PROJECT TEAM

ARCHITECT:
ARCHITECTS HAWAII, LTD.
733 BISHOP STREET, SUITE 3100
HONOLULU, HAWAII 96813
808.523.9636

SURVEYOR:
CONTROL POINT SURVEYING, INC.
1150 S. KING ST. SUITE 1200
HONOLULU, HAWAII 96814
808.591.2022

CIVIL ENGINEER:
BELT COLLINS HAWAII
2153 NORTH KING STREET, SUITE 200
HONOLULU, HAWAII 96819
808.521.5361

ENVIRONMENTAL:
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2006 KALIHI STREET
HONOLULU, HAWAII 96819
808.841.5064

GEOTECHNICAL ENGINEER:
HIRATA & ASSOCIATES
99-1433 KOAHA PLACE
AIEA, HAWAII 96701
808.486.0787

STRUCTURAL ENGINEER:
SHIGEMURA, LAU, SAKANASHI, HIGUCHI & ASSOCIATES
1916 YOUNG STREET, SUITE 200
HONOLULU, HAWAII 96826
808.942.9100

ATFP/BLAST CONSULTANT:
HINMAN CONSULTING ENGINEERS, INC.
ONE BUSH STREET, SUITE 510
SAN FRANCISCO, CA., 94104
415.621.4423

MECHANICAL ENGINEER:
THERMAL ENGINEERING CORPORATION
512 KALIHI STREET
HONOLULU, HAWAII 96819
808.848.6966

ELECTRICAL ENGINEER:
ECS, INC.
615 PIIKOI STREET, SUITE 207
HONOLULU, HAWAII 96814
808.591.8181

TELCOMMUNICATIONS ENGINEER:
FUTURE COMMUNICATIONS CONSULTING, INC.
95-1109 AHOKA STREET
MILILANI, HI 96789
808.744.9748

COST ESTIMATOR:
RIDER LEVETT BUCKNALL
1001 BISHOP STREET, SUITE 1340
HONOLULU, HI 96813
808.521.2641

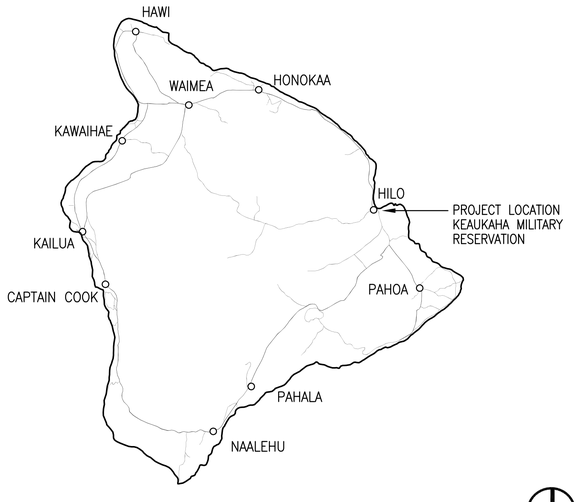
STATE OF HAWAI`I DEPARTMENT OF DEFENSE
HAWAI`I ARMY NATIONAL GUARD (HIARNG)

BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS

KEAUKAHA MILITARY RESERVATION (KMR), HILO, HAWAI`I
1046 LEILANI STREET, BUILDING 621
TMK: (3) 2-1-012 : 003

FINAL DESIGN SUBMITTAL
30 SEPTEMBER, 2019

LOCATION MAP



ISLAND OF HAWAI`I

VICINITY MAP



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SIGNATURE
4/30/2020
EXPIRATION DATE

SYM	DESCRIPTION	DATE	APPR

SUBMITTAL PHASE: FINAL SUBMITTAL
SUBMITTAL DATE: 30 SEPTEMBER 2019
DES: XXX DRW: XXX CHK: XXX

STATE OF HAWAI`I
FACILITY MANAGEMENT OFFICE
DEPARTMENT OF DEFENSE
HAWAII ARMY NATIONAL GUARD
DESIGN AND PROJECT MANAGEMENT BRANCH
KEAUKAHA MILITARY RESERVATION – B621
HILO, HAWAI`I
HAWAI`I ARMY NATIONAL GUARD (HIARNG)
BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS
PROJECT TITLE, PROJECT TEAM, LOCATION MAP, VICINITY MAP

SCALE: AS NOTED
STATE PROJECT NO. CA-1212-C3
FEDERAL PROJECT NO. 15130007
SHEET 1 of 126
G-001

ABBREVIATIONS

SYMBOLS

&	AND
∠	ANGLE
@	AT
℄	CENTERLINE
[	CHANNEL
Ø	DIAMETER, ROUND
%	PERCENT
#	POUND, NUMBER
PL	PROPERTY LINE

A

A–	ACCESSIBLE
AB	ANCHOR BOLT
ABV	ABOVE
A/C	AIR CONDITIONING
AC	ASPHALTIC CONCRETE
ACOUS	ACOUSTICAL
AD	AREA DRAIN
ADA	AMERICANS WITH DISABILITIES ACT
ADJ	ADJUSTABLE, ADJACENT
AFF	ABOVE FINISH FLOOR
AGGR	AGGREGATE
ALUM	ALUMINUM
ALT	ALTERNATE
ANOD	ANODIZED
APPROX	APPROXIMATE
ARCH	ARCHITECT, ARCHITECTURAL
ASPH	ASPHALT

B

BC	BOTTOM OF CURB
BD	BOARD
BLDG	BUILDING
BLKG	BLOCKING
BM	BEAM, BENCHMARK
BMH	BROOM/MOP HOLDER
BOT	BOTTOM
BW	BOTTOM OF WALL

C

CAB	CABINET
CAL	CALIPER
CG	CORNER GUARD
CI	CAST IRON
CJ	CONTROL JOINT
CLG	CEILING
CLG	CEILING
CLO	CLOSET
CLR	CLEAR, CLEARANCE
CMU	CONCRETE MASONRY UNIT(S)
CNTR	COUNTER
CO	CLEAN OUT
COL	COLUMN
CONC	CONCRETE
COND	CONDITION
CONN	CONNECTION
CONSTR	CONSTRUCTION
CONT	CONTINUOUS
CONTR	CONTRACTOR
COORD	COORDINATE
CORR	CORRIDOR, CORRUGATED
CT	CERAMIC TILE

D

D	DEEP, DEPTH
DA	DOUBLE–ACTING
DBL	DOUBLE
DEFS	DIRECT APPLIED EXTERIOR FINISH
DET	DETAIL
DF	DRINKING FOUNTAIN
DI	DRAIN INLET
DIA	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DISP	DISPENSER
DN	DOWN
DS	DOWNSPOUT
DSP	DRY STANDPIPE
DWG	DRAWING
DWR	DRAWER

E

(E)	EXISTING
E	EAST
EA	EACH
EC	EXPOSED CEILING
EFS	DIRECT APPLIED EXTERIOR FINISH SYSTEM
EIFS	EXTERIOR INSULATION & FINISH SYSTEM
EJ	EXPANSION JOINT
EL	ELEVATION
ELEC	ELECTRICAL
ELEV	ELEVATOR
EMER	EMERGENCY
ENCL	ENCLOSURE
EPB	ELECTRICAL PANELBOARD
EQ	EQUAL
EQUIP	EQUIPMENT
EWC	ELECTRIC WATER COOLER
EWH	ELECTRICAL WATER HEATER
EXH	EXHAUST
EXP	EXPANSION
EXIST	EXISTING
EXT	EXTERIOR

F

FA	FIRE ALARM, FRESH AIR
FB	FLAT BAR
FCU	FAN COIL UNIT
FD	FLOOR DRAIN
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FFEL	FINISH FLOOR ELEVATION
FIN	FINISH, FINISHED
FL	FLOOR
FLASH	FLASHING
FLDG	FOLDING
FLR	FLOOR
FLUOR	FLUORESCENT
FOF	FACE OF FINISH
FOS	FACE OF STUD(S)
FP	FIREPROOFING
FR	FRAME
FRTW	FIRE RETARDANT TREATED WOOD
FT	FOOT, FEET
FTG	FOOTING

G

GA	GAUGE
GALV	GALVANIZED
GB	GRAB BAR
GL	GLASS
GND	GROUND
GR	GRADE
GYP	GYPSUM

H

H	HIGH
HB	HOSE BIBB
HC	HOLLOW CORE
HDWD	HARDWOOD
HDW	HARDWARE
HIARNG	HAWAII ARMY NATIONAL GUARD
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HP	HIGH POINT
HR	HOUR
HT	HEIGHT

I

ID	INSIDE DIAMETER / DIMENSION
IGU	INSULATING GLASS UNIT
INCL	INCLUDE, INCLUDED, INCLUDING, INCLUSIVE
INSUL	INSULATION
INT	INTERIOR
INV	INVERT

J

JAN	JANITOR
JT	JOINT

K

KD	KNOCKED DOWN
KO	KNOCK–OUT

L

L	LENGTH, LONG
LAB	LABORATORY
LAM	LAMINATE
LAV	LAVATORY
LKR	LOCKER
LT	LIGHT

M

MAINT	MATINTENANCE
MAX	MAXIMUM
MECH	MECHANICAL
MEMB	MEMBRANE
MET	METAL
MFR	MANUFACTURER
MIN	MINIMUM
MIRR	MIRROR
MISC	MISCELLANEOUS
MO	MASONRY OPENING
MOD	MODIFIED
MR	MOISTURE RESISTANT
MTD	MOUNTED
MTG	MOUNTING
MULL	MULLION

N

N	NORTH
NIC	NOT IN CONTRACT
NO	NUMBER
NOM	NOMINAL
NTS	NOT TO SCALE

O

OA	OVERALL
OC	ON CENTER
OD	OUTSIDE DIAMETER / DIMENSION
ORD	OVERFLOW ROOF DRAIN
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED OWNER INSTALLED
OFF	OFFICE
OPNG	OPENING
OPP	OPPOSITE
O/S	OFFSET

P

P	PAINT
PL	PROPERTY LINE
PLAM	PLASTIC LAMINATE
PLAS	PLASTER
PLBG	PLUMBING
PLYWD	PLYWOOD
PNL	PANEL
PP	POWER POLE
PR	PAIR
PRCST	PRECAST
PROP	PROPERTY
PT	PORCELAIN TILE
PTD	PAPER TOWEL DISPENSER
PTD/WR	COMBINATION PAPER TOWEL DISPENSER WASTE RECEPTACLE
PTN	PARTITION
PTR	PAPER TOWEL RECEPTACLE

Q

QT	QUARRY TILE

R

R	RISER, RADIUS
RB	RESILIENT BASE
RH	ROBE HOOK
RD	ROOF DRAIN
REF	REFERENCE, REFRIGERATOR
REFL	REFLECTED, REFLECTANCE
REINF	REINFORCES, REINFORCING
REQD	REQUIRED
RESIL	RESILIENT
RM	ROOM
RND	ROUND
RO	ROUGH OPENING

S

S	SOUTH
SB	SPLASH BLOCK
SC	SOLID CORE
SCD	SEAT COVER DISPENSER
SCR	SHOWER CURTAIN ROD
SCHED	SCHEDULE OR SCHEDULED
SD	SOAP DISPENSER
SECT	SECTION
SHV	SHELVING
SHR	SHOWER
SHT	SHEET
SIM	SIMILAR
SL	SLOPE
SLDG	SLIDING
SLNT	SEALANT
SMH	SEWER MANHOLE
SND	SANITARY NAPKIN DISPOSAL
SPD	SPREAD
SPEC	SPECIFICATION(S)
SQ	SQUARE
SS	SERVICE SINK
SST	STAINLESS STEEL
STA	STATION
STC	SOUND TRANSMISSION CLASS

T

T	TREAD
TC	TOP OF CURB
TELCOM	TELECOMMUNICATION
TMPD	TEMPERED
TH	TOWEL HOOK
THK	THICK
TOP	TOP OF PLATE
TOS	TOP OF SLAB
TOW	TOP OF WALL
TPD	TOILET PAPER DISPENSER
TPH	TOILET PAPER HOLDER
TPO	THERMOPLASTIC POLYOLEFIN
TRP	TRANSLUCENT RESIN PANEL
TSCD	TOILET SEAT COVER DISPENSER
TV	TELEVISION
TW	TOP OF WALL
TYP	TYPICAL

U

UL	UNDERWRITER'S LABORATORIES INC
UNF	UNFINISHED
UON	UNLESS OTHERWISE NOTED
UR	URINAL

V

VERT	VERTICAL
VEST	VESTIBULE
VIF	VERIFY IN FIELD

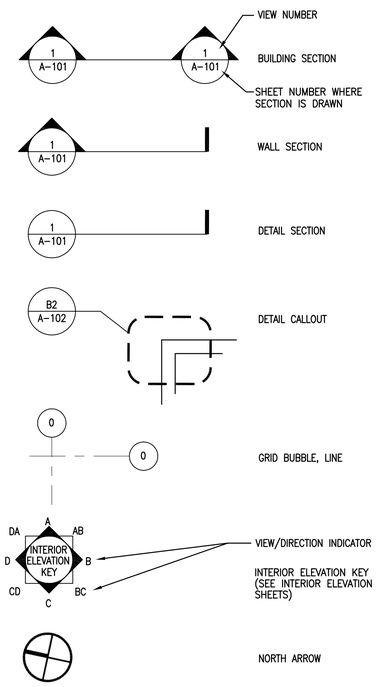
W

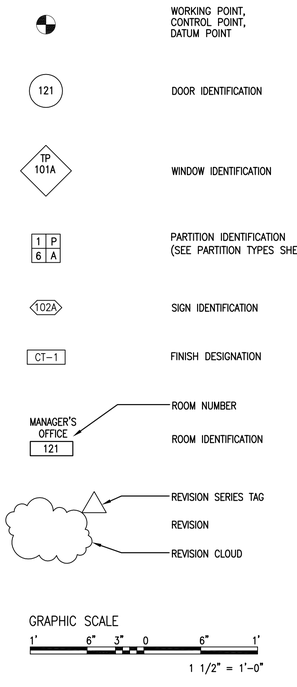
W	WEST, WIDE, WIDTH, WATER
W/	WITH
W/O	WITHOUT
WC	WATER CLOSET
WD	WOOD
WDW	WINDOW
WH	WATER HEATER
WP	WATERPROOF(ING)
WR	WATER RESISTANT, WASTE RECEPTACLE
WB	WEATHER BARRIER
WSCT	WAINSCOT
WO	WHERE OCCURS
WWF	WELDED WIRE FABRIC

Y

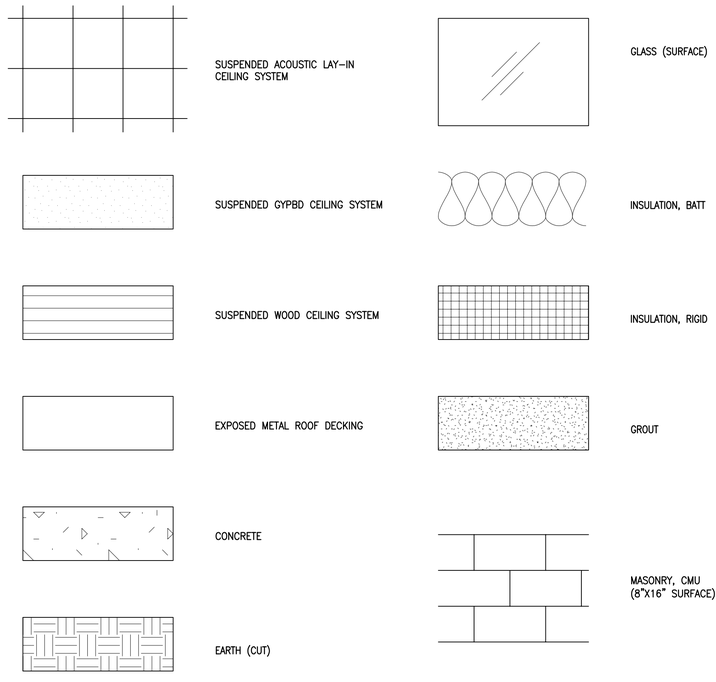
YCA	YOUTH CHALLENGE academy

SYMBOLS





MATERIALS AND PARTITIONS



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SUBMITTAL PHASE
FINAL SUBMITTAL

SUBMITTAL DATE 30 SEPTEMBER 2019

DES: XXX DRW: XXX CHK: XXX

DEPARTMENT OF DEFENSE
HAWAII ARMY NATIONAL GUARD
DESIGN AND PROJECT MANAGEMENT BRANCH

STATE OF HAWAI'I
FACILITY MANAGEMENT OFFICE

KEAUKAHA MILITARY RESERVATION – B621
HILO, HAWAI'I

HAWAI'I ARMY NATIONAL GUARD (HIARNG)
BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS

ABBREVIATIONS, SYMBOLS AND LEGEND

SCALE: AS NOTED

STATE PROJECT NO.
CA-1212-C3

FEDERAL PROJECT NO.
15130007

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G-002

DEDUCTIVE BID ITEMS

DEDUCTIVE BID ITEM 01	DELETE REMOVAL OF EXISTING ROOFING TO SUBSTRATE, FASCIA, GUTTERS, DOWNSPOUTS, NEW TPO ROOFING.
DEDUCTIVE BID ITEM 02	DELETE REMOVAL OF EXISTING CEILINGS AND LIGHT FIXTURES, HAZARDOUS MATERIAL ABATEMENT, PROVIDING NEW CEILINGS AND LIGHTS.
DEDUCTIVE BID ITEM 03	DELETE REMOVAL OF EXISTING AC PAVEMENT FOR UNIT COOK TRAILER. DELETE GREASE INTERCEPTOR, ASSOCIATED SEWER LINE, AND ASSOCIATED UNIT COOK TRAILER CONC PAD.

MINOR CONSTRUCTION SUMMARY

ASPHALT CONCRETE PARKING/DRIVEWAYS	1890 SY
CONCRETE WALKWAY	2,380 SF
CMU TRASH ENCLOSURE	350 SF
GREASE INTERCEPTOR	1-QTY
SEEPAGE WELLS	2-QTY

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HAWAII ARMY NATIONAL GUARD

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4/30/2020
EXPIRATION DATE

	APPR	DATE	DESCRIPTION	SYM

SUBMITTAL PHASE
FINAL SUBMITTAL
SUBMITTAL DATE 30 SEPTEMBER 2019
DES XXX | DRW XXX | CHK XXX

DEPARTMENT OF DEFENSE
HAWAII ARMY NATIONAL GUARD
DESIGN AND PROJECT MANAGEMENT BRANCH
STATE OF HAWAI'I
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KEAUKAHA MILITARY RESERVATION - B621
HILO, HAWAI'I

HAWAI'I ARMY NATIONAL GUARD (HIARNG)
BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS

INDEX OF DRAWINGS, DEDUCTIVE BID ITEMS, MINOR CONSTRUCTION SUMMARY

SCALE: AS NOTED
STATE PROJECT NO. CA-1212-C3
FEDERAL PROJECT NO. 15130007
SHEET 3 of 126

G-003

CODE SUMMARY (PER MILITARY CRITERIA)

APPLICABLE CODES AND CRITERIA:
UFC 1-200-01 GENERAL BUILDING REQUIREMENTS, 1 JULY 2013
UFC 3600-01 FIRE PROTECTION ENGINEERING FOR FACILITIES, 26 SEPT 2006 WITH CHANGE 3 1 MARCH 2013

2012 INTERNATIONAL BUILDING CODE
2012 NFPA 1 UNIFORM FIRE CODE
2012 NFPA 90A AIR-CONDITIONING AND VENTILATING SYSTEMS
2012 NFPA 101 LIFE SAFETY CODE

DEPUTY SECRETARY OF DEFENSE MEMORANDUM "ACCESS FOR PEOPLE WITH DISABILITIES" 31 OCT 2008

OCCUPANCY CLASSIFICATION:
MIXED OCCUPANCY: GROUP A-3 (GYMNASIUM), GROUP B (BUSINESS), GROUP E (EDUCATION)

CONSTRUCTION CLASSIFICATION:
TYPE VB (NON-FIRE RATED, COMBUSTIBLE)

ALLOWABLE AREA:
TABULAR AREAS FOR THE FOLLOWING OCCUPANCIES IN TYPE VB CONSTRUCTION (TABLE 503):
GROUP A-3: 6,000 SF
GROUP B: 9,000 SF
GROUP E: 9,500 SF

INCREASE FOR FRONTAGE: 75% FOR 30 FEET AROUND ENTIRE BUILDING PERIMETER (PARAGRAPH 506.2)
INCREASE FOR FIRE SPRINKLERS: 300% FOR ONE STORY BUILDING (PARAGRAPH 506.3)
TOTAL ALLOWABLE AREA (EQUATION 5-1) FOR EACH OCCUPANCY
GROUP A-3: {6,000 + [6,000 X 0.75] + 6,000 X 3] } = 28,500 SF
GROUP B: {9,000 + [9,000 X 0.75] + 9,000 X 3] } = 42,750 SF
GROUP E: {9,500 + [9,500 X 0.75] + 9,500 X 3] } = 45,125 SF

TOTAL ALLOWABLE AREA FOR SEPARATED OCCUPANCIES IS CALCULATED BY ADDING THE RATIOS OF THE ACTUAL BUILDING AREAS DIVIDED BY THE ALLOWABLE AREA FOR EACH OCCUPANCY WITH THE TOTAL NOT PERMITTED TO EXCEED ONE (PARAGRAPH 508.3.3.2):

GROUP A-3	GROUP B	GROUP E	
8,258/28,500	+ 18,005/42,750 +	12,568/45,125	= 0.99

ALLOWABLE HEIGHT:
TABULAR HEIGHTS FOR THE FOLLOWING OCCUPANCIES IN TYPE VB CONSTRUCTION (TABLE 503.8):
GROUP A-3: 40 FT, 1 STORY
GROUP B: 40 FT, 2 STORIES
GROUP E: 40 FT, 1 STORY

INCREASE FOR FIRE SPRINKLERS: 20 FEET, ONE STORY (PARAGRAPH 504.2)

	ALLOWABLE HEIGHT	ACTUAL HEIGHT
GROUP A-3:	60 FT, 2 STORIES	33.3 FT, 1 STORY
GROUP B:	60 FT, 3 STORIES	16.0 FT, 1 STORY
GROUP E:	60 FT, 2 STORIES	17.5 FT, 1 STORY

FIRE-RESISTANCE RATING REQUIREMENTS FOR BUILDING ELEMENTS (TABLE 601) FOR TYPE II CONSTRUCTION:

STRUCTURAL FRAME	0 HOURS
BEARING WALLS - EXTERIOR	0 HOURS
BEARING WALLS - INTERIOR	0 HOURS
NONBEARING WALLS AND PARTITIONS - EXTERIOR	0 HOURS
NONBEARING WALLS AND PARTITIONS - INTERIOR	0 HOURS
FLOOR CONSTRUCTION (INCLUDING SUPPORTING BEAMS AND JOISTS)	0 HOURS
ROOF CONSTRUCTION (INCLUDING SUPPORTING BEAMS AND JOISTS)	0 HOURS

FIRE RESISTIVE SUBSTITUTION (TABLE 601 FOOTNOTE E):
NOT USED

FIRE RATED SEPARATION OF OCCUPANCIES IN A SPRINKLERED BUILDING (TABLE 508.3.3):
GROUP A-3 AND GROUP B: 1 HOUR
GROUP A-3 AND GROUP E: NONE
GROUP B AND GROUP E: 1 HOUR

NOTE: THE GROUP A-3 AND GROUP B AREAS ARE SEPARATED BY THE WALKWAY.

MAXIMUM AREA OF EXTERIOR WALL OPENINGS (TABLE 704.8):
UNLIMITED UNPROTECTED OPENINGS PER FOOTNOTE i SINCE EXTERIOR BEARING WALL, EXTERIOR NONBEARING WALL, AND EXTERIOR STRUCTURAL FRAME ARE NOTE REQUIRED TO BE FIRE-RESISTANCE RATED BY TABLE 601 OR 602.

OPENING PROTECTIVES:
1-HOUR FIRE BARRIER (OTHER THAN SHAFT, EXIT ENCLOSURE, EXIT PASSAGEWAY): 3/4 HOUR FIRE DOOR

THROUGH PENETRATIONS (SECTION 712):
PIPE, CONDUIT AND DUCT PENETRATIONS THROUGH FIRE RATED WALLS WILL BE FIRESTOPPED WITH A UL LISTED THROUGH PENETRATION FIRE STOP SYSTEM (PARAGRAPH 714.3.1.2)

FIRE DAMPERS:
FIRE BARRIER - NOT REQUIRED FOR WALLS LESS THAN 2-HOUR (NFPA 90A PARAGRAPH 5.3.1.1)

SMOKE DAMPERS:
NOT REQUIRED - AREA OF WORK DOES NOT HAVE SMOKE BARRIERS

INTERIOR WALL AND CEILING FINISH IN SPRINKLERED BUILDING (NFPA 101 PARAGRAPH 38.3.3.2):

GROUP B:	
EXIT ENCLOSURES	CLASS A OR B
OTHER SPACES	CLASS A, B, OR C

INTERIOR FLOOR FINISH (NFPA 101 PARAGRAPH 38.3.3.3):
GROUP B:
CLASS I OR II

FIRE SPRINKLERS:
REQUIRED PER UFC 3-600-01 PARAGRAPH 4-2.2.

FIRE ALARM:
REQUIRED PER UFC 3-600-01 PARAGRAPH 5-3.1.

FIRE EXTINGUISHERS:
REQUIRED FOR BUSINESS OCCUPANCIES PER NFPA 1 TABLE 13.6.2.

MAXIMUM TRAVEL DISTANCE TO A FIRE EXTINGUISHER 75 FT (NFPA 1 TABLE 13.6.6.2.1)

FIRE DEPARTMENT ACCESS:
FIRE DEPARTMENT ACCESS ROAD REQUIRED TO EXTEND WITHIN 50 FT OF AT LEAST ONE EXTERIOR DOOR THAT CAN BE OPENED FROM OUTSIDE AND PROVIDE ACCESS TO INTERIOR OF BUILDING (NFPA 1 PARAGRAPH 18.2.3.2.1)

ALL PORTIONS OF EXTERIOR WALLS SHALL BE WITHIN 350 FT OF A FIRE HYDRANT PER UFC 3-600-01 PARAGRAPH 3-7.3.3.

NOTE: HAWAII COUNTY FIRE DEPARTMENT REQUIRES 300 FT FROM FIRE ACCESS ROADS FOR BUILDINGS WITH FIRE SPRINKLERS PER NFPA 1 PARAGRAPH 18.2.3.2.2.1 AS AMENDED BY HAWAII COUNTY)

MEANS OF EGRESS:

OCCUPANT LOAD:
OCCUPANT LOAD FACTOR (NFPA 101 TABLE 7.3.1.2):
BUSINESS: 100 SF PER OCCUPANT

CALCULATED OCCUPANT LOAD:
BUSINESS: 18,005 SF / 100 SF PER OCCUPANT = 181 OCCUPANTS

MEANS OF EGRESS COMPONENTS:
DOORS, STAIRS AND RAMPS LEADING TO THE EXTERIOR

NUMBER OF MEANS OF EGRESS:
ONE MEANS OF EGRESS REQUIRED FOR EACH ROOM SINCE EXIT ACCESS CAN BE REACHED WITHIN THE DISTANCE PERMITTED FOR COMMON PATH OF TRAVEL (NFPA 101 PARAGRAPH 38.2.4.2).

EGRESS CAPACITY (NFPA 101 TABLE 7.3.3.1):

LEVEL COMPONENTS AND RAMPS	0.2 INCHES PER OCCUPANT
STAIRWAYS	0.3 INCHES PER OCCUPANT

BUILDING:
CALCULATED EGRESS WIDTH REQUIRED = 1,356 OCCUPANTS X 0.30 INCHES PER OCCUPANT = 406.8 INCHES (33.9 FT)
THE EXISTING STAIRS HAVE A COMBINED WIDTH OF APPROXIMATELY 52.3 FEET.

MEANS OF EGRESS ILLUMINATION:
REQUIRED (NFPA 101 PARAGRAPH 38.2.8)

EMERGENCY LIGHTING:
NOT REQUIRED SINCE BUILDING IS NOT MORE THAN 3 STORIES, DOES NOT HAVE OCCUPANCY ABOVE OR BELOW LEVEL OF EXIT DISCHARGE, AND HAS OCCUPANCY LOAD LESS THAN 300 (NFPA 101 PARAGRAPH 38.2.9.1)

ACCESSIBLE MEANS OF EGRESS:
ACCESSIBLE EXITING WILL BE PROVIDED BY EXTERIOR RAMPS LEADING TO THE PARKING AREA OF PUBLIC WAY OR EXTERIOR AREA FOR ASSISTED RESCUE.

COMMON PATH OF TRAVEL (FOR A SPRINKLERED BUILDING):
GROUP B: 100 FT (NFPA 101 PARAGRAPH 38.2.5.3.1)

DEAD END CORRIDOR (FOR A SPRINKLERED BUILDING):
GROUP B: 50 FT (NFPA 101 PARAGRAPH 38.2.5.3.1)

TRAVEL DISTANCE (FOR A SPRINKLERED BUILDING):
GROUP B: 300 FT (NFPA 101 PARAGRAPH 2.6.3)

EXIT DISCHARGE:
EXIT DISCHARGE WILL BE PROVIDED BY WALKING PATHS LEADING FROM EXTERIOR STAIRS AND RAMPS TO THE PUBLIC WAY.

HAWAII ARMY NATIONAL GUARD

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SIGNATURE
4/30/2020
EXPIRATION DATE

DESCRIPTION	DATE	APPR
SYM		

SUBMITTAL PHASE
FINAL SUBMITTAL
SUBMITTAL DATE 30 SEPTEMBER 2019
DES DRW CHK

DEPARTMENT OF DEFENSE
HAWAII ARMY NATIONAL GUARD
DESIGN AND PROJECT MANAGEMENT BRANCH
STATE OF HAWAI'I
FACILITY MANAGEMENT OFFICE

KEAUKAHA MILITARY RESERVATION - B621
HILO, HAWAI'I

HAWAI`I ARMY NATIONAL GUARD (HIARNG)
BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS
BUILDING 621 CODE SUMMARY

SCALE: AS NOTED
STATE PROJECT NO. CA-1212-C3
FEDERAL PROJECT NO. 15130007
SHEET 4 of 126
G-004

EXIT STAIR
EGRESS WIDTH PER OCCUPANT REQUIRED: 0.30 INCHES
EXIT WIDTH: 106 INCHES
EXIT CAPACITY: 353 OCCUPANTS

EXIT RAMP
EGRESS WIDTH PER OCCUPANT REQUIRED: 0.20 INCHES
EXIT WIDTH: 45 INCHES
EXIT CAPACITY: 225 OCCUPANTS

EXISTING 1 HOUR FIRE RATED WALL

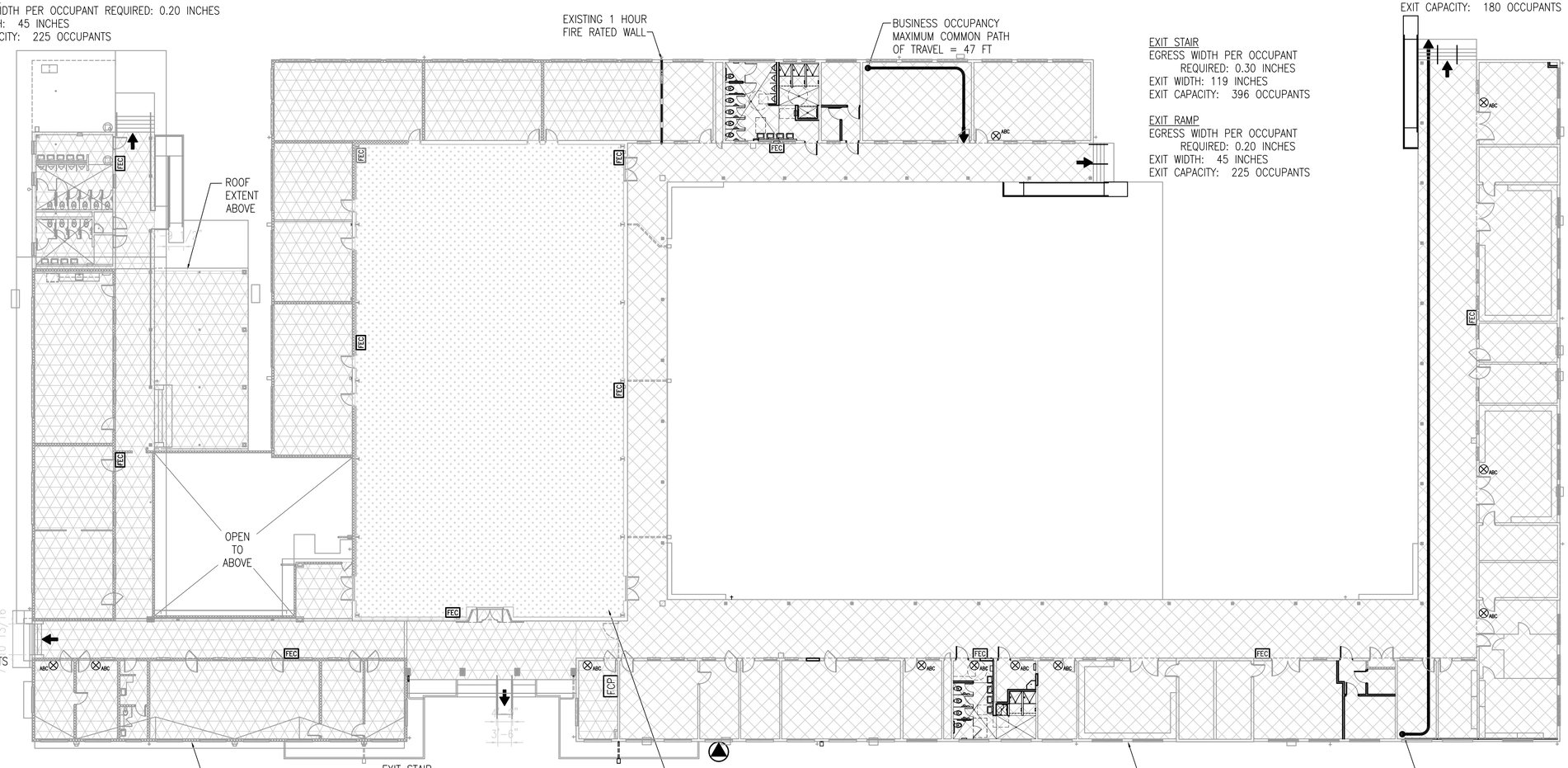
BUSINESS OCCUPANCY MAXIMUM COMMON PATH OF TRAVEL = 47 FT

EXIT STAIR
EGRESS WIDTH PER OCCUPANT REQUIRED: 0.30 INCHES
EXIT WIDTH: 119 INCHES
EXIT CAPACITY: 396 OCCUPANTS

EXIT RAMP
EGRESS WIDTH PER OCCUPANT REQUIRED: 0.20 INCHES
EXIT WIDTH: 45 INCHES
EXIT CAPACITY: 225 OCCUPANTS

EXIT STAIR
EGRESS WIDTH PER OCCUPANT REQUIRED: 0.30 INCHES
EXIT WIDTH: 120 INCHES
EXIT CAPACITY: 400 OCCUPANTS

EXIT RAMP
EGRESS WIDTH PER OCCUPANT REQUIRED: 0.20 INCHES
EXIT WIDTH: 36 INCHES
EXIT CAPACITY: 180 OCCUPANTS



EXIT STAIR
EGRESS WIDTH PER OCCUPANT REQUIRED: 0.30 INCHES
EXIT WIDTH: 94 INCHES
EXIT CAPACITY: 313 OCCUPANTS

GROUP E
12,568 SF

EXIT STAIR
EGRESS WIDTH PER OCCUPANT REQUIRED: 0.30 INCHES
EXIT WIDTH: 189 INCHES
EXIT CAPACITY: 630 OCCUPANTS

EXIT RAMP
EGRESS WIDTH PER OCCUPANT REQUIRED: 0.20 INCHES
EXIT WIDTH: 48 INCHES
EXIT CAPACITY: 240 OCCUPANTS

GROUP A-3
8,258 SF

GROUP B
18,005 SF

BUSINESS OCCUPANCY MAXIMUM TRAVEL DISTANCE = 188 FT

LEGEND

- 1 HOUR FIRE RATED WALL (EXISTING)
- DESIGNATED EXITS
- FCP — FIRE ALARM CONTROL PANEL
- FEC — FIRE EXTINGUISHER, 4A:60B:C IN CABINET
- ABC — FIRE EXTINGUISHER, 4A:60B:C ON BRACKET
- WET PIPE SPRINKLER RISER

BUILDING 621 LIFE SAFETY PLAN

SCALE: 1/16" = 1'-0"

PLAN NORTH

NOTES:
1. BUILDING DOES NOT HAVE DEAD END CORRIDORS.

0 4 8 16 32 48FT
SCALE: 1/16"=1'-0"

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STATE OF HAWAI'I
FACILITY MANAGEMENT OFFICE
HAWAII ARMY NATIONAL GUARD
DESIGN AND PROJECT MANAGEMENT BRANCH
DEPARTMENT OF DEFENSE
KEAUKAHA MILITARY RESERVATION – B621
HILO, HAWAI'I
HAWAI'I ARMY NATIONAL GUARD (HIARNG)
BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS
BUILDING 621 LIFE SAFETY PLAN

SCALE: AS NOTED
STATE PROJECT NO. CA-1212-C3
FEDERAL PROJECT NO. 15130007
SHEET 5 of 126
G-005

HAZARDOUS MATERIALS NOTES FOR THE HIARNG PORTION OF BUILDING 621

A HAZARDOUS MATERIALS SURVEY HAS BEEN CONDUCTED TO IDENTIFY POTENTIALLY HAZARDOUS MATERIALS THAT ARE EXPECTED TO BE DISTURBED DURING THE SUBJECT PROJECT. SUSPECT MATERIALS WHICH WERE EVALUATED INCLUDED THOSE WHICH MAY CONTAIN: ASBESTOS, ARSENIC, AND LEAD.

THE RESULTS OF THE SURVEY ARE CONTAINED IN THE REPORT: REPORT OF FINDINGS, HAZARDOUS MATERIALS TESTING SERVICES, PROJECT NUMBERS: FEDERAL: 15130007; STATE: CA-1212-C, KEAUKAHA MILITARY RESERVATION, BUILDING 621, HAWAII ARMY NATIONAL GUARD (HIARNG) (PHASE 1), 1046 LEILANI STREET, HILO, HAWAII ISLAND, HAWAII, DATED JANUARY 23, 2013.

SHOULD THE SCOPE OF THE PLANNED PROJECT CHANGE OR IF HIDDEN MATERIALS ARE ENCOUNTERED DURING THE DEMOLITIONS/RENOVATIONS WHICH HAVE NOT BEEN PREVIOUSLY CHARACTERIZED, SUSPECT MATERIALS SHOULD BE ASSUMED TO BE HAZARDOUS UNLESS TESTING PROVES OTHERWISE. SPECIFICALLY, SEVERAL ROOMS WERE INACCESSIBLE AT THE TIME OF THE SURVEY. ROOMS WHICH WERE NOT SURVEYED ARE LABELED AS 'LOCKED'. SUSPECT MATERIALS MAY BE PRESENT IN THOSE ROOMS NOT SURVEYED.

THE CONTRACTOR SHALL REFER TO THE ABOVE-MENTIONED HAZARDOUS MATERIALS REPORT PRIOR TO DISTURBING ANY MATERIALS.

ASBESTOS

ASBESTOS HAS NOT BEEN IDENTIFIED IN THE SAMPLES TAKEN.

WHERE SUSPECT OR CONFIRMED ACM IS ENCOUNTERED, A QUALIFIED ASBESTOS ABATEMENT CONTRACTOR POSSESSING A VALID C-19 LICENSE SHOULD BE RETAINED TO REMOVE ANY ACM THAT WILL BE AFFECTED BEFORE DEMOLITION OR RENOVATION OPERATIONS BEGIN THAT COULD DISTURB THE MATERIAL. CONTRACTORS THAT REMOVE DISTURB, OR DISPOSE ACM MUST COMPLY WITH ALL CURRENT FEDERAL AND STATE REGULATIONS AND CONTRACT SPECIFICATIONS.

LEAD

LEAD-BASED SURFACES/PAINTS HAVE BEEN IDENTIFIED IN MFA'S SURVEY IN THE FOLLOWING SAMPLES:

1. SAMPLE L4, WHITE METAL WINDOW FRAME, B621, ROOM 20 (4.5000%)
2. SAMPLE L5, 'PINK' METAL WINDOW FRAME, B621, ROOM 11 (3.6000%)
3. SAMPLE L6, BROWN METAL WINDOW FRAME, B621, ROOM 12 EXTERIOR (12.0000%)

LEAD-CONTAINING SURFACES/PAINTS HAVE BEEN IDENTIFIED IN MFA'S SURVEY IN THE FOLLOWING SAMPLES:

1. SAMPLE L1, WHITE CANEC CEILING PANEL, B621, ROOM 10 (0.0950%)
2. SAMPLE L3, WHITE CONCRETE WALL, B621, ROOM 35 (0.0850%)
3. SAMPLE L8, WHITE WOOD CEILING, B621 MEN'S RESTROOM (0.1700%)

ALTHOUGH THE LEAD CONTENT OF ANY PAINTED/COATED SURFACE CAN VARY FROM AREA TO AREA, THOSE SURFACES ENCOUNTERED BY THE CONTRACTOR THAT APPEAR HOMOGENEOUS WITH THE SURFACES DESCRIBED IN TABLE 2, OF THE ABOVE-MENTIONED REPORT, SHOULD BE EVALUATED WITH DISCRETION AS THEY MAY CONTAIN COMPARABLE AMOUNTS OF LEAD.

DURING ANY WORK WHICH DISTURBS PAINTED/COATED SURFACES, PAINT CHIPS SHALL NOT BE ALLOWED TO FALL TO UNPROTECTED GROUND. PROTECT THE GROUND AND OTHER AREAS WHERE PAINT CHIPS ARE LIKELY TO FALL, WITH PLASTIC SHEETING. WHERE WIND IS LIKELY TO DISPERSE PAINT CHIPS UPON DISTURBANCE, THE CONTRACTOR SHALL REMOVE ALL LOOSE AND FLAKING PAINT WITH A HEPA VACUUM POSITIONED AT THE POINT OF REMOVAL AND SUCH THAT NO PAINT CHIPS ARE ALLOWED TO ESCAPE THE LEAD-CONTROL AREA TO THE SURROUNDING ENVIRONMENT.

DURING ALL CONSTRUCTION WORK WHERE AN PERSON MAY BE OCCUPATIONALLY EXPOSED TO LEAD OR WHERE LEAD-BASED/CONTAINING SURFACES ARE EXPECTED TO BE DISTURBED, CONTROLLED, OR DISPOSED, CONTRACTORS MUST COMPLY WITH ALL CURRENT FEDERAL AND STATE REGULATIONS, AND CONTRACT SPECIFICATIONS.

LIGHTING

CONTRACTORS SHOULD VISUALLY INSPECT ALL LIGHT FIXTURES TO DETERMINE THE PROPER DISPOSAL METHOD. BALLASTS MANUFACTURED SINCE 1979 THAT DO NOT CONTAIN PCBS ARE USUALLY LABELED WITH A STICKER TO THAT EFFECT. BALLASTS THAT DO NOT HAVE THE STICKER SHOULD BE SEGREGATED AND TREATED AS IF THEY DO CONTAIN PCBS FOR PROPER DISPOSAL. IF PCB BALLASTS HAVE BEEN PUNCTURED OR ARE LEAKING, THEY MUST BE HANDLED AND DISPOSED OF PROPERLY. WHERE BALLASTS ARE HANDLED AND/OR DISPOSED IN ANY WAY, THE CONTRACTOR MUST COMPLY WITH ALL CURRENT FEDERAL AND STATE REGULATIONS, AND CONTRACT SPECIFICATIONS, INCLUDING THE DISPOSAL REQUIREMENTS FOR FLUORESCENT LIGHT BALLASTS FROM THE TSCA WHEN DISPOSING OF ANY LIGHTING BALLAST.

LAMPS IN THE LIGHTING STANDARDS FOUND IN THE BUILDINGS SURVEYED MAY FALL UNDER THE CATEGORY OF "UNIVERSAL WASTE." EXAMPLES OF COMMON UNIVERSAL WASTE ELECTRIC LAMPS INCLUDE, BUT ARE NOT LIMITED TO, FLUORESCENT, HIGH INTENSITY DISCHARGE, NEON, MERCURY VAPOR, HIGH PRESSURE SODIUM, AND METAL HALIDE LAMPS. THE CONTRACTOR IS RESPONSIBLE FOR CHARACTERIZING WHICH TYPE OF LAMP WILL BE DEMOLISHED AS PART OF THE SUBJECT PROJECT.

CONTRACTORS MUST COLLECT, PROPERLY HANDLE, AND DISPOSE OF UNIVERSAL WASTE IN ACCORDANCE WITH ALL CURRENT FEDERAL AND STATE REGULATIONS, AND CONTRACT SPECIFICATIONS, INCLUDING EPA 40 CFR 273, STANDARDS FOR UNIVERSAL WASTE MANAGEMENT. THE PROVISIONS FOUND IN EPA 40 CFR 260-268 MAY ALSO APPLY.

ARSENIC

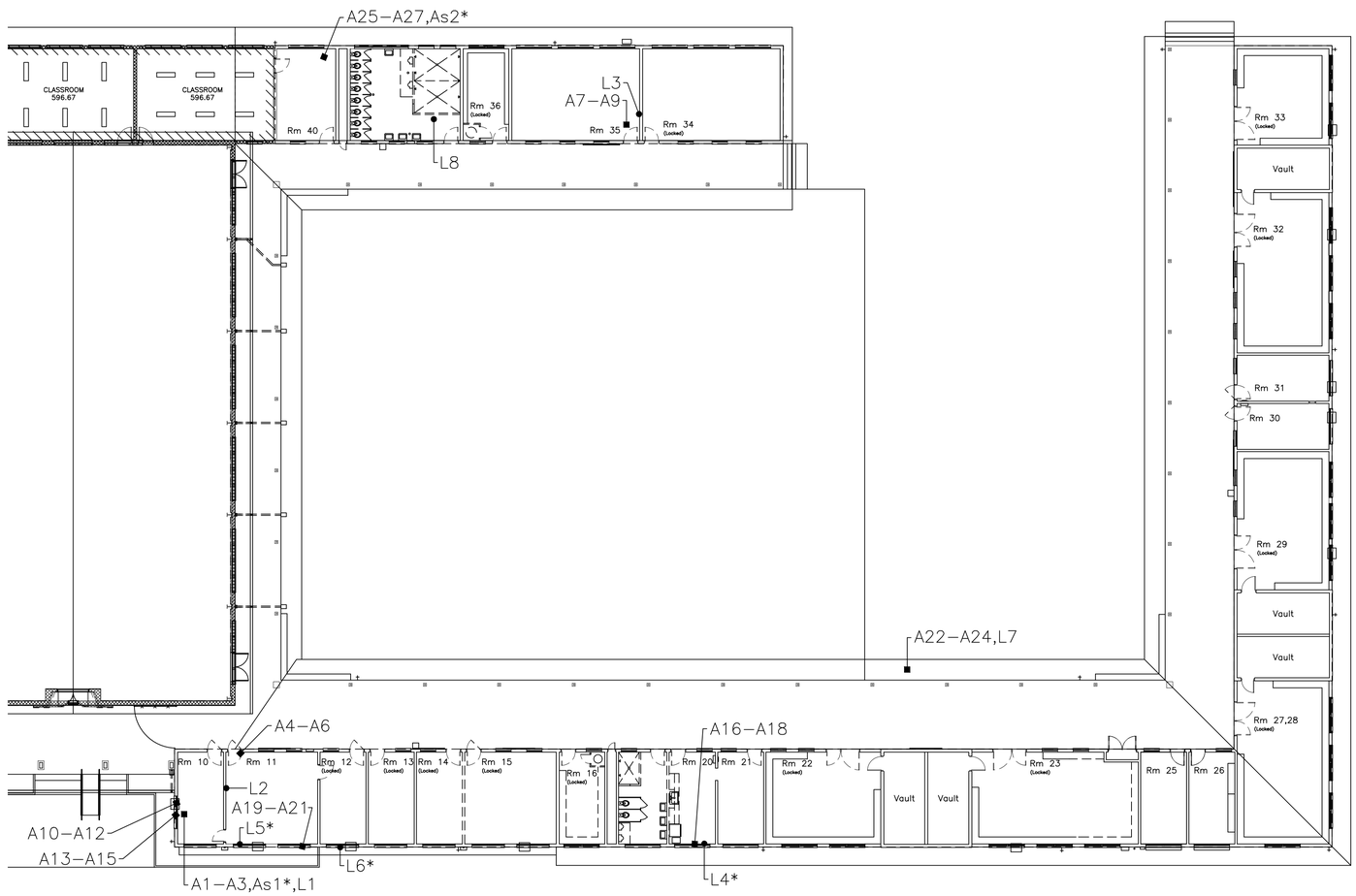
LABORATORY ANALYSIS OF THE CANEC CEILING PANEL SAMPLES ARE AS FOLLOWS:

1. AS1 – WHITE CEILING PANEL (RECTANGLE), B621, ROOM10 (2800 MG/KG)
2. AS2 – WHITE CEILING PANEL (PERFORATED SQUARE), B621, ROOM 40 (2500 MG/KG)

BASED ON THE LABORATORY RESULTS, THE DISTURBANCE OF THESE PANELS COULD RESULT IN AN ARSENIC DUST HAZARD.

WHERE THE CONTRACTOR ENCOUNTERS MATERIALS CONTAINING ARSENIC, THE PROVISIONS, INCLUDING BUT NOT LIMITED TO THOSE, FOUND IN OSHA 29 CFR 1910.1018, 29 CFR 1910 & 1926 SUBPART Z, TOXIC AND HAZARDOUS SUBSTANCES AND HIOSH 12-202 HEALTH STANDARDS, TOXIC MATERIALS AND HARMFUL PHYSICAL AGENTS, SHALL BE FOLLOWED. THESE REGULATIONS APPLY TO ALL CONSTRUCTION WORK WHERE AN EMPLOYEE MAY BE OCCUPATIONALLY EXPOSED TO ARSENIC. CONTRACTORS WHO DISTURB ARSENIC-CONTAINING BUILDING MATERIALS MUST COMPLY WITH ALL APPLICABLE FEDERAL AND STATE REGULATIONS, AND CONTRACT SPECIFICATIONS TO MANAGE ARSENIC-CONTAINING MATERIALS IN SUCH A WAY THAT DOES NOT RESULT IN WORKER OR PUBLIC EXPOSURE OF ARSENIC-CONTAMINATED DUST OR DEBRIS.

WITH RESPECT TO DISPOSAL OF SUCH MATERIALS, A REGULATORY EXCLUSION FOR ARSENICALLY TREATED WOOD PRODUCTS EXISTS UNDER FEDERAL HAZARDOUS WASTE REGULATIONS, BUT THE MATERIAL SHOULD BE DISPOSED OF APPROPRIATELY AND IN ACCORDANCE WITH ANY ADDITIONAL REQUIREMENTS A STATE-LICENSED LANDFILL MAY IMPOSE.



LEGEND

A1 Building material sample ID and approximate location
* = ACM

L1 Paint chip sample ID and approximate location
* = LBP

As1 Canec-type material sample ID and approximate location
* = contains arsenic

0 4 8 16 32 48FT
SCALE: 1/16"=1'-0"

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SIGNATURE EXPIRATION DATE

APPR	DATE	DESCRIPTION	SYM

SUBMITTAL PHASE
FINAL SUBMITTAL
SUBMITTAL DATE 30 SEPTEMBER 2019
DES | DRW | CHK

STATE OF HAWAI'I
FACILITY MANAGEMENT OFFICE
DEPARTMENT OF DEFENSE
HAWAII ARMY NATIONAL GUARD
DESIGN AND PROJECT MANAGEMENT BRANCH
KEAUKAHA MILITARY RESERVATION – B621
HILO, HAWAI'I
HAWAI`I ARMY NATIONAL GUARD (HIARNG)
BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS
HAZARDOUS MATERIALS NOTES AND SAMPLING LOCATIONS

SCALE:
STATE PROJECT NO. CA-1212-C3
FEDERAL PROJECT NO. 15130007
SHEET 6 of 126
H-001

ABBREVIATIONS

AC	ASPHALTIC CONCRETE PAVEMENT, ACRE
ADA	AMERICANS WITH DISABILITY ACT
AVE	AVENUE
B	BOTTOM
BC	BOTTOM CURB
BL	BASE LINE
BLK	BLOCK
BMP	BEST MANAGEMENT PRACTICES
BOT	BOTTOM
BW	BOTTOM WALL
CB	CATCH BASIN
CFS	CUBIC FEET PER SECOND
CL	CENTERLINE, CLASS
CMU	CONCRETE MASONRY UNIT
CO	CLEANOUT
COL	COLUMN
CONC	CONCRETE
CONN	CONNECTION
CONT	CONTINUATION
COTG	CLEANOUT TO GRADE
CY	CUBIC YARD
D	DIAMETER/DRAIN
DI	DUCTILE IRON
DIA	DIAMETER
DIST	DISTANCE
DPW	DEPARTMENT OF PUBLIC WORKS
DRWY	DRIVEWAY
DTL	DETAIL
DWG	DRAWING
DWS	DEPARTMENT OF WATER SUPPLY
ELEC	ELECTRICAL
ELEV	ELEVATION
EOP	EDGE OF PAVEMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
EQ	EQUAL
EXIST	EXISTING
FDC	FIRE DEPARTMENT CONNECTION
FFE	FINISH FLOOR ELEVATION
FH	FIRE HYDRANT
F.H.	FLAT HEAD
FTG	FOOTING
FT	FEET
GPM	GALLONS PER MINUTE
GV	GATE VALVE
GW	GUY WIRE
H	HEIGHT, HORIZONTAL
HB	HOSE BIBB
HIARNG	HAWAII ARMY NATIONAL GUARD
HIARNG-ENV	HAWAII ARMY NATIONAL GUARD ENVIRONMENTAL OFFICE
HORIZ	HORIZONTAL
HP	HIGH POINT
IAW	IN ACCORDANCE WITH
ID	INSIDE DIAMETER, IDENTIFICATION
INTERS	INTERSECTION
INV	INVERT
IRR	IRRIGATION
L	LENGTH
LF	LINEAL FEET
LPG	LIQUEFIED PETROLEUM GAS
LT	LEFT TANGENT
MAX	MAXIMUM
MECH	MECHANICAL
MH	MANHOLE
MIN	MINIMUM
MPH	MILES PER HOUR
MSL	MEAN SEA LEVEL
NIC	NOT IN CONTRACT
N/A	NOT APPLICABLE
ND	NOMINAL DIAMETER
NO	NUMBER
O/H	OVERHEAD
O/S	OFFSET
OC	ON CENTER
OD	OUTSIDE DIAMETER
PL	PROPERTY LINE, PLATE
PAV'T	PAVEMENT
POC	POINT OF CONNECTION
PR	PUBLIC ROAD
PSI	POUNDS PER SQUARE INCH
PVC	POLYVINYL CHLORIDE
R	RADIUS
RC	REINFORCED CONCRETE
RD	ROAD
REF	REFERENCE
REINF	REINFORCED
REQ'D	REQUIRED
ROW	RIGHT-OF-WAY
RPM	REFLECTIVE PAVEMENT MARKER
RT	RIGHT TANGENT
S	SLOPE, SEWER
SCH	SCHEDULE
SF	SQUARE FEET
SHT	SHEET
SL	SEWER LINE
SMH	SEWER MANHOLE
SPEC	SPECIFICATIONS
SQ	SQUARE
STA	STATION
STD	STANDARD
T	TOP
TC	TOP CURB
TEL	TELEPHONE
TMK	TAX MAP KEY
TP	TOP PIPE
TS	TOP STEM
TV	TOP VALVE
TW	TOP WALL
TYP	TYPICAL
UICS	UNDERGROUND INJECTION CONTROLS
UP	UTILITY POLE
VB	VALVE BOX
W	WIDE, WATER
W/	WITH
WM	WATER METER
WMH	WATER MANHOLE
WT	WEIGHT
WV	WATER VALVE
WWF	WELDED WIRE FABRIC
YCA	YOUTH CHALLENGE ACADEMY

GENERAL NOTES

1. ALL CONSTRUCTION WORK SHALL BE DONE IN ACCORDANCE WITH THE "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION," SEPTEMBER 1986, AND "STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION," SEPTEMBER 1984, OF THE DEPARTMENT OF PUBLIC WORKS, COUNTY OF HAWAII, AND INCLUDING SUPPLEMENTS AND AMENDMENTS MADE THERETO.
2. TOPOGRAPHIC SURVEY WORK COMPLETED BY CONTROL POINT SURVEYING, INC. DATED SEPTEMBER 6, 2012.
3. ALL COORDINATES AND AZIMUTHS ARE REFERRED TO GOVERNMENT TRIANGULATION STATION "HALAI." ELEVATIONS ARE REFERENCED TO MEAN SEA LEVEL.
4. ALL ELEVATIONS AND DISTANCES SHOWN ON PLANS ARE IN FEET.
5. FOR BENCH MARK, SEE SHEET CS100.
6. DIMENSIONS TAKE PRECEDENCE OVER SCALE.
7. WORK INCIDENTAL TO THE CONTRACT AND NECESSARY TO COMPLETE THE PROJECT, ALTHOUGH NOT SPECIFICALLY REFERRED TO ON THE CONTRACT DOCUMENTS, SHALL BE FURNISHED AND PERFORMED BY THE CONTRACTOR.
8. ALL EXISTING UTILITY LOCATIONS SHOWN ON PLANS AND PROFILES ARE BASED ON AVAILABLE SOURCES. THE CONTRACTOR SHALL VERIFY PRIOR TO ITS CONSTRUCTION, THE EXACT HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES, WHETHER SHOWN ON THE PLANS OR NOT, AND SHALL BE RESPONSIBLE FOR THE REPAIR OR REPLACEMENT OF SAME IN THE EVENT OF DAMAGE DUE TO HIS CONSTRUCTION PRACTICES. BEFORE DISRUPTING SERVICE OF ANY UTILITY, THE CONTRACTOR SHALL CONTACT AND COORDINATE ITS WORK WITH THE RESPONSIBLE UTILITY AUTHORITY.
9. THE CONTRACTOR AGREES THAT IT SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR THE JOB SITE CONDITION DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING THE SAFETY OF ALL PERSONS AND PROPERTY; AND THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR ENGINEER.
10. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL REQUIRED PERMITS FROM APPROPRIATE GOVERNMENT AGENCIES, EXCEPT THE NPDES PERMIT WHICH HAS BEEN OBTAINED BY THE OWNER.
11. THE CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS OF THE NPDES PERMIT. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ANY NEW NPDES PERMITS OR UPDATES TO THE NPDES PERMITS AFTER CONSTRUCTION CONTRACT HAS BEEN EXECUTED.
12. THE CONTRACTOR SHALL MAKE ARRANGEMENTS FOR UTILITIES SUCH AS ELECTRICITY, WATER, ETC. REQUIRED FOR ITS OPERATIONS AND ALL COST SHALL BE BORNE BY THE CONTRACTOR.
13. THE CONTRACTOR SHALL CONDUCT ALL TESTS AS REQUESTED BY THE ENGINEER AND BE RESPONSIBLE FOR EXPENSES INCURRED IN CONDUCTING THESE TESTS.
14. IF DIMENSIONAL ERRORS OR CONFLICTS OCCUR, THE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE AND THE ENGINEER AND SHALL WAIT FOR CLARIFICATION BEFORE RESUMING OR COMMENCING WORK ON THE DISCREPANCY ITEM.
15. THE CONTRACTOR SHALL COORDINATE THE STORAGE OF ITS MATERIAL AND EQUIPMENT WITH THE PROJECT MANAGER.
16. THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL TRAFFIC CONTROL DEVICES IN CONFORMANCE WITH THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS," AND TO THE SATISFACTION OF THE ENGINEER.
17. CONTRACT LIMITS ARE 10 FEET OUTSIDE THE GRADING LIMITS DELINEATED ON PLAN. THE CONTRACTOR SHALL RESTRICT ITS WORK ACTIVITIES, EQUIPMENT AND MATERIALS TO WITHIN THE CONTRACT LIMITS, UNLESS PERMITTED BY THE PROJECT MANAGER.
18. THE CONTRACTOR SHALL PROVIDE TO THE ENGINEER "AS-BUILT" DRAWINGS OF ALL NEW AND/OR RELOCATED UTILITIES, TRAFFIC CONTROL DEVICES, AND ALL STRUCTURES UPON COMPLETION OF WORK.
19. THE CONTRACTOR SHALL PROTECT ALL EXISTING PAVEMENT FROM DAMAGE DUE TO ITS CONSTRUCTION PRACTICES. IN THE EVENT OF DAMAGE, THE CONTRACTOR SHALL CONTACT AND COORDINATE ITS WORK WITH THE RESPONSIBLE AUTHORITY.
20. THE ENGINEER RESERVES THE RIGHT TO MAKE CHANGES TO THE DRAINAGE SYSTEM AS SUCH CHANGES ARE FOUND TO BE NECESSARY AS THE LAND IS CLEARED AND CONSTRUCTION PROGRESSES.

DRAINAGE NOTE

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE COUNTY OF HAWAI'I DEPARTMENT OF PUBLIC WORKS "STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION", DATED SEPTEMBER 1984, AND "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTIONS", DATED SEPTEMBER 1986, AND SUPPLEMENT AND AMENDMENT MADE THERETO.

EROSION/TEMPORARY DUST CONTROL

1. DURING CONSTRUCTION, PREVENTIVE MEASURES SHALL BE USED TO CONTROL FORESEEABLE DUST, EROSION OR SEDIMENTATION PROBLEMS WHICH MAY ARISE AS THE JOB PROGRESSES.
2. DRAINAGE SYSTEMS AS SHOWN ON THE CONSTRUCTION PLANS SHALL BE CONSTRUCTED AS EARLY AS PRACTICALLY POSSIBLE.
3. ALL FILL, SUBBASE AND BASE MATERIAL PLACED WITHIN THE ROAD PAVEMENT PRISM SHALL BE SUBSTANTIALLY COMPACTED BY THE END OF THE DAY.
4. THE CONTRACTOR SHALL CONDUCT ITS GRADING OPERATIONS SO THAT EXCAVATION, EMBANKMENT AND IMPORTED MATERIAL SHALL BE DAMPENED WITH WATER DURING GRADING OPERATIONS AT ALL TIMES.
5. WATER TRUCK AND/OR TEMPORARY SPRINKLERS SHALL BE AVAILABLE ON THE JOB SITE AT ALL TIMES TO ENSURE BARE EARTH DOES NOT CREATE A DUST PROBLEM.
6. FUGITIVE DUST AND SOLID WASTE DISPOSAL DURING GRUBBING AND GRADING ACTIVITIES SHALL MEET REQUIREMENTS OF ADMINISTRATIVE RULES, TITLE 11, CHAPTER 60, AIR POLLUTION CONTROL, AND CHAPTER 58, SOLID WASTE MANAGEMENT CONTROL.

GRADING NOTES

1. ALL GRADING WORK SHALL CONFORM TO CHAPTER 10 OF THE HAWAII COUNTY CODE. SHOULD A GRADING PERMIT BE REQUIRED, NO WORK SHALL COMMENCE UNTIL THE DEPARTMENT OF PUBLIC WORKS (DPW) APPROVES A GRADING PERMIT.
2. THE CONTRACTOR SHALL REMOVE ALL SILT AND DEBRIS DEPOSITED IN DRAINAGE FACILITIES, ROADWAYS AND OTHER AREAS RESULTING FROM HIS WORK. THE COSTS INCURRED FOR ANY NECESSARY REMEDIAL ACTION BY THE DPW SHALL BE PAYABLE BY THE CONTRACTOR.
3. THE CONTRACTOR, AT ITS OWN EXPENSE, SHALL KEEP THE PROJECT AND SURROUNDING AREAS FREE FROM DUST NUISANCES. THE WORK SHALL BE IN CONFORMANCE WITH THE AIR POLLUTION CONTROL RULES OF THE STATE DEPARTMENT OF HEALTH, HAR 11-60.1, FUGITIVE DUST.
4. ALL GRADING OPERATIONS SHALL BE PERFORMED IN CONFORMANCE WITH THE APPLICABLE PROVISIONS OF THE HAWAII ADMINISTRATIVE RULES, TITLE 11, CHAPTER 55, WATER POLLUTION CONTROL AND CHAPTER 54, WATER QUALITY STANDARDS, AND TO THE EROSION AND SEDIMENTATION CONTROL STANDARDS AND GUIDELINES OF THE DEPARTMENT OF PUBLIC WORKS, COUNTY OF HAWAII.
5. THE CONTRACTOR SHALL SOD OR PLANT ALL SLOPES AND EXPOSED AREA IMMEDIATELY AFTER THE GRADING WORK HAS BEEN COMPLETED.
6. FILLS ON SLOPES STEEPER THAN 5:1 SHALL BE KEYED.
7. THE CONTRACTOR SHALL INFORM THE DPW OF THE LOCATION OF THE DISPOSAL AND/OR BORROW SITE(S) REQUIRED FOR THIS PROJECT WHEN AN APPLICATION FOR A GRADING PERMIT IS MADE. THE DISPOSAL AND/OR BORROW SITE(S) MUST ALSO FULFILL THE REQUIREMENTS OF THE GRADING ORDINANCE.
8. NO GRADING WORK SHALL BE DONE ON SATURDAYS, SUNDAYS AND HOLIDAYS ANYTIME WITHOUT PRIOR APPROVAL FROM THE DEPARTMENT OF PUBLIC WORKS. GRADING WORK ON NORMAL WORKING DAYS SHALL BE BETWEEN THE HOURS OF 7:00 A.M. TO 3:30 P.M.
9. FILLS SHALL BE COMPACTED TO 95% OF MAXIMUM DENSITY PER ASTM D-1557 TEST.
10. THE CONTRACTOR SHALL REMOVE ALL VEGETATION BEFORE PLACING FILLS ON NATURAL GROUND SURFACE.
11. THE CONTRACTOR SHALL OBTAIN A GRADING PERMIT TWO WEEKS PRIOR TO BEGINNING OF GRADING WORK FROM THE DEPARTMENT OF PUBLIC WORKS, PERMIT SECTION. GRADING FEES SHALL BE PAID BY THE CONTRACTOR.
12. THE LIMITS OF THE GRADED AREA SHALL BE FLAGGED BEFORE THE COMMENCEMENT OF GRADING WORK.
13. THE CONTRACTOR SHALL CONFINE ALL ITS GRADING OPERATIONS WITHIN CONTRACT LIMITS AND SHALL PROTECT EXISTING FEATURES CLOSE TO LIMITS.
14. SHOULD ANY UNIDENTIFIED SITES OR REMAINS SUCH AS ARTIFACTS, SHELL, BONE, OR CHARCOAL DEPOSITS, HUMAN BURIALS, ROCK OR CORAL ALIGNMENTS, PAVING OR WALLS BE ENCOUNTERED, WORK IN THE AFFECTED AREA SHALL CEASE, AND THE PLANNING DEPARTMENT AND THE OWNERS DESIGNATED REPRESENTATIVE SHALL BE IMMEDIATELY NOTIFIED. SUBSEQUENT WORK SHALL PROCEED UPON AN ARCHEOLOGICAL CLEARANCE FROM THE PLANNING DEPARTMENT, THROUGH THE OWNERS DESIGNATED REPRESENTATIVE, WHEN IT FINDS THAT SUFFICIENT MITIGATIVE MEASURES HAVE BEEN TAKEN.
15. THE FOLLOWING QUANTITIES ARE APPROVED FOR PERMIT PURPOSES ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING ITS OWN QUANTITIES. ESTIMATED EARTHWORK QUANTITIES:

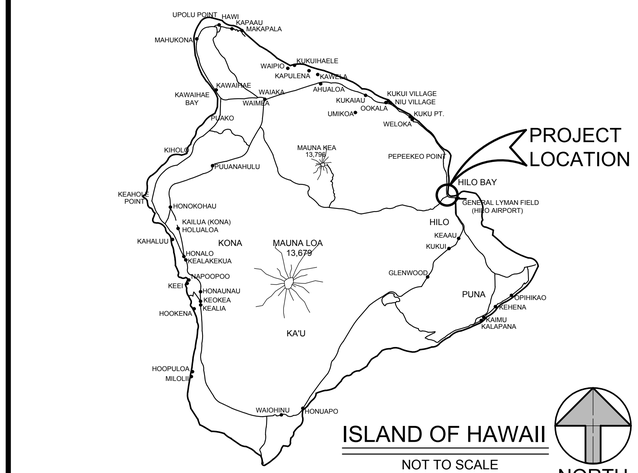
EXCAVATION	=	352 CY
EMBANKMENT	=	350 CY
TOTAL GRADED AREA	=	1.28 ACRES

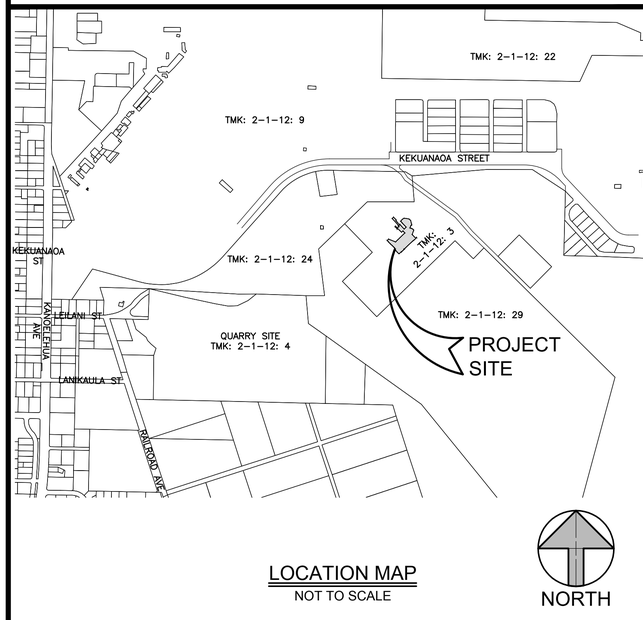
SOLID WASTE CONSTRUCTION NOTES

1. UNLESS OTHERWISE SPECIFIED THE CONTRACTOR IS RESPONSIBLE FOR THE PROPER HANDLING, STORAGE AND/OR DISPOSAL OF ALL WASTE GENERATED BY THIS CONSTRUCTION, INCLUDING GRUBBING AND EXCESS EXCAVATED MATERIAL. ANY MATERIAL BROUGHT TO THE COUNTY LANDFILLS WILL BE SUBJECTED TO THE INSTITUTED TIPPING FEE SYSTEM, WITH NO EXCEPTIONS OR EXEMPTIONS.
2. ALL WASTES GENERATED BY CONSTRUCTION, INCLUDING GRUBBING, DEMOLITION AND EXCESS EXCAVATION MATERIAL MAY BE BROUGHT TO THE WEST HAWAII OR THE HILO LANDFILL. THE CONTRACTOR SHALL CHECK WITH THE SOLID WASTE DIVISION FOR DISCLOSURE OF THE CURRENT LANDFILL FEE AND CONSIDERATION OF THAT FEE SHALL BE INCLUDED IN THE CONTRACTOR'S BID SUM.
3. CONSTRUCTION, DEMOLITION AND GRUBBING MATERIAL SHALL NOT BE DEPOSITED AT ANY OF THE COUNTY TRANSFER STATIONS, BUT SHALL BE TRANSPORTED FOR DISPOSAL TO EITHER THE WEST HAWAII OR HILO LANDFILL.
4. ASBESTOS MATERIAL MUST BE SEPARATED, DOUBLE BAGGED AND LANDFILLED IN ACCORDANCE WITH REGULATIONS OF THE SOLID WASTE DIVISION, DEPARTMENT OF PUBLIC WORKS. INFORMATION MAY BE OBTAINED BY CALLING THE DIVISION AT (808) 961-8339 BETWEEN 7:00 A.M. AND 4:00 P.M. MONDAY THROUGH FRIDAY.

INDEX OF CIVIL DRAWINGS:

DRAWING NO.	DESCRIPTION
C-001	CIVIL LOCATION MAP, INDEX OF DRAWINGS AND CONSTRUCTION NOTES
C-002	CIVIL CONSTRUCTION NOTES
CD101	CIVIL SITE DEMOLITION AND EROSION CONTROL PLAN
CD102	CIVIL EROSION CONTROL DETAILS
CS100	CIVIL GENERAL SITE AND BORING LOCATION PLAN
CS101	CIVIL SITE LAYOUT AND UTILITY PLAN
CG101	CIVIL SITE GRADING AND DRAINAGE PLAN
C-201	CIVIL SITE SECTION AND DRAIN LINE PROFILES
C-501	CIVIL TYPICAL PAVEMENT, CONCRETE WALKWAY, AND SEWER DETAILS
C-502	CIVIL SIGNING AND STRIPING DETAILS
C-503	CIVIL DRAINAGE DETAILS
C-601	BORING LOGS





APPROVED BY:

DIRECTOR, DEPARTMENT OF PUBLIC WORKS, COUNTY OF HAWAII (FOR GRADING PURPOSES ONLY) — DATE

PLANNING DIRECTOR, COUNTY OF HAWAII — DATE

ahl.
733 BISHOP STREET, SUITE 3100
HONOLULU, HAWAII 96813
TELEPHONE: (808) 523-9636
FAX: (808) 521-3280
www.ahldesign.com
A/E INFO

ERIC H. TAMASHIRO
LICENSED PROFESSIONAL ENGINEER
No.9787-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION
SIGNATURE — 4/30/2020 — EXPIRATION DATE

APPR	DATE	DESCRIPTION	SYM

SUBMITTAL PHASE: FINAL SUBMITTAL
SUBMITTAL DATE: 30 SEPTEMBER 2019
DES | DRW | CHK

DEPARTMENT OF DEFENSE
STATE OF HAWAI'I
FACILITY MANAGEMENT OFFICE
HAWAII ARMY NATIONAL GUARD
DESIGN AND PROJECT MANAGEMENT BRANCH
KEAUKAHA MILITARY RESERVATION - B621
HILO, HAWAI'I

HAWAI`I ARMY NATIONAL GUARD (HIARNG)
BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS

CIVIL LOCATION MAP, INDEX OF DRAWINGS AND CONSTRUCTION NOTES

SCALE:
STATE JOB NO. CA-1212-C3
FEDERAL PROJECT NO. 15130007
SHEET 7 of 126
C-001

STANDARD TRAFFIC NOTES FOR PRIVATE ROADS

1. THE TRAFFIC CONTROL DEVICES AND STREET LIGHTS AT THE CONNECTION OF THE PRIVATE ROAD TO THE COUNTY ROADWAY SHALL BE DESIGNED IN ACCORDANCE WITH COUNTY TRAFFIC DIVISION REQUIREMENTS AND MUST BE APPROVED BY THE COUNTY TRAFFIC DIVISION.
2. THE OWNER(S) OF A PRIVATE ROAD SHALL:
   a. SEE TRAFFIC NOTES ITEMS 13 AND 14.
3. THE STREET LIGHTS LOCATED WITHIN THE COUNTY RIGHT-OF-WAY SHALL BE DEDICATED TO THE COUNTY.
4. TRAFFIC CONTROL DEVICES AFFECTING THE PRIVATE ROAD, BUT LOCATED WITHIN THE COUNTY RIGHT-OF-WAY SHALL BE MAINTAINED BY THE PRIVATE OWNERS.
5. IF THE OWNER(S) DECIDE TO DEDICATE THE PRIVATE ROAD TO THE COUNTY, THE PRIVATE ROAD MUST MEET THE CURRENT DEDICABLE COUNTY OF HAWAII STANDARDS AND MUST HAVE STREET NAMES WHICH HAVE BEEN APPROVED BY RESOLUTION.

HAWAII ARMY NATIONAL GUARD ENVIRONMENTAL COMPLIANCE NOTES

1. PRIOR TO START OF CONSTRUCTION AND WITHIN 30 DAYS OF COMPLETION OF THE PROJECT, CONTRACTOR SHALL SUBMIT TO HAWAII ARMY NATIONAL GUARD ENVIRONMENTAL OFFICE (HIARNG-ENV) A HAZARDOUS MATERIAL INVENTORY LOG OF CHEMICAL PRODUCTS TO BE USED IN THE PROJECT, AND PROVIDE AN UPDATE NO LATER THAN 31 JANUARY OF EACH CALENDAR YEAR. THE LOG SHALL INCLUDE THE PRODUCT NAME AND MANUFACTURER ID NUMBER, CONTAINER SIZE, AMOUNT USED, AND MAXIMUM NUMBER OF CONTAINERS TO BE STORED ON SITE AT ANY GIVEN DAY DURING THE PROJECT. MATERIAL SAFETY DATA SHEETS (MSDSs) SHALL BE PROVIDED OR MADE AVAILABLE TO THE PROJECT MANAGER AND HIARNG-ENV.
2. PRIOR TO START OF CONSTRUCTION, CONTRACTOR WILL PROVIDE TO HIARNG-ENV AN ESTIMATE OF THE MAXIMUM AMOUNT OF HAZARDOUS WASTE EXPECTED TO BE GENERATED PER MONTH, AND THE TOTAL AMOUNT ANTICIPATED TO BE STORED ON-SITE AT ANY GIVEN TIME. CONTRACTOR TO COORDINATE WITH HIARNG-ENV OFFICE OF THE DATES FOR THE QUANTITY OF HAZARDOUS WASTE THAT WILL BE GENERATED. ALL WASTE WILL BE STORED IN A SECURED AREA PENDING REMOVAL FOR DISPOSAL, WITH SIGNAGE INDICATING CONTACT INFORMATION AND SHALL BE MANAGED AND LABELED IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS.
3. CONTRACTOR SHALL PROVIDE COPIES OF ALL WASTE DISPOSAL DOCUMENTATION (INCLUDING ANY REQUIRED LAB ANALYSES, WASTE PROFILES, AND ANY OTHER SUPPORTING DOCUMENTATION) TO THE PROJECT MANAGER AND HIARNG-ENV, ALONG WITH DRAFT COPIES OF THE WASTE MANIFESTS FOR REVIEW PRIOR TO WASTE SHIPMENT OFF-SITE FOR DISPOSAL. IF THE CONTRACTOR UTILIZES A HIARNG EPA ID NUMBER FOR WASTE DISPOSAL, MANIFESTS WILL ONLY BE SIGNED BY INDIVIDUALS AUTHORIZED BY HIARNG-ENV. ALL COSTS FOR DISPOSAL OF WASTE GENERATED BY THIS PROJECT SHALL BE PAID FOR BY THE CONTRACTOR.
4. HIARNG-ENV APPROVAL IS REQUIRED FOR ANY FUELING OPERATIONS BEING CONDUCTED ON-SITE, WHICH WILL BE CONDUCTED IN ACCORDANCE WITH (IAW) ALL APPLICABLE REQUIREMENTS.
5. HIARNG-ENV APPROVAL IS REQUIRED FOR ANY ABOVE GROUND STORAGE TANK STAGED ON-SITE. FOR STORAGE OF OIL EXCEEDING THE EPA THRESHOLD OF 1,320 GALLONS SHELL CAPACITY OF OIL IN CONTAINERS 55 GALLONS OR GREATER, CONTRACTOR IS RESPONSIBLE FOR PREPARING A SPILL PREVENTION, CONTROL, AND COUNTERMEASURES (SPCC) PLAN IN ACCORDANCE WITH 40 CFR 112, AND PROVIDING A COPY TO HIARNG-ENV.
6. CONTRACTOR SHALL USE PROTECTIVE MEASURES FOR ON-SITE CHEMICALS, EQUIPMENT AND VEHICLES TO PREVENT SPILLS AND LEAKS INTO THE ENVIRONMENT AND ENSURE ONLY RAINWATER, AS PERMITTED, ENTERS ON-SITE UICS, STORM DRAINS, SWALES, STREAMS, AND OTHER PATHS TO NAVIGABLE WATERS.
7. CONTRACTOR SHALL REPORT SPILLS IMMEDIATELY TO THE PROJECT MANAGER AND HIARNG-ENV AND COMPLETE THE HIARNG SPILL INCIDENT REPORT FORM AS REQUIRED. CONTRACTOR SHALL IMMEDIATELY CLEAN UP ALL SPILLS IAW FEDERAL AND STATE GUIDELINES AND TO THE SATISFACTION OF THE HIARNG-ENV, AND IS RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH THE CLEANUP. CONTRACTOR SHALL MAINTAIN ADEQUATE SPILL SUPPLIES COMMENSURATE WITH THE POTENTIAL FOR SPILLS, AND WILL CONTRACT OUT SPILL CLEANUP BEYOND THEIR CAPABILITIES. CONTRACTOR SHALL ACCOMPLISH ALL REGULATORY VERBAL AND WRITTEN NOTIFICATIONS TO THE STATE EMERGENCY RESPONSE COMMISSION (SERC), LOCAL EMERGENCY PLANNING COMMITTEE (LEPC), NATIONAL RESPONSE CENTER (NRC), ENVIRONMENTAL PROTECTION AGENCY (EPA), AS APPLICABLE, AND PROVIDE HIARNG-ENV COPIES OF ALL SPILL REPORTS.
8. CONTRACTOR IS RESPONIBLE FOR OBTAINING ANY AND ALL REQUIRED ENVIRONMENTAL PERMITS, E.G., CONSTRUCTION-RELATED SURFACE DISCHARGE PERMITS, COUNTY-REQUIRED INDUSTRIAL WASTEWATER DISCHARGE PERMITS, MINOR (POLLUTION) SOURCE AIR PERMITS, ETC. FOR ANY CONTRACT-RELATED WORK.

TRAFFIC NOTES

1. ALL TRAFFIC SIGNS AND PAVEMENT MARKINGS SHALL CONFORM TO THE LATEST EDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", AS AMENDED, AND APPLICABLE SECTIONS OF PART V OF THE "STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION", DATED SEPTEMBER, 1984, AND THE "HAWAII STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND PUBLIC WORKS CONSTRUCTION," 1994 EDITION, UNLESS OTHERWISE SPECIFIED ON THE PLANS, SPECIFICATIONS OR THE STANDARD TRAFFIC NOTES.
2. THE CONTRACTOR SHALL INSTALL PERMANENT OR TEMPORARY PAVEMENT MARKERS, STRIPING AND MARKINGS AS REQUIRED BY SECTION 629 OF THE "HAWAII STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND PUBLIC WORKS CONSTRUCTION," 1994 EDITION. THE TEMPORARY STRIPING MUST BE INSTALLED AS CLOSE AS POSSIBLE TO THE FINAL LOCATION TO ENSURE PROPER LANE WIDTHS & SAFE FLOW OF TRAFFIC.

   THE CONTRACTOR SHALL COORDINATE AND HIRE SPECIAL DUTY POLICE OFFICER(S) AS NEEDED TO PROVIDE TRAFFIC CONTROL WHILE WORKING WITHIN THE COUNTY RIGHT OF WAY.
3. THE CONTRACTOR SHALL INFORM THE ENGINEER AT LEAST SIX (6) WORKING DAYS PRIOR TO ANY WORK ON PAVEMENT MARKING OPERATIONS AND/OR SIGN INSTALLATIONS TO SCHEDULE A REVIEW AND APPROVAL OF THE STRIPING AND/OR SIGNING PLANS.
4. THE APPROVED STRIPING PLAN SHALL BE LAID OUT USING THINNED-OUT PAINT OR OTHER APPROVED METHODS. FIELD ADJUSTMENTS SHALL BE MADE AS DIRECTED BY THE ENGINEER BEFORE THE FINAL MARKINGS ARE APPLIED.
5. ALL PAVEMENT MARKINGS THAT BECOME INAPPLICABLE SHALL BE REMOVED BY THE CONTRACTOR AT ITS OWN EXPENSE. REMOVAL SHALL BE BY ERADICATION OR BY OTHER METHODS APPROVED BY THE ENGINEER BEFORE THE NEW PAVEMENT MARKINGS ARE APPLIED. EXCESSIVE GOUGING OF THE PAVEMENT IS NOT ACCEPTABLE AND SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
6. PAVEMENT STRIPING SHALL BE WITH REFLECTIVE THERMOPLASTIC COMPOUND PAVEMENT MARKINGS AS SPECIFIED IN SECTIONS 629 AND 721.55 OF THE HAWAI'I STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND PUBLIC WORKS CONSTRUCTION (1994 EDITION) ON ALL ROADWAYS HAVING A TRAFFIC VOLUME OF MORE THAN 400 AADT. THE CONTRACTOR SHALL SUBMIT CERTIFICATE OF COMPLIANCE CERTIFYING THAT THE THERMOPLASTIC MATERIAL TO BE USED MEETS THE CURRENT STATE OF HAWAI'I, DEPARTMENT OF TRANSPORTATION SPECIFICATIONS.

   PRE-MIXED RECLECTORIZED OIL-BASED LEAD-FREE TRAFFIC PAINTS THAT HAVE BEEN TESTED AND PRE-APPROVED BY THE COUNTY OF HAWAI'I MAY BE USED ON LOW VOLUME ROADS HAVING A TRAFFIC VOLUME OF LESS THAN 400 AADT, EXCEPT STOP LINES, CROSSWALK MARKINGS, PAVEMENT ARROWS AND SYMBOLS SHALL BE WITH THERMOPLASTIC COMPOUND OR HEAT APPLIED PRE-FORMED THERMOPLASTIC PAVEMENT MARKING TAPE DESCRIBED BELOW.

   HEAT APPLIED PRE-FORMED THERMOPLASTIC PAVEMENT MARKING TAPE WITH VISIBLE TEMPERATURE INDICATORS, OR AN EQUAL PAVEMENT MARKING TAPE THAT IS APPROVED BY THE TRAFFIC DIVISION MAY BE USED FOR CROSSWALKS, STOP LINES, PAVEMENT ARROWS, ALPHABETS AND SYMBOLS IN LIEU OF THERMOPLASTIC COMPOUND.
7. REFLECTORIZED RAISED PAVEMENT MARKERS SHALL BE THE REGULAR SIZED MARKERS WITH APPROXIMATE DIMENSIONS OF 4" X 4" X 0.7". THE CONTRACTOR SHALL SUBMIT CERTIFICATE OF COMPLIANCE CERTIFYING THAT THE RAISED PAVEMENT MARKERS TO BE USED MEETS AND/OR EXCEEDS THE CURRENT STATE OF HAWAI'I, DEPARTMENT OF TRANSPORTATION SPECIFICATIONS.
8. ALL TRAFFIC SIGNS AND POSTS SHALL MEET THE REQUIREMENTS OF THE COUNTY OF HAWAII STANDARD DETAIL T-1 EXCEPT THAT FLANGED CHANNEL POSTS AND OCTAGONAL POSTS WILL NOT BE ACCEPTABLE. SIGNS SHALL BE ON ALUMINUM SHEETING OF 0.080-INCH MINIMUM THICKNESS. SIGN POST SHALL BE 2 INCH SQUARE TELESPAR TUBING NUMBER 20 F 12 OR EQUIVALENT WITH 2-1/4 INCH SQUARE TELESPAR ANCHOR POST.
9. ALL TRAFFIC SIGNS SHALL BE COMPLETELY REFLECTORIZED WITH TYPE III OR TYPE IV HIGH INTENSITY RETROREFLECTIVE SHEETING EXCEPT THAT PARKING/NO PARKING AND STREET NAME SIGNS MAY BE ENGINEER GRADE REFLECTIVE SHEETING. OVERHEAD STREET NAME SIGNS SHALL BE HIGH INTENSITY.
10. THE 2-1/4 INCH SQUARE ANCHOR POST FOR SIGNS SHALL BE DRIVEN INTO THE GROUND, ASPHALTIC CONCRETE PAVEMENT OR CONCRETE SIDEWALK IN ACCORDANCE WITH THE PLANS. ALL DAMAGES TO THE SURROUNDING AREA SHALL BE REPAIRED TO ITS ORIGINAL CONDITION OR BETTER. BEFORE DRIVING INTO CONCRETE, A NEAT HOLE OF APPROXIMATELY 3 INCH DIAMETER SHALL BE DRILLED THROUGH THE CONCRETE PRIOR TO THE INSTALLATION OF THE ANCHOR POST. IF DRIVING INTO THE CONCRETE OR ASPHALTIC CONCRETE PAVEMENT IS NOT POSSIBLE WITHOUT DAMAGE TO THE SURROUNDING CONCRETE OR ASPHALTIC CONCRETE PAVEMENT, A 12" X 12" SQUARE SHALL BE SAW-CUT AND REMOVED PRIOR TO THE INSTALLATION OF THE ANCHOR POST AND THEN PATCHED WITH HOT MIX TO MATCH THE EXISTING ASPHALTIC CONCRETE PAVEMENT, AND CONCRETE TO MATCH THE EXISTING CONCRETE SIDEWALK.
11. UPON COMPLETION OF THE CONSTRUCTION WORK THE CONTRACTOR SHALL RESTRIPE ALL PAVEMENT MARKINGS WITHIN THE CONSTRUCTION WORK AREA AND ADJACENT ROADWAY PAVEMENTS UP TO 300 FEET BEYOND THE CONSTRUCTION AREA IN ACCORDANCE TO ITEM 6 OF THE CURRENT STANDARD TRAFFIC NOTES. ALL TRAFFIC SIGNS AND POSTS WITHIN THE CONSTRUCTION AREA AND ADJACENT AREAS THAT HAVE BEEN DAMAGED, REMOVED, OR ADVERSELY AFFECTED BY THE CONSTRUCTION WORK SHALL BE REPLACED BY THE CONTRACTOR IN ACCORDANCE TO ITEM(S) 8, 9, AND 10 OF THE CURRENT STANDARD TRAFFIC NOTES.
12. ALL DEDICATED STREETS MUST HAVE STREET NAMES WHICH HAVE BEEN APPROVED BY RESOLUTION BEFORE ACCEPTANCE OF THE STREET BY THE COUNTY OF HAWAI'I.
13. INSTALL PRIVATE ROAD SIGN(S) ON ALL PRIVATE ROAD(S). SIGN SHALL BE ON 18" WIDE X 12" HIGH ALUMINUM PLATE WITH 4" BLACK LETTERING ON WHITE REFLECTORIZED SHEETING WITH BORDER.
14. ALL SIGNS & MARKINGS FOR PRIVATE ROADWAYS SHALL BE MAINTAINED BY THE PRIVATE OWNERS.

SEWER NOTES (PRIVATE SYSTEM)

1. ALL CONSTRUCTION DETAILS AND SPECIFICATIONS NOT SHOWN ON THE PLANS SHALL CONFORM TO THE STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION, SEPTEMBER 1984, AND STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, SEPTEMBER 1986.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INVESTIGATION, INSPECTION AND VERIFICATION OF ALL EXISTING UTILITIES SUPPLEMENTED BY ACTUAL DIGGING IN THE FIELD IF NECESSARY, TO DETERMINE THE ACTUAL LOCATION OF SUCH UTILITIES WITH THEIR BRANCH AND SERVICE LINES, WHETHER INDICATED ON PLANS OR NOT.
3. THE CONTRACTOR SHALL BE REQUIRED TO TAKE OUT AND PAY FOR ALL NECESSARY PERMITS AND LICENSES REQUIRED BY LOCAL ORDINANCES FOR THE PROSECUTION OF THIS WORK.
4. WORKMANSHIP SHALL BE FIRST CLASS. ALL WORK SHALL BE PERFORMED BY THE RESPECTIVE TRADE PERSON IN ACCORDANCE WITH APPLICABLE COUNTY ORDINANCE AND STATE REGULATION.
5. THE CONTRACTOR SHALL REPAIR, AT ITS EXPENSE, ALL DAMAGES SUSTAINED DURING THE COURSE OF ITS WORK AND LEAVE COMPLETED WORK IN ITS ORIGINAL OR BETTER CONDITION.
6. ALL DEBRIS RESULTING FROM THE SEWER CONSTRUCTION WORK SHALL NOT BE ALLOWED TO ENTER THE EXISTING SEWER SYSTEM. THE CONTRACTOR SHALL PROVIDE THE NECESSARY BARRIERS AND COLLECTION DEVICES TO PREVENT DEBRIS FROM ENTERING THE SEWER. THE CONTRACTOR SHALL FLUSH ALL NEWLY CONSTRUCTED SEWER PIPE BEFORE CONNECTION TO THE EXISTING SEWER SYSTEM. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ALL DEBRIS THAT ENTERS THE EXISTING SEWER SYSTEM AS A RESULT OF THE CONSTRUCTION WORK.
7. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER SHOULD ANY EXISTING SEWER LINE BE DAMAGED. THE CONTRACTOR SHALL REPAIR THE SEWER LINE AND ANY ROCKS OR DEBRIS THAT ENTERED THE SEWER SYSTEM SHALL BE PHYSICALLY REMOVED FROM THE SEWER TO THE SATISFACTION OF THE ENGINEER. THE WORK MAY INCLUDE FLUSHING AND/OR USE OF A PIPE PIG.
8. UNLESS OTHERWISE APPROVED OR NOTED, ALL SEWER PIPES AND FITTINGS SHALL BE PVC SDR-26 BELL(S) AND SPIGOT. PIPE COUPLINGS SHALL BE WITH AN APPROVED SOLID BODY PVC SLEEVE OR NON-SHEAR RUBBER COUPLING (DFW/HPI OR EQUAL). MATERIALS FOR CLASS B PIPE BEDDING SHALL BE 3/4" AGGREGATE BASE COURSE PLACED IN SUCCESSIVE HORIZONTAL LAYERS OF LOOSE MATERIAL NOT TO EXCEED 6 INCHES IN DEPTH, AND SHALL BE UNIFORMLY CONSILIDATED TO 95 PERCENT MAXIMUM DRY DENSITY. COMPACTION TESTING FOR COMPLIANCE SHALL BE ROUTINELY PERFORMED AND APPROVED BY THE CONTRACTOR'S GEOTECHNICAL ENGINEER. ALL TEST RESULTS SHALL BE SUBMITTED TO THE ENGINEER FOR FINAL ACCEPTANCE.
9. PVC SEWER PIPE CONNECTIONS TO NEW MANHOLES SHALL BE WITH AN APPROVED CAST-IN MANHOLE PIPE ADAPTER (A-LOK, ECONOSEAL, OR APPROVED EQUAL). PVC SEWER PIPE CONNECTIONS TO EXISTING MANHOLES SHALL BE WITH AN APPROVED MANHOLE PIPE ADAPTER (A-LOK FIELD SLEEVE OR APPROVED EQUAL). WHEN PERMITTED BY THE ENGINEER, VITRIFIED CLAY PIPE (VCP) SEWER CONNECTIONS TO NEW AND/OR EXISTING MANHOLES SHALL BE WITH A SHORT, ONE-FOOT MAXIMUM, LENGTH OF VCP STUB TOGETHER WITH AN APPROVED RUBBER COUPLING (DFW/HPI OR EQUAL). RUBBER COUPLINGS SHALL HAVE PURE STAINLESS STEEL STRAPS INCLUDING TIGHTENING SCREWS.
10. DROP MANHOLES AND MANHOLES WITH SEWER MAIN PIPE LINES LARGER THAN OR EQUAL TO 12-INCHES SHALL BE LINED WITH A PVC LINER (DURA-PLATE LINER OR EQUAL).
11. THE ANGLE BETWEEN THE INLET AND OUTLET SEWERS SHALL BE A MINIMUM OF 90 DEGREES. NEW AND EXISTING MANHOLE BASE SECTIONS SHALL BE CHANNELED AS NECESSARY. CHANNELS SHALL PROVIDE A SMOOTH TRANSITION BETWEEN INLET AND OUTLET SEWERS.
12. UNLESS OTHERWISE APPROVED OR NOTED, ALL MANHOLES SHALL BE PROVIDED "ECCENTRIC" CONE SECTIONS WITH TYPE SA FRAMES AND COVERS (STD. DETAIL S-22); ALL MANHOLES LESS THAN 5'-0" DEEP SHALL BE PROVIDED 22-INCH "CONCENTRIC" CONE SECTIONS (STD. DETAIL S-21) WITH TYPE SB FRAMES AND COVERS.
13. ALL LATERAL CONNECTIONS TO THE SEWER MAIN SHALL BE MADE WITH A WYE FITTING ROTATED 45 DEGREES ABOVE THE SEWER SPRING LINE.
14. ALL CLEANOUTS SHALL BE EASILY ACCESSIBLE (I.E., NOT BE BURIED OR LOCATED UNDER OR CLOSE TO ROCK WALLS, FENCES OR OTHER OBSTRUCTIONS). IF A CLEANOUT IS DETERMINED INACCESSIBLE, IT SHALL BE RELOCATED AT THE CONTRACTOR'S EXPENSE. THE CLEANOUT SHALL BE OF THE SAME MATERIAL AND DIAMETER (TYPICAL, 6-INCH) AS THAT OF THE SEWER LATERAL PROVIDED. THE CLEANOUT SHALL BE PROVIDED A BRASS COUNTERSUNK CAP AND AN 18"X18"X8" CLASS B CONCRETE COLLAR REINFORCED WITH 1-#3 REINFORCEMENT STEEL LOOP. THE CLEANOUT SUBJECT TO VEHICULAR OR ABNORMAL LOADING SHALL BE PROVIDED A TRAFFIC RATED FRAME/COVER (MODEL SBF 1246 W, MANUFACTURED BY SOUTH BAY FOUNDRY, OR APPROVED EQUAL) INSTALLED TO GRADE WITH AN 24"X24"X8" CLASS B CONCRETE COLLAR REINFORCED 1-#3 REINFORCEMENT STEEL HOOP. SEE SEWER COTG DETAIL.
15. UNLESS OTHERWISE NOTED AND LOCATIONS DETAILED ON APPROVED PLANS, CONCRETE JACKETING OF NEW OR EXISTING SEWER MAINS AND SERVICE LATERALS SHALL NOT BE PERMITTED.
16. ALL SEWER LATERALS SHALL BE SLOPED AT 2.08% UNLESS OTHERWISE NOTED. MAINTAIN 18" VERTICAL CLEARANCE AT WATER LINE CROSSINGS.

HAWAII ARMY NATIONAL GUARD SOLID WASTE CONSTRUCTION NOTES

1. THE CONTRACTOR SHALL SUBMIT SOLID WASTE REPORTS TO THE HIARNG PROJECT MANAGER FOR THE DURATION OF THE PROJECT. THE REPORTS SHALL ADDRESS:
   a. DIVERTED WASTE (I.E. WASTE THAT DOES NOT GO INTO THE LANDFILL)
   b. RECYCLE WASTE
   c. LANDFILL WASTE
   d. RECOVERED WASTE (I.E. FREON FROM AC EQUIPMENT AND REFRIGERATOR)
2. THE CONTRACTOR SHALL SUBMIT LEGIBLE COPIES OF DUMP TICKET RECEIPT FROM VENDOR, SHOWING THE TONNAGE OF WASTE TO THE HIARNG PROJECT MANAGER. IF WASTE PRODUCTS ARE COMBINED TOGETHER WITH OTHER PROJECTS, THE CONTRACTOR SHALL PROVIDE A BREAKDOWN PER PROJECT.

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DEPARTMENT OF DEFENSE
HAWAII ARMY NATIONAL GUARD
DESIGN AND PROJECT MANAGEMENT BRANCH
STATE OF HAWAI'I
FACILITY MANAGEMENT OFFICE

HILO, HAWAI'I
HAWAI`I ARMY NATIONAL GUARD (HIARNG)
KEAUKAHA MILITARY RESERVATION - B621
BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS

CIVIL CONSTRUCTION NOTES

SCALE:

STATE PROJECT NO.
CA-1212-C3

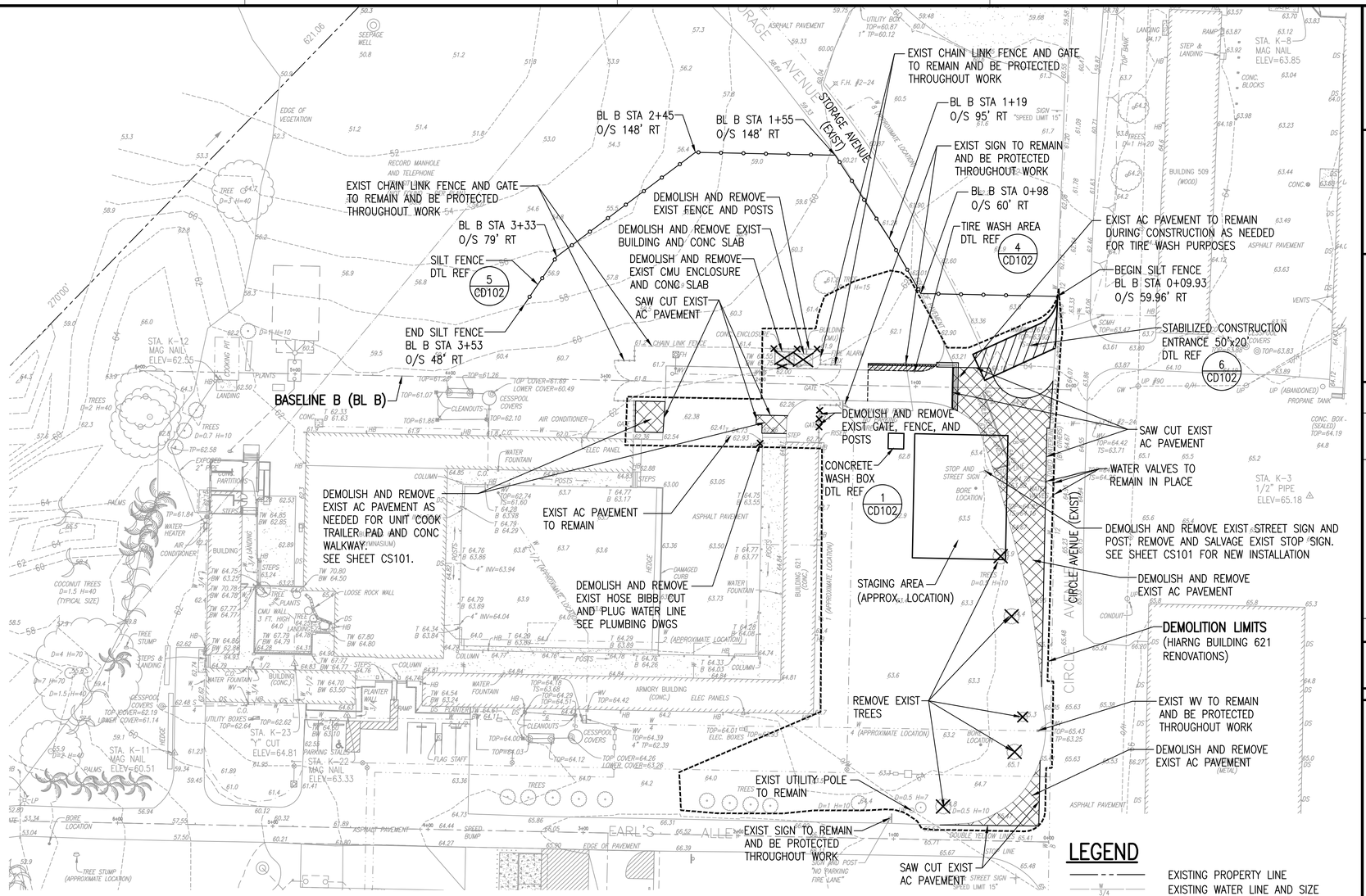
FEDERAL PROJECT NO.
15130007

SHEET 8 of 126

C-002

EROSION CONTROL AND BMP NOTES

1. MEASURES TO CONTROL EROSION AND OTHER POLLUTANTS SHALL BE IN PLACE BEFORE ANY DEMOLITION OR EARTH MOVING WORK IS INITIATED. THESE MEASURES SHALL BE PROPERLY CONSTRUCTED AND MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.
2. ALL EROSION CONTROL MEASURES SHALL BE CHECKED AND REPAIRED AS NECESSARY.
3. STORM WATER FLOWING TOWARD THE CONSTRUCTION AREA SHALL BE DIVERTED BY USING APPROPRIATE CONTROL MEASURES AS PRACTICAL.
4. CONSTRUCT TEMPORARY CONSTRUCTION EGRESS/INGRESS AREA AT LOCATIONS SHOWN ON THIS DRAWING. ALL VEHICLES EXITING THE SITE ARE TO BE WASHED DOWN PRIOR TO EXIT. CONSTRUCTION ENTRANCE AREA MAY BE ADJUSTED TO FIT THE CONTRACTOR'S OPERATIONS.
5. CONSTRUCT PERIMETER PROTECTION (SILT FENCE OR COMPOST FILTER SOCK) SEE DETAILS THIS DRAWING.
6. AT THE END OF THE GRADING OPERATION AND AT THE COMPLETION OF PROJECT, EXISTING DRAIN INLETS AND DRAIN MANHOLES SURROUNDING THE PROJECT SITE SHALL BE INSPECTED AND ANY ACCUMULATED SEDIMENT AND DEBRIS FOUND IN THE DRAIN INLETS AND DRAIN MANHOLES SHALL BE REMOVED. FLUSHING INTO THE DRAIN INLETS AND DRAIN MANHOLES IS PROHIBITED.
7. THE CONTRACTOR SHALL ENSURE THAT EXISTING ROADWAYS USED TO ACCESS THE PROJECT ARE CLEANED OF ALL DEBRIS, TRASH, DIRT, MUD, ETC. AT THE END OF EACH WORK DAY.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY SEWAGE SPILLS CAUSED DURING CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE STATE DEPARTMENT OF HEALTH AND UTILIZE APPROPRIATE SAMPLING AND ANALYZING PROCEDURES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PUBLIC NOTIFICATIONS AND PRESS RELEASES.
9. GOOD HOUSEKEEPING BEST MANAGEMENT PRACTICES:
   - A. 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.
   - B. 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.
   - C. PRODUCTS SHALL BE KEPT IN THEIR ORIGINAL CONTAINERS WITH THE ORIGINAL MANUFACTURER'S LABEL.
   - D. SUBSTANCES SHALL NOT BE MIXED WITH ONE ANOTHER UNLESS RECOMMENDED BY THE MANUFACTURER.
   - E. WHENEVER POSSIBLE, THE ENTIRE CONTAINER CONTENTS WILL BE USED UP PRIOR TO DISPOSAL OF THE CONTAINER.
   - F. MANUFACTURER'S RECOMMENDATIONS FOR PROPER USE AND DISPOSAL SHALL BE FOLLOWED.
   - G. THE CONTRACTOR SHALL CONDUCT A DAILY INSPECTION TO ENSURE PROPER USE AND DISPOSAL OF MATERIALS ONSITE.
   - H. CONCRETE TRUCK CHUTE WASH WATER WILL BE DISCHARGED TO A DESIGNATED AREA WHERE COMMINGLING WITH STORM WATER WILL BE PREVENTED BY CUT-OFF DITCH OR PERIMETER BERM. WATER SHALL NOT BE DISCHARGED IN THE DRAINAGE SYSTEM OR WATERS OF THE UNITED STATES. THE CONTRACTOR SHALL CLEAN DISPOSAL SITE AS REQUIRED OR AS REQUESTED BY THE PROJECT MANAGER.
10. THE FINAL LIFT OF EACH DAY'S WORK SHALL BE COMPACTED TO PREVENT EROSION OF FILL MATERIAL.
11. ANY DIRT OR GRASSED AREA DISTURBED SHALL BE RESTORED BY SEEDED HYDROMULCH. THE GRASS SHALL BE FULLY ESTABLISHED AT COMPLETION OF PROJECT.
12. STABILIZATION SHALL BE ACCOMPLISHED BY TEMPORARILY OR PERMANENTLY PROTECTING THE DISTURBED SOIL SURFACE FROM RAINFALL IMPACTS AND RUNOFF WITH PLANTING OR GRAVEL. FOR STABILIZATION WITH PLANTING, TEMPORARY IRRIGATION SHALL BE INSTALLED TO FACILITATE GROWTH. DO NOT OVERWATER.
13. FERTILIZER AND PESTICIDE APPLICATION SHALL NOT OCCUR DURING HEAVY RAINS, OR IF HEAVY RAINS ARE ANTICIPATED DURING THE WORKDAY.
14. ALL CONTROL MEASURES SHALL BE CHECKED AND REPAIRED AS NECESSARY, FOR EXAMPLE, WEEKLY IN DRY PERIODS AND WITHIN TWENTY-FOUR HOURS AFTER ANY RAINFALL OF 0.5 INCHES OR GREATER WITHIN A 24-HOUR PERIOD. DURING PROLONGED RAINFALL, DAILY CHECKING IS NECESSARY. THE CONTRACTOR SHALL MAINTAIN RECORDS OF CHECKS AND REPAIRS.
15. IF HEAVY RAINS ARE PROJECTED DURING A WORKDAY, ALL CONTROL STRUCTURES SHALL BE INSPECTED IMMEDIATELY AND REINFORCED AS NECESSARY.
16. THE CONTRACTOR SHALL MAINTAIN RECORDS OF THE DURATION AND ESTIMATED VOLUME OF STORM WATER DISCHARGE(S).
17. A SPECIFIC INDIVIDUAL SHALL BE DESIGNATED TO BE RESPONSIBLE FOR EROSION AND SEDIMENT CONTROLS ON THE PROJECT SITE.
18. CONTRACTORS AND SUBCONTRACTORS SHALL BE TRAINED ON THE BEST MANAGEMENT PRACTICES.
19. SANITARY AND SEPTIC WASTES SHALL BE COLLECTED FROM ON-SITE FACILITIES ON A REGULAR BASIS BY A LICENSED HAULER. SANITARY AND SEPTIC FACILITIES SHALL NOT BE LOCATED NEAR WATERCOURSES.
20. DUST CONTROL WITH WATER SPRAY (BY TRUCK OR TEMPORARY SPRINKLERS) SHALL BE INSTALLED AS NEEDED. DO NOT OVERWATER.
21. PERIMETER PROTECTION SHALL BE CLEARED OF SILT IMMEDIATELY FOLLOWING THE END OF ANY RAINFALL THAT CAUSES SILT BUILDUP.
22. LOCATE STOCKPILES, INCLUDING WASTE AND SOIL, MATERIALS, CONCRETE WASH, AND TIRE WASH AWAY FROM CONCENTRATED DRAINAGE FLOWS, DRAINAGE SWALES AND INLETS.



0 20 40 80 120FT
SCALE: 1" = 40'-0"

SITE DEMOLITION AND EROSION CONTROL PLAN
1"=40'

PLAN NORTH

LEGEND

- EXISTING PROPERTY LINE
- EXISTING WATER LINE AND SIZE
- EXISTING FIRE SERVICE LINE AND SIZE
- EXISTING ELECTRICAL/ TELEPHONE/ CABLE TV LINES
- EXISTING SEWER LINE AND SIZE
- EXISTING SPOT ELEVATION
- EXISTING CONTOUR
- EXISTING SEWER MANHOLE
- EXISTING LIGHT POLE
- EXISTING CHAIN LINK FENCE
- SILT FENCE
- EXISTING BUILDING
- EXISTING AC PAVEMENT TO BE SAWCUT AND REMOVED
- STABILIZED CONSTRUCTION ACCESS
- EXISTING TREE TO BE REMOVED
- LIMITS OF DEMOLITION

NOTE:
1. FOR ABBREVIATIONS SEE SHEET C-001.

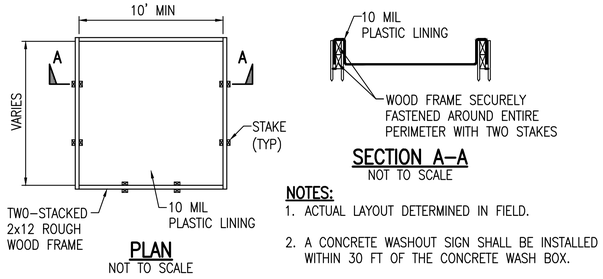
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KEAUKAHA MILITARY RESERVATION – B621, HILO, HAWAI'I
HAWAI'I ARMY NATIONAL GUARD (HIARNG)
BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS
CIVIL SITE DEMOLITION AND EROSION CONTROL PLAN

SCALE:
STATE JOB NO. CA-1212-C3
FEDERAL PROJECT NO. 15130007
SHEET 9 of 126
CD101

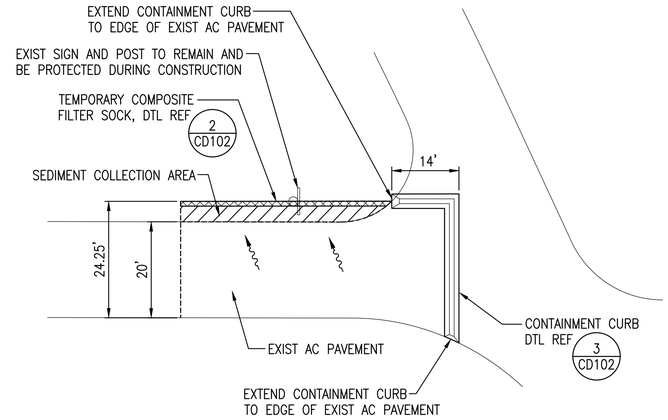


NOTES:

1. ACTUAL LAYOUT DETERMINED IN FIELD.
2. A CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30 FT OF THE CONCRETE WASH BOX.

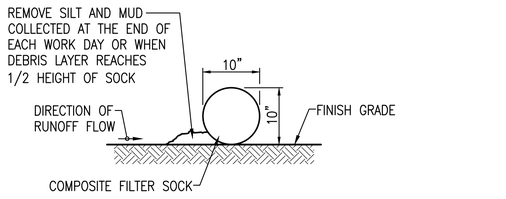
CONCRETE WASH BOX DETAIL 1

NOT TO SCALE — CD101



TIRE WASH AREA DETAIL 4

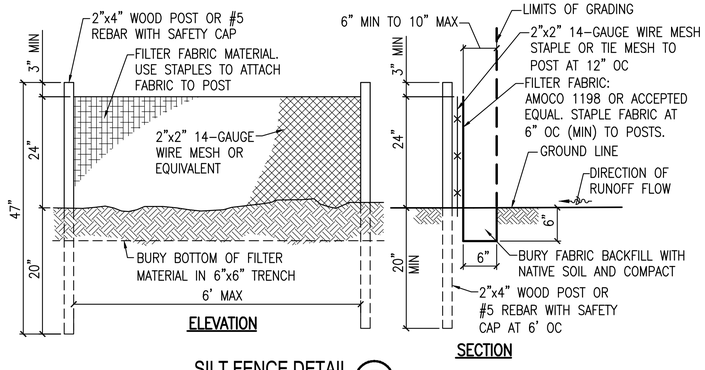
NOT TO SCALE — CD101



COMPOSITE FILTER SOCK BERM

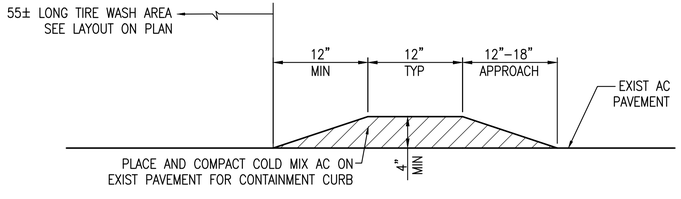
TEMPORARY TIRE WASH BERM 2

NOT TO SCALE — CD102



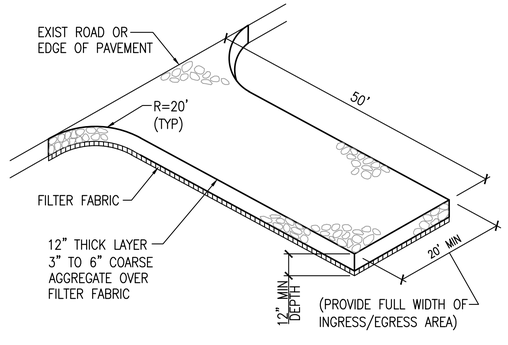
SILT FENCE DETAIL 5

NOT TO SCALE — CD102



TIRE WASH AREA CONTAINMENT CURB DETAIL 3

NOT TO SCALE — CD102



STABILIZED CONSTRUCTION ENTRANCE/EXIT DETAIL 6

NOT TO SCALE — CD102

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DEPARTMENT OF DEFENSE
DESIGN AND PROJECT MANAGEMENT BRANCH
HAWAII ARMY NATIONAL GUARD
KEAUKAHA MILITARY RESERVATION – B621
HILO, HAWAI'I

HAWAI'I ARMY NATIONAL GUARD (HIARNG) BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS

CIVIL EROSION CONTROL DETAILS

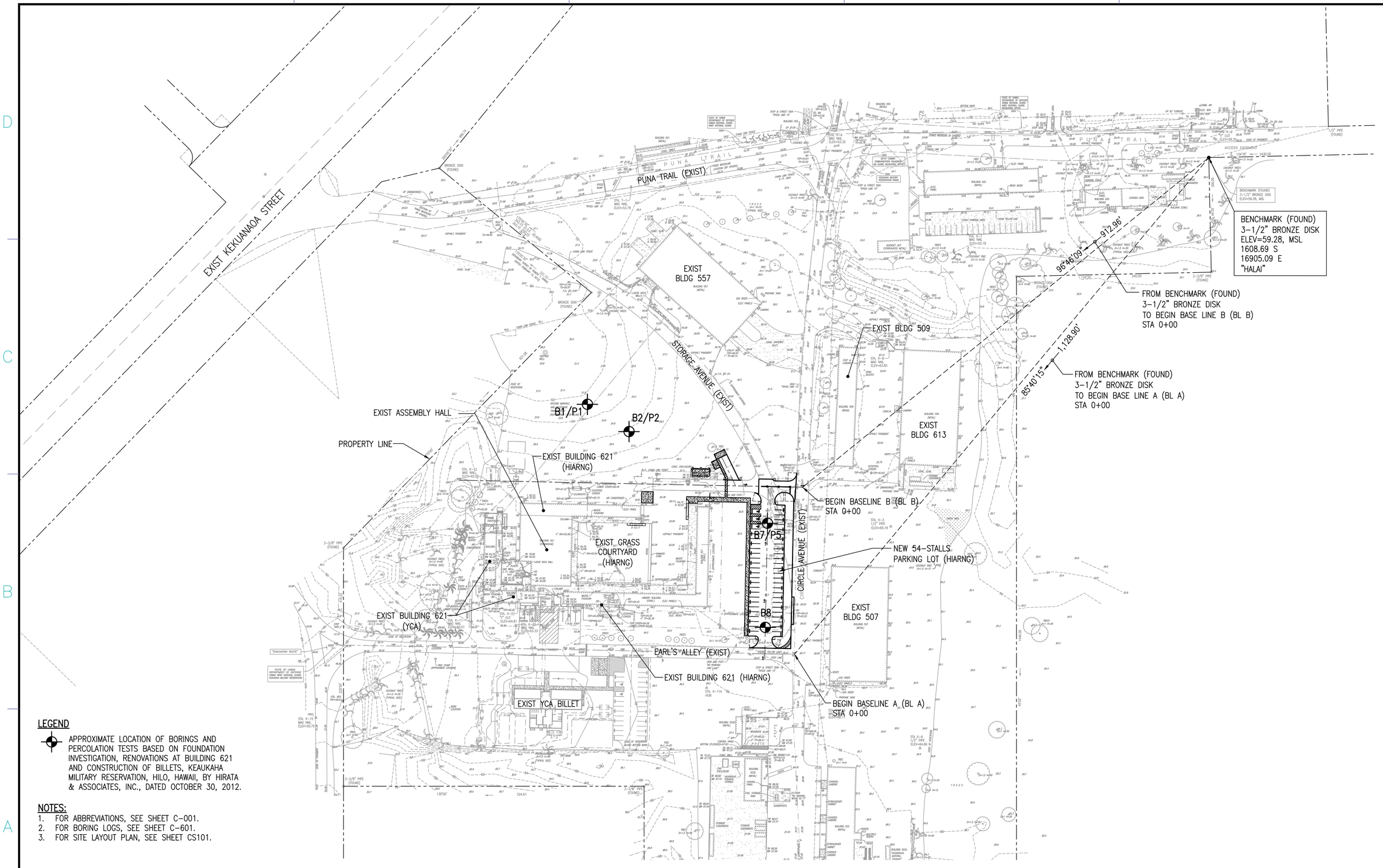
SCALE:

STATE JOB NO.
CA-1212-C3

FEDERAL PROJECT NO.
15130007

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CD102



LEGEND

⌖ APPROXIMATE LOCATION OF BORINGS AND PERCOLATION TESTS BASED ON FOUNDATION INVESTIGATION, RENOVATIONS AT BUILDING 621 AND CONSTRUCTION OF BILLETS, KEAUKAHA MILITARY RESERVATION, HILO, HAWAII, BY HIRATA & ASSOCIATES, INC., DATED OCTOBER 30, 2012.

NOTES:

1. FOR ABBREVIATIONS, SEE SHEET C-001.
2. FOR BORING LOGS, SEE SHEET C-601.
3. FOR SITE LAYOUT PLAN, SEE SHEET CS101.

GENERAL SITE AND BORING LOCATION PLAN

1"=80'

PLAN NORTH

0 40 80 160 240FT

SCALE: 1" = 80'-0"

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KEAUKAHA MILITARY RESERVATION - B621
HILO, HAWAI'I

HAWAI'I ARMY NATIONAL GUARD (HIARNG)
BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS

CIVIL GENERAL SITE AND BORING LOCATION PLAN

SCALE:

STATE PROJECT NO.
CA-1212-C3

FEDERAL PROJECT NO.
15130007

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CS100

LEGEND

- EXISTING PROPERTY LINE
- PROJECT LIMITS
- EXISTING WATER LINE AND SIZE (W 3/4)
- EXISTING FIRE SERVICE LINE AND SIZE (FS 8)
- EXISTING ELECTRICAL LINES (E)
- EXISTING SEWER LINE AND SIZE (S 4)
- EXISTING FIRE HYDRANT
- EXISTING SEWER MANHOLE (SMH)
- EXISTING UTILITY BOX
- EXISTING BUILDING
- EXISTING CONCRETE PAVEMENT
- EXISTING CONTOUR (60)
- EXISTING SPOT ELEVATION (63.5)
- NEW SEWER LINE AND SIZE (S6")
- NEW SEEPAGE WELL
- NEW CLEANOUT
- NEW BUILDING
- NEW AC PAVEMENT
- NEW CONCRETE WALKWAY/SLAB
- NEW PAVEMENT STRIPING FOR ACCESS AISLE AND NO PARKING AREAS
- NEW FENCE

NOTES:

1. FOR ABBREVIATIONS SEE SHEET C-001.
2. FOR EROSION CONTROL MEASURES SEE SHEETS CD101 AND CD102.
3. FOR SIGNING AND STRIPING SEE SHEET C-502.
4. FOR BENCHMARK SEE SHEET CS100.
5. FOR SEWER LATERALS AND COTG DETAILS SEE SHEET C-501.

BASELINE B (BL B)

BASELINE A (BL A)

PROJECT LIMITS

RECYCLE BIN ENCLOSURE PAD (MINOR CONSTRUCTION) DTL REF 3/C-501

CONNECT NEW CHAIN LINK SECURITY FENCE TO EXIST FENCE BL B STA 1+61.85 o/s 22.75' RT

BL B STA 1+64 o/s 16' RT

6' HIGH CHAIN LINK FENCE PER U.S. ARMY CORPS OF ENGINEERS STD DTL 872-90-02 FE5 CHAIN LINK SECURITY FENCE DTL (MINOR CONSTRUCTION)

CONNECT NEW CHAIN LINK SECURITY FENCE TO EXIST FENCE BL B STA 1+96 o/s 22.60' RT

BOLLARD 3' HIGH, 4" DIAMETER AT 3' OC (TYP) (MINOR CONSTRUCTION) DTL REF 8/C-502

BL B STA 1+94 o/s 16' RT

BL B STA 2+60.29 o/s 13' LT

BL B STA 2+80.29 o/s 13' LT

BL B STA 3+31.95 o/s 24.95' LT 1/8 BEND DEDUCTIVE BID ITEM #03

EXIST SEEPAGE PIT

EXIST 2,500 GAL SEPTIC TANK

GREASE INTERCEPTOR DEDUCTIVE BID ITEM #03 SEE PLUMBING 137'00" ← 600.00'

NEW LPG TANK CONCRETE PAD DTL REF 3/C-501

TRASH ENCLOSURE PAD (MINOR CONSTRUCTION) DTL REF 3/C-501

AC PAVEMENT FOR TRASH AND RECYCLE BIN ENCLOSURES (MINOR CONSTRUCTION) DTL REF 4/C-501

4" WIDE SOLID WHITE STRIPE AT 45°, 2' ON CENTER (MINOR CONSTRUCTION)

SEEPAGE WELL (MINOR CONSTRUCTION)

CL ROAD

200'00", 56.00'

BL B STA 1+17= CL ROAD 0+00

RAISED PAVEMENT MARKER (MINOR CONSTRUCTION) DTL REF 2/C-502

96°46'09" 912.96' FROM BENCHMARK (FOUND) 3-1/2" BRONZE DISK TO BEGIN BASE LINE B (BL B) STA 0+00

BEGIN BASELINE B (BL B) STA 0+00 1501.07 S 15998.49 E "HALAI"

ACCESSIBLE ROUTE 67.06'

NEW FIRE LANE 40.7'

INSTALL AT MIN 2% SLOPE

BL B STA 3+27 o/s 20.00' LT WYE AND COTG DEDUCTIVE BID ITEM #03 DTL REF 6/C-501 TYP

BL B STA 3+76.02 o/s 26.81' LT REMOVE EXIST COTG AND INSTALL NEW IN-LINE COTG CONNECT TO EXIST S4" DEDUCTIVE BID ITEM #03 INV=58.4±

RAMP SEE ARCH DWGS

RAMP SEE ARCH DWGS SEE INSET THIS SHEET

8' WIDE WALKWAY (MINOR CONSTRUCTION) DTL REF 1/C-501

BL B STA 0+60= CL PARKING 0+00

SEEPAGE WELL (MINOR CONSTRUCTION)

4" DOUBLE YELLOW STRIPE (MINOR CONSTRUCTION) DTL REF 1/C-502

12" WIDE STOP BAR (MINOR CONSTRUCTION) DTL REF 1/C-502

STOP POST WITH SALVAGED STOP SIGN (MINOR CONSTRUCTION) DTL REF 1, 6/C-502

2 ACCESSIBLE STALLS @ 8'=16'
1 ACCESS AISLE @ 8'=8'
2 ACCESS AISLES @ 5'=10'
1 ACCESSIBLE STALL @ 8.5'=8.5'

CONC WHEEL STOP (MINOR CONSTRUCTION) DTL REF 7/C-502 (TYP)

HIARNG PARKING LOT (MINOR CONSTRUCTION) DTL REF 4/C-501

CL PARKING

CONCRETE WALKWAY AND HEADER (MINOR CONSTRUCTION) DTL REF 1, 2/C-501

22 STALLS AT 8.5'=187'

27 STALLS 8.5'=229.5'

NEW AC PAVEMENT

AC PAVEMENT (MINOR CONSTRUCTION) DTL REF 5/C-501

85°40'16" 1128.98' FROM BENCHMARK (FOUND) 3-1/2" BRONZE DISK TO BEGIN BASE LINE A (BL A) STA 0+00

CIRCLE AVENUE (EXIST)

BEGIN BASELINE A (BL A) STA 0+00 1,693.60 S 15,779.41 E "HALAI"

END AC PAVEMENT CL PARKING 2+82.1±

EDGE OF AC PAVEMENT

NEW 4" SOLID WHITE STRIPE AT 45°, 2' OC

EXIST GRASS COURTYARD (HIARNG)

UNIT COOK TRAILER PAD (MINOR CONSTRUCTION) DEDUCTIVE BID ITEM #03 DTL REF 3/C-501

6' WIDE X 6' HIGH GATE PER U.S. ARMY CORPS OF ENGINEERS STD DTL 872-90-08 PERSONNEL GATE FE5 (SINGLE OPENING) WITH LATCH HEIGHT AT 34" MIN AND 48" MAX ABOVE TOP OF WALKWAY (MINOR CONSTRUCTION) ⚠1

EXIST AC PAVEMENT

ACCESSIBLE AISLE SIGN AND POST (MINOR CONSTRUCTION) DTL REF 5/C-502 (TYP)

ACCESSIBLE STALL SIGN AND POST (MINOR CONSTRUCTION) DTL REF 5/C-502 (TYP)

BL B STA 2+89 o/s 20.00' LT PROVIDE 1 1/4" FEMALE QUICK DISCONNECT COUPLING WITH DUST PLUG DEDUCTIVE BID ITEM #03

EXIST BUILDING 621 (YCA)

EXIST ASSEMBLY/DINING (COMMON AREA)

EXIST GARDEN (COMMON AREA)

EXIST BUILDING 621 (HIARNG)

EXIST BUILDING 509

BUILDING 509 (WOOD)

EXIST BUILDING 507

BUILDING 507 (METAL)

BLDG 613

BUILDING (METAL)

STA. K-8 MAG NAIL ELEV=63.85

STA. K-3 1/2" PIPE ELEV=65.18

STA. K-22 MAG NAIL ELEV=63.33

EARL'S ALLEY (EXIST)

137'00" ← 800.00'

SPEED BUMP

ASPHALT PAVEMENT

EDGE OF PAVEMENT

EDGE OF VEGETATION

RECORD MANHOLE AND TELEPHONE TRANSIT DUCT (NOT FOUND – PER PLAN)

SEEPAGE WELL

F.H. #2-24

W 8 (APPROXIMATE LOCATION)

UTILITY BOX

SIGN SPEED LIMIT 15"

TOP BANK

STEP & LANDING

RAMP

LANDING

CONC. BLOCKS

TREES D=1 H=20

CONC. SLAB

STORA CONTA

ELEC. PANELS

VENTS

CESSPOOL COVERS

PATCH

UP (ABANDONED) PROPANE TANK

CONC. BOX (SEALED)

COCONUT TREE D=1.5 H=15

COCONUT TREES D=1.5 H=40 (TYPICAL SIZE)

PALMS

TREE STUMP D=4 H=70

TREE D=7 H=70

AIR CONDITIONER

LOOSE ROCK WALL

PLANTER WALL

PLANTERS

FLAG STAFF

PARKING STALLS

CLEANOUTS

CESSPOOL COVERS

WATER FOUNTAIN

ELEC. PANEL

GAS RISER

ELEC. PANELS

SIGN AND PAVEMENT MARKING "NO PARKING FIRE LANE"

STOP LINE

STREET SIGN SPEED LIMIT 15"

WATER VALVES

FOUND PARTITIONS

LOUVERS

STEPS

POSTS

COLUMN

HEDGE

TREES

CONDUIT

INSET

1"=5'

ADA MANEUVERING CLEARANCE FRONT APPROACH, PULL SIDE 1.50' MIN PARALLEL TO DOORWAY (BEYOND LATCH SIDE)

2.00'

6.00'

LATCH HEIGHT AT 34" MIN AND 48" MAX ABOVE TOP OF WALKWAY

ADA MANEUVERING CLEARANCE FRONT APPROACH, PULL SIDE 5.00' MIN PERPENDICULAR TO DOORWAY

SITE LAYOUT AND UTILITY PLAN

1"=30'

PLAN NORTH

0 15 30 60 90FT

SCALE: 1" = 30'-0"

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HONOLULU, HAWAII 96813
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No.9787-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SIGNATURE 4/30/2020 EXPIRATION DATE

DCAB COMMENTS	DATE	APPR
	10/2017	

SUBMITTAL PHASE: FINAL SUBMITTAL

SUBMITTAL DATE: 30 SEPTEMBER 2019

DES | DRW | CHK

DEPARTMENT OF DEFENSE
HAWAII ARMY NATIONAL GUARD
DESIGN AND PROJECT MANAGEMENT BRANCH
HILO, HAWAI'I
STATE OF HAWAI'I
FACILITY MANAGEMENT OFFICE

KEAUKAHA MILITARY RESERVATION – B621
HAWAI'I ARMY NATIONAL GUARD (HIARNG)
BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS

CIVIL SITE LAYOUT AND UTILITY PLAN

SCALE:

STATE JOB NO. CA-1212-C3

FEDERAL PROJECT NO. 15130007

SHEET 12 of 126

CS101

LEGEND

- PROPERTY LINES
- EXISTING BUILDING
- EXISTING CONCRETE PAVEMENT
- NEW CONCRETE WALKWAY/SLAB
- NEW AC PAVEMENT
- EXISTING CONTOUR (60)
- EXISTING SPOT ELEVATION (63.5)
- NEW CONTOUR (62)
- NEW SPOT ELEVATION (63.58)
- NEW DRAIN LINE (D12")
- NEW SEEPAGE WELL
- NEW SWALE
- DIRECTION OF RUN-OFF
- LIMITS OF GRADING
- PROJECT LIMITS

NOTES:

1. FOR ABBREVIATIONS SEE SHEET C-001.
2. FOR EROSION CONTROL MEASURES SEE SHEETS CD101 AND CD102.
3. FOR SEEPAGE WELL DETAILS SEE SHEET C-503.
4. FOR CIVIL SITE SECTION AND DRAIN LINE PROFILE SEE SHEET C-201.

CONNECT TO EXIST AC PAVEMENT PROVIDE SMOOTH RIDING CONNECTION DTL REF 5/C-501

LIMITS OF GRADING

CL ROAD

BL B STA 1+10 o/s 46' RT SEEPAGE WELL W/24" DIA GRATE (MINOR CONSTRUCTION) TOP=61.40 INV=57.9 (D12") DTL REF 1/C-503

MAKE FLUSH CONNECTION TO EXIST AC PAVEMENT

MATCH EXIST GRADE 62.63±

BASELINE B (BL B)

137°00' ← 600.00'

EXIST BUILDING 621 (YCA)

RAMP SEE ARCH DRAWINGS

EXIST ASSEMBLY HALL BUILDING 621 (GYMNASIUM)

PROJECT LIMITS

EXIST AC PAVEMENT

EXIST BUILDING 621 (HIARNG)

LIMITS OF GRADING

BASELINE A (BL A)

137°00' ← 800.00'

EARL'S ALLEY (EXIST)

GRASS SWALE (MINOR CONSTRUCTION) DTL REF 7/C-503 (TYP)

CONNECT TO EXIST AC PAVEMENT PROVIDE SMOOTH RIDING CONNECTION DTL REF 5/C-501

MATCH EXIST GRADE (TYP) 64.8±

DRAIN LINE (D12") 107'± AT S=1.0% DTL REF 8/C-503

BL B STA 1+24 o/s 60' LT SEEPAGE WELL W/24" DIA GRATE (MINOR CONSTRUCTION) TOP=61.80 INV=59.0 (D12") DTL REF 1/C-503

NEW AC PAVEMENT

EXIST BUILDING 509 — BUILDING 509 (WOOD)

EXIST BUILDING 507 — BUILDING 507 (METAL)

BLDG 613 — BUILDING 55 (METAL)

STA. K-8 MAG NAIL ELEV=63.85

STA. K-3 1/2" PIPE ELEV=65.18

STA. K-11 MAG NAIL ELEV=60.51

STA. K-23 "X" CUT ELEV=64.81

STA. K-22 MAG NAIL ELEV=63.33

CIRCLE AVENUE (EXIST)

EARL'S ALLEY (EXIST)

SUMMARY OF EARTHWORK CALCULATIONS:

ESTIMATED EXCAVATION:	352 CUBIC YARDS
ESTIMATED EMBANKMENT:	350 CUBIC YARDS
AREA TO BE GRADED:	1.28 ACRES

NOTES:

1. QUANTITIES SHOWN ARE FOR PERMIT PURPOSES ONLY AND SHALL NOT BE USED FOR BIDDING PURPOSES.
2. CONTRACTOR SHALL BE RESPONSIBLE TO COMPLETE THE GRADING WORK TO THE GRADES AND DIMENSIONS SHOWN ON THE PLANS.

SITE GRADING AND DRAINAGE PLAN

1"=30'

PLAN NORTH

SCALE: 0 15 30 60 90FT — 1" = 30'-0"

HAWAII ARMY NATIONAL GUARD

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DES | DRW | CHK

STATE OF HAWAI'I — FACILITY MANAGEMENT OFFICE
DEPARTMENT OF DEFENSE — HAWAII ARMY NATIONAL GUARD — DESIGN AND PROJECT MANAGEMENT BRANCH — HILO, HAWAI'I

KEAUKAHA MILITARY RESERVATION – B621

HAWAI'I ARMY NATIONAL GUARD (HIARNG) BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS

CIVIL SITE GRADING AND DRAINAGE PLAN

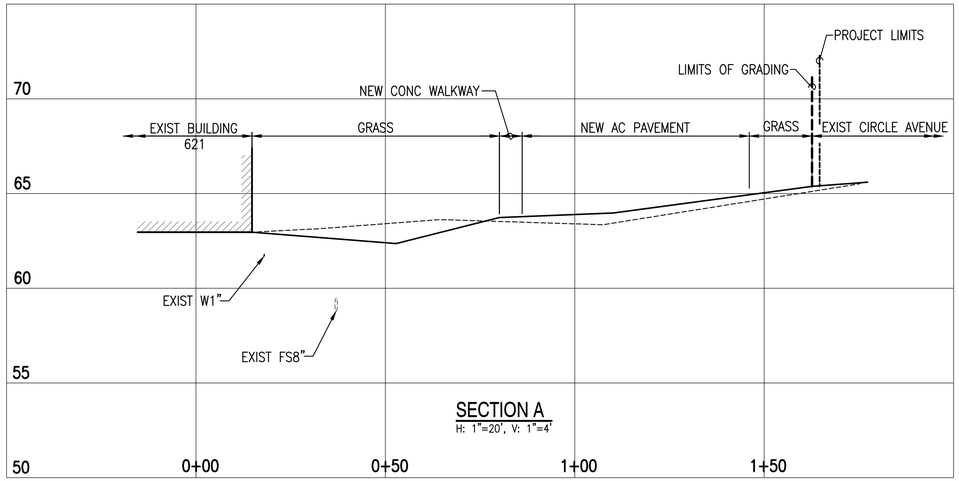
SCALE:

STATE PROJECT NO. CA-1212-C3

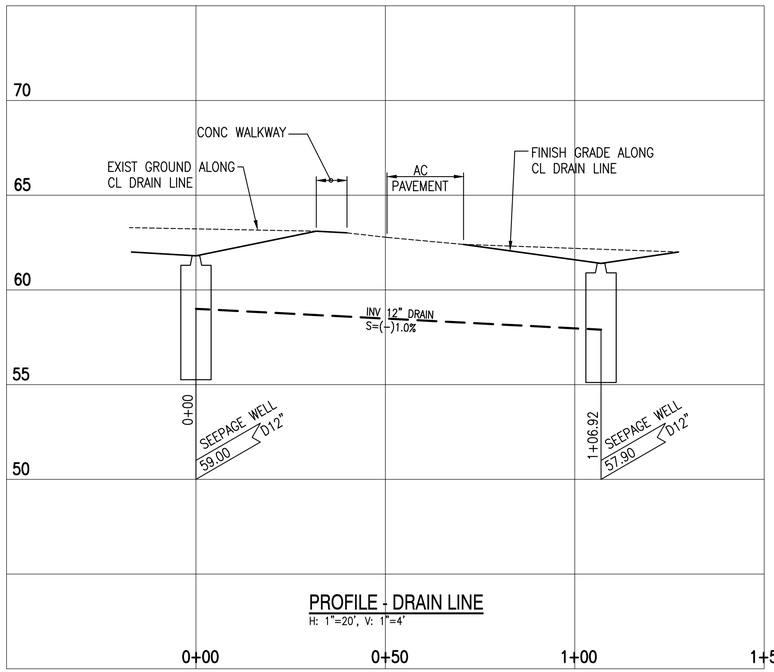
FEDERAL PROJECT NO. 15130007

SHEET 13 of 126

CG101



SECTION A
H: 1"=20', V: 1"=4'



PROFILE - DRAIN LINE
H: 1"=20', V: 1"=4'

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HILO, HAWAI'I

HAWAI`I ARMY NATIONAL GUARD (HIARNG)
BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS

CIVIL SITE SECTION AND DRAIN LINE PROFILE

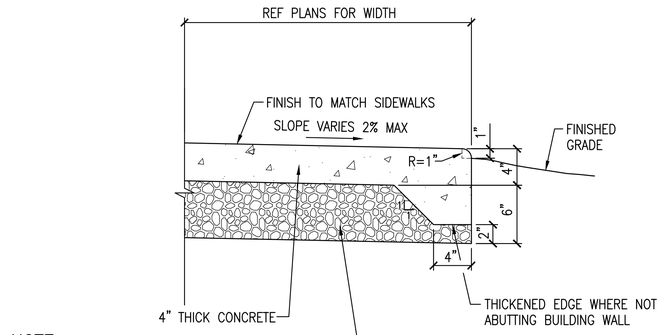
SCALE:

STATE JOB NO.
CA-1212-C3

FEDERAL PROJECT NO.
15130007

SHEET 14 of 126

C-201

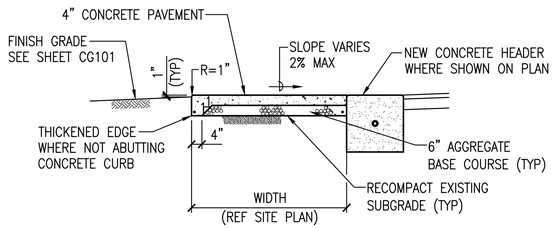


NOTE:

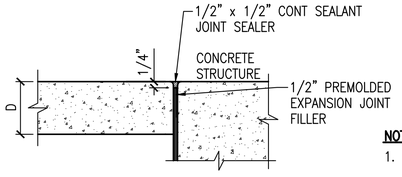
1. PROVIDE TOOLED JOINTS AT 5'–0" OC (MAXIMUM) AND ISOLATION JOINTS AT ADJOINING CONSTRUCTION. SEALANT AT ALL JOINTS. RERERENCE FLOOR PLANS FOR LOCATIONS.
2. FOR JOINTS DTL REF (2 / C–501)

CONCRETE WALKWAY DETAIL 1

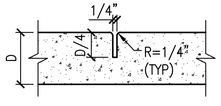
NOT TO SCALE — CS101, C–501, C–503



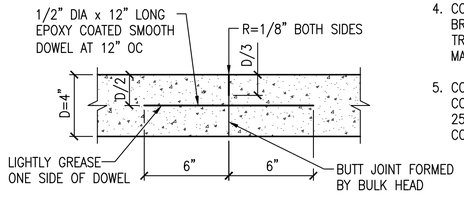
CONCRETE WALKWAY WITH HEADER



ISOLATION JOINT



CONTRACTION (SCORES) JOINT



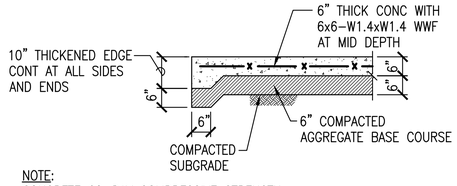
TRANSVERSE CONSTRUCTION JOINT

NOTES:

1. PLACE CONSTRUCTION JOINTS AT INTERVALS NOT TO EXCEED 20 FEET O.C. MAXIMUM.
2. SPACE CONTRACTION JOINTS AT A DISTANCE EQUAL TO THE WALKWAY WIDTH OR EQUAL SQUARES ON CENTER, WHICHEVER IS LESS.
3. PLACE ISOLATION JOINTS WHERE WALKWAY BUTTS AGAINST EXISTING OR NEW WALK, STRUCTURES, PADS AND TRANSVERSE WALKWAYS.
4. CONCRETE WALKWAY SHALL BE BROOM FINISHED IN A DIRECTION TRANSVERSE TO THAT OF THE MAIN TRAFFIC.
5. CONCRETE SHALL HAVE A MINIMUM COMPREHENSIVE STRENGTH OF 2500 PSI AT 28 DAYS AND SHALL CONFORM TO ASTM C94.

CONCRETE WALKWAY JOINT DETAILS 2

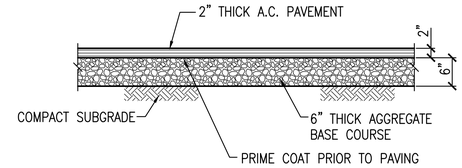
NOT TO SCALE — CS101



NOTE:
CONCRETE 28–DAY COMPRESSIVE STRENGTH SHALL BE 3,000 PSI

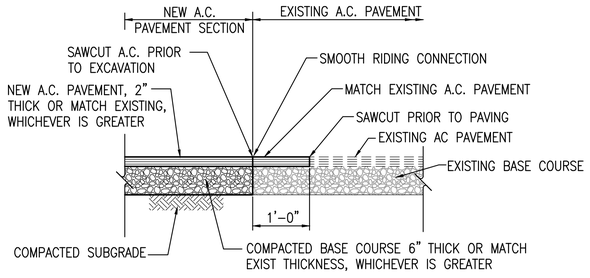
CONCRETE PAVEMENT DETAIL 3

NOT TO SCALE — CS101



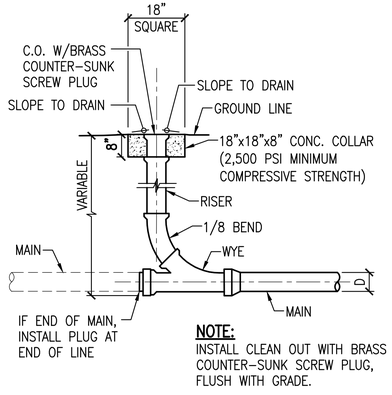
TYPICAL ASPHALT PAVEMENT 4

NOT TO SCALE — CS101, C–502, C–503



A.C. PAVEMENT TRANSITION DETAIL 5

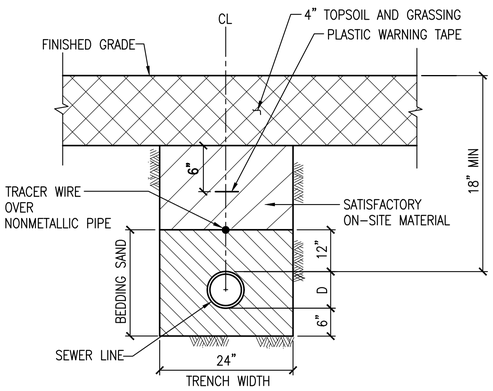
NOT TO SCALE — CS101, CG101



NOTE:
INSTALL CLEAN OUT WITH BRASS COUNTER–SUNK SCREW PLUG, FLUSH WITH GRADE.

SEWER COTG DETAIL 6

NOT TO SCALE — CS101



SEWER LINE TRENCH DETAIL 7

NOT TO SCALE — CS101

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DEPARTMENT OF DEFENSE
DESIGN AND PROJECT MANAGEMENT BRANCH
HAWAII ARMY NATIONAL GUARD
STATE OF HAWAI'I
FACILITY MANAGEMENT OFFICE
KEAUKAHA MILITARY RESERVATION – B621
HILO, HAWAI'I

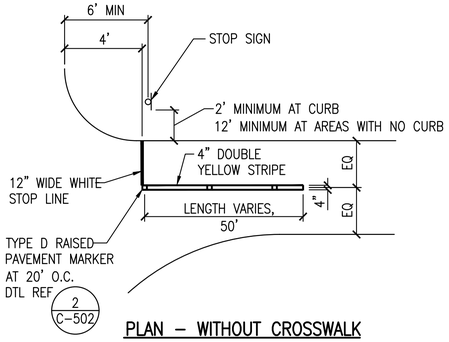
HAWAI`I ARMY NATIONAL GUARD (HIARNG)
BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS

CIVIL TYPICAL PAVEMENT, CONCRETE WALKWAY, AND SEWER DETAILS

SCALE:
STATE JOB NO. CA-1212-C3
FEDERAL PROJECT NO. 15130007
SHEET 15 of 126
C-501

NOTES:

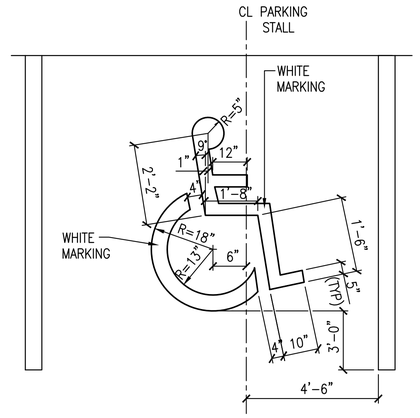
1. PAVEMENT MARKING AND STRIPING SHALL CONFORM TO THE LATEST EDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS," BY FHWA, AND AS AMENDED.
2. RAISED PAVEMENT MARKERS SHALL MATCH IN COLOR W/THE PAVEMENT STRIPING COLOR.
4. ALL UNITS SHOWN ON THIS PLAN ARE IN FEET UNLESS INDICATED OTHERWISE.
5. FOR SIGN POST DTL REF 6 / C-502



PLAN – WITHOUT CROSSWALK

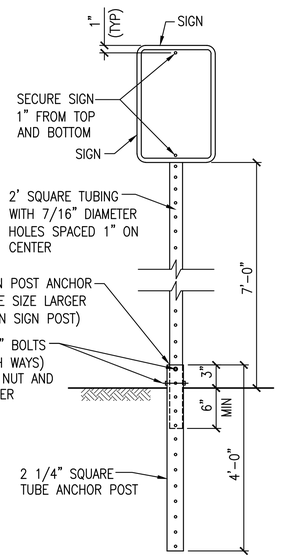
STOP LINE AND PAVEMENT MARKING DETAILS 1

NOT TO SCALE — CS101



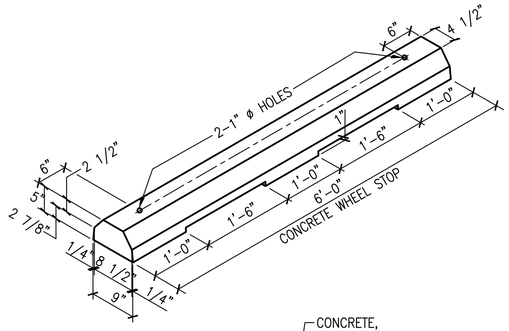
ACCESSIBLE PARKING SYMBOL DETAIL 4

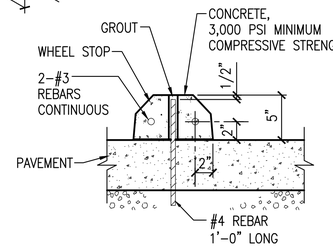
NOT TO SCALE — C-502



SIGN POST DETAIL 6

NOT TO SCALE — CS101, C-502

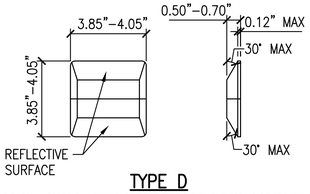




SECTION

CONCRETE WHEEL STOP DETAIL 7

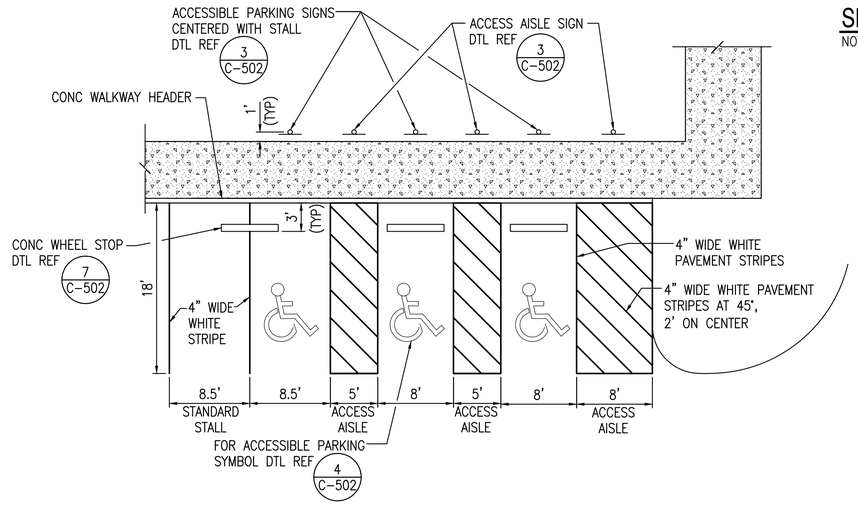
NOT TO SCALE — CS101, C502



TYPE D
TWO-WAY REFLECTIVE YELLOW MARKER

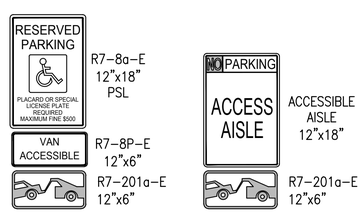
RAISED PAVEMENT MARKERS DETAIL 2

NOT TO SCALE — CS101, C-502



ACCESSIBLE PARKING LAYOUT 5

NOT TO SCALE — CS101



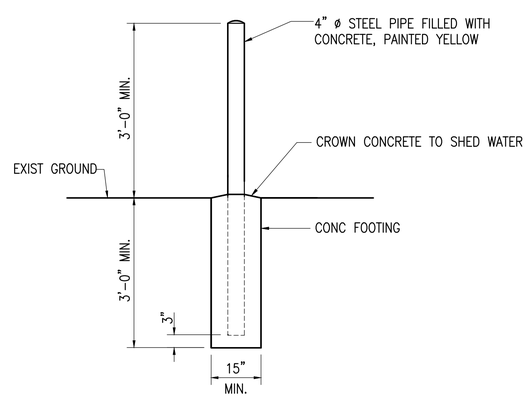
STANDARD STALL ACCESSIBLE PARKING SIGN

ACCESS AISLE SIGN

NOTE:
INSTALL SIGNS ON SIGN POST. DTL REF 6 / C-506

PARKING SIGNS 3

NOT TO SCALE — CS101, C-502



BOLLARD DETAIL 8

NOT TO SCALE — CS101

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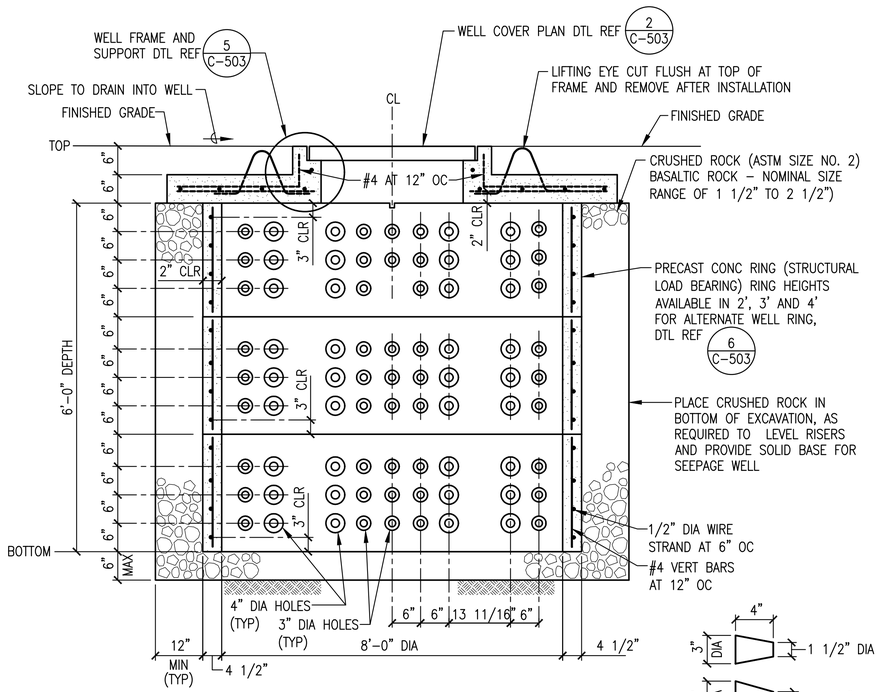
KEAUKAHA MILITARY RESERVATION – B621
HILO, HAWAI'I

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BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS

CIVIL SIGNING AND STRIPING DETAILS

SCALE:
STATE JOB NO. CA-1212-C3
FEDERAL PROJECT NO. 15130007
SHEET 16 of 126

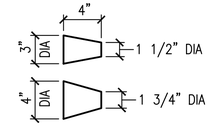
C-502



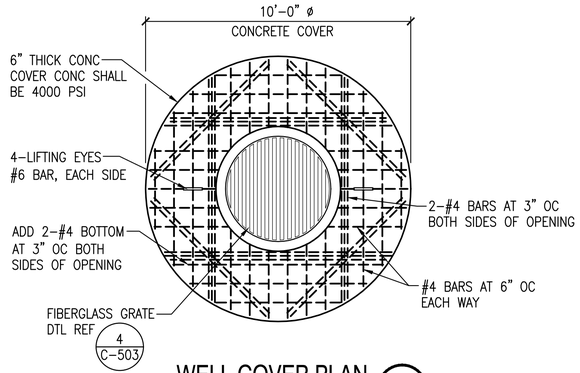
SEEPAGE WELL NOTES:

1. WIRE STRAND SHALL CONFORM TO ASTM A-416 AND HAVE STRENGTH OF 270 KSI. WIRE STRAND TO BE LAPPED 30".
2. CONCRETE-28 DAYS COMPRESSIVE CONCRETE STRENGTH = 4000 PSI IN 28 DAYS.
3. CONTRACTOR SHALL PRESERVE EXISTING GEOLOGICAL FORMATION AT PROPOSED SEEPAGE WELL LOCATION TO ENSURE PROPER SEEPAGE WELL OPERATION.

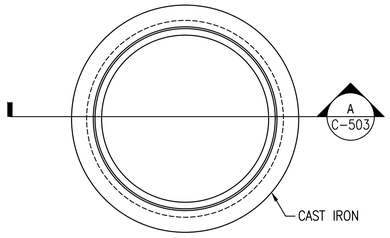
SEEPAGE WELL DETAIL
NOT TO SCALE CG101 — 1



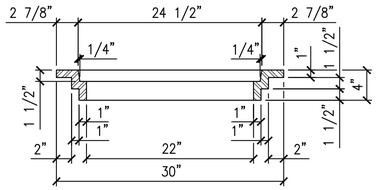
TYPICAL SEEPAGE HOLE
NOT TO SCALE



WELL COVER PLAN
NOT TO SCALE C-503 — 2

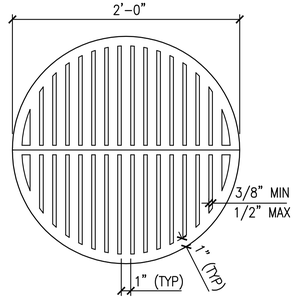


PLAN



SECTION
NOT TO SCALE C-503 — A

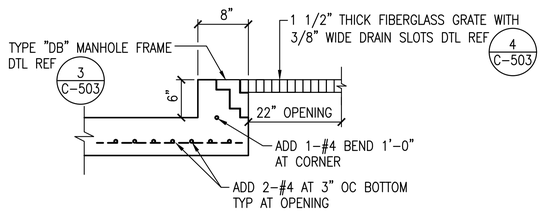
TYPE "DB" MANHOLE FRAME DETAIL
NOT TO SCALE C-503 — 3



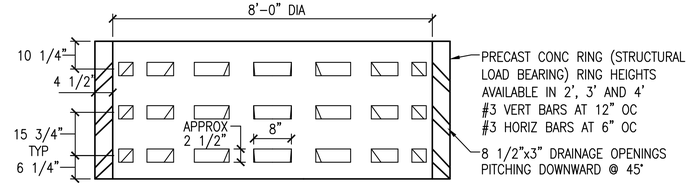
SPECIFICATIONS:

24" DIA CIRCLE
1 1/2" THICK FIBER GLASS REINFORCED PLASTIC
1" RUNGS 3/8"-1/2" SLOTS
GELCOAT=15-20 MILS
COLOR: BLACK
WEIGHT=APPROX 25 POUNDS

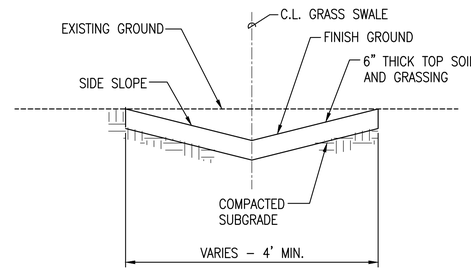
FIBERGLASS GRATE DETAIL
NOT TO SCALE C-503 — 4



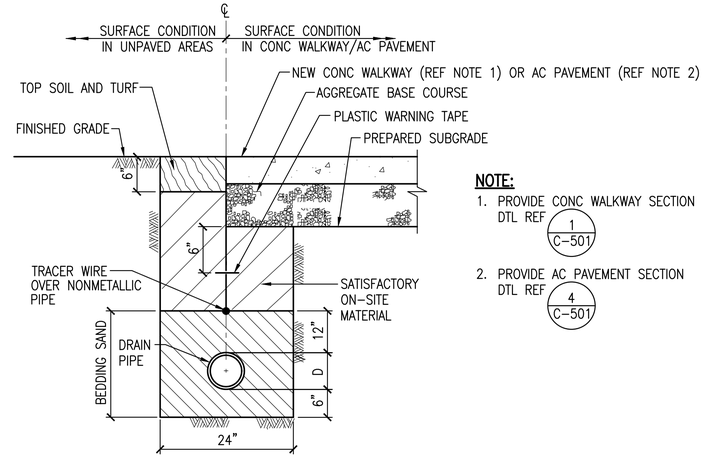
WELL FRAME AND SUPPORT
NOT TO SCALE C-503 — 5



ALTERNATE WELL RING DETAIL
NOT TO SCALE C-503 — 6



GRASS SWALE
NOT TO SCALE CG101 — 7



NOTE:

1. PROVIDE CONC WALKWAY SECTION DTL REF 1 C-501
2. PROVIDE AC PAVEMENT SECTION DTL REF 4 C-501

DRAIN LINE TRENCH DETAIL
NOT TO SCALE CG101 — 8

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NO	DESCRIPTION	DATE	APPR
STM			

SUBMITTAL PHASE: FINAL SUBMITTAL
SUBMITTAL DATE: 30 SEPTEMBER 2019
DES | DRW | CHK

STATE OF HAWAI'I
FACILITY MANAGEMENT OFFICE
DEPARTMENT OF DEFENSE
HAWAII ARMY NATIONAL GUARD
DESIGN AND PROJECT MANAGEMENT BRANCH

KEAUKAHA MILITARY RESERVATION – B621
HILO, HAWAI'I

HAWAI'I ARMY NATIONAL GUARD (HIARNG)
BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS

CIVIL DRAINAGE DETAILS

SCALE:
STATE JOB NO. CA-1212-C3
FEDERAL PROJECT NO. 15130007
SHEET 17 of 126

C-503

HIRATA & ASSOCIATES, INC.

BORING LOG

W.O. 12-5379

BORING NO. B1 DRIVING WT. 140 lb. START DATE 8/22/12
SURFACE ELEV. 54±* DROP 30 in. END DATE 8/22/12

DEPTH	GRAPH	SAMPLE	BLOWS PER FOOT	DRY DENSITY (PCF)	MOIST. CONT. (%)	DESCRIPTION
0						GRAVEL (GM) – Grayish brown, slightly moist, medium dense.
			15	78	9	
5			8	79	22	Moist from 4 feet.
			46	70	20	Dense at 8 feet.
10						BASALT (WS) – Gray, hard, fractured, slightly weathered. Begin NX coring at 10 feet. 100% Recovery from 10 to 15 feet. RQD = 65%
15						100% Recovery from 15 to 20 feet. RQD = 81%
20						End boring at 20 feet.
25						* Elevations based on Topographic Survey Map provided by Belt Collins Hawaii, Ltd.
						Neither groundwater nor seepage water encountered.
30						Plate A4.1

HIRATA & ASSOCIATES, INC.

BORING LOG

W.O. 12-5379

BORING NO. B2 DRIVING WT. 140 lb. START DATE 8/22/12
SURFACE ELEV. 59.5± DROP 30 in. END DATE 8/22/12

DEPTH	GRAPH	SAMPLE	BLOWS PER FOOT	DRY DENSITY (PCF)	MOIST. CONT. (%)	DESCRIPTION
0						GRAVEL (GW) – Grayish brown, moist, medium dense.
			23	71	18	
			12	58	10	
5			10		21	Sample disturbed at 5 feet.
10			13		5	Sample disturbed at 10 feet.
15			10/No Pentration			BASALT (WS) – Gray, hard, slightly weathered.
						End boring at 15 feet.
20						Neither groundwater nor seepage water encountered.
25						
30						Plate A4.2

HIRATA & ASSOCIATES, INC.

BORING LOG

W.O. 12-5379

BORING NO. B7 DRIVING WT. 140 lb. START DATE 8/22/12
SURFACE ELEV. 63.5± DROP 30 in. END DATE 8/22/12

DEPTH	GRAPH	SAMPLE	BLOWS PER FOOT	DRY DENSITY (PCF)	MOIST. CONT. (%)	DESCRIPTION
0						GRAVEL (GW) – Grayish brown, moist, medium dense to dense.
			50/3"	73	13	
			10	66	14	
5			50/4"	84	12	
						End boring at 6 feet.
10						
15						
20						
25						
						Neither groundwater nor seepage water encountered.
30						Plate A4.7

HIRATA & ASSOCIATES, INC.

BORING LOG

W.O. 12-5379

BORING NO. B8 DRIVING WT. 140 lb. START DATE 8/22/12
SURFACE ELEV. 63.5± DROP 30 in. END DATE 8/22/12

DEPTH	GRAPH	SAMPLE	BLOWS PER FOOT	DRY DENSITY (PCF)	MOIST. CONT. (%)	DESCRIPTION
0						GRAVEL (GW) – Grayish brown, slightly moist, dense.
			10/No Penetration			
						BASLT (WS) – Gray, hard, slightly weathered.
			10/No Penetration			
5						End boring at 4 feet.
10						
15						
20						
						Neither groundwater nor seepage water encountered.
25						
30						Plate A4.8

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EXPIRATION DATE

APPR | DATE | DESCRIPTION | SYM

SUBMITTAL PHASE
FINAL SUBMITTAL
SUBMITTAL DATE 30 SEPTEMBER 2019
DES | DRW | CHK

DEPARTMENT OF DEFENSE
HAWAII ARMY NATIONAL GUARD
DESIGN AND PROJECT MANAGEMENT BRANCH
STATE OF HAWAI'I
FACILITY MANAGEMENT OFFICE

HILO, HAWAI'I
KEAUKAHA MILITARY RESERVATION – B621
HAWAI`I ARMY NATIONAL GUARD (HIARNG)
BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS
BORING LOGS

SCALE:
STATE JOB NO. CA-1212-C3
FEDERAL PROJECT NO. 15130007
SHEET 18 of 126
C-601

LANDSCAPE PROJECT LIMITS

WHITE HIBISCUS (TYP. SYM.) DET REF 2 / L-601

POLY HEADER (TYP. SYM.) DTL REF 4 / L-601

COMMON BERMUDA GRASS (TYP. SYM.)

KOU (TYP. SYM.) DTL REF 1 / L-601

10' LONG ROOT BARRIER (TYP. SYM.) DTL REF 3 / L-601

EXISTING BUILDING 621 (YCA)

EXISTING BUILDING 621 (HIARNG)

EXISTING ASSEMBLY HALL

EXISTING HIARNG GRASS COURTYARD

EXISTING GARDEN (COMMON AREA)

EXISTING CIRCLE AVENUE

EXISTING EARL'S ALLEY

LANDSCAPE PROJECT LIMITS

COMMON BERMUDA GRASS (TYP. SYM.)

KOU (TYP. SYM.) DTL REF 1 / L-601

10' LONG ROOT BARRIER (TYP. SYM.) DTL REF 3 / L-601

COMMON BERMUDA GRASS (TYP. SYM.)

KOU (TYP. SYM.) DTL REF 1 / L-601

PLAN NORTH

LANDSCAPE PLANTING PLAN
1"=30'

Scale: 1"=30'

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SYM	DESCRIPTION	DATE	APPR

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STATE OF HAWAI'I
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DEPARTMENT OF DEFENSE
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KEAUKAHA MILITARY RESERVATION – B621
HILO, HAWAI'I

HAWAI`I ARMY NATIONAL GUARD (HIARNG)
BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS

LANDSCAPE PLANTING PLAN

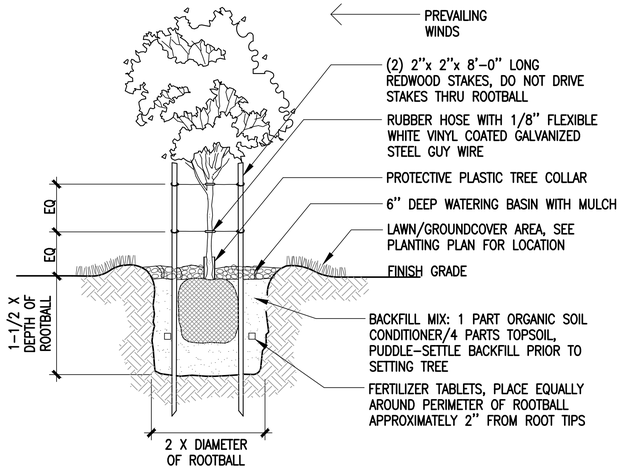
SCALE:

STATE PROJECT NO.
CA-1212-C3

FEDERAL PROJECT NO.
15130007

SHEET
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LP101

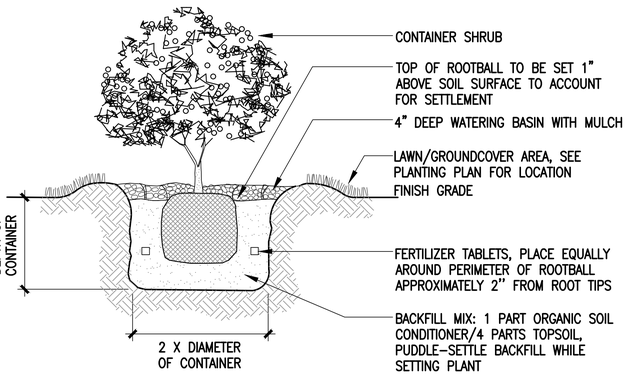


TREE STAKING DETAIL

NOT TO SCALE — L-601 (1)

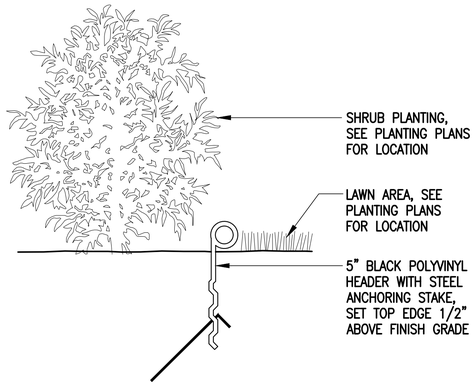
PLANT MATERIAL LIST

TOTAL QTY		BOTANICAL NAME	COMMON NAME	SIZE	CALIPER	HEIGHT	SPACING	REMARKS
TREES								
10	EA	CORDIA SUBCORDATA	KOU	25 GAL.	2"	6'-8' HT		FULL
SHRUBS								
55	EA	HIBISCUS ARNOTTIANUS	WHITE HIBISCUS	5 GAL.		2'-3' HT	24" O.C.	
GROUNDCOVERS								
51,450	SF	CYNODON DACTYLON	COMMON BERMUDA GRASS	SEED				HYDROMULCH
MISCELLANEOUS ITEMS								
51,730	SF	SOIL PREPARATION (1" OF ORGANIC SOIL CONDITIONER & FERTILIZER TO BE SPREAD AND TILLED 6" DEEP INTO SOIL)						
105	LF	POLY HEADER						
215	LF	ROOT BARRIER (24" DEEP)						



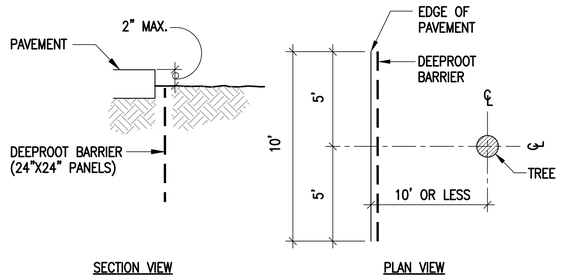
SHRUB PLANTING DETAIL

NOT TO SCALE — L-601 (2)



POLY HEADER DETAIL

NOT TO SCALE — L-601 (4)



ROOT BARRIER DETAIL

NOT TO SCALE — L-601 (3)

GENERAL NOTES:

1. INSPECT THE SITE AND VERIFY CONDITIONS PRIOR TO COMMENCING WITH THE WORK AND REPORT ANY DISCREPANCIES TO THE ARCHITECT. BY COMMENCING WITH THE WORK, THE LANDSCAPE CONTRACTOR ACCEPTS THE EXISTING CONDITIONS AND ASSUMES RESPONSIBILITY FOR MAINTAINING THOSE CONDITIONS.
2. ALL EXISTING STRUCTURES, UTILITIES, APPURTENANCES, PAVING, LANDSCAPE AND OTHER ELEMENTS TO REMAIN SHALL BE PROTECTED FROM ANY DAMAGE. EXISTING STRUCTURES, UTILITIES, APPURTENANCES, PAVING, LANDSCAPE AND OTHER ELEMENTS DAMAGED BY CONSTRUCTION UNDER THIS CONTRACT SHALL BE REPAIRED AT NO ADDITIONAL COST TO THE OWNER TO THE SATISFACTION OF THE HI-ENV/ENGINEER/ARCHITECT.
3. LANDSCAPE CONTRACTOR SHALL COORDINATE ALL WORK WITH RELATED CONTRACTORS AND WITH THE GENERAL CONSTRUCTION OF THE PROJECT IN ORDER NOT TO IMPEDE THE PROGRESS OF THE WORK OF OTHERS OR THE CONTRACTOR'S OWN WORK.
4. FIELD LAYOUT THE LOCATION OF ALL PROPOSED IMPROVEMENTS AND OBTAIN APPROVAL OF THE LAYOUT PRIOR TO START OR WORK. THE ARCHITECT RESERVES THE RIGHT TO REVISE THE LAYOUT OF THE PROPOSED IMPROVEMENTS PRIOR TO THE START OF WORK. THE CONTRACTOR SHALL BE RESPONSIBLE TO MAKE THE ADJUSTMENTS AT NO ADDITIONAL COST TO THE OWNER.
5. THE CONTRACTOR SHALL VERIFY AND CHECK DIMENSIONS AND DETAILS PRIOR TO THE START OF WORK. ANY DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ARCHITECT THROUGH THE PROJECT QUALITY CONTROL MANAGER. ALLOW FOR CONSTRUCTION TOLERANCE IN ORDER TO MEET THE MINIMUM AND MAXIMUM REQUIREMENTS AS INDICATED ON THE DRAWINGS AND SPECIFICATIONS.
6. CONTRACTOR SHALL MAINTAIN AND PROTECT ALL EXISTING PLANT MATERIAL AND LANDSCAPE AREAS TO REMAIN. THIS INCLUDES WATERING, PRUNING/TRIMMING, WEEDING, GRASS CUTTING, AND GENERAL CLEAN UP. DO NOT STORE MATERIALS OR EQUIPMENT, OR OPERATE OR PARK EQUIPMENT NEAR OR UNDER THE BRANCHES AND CANOPY DRIP LINE OF EXISTING PLANTS AND TREES THAT ARE TO REMAIN, EXCEPT AS REQUIRED FOR CONSTRUCTION IN THOSE AREAS.
7. HYDRO-SEED ALL EXISTING GRASS AREAS DAMAGED BY CONSTRUCTION. MATCH TO EXISTING GRASS TYPE UNLESS OTHERWISE SHOWN.

PLANTING NOTES:

1. BACKFILL MIX SHALL CONSIST OF THREE (3) PARTS OF AMENDED IMPORTED PLANTING SOIL TO ONE (1) PART ORGANIC SOIL CONDITIONER (SEE SPECIFICATIONS). ADD ONE (1) POUND OF 10-30-10 FERTILIZER TO ONE (1) CUBIC YARD OF BACKFILL MIX. MIX THOROUGHLY ON PROJECT SITE PRIOR TO ANY PLANTING OPERATIONS.
2. PLANTING TABLETS FOR TREES AND SHRUBS SHALL BE AS FOLLOWS:

A)	FIELD SPECIMEN	12 TABLETS
B)	25 GALLON	8 TABLETS
C)	15 GALLON	5 TABLETS
D)	5 GALLON	3 TABLETS
E)	3 GALLON	2 TABLETS
F)	1 GALLON	1 TABLET

   USE SLOW RELEASE FERTILIZER TABLETS 20-10-5, 21 GRAM SIZE.
4. GROUNDCOVER SHALL BE PLANTED UNDER ALL TREES, PALMS AND SHRUBS (UNLESS OTHERWISE NOTED ON PLANS).
5. QUANTITIES ARE SHOWN FOR THE CONVENIENCE OF THE CONTRACTOR ONLY. THE CONTRACTOR SHALL PERFORM ITS OWN QUANTITY ESTIMATES FOR THE PURPOSES OF BIDDING AND CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE PLANTS AND OTHER MATERIALS IN THE QUANTITIES NECESSARY TO COMPLETE THE INSTALLATION AS SHOWN ON THE DRAWINGS.

IRRIGATION NOTE:

CONTRACTOR SHALL PROVIDE TEMPORARY ON-GRADE IRRIGATION DURING THE ESTABLISHMENT PERIOD.

HAWAII ARMY NATIONAL GUARD

ahl.

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4/30/2020
SIGNATURE — EXPIRATION DATE

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SUBMITTAL PHASE: FINAL SUBMITTAL
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DES | DRW | CHK

DEPARTMENT OF DEFENSE
STATE OF HAWAI`I
FACILITY MANAGEMENT OFFICE
HAWAII ARMY NATIONAL GUARD
DESIGN AND PROJECT MANAGEMENT BRANCH
KEAUKAHA MILITARY RESERVATION - B621
HILO, HAWAI`I

HAWAI`I ARMY NATIONAL GUARD (HIARNG)
BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS

PLANT MATERIAL LIST, DETAILS & NOTES

SCALE:

STATE PROJECT NO.
CA-1212-C3

FEDERAL PROJECT NO.
15130007

SHEET
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L-601

GENERAL NOTES:

1. THE CONTRACTOR SHALL VERIFY ALL FIELD DIMENSIONS AND CONDITIONS PRIOR TO STARTING WORK. ALL DISCREPANCIES SHALL BE PROMPTLY REPORTED TO THE PROJECT MANAGER.
2. ALL OMISSIONS OR CONFLICTS BETWEEN THE VARIOUS ELEMENTS OF THE WORKING DRAWINGS AND/OR SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE PROJECT MANAGER BEFORE PROCEEDING WITH ANY WORK SO INVOLVED.
3. UNLESS SPECIFICALLY DETAILED ELSEWHERE, CONTRACTOR SHALL FOLLOW TYPICAL DETAILS ON SHEETS S-002 THROUGH S-003.
4. WHERE CONDITIONS HAVE NOT BEEN SPECIFICALLY INDICATED BUT ARE SIMILAR TO DETAILS SHOWN ON SHEETS S-002 THROUGH S-003, MODIFY TYPICAL DETAILS AS DIRECTED TO MEET SPECIAL CONDITIONS.
5. STRUCTURAL DRAWINGS WHERE INDICATED HAVE BEEN DRAWN TO APPROXIMATE SCALE. UNLESS DRAWING SPECIFICALLY PROVIDES A DIMENSION, THE CONTRACTOR SHALL NOT USE OR SCALE STRUCTURAL DRAWINGS TO DETERMINE DIMENSIONS.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SHORING. THE CONTRACTOR SHALL PROVIDE TEMPORARY ERECTION BRACING AND SHORING FOR ALL STRUCTURAL MEMBERS AS REQUIRED FOR STRUCTURAL STABILITY OF THE STRUCTURE DURING ALL PHASES OF CONSTRUCTION.

FOUNDATION NOTES:

1. FOUNDATION DESIGN IS BASED ON SOILS INVESTIGATION REPORT DONE BY HIRATA AND ASSOCIATES DATED OCTOBER 30, 2012. A COPY OF THE REPORT IS ON FILE WITH THE ARCHITECT. THE CONTRACTOR SHALL OBTAIN A COPY OF THE REPORT AND BECOME FAMILIAR WITH THE CONTENTS OF THE REPORT.
2. CONVENTIONAL SHALLOW FOOTINGS WILL BE USED FOR ALL STRUCTURES. TO PROVIDE MORE UNIFORM SUPPORT, ALL FOUNDATIONS SHALL BE UNDERLAIN BY A MINIMUM OF 12 INCHES OF GRANULAR STRUCTURAL FILL. OVEREXCAVATION OF THE INSITU GRAVEL WILL BE REQUIRED FOR THE PLACEMENT OF THE GRANULAR STRUCTURAL FILL. AS AN ALTERNATIVE, ALL FOUNDATION MAY ALSO EXTEND THROUGH THE NEW FILL AND BE FOUNDED DIRECTLY ON THE INSITU GRAVEL. TO PROVIDE MORE UNIFORM SUPPORT, ALL FOUNDATIONS FOR A PARTICULAR STRUCTURE SHALL BE FOUNDED ON THE SAME MATERIAL.
3. THE TOP OF ALL FOUNDATIONS SHALL BE A MINIMUM OF 12 INCHES BELOW THE LOWEST ADJACENT FINISH GRADE. ALL FOOTING SHALL BE BEAR ON A LEVEL PLANE. WALL FOOTINGS SHALL BE STEPPED IN ACCORDANCE WITH THE STRUCTURAL DETAIL AS REQUIRED. FOOTINGS LOCATED ON, OR NEAR THE TOP OF SLOPES, SHALL BE EMBEDDED SUCH THAT A MAXIMUM HORIZONTAL DISTANCE OF 5 FEET IS MAINTAINED BETWEEN THE BOTTOM EDGE OF THE FOOTING AND FACE OF SLOPE.
4. THE BOTTOM OF FOOTING EXCAVATIONS SHALL BE THOROUGHLY TAMPED AND CLEANED OF LOOSE MATERIAL PRIOR TO PLACEMENT OF REINFORCING STEEL AND CONCRETE.
5. SLAB-ON-GRADE SHALL BE UNDERLAIN BY A 4-INCH CUSHION OF CLEAN GRAVEL, SUCH AS #3 FINE (ASTM C33 SIZE NO. 67). A VAPOR BARRIER OF 15 MIL POLYOLEFIN SHALL BE PLACED DIRECTLY BENEATH THE SLAB-ON-GRADE FOR INTERIOR SLABS. PRIOR TO PLACEMENT OF GRAVEL CUSHION, THE SLAB SUBGRADE SHALL BE SCARIFIED TO A DEPTH OF 6 INCHES, MOISTENED TO ABOUT 2 PERCENT ABOVE OPTIMUM MOISTURE CONTENT, AND COMPACTED TO A MINIMUM OF 95 PERCENT COMPACTION AS DETERMINED BY ASTM D 1557. THE GRAVEL CUSHION SHALL BE COMPACTED TO A LEVEL SURFACE USING A VIBRATORY COMPACTOR.
6. ONSITE FILL MATERIAL - THE ONSITE GRAVEL WILL BE ACCEPTABLE FOR REUSE IN STRUCTURAL FILLS AND BACKFILLS. ALL ROCK FRAGMENTS LARGER THAN 3 INCHES IN MAXIMUM DIMENSION SHALL BE REMOVED FROM THE ONSITE GRAVEL PRIOR TO REUSE. EXCAVATED BASALT MAY ALSO BE REUSED IN STRUCTURAL FILLS AND BACKFILLS PROVIDED THE MATERIAL IS CRUSHED AND PROCESSED TO A WELL-GRADED CONSISTENCY WITH A MAXIMUM PARTICLE SIZE OF 3 INCHES.
7. IMPORTED FILL MATERIAL - IMPORTED STRUCTURAL FILL SHALL BE WELL-GRADED, NON-EXPANSIVE GRANULAR MATERIAL. MAXIMUM PARTICLE SIZE SHALL BE 3 INCHES, WITH BETWEEN 8 AND 20 PERCENT OF SOIL BY WEIGHT SHALL PASS THE #200 SIEVE. IN ADDITION, THE PLASTICITY INDEX (P.I.) OF THAT PORTION OF THE SOIL PASSING THE #40 SIEVE SHALL NOT BE GREATER THAN 10. GRANULAR STRUCTURAL FILL SHALL ALSO HAVE A MINIMUM CBR VALUE OF 15 AND A CBR EXPANSION VALUES LESS THAN 1 PERCENT WHEN TESTED IN ACCORDANCE WITH ASTM D 1883.
8. COMPACTION- STRUCTURAL FILL AND BACKFILL SHALL BE PLACED IN HORIZONTAL LIFTS RESTRICTED TO 8 INCHES IN LOOSE THICKNESS AND COMPACTED TO A MINIMUM OF 95 PERCENT COMPACTION AS DETERMINED BY ASTM D 1557. FILL PLACED IN AREAS WHICH SLOPE STEEPER THAN 5H:1V SHALL BE CONTINUALLY BENCHED AS THE FILL IS BROUGHT IN LIFTS.
9. DESIGN PARAMETERS ARE AS FOLLOWS:
   - ALLOWABLE BEARING PRESSURE ..... 2,500 PSF (FOR DEAD AND LIVE, WITH 1/3 INCREASE FOR WIND AND SEISMIC)
   - COEFFICIENT OF FRICTION 0.4
   - PASSIVE PRESSURE ..... 250 PCF (WITH MAXIMUM OF 2,500 PSF, NEGLECT UPPER 12 UNLESS COVERED BY PAVEMENT OR CONCRETE SLAB)
   - SITE CLASS ..... B
10. A GEOTECHNICAL ENGINEER LICENSED IN THE STATE OF HAWAII SHALL BE HIRED BY THE CONTRACTOR FOR THE FOLLOWING:
    1) CHECK FOOTING EXCAVATIONS PRIOR TO PLACEMENT OF GRANULAR STRUCTURAL FILL, REINFORCING STEEL AND CONCRETE.
    2) REVIEW AND/OR PREFORM LABORATORY TESTING ON IMPORTED BORROW TO DETERMINE ITS ACCEPTABILITY FOR USE IN COMPACTED FILLS.
    3) OBSERVE STRUCTURAL FILL PLACEMENT AND PERFORM COMPACTION TESTING.
    4) PROVIDE GEOTECHNICAL CONSULTATION AS REQUIRED.
    5) ALL WORK REQUIRED OF THE GEOTECHNICAL SHALL BE COORDINATED DIRECTLY BETWEEN THE GEOTECHNICAL ENGINEER AND CONTRACTOR.

REINFORCING STEEL:

1. UNLESS OTHERWISE INDICATED ON PLANS AND/OR SCHEDULE, ALL REINFORCING STEEL SHALL BE HIGH STRENGTH GRADE DEFORMED BARS WHICH SHALL CONFORM TO THE STANDARD SPECIFICATION OF ASTM A615 GRADE 60. ALL REINFORCING STEEL TO BE WELDED SHALL CONFORM TO ASTM A706, GRADE 60.
2. LOW HYDROGEN WELDING RODS SHALL BE USED FOR ALL WELDING TO REINFORCING BARS.
3. REINFORCING SHALL BE SPLICED ONLY AS SHOWN OR NOTED. SPLICES AT OTHER LOCATIONS SHALL BE MADE AWAY FROM POINTS OF MAXIMUM STRESS AND APPROVED BY THE PROJECT MANAGER. SEE DETAILS FOR "LAP SPLICES".
4. BARS NOTED AS "CONT." VERTICAL AND HORIZONTAL WALL REINFORCING AND COLUMN REINFORCING SHALL HAVE A MINIMUM SPLICE EQUAL TO 48 BAR DIAMETERS BUT NOT LESS THAN 24 INCHES.
5. PROVIDE DOWELS IN FOOTINGS THE SAME SIZE AND NUMBER AND IN THE SAME LOCATION AS VERTICAL COLUMN REINFORCING. DOWELS SHALL HAVE A MINIMUM PROJECTION EQUAL TO 48 BAR DIAMETERS BUT NOT LESS THAN 24 INCHES.
6. ALL REINFORCING STEEL, ANCHOR BOLTS AND OTHER INSERTS SHALL BE SECURED IN POSITION PRIOR TO PLACING CONCRETE.
7. MINIMUM CONCRETE PROTECTION FOR REINFORCING STEEL UNLESS OTHERWISE SHOWN:
   - CONCRETE CAST AGAINST EARTH (EXCEPT SLAB ON GRADE) ..... 3"
   - FORMED CONCRETE SURFACE EXPOSED TO EARTH OR WEATHER ..... 2"
   - CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND:
     - SLABS ..... ¾" (TOP AT INTERIOR)
     - ..... 1" (TOP AT EXTERIOR)
     - WALLS ..... ¾"
     - BEAMS AND COLUMNS ..... 1½"
   - CONCRETE COVER TOLERANCE SHALL BE AS FOLLOWS:
     - FORMED SOFFITS OR MEMBERS 4" OR LESS IN THICKNESS ..... +⅜,-¼"
     - MEMBERS 12" THICK OR LESS ..... ±½"
     - MEMBERS GREATER THAN 12" THICK ..... ±½"

   FOR ALL CASES, THE COVER SHALL NOT BE LESS THAN ⅔ OF WHAT IS INDICATED AND REQUIRED BY THE DRAWINGS AND SPECIFICATIONS.

CONCRETE:

1. ALL CONCRETE WORK SHALL CONFORM TO ACI 318-02.
2. SLEEVES EXCEEDING ONE-THIRD THE SLAB OR WALL THICKNESS SHALL NOT BE PLACED IN STRUCTURAL CONCRETE UNLESS SPECIFICALLY DETAILED. PIPE MAY PASS THROUGH STRUCTURAL CONCRETE IN SLEEVES BUT SHALL NOT BE EMBEDDED THEREIN.
3. SECURE ALL BOLTS, ANCHORS, INSERTS, ETC. AND VERIFY ALL GROOVES, SLOTS, AND FINISHES PRIOR TO PLACING CONCRETE.
4. VERIFY LOCATIONS AND DIMENSIONS OF SLOTS, ANCHORS, DUCTS, ETC., RELATING TO MECHANICAL, ELECTRICAL AND ARCHITECTURAL WORK BEFORE POURING CONCRETE.
5. ALL CONCRETE WORK SHALL BE THOROUGHLY CONSOLIDATED DURING PLACEMENT USING A MECHANICAL VIBRATOR. ALL CONCRETE SHALL BE CURED FOR A PERIOD OF NOT LESS THAN 7 DAYS.
6. LOCATIONS OF ALL CONSTRUCTION OR COLD JOINTS SHALL BE COORDINATED WITH AND APPROVED BY THE PROJECT MANAGER.
7. 48 HOURS PRIOR TO THE POURING OF ANY STRUCTURAL CONCRETE, THE CONTRACTOR SHALL NOTIFY THE PROJECT MANAGER SO AN INSPECTION CAN BE MADE OF ALL FORMS AND REINFORCING STEEL.
8. THE 28-DAY COMPRESSIVE STRENGTH AND MAXIMUM AGGREGATE SIZE OF CONCRETE SHALL BE AS FOLLOWS:

	STRENGTH (PSI)	MAX. AGGREGATE	W/C RATIO
SLAB ON GRADE AND CURBS	4,500	1½"	0.45
FOOTINGS AND GRADE BEAMS	4,000	1½"	0.50

CONCRETE BLOCK MASONRY:

1. CONCRETE BLOCK SHALL BE HOLLOW LOAD BEARING UNITS CONFORMING TO ASTM C90.
2. MASONRY MORTAR SHALL BE TYPE "M", WITH A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 2,500 PSI CONFORMING TO ASTM C270.
3. MASONRY GROUT SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 2,500 PSI.
4. ALL CELLS CONTAINING REINFORCING, ANCHORS AND INSERTS SHALL BE GROUTED SOLID. GROUT IN LIFTS NOT TO EXCEED 8'-0".
5. UNLESS NOTED OTHERWISE, ALL WALLS SHALL BE CONSTRUCTED IN CONVENTIONAL RUNNING BOND.
6. AT CMU WALLS PROVIDE HORIZONTAL JOINT REINFORCING AT 16"o.c.
7. WIRE POSITIONERS - CMU WALL REINFORCING SHALL BE SECURED AGAINST DISPLACEMENT BY GALVANIZED NO. 9 GAUGE WIRE POSITIONERS AS SPECIFIED.

EPOXIED ANCHORS:

1. ADHESIVE SHALL BE AN INJECTABLE TWO-COMPONENT EPOXY SUCH AS SIMPSON SET-XP, HILTI HIT RE-500 SD OR APPROVED EQUAL.
2. INSTALLATION OF EPOXIED ANCHORS SHALL FOLLOW ALL MANUFACTURER'S RECOMMENDATIONS.
3. THREADED ANCHOR RODS SHALL BE HOT DIP GALVANIZED AND CONFORM TO ASTM A-193, GRADE B7. THREADED ANCHOR RODS SHALL BE UNC FULLY THREADED, CLEAN, STRIAGHT AND FREE OF INDENTATIONS OR OTHER DEFECTS ALONG THEIR LENGTH.
4. HOLES SHALL BE DRILLED WITH A CARBIDE-TIPPED DRILL BIT. IF HOLES ARE CORE DRILLED WITH DIAMOND-CORE BITS, EPOXY ADHESIVE SELECTED FOR USE BY THE CONTRACTOR SHALL BE SUITABLE FOR THIS APPLICATION WITH NO REDUCTION IN PUBLISHED ALLOWABLE SHEAR AND TENSION LOADS.
5. DIAMETER OF HOLES SHALL BE EQUAL TO THREADED ROD DIAMETER +⅛".
6. ANCHORS SHALL BE INSTALLED IN CONCRETE/CMU THAT HAS REACHED ITS FULL DESIGN COMPRESSIVE STRENGTH.
7. INSTALLATION OF EPOXIED ANCHORS SHALL BE PERFORMED UNDER THE SUPERVISION OF A SPECIAL INSPECTOR IN ACCORDANCE WITH SECTIONS 1704.4 AND 1704.13 OF THE IBC. THE SPECIAL INSPECTOR MUST BE ON THE JOBSITE TO VERIFY ANCHOR TYPE, ANCHOR DIMENSIONS, CONCRETE TYPE, CONCRETE/CMU COMPRESSIVE STRENGTH, HOLE DIMENSIONS, HOLE CLEANING PROCEDURES, ANCHOR SPACING, EDGE DISTANCES, ANCHOR EMBEDMENT, AND TIGHTENING TORQUE.

WOOD:

1. ALL WOOD STRUCTURAL MEMBERS SHALL BE DOUGLAS FIR AND SHALL MEET THE FOLLOWING MINIMUM GRADES AS ESTABLISHED BY THE WEST COAST LUMBER INSPECTION BUREAU:
   - BEAMS ..... NO. 1
   - JOISTS/RAFTERS ..... NO. 2
   - POSTS ..... NO. 1
   - BLOCKING, PLATES, STUDS, ETC. ..... CONSTRUCTION
2. PROVIDE 30# FELT BELOW ALL PLATES RESTING ON CONCRETE OR MASONRY.
3. PROVIDE STANDARD WASHERS AT ALL BOLTS AND NUTS BEARING ON WOOD.
4. HOLES THRU PLATES AND STUDS SHALL BE CENTERED IN THE MEMBER AND SHALL NOT EXCEED 1/3 THE PLATE WIDTH.
5. MINIMUM NAILING SHALL COMPLY WITH TABLE 23-II-B-1 OF THE UNIFORM BUILDING CODE.
6. ALL PREFABRICATED METAL HANGERS AND CONNECTORS NOTED IN THE DRAWINGS SHALL BE "SIMPSON STRONG-TIE" CONNECTORS OR APPROVED EQUALS.
7. ALL WOOD STRUCTURAL MEMBERS SHALL BE TREATED AGAINST ROT AND INSECT DAMAGE. SEE SPECIFICATIONS
8. PROVIDE 2X CONTINUOUS STRUCTURAL FASCIA AT ALL EAVES. FASCIA SUPPORTS HIPS AND LAST RAFTER ON GABLED ROOFS. DO NOT SPLICE FASCIA WITHIN 12'-0" OF CORNERS.
9. ALL PREFABRICATED METAL CONNECTORS SHALL BE BY SIMPSON STRONG-TIE COMPANY.
10. ALL METAL CONNECTORS NOT CONCEALED AND/OR EXPOSED TO THE ATMOSPHERE SHALL BE OUT OF "Z-MAX", STAINLESS STEEL OR HOT-DIPPED GALVANIZED.

SAWN LUMBER DECKING:

1. THE 2"x6" NOMINAL, T&G ROOF DECKING SHALL BE DOUGLAS FIR, SELECT DEX GRADE AS SPECIFIED IN THE STANDARD GRADING RULES FOR WEST COAST LUMBER, NO. 16, WEST COAST LUMBER INSPECTION BUREAU (WCLIB).
2. DECKING SHALL BE INSTALLED CONTINUOUS OVER 3 OR MORE SUPPORTS WITH DISTANCE BETWEEN END JOINTS IN ADJACENT COURSES AT LEAST 2 FEET APART. JOINTS IN THE SAME LINE SHALL BE SEPARATED BY AT LEAST TWO INTERVENING COURSES.
3. DECKING SHALL BE LAID WITH THE TONGUES UP ON THE SLOPED ROOF AND THE PATTERN FACE EXPOSED ON THE UNDERSIDE. EACH PIECE SHALL BE TOE-NAILED THROUGH THE TONGUE WITH A 16d NAIL AND ALSO FACE NAILED TO EACH SUPPORT USING 2-16d COMMON NAILS.

DESIGN LOADS:

1. FLOOR LIVE LOADS ..... 100 PSF
2. ROOF LIVE LOADS ..... 20 PSF REDUCIBLE
3. WIND LOADS:
   BASIC WIND SPEED (3-SEC GUST) ..... 105 MPH
   WIND EXPOSURE C
   Kzt = 1.0
   Kd = 0.75
   PARTIALLY ENCLOSED
3. SEISMIC LOADS:
   MAPPED - MAXIMUM CONSIDERED EARTHQUAKE ACCELERATIONS
   Ss (SHORT PERIOD) 1.5
   S1 (1 SEC. PERIOD) 0.60
4. LATERAL FORCE RESISTING SYSTEM

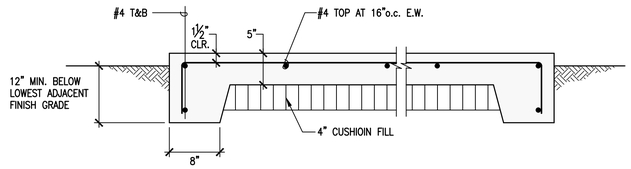
BUILDING	LATERAL FORCE RESISTING SYSTEM	OCCUPANCY CATEGORY	WIND	SEISMIC
			IMPORTANCE FACTOR	IMPORTANCE FACTOR
ADDITION TO BLDG 621	SPECIAL REINFORCED MASONRY SHEARWALLS, R=5	II	1.0	1.0

SPECIAL INSPECTION REQUIREMENTS LIST BELOW

1. THE CONTRACTOR SHALL EMPLOY A SPECIAL INSPECTOR FOR WORK REQUIRING SPECIAL INSPECTION PER CHAPTER 17 OF THE 2003 IBC AS ADOPTED BY THE COUNTY OF HAWAII.
2. SPECIAL INSPECTION FIRM SHALL HAVE AT LEAST 6 YEARS OF EXPERIENCE AND SHALL BE CERTIFIED WITHIN THE BUILDING DEPARTMENT JURISDICTION OF CONSTRUCTION (IF SUCH CERTIFICATION EXIST).
3. THE CONTRACTOR SHALL COORDINATE HIS WORK WITH THE SPECIAL INSPECTOR TO ENSURE THAT ALL ELEMENTS REQUIRING SPECIAL INSPECTION ARE INSPECTED.
4. SPECIAL INSPECTION IS REQUIRED FOR THE FOLLOWING TYPES OF WORK:
   A. CONCRETE:
      OBSERVE THE TAKING OF TEST SPECIMENS AND THE PLACING OF CONCRETE FOR ALL ELEMENTS.
   B. MASONRY:
      OBSERVE THE TAKING OF TEST SPECIMENS, SITE-PREPARED MORTAR PROPORTIONS, PLACING OF GROUT.
   C. REINFORCING STEEL:
      OBSERVE THE PLACEMENT OF ALL REINFORCING. THE SPECIAL INSPECTOR NEED NOT BE PRESENT CONTINUOUSLY DURING THE PLACING OF REINFORCING STEEL, PROVIDED HE HAS INSPECTED FOR CONFORMANCE WITH THE APPROVED PLANS PRIOR TO THE CLOSING OF FORMS FOR THE DELIVERY OF CONCRETE TO THE JOBSITE.
   D. UPLIFT WIND CONNECTORS FOR WOOD MEMBERS.
5. SPECIAL INSPECTOR SHALL BE IDENTIFIED ON SPECIAL INSPECTION FORM PROVIDED BY THE COUNTY OF HAWAII DEPARTMENT OF PUBLIC WORKS BUILDING DIVISION. EACH ITEM AS REQUIRED IN ITEM 4 ABOVE SHALL BE SPECIALLY INSPECTED.

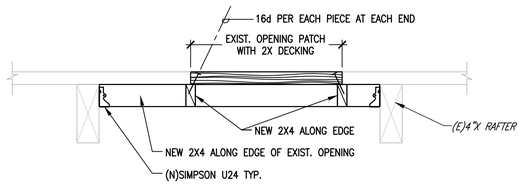
ABBREVIATIONS

A.B.	ANCHOR BOLT	JT	JOINT
ARCH.	ARCHITECTURAL OR ARCHITECT	KSF	KIPS PER SQUARE FOOT
@	AT	LONG.	LONGITUDINAL
BAL.	BALANCE	MAX.	MAXIMUM
BOT.	BOTTOM	M.B.	MACHINE BOLT
BM.	BEAM	MECH.	MECHANICAL
B.T.B.	BASALTIC TERMITE BARRIER	MIN.	MINIMUM
C.F.S. or CFS	COLD FORMED STEEL	(N)	NEW
C.I.P.	CAST IN PLACE	N.T.S.	NOT TO SCALE
C.J.	CONSTRUCTION OR CONTROL JOINT	NO.	NUMBER
CL	CENTER LINE	O.C.	ON CENTER
CLR.	CLEAR	OPP.	OPPOSITE
CMU	CONCRETE MASONRY UNIT	PL.	PLATE
COL.	COLUMN	PSI.	POUNDS PER SQUARE INCH
CONC.	CONCRETE	PSF	POUNDS PER SQUARE FOOT
CONT.	CONTINUOUS	R.F. OR	REINFORCED OR
CONN.	CONNECTION	REINF.	REINFORCEMENT
DIA. OR ø	DIAMETER	REQ'D.	REQUIRED
DIAG.	DIAGONAL	SHT.	SHEET
DET.	DETAIL	SP.	SPACE OR SPACES
D.F.	DOUGLAS FIR	SIM.	SIMILAR
(E), EXIST'G	EXISTING	SQ.	SQUARE
EA.	EACH	STD.	STANDARD
E.J.	EXPANSION JOINT	T&B	TOP AND BOTTOM
E.F.	EACH FACE	T&G	TONGUE AND GROOVE
EL.	ELEVATOR	THK.	THICK
ELEV.	ELEVATION	T.O.C.	TOP OF CONCRETE
EQ.	EQUAL	T.O.F.	TOP OF FOOTING
EXP.	EXPANSION	T.O.S.	TOP OF SLAB
EXT.	EXTERIOR	T.O.W.	TOP OF WALL
E.W.	EACH WAY	TRANS.	TRANSVERSE
F.P.	FULL PENETRATION	TYP.	TYPICAL
FT.	FOOT OR FEET	VERT.	VERTICAL
FTG.	FOOTING	W/	WITH
GA.	GAGE	W/O	WITH OUT
GALV.	GALVANIZE	W.J.	WALL JOINT
HORIZ.	HORIZONTAL	W.W.F.	WELDED WIRE FABRIC
HSB	HIGH STRENGTH BOLT	W.W.M.	WELDED WIRE MESH
INT.	INTERIOR		



EXTERIOR EQUIPMENT PAD

NOT TO SCALE — S-001 — B4



TYPICAL PATCH OF EXIST. ROOF PENETRATION

NOT TO SCALE — S-001 — A4

HAWAII ARMY NATIONAL GUARD

ahl.
733 BISHOP STREET, SUITE 3100
HONOLULU, HAWAII 96813
TELEPHONE: (808) 523-9636
FAX: (808) 521-3280
www.ahldesign.com
A/E INFO

CRAIG H. SAKANASHI
LICENSED PROFESSIONAL ENGINEER
No. 5509-S
HAWAII, U.S.A.
THIS SHEET WAS PREPARED BY ME OR UNDER MY SUPERVISION
4/30/2020
SIGNATURE — EXPIRATION DATE

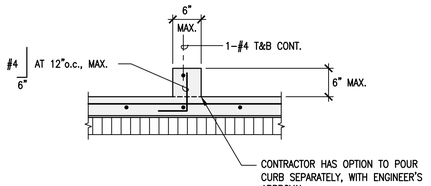
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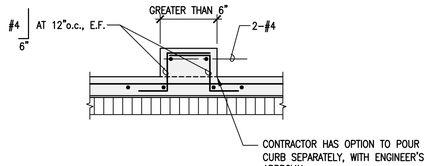
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FINAL SUBMITTAL
SUBMITTAL DATE 30 SEPTEMBER 2019
DES | DRW | CHK

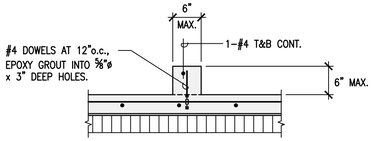
DEPARTMENT OF DEFENSE
HAWAII ARMY NATIONAL GUARD
DESIGN AND PROJECT MANAGEMENT BRANCH
STATE OF HAWAI'I
FACILITY MANAGEMENT OFFICE

KEAUKAHA MILITARY RESERVATION - B621
HILO, HAWAI'I
HAWAI'I ARMY NATIONAL GUARD (HIARNG)
BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS
GENERAL NOTES

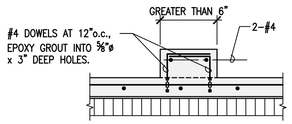
SCALE:
STATE PROJECT NO. CA-1212-C3
FEDERAL PROJECT NO. 15130007
SHEET 21 of 126
S-001







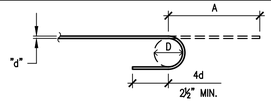
ALTERNATE AT INTERIOR PARTITION WALL ONLY



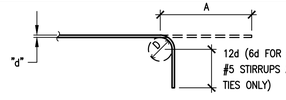
ALTERNATE AT INTERIOR PARTITION WALL ONLY

TYP. CONCRETE CURB DETAIL

NOT TO SCALE — S–002 — C1

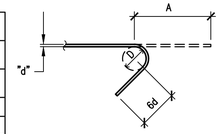


STANDARD HOOK 180°



BAR BEND 90°

BAR SIZE	MINIMUM EXTENSION LENGTHS "A"			
	STANDARD HOOKS		TIES AND STIRRUPS	
	180° HOOKS	90° HOOKS	90° HOOKS	135° HOOKS
#3	6"	7"	5"	6"
#4	8"	9"	6"	7"
#5	9"	11"	7"	9"
#6	11"	13"	14"	12"
#7	12"	15"	16"	14"
#8	14"	17"	19"	16"
#9	19"	21"	NA	NA
#10	21"	24"	NA	NA
#11	24"	26"	NA	NA
#14	34"	34"	NA	NA
#18	45"	45"	NA	NA

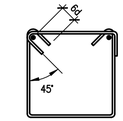


BAR BEND 135°

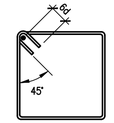
BAR SIZE	D
#3,#4,#5 #6,#7,#8	6 d
#9,#10,#11	8 d
#14,#18	10 d

TYP. REBAR BENDING

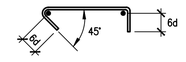
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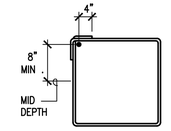
AT BEAMS



AT COLUMNS



COLUMN CROSS TIES



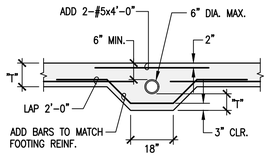
ALTERNATE AT BEAMS
(W/ APPROVAL FROM ENG.)

NOTES:

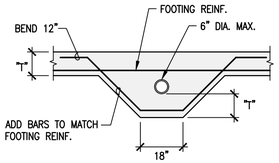
1. THESE DETAILS SHALL APPLY TO #3. #4, AND #5 BARS – GRADE 40 AND GRADE 60.
2. ALL BARS SHALL BE BENT COLD.
3. MINIMUM FINISHED BEND DIAMETER = 4d FOR #3, 4, AND #15 BARS.

TYP. TIE AND STIRRUP DETAIL

NOT TO SCALE — S–002 — C5



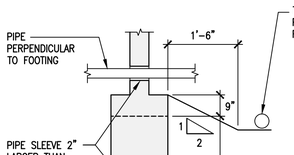
THROUGH FOOTING



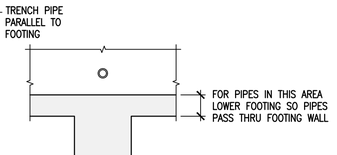
UNDER FOOTING

TYP. PIPE SLEEVE FOOTING

NOT TO SCALE — S–002 — B1



SECTION

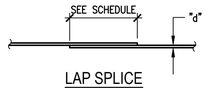


ELEVATION

NOTE:
FOR PIPES 3'–0" OR LESS BELOW FOOTINGS, PROVIDE SLEEVE AND CONCRETE AS SHOWN. FOR PIPES MORE THAN 3'–0" BELOW FOOTINGS USE STEPPED FOOTING DETAIL TO STAY WITHIN 3'–0".

TYP. PIPE SLEEVE BELOW FOOTING

NOT TO SCALE — S–002 — B2



LAP SPLICE



BAR OFFSET

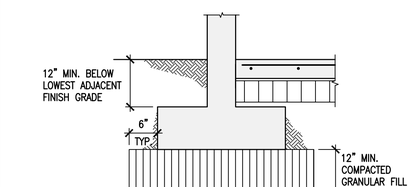
BAR SIZE	f'c = 3000 PSI		f'c = 4000 PSI		f'c = 5000 PSI		f'c = 6000 PSI	
	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS
#3	24"	24"	24"	24"	24"	24"	24"	24"
#4	29"	24"	25"	24"	24"	24"	24"	24"
#5	36"	28"	31"	24"	28"	24"	26"	24"
#6	43"	33"	37"	29"	34"	26"	31"	24"
#7	63"	48"	54"	42"	49"	38"	45"	34"
#8	72"	55"	62"	48"	56"	43"	51"	39"
#9	81"	62"	70"	54"	63"	48"	57"	44"
#10	91"	70"	79"	61"	70"	54"	64"	50"
#11	101"	78"	87"	67"	78"	60"	71"	55"

NOTES:

1. LAP SPLICE LENGTHS ARE FOR CLASS A LAP SPLICES ONLY.
2. LAP SPLICE LENGTHS ARE FOR GRADE 60 DEFORMED BARS.
3. LAP SPLICE LENGTHS SHALL BE IN ACCORDANCE WITH THIS TABLE, UNLESS OTHERWISE SHOWN OR NOTED.
4. A "TOP" BAR IS HORIZONTAL REINFORCEMENT WHICH HAS MORE THAN 12" OF FRESH CONCRETE CAST BELOW THE SPLICE.

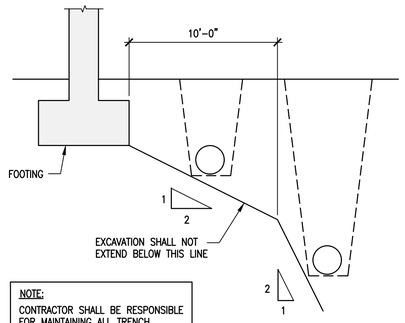
TYP. LAP SPLICE DETAIL

NOT TO SCALE — S–002 — B3



TYP. OVER-EXCAVATION AND BACKFILL BENEATH ALL FTG.

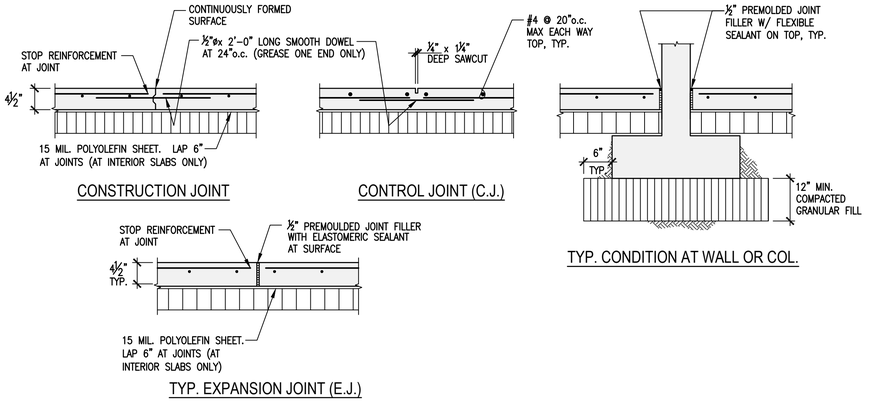
NOT TO SCALE — S–002 — B5



NOTE:
CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL TRENCH SLOPES BY SHORING AS REQUIRED.

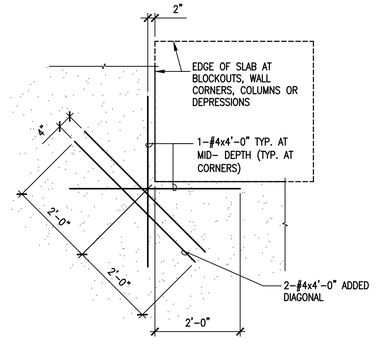
TYP. TRENCH DETAIL

NOT TO SCALE — S–002 — A1



TYP. SLAB-ON-GRADE DETAILS

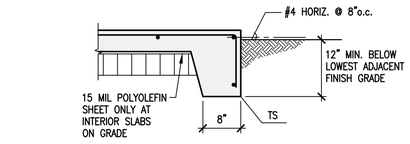
NOT TO SCALE — S–002 — A2



PLAN

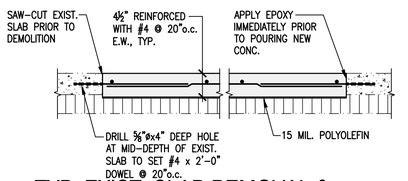
TYP. S.O.G. RE-ENTRANT CORNER-BLOCKOUT DETAIL

NOT TO SCALE — S–002 — A3



TYP. TS (THICK SLAB EDGE)

NOT TO SCALE — S–002 — A4



TYP. EXIST. SLAB REMOVAL & REPLACEMENT

NOT TO SCALE — S–002 — A5

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A/E INFO

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No. 5509–S
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION
4/30/2020
SIGNATURE — EXPIRATION DATE

	APPR	DATE	DESCRIPTION	STM

SUBMITTAL PHASE
FINAL SUBMITTAL
SUBMITTAL DATE 30 SEPTEMBER 2019

DES	DRW	CHK

DEPARTMENT OF DEFENSE
STATE OF HAWAI'I
FACILITY MANAGEMENT OFFICE
HAWAII ARMY NATIONAL GUARD
DESIGN AND PROJECT MANAGEMENT BRANCH
KEAUKAHA MILITARY RESERVATION – B621
HILO, HAWAI'I
HAWAI`I ARMY NATIONAL GUARD (HIARNG)
BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS
TYPICAL DETAILS

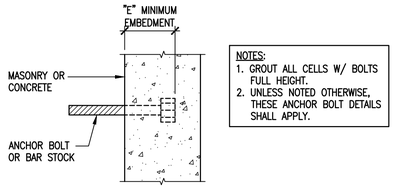
SCALE:

STATE PROJECT NO.
CA-1212-C3

FEDERAL PROJECT NO.
15130007

SHEET 22 of 126

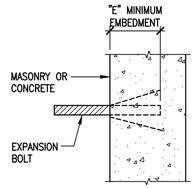
S–002



NOTES:
1. GROUT ALL CELLS W/ BOLTS FULL HEIGHT.
2. UNLESS NOTED OTHERWISE, THESE ANCHOR BOLT DETAILS SHALL APPLY.

BOLT SIZE	HORIZONTAL APPLICATION MINIMUM "E"	VERTICAL APPLICATION MINIMUM "E"
1/2" DIA.	4"	6"
5/8" DIA.	4"	6"
3/4" DIA.	5"	7"
7/8" DIA.	6"	8"
1" DIA.	7"	9"

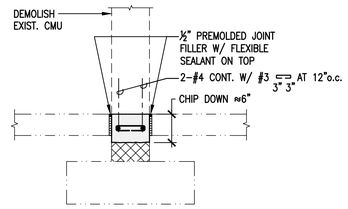
TYP. ANCHOR BOLT
NOT TO SCALE — S-003 — C1



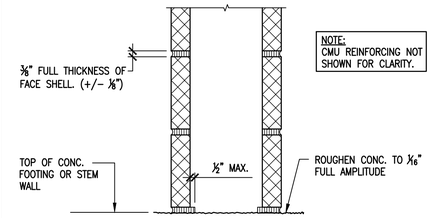
NOTES:
1. GROUT ALL CELLS W/ BOLTS FULL HEIGHT.
2. ALL EXPANSION BOLTS SHALL BE REDHEAD ANCHORS OR EQUAL, HAVING THE FOLLOWING MINIMUM LOAD VALUES.

BOLT SIZE	MINIMUM "E"	ALLOW. SHEAR IN CONC. (#)	ALLOW. SHEAR IN MASONRY (#)
1/2" DIA.	4"	1550	550
5/8" DIA.	4"	1800	650
3/4" DIA.	5"	2100	800
7/8" DIA.	6"	2500	1000
1" DIA.	7"		

TYP. EXPANSION BOLT
NOT TO SCALE — S-003 — C2

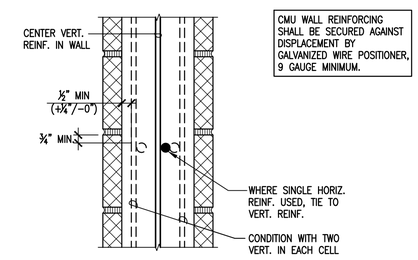


DETAIL
NOT TO SCALE — S-003 — C3



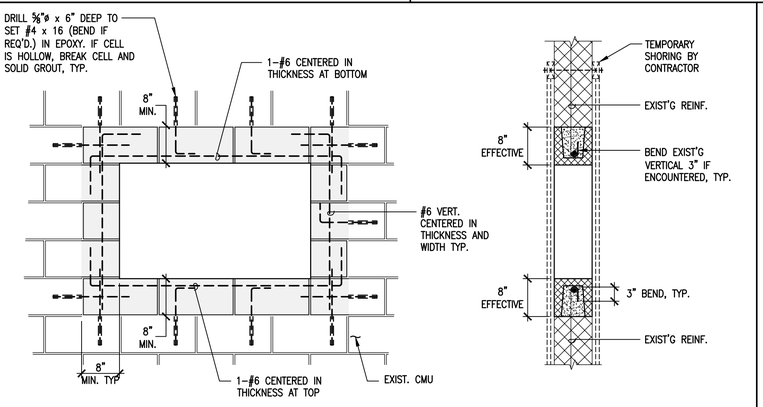
VERTICAL AND HORIZONTAL JOINTS SHALL BE TOOLED TO PRODUCE A DENSE SLIGHTLY CONCAVE SURFACE WELL BONDED TO THE BLOCK AT THE EDGES. MORTAR JOINTS SHALL BE STRAIGHT, CLEAN, AND IN A THICKNESS OF 3/8" +/- 1/8". WHERE WALLS ARE TO RECEIVE PLASTER, FILLER, WATERPROOFING OR PROTECTIVE COATINGS, THE HORIZONTAL AND VERTICAL JOINTS SHALL BE STRUCK FLUSH.

CMU WALL MORTAR DETAIL
NOT TO SCALE — S-003 — C4

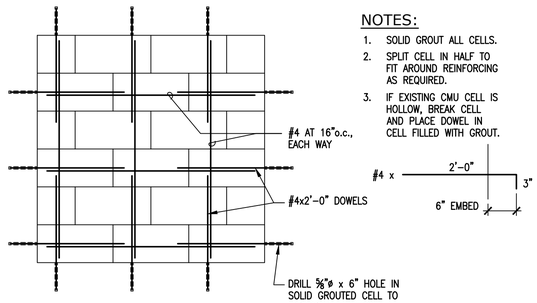


SINGLE VERT. REINF.

CMU WALL REINF. PLACEMENT
NOT TO SCALE — S-003 — C5



TYP. OPENING IN EXIST'G CMU WALL
SCALE: 3/4" = 1'-0" — S-003 — B1



NOTES:
1. SOLID GROUT ALL CELLS.
2. SPLIT CELL IN HALF TO FIT AROUND REINFORCING AS REQUIRED.
3. IF EXISTING CMU CELL IS HOLLOW, BREAK CELL AND PLACE DOWEL IN CELL FILLED WITH GROUT.

#4 x 2'-0" 3" 6" EMBED

CMU WALL PATCH
NOT TO SCALE — S-003 — B2

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A/E INFO

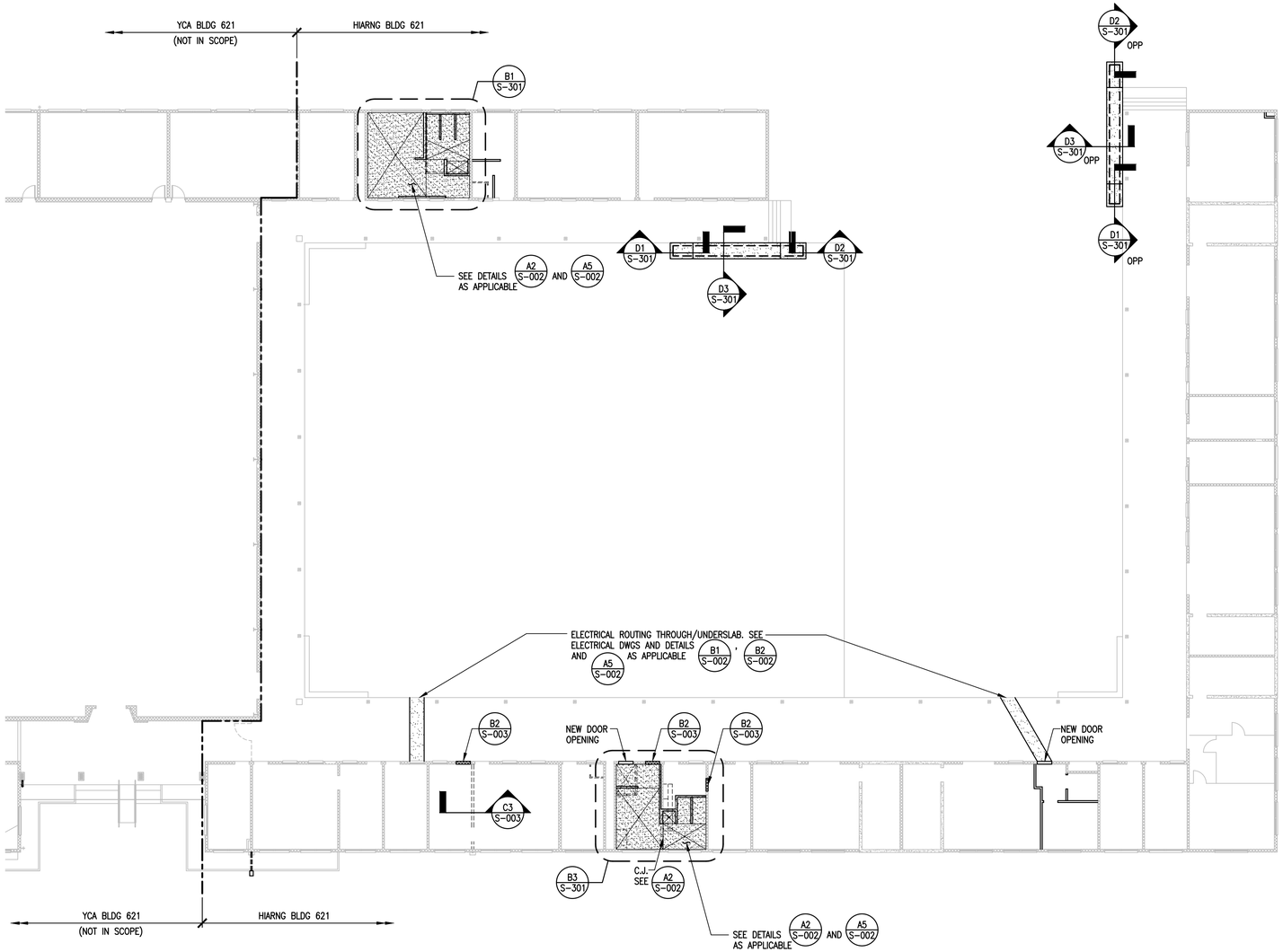
CRAIG H. SAKANASHI
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SUBMITTAL DATE 30 SEPTEMBER 2019
DES | DRW | CHK

STATE OF HAWAI'I
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DEPARTMENT OF DEFENSE
HAWAII ARMY NATIONAL GUARD
DESIGN AND PROJECT MANAGEMENT BRANCH
KEAUKAHA MILITARY RESERVATION - B621
HILO, HAWAI'I
HAWAI'I ARMY NATIONAL GUARD (HIARNG)
BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS
TYPICAL DETAILS

SCALE:
STATE PROJECT NO. CA-1212-C3
FEDERAL PROJECT NO. 15130007
SHEET 23 of 126
S-003



HIARNG BLDG 621 PARTIAL FOUNDATION PLAN

SCALE: 1/16" = 1'-0"

S-101 A1

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PARTIAL FOUNDATION PLAN

SCALE:

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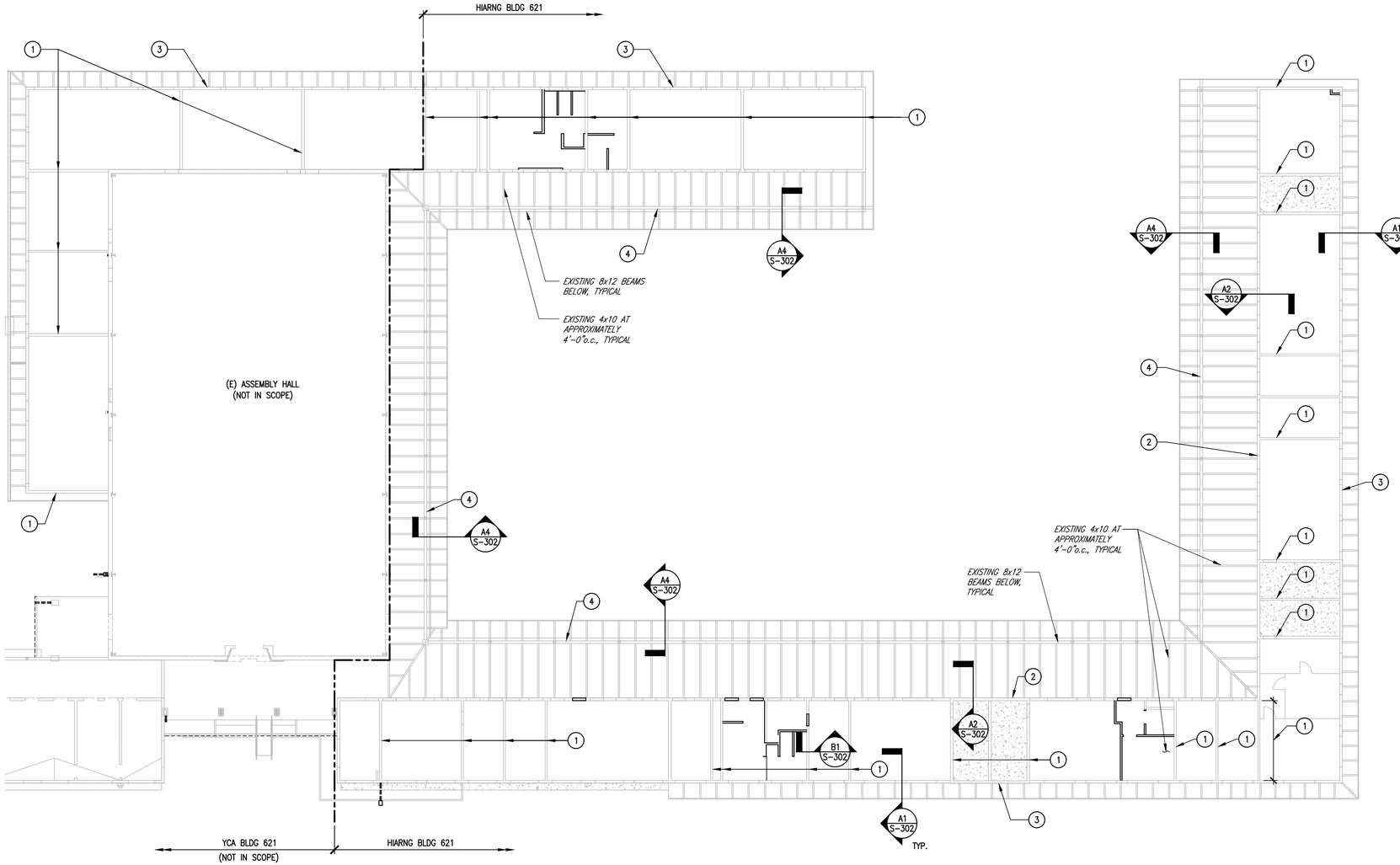
SHEET 24 of 126

S-101

SCHEDULE OF EXIST'G WALL TO ROOF RETROFIT CONN.	
MARK	DETAIL
1	B1/S-302
2	A2/S-302
3	A1/S-302
4	A4/S-302

LEGEND / NOTES

1. ALL PREFABRICATED ROOF CONNECTORS SHALL EITHER BE MADE OUT OF 316 STAINLESS STEEL OR WITH "Z-MAX" FINISH. CONNECTORS THAT ARE THICK ENOUGH SHALL BE HOT-DIPPED GALVANIZED. ALL PREFABRICATED CONNECTORS SHALL BE SIMPSON, STRONG TIE.
2. ALL NAILS FOR PREFABRICATED CONNECTORS SHALL BE OF THE PROPER SIZE AS RECOMMENDED BY CONNECTOR MANUFACTURER. ALL NAILS SHALL EITHER BE HOT DIPPED GALVANIZED OR MADE OUT OF STAINLESS STEEL.
3. ALL BOLTS AND NUTS SHALL BE GALVANIZED.



HIARNG BLDG 621 PARTIAL ROOF FRAMING PLAN

SCALE: 1/16" = 1'-0"

S-102 A1

0 4 8 16 32 48FT
SCALE: 1/16"=1'-0"

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FINAL SUBMITTAL
SUBMITTAL DATE 30 SEPTEMBER 2019

DES	DRW	CHK

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HAWAI'I ARMY NATIONAL GUARD (HIARNG)
BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS

PARTIAL ROOF FRAMING PLAN

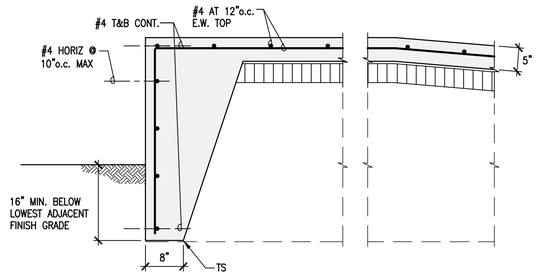
SCALE:

STATE PROJECT NO.
CA-1212-C3

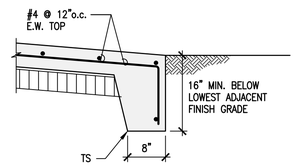
FEDERAL PROJECT NO.
15130007

SHEET 25 of 126

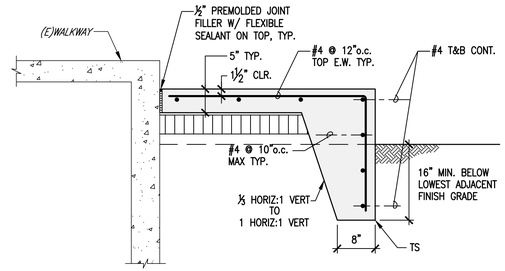
S-102



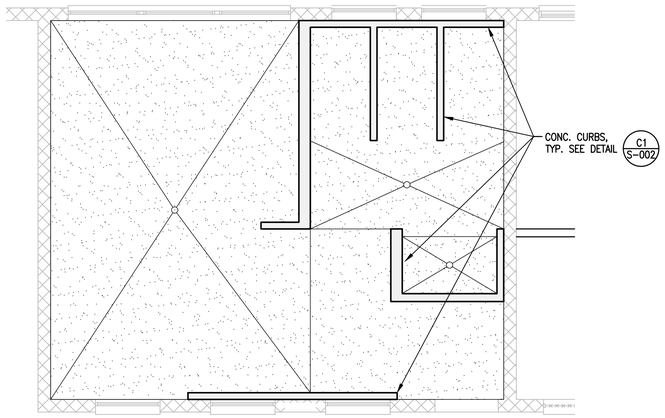
SECTION
SCALE: 3/4" = 1'-0"
S-301 D1



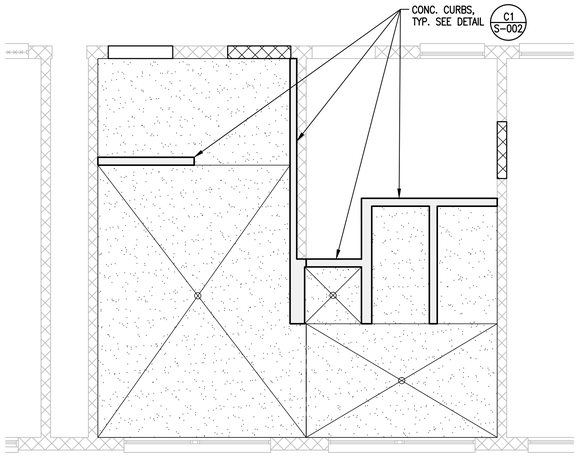
SECTION
SCALE: 3/4" = 1'-0"
S-301 D2



SECTION
SCALE: 3/4" = 1'-0"
S-301 D3



ENLARGED CURB PLAN
SCALE: 1/4" = 1'-0"
S-301 B1



ENLARGED CURB PLAN
SCALE: 1/4" = 1'-0"
S-301 B3

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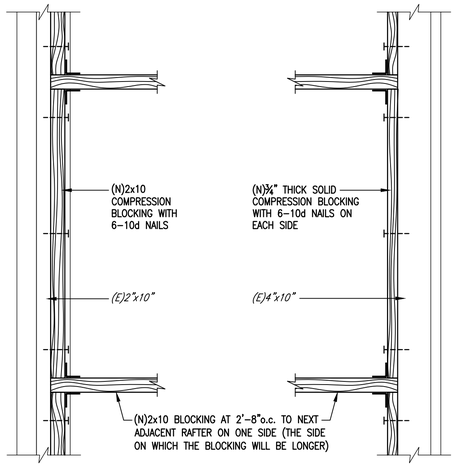
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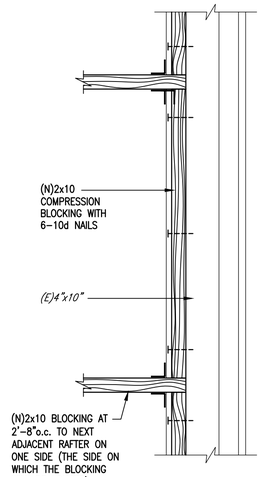
DEPARTMENT OF DEFENSE
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BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS
FOUNDATION SECTIONS AND ENLARGED CURB PLANS

SCALE:
STATE PROJECT NO.
CA-1212-C3
FEDERAL PROJECT NO.
15130007
SHEET 26 of 126
S-301

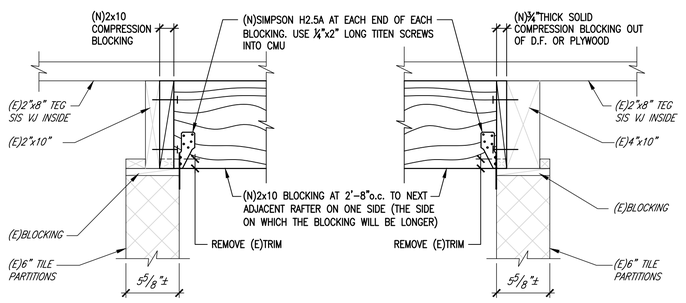


PLAN VIEW

PLAN VIEW

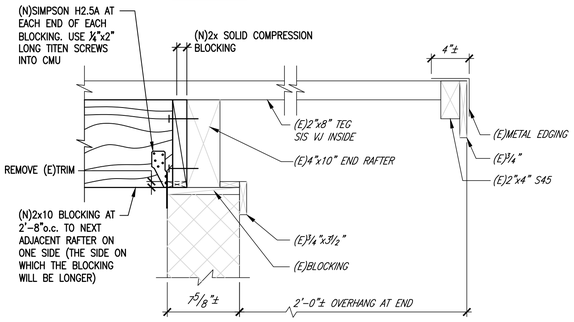


PLAN VIEW



DETAIL OF PARTITION BETWEEN 2 RAFTERS

DETAIL OF PARTITION WHERE
RAFTER IS DIRECTLY ABOVE

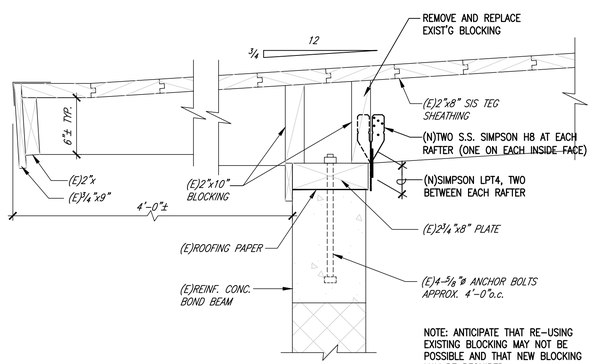


EXTERIOR END WALL

RETROFIT CONDITION

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

S-302 B1

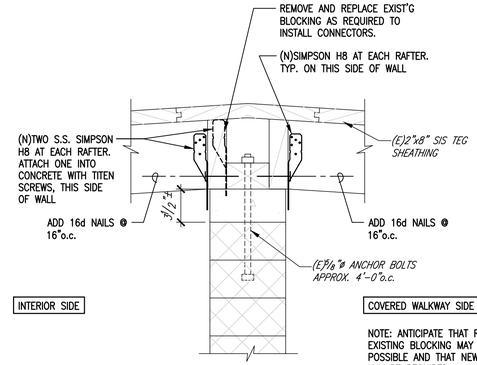


NOTE: ANTICIPATE THAT RE-USING EXISTING BLOCKING MAY NOT BE POSSIBLE AND THAT NEW BLOCKING MAY BE REQUIRED.

ALONG EXTERIOR LONGITUDINAL WALL

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

S-302 A1

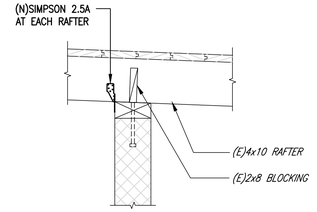


NOTE: ANTICIPATE THAT RE-USING EXISTING BLOCKING MAY NOT BE POSSIBLE AND THAT NEW BLOCKING MAY BE REQUIRED.

ALONG RIDGE

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

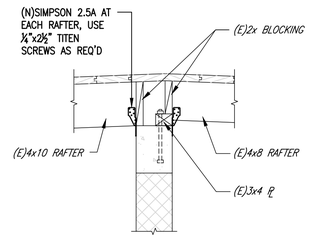
S-302 A2



DETAIL

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

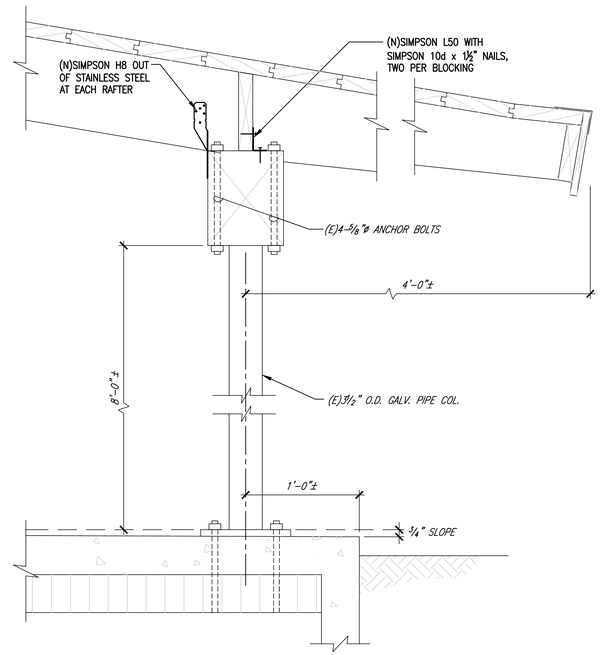
S-302 D4



DETAIL

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

S-302 D5



SECTION

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

S-302 A4

0 3" 6" 1 1'-6" 2FT
SCALE: 1-1/2"=1'-0"

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No. 5509-S
HAWAII, U.S.A.

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SIGNATURE 4/30/2020 EXPIRATION DATE

NO	DESCRIPTION	DATE	APPR

SUBMITTAL PHASE
FINAL SUBMITTAL

SUBMITTAL DATE 30 SEPTEMBER 2019

DES	DRW	CHK

DEPARTMENT OF DEFENSE
HAWAII ARMY NATIONAL GUARD
DESIGN AND PROJECT MANAGEMENT BRANCH
STATE OF HAWAI'I
FACILITY MANAGEMENT OFFICE
KEAUKAHA MILITARY RESERVATION – B621
HILO, HAWAI'I

HAWAI'I ARMY NATIONAL GUARD (HIARNG)
BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS

ROOF FRAMING SECTIONS AND DETAILS

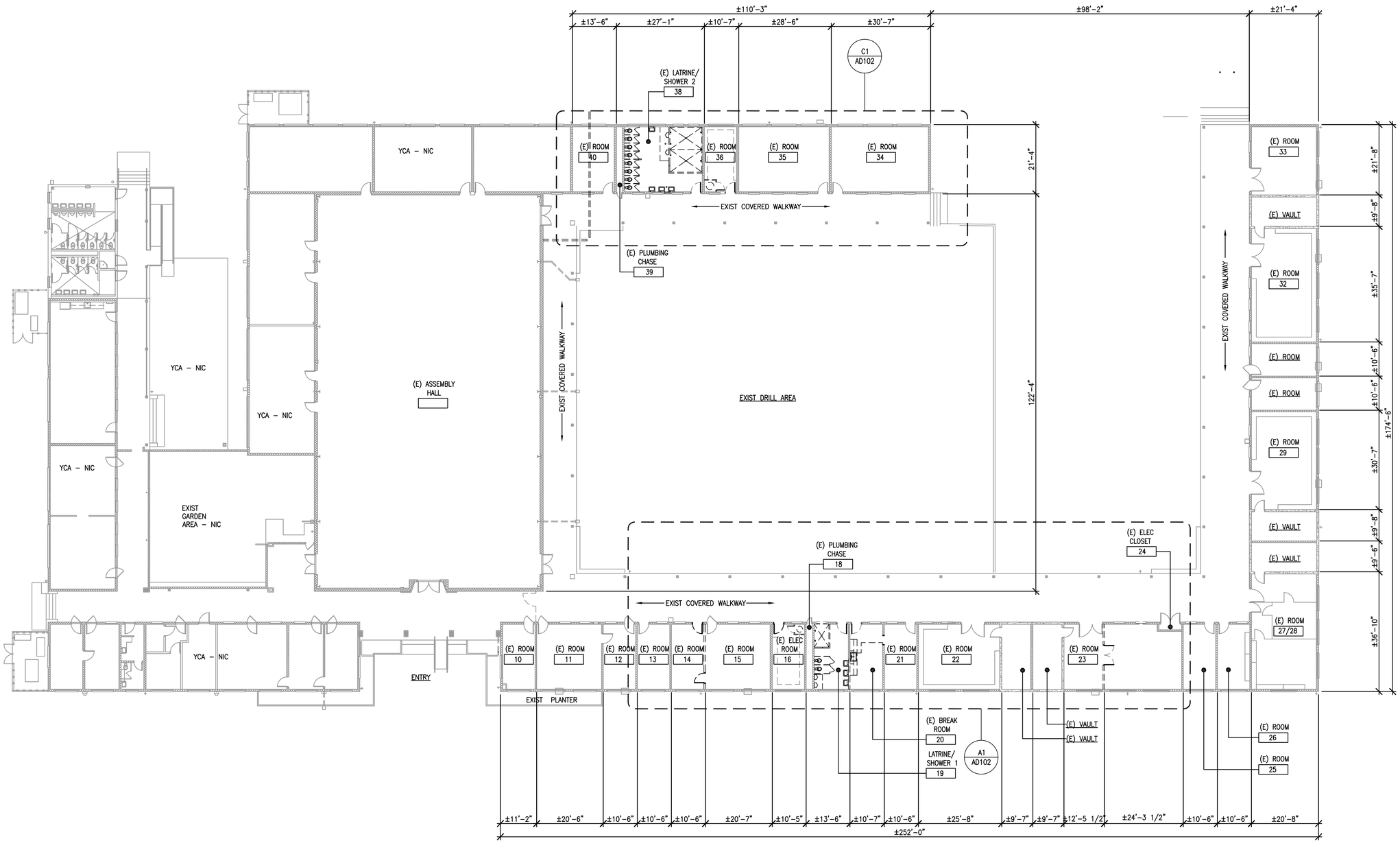
SCALE:

STATE PROJECT NO.
CA-1212-C3

FEDERAL PROJECT NO.
15130007

SHEET 27 of 126

S-302



HIARNG - OVERALL DEMOLITION PLAN

SCALE: 1/16" = 1'-0"

PLAN NORTH

BLDG 621 KEY PLAN

GRAPHIC SCALE
0 4 8 16 32 48FT
SCALE: 1/16"=1'-0"

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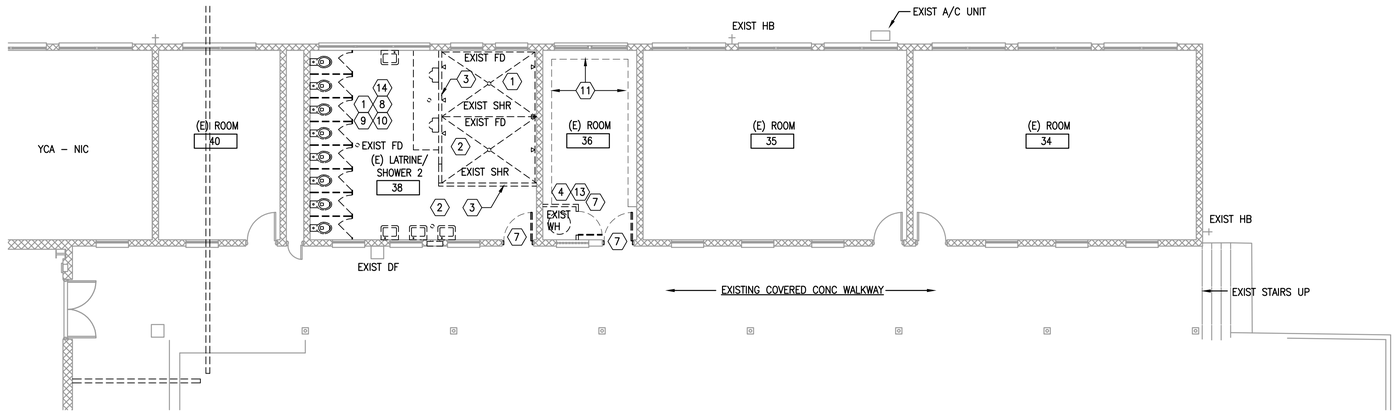
TERRY McFARLAND
LICENSED PROFESSIONAL ARCHITECT
No. 7418
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SYM	DESCRIPTION	DATE	APPR

SUBMITTAL PHASE
FINAL SUBMITTAL
SUBMITTAL DATE 17 MAY 2017
DES | DRW | CHK

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HAWAI`I ARMY NATIONAL GUARD (HIARNG)
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HIARNG – OVERALL DEMOLITION PLAN

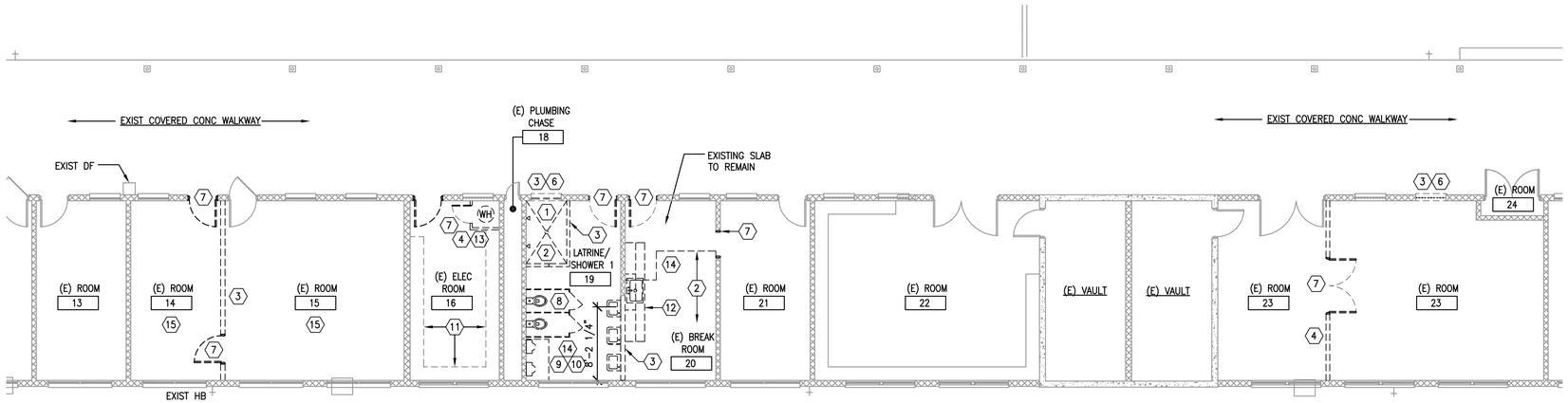
SCALE: AS NOTED
STATE PROJECT NO. CA-1212-C3
FEDERAL PROJECT NO. 15130007
SHEET 28 of 126
AD101



PARTIAL DEMOLITION FLOOR PLAN C1

SCALE: 1/8" = 1'-0" AD101

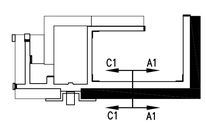
PLAN NORTH



PARTIAL DEMOLITION FLOOR PLAN A1

SCALE: 1/8" = 1'-0" AD101

PLAN NORTH



KEY PLAN

GRAPHIC SCALE
0 2 4 8 16 24FT
SCALE: 1/8"=1'-0"

DEMOLITION KEYNOTES LEGEND

DEMOLISH EXISTING – – – – – – – – – – –

EXISTING TO REMAIN ———————

MARK	DESCRIPTION
1	REMOVE EXIST CERAMIC TILE FLOORING TO CONCRETE SUB-BASE IN ROOM/SPACE.
2	SAWCUT EXIST FLOOR SLAB FOR NEW PLUMBING. PATCH, REPAIR & SEAL CONCRETE FLOOR PRIOR TO THE INSTALLATION OF NEW FLOOR FINISH OR TO MATCH EXIST SLAB TO REMAIN.
3	REMOVE EXIST MASONRY PARTITION WALL AS INDICATED. PATCH, REPAIR & SEAL CONCRETE FLOOR AS REQUIRED.
4	REMOVE EXIST METAL/WOOD STUD PARTITION AS INDICATED. PATCH, REPAIR & SEAL CONCRETE FLOOR PRIOR TO INSTALLATION OF NEW FLOOR FINISH OR TO MATCH EXIST SLAB TO REMAIN.
5	REMOVE EXIST CERAMIC TILE AND SUBSTRATE COMPLETELY TO STRUCTURE.
6	REMOVE EXIST FRAME AND SECURITY GRILLE (WHERE OCCURS) AND PORTION OF EXIST CMU WALL. CAULK, PATCH, REPAIR AND PREP ROUGH OPENING FOR NEW DOOR ASSEMBLY.
7	REMOVE EXIST DOOR, FRAME, TRANSOM (WHERE OCCURS) AND HARDWARE. REMOVE THRESHOLD (WHERE OCCURS). PATCH, REPAIR AND PREP ROUGH OPENING FOR NEW DOOR FRAME AND THRESHOLD OR WALL INFILL AS INDICATED..
8	REMOVE EXIST TOILET PARTITIONS.
9	REMOVE EXIST PLUMBING FIXTURES (REFER TO PLUMBING DRAWINGS).
10	REMOVE ALL EXIST TOILET ACCESSORIES TO INCLUDE BUT NOT LIMITED TO MIRRORS, PAPER TOWEL DISPENSERS, SOAP DISPENSERS/HOLDERS, GRAB BARS, SHOWER RODS, ROBE HOOKS, AND TRASH RECEPTACLES.
11	REMOVE EXIST SHELVING.
12	REMOVE EXIST BASE CABINET, COUNTER, WALL CABINET AND SINK (WHERE OCCURS).
13	REMOVE EXIST WATER HEATER.
14	REMOVE EXIST SLAB-ON-GRADE, BASE COURSE AND SOILS AS REQUIRED FOR NEW SLAB ON GRADE.
15	REMOVE EXIST CARPETING, PADDING, ADHESIVE AND WALL BASE TO CONCRETE SUB-BASE IN SPACE. PATCH, REPAIR & SEAL CONCRETE FLOOR PRIOR TO INSTALLATION OF NEW FLOOR FINISH.

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HAWAI'I ARMY NATIONAL GUARD (HIARNG)
BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS

HIARNG – ENLARGED PARTIAL DEMOLITION PLANS

SCALE: AS NOTED

STATE PROJECT NO.
CA-1212-C3

FEDERAL PROJECT NO.
15130007

SHEET 29 of 126

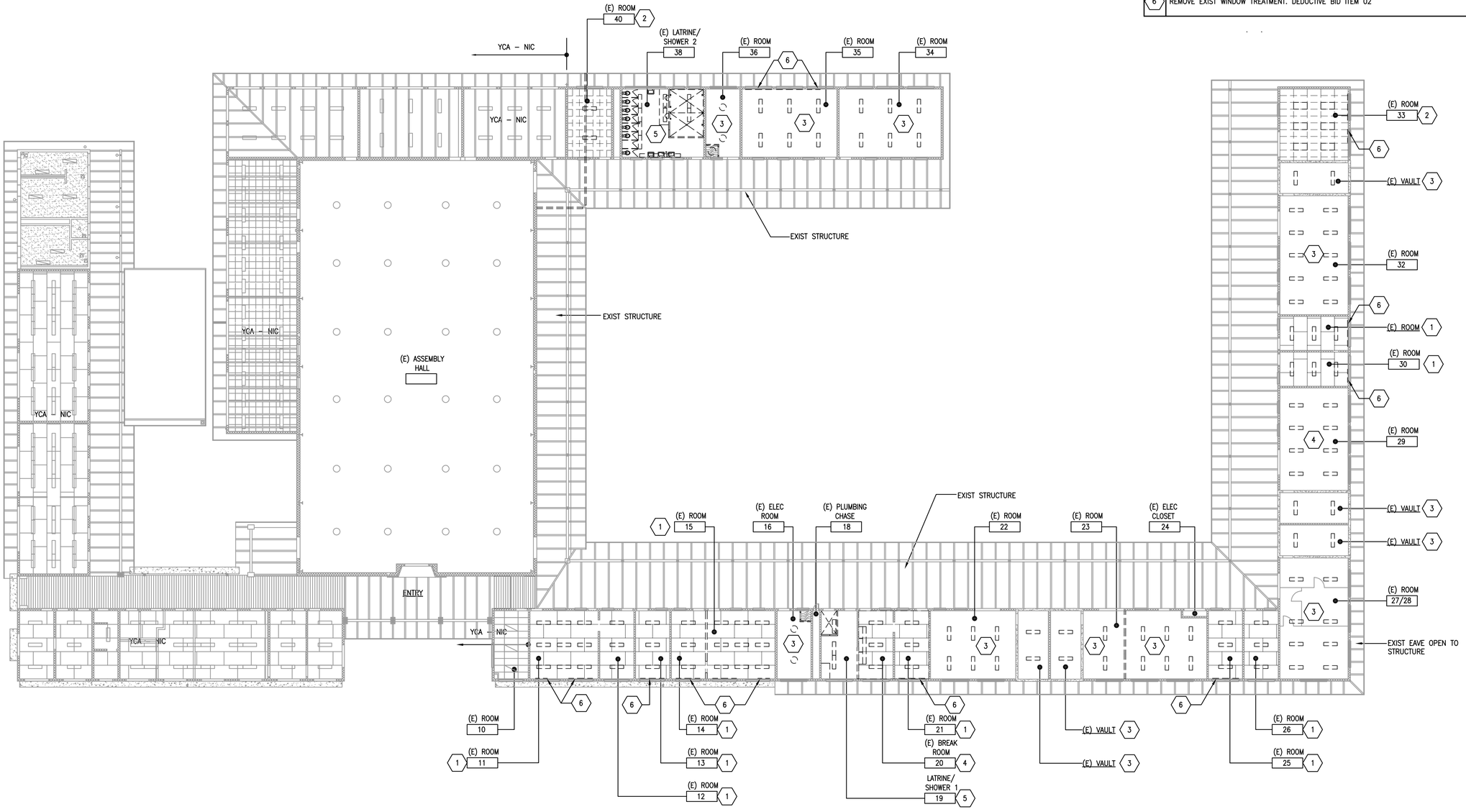
AD102

DEMOLITION LEGEND

DEMOLISH EXISTING — — — — — — — —

EXISTING TO REMAIN ————————

MARK	DESCRIPTION
1	REMOVE EXIST CANEC CEILING SYSTEM COMPLETE TO STRUCTURE INCLUDING EXIST LIGHT FIXTURES. DEDUCTIVE BID ITEM 02
2	REMOVE EXIST 2'x2' ACOUSTIC TILE CEILING COMPLETE TO STRUCTURE INCLUDING EXIST LIGHT FIXTURES. DEDUCTIVE BID ITEM 02
3	REMOVE EXIST LIGHT FIXTURES (SEE ELECTRICAL). DEDUCTIVE BID ITEM 02
4	REMOVE EXIST CANEC CEILING SYSTEM COMPLETE TO STRUCTURE INCLUDING EXIST LIGHT FIXTURES.
5	REMOVE EXIST LIGHT FIXTURES (SEE ELECTRICAL).
6	REMOVE EXIST WINDOW TREATMENT. DEDUCTIVE BID ITEM 02



OVERALL REFLECTED CEILING DEMOLITION PLAN

SCALE: 1/16" = 1'-0"

PLAN NORTH

GRAPHIC SCALE
0 4 8 16 32 48FT
SCALE: 1/16"=1'-0"

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HIARNG – OVERALL REFLECTED CEILING DEMOLITION PLAN

SCALE: AS NOTED
STATE PROJECT NO. CA-1212-C3
FEDERAL PROJECT NO. 15130007
SHEET 30 of 126

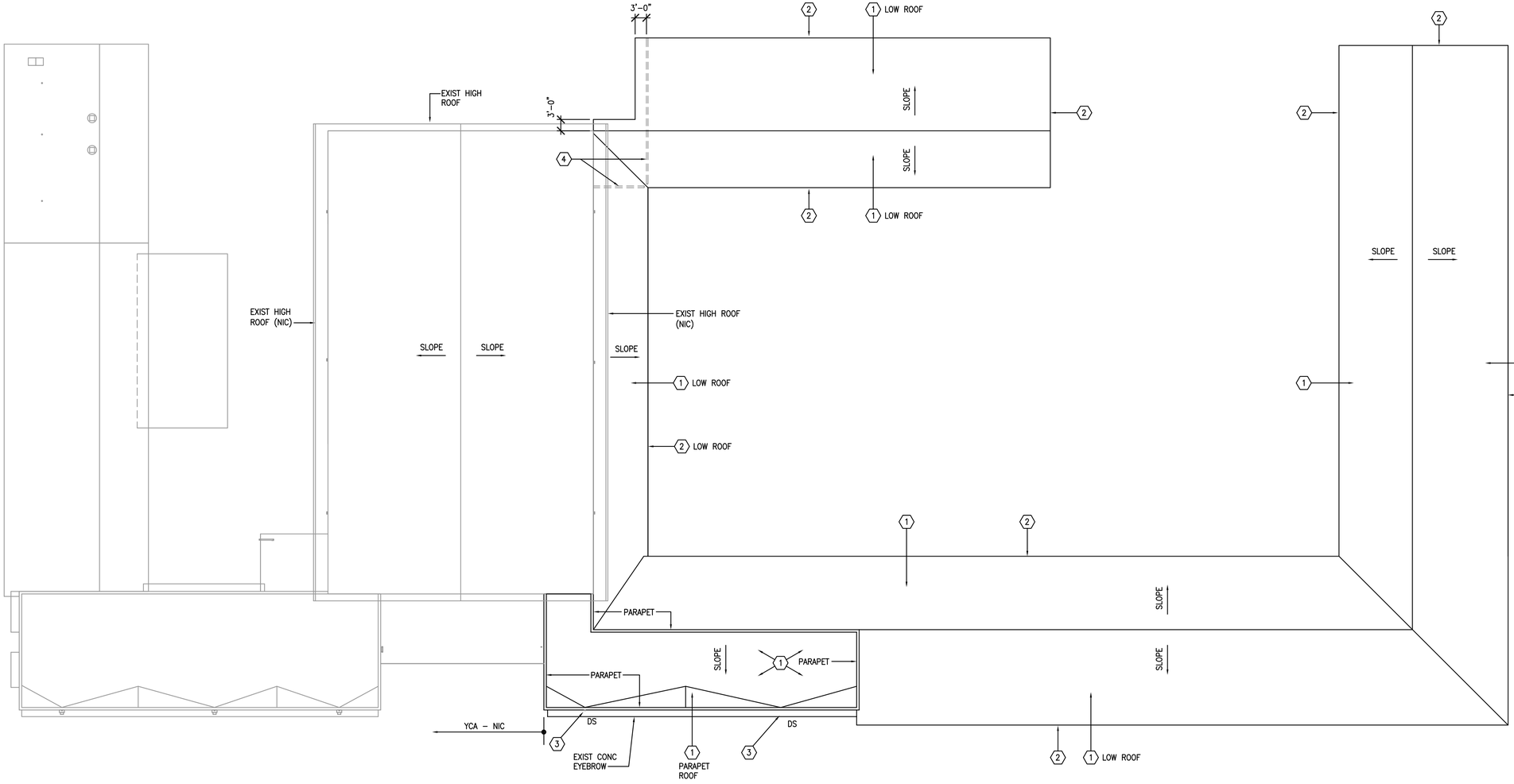
AD103

DEMOLITION LEGEND

DEMOLISH EXISTING — — — — — — — —

EXISTING TO REMAIN ————————

MARK	DESCRIPTION
1	REMOVE EXIST BUILT-UP ROOFING SYSTEM DOWN TO EXISTING SUBSTRATE. DEDUCTIVE BID ITEM 01
2	REMOVE EXIST FASCIA, VERGE AND TRIM BOARDS. EXISTING SOFFITS (WHERE OCCURS) TO REMAIN. DEDUCTIVE BID ITEM 01
3	REMOVE EXIST GUTTER, DOWNSPOUTS AND SUPPORT STRAPS. DEDUCTIVE BID ITEM 01
4	REMOVE EXIST CURBS AND ADJACENT TPO ROOFING FOR NEW TPO TIE-IN



OVERALL ROOF DEMOLITION PLAN

SCALE: 1/16" = 1'-0"

PLAN NORTH

GRAPHIC SCALE

0 4 8 16 32 48FT

SCALE: 1/16"=1'-0"

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HIARNG – OVERALL ROOF DEMOLITION PLAN

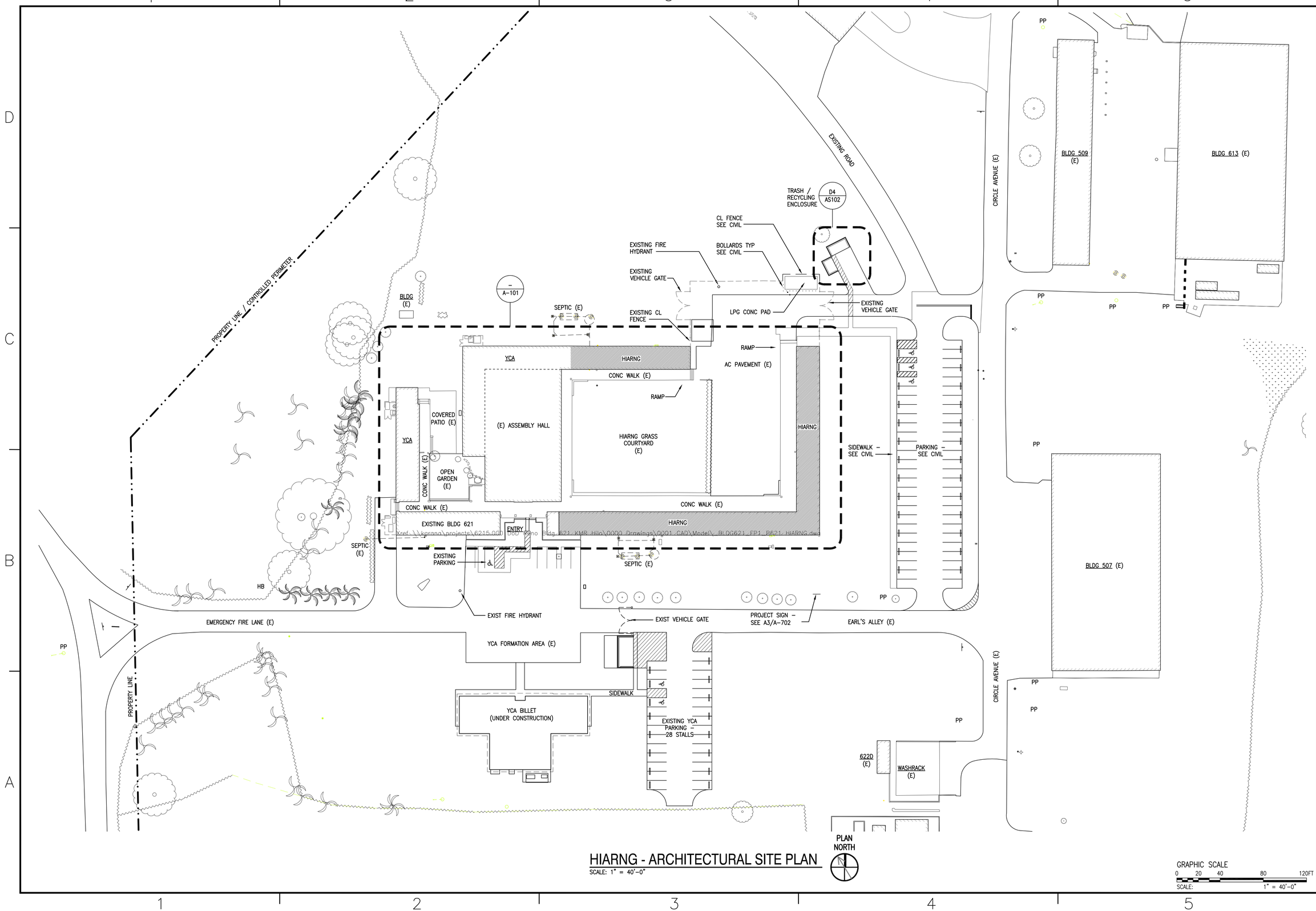
SCALE: AS NOTED

STATE PROJECT NO. CA-1212-C3

FEDERAL PROJECT NO. 15130007

SHEET 31 of 126

AD104



HIARNG - ARCHITECTURAL SITE PLAN

SCALE: 1" = 40'-0"

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DEPARTMENT OF DEFENSE
HAWAII ARMY NATIONAL GUARD
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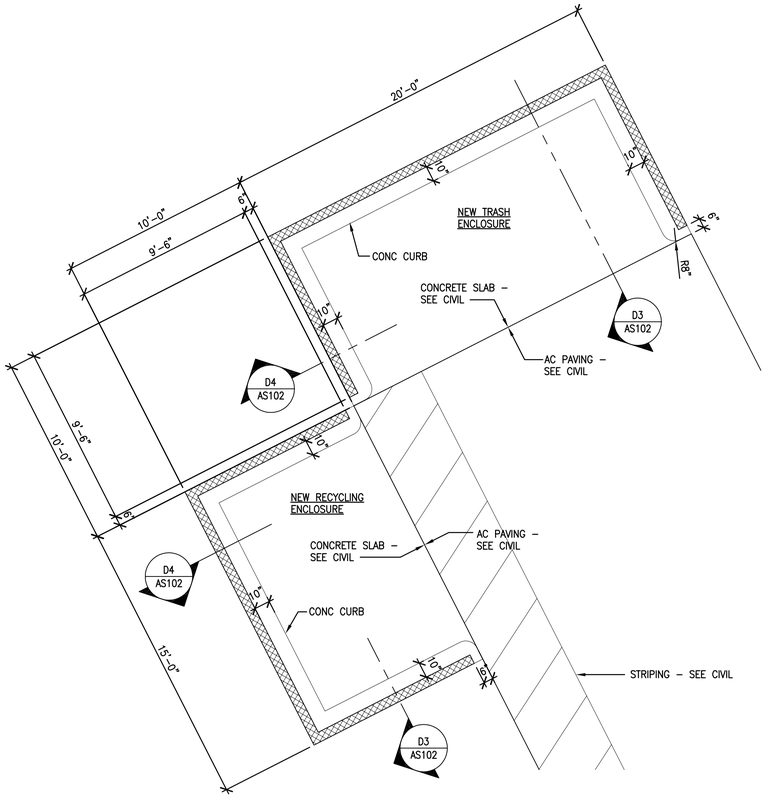
KEAUKAHA MILITARY RESERVATION – B621
HILO, HAWAI'I

HAWAI'I ARMY NATIONAL GUARD (HIARNG)
BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS

HIARNG – ARCHITECTURAL SITE PLAN

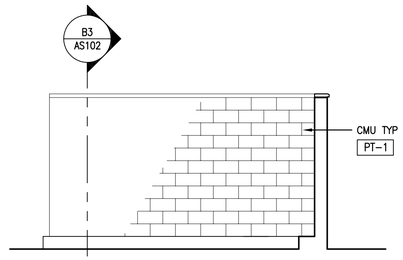
SCALE: AS NOTED
STATE PROJECT NO. CA-1212-C3
FEDERAL PROJECT NO. 15130007
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AS101



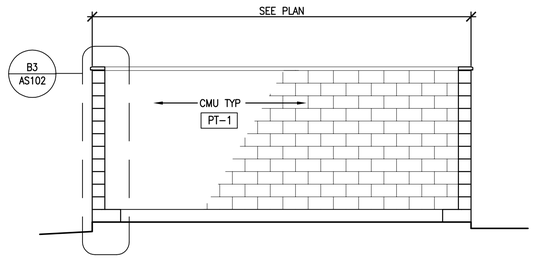
TRASH / RECYCLING ENCLOSURE DETAIL PLAN (C1)

SCALE: 1/4" = 1'-0" AS101



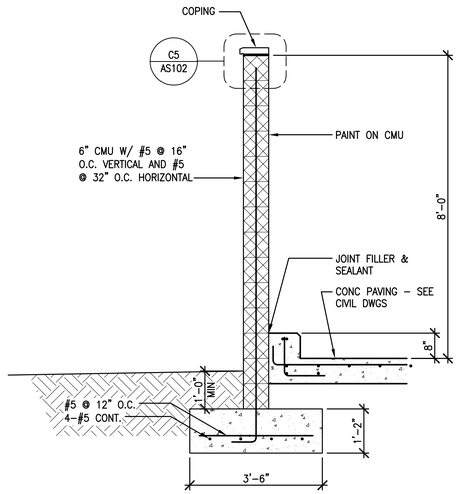
TRASH ENCLOSURE - SECTION (D3)

SCALE: 1/4" = 1'-0" AS102



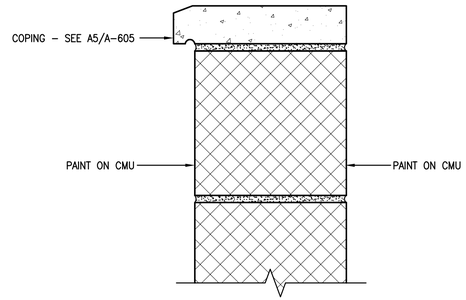
TRASH ENCLOSURE - ELEVATION (D4)

SCALE: 1/4" = 1'-0" AS102



TRASH ENCLOSURE - DETAIL (B3)

SCALE: 1/2" = 1'-0" A-102



DETAIL (B4)

SCALE: 3" = 1'-0" A-102

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DEPARTMENT OF DEFENSE

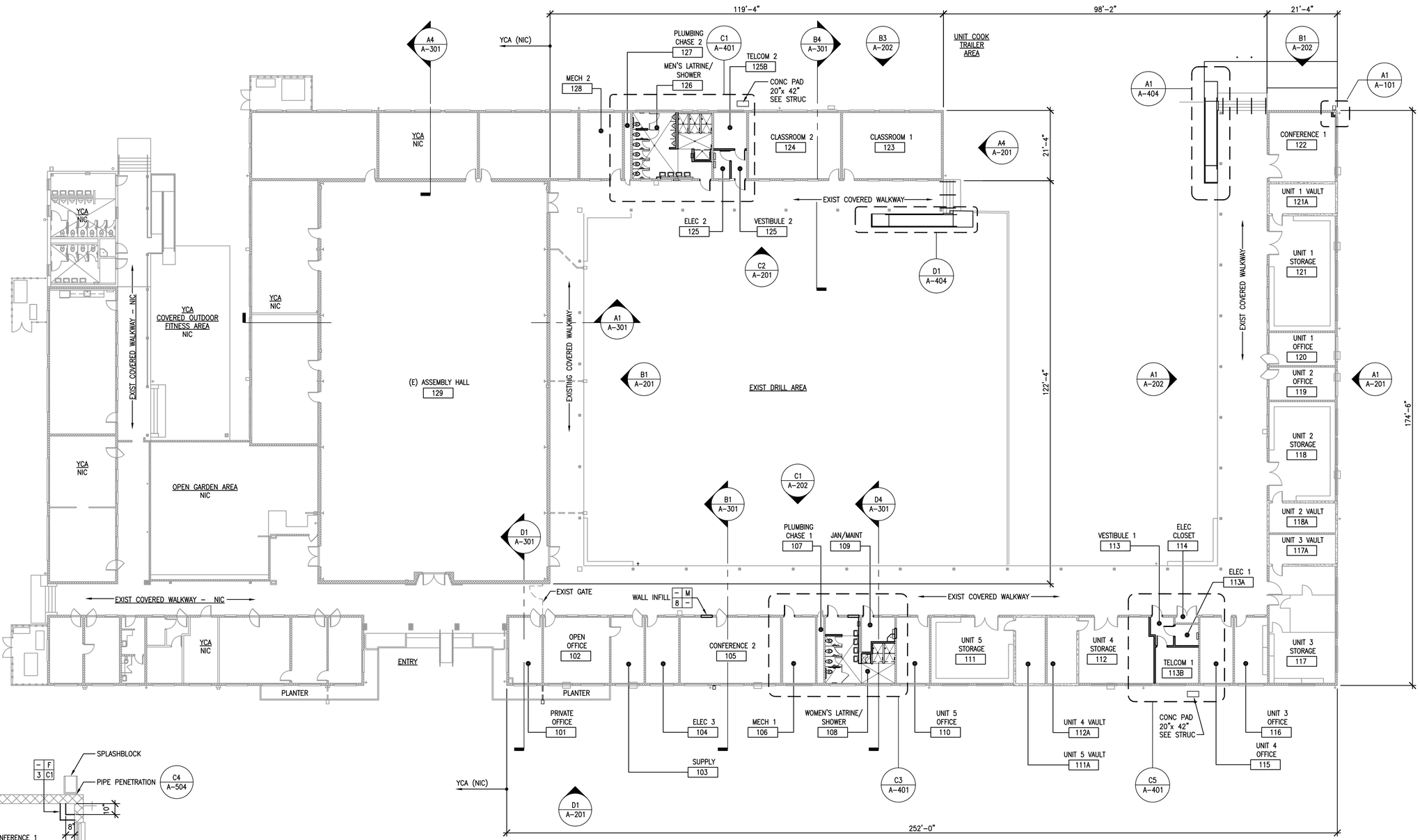
KEAUKAHA MILITARY RESERVATION – B621
HILO, HAWAI'I

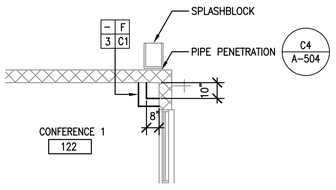
HAWAI`I ARMY NATIONAL GUARD (HIARNG)
BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS

TRASH ENCLOSURE DETAILS

SCALE: AS NOTED
STATE PROJECT NO. CA-1212-C3
FEDERAL PROJECT NO. 15130007
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AS102





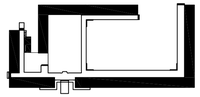
DETAIL PLAN

SCALE: 1/4" = 1'-0" A-101 (A1)

BUILDING 621 OVERALL FLOOR PLAN

SCALE: 1/16" = 1'-0"

PLAN NORTH



BLDG 621 KEY PLAN

GRAPHIC SCALE
0 4 8 16 32 48FT
SCALE: 1/16"=1'-0"

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HIARNG – OVERALL FLOOR PLAN

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SHEET 34 of 126

A-101

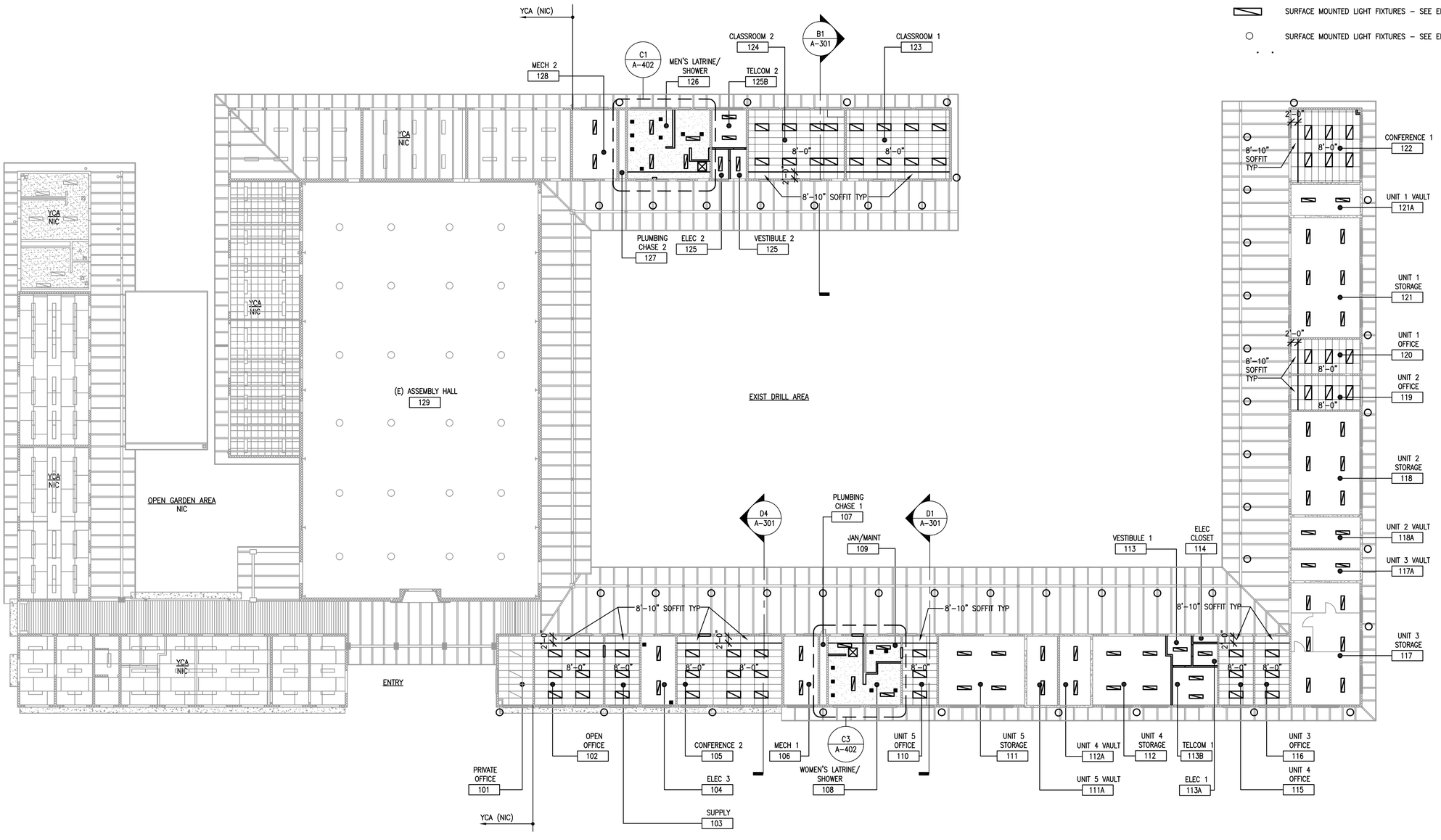
LEGEND:

SUSPENDED ACOUSTIC CLG TILE WITH LIGHT FIXTURES. CEILING TILE – SEE DEDUCTIVE BID ITEM 02. SEE ELECTRICAL FOR LIGHT FIXTURES.

GYPSUM BOARD CEILING WITH SURFACE MOUNTED LIGHT FIXTURES. SEE ELECTRICAL FOR LIGHT FIXTURES.

SURFACE MOUNTED LIGHT FIXTURES – SEE ELECTRICAL

SURFACE MOUNTED LIGHT FIXTURES – SEE ELECTRICAL



BUILDING 621 OVERALL REFLECTED CEILING PLAN

SCALE: 1/16" = 1'-0"

PLAN NORTH

GRAPHIC SCALE
0 4 8 16 32 48FT
SCALE: 1/16"=1'-0"

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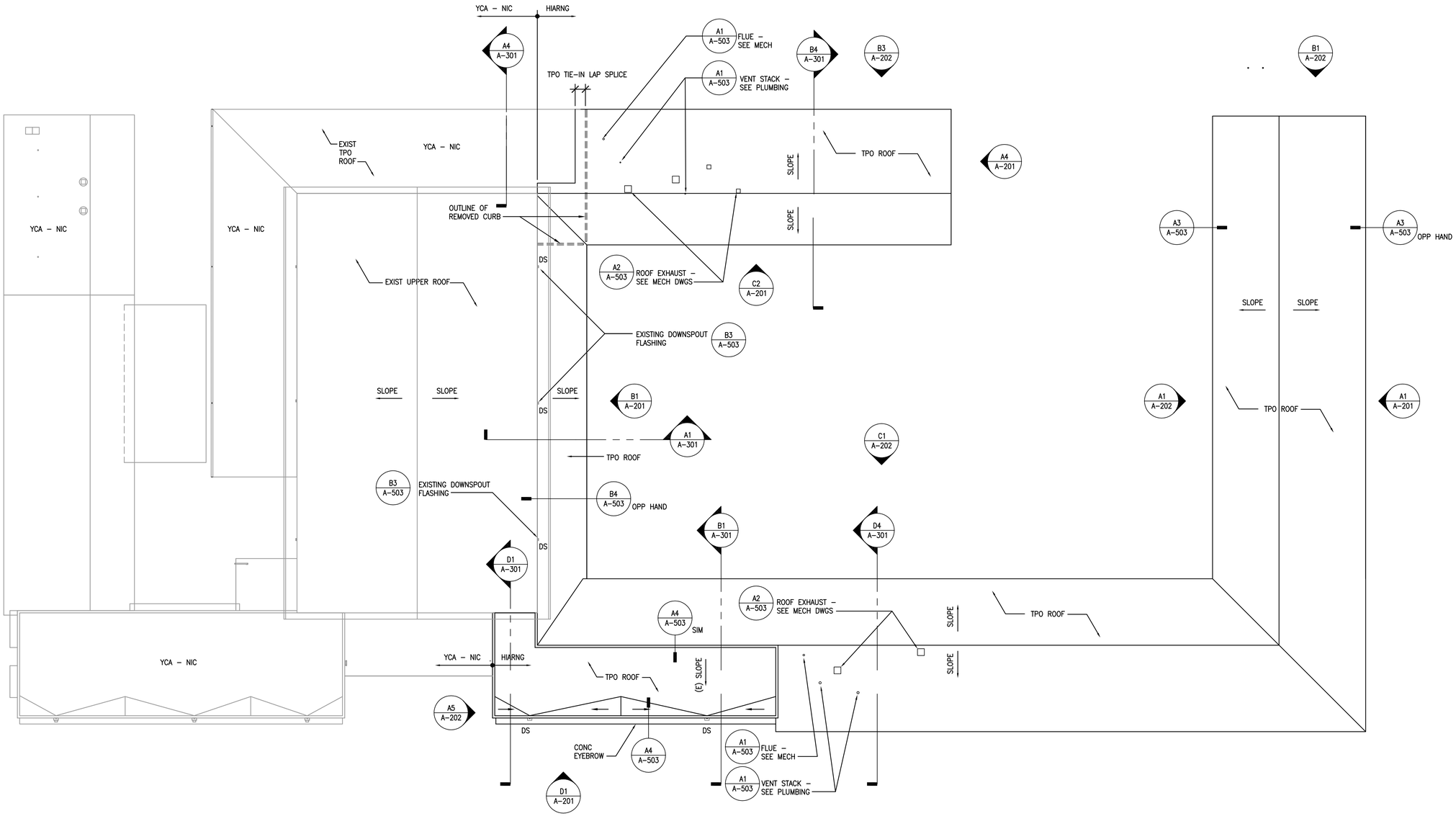
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HIARNG – OVERALL REFLECTED CEILING PLAN

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FEDERAL PROJECT NO. 15130007
SHEET 35 of 126
A-102



OVERALL ROOF PLAN

SCALE: 1/16" = 1'-0"

PLAN NORTH

GRAPHIC SCALE
0 4 8 16 32 48FT
SCALE: 1/16"=1'-0"

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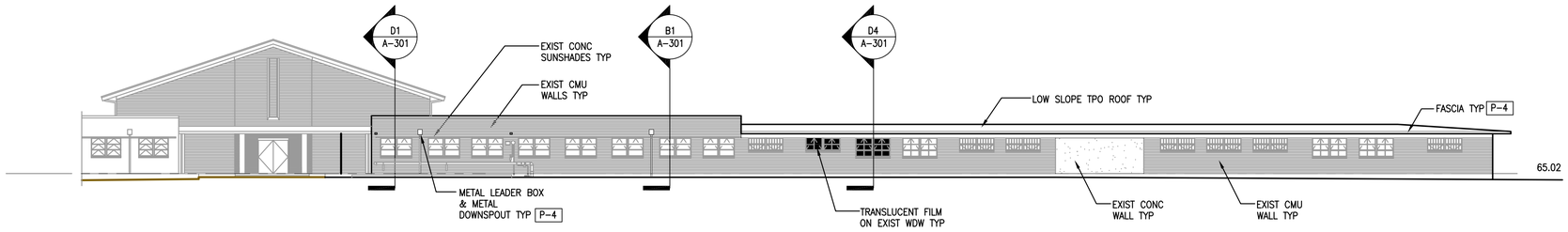
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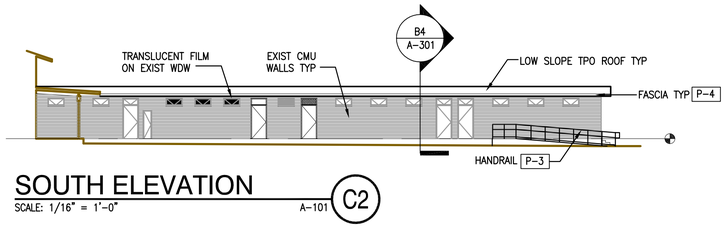
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HAWAI'I ARMY NATIONAL GUARD (HIARNG)
BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS
HIARNG – OVERALL ROOF PLAN

SCALE: AS NOTED
STATE PROJECT NO. CA-1212-C3
FEDERAL PROJECT NO. 15130007
SHEET 36 of 126
A-103



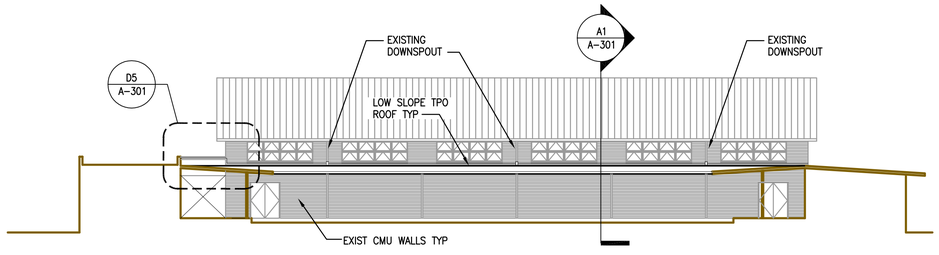
SOUTH ELEVATION

SCALE: 1/16" = 1'-0" A-101 D1



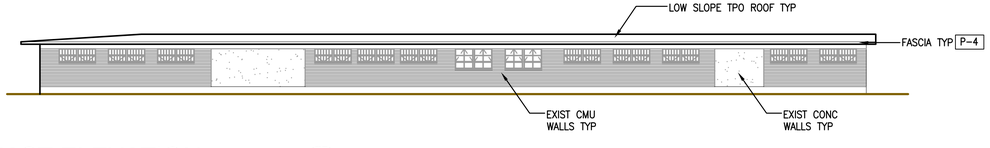
SOUTH ELEVATION

SCALE: 1/16" = 1'-0" A-101 C2



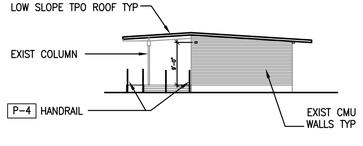
EAST ELEVATION

SCALE: 1/16" = 1'-0" A-101 B1



EAST ELEVATION

SCALE: 1/16" = 1'-0" A-101 A1



EAST ELEVATION

SCALE: 1/16" = 1'-0" A-101 A4

GRAPHIC SCALE

0 1 2 4 8 12FT
SCALE: 1/4"=1'-0"

0 4 8 16 32 48FT
SCALE: 1/16"=1'-0"

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TERRY McFARLAND
LICENSED PROFESSIONAL ARCHITECT
No. 7418
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SIGNATURE 4/30/2020 EXPIRATION DATE

SYM	DESCRIPTION	DATE	APPR

SUBMITTAL PHASE
FINAL SUBMITTAL
SUBMITTAL DATE 30 SEPTEMBER 2019
DES DRW CHK

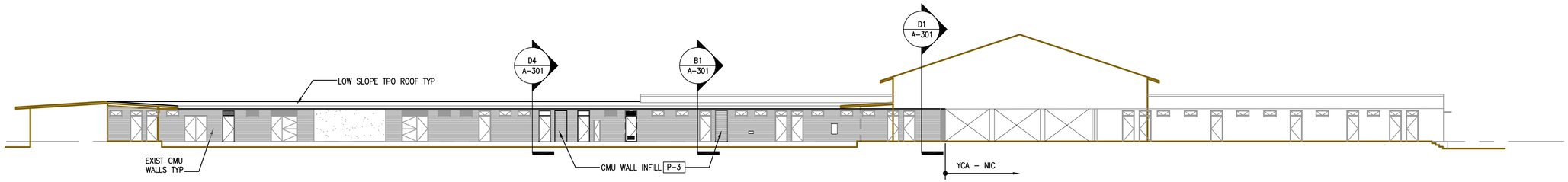
DEPARTMENT OF DEFENSE
HAWAII ARMY NATIONAL GUARD
DESIGN AND PROJECT MANAGEMENT BRANCH
STATE OF HAWAI'I
FACILITY MANAGEMENT OFFICE
KEAUKAHA MILITARY RESERVATION - B621
HILO, HAWAI'I

HAWAI`I ARMY NATIONAL GUARD (HIARNG)
BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS

HIARNG – EXTERIOR ELEVATIONS

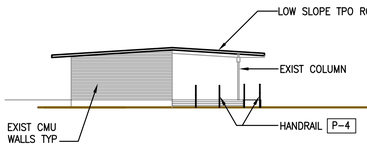
SCALE: AS NOTED
STATE PROJECT NO. CA-1212-C3
FEDERAL PROJECT NO. 15130007
SHEET 37 of 126

A-201



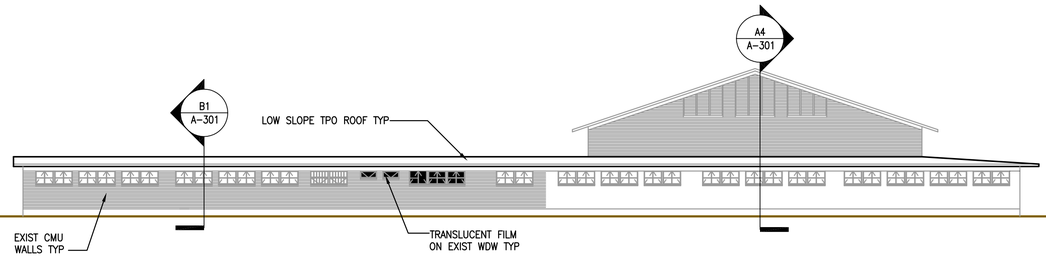
NORTH ELEVATION

SCALE: 1/16" = 1'-0" A-101 C1



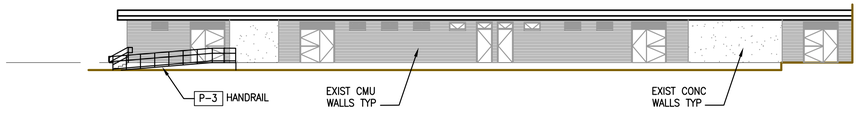
NORTH ELEVATION

SCALE: 1/16" = 1'-0" A-101 B1



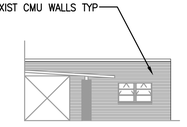
NORTH ELEVATION

SCALE: 1/16" = 1'-0" A-101 B3



WEST ELEVATION

SCALE: 1/16" = 1'-0" A-101 A1



WEST ELEVATION

SCALE: 1/16" = 1'-0" A-101 A5

GRAPHIC SCALE
0 4 8 16 32 48FT
SCALE: 1/16"=1'-0"

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HAWAII ARMY NATIONAL GUARD
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STATE OF HAWAI'I
FACILITY MANAGEMENT OFFICE

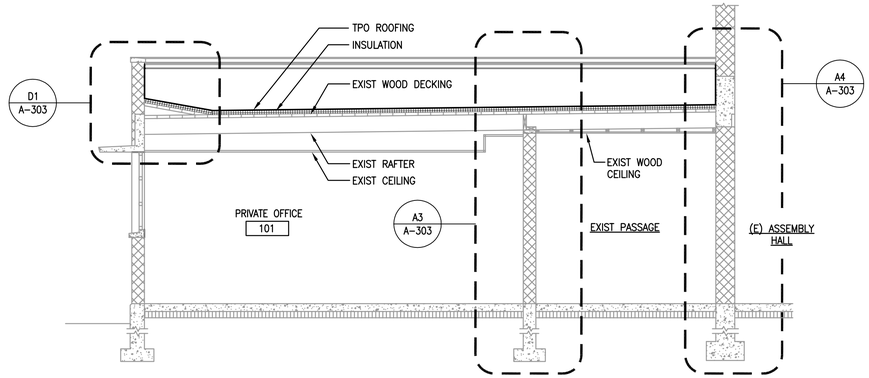
KEAUKAHA MILITARY RESERVATION – B621
HILO, HAWAI'I

HAWAI'I ARMY NATIONAL GUARD (HIARNG)
BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS

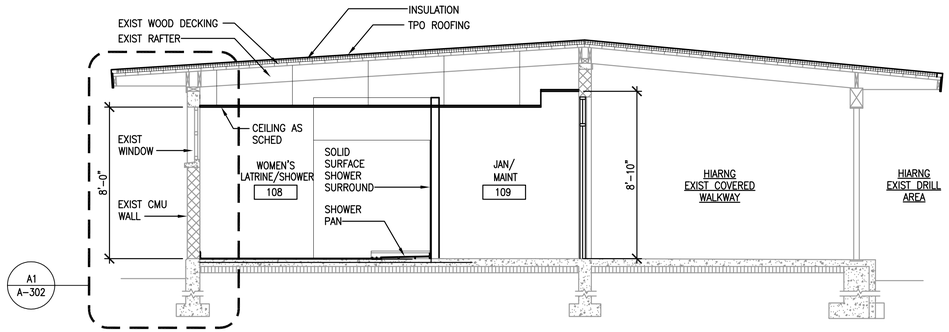
HIARNG – EXTERIOR ELEVATIONS

SCALE: AS NOTED
STATE PROJECT NO. CA-1212-C3
FEDERAL PROJECT NO. 15130007
SHEET 38 of 126

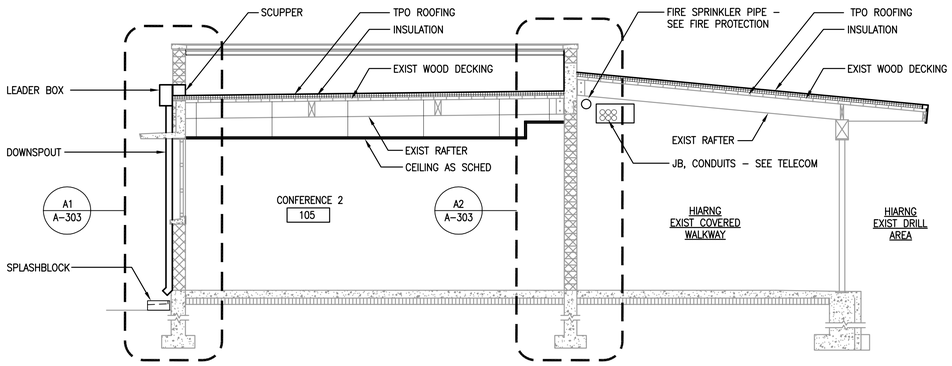
A-202



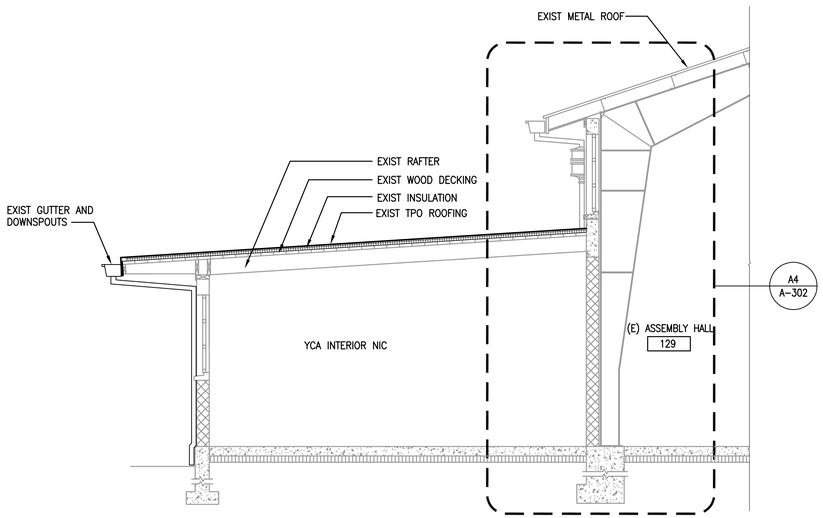
BUILDING SECTION
SCALE: 1/4" = 1'-0" A-101 D1



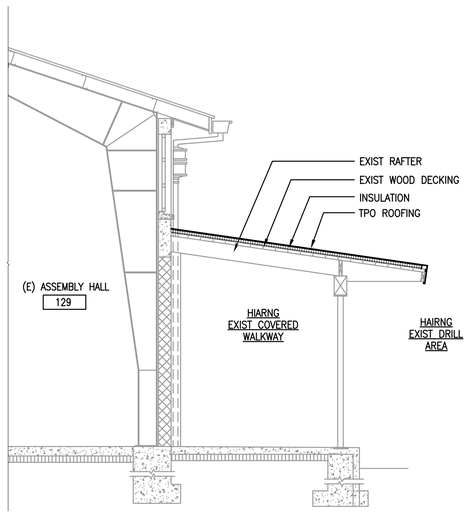
BUILDING SECTION
SCALE: 1/4" = 1'-0" A-101 D4

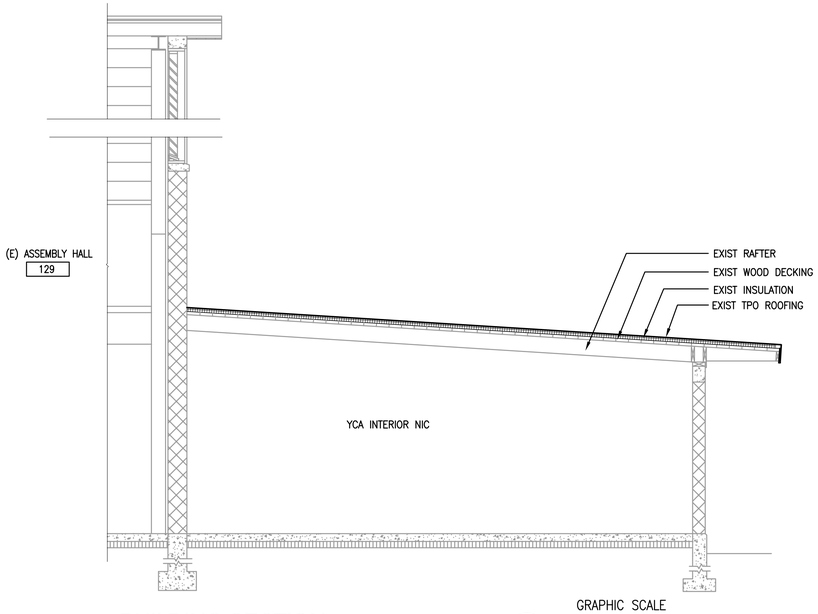


BUILDING SECTION
SCALE: 1/4" = 1'-0" A-101 B1



BUILDING SECTION
SCALE: 1/4" = 1'-0" A-101 A1





BUILDING SECTION
SCALE: 1/4" = 1'-0" A-101 A4

GRAPHIC SCALE
4' 3' 2' 1' 0 4' 8'
1/4" = 1'-0"

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FACILITY MANAGEMENT OFFICE

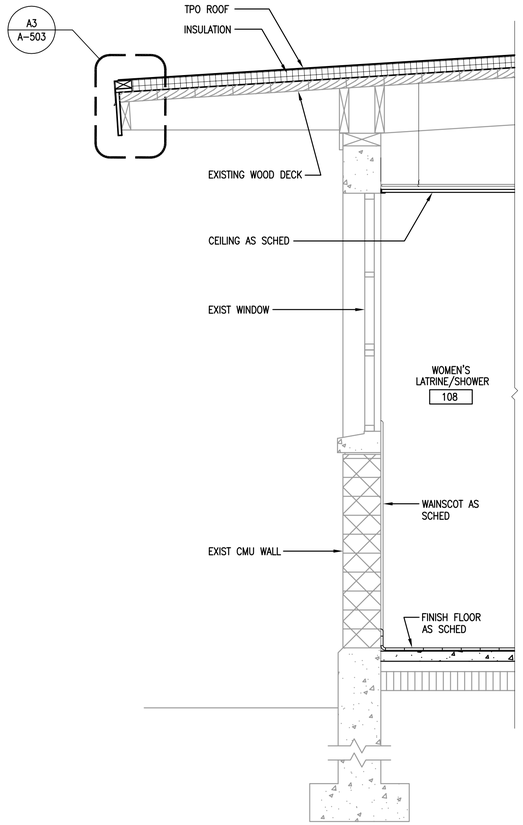
KEAUKAHA MILITARY RESERVATION - B621
HILO, HAWAI'I

HAWAI'I ARMY NATIONAL GUARD (HIARNG)
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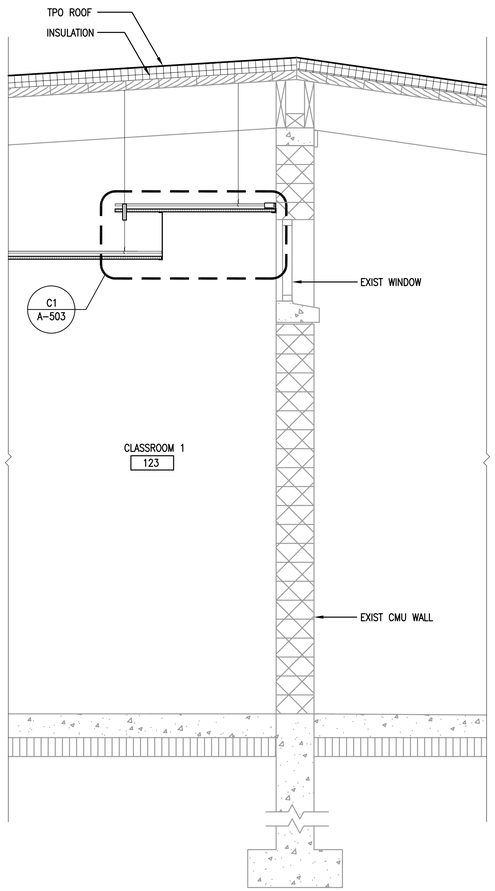
HIARNG - BUILDING SECTIONS

SCALE: AS NOTED
STATE PROJECT NO. CA-1212-C3
FEDERAL PROJECT NO. 15130007
SHEET 39 of 126

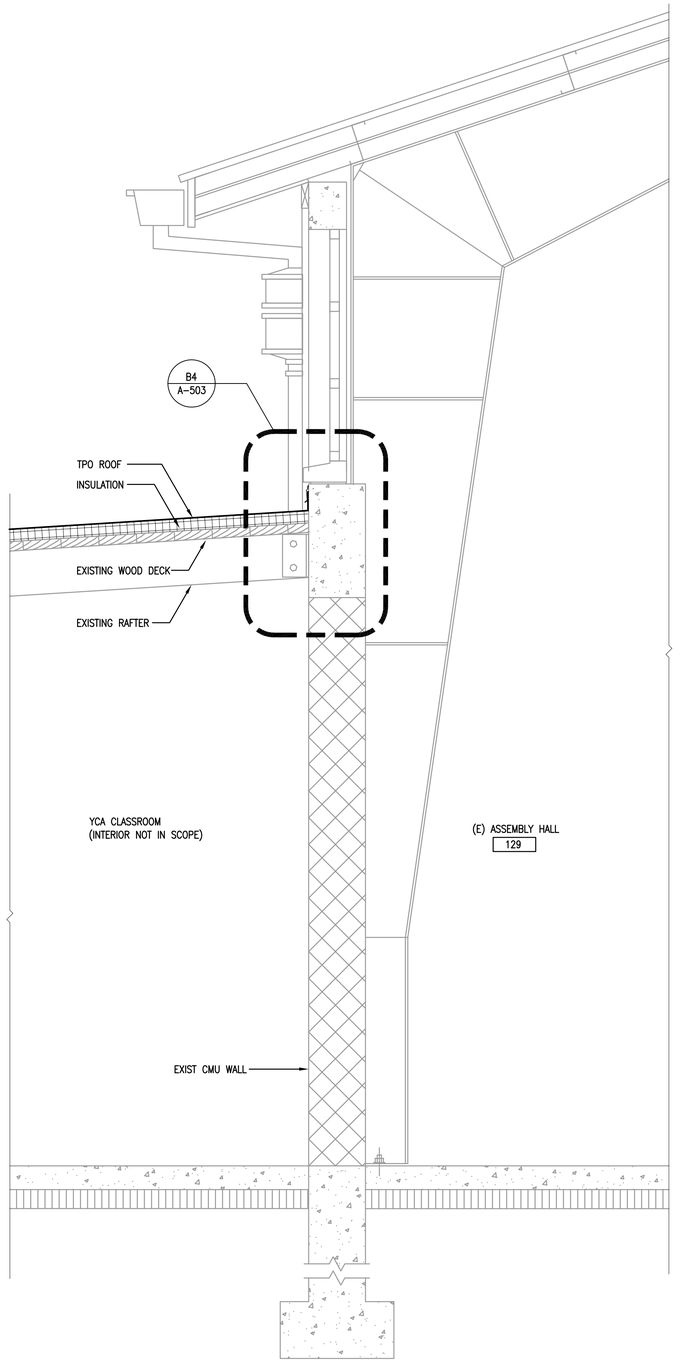
A-301



WALL SECTION
SCALE: 3/4" = 1'-0"
A-101 A1



WALL SECTION
SCALE: 3/4" = 1'-0"
A-101 A3



WALL SECTION
SCALE: 3/4" = 1'-0"
A-101 A4

GRAPHIC SCALE
0 6" 1 2 3 4FT
SCALE: 3/4"=1'-0"

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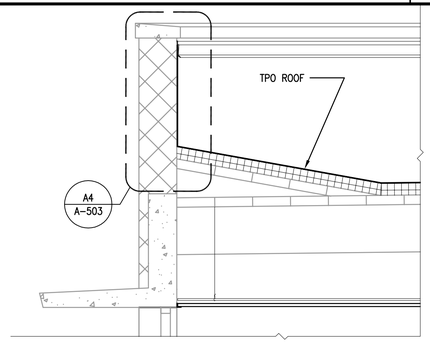
STATE OF HAWAI'I
FACILITY MANAGEMENT OFFICE
HAWAII ARMY NATIONAL GUARD
DESIGN AND PROJECT MANAGEMENT BRANCH
DEPARTMENT OF DEFENSE
KEAUKAHA MILITARY RESERVATION – B621
HILO, HAWAI'I

HAWAI'I ARMY NATIONAL GUARD (HIARNG)
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HIARNG – WALL SECTIONS

SCALE: AS NOTED
STATE PROJECT NO. CA-1212-C3
FEDERAL PROJECT NO. 15130007
SHEET 40 of 126

A-302



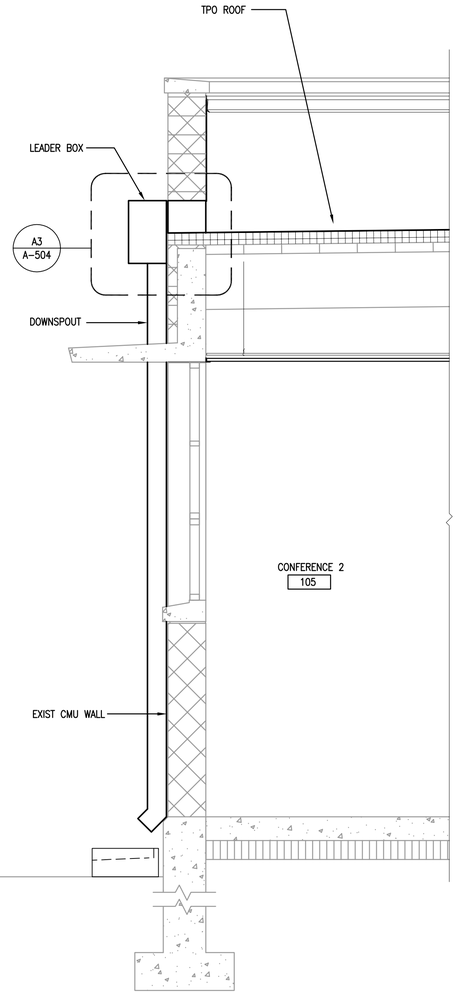
WALL SECTION

SCALE: 3/4" = 1'-0" A-301 D1

GRAPHIC SCALE

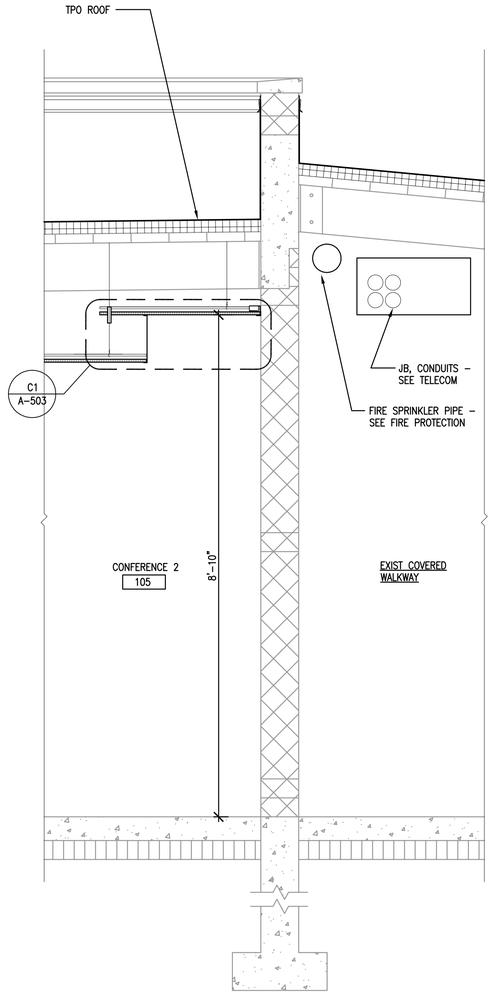
0 6" 1 2 3 4FT

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



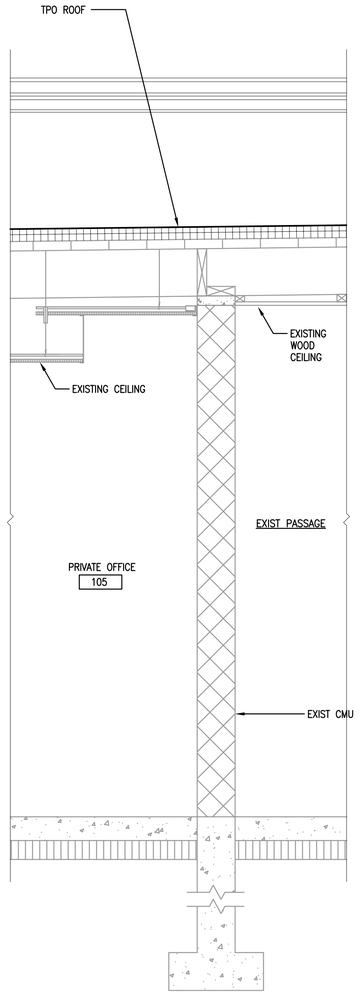
WALL SECTION

SCALE: 3/4" = 1'-0" A-301 A1



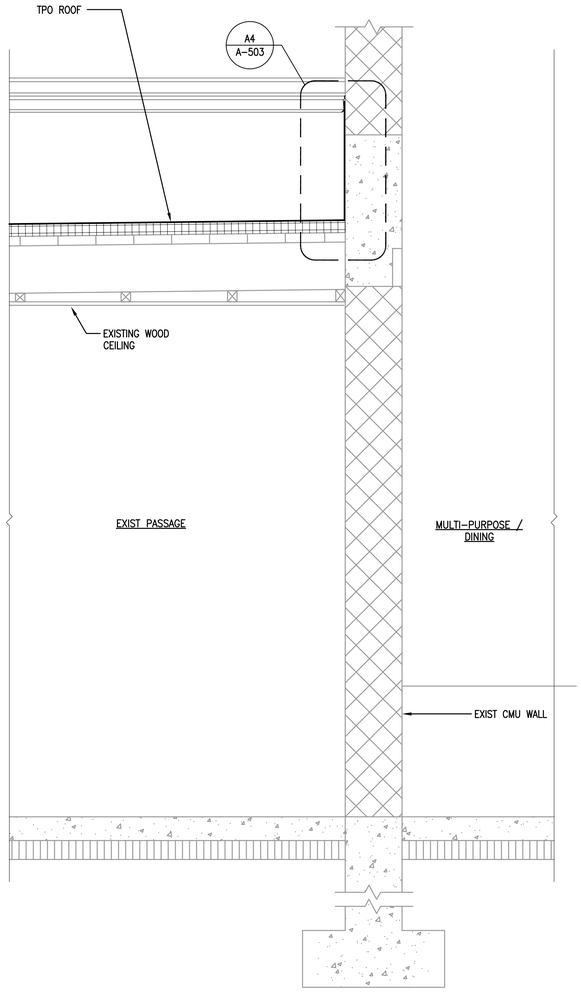
WALL SECTION

SCALE: 3/4" = 1'-0" A-301 A2



WALL SECTION

SCALE: 3/4" = 1'-0" A-301 A3



WALL SECTION

SCALE: 3/4" = 1'-0" A-301 A4

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KEAUKAHA MILITARY RESERVATION - B621
HILO, HAWAI'I

HAWAI'I ARMY NATIONAL GUARD (HIARNG)
BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS

HIARNG - WALL SECTIONS

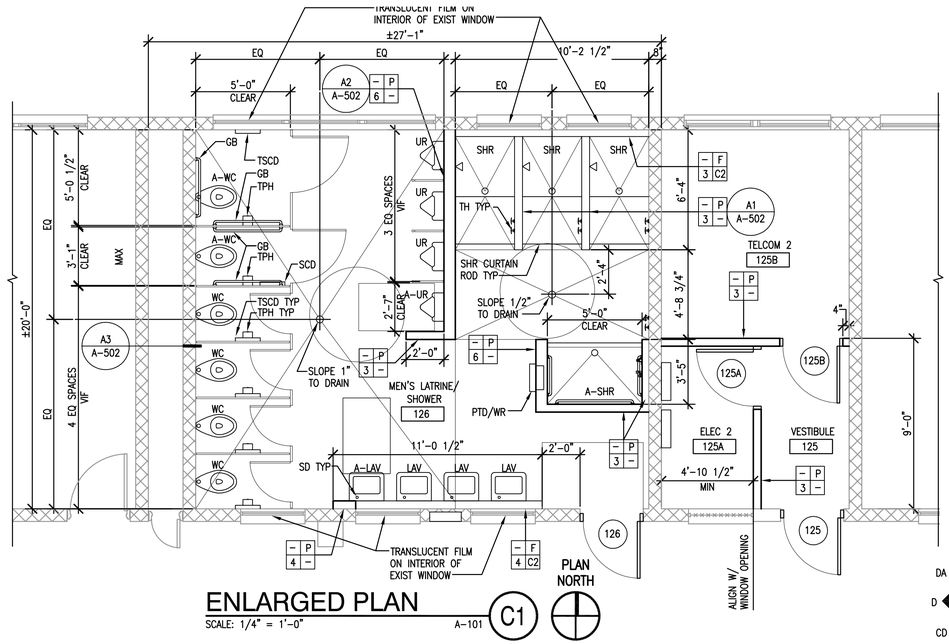
SCALE: AS NOTED

STATE PROJECT NO. CA-1212-C3

FEDERAL PROJECT NO. 15130007

SHEET 41 of 126

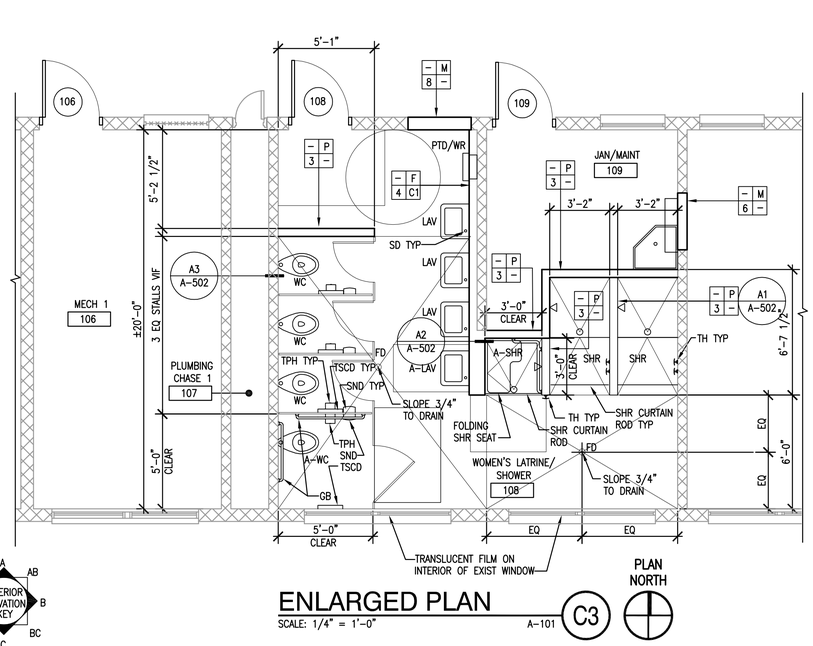
A-303



ENLARGED PLAN

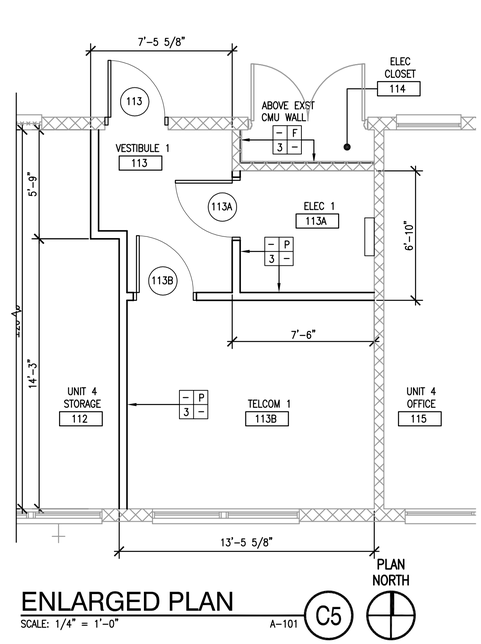
SCALE: 1/4" = 1'-0" A-101 C1





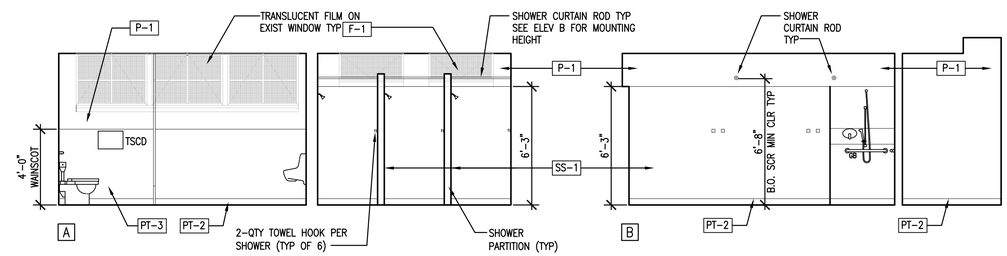
ENLARGED PLAN

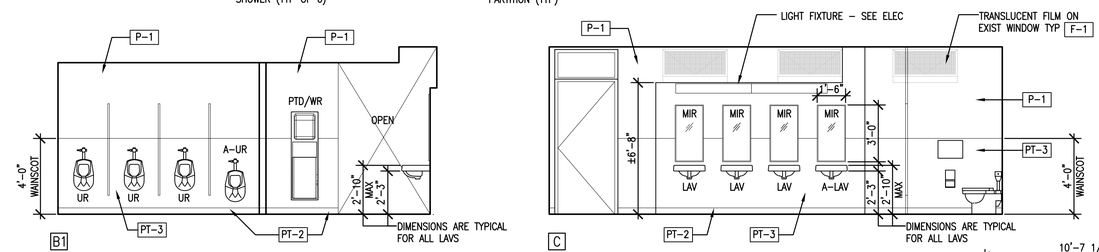
SCALE: 1/4" = 1'-0" A-101 C3

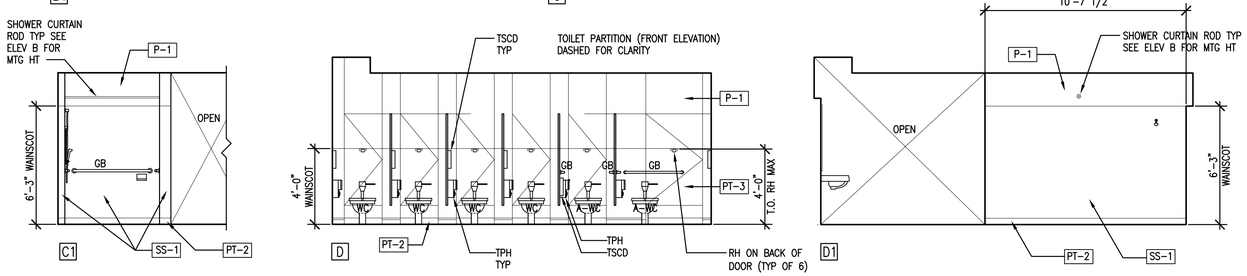


ENLARGED PLAN

SCALE: 1/4" = 1'-0" A-101 C5

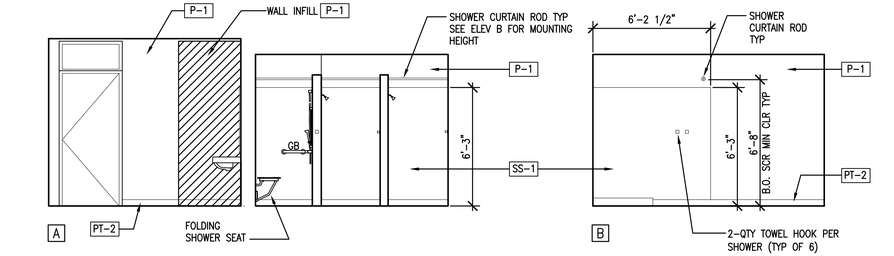


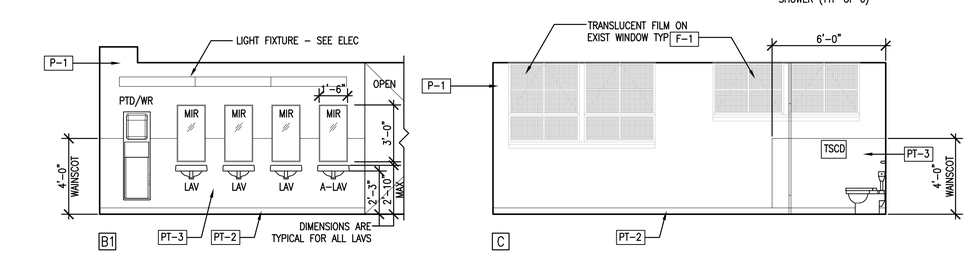


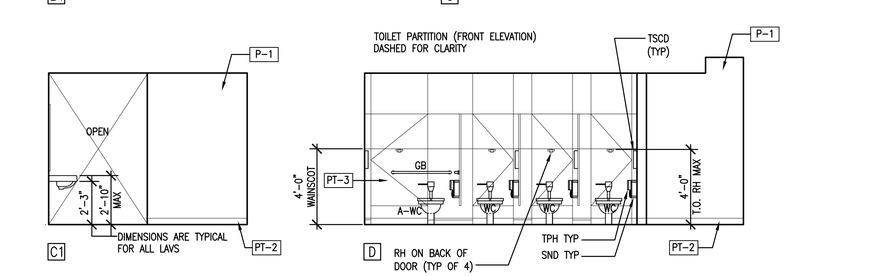


MEN'S LATRINE/SHOWER INTERIOR ELEVATIONS 126

SCALE: 1/4" = 1'-0" A-401 A1







WOMEN'S LATRINE/SHOWER INTERIOR ELEVATIONS 108

SCALE: 1/4" = 1'-0" A-401 A3

0 1 2 4 8 12FT
SCALE: 1/4"=1'-0"

HAWAII ARMY NATIONAL GUARD

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KEAUKAHA MILITARY RESERVATION - B621
HAWAI'I ARMY NATIONAL GUARD (HIARNG)
BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS

HIARNG - LATRINE / SHOWER PLANS AND INTERIOR ELEVATIONS

STATE OF HAWAI'I
FACILITY MANAGEMENT OFFICE

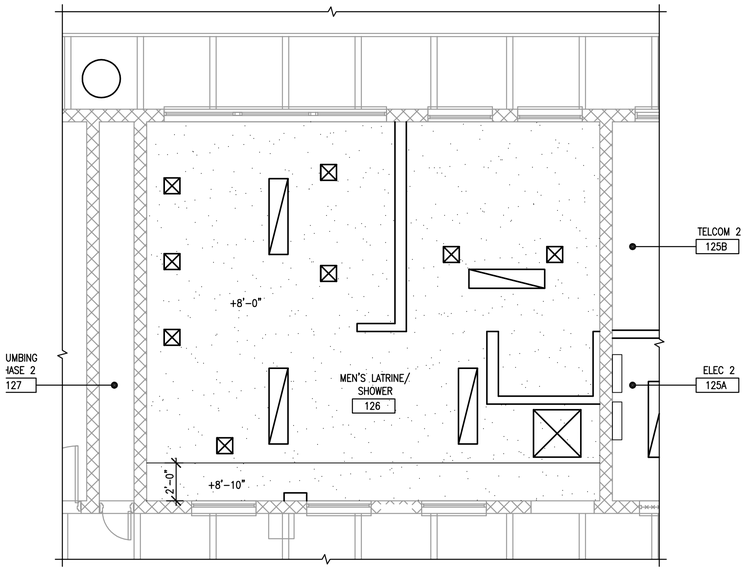
SCALE: AS NOTED

STATE PROJECT NO. CA-1212-C3

FEDERAL PROJECT NO. 15130007

SHEET 42 of 126

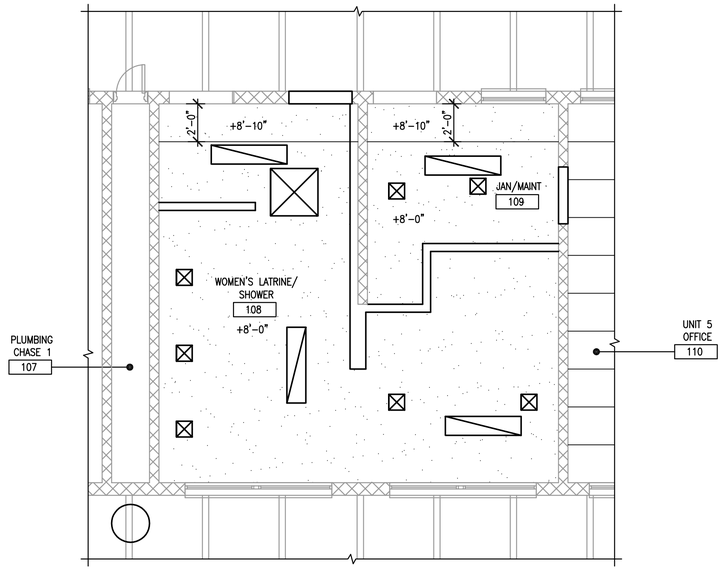
A-401



ENLARGED REFLECTED CEILING PLAN C1

SCALE: 1/4" = 1'-0" A-102

PLAN NORTH



ENLARGED REFLECTED CEILING PLAN C3

SCALE: 1/4" = 1'-0" A-102

PLAN NORTH

GYPSUM BOARD CEILING

LIGHT FIXTURES – SEE ELECTRICAL

OR

CEILING ACCESS PANEL – SEE MECHANICAL OR PLUMBING FOR SIZE UON

MECHANICAL DEVICES – SEE MECHANICAL

INTERIOR ELEVATION KEY

A AB B BC C CD D DA

0 1 2 4 8 12FT

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

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DES	DRW	CHK

DEPARTMENT OF DEFENSE
HAWAII ARMY NATIONAL GUARD
DESIGN AND PROJECT MANAGEMENT BRANCH
STATE OF HAWAI'I
FACILITY MANAGEMENT OFFICE

KEAUKAHA MILITARY RESERVATION – B621
HILO, HAWAI'I

HAWAI`I ARMY NATIONAL GUARD (HIARNG)
BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS

HIARNG – LATRINE / SHOWER REFLECTED CEILING PLANS

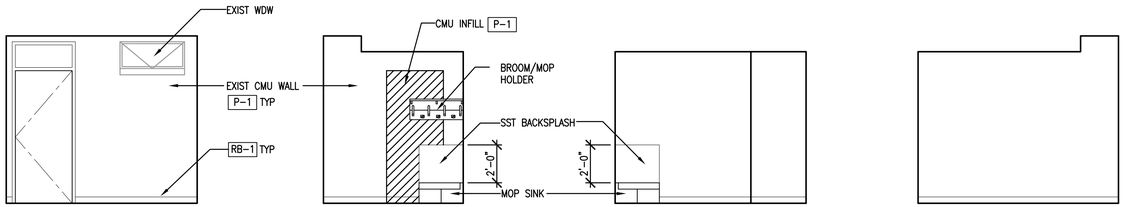
SCALE: AS NOTED

STATE PROJECT NO.
CA-1212-C3

FEDERAL PROJECT NO.
15130007

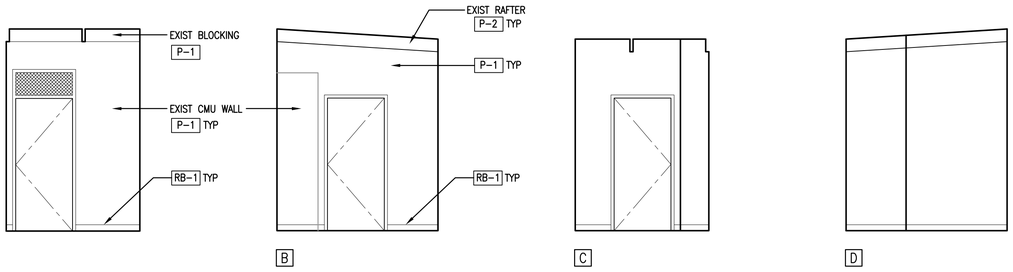
SHEET 43 of 126

A-402



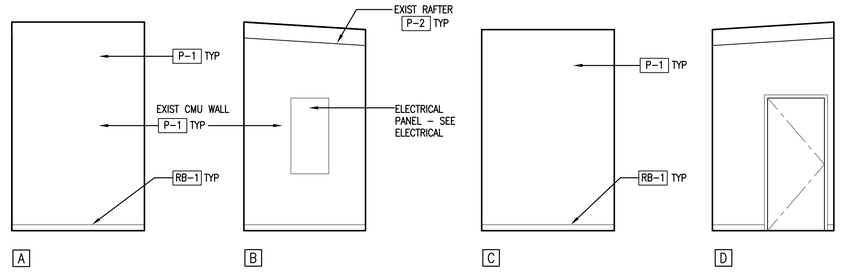
JANITOR 109

SCALE: 1/4" = 1'-0" — A-401 — D1



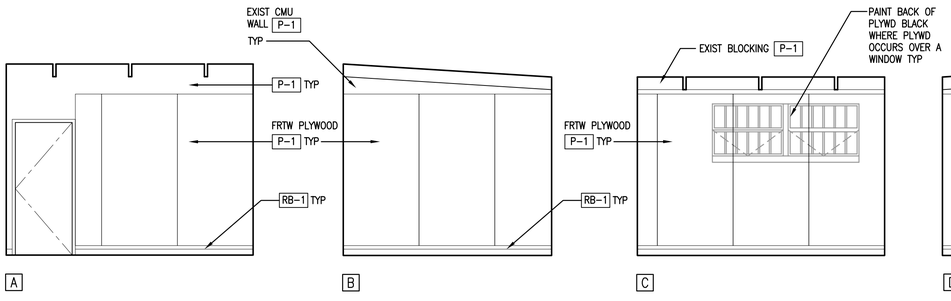
VESTIBULE 1 113

SCALE: 1/4" = 1'-0" — A-401 — C1



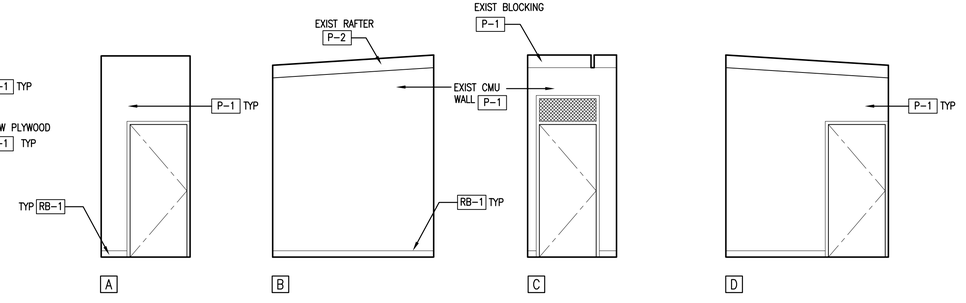
ELEC 1 113A

SCALE: 1/4" = 1'-0" — A-401 — C4



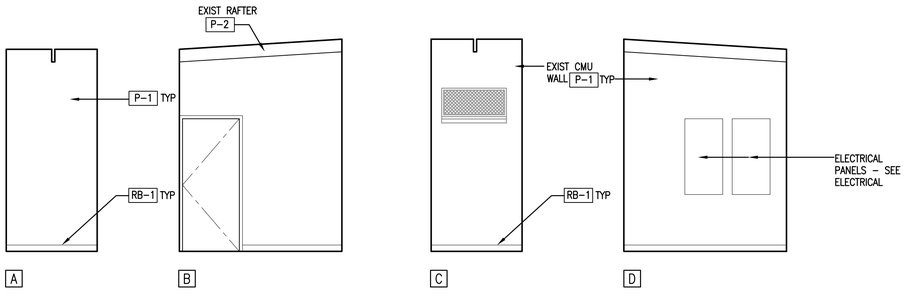
TELCOM 1 113B

SCALE: 1/4" = 1'-0" — A-401 — B1



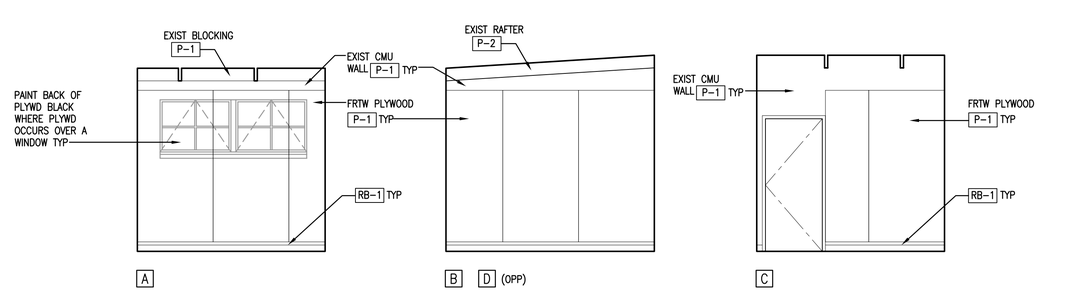
VESTIBULE 2 125

SCALE: 1/4" = 1'-0" — A-401 — B4



ELEC 2 125A

SCALE: 1/4" = 1'-0" — A-401 — A1



TELCOM 2 125B

SCALE: 1/4" = 1'-0" — A-401 — A4

GRAPHIC SCALE
0 1 2 4 8 12FT
SCALE: 1/4"=1'-0"

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No. 7418
HAWAII, U.S.A.
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION
SIGNATURE
4/30/2020
EXPIRATION DATE

MARK	DESCRIPTION	DATE	APPR

SUBMITTAL PHASE: FINAL SUBMITTAL
SUBMITTAL DATE: 30 SEPTEMBER 2019
DES | DRW | CHK

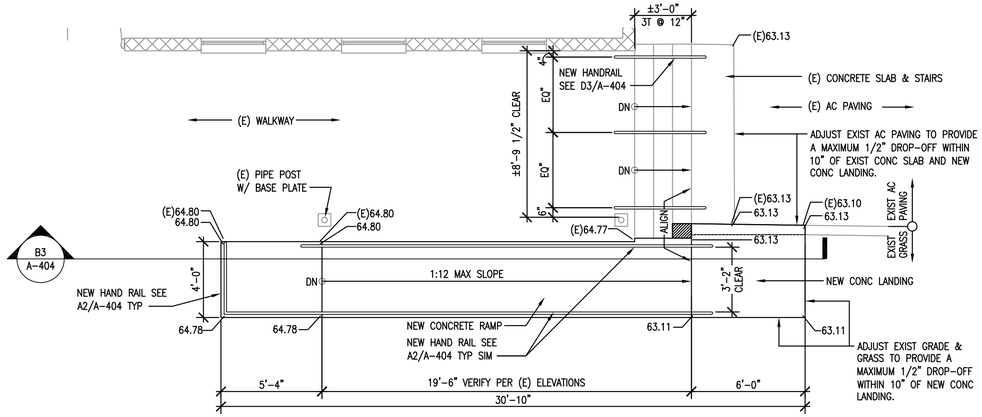
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STATE OF HAWAI'I
FACILITY MANAGEMENT OFFICE
KEAUKAHA MILITARY RESERVATION – B621
HILO, HAWAI'I

HAWAI`I ARMY NATIONAL GUARD (HIARNG)
BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS

HIARNG – INTERIOR ELEVATIONS

SCALE: AS NOTED
STATE PROJECT NO. CA-1212-C3
FEDERAL PROJECT NO. 15130007
SHEET 44 of 126

A-403

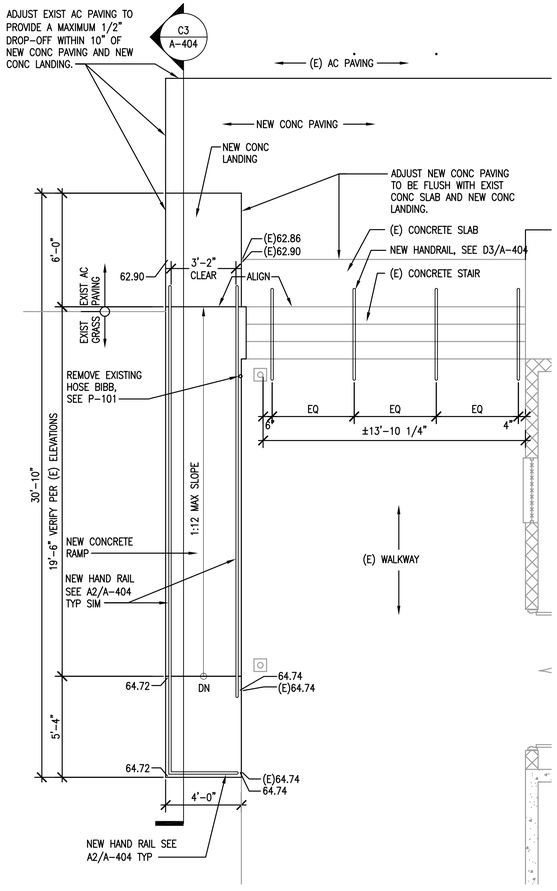


RAMP ENLARGED PLAN

SCALE: 1/4" = 1'-0" — A-101 — D1

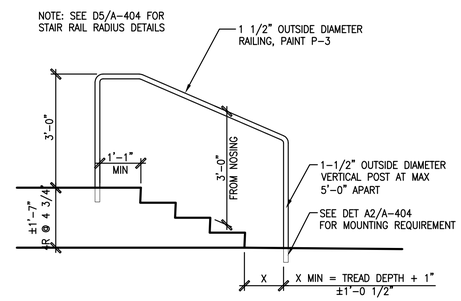
NOTES:

- AREA TO REMOVE EXIST GRASS EDGING. CONNECT NEW LANDING TO EXIST CONCRETE SLAB AND AC PAVING. MAKE SMOOTH TRANSITION.
- AREA TO ADD CONCRETE FILL BETWEEN EXISTING STAIR AND NEW RAMP AFTER REMOVING (E) EDGE PAVING. MATCH TO (E) STAIR TREAD AND RAISER PROFILE.



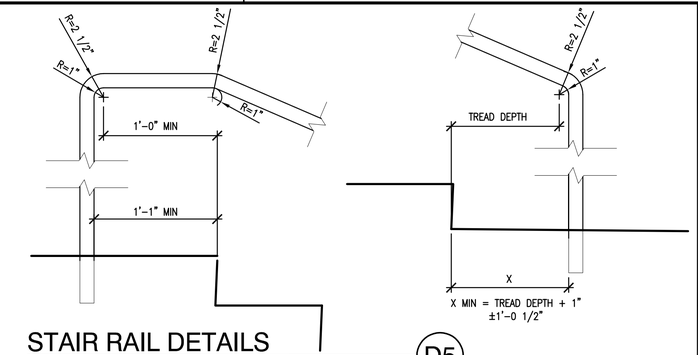
RAMP ENLARGED PLAN

SCALE: 1/4" = 1'-0" — A-101 — A1



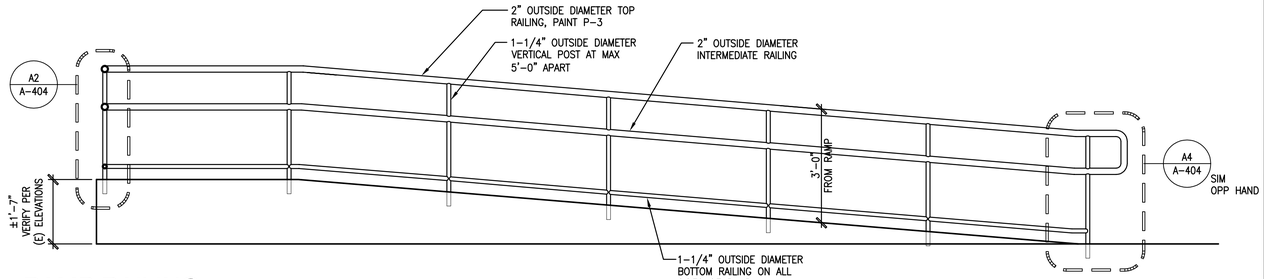
STAIR RAILING

SCALE: 1/2" = 1'-0" — A-404 — D3



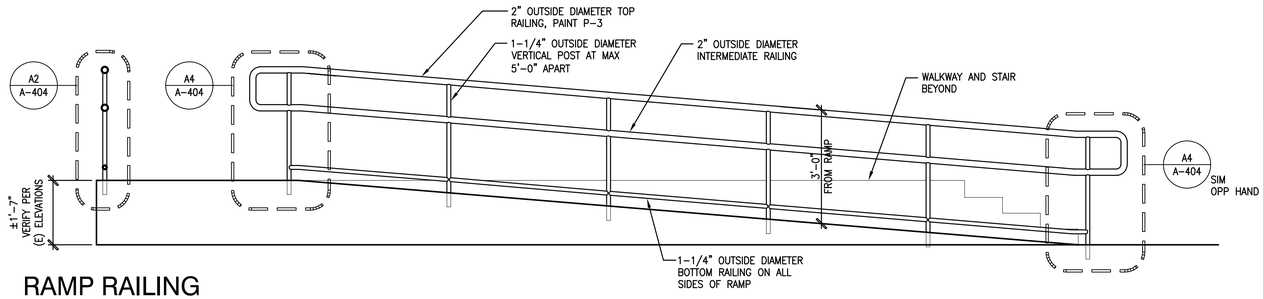
STAIR RAIL DETAILS

SCALE: 1 1/2" = 1'-0" — A-404 — D5



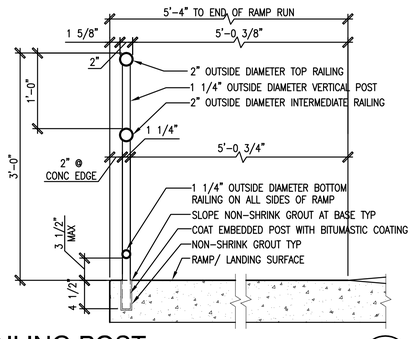
RAMP RAILING @ (E) COURTYARD SIDE

SCALE: 1/2" = 1'-0" — A-404 — C3



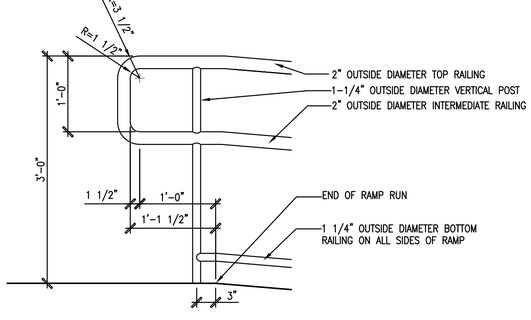
RAMP RAILING @ BUILDING SIDE

SCALE: 1/2" = 1'-0" — A-404 — B3



RAILING POST

SCALE: 1" = 1'-0" — A-404 — A2



RAILING EXTENSION

SCALE: 1" = 1'-0" — A-404 — A4

GRAPHIC SCALE

0 1 2 4 8 12FT — SCALE: 1/4"=1'-0"

0 1 2 4 6FT — SCALE: 1/2"=1'-0"

0 3" 6" 1 1.5 2 3FT — SCALE: 1" = 1'-0"

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SUBMITTAL PHASE: FINAL SUBMITTAL

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HIARNG – RAMP DETAILS

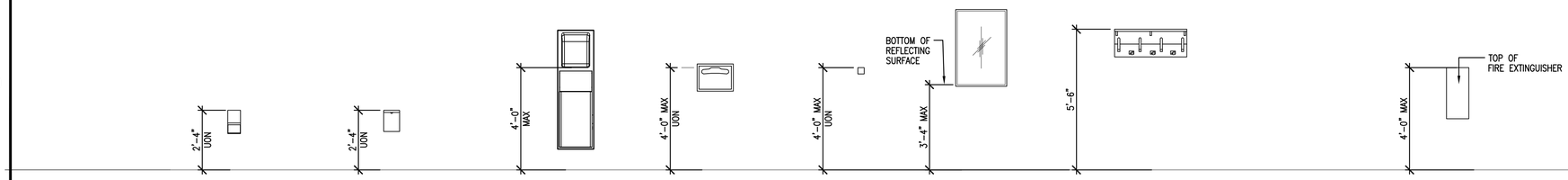
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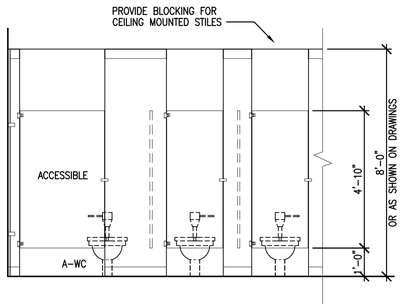
STATE PROJECT NO.: CA-1212-C3

FEDERAL PROJECT NO.: 15130007

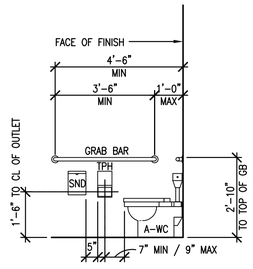
SHEET: 45 of 126

A-404

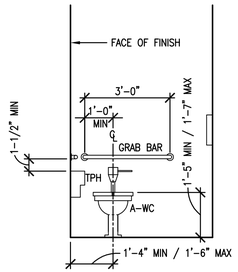




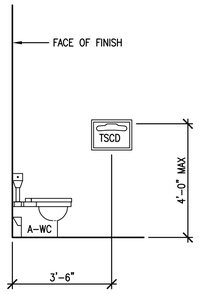
TYPICAL FULL HEIGHT FLOOR TO CEILING MOUNTED TOILET PARTITION ELEVATION
(TOILET ACCESSORIES NOT SHOWN FOR CLARITY)



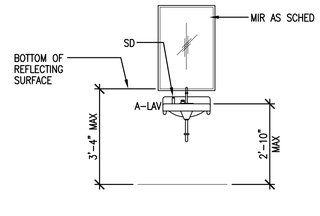
TYPICAL SIDE ELEVATION AT ACCESSIBLE TOILET COMPARTMENT



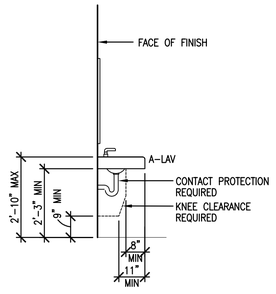
TYPICAL FRONT ELEVATION AT ACCESSIBLE TOILET COMPARTMENT



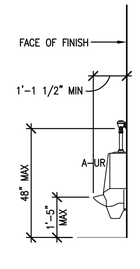
TYPICAL SIDE ELEVATION AT ACCESSIBLE TOILET COMPARTMENT



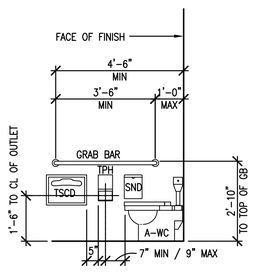
TYPICAL FRONT ELEVATION AT ACCESSIBLE LAVATORY



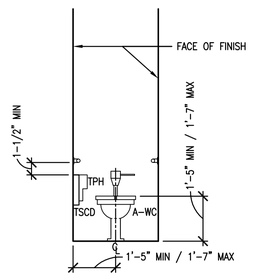
TYPICAL SIDE ELEVATION AT ACCESSIBLE LAVATORY



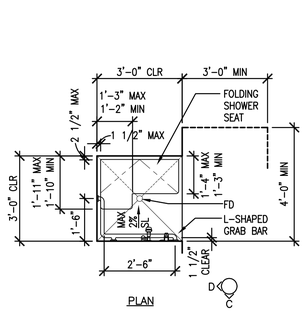
TYPICAL SIDE ELEVATION AT ACCESSIBLE URINAL



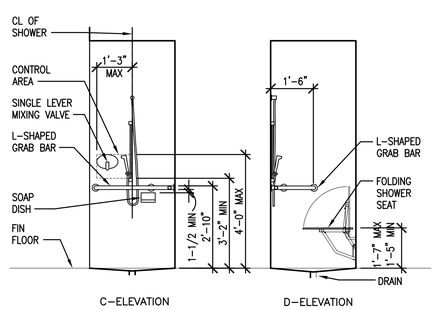
TYPICAL SIDE ELEVATION AT AMBULATORY TOILET COMPARTMENT

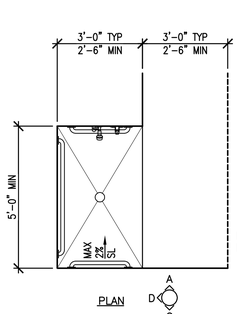


TYPICAL FRONT ELEVATION AT AMBULATORY TOILET COMPARTMENT

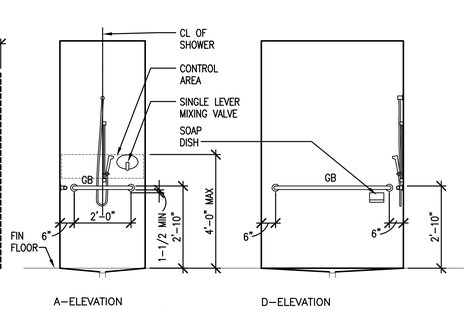


TRANSFER TYPE SHOWER





STANDARD ROLL-IN TYPE SHOWER WITHOUT SEAT



GRAPHIC SCALE
4' 2' 1' 0 2' 4'
3/8" = 1'-0"

733 BISHOP STREET, SUITE 3100
HONOLULU, HAWAII 96813
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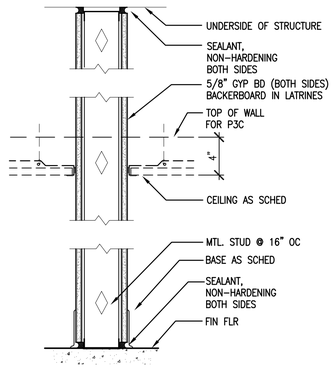
STATE OF HAWAI'I
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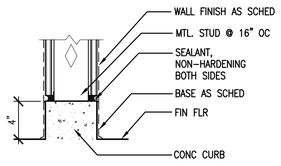
TYPICAL MOUNTING HEIGHTS

SCALE: AS NOTED
STATE PROJECT NO. CA-1212-C3
FEDERAL PROJECT NO. 15130007
SHEET 46 of 126

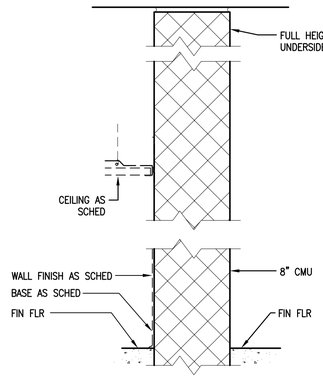
A-501



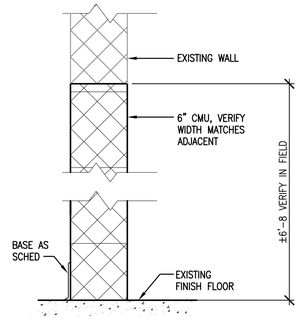
P3, P6, P3C



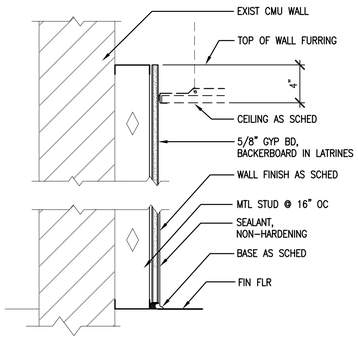
CONC CURB AT P3
WHERE OCCURS



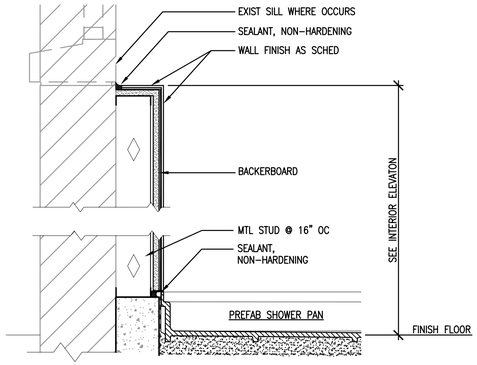
M8



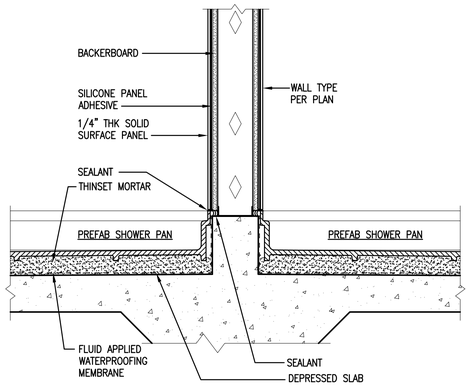
M6 NOTE: SEE STRUCTURAL FOR CONNECTION TO ADJACENT WALL



F4C1
F6C1 NOTE: WHERE NO CEILING OCCURS CONTINUE WALL TO BOTTOM OF UNDERSIDE OF ROOF DECK

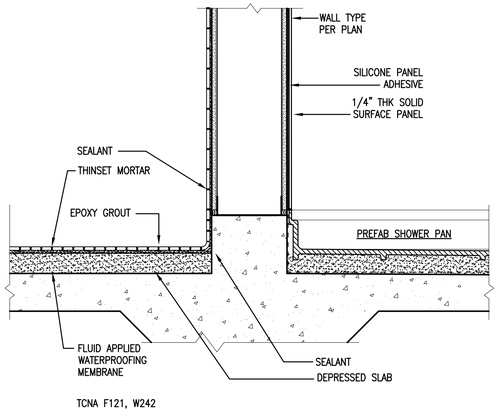


F4C2



DETAIL A1

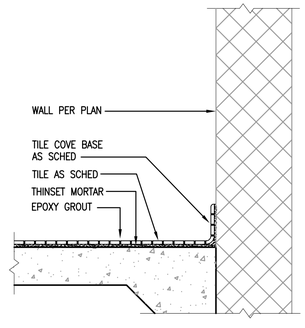
SCALE: 1 1/2" = 1'-0" A-000



TCNA F121, W242

DETAIL A2

SCALE: 1 1/2" = 1'-0" A-000



DETAIL A3

SCALE: 1 1/2" = 1'-0" A-000

LEGEND:

FIRE RATING → 1 | P ← CONSTRUCTION TYPE
WALL OR STUD SIZE → 6 | A ← MODIFICATIONS

FIRE RATING

1 – 1 HOUR
2 – 2 HOUR
3 – 3 HOUR

NOTE: BLANK INDICATES NO FIRE RATING

CONSTRUCTION TYPES

C – CHASE PARTITION
F – FURRING
M – MASONRY
P – BASIC PARTITION
S – SHAFT PARTITION
X – SPECIAL
D – CONC WALL

SIZE CODES

STUDS

H – 7/8" HAT CHANNEL
1 – 1 5/8" MTL STUDS
2 – 2 1/2" MTL STUDS
3 – 3 5/8" MTL STUDS
4 – 4" MTL STUDS
6 – 6" MTL STUDS

MASONRY

SIZES SHOWN ARE NOMINAL. ACTUAL SIZE IS 3/8" LESS.

MODIFICATIONS

A – ACOUS INSULATION
B – BULLET RESISTANT PANELS
C – GYP BD 4" PAST CLG
C1 – GYP BD ONE SIDE, 4" PAST CLG
C2 – PARTIAL HEIGHT WALL
F – EIFS
L – LEAD LINED
P – PLUMBING WALL
V – VENEER PLASTER

NOTE: BLANK INDICATES NO MODIFICATIONS

GENERAL NOTES:

1. ALL GYP BD IS 5/8" THICK UNLESS NOTED OTHERWISE.
2. PARTITION TYPE @ HEADERS: AT DOORS, GLAZED PARTITIONS, CASED OPENINGS, CONTINUE ADJACENT PARTITION TYPE.
3. ALL PARTITIONS TO BE OF NON-COMBUSTIBLE CONSTRUCTION.
4. PROVIDE MOISTURE RESISTANT GYP BD FOR ALL LATRINE CEILINGS.
5. PROVIDE BACKER BOARD AT ALL SHOWER CONDITIONS.

GRAPHIC SCALE
0 3" 6" 1 1'-6" 2FT
SCALE: 1-1/2"=1'-0"

ahl.
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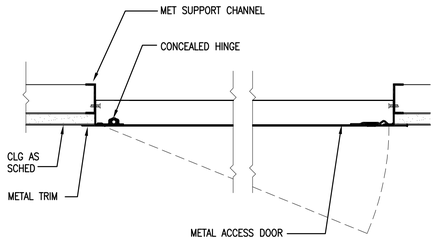
TERRY McFARLAND
LICENSED PROFESSIONAL ARCHITECT
No. 7418
HAWAII, U.S.A.
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION
SIGNATURE 4/30/2020 EXPIRATION DATE

STM	DESCRIPTION	DATE	APPR

SUBMITTAL PHASE
FINAL SUBMITTAL
SUBMITTAL DATE 30 SEPTEMBER 2019
DES DRW CHK

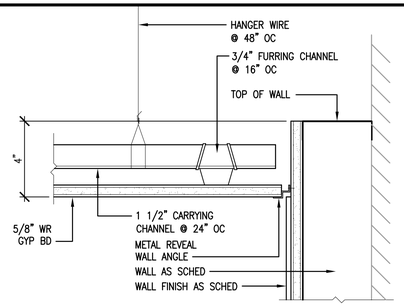
STATE OF HAWAI'I
FACILITY MANAGEMENT OFFICE
HAWAII ARMY NATIONAL GUARD
DESIGN AND PROJECT MANAGEMENT BRANCH
DEPARTMENT OF DEFENSE
KEAUKAHA MILITARY RESERVATION – B621
HILO, HAWAI'I
HAWAI'I ARMY NATIONAL GUARD (HIARNG)
BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS
HIARNG – WALL TYPES

SCALE: AS NOTED
STATE PROJECT NO. CA-1212-C3
FEDERAL PROJECT NO. 15130007
SHEET 47 of 126
A-502



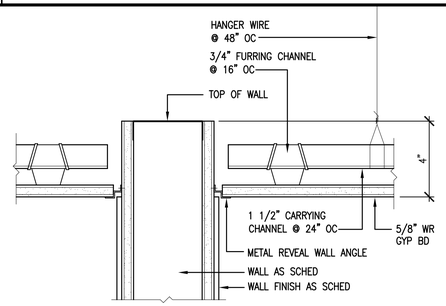
ACCESS PANEL DETAIL (D1)

SCALE: 3" = 1'-0" A-106



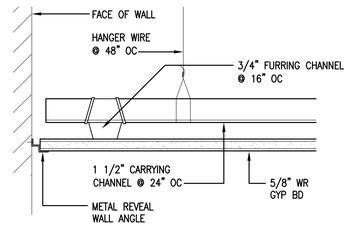
GYP BD CEILING DETAIL (D2)

SCALE: 3" = 1'-0" A-106



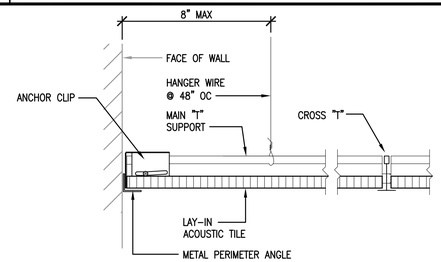
GYP BD CEILING DETAIL (D3)

SCALE: 3" = 1'-0" A-106



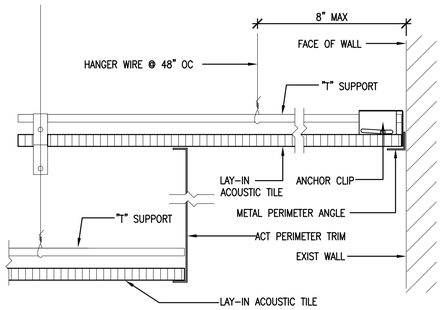
GYP BD CEILING DETAIL (D4)

SCALE: 3" = 1'-0" A-106



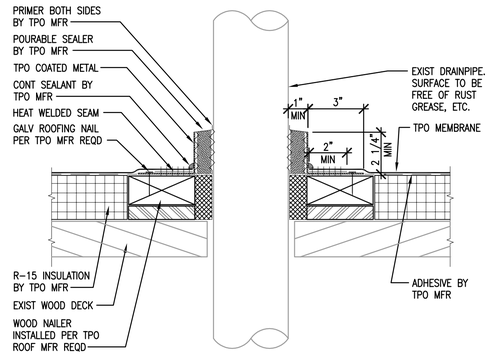
ACOUSTIC PANEL DETAIL (D5)

SCALE: 3" = 1'-0" A-106



SOFFIT DETAIL (C1)

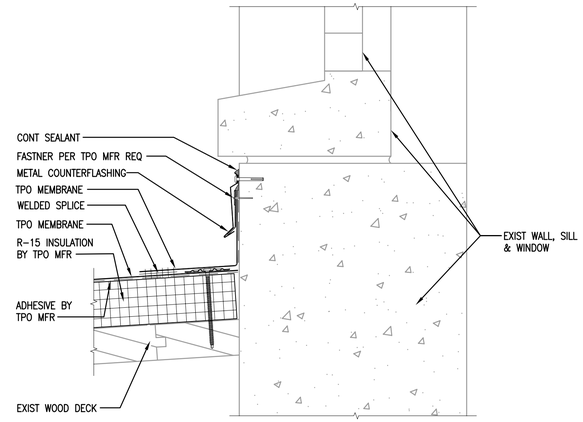
SCALE: 3" = 1'-0" A-106



NOTE: SEE LEGEND FOR ADDITIONAL MATERIALS

ROOF DETAIL - FLASHING AT EXISTING DOWNSPOUT (B3)

SCALE: 3" = 1'-0" A-103

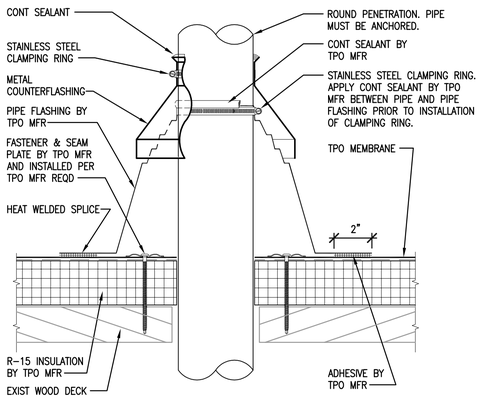


NOTE: SEE LEGEND FOR ADDITIONAL MATERIALS

ROOF DETAIL - FLASHING AT HIGH WINDOW (B4)

SCALE: 3" = 1'-0" A-103

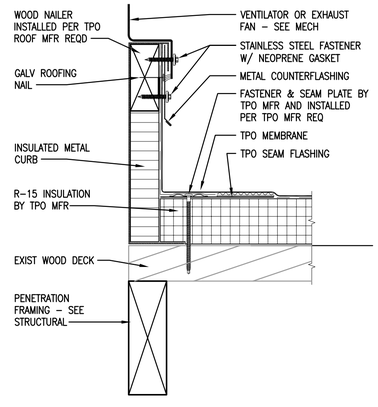
LEGEND
- SEALANT
- SPLICE TAPE
- ADHESIVE
- PRIMER



NOTE: SEE LEGEND FOR ADDITIONAL MATERIALS

ROOF DETAIL - FLASHING AT ROUND PENETRATION (A1)

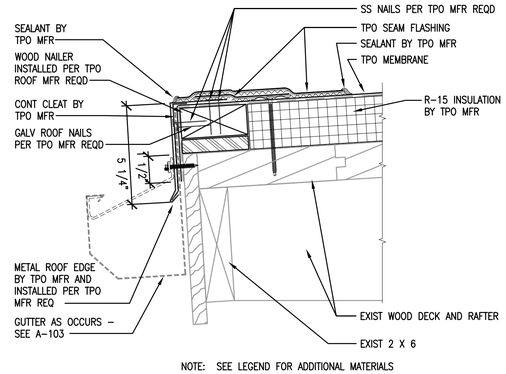
SCALE: 3" = 1'-0" A-103



NOTE: SEE LEGEND FOR ADDITIONAL MATERIALS

ROOF DETAIL - FLASHING AT RECTANGULAR PENETRATION (A2)

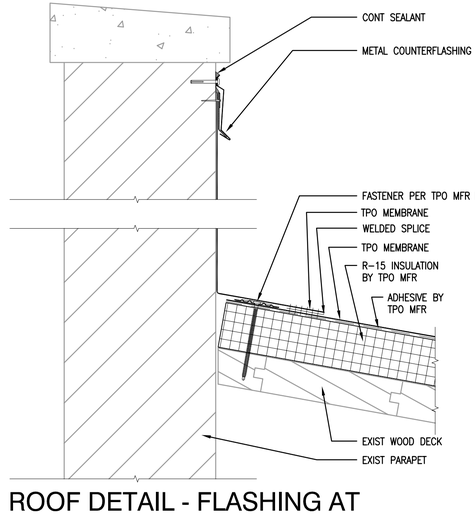
SCALE: 3" = 1'-0" A-103



NOTE: SEE LEGEND FOR ADDITIONAL MATERIALS

ROOF DETAIL - FLASHING AT EAVE (A3)

SCALE: 3" = 1'-0" A-302



ROOF DETAIL - FLASHING AT PARAPET (A4)

SCALE: 3" = 1'-0" A-103

GRAPHIC SCALE
0 1" 2" 3" 6" 9" 1FT
SCALE: 3"=1'-0"

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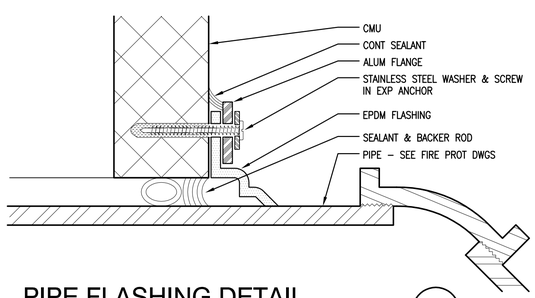
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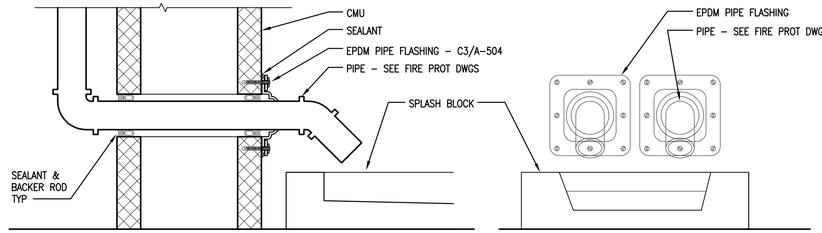
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HAWAI'I ARMY NATIONAL GUARD (HIARNG)
BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS
HIARNG - DETAILS

SCALE: AS NOTED
STATE PROJECT NO. CA-1212-C3
FEDERAL PROJECT NO. 15130007
SHEET 48 of 126
A-503



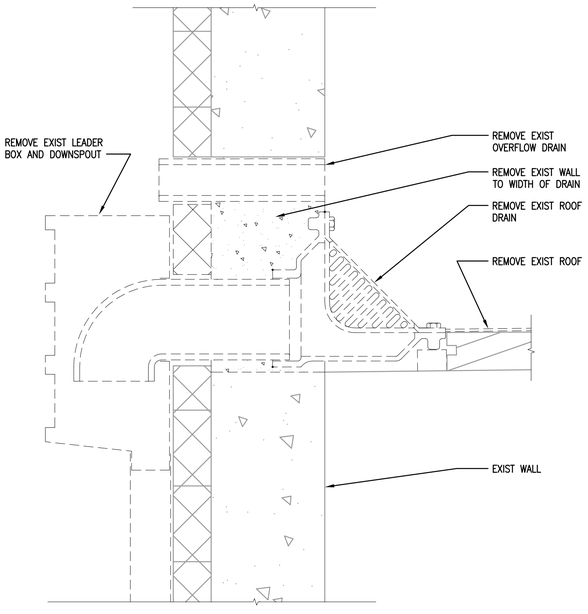
PIPE FLASHING DETAIL

SCALE: FULL SCALE — A-504 — C3



PIPE FLASHING, EXTERIOR WALL SECTION & ELEVATION

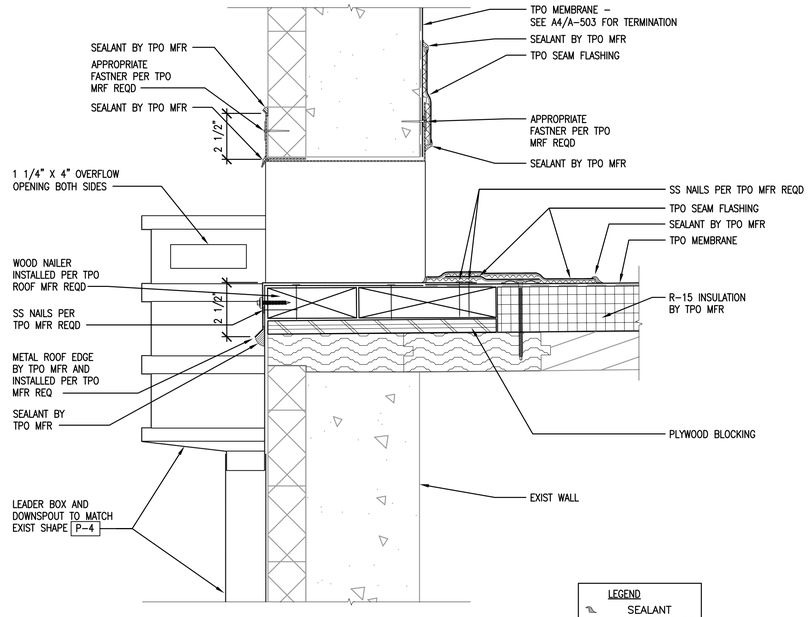
SCALE: 3" = 1'-0" — A-101 — C4



ROOF DETAIL - DEMOLITION AT EXIST ROOF DRAIN

SCALE: 3" = 1'-0" — A-103 — A1

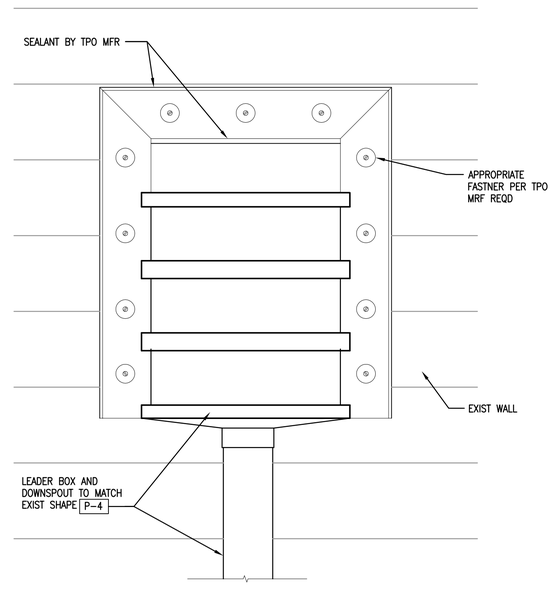
GRAPHIC SCALE
0 1" 2" 3" 6" 9" 1FT
SCALE: 3"=1'-0"



ROOF DETAIL - FLASHING AT ROOF DRAIN

NOTE: SEE LEGEND FOR ADDITIONAL MATERIALS

SCALE: 3" = 1'-0" — A-302 — A3



ROOF DETAIL - FLASHING AT ROOF DRAIN

SCALE: 3" = 1'-0" — A-302 — A4

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DEPARTMENT OF DEFENSE
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DESIGN AND PROJECT MANAGEMENT BRANCH
STATE OF HAWAI'I
FACILITY MANAGEMENT OFFICE

KEAUKAHA MILITARY RESERVATION – B621
HILO, HAWAI'I

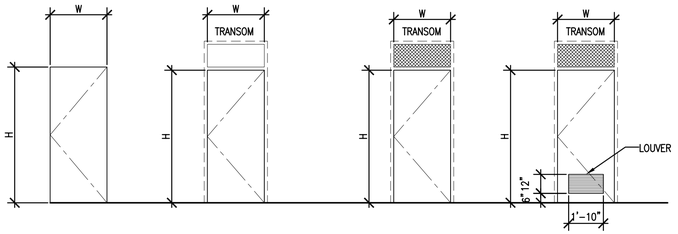
HAWAI'I ARMY NATIONAL GUARD (HIARNG)
BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS

HIARNG – DETAILS

SCALE: AS NOTED
STATE PROJECT NO. CA-1212-C3
FEDERAL PROJECT NO. 15130007
SHEET 49 of 126

A-504

DOOR TYPES



A
INTERIOR FLUSH

B
EXTERIOR FLUSH W/
GLAZED FIXED TRANSOM

C
EXTERIOR FLUSH
W/ WIRE MESH TRANSOM
AND INSECT SCREEN

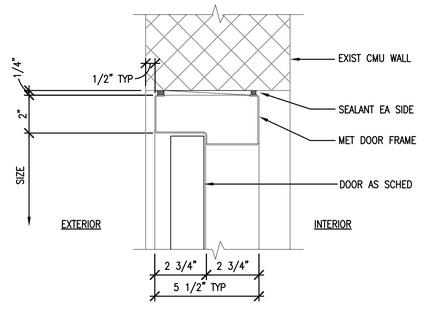
D
EXTERIOR FLUSH
W/ WIRE MESH TRANSOM
AND INSECT SCREEN AND
LOUVER

DOOR NOTES

1. (–) INDICATES FEATURE NOT REQUIRED
2. ALL DOORS ARE 1–3/4" THICK UNLESS NOTED OTHERWISE.
3. DOOR CONSTRUCTION:
   HM = HOLLOW METAL
4. DOOR FINISH:
   P–* = PAINT (SEE COLOR/MATERIAL SCHEDULE A–610)
5. DOOR FRAME (AND FINISH):
   HMP = HOLLOW METAL W/ PAINT FINISH
6. GLASS TYPES:
   LM1 – CLEAR LAMINATED GLASS (SEE SPECIFICATIONS)
7. FIRE RATING:
   DOOR RATINGS ARE INDICATED IN MINUTES, FIRE RATED DOORS SHALL BE AUTOMATIC SELF CLOSING.
8. HARDWARE GROUP:
   SEE SPECIFICATIONS.
9. BLAST ZONE:
   SEE SPECIFICATIONS.

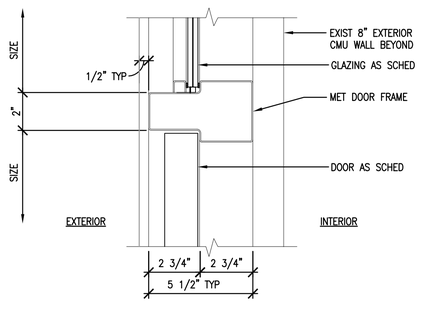
DOOR SCHEDULE

DOOR NUMBER	DOOR SIZE (W x H)	DOOR TYPE	CONSTRUCTION (NOTE 3)	DOOR FINISH (NOTE 4)	DOOR FRAME (NOTE 5)	GLASS (NOTES 6)	FIRE RATING IN MINUTES (NOTE 7)	STC RATING	HARDWARE GROUP (NOTE 8)	FRAMING DETAILS			BLAST ZONE (NOTE 9)	REMARKS
										HEAD	JAMB	THRESHOLD		
106	3'–0" x 7'–0"	D	HM	P–4	HMP	–	–	–	004	B3, B2/A–601	B1, B3/A–601	A2/A–601	D	
108	3'–0" x 7'–0"	B	HM	P–4	HMP	LM1	–	–	003	B3, B2/A–601	B1, B3/A–601	A2/A–601	D	
109	3'–0" x 7'–0"	B	HM	P–4	HMP	LM1	–	–	002	B3, B2/A–601	B1, B3/A–601	A1/A–601	D	
113	3'–0" x 7'–0"	C	HM	P–4	HMP	–	–	–	004	B4, A4/A–601	B1, B4/A–601	A1/A–601	D	
113A	3'–0" x 7'–0"	A	HM	P–4	HMP	–	–	–	001	A3/A–601	A3/A–601	–	–	
113B	3'–0" x 7'–0"	A	HM	P–4	HMP	–	–	–	001	A3/A–601	A3/A–601	–	–	
125	3'–0" x 7'–0"	C	HM	P–4	HMP	–	–	–	004	B4, A4/A–601	B1, B4/A–601	A1/A–601	D	
125A	3'–0" x 7'–0"	A	HM	P–4	HMP	–	–	–	001	A3/A–601	A3/A–601	–	–	
125B	3'–0" x 7'–0"	A	HM	P–4	HMP	–	–	–	001	A3/A–601	A3/A–601	–	–	
126	3'–0" x 7'–0"	B	HM	P–4	HMP	LM1	–	–	003	B3, B2/A–601	B1, B3/A–601	A2/A–601	D	



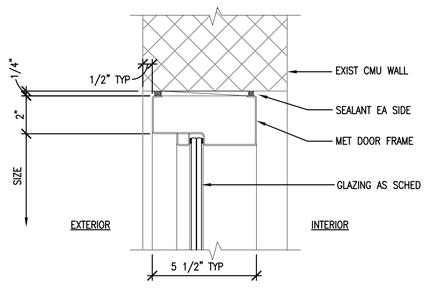
HEAD / JAMB (SIMILAR) — B1

SCALE: 3" = 1'–0" — A–601



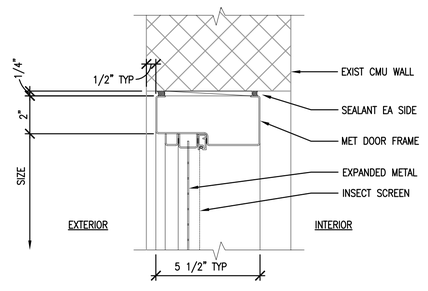
TRANSOM — B2

SCALE: 3" = 1'–0" — A–601



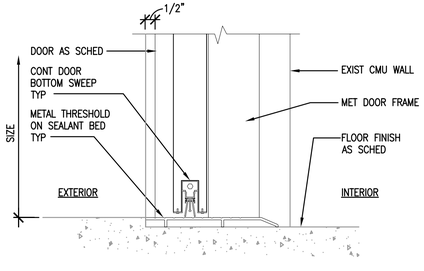
HEAD / JAMB (SIMILAR) — B3

SCALE: 3" = 1'–0" — A–601



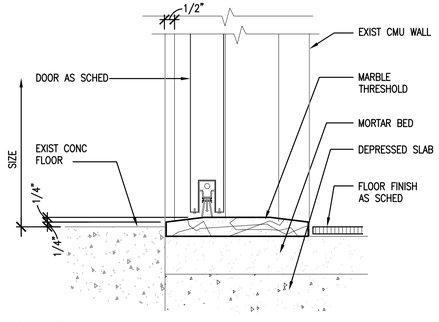
HEAD / JAMB (SIMILAR) — B4

SCALE: 3" = 1'–0" — A–601



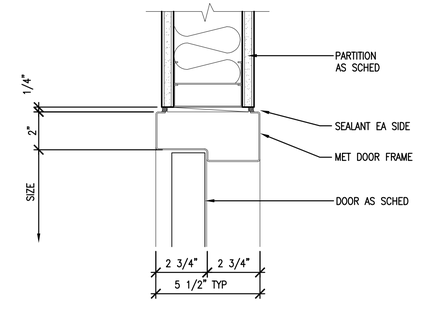
THRESHOLD — A1

SCALE: 3" = 1'–0" — A–601



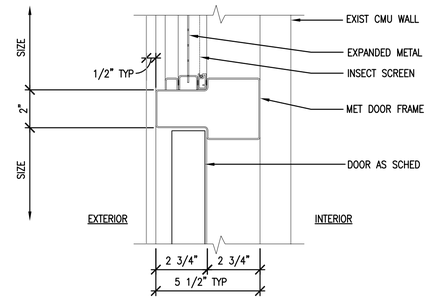
THRESHOLD — A2

SCALE: 3" = 1'–0" — A–601



HEAD (JAMB SIMILAR) — A3

SCALE: 3" = 1'–0" — A–601



TRANSOM — A4

SCALE: 3" = 1'–0" — A–601

GRAPHIC SCALE
0 1" 2" 3" 6" 9" 1FT
SCALE: 3"=1'–0"

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HAWAI`I ARMY NATIONAL GUARD (HIARNG)
BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS
HIARNG – DOOR TYPES, DOOR SCHEDULE AND DETAILS

SCALE: AS NOTED
STATE PROJECT NO. CA-1212-C3
FEDERAL PROJECT NO. 15130007
SHEET 50 of 126
A-601

ROOM FINISH SCHEDULE

RM NUMBER	ROOM NAME	FLOOR	BASE	WALL A	WALL B	WALL C	WALL D	WAINSCOT MATERIAL	WAINSCOT HEIGHT	MILLWORK COUNTER TOP	MILLWORK CABINETS	TRIM CORNER GUARD	TRIM CRASH RAIL	CEILING	CEILING HEIGHT	REMARKS
102	OPEN OFFICE 1	–	–	–	–	–	–	–	–	–	–	–	–	ACT–1	SEE A–102	
103	SUPPLY	–	–	–	–	–	–	–	–	–	–	–	–	ACT–1	SEE A–102	
105	CONFERENCE 1	SC–1	RB–1	P–1	P–1	P–1	P–1	NONE	–	NONE	NONE	NONE	NONE	ACT–1	SEE A–102	
108	WOMEN'S LATRINE / SHOWER	PT–1	PT–2	P–1	P–1	P–1	P–1	SS–1, PT–3	–	NONE	NONE	NONE	NONE	P–2	SEE A–102	SS–1 FOR SHOWER SURROUND, PT–3 FOR WAINSCOT AS INDICATED
109	JAN / MAINT	SC–1	RB–1	P–1	P–1	P–1	P–1	NONE	–	NONE	NONE	NONE	NONE	P–2	SEE A–102	
110	UNIT OFFICE 5	–	–	–	–	–	–	–	–	–	–	–	–	ACT–1	SEE A–102	
113	VESTIBULE 1	SC–1	RB–1	P–1	P–1	P–1	P–1	NONE	–	NONE	NONE	NONE	NONE	P–2	SEE A–102	
113A	ELEC 1	SC–1	RB–1	P–1	P–1	P–1	P–1	NONE	–	NONE	NONE	NONE	NONE	P–2	SEE A–102	
113B	TELCOM 1	SC–1	RB–1	P–1	P–1	P–1	P–1	NONE	–	NONE	NONE	NONE	NONE	P–2	SEE A–102	
115	UNIT 4 OFFICE	–	–	–	–	–	–	–	–	–	–	–	–	ACT–1	SEE A–102	
116	UNIT 3 OFFICE	–	–	–	–	–	–	–	–	–	–	–	–	ACT–1	SEE A–102	
119	UNIT 2 OFFICE	–	–	–	–	–	–	–	–	–	–	–	–	ACT–1	SEE A–102	
120	UNIT 1 OFFICE	–	–	–	–	–	–	–	–	–	–	–	–	ACT–1	SEE A–102	
122	CONFERENCE 1	–	–	–	–	–	–	–	–	–	–	–	–	ACT–1	SEE A–102	
123	CLASSROOM 1	–	–	–	–	–	–	–	–	–	–	–	–	ACT–1	SEE A–102	
124	CLASSROOM 2	–	–	–	–	–	–	–	–	–	–	–	–	ACT–1	SEE A–102	
125	VESTIBULE 2	SC–1	RB–1	P–1	P–1	P–1	P–1	NONE	–	NONE	NONE	NONE	NONE	P–2	SEE A–102	
125A	ELEC 2	SC–1	RB–1	P–1	P–1	P–1	P–1	NONE	–	NONE	NONE	NONE	NONE	P–2	SEE A–102	
125B	TELECOM 2	SC–1	RB–1	P–1	P–1	P–1	P–1	NONE	–	NONE	NONE	NONE	NONE	P–2	SEE A–102	
126	MEN'S LATRINE / SHOWER	PT–1	PT–2	P–1	P–1	P–1	P–1	SS–1, PT–3	–	NONE	NONE	NONE	NONE	P–2	SEE A–102	SS–1 FOR SHOWER SURROUND, PT–3 FOR WAINSCOT AS INDICATED

COLOR / MATERIAL SCHEDULE

CODE	DESCRIPTION	MANUFACTURER	PATTERN / STYLE	COMMENTS
ACT–1	ACOUSTIC CEILING PANEL (2' X 4')	ARMSTRONG COMMERCIAL CEILINGS	FINE FISSURED 2' X 4' 15/16" SQUARE LAY–IN #1729 (NRC RATING=0.55, CAC RATING=35) W/ PRELUDE 15/16" SUSPENSION SYSTEM, COLOR: WHITE	SEE RCP FOR EXACT LOCATIONS
F–1	FILM FOR WINDOW	3M	FASARA DECORATIVE GLASS FILM, DESIGN: SAN MARINO 2H2MA MM	
GRT–1	GROUT	LATICRETE	SPECTRALOCK PRO GROUT PREMIUM EPOXY GROUT, COLOR #40 LATTE	TO BE USED WITH PT–1 AND PT–2
GRT–2	GROUT	LATICRETE	SPECTRALOCK PRO GROUT PREMIUM EPOXY GROUT, COLOR #18 SAUTERNE	TO BE USED WITH PT–3
M–1	MARBLE THRESHOLD	DALTILE	DALTILE NATURAL STONE THRESHOLD DOUBLE HOLLYWOOD BEVEL THRESHOLD 6 X 36 X 3/4, COLOR: CHIARO BEIGE M710	REFER TO HARDWARE GROUP 003
P–1	PAINT	SHERWIN WILLIAMS	SHERWIN WILLIAMS PROGREEN, COLOR: #SW7042 SHOJI WHITE	SEMI–GLOSS SHEEN
P–2	PAINT	SHERWIN WILLIAMS	SHERWIN WILLIAMS PROGREEN, COLOR: #SW7000 IBIS WHITE	SEMI–GLOSS SHEEN
P–3	PAINT	SHERWIN WILLIAMS	SHERWIN WILLIAMS PROGREEN, COLOR: #SW7554 STEAMED MILK	SEMI–GLOSS SHEEN, MATCH EXISTING BUILDING FIELD COLOR
P–4	PAINT	SHERWIN WILLIAMS	SHERWIN WILLIAMS PROGREEN, COLOR: #SW7518 BEACH HOUSE	SEMI–GLOSS SHEEN, MATCH EXISTING BUILDING ACCENT COLOR
PT–1	PORCELAIN TILE	DALTILE	KEYSTONE MOSAIC COLOR BODY PORCELAIN TILE 1" X 1" X 1/4" THICK, COLOR: TERRAIN #DK10 (ELEMENTAL TAN D166, ARTISIAN BROWN D144, ARTISIAN BROWN SPECKLE D204)	USE GROUT GRT–1. GROUT WIDTH TO BE 1/16".
PT–2	PORCELAIN TILE	DALTILE	KEYSTONE MOSAIC COLOR BODY PORCELAIN TILE 1" X 1" X 1/4" THICK, COLOR: TERRAIN #DK10 MB–5 COVE BASE (ELEMENTAL TAN D166, ARTISIAN BROWN D144, ARTISIAN BROWN SPECKLE D204)	USE GROUT GRT–1. GROUT WIDTH TO BE 1/16".
PT–3	PORCELAIN TILE	DALTILE	RITTENHOUSE SQUARE SEMI–GLOSS GLAZED WALL TILE 2" X 4" X 5/16" THICK, COLOR: 3K175 BISCUIT W/ MOSAIC BULLNOSE	USE GROUT GRT–2. GROUT WIDTH TO BE 1/16".
RB–1	RUBBER BASE	JOHNSONITE	STANDARD 4" COVE WALL BASE (1/8" THICK), COLOR: #63 BURNT UMBER	
SC–1	SEALED CONCRETE	SINAK CORPORATION	SINAK SEALER S–102 @ FLOOR, COLOR: WATER CLEAR	
SS–1	SOLID SURFACE	CORIAN DUPOINT	SHOWER SURROUND, COLOR: SANDSTONE	
TPT–1	PHENOLIC TOILET PARTITION	BOBRICK	SC02 DESERT BEIGE	

COLOR & MATERIALS NOTES LIST:

CODE

ACT	ACOUSTICAL CEILING PANEL/TILE
F	FILM FOR GLASS
GRT	GROUT
P	PAINT
PL	PLASTIC LAMINATE
PT	PORCELAIN TILE
RB	RUBBER FLOOR BASE
SC	SEALED CONCRETE
SS	SOLID SURFACE
TPT	TOILET PARTITION

PAINTING NOTES:

1. SOLID PAINTS: THE COLOR SCHEDULE UTILIZES SHERWIN WILLIAMS COMPANY AS A BASE FOR COLOR SELECTION.
2. THE SHEEN LEVEL SHALL BE SEMI–GLOSS U.N.O.

PRE-FINISHED MANUFACTURED ITEMS:

1. MANUFACTURER'S TRADE NAMES SHOWN ARE FOR THE PURPOSE OF INDICATING COLORS AND TEXTURES ONLY.

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A/E INFO

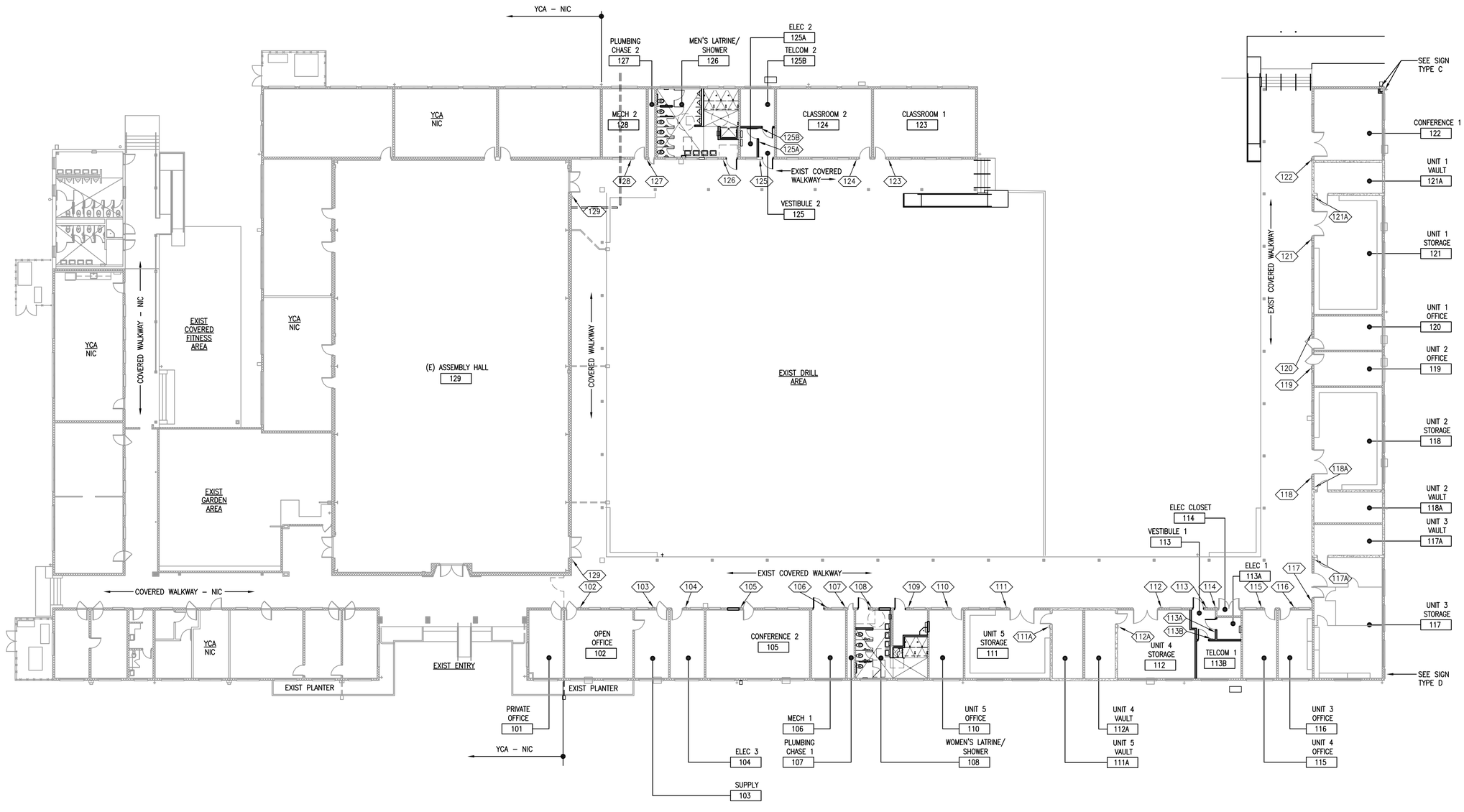
TERRY McFARLAND
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THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION
SIGNATURE
4/30/2020
EXPIRATION DATE

SYM	DESCRIPTION	DATE	APPR

SUBMITTAL PHASE
FINAL SUBMITTAL
SUBMITTAL DATE 30 SEPTEMBER 2019
DES | DRW | CHK

STATE OF HAWAI'I
FACILITY MANAGEMENT OFFICE
DEPARTMENT OF DEFENSE
HAWAII ARMY NATIONAL GUARD
DESIGN AND PROJECT MANAGEMENT BRANCH
KEAUKAHA MILITARY RESERVATION – B621
HILO, HAWAI'I
HAWAI'I ARMY NATIONAL GUARD (HIARNG)
BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS
HIARNG – ROOM FINISH AND COLOR/MATERIAL SCHEDULES

SCALE: AS NOTED
STATE PROJECT NO. CA-1212-C3
FEDERAL PROJECT NO. 15130007
SHEET 51 of 126
A-610



OVERALL SIGNAGE PLAN

SCALE: 1/16" = 1'-0"

GRAPHIC SCALE
0 4 8 16 32 48FT
SCALE: 1/16"=1'-0"

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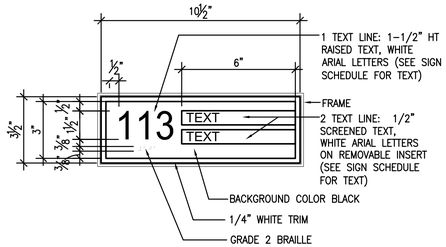
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DEPARTMENT OF DEFENSE
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HAWAI`I ARMY NATIONAL GUARD (HIARNG)
BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS

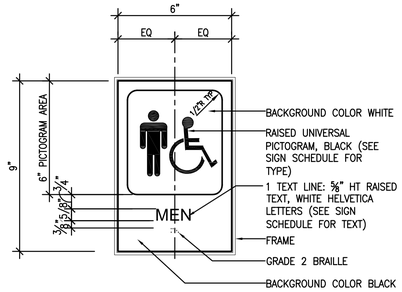
HIARNG – OVERALL SIGNAGE PLAN

SCALE: AS NOTED
STATE PROJECT NO. CA-1212-C3
FEDERAL PROJECT NO. 15130007
SHEET 52 of 126
A-701



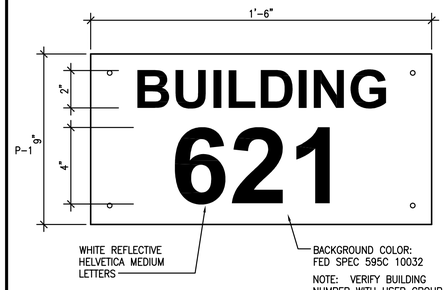
SIGN TYPE A

SCALE: 3" = 1'-0"



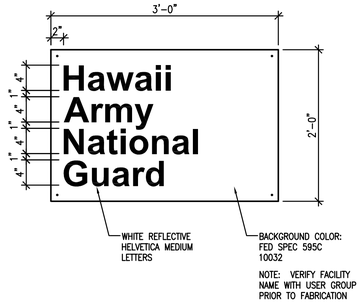
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SCALE: 3" = 1'-0"



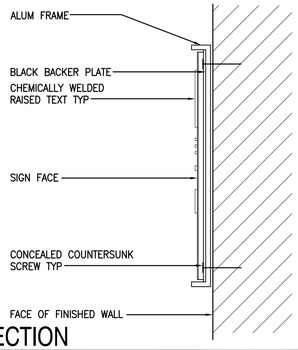
SIGN TYPE C

SCALE: 3" = 1'-0"



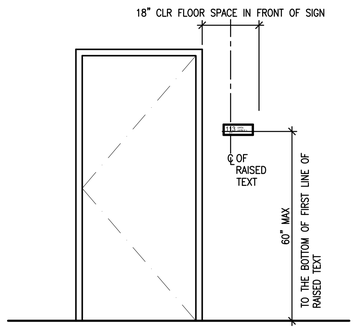
SIGN TYPE D

SCALE: 3" = 1'-0"



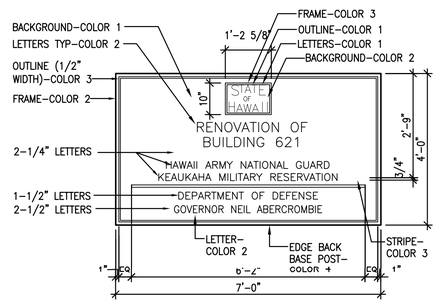
SIGN SECTION

SCALE: 6" = 1'-0" — B1 — A-702



TYPICAL SIGN MOUNTING AT SINGLE

SCALE: 1/2" = 1'-0" — A1 — A-702



LETTER STYLE: COPY IS CENTERED AND SET IN ADOBE TYPE FUTURA HEAVY. IF THIS TYPE IS NOT AVAILABLE, FUTURA BOLD MAY BE SUBSTITUTED. COPY SHOULD BE SET AND SPACED BY A PROFESSIONAL TYPESETTER AND ENLARGED PHOTOGRAPHICALLY FOR PHOTO STENCIL SCREEN PROCESS.

ART WORK: CONSTANT ELEMENTS OF SIGN LAYOUT – FRAME, OUTLINE, STRIPE AND OFFICIAL STATE INFORMATION – MAY BE DUPLICATED FOLLOWING WORKING DRAWING MEASUREMENTS OR BE REPRODUCED AND ENLARGED PHOTOGRAPHICALLY USING A LAYOUT TEMPLATE IF PROVIDED.

MATERIALS: PANEL IS 3/4" EXTERIOR GRADE HIGH DENSITY OVERLAID PLYWOOD, WITH RESIN BONDED SURFACES ON BOTH SIDES.

PAINTS AND INKS: SCREEN PAINTS ARE MATTE FINISH. PAINTS ARE SATIN FINISH, EXTERIOR GRADE. REFERENCES TO AMERITONE COLOR KEY ARE FOR COLOR MATCH ONLY.

COLOR 1: 1BL10A BOHEMIAN BLUE
COLOR 2: 2H16P SOFTLY (WHITE)
COLOR 3: 2VR2A HOT TANGO (RED)
COLOR 4: 1M52E TOKAY (GRAY)

PROJECT SIGN

SCALE: NTS — A3 — A-702

SIGN SCHEDULE

ROOM NO	SIGN ID	SIGN TYPE	QTY	SIGN TEXT	DETAIL	REMARKS
102	102	A	1	102 OFFICE	B1/A-702	
103	103	A	1	103 STORAGE	B1/A-702	
104	104	A	1	104 ELECTRICAL	B1/A-702	
105	105	A	1	105 CONFERENCE	B1/A-702	
106	106	A	1	106 MECHANICAL	B1/A-702	
107	107	A	1	107 PLUMBING CHASE	B1/A-702	
108	108	B	1	WOMEN	B1/A-702	
109	109	A	1	108 JANITOR	B1/A-702	
110	110	A	1	109 UNIT OFFICE	B1/A-702	
111	111	A	1	110 UNIT STORAGE	B1/A-702	
111A	111A	A	1	110A UNIT VAULT	B1/A-702	
112	112	A	1	111 UNIT STORAGE	B1/A-702	
112A	112A	A	1	111A UNIT VAULT	B1/A-702	
113	113	A	1	113 ELECTRICAL / TELECOMMUNICATION	B1/A-702	
113A	113	A	1	113A ELECTRICAL	B1/A-702	
113B	113	A	1	113B TELCOMMUNICATION	B1/A-702	
114	114	A	1	113C ELECTRICAL	B1/A-702	
115	115	A	1	114 UNIT OFFICE	B1/A-702	
116	116	A	1	115 UNIT OFFICE	B1/A-702	
117	117	A	1	116 UNIT STORAGE	B1/A-702	
117A	117A	A	1	116A UNIT VAULT	B1/A-702	
118	118	A	1	117 UNIT STORAGE	B1/A-702	
118A	118A	A	1	117A UNIT VAULT	B1/A-702	
119	119	A	1	118 UNIT OFFICE	B1/A-702	
120	120	A	1	119 UNIT OFFICE	B1/A-702	
121	121	A	1	120 UNIT STORAGE	B1/A-702	
121A	121A	A	1	120A UNIT VAULT	B1/A-702	
122	122	A	1	121 OFFICE	B1/A-702	
123	123	A	1	122 CLASSROOM	B1/A-702	
124	124	A	1	123 CLASSROOM	B1/A-702	
125	125	A	1	124 ELECTRICAL / TELECOMMUNICATION	B1/A-702	
125A	125	A	1	124A ELECTRICAL	B1/A-702	
125B	125	A	1	124B TELCOMMUNICATION	B1/A-702	
126	126	B	1	MEN	B1/A-702	
127	127	A	1	125 PLUMBING CHASE	B1/A-702	
128	128	A	1	126 MECHANICAL	B1/A-702	
129	129	A	2	201 ASSEMBLY HALL	B1/A-702	

GRAPHIC SCALE

0 20 40 80 120FT
SCALE: 1" = 40'-0"

0 20 40 80 120FT
SCALE: 1" = 40'-0"

0 20 40 80 120FT
SCALE: 1" = 40'-0"

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KEAUKAHA MILITARY RESERVATION – B621
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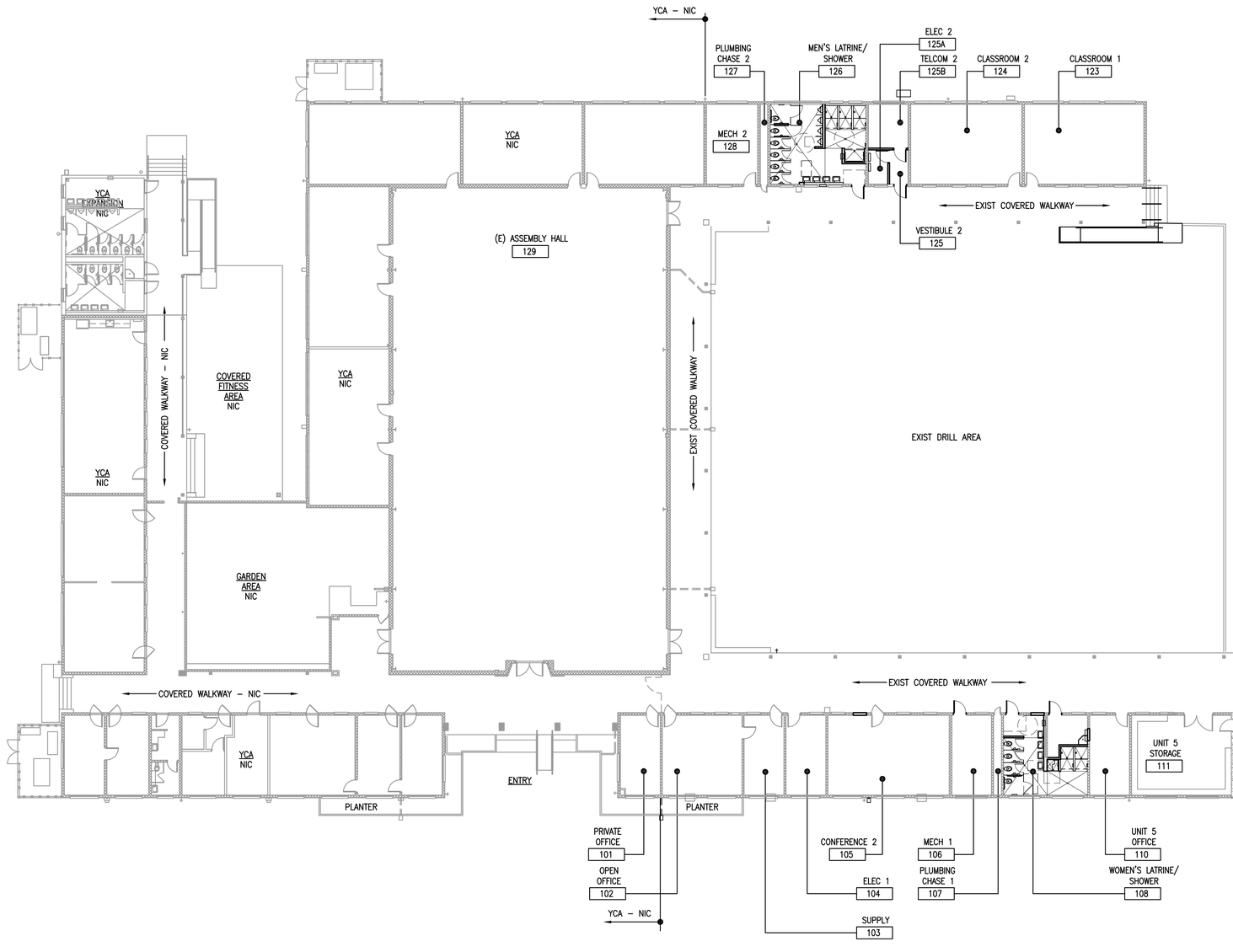
HAWAI'I ARMY NATIONAL GUARD (HIARNG)
BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS

HIARNG – SIGN TYPES AND SCHEDULE

SCALE: AS NOTED
STATE PROJECT NO. CA-1212-C3
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A-702

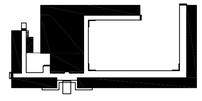
GENERAL NOTES

1. ALL FURNITURE INDICATED IS NIC AND PROVIDED FOR INFORMATIONAL PURPOSES ONLY.



OVERALL FF&E PLAN

SCALE: 1/16" = 1'–0"



BLDG 621 KEY PLAN

GRAPHIC SCALE

16' 12' 8' 4' 0 16' 32'

1/16" = 1'–0"

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SYM		

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FINAL SUBMITTAL

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DEPARTMENT OF DEFENSE
HAWAII ARMY NATIONAL GUARD
DESIGN AND PROJECT MANAGEMENT BRANCH
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HAWAI`I ARMY NATIONAL GUARD (HIARNG)
BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS

HIARNG – OVERALL FF&E PLAN

SCALE: AS NOTED

STATE PROJECT NO.
CA-1212-C3

FEDERAL PROJECT NO.
15130007

SHEET 54 of 126

A-801

GENERAL NOTES:

1. PIPE AND CONDUIT PENETRATIONS IN FIRE RATED WALLS AND FLOOR/CEILING CONSTRUCTION SHALL BE FIRESTOPPED WITH A UL LISTED THROUGH PENETRATION FIRESTOPPING SYSTEM.

2. PROVIDE PORTABLE FIRE EXTINGUISHERS IN ACCORDANCE WITH NFPA 10 AND SPECIFICATION 10520.

FIRE SPRINKLER NOTES:

1. SPRINKLER SYSTEM DESIGN AND INSTALLATION SHALL BE IN ACCORDANCE WITH NFPA 13, SPECIFICATION 15300. CONTRACTOR SHALL VERIFY THE LOCATION OF ALL SPRINKLER SYSTEM COMPONENTS AND COORDINATE WITH THE VARIOUS TRADES.

2. ALL DEVICES SHALL BE UL LISTED OR FM APPROVED.

3. WATER SUPPLY DATA:

   TEST HYDRANT: FH ALONG CIRCLE AVENUE
   FLOW HYDRANT: FH ALONG CIRCLE AVENUE

   STATIC PRESSURE: 83 PSI
   RESIDUAL PRESSURE: 20 PSI
   FLOW AT RESIDUAL PRESSURE: 2,100 GPM

4. WET PIPE SPRINKLER SYSTEMS SHALL BE DESIGNED IN ACCORDANCE WITH NFPA 13, SPECIFICATION 15300, AND AS INDICATED:

   HIARNG PORTION OF BUILDING 621:

   CLASSROOM, CONFERENCE, COVERED WALKWAY, LATRINE, OFFICE, VESTIBULE:

OCCUPANCY CLASSIFICATION:	LIGHT HAZARD (HAZARD CATEGORY 1)
DESIGN DENSITY:	0.10 GPM/SF
DESIGN AREA:	1,500 SF
HOSE STREAM:	250 GPM
DURATION:	60 MINUTES
SPRINKLER TYPE:	QUICK RESPONSE SSP OR SSU
SPRINKLER TEMPERATURE RATING:	ORDINARY
SPRINKLER K-FACTOR:	K=5.6 MINIMUM

   ELECTRICAL, JANITOR, MECHANICAL, STORAGE, SUPPLY, TELECOM, VAULT:

OCCUPANCY CLASSIFICATION:	ORDINARY HAZARD GROUP 1 (HAZARD CATEGORY 2)
DESIGN DENSITY:	0.20 GPM/SM
DESIGN AREA:	2,500 SF
HOSE STREAM:	250 GPM
DURATION:	60 MINUTES
SPRINKLER TYPE:	QUICK RESPONSE SSP OR SSU
SPRINKLER TEMPERATURE RATING:	ORDINARY
SPRINKLER K-FACTOR:	K=5.6 MINIMUM

5. SPRINKLER HYDRAULIC CALCULATIONS SHALL INCLUDE A 10 PSI SAFETY FACTOR TO THE WATER SUPPLY CURVE.

6. PIPING SHALL BE PROVIDED WITH SWAY BRACING AND BRANCH LINE RESTRAINT IN ACCORDANCE WITH NFPA 13.

7. SPRINKLER PIPE SHALL COMPLY WITH NFPA 13, EXCEPT THAT PLASTIC PIPE OR COPPER TUBING WILL NOT BE PERMITTED. ALL PIPING SHALL BE SCHEDULE 40 STEEL PIPE. EXTERIOR PIPING SHALL BE GALVANIZED AND PAINTED.

8. PRIME AND FINISH COAT ALL SPRINKLER PIPE IN ACCORDANCE WITH SPECIFICATION 09900. PAINT EXPOSED SPRINKLER PIPE TO MATCH THE COLOR OF CEILING/WALLS.

9. PIPE ROUTING AND SPRINKLER LOCATIONS SHOWN ARE CONCEPTUAL. THE CONTRACTOR SHALL INSTALL THE SYSTEM IN ACCORDANCE WITH THE APPLICABLE CODES, MANUFACTURER'S RECOMMENDATIONS, AND EQUIPMENT LISTINGS.

10. ALL SPRINKLER PIPING IN FINISHED AREAS SHALL BE CONCEALED FROM VIEW.

11. IN AREAS WITH SUSPENDED ACOUSTICAL TILE CEILINGS, LOCATE SPRINKLERS IN APPROXIMATE CENTER OF TILE.

12. PROVIDE SPLASH BLOCK FOR SPRINKLER SYSTEM RISER DRAINS, WATER MOTOR GONG DRAINS, AND INSPECTOR'S TEST CONNECTIONS.

13. PROVIDE TAMPER SWITCHES FOR ALL NORMALLY OPEN OS&Y CONTROL VALVES AND BUTTERFLY VALVES ON THE SPRINKLER SYSTEMS, INCLUDING RISER CONTROL VALVES. CHAIN AND LOCK ALL OS & Y VALVES AND BUTTERFLY VALVES IN THEIR NORMALLY OPEN OR CLOSED POSITION.

LEGEND & ABBREVIATIONS

SYMBOLS	ABBREVIATIONS	DESCRIPTION
	AFF	ABOVE FINISHED FLOOR
	CONC	CONCRETE
FDC	FDC	FIRE SPRINKLER SYSTEM FIRE DEPARTMENT CONNECTION
— FS —	FS	FIRE SPRINKLER SYSTEM PIPING
PS		FIRE SPRINKLER SYSTEM PRESSURE SWITCH
		FIRE SPRINKLER SYSTEM RISER (WET PIPE)
TS		FIRE SPRINKLER SYSTEM TAMPER SWITCH
WF		FIRE SPRINKLER WATERFLOW SWITCH
— FW —		FIRE WATER LINE
FW_{xx}		FIRE WATER LINE SIZE DESIGNATION
		PIPE/CONDUIT CAP
	CONT	PIPE/CONDUIT CONTINUATION
		PIPE/CONDUIT ELBOW (TURNING DOWN)
		PIPE/CONDUIT PLUG
		PIPE/CONDUIT TEE (TURNING DOWN)
	UP/DN	PIPE/CONDUIT UP/DOWN
	NC	NORMALLY CLOSED (VALVE)
	NO	NORMALLY OPEN (VALVE)
FEC E		PORTABLE FIRE EXTINGUISHER CABINET. EXISTING FIRE HOSE CABINET WITH HOSE RACK REMOVED AND NEW 4A:60B:C RATED MULTIPURPOSE DRY CHEMICAL FIRE EXTINGUISHER
ABC		PORTABLE FIRE EXTINGUISHER, 4A:60B:C RATED MULTIPURPOSE DRY CHEMICAL, MOUNTED ON BRACKET @ 48" AFF TO TOP OF HANDLE.
	TYP	TYPICAL
— W —		WATER LINE
W_{xx}		WATER LINE SIZE DESIGNATION

HAWAII ARMY NATIONAL GUARD

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REGISTERED PROFESSIONAL ENGINEER
MELVIN K. HAMANO
FP1244
FIRE PROTECTION
STATE OF CALIFORNIA

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION 6/30/2021
SIGNATURE EXPIRATION DATE

SYM	DESCRIPTION	DATE	APPR

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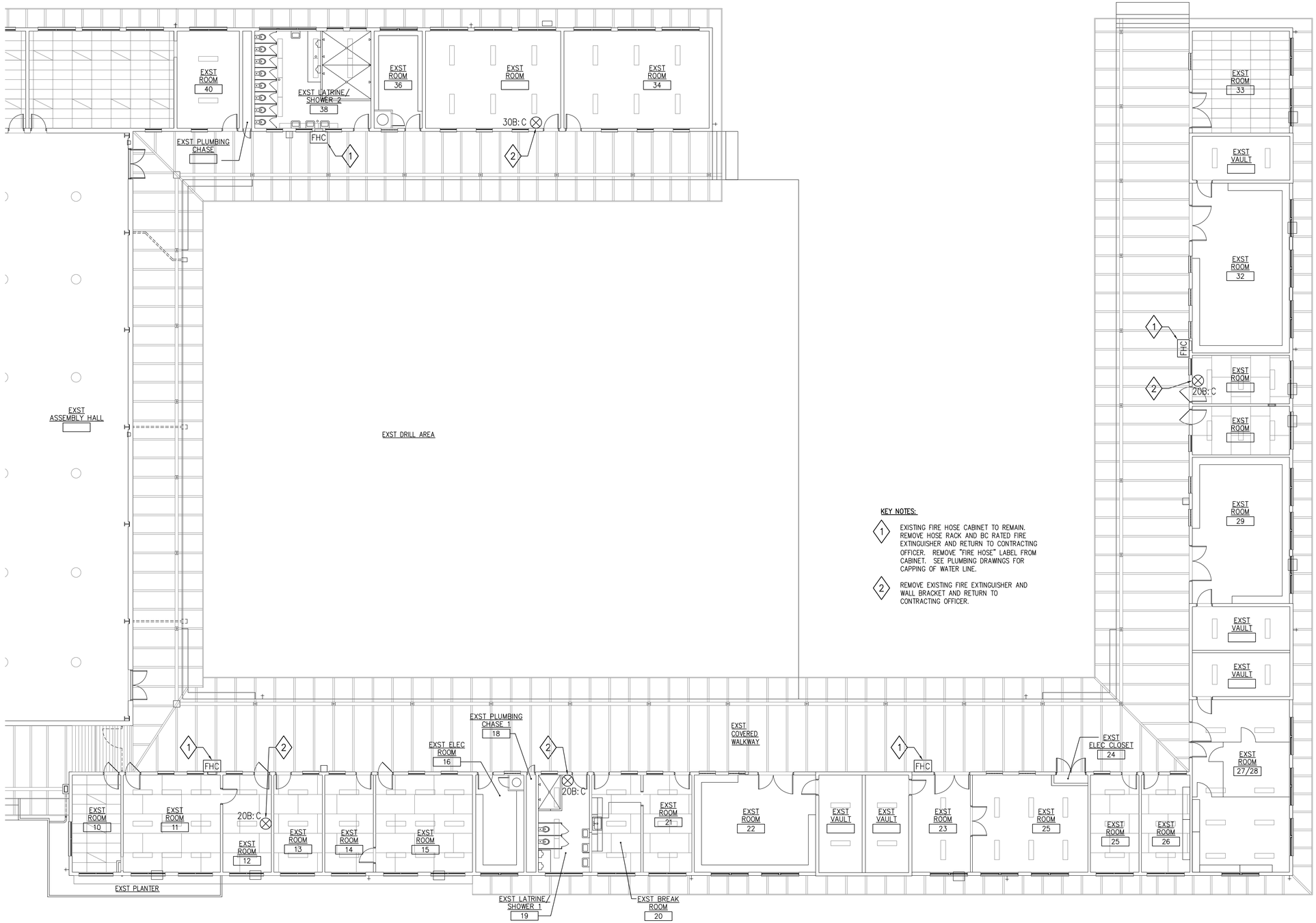
HAWAI`I ARMY NATIONAL GUARD (HIARNG)
BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS

FIRE PROTECTION NOTES, LEGEND AND ABBREVIATIONS

SCALE: AS NOTED
STATE PROJECT NO. CA-1212-C3
FEDERAL PROJECT NO. 15130007
SHEET 55 of 126

FX001

C:\DOCUMENTS AND SETTINGS\ADMINISTRATOR\DESKTOP\BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS\FX001 - FIRE PROTECTION NOTES, LEGEND AND ABBREVIATIONS.DWG, 6/30/2021 8:49:26 AM, Brother DCP-J1100DW Printer (HalfPage).ctb



KEY NOTES:

1. EXISTING FIRE HOSE CABINET TO REMAIN. REMOVE HOSE RACK AND BC RATED FIRE EXTINGUISHER AND RETURN TO CONTRACTING OFFICER. REMOVE "FIRE HOSE" LABEL FROM CABINET. SEE PLUMBING DRAWINGS FOR CAPPING OF WATER LINE.
2. REMOVE EXISTING FIRE EXTINGUISHER AND WALL BRACKET AND RETURN TO CONTRACTING OFFICER.

PARTIAL BUILDING 621 FIRE PROTECTION DEMOLITION PLAN

SCALE: 3/32" = 1'-0"

PLAN NORTH

GRAPHIC SCALE

0 8 16 24 32FT

SCALE: 3/32"=1'-0"

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EXPIRATION DATE 6/30/2021

SYM	DESCRIPTION	DATE	APPR

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SUBMITTAL DATE 30 SEPTEMBER 2019

DES DMK DRW TEC CHK KMM

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FACILITY MANAGEMENT OFFICE
HAWAII ARMY NATIONAL GUARD
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DEPARTMENT OF DEFENSE

KEAUKAHA MILITARY RESERVATION – B621
HILO, HAWAI'I

HAWAI'I ARMY NATIONAL GUARD (HIARNG)
BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS

PARTIAL BUILDING 621 FIRE PROTECTION DEMOLITION PLAN

SCALE: AS NOTED

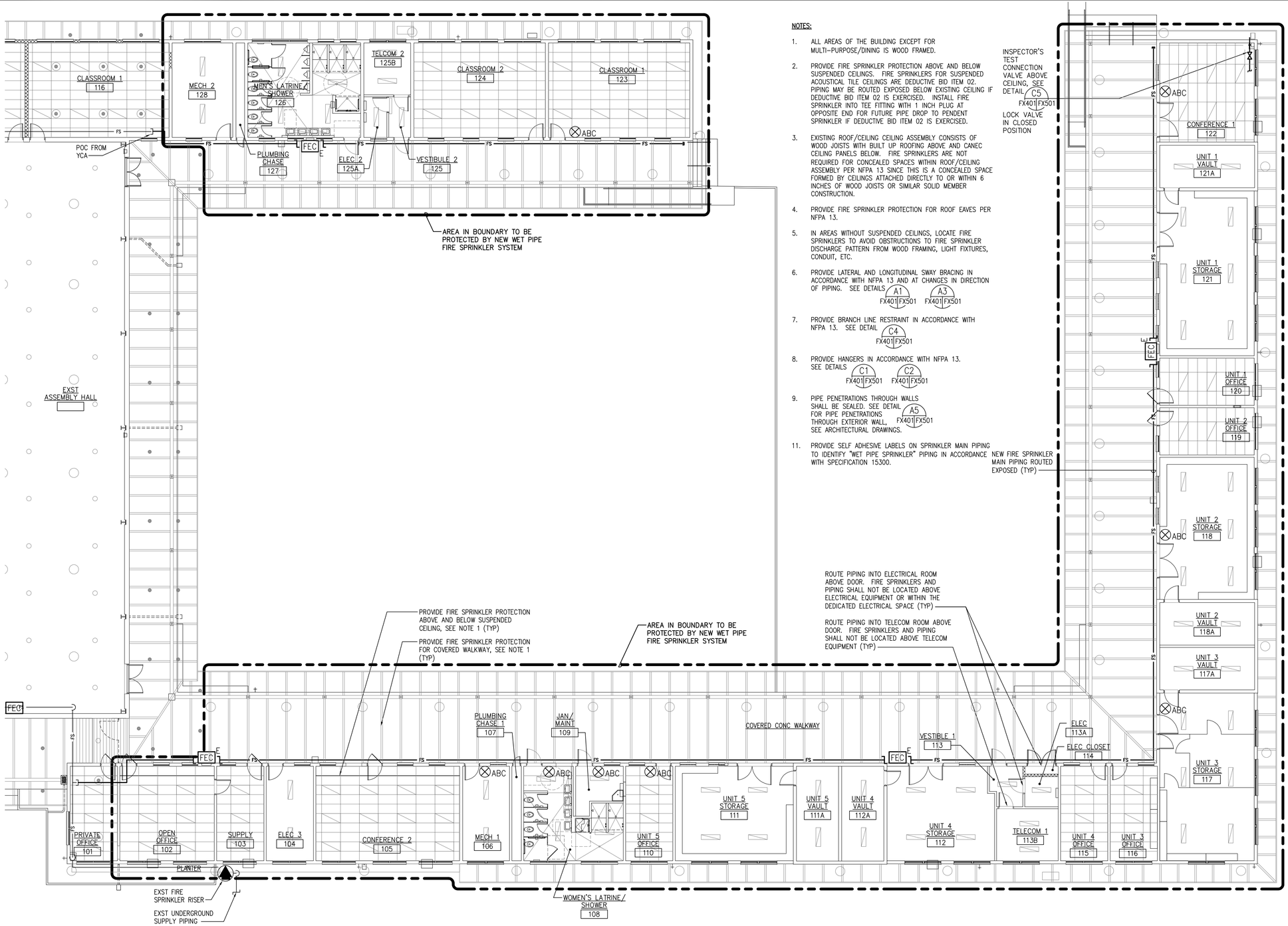
STATE PROJECT NO. CA-1212-C3

FEDERAL PROJECT NO. 15130007

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FX101

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NOTES:

1. ALL AREAS OF THE BUILDING EXCEPT FOR MULTI–PURPOSE/DINING IS WOOD FRAMED.
2. PROVIDE FIRE SPRINKLER PROTECTION ABOVE AND BELOW SUSPENDED CEILINGS. FIRE SPRINKLERS FOR SUSPENDED ACOUSTICAL TILE CEILINGS ARE DEDUCTIVE BID ITEM 02. PIPING MAY BE ROUTED EXPOSED BELOW EXISTING CEILING IF DEDUCTIVE BID ITEM 02 IS EXERCISED. INSTALL FIRE SPRINKLER INTO TEE FITTING WITH 1 INCH PLUG AT OPPOSITE END FOR FUTURE PIPE DROP TO PENDENT SPRINKLER IF DEDUCTIVE BID ITEM 02 IS EXERCISED.
3. EXISTING ROOF/CEILING CEILING ASSEMBLY CONSISTS OF WOOD JOISTS WITH BUILT UP ROOFING ABOVE AND CANEC CEILING PANELS BELOW. FIRE SPRINKLERS ARE NOT REQUIRED FOR CONCEALED SPACES WITHIN ROOF/CEILING ASSEMBLY PER NFPA 13 SINCE THIS IS A CONCEALED SPACE FORMED BY CEILINGS ATTACHED DIRECTLY TO OR WITHIN 6 INCHES OF WOOD JOISTS OR SIMILAR SOLID MEMBER CONSTRUCTION.
4. PROVIDE FIRE SPRINKLER PROTECTION FOR ROOF EAVES PER NFPA 13.
5. IN AREAS WITHOUT SUSPENDED CEILINGS, LOCATE FIRE SPRINKLERS TO AVOID OBSTRUCTIONS TO FIRE SPRINKLER DISCHARGE PATTERN FROM WOOD FRAMING, LIGHT FIXTURES, CONDUIT, ETC.
6. PROVIDE LATERAL AND LONGITUDINAL SWAY BRACING IN ACCORDANCE WITH NFPA 13 AND AT CHANGES IN DIRECTION OF PIPING. SEE DETAILS A1 FX401 FX501 A3 FX401 FX501
7. PROVIDE BRANCH LINE RESTRAINT IN ACCORDANCE WITH NFPA 13. SEE DETAIL C4 FX401 FX501
8. PROVIDE HANGERS IN ACCORDANCE WITH NFPA 13. SEE DETAILS C1 FX401 FX501 C2 FX401 FX501
9. PIPE PENETRATIONS THROUGH WALLS SHALL BE SEALED. SEE DETAIL A5 FX401 FX501 FOR PIPE PENETRATIONS THROUGH EXTERIOR WALL, SEE ARCHITECTURAL DRAWINGS.
11. PROVIDE SELF ADHESIVE LABELS ON SPRINKLER MAIN PIPING TO IDENTIFY "WET PIPE SPRINKLER" PIPING IN ACCORDANCE WITH SPECIFICATION 15300.

PARTIAL BUILDING 621 FIRE SPRINKLER PLAN

SCALE: 3/32" = 1'–0"

PLAN NORTH

GRAPHIC SCALE

0 2 4 8 16 24 32FT

SCALE: 3/32"=1'–0"

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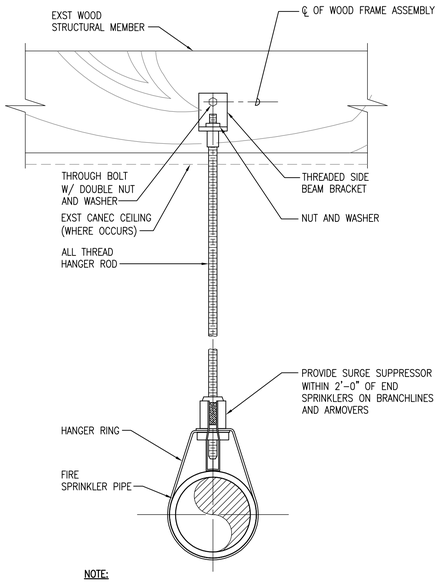
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PARTIAL BUILDING 621 FIRE SPRINKLER PLAN

SCALE: AS NOTED
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SHEET 57 of 126

FX401

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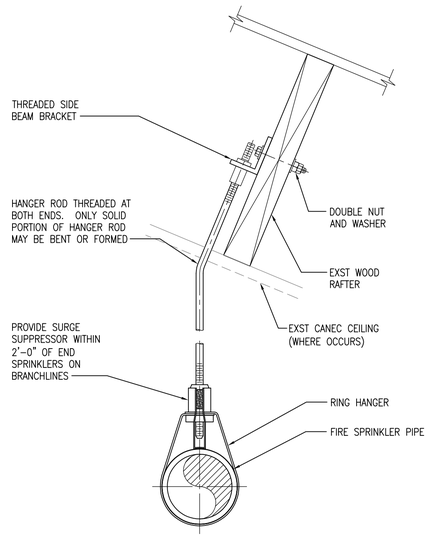


NOTE:

HOLES IN WOOD FRAME ASSEMBLY SHALL NOT EXCEED 1/16 INCH GREATER THAN THE BOLT DIAMETER.

TYPICAL PIPE HANGER DETAIL

SCALE: NONE FX401 C1

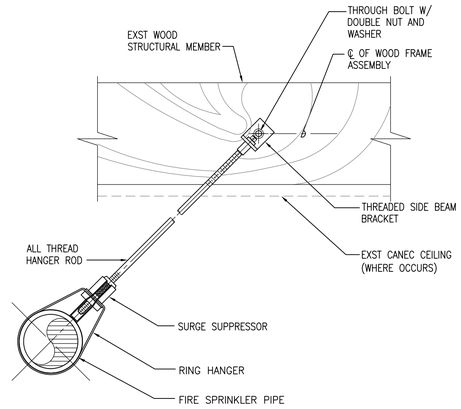


NOTE:

HOLES IN WOOD FRAME ASSEMBLY SHALL NOT EXCEED 1/16 INCH GREATER THAN THE BOLT DIAMETER.

TYPICAL PIPE HANGER DETAIL

SCALE: NONE FX401 C2

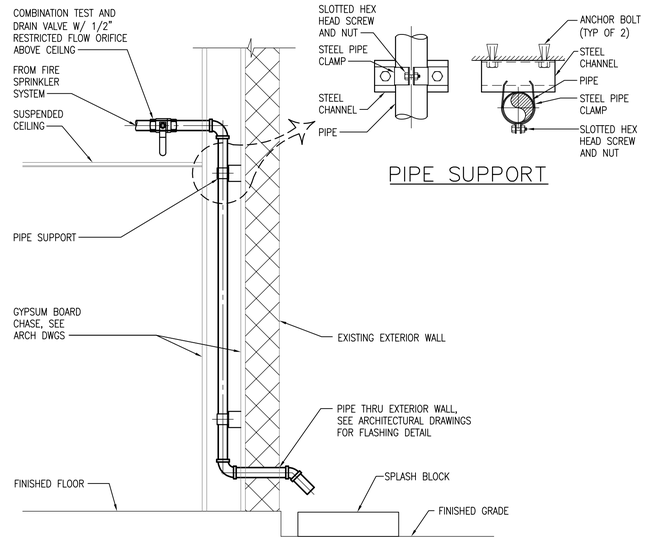


NOTE:

1. PROVIDE BRANCH LINE RESTRAINT WITHIN 2'-0" OF END OF BRANCH LINE.
2. HOLES IN WOOD FRAME ASSEMBLY SHALL NOT EXCEED 1/16 INCH GREATER THAN THE BOLT DIAMETER.

TYPICAL BRANCH LINE RESTRAINT DETAIL

SCALE: NONE FX401 C4

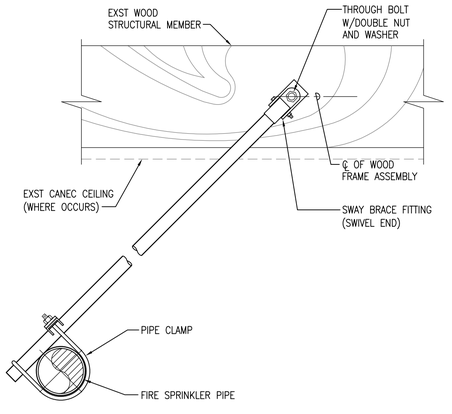


NOTE:

LOCK INSPECTOR'S TEST VALVE IN CLOSE POSITION.

INSPECTOR'S TEST CONNECTION DETAIL

SCALE: NONE FX401 C5

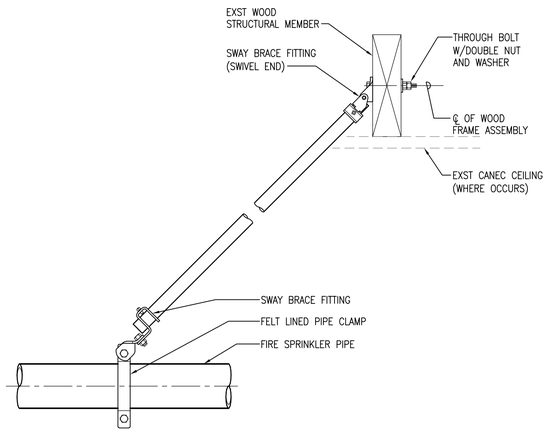


NOTES:

1. SWAY BRACING COMPONENTS, SIZING AND SPACING SHALL BE IN ACCORDANCE WITH NFPA 13.
2. HOLES IN WOOD FRAME ASSEMBLY SHALL NOT EXCEED 1/16 INCH GREATER THAN THE BOLT DIAMETER.

TYPICAL LATERAL SWAY BRACE DETAIL

SCALE: NONE FX401 A1

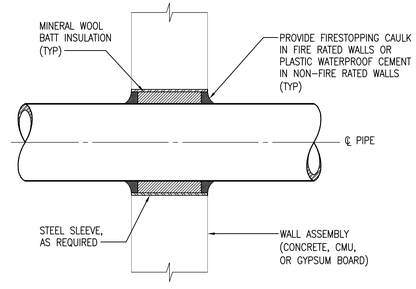


NOTES:

1. SWAY BRACING COMPONENTS, SIZING AND SPACING SHALL BE IN ACCORDANCE WITH NFPA 13.
2. HOLES IN WOOD FRAME ASSEMBLY SHALL NOT EXCEED 1/16 INCH GREATER THAN THE BOLT DIAMETER.

TYPICAL LONGITUDINAL SWAY BRACE DETAIL

SCALE: NONE FX401 A3



NOTES:

1. CONTRACTOR SHALL PROVIDE A UL LISTED THROUGH PENETRATION FIRE STOP SYSTEM FOR FIRE RATED WALLS.

TYPICAL PIPE THRU INTERIOR WALL DETAIL

SCALE: NONE FX401 A5

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FINAL SUBMITTAL
SUBMITTAL DATE 30 SEPTEMBER 2019
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BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS
DETAILS

SCALE: AS NOTED
STATE PROJECT NO. CA-1212-C3
FEDERAL PROJECT NO. 15130007
SHEET 58 of 126
FX501

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GENERAL NOTES:

1. PIPE AND CONDUIT PENETRATIONS IN FIRE RATED WALLS AND FLOOR/CEILING CONSTRUCTION SHALL BE FIRESTOPPED WITH A UL LISTED THROUGH PENETRATION FIRESTOPPING SYSTEM.

2. PROVIDE PORTABLE FIRE EXTINGUISHERS IN ACCORDANCE WITH NFPA 10 AND SPECIFICATION 10520.

FIRE ALARM NOTES:

1. PROVIDE ADDRESSABLE FIRE ALARM SYSTEM. FIRE ALARM SYSTEM DESIGN AND INSTALLATION SHALL BE IN ACCORDANCE WITH NFPA 72 AND SPECIFICATION 13850.

2. DEVICES ARE SHOWN IN SUGGESTED LOCATIONS. FINAL QUANTITY AND LAYOUT SHALL BE IN ACCORDANCE WITH APPLICABLE CODES, MANUFACTURER'S RECOMMENDATIONS, SPECIFICATION 13850, AND EQUIPMENT LISTINGS. CONTRACTOR IS RESPONSIBLE TO PROVIDE A FULLY FUNCTIONAL SYSTEM WITH ALL MATERIALS, EQUIPMENT, AND DEVICES WHETHER SHOWN ON DRAWINGS OR NOT. COORDINATE LOCATION OF DEVICES WITH STRUCTURAL MEMBERS, ARCHITECTURAL FEATURES, LIGHTING, ELECTRICAL CONDUIT AND CABLE TRAYS, MECHANICAL DUCTS AND PIPING, AND AIR HANDLING SYSTEMS.

3. FIRE ALARM CONDUIT SHALL BE 3/4 INCH MINIMUM, UNLESS OTHERWISE NOTED.

4. INITIATING DEVICE CIRCUITS SHALL BE CLASS B SUPERVISED. SIGNALING LINE CIRCUITS SHALL BE CLASS B SUPERVISED. SIGNALING LINE CIRCUITS FOR THE NETWORK SHALL BE CLASS A SUPERVISED. NOTIFICATION CIRCUITS SHALL BE CLASS A SUPERVISED.

5. WIRING FOR 24 VDC FIRE ALARM CIRCUITS SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE. VISUAL ALARM CIRCUITS SHALL BE SOLID COPPER NO. 14 AWG MINIMUM. INITIATING DEVICE CIRCUITS SHALL BE SOLID COPPER NO. 16 AWG MINIMUM. FOR SIGNALING LINE CIRCUITS, PROVIDE SINGLE STRAND TWISTED PAIR NO. 18 TO NO. 12 AWG DEPENDING ON DISTANCE AND PER MANUFACTURER'S RECOMMENDATIONS.

6. SEPARATE CONDUITS SHALL BE USED FOR 120 VAC AND 24 VDC CIRCUITS. CONDUIT SHALL BE CONCEALED IN FINISHED AREAS.

7. ALL FIRE ALARM DEVICES AND SIGNALS USED FOR THE GENERAL EVACUATION OF THE FACILITY SHALL BE ADA/ABA COMPLIANT. MOUNT AUDIOVISUAL AND VISUAL ALARMS 80 INCHES ABOVE FINISH FLOOR TO BOTTOM OF LENS. MOUNT AUDIBLE ALARMS 90 INCHES ABOVE FINISH FLOOR TO TOP OF DEVICE. MOUNT MANUAL PULL STATIONS 48 INCHES ABOVE FINISH FLOOR TO TOP OF MANUAL PULL STATION.

8. FIRE ALARM SYSTEM SHALL BE PROVIDED WITH TRANSIENT VOLTAGE SURGE SUPPRESSION (TVSS) PROTECTION DEVICES ON ALL CIRCUITS ENTERING AND LEAVING THE BUILDING. PROVIDE TVSS DEVICES AT POWER SUPPLY CONNECTION TO FIRE ALARM CONTROL PANEL, EXTENDER PANELS, ETC. A COMPREHENSIVE EVALUATION OF OTHER TRANSIENT VOLTAGE ENTRY POINTS SHALL BE CONDUCTED AND APPROPRIATE TVSS PROTECTION DEVICES SHALL BE INSTALLED WHERE NEEDED.

9 . THE MANUFACTURER'S REPRESENTATIVE FOR THE BUILDING FIRE ALARM SYSTEM SHALL BE PRESENT AT THE PRELIMINARY AND FINAL ACCEPTANCE TESTING OF THE FIRE ALARM SYSTEM INSTALLATION.

10. CONTRACTOR SHALL PATCH, REPAIR, AND PAINT WALLS AND CEILINGS DAMAGED DURING FIRE ALARM SYSTEM INSTALLATION.

LEGEND & ABBREVIATIONS

SYMBOLS	ABBREVIATIONS	DESCRIPTION
	AFF	ABOVE FINISHED FLOOR
	CONC	CONCRETE
CAB		FIRE ALARM SYSTEM CABINET
	CKT	FIRE ALARM SYSTEM CIRCUIT
CM		FIRE ALARM SYSTEM CONTROL MODULE
FACP	FACP	FIRE ALARM SYSTEM CONTROL PANEL
		FIRE ALARM SYSTEM END OF LINE RESISTOR
EP		FIRE ALARM SYSTEM EXTENDER PANEL
H		FIRE ALARM SYSTEM HORN, WALL MOUNTED
H		FIRE ALARM SYSTEM HORN STROBE, WALL MOUNTED
H WP		FIRE ALARM SYSTEM HORN STROBE, WALL MOUNTED, WEATHERPROOF
JB		FIRE ALARM SYSTEM JUNCTION BOX
M		FIRE ALARM SYSTEM MANUAL PULL STATION
M WP		FIRE ALARM SYSTEM MANUAL PULL STATION, WEATHERPROOF
MM		FIRE ALARM SYSTEM MONITOR MODULE
	NAC	FIRE ALARM SYSTEM NOTIFICATION APPLIANCE CIRCUIT
FA		FIRE ALARM SYSTEM RACEWAY
	SLC	FIRE ALARM SYSTEM SIGNALING LINE CIRCUIT
		FIRE ALARM SYSTEM SMOKE DETECTOR, PHOTOELECTRIC
		FIRE ALARM SYSTEM STROBE, WALL MOUNTED
TVSS		FIRE ALARM SYSTEM TRANSIENT VOLTAGE SURGE SUPPRESSION PROTECTION DEVICE
PS		FIRE SPRINKLER SYSTEM PRESSURE SWITCH
		FIRE SPRINKLER SYSTEM RISER (WET PIPE)
TS		FIRE SPRINKLER SYSTEM TAMPER SWITCH
WF		FIRE SPRINKLER SYSTEM WATERFLOW SWITCH
		PIPE/CONDUIT CAP
	CONT	PIPE/CONDUIT CONTINUATION
		PIPE/CONDUIT ELBOW (TURNING DOWN)
		PIPE/CONDUIT PLUG
		PIPE/CONDUIT TEE (TURNING DOWN)
	UP/DN	PIPE/CONDUIT UP/DOWN
	TYP	TYPICAL

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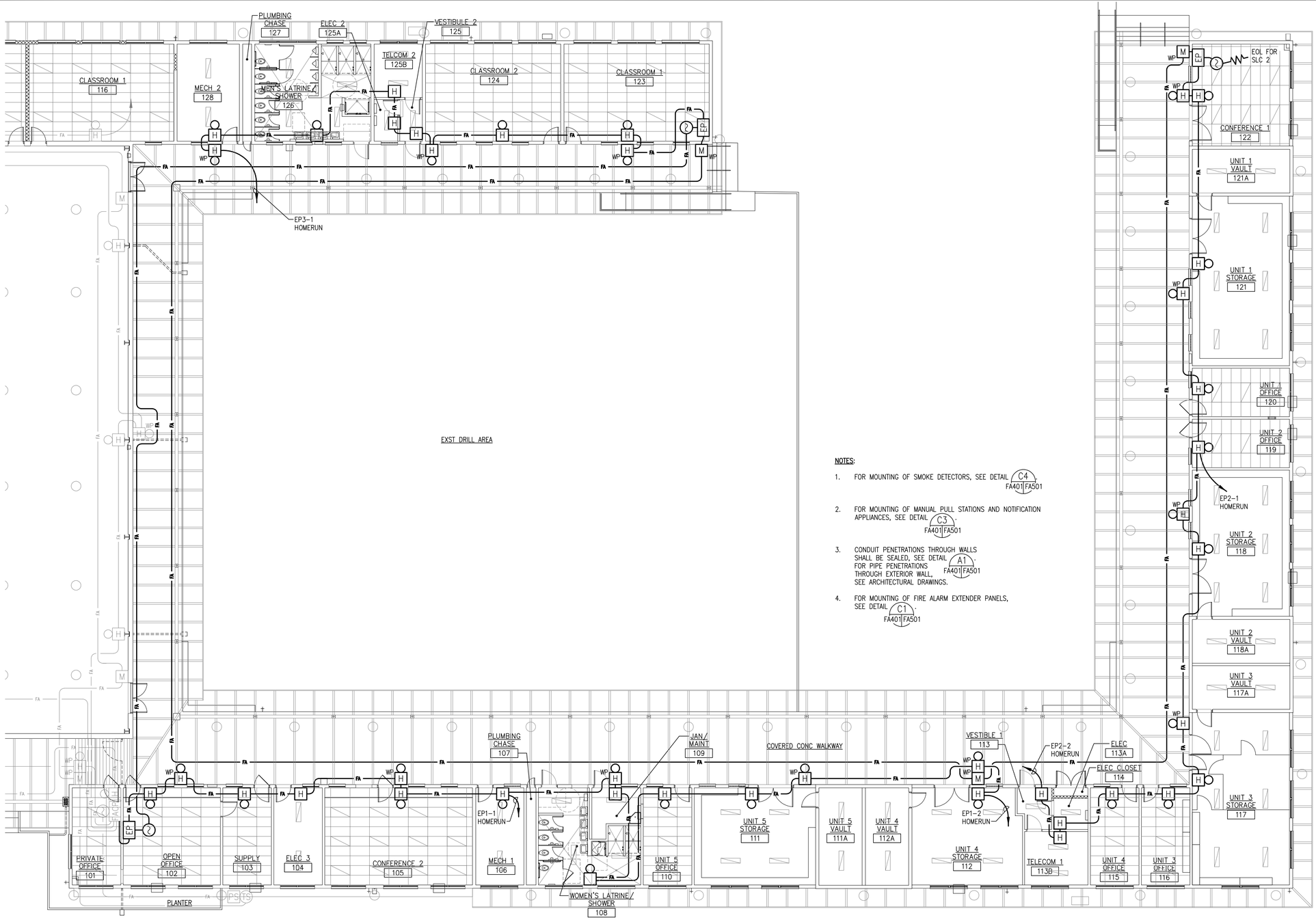
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SUBMITTAL DATE 30 SEPTEMBER 2019
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FIRE ALARM NOTES, LEGEND AND ABBREVIATIONS

SCALE: AS NOTED
STATE PROJECT NO. CA-1212-C3
FEDERAL PROJECT NO. 15130007
SHEET 59 of 126
FA001

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NOTES:

1. FOR MOUNTING OF SMOKE DETECTORS, SEE DETAIL C4 FA401 FA501.
2. FOR MOUNTING OF MANUAL PULL STATIONS AND NOTIFICATION APPLIANCES, SEE DETAIL C3 FA401 FA501.
3. CONDUIT PENETRATIONS THROUGH WALLS SHALL BE SEALED, SEE DETAIL A1 FA401 FA501. FOR PIPE PENETRATIONS THROUGH EXTERIOR WALL, SEE ARCHITECTURAL DRAWINGS.
4. FOR MOUNTING OF FIRE ALARM EXTENDER PANELS, SEE DETAIL C1 FA401 FA501.

PARTIAL BUILDING 621 FIRE ALARM PLAN

SCALE: 3/32" = 1'-0"

PLAN NORTH

GRAPHIC SCALE

0 2 4 8 16 24 32FT

SCALE: 3/32"=1'-0"

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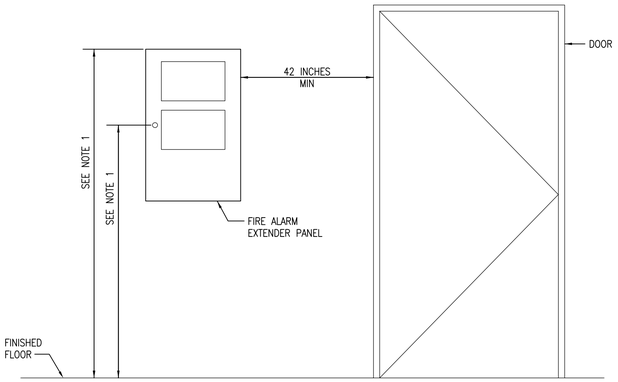
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SHEET 60 of 126

FA401

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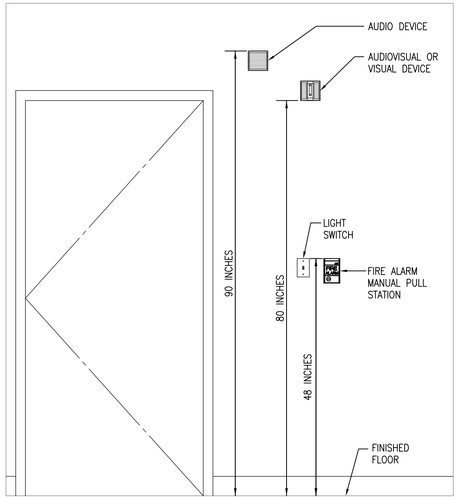


NOTES:

1. INSTALL ENCLOSURES WITH TOP OF CABINET 72 INCHES ABOVE FINISHED FLOOR OR CENTER OF CABINET AT 60 INCHES, WHICHEVER IS LOWER.
2. SURFACE MOUNT PANEL.

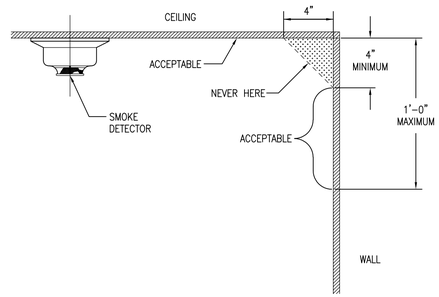
FIRE ALARM EXTENDER PANEL MOUNTING DETAIL

SCALE: NONE — FA401 — C1



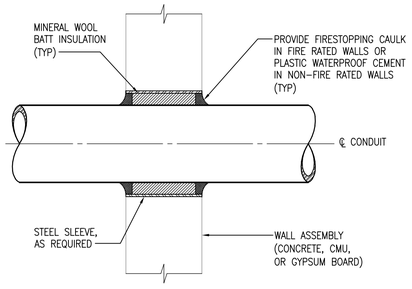
TYPICAL FIRE ALARM DEVICE MOUNTING DETAIL

SCALE: NONE — FA401 — C3



SMOKE DETECTOR MOUNTING DETAIL

SCALE: NONE — FA401 — C4



NOTES:

1. CONTRACTOR SHALL PROVIDE A UL LISTED THROUGH PENETRATION FIRE STOP SYSTEM FOR FIRE RATED WALLS.

TYPICAL CONDUIT THRU INTERIOR WALL DETAIL

SCALE: NONE — FA401 — A1

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DETAILS

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FA501

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SYSTEM INPUT	SYSTEM OUTPUT: ANNUNCIATE ALARM CONDITION ON FACP	ANNUNCIATE SUPERVISORY CONDITION ON FACP	ANNUNCIATE TROUBLE CONDITION ON FACP	ACTIVATE BUILDING NOTIFICATION DEVICES WITH THREE TONE TEMPORAL SIGNAL OUTPUT	TRANSMIT SIGNAL TO REMOTE SUPERVISING STATION (SEE NOTE 1)
	ANNUNCIATION			NOTIFICATION	
WET PIPE SPRINKLER SYSTEM PRESSURE OR WATERFLOW SWITCH (EXISTING)	●			●	●
MANUAL PULL STATION (EXISTING AND NEW)	●			●	●
SMOKE DETECTOR (EXISTING AND NEW)	●			●	●
ANY SPRINKLER CONTROL VALVE TAMPER SWITCH (EXISTING)		●			●
ANY TROUBLE CONDITION ON SYSTEM (EXISTING AND NEW)			●		●

NOTE:
1. SIGNAL TRANSMISSION VIA EXISTING DACT.

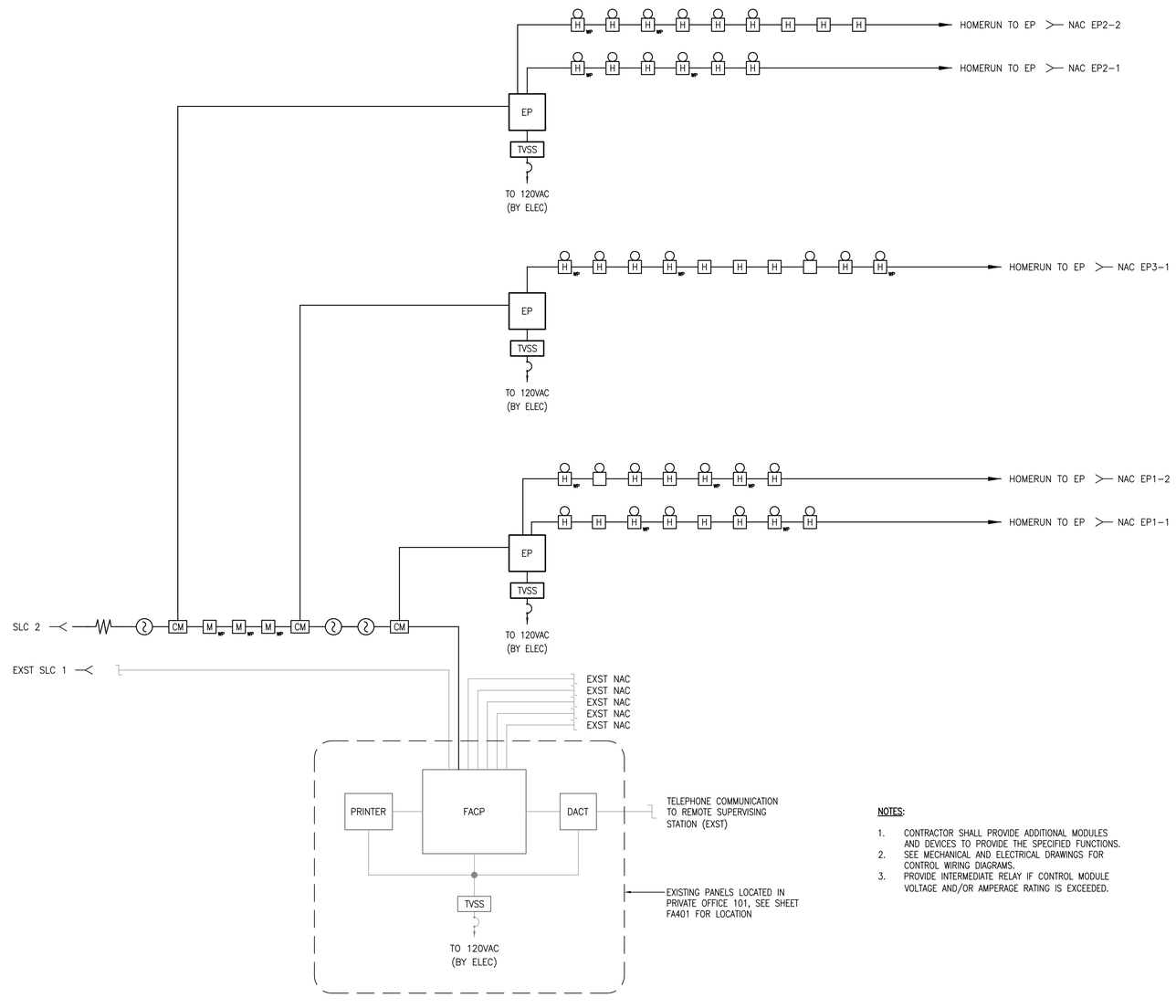
FIRE ALARM SYSTEM MATRIX

SCALE: NONE

EXISTING FIRE ALARM SIGNALS MONITORED OFF SITE

ZONE	SIGNAL
1.	SPRINKLER WATERFLOW ALARM
2.	GENERAL ALARM
3.	SUPERVISORY
4.	TROUBLE
5.	SPARE
6.	SPARE

NOTES:
1. SIGNALS MONITORED OFF SITE BY A COMMERCIAL REMOTE SUPERVISING STATION.
2. SIGNALS TRANSMITTED VIA DIGITAL ALARM COMMUNICATOR TRANSMITTER (DACT) VIA TELEPHONE CONNECTION.
3. CONTRACTOR SHALL VERIFY ZONE ASSIGNMENTS AT REMOTE MONITORING STATION.



FIRE ALARM SYSTEM RISER DIAGRAM

SCALE: NONE

NOTES:
1. CONTRACTOR SHALL PROVIDE ADDITIONAL MODULES AND DEVICES TO PROVIDE THE SPECIFIED FUNCTIONS.
2. SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR CONTROL WIRING DIAGRAMS.
3. PROVIDE INTERMEDIATE RELAY IF CONTROL MODULE VOLTAGE AND/OR AMPERAGE RATING IS EXCEEDED.

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REGISTERED PROFESSIONAL ENGINEER
MELVIN K. HAYANO
FP1244
FIRE PROTECTION
STATE OF CALIFORNIA

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION
SIGNATURE
EXPIRATION DATE 6/30/2021

NO	DESCRIPTION	DATE	APPR

SUBMITTAL PHASE: FINAL SUBMITTAL
SUBMITTAL DATE: 30 SEPTEMBER 2019
DES: DMK DRW: TEC CHK: KMM

DEPARTMENT OF DEFENSE
HAWAII ARMY NATIONAL GUARD
DESIGN AND PROJECT MANAGEMENT BRANCH
STATE OF HAWAI`I
FACILITY MANAGEMENT OFFICE
KEAUKAHA MILITARY RESERVATION – B621
HILO, HAWAI`I
HAWAI`I ARMY NATIONAL GUARD (HIARNG)
BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS
FIRE ALARM RISER DIAGRAM AND MATRIX

SCALE: AS NOTED
STATE PROJECT NO. CA-1212-C3
FEDERAL PROJECT NO. 15130007
SHEET 62 of 126
FA601

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PLUMBING LEGEND & ABBREVIATIONS

SYMBOLS	ABBREVIATIONS	DESCRIPTIONS	SYMBOLS	ABBREVIATIONS	DESCRIPTIONS
ϕ	AFCO	ACID WASTE FLOOR CLEANOUT	IW	IW	INDUSTRIAL WATER
	AFF	ABOVE FINISHED FLOOR	IA	IA	INSTRUMENT AIR
	AP	ACCESS PANEL		kW	KILOWATT
		ANGLE VALVE		MAX	MAXIMUM
	APPROX	APPROXIMATELY		MIN	MINIMUM
	ARCH	ARCHITECTURAL			NEW WORK
		BALL VALVE		NO	NUMBER
		BUTTERFLY VALVE		Pa	PASCAL
CA	CA	COMPRESSED AIR		PH	PHASE
CD	CD	CONDENSATE DRAIN		PRV	PRESSURE REDUCING VALVE
	CO	CLEANOUT		PV	PLUG VALVE
		CHECK VALVE		POC	POINT OF CONNECTION
	CLG	CEILING			PRESSURE GAUGE
	CLR	CLEARANCE		PRV	PRESSURE REDUCING VALVE
CA		COMPRESSED AIR			
	CONC	CONCRETE		QTY	QUANTITY
	CONN	CONNECTION		RPBP	REDUCED PRESSURE BACKFLOW PREVENTER
	CONT	CONTINUATION		SHD	SHOWER DRAIN
CW	CW	COLD WATER		SL	SLOPE IN DIRECTION OF THE ARROW
ø	DIA	DIAMETER	S1		STACK NUMBER
	DN	DOWN			
	DWGS	DRAWINGS			STRAINER
	DWV	DRAIN WASTE VENT		SS	STAINLESS STEEL
	EA	EXHAUST AIR		STRUCT	STRUCTURAL
	EEWS	EMERGENCY EYEWASH/SHOWER		S OR W	SOIL OR WASTE
	EEW	EMERGENCY EYEWASH		SQ	SQUARE
	ELEC	ELECTRICAL		SW	SOLAR WATER
	ETP	ELECTRIC TRAP PRIMER	SWR	SWR	SOLAR WATER RETURN
	EWC	ELECTRIC WATER COOLER	SWS	SWS	SOLAR WATER SUPPLY
	EXST	EXISTING		TEMP	TEMPERATURE
ϕ	FCO	FLOOR CLEANOUT		THK	THICK
	FD	FLOOR DRAIN			THERMOMETER
	FIN FLR	FINISHED FLOOR		TMV	THERMOSTATIC MIXING VALVE
	FS	FLOOR SINK	TW	TW	TEMPERED WATER
	FU	FIXTURE UNIT	TWR	TWR	TEMPERED WATER RETURN
G	G	GAS		TYP	TYPICAL
	GV	GATE VALVE			UNION
	GPD	GALLONS PER DAY		V	VOLTS
	GPM	GALLONS PER MINUTE		V	VENT
	HB W/VB	HOSE BIBB W/ VACUUM BREAKER		VTR	VENT THRU ROOF
HW	HW	HOT WATER		WCO	WALL CLEANOUT
HWR	HWR	HOT WATER RETURN		WD	WASTE DISPOSER
	HWRP	HOT WATER RETURN PUMP		WHA	WATER HAMMER ARRESTOR
	Hz	HERTZ			

PLUMBING NOTES

1. CONTRACTOR SHALL VERIFY ALL CONDITIONS PRIOR TO FABRICATION, INSTALLATION AND COMMENCEMENT OF ALL WORK TO BE DONE. COORDINATE ALL WORK TO BE DONE WITH OTHER TRADES.
2. ALL DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
3. CONTRACTOR SHALL COORDINATE ALL WORK WITH OTHER TRADES AND FIELD CONDITIONS AFFECTING OR AFFECTED BY THIS INSTALLATION. SHOULD CONFLICTS OCCUR, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY.
4. PROVIDE DIELECTRIC CONNECTIONS AT ALL FERROUS TO COPPER CONNECTIONS.
5. PROVIDE FIRE STOPPING AT ALL PIPE AND DUCT PENETRATIONS THROUGH FIRE RATED WALLS AND SMOKE WALLS AND FLOORS.
6. PROVIDE EPOXY COATING ON ALL EXTERIOR PIPING AND SUPPORTS.
7. AT EACH TEMPERATURE SENSOR, PROVIDE A THERMOMETER.
8. INDICATE ELECTRICAL CIRCUIT DESIGNATIONS, PANEL AND BREAKER LOCATIONS ON AS-BUILT DRAWINGS.
9. CONTRACTOR SHALL PROVIDE SUPPLEMENTAL STEEL FOR SUPPORT OF DUCTS, PIPING AND OTHER MECHANICAL EQUIPMENT AS INDICATED IN STRUCTURAL DRAWINGS. DO NOT DRILL STRUCTURAL STEEL OR JOISTS.
10. INSTALLATION OF ELECTRICAL ITEMS (E.G. CABLE TRAYS, CONDUITS, ETC.) IN THE CEILING CAVITY AND ACCESS FLOOR SPACE SHALL BE CLOSELY COORDINATED WITH ALL TRADES (I.E. HVAC, FIRE PROTECTION SYSTEMS, ACCESS FLOOR, ETC.) TO AVOID CONFLICTS AND TO INSURE PROPER CLEARANCES ARE MET.
11. ALL MOTOR CONTROLLERS AND CONTROL PANELS SHALL BE INSTALLED WITH CLEARANCE SPACES IN ACCORDANCE WITH NATIONAL ELECTRICAL CODE.
12. UNLESS OTHERWISE INDICATED, MOUNT ALL WALL MOUNTED MECHANICAL DEVICES, PANELS, SWITCHES, ETC AT 48" AFF.
13. ALL ROOF, WALL AND FLOOR PENETRATIONS SHALL BE VERIFIED AND COORDINATED WITH THE STRUCTURAL DRAWINGS.
14. COORDINATE ALL ACCESS PANEL LOCATIONS WITH THE ARCHITECTURAL DRAWINGS AND CENTER ON THE EQUIPMENT OR DEVICE IT SERVES (E.G. WHA, VALVES, ETC.). FOR 1 HOUR RATED WALLS AND ROOF/CEILING ASSEMBLIES, PROVIDE MINIMUM 1 HOUR RATED ACCESS PANELS.
15. CONTRACTOR SHALL ENSURE THAT ALL EQUIPMENT AND PIPING ARE INSTALLED WITH MANUFACTURER'S RECOMMENDED ACCESS SPACE FOR MAINTENANCE, OPERATION & CODES.
16. ALL SINKS, FLOOR DRAINS, FLOOR SINKS AND OTHER WASTE WATER CONNECTIONS WHICH ACCEPT PROCESS/WASHDOWN WATER, SHALL BE PROVIDED WITH 1/4" SCREENED OPENINGS MAXIMUM.
17. WATER CONSERVATION – PROVIDE FLOW RESTRICTORS OR OTHER APPROVED FLOW CONTROL DEVICES TO LIMIT FLOW ON ALL LAVATORY FAUCETS TO A MAXIMUM OF 1.5 GPM, FOR ALL SHOWER HEADS TO 2.0 GPM AND SINKS TO 2.5 GPM AND FOR ALL URINALS TO 0.13 GALLONS PER FLUSH AND FOR ALL WATER CLOSETS TO 1.3 GALLONS PER FLUSH.
18. PROVIDE SEISMIC BRACING AS SPECIFIED.
19. UNLESS OTHERWISE INDICATED, MOUNT ALL HOSE BIBBS AT 24"AFF.
20. NO PIPING OR DUCTS ALLOWED ABOVE THE ELECTRIC ROOMS OR TELECOMM ROOMS UNLESS THEY ARE SERVING THAT ROOM.
21. ALL GAPS AT THE PENETRATIONS THROUGH FIRE RATED CEILING AND WALL ASSEMBLIES FOR DUCTS, PIPES, PIPE AND DUCT SUPPORTS, RODS, STRAPS, CONTROL CONDUITS, ETC. SHALL BE SEALED WITH APPROVED FIRESTOPPING MATERIAL AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS TO MAINTAIN THE FIRE RATING OF THE ASSEMBLY. SEE ARCH DRAWINGS FOR LOCATION OF FIRE RATED WALLS & CEILINGS.
22. STRUCTURES UNDERGOING CONSTRUCTION, ALTERATION OR DEMOLITION OPERATIONS, INCLUDING THOSE IN UNDERGROUND LOCATIONS, SHALL COMPLY WITH NFPA 241 AND CHAPTER 16 OF THE 2006 NFPA 1.
23. FOR VTR FLASHING DETAIL, SEE ARCH DRAWINGS.

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SUBMITTAL DATE 30 SEPTEMBER 2019
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DEPARTMENT OF DEFENSE
HAWAII ARMY NATIONAL GUARD
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HILO, HAWAI'I
KEAUKAHA MILITARY RESERVATION – B621
HAWAI`I ARMY NATIONAL GUARD (HIARNG)
BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS
LEGEND & ABBREVIATIONS AND PLUMBING NOTES

SCALE: AS NOTED
STATE PROJECT NO. CA-1212-C3
FEDERAL PROJECT NO. 15130007
SHEET 63 of 126
P-001

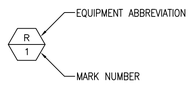
NEW FIXTURE UNITS:

FIXTURE TYPE	QUANTITY	WATER	
		FU/FIX	TOTAL FU
WATER CLOSET (FLUSH VALVE)	20	3.4	68
URINAL	8	1.7	13.6
LAVATORY	16	0.6	9.6
ELECTRIC WATER COOLER	8	0.6	4.8
MOP SINK	4	2.0	8.0
SHOWER	–	–	–
LAUNDRY TRAY	–	–	–
ICE MAKER	3	0.6	1.8
HOSE BIBB (FIRST)	1	2.5	2.5
HOSE BIBB	17	1	17.0
SUBTOTAL			189.9 WSU
TOTAL GPM			90
TOTAL GPD			1800 GPD

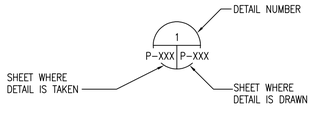
PLUMBING FIXTURE SCHEDULE AND CONNECTION SIZE

TAG	DESCRIPTION	CW	HW	DRAIN	VENT	MAX CONSUMPTION
A–WC	ACCESSIBLE WATER CLOSET, WALL MOUNTED, SENSOR FLUSH VALVE	1	N/A	4	2	1.3 GAL/FLUSH
WC	WATER CLOSET, WALL MOUNTED, SENSOR FLUSH VALVE	1	N/A	4	2	1.3 GAL/FLUSH
A–UR	ACCESSIBLE URINAL, SENSOR FLUSH VALVE	3/4	N/A	2	2	1.3 GAL/FLUSH
UR	URINAL, SENSOR FLUSH VALVE	3/4	N/A	2	2	1.3 GAL/FLUSH
A–LAV	ACCESSIBLE LAVATORY, COUNTER MOUNT, SENSOR FAUCET	1/2	1/2	2	2	1.5 GPM
LAV	LAVATORY, COUNTER MOUNT, SENSOR FAUCET	1/2	1/2	2	2	1.5 GPM
A–SK–1	ACCESSIBLE SINK, SINGLE COMPARTMENT	1/2	1/2	2	2	1.5 GPM
A–SK–2	ACCESSIBLE SINK, 2–COMPARTMENT	1/2	1/2	2	2	1.5 GPM
MS	MOP SINK	1/2	1/2	2	2	1.5 GPM
A–EWC	ACCESSIBLE ELECTRIC WATER COOLER, DUAL HEIGHT	1/2	N/A	2	2	

SYMBOL LEGEND



EQUIPMENT SYMBOL



DETAIL SYMBOL

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EXPIRATION DATE

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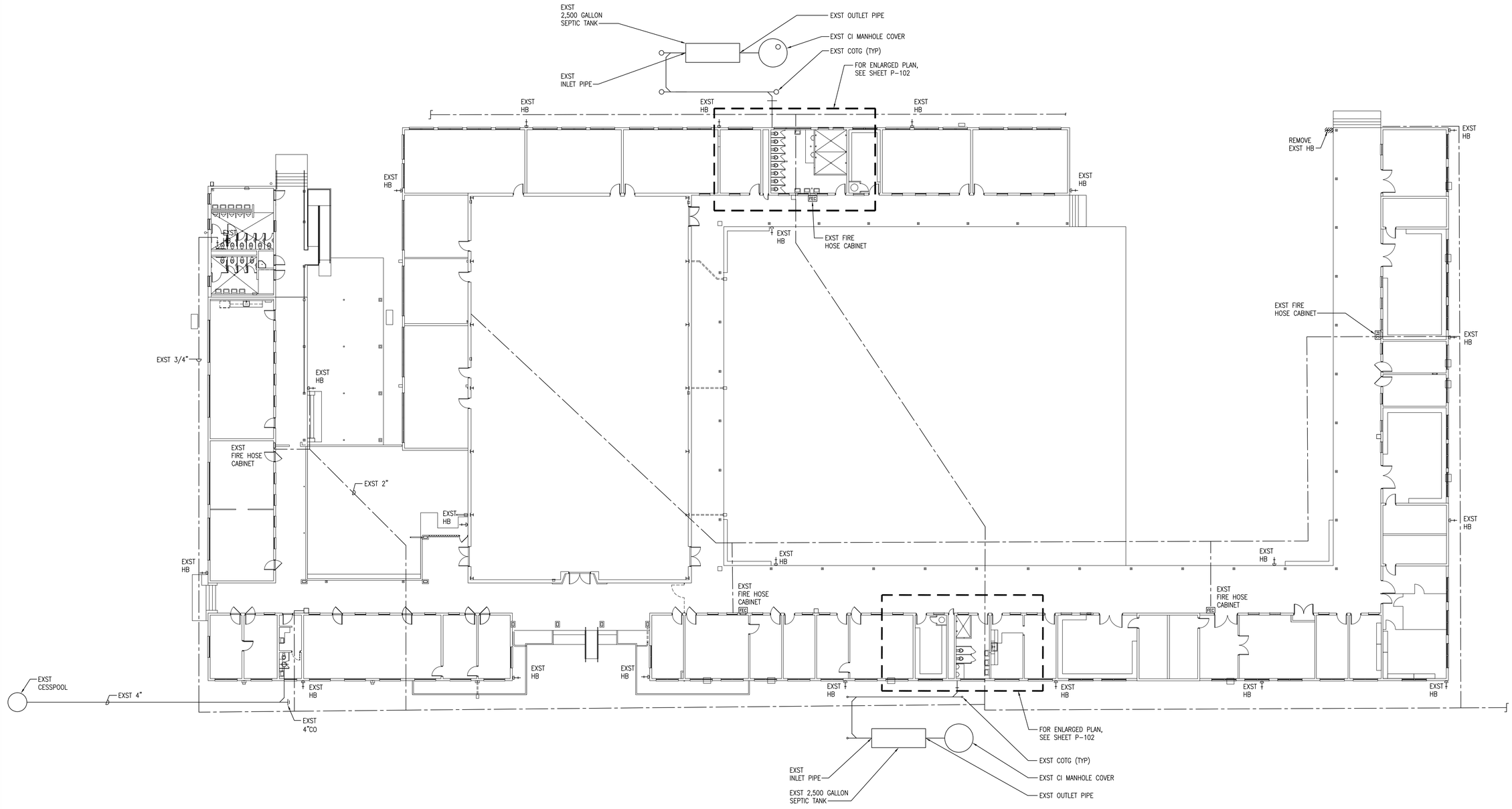
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SUBMITTAL DATE: 30 SEPTEMBER 2019
DES: KMM | DRW: TEC | CHK: KMM

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HAWAI`I ARMY NATIONAL GUARD (HIARNG)
BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS
BWS FLOW REQUIREMENTS AND NOTES, FIXTURE SCHEDULES

SCALE: AS NOTED
STATE PROJECT NO. CA-1212-C3
FEDERAL PROJECT NO. 15130007
SHEET 64 of 126
P-002

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OVERALL PLUMBING DEMOLITION PLAN

SCALE: 1/16" = 1'-0"

PLAN NORTH

GRAPHIC SCALE

0 4 8 16 32 48FT

SCALE: 1/16"=1'-0"

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FINAL SUBMITTAL

SUBMITTAL DATE 30 SEPTEMBER 2019

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OVERALL PLUMBING DEMOLITION PLAN

SCALE: AS NOTED

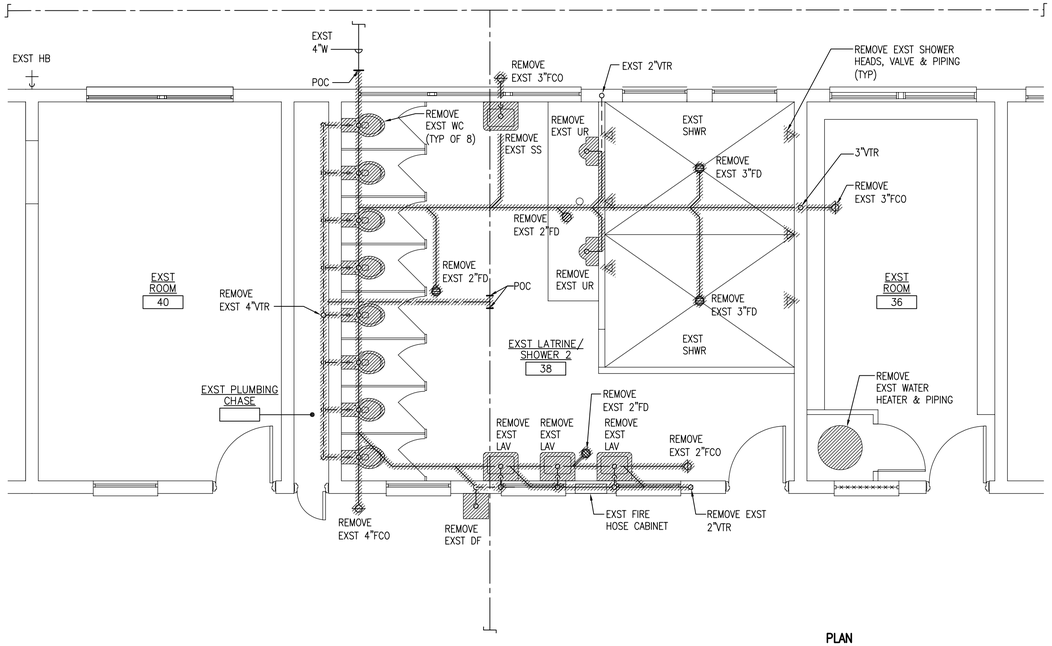
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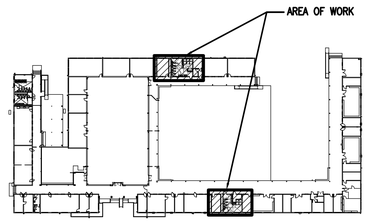
© 2012 / 2015 / 2019 Ahl Design Hawaii Army National Guard Building 621 Renovation and Latrine Improvements Overall Plumbing Demolition Plan.dwg 9/30/2019 9:47:28 AM Brandon Hirata Hirata Engineering, Inc.



PARTIAL BLDG 621 PLUMBING DEMOLITION PLAN

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

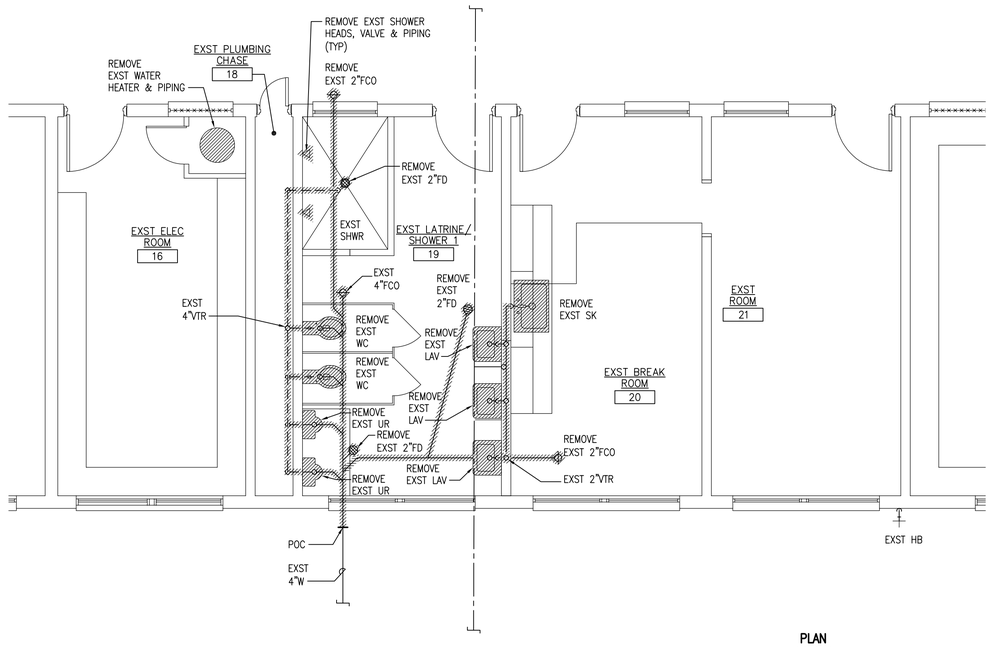
PLAN NORTH



KEY PLAN

SCALE: NONE

PLAN NORTH



PARTIAL BLDG 621 PLUMBING DEMOLITION PLAN

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

PLAN NORTH

GRAPHIC SCALE

0 1 2 4 8 12FT

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

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PARTIAL BLDG 621 PLUMBING DEMOLITION PLANS

SCALE: AS NOTED

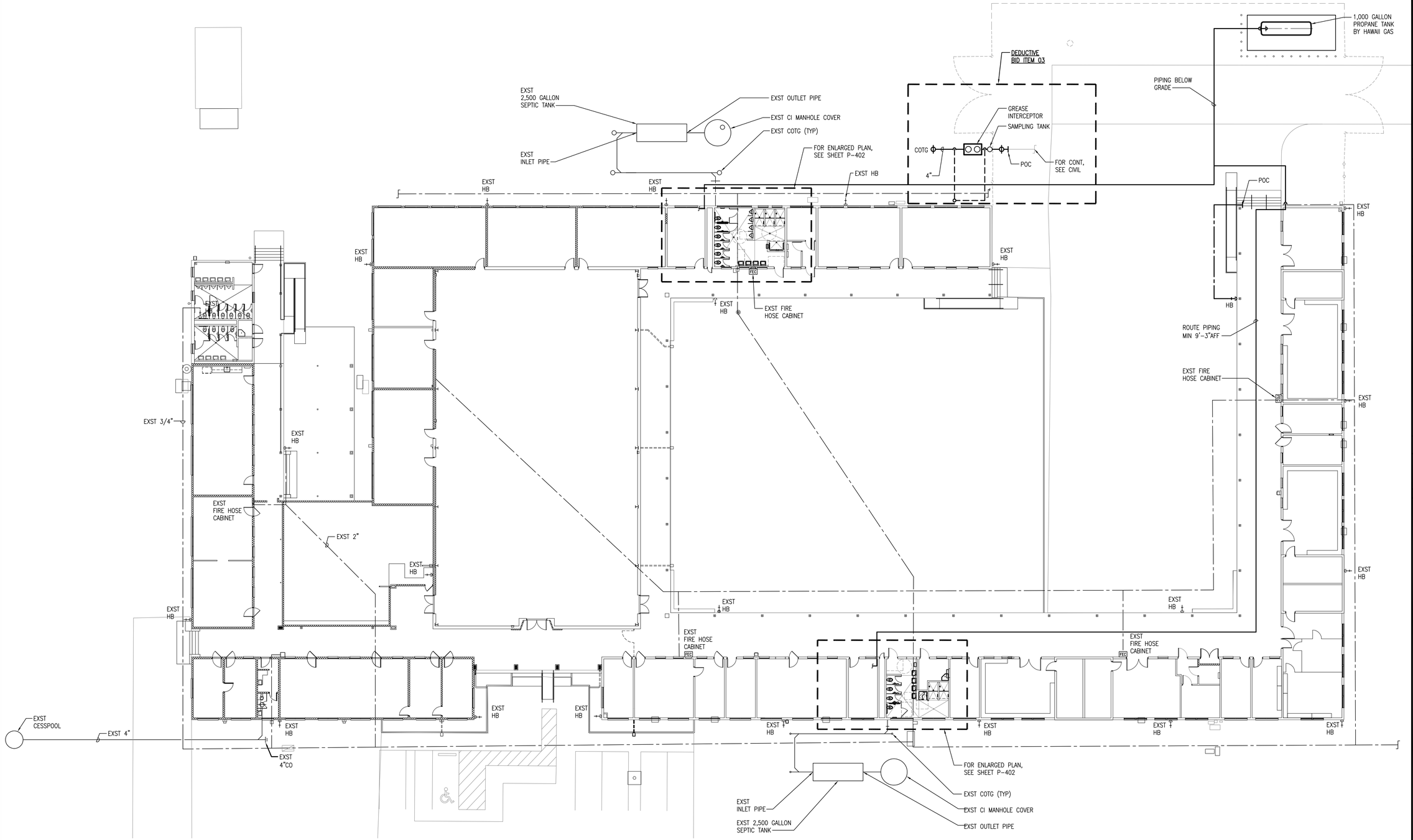
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P-102

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OVERALL PLUMBING PLAN

SCALE: 1/16" = 1'-0"

PLAN NORTH

GRAPHIC SCALE

0 4 8 16 32 48FT

SCALE: 1/16"=1'-0"

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BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS

OVERALL PLUMBING PLAN

SCALE: AS NOTED

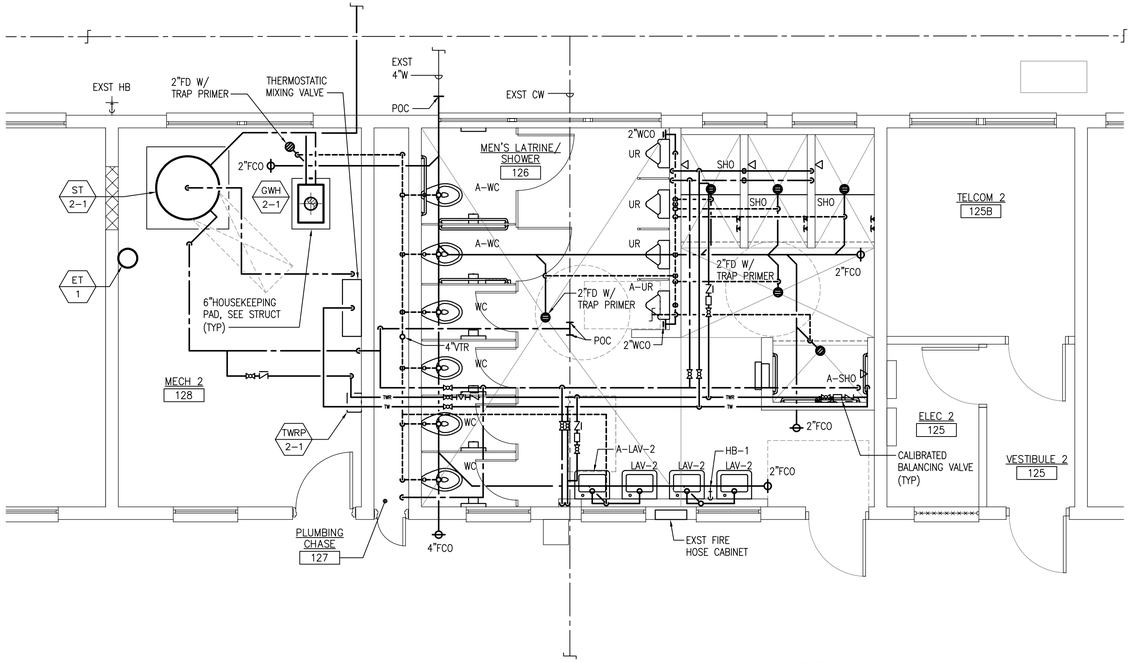
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P-401

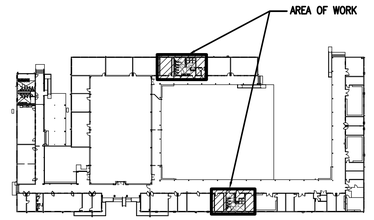
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PARTIAL BLDG 621 PLUMBING PLAN

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

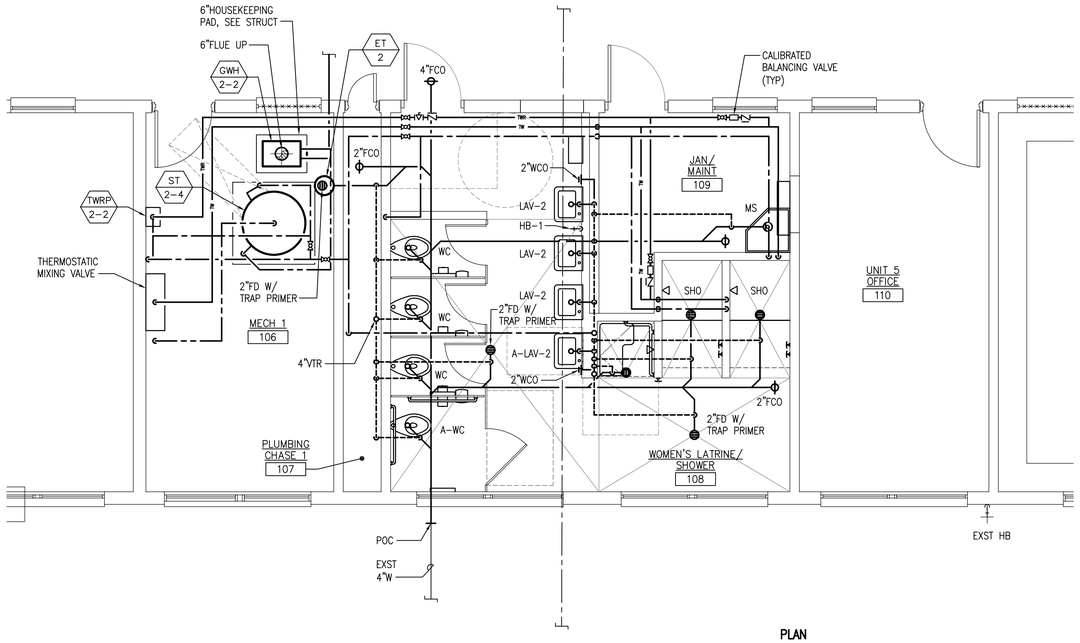
PLAN NORTH



KEY PLAN

SCALE: NONE

PLAN NORTH



PARTIAL BLDG 621 PLUMBING PLAN

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

PLAN NORTH

GRAPHIC SCALE

0 1 2 4 8 12FT

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

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HILO, HAWAI`I

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PARTIAL BLDG 621 PLUMBING PLANS

SCALE: AS NOTED

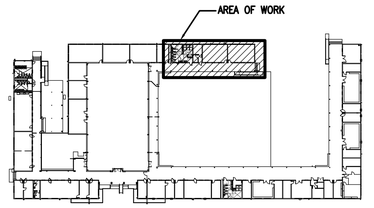
STATE PROJECT NO.
CA-1212-C3

FEDERAL PROJECT NO.
15130007

SHEET 68 of 126

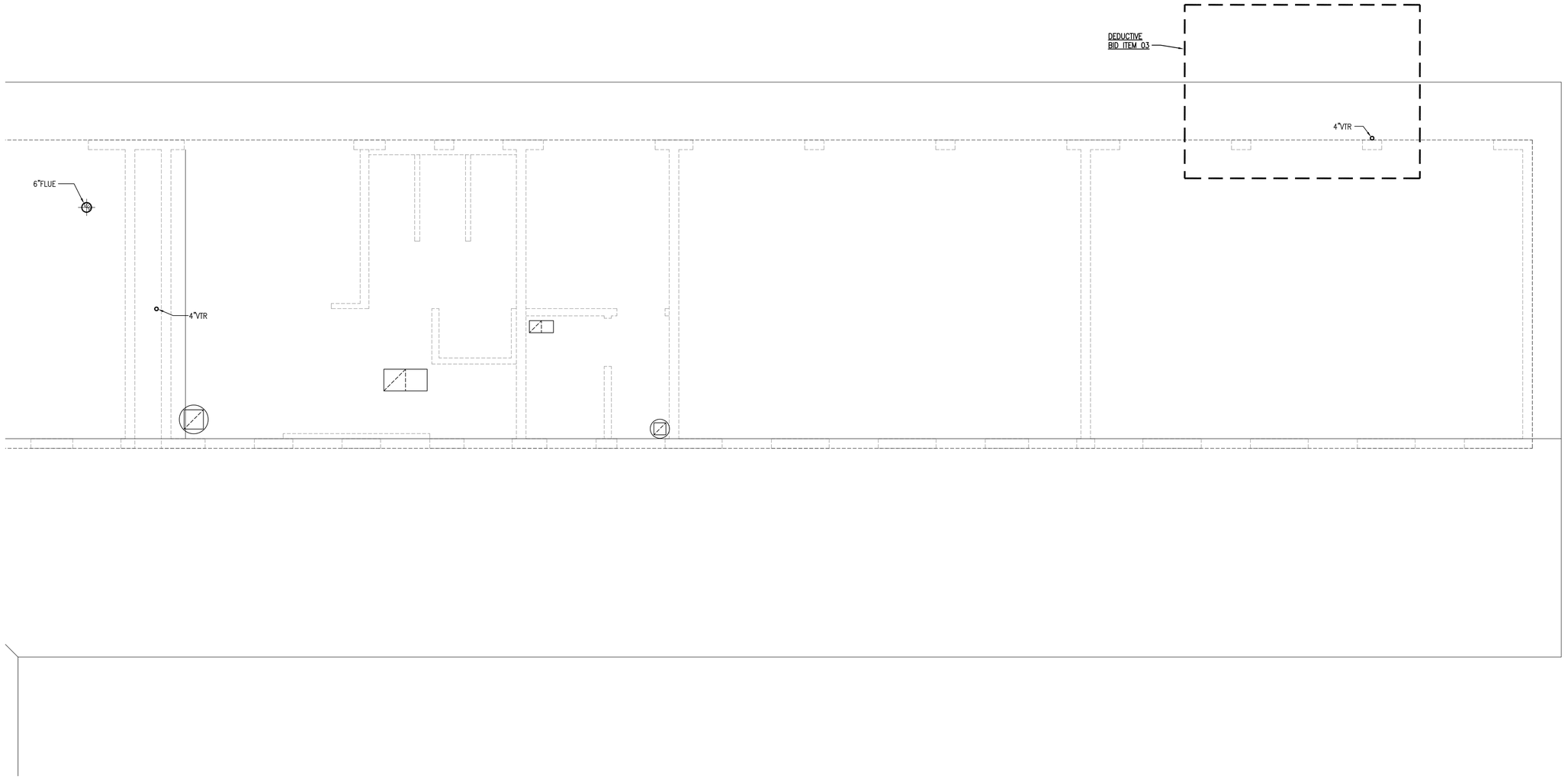
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KEY PLAN
SCALE: NONE

PLAN NORTH



PARTIAL ROOF PLAN
SCALE: 1/4" = 1'-0"

PLAN NORTH

GRAPHIC SCALE
0 1 2 4 8 12FT
SCALE: 1/4"=1'-0"

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SUBMITTAL DATE 30 SEPTEMBER 2019
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STATE OF HAWAI'I
FACILITY MANAGEMENT OFFICE
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DEPARTMENT OF DEFENSE

KEAUKAHA MILITARY RESERVATION – B621
HILO, HAWAI'I

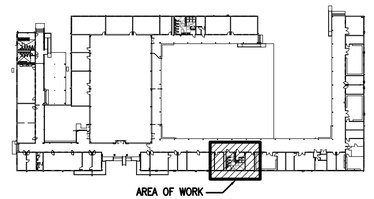
HAWAI'I ARMY NATIONAL GUARD (HIARNG)
BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS

PARTIAL ROOF PLAN

SCALE: AS NOTED
STATE PROJECT NO. CA-1212-C3
FEDERAL PROJECT NO. 15130007
SHEET 69 of 126

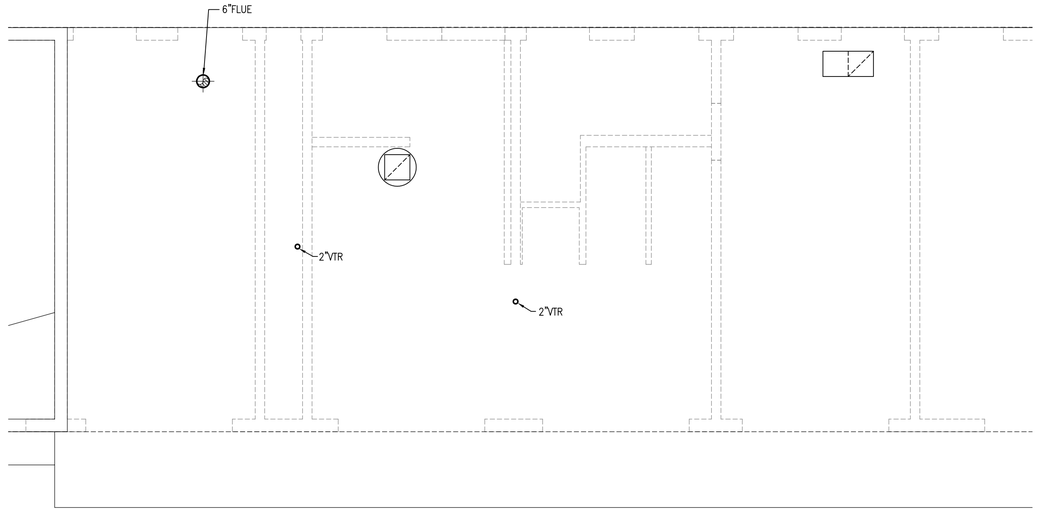
P-403

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PLAN NORTH

KEY PLAN
SCALE: NONE



PLAN NORTH

PARTIAL MECHANICAL ROOF PLAN
SCALE: 1/4" = 1'-0"

GRAPHIC SCALE

0 4 8 16 32 48FT

SCALE: 1/16"=1'-0"

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PARTIAL MECHANICAL ROOF PLAN

SCALE: AS NOTED

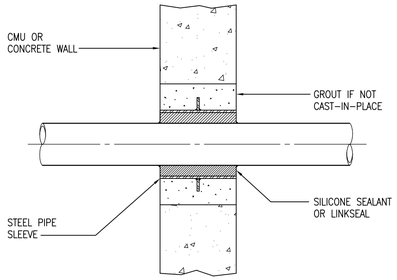
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SHEET 70 of 126

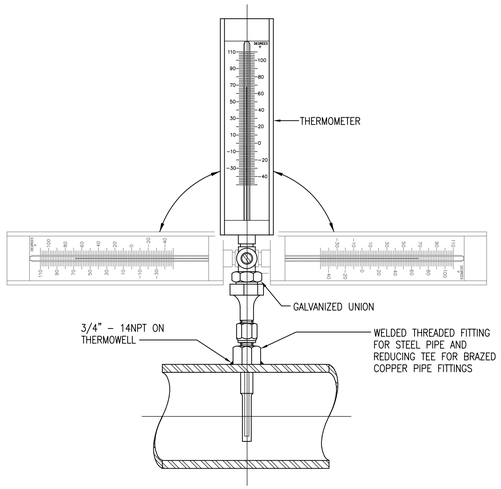
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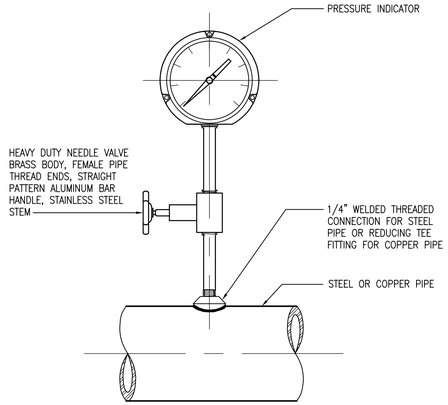
TYPICAL WALL PENETRATION DETAIL — D1

SCALE: NONE — P-501



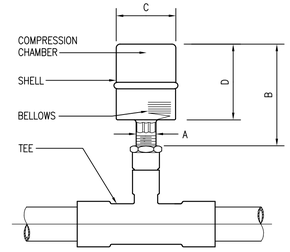
ADJUSTABLE ANGLE THERMOMETER DETAIL — D2

SCALE: NONE — P-501



PRESSURE GAUGE DETAIL — D3

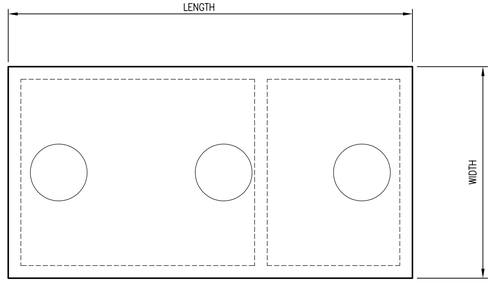
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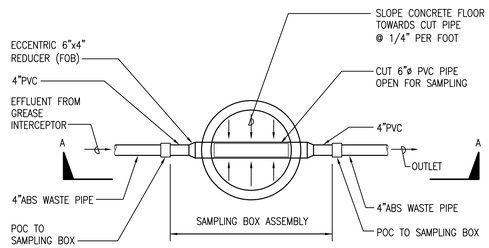
P.D.I. SYMBOL	FIXTURE UNIT RATING	A SIZE	B SIZE	C SIZE	D SIZE
A	1 – 11	3/4"	2 5/8"	3 1/4"	1 7/16"
B	12 – 32	1"	3"	3 1/4"	1 3/4"
C	33 – 60	1"	3 5/8"	3 1/4"	2 1/4"
D	61 – 113	1"	5 1/8"	3 1/4"	3 1/4"
E	114 – 154	1"	5 1/2"	3 1/4"	4 1/8"
F	155 – 330	1"	6 5/8"	3 1/4"	5 1/4"

WATER HAMMER ARRESTER DETAIL — D4

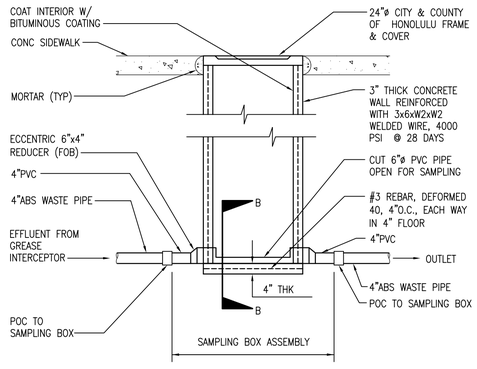
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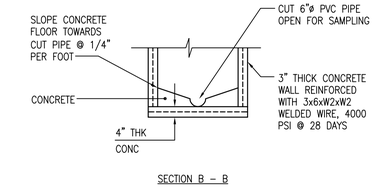
TOP VIEW (COVERS & RISERS NOT SHOWN)



PLAN



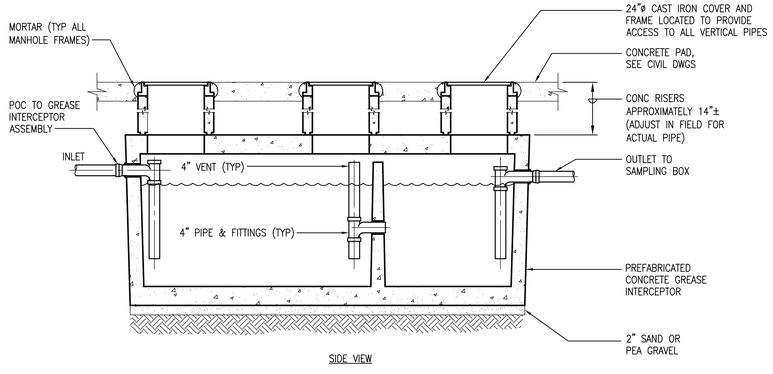
SECTION A – A



SECTION B – B

SAMPLING BOX DETAIL - DEDUCTIVE BID ITEM 03 — B1

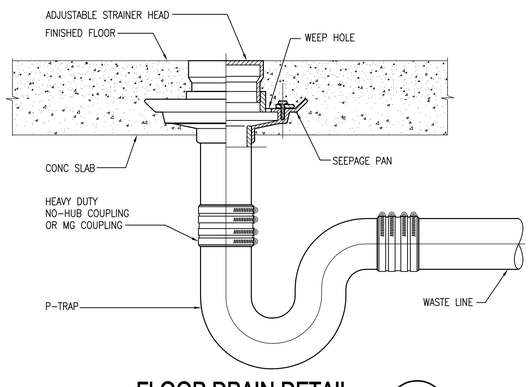
SCALE: NONE — P-501



SIDE VIEW

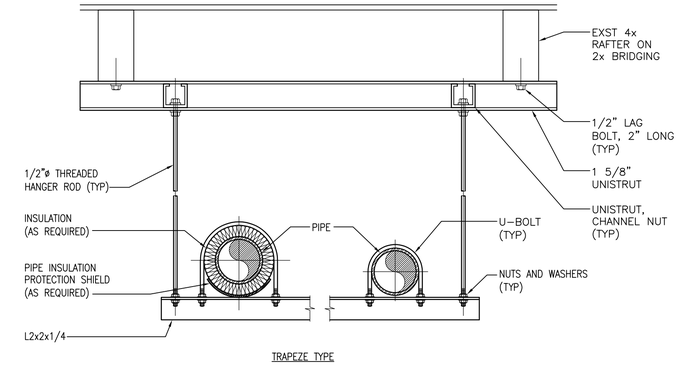
GREASE INTERCEPTOR DETAIL - DEDUCTIVE BID ITEM 03 — A1

SCALE: NONE — P-501



FLOOR DRAIN DETAIL — A3

SCALE: NONE — P-501



TRAPEZE TYPE

PIPE HANGER DETAIL — A4

SCALE: NONE — P-501

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HILO, HAWAI'I
HAWAI'I ARMY NATIONAL GUARD (HIARNG)
BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS
DETAILS

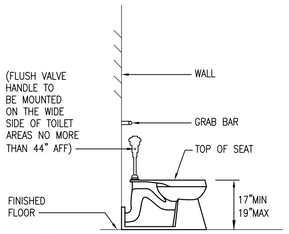
SCALE: AS NOTED

STATE PROJECT NO. CA-1212-C3

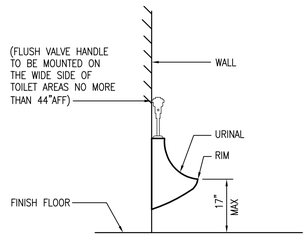
FEDERAL PROJECT NO. 15130007

SHEET 71 of 126

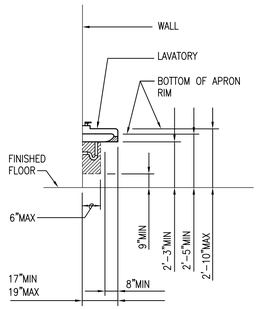
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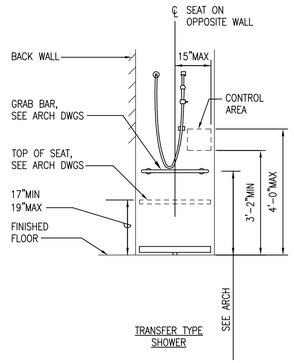
WATER CLOSET



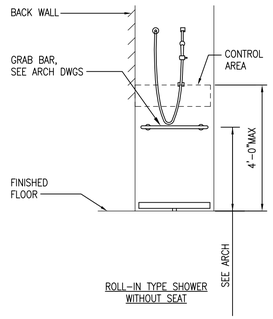
URINAL – STALL



LAVATORY – WALL HUNG



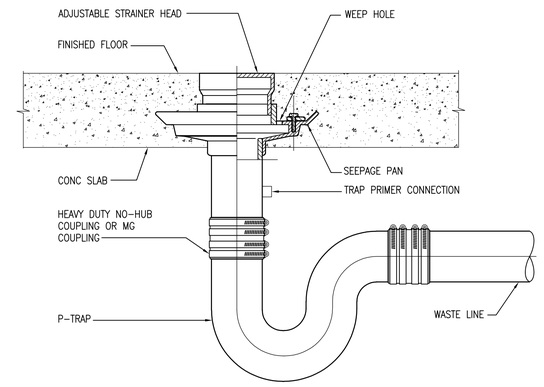
TRANSFER TYPE SHOWER



ROLL-IN TYPE SHOWER WITHOUT SEAT

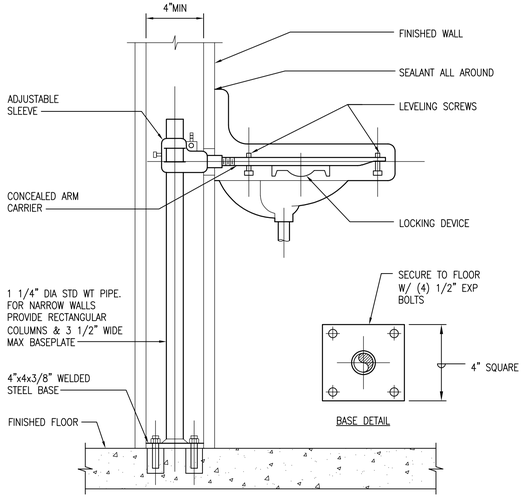
ACCESSIBLE PLUMBING FIXTURE REQUIREMENT DETAILS

SCALE: NONE P-502 D1



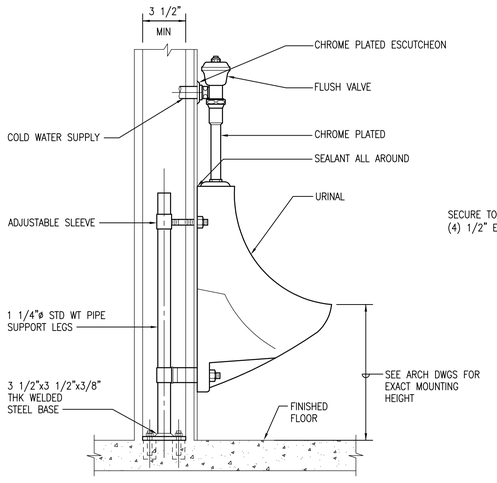
FLOOR DRAIN W/ TRAP PRIMER DETAIL

SCALE: NONE P-502 D5



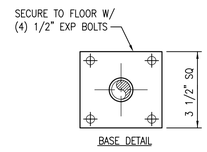
LAVATORY - FLOOR SUPPORTED

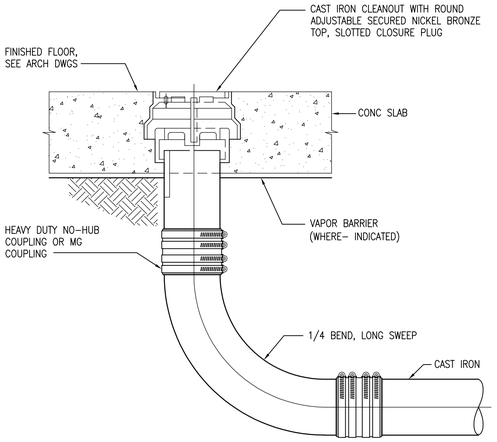
SCALE: NONE P-502 B1



URINAL SUPPORT DETAIL

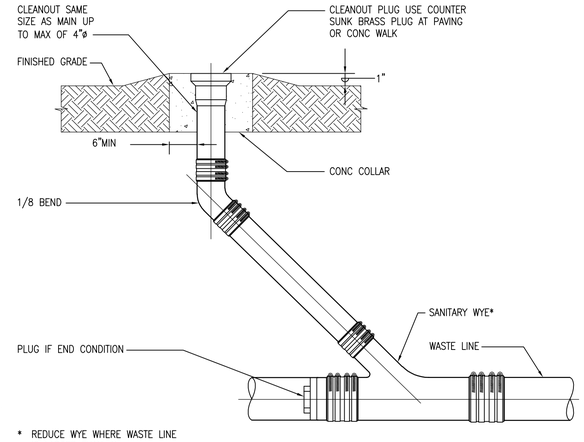
SCALE: NONE P-502 B3





FLOOR CLEANOUT DETAIL

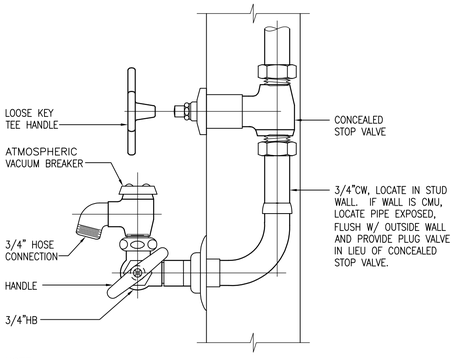
SCALE: NONE P-502 B4



* REDUCE WYE WHERE WASTE LINE IS LARGER THAN 4"

CLEANOUT TO GRADE DETAIL

SCALE: NONE P-502 B5

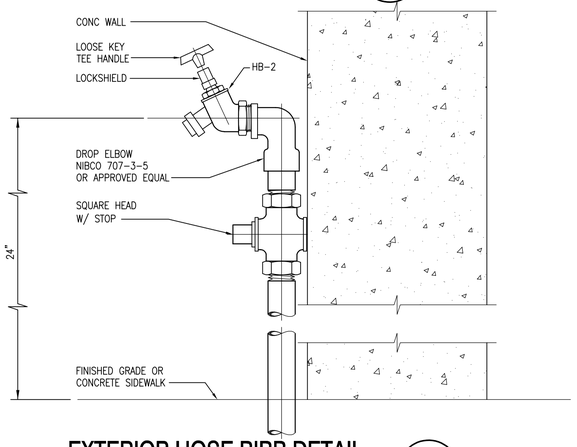


NOTE:

ELBOW DN CONDITION SHOWN. MODIFY FOR OTHER CONDITIONS OF SUPPLY PIPE ORIENTATION.

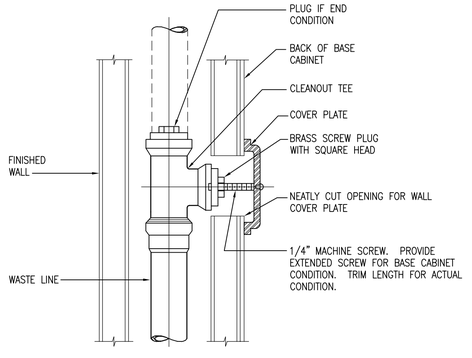
INTERIOR HOSE BIBB DETAIL

SCALE: NONE P-502 A1



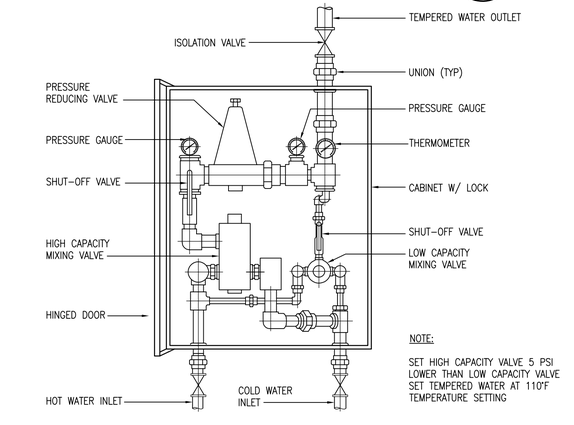
EXTERIOR HOSE BIBB DETAIL

SCALE: NONE P-502 A2



WALL CLEANOUT DETAIL

SCALE: NONE P-502 A4



NOTE:

SET HIGH CAPACITY VALVE 5 PSI LOWER THAN LOW CAPACITY VALVE SET TEMPERED WATER AT 110°F TEMPERATURE SETTING

TWO STAGE THERMOSTATIC MIXING VALVE DETAIL

SCALE: NONE P-502 A5

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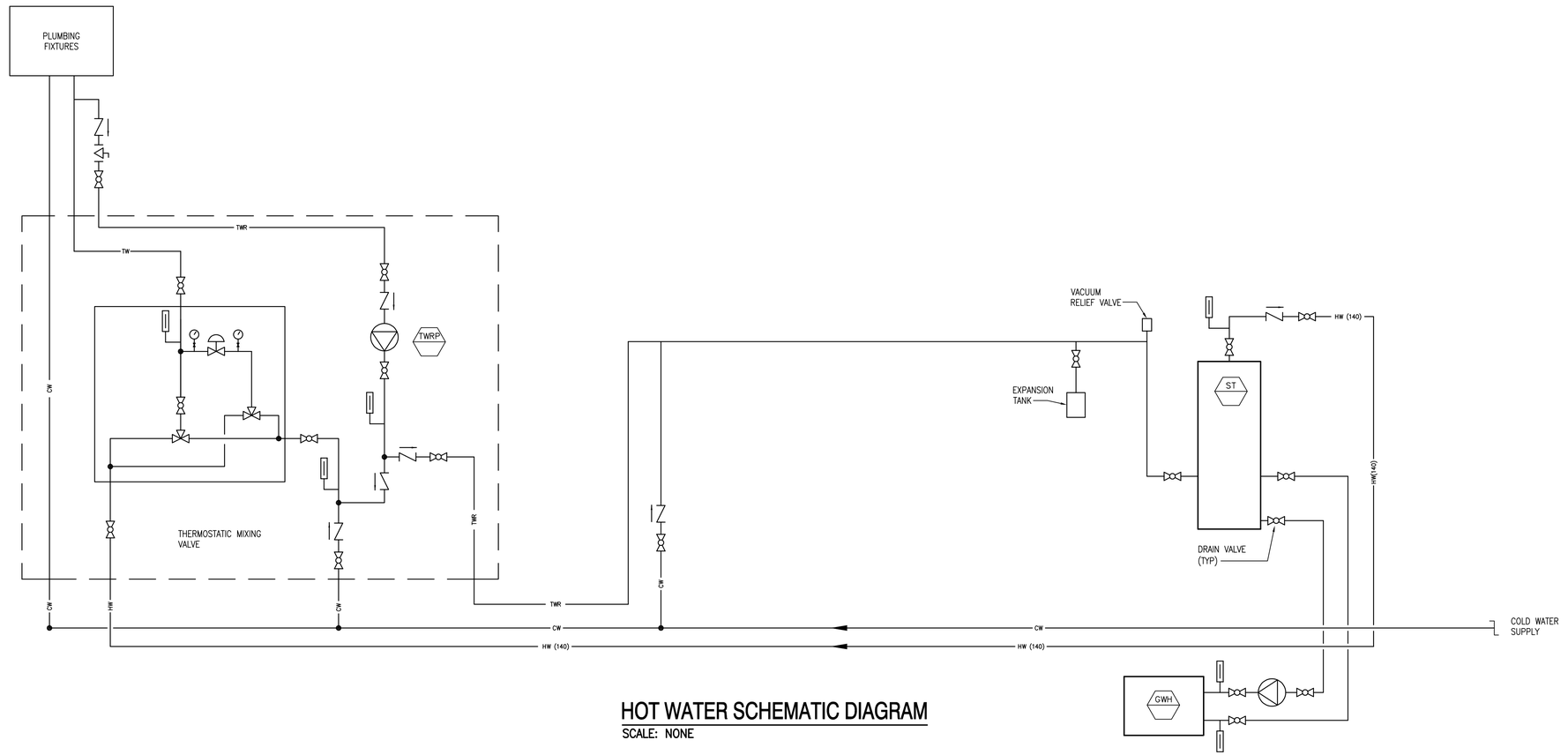
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SCALE: AS NOTED
STATE PROJECT NO. CA-1212-C3
FEDERAL PROJECT NO. 15130007
SHEET 72 of 126
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HOT WATER SCHEMATIC DIAGRAM

SCALE: NONE

SEQUENCE OF OPERATION - HOT WATER SYSTEM

1. DOMESTIC HOT WATER IS SUPPLIED AT 140 DEG F.
2. THE DOMESTIC HOT WATER IS TEMPERED AT THE THERMOSTATIC MIXING VALVE AND SUPPLIED TO THE FACILITY AS TEMPERED WATER AT 115 DEG F AS RECOMMENDED BY ASHRAE.
3. TEMPERED WATER RETURN:

   A TEMPERED WATER RETURN PUMP IS PROVIDED TO MAINTAIN TEMPERATURE IN THE TEMPERED WATER SYSTEM. THE TEMPERED WATER RETURN PUMP IS ACTIVATED WHEN THE TEMPERATURE IN THE TEMPERED WATER SYSTEM DROPS BELOW 100 DEG F.
4. A GAS WATER HEATER PROVIDES THE HOT WATER DESIGN TEMPERATURE OF 140 DEG F.

ahl.
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HOT WATER SCHEMATIC DIAGRAM AND SEQUENCE OF OPERATION

SCALE: AS NOTED
STATE PROJECT NO. CA-1212-C3
FEDERAL PROJECT NO. 15130007
SHEET 73 of 126

P-601

D:\2019\15000 Kaeukaha Military Reserv Renov Bldg 621\Drawing\Planning\Latrine\Mod Add 3\ARC_HOT WATER SCHEMATIC DIAGRAM.DWG 07-Aug, 9/25/2019 9:47:10 AM, Brandon Ellis\1:0 Printer, HighResPrint 3

PUMP SCHEDULE

NO	AREA SERVED	TYPE	SERVICE	FLOW RATE GPM	TOTAL DYNAMIC HEAD FT	MOTOR		REMARKS
						HP	POWER	
TWRP 2-1	TEMPERED WATER	INLINE CANNED ROTOR	HOT WATER RETURN	2.0	10.0	0.04	115/1/60	GRUNDFOS, OR APPROVED EQUAL
TWRP 2-2	TEMPERED WATER	INLINE CANNED ROTOR	HOT WATER RETURN	2.0	10.0	0.04	115/1/60	GRUNDFOS, OR APPROVED EQUAL

GAS WATER HEATER SCHEDULE

NO	SERVICES	QTY	OUTPUT BTUH	WATER TEMPERATURE °F	RECOVERY RATE GPM	DIMENSION				WATER TEMPERATURE		POWER V/PH/HZ	AMPS	MIN. EFFICIENCY	WEIGHT LBS	REMARKS
						HEIGHT IN	WIDTH IN	LENGTH IN	FLUE DIA IN	ENTERING °F	LEAVING °F					
GWH 2-1	DOMESTIC HOT WATER	1	112,000	70	195	45	14	24	6	120	140	120/1/60	19	87%	186	RAYPAK WH-133 OR APPROVED EQUAL
GWH 2-2	DOMESTIC HOT WATER	1	112,000	70	195	45	14	24	6	120	140	120/1/60	19	87%	186	RAYPAK WH-133 OR APPROVED EQUAL

HOT WATER STORAGE TANK SCHEDULE

NO	MIN CAPACITY GAL	BODY DIMENSIONS		WEIGHT LBS	LINING	STYLE	REMARKS
		HEIGHT IN	DIAMETER IN				
ST 2-1	305	77	36	2,900	EPOXY	VERTICAL	HANSON, RAYPAK, WEBEN JARCO WATER TANK OR APPROVED EQUAL
ST 2-4	305	77	36	2,900	EPOXY	VERTICAL	HANSON, RAYPAK, WEBEN JARCO WATER TANK OR APPROVED EQUAL

GREASE INTERCEPTOR SCHEDULE - DEDUCTIVE BID ITEM 03

NO	GREASE CAPACITY (GAL)	AREA SERVED	BODY DIMENSIONS			REMARKS
			LENGTH	WIDTH	HEIGHT	
GT 1	320	–	6'-8"	3'-8"	4'-4"	JENSEN PRECAST PRODUCTS OR APPROVED EQUAL. PROVIDE W/ WATERPROOF COATING ON EXTERIOR

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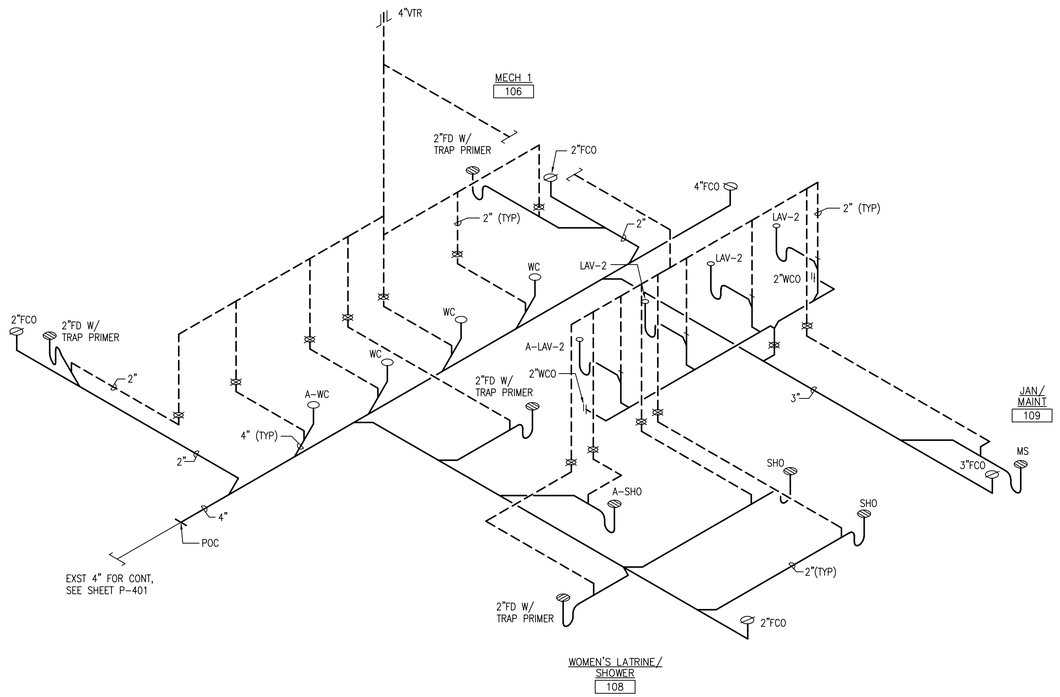
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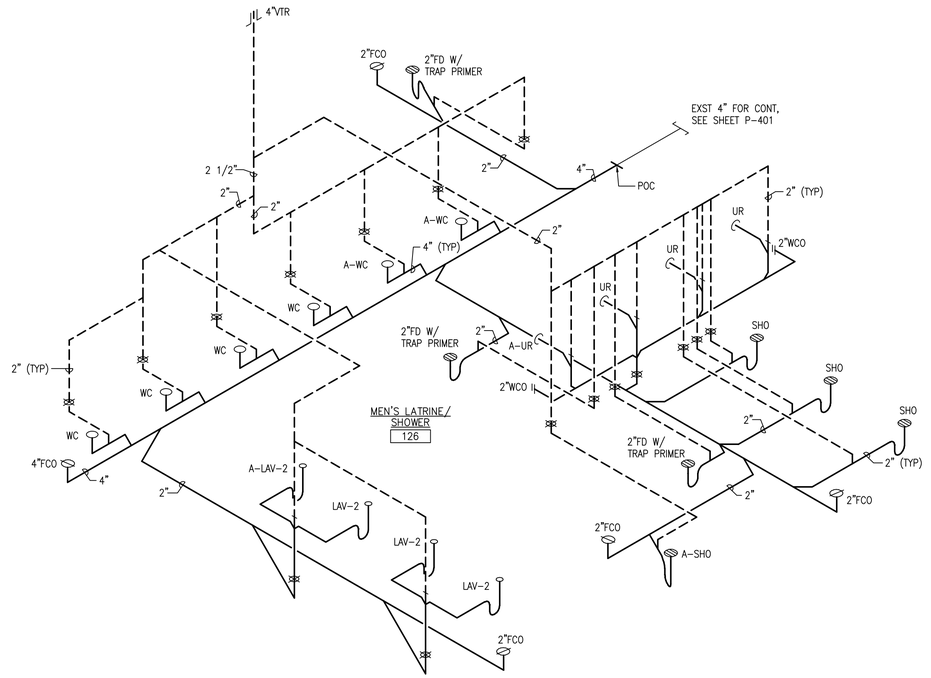
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FINAL SUBMITTAL
SUBMITTAL DATE 30 SEPTEMBER 2019
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HILO, HAWAI`I
HAWAI`I ARMY NATIONAL GUARD (HIARNG)
BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS
EQUIPMENT SCHEDULES

SCALE: AS NOTED
STATE PROJECT NO. CA-1212-C3
FEDERAL PROJECT NO. 15130007
SHEET 74 of 126
P-602

D:\2019\15000 Keaukaha Military Reserv Bldg 621\Drawing\Drawing Layout\ARCH\E-EQUIPMENT SCHEDULES.dwg, 9/30/2019 9:48:32 AM, Brandon, 1:1





SANITARY PIPING DIAGRAM

SCALE: NONE

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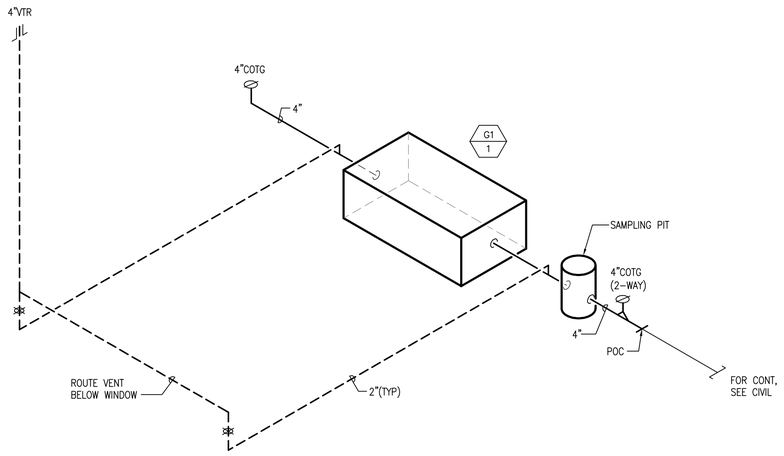
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SANITARY PIPING DIAGRAM

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GREASE INTERCEPTOR PIPING DIAGRAM - DEDUCTIVE BID ITEM 03

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GREASE INTERCEPTOR PIPING DIAGRAM – DEDUCTIVE BID ITEM 03

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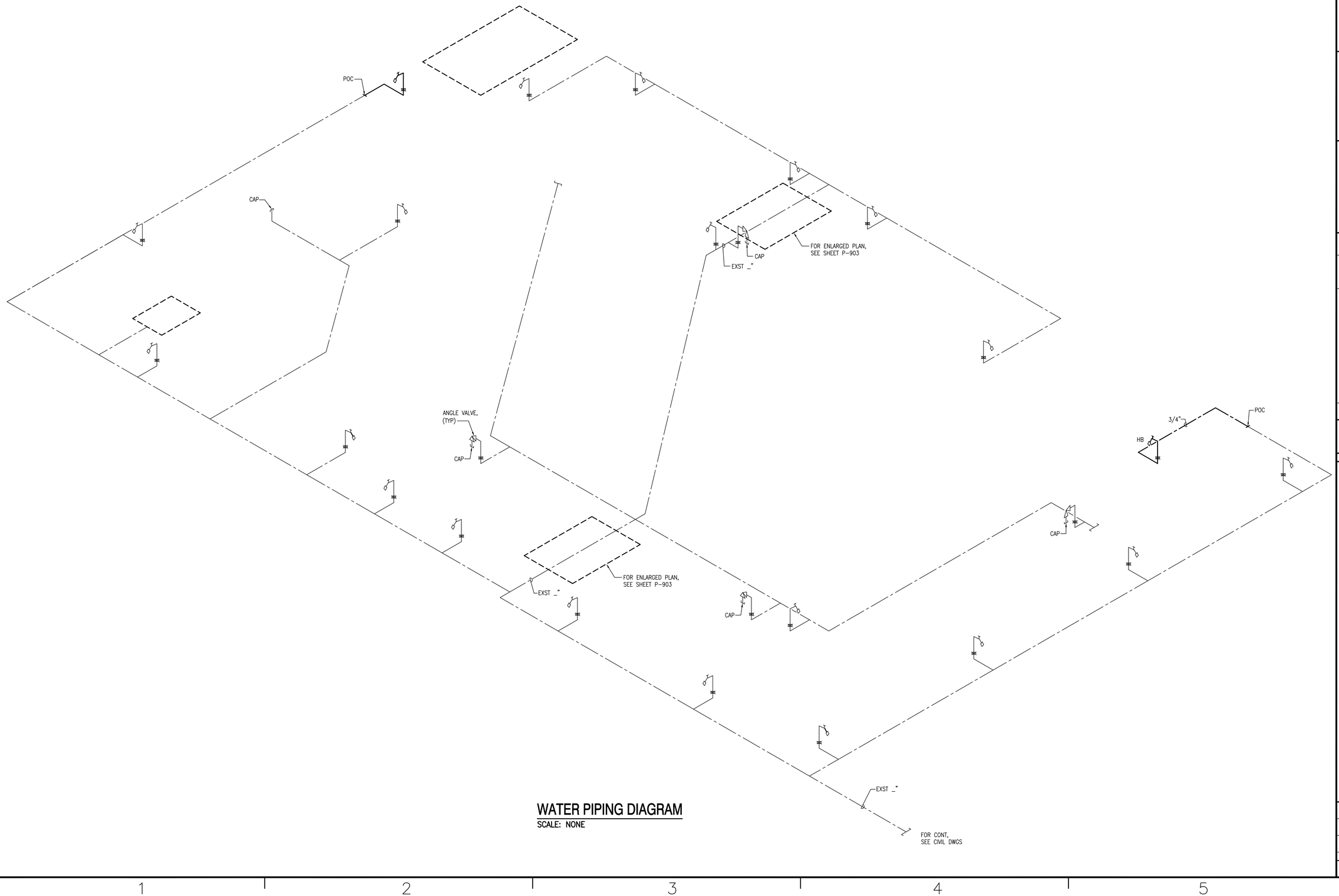
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P-902

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WATER PIPING DIAGRAM

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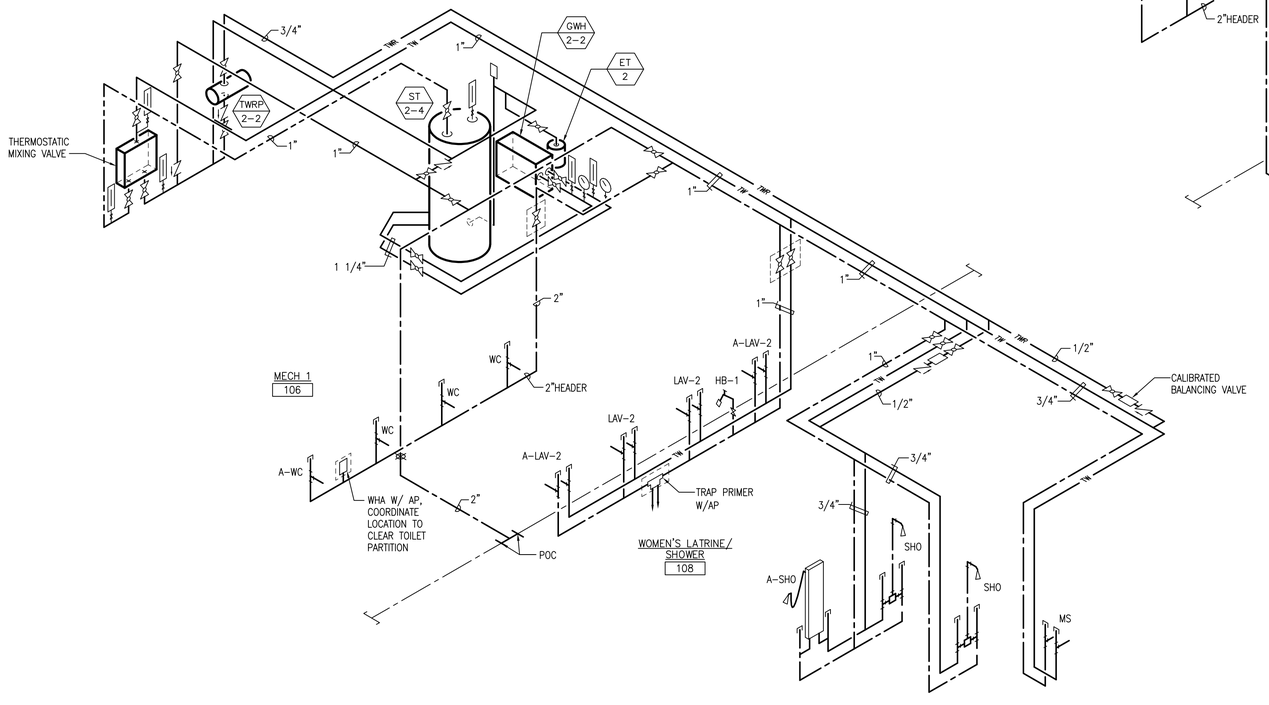
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WATER PIPING DIAGRAM

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SHEET 77 of 126
P-903

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WATER PIPING DIAGRAM

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LEGEND & ABBREVIATIONS

SYMBOLS	ABBREVIATIONS	DESCRIPTIONS	SYMBOLS	ABBREVIATIONS	DESCRIPTIONS
	ACCU	AIR COOLED CONDENSING UNIT			NEW EQUIPMENT
	AFF	ABOVE FINISHED FLOOR		NC	NORMALLY CLOSED
	AHU	AIR HANDLING UNIT		NO	NORMALLY OPEN
	AP	ACCESS PANEL		NIC	NOT IN CONTRACT
		BALL VALVE		OA	OUTSIDE AIR
	BCP	BUILDING CONTROL PANEL		OFOI	OWNER FURNISHED OWNER INSTALLED
	BMS	BUILDING MANAGEMENT SYSTEM (SAME AS EMCS)			PIPE SLEEVE
	BFV	BUTTERFLY VALVE		PFRR	PHASE FAILURE OR REVERSAL RELAY
	CFM	CUBIC FEET PER MINUTE		PRV	POWERED ROOF VENTILATOR
		CHECK VALVE		PRV	PRESSURE REDUCING VALVE
©		CO2 SENSOR			
		COMBINATION FIRE/SMOKE DAMPER (HORIZONTAL)			PRESSURE GAUGE W/ SHUTOFF VALVE
		COMBINATION FIRE/SMOKE DAMPER (VERTICAL)	PS		PRESSURE SWITCH
		CONCEALED DAMPER			PLUG VALVE OR GAS COCK
				RA	RETURN AIR
	CONC	CONCRETE		RAR	RETURN AIR REGISTER
CD	CD	CONDENSATE DRAIN	RH		RELATIVE HUMIDITY SENSOR
	CONN	CONNECTION		RPBP	REDUCED PRESSURE BACKFLOW PREVENTER
	CONT	CONTINUATION		RV	RELIEF VALVE
	CP	CIRCULATION PUMP			
CR	CR	CONDENSATE RETURN		SCC	SENSIBLE COOLING CAPACITY
	CS	CURRENT SWITCH			SMOKE DAMPER (HORIZONTAL)
ø		DIAMETER			
	DN	DOWN			SMOKE DAMPER (VERTICAL)
	DWGS	DRAWINGS			
	EMCS	ENERGY MANAGEMENT & CONTROL SYSTEM	SD		SMOKE DETECTOR (DUCT MOUNTED)
	EA	EXHAUST AIR			
	EAR	EXHAUST AIR REGISTER	SP		STATIC PRESSURE SENSOR & TRANSMITTER (DUCT MOUNTED)
	EF	EXHAUST FAN			
	EXH	EXHAUST		ST	STORAGE TANK
	EXST	EXISTING		SF	SUPPLY FAN OR SQUARE FEET
	FCU	FAN COIL UNIT		SA	SUPPLY AIR
		FIRE DAMPER (HORIZONTAL) 1 1/2 HR		SAD	SUPPLY AIR DIFFUSER
				SAR	SUPPLY AIR REGISTER
		FIRE DAMPER (VERTICAL) 1 1/2 HR	S		SWITCH
			TE		TEMPERATURE ELEMENT W/ THERMOWELL
	FIN FLR	FINISHED FLOOR			
	FLEX CONN	FLEXIBLE CONNECTION			THERMOMETER W/ THERMOWELL
	FMS	FLOW METERING STATION			
	FA	FREE AREA	T	T-STAT	THERMOSTAT OR TEMPERATURE SENSOR
	GAL	GALLONS		TCC	TOTAL COOLING CAPACITY
	GPM	GALLONS PER MINUTE		TA	TRANSFER AIR
	GV	GATE VALVE		TAR	TRANSFER AIR REGISTER
		GLOBE VALVE		TYP	TYPICAL
HE		HUMIDITY SENSOR			UNION
	IC	INDIVIDUAL CONTROLLER		UV	ULTRAVIOLET
	LS	LIMIT SWITCH		UVC	ULTRAVIOLET 'C'
M		MAGNAHELIC GAUGE		VAV	VARIABLE AIR VOLUME
	MAU	MAKE-UP AIR UNIT		VFD	VARIABLE FREQUENCY DRIVE
	MAX	MAXIMUM	VD	VD	VOLUME DAMPER (OPPOSED BLADE IF DUCT DIMENSION OVER 10 INCHES)
	MCC	MOTOR CONTROL CENTER			
	MD	MOTORIZED DAMPER		VTR	VENT THROUGH ROOF
	MIN	MINIMUM			

GENERAL NOTES:

1. MECHANICAL SUB-CONTRACTORS (A/C, PLUMBING, SPRINKLER, ETC) SHALL COORDINATE ALL WORK WITH OTHER TRADES.
2. ALL DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE CONTRACTING OFFICER PRIOR TO THE START OF ANY WORK.
3. UNLESS OTHERWISE INDICATED, MOUNT ALL WALL MOUNTED MECHANICAL DEVICES, PANELS, SWITCHES, ETC AT 48" AFF.
4. ALL ROOF, WALL AND FLOOR PENETRATIONS SHALL BE VERIFIED AND COORDINATED WITH THE STRUCTURAL DRAWINGS.
5. PROVIDE DIELECTRIC CONNECTIONS AT ALL FERROUS TO COPPER CONNECTIONS.
6. ALL NUMERIC DUCT DIMENSIONS SHOWN ARE NET DIMENSIONS WITHOUT INSULATION THICKNESS, CONTRACTOR SHALL ADJUST DIMENSIONS FOR INSULATION THICKNESS REQUIRED. AIR CONDITIONING SUPPLY AND RETURN DUCTS SHALL BE INSULATED WITH 1 1/2" THICK DUCT WRAP, UNLESS OTHERWISE INDICATED.
7. CONDENSATE DRAINS SHALL BE CONTINUOUSLY SLOPED AT 1/4" PER FOOT MINIMUM. INSULATE ALL ABOVE GRADE INDOOR CONDENSATE DRAIN LINES WITH 1" THICK INSULATION MINIMUM OR AS INDICATED. PROVIDE PIPE FITTINGS & INSULATION FOR ALL FCU'S AND AHU'S, TO FLOOR SINK SPLASH BLOCK AT GRADE OR OTHER APPROVED RECEPTOR.
8. COORDINATE ALL ACCESS PANEL LOCATIONS WITH THE ARCHITECTURAL DRAWINGS AND CENTER ON THE EQUIPMENT OR DEVICE IT SERVES (eg WHA, VALVES, ETC). FOR 1 HOUR RATED WALLS AND ROOF/CEILING ASSEMBLIES, PROVIDE MINIMUM 1 HOUR RATED ACCESS PANELS.
9. ALL EQUIPMENT, ACCESSORIES AND STRUCTURES AND OTHER ITEMS ARE NEW UNLESS OTHERWISE INDICATED.
10. CONTRACTOR SHALL ENSURE THAT ALL EQUIPMENT AND PIPING ARE INSTALLED WITH MANUFACTURER'S RECOMMENDED ACCESS SPACE FOR MAINTENANCE, OPERATION & CODES.
11. FOR ALL WALL MOUNTED THERMOSTATS, SENSORS & SWITCHES, PROVIDE ALL CONDUIT & JUNCTION BOXES IN WALL (INCLUDING CMU WALLS) WHERE CONDITION OCCURS. EXPOSED CONDUIT & JUNCTION BOXES WILL NOT BE ALLOWED. MOUNT ALL SENSORS AND SWITCHES AT 48" AFF. TO TOP OF SENSOR. PROVIDE CLEAR LOCKING COVERS FOR ALL THERMOSTATS, 4" MAXIMUM PROTRUSION.
12. PROVIDE SEISMIC BRACING AS SPECIFIED.
13. ALL GAPS AT THE PENETRATIONS THROUGH FIRE RATED CEILING AND WALL ASSEMBLIES FOR DUCTS, PIPES, PIPE AND DUCT SUPPORTS, RODS, STRAPS, CONTROL CONDUITS, ETC. SHALL BE SEALED WITH APPROVED FIRESTOPPING MATERIAL AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS TO MAINTAIN THE UL FIRE RATING OF THE ASSEMBLY. SEE ARCH DRAWINGS FOR LOCATION OF FIRE RATED WALLS & CEILINGS.
14. STRUCTURES UNDERGOING CONSTRUCTION, ALTERATION OR DEMOLITION OPERATIONS, INCLUDING THOSE IN UNDERGROUND LOCATIONS, SHALL COMPLY WITH NFPA 241 AND CHAPTER 16 OF THE 2006 NFPA 1.
15. THE AIR CONDITIONING & VENTILATION SYSTEM SHALL COMPLY WITH TITLE II, ADMINISTRATIVE RULES, DEPARTMENT OF HEALTH, CHAPTER 39, AIR CONDITIONING & VENTILATING REQUIREMENTS.
16. COORDINATE LOCATION AND INSTALLATION OF EQUIPMENT, DUCTS, PIPE RACK SUPPORTS, AND PIPES WITH ELECTRICAL CONDUITS, PANELS, CABLE TRAYS, LIGHTS AND BUILDING STRUCTURE TO PROVIDE CLEARANCES AND MAINTENANCE ACCESS SPACE REQUIRED.
17. CONTRACTOR SHALL PROVIDE SUPPLEMENTAL STEEL FOR SUPPORT OF DUCTS, PIPING AND OTHER MECHANICAL EQUIPMENT. COORDINATE WITH STRUCTURAL DRAWINGS. DO NOT DRILL STRUCTURAL STEEL OR JOISTS.
18. ALL MOTOR CONTROLLERS AND CONTROL PANELS SHALL BE INSTALLED WITH CLEARANCE SPACES IN ACCORDANCE WITH NATIONAL ELECTRICAL CODE.
19. COORDINATE DUCT INSTALLATION WITH CEILING GRID TIE WIRES. CEILING GRID TIE WIRES SHALL NOT TOUCH DUCTWORK, PIPING, OR EQUIPMENT.
20. ALL OF THE EXTERIOR PIPING SUPPORTS AND EQUIPMENT SUPPORTS SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION. PAINT ALL EXTERIOR SUPPORTS WITH EPOXY TO MATCH ADJACENT AREAS.
21. COORDINATE HOUSEKEEPING PADS AND SLAB ON GRADE WITH STRUCTURAL AND CIVIL.
22. MOUNT ALL OVERHEAD UTILITIES AND OTHER FIXTURES WEIGHING 14 KILOGRAMS (31 POUNDS) OR MORE (EXCLUDING DISTRIBUTED SYSTEMS SUCH AS PIPING NETWORKS THAT COLLECTIVELY EXCEED THAT WEIGHT) TO MINIMIZE THE LIKELIHOOD THAT THEY WILL FALL AND INJURE BUILDING OCCUPANTS. DESIGN ALL EQUIPMENT MOUNTINGS TO RESIST FORCES OF 0.5 TIMES THE EQUIPMENT WEIGHT IN ANY HORIZONTAL DIRECTION AND 1.5 TIMES THE EQUIPMENT WEIGHT IN THE DOWNWARD DIRECTION. THIS STANDARD DOES NOT PRECLUDE THE NEED TO DESIGN EQUIPMENT MOUNTINGS FOR FORCES REQUIRED BY OTHER CRITERIA SUCH AS SEISMIC STANDARDS.
23. FOR ALL DEMOLISHED EQUIPMENT WITH A STATE OF HAWAII IDENTIFICATION STICKER, TURN OVER TO PROJECT MANAGER.
24. FOR ALL DEMOLISHED EQUIPMENT WITH A STATE OF HAWAII IDENTIFICATION STICKER, TURN OVER TO PROJECT MANAGER.
25. COORDINATE ALL NEW DUCTWORK WITH EXISTING FIRE SPRINKLER PIPING.
26. PAINT EXTERIOR AND INTERIOR CONDENSATE DRAINS TO MATCH ADJACENT WALLS.
27. PROVIDE ALUMINUM PIPE COVERING ON ALL INSULATED REFRIGERATED PIPING, INTERIOR AND EXTERIOR, PAINT TO MATCH ADJACENT WALL.
28. PAINT ALL INTERIOR AND EXTERIOR DUCTWORK, COORDINATE WITH ARCHITECT.
29. FOR MOUNTING FAN COIL UNITS, REMOVE EXISTING GYP BOARD AS REQUIRED TO INSTALL BLOCKING FOR FAN COIL UNITS. REPLACE GYP BOARD AND PAINT ENTIRE WALL, COORDINATE COLOR WITH ARCHITECT.
30. PROVIDE ALL NECESSARY BELT AND SHEAVES TO BALANCE EQUIPMENT TO THE AIRFLOWS INDICATED.

HAWAII COUNTY CODE – CHAPTER 5 – BUILDING
2006 IECC & ORDINANCES 09-48 & 10-68
BUILDING ENERGY EFFICIENCY STANDARDS

I CERTIFY THAT THE DESIGN IS IN CONFORMANCE WITH THE BUILDING ENERGY EFFICIENCY STANDARDS PERTAINING TO:

SECTION 503 BUILDING MECHANICAL SYSTEMS

SECTION 504 SERVICE WATER HEATING (MANDATORY)

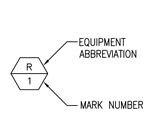
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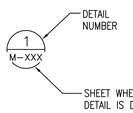
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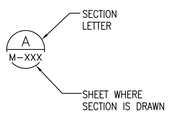
SYMBOLS



EQUIPMENT SYMBOL



DETAIL SYMBOL



SECTION SYMBOL

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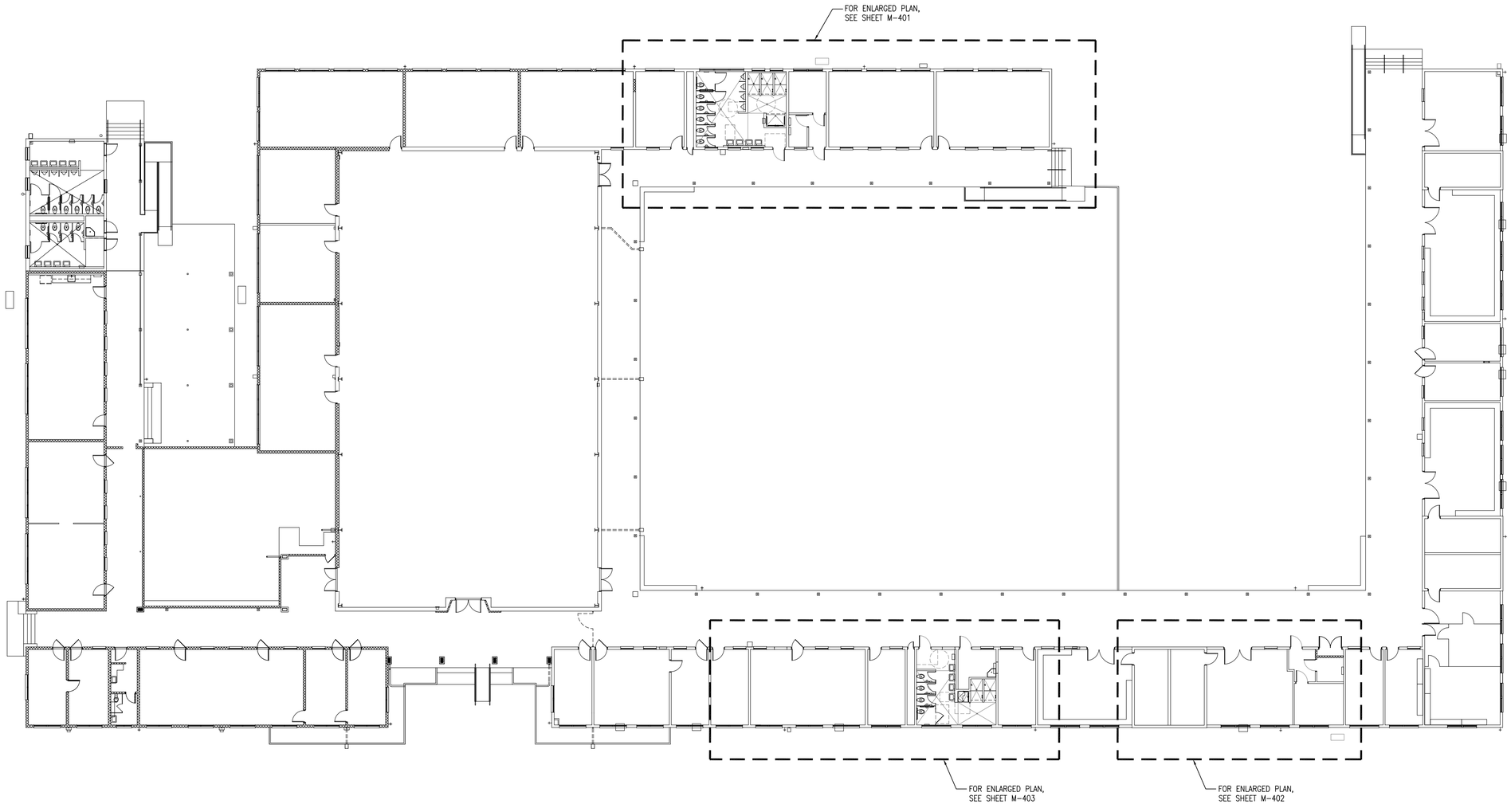
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SUBMITTAL DATE: 30 SEPTEMBER 2019
DES: SLC DRW: TEC CHK: KMM

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LEGEND & ABBREVIATIONS AND GENERAL NOTES

SCALE: AS NOTED
STATE PROJECT NO. CA-1212-C3
FEDERAL PROJECT NO. 15130007
SHEET 79 of 126
M-001

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OVERALL MECHANICAL PLAN
SCALE: 1/16" = 1'-0"

PLAN NORTH

GRAPHIC SCALE

0 4 8 16 32 48FT

SCALE: 1/16"=1'-0"

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OVERALL MECHANICAL PLAN

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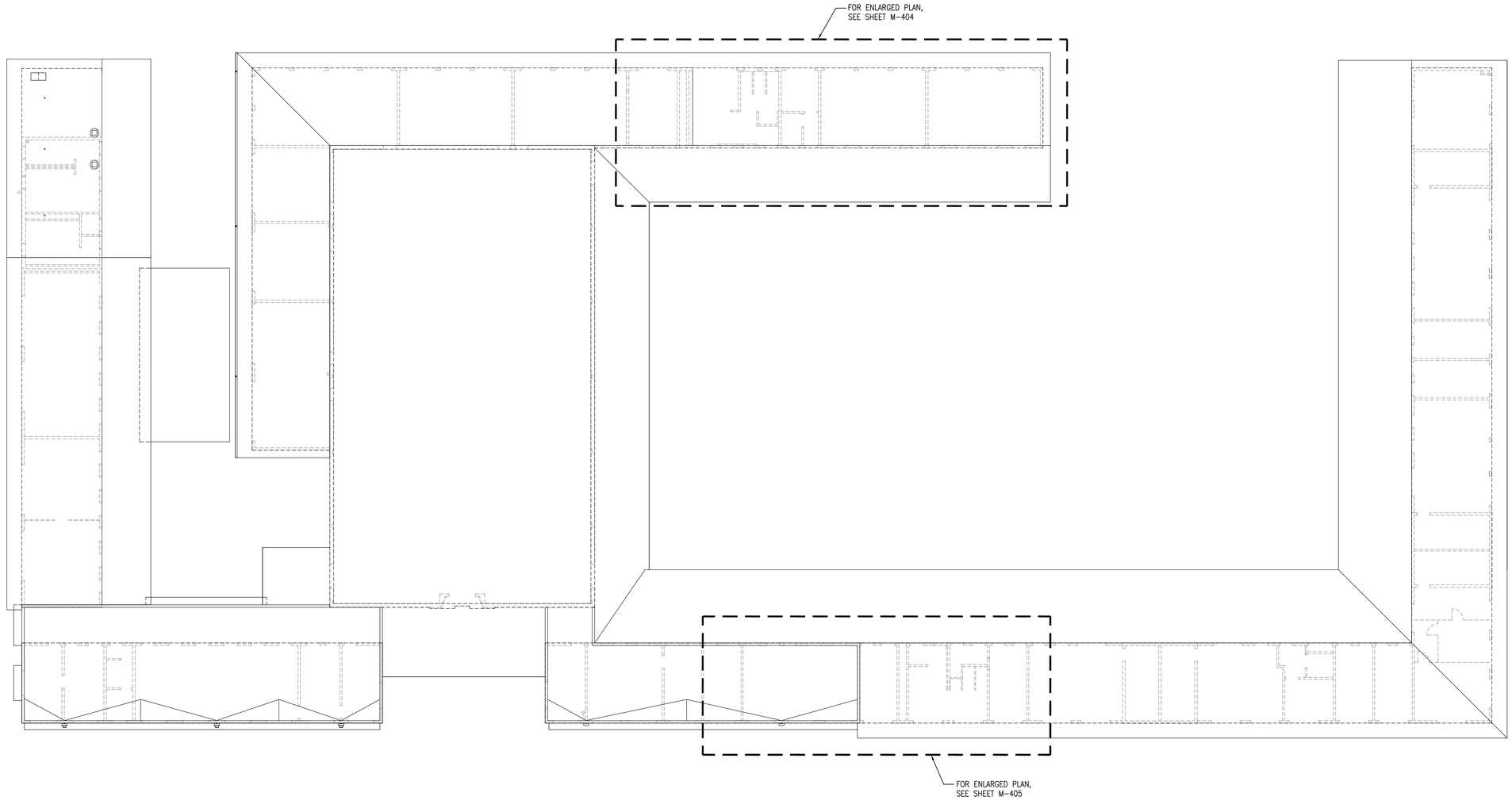
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15130007

SHEET 80 of 126

M-101

(C)2013-2020 Honolulu Military Teams Bldg 621 Drawings\Planning\Latrine\M-621 OVERALL MECHANICAL PLAN.dwg, 5/30/2019 3:46:42 PM, Blackburn, 1:1



OVERALL MECHANICAL ROOF PLAN

SCALE: 1/16" = 1'-0"

PLAN NORTH

GRAPHIC SCALE

0 4 8 16 32 48FT

SCALE: 1/16"=1'-0"

733 BISHOP STREET, SUITE 3100
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KEVIN M. MACHIDA
LICENSED PROFESSIONAL ENGINEER
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HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION
SIGNATURE
4/30/2020
EXPIRATION DATE

SYM	DESCRIPTION	DATE	APPR

SUBMITTAL PHASE
FINAL SUBMITTAL

SUBMITTAL DATE 30 SEPTEMBER 2019

DES SLC | DRW TEC | CHK KMM

DEPARTMENT OF DEFENSE
HAWAII ARMY NATIONAL GUARD
DESIGN AND PROJECT MANAGEMENT BRANCH
STATE OF HAWAI'I
FACILITY MANAGEMENT OFFICE

KEAUKAHA MILITARY RESERVATION – B621
HILO, HAWAI'I

HAWAI`I ARMY NATIONAL GUARD (HIARNG)
BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS

OVERALL MECHANICAL ROOF PLAN

SCALE: AS NOTED

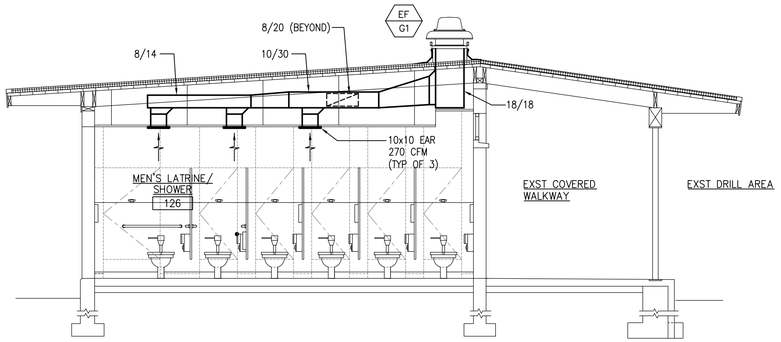
STATE PROJECT NO.
CA-1212-C3

FEDERAL PROJECT NO.
15130007

SHEET 81 of 126

M-102

C:\DTD\1300 Keaukaha Military Reserv Bldg 621\Drawings\Running\Arch\M\M-B621MECHANICAL ROOF PLAN.dwg, 10/3/2019 9:45:06 AM, Bluebeam PDF (In Process - HighRes).3

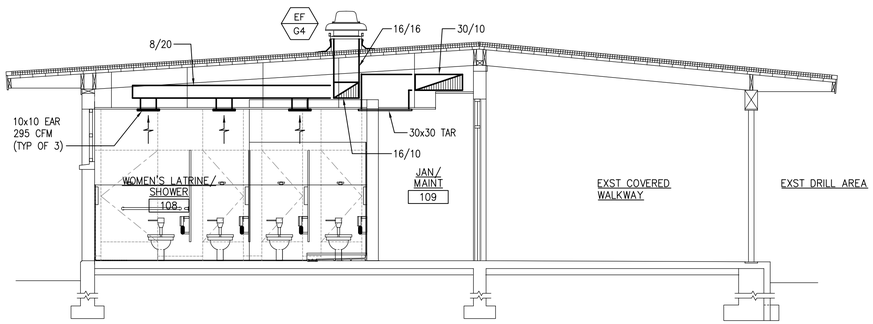


SECTION

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

M-401

D1



SECTION

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

M-403

B1

GRAPHIC SCALE

0 1 2 4 8 12FT

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

HAWAII ARMY NATIONAL GUARD

ahl.

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HAWAII ARMY NATIONAL GUARD
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KEAUKAHA MILITARY RESERVATION – B621
HILO, HAWAI'I

HAWAI`I ARMY NATIONAL GUARD (HIARNG)
BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS

SECTIONS

SCALE: AS NOTED

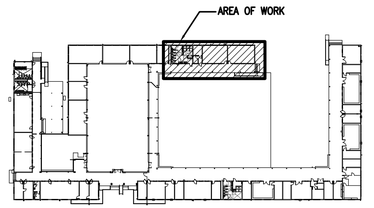
STATE PROJECT NO. CA-1212-C3

FEDERAL PROJECT NO. 15130007

SHEET 82 of 126

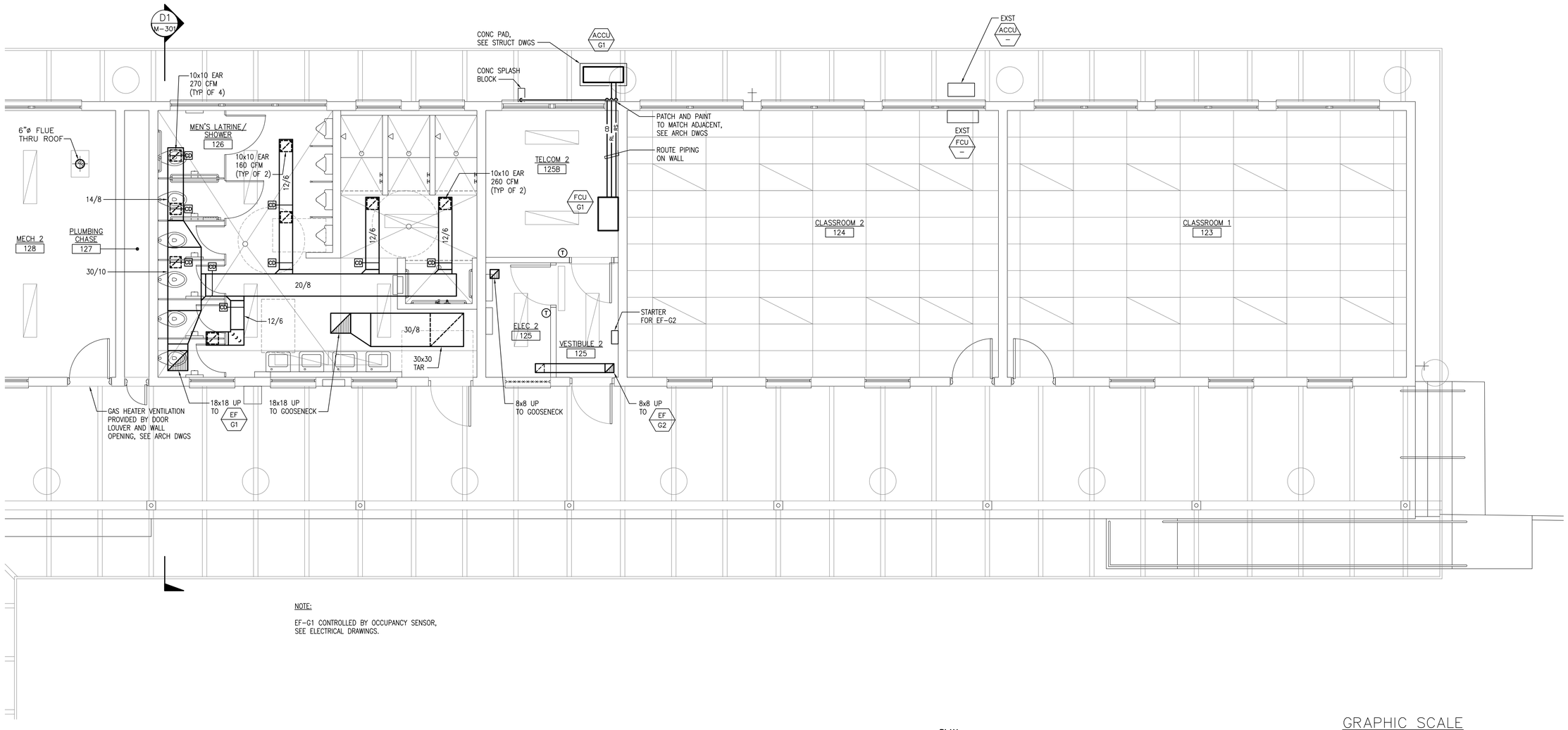
M-301

6/28/2019 5:00:00 PM Kekaha Military Res - Bldg 621 Drawings\Planning and Permit\M-401 SECTIONS.dwg, 6/28/2019 11:44:45 AM, Bluebeam PDF24 Printer, Hightail.pc3



KEY PLAN
SCALE: NONE

PLAN NORTH



NOTE:

EF-G1 CONTROLLED BY OCCUPANCY SENSOR,
SEE ELECTRICAL DRAWINGS.

PARTIAL BLDG 621 MECHANICAL PLAN
SCALE: 1/4" = 1'-0"

PLAN NORTH

GRAPHIC SCALE
0 1 2 4 8 12FT
SCALE: 1/4"=1'-0"

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DEPARTMENT OF DEFENSE
HAWAII ARMY NATIONAL GUARD
DESIGN AND PROJECT MANAGEMENT BRANCH
STATE OF HAWAI'I
FACILITY MANAGEMENT OFFICE

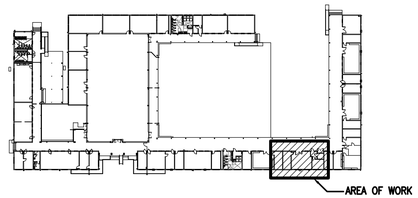
KEAUKAHA MILITARY RESERVATION – B621
HILO, HAWAI'I

HAWAI`I ARMY NATIONAL GUARD (HIARNG)
BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS
PARTIAL BLDG 621 MECHANICAL PLAN

SCALE: AS NOTED
STATE PROJECT NO. CA-1212-C3
FEDERAL PROJECT NO. 15130007
SHEET 83 of 126

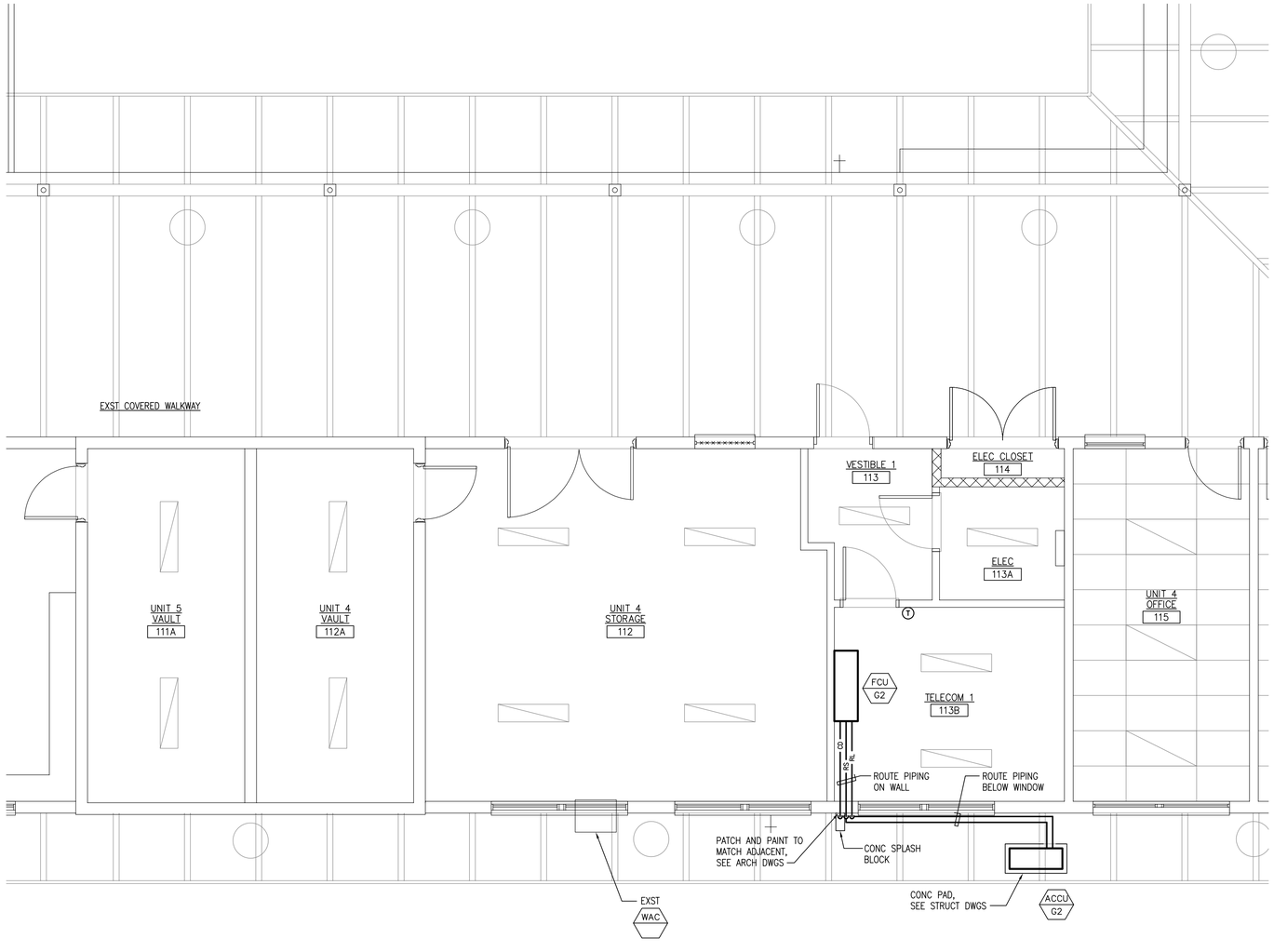
M-401

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PLAN NORTH

KEY PLAN
SCALE: NONE



PLAN NORTH

PARTIAL BLDG 621 MECHANICAL PLAN
SCALE: 1/4" = 1'-0"

GRAPHIC SCALE

0 1 2 4 8 12FT

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

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FINAL SUBMITTAL

SUBMITTAL DATE 30 SEPTEMBER 2019

DES: SLC DRW: TEC CHK: KMM

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PARTIAL BLDG 621 MECHANICAL PLAN

SCALE: AS NOTED

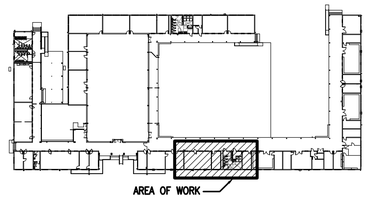
STATE PROJECT NO.
CA-1212-C3

FEDERAL PROJECT NO.
15130007

SHEET 84 of 126

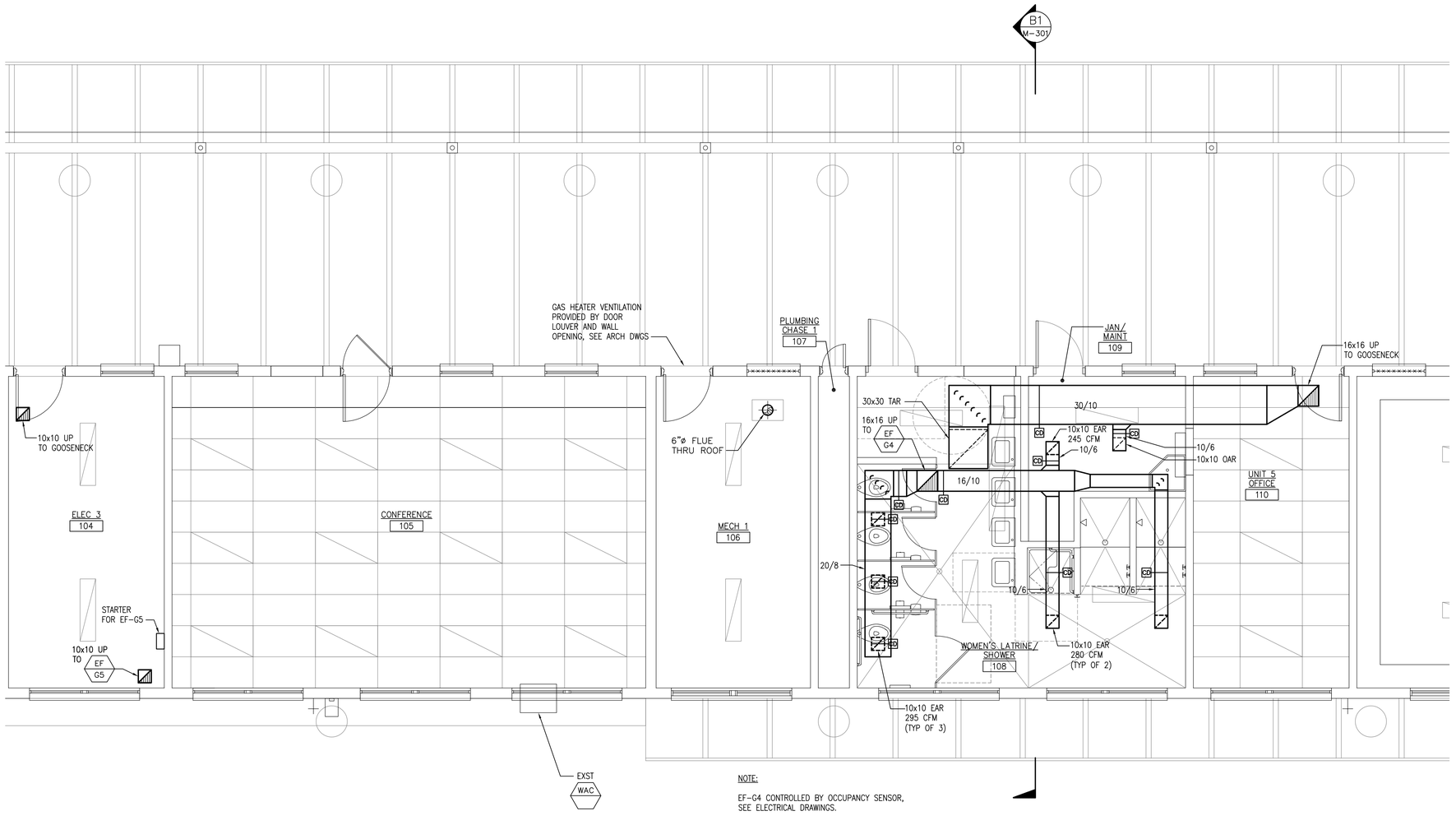
M-402

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KEY PLAN
SCALE: NONE

PLAN NORTH



NOTE:

EF-G4 CONTROLLED BY OCCUPANCY SENSOR, SEE ELECTRICAL DRAWINGS.

PARTIAL BLDG 621 MECHANICAL PLAN
SCALE: 1/4" = 1'-0"

PLAN NORTH

GRAPHIC SCALE

0 1 2 4 8 12FT
SCALE: 1/4"=1'-0"

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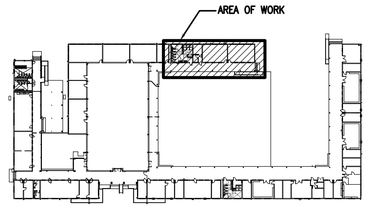
SUBMITTAL PHASE
FINAL SUBMITTAL
SUBMITTAL DATE 30 SEPTEMBER 2019
DES SLC DRW TEC CHK KMM

DEPARTMENT OF DEFENSE
HAWAII ARMY NATIONAL GUARD
DESIGN AND PROJECT MANAGEMENT BRANCH
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HILO, HAWAI'I

HAWAI`I ARMY NATIONAL GUARD (HIARNG)
BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS
PARTIAL BLDG 621 MECHANICAL PLAN

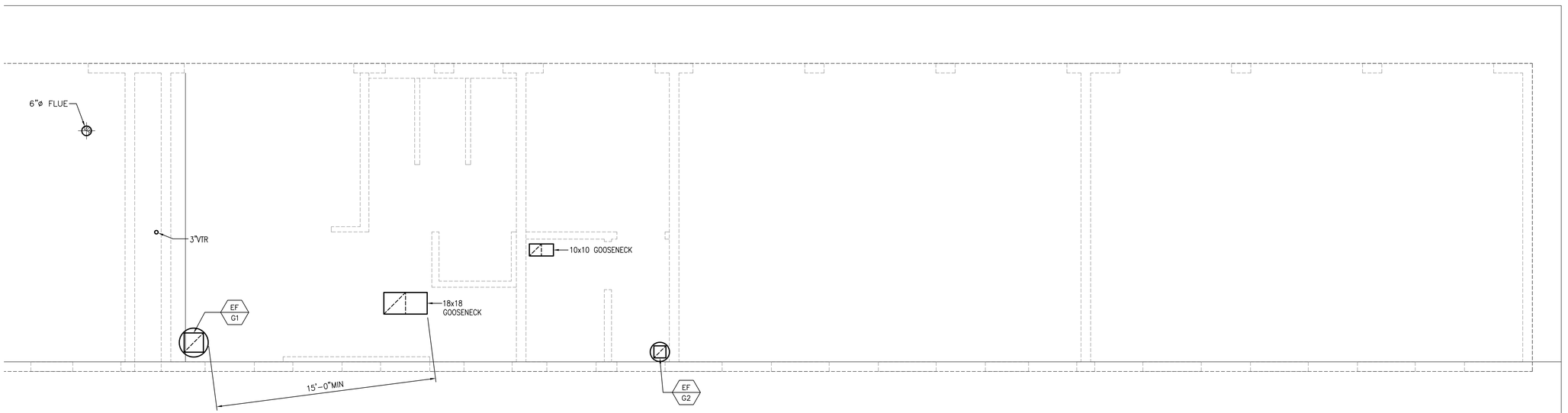
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STATE PROJECT NO. CA-1212-C3
FEDERAL PROJECT NO. 15130007
SHEET 85 of 126
M-403

C:\DOCUMENTS and Settings\Administrator\Desktop\Keaukaha Military Reserve Bldg 621\Drawings\Permitting\Latrine\M-403 PARTIAL BLDG MECHANICAL PLAN.dwg, 4/30/2019 8:47:08 AM, Bluebeam PDF (5 Pages High)



KEY PLAN
SCALE: NONE

PLAN NORTH



PARTIAL MECHANICAL ROOF PLAN
SCALE: 1/4" = 1'-0"

PLAN NORTH

GRAPHIC SCALE
0 1 2 4 8 12FT
SCALE: 1/4"=1'-0"

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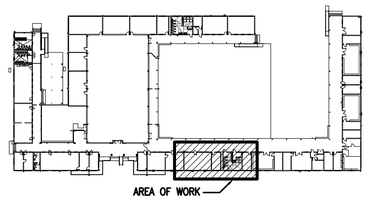
SYM	DESCRIPTION	DATE	APPR

SUBMITTAL PHASE
FINAL SUBMITTAL
SUBMITTAL DATE 30 SEPTEMBER 2019
DES SLC | DRW TEC | CHK KMM

STATE OF HAWAI'I
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KEAUKAHA MILITARY RESERVATION – B621
HILO, HAWAI'I
HAWAI'I ARMY NATIONAL GUARD (HIARNG)
BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS
PARTIAL MECHANICAL ROOF PLAN

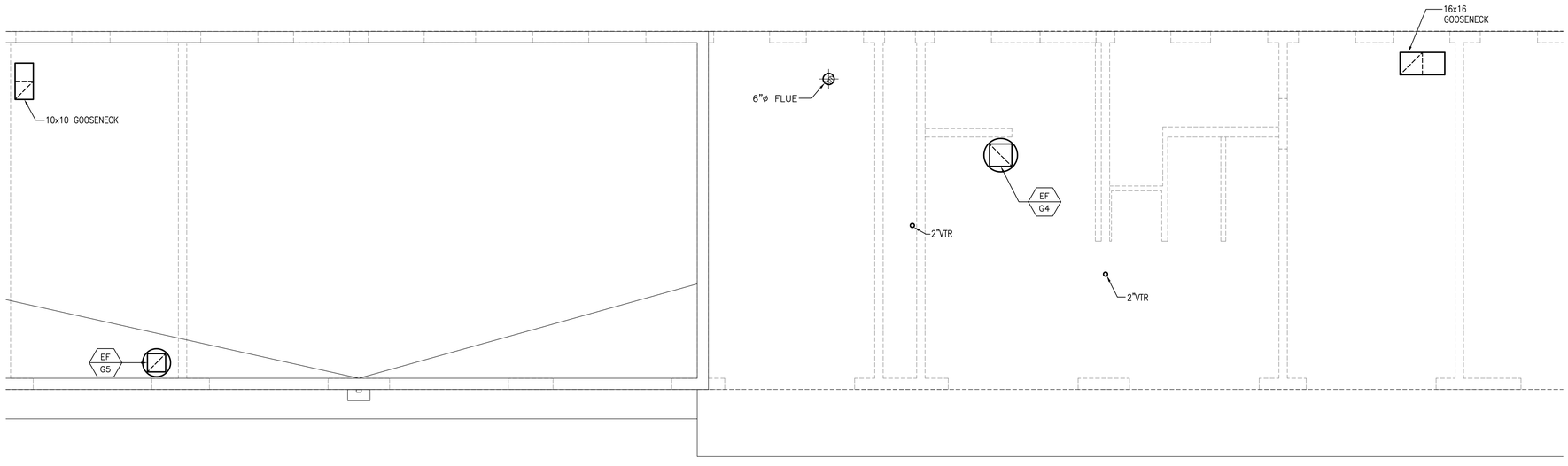
SCALE: AS NOTED
STATE PROJECT NO. CA-1212-C3
FEDERAL PROJECT NO. 15130007
SHEET 86 of 126
M-404

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KEY PLAN
SCALE: NONE

PLAN NORTH



PARTIAL MECHANICAL ROOF PLAN
SCALE: 1/4" = 1'-0"

PLAN NORTH

GRAPHIC SCALE
0 1 2 4 8 12FT
SCALE: 1/4"=1'-0"

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SUBMITTAL DATE 30 SEPTEMBER 2019
DES: SLC DRW: TEC CHK: KMM

DEPARTMENT OF DEFENSE
HAWAII ARMY NATIONAL GUARD
DESIGN AND PROJECT MANAGEMENT BRANCH
STATE OF HAWAI'I
FACILITY MANAGEMENT OFFICE
KEAUKAHA MILITARY RESERVATION – B621
HILO, HAWAI'I

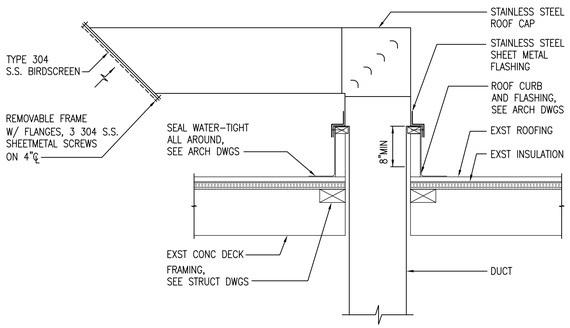
HAWAI`I ARMY NATIONAL GUARD (HIARNG)
BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS

PARTIAL MECHANICAL ROOF PLAN

SCALE: AS NOTED
STATE PROJECT NO. CA-1212-C3
FEDERAL PROJECT NO. 15130007
SHEET 87 of 126

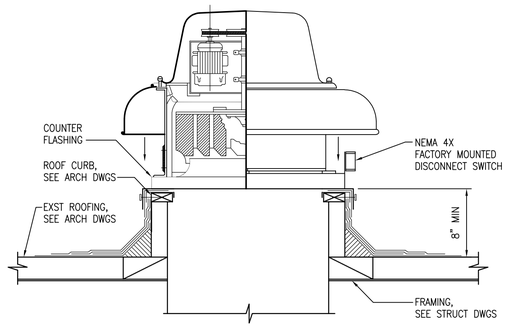
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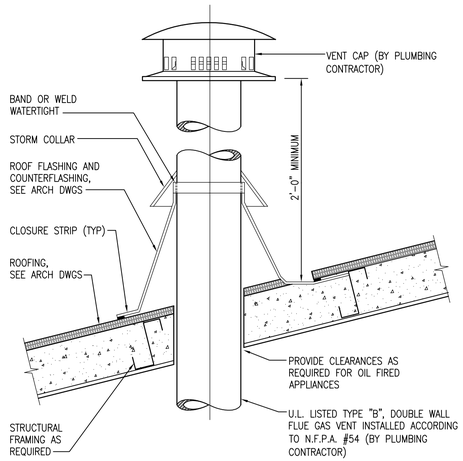
GOOSENECK DETAIL — D1

SCALE: NONE — M-501



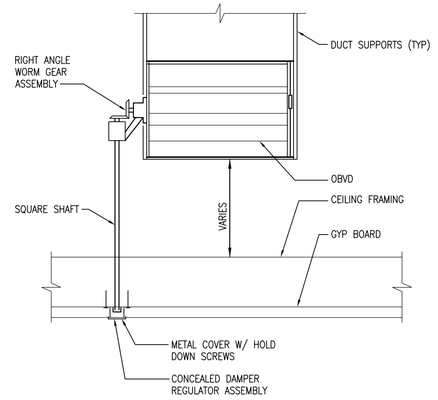
ROOF CURB DETAIL — D2

SCALE: NONE — M-501



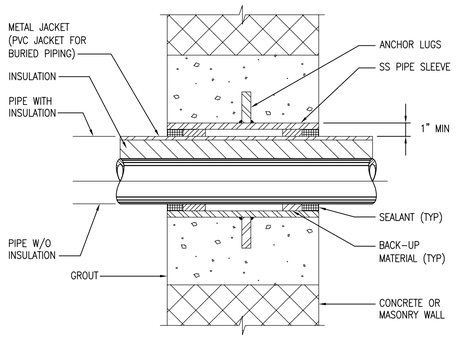
FLUE THRU ROOF DETAIL — D3

SCALE: NONE — M-501



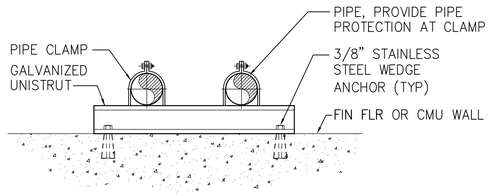
CONCEALED DAMPER ACTUATOR DETAIL — D5

SCALE: NONE — M-501



WALL PIPE PENETRATION DETAIL — B1

SCALE: NONE — M-501



TYPICAL PIPE SUPPORT DETAIL — B2

SCALE: NONE — M-501

HAWAII ARMY NATIONAL GUARD
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SIGNATURE — EXPIRATION DATE

APPR	DATE	DESCRIPTION

SUBMITTAL PHASE: FINAL SUBMITTAL

SUBMITTAL DATE: 30 SEPTEMBER 2019

DES: SLC | DRW: TEC | CHK: KMM

STATE OF HAWAI'I
FACILITY MANAGEMENT OFFICE
HAWAII ARMY NATIONAL GUARD
DESIGN AND PROJECT MANAGEMENT BRANCH
KEAUKAHA MILITARY RESERVATION – B621
HILO, HAWAI'I
HAWAI`I ARMY NATIONAL GUARD (HIARNG)
BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS
DETAILS

SCALE: AS NOTED

STATE PROJECT NO. CA-1212-C3

FEDERAL PROJECT NO. 15130007

SHEET 88 of 126

M-501

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EXHAUST FAN SCHEDULE

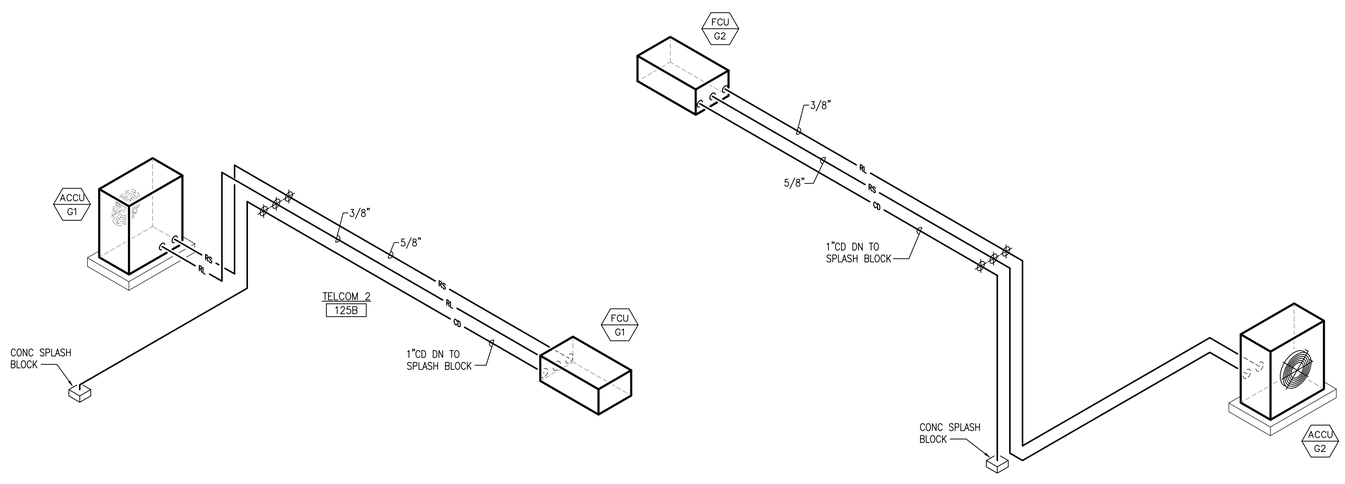
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					CAPACITY CFM	STATIC PRESSURE "WG	RPM	HP	V/PH/HZ			
EF G1	ROOF	MENS	CENTRIFUGAL	BELT	1,920	0.45	1,024	1/2	120/1/60	62	78	GREENHECK CUBE OR APPROVED EQUAL
EF G2	ROOF	ELECTRICAL	CENTRIFUGAL	BELT	150	0.30	1,136	1/4	120/1/60	58	69	GREENHECK CUBE OR APPROVED EQUAL
EF G3	–	–	–	–	–	–	–	–	–	–	–	NOT USED
EF G4	ROOF	WOMENS	CENTRIFUGAL	BELT	1,690	0.45	1,557	1/2	120/1/60	67	71	GREENHECK CUBE OR APPROVED EQUAL
EF G5	ROOF	ELECTRICAL	CENTRIFUGAL	BELT	1,050	0.26	1,136	1/4	120/1/60	58	69	GREENHECK CUBE OR APPROVED EQUAL

FAN COIL UNIT SCHEDULE

NO	TYPE	LOCATION	FAN SELECTION					COOLING COIL SECTION		ELECTRICAL POWER	SOUND DBA	WEIGHT LBS	REMARKS
			SA CFM	OA CFM	E.S.P. "WG	MIN HP	DRIVE	TCC BTUH	SCC BTUH				
FCU G1	WALL MOUNTED	TELECOM RM 125B	250	–	–	–	DIRECT	5,800	5,600	208–230/1/60	45	22	MITSUBISHI MSY–GE 12NA OR APPROVED EQUAL
FCU G2	WALL MOUNTED	TELECOM RM 113B	500	–	–	–	DIRECT	11,900	11,700	208–230/1/60	49	22	MITSUBISHI MSY–GE 18NA OR APPROVED EQUAL

AIR COOLED CONDENSING UNIT SCHEDULE

NO	LOCATION	MIN SENSIBLE CAPACITY (BTUH)	COMPRESSOR		CONDENSER SECTION		WEIGHT LBS	UNIT		REMARKS
			QTY	LRA (EA)	FLA (kW)	AMBIENT AIR (°F)		POWER	MCA	
ACCU G1	EXTERIOR	5,600	1	8.2	.5	90	77	208–230/1/60	12	MITSUBISHI MUY–GE 12NA OR APPROVED EQUAL
ACCU G2	EXTERIOR	11,700	1	10	.93	90	119	208–230/1/60	14	MITSUBISHI MUY–GE 18NA OR APPROVED EQUAL



NOTE:

REFRIGERANT PIPE SIZES, VALVES AND ACCESSORIES SHALL BE PROVIDED AS RECOMMENDED BY ACTUAL MANUFACTURER OF SPLIT SYSTEM.

REFRIGERANT PIPING DIAGRAM

SCALE: NONE

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KEAUKAHA MILITARY RESERVATION – B621
HILO, HAWAI`I

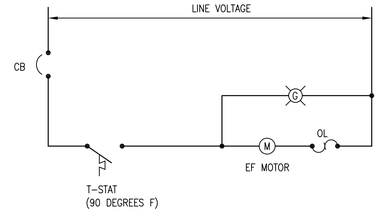
HAWAI`I ARMY NATIONAL GUARD (HIARNG)
BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS

EQUIPMENT SCHEDULES, REFRIGERANT PIPING DIAGRAM

SCALE: AS NOTED
STATE PROJECT NO. CA-1212-C3
FEDERAL PROJECT NO. 15130007
SHEET 89 of 126

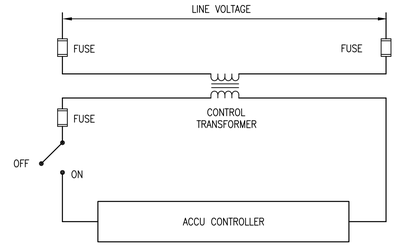
M-601

G:\2019\15000 Keaukaha Military Reserve Bldg 621\Drawing\Permit Drawing\Latrine\M601 EQUIPMENT SCHEDULES, REFRIGERANT PIPING DIAGRAM.dwg, 9/30/2019 9:47:11 AM, Bluebeam PDF (19.0 Printer Plug&Read)



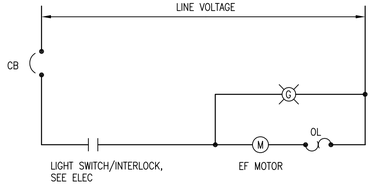
SINGLE PHASE EXHAUST FAN CONTROL DIAGRAM (T-STAT)

SCALE: NONE (FOR ELECTRIC RM EF)



ACCU CONTROL DIAGRAM

SCALE: NONE



SINGLE PHASE EXHAUST FAN CONTROL DIAGRAM

SCALE: NONE (FOR LATRINES EF)

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SIGNATURE
4/30/2020
EXPIRATION DATE

SYM	DESCRIPTION	DATE	APPR

SUBMITTAL PHASE
FINAL SUBMITTAL

SUBMITTAL DATE 30 SEPTEMBER 2019

DES SLC | DRW TEC | CHK KMM

DEPARTMENT OF DEFENSE
HAWAII ARMY NATIONAL GUARD
STATE OF HAWAI'I
DESIGN AND PROJECT MANAGEMENT BRANCH
FACILITY MANAGEMENT OFFICE
KEAUKAHA MILITARY RESERVATION – B621
HILO, HAWAI'I
HAWAI`I ARMY NATIONAL GUARD (HIARNG)
BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS
CONTROL DIAGRAM
SIGNATURE
KMM
TEC

SCALE: AS NOTED
STATE PROJECT NO. CA-1212-C3
FEDERAL PROJECT NO. 15130007
SHEET 90 of 126

M-602

C:\PTC\2019\Hawaii Army National Guard\Keaukaha Military Reservation\Bldg 621\Drawings\Electrical\Control Diagrams\M-602 CONTROL DIAGRAMS.dwg, 4/30/2020 9:54:13 AM, Blackburn, PDF Printmaker

ELECTRICAL SYMBOL LIST / MOUNTING HEIGHT SCHEDULE

MOUNTING HEIGHT FROM FLOOR TO		(SPECIAL MOUNTING HEIGHTS INDICATED ON PLAN)		
		SYMBOL		
TOP	℄	EXISTING	NEW	DESCRIPTION
		(1)	1	FLUORESCENT LUMINAIRE, CEILING MOUNTED (NUMERAL IN CIRCLE CORRESPONDS TO LUMINAIRE SCHEDULE)
			1	LUMINAIRE, CEILING MOUNTED, ADJUSTABLE
		1	1	LUMINAIRE, CEILING MOUNTED (NUMERAL IN CIRCLE CORRESPONDS TO LUMINAIRE SCHEDULE)
		1H	1H	LUMINAIRE, WALL MOUNTED (NUMERAL IN CIRCLE CORRESPONDS TO LUMINAIRE SCHEDULE)
	7'–6"			EMERGENCY LUMINAIRE, WALL MOUNTED
	7'–6"		H	ILLUMINATED EXIT SIGN, WALL MOUNTED, DIRECTIONAL ARROWS AS INDICATED
				ILLUMINATED EXIT SIGN, CEILING MOUNTED, DIRECTIONAL ARROWS AS INDICATED
	46"		$a	LIGHT SWITCH, FLUSH WALL MOUNTED, 1P20A, 120/277V, 1HP MAX. (LETTER INDICATES LUMINAIRES CONTROLLED)
	46"		$2	DOUBLE POLE SINGLE THROW SWITCH, 20A, 120/277V
	46"		$3	THREE WAY SWITCH, 20A, 120/277V
	46"		$D	DIMMER SWITCH, 1000 WATT, 120 VOLT RATING, UNLESS OTHERWISE INDICATED
	46"		$P	PILOT LIGHT SWITCH, 120V (277V)
	46"			SWITCHBANK
	46"		H	OCCUPANCY SENSOR LIGHT SWITCH
				OCCUPANCY SENSOR HEAD, CEILING MOUNTED
	7'–6"		H	OCCUPANCY SENSOR HEAD, WALL MOUNTED
			PH	OCCUPANCY SENSOR SWITCHPACK/RELAY
	18"			RECEPTACLE, DUPLEX, GROUNDING TYPE, 125V, NEMA TYPE 5–15R
	18"			RECEPTACLE, DUPLEX, GFCI TYPE, 125V, NEMA TYPE 5–20R
				RECEPTACLE, DUPLEX, FLUSH FLOOR MOUNTED, GROUNDING TYPE, 125V, NEMA 5–15R
	18"			RECEPTACLE, SINGLE, SPECIAL PURPOSE, 250V–1ø, NEMA CONFIGURATION AS NOTED
			JH	JUNCTION BOX, LARGE, WALL MOUNTED
			J	JUNCTION BOX, LARGE, HORIZONTALLY MOUNTED
			J	JUNCTION BOX, HORIZONTALLY MOUNTED
			JH	JUNCTION BOX, WALL MOUNTED
5'–0"			TH	TIME SWITCH
5'–0"			CH	CONTACTOR
			T	TRANSFORMER, PAD OR FLOOR MOUNTED
	46"		H	PUSH BUTTON SWITCH, WALL MOUNTED
				EQUIPMENT TERMINATION WITH FLEXIBLE CONDUIT WHIP
5'–0"				NON–FUSED DISCONNECT SWITCH, 3P30A UNLESS OTHERWISE NOTED, VOLTAGE TO MATCH CIRCUITING
5'–0"				ENCLOSED CIRCUIT BREAKER
6'–0"				PANELBOARD
				ELECTRICAL EQUIPMENT
6'–0"				TELEPHONE BACKBOARD
6'–0"				SIGNAL CABINET FOR SYSTEM NOTED
		e	A–1,3	HOMERUN ARROW TO PANELBOARD. LETTER INDICATES PANELBOARD, NUMBERS INDICATES CIRCUITS.
		e		INTERIOR WORK: CONCEALED CONDUIT IN FINISHED FLOOR OR BELOW GRADE (NO HASHMARKS INDICATE 2 CURRENT CARRYING CONDUCTORS AND 1 GROUND CONDUCTOR WITHIN, ALL OTHERS SIMILAR). EXTERIOR WORK: CONCRETE ENCASED UNDERGROUND DUCT LINE, SEE DUCT SECTION INDICATOR AND SCHEDULE.

MOUNTING HEIGHT FROM FLOOR TO		(SPECIAL MOUNTING HEIGHTS INDICATED ON PLAN)		
		SYMBOL		
TOP	℄	EXISTING	NEW	DESCRIPTION
		e		CONCEALED CONDUIT IN CEILING OR WALLS, (HASHMARKS INDICATE 3–WIRES WITHIN, ALL OTHERS SIMILAR).
		e		EXPOSED RACEWAY, PROVIDE STRAP 10'–0" ON CENTER MAXIMUM
				GROUNDING CONDUCTOR ROUTED WITH CIRCUIT CONDUCTORS
			E	CONDUIT STUB, 3/4" MINIMUM CONDUIT UNLESS OTHERWISE NOTED
				SAWCUT ROADWAY/SIDEWALK. REPAIR TO MATCH EXISTING
			A	ALARM SYSTEM RACEWAY, 3/4" MINIMUM CONDUIT WITH PULL STRING
			W	SURFACE METAL RACEWAY
			+42"	DENOTES 42" ABOVE FINISHED FLOOR OR GRADE
			A.F.F.	ABOVE FINISHED FLOOR
			EHH	ELECTRICAL HANDHOLE
			GFCI	GROUND FAULT CIRCUIT INTERRUPTER
			GND	GROUND
			HELCo	HAWAII ELECTRIC LIGHT COMPANY
			HP	HORSEPOWER
			HTCo	HAWAIIAN TELEPHONE COMPANY
			KVA	KILOVOLT–AMPERE
			KW	KILOWATT
			NL	NIGHT LIGHT CIRCUIT
			WP	WEATHERPROOF
				DENOTES DEMOLITION/REMOVAL
			1	NOTE INDICATOR
			1 / E–2	DETAIL INDICATOR: TOP HALF DENOTES DETAIL NUMBER, BOTTOM HALF DENOTES SHEET NUMBER
				POWER TRANSFORMER
				GROUND
				CIRCUIT BREAKER
				NON–FUSED DISCONNECT SWITCH
				TRANSFER SWITCH
				POTENTIAL TRANSFORMER
				CURRENT TRANSFORMER
			A	AMMETER
			M	METER SOCKET
				POLE LIGHT ASSEMBLY, SINGLE LUMINAIRE PER POLE (SYMBOL CORRESPONDS TO LUMINAIRE SCHEDULE)

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HAWAI`I ARMY NATIONAL GUARD (HIARNG)
BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS
ELECTRICAL SYMBOL LIST

SCALE: AS NOTED
STATE PROJECT NO. CA-1212-C3
FEDERAL PROJECT NO. 15130007
SHEET 91 of 126
E-001

LUMINAIRE SCHEDULE

TYPE	DESCRIPTION	LAMPS
1	LED, RECESSED 2' x 4', 2 LAMP, ACRYLIC LENS, STEEL HOUSING, 120V, PAINT AFTER FABRICATION, SPRING LOADED DOOR LATCH, 4300 LUMENS COLUMBIA #LLT-24-35LWG-FSA12F-E-U-PAF, LITHONIA OR METALUX EQUAL	33W LED 3500K
2	LED, SURFACE MOUNTED, 4' WRAPAROUND, STEEL HOUSING, PRISMATIC ACRYLIC LENS, 120V, 3295 LUMENS, STEM MOUNTED AS NOTED COLUMBIA #LAW-4-35-VW-E-U, LITHONIA OR METALUX EQUAL	27W LED 3500K
3	LED, SURFACE MOUNTED ADJUSTABLE CYLINDER, 35° BEAM SPREAD, 120V BUILT-IN DRIVER, 4" DIAMETER, 400 LUMEN OUTPUT MINIMUM, PROVIDE CANOPY MOUNTING OUTLET, WHITE FINISH, LOUVER LIGHTOLIER #LLABS-27-RF OR EQUAL	10W LED 2700K
4	AMBER LED, WALL MOUNTED AT +9'-0", SEMI-SHIELDED, WET LABEL, 120V, BRONZE FINISH, 2238 LUMENS, SURFACE CONDUIT ENTRY BOX VISIONAIRE #VSC-1-T3-16LC-3-HW-UNV-VCB-BZ OR EQUAL	18W AMBER LED
5	LED, WALL MOUNTED AT +6'-9", STEEL HOUSING, POLYCARBONATE LENS, 120V, WHITE FINISH, 2317 LUMENS COLUMBIA #LVP523-20W-3500K, KENELL OR LITHONIA EQUAL	20W LED 3500K
6	LED, ALUMINUM HOUSING, HORIZONTALLY MOUNTED ON BEAM, POLYCARBONATE LENS, 120V, SURFACE CONDUIT ENTRY HUBS, BRONZE FINISH, DAMP LABEL, 1193 LUMENS LUMINAIRE LIGHTING #DWL512-15W-3500K-CP-BRZ-DAMP, OR EQUAL	15W LED 3500K
7	SAME AS TYPE 1 EXCEPT 4900 LUMENS COLUMBIA #LLT-24-35MLG-FSA12F-E-U-PAF, LITHONIA OR METALUX EQUAL	38W LED 3500K
8	LED, SURFACE MOUNTED, 4' WRAPAROUND, POSITIVE LATCH DOOR, 120V, STEM MOUNTED AS NOTED, POLYCARBONATE LENS COLUMBIA #LVP523-20W-3500K, KENELL OR LITHONIA EQUAL	20W LED 3500K
9	LED, SURFACE MOUNTED, STEEL HOUSING, DAMP LABEL, POLYCARBONATE LENS, STAINLESS STEEL SCREWS, 3184 LUMENS LUMINAIRE #LVP751-25W-3500K, COLUMBIA OR FAILSAFE EQUAL	25W LED 3500K
10	LED, SURFACE MOUNTED, 11" DIAMETER WHITE DRUM, STEEL HOUSING, 120V, DAMP LABEL, 1700 LUMENS TERON #EE-L13.0-ZE560, LIGHTWAY, PROGRESS EQUAL	15W LED 3500K
11	LED, SURFACE MOUNTED, POLYCARBONATE HOUSING, POLYCARBONATE LENS, DAMP LABEL, CONDUIT ENTRY HOUSING, 120V, 12" SQUARE, BRONZE FINISH, 2993 LUMENS LUMINAIRE LIGHTING #SWP1212-3500K, LITHONIA, KENALL, OR EQUAL	25W LED 3500K
12	LED, SURFACE MOUNTED, 4' VAPORTIGHT FIBERGLASS HOUSING, ACRYLIC LENS, 120V, DAMP LABEL, FULLY GASKETED, 4086 LUMENS HE WILLIAMS #96-4-L40-8-35-HIAFR, LITHONIA OR METALUX EQUAL	30W LED 3500K
13	LED, SURFACE MOUNTED 2' x 4', STEEL HOUSING, ACRYLIC LENS, 120V, 3763 LUMENS HE WILLIAMS #PTS-24-L38/835-RA, LITHONIA OR METALUX EQUAL	31W LED 3500K
	LPS POLE LIGHT, SEE DETAIL, 25' POLE, 120V	115W AMBER LED
	EMERGENCY LIGHT, WALL MOUNTED AT +8'-0", 2 HEAD, 120/277V, SEALED MAINTENANCE-FREE BATTERIES, 90 MINUTE BATTERIES, BUILT-IN READY LIGHT AND TEST SWITCH, DAMP LABEL, LOW VOLTAGE DISCONNECT LITHONIA, DUALITE, SURELITE OR EQUAL	2-15W MIN
	EXIT LIGHT, WALL MOUNTED AT 7'-6", 120/277V, SEALED MAINTENANCE-FREE BATTERIES, LOW VOLTAGE DISCONNECT, TEST BUTTON AND READY LIGHT, RED LETTERS ON BLACK STENCIL FACE, ALUMINUM FACEPLATE, DAMP LABEL LITHONIA, DUALITE, SURELITE OR EQUAL	LED 5W
	EXIT LIGHT, SIMILAR TO ABOVE BUT WITH ADDITIONAL 2 EMERGENCY LIGHTING HEAD	LED +2-25W

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HILO, HAWAI'I

HAWAI`I ARMY NATIONAL GUARD (HIARNG)
BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS

LUMINAIRE SCHEDULE

SCALE: AS NOTED
STATE PROJECT NO. CA-1212-C3
FEDERAL PROJECT NO. 15130007
SHEET 92 of 126
E-002

FUTURE BUILDINGS

STUB 3–2" POWER AND 4–2" COMM

2–2" POWER 3–4" COMM

3' x 5' POWER HH, 3' x 5' COMM HH

SAWCUT AND PATCH PAVING AND SIDEWALK

CARD GATE, SEE T–103

SEE T–103

COMM AND ELECTRIC ROOM

2–WP, JUNCTION BOXES AT +9'–6" TO TOP ABOVE FINISH FLOOR

6–2" POWER 3–4", COMM SEE E–102 (C4)

1"C, 2#8, 1#10 GND. RUN UNDER SIDEWALK

25' HIGH PARKING LOT POLE LIGHT, SEE E–102 (A2)

6–2" POWER, SEE E–102 (C4) SIM

3–4" COMM, SEE E–102 (C2) SIM

3' x 5' POWER HH

EXISTING 6–2"C

3' x 5' COMM HH, AVOID WATER FAUCET

EXISTING ELECTRIC ROOM

EXISTING JUNCTION BOX

480V EXISTING SWITCHBOARD

COMM ROOM

COMM JUNCTION BOX

3–4" COMM SEE E–102 (C2)

EXISTING HELCO TRANSFORMER

EXISTING 2–2" POWER 1–2" POWER (SPARE), SEE E–102 (C2)

EXISTING 3'x5' HELCO HH

EXISTING COMM HH

EXISTING 3–4" COMM

EXISTING HHG

EXISTING 3'x5' COMM HH

3–4" COMM

EXISTING 3'x5' COMM HH "SPEED LIMIT 15"

EXISTING YCA PHASE I

EXISTING STUBUP 2–4" HELCO

EXISTING STUBUP 2–4" COMM ELEV=66.17

EXISTING UTILITY POLE

EXISTING HELCO 120/208V UNDERGROUND SERVICE AND HAWAIIAN TELCOM SERVICE TO BE REMOVED AT END OF PROJECT

STA. K–12 MAG NAIL ELEV=62.55

STA. K–11 MAG NAIL ELEV=60.51

STA. K–23 "Y" CUT ELEV=64.81

STA. K–22 MAG NAIL ELEV=63.33

STA. K–3 1/2" PIPE ELEV=65.1

STA. K–11A HUB

(E) ASSEMBLY HALL

BUILDING 621 (CONC.)

BUILDING 622D (METAL)

BUILDING 507 (METAL)

ARMORY BUILDING (CONC.)

EARL'S ALLEE

CIRCLE AVENUE

ASPHALT PAVEMENT

EDGE OF PAVEMENT

EDGE OF VEGETATION

EDGE OF VEGETATION ALONG BOTTOM BANK

TOP BANK

CONC. ENCLOSURE

CHAIN LINK FENCE

CESSPOOL COVERS

CLEANOUTS

WATER FOUNTAIN

WATER HEATER

AIR CONDITIONER

PLANTERS

TREES

PALMS

COCONUT TREES D=1.5 H=40 (TYPICAL SIZE)

COCONUT TREES D=1.5 H=30 (TYPICAL SIZE)

TREE STUMP

TREE STUMP (APPROXIMATE LOCATION)

LOOSE ROCK WALL

CMU WALL 3 FT. HIGH

STEPS & LANDING

COOKING PIT

EXPOSED 2" PIPE

MOVING PARTITIONS

ELEC OUTLET

ELEC. PANELS

ELEC. BOXES

FIRE ALARM BOX

FLAG STAFF

PLANTED TANK

PLANTER WALL

RAMP

SPEED BUMP

PARKING STALLS

UTILITY BOXES

GATE

BORE LOCATION

WATER VALVES

DOUBLE YELLOW LINES

STOP LINE

TONED WATERLINE (BY OTHERS)

WM #82326718

WM #96861134

VENTS

GAS RISER

ELEC. PANELS

RISERS

PROPANE TANK

CONDUIT

WASHRACK

1" BFP CONTROL PANEL

P O S T S

ELECTRICAL SITE PLAN

SCALE: 1" = 30'

A1

PLAN NORTH

0 15 30 60 90FT

SCALE: 1" = 30'–0"

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STATE OF HAWAI'I
FACILITY MANAGEMENT OFFICE

ELECTRICAL SITE PLAN

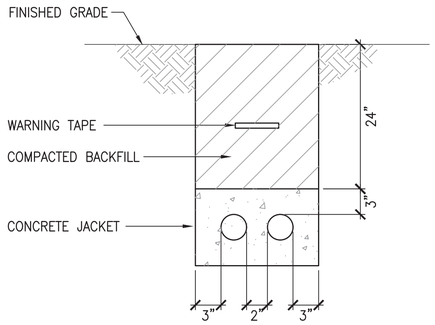
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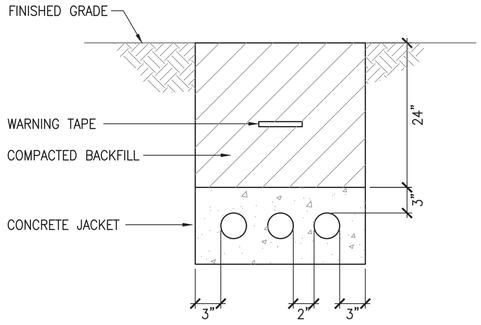
FEDERAL PROJECT NO. 15130007

SHEET 93 of 126

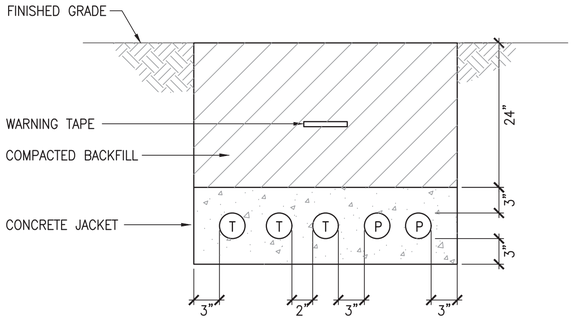
ES101



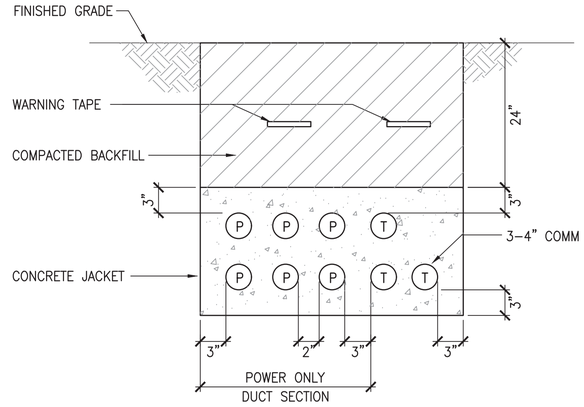
TYPICAL 2 WAY DUCT C1
NOT TO SCALE ES102



TYPICAL 3 WAY DUCT C2
NOT TO SCALE ES102



DUCT SECTION C3
NOT TO SCALE ES102



DUCT SECTION C4
NOT TO SCALE ES102

STREET LIGHT NOTES:

1. NO CHANGES WILL BE ALLOWED WITHOUT PRIOR APPROVAL.
2. THE CONTRACTOR SHALL INSCRIBE THE MONTH AND YEAR OF INSTALLATION OF PHOTOCELLS AND LAMPS. ALL P.E.'S SHALL HAVE THE NORTH INDEX FACING NORTH.
3. ALL LABOR AND MATERIALS SHALL BE WARRANTED FOR A MINIMUM OF ONE YEAR FROM DATE OF ENERGIZING OF STREETLIGHTS.
4. ACCEPTABLE STREET LIGHT MATERIALS:

   LUMINAIRES, WITH PE RECEPTACLE AND 120 VOLT LED.

   BEACON LIGHTING: VPL 64L–115–AM (115W). GREY FINISH (GYS), TYPE 3 DISTRIBUTION, 7 PIN RECEPTACLE

   PHOTOCELLS, COMPLETELY SOLID STATE, FAIL "ON".

   FISHER PIERCE, FP–7790B SPS

   ALUMINUM POLES: INTERNALLY MOUNTED VIBRATION DAMPER, MINIMUM .188 WALL THICKNESS. MUST BE APPROVED BY F.H.W.A. TO BE IN COMPLIANCE WITH THE 2009 AMENDED AND ADOPTED AASHTO SPECIFICATIONS. 10 TO 12 INCH BASE BOLT CIRCLE. ARM LENGTH SHALL BE PER PLANS.

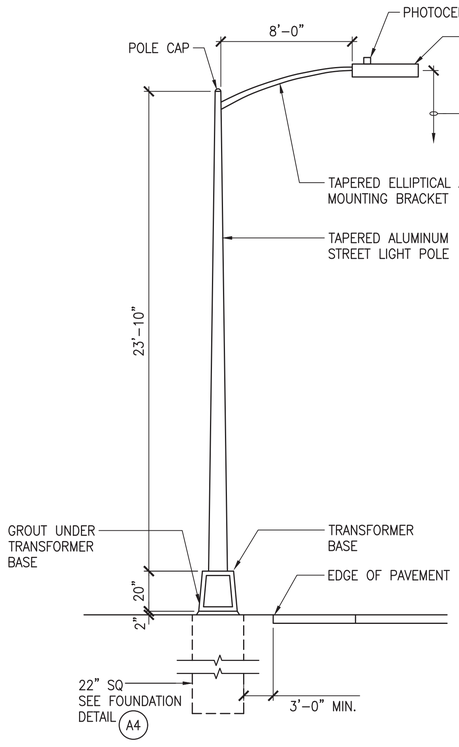
   HAPCO RTA25D7B

   TRANSFORMER BASES: ALUMINUM WITH 15 INCH BASE BOLT CIRCLE. MUST BE APPROVED BY F.H.W.A. TO BE IN COMPLIANCE WITH THE 2009 AMENDED AND ADOPTED AASHTO BREAKAWAY SPECIFICATIONS.

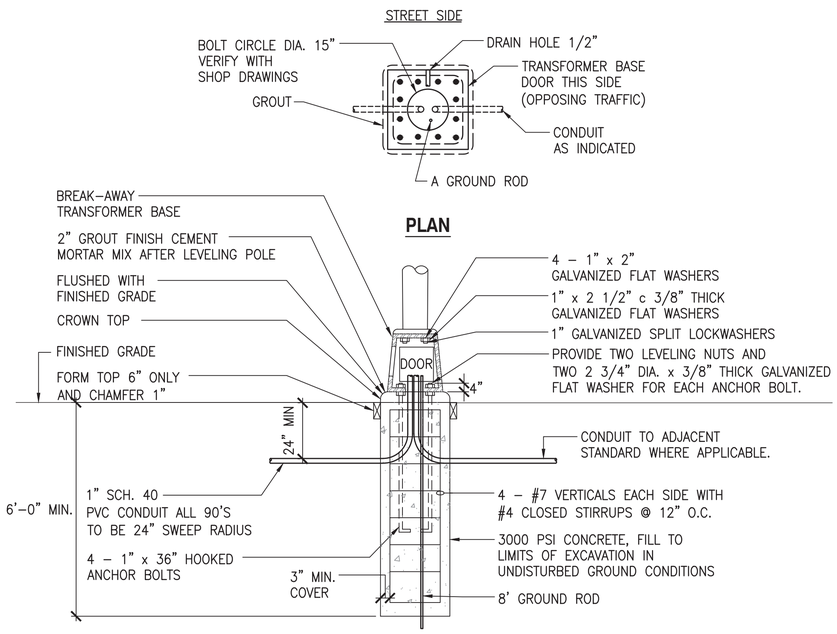
   1) LEXINGTON 08R–1315B–17
   2) AKRON FOUNDRY TB1–17
5. SHOP DRAWING SHALL BE SUBMITTED FOR APPROVAL BY THE CONTRACTING OFFICER.
6. ALL UNDERGROUND WIRING STREETLIGHTS SHALL BE GROUNDED TO PROVIDE A MAXIMUM 25 OHMS TO GROUND.
7. ALL WORK SHALL CONFORM TO THE LATEST NATIONAL ELECTRIC CODE.

ATFP NOTE:

MOUNT ALL OVERHEAD UTILITIES AND OTHER FIXTURES WEIGHING 14 KILOGRAMS (31 POUNDS) OR MORE (EXCLUDING DISTRIBUTED SYSTEMS SUCH AS PIPING NETWORKS THAT COLLECTIVELY EXCEED THAT WEIGHT) TO MINIMIZE THE LIKELIHOOD THAT THEY WILL FALL AND INJURE BUILDING OCCUPANTS. DESIGN ALL EQUIPMENT MOUNTINGS TO RESIST FORCES OF 0.5 TIMES THE EQUIPMENT WEIGHT IN THE DOWNWARD DIRECTION. THIS STANDARD DOES NOT PRECLUDE THE NEED TO DESIGN EQUIPMENT MOUNTINGS FOR FORCES REQUIRED BY OTHER CRITERIA SUCH AS SEISMIC STANDARDS.



PARKING LOT LIGHT STANDARD DETAIL A2
NOT TO SCALE ES102



PARKING LOT LIGHT STANDARD DETAIL A4
NOT TO SCALE ES102

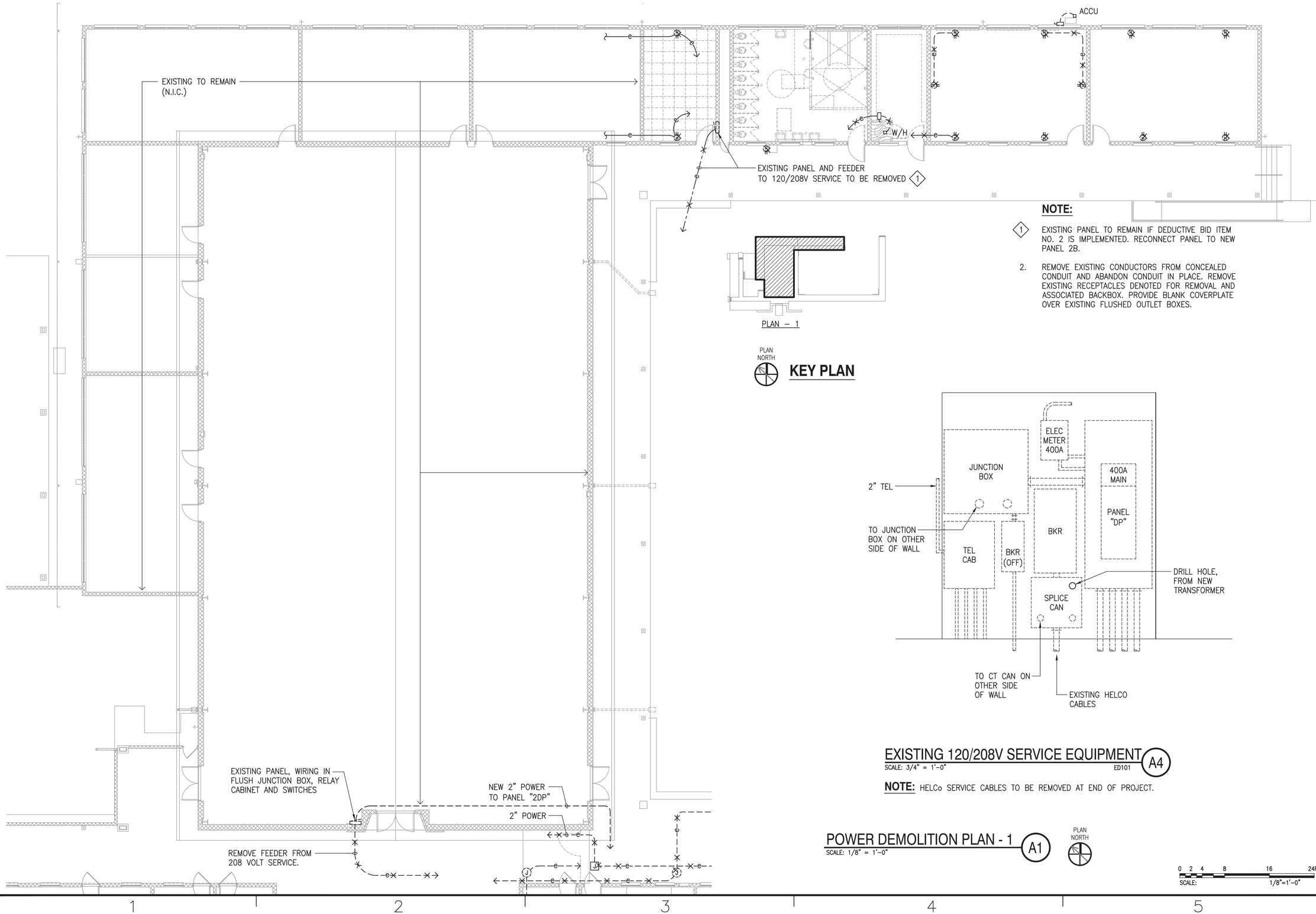
HAWAII ARMY NATIONAL GUARD
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733 BISHOP STREET, SUITE 3100
HONOLULU, HAWAII 96813
TELEPHONE: (808) 523–9636
FAX: (808) 521–3280
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A/E INFO
MICHELE N. ADOLPHO
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No. 10017–E
HAWAII, U.S.A.
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION
4/30/2020
SIGNATURE EXPIRATION DATE

NO	DESCRIPTION	DATE	APPR
	SYM		

SUBMITTAL PHASE
FINAL SUBMITTAL
SUBMITTAL DATE 30 SEPTEMBER 2019
DES GK DRW MC CHK GK

STATE OF HAWAI'I
FACILITY MANAGEMENT OFFICE
DEPARTMENT OF DEFENSE
HAWAII ARMY NATIONAL GUARD
DESIGN AND PROJECT MANAGEMENT BRANCH
KEAUKAHA MILITARY RESERVATION – B621
HILO, HAWAI'I
HAWAI'I ARMY NATIONAL GUARD (HIARNG)
BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS
DUCT SECTION AND LIGHT POLE DETAILS

SCALE: AS NOTED
STATE PROJECT NO. CA-1212-C3
FEDERAL PROJECT NO. 15130007
SHEET 94 of 126
ES102



PLAN – 1

PLAN NORTH

KEY PLAN

NOTE:

1 EXISTING PANEL TO REMAIN IF DEDUCTIVE BID ITEM NO. 2 IS IMPLEMENTED. RECONNECT PANEL TO NEW PANEL 2B.

2. REMOVE EXISTING CONDUCTORS FROM CONCEALED CONDUIT AND ABANDON CONDUIT IN PLACE. REMOVE EXISTING RECEPTACLES DENOTED FOR REMOVAL AND ASSOCIATED BACKBOX. PROVIDE BLANK COVERPLATE OVER EXISTING FLUSHED OUTLET BOXES.

EXISTING 120/208V SERVICE EQUIPMENT A4

SCALE: 3/4" = 1'-0" ED101

NOTE: HELCo SERVICE CABLES TO BE REMOVED AT END OF PROJECT.

POWER DEMOLITION PLAN - 1 A1

SCALE: 1/8" = 1'-0"

PLAN NORTH

0 2 4 8 16 24FT
SCALE: 1/8"=1'-0"

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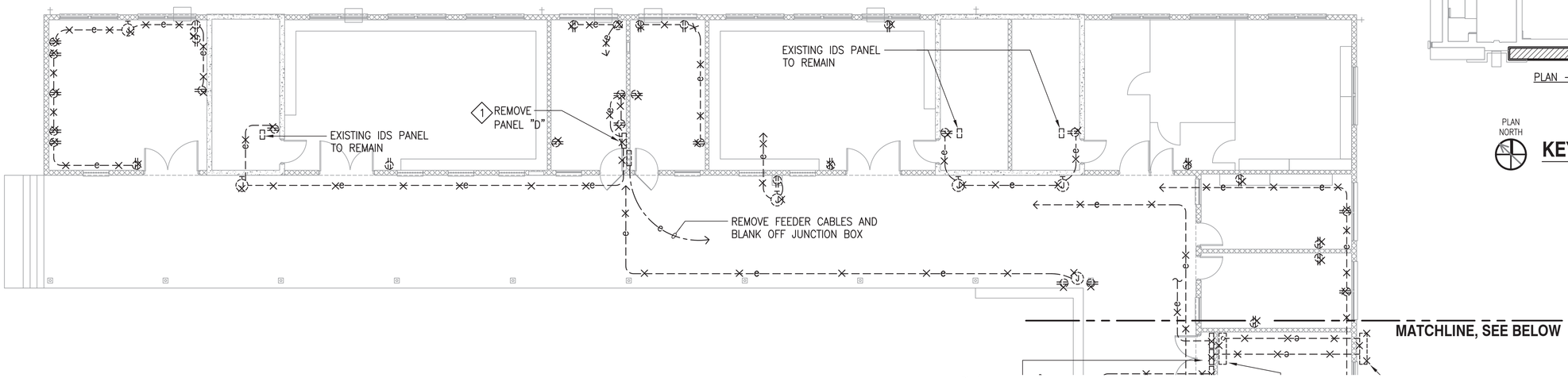
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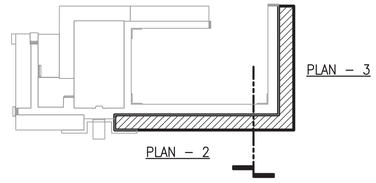
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DEPARTMENT OF DEFENSE
HAWAII ARMY NATIONAL GUARD
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STATE OF HAWAI'I
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KEAUKAHA MILITARY RESERVATION – B621
HILO, HAWAI'I
HAWAI'I ARMY NATIONAL GUARD (HIARNG)
BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS
POWER DEMOLITION PLAN – 1

SCALE: AS NOTED
STATE PROJECT NO. CA-1212-C3
FEDERAL PROJECT NO. 15130007
SHEET 95 of 126
ED101





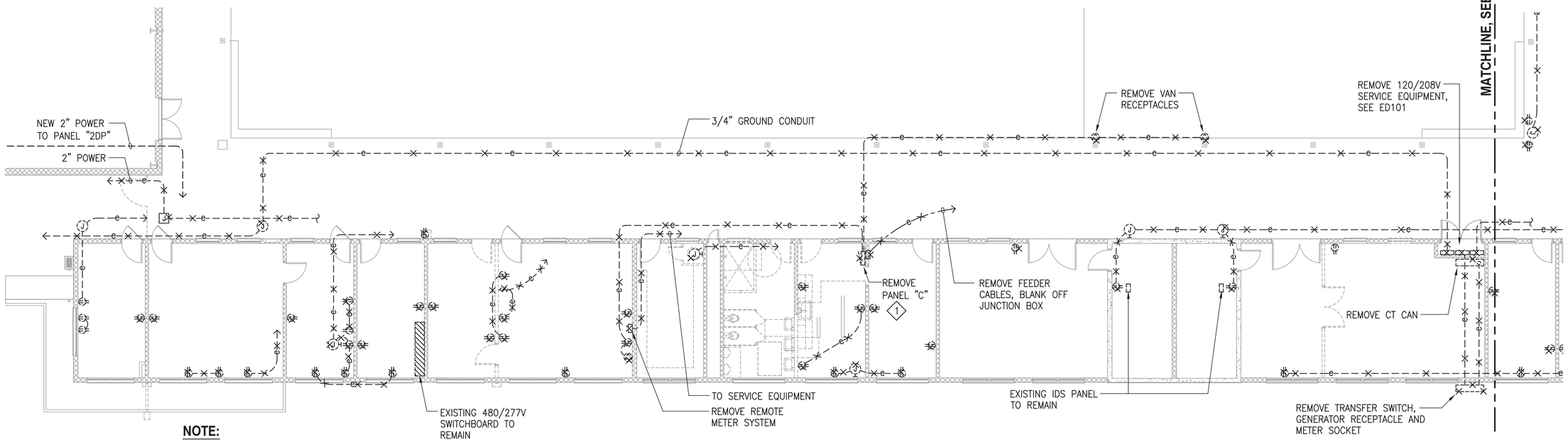
PLAN NORTH

KEY PLAN

POWER DEMOLITION PLAN - 3 (C1)

SCALE: 1/8" = 1'-0"

PLAN NORTH



NOTE:

1. EXISTING PANEL TO REMAIN IF DEDUCTIVE BID ITEM NO. 2 IS IMPLEMENTED.
2. REMOVE EXISTING CONDUCTORS FROM CONCEALED CONDUIT AND ABANDON CONDUIT IN PLACE. REMOVE EXISTING RECEPTACLES DENOTED FOR REMOVAL AND ASSOCIATED BACKBOX. PROVIDE BLANK COVERPLATE OVER EXISTING FLUSHED OUTLET BOXES.

POWER DEMOLITION PLAN - 2 (A1)

SCALE: 1/8" = 1'-0"

PLAN NORTH

0 2 4 8 16 24FT
SCALE: 1/8"=1'-0"

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GK	MC	GK

DEPARTMENT OF DEFENSE
HAWAII ARMY NATIONAL GUARD
DESIGN AND PROJECT MANAGEMENT BRANCH
STATE OF HAWAI'I
FACILITY MANAGEMENT OFFICE

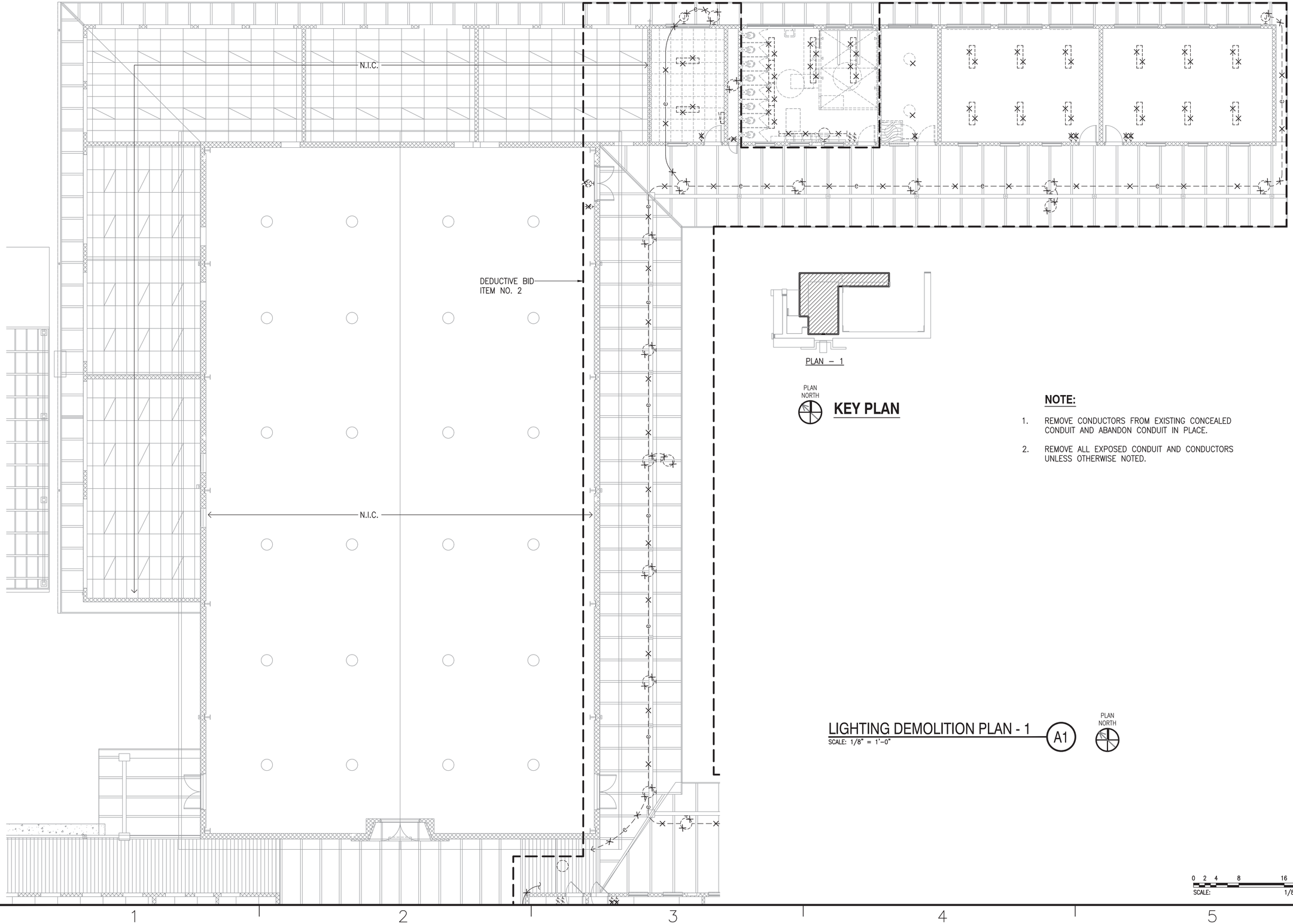
KEAUKAHA MILITARY RESERVATION – B621
HILO, HAWAI'I

HAWAI'I ARMY NATIONAL GUARD (HIARNG)
BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS

POWER DEMOLITION PLANS – 2 AND 3

SCALE: AS NOTED
STATE PROJECT NO. CA-1212-C3
FEDERAL PROJECT NO. 15130007
SHEET 96 of 126

ED102



PLAN – 1

PLAN NORTH

KEY PLAN

NOTE:

1. REMOVE CONDUCTORS FROM EXISTING CONCEALED CONDUIT AND ABANDON CONDUIT IN PLACE.
2. REMOVE ALL EXPOSED CONDUIT AND CONDUCTORS UNLESS OTHERWISE NOTED.

LIGHTING DEMOLITION PLAN - 1

SCALE: 1/8" = 1'–0"

A1

PLAN NORTH

0 2 4 8 16 24FT

SCALE: 1/8"=1'–0"

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DEPARTMENT OF DEFENSE
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DESIGN AND PROJECT MANAGEMENT BRANCH
STATE OF HAWAI'I
FACILITY MANAGEMENT OFFICE

KEAUKAHA MILITARY RESERVATION – B621
HILO, HAWAI'I

HAWAI`I ARMY NATIONAL GUARD (HIARNG)
BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS

LIGHTING DEMOLITION PLAN – 1

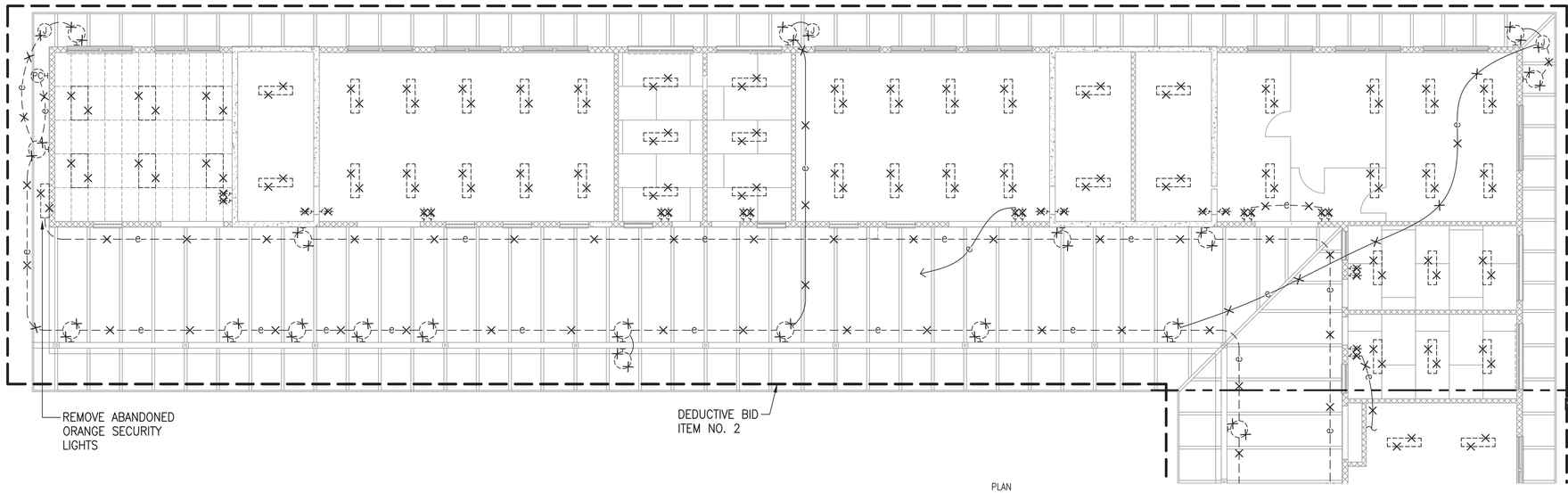
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STATE PROJECT NO. CA-1212-C3

FEDERAL PROJECT NO. 15130007

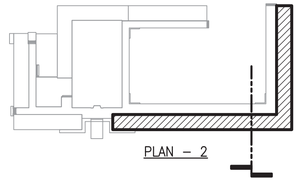
SHEET 97 of 126

ED103



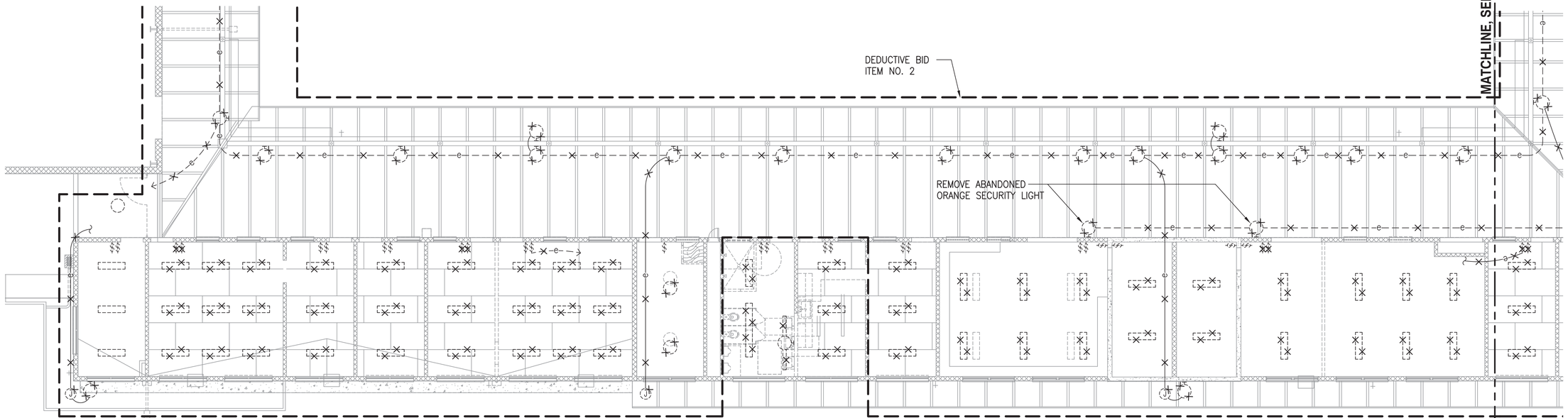
LIGHTING DEMOLITION PLAN - 3 (C1)
SCALE: 1/8" = 1'-0"

PLAN NORTH



PLAN NORTH

KEY PLAN



LIGHTING DEMOLITION PLAN - 2 (A1)
SCALE: 1/8" = 1'-0"

PLAN NORTH

NOTE:

1. REMOVE CONDUCTORS FROM EXISTING CONCEALED CONDUIT AND ABANDON CONDUIT IN PLACE.
2. REMOVE ALL EXPOSED CONDUIT AND CONDUCTORS UNLESS OTHERWISE NOTED.

0 2 4 8 16 24FT
SCALE: 1/8"=1'-0"

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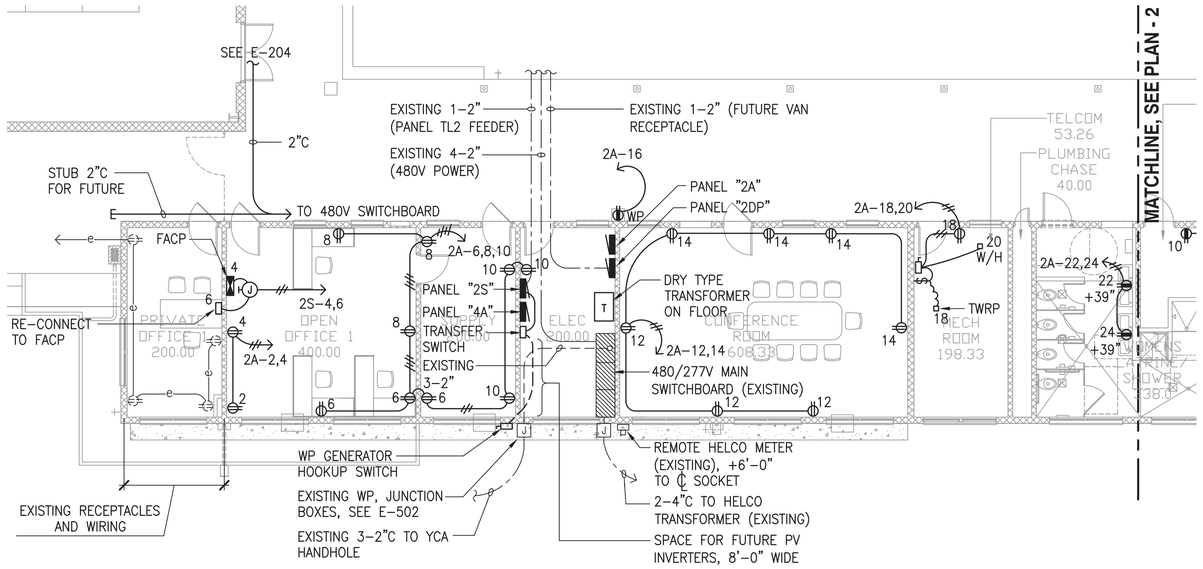
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DEPARTMENT OF DEFENSE
DESIGN AND PROJECT MANAGEMENT BRANCH
HAWAII ARMY NATIONAL GUARD

KEAUKAHA MILITARY RESERVATION – B621
HILO, HAWAI'I

HAWAI'I ARMY NATIONAL GUARD (HIARNG)
BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS

LIGHTING DEMOLITION PLANS – 2 AND 3

SCALE: AS NOTED
STATE PROJECT NO. CA-1212-C3
FEDERAL PROJECT NO. 15130007
SHEET 98 of 126
ED104

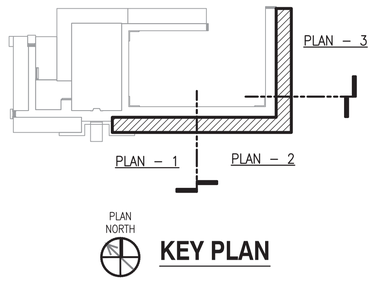


WING 1 POWER PLAN - 1

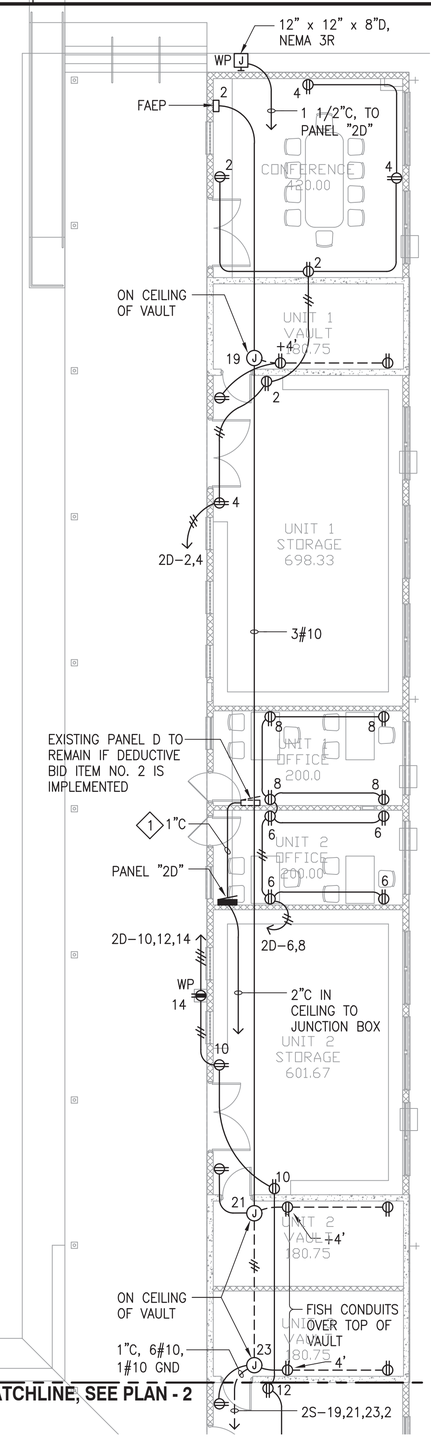
SCALE: 1/8" = 1'-0"

C1

PLAN NORTH



KEY PLAN

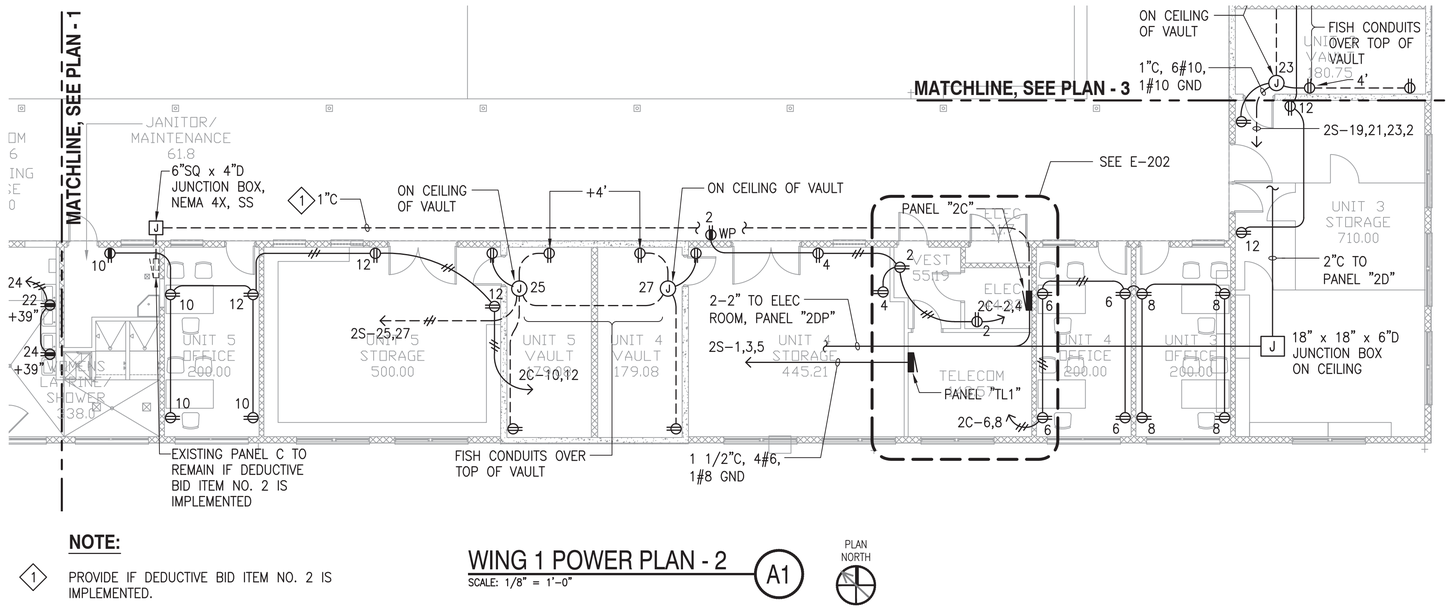


WING 1 POWER PLAN - 3

SCALE: 1/8" = 1'-0"

A4

PLAN NORTH



WING 1 POWER PLAN - 2

SCALE: 1/8" = 1'-0"

A1

PLAN NORTH

NOTE:

1. PROVIDE IF DEDUCTIVE BID ITEM NO. 2 IS IMPLEMENTED.

SCALE: 0 2 4 8 16 24FT — 1/8"=1'-0"

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DES GK | DRW MC | CHK GK

STATE OF HAWAI'I — FACILITY MANAGEMENT OFFICE

DEPARTMENT OF DEFENSE — HAWAII ARMY NATIONAL GUARD — DESIGN AND PROJECT MANAGEMENT BRANCH

KEAUKAHA MILITARY RESERVATION – B621 — HILO, HAWAI'I

HAWAI'I ARMY NATIONAL GUARD (HIARNG)
BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS

WING 1 POWER PLANS

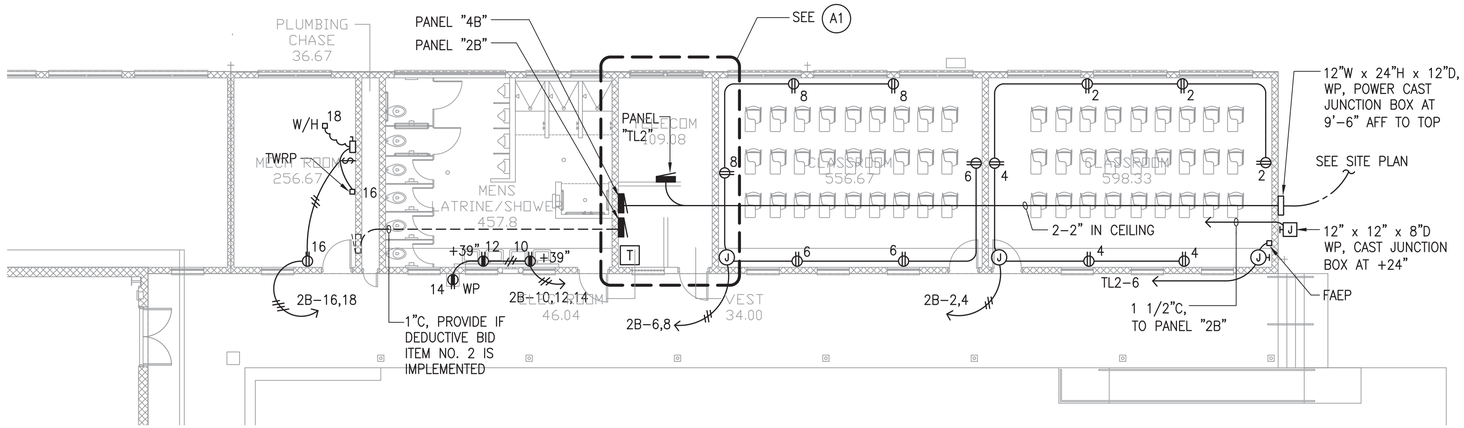
SCALE: AS NOTED

STATE PROJECT NO. CA-1212-C3

FEDERAL PROJECT NO. 15130007

SHEET 99 of 126

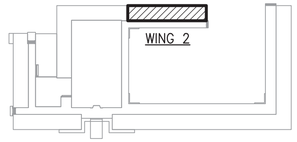
E-201



WING 2 - POWER PLAN C1

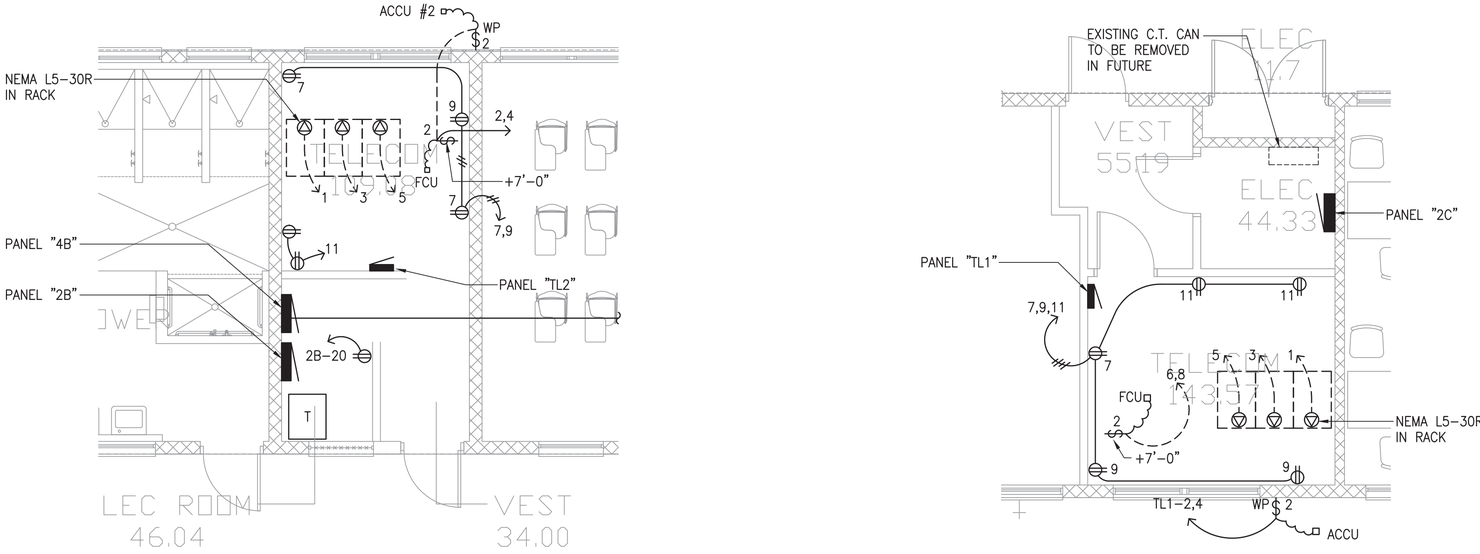
SCALE: 1/8" = 1'-0"

PLAN NORTH



PLAN NORTH

KEY PLAN



PARTIAL ELECTRICAL PLAN A1

SCALE: 1/4" = 1'-0" E-202

PLAN NORTH

PARTIAL ELECTRICAL PLAN A3

SCALE: 1/4" = 1'-0" E-201

PLAN NORTH

0 1 2 4 8 12FT
SCALE: 1/4"=1'-0"

0 2 4 8 16 24FT
SCALE: 1/8"=1'-0"

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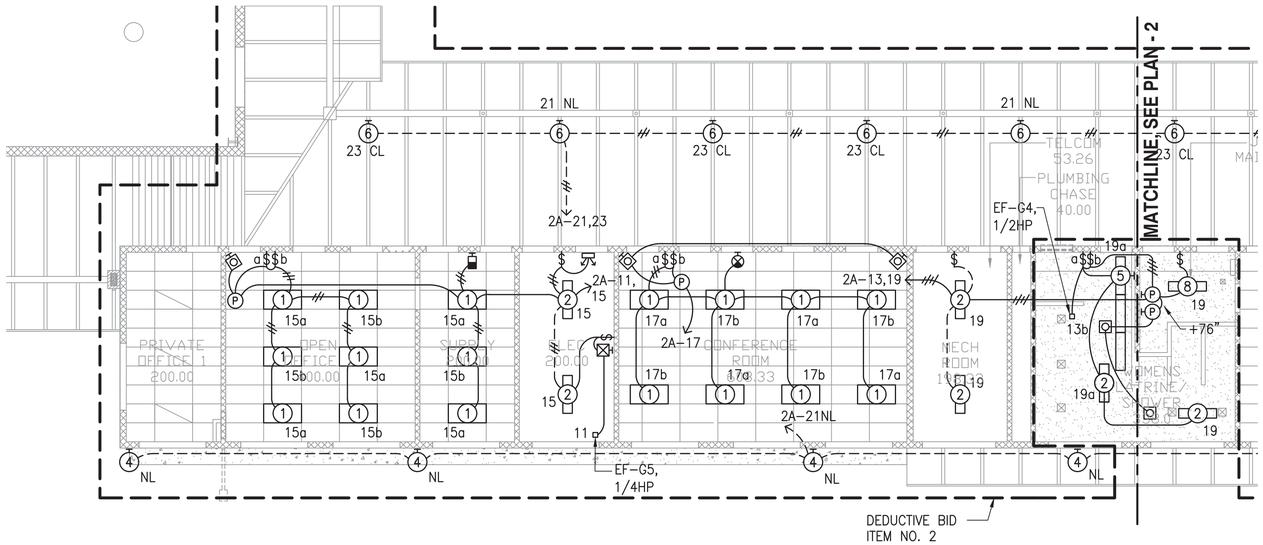
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HILO, HAWAI'I

HAWAI'I ARMY NATIONAL GUARD (HIARNG)
BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS

WING 2 POWER PLANS

SCALE: AS NOTED
STATE PROJECT NO. CA-1212-C3
FEDERAL PROJECT NO. 15130007
SHEET 100 of 126

E-202



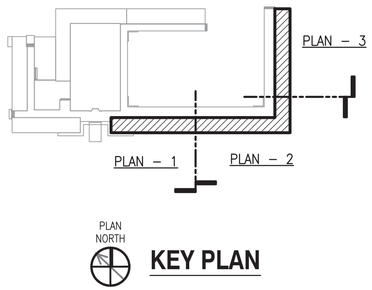
NOTES:

1. INTERCEPT EXISTING LIGHTING CIRCUIT AND EXTEND TO NEW FIXTURES IN WOMENS LATRINE/SHOWER IF DEDUCTIVE BID ITEM NO. 2 IS IMPLEMENTED. CONTRACTOR TO VERIFY EXISTING CIRCUITRY PRIOR TO BEGINNING WORK.

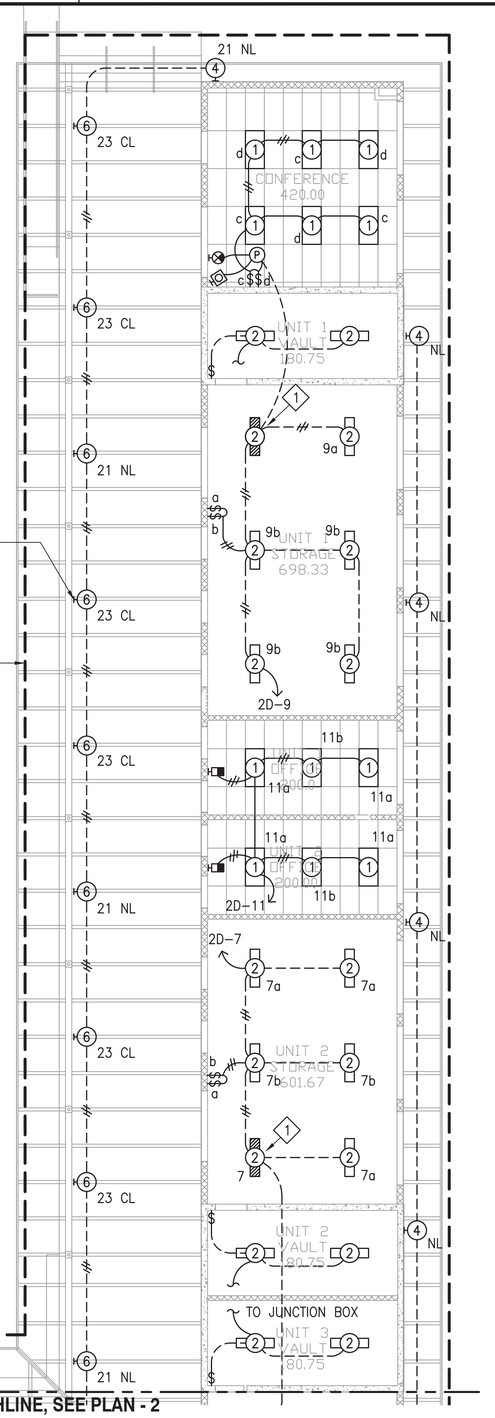
PARTIAL LIGHTING PLAN - 1 (C1)

SCALE: 1/8" = 1'-0"

PLAN NORTH



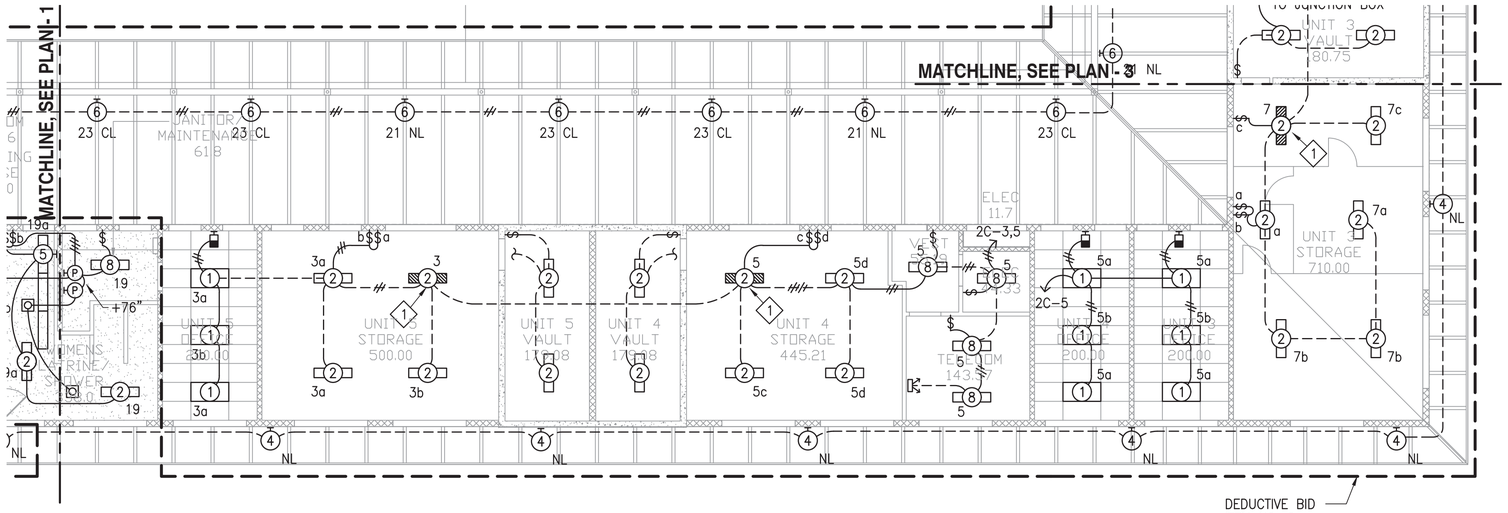
KEY PLAN



PARTIAL LIGHTING PLAN - 3 (A4)

SCALE: 1/8" = 1'-0"

PLAN NORTH



PARTIAL LIGHTING PLAN - 2 (A1)

SCALE: 1/8" = 1'-0"

PLAN NORTH

NOTE:

◇1 24 HOUR LIGHT IN FRONT OF VAULT.

0 2 4 8 16 24FT

SCALE: 1/8"=1'-0"

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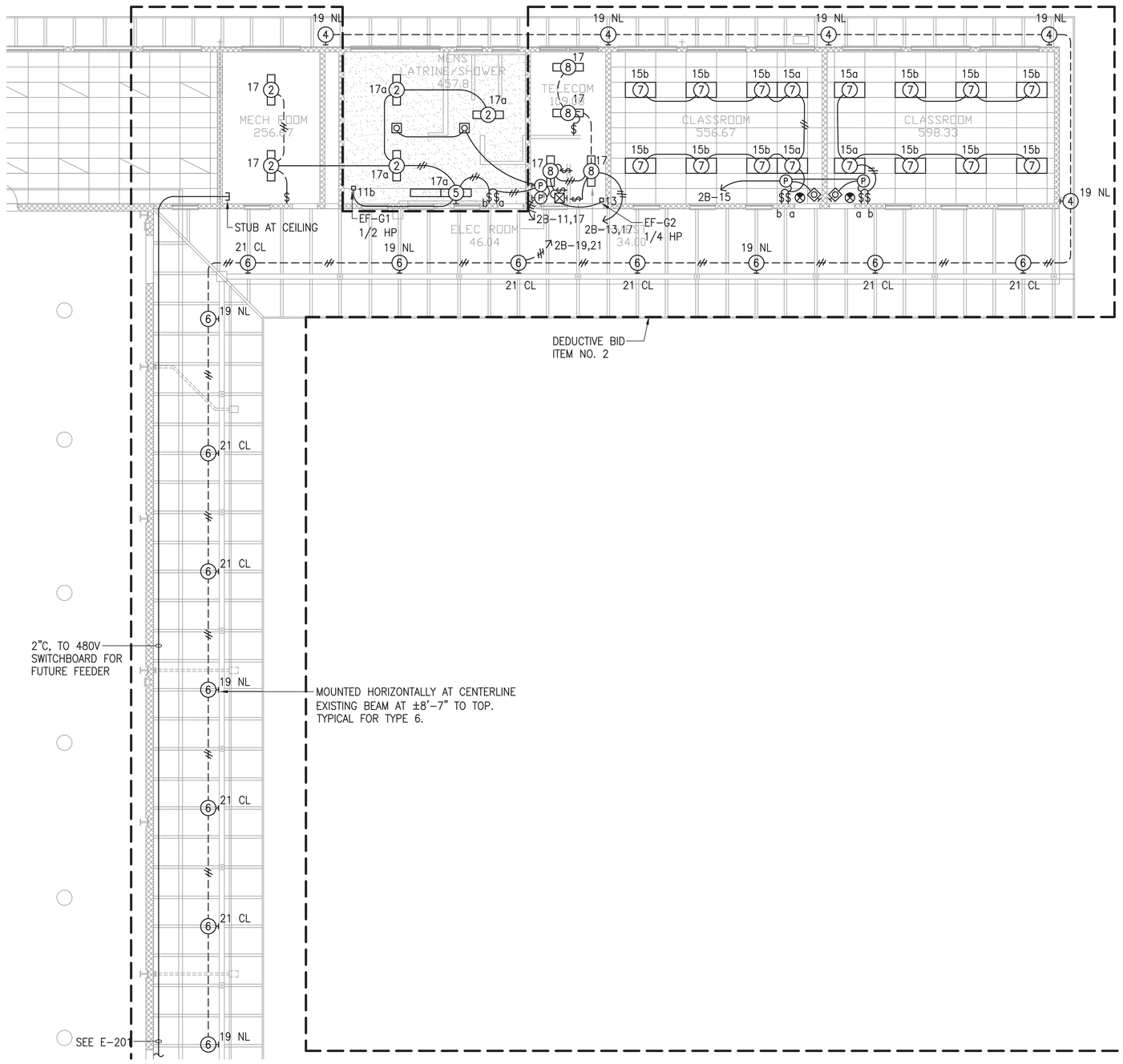
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HAWAI`I ARMY NATIONAL GUARD (HIARNG)
BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS

PARTIAL LIGHTING PLANS

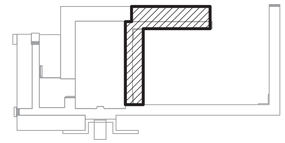
SCALE: AS NOTED
STATE PROJECT NO. CA-1212-C3
FEDERAL PROJECT NO. 15130007
SHEET 101 of 126

E-203



PARTIAL LIGHTING PLAN (A1)
SCALE: 1/8" = 1'-0"

PLAN NORTH



PLAN NORTH

KEY PLAN

NOTES:

1. MOUNT ALL OVERHEAD ELECTRICAL EQUIPMENT AND LIGHTS WEIGHING 31 POUNDS OR MORE TO MINIMIZE LIKELIHOOD THAT THEY WILL FALL AND CAUSE INJURY TO BUILDING OCCUPANTS. DESIGN ALL EQUIPMENT MOUNTING TO RESIST FORCES OF 0.5 TIMES THE EQUIPMENT WEIGHT IN ANY HORIZONTAL DIRECTION AND 1.5 TIMES THE EQUIPMENT WEIGHT IN THE DOWNWARD DIRECTION.
2. INTERCEPT EXISTING LIGHTING CIRCUIT AND EXTEND TO NEW FIXTURES IN MENS LATRINE/SHOWER IF DEDUCTIVE BID ITEM NO. 2 IS IMPLEMENTED. CONTRACTOR TO VERIFY EXISTING CIRCUITRY PRIOR TO BEGINNING WORK.

0 2 4 8 16 24FT
SCALE: 1/8"=1'-0"

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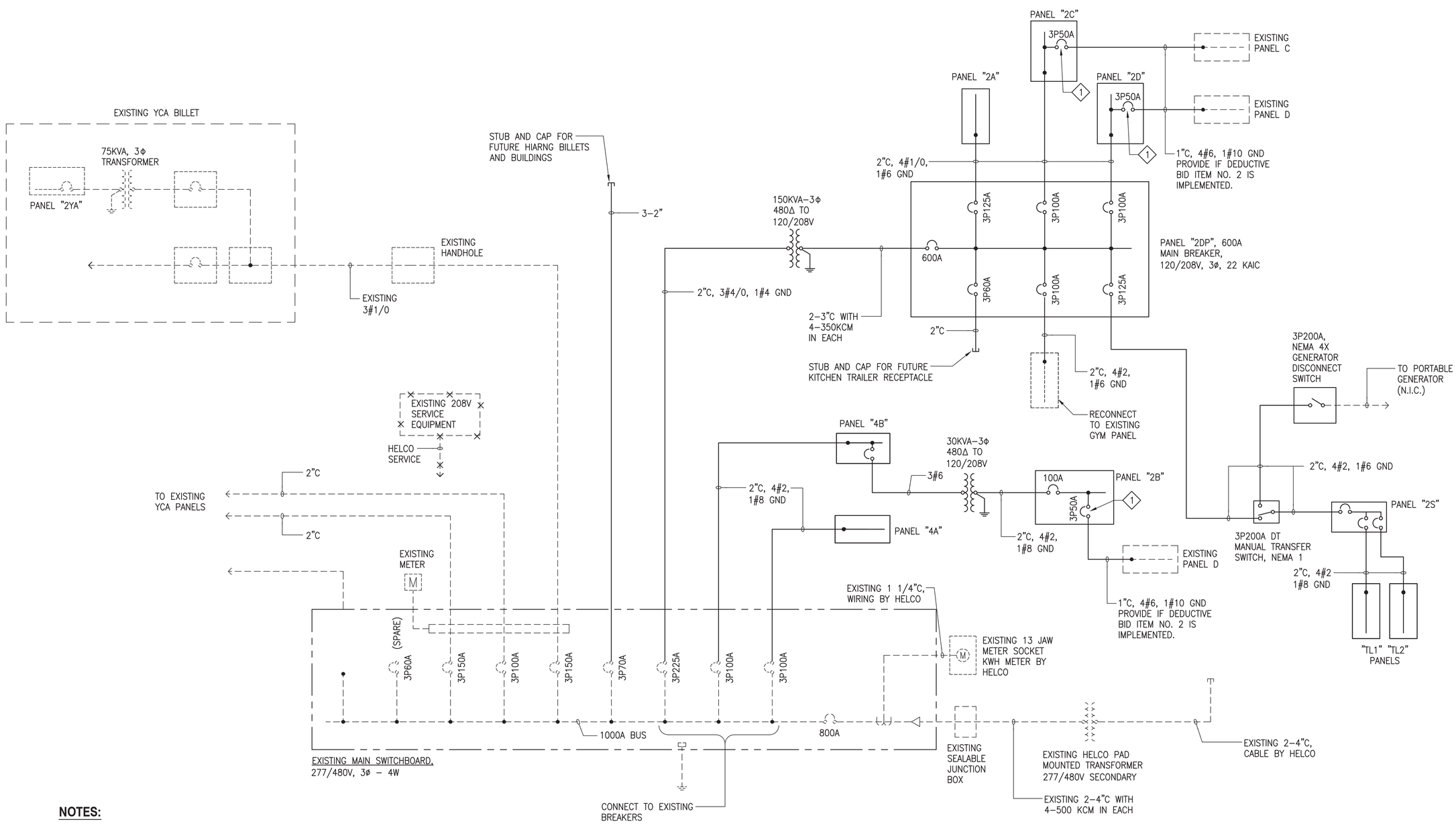
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DEPARTMENT OF DEFENSE
HAWAII ARMY NATIONAL GUARD
DESIGN AND PROJECT MANAGEMENT BRANCH
STATE OF HAWAI'I
FACILITY MANAGEMENT OFFICE

KEAUKAHA MILITARY RESERVATION – B621
HILO, HAWAI'I
HAWAI`I ARMY NATIONAL GUARD (HIARNG)
BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS
PARTIAL LIGHTING PLAN

SCALE: AS NOTED
STATE PROJECT NO. CA-1212-C3
FEDERAL PROJECT NO. 15130007
SHEET 102 of 126
E-204



NOTES:

1. PROVIDE IF DEDUCTIVE BID ITEM NO. 2 IS IMPLEMENTED.

HIARNG ONE-LINE DIAGRAM — A1

NO SCALE

ahl.
733 BISHOP STREET, SUITE 3100
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MICHELE N. ADOLPHO
LICENSED PROFESSIONAL ENGINEER
No. 10017-E
HAWAII, U.S.A.
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION
SIGNATURE
4/30/2020
EXPIRATION DATE

APPR	DATE	DESCRIPTION	SYM

SUBMITTAL PHASE
FINAL SUBMITTAL

SUBMITTAL DATE 30 SEPTEMBER 2019

DES GK | DRW MC | CHK GK

STATE OF HAWAI'I
FACILITY MANAGEMENT OFFICE
KEAUKAHA MILITARY RESERVATION – B621
HAWAII ARMY NATIONAL GUARD
DESIGN AND PROJECT MANAGEMENT BRANCH
HILO, HAWAI'I

HAWAI'I ARMY NATIONAL GUARD (HIARNG)
BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS

ONE–LINE DIAGRAM

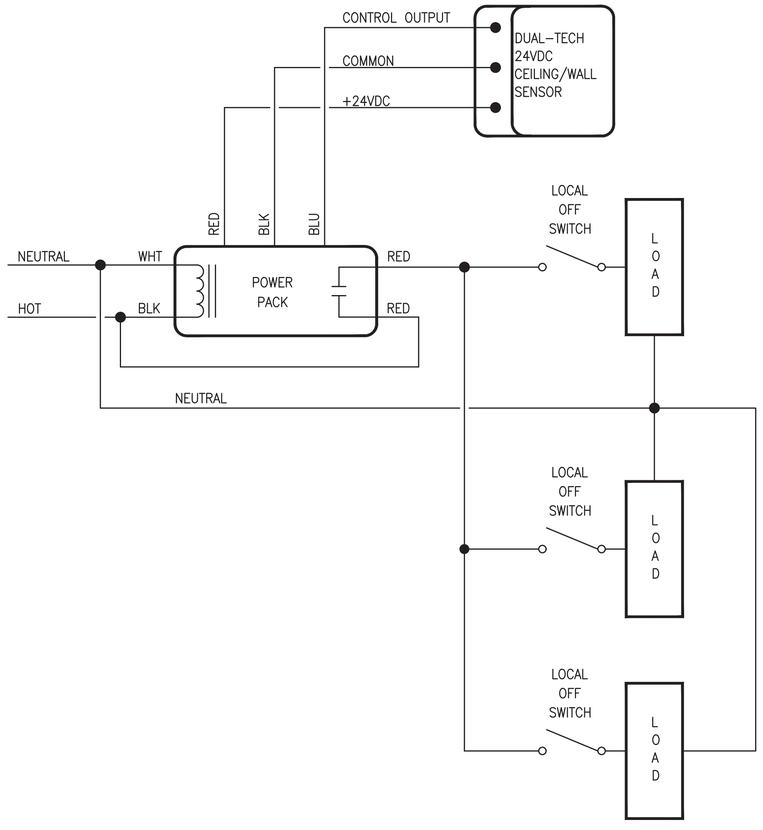
SCALE: AS NOTED

STATE PROJECT NO. CA-1212-C3

FEDERAL PROJECT NO. 15130007

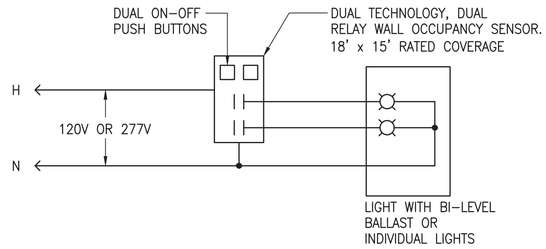
SHEET 103 of 126

E-401



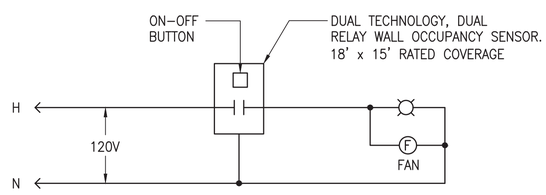
TYPICAL POWER PACK LIGHTING CONNECTION — A1

NO SCALE — FOR CLASSROOM



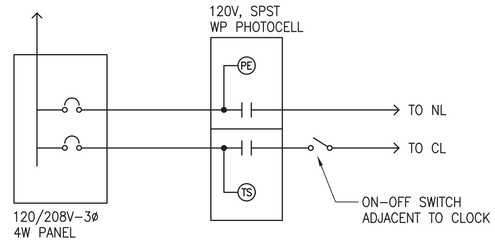
BI-LEVEL SWITCHING DIAGRAM — C4

NO SCALE — FOR OFFICES



SMALL RESTROOM SWITCHING DIAGRAM — B4

NO SCALE



NL/CL LIGHTING CONTROL DIAGRAM — A4

NO SCALE

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A/E INFO

MICHELE N. ADOLPHO — LICENSED PROFESSIONAL ENGINEER — No. 10017–E — HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION — 4/30/2020

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STATE OF HAWAI'I — FACILITY MANAGEMENT OFFICE
DEPARTMENT OF DEFENSE — HAWAII ARMY NATIONAL GUARD — DESIGN AND PROJECT MANAGEMENT BRANCH

KEAUKAHA MILITARY RESERVATION – B621 — HILO, HAWAI'I

HAWAI`I ARMY NATIONAL GUARD (HIARNG)
BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS

LIGHTING CONTROL DIAGRAMS

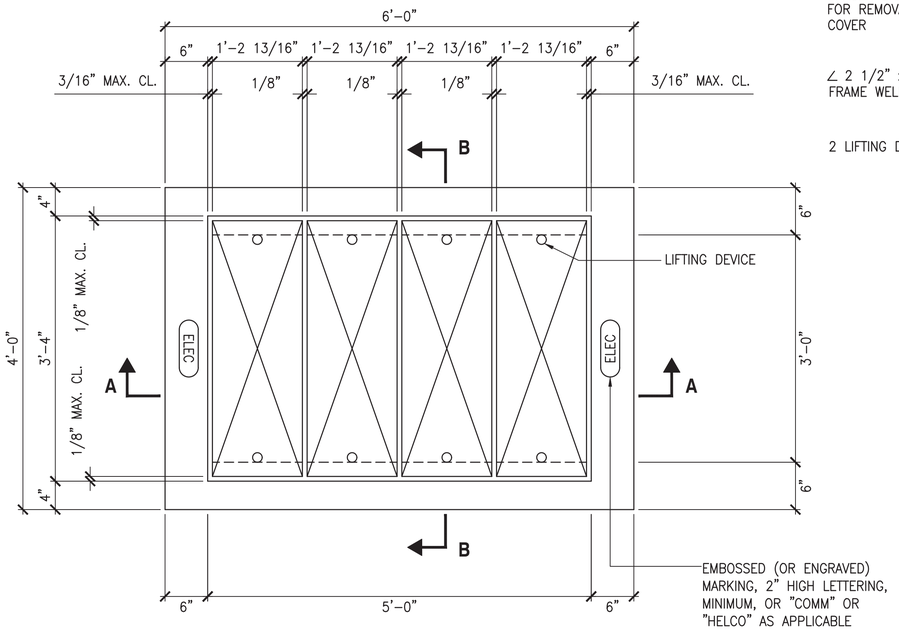
SCALE: AS NOTED

STATE PROJECT NO. CA-1212-C3

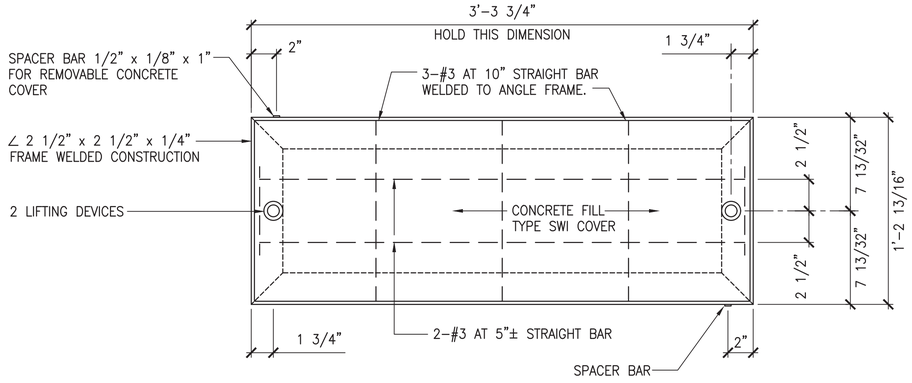
FEDERAL PROJECT NO. 15130007

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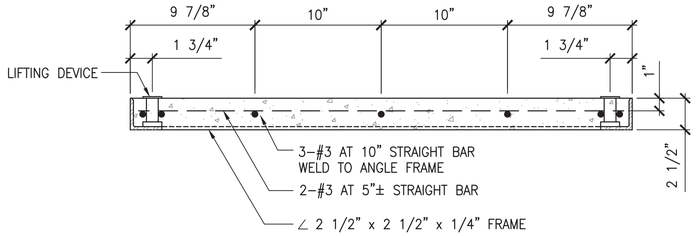
E-402



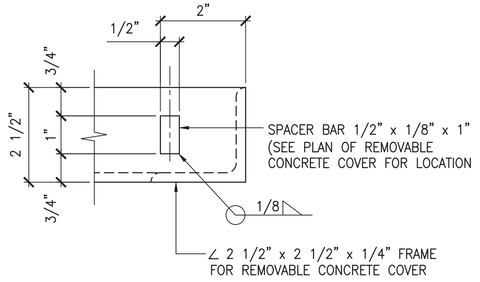
PLAN



COVER SLAB PLAN



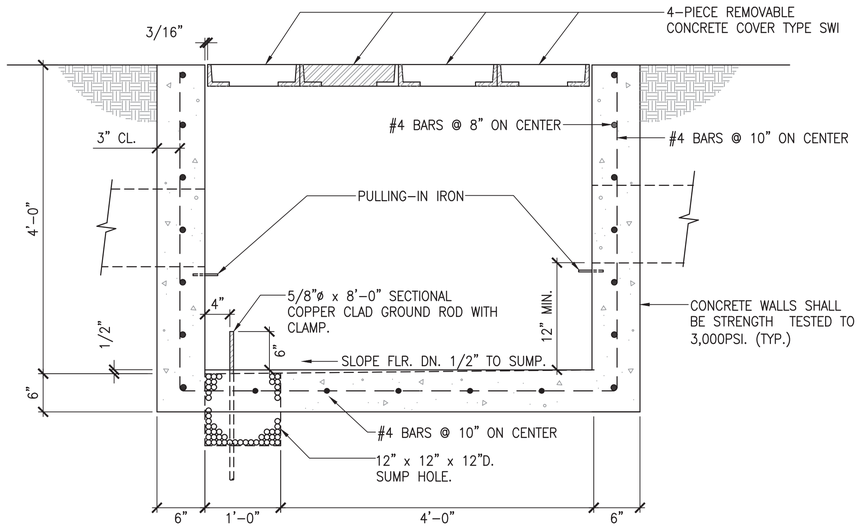
COVER SLAB SECTION



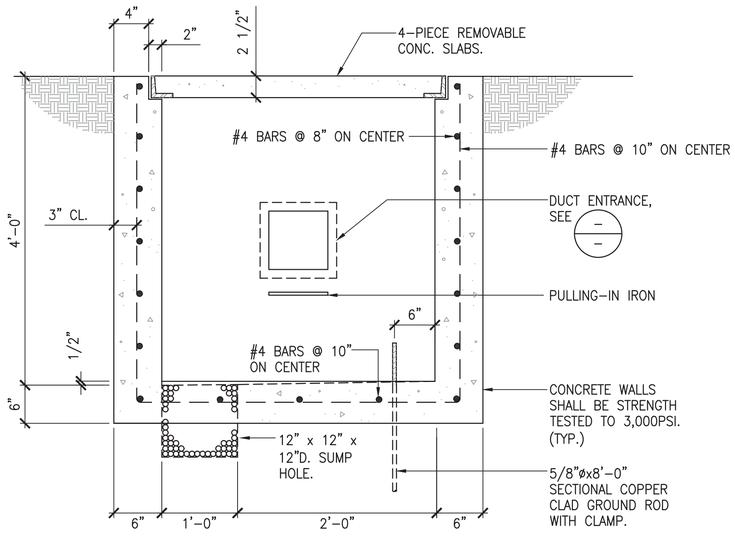
SPACER BAR DETAIL

NOTES:

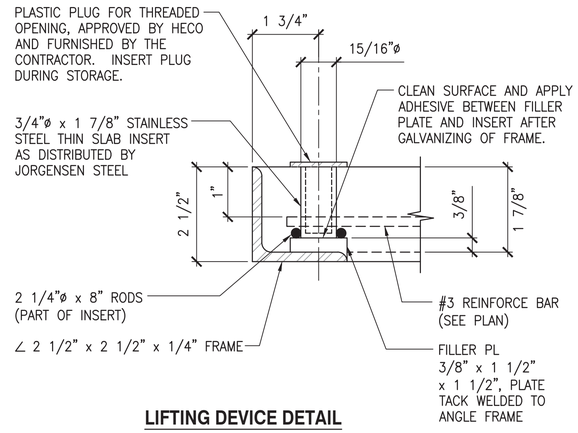
1. PROVIDE 2 EACH COVER LIFTING TOOL FOR HANDHOLE.
2. GALVANIZE L FRAME OR ⊏ FRAME, STEEL RODS, AND SPACER BARS AFTER FABRICATION.



SECTION A-A



SECTION B-B



LIFTING DEVICE DETAIL

TYPICAL HANDHOLE DETAILS (A1)
NOT TO SCALE

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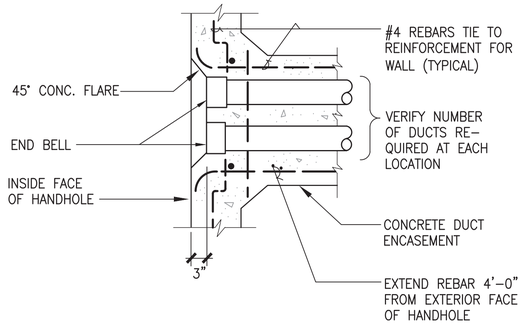
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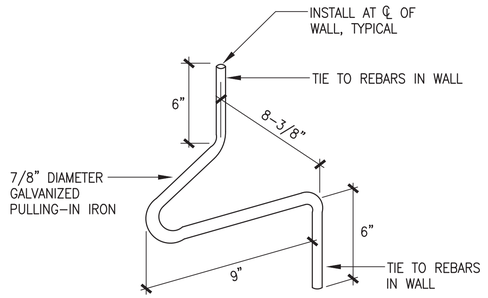
DEPARTMENT OF DEFENSE
HAWAII ARMY NATIONAL GUARD
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STATE OF HAWAI'I
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HILO, HAWAI'I
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TYPICAL HANDHOLE DETAILS

SCALE: AS NOTED
STATE PROJECT NO. CA-1212-C3
FEDERAL PROJECT NO. 15130007
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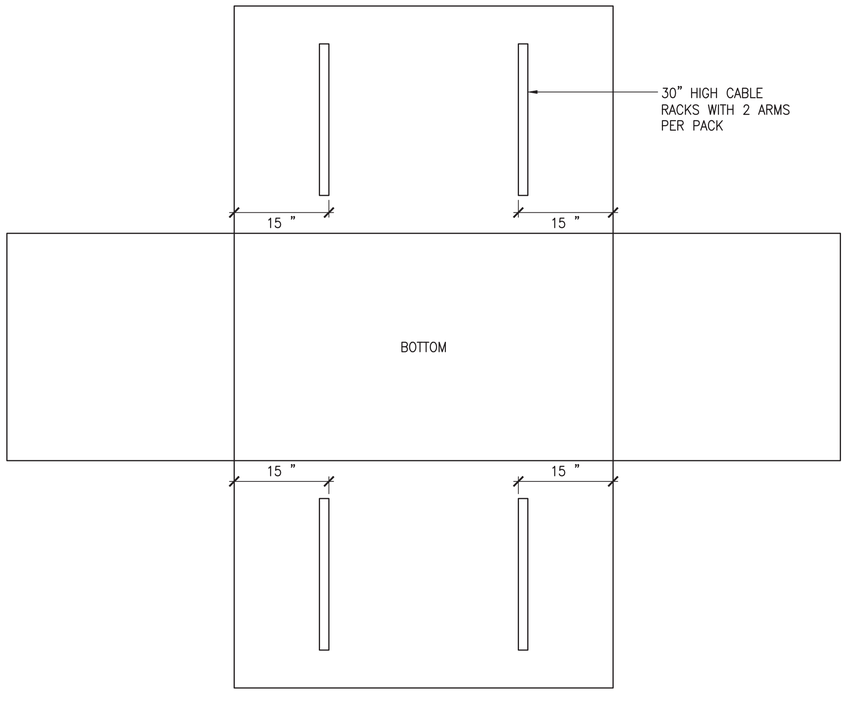
TYPICAL DUCT ENTRANCE DETAILS C3

NOT TO SCALE



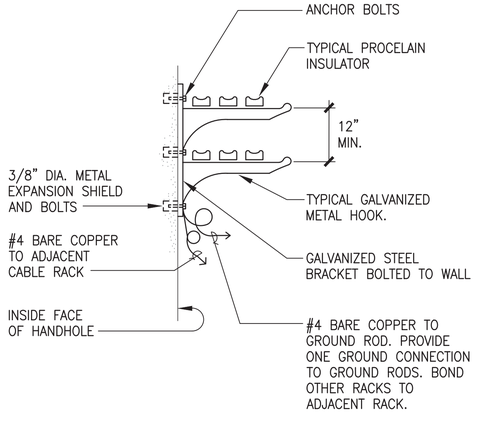
PULLING IRON DETAIL C5

NOT TO SCALE



3' x 5' HANDHOLE CABLE RACK DETAIL A1

NOT TO SCALE



TYPICAL CABLE RACK DETAILS A3

NOT TO SCALE

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TYPICAL HANDHOLE DETAILS

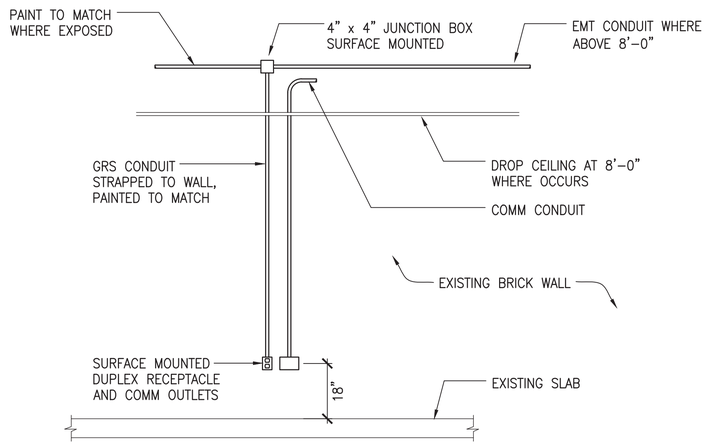
SCALE: AS NOTED

STATE PROJECT NO. CA-1212-C3

FEDERAL PROJECT NO. 15130007

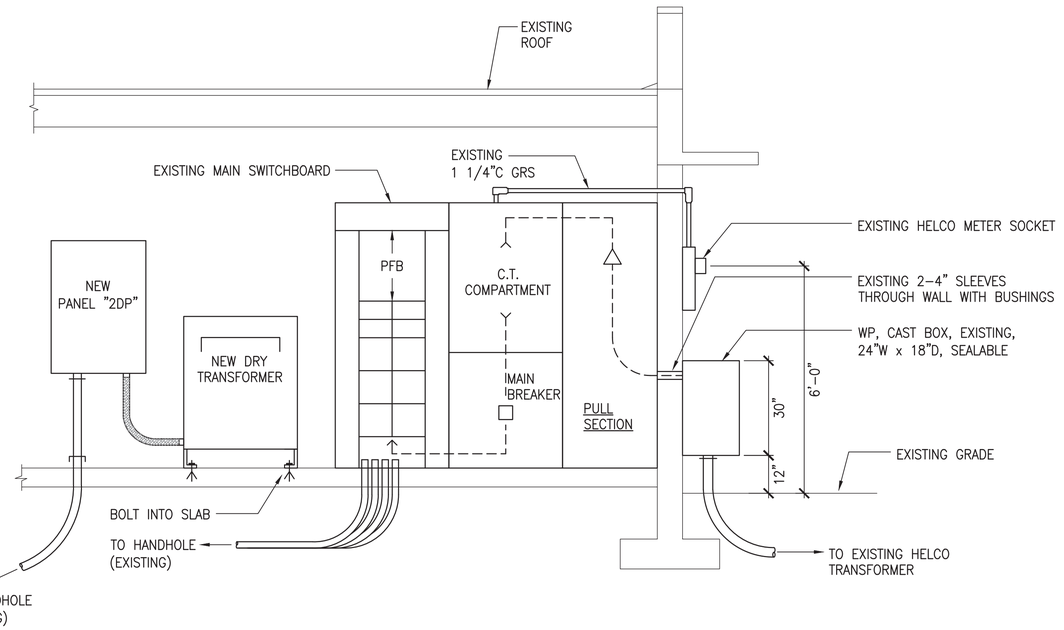
SHEET 106 of 126

E-502



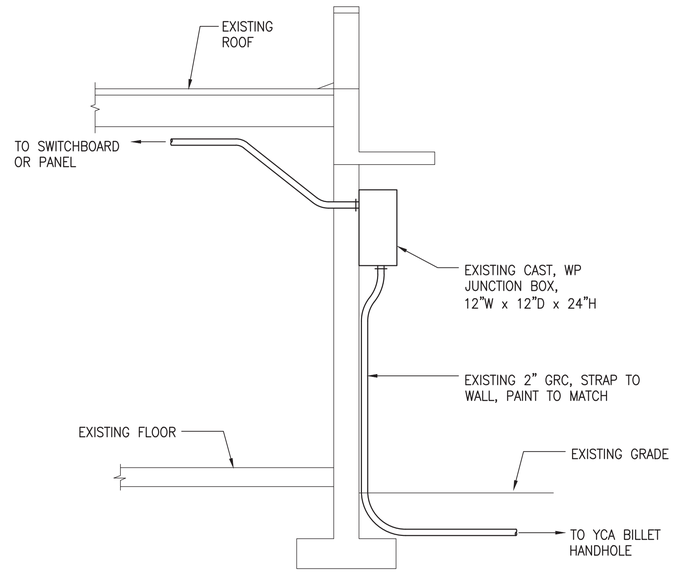
TYPICAL WALL OUTLET ROUGH-IN C1

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



MAIN SWITCHBOARD ELEVATION B3

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



JUNCTION BOX ELEVATION A1

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

0 1 2 4 6FT

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

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SUBMITTAL DATE 30 SEPTEMBER 2019

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DEPARTMENT OF DEFENSE
HAWAII ARMY NATIONAL GUARD
DESIGN AND PROJECT MANAGEMENT BRANCH
STATE OF HAWAI'I
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HILO, HAWAI'I
KEAUKAHA MILITARY RESERVATION – B621
HAWAI'I ARMY NATIONAL GUARD (HIARNG)
BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS

ELECTRICAL ELEVATIONS AND DETAILS

SCALE: AS NOTED
STATE PROJECT NO. CA-1212-C3
FEDERAL PROJECT NO. 15130007
SHEET 107 of 126

E-503

PANEL "2A"

120/208 VOLTS, 3 PHASE, 4 WIRE
225 AMP MAIN LUGS
REQ'D OPTIONS:

MIN AIC: 10,000
MOUNTING: SURFACE

WIRE	SIZE (AWG)	CKT NO	USE	CKT BKR POLE	CKT BKR AMP	CONNECTED LOAD (KVA) PHASE A	PHASE B	PHASE C	CKT BKR AMP	CKT BKR POLE	USE	CKT NO	SIZE (AWG) WIRE
–		1		3		2.5 0.8			20	1	OFFICE RECEPTACLE	2	12
–		3	ACCU (FUTURE)				2.5 0.8		20	1	OFFICE RECEPTACLE	4	12
–		5			30			2.5 0.8	20	1	OFFICE RECEPTACLE	6	12
–		7	FCU (FUTURE)	2		0.4 0.8			20	1	OFFICE RECEPTACLE	8	12
–		9			15		0.4 0.8		20	1	OFFICE RECEPTACLE	10	12
12		11	EXHAUST FAN	1	20			0.7 0.8	20	1	OFFICE RECEPTACLE	12	12
12		13	EXHAUST FAN	1	20	1.2 0.8			20	1	OFFICE RECEPTACLE	14	12
12		15	LIGHTS	1	20		1.0 0.7		20	1	EWC	16	12
12		17	LIGHTS	1	20			0.5 0.6	20	1	H/W PUMP	18	12
12		19	LIGHTS	1	20	0.4 2.0			30	1	H/W HEATER	20	10
NL		10	21 EXTERIOR LIGHTS	1	20		1.0 0.4		20	1	LAV RECEPT	22	12
CL		10	1.0 EXTERIOR LIGHTS	1	20			1.0 0.4	20	1	LAV RECEPT	24	12
–		25	SPARE	1	20	1.0 1.0			20	1	SPARE	26	–
–		27	SPARE	1	20		1.0 1.0		20	1	SPARE	28	–
–		29	SPARE	1	20			1.0 1.0	20	1	SPARE	30	–
–		31	PFB	1	–	– –			–	1	PFB	32	–
–		33	PFB	1	–		– –		–	1	PFB	34	–
–		35	PFB	1	–			– –	–	1	PFB	36	–
–		37	PFB	1	–	– –			–	1	PFB	38	–
–		39	PFB	1	–		– –		–	1	PFB	40	–
–		41	PFB	1	–			– –	–	1	PFB	42	–
			CONNECTED LOAD/PHASE			11.5	10.2	10.4					
			TOTAL CONNECTED LOAD			32.1 KVA							
			DEMAND FACTOR			0.8							
			TOTAL DEMAND LOAD			25.7 KVA=	72 AMPS						

PANEL "2B"

120/208 VOLTS, 3 PHASE, 4 WIRE
100 AMP MAIN BREAKER
REQ'D OPTIONS:

MIN AIC: 10,000
MOUNTING: SURFACE

WIRE	SIZE (AWG)	CKT NO	USE	CKT BKR POLE	CKT BKR AMP	CONNECTED LOAD (KVA) PHASE A	PHASE B	PHASE C	CKT BKR AMP	CKT BKR POLE	USE	CKT NO	SIZE (AWG) WIRE
–		1		3		3.1 0.6			20	1	CLASSRM RECEPTACLE	2	12
–		3	ACCU (FUTURE)				3.1 0.6		20	1	CLASSRM RECEPTACLE	4	12
–		5			20			3.1 0.6	20	1	CLASSRM RECEPTACLE	6	12
–		7	FCU (FUTURE)	2		0.3 0.6			20	1	CLASSRM RECEPTACLE	8	12
–		9			15		0.3 0.4		20	1	TOILET RECEPTACLE	10	12
12		11	EXHAUST FAN	1	20			1.2 0.4	20	1	TOILET RECEPTACLE	12	12
12		13	EXHAUST FAN	1	20	0.7 0.7			20	1	EWC	14	12
12		15	LIGHTS	1	20		1.5 0.6		20	1	H/W PUMP	16	12
12		17	LIGHTS	1	20			0.8 2.0	30	1	H/W HEATER	18	10
12		19	EXTERIOR LIGHTS	1	20	0.4 1.0			20	1	ELEC ROOM	20	12
12		21	EXTERIOR LIGHTS	1	20		0.5 1.0		20	1	SPARE	22	–
*	6	23		3				4.0 1.0	20	1	SPARE	24	–
*	6	25	EXISTING PANEL			4.0 1.0			20	1	SPARE	26	–
*	6	27			50		4.0 1.0		20	1	SPARE	28	–
–		29	SPARE	1	20			1.0 1.0	20	1	SPARE	30	–
–		31	PFB	1	–	– –			–	1	PFB	32	–
–		33	PFB	1	–		– –		–	1	PFB	34	–
–		35	PFB	1	–			– –	–	1	PFB	36	–
–		37	PFB	1	–	– –			–	1	PFB	38	–
–		39	PFB	1	–		– –		–	1	PFB	40	–
–		41	PFB	1	–			– –	–	1	PFB	42	–
			CONNECTED LOAD/PHASE			13.0	12.8	15.1					
			TOTAL CONNECTED LOAD			40.9 KVA							
			DEMAND FACTOR			0.7							
			TOTAL DEMAND LOAD			28.6 KVA=	79 AMPS						

* PROVIDE IF DEDUCTIVE BID ITEM NO. 2 IS IMPLEMENTED. PROVIDE 3–1P20A SPARES IF DEDUCTIVE BID ITEM NO. 2 IS NOT IMPLEMENTED.

PANEL "2C"

120/208 VOLTS, 3 PHASE, 4 WIRE
100 AMP MAIN LUGS
REQ'D OPTIONS:

MIN AIC: 10,000
MOUNTING: SURFACE

WIRE	SIZE (AWG)	CKT NO	USE	CKT BKR POLE	CKT BKR AMP	CONNECTED LOAD (KVA) PHASE A	PHASE B	PHASE C	CKT BKR AMP	CKT BKR POLE	USE	CKT NO	SIZE (AWG) WIRE
–		1	POLE LT (FUTURE)	1	20	1.1 0.8			20	1	OFFICE RECEPT	2	12
12		3	OFFICE LIGHTS	1	20		0.5 0.8		20	1	OFFICE RECEPT	4	12
12		5	OFFICE LIGHTS	1	20			0.9 0.8	20	1	OFFICE RECEPT	6	12
*	6	7		3		4.0 0.8			20	1	OFFICE RECEPT	8	12
*	6	9	EXISTING PANEL C				4.0 0.8		20	1	OFFICE RECEPT	10	12
*	6	11			50			4.0 0.8	20	1	OFFICE RECEPT	12	12
–		13	SPARE	1	20	1.0 1.0			20	1	SPARE	14	–
–		15	SPARE	1	20		1.0 1.0		20	1	SPARE	16	–
–		17	SPARE	1	20			1.0 1.0	20	1	SPARE	18	–
–		19	PFB	1	–	– –			–	1	PFB	20	–
–		21	PFB	1	–		– –		–	1	PFB	22	–
–		23	PFB	1	–			– –	–	1	PFB	24	–
–		25	PFB	1	–	– –			–	1	PFB	26	–
–		27	PFB	1	–		– –		–	1	PFB	28	–
–		29	PFB	1	–			– –	–	1	PFB	30	–
			CONNECTED LOAD/PHASE			8.7	8.5	8.5					
			TOTAL CONNECTED LOAD			25.7 KVA							
			DEMAND FACTOR			0.8							
			TOTAL DEMAND LOAD			20.5 KVA =	57 AMPS						

* PROVIDE IF DEDUCTIVE BID ITEM NO. 2 IS IMPLEMENTED. PROVIDE 3–1P20A SPARES IF DEDUCTIVE BID ITEM NO. 2 IS NOT IMPLEMENTED.

PANEL "2D"

120/208 VOLTS, 3 PHASE, 4 WIRE
225 AMP MAIN LUGS
REQ'D OPTIONS:

MIN AIC: 10,000
MOUNTING: SURFACE

WIRE	SIZE (AWG)	CKT NO	USE	CKT BKR POLE	CKT BKR AMP	CONNECTED LOAD (KVA) PHASE A	PHASE B	PHASE C	CKT BKR AMP	CKT BKR POLE	USE	CKT NO	SIZE (AWG) WIRE
–		1		3		2.0 0.6			20	1	OFFICE RECEPTACLE	2	12
–		3	ACCU (FUTURE)				2.0 0.6		20	1	OFFICE RECEPTACLE	4	12
–		5			20			2.0 0.8	20	1	OFFICE RECEPTACLE	6	12
12		7	OFFICE LIGHTS	1	20	0.9 0.8			20	1	OFFICE RECEPTACLE	8	12
12		9	OFFICE LIGHTS	1	20		0.9 0.8		20	1	OFFICE RECEPTACLE	10	12
12		11	OFFICE LIGHTS	1	20			0.4 0.8	20	1	OFFICE RECEPTACLE	12	12
*	6	13		3		4.0 0.7			20	1	EWC	14	12
*	6	15	EXISTING PANEL D				4.0 1.0		20	1	SPARE	16	–
*	6	17			50			4.0 1.0	20	1	SPARE	18	–
–		19	SPARE	1	20	1.0 1.0			20	1	SPARE	20	–
–		21	SPARE	1	20		1.0 1.0		20	1	SPARE	22	–
–		23	SPARE	1	20			1.0 1.0	20	1	SPARE	24	–
–		25	PFB	1	–	– –			–	1	PFB	26	–
–		27	PFB	1	–		– –		–	1	PFB	28	–
–		29	PFB	1	–			– –	–	1	PFB	30	–
–		31	PFB	1	–	– –			–	1	PFB	32	–
–		33	PFB	1	–		– –		–	1	PFB	34	–
–		35	PFB	1	–			– –	–	1	PFB	36	–
–		37	PFB	1	–	– –			–	1	PFB	38	–
–		39	PFB	1	–		– –		–	1	PFB	40	–
–		41	PFB	1	–			– –	–	1	PFB	42	–
			CONNECTED LOAD/PHASE			11.0	11.3	11.5					
			TOTAL CONNECTED LOAD			33.8 KVA							
			DEMAND FACTOR			0.8							
			TOTAL DEMAND LOAD			27.0 KVA=	75 AMPS						

* PROVIDE IF DEDUCTIVE BID ITEM NO. 2 IS IMPLEMENTED. PROVIDE 3–1P20A SPARES IF DEDUCTIVE BID ITEM NO. 2 IS NOT IMPLEMENTED.

PANEL "2S"

120/208 VOLTS, 3 PHASE, 4 WIRE
125 AMP MAIN BREAKER
REQ'D OPTIONS:

MIN AIC: 10,000
MOUNTING: SURFACE

WIRE	SIZE (AWG)	CKT NO	USE	CKT BKR POLE	CKT BKR AMP	CONNECTED LOAD (KVA) PHASE A	PHASE B	PHASE C	CKT BKR AMP	CKT BKR POLE	USE	CKT NO	SIZE (AWG) WIRE
6		1		3		3.7 0.4			20	1	FIRE ALARM PANEL *	2	10
6		3	TELCOM PANEL TL1				3.7 0.4		20	1	FIRE ALARM PANEL *	4	12
6		5			60			3.7 0.4	20	1	FIRE ALARM PANEL *	6	12
2		7		3		3.0 0.4			20	1	FIRE ALARM PANEL *	8	12
2		9	TELCOM PANEL TL2				3.0 1.0		20	1	SPARE	10	–
2		11			60			3.0 1.0	20	1	SPARE	12	–
–		13		3		3.0 –			–	1	PFB	14	–
–		15	TELCOM PANEL TL3				3.0 –		–	1	PFB	16	–
–		17	(FUTURE)		60			3.0 –	–	1	PFB	18	–
10		19	ARMS VAULT SECURITY	1	20	1.0 –			–	1	PFB	20	–
10		21	ARMS VAULT SECURITY	1	20		1.0 –		–	1	PFB	22	–
10		23	ARMS VAULT SECURITY	1	20			1.0 –	–	1	PFB	24	–
10		25	ARMS VAULT SECURITY	1	20	1.0 –			–	1	PFB	26	–
10		27	ARMS VAULT SECURITY	1	20		1.0 –		–	1	PFB	28	–
–		29	SPARE	1	20			1.0 –	–	1	PFB	30	–
			CONNECTED LOAD/PHASE			12.5	13.1	13.1					
			TOTAL CONNECTED LOAD			38.7 KVA							
			DEMAND FACTOR			0.7							
			TOTAL DEMAND LOAD			27.1 KVA =	75 AMPS						

* DENOTES LOCK–ON HANDLE CLIP

PANEL "4A"

277/480 VOLTS, 3 PHASE, 4 WIRE
100 AMP MAIN LUGS
REQ'D OPTIONS:

MIN AIC: 14,000
MOUNTING: SURFACE

WIRE	SIZE (AWG)	CKT NO	USE	CKT BKR POLE	CKT BKR AMP	CONNECTED LOAD (KVA) PHASE A	PHASE B	PHASE C	CKT BKR AMP	CKT BKR POLE	USE	CKT NO	SIZE (AWG) WIRE
–		1		3		2.0 1.0			20	1	SPARE	2	–
–		3	MAU (FUTURE)				2.0 1.0		20	1	SPARE	4	–
–		5			15			2.0 1.0	20	1	SPARE	6	–
–		7		3		3.1 –			–	1	PFB	8	–
–		9	MAU (FUTURE)				3.1 –		–	1	PFB	10	–
–		11			20			3.1 –	–	1	PFB	12	–
–		13	PFB	1	–	– –			–	1	PFB	14	–
–		15	PFB	1	–		– –		–	1	PFB	16	–
–		17	PFB	1	–			– –	–	1	PFB	18	–
			CONNECTED LOAD/PHASE			6.1	6.1	6.1					
			TOTAL CONNECTED LOAD			18.3 KVA							
			DEMAND FACTOR			1.0							
			TOTAL DEMAND LOAD			18.3 KVA=	22 AMPS						

PANEL "4B"

277/480 VOLTS, 3 PHASE, 4 WIRE
100 AMP MAIN LUGS
REQ'D OPTIONS:

MIN AIC: 14,000
MOUNTING: SURFACE

WIRE	SIZE (AWG)	CKT NO	USE	CKT BKR POLE	CKT BKR AMP	CONNECTED LOAD (KVA) PHASE A	PHASE B	PHASE C	CKT BKR AMP	CKT BKR POLE	USE	CKT NO	SIZE (AWG) WIRE
–		1		3		3.1 1.0			20	1	SPARE	2	–
–		3	MAU (FUTURE)				3.1 1.0		20	1	SPARE	4	–
–		5			20			3.1 1.0	20	1	SPARE	6	–
6		7		3		10.6 1.0			20	1	SPARE	8	–
6		9	PANEL "2B"				10.6 1.0		20	1	SPARE	10	–
6		11			50			10.6 1.0	20	1	SPARE	12	–
–		13	PFB	1	–	– –			–	1	PFB	14	–
–		15	PFB	1	–		– –		–	1	PFB	16	–
–		17	PFB	1	–			– –	–	1	PFB	18	–
			CONNECTED LOAD/PHASE			15.7	15.7	15.7					
			TOTAL CONNECTED LOAD			47.1 KVA							
			DEMAND FACTOR			0.8							
			TOTAL DEMAND LOAD			37.7 KVA=	46 AMPS						

PANEL "TL1"

120/208 VOLTS, 3 PHASE, 4 WIRE
100 AMP MAIN LUGS
REQ'D OPTIONS: FULL–SIZE LOADCENTER

MIN AIC: 10,000
MOUNTING: SURFACE

WIRE	SIZE (AWG)	CKT NO	USE	CKT BKR POLE	CKT BKR AMP	CONNECTED LOAD (KVA) PHASE A	PHASE B	PHASE C	CKT BKR AMP	CKT BKR POLE	USE	CKT NO	SIZE (AWG) WIRE
10		1	RACK UPS	1	30	1.5 1.1				2	ACCU #1	2	12
10		3	RACK UPS	1	30		1.5 1.1		15			4	12
10		5	RACK UPS	1	30			1.5 0.1		2	FCU	6	12
12		7	TEL RECEPT	1	20	0.4 0.1			15			8	12
12		9	TV RECEPT	1	20		0.4 –		–	1	PFB	10	–
12		11	CARD ACCESS SYSTEM	1	20			0.4 –	–	1	PFB	12	–
–		13	SPARE	1	20	1.0 –			–	1	PFB	14	–
–		15	SPARE	1	20		1.0 –		–	1	PFB	16	–
–		17	SPARE	1	20			1.0 –	–	1	PFB	18	–
			CONNECTED LOAD/PHASE			4.1	4.0	3.0					
			TOTAL CONNECTED LOAD			11.1 KVA							
			DEMAND FACTOR			1.0							
			TOTAL DEMAND LOAD			11.1 KVA=	31 AMPS						

PANEL "TL2"

120/208 VOLTS, 3 PHASE, 4 WIRE
100 AMP MAIN LUGS
REQ'D OPTIONS: FULL–SIZE LOADCENTER

MIN AIC: 10,000
MOUNTING: SURFACE

WIRE	SIZE (AWG)	CKT NO	USE	CKT BKR POLE	CKT BKR AMP	CONNECTED LOAD (KVA) PHASE A	PHASE B	PHASE C	CKT BKR AMP	CKT BKR POLE	USE	CKT NO	SIZE (AWG) WIRE
10		1	RACK UPS	1	30	1.5 1.0				2	ACCU/FCU	2	12
10		3	RACK UPS	1	30		1.5 1.0		15			4	12
10		5	RACK UPS	1	30			1.5 1.0	20	1	FAEP *	6	12
12		7	TEL RECEPT	1	20	0.4 –			–	1	PFB	8	–
12		9	TV RECEPT	1	20		0.4 –		–	1	PFB	10	–
12		11	CARD ACCESS SYSTEM	1	20			0.4 –	–	1	PFB	12	–
			CONNECTED LOAD/PHASE			2.9	2.9	2.9					
			TOTAL CONNECTED LOAD			8.7 KVA							
			DEMAND FACTOR			1.0							
			TOTAL DEMAND LOAD			8.7 KVA=	24.2 AMPS						

* DENOTES LOCK ON HANDLE CLIP

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4/30/2020
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	APPR	DATE	DESCRIPTION	SYM

SUBMITTAL PHASE
FINAL SUBMITTAL

SUBMITTAL DATE 30 SEPTEMBER 2019

DES	DRW	CHK
GK	MC	GK

DEPARTMENT OF DEFENSE
HAWAII ARMY NATIONAL GUARD
DESIGN AND PROJECT MANAGEMENT BRANCH
STATE OF HAWAI'I
FACILITY MANAGEMENT OFFICE
KEAUKAHA MILITARY RESERVATION – B621
HILO, HAWAI'I
HAWAI'I ARMY NATIONAL GUARD (HIARNG)
BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS
PANEL SCHEDULES

SCALE: AS NOTED
STATE PROJECT NO. CA-1212-C3
FEDERAL PROJECT NO. 15130007
SHEET 108 of 126
E-601

TELECOMMUNICATION SYMBOL LIST / MOUNTING HEIGHT SCHEDULE

MOUNTING HEIGHT FROM FLOOR TO		(SPECIAL MOUNTING HEIGHTS INDICATED ON PLAN)	
TOP	℄	SYMBOL	DESCRIPTION
	46"	▶	TELEPHONE WALLPHONE OUTLET, WALL MOUNTED (1T)
	18"	▷	TELECOMMUNICATIONS (TEL/DATA) INFORMATION OUTLET, WALL MOUNTED (1T/1D)
		⊱	EXISTING TELECOMMUNICATIONS OUTLET
		(V)H	CATV OUTLET, WALL MOUNTED (1V)
		(V)H	EXISTING CATV OUTLET
		(J)	JUNCTION BOX, SMALL, HORIZONTALLY MOUNTED
		(J)H	JUNCTION BOX, SMALL, WALL MOUNTED
		[J]	JUNCTION BOX, LARGE, HORIZONTALLY MOUNTED, SIZED AS NOTED
		[J]H	JUNCTION BOX, LARGE, WALL MOUNTED, SIZED AS NOTED
	8'-0"	▷(C)H	CCTV CAMERA OUTLET BOX, WALL MOUNTED, MIN. 1"C W/ PULLSTRING, CCTV CAMERA/WIRING BY OTHERS.
		WP ▷(C)	CCTV CAMERA OUTLET BOX, CEILING MOUNTED, MIN. 1"C W/ PULLSTRING, CCTV CAMERA/WIRING BY OTHERS. WP DENOTES WEATHERPROOF ENCLOSURE
		— – —	CONCEALED CONDUIT IN FINISHED FLOOR OR BELOW GRADE
		———	CONCEALED CONDUIT ABOVE GRADE IN CEILINGS OR WALLS.
		⌒	EXPOSED RACEWAY, PROVIDE STRAP 8'-0" ON CENTER MINIMUM
		TC1 ←	HOMERUN ARROW TO COMM CABINET. MIN. 1"C FOR HORIZONTAL DISTRIBUTION. IDENTIFIER INDICATES TELECOMMUNICATIONS ROOM.
		E	CONDUIT STUB, 1" MINIMUM CONDUIT
		×	DENOTES DEMOLITION/REMOVAL WORK
		+42"	DENOTES 42" ABOVE FINISHED FLOOR OR GRADE
		1T	DENOTES ONE (1) CAT-6 TELEPHONE CABLE
		1D	DENOTES ONE (1) CAT-6 DATA CABLE
		1V	DENOTES ONE (1) CATV RG-6 COAXIAL CABLE
		A.F.F.	ABOVE FINISHED FLOOR
		BMS	BALANCED MAGNETIC SWITCH
		CAT-6	CATEGORY-6 UNSHIELDED TWISTED PAIR (UTP) CABLE
		CCTV	CLOSED CIRCUIT TELEVISION SYSTEM
		FO	FIBER OPTIC CABLE
		GND	GROUND
		MM	MULTI-MODE (50-MICRON OM3) FIBER OPTIC CABLE
		PoE	POWER OVER ETHERNET
		P/P	PATCH PANEL
		PIR	PASSIVE INFRARED MOTION DETECTOR
		SM	SINGLE MODE FIBER OPTIC CABLE
		TGB	TELECOMMUNICATIONS GROUNDING BUSBAR
		TMGB	TELECOMMUNICATIONS MAIN GROUNDING BUSBAR
		1 →	NOTE INDICATOR
		1 / T101	DETAIL INDICATOR: TOP HALF DENOTES DETAIL NUMBER, BOTTOM HALF DENOTES SHEET NUMBER

GENERAL TELECOMMUNICATIONS NOTES/SPECIFICATIONS:

1. ALL TELECOMMUNICATIONS INFRASTRUCTURE SHALL BE INSTALLED IN ACCORDANCE WITH REQUIREMENTS IDENTIFIED WITHIN ANSI/TIA/EIA WIRING STANDARDS.
2. ALL TELECOMMUNICATIONS PATHWAYS SHALL BE INSTALLED IN ACCORDANCE WITH ANSI/TIA-569-D AND ADDENDA UNLESS OTHERWISE INDICATED.
3. ALL TELECOMMUNICATIONS CABLING SHALL BE INSTALLED AND TESTED IN ACCORDANCE WITH ANSI TIA/EIA-568-C.0, ANSI TIA/EIA-568-C.1, ANSI/TIA/EIA-568-C.2, ANSI/TIA/EIA-568-C.3 AND ADDENDA UNLESS OTHERWISE INDICATED.
4. ALL TELECOMMUNICATIONS INFRASTRUCTURE SHALL BE LABELED AND IDENTIFIED IN ACCORDANCE WITH ANSI TIA/EIA-606-C AND AS INDICATED ON THE CONSTRUCTION DOCUMENTS.
5. PROVIDE APPROPRIATE FIRE STOPPING MEASURES FOR ALL PENETRATIONS THRU FIRE-RATED PARTITITIONS/FLOORS. ALL PENETRATIONS THRU FIRE RATED PARTITIONS/FLOORS SHALL BE FIRE STOPPED SUCH AS TO PRESERVE THE INTEGRITY AND FIRE RATING OF THE PARTITION/FLOORS IN ACCORDANCE WITH THE LATEST EDITIONS OF IBC, NFPA 72 (NEC), ANSI/TIA/EIA WIRING STANDARDS, AND ANY LOCAL COUNTY ORDINANCES. REFER TO ARCHITECTURAL PLANS FOR FIRE PARTITION LOCATIONS. PENETRATIONS THRU NON-FIRE RATED PARTITIONS SHALL BE SEALED WITH PLIABLE DUCT SEAL OR OTHER MEANS TO MINIMIZE ACOUSTIC (NOISE) TRANSMISSIONS BETWEEN ADJACENT SPACES.
6. GROUNDING AND BONDING FOR ALL INTERIOR TELECOMMUNICATIONS INFRASTRUCTURE SHALL BE IN ACCORDANCE WITH ANSI/TIA-STD-607-B AND NFPA 70 – NATIONAL ELECTRICAL CODE (NEC).
7. ALL WORK ASSOCIATED WITH PATHWAYS/SPACES SHALL BE DONE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE AND COUNTY BUILDING CODES. CONSTRUCTION PRACTICES SHALL CONFORM TO THE LATEST EDITION OF AMERICAN ELECTRICIANS' HANDBOOK BY CROFT, AND APPLICABLE INSTRUCTIONS OF MANUFACTURERS OF EQUIPMENT AND MATERIAL SUPPLIED FOR THIS PROJECT. ALL MATERIALS SHALL BE NEW AND BEAR THE UL LABEL WHERE APPLICABLE. INSTALLATION SHALL BE COMPLETED IN EVERY DETAIL AS SPECIFIED AND READY FOR USE.
8. ROUTING OF TELECOMMUNICATIONS PATHWAYS IS TYPICAL ONLY AND MAY BE VARIED IN ANY LOGICAL MANNER. CONTRACTOR SHALL PROVIDE ADDITIONAL JUNCTION BOXES WHERE TELECOMMUNICATIONS CONDUIT RUNS EXCEED 100-FT IN LENGTH OR WHERE THE SUM OF THE BENDS WITHIN A RUN EXCEEDS 180-DEGREES. ANY DEVICE MAY BE RELOCATED WITHIN 10' BEFORE INSTALLATION AT THE DIRECTION OF THE PROJECT MANAGER WITHOUT ADDITIONAL COST TO THE COUNTY.
9. ALL CONDUITS SHALL BE CONCEALED IN NEW WALLS, CEILINGS, FLOORS, AND FURRED SPACES TO MAXIMUM EXTENT POSSIBLE OR UNLESS OTHERWISE NOTED. ALL CONDUITS ON EXISTING NON-FURRED WALLS SHALL BE SURFACE MOUNTED AND PAINTED TO MATCH SURROUNDING FINISHES.
10. THE TELECOMMUNICATIONS CONTRACTOR SHALL COORDINATE HIS WORK WITH OTHER TRADES TO AVOID CONFLICTS WITH ELECTRICAL, MECHANICAL, STRUCTURAL AND ARCHITECTURAL ELEMENTS OF THIS PROJECT.
11. IN THE EVENT OF DISCREPANCY, IMMEDIATELY NOTIFY THE PROJECT MANAGER IN WRITING. DO NOT PROCEED WITH INSTALLATION IN AREAS OF DISCREPANCY UNTIL ALL SUCH DISCREPANCIES HAVE BEEN FULLY RESOLVED.
12. PAINT ALL EXPOSED RACEWAYS TO MATCH SURROUNDING FINISHES.
13. CONDUIT FITTINGS (LB, LR, ETC.) ARE NOT ACCEPTABLE AND SHALL NOT BE UTILIZED ON TELECOMMUNICATIONS CONDUITS.

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THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION — 4/30/2020
SIGNATURE — EXPIRATION DATE

SYM	DESCRIPTION	DATE	APPR

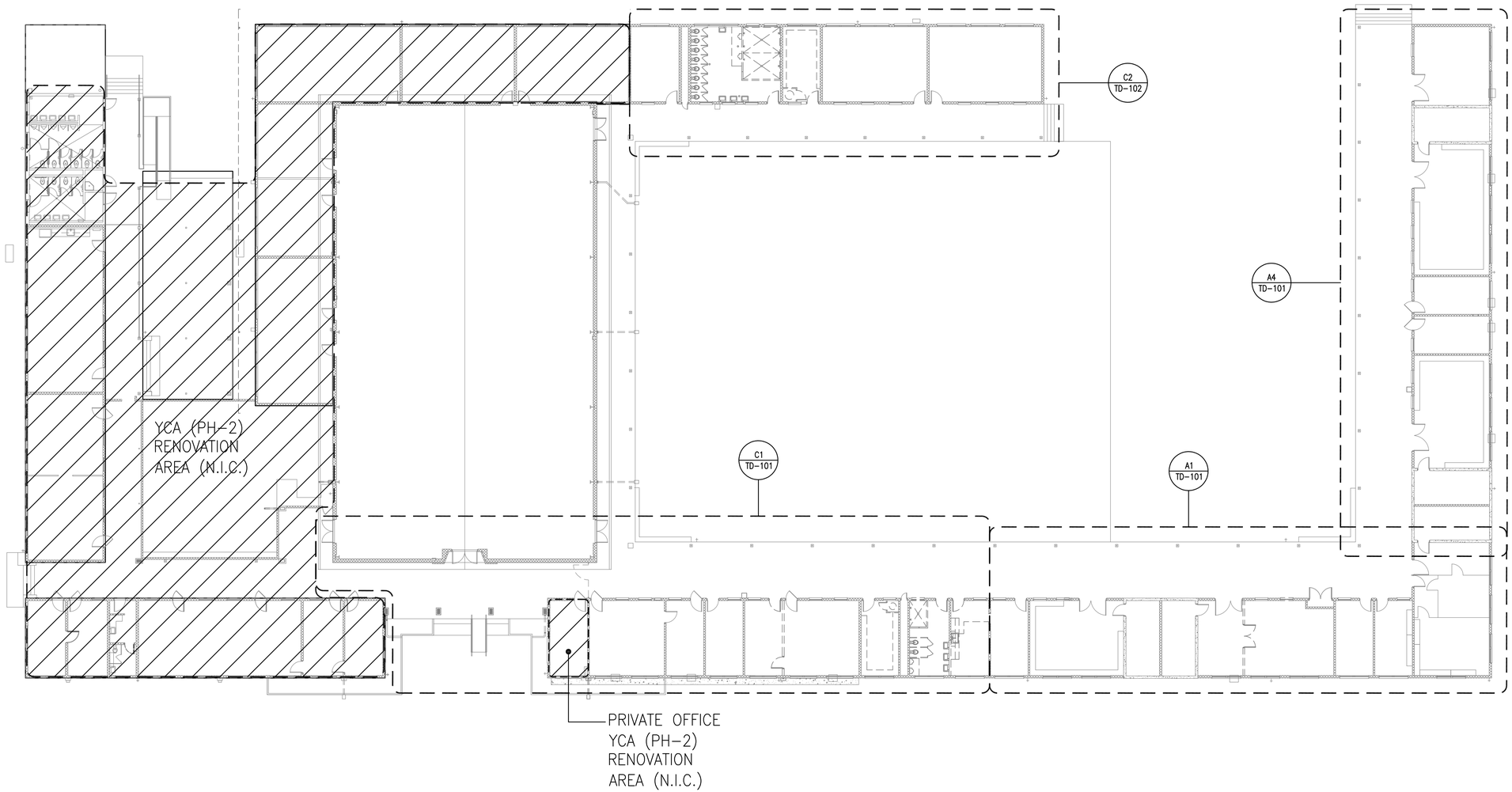
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FINAL SUBMITTAL
SUBMITTAL DATE 30 SEPTEMBER 2019
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HILO, HAWAI'I

HAWAI'I ARMY NATIONAL GUARD (HIARNG)
BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS

TELECOMMUNICATIONS SYMBOL LIST AND GENERAL NOTES

SCALE: AS NOTED
STATE PROJECT NO. CA-1212-C3
FEDERAL PROJECT NO. 15130007
SHEET 109 of 126
T-001



BUILDING 621 OVERALL HIARNG TELECOMMUNICATIONS DEMOLITION PLAN

SCALE: 1/16" = 1'-0"

GRAPHIC SCALE:
0 4 8 16 32 48FT
SCALE: 1/16"=1'-0"

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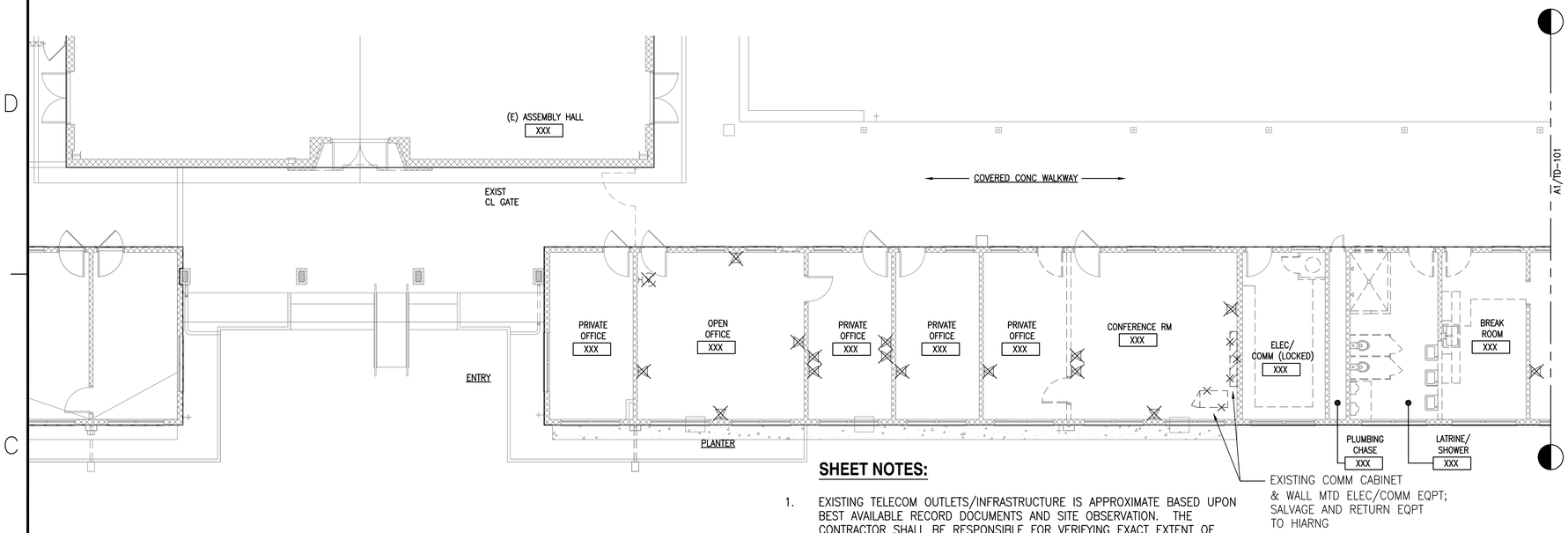
APPR	DATE	DESCRIPTION	SYM

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SUBMITTAL DATE 30 SEPTEMBER 2019
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STATE OF HAWAI'I
FACILITY MANAGEMENT OFFICE

KEAUKAHA MILITARY RESERVATION - B621
HILO, HAWAI'I
HAWAI`I ARMY NATIONAL GUARD (HIARNG)
BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS
BLDG 621 OVERALL HIARNG TELECOM DEMOLITION PLAN

SCALE: AS NOTED
STATE PROJECT NO. CA-1212-C3
FEDERAL PROJECT NO. 15130007
SHEET 110 of 126
TD-100



PARTIAL COMM DEMOLITION PLAN

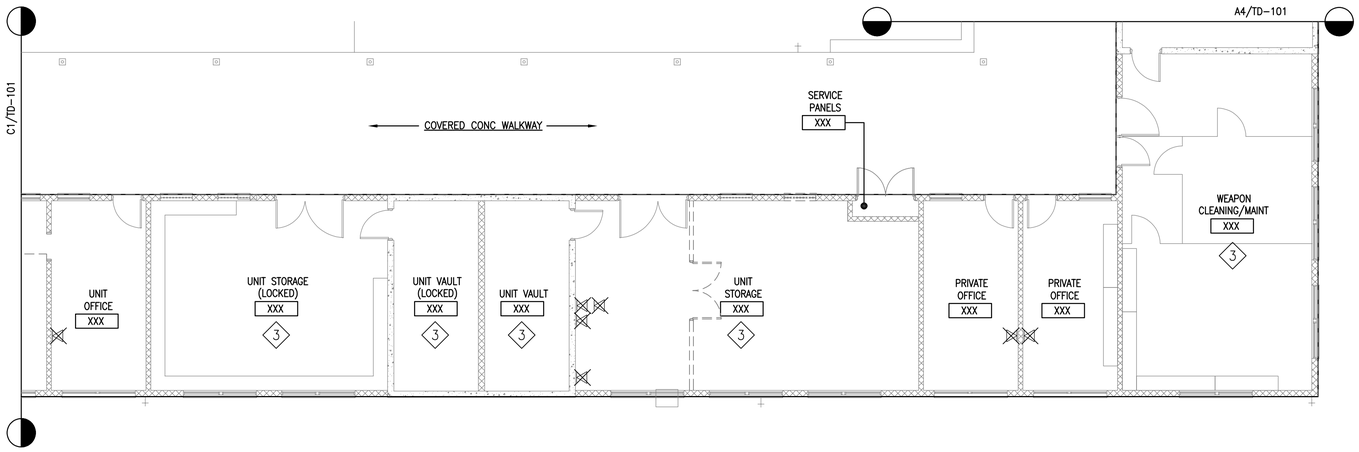
SCALE: 1/8" = 1'-0"

C1

SHEET NOTES:

1. EXISTING TELECOM OUTLETS/INFRASTRUCTURE IS APPROXIMATE BASED UPON BEST AVAILABLE RECORD DOCUMENTS AND SITE OBSERVATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING EXACT EXTENT OF DEMOLITION WORK PRIOR TO CONSTRUCTION.
2. ALL UNUSED SURFACE MOUNTED TELECOMMUNICATIONS INFRASTRUCTURE SHALL BE REMOVED. REPAIR/PATCH WALLS TO MATCH SURROUNDING FINISHES. FOR EXISTING FLUSH MOUNTED TELECOMMUNICATIONS OUTLETS, REMOVE OUTLETS/CABLING AND PROVIDE BLANK COVERPLATE.

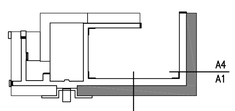
◇3 EXISTING SECURITY (ACS/IDS) EQUIPMENT/INFRASTRUCTURE IN EXISTING SUPPLY ROOM/VAULTS SHALL REMAIN IN PLACE AND OPERATIONAL THROUGHOUT CONSTRUCTION. SHOULD THERE BE FOR AN OUTAGE OF SERVICE TO THESE ROOMS, COORDINATE OUTAGE WITH HIARNG.



PARTIAL COMM DEMOLITION PLAN

SCALE: 1/8" = 1'-0"

A1

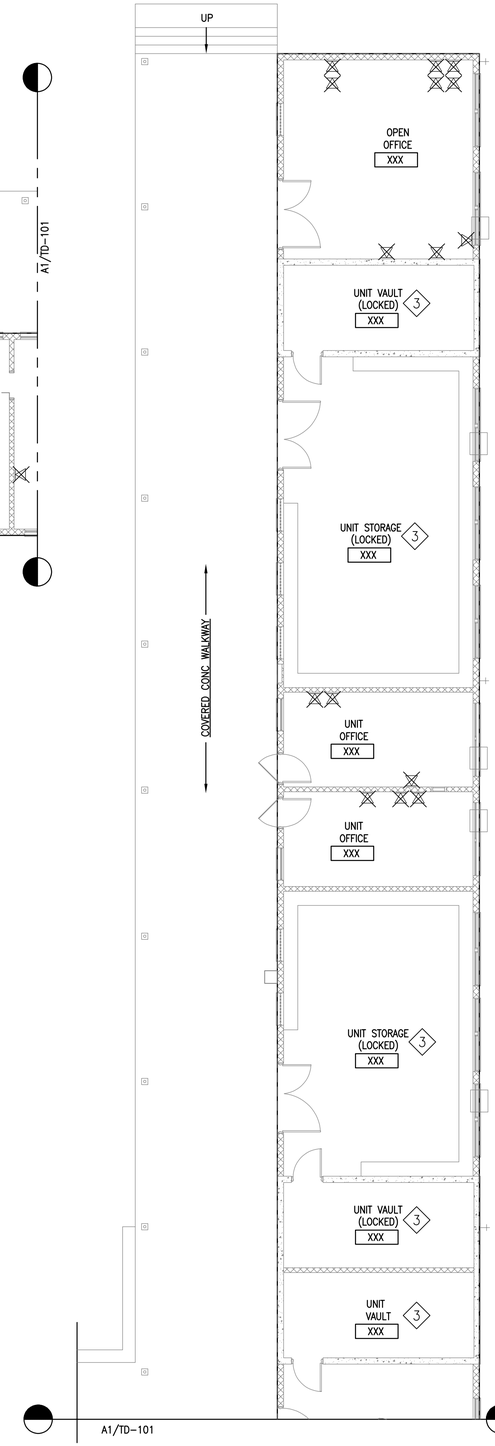


KEY PLAN

GRAPHIC SCALE:

0 2 4 8 16 24FT

SCALE: 1/8"=1'-0"



PARTIAL COMM DEMOLITION PLAN

SCALE: 1/8" = 1'-0"

A4

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BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS

PARTIAL BLDG 621 HIARNG COMM DEMOLITION PLANS

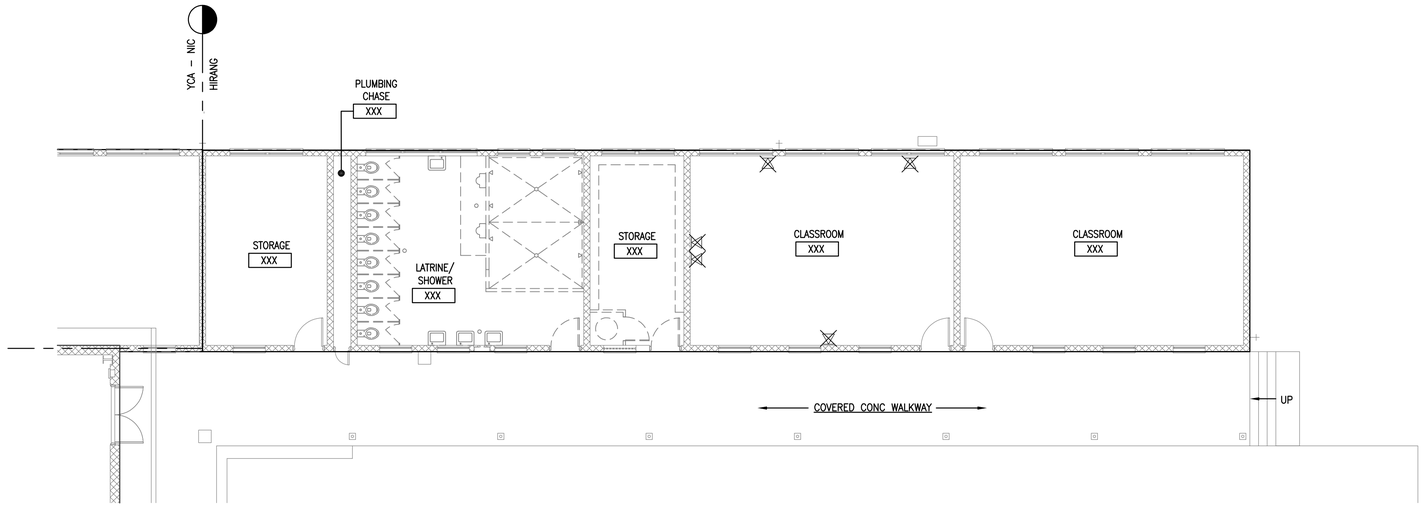
SCALE: AS NOTED

STATE PROJECT NO.
CA-1212-C3

FEDERAL PROJECT NO.
15130007

SHEET 111 of 126

TD-101



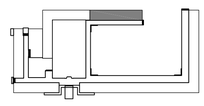
PARTIAL COMM DEMOLITION PLAN

SCALE: 1/8" = 1'-0"

C2

NOTES:

1. EXISTING TELECOM OUTLETS/INFRASTRUCTURE IS APPROXIMATE BASED UPON BEST AVAILABLE RECORD DOCUMENTS AND SITE OBSERVATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING EXACT EXTENT OF DEMOLITION WORK PRIOR TO CONSTRUCTION.
2. SURFACE MOUNTED TELECOMMUNICATIONS INFRASTRUCTURE SHALL BE REMOVED. REPAIR/PATCH WALLS TO MATCH SURROUNDING FINISHES. FOR FLUSH MOUNTED TELECOMMUNICATIONS OUTLETS, REMOVE OUTLETS/CABLING AND PROVIDE BLANK COVERPLATE.



KEY PLAN

GRAPHIC SCALE:

0 2 4 8 16 24FT

SCALE: 1/8"=1'-0"

733 BISHOP STREET, SUITE 3100
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TELEPHONE: (808) 523-9636
FAX: (808) 521-3280
www.ahldesign.com
A/E INFO

MICHAEL SHAWN MISUNO — LICENSED PROFESSIONAL ENGINEER — No. 10603-E — HAWAII U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION — 4/30/2020

SIGNATURE — EXPIRATION DATE

SYM	DESCRIPTION	DATE	APPR

SUBMITTAL PHASE: FINAL SUBMITTAL

SUBMITTAL DATE: 30 SEPTEMBER 2019

DES MMI | DRW FCC | CHK MMI

DEPARTMENT OF DEFENSE
HAWAII ARMY NATIONAL GUARD
DESIGN AND PROJECT MANAGEMENT BRANCH
STATE OF HAWAI'I
FACILITY MANAGEMENT OFFICE

KEAUKAHA MILITARY RESERVATION – B621
HILO, HAWAI'I

HAWAI`I ARMY NATIONAL GUARD (HIARNG)
BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS

PARTIAL BLDG 621 HIARNG COMM DEMOLITION PLAN

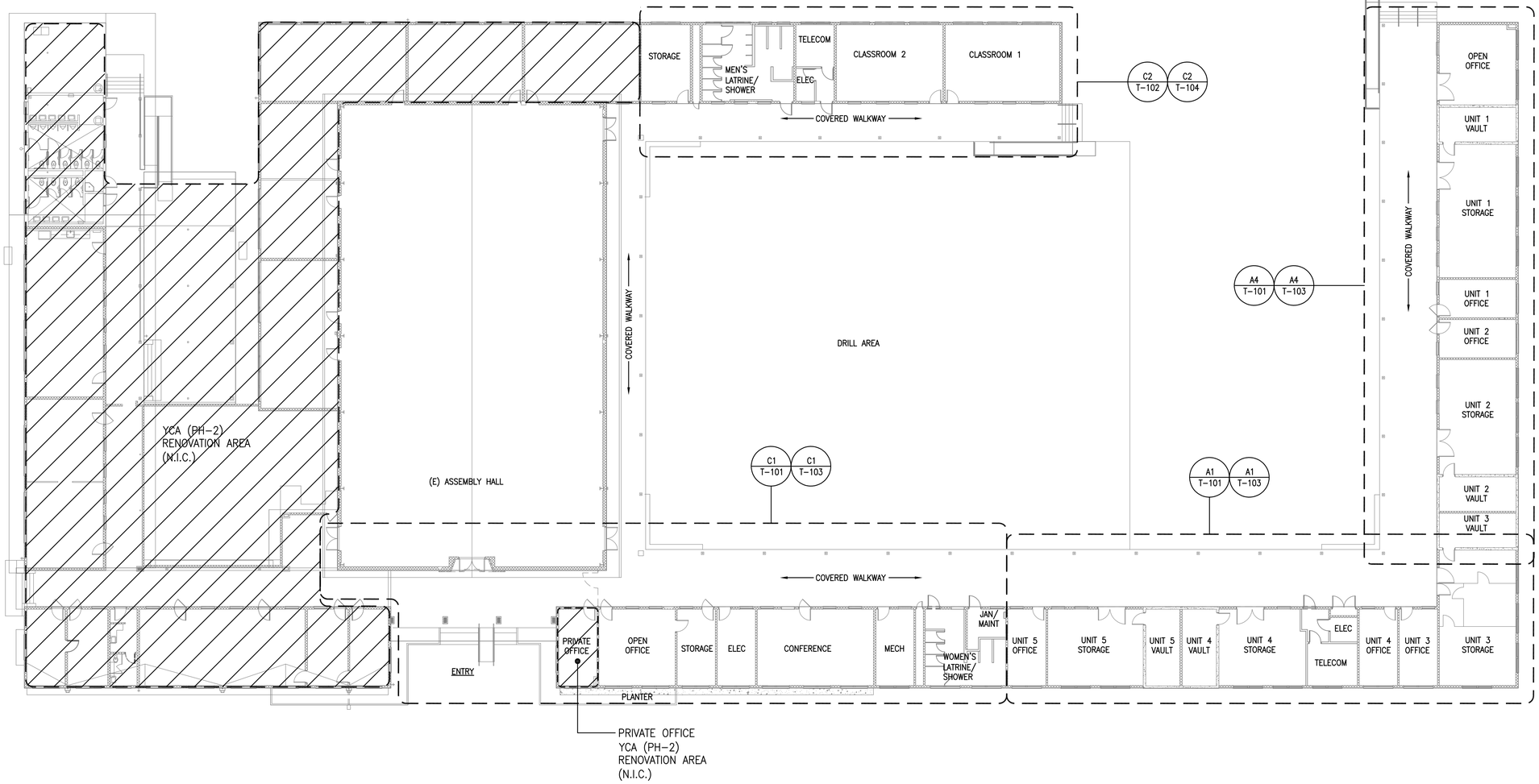
SCALE: AS NOTED

STATE PROJECT NO. CA-1212-C3

FEDERAL PROJECT NO. 15130007

SHEET 112 of 126

TD-102



BUILDING 621 OVERALL HIARNG TELECOMMUNICATIONS PLAN

SCALE: 1/16" = 1'-0"

GRAPHIC SCALE:
0 4 8 16 32 48FT
SCALE: 1/16"=1'-0"

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HAWAII ARMY NATIONAL GUARD
DESIGN AND PROJECT MANAGEMENT BRANCH
STATE OF HAWAI'I
FACILITY MANAGEMENT OFFICE

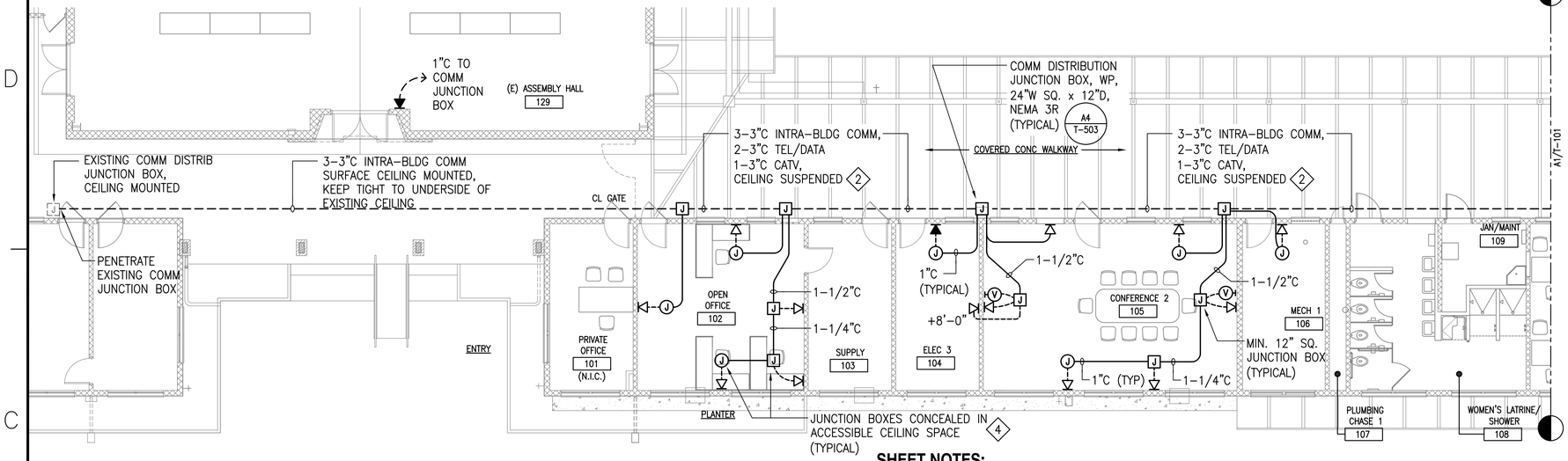
KEAUKAHA MILITARY RESERVATION – B621
HILO, HAWAI'I

HAWAI'I ARMY NATIONAL GUARD (HIARNG)
BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS

BLDG 621 OVERALL HIARNG TELECOMMUNICATIONS PLAN

SCALE: AS NOTED
STATE PROJECT NO. CA-1212-C3
FEDERAL PROJECT NO. 15130007
SHEET 113 of 126

T-100



PARTIAL COMM PLAN - TEL/DATA/CATV

SCALE: 1/8" = 1'-0" — C1

SHEET NOTES:

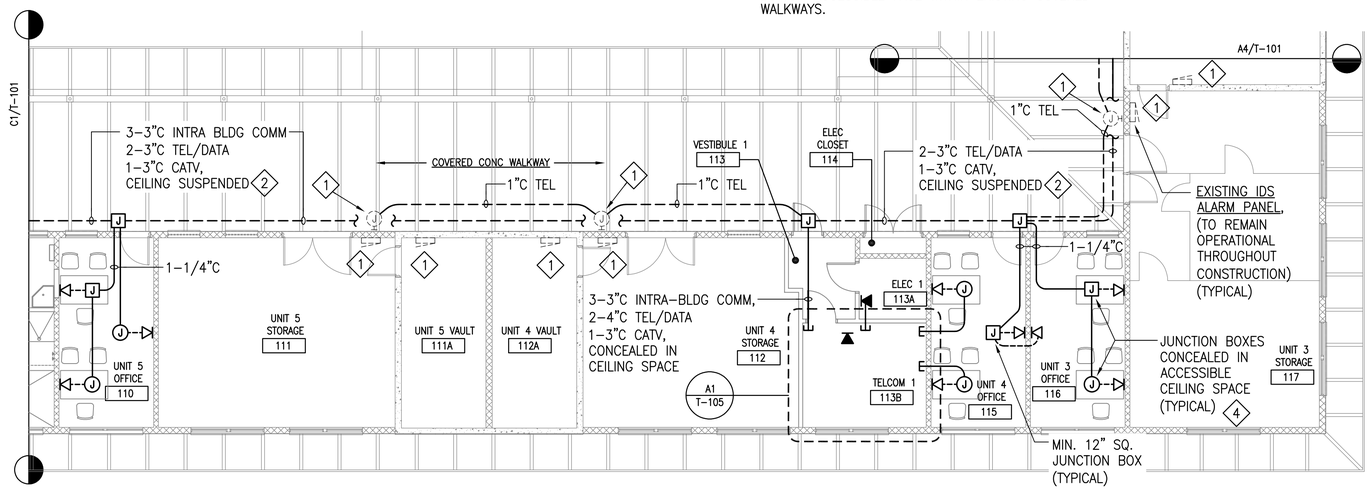
1. RECONNECT EXISTING IDS ALARM TELEPHONE CIRCUIT FOR EXISTING SUPPLY ROOM/VAULTS TO NEW TELEPHONE SERVICE VIA NEW TELECOM ROOM. CONTRACTOR SHALL MINIMIZE SERVICE OUTAGE. COORDINATE SCHEDULE AND DURATION OF SERVICE OUTAGE WITH HIARNG PHYSICAL SECURITY VIA PROJECT MANAGER PRIOR TO CONSTRUCTION.

2. MOUNT CONDUITS AS HIGH AS PRACTICAL, BUT NOT LESS THAN 9-3" CLEAR AFF.

3. MOUNT COMM DISTRIBUTION JUNCTION BOX AT 8'-10" AFF TO BOTTOM ACCESSIBLE FACE WITHIN EXISTING COVERED WALKWAYS.

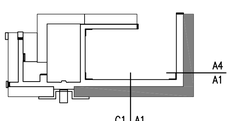
4. NOTE THAT ACCESSIBLE CEILINGS ARE INCLUDED AS PART OF DEDUCTIVE BID ITEM NO. 2. SHOULD THE ACCESSIBLE CEILINGS NOT BE INSTALLED, CONTRACTOR SHALL INSTALL JUNCTION BOXES AS HIGH AS PRACTICAL, BUT NO LOWER THAN 8'-3" AFF.

5. COMM DISTRIBUTION JUNCTION BOXES INDICATED ON PLAN ARE APPROXIMATE. EXACT LOCATIONS SHALL BE FIELD VERIFIED AND COORDINATED WITH OTHER TRADES TO ENSURE CONTINUOUS ACCESS IS MAINTAINED TO JUNCTION BOX AT ALL TIMES.



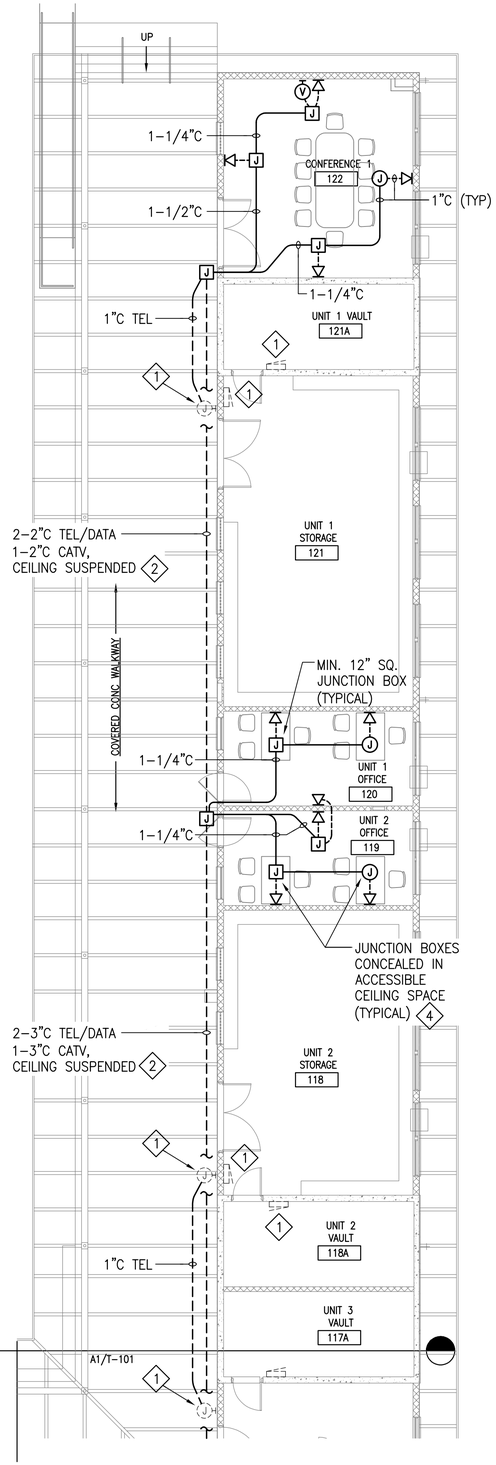
PARTIAL COMM PLAN - TEL/DATA/CATV

SCALE: 1/8" = 1'-0" — A1



KEY PLAN

GRAPHIC SCALE:
0 2 4 8 16 24FT
SCALE: 1/8"=1'-0"



PARTIAL COMM PLAN - TEL/DATA/CATV

SCALE: 1/8" = 1'-0" — A4

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A/E INFO

LICENSED PROFESSIONAL ENGINEER No. 10603-E — MICHAEL SHAWN MATSUSHIMA — HAWAII U.S.A.

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SIGNATURE — EXPIRATION DATE

APPR	DATE	DESCRIPTION	SYM

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SUBMITTAL DATE: 30 SEPTEMBER 2019
DES: MMI | DRW: FCC | CHK: MMI

DEPARTMENT OF DEFENSE
STATE OF HAWAI'I — FACILITY MANAGEMENT OFFICE
HAWAII ARMY NATIONAL GUARD — DESIGN AND PROJECT MANAGEMENT BRANCH
KEAUKAHA MILITARY RESERVATION – B621 — HILO, HAWAI'I

HAWAI'I ARMY NATIONAL GUARD (HIARNG)
BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS

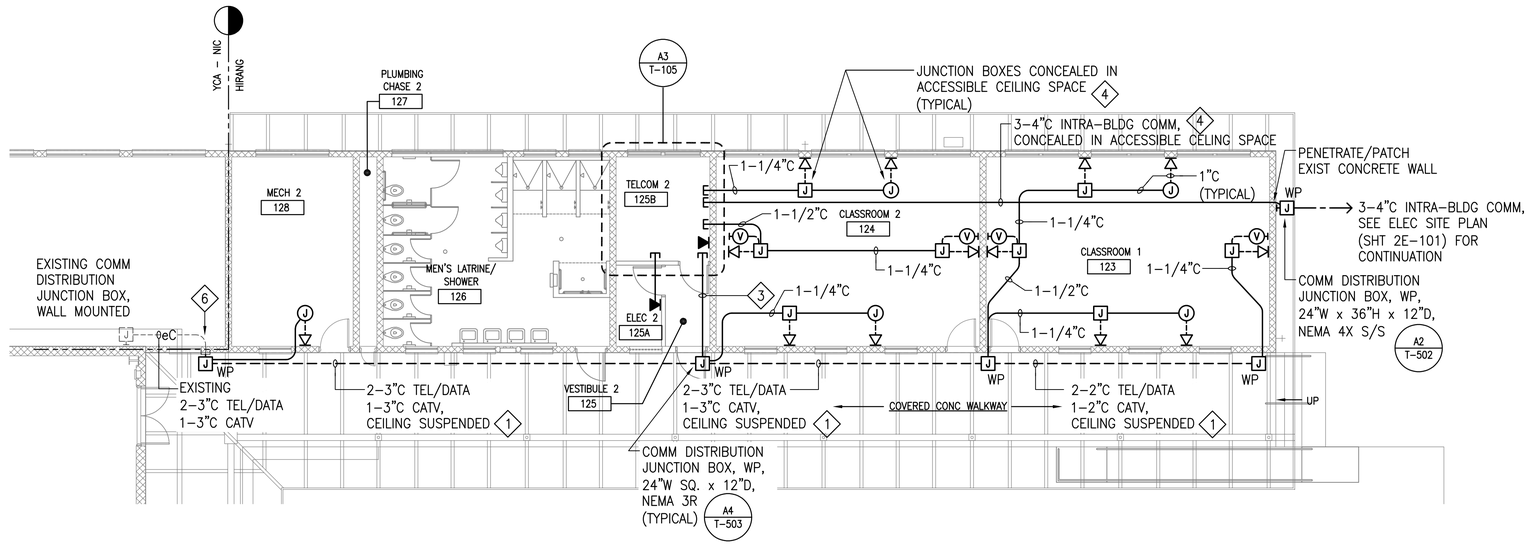
PARTIAL BLDG 621 HIARNG COMM PLANS – TEL/DATA/CATV

SCALE: AS NOTED
STATE PROJECT NO. CA-1212-C3
FEDERAL PROJECT NO. 15130007
SHEET 114 of 126

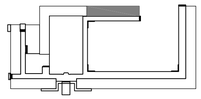
T-101

SHEET NOTES:

1. MOUNT CONDUITS AS HIGH AS PRACTICAL, BUT NOT LESS THAN 9–3" CLEAR AFF.
2. MOUNT COMM DISTRIBUTION JUNCTION BOX AT 8'–10" AFF TO BOTTOM ACCESSIBLE FACE WITHIN COVERED WALKWAYS.
3. 2–4"C TEL/DATA, 1–3"C CATV, CONCEALED IN CEILING SPACE.
4. NOTE THAT ACCESSIBLE CEILINGS ARE INCLUDED AS PART OF DEDUCTIVE BID ITEM NO. 2. SHOULD THE ACCESSIBLE CEILINGS NOT BE INSTALLED, CONTRACTOR SHALL INSTALL JUNCTION BOXES/CONDUITS AS HIGH AS PRACTICAL, BUT NO LOWER THAN 8'–3" AFF.
5. COMM DISTRIBUTION JUNCTION BOXES INDICATED ON PLAN ARE APPROXIMATE. EXACT LOCATIONS SHALL BE FIELD VERIFIED AND COORDINATED WITH OTHER TRADES TO ENSURE CONTINUOUS ACCESS IS MAINTAINED TO JUNCTION BOX AT ALL TIMES.
6. PROVIDE COUPLING AND EXTEND 2–3"C TEL/DATA AND 1–3"C CATV INTO NEW COMM DISTRIBUTION JUNCTION BOX.



PARTIAL COMM PLAN - TEL/DATA/CATV
SCALE: 1/8" = 1'–0"
C2



KEY PLAN

GRAPHIC SCALE:
0 2 4 8 16 24FT
SCALE: 1/8"=1'–0"

HAWAII ARMY NATIONAL GUARD

ahl.
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A/E INFO

MICHAEL–SHAWN M. SHIMABUKURO
LICENSED PROFESSIONAL ENGINEER
No. 10603–E
HAWAII U.S.A.

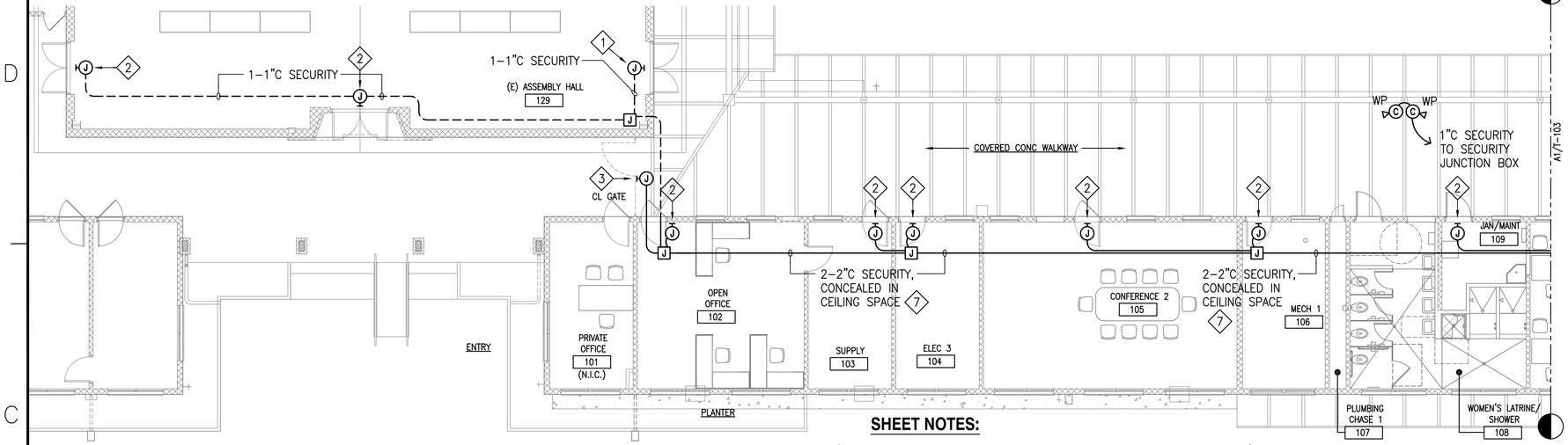
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DEPARTMENT OF DEFENSE
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HAWAI`I ARMY NATIONAL GUARD (HIARNG)
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PARTIAL BLDG 621 HIARNG COMM PLAN – TEL/DATA/CATV

SCALE: AS NOTED
STATE PROJECT NO. CA-1212-C3
FEDERAL PROJECT NO. 15130007
SHEET 115 of 126
T-102



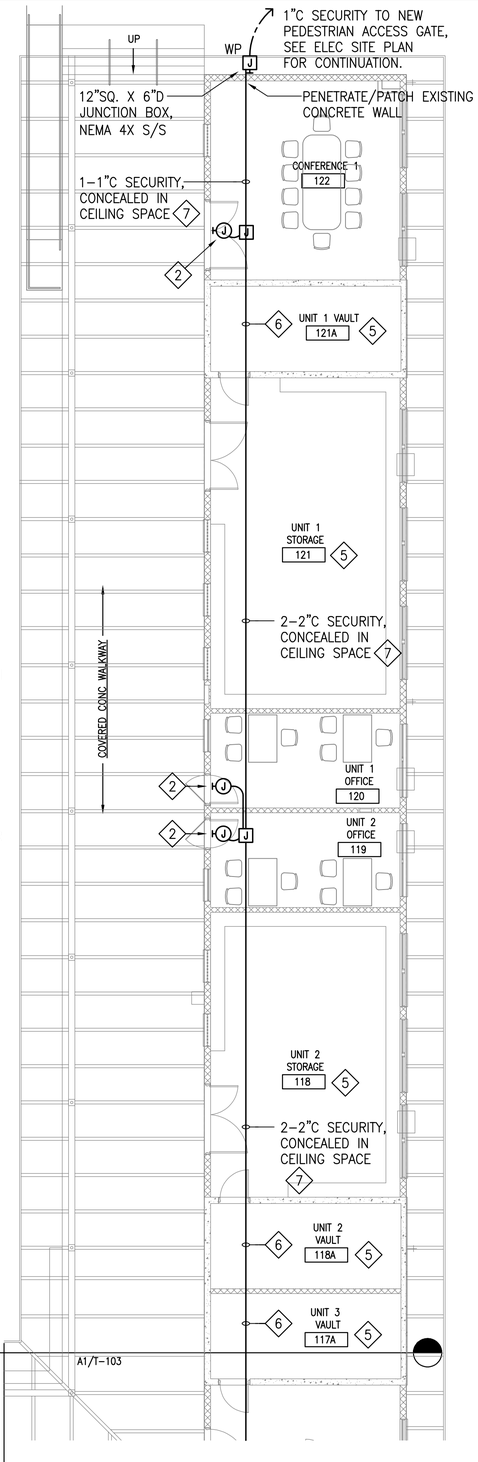
PARTIAL COMM PLAN - ACS/IDS/CCTV

SCALE: 1/8" = 1'–0"

C1

SHEET NOTES:

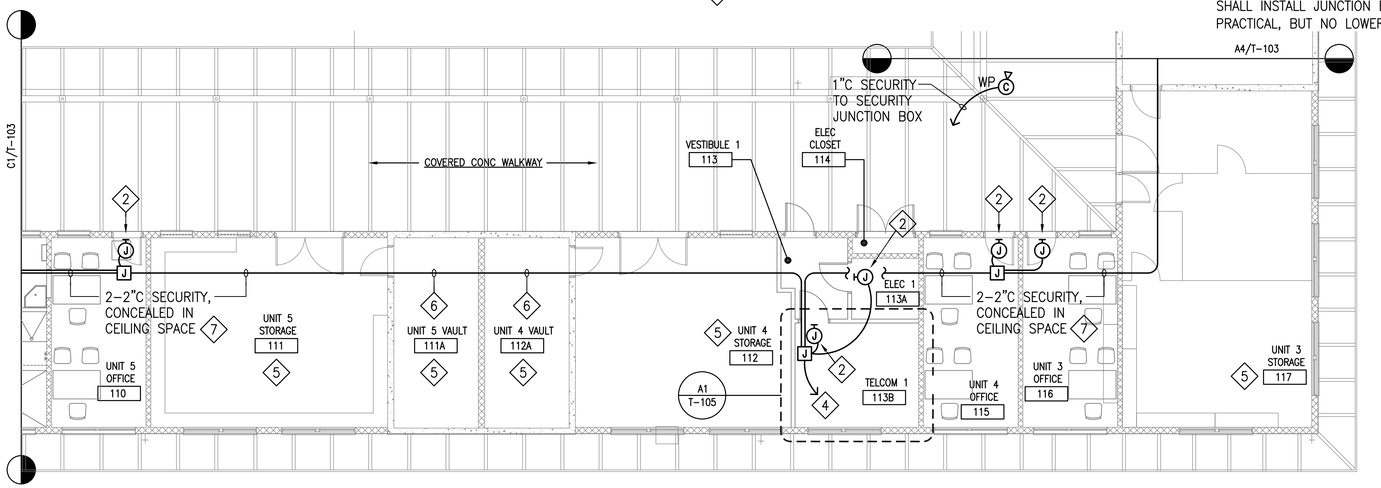
1. DOOR DESIGNATED FOR EMERGENCY EXIT/EGRESS PURPOSES ONLY. PROVIDE SIGNAGE AND OUTLET BOX FOR FUTURE BALANCE MAGNETIC SWITCH TO ALARM/MONITOR DOOR STATUS.
2. ACS JUNCTION BOX, ROUGH–IN EMPTY OUTLET BOXES FOR FUTURE CARD READER, PIR RTE MOTION SENSOR, ELECTRIC STRIKE/HINGE, AND BMS.
3. CONTROLLED ACCESS POINT, ACS JUNCTION BOX, MAKE PROVISIONS FOR FUTURE CARD READER WITH KEYPAD, PIR RTE MOTION SENSOR, ELECTRIC STRIKE, AND BMS. SECURITY EQUIPMENT/DEVICES AND CABLING BY OTHERS.
4. 2–3"C SECURITY TO SECURITY BACKBOARD IN TELECOM ROOM.
5. EXISTING ACS/IDS ALARM SYSTEMS WITHIN UNIT STORAGE AREAS AND VAULTS TO REMAIN IN PLACE AND OPERATIONAL THROUGHOUT CONSTRUCTION. COORDINATE ACCESS AND WORK REQUIREMENTS WITHIN THESE SECURED AREAS (UNIT STORAGE/VAULT) WITH PROJECT MANAGER.
6. CUT/PATCH EXISTING CONCRETE CAP OVER EXISTING SECURED VAULT AREAS, AS REQUIRED, TO INSTALL NEW SECURITY CONDUITS.
7. NOTE THAT ACCESSIBLE CEILINGS ARE INCLUDED AS PART OF DEDUCTIVE BID ITEM NO. 2. SHOULD THE ACCESSIBLE CEILINGS NOT BE INSTALLED, CONTRACTOR SHALL INSTALL JUNCTION BOXES AS HIGH AS PRACTICAL, BUT NO LOWER THAN 8'–3" AFF.



PARTIAL COMM PLAN - ACS/IDS/CCTV

SCALE: 1/8" = 1'–0"

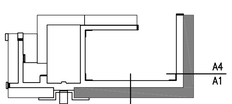
A4



PARTIAL COMM PLAN - ACS/IDS/CCTV

SCALE: 1/8" = 1'–0"

A1



KEY PLAN

GRAPHIC SCALE:

0 2 4 8 16 24FT

SCALE: 1/8"=1'–0"

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DEPARTMENT OF DEFENSE
HAWAII ARMY NATIONAL GUARD
DESIGN AND PROJECT MANAGEMENT BRANCH
STATE OF HAWAI'I
FACILITY MANAGEMENT OFFICE

KEAUKAHA MILITARY RESERVATION – B621
HILO, HAWAI'I

HAWAI'I ARMY NATIONAL GUARD (HIARNG)
BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS

PARTIAL BLDG 621 HIARNG COMM PLANS – ACS/IDS/CCTV

SCALE: AS NOTED

STATE PROJECT NO.
CA-1212-C3

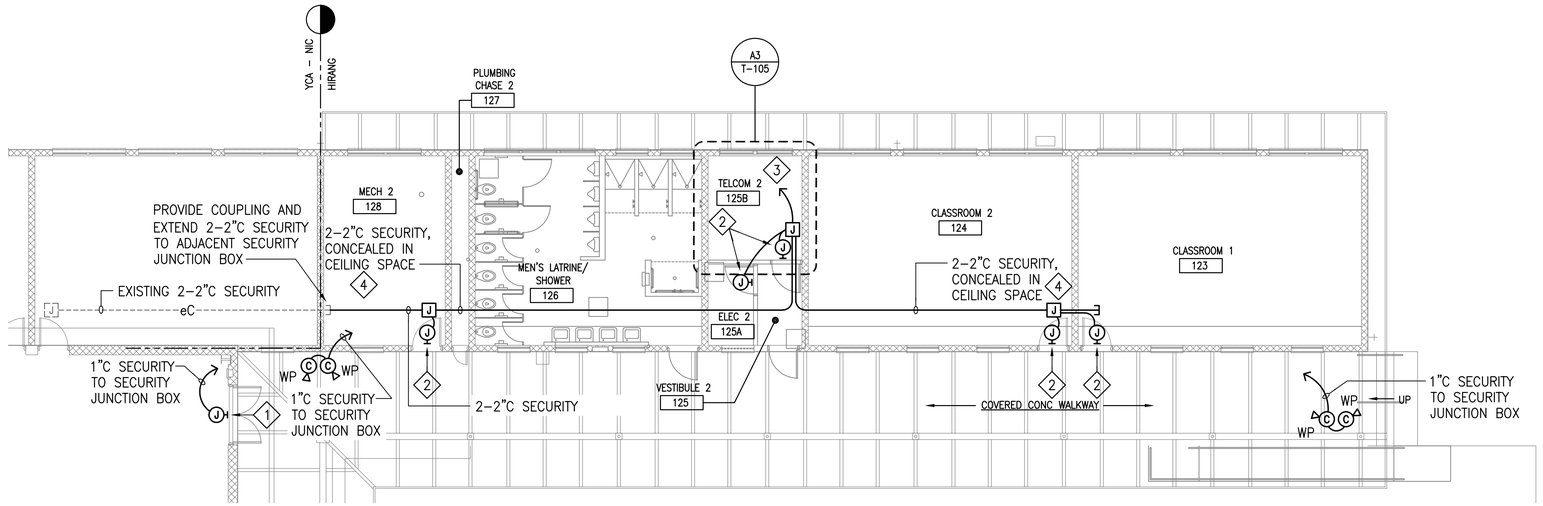
FEDERAL PROJECT NO.
15130007

SHEET 116 of 126

T-103

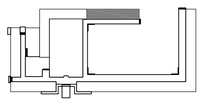
SHEET NOTES:

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2. ACS JUNCTION BOX, ROUGH-IN EMPTY OUTLET BOXES FOR FUTURE CARD READER, PIR RTE MOTION SENSOR, ELECTRIC STRIKE/HINGE, AND BMS.
3. 2-3"C SECURITY TO SECURITY BACKBOARD IN TELECOM ROOM.
4. NOTE THAT ACCESSIBLE CEILINGS ARE INCLUDED AS PART OF DEDUCTIVE BID ITEM NO. 2. SHOULD THE ACCESSIBLE CEILINGS NOT BE INSTALLED, CONTRACTOR SHALL INSTALL JUNCTION BOXES AS HIGH AS PRACTICAL, BUT NO LOWER THAN 8'-3" AFF.



PARTIAL COMM PLAN - ACS/IDS/CCTV — C2

SCALE: 1/8" = 1'-0"



KEY PLAN

GRAPHIC SCALE:

0 2 4 8 16 24FT

SCALE: 1/8"=1'-0"

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BUILDING 621 RENOVATION AND LATRINE IMPROVEMENTS

PARTIAL BLDG 621 HIARNG COMM PLAN - ACS/IDS/CCTV

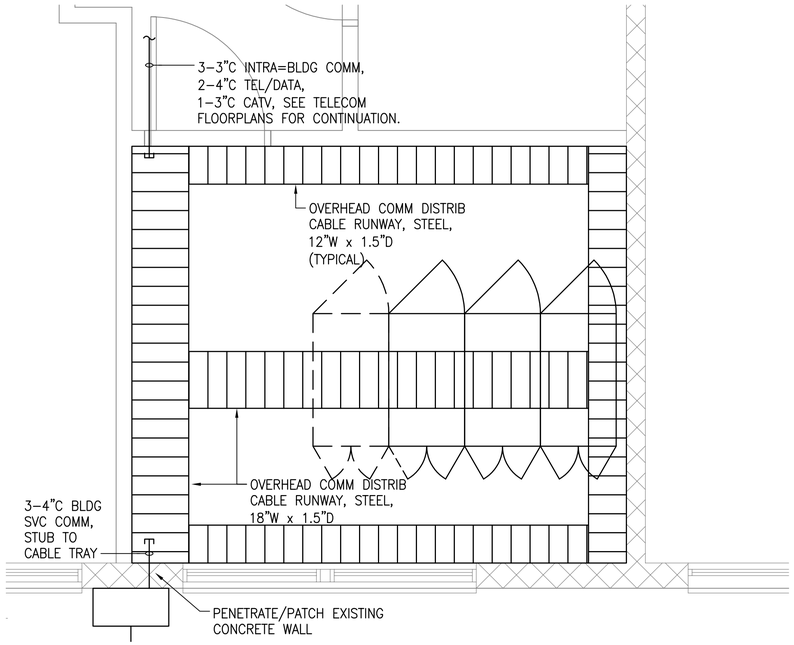
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STATE PROJECT NO. CA-1212-C3

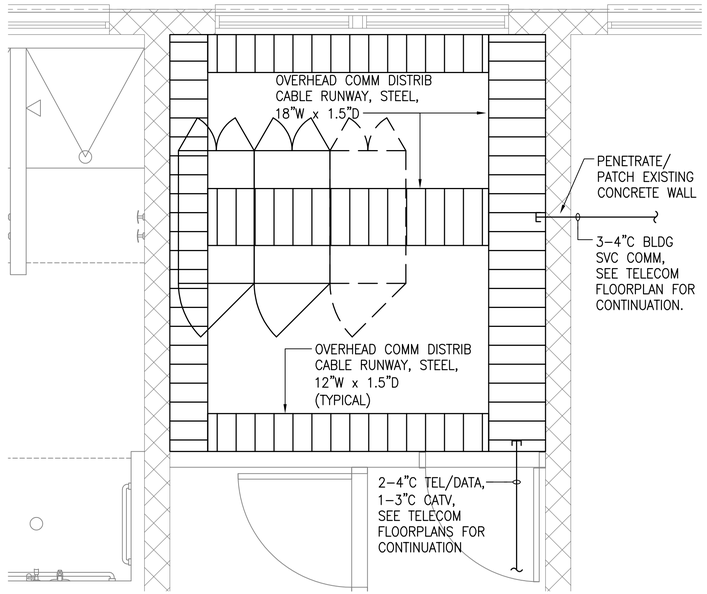
FEDERAL PROJECT NO. 15130007

SHEET 117 of 126

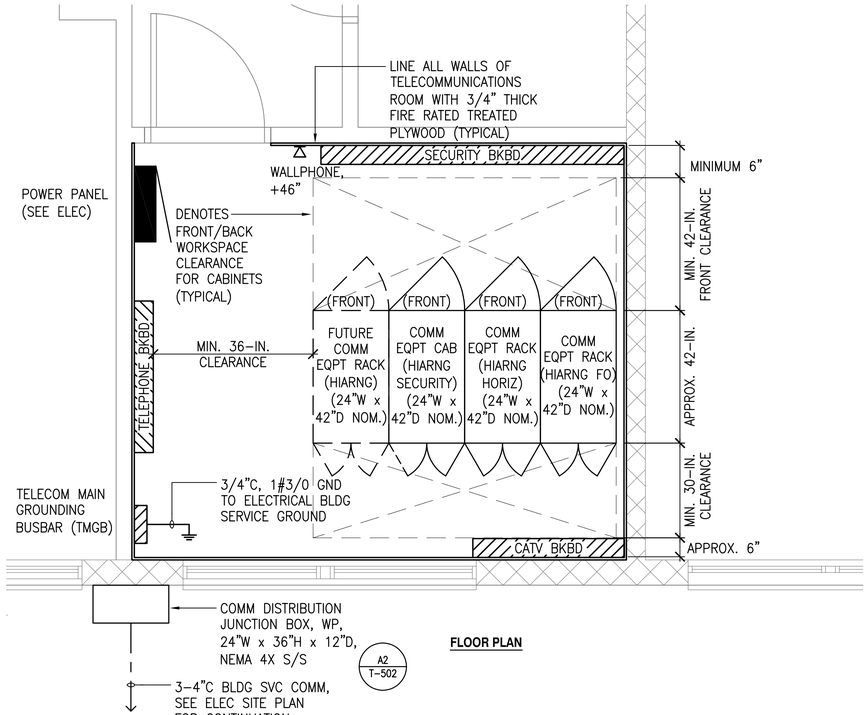
T-104



OVERHEAD DISTRIBUTION PLAN



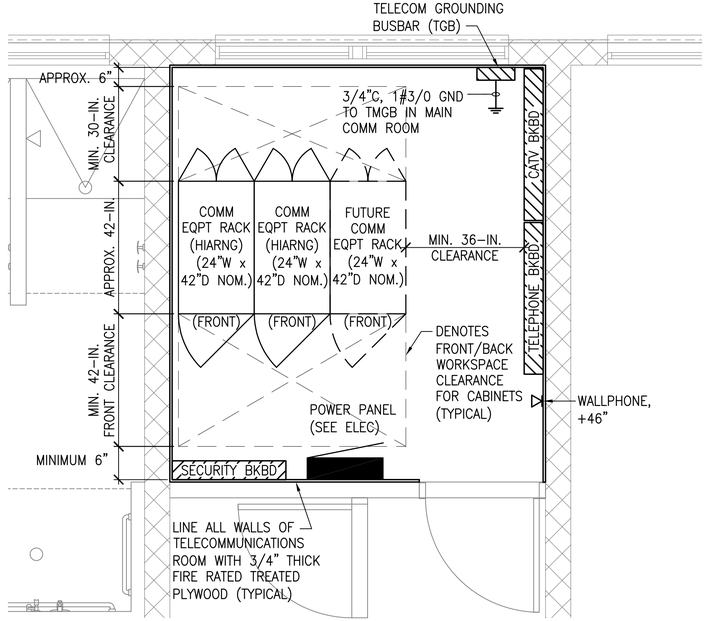
OVERHEAD DISTRIBUTION PLAN



FLOOR PLAN

ENLARGED PLAN - MAIN TELECOM ROOM (RM 113B) A1

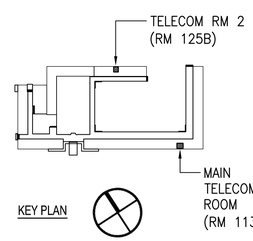
SCALE: 1/2" = 1'-0"



FLOOR PLAN

ENLARGED PLAN - TELECOM ROOM 2 (RM 125B) A3

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



KEY PLAN

GRAPHIC SCALE:

0 1 2 4 6FT

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

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BLDG 621 HIARNG ENLARGED COMM ROOM PLANS

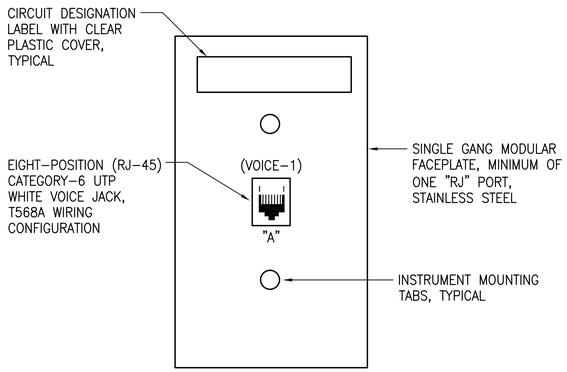
SCALE: AS NOTED

STATE PROJECT NO. CA-1212-C3

FEDERAL PROJECT NO. 15130007

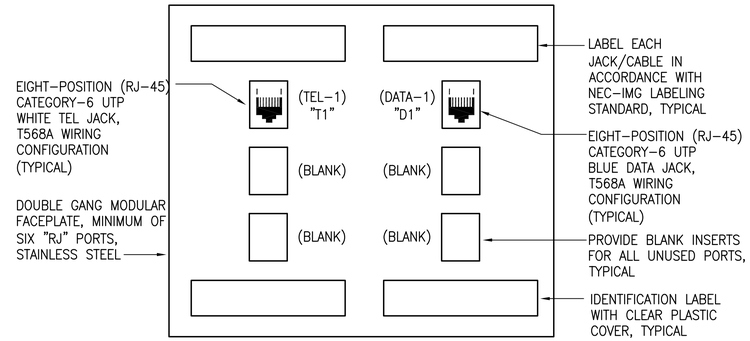
SHEET 118 of 126

T-105



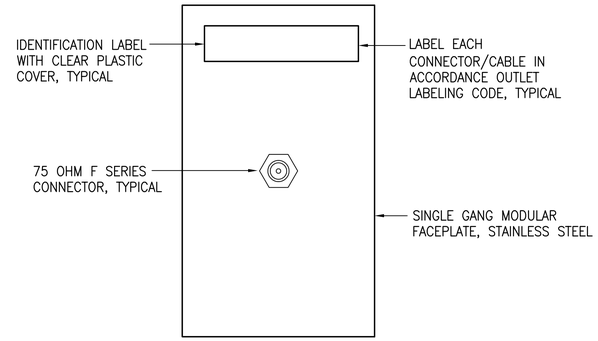
TYPICAL TELEPHONE WALLPHONE OUTLET DETAIL C1

NOT TO SCALE



TYPICAL COMBINATION TEL/DATA INFORMATION OUTLET DETAIL C2

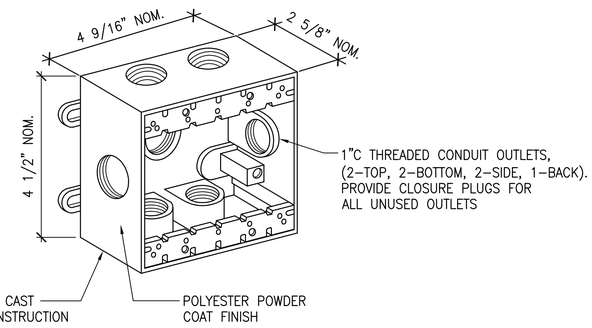
NOT TO SCALE



TYPICAL CATV OUTLET DETAIL (1V) C4

NOT TO SCALE

JACK/CABLE COLOR CODING SCHEME	
COLOR	SYSTEM DESCRIPTION
WHITE	TELEPHONE (VOICE)
BLUE	DATA/LAN

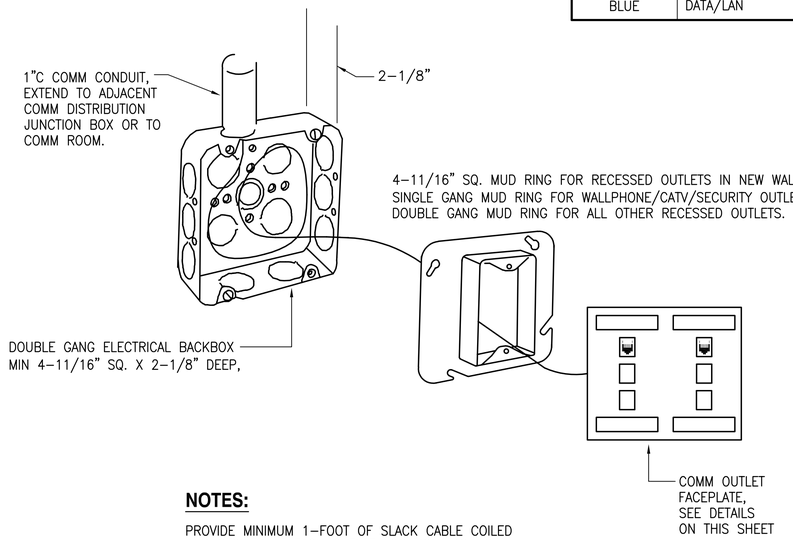


NOTES:

1. FACEPLATES NOT SHOWN FOR CLARITY. FOR FACEPLATE REQUIREMENTS, SEE DETAILS ABOVE.
2. O–Z GEDNEY #WDK210 OR APPROVED EQUIVALENT
3. PAINT OUTLETS AND CONDUITS TO MATCH EXISTING SURROUNDING SURFACE.
4. CUT CONDUIT OPENINGS AS REQUIRED TO CONNECT INDICATED CONDUIT SIZES AND COUNTS. REMOVE ALL SHARP EDGES.
5. MOUNT TO WALL WITH SCREWS OR ANCHOR BOLTS.
6. ORIENT BOXES TO ALLOW INSTALLATION OF OUTLET COVERS AS INDICATED IN DETAILS ABOVE.
7. DOUBLE–GANG OUTLET BOX SHOWN ABOVE. OUTLET BOX FOR SURFACE MOUNTED WALLPHONE, SECURITY, AND CATV OUTLETS ON EXISTING WALLS SIMILAR EXCEPT SINGLE–GANG DEEP OUTLET BOX.

TYPICAL SURFACE MOUNTEED TELECOM OUTLET BOX DETAIL - EXISTING WALL A1

NOT TO SCALE



NOTES:

PROVIDE MINIMUM 1–FOOT OF SLACK CABLE COILED AND STOWED AT EACH OUTLET LOCATION. DO NOT EXCEED CABLE MANUFACTURER'S RECOMMENDED MINIMUM BENDING RADIUS.

TYPICAL RECESSED TELECOM OUTLET BOX DETAIL - NEW WALL A3

NOT TO SCALE

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SUBMITTAL DATE 30 SEPTEMBER 2019
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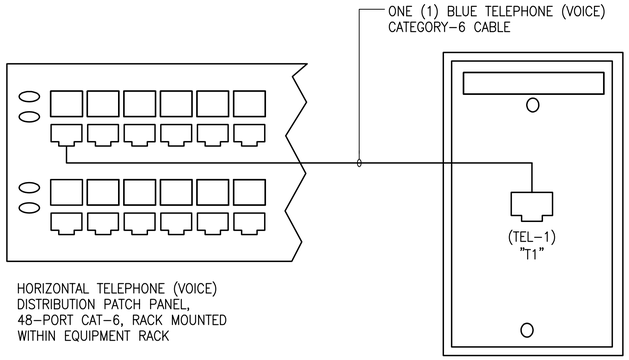
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TELECOMMUNICATIONS DETAILS

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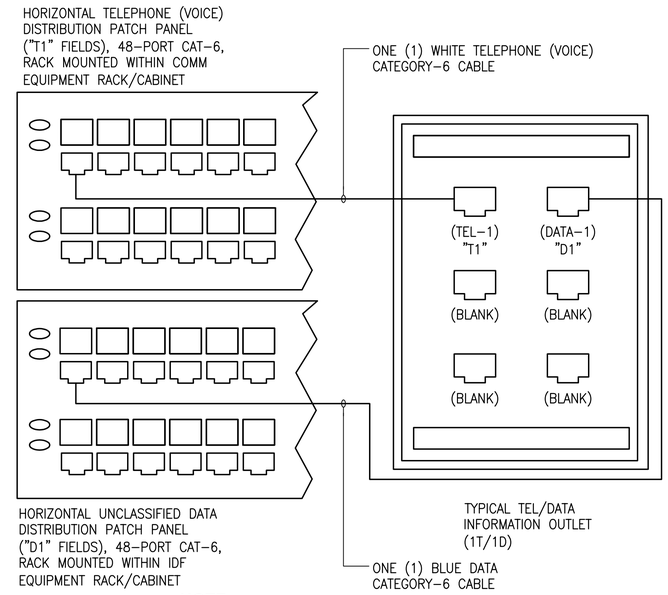


NOTES:

1. ALL TELEPHONE WALLPHONE OUTLETS SHALL BE GROUPED TOGETHER WITHIN THE SAME TELEPHONE (VOICE) PATCH PANEL.
2. ALL TELECOMMUNICATIONS INFRASTRUCTURE (OUTLETS, PATCH PANELS, EQUIPMENT/COMPONENT PANELS, RACKS, ETC.) SHALL BE LABELED IN ACCORDANCE WITH HIARNG BUILDING CABLING SYSTEM LABELING STANDARDS AND IN ACCORDANCE WITH ANSI/TIA/EIA–606–C.

TYPICAL TEL WALLPHONE OUTLET WIRING DIAGRAM B1

NOT TO SCALE

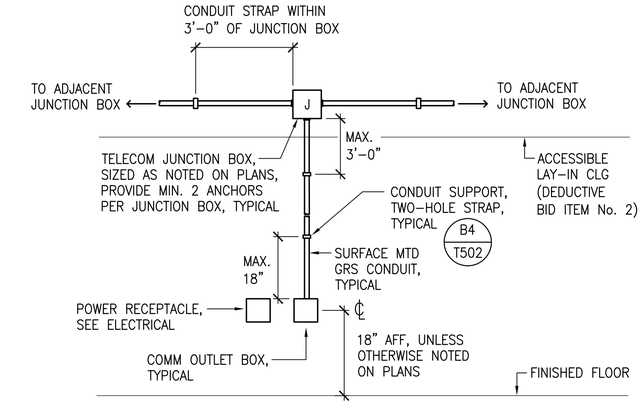


NOTE:

ALL TELECOMMUNICATIONS INFRASTRUCTURE (OUTLETS, PATCH PANELS, EQUIPMENT/COMPONENT PANELS, RACKS, ETC.) SHALL BE LABELED IN ACCORDANCE WITH HIARNG BUILDING CABLING SYSTEM LABELING STANDARDS AND IN ACCORDANCE WITH ANSI/TIA/EIA–606–C.

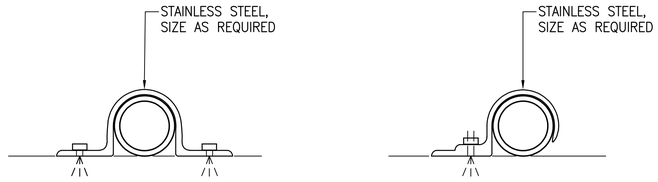
TYPICAL TEL/DATA INFORMATION OUTLET WIRING DIAGRAM B2

NOT TO SCALE



TYPICAL SURFACE MOUNTED TELECOM OUTLET - ELEVATION C4

NOT TO SCALE

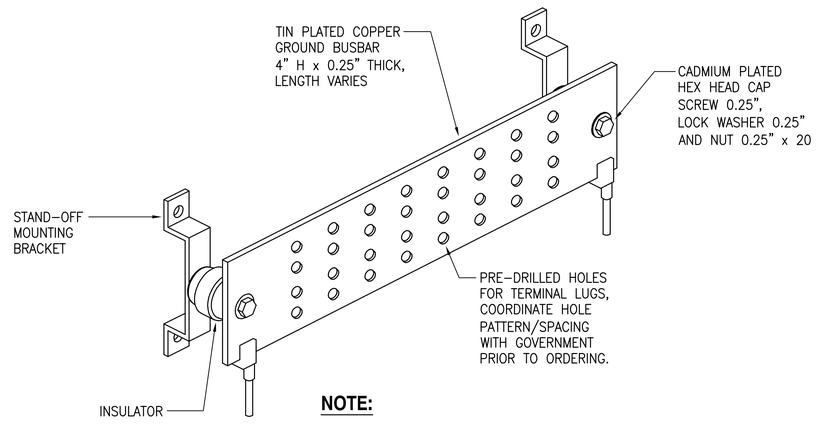


TWO HOLE STRAP

ONE HOLE STRAP

CONDUIT STRAP DETAIL B4

NOT TO SCALE

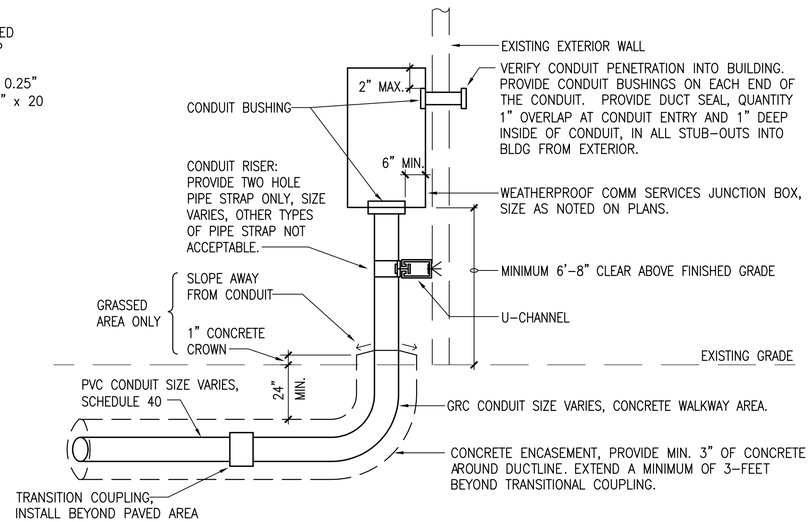


NOTE:

GROUND BUSBAR SHALL BE LABELED AND INSTALLED IN ACCORDANCE WITH ANSI/TIA–607–B. CONNECTIONS TO GROUND BUS SHALL BE VIA TWO–HOLE LUGS WITH NON–REVERSABLE COMPRESSION CRIMP. MECHANICAL LUG CONNECTIONS SHALL NOT BE USED.

TELECOMMUNICATIONS GROUNDING BUSBAR DETAIL A1

NOT TO SCALE



TYPICAL EXTERIOR BUILDING SERVICE JUNCTION BOX DETAIL A2

NOT TO SCALE

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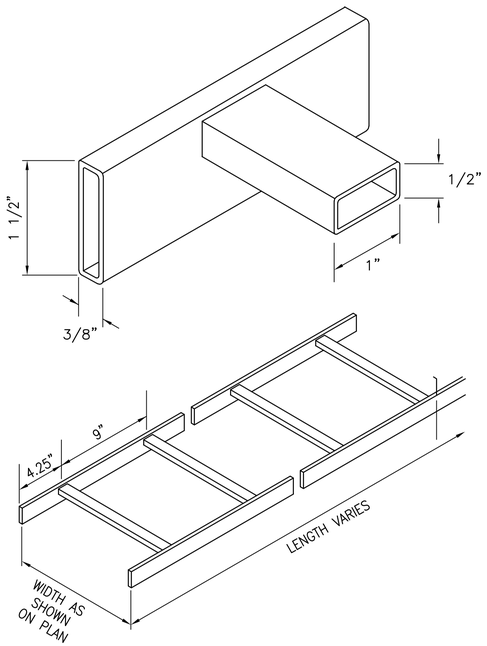
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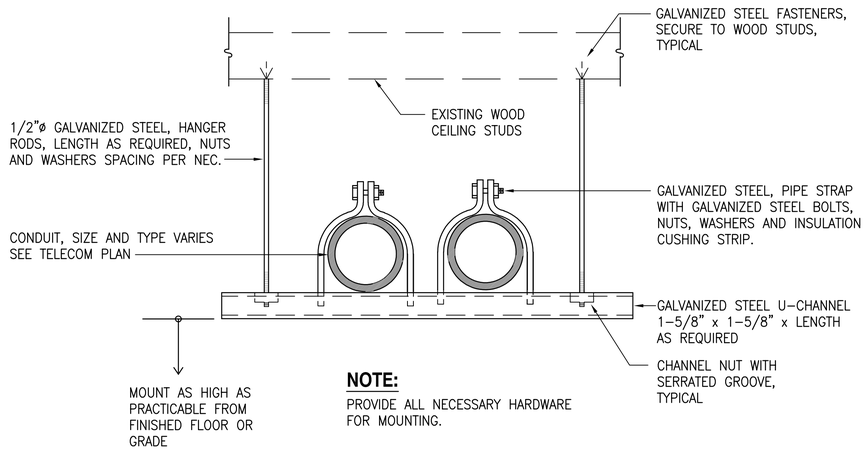
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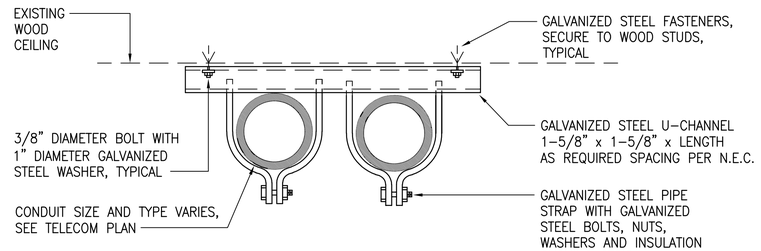


CABLE RUNWAY DETAIL — C1
NOT TO SCALE

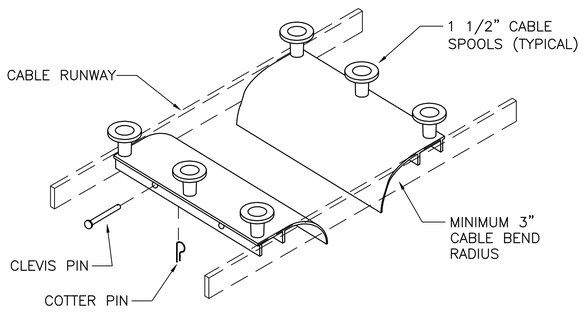


NOTE:
PROVIDE ALL NECESSARY HARDWARE FOR MOUNTING.

TYPICAL CEILING CONDUIT HANGAR SUPPORT DETAIL — C2
NOT TO SCALE

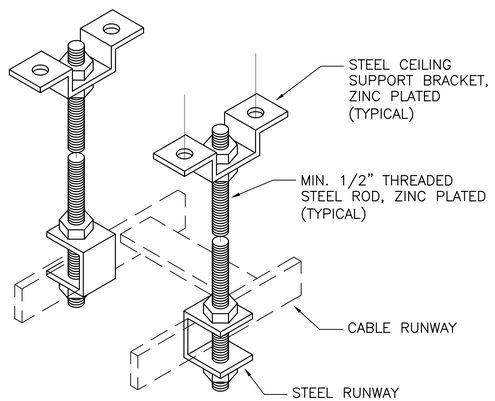


TYPICAL CEILING MOUNTED CONDUIT SUPPORT DETAIL — C4
NOT TO SCALE

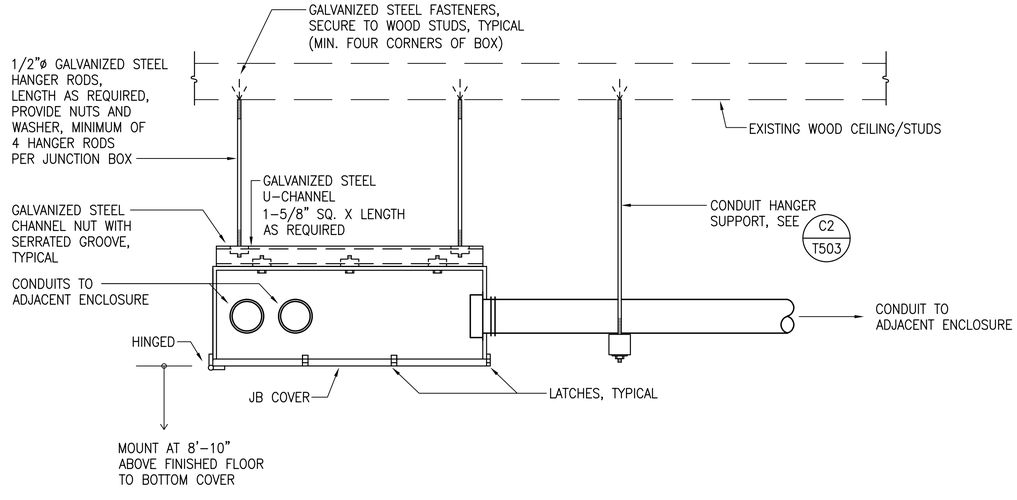


NOTE:
PROVIDE MINIMUM OF ONE (1) CABLE RUNWAY DROPOUT PER EQUIPMENT CABINET POSITION. REFER TO FLOORPLANS FOR EQUIPMENT CABINET POSITIIONS.

CABLE RUNWAY DROPOUT DETAIL — A1
NOT TO SCALE



CABLE RUNWAY SUPPORT DETAIL — A2
NOT TO SCALE



CEILING SUSPENDED TELECOM JUNCTION BOX SUPPORT DETAIL — A4
NOT TO SCALE

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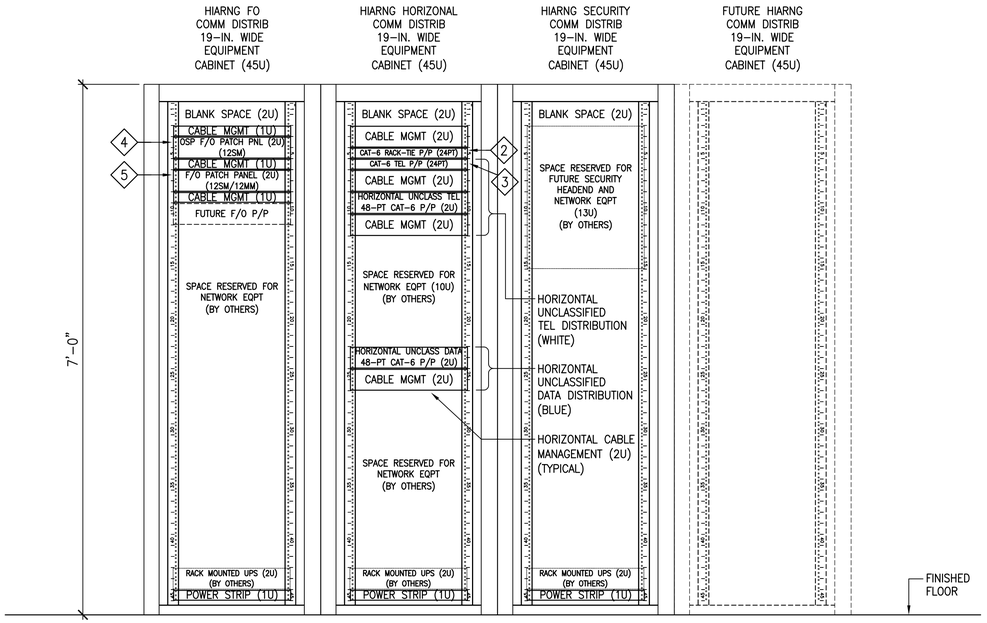
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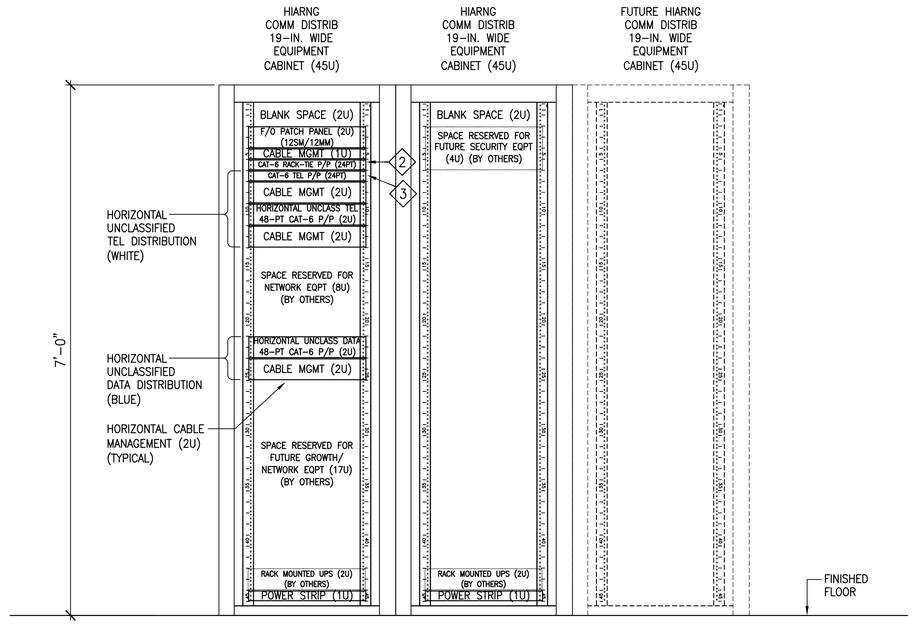
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CABINET ELEVATION - MAIN TELECOM ROOM (113B) B1
NOT TO SCALE



CABINET ELEVATION -TELECOM ROOM 2 (125B) B4
NOT TO SCALE

SHEET NOTES:

1. EQUIPMENT CABINET LAYOUTS ARE PROVIDED FOR INFORMATION ONLY. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING EQUIPMENT REQUIREMENTS AND PROVIDING ALL NECESSARY EQUIPMENT TO ENSURE A COMPLETE AND OPERATIONAL SYSTEM.

2. 24-PORT CAT-6 RACK-TIE PATCH PANEL (1U), SUPPORTS ANALOG TELEPHONE CONNECTIONS BETWEEN BACKBOARD AND EQUIPMENT RACK/CABINET.

3. 24-PORT CAT-6 TELEPHONE (WALLPHONE/VAULT) PATCH PANEL (2U)

4. HIARNG INTER-BUILDING OSP BACKBONE FIBER OPTIC DISTRIBUTION PANEL, 12-STD SINGLE-MODE, DUPLEX SC CONNECTORS.

5. HIARNG INTRA-BUILDING OSP FIBER OPTIC PATCH PANEL (COMM ROOM 2), HYBRID FO (12-STD SINGLE-MODE/ 12-STD OM-3 50-MICRON MULTI-MODE), DUPLEX SC CONNECTORS.

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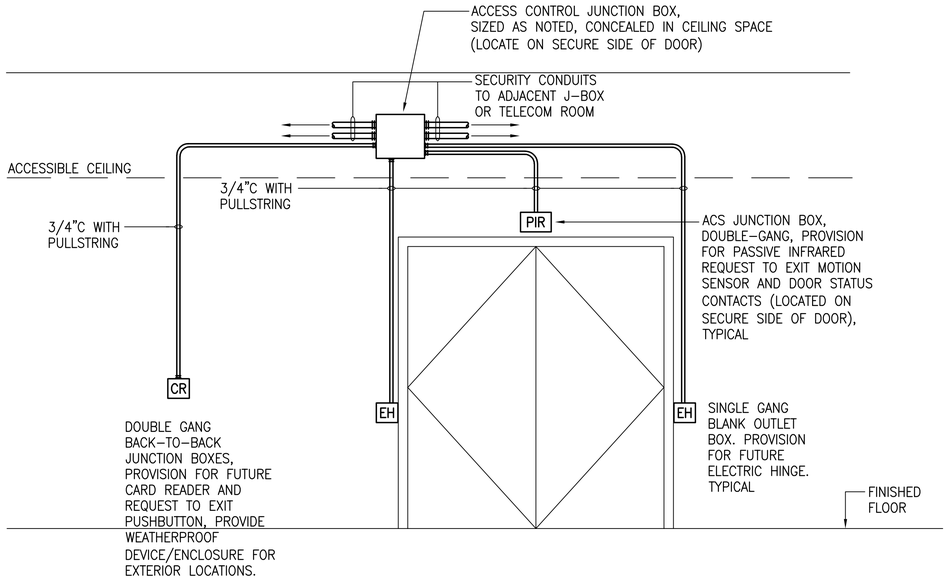
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TELECOMMUNICATIONS DETAILS - RACK ELEVATIONS

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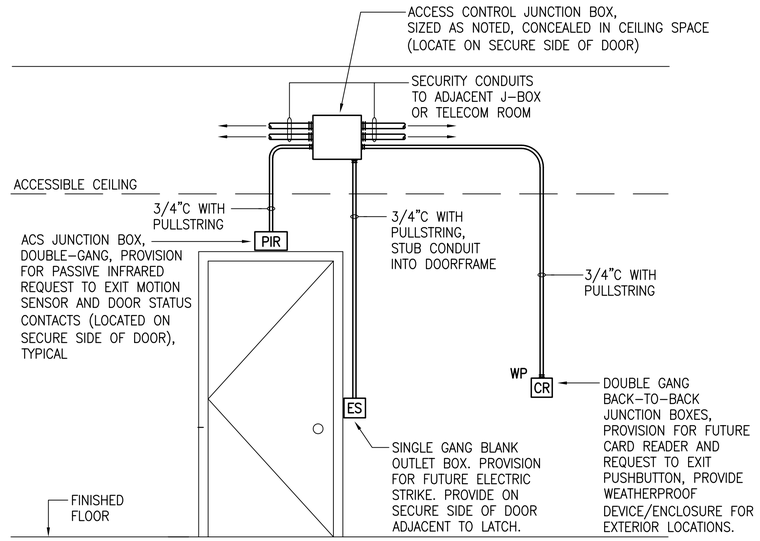


NOTE:

PRIOR TO ROUGH–IN, CONTRACTOR SHALL COORDINATE EXACT LOCATIONS AND MOUNTING HEIGHTS OF OUTLET BOXES WITH ACCESS CONTROL SYSTEM PROVIDER AND DOOR HARDWARE CONTRACTOR.

TYPICAL ACCESS CONTROL CONDUIT ROUGH-IN DIAGRAM - DOUBLE DOOR — B1

NOT TO SCALE



NOTE:

PRIOR TO ROUGH–IN, CONTRACTOR SHALL COORDINATE EXACT LOCATIONS AND MOUNTING HEIGHTS OF OUTLET BOXES WITH ACCESS CONTROL SYSTEM PROVIDER AND DOOR HARDWARE CONTRACTOR.

TYPICAL ACCESS CONTROL CONDUIT ROUGH-IN DIAGRAM - SINGLE DOOR — B3

NOT TO SCALE

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TELECOMMUNICATIONS DETAILS – ACS ROUGH–IN

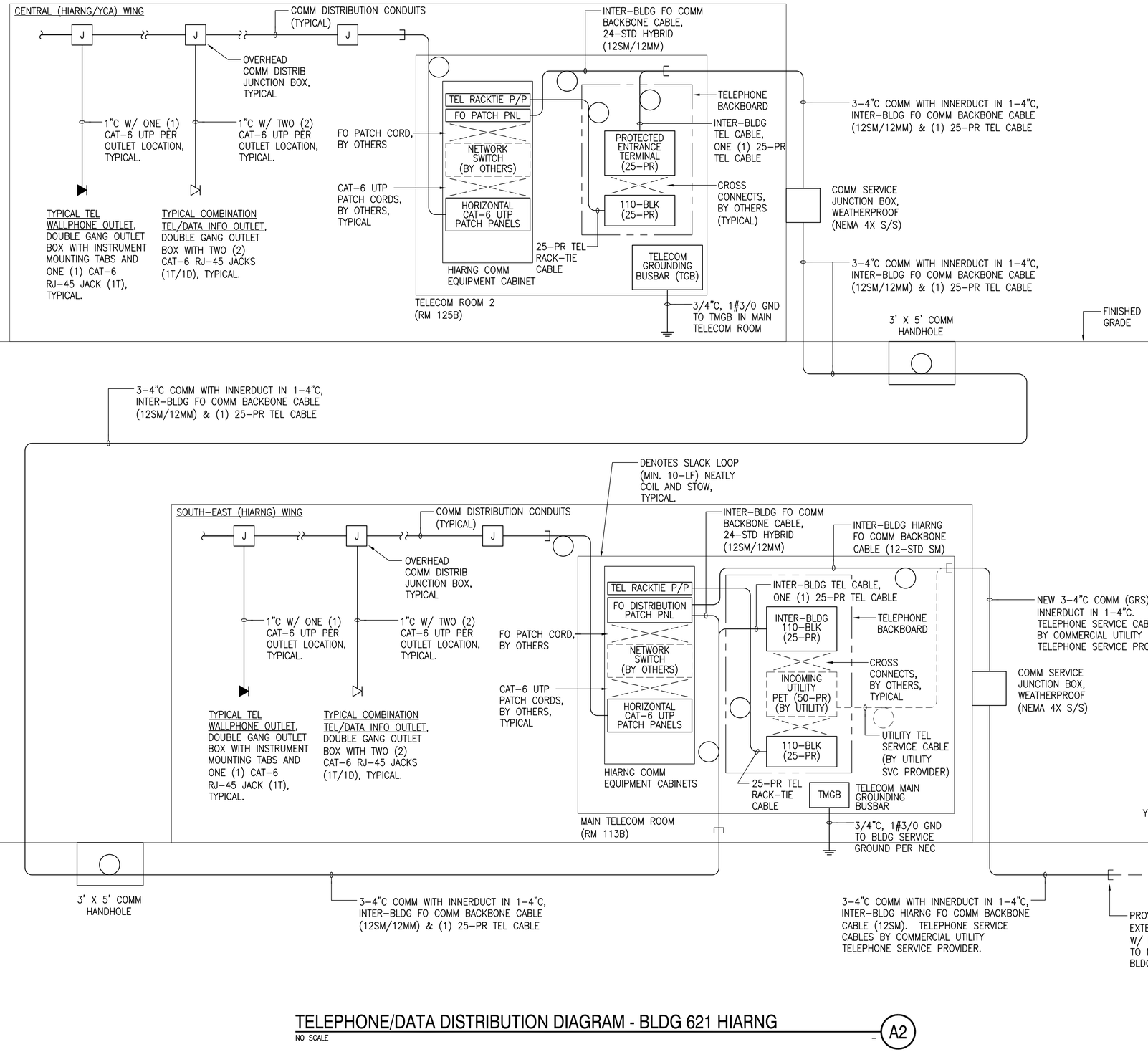
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TELEPHONE/DATA DISTRIBUTION DIAGRAM - BLDG 621 HIARNG

NO SCALE

A2

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TELECOMMUNICATIONS DISTRIBUTION DIAGRAM - TEL/DATA

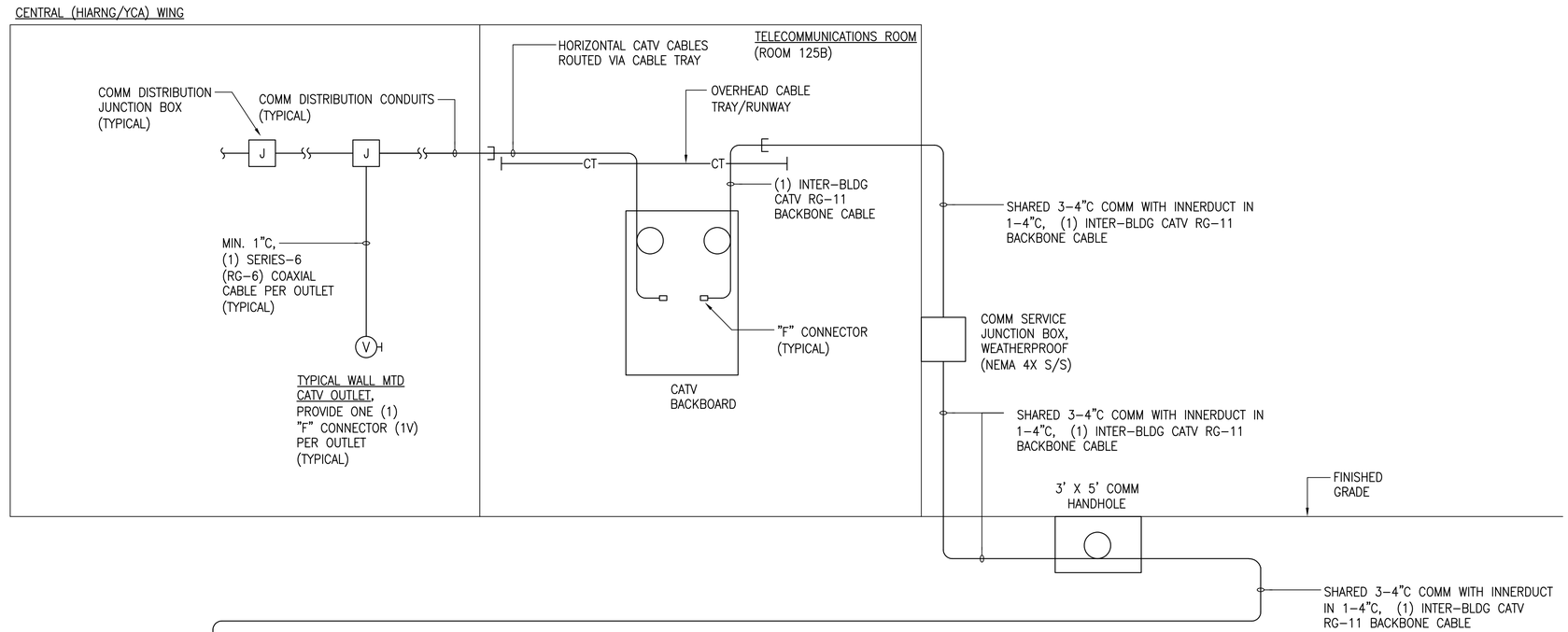
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CATV DISTRIBUTION DIAGRAM - BLDG 621 HIARNG

NO SCALE

A3

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TELECOMMUNICATIONS RISER DIAGRAM – CATV

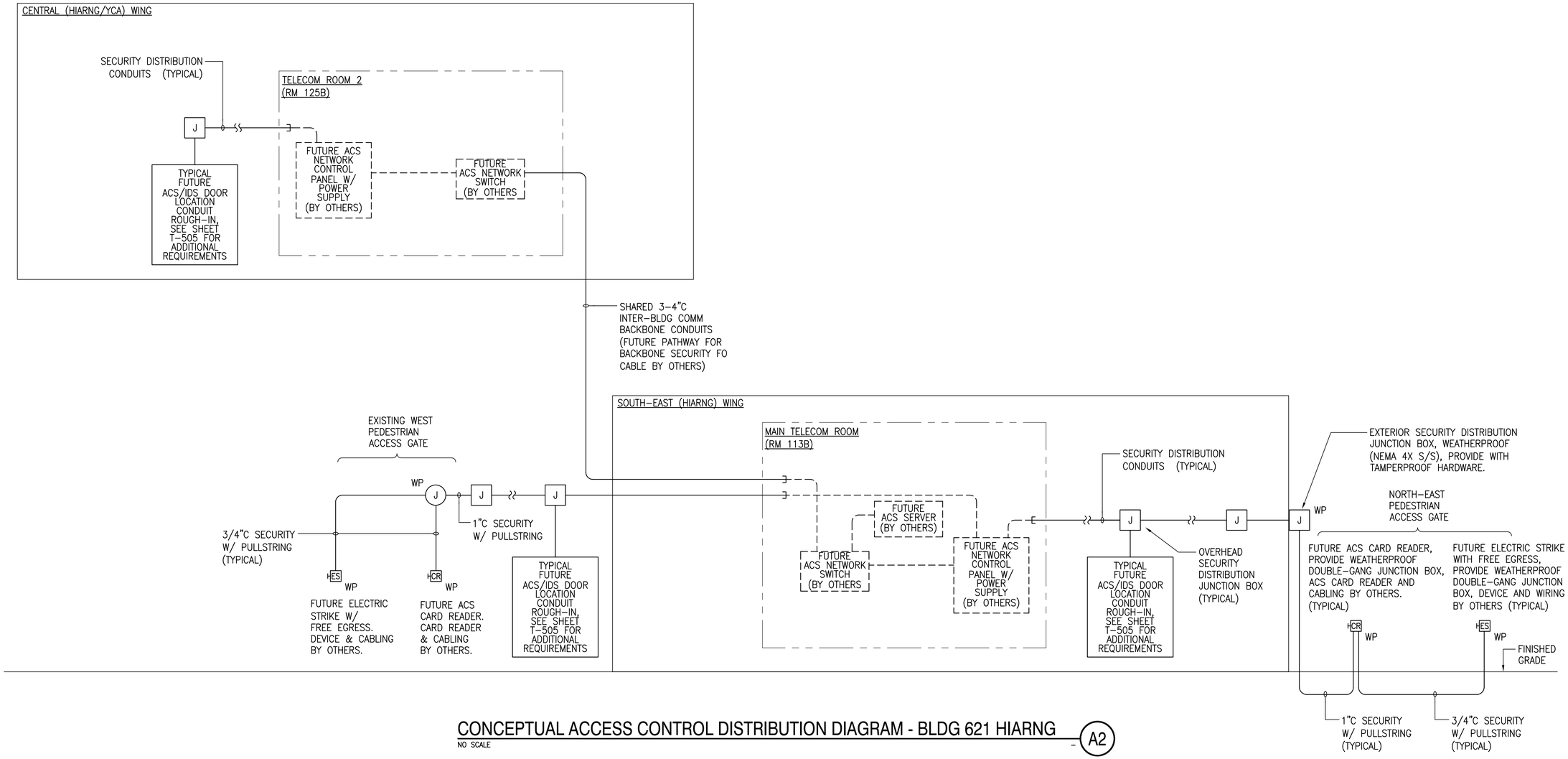
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CONCEPTUAL ACCESS CONTROL DISTRIBUTION DIAGRAM - BLDG 621 HIARNG

NO SCALE

A2

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TELECOMMUNICATIONS RISER DIAGRAM - SECURITY

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