

GRAVESITE RESTORATION MAUI VETERANS CEMETERY, PHASE II

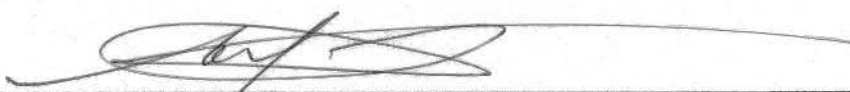
MAKAWAO, ISLAND OF MAUI, HAWAII
JOB NO.: CA-1208-C2
FAI NO.: HI-14-33

FOR THE
STATE OF HAWAII
DEPARTMENT OF DEFENSE
OFFICE OF VETERANS SERVICES


CONSULTANT	DISCIPLINE	ADDRESS
AECOM TECHNICAL SERVICES, INC.	CIVIL ENGINEER	1001 BISHOP STREET, SUITE 1600 HONOLULU, HAWAII 96813
PBR HAWAII & ASSOCIATES, INC.	LANDSCAPE ARCHITECT	1001 BISHOP STREET, SUITE 650 HONOLULU, HAWAII 96813



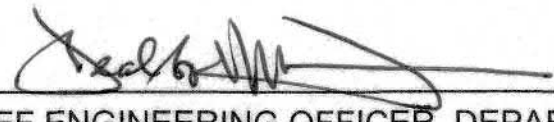
APPROVED:



ADJUTANT GENERAL, DEPARTMENT OF DEFENSE
STATE OF HAWAII
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DATE



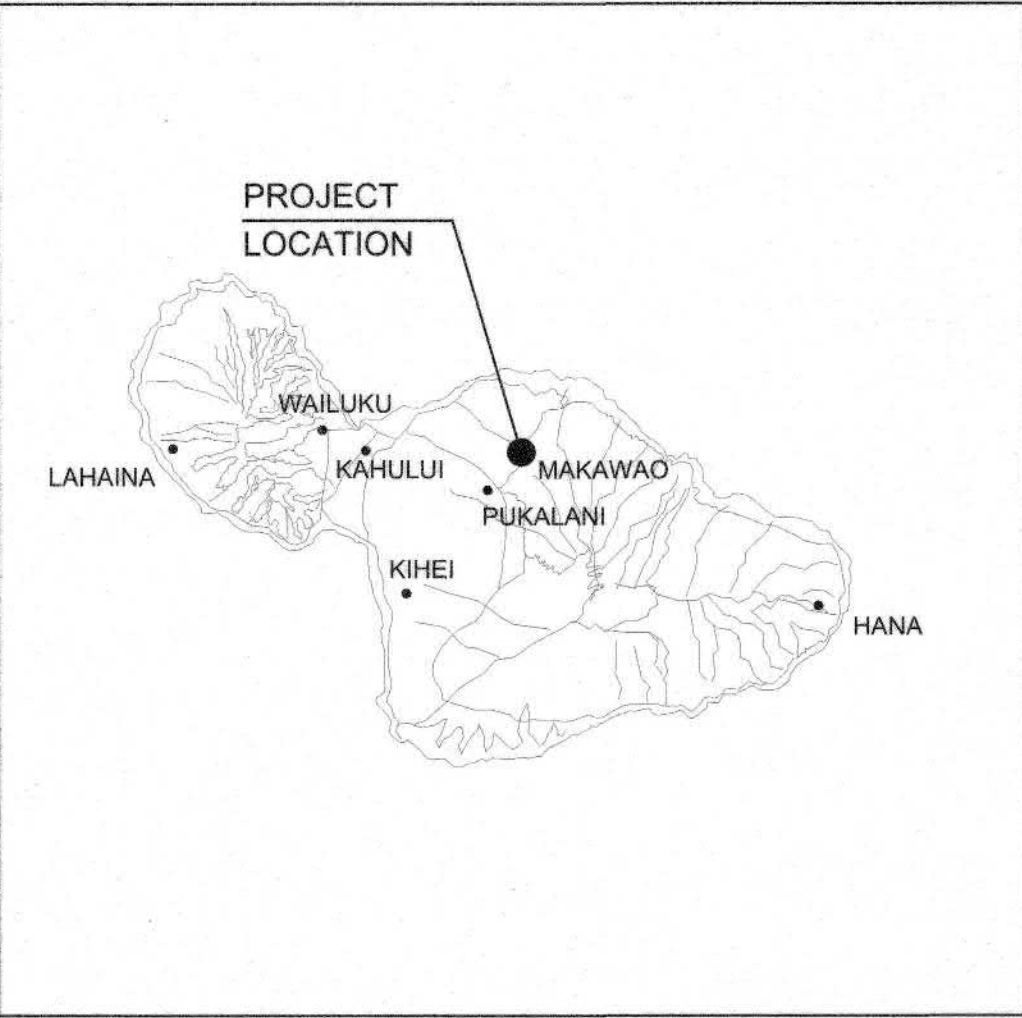
DIRECTOR, OFFICE OF VETERANS SERVICES, DEPARTMENT OF DEFENSE
STATE OF HAWAII
31 Jul 17
DATE



CHIEF ENGINEERING OFFICER, DEPARTMENT OF DEFENSE
STATE OF HAWAII
31 Jul 17
DATE

INDEX TO DRAWINGS

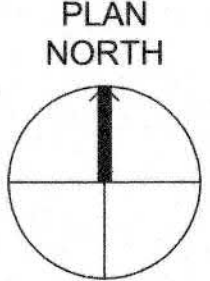
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1	GI001	COVER SHEET	16	CG501	EROSION CONTROL DETAILS
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ISLAND OF MAUI
SCALE: NTS



LOCATION MAP
SCALE: NTS



ARCHITECT / ENGINEERS:

AECOM



Drawing Title
COVER SHEET

Project Title
GRAVESITE RESTORATION, MAUI VETERANS CEMETERY
PHASE II
STATE OF HAWAII, DEPARTMENT OF DEFENSE,
OFFICE OF VETERANS SERVICES

Project Number
CA-1208-D

Building Number

Location
MAUI VETERANS CEMETERY, MAKAWAO, ISLAND OF MAUI, HI

Drawing Number

GI001

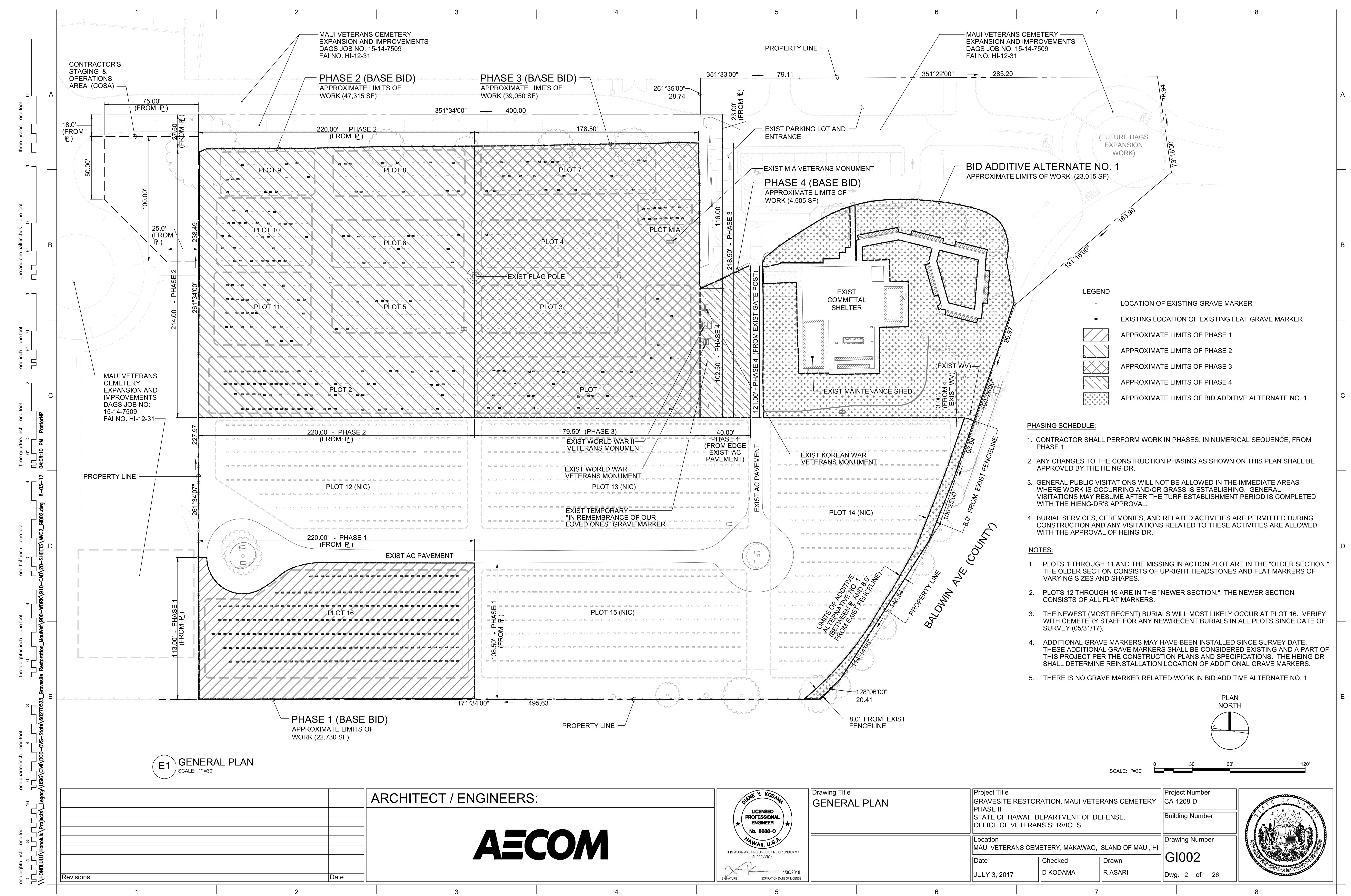
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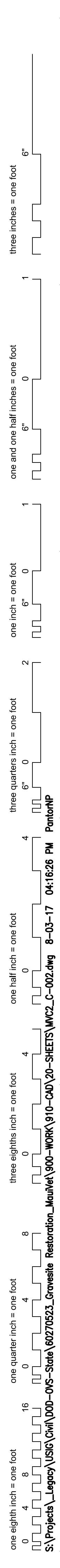
Checked
D KODAMA

Drawn
R ASARI

Dwg. 1 of 26







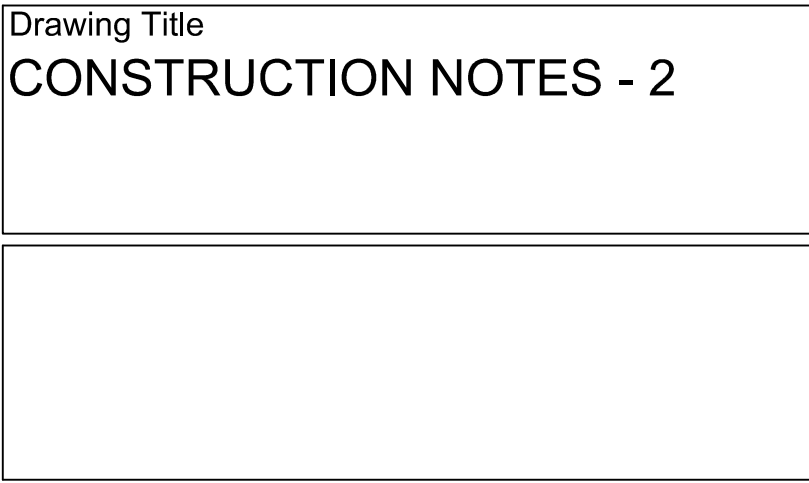
AC	ASPHALT CONCRETE
BB	BOTTOM BANK
BC	BOTTOM CURB
BFP	BACKFLOW PREVENTER
BL	BASELINE
BM	BENCHMARK
BW	BOTTOM WALL
CBR	CALIFORNIA BEARING RATIO
CL	CENTER LINE
CO	SEWER CLEANOUT
CONC	CONCRETE
CWS	CONCRETE WHEEL STOP
CRM	CONCRETE ROCK MASONRY
DPW	DEPARTMENT OF PUBLIC WORKS
D=	APPROXIMATE DIAMETER
D/W	DRIVEWAY
EXIST	EXISTING
GMC	GRAVE MARKER CORNER
GP	GATE POST
Guy	GUY WIRE ANCHOR
H=	APPROXIMATE HEIGHT
HB	HOSE BIBB
HIENG-DR	STATE OF HAWAII, DEPARTMENT OF DEFENSE, ENGINEERING OFFICE DESIGNATED REPRESENTATIVE
ICB	IRRIGATION CONTROL BOX
ICV	IRRIGATION CONTROL VALVE
MIA	MISSING IN ACTION
MVC	MAUI VETERANS CEMETERY
NE	NORTHEASTERN
NIC	NOT IN CONTRACT
NO.	NUMBER
NW	NORTHWESTERN
OVS	OFFICE OF VETERANS' SERVICES
PP	POWER POLE
SE	SOUTHEASTERN
S=	APPROXIMATE SIZE
SF	SQUARE FEET
SMH	SEWER MANHOLE
S/W	SIDEWALK
SP	SURVEY POINT
SW	SOUTHWESTERN
SWL	SOLID WHITE PAVEMENT STRIPE
T	TOP ELEVATION
TB	TOP BANK
TC	TOP CURB
TCP	TRASH CAN PAD
TL	TOP LEFT
TMK	TAX MAP KEY
TR	TOP RIGHT
TW	TOP WALL
WM	WATER METER
WV	WATER VALVE
—W—	WATER LINE
—OH—	OVERHEAD UTILITY LINE
±	PLUS/MINUS

1. THE 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 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 SHALL REQUIRE SUPPLEMENTARY MEASURES IF REQUIRED.
3. NO CONTRACTOR SHALL PERFORM ANY TRENCHING 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 BY THE HIENG-DR SHALL BE PAYABLE BY THE CONTRACTOR.
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. CONSTRUCTION FENCING SHALL BE INSTALLED AROUND ALL WORK AREAS, INCLUDING AREAS WITH GRASS IN ESTABLISHMENT (SEE SHEET C5501 FOR CONSTRUCTION FENCING DETAIL).
5. 2' HIGH X 2' WIDE TEMPORARY PLASTIC PLACARD WARNING SIGNS READING "BURIAL SECTION RENOVATIONS IN PROGRESS, PLEASE PARDON OUR DUST" SHALL BE INSTALLED AT ALL WORK AREAS. 2' HIGH X 2' WIDE TEMPORARY PLASTIC PLACARD WARNING SIGNS READING "AREA TEMPORARILY CLOSED FOR GRASS ESTABLISHMENT, CAUTION: WET GROUND" SHALL BE INSTALLED AT ALL AREAS CLOSED FOR GRASS ESTABLISHMENT.
6. THE CONTRACTOR'S ATTENTION IS DIRECTED TO CHAPTER 46 PUBLIC HEALTH REGULATIONS DEPARTMENT OF HEALTH, STATE OF HAWAII, "COMMUNITY NOISE CONTROL" IN WHICH MAXIMUM ALLOWABLE NOISE LEVELS HAVE BEEN SET. IF THE CONSTRUCTION ACTIVITIES FOR THIS PROJECT WILL EXCEED THE ALLOWABLE NOISE LEVELS, THE CONTRACTOR WILL BE REQUIRED TO OBTAIN A PERMIT FROM THE DIRECTOR OF THE DEPARTMENT OF PUBLIC 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 CONSTRUCTION ACTIVITIES. APPLICATION AND INFORMATION ON VARIANCES ARE AVAILABLE AT THE ENVIRONMENTAL HEALTH SERVICES DIVISION, 591 ALA MOANA BOULEVARD, HONOLULU, HAWAII 96813 OR BY TELEPHONE (586-4700).

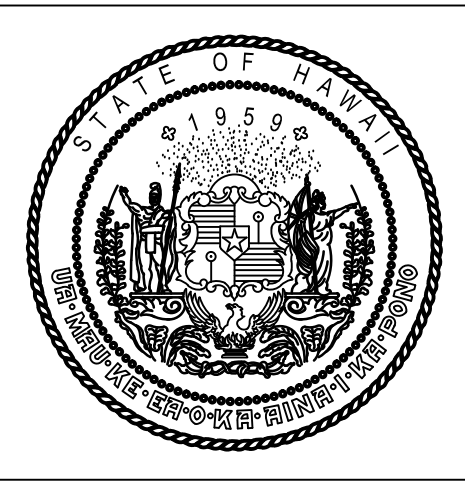
1. AZIMUTHS AND COORDINATES ARE REFERRED TO STATE SURVEY TRIANGULATION STATION "PIIHOLO".
2. MAP IS COMPILED FROM RECORDS FOUND AT THE STATE SURVEY OFFICE, REAL PROPERTY TAX MAPPING BRANCH AND BUREAU OF CONVEYANCES. RECORDED DATA HAS NOT BEEN VERIFIED BY AN ACTUAL ON THE GROUND.
3. ELEVATIONS ARE ASSUMED.
4. DATE OF SURVEY: 05/31/2017.

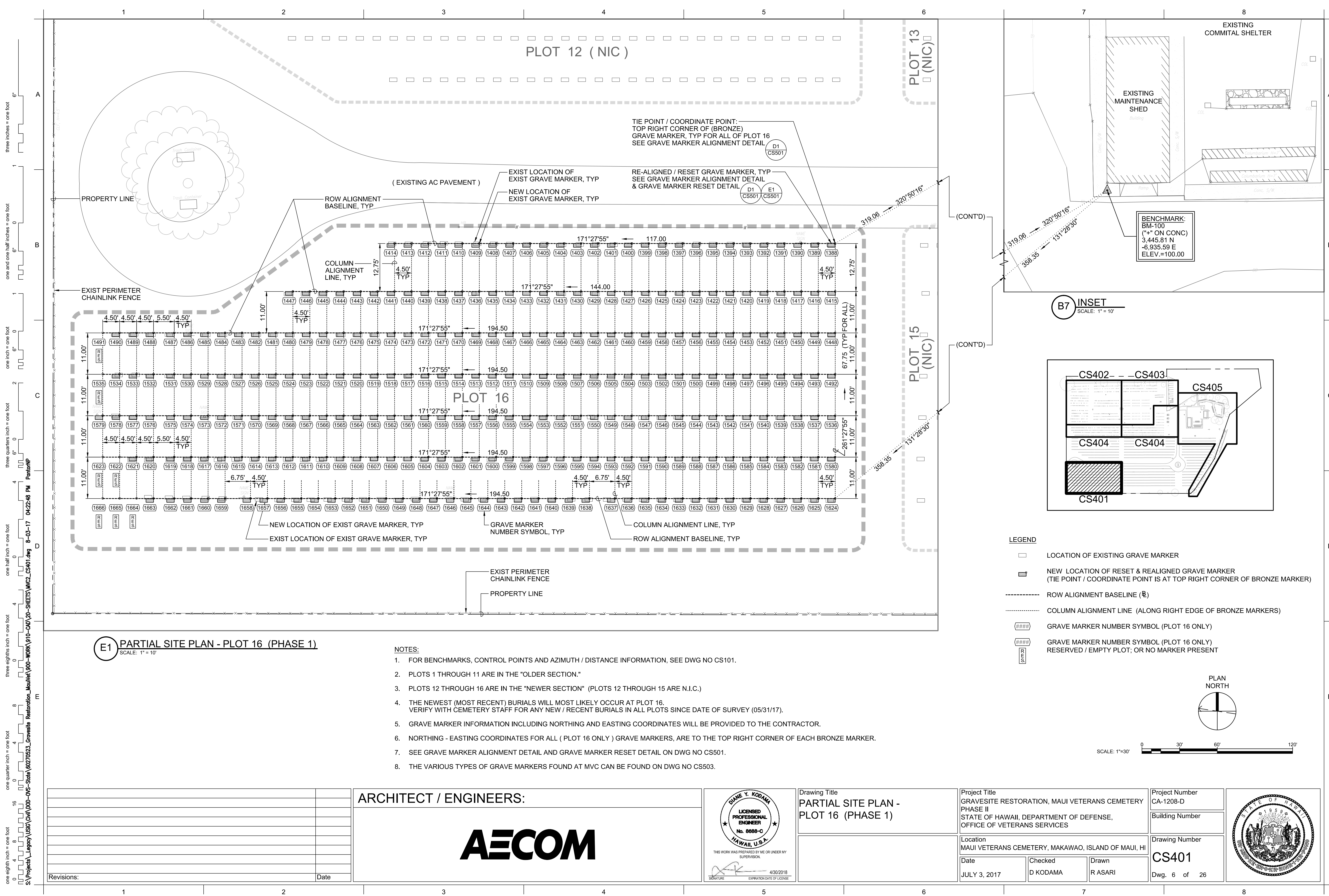
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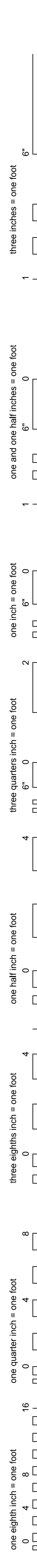
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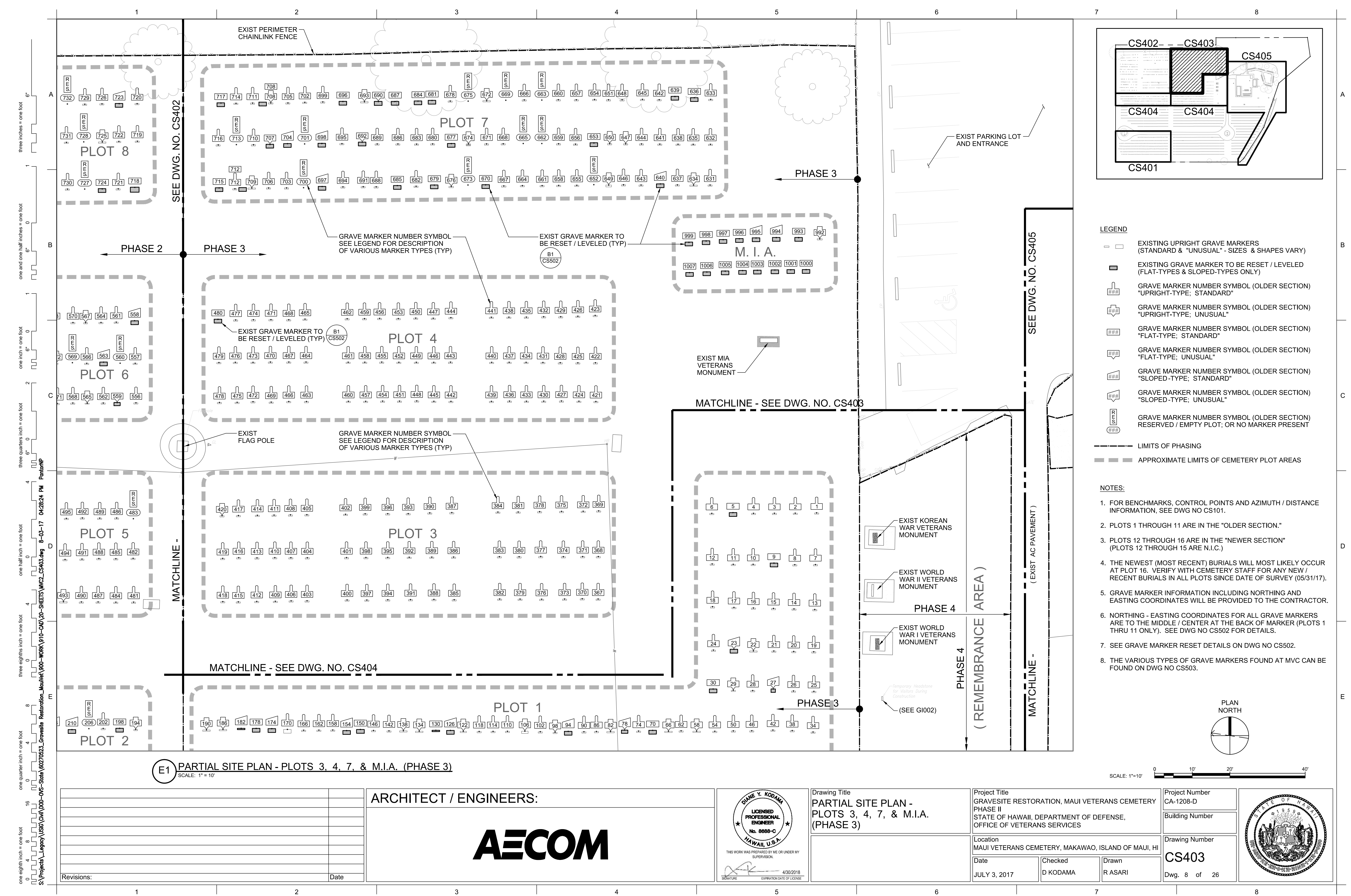


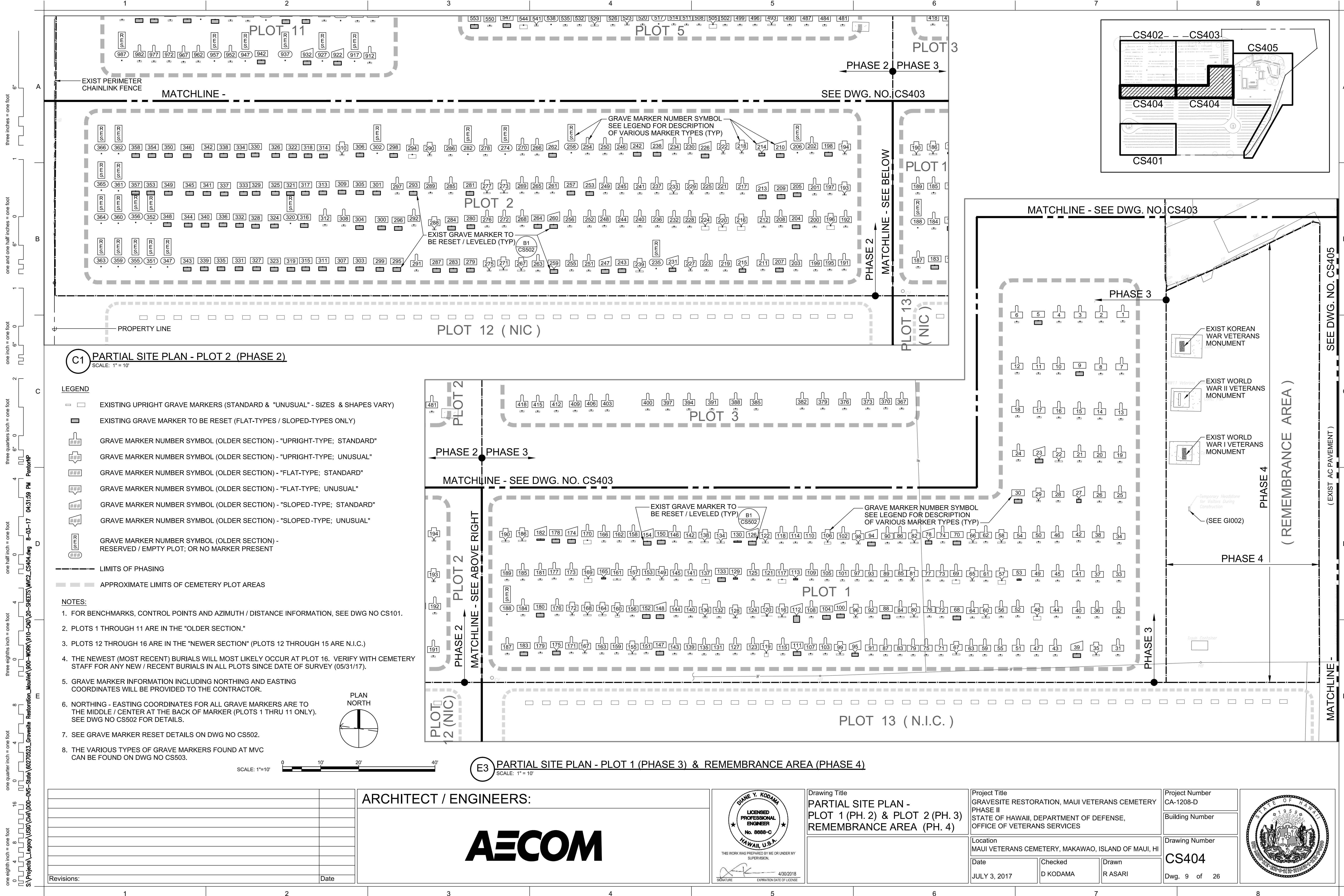
Project Number CA-1208-D
Building Number
Drawing Number C-002 Dwg. 4 of 26







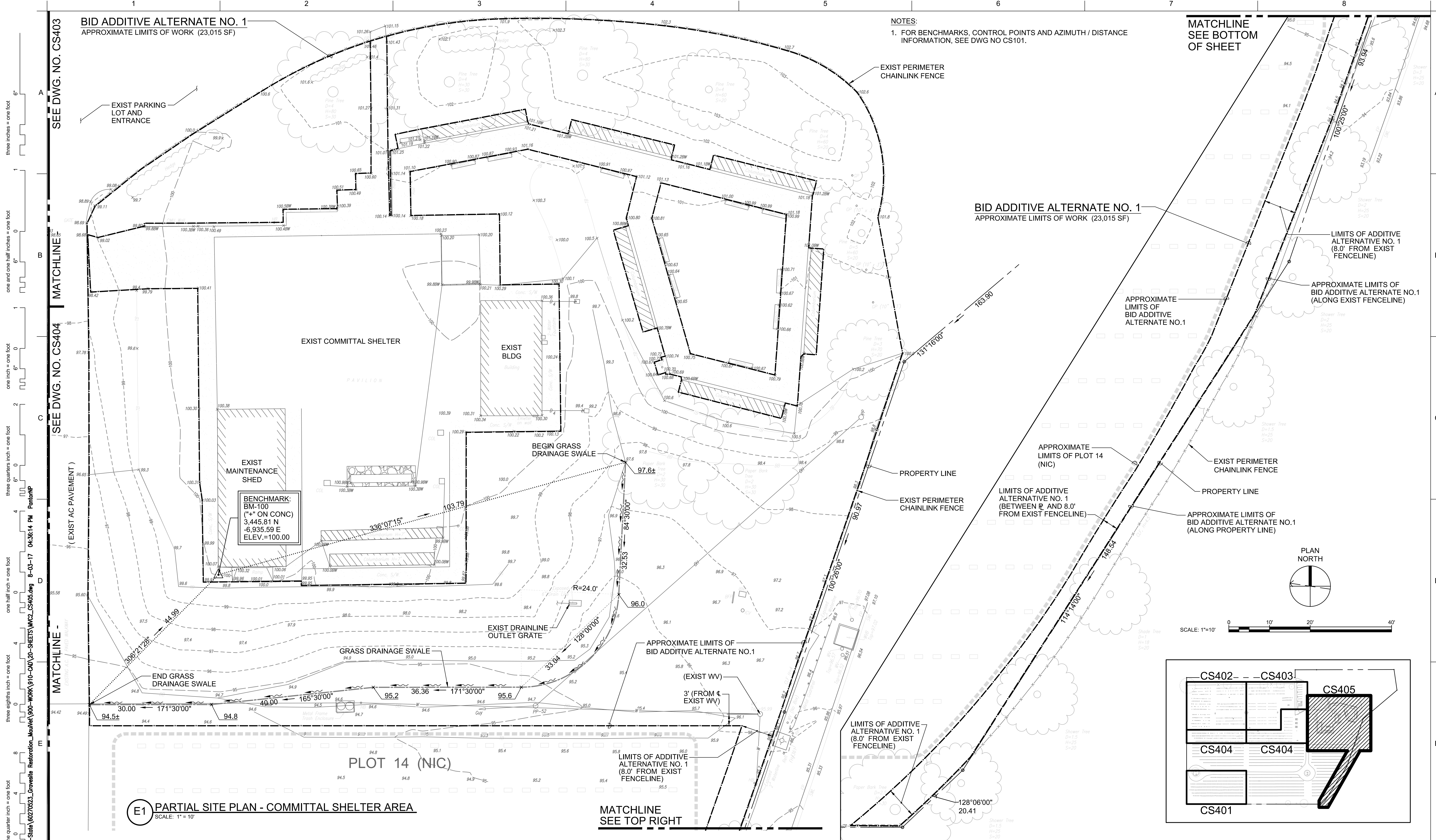




three inches = one foot
one and one half inches = one foot
one inch = one foot
three quarters inch = one foot
three eighths inch = one foot
one half inch = one foot
one quarter inch = one foot
one eighth inch = one foot

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Revisions:

Date

ARCHITECT / ENGINEERS:

AECOM

DANIE Y. KODAMA

LICENSED PROFESSIONAL ENGINEER

No. 8888-C

HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

4/30/2018

EXPIRATION DATE OF LICENSE

Drawing Title

PARTIAL SITE PLAN - COMMITTAL SHELTER AREA

Project Title

GRAVESITE RESTORATION, MAUI VETERANS CEMETERY PHASE II STATE OF HAWAII, DEPARTMENT OF DEFENSE, OFFICE OF VETERANS SERVICES

Location

MAUI VETERANS CEMETERY, MAKAWAO, ISLAND OF MAUI, HI

Date

JULY 3, 2017

Checked

D KODAMA

Drawn

R ASARI

Project Number

CA-1208-D

Building Number

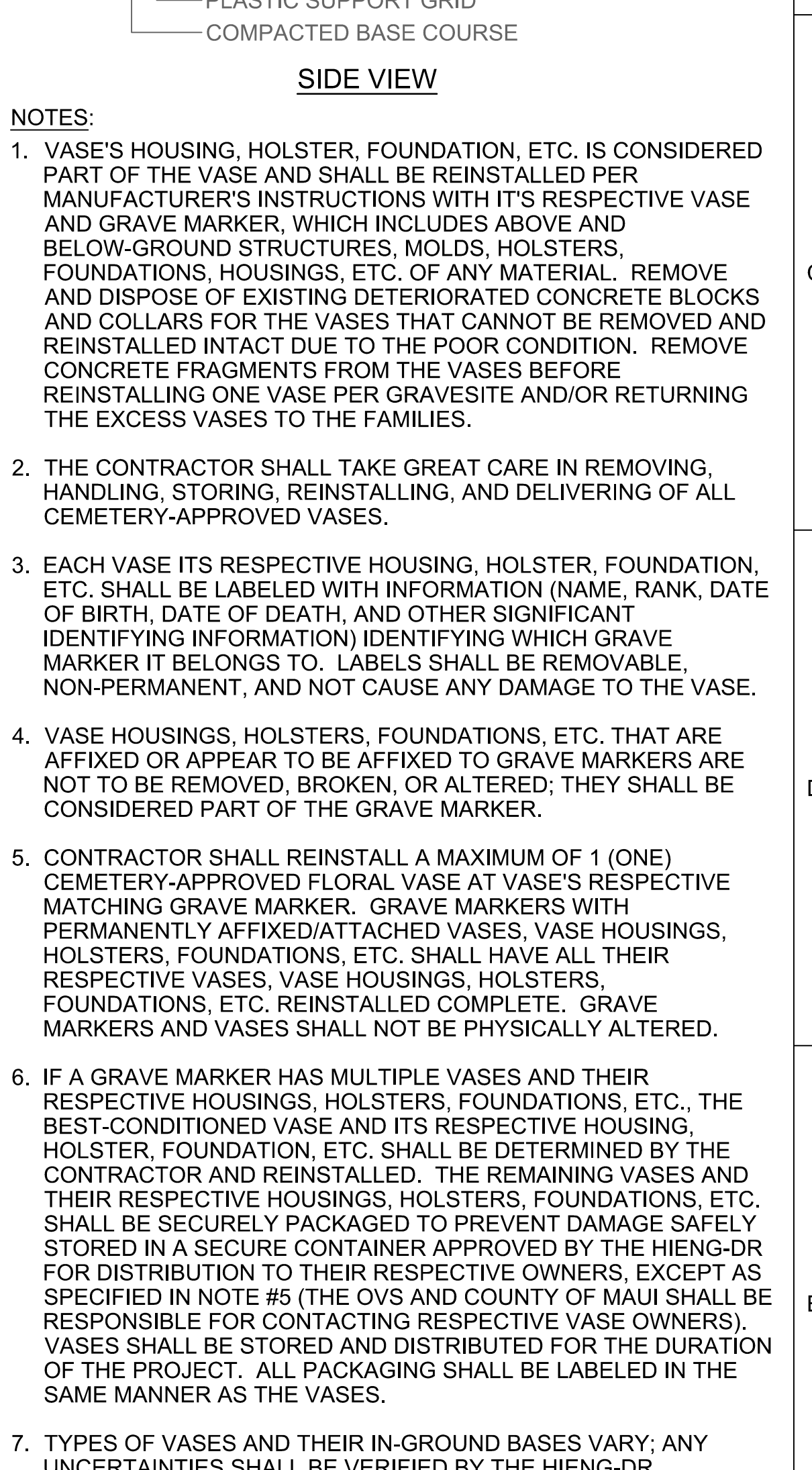
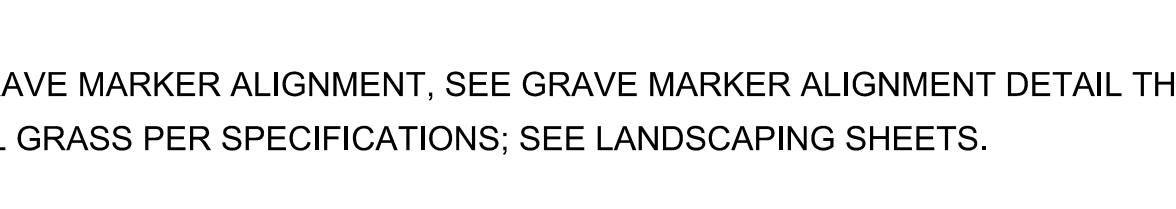
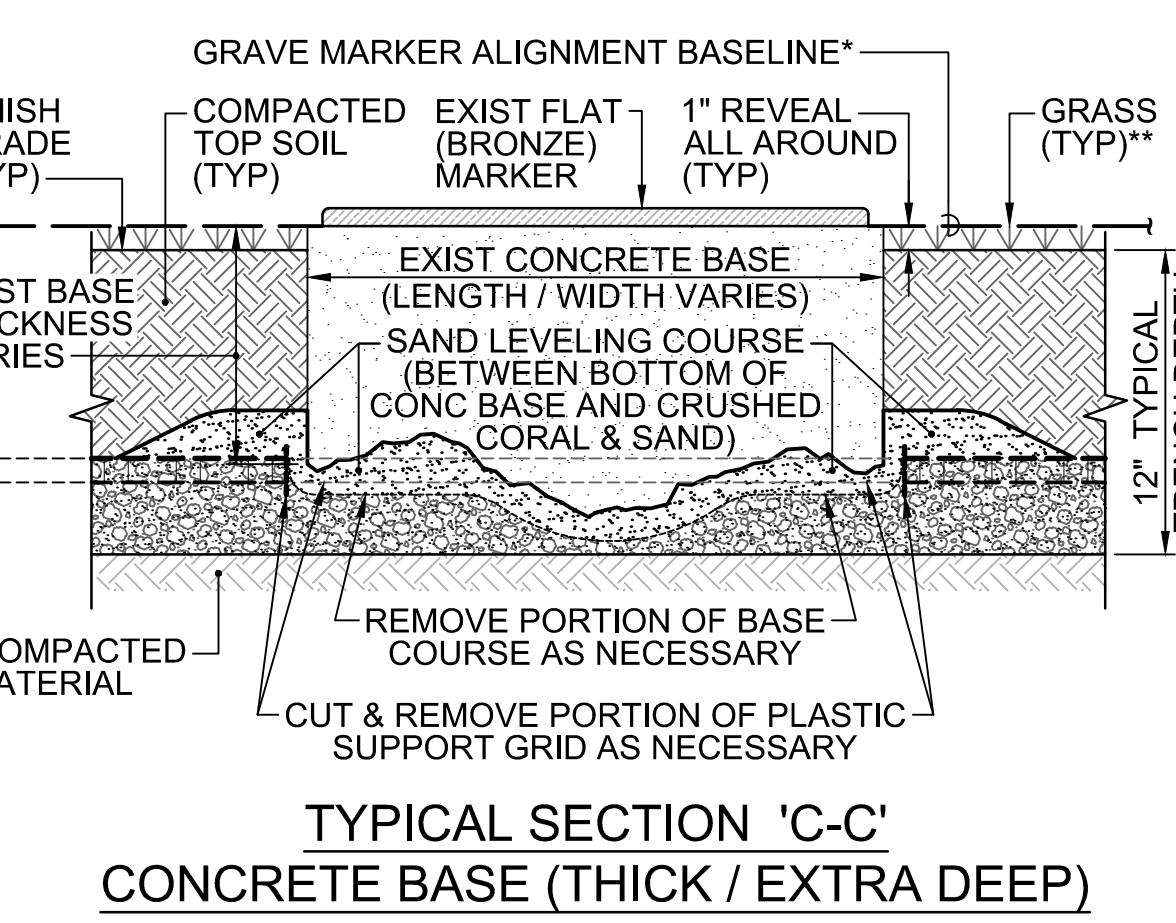
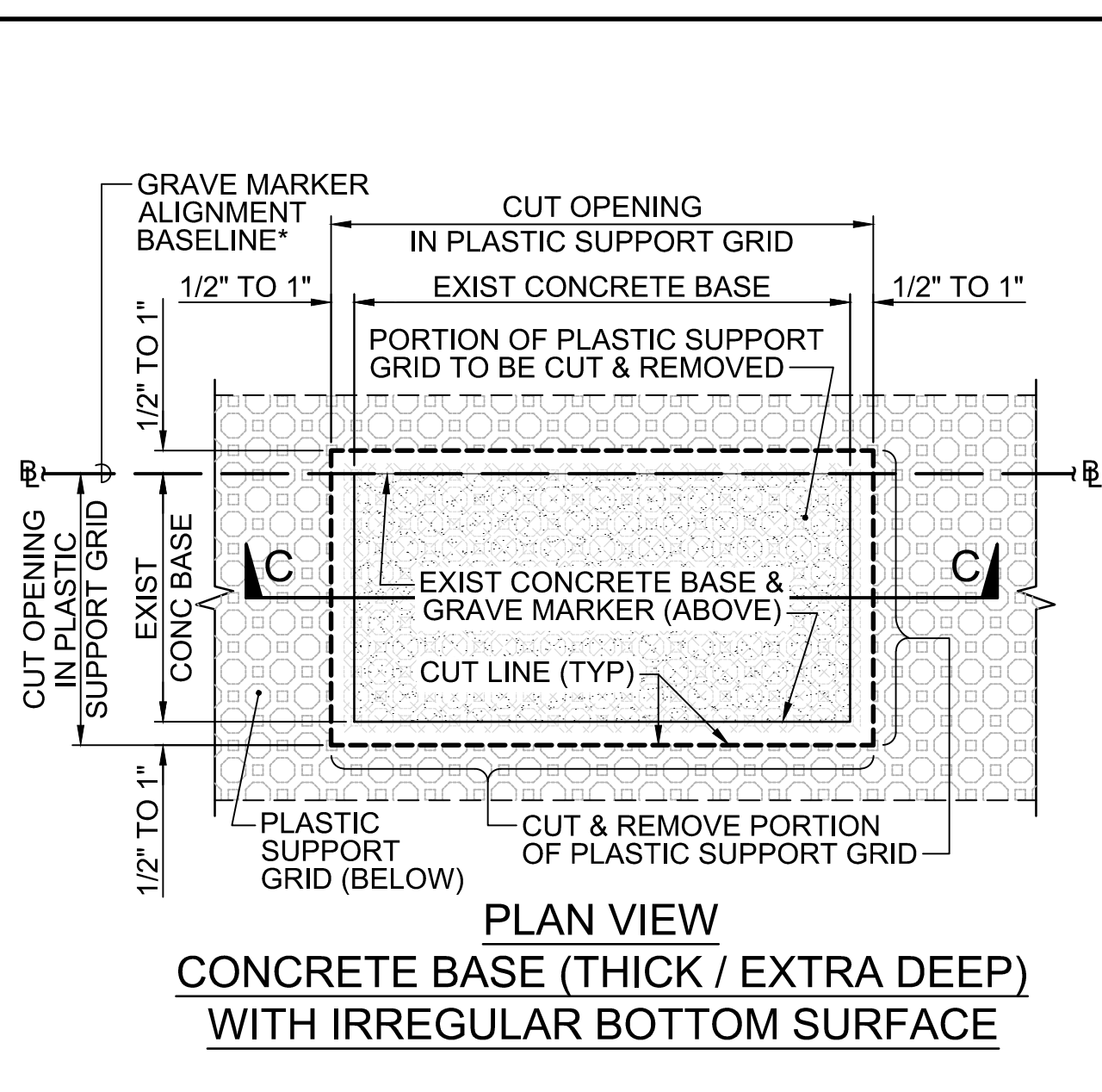
Drawing Number

CS405

Dwg. 10 of 26

three inches = one foot
one inch = one foot
one half inch = one foot
three quarters inch = one foot
one half inch = one foot
three eighths inch = one foot
one quarter inch = one foot
one eighth inch = one foot

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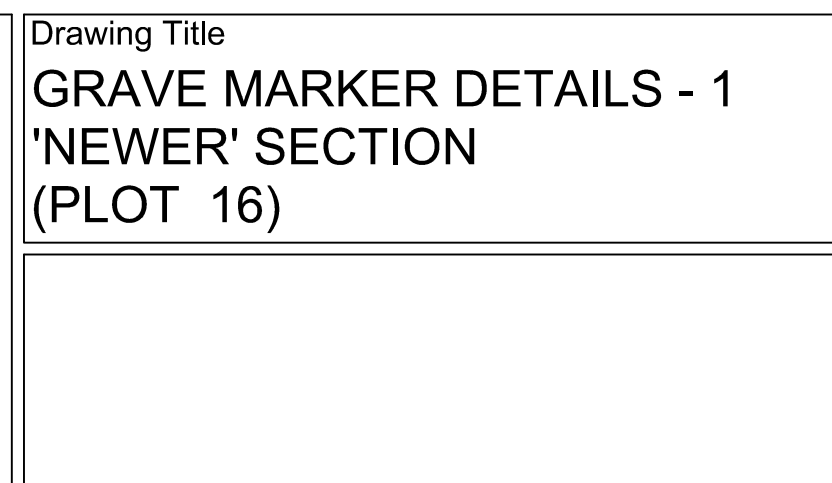
NOTES:

1. VASE'S HOUSING, HOLSTER, FOUNDATION, ETC. IS CONSIDERED PART OF THE VASE AND SHALL BE REINSTALLED PER MANUFACTURER'S INSTRUCTIONS WITH IT'S RESPECTIVE VASE AND GRAVE MARKER, WHICH INCLUDES ABOVE AND BELOW-GROUND STRUCTURES, MOLDS, HOLSTERS, FOUNDATIONS, HOUSINGS, ETC. OF ANY MATERIAL. REMOVE AND DISPOSE OF EXISTING DETERIORATED CONCRETE BLOCKS AND COLLARS FOR THE VASES THAT CANNOT BE REMOVED AND REINSTALLED INTACT DUE TO THE POOR CONDITION. REMOVE CONCRETE FRAGMENTS FROM THE VASES BEFORE REINSTALLING ONE VASE PER GRAVESITE AND/OR RETURNING THE EXCESS VASES TO THE FAMILIES.
2. THE CONTRACTOR SHALL TAKE GREAT CARE IN REMOVING, HANDLING, STORING, REINSTALLING, AND DELIVERING OF ALL CEMETERY-APPROVED VASES.
3. EACH VASE ITS RESPECTIVE HOUSING, HOLSTER, FOUNDATION, ETC. SHALL BE LABELED WITH INFORMATION (NAME, RANK, DATE OF BIRTH, DATE OF DEATH, AND OTHER SIGNIFICANT IDENTIFYING INFORMATION) IDENTIFYING WHICH GRAVE MARKER IT BELONGS TO. LABELS SHALL BE REMOVABLE, NON-PERMANENT, AND NOT CAUSE ANY DAMAGE TO THE VASE.
4. VASE HOUSINGS, HOLSTERS, FOUNDATIONS, ETC. THAT ARE AFFIXED OR APPEAR TO BE AFFIXED TO GRAVE MARKERS ARE NOT TO BE REMOVED, BROKEN, OR ALTERED; THEY SHALL BE CONSIDERED PART OF THE GRAVE MARKER.
5. CONTRACTOR SHALL REINSTALL A MAXIMUM OF 1 (ONE) CEMETERY-APPROVED FLORAL VASE AT VASE'S RESPECTIVE MATCHING GRAVE MARKER. GRAVE MARKERS WITH PERMANENTLY AFFIXED/ATTACHED VASES, VASE HOUSINGS, HOLSTERS, FOUNDATIONS, ETC. SHALL HAVE ALL THEIR RESPECTIVE VASES, VASE HOUSINGS, HOLSTERS, FOUNDATIONS, ETC. REINSTALLED COMPLETE. GRAVE MARKERS AND VASES SHALL NOT BE PHYSICALLY ALTERED.
6. IF A GRAVE MARKER HAS MULTIPLE VASES AND THEIR RESPECTIVE HOUSINGS, HOLSTERS, FOUNDATIONS, ETC., THE BEST-CONDITIONED VASE AND ITS RESPECTIVE HOUSING, HOLSTER, FOUNDATION, ETC. SHALL BE DETERMINED BY THE CONTRACTOR AND REINSTALLED. THE REMAINING VASES AND THEIR RESPECTIVE HOUSINGS, HOLSTERS, FOUNDATIONS, ETC. SHALL BE SECURELY PACKAGED TO PREVENT DAMAGE SAFELY STORED IN A SECURE CONTAINER APPROVED BY THE HIENG-DR FOR DISTRIBUTION TO THEIR RESPECTIVE OWNERS, EXCEPT AS SPECIFIED IN NOTE #5 (THE OVS AND COUNTY OF MAUI SHALL BE RESPONSIBLE FOR CONTACTING RESPECTIVE VASE OWNERS). VASES SHALL BE STORED AND DISTRIBUTED FOR THE DURATION OF THE PROJECT. ALL PACKAGING SHALL BE LABELED IN THE SAME MANNER AS THE VASES.
7. TYPES OF VASES AND THEIR IN-GROUND BASES VARY; ANY UNCERTAINTIES SHALL BE VERIFIED BY THE HIENG-DR.



ARCHITECT / ENGINEERS:

AECOM

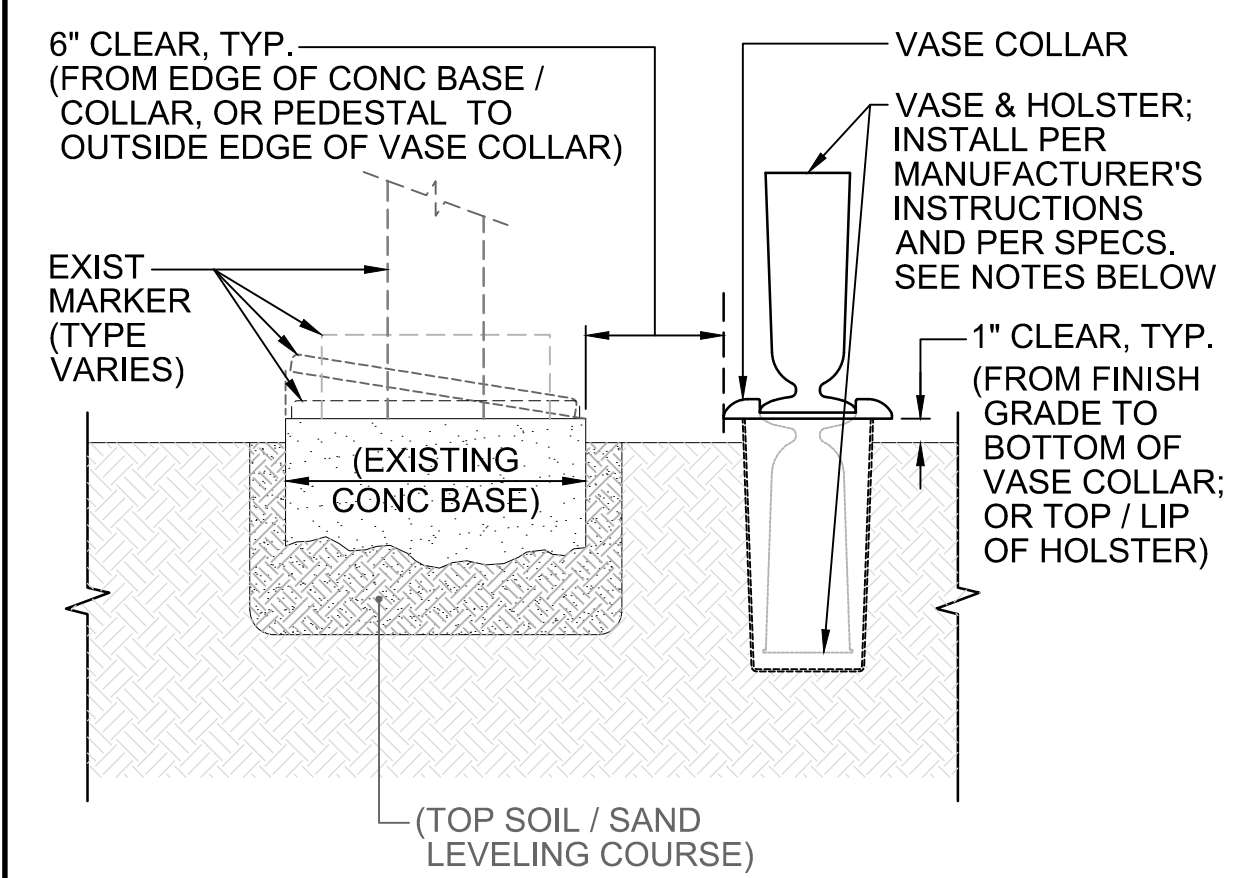
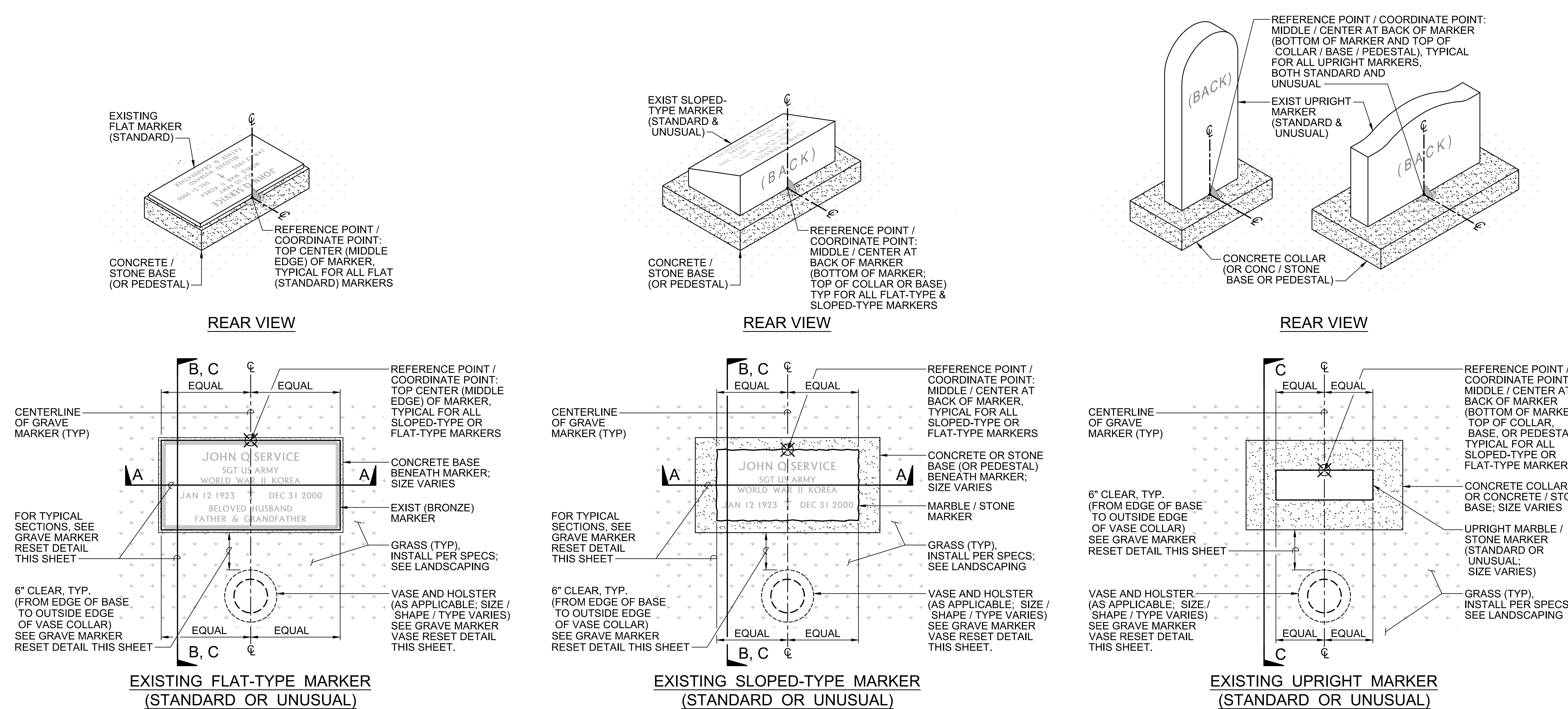


Project Title GRAVESITE RESTORATION, MAUI VETERANS CEMETERY PHASE II STATE OF HAWAII, DEPARTMENT OF DEFENSE, OFFICE OF VETERANS SERVICES			Project Number CA-1208-D
Location MAUI VETERANS CEMETERY, MAKAWAO, ISLAND OF MAUI, HI			Building Number
Date JULY 3, 2017	Checked D KODAMA	Drawn N PANTORILLA	Drawing Number CS501 Dwg. 11 of 26



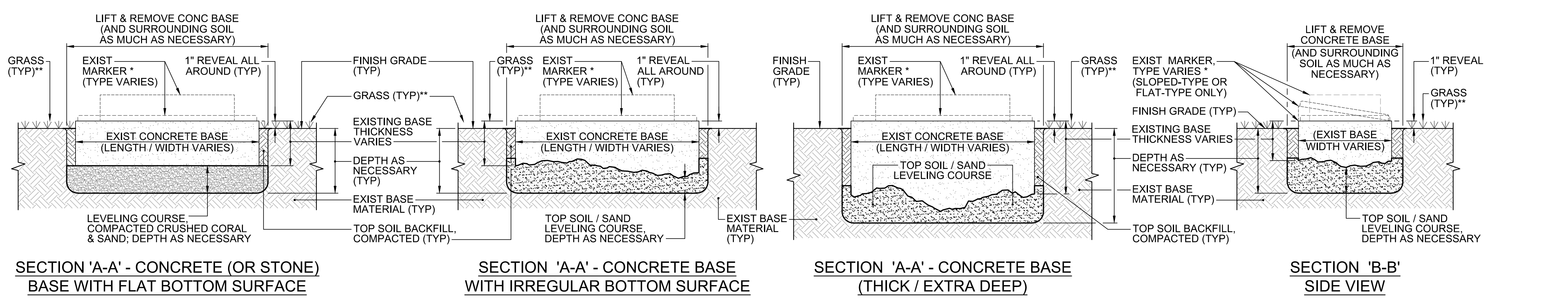
three inches = one foot
one and one half inches = one foot
one inch = one foot
three quarters inch = one foot
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one quarter inch = one foot
one eighth inch = one foot
one sixteenth inch = one foot

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- NOTES:**
- VASE'S HOUSING, HOLSTER, FOUNDATION, ETC. IS CONSIDERED PART OF THE VASE AND SHALL BE REINSTALLED PER MANUFACTURER'S INSTRUCTIONS WITH IT'S RESPECTIVE VASE AND GRAVE MARKER, WHICH INCLUDES ABOVE AND BELOW-GROUND STRUCTURES, MOLDS, HOLSTERS, FOUNDATIONS, HOUSINGS, ETC. OF ANY MATERIAL. REMOVE AND DISPOSE OF EXISTING DETERIORATED CONCRETE BLOCKS AND COLLARS FOR THE VASES THAT CANNOT BE REMOVED AND REINSTALLED INTACT DUE TO THE POOR CONDITION. REMOVE CONCRETE FRAGMENTS FROM THE VASES BEFORE REINSTALLING ONE VASE PER GRAVESITE AND/OR RETURNING THE EXCESS VASES TO THE FAMILIES.
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 - TYPES OF VASES AND THEIR IN-GROUND BASES VARY; ANY UNCERTAINTIES SHALL BE VERIFIED BY THE HIENG-DR.

D1 TYPICAL GRAVE MARKER TIE POINT DETAIL (FOR "OLDER SECTION" / PLOTS 1 - 11 ONLY)
SCALE: 1 1/2" = 1'-0"

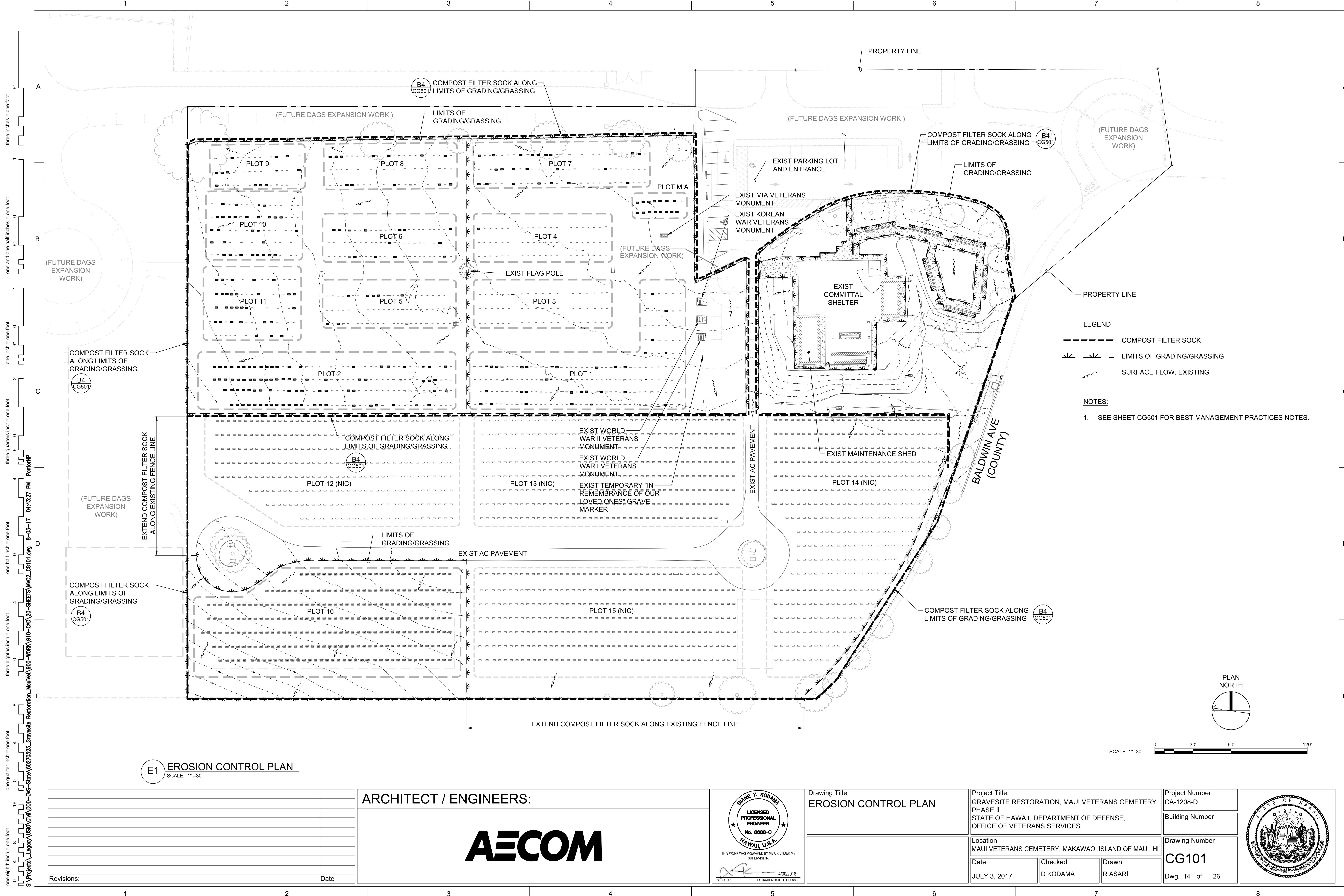


* ONLY FLAT-TYPE AND SLOPED-TYPE MARKERS. (IN "OLD SECTION") SHALL BE RESET AND LEVELED. SEE SHEETS CS402, CS403, AND CS404 FOR EXISTING GRAVE MARKER LOCATIONS. SEE DWG NO CS503 FOR GRAVE MARKER TYPES.
** INSTALL GRASS PER SPECIFICATIONS; SEE LANDSCAPING SHEETS.

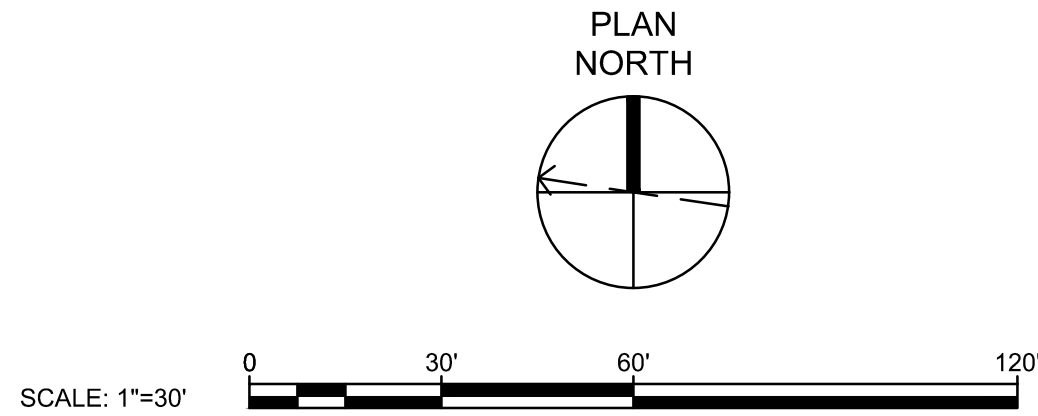
E1 GRAVE MARKER RESET DETAIL - NO TRENCH / NO PLASTIC SUPPORT GRID (FOR "OLDER SECTION" / PLOTS 1 - 11 ONLY)
SCALE: 1 1/2" = 1'-0"

E7 SECTION 'C-C' GRAVE MARKER VASE RESET DETAIL
SCALE: 1 1/2" = 1'-0"

ARCHITECT / ENGINEERS:						Drawing Title GRAVE MARKER DETAILS - "OLDER SECTION" (PLOTS 1 THRU 11)		Project Title GRAVESITE RESTORATION, MAUI VETERANS CEMETERY PHASE II STATE OF HAWAII, DEPARTMENT OF DEFENSE, OFFICE OF VETERANS SERVICES		Project Number CA-1208-D			
Revisions:		Date		THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION. 4/30/2018				Location MAUI VETERANS CEMETERY, MAKAWAO, ISLAND OF MAUI, HI		Building Number			
								Date JULY 3, 2017		Checked D KODAMA			Drawing Number CS502
										Dwg. 12 of 26			



E1 EROSION CONTROL PLAN
SCALE: 1"=30'



		Revisions:	Date

ARCHITECT / ENGINEERS:

AECOM

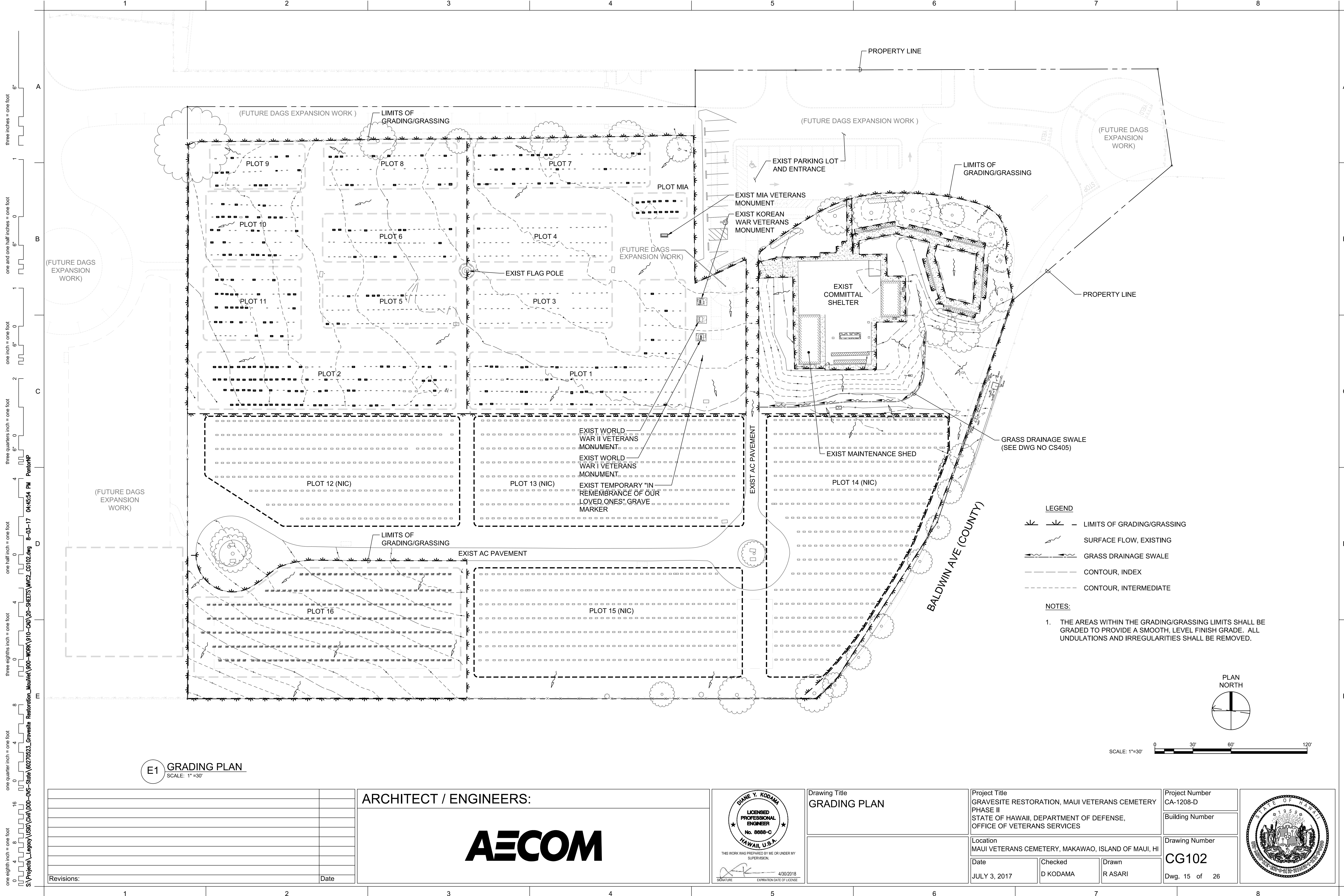
DANIE Y. KODAMA
LICENSED PROFESSIONAL ENGINEER
No. 8888-C
HAWAII, U.S.A.
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
4/30/2018
EXPIRATION DATE OF LICENSE

Drawing Title EROSION CONTROL PLAN	
Location MAUI VETERANS CEMETERY, MAKAWAO, ISLAND OF MAUI, HI	
Date JULY 3, 2017	Checked D KODAMA
Drawn R ASARI	

Project Title GRAVESITE RESTORATION, MAUI VETERANS CEMETERY PHASE II STATE OF HAWAII, DEPARTMENT OF DEFENSE, OFFICE OF VETERANS SERVICES	
Location MAUI VETERANS CEMETERY, MAKAWAO, ISLAND OF MAUI, HI	
Date JULY 3, 2017	Checked D KODAMA
Drawn R ASARI	

Project Number CA-1208-D	Building Number
Drawing Number CG101	Dwg. 14 of 26



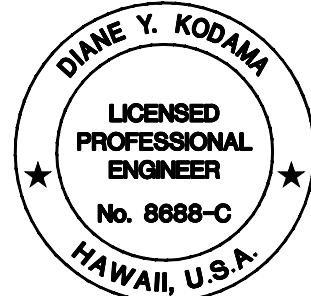


E1 GRADING PLAN
SCALE: 1"=30'

Revisions:	
Date	

ARCHITECT / ENGINEERS:

AECOM



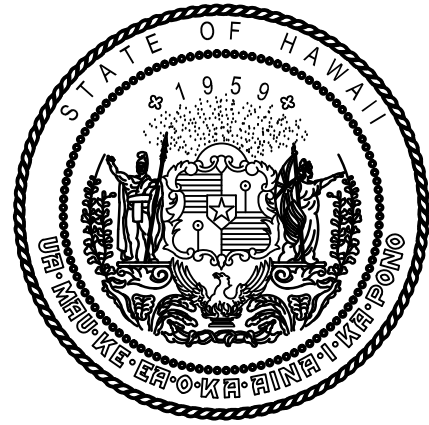
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
SIGNATURE: [Signature] 4/30/2018 EXPIRATION DATE OF LICENSE

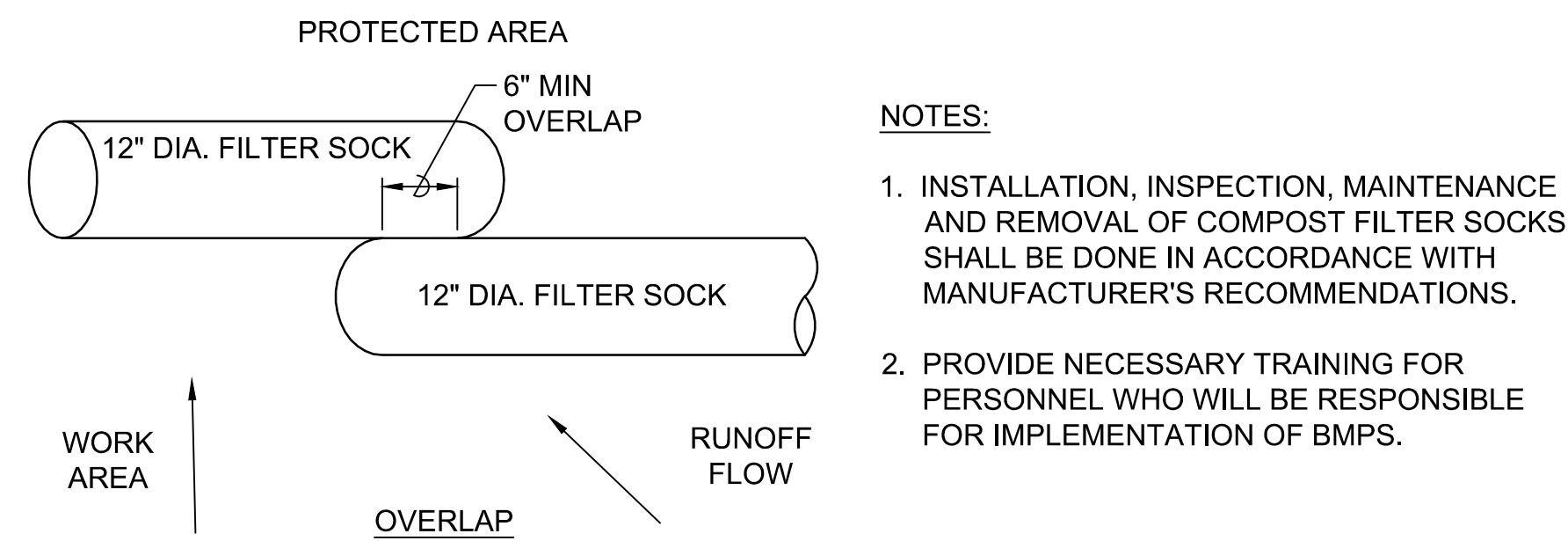
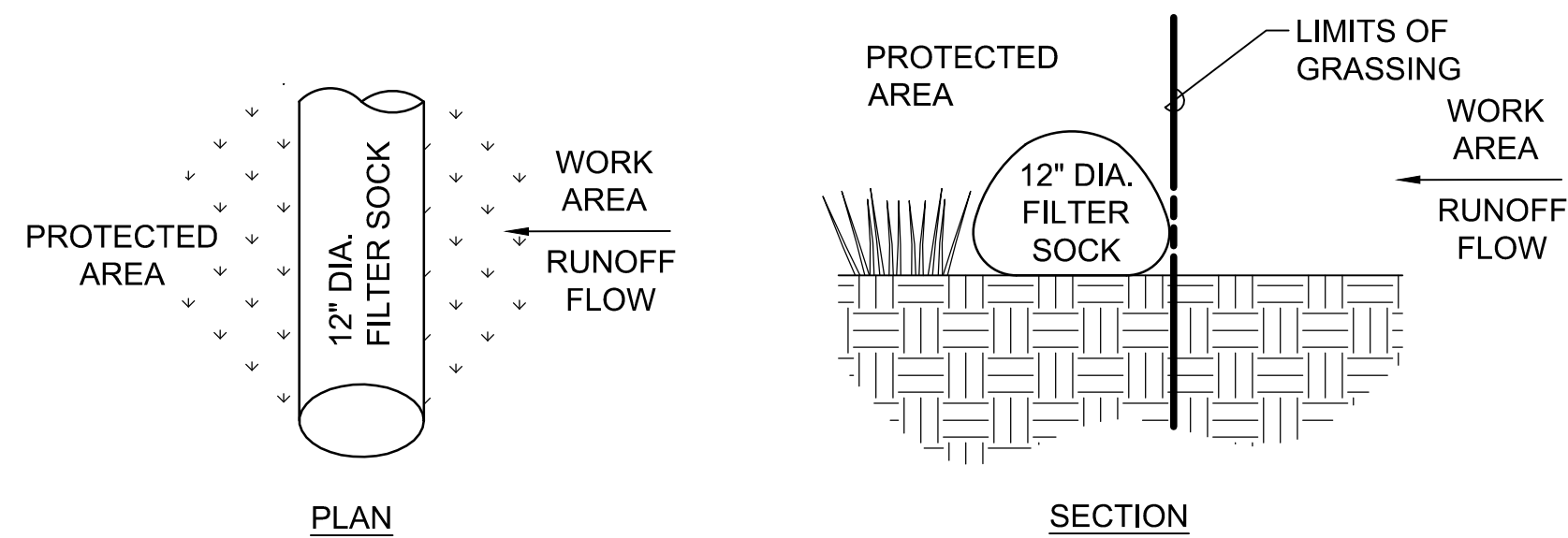
Drawing Title
GRADING PLAN

Project Title
GRAVESITE RESTORATION, MAUI VETERANS CEMETERY
PHASE II
STATE OF HAWAII, DEPARTMENT OF DEFENSE,
OFFICE OF VETERANS SERVICES

Date	Checked	Drawn
JULY 3, 2017	D KODAMA	R ASARI

Project Number	CA-1208-D
Building Number	
Drawing Number	CG102
Dwg. 15 of 26	





B4 DETAIL - COMPOST FILTER SOCK INSTALLATION

SCALE: NTS

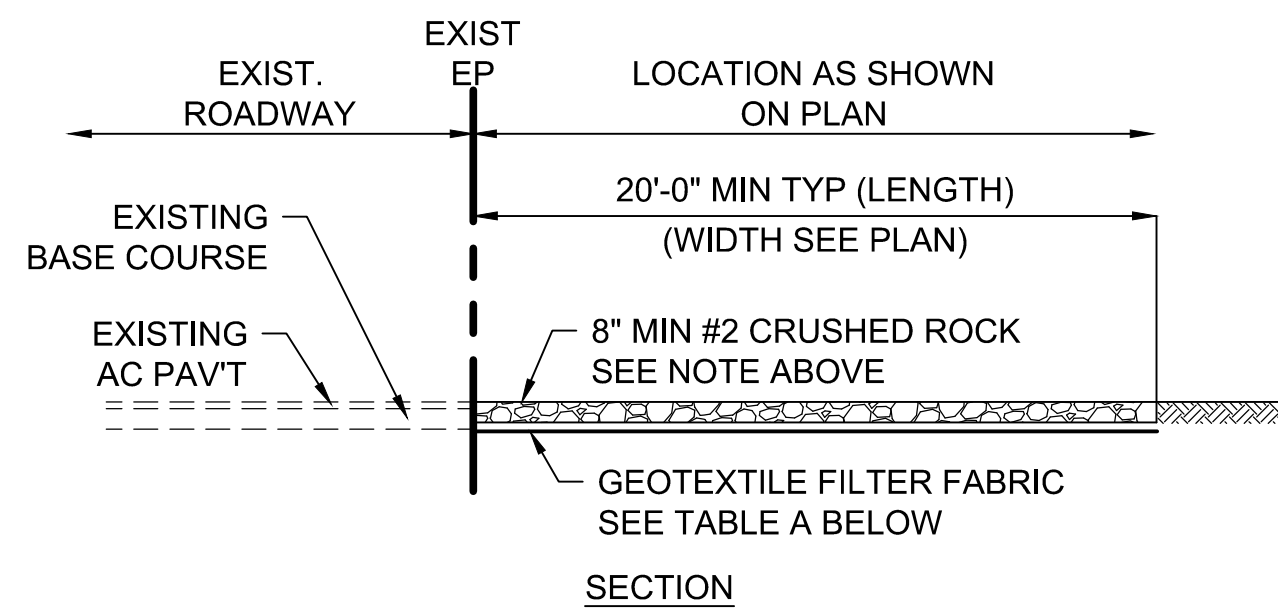
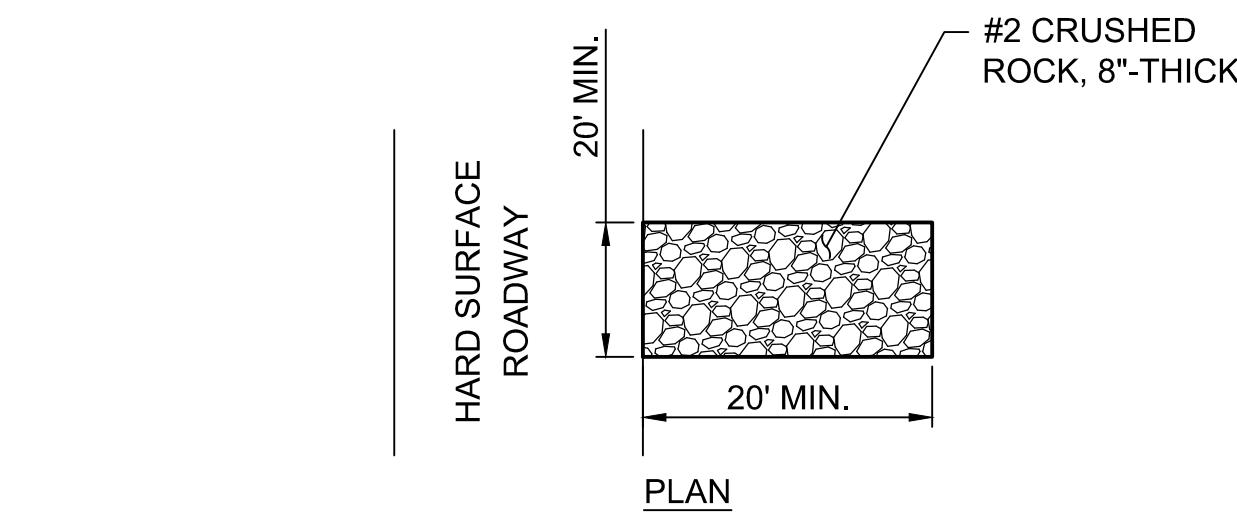


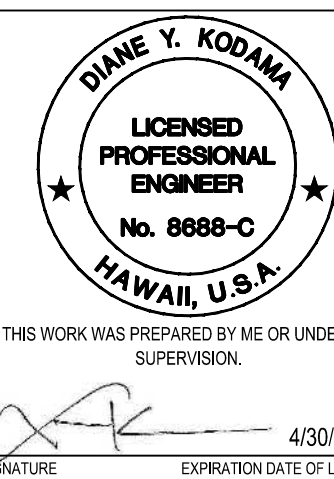
TABLE A GEOTEXTILE REQUIREMENTS	
PHYSICAL PROPERTY	REQUIREMENTS
GRAB TENSILE STRENGTH	220 LB (ASTM D1682)
ELONGATION FAILURE	60% (ASTM D1682)
MULLEN BURST STRENGTH	430 LB (ASTM D3768)
PUNCTURE STRENGTH	125 LB (ASTM D751, MODIFIED)
EQUIVALENT OPENING	SIZE 40-80 (U.S. STD SIEVE, CW-02215)

B1 STABILIZED CONSTRUCTION INGRESS-EGRESS

SCALE: NTS

[illegible]

ARCHITECT / ENGINEERS:

AECOM

Drawing Title	EROSION CONTROL DETAILS
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Project Title
GRAVESITE RESTORATION, MAUI VETERANS CEMETERY PHASE II
STATE OF HAWAII, DEPARTMENT OF DEFENSE, OFFICE OF VETERANS SERVICES

Location		
MAUI VETERANS CEMETERY, MAKAWAO, ISLAND OF MAUI, HAWAII		
Date	Checked	Drawn
JULY 3, 2017	D KODAMA	R ASARI

Project Number	CA-1208-D
Building Number	

Drawing Number
CG501
Dwg. 16 of 2



TREE DISPOSITION NOTES:

1. CONTRACTOR WILL BE RESPONSIBLE FOR LOCATING ALL EXISTING UTILITIES PRIOR TO THE START OF CONSTRUCTION OPERATIONS.
2. ALL TREE WORK MUST ADHERE TO AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI) - a300 TREE CARE STANDARDS AND ANSI - z133 SAFETY STANDARDS FOR TREE WORK.
3. THE CONTRACTOR WILL EMPLOY THE SERVICES OF A QUALIFIED ARBORIST FOR ALL TREE TRIMMING WORK PERFORMED FOR THE DURATION OF THE PROJECT. THE ARBORIST WILL HAVE A MINIMUM OF THREE (3) YEARS EXPERIENCE WITH TREE PROTECTION PROJECTS (OR RELATED WORK) AND BE CERTIFIED IN GOOD STANDING AS AN INTERNATIONAL SOCIETY OF ARBORICULTURE (ISA) CERTIFIED ARBORIST FOR A MINIMUM OF FIVE (5) YEARS. THE ARBORIST'S CERTIFICATION SHALL BE VALID AND CURRENT DURING CONSTRUCTION. CONTRACTOR WILL SUBMIT A COPY OF THE ISA ARBORIST CERTIFICATION OF GOOD STANDING OF FIVE (5) YEARS TO THE CONTRACTING OFFICER (OR HIS DESIGNATED REPRESENTATIVE) A MINIMUM OF SEVEN (7) DAYS PRIOR TO PERFORMING TREE TRIMMING WORK.
4. TREE PROTECTION ZONE:
 - 4.1. CONTRACTOR WILL INSTALL TREE PROTECTION ZONE FENCING AROUND ALL TREES DESIGNATED TO REMAIN WITHIN THE PROJECT LIMITS.
 - 4.2. THE ARBORIST WILL DETERMINE THE PLACEMENT OF THE TREE PROTECTION ZONE (TPZ), MARK APPROPRIATE DISTANCES TO PLACE FENCING ON A TREE PROTECTION PLAN (TPP) MAP, MARK ZONES FOR TPZ DIRECTLY ON SITE, AND ENSURE PROPER INSTALLATION OF TPZ FENCING.
 - 4.3. THE ARBORIST WILL OBSERVE TREE PRUNING, CROWN THINNING, CROWN LIFTING, AND ROOT PRUNING. THE CONTRACTOR WILL WORK CLOSELY WITH THE ARBORIST IF WORK MUST BE DONE WITHIN OR IN CLOSE PROXIMITY TO THE TPZ.
 - 4.4. GRASS REMOVAL AND LEVELING OF EXISTING GRADE WITHIN THE TPZ SHALL BE DONE BY HAND. NO MECHANICAL METHODS WILL BE ALLOWED.
 - 4.5. NO GRADING WORK WILL BE ALLOWED WITHIN THE TPZ WITHOUT CONSENT BY THE ARBORIST AND APPROVED CONTRACTING OFFICER (OR HIS DESIGNATED REPRESENTATIVE).
5. THE CONTRACTOR SHALL PRESENT AND REVIEW PROCEDURES FOR PERFORMING TREE-RELATED WORK AND ACTIVITIES IN THE AREAS AROUND TREES AND WITHIN THE TREE PROTECTION ZONE (TPZ), INCLUDING ACCESS ROUTES, STORAGE AREAS, AND MEASURES REQUIRED TO PROTECT TREES DURING THE CONSTRUCTION PERIOD TO THE CONTRACTING OFFICER (OR HIS DESIGNATED REPRESENTATIVE) PRIOR TO THE START OF CONSTRUCTION OPERATIONS.
6. CONTRACTOR WILL TAKE PROPER MEASURES TO PROTECT THE CROWN AND ROOT SYSTEMS OF THE TREES FROM UNNECESSARY DAMAGE DURING GRADING AND CONSTRUCTION OPERATIONS. WHEN POTENTIALLY DAMAGING CONSTRUCTION ACTIVITIES ARISE (E.G. REMOVAL OF MAJOR SUPPORT ROOTS, EXCESSIVE ROOT REMOVAL ON ONE OR MORE SIDES OF THE TREE, MAJOR CROWN BRANCH REMOVAL) THE ARBORIST WILL CONSULT WITH THE CONTRACTING OFFICER (OR HIS DESIGNATED REPRESENTATIVE) FOR APPROVAL PRIOR PROCEEDING WITH ANY PRUNING ACTIVITIES.
7. WORK SCHEDULE: NO ONSITE WORK IN PROXIMITY TO PROTECTED TREES, INCLUDING BUT NOT LIMITED TO DEMOLITION, GRADING, AND TRENCHING, SHALL NOT BE PERFORMED UNTIL APPROPRIATE TREE PRUNING WORK AND INSTALLATION OF THE TREE PROTECTION ZONE (TPZ) FENCE HAVE BEEN SATISFACTORILY COMPLETED UNDER THE SUPERVISION OF THE ARBORIST AND APPROVED BY THE CONTRACTING OFFICER (OR HIS DESIGNATED REPRESENTATIVE). THE CONTRACTOR WILL NOTIFY THE CONTRACTING OFFICER (OR HIS DESIGNATED REPRESENTATIVE) IN WRITING ONCE ALL TREE PROTECTION MEASURES HAVE BEEN FULLY AND PROPERLY IMPLEMENTED PRIOR TO STARTING CONSTRUCTION OPERATIONS.
8. SIGNAGE: PROJECT SITE ENTRY AREAS ARE TO BE PROMINENTLY MARKED WITH SIGNAGE INDICATING "TREE PROTECTION PROJECT - CHECK IN AT OFFICE IS REQUIRED PRIOR TO ANY DELIVERIES AND/OR COMMENCEMENT OF WORK".
9. TREE PRUNING: PRIOR TO ANY DEMOLITION OR CONSTRUCTION WORK, THE CONTRACTOR WILL PROPERLY PRUNE ALL TREES TO REMAIN WITHIN THE PROJECT SITE. ALL PRUNING WORK WILL BE DONE UNDER THE DIRECT SUPERVISION OF THE ARBORIST. PRUNING WORK WILL INCLUDE BUT IS NOT LIMITED TO THE FOLLOWING:
 - 9.1. CROWN CLEANING: REMOVAL OF DEAD, DISEASED, DAMAGED, AND/OR

INSECT INFESTED WOOD, CROSSING LIMBS, BROKEN AND OLD STUBS,
AND WATER SPROUTS.

- 9.2. CROWN RAISING: REMOVAL OF LOWER LIMBS TO PROVIDE CLEARANCE FOR CONSTRUCTION ACTIVITIES. PROPER CARE AND ATTENTION SHALL BE GIVEN TO THE STRUCTURAL STABILITY AND AESTHETICS OF THE TREE.
- 9.3. CROWN THINNING: SELECTIVE REMOVAL OF UNWANTED BRANCHES AND LIMBS TO PROVIDE LIGHT AND AIR PENETRATION, AND REDUCE THE WEIGHT ON HEAVILY LADEN BRANCH STRUCTURES.
- 9.4. UTILITY PRUNING: SELECTIVE REMOVAL OF LIMBS AND BRANCHES IN PROXIMITY TO UTILITY LINES.
10. ROOT PRUNING: ROOT PRUNING (AS NECESSARY) OUTSIDE THE TPZ SHALL BE DONE UNDER THE DIRECT SUPERVISION OF THE ARBORIST. ROOT PRUNING SHALL BE DONE PRIOR TO GRADING, EXCAVATION, OR TRENCHING OF ROOTS GREATER THAN TWO (2) INCHES IN DIAMETER BY CAREFULLY CUTTING EXPOSED SURFACE ROOTS, AND CAREFULLY EXPOSING SUB-SURFACE ROOTS MANUALLY OR WITH APPROVED POWER EQUIPMENT. ROOTS SHALL BE CUT WITH A SHARP POWER OR HAND SAW, ROCK SAW, NARROW TRENCHER WITH A SHARP BLADE, OR OTHER APPROVED ROOT PRUNING EQUIPMENT. ANY ROOTS DAMAGED DURING GRADING OR OTHER CONSTRUCTION ACTIVITY SHALL BE EXPOSED TO THE NEAREST SOUND TISSUE AND CUT CLEANLY WITH A SHARP SAW OR OTHER APPROVED EQUIPMENT.
11. LIMITATION OF CONSTRUCTION ACTIVITIES BENEATH TREE CROWN AND OUTSIDE OF THE TREE PROTECTION ZONE FENCING: ALL CONTRACTORS SHALL LIMIT ACTIVITIES BENEATH THE CROWN OF TREES TO ONLY THOSE ACTIVITIES EXPLICITLY REQUIRED TO COMPLETE THE CONSTRUCTION ACTIVITIES AS SPECIFIED UNDER AND/OR ADJACENT TO TREE CROWNS. ALL EXCAVATION WORK DONE BENEATH TREE CROWNS SHALL BE PERFORMED UNDER THE DIRECT SUPERVISION OF THE ARBORIST. MATERIAL AND TOPSOIL STOCKPILING, VEHICLE PARKING, TEMPORARY ROADWAYS, CONSTRUCTION MATERIAL MIXING OR DUMPING, PORTABLE LATRINES, AND FIELD OFFICES WILL NOT BE TEMPORARILY OR PERMANENTLY LOCATED BENEATH TREE CROWNS EXCEPT IN AREAS WITH PRE-EXISTING PAVING AND/OR AREAS SPECIFICALLY APPROVED BY THE ARBORIST.
12. TREE MAINTENANCE: CONTRACTOR WILL BE RESPONSIBLE FOR MAINTAINING EXISTING TREES WITHIN TPZ FENCING THROUGHOUT CONSTRUCTION. CONTRACTOR'S RESPONSIBILITIES WILL INCLUDE BUT IS NOT LIMITED TO WATERING, PRUNING, AND FERTILIZING OF THE TREES. THE CONTRACTOR WILL WEED WITHIN THE TPZ FENCING ON A REGULAR BASIS AND REPLENISH WOOD MULCH AS NECESSARY TO MAINTAIN A FOUR (4) INCH DEPTH.
13. IF TREES OTHER THAN THOSE SPECIFICALLY DESIGNATED FOR REMOVAL ARE DAMAGED BEYOND SURVIVAL CONDITIONS AS DETERMINED BY THE ARBORIST AND/OR CONTRACTING OFFICER (OR HIS DESIGNATED REPRESENTATIVE), THE CONTRACTOR WILL REMOVE SUCH TREE(S) AND REPLACE THE TREE(S) WITH THE SAME SPECIES AND SIZE. CONTRACTOR WILL MAINTAIN THE REPLACEMENT TREE(S) FOR THE DURATION OF CONSTRUCTION OR 90 DAYS, WHICHEVER IS GREATER, AT NO ADDITIONAL COST. CONTRACTOR SHALL APPLY THE SAME WARRANTY AS NEW TREES FOR EXISTING TREES.
14. CONTRACTOR SHALL REMOVE ALL TPZ FENCING PRIOR TO GRASSING OPERATIONS. CONTRACTOR WILL CONTINUE TO ADHERE TO TPZ PROCEDURE BENEATH TREE CROWNS SUCH AS, BUT NOT LIMITED TO, NO STORAGE OF EQUIPMENT OR MATERIALS, VEHICLE PARKING, CONSTRUCTION MATERIAL MIXING OR DUMPING, PORTABLE LATRINES, FIELD OFFICES, AND EXCESSIVE FOOT TRAFFIC.

LIST OF ABBREVIATIONS:

ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
ISA	INTERNATIONAL SOCIETY OF ARBORICULTURE
TPZ	TREE PROTECTION ZONE
TPP	TREE PROTECTION PLAN

three inches = one foot

one and one half inches = one foot

one inch = one foot

three quarters inch = one foot

one half inch = one foot

three eighths inch = one foot

one quarter inch = one foot

a eighth inch = one foot

PROJECTS\MAUI\Statewide_Gravesite_Restoration_MakawaoVetPH2_2922-06\CAD_Sheets\MVC2_LD-01.dwg 8-04-17 11:53:37 AM pwichman

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ARCHITECT / ENGINEERS:



Drawing Title
TREE DISPOSITION NOTES

Approved:
LTC. NEAL S. MITSUYOSHI
CHIEF ENGINEERING OFFICER, CONTRACTING OFFICER
DEPARTMENT OF DEFENSE, ENGINEERING OFFICE

Project Title
GRAVESITE RESTORATION FOR VETERANS CEMETERIES STATEWIDE STATE OF HAWAII, DEPARTMENT OF DEFENSE, OFFICE OF VETERANS SERVICES

Location	MAUI VETERANS CEMETERY, MAKAWAO, ISLAND OF MAUI, HAWAII
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Date
JULY 28, 2017

☐ Checked☐ Drawn

Project Number

Building Number

Drawing Number

LD-01

Dwg. 17 ' of 26



TREE PROTECTION ZONE:

1.
- TREE PROTECTION ZONE FENCING SHALL BE A MINIMUM TEN (10) FEET FROM THE TRUNK.
2.
- NO TRENCHING FOR UTILITIES WILL BE ALLOWED WITHIN THE TREE PROTECTION ZONE. UNDERGROUND UTILITIES WHICH CANNOT BE ROUTED AROUND THE TREE PROTECTION ZONE MAY BE TUNNELED OR BORED THROUGH THE ZONE. THE TUNNEL OR BORE SHALL BE AT LEAST FOUR (4) FEET BELOW EXISTING GRADE. THE TUNNEL OR BORE SHALL MAINTAIN A MINIMUM TEN (10) FOOT HORIZONTAL DISTANCE FROM TREES WITHIN THE TREE PROTECTION ZONE.
3.
- FENCES SHALL BE ERECTED AT THE PERIMETER OF THE TREE PROTECTION ZONE (TPZ) FOR ALL TREES IDENTIFIED TO REMAIN ON PLAN. THE TPZ SHALL BE CONSTRUCTED OF A FOUR (4) FOOT HIGH ORANGE PLASTIC MESH (OR APPROVED EQUIVALENT) SUPPORTED ON MINIMUM SIX (6) FOOT LONG STEEL T-POST. ATTACH 6X6 WWM TO INTERIOR OF ORANGE PLASTIC MESH FOR ADDITIONAL SUPPORT. ORANGE PLASTIC FENCING AND 6X6 WWM SHALL BE SECURELY FASTENED TO THE POSTS TO MINIMIZE ANY SAGGING. FENCE SHALL BE INSTALLED PRIOR TO ANY DEMOLITION WORK AND SHALL BE REMOVED AFTER CONSTRUCTION IS COMPLETE. ATTACH FOUR (4) SIGNS, EQUALLY SPACED, ON THE TPZ FENCING. THE SIGNS SHALL READ "TREE PROTECTION ZONE [TPZ] - NO GRADE CHANGE, STORAGE OR EQUIPMENT PERMITTED WITHIN TPZ".
4.
- FOR THE DURATION OF CONSTRUCTION WITHIN THE TPZ FENCING OF THE TREES TO REMAIN THERE MUST BE:

-

NO CHANGES, ALTERATION OR DISTURBANCE TO THE GRADE BY ADDING FILL, EXCAVATING OR SCRAPING EXCEPT AS NOTED ON PLANS;

-

NO STORAGE ON CONSTRUCTION MATERIALS OR EQUIPMENT;

-

NO STOCKPILING OF ANY CONSTRUCTION MATERIALS OR EXCAVATED MATERIALS;

-

NO DISPOSAL OF ANY LIQUIDS (e.g. CONCRETE SLEUTH, GAS, OIL, PAINT);

-

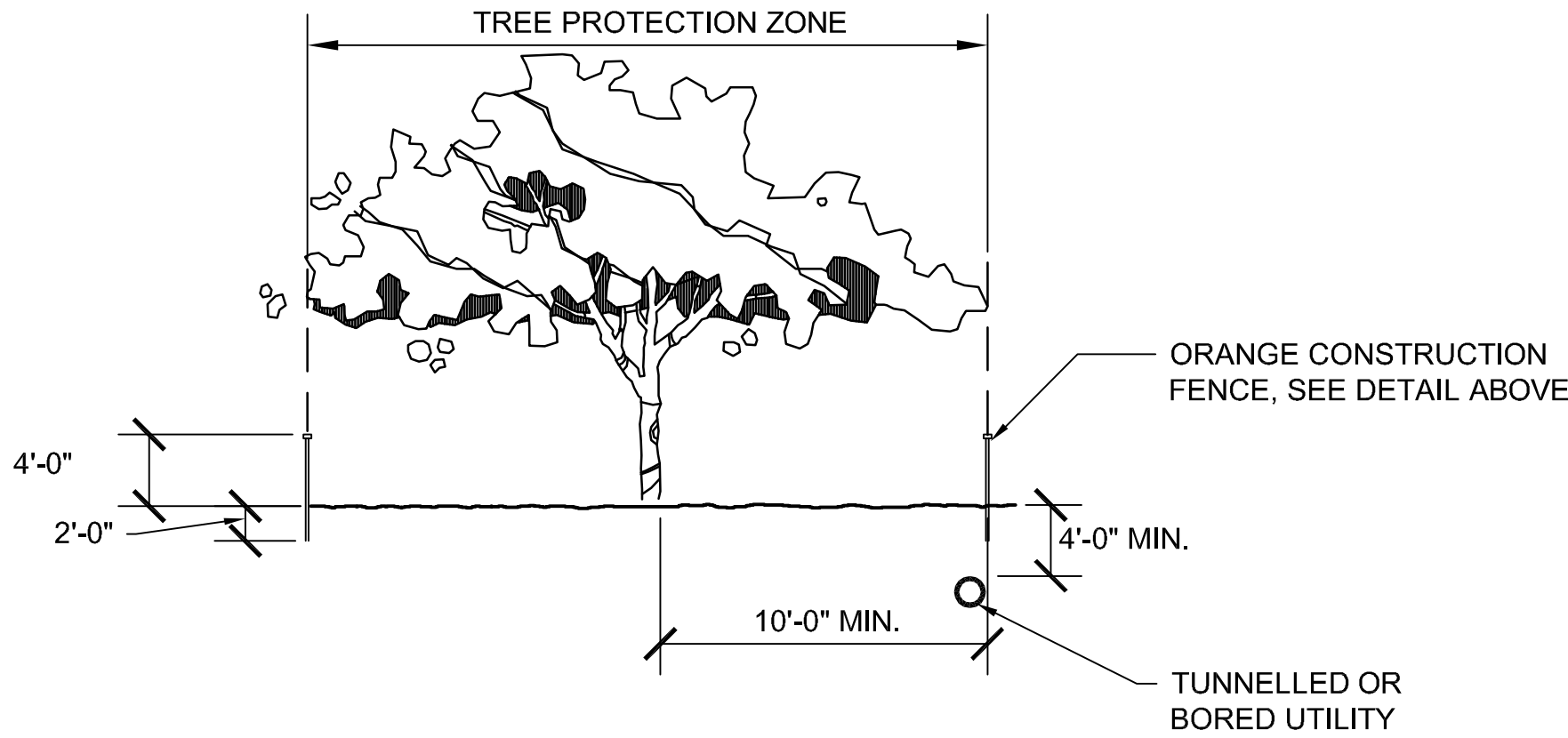
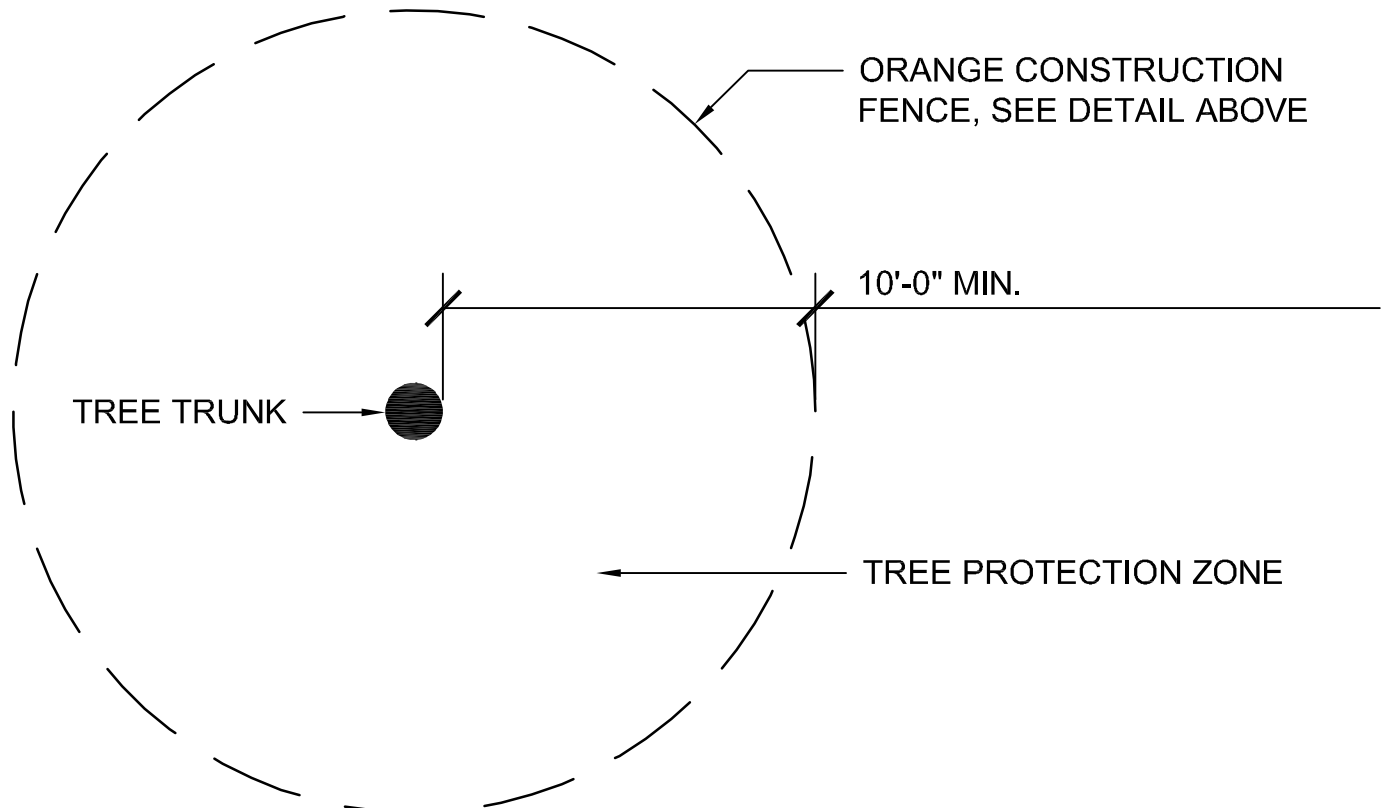
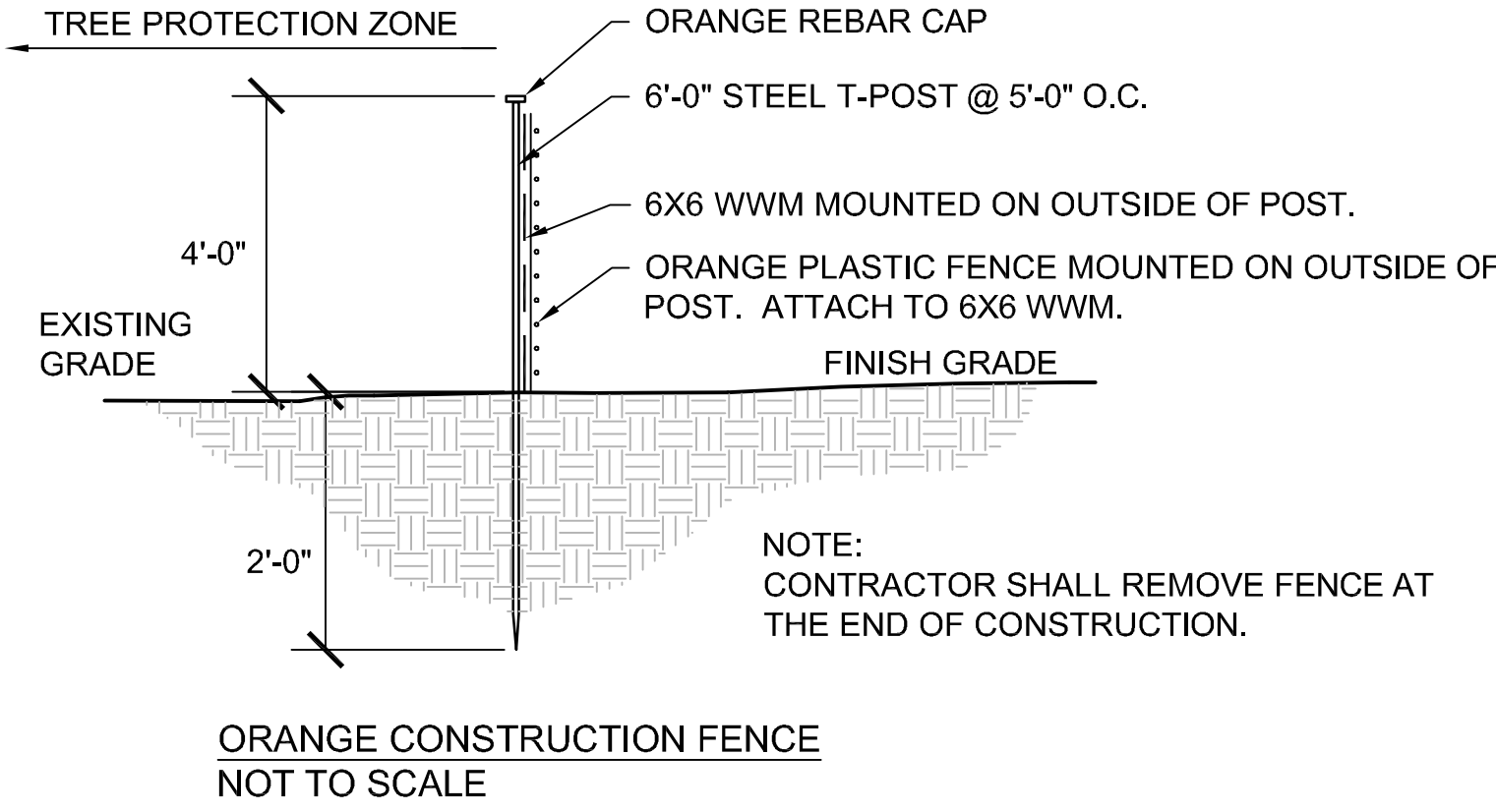
NO VEHICULAR TRAFFIC, EQUIPMENT OR EXCESSIVE PEDESTRIAN TRAFFIC;

-

NO ATTACHMENT OF ANY WIRES, ROPES, LIGHTS OR ANY OTHER SUCH ATTACHMENT OTHER THAN THOSE OF A PROTECTIVE NATURE TO ANY TREE TO BE PRESERVED;

-

NO CLEANING OF EQUIPMENT OR MATERIAL UNDER THE CANOPY OF ANY TREE OR GROUP OF TREES TO BE PRESERVED
5.
- TREE ROOT INJURY: IF DAMAGE TO TREE(S) AND/OR TREE ROOTS OCCUR DURING DEMOLITION OR CONSTRUCTION ACTIVITY, THE RESPONSIBLE PARTY SHALL IMMEDIATELY REPORT THE INCIDENT TO THE CONTRACTING OFFICER AND ARBORIST. THE ARBORIST SHALL EVALUATE THE INJURY AND APPLY APPROPRIATE TREATMENT AFTER CONSULTING WITH THE CONTRACTING OFFICER. THE CONTRACTOR SHALL SUBMIT A WRITTEN REPORT OF THE TREE INJURY AND TREATMENT TO THE CONTRACTING OFFICER.
6.
- INSTALL A TWO (2) INCH LAYER OF ORGANIC MULCH WITHIN THE TREE PROTECTION ZONE FENCING. MULCH SHALL NOT EXCEED TWO (2) INCH PARTICLE SIZE.



LIST OF ABBREVIATIONS:

TPZ	TREE PROTECTION ZONE
O.C.	ON CENTER
MIN.	MINIMUM

D1 TREE PROTECTION DETAIL

NOT TO SCALE

ARCHITECT / ENGINEERS:



Drawing Title
TREE PROTECTION DETAILS

Approved:
LTC. NEAL S. MITSUYOSHI
CHIEF ENGINEERING OFFICER, CONTRACTING OFFICER
DEPARTMENT OF DEFENSE, ENGINEERING OFFICE

Project Title
GRAVESITE RESTORATION FOR VETERANS CEMETERIES STATEWIDE,
STATE OF HAWAII, DEPARTMENT OF DEFENSE,
OFFICE OF VETERANS SERVICES

Location
MAUI VETERANS CEMETERY, MAKAWAO, ISLAND OF MAUI, HI

Date
JULY 28, 2017

Checked

Drawn

Project Number
-

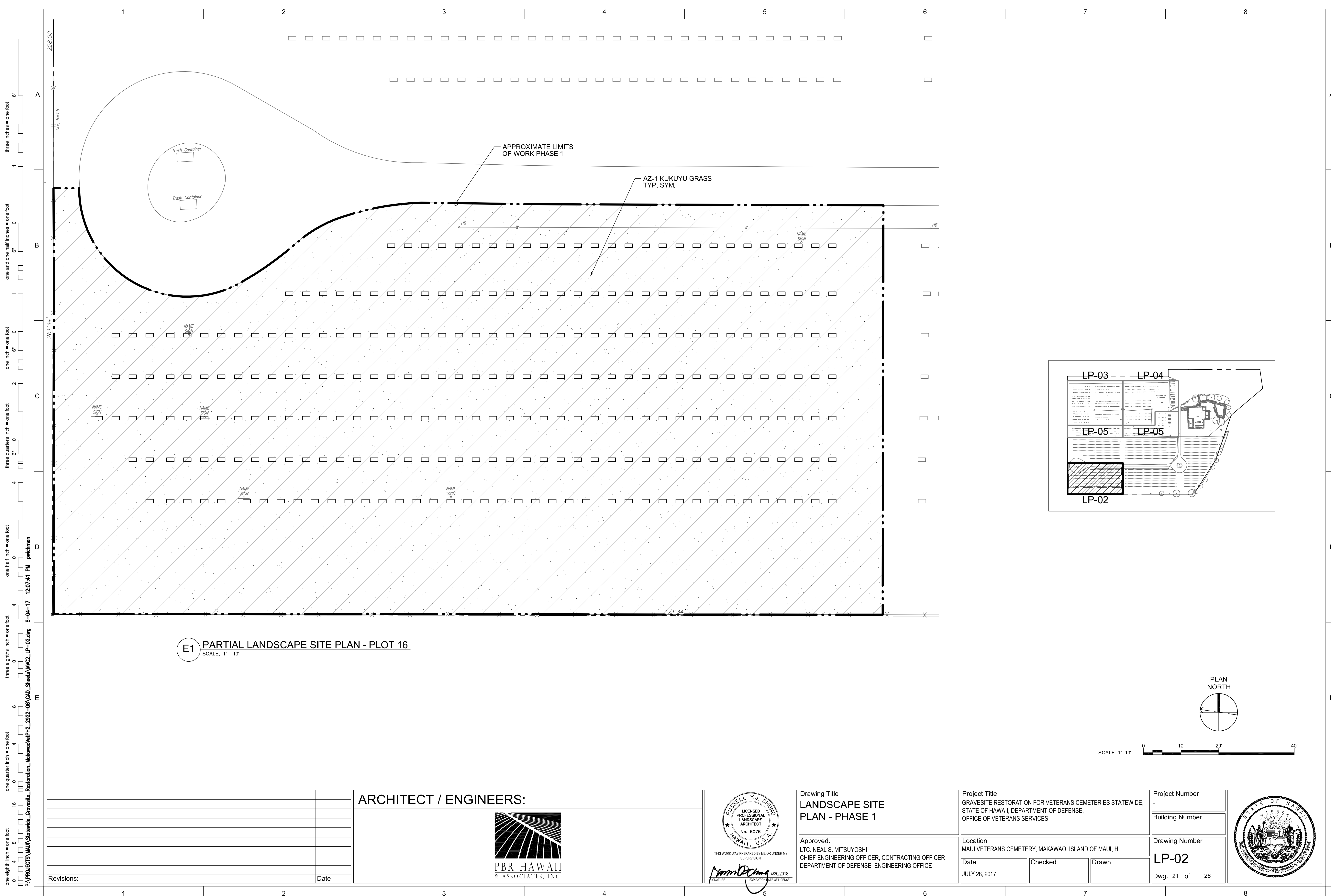
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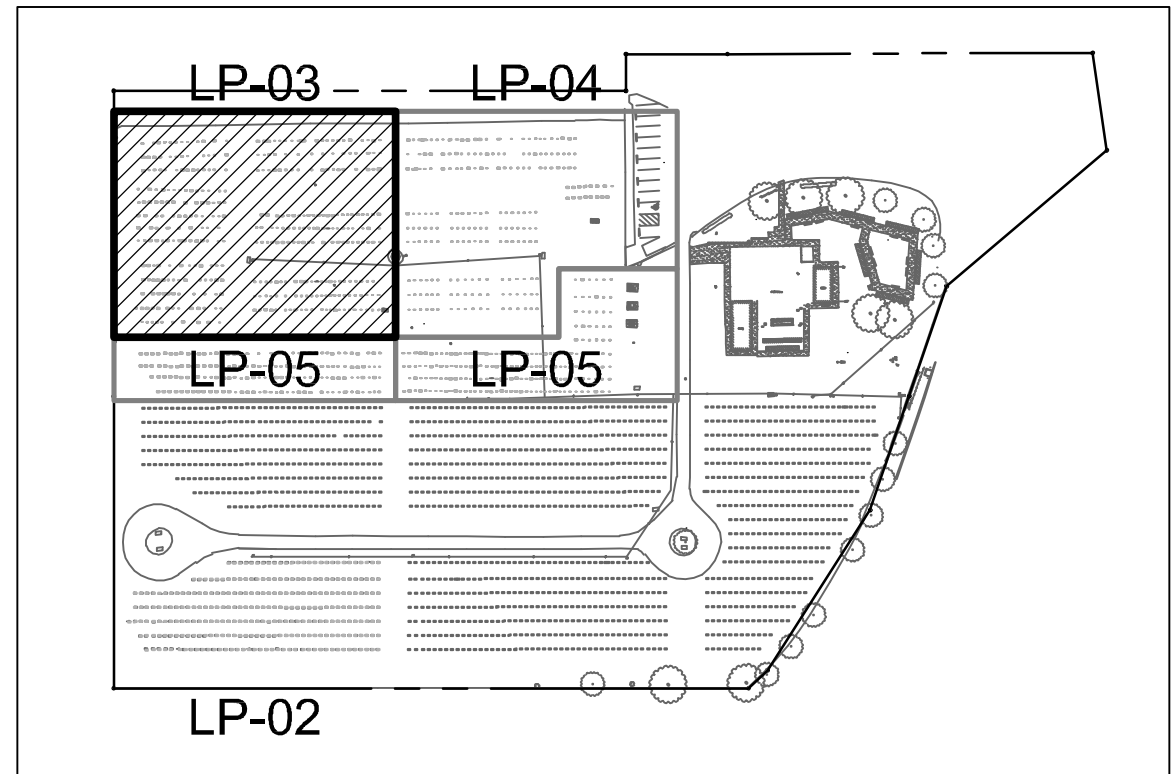
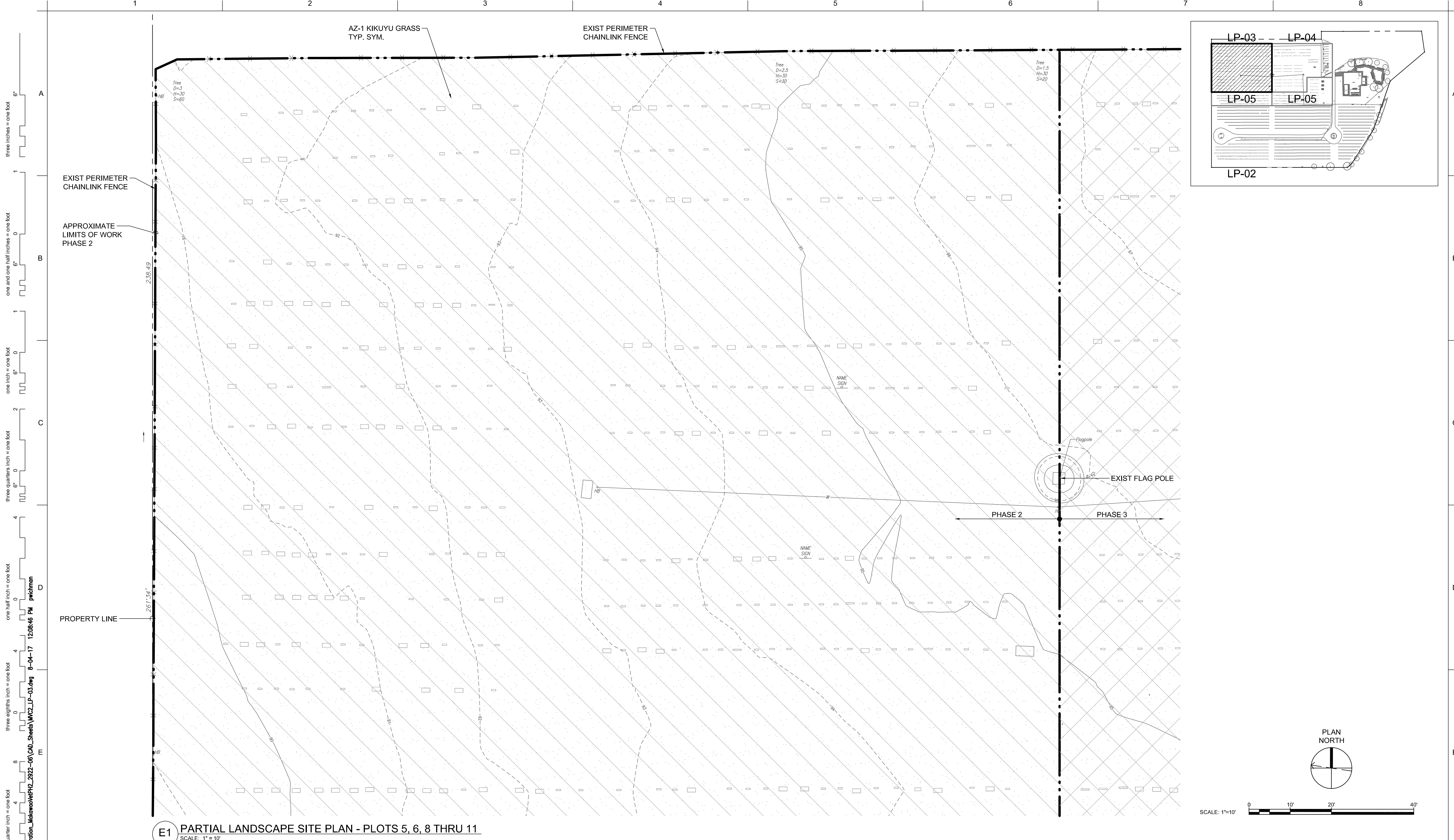
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LD-03

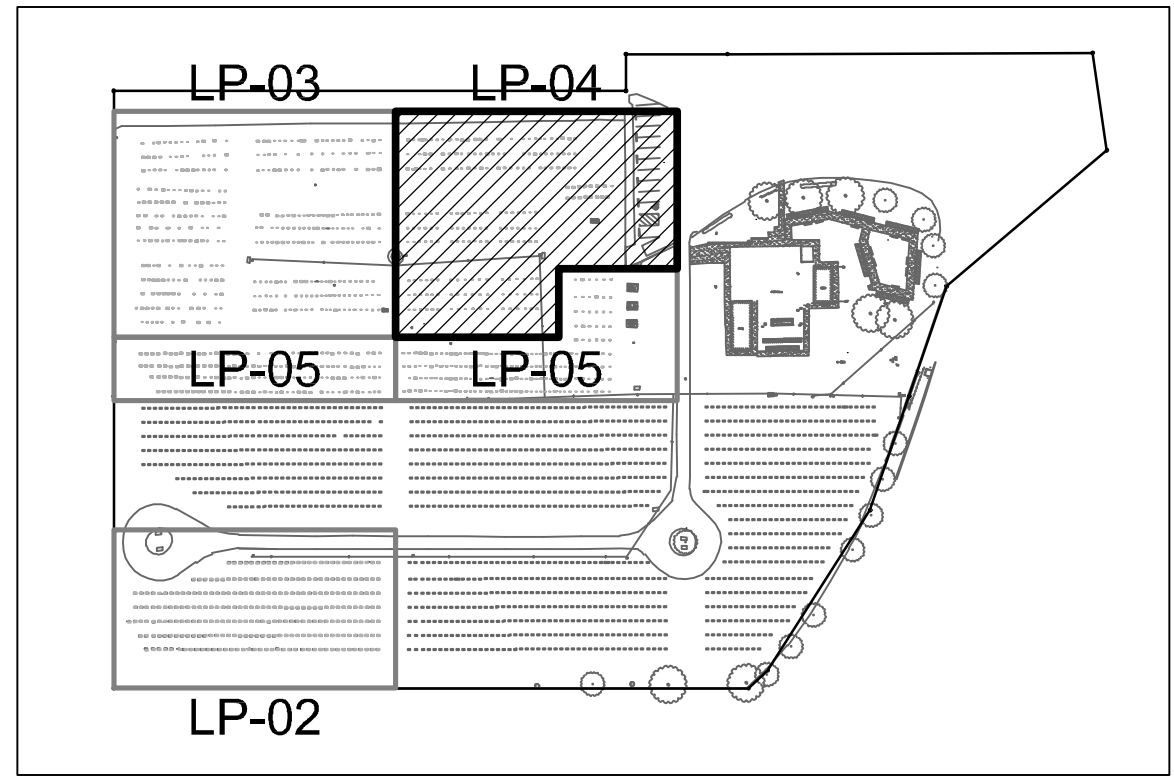
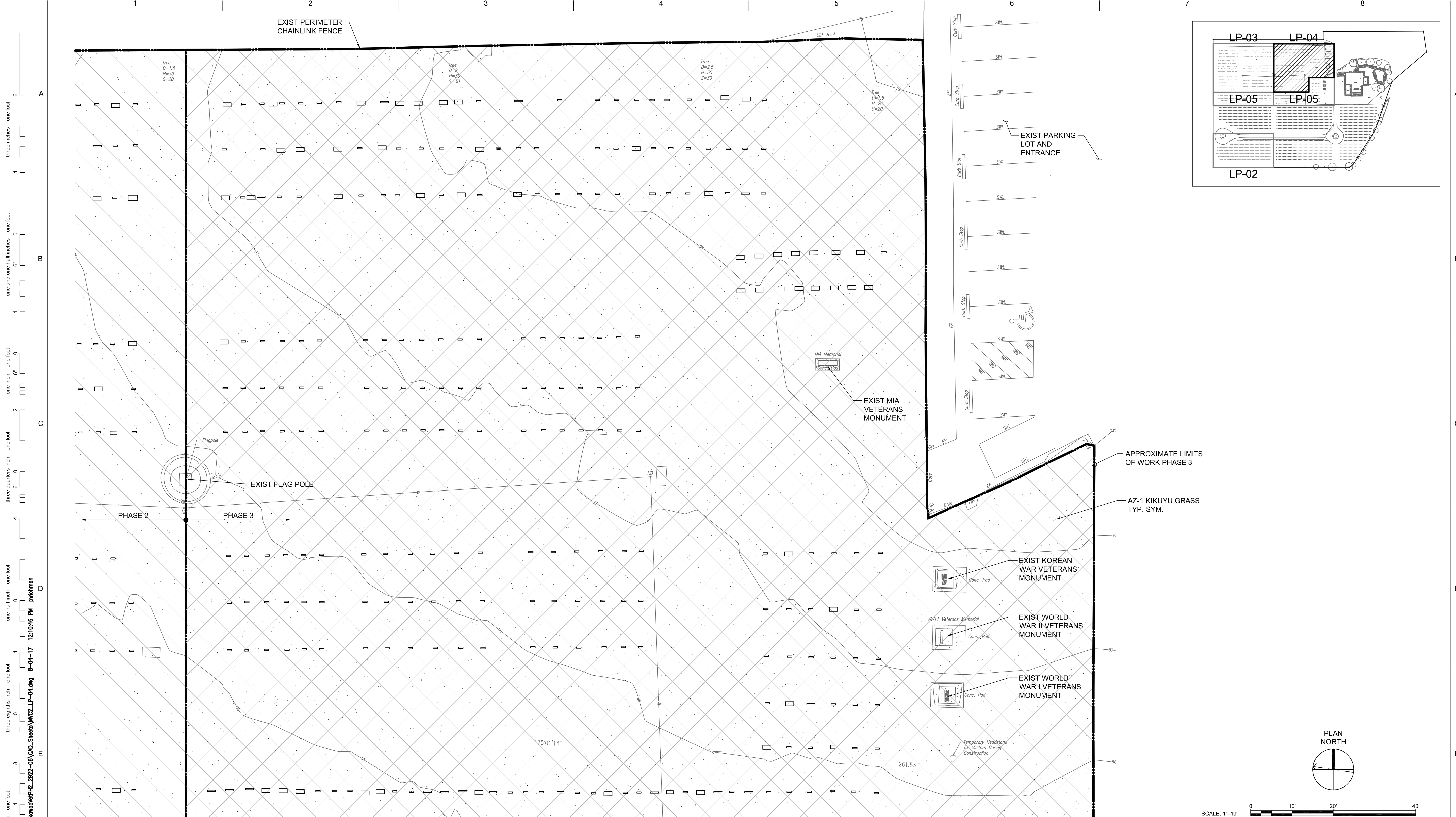
Dwg. 19 of 26







Revisions:	Date	ARCHITECT / ENGINEERS:			Drawing Title LANDSCAPE SITE PLAN - PHASE 2		Project Title GRAVESITE RESTORATION FOR VETERANS CEMETERIES STATEWIDE, STATE OF HAWAII, DEPARTMENT OF DEFENSE, OFFICE OF VETERANS SERVICES		Project Number -	
					Approved: LTC. NEAL S. MITSUYOSHI CHIEF ENGINEERING OFFICER, CONTRACTING OFFICER DEPARTMENT OF DEFENSE, ENGINEERING OFFICE		Location MAUI VETERANS CEMETERY, MAKAWAO, ISLAND OF MAUI, HI		Building Number	
				Date JULY 28, 2017		Checked		Drawing Number LP-03		
				Signature <i>Russell Y.J. Chung</i>		Drawn		Dwg. 22 of 26		

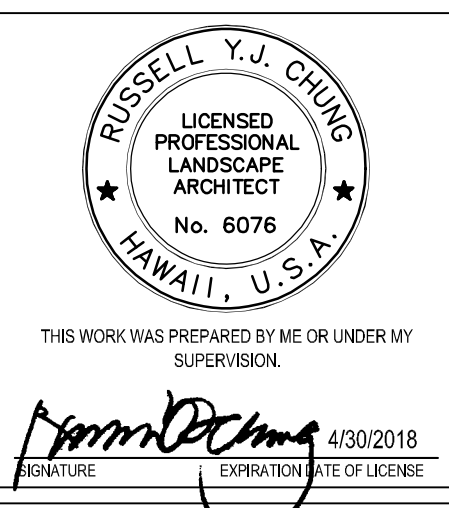


E1 PARTIAL SITE PLAN - PLOTS 3, 4, 7, MIA
SCALE: 1" = 10'

Revisions:		Date
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ARCHITECT / ENGINEERS:

PBR HAWAII & ASSOCIATES, INC.



Drawing Title
LANDSCAPE SITE PLAN - PHASE 3

Approved:
LTC. NEAL S. MITSUYOSHI
CHIEF ENGINEERING OFFICER, CONTRACTING OFFICER
DEPARTMENT OF DEFENSE, ENGINEERING OFFICE

Project Title
GRAVESITE RESTORATION FOR VETERANS CEMETERIES STATEWIDE,
STATE OF HAWAII, DEPARTMENT OF DEFENSE,
OFFICE OF VETERANS SERVICES

Location
MAUI VETERANS CEMETERY, MAKAWAO, ISLAND OF MAUI, HI

Date
JULY 28, 2017

Checked

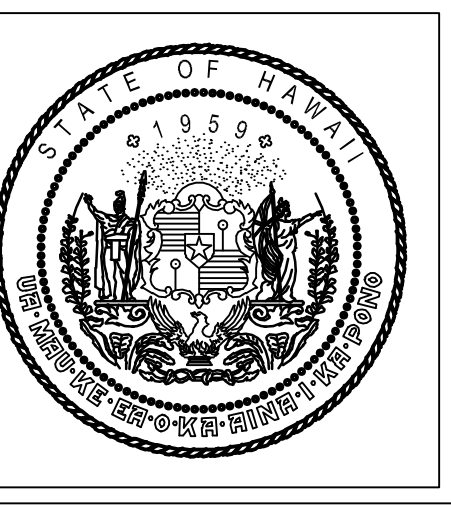
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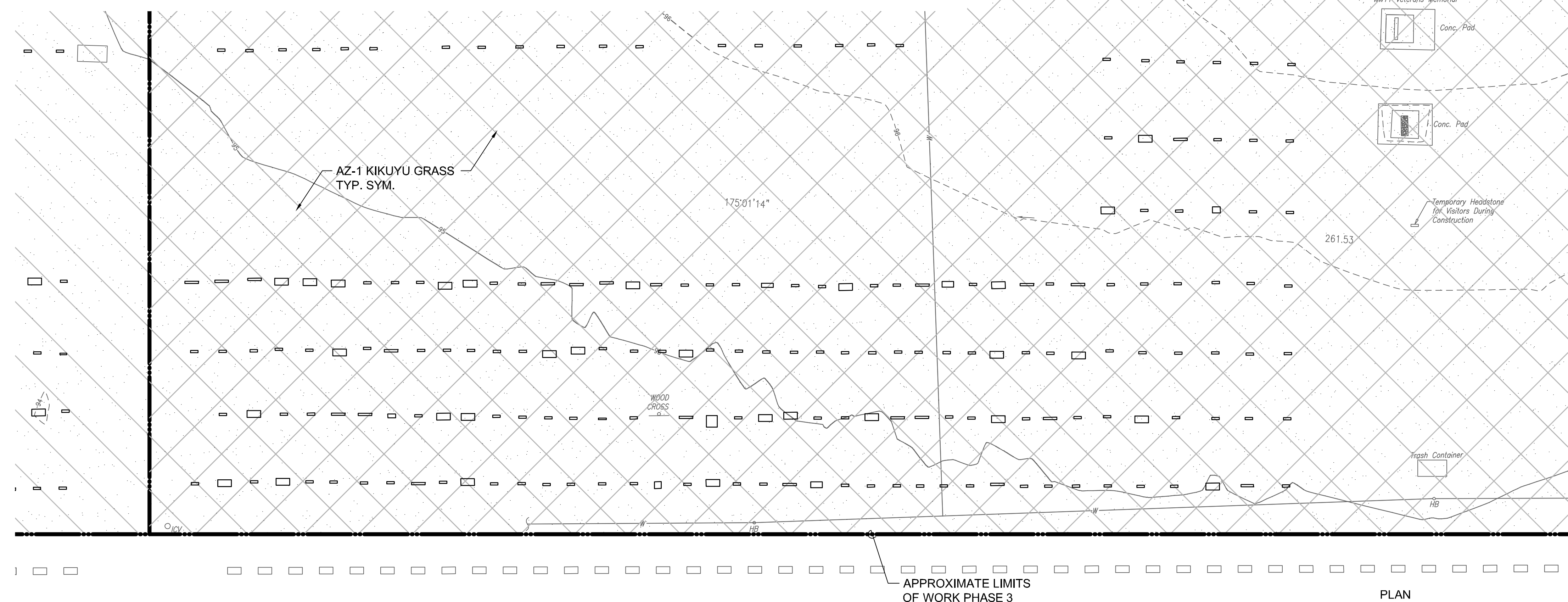
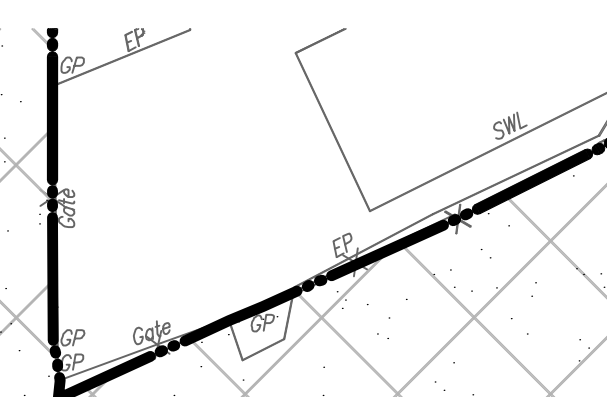
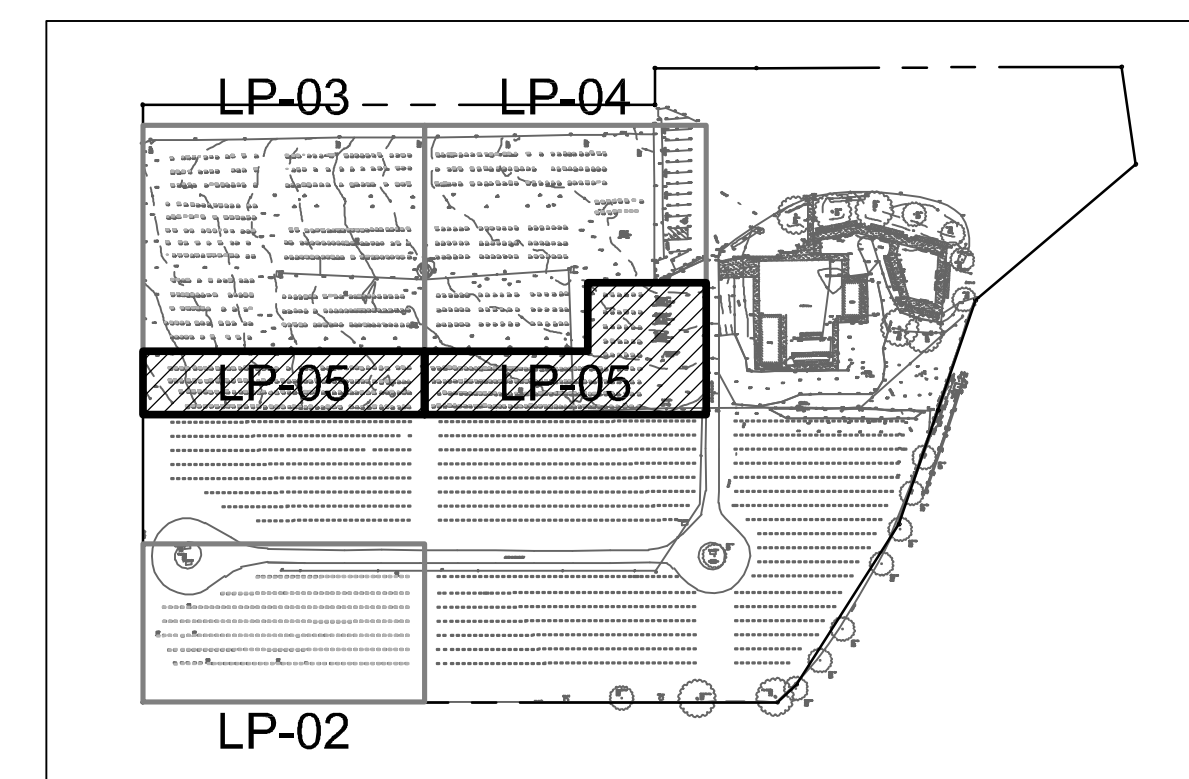
Project Number
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Building Number

Drawing Number
LP-04

Dwg. 23 of 26

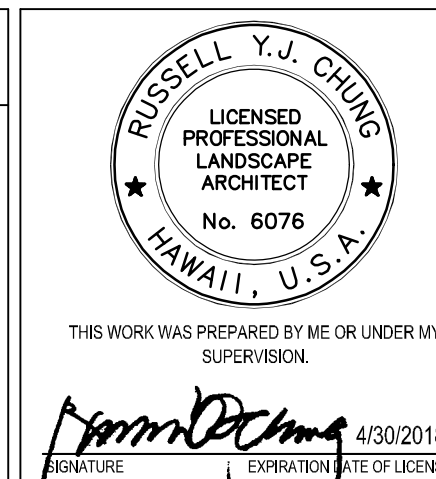




E1 PARTIAL SITE PLAN - PLOTS 1 AND 2
SCALE: 1" = 10'

[illegible]

ARCHITECT / ENGINEERS:



Drawing Title
LANDSCAPE SITE
PLAN - PHASE 2 & 3

Approved:
LTC. NEAL S. MITSUYOSHI
CHIEF ENGINEERING OFFICER, CONTRACTING OFFICER
DEPARTMENT OF DEFENSE, ENGINEERING OFFICE

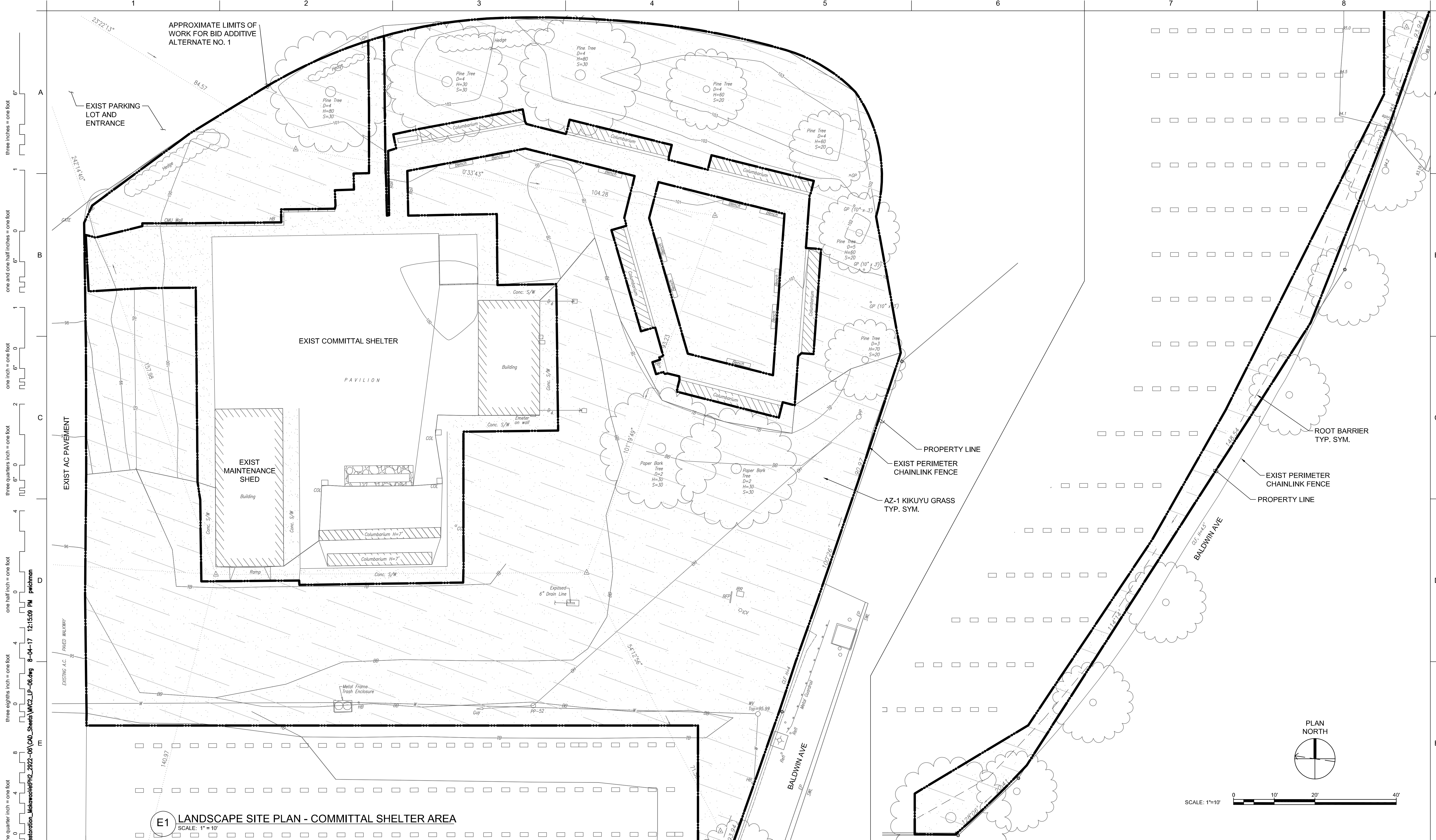
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Location		
MAUI VETERANS CEMETERY, MAKAWAO, ISLAND OF MAUI, HI		
Date	Checked	Drawn
JULY 28, 2017		

Project Number	-
Building Number	

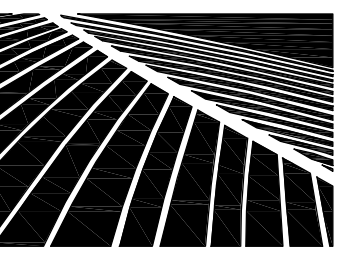
Drawing Number
LP-05
Dwg. 24 of 26

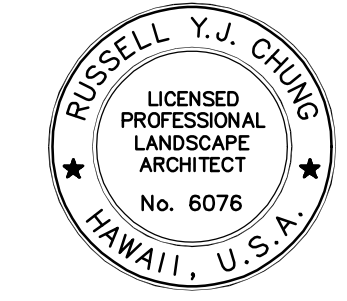





Revisions:		Date
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ARCHITECT / ENGINEERS:


PBR HAWAII
& ASSOCIATES, INC.


THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

EXPIRATION DATE OF LICENSE: 4/30/2018

Drawing Title
LANDSCAPE SITE PLAN - COMMITTAL SHELTER AREA

Approved:
LTC. NEAL S. MITSUYOSHI
CHIEF ENGINEERING OFFICER, CONTRACTING OFFICER
DEPARTMENT OF DEFENSE, ENGINEERING OFFICE

Project Title
GRAVESITE RESTORATION FOR VETERANS CEMETERIES STATEWIDE,
STATE OF HAWAII, DEPARTMENT OF DEFENSE,
OFFICE OF VETERANS SERVICES

Location
MAUI VETERANS CEMETERY, MAKAWAO, ISLAND OF MAUI, HI

Date
JULY 28, 2017

Checked

Drawn

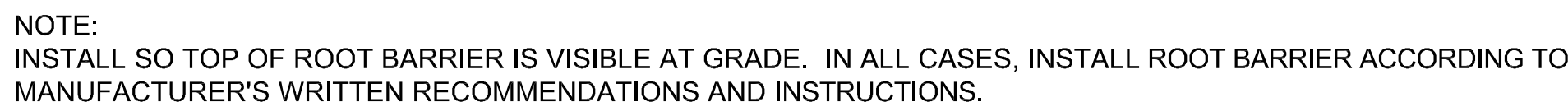
Project Number
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Building Number

Drawing Number
LP-06

Dwg. 25 of 26





NOT TO SCALE

MISCELLANEOUS ITEMS		
23,265 SF	ORGANIC SOIL AMENDMENT (1" LAYER OVER ALL PLANTING AREAS)	
315 CY	IMPORTED SCREENED TOPSOIL (4" LAYER OVER ALL PLANTING AREAS)	
160 LF	PLASTIC ROOT BARRIER (36" DEPTH, 20 LF PER TREE MINIMUM)	