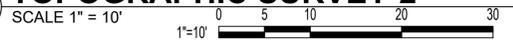


A1 TOPOGRAPHIC SURVEY-2





AE INFO

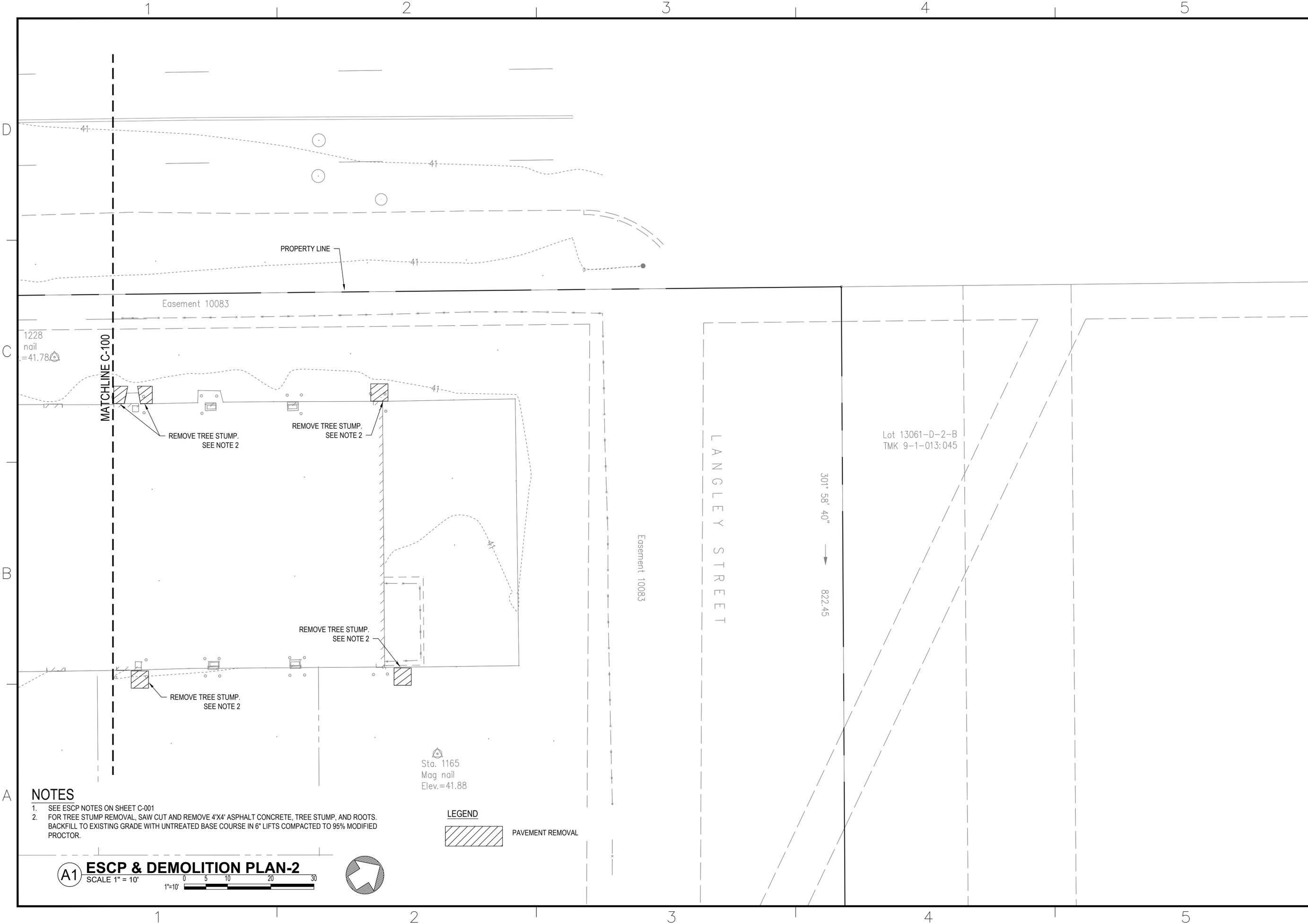


SYMBOL	DESCRIPTION	DATE	APPROVED

100% FINAL DESIGN
 SUBMITAL DATE: 03/22/2024

DESIGNER	DRW	CHK
DEPARTMENT OF DEFENSE HAWAII ARMY NATIONAL GUARD DESIGN AND PROJECT MANAGEMENT BRANCH KALAELOA, HAWAII	KALAELOA B90T RESTORATION TOPOGRAPHIC SURVEY - 2	
STATE OF HAWAII FACILITY MANAGEMENT OFFICE BUILDING 90T		

SCALE: 1" = 10'
 STATE JOB NO. CA-202209-C
 FEDERAL PROJECT NO. 15H00074
 SHEET 6 OF 67
C-101



NOTES
 1. SEE ESCP NOTES ON SHEET C-001
 2. FOR TREE STUMP REMOVAL, SAW CUT AND REMOVE 4'X4' ASPHALT CONCRETE, TREE STUMP, AND ROOTS. BACKFILL TO EXISTING GRADE WITH UNTREATED BASE COURSE IN 6" LIFTS COMPACTED TO 95% MODIFIED PROCTOR.

LEGEND
 PAVEMENT REMOVAL

A1 ESCP & DEMOLITION PLAN-2
 SCALE 1" = 10'





REV	DATE	DESCRIPTION

100% FINAL DESIGN
 SUBMITTAL DATE: 03/22/2024

DESIGNER: [Signature]	DRAWN: [Signature]	CHECKED: [Signature]
-----------------------	--------------------	----------------------

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

KALAELOA B90T RESTORATION
 ESCP & DEMOLITION PLAN -2

STATE OF HAWAII
 FACILITY MANAGEMENT OFFICE
 BUILDING 90T

SCALE: 1" = 10'
 STATE JOB NO. CA-202209-C
 FEDERAL PROJECT NO. 15H00074
 SHEET 8 OF 67

C-103

NOTES

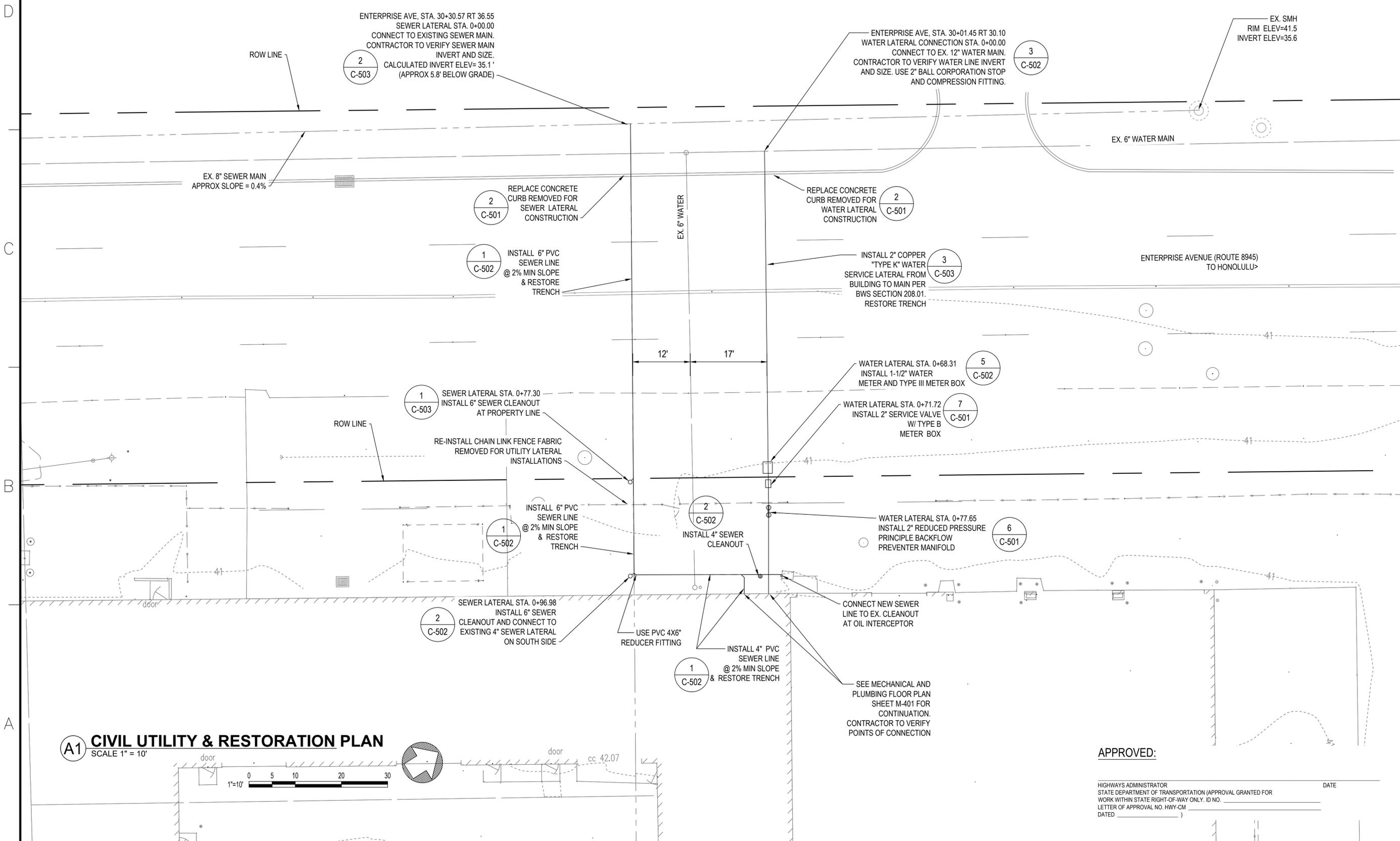
1. SEE DEMOLITION PLAN FOR ASPHALT AND CONCRETE CURB RESTORATION AREAS
2. RESTORE ALL LANDSCAPING DISTURBED BY CONSTRUCTION ACTIVITIES
3. SEE GENERAL NOTES ON SHEET C-001
4. USE 45° CONNECTION FITTINGS AT ALL SEWER LATERAL BENDS

D

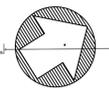
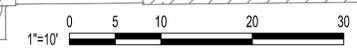
C

B

A



A1 CIVIL UTILITY & RESTORATION PLAN
SCALE 1" = 10'



APPROVED:

HIGHWAYS ADMINISTRATOR
STATE DEPARTMENT OF TRANSPORTATION (APPROVAL GRANTED FOR
WORK WITHIN STATE RIGHT-OF-WAY ONLY, ID NO. _____
LETTER OF APPROVAL NO. HWY-CM _____
DATED _____)



REV.	DATE	DESCRIPTION

100% FINAL DESIGN
DESIGN DATE 03/22/2024

DEPARTMENT OF DEFENSE
HAWAII ARMY NATIONAL GUARD
DESIGN AND PROJECT MANAGEMENT BRANCH
KALAELOA, HAWAII
BUILDING 90T

**KALAELOA B90T RESTORATION
CIVIL UTILITY & RESTORATION PLAN**

SCALE: 1" = 10'

STATE JOB NO. CA-202209-C
FEDERAL PROJECT NO. 15H00074
SHEET 9 OF 67

C-104

1 2 3 4 5

DEMOLITION NOTES

1. REMOVE EXIST A/C UNITS, TYP
2. REMOVE EXIST MTL SIDING, TYP
3. REMOVE EXIST MTL ROOFING, TYP
4. REMOVE EXISTING WDWS AND WDW FRAMES, UNO
5. REMOVE EXIST CONDUIT, PIPES, MECH AND ELEC EQUIPMENT, LIGHTS, TO ACCOMMODATE METAL SIDING WORK
6. REMOVE ALL VEGETATION AGAINST THE EXTERIOR WALLS OF THE BUILDING TO ACCOMMODATE METAL SIDING WORK. SEE CIVIL FOR TREE STUMP REMOVAL
7. REMOVE EXIST GUTTERS AND DS, TYP. SALVAGE EXIST SPLASH BLOCKS FOR REINSTALLATION



A/E INFO

I CERTIFY THAT THIS DRAWING WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION.



EXPIRES APRIL 30, 2026 SEAL

DATE	DESCRIPTION

SUBMITTAL PHASE

100% FINAL DESIGN

SUBMITTAL DATE 03/22/2024

DES GM DRW EB CHK GM

DEPARTMENT OF DEFENSE

DESIGN AND PROJECT MANAGEMENT BRANCH

KALAELOA, HAWAII

HAWAII ARMY NATIONAL GUARD

STATE OF HAWAII

FACILITY MANAGEMENT OFFICE

BUILDING 90T

KALAELOA B90T RESTORATION

PARTIAL DEMOLITION FIRST FLOOR PLAN III - IV

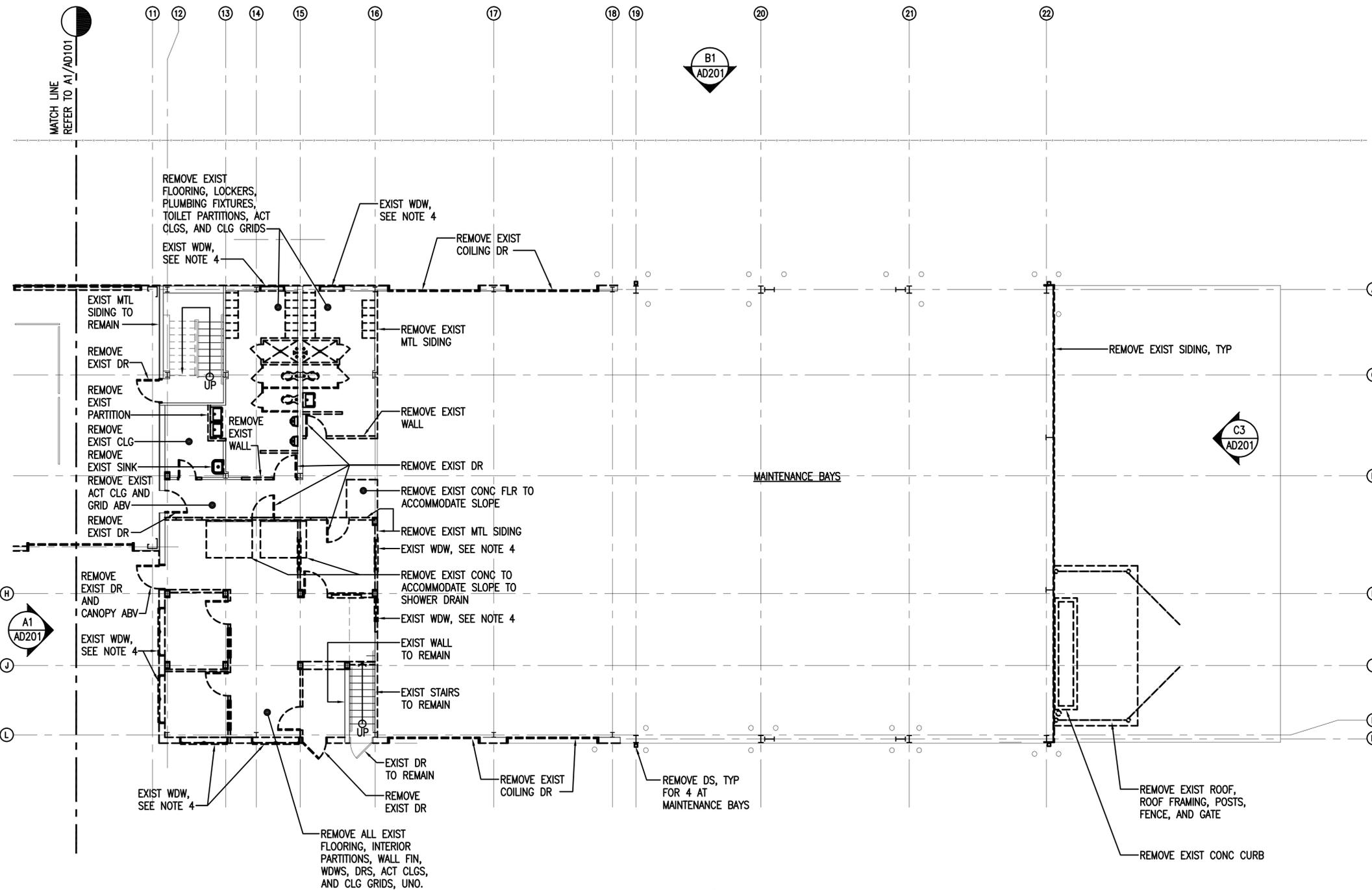
SCALE: AS NOTED

STATE JOB NO. CA-202209-C

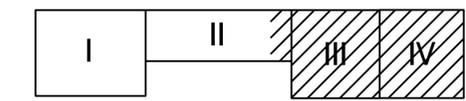
FEDERAL PROJECT NO. 15H00074

SHEET 15 OF 67

AD102



KEY PLAN

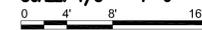


BLDG 90T

- I. HIGH BAY AREA
- II. FUTURE OPEN OFFICE AREA
- III. RESTROOMS
- IV. MAINTENANCE BAYS

PARTIAL DEMOLITION FIRST FLOOR PLAN III - IV

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



D

C

B

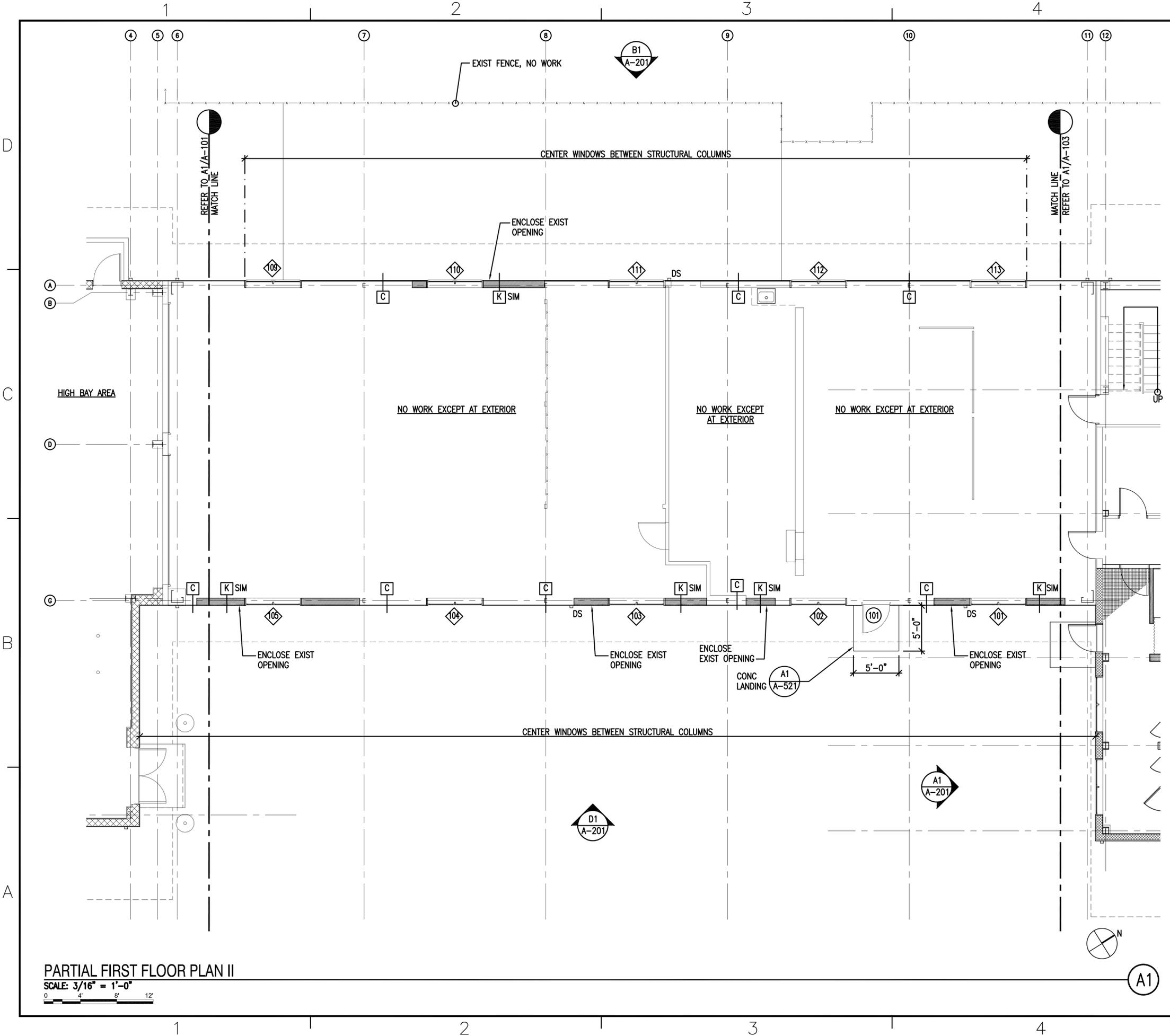
A

D

C

B

A



PARTIAL FIRST FLOOR PLAN II
 SCALE: 3/16" = 1'-0"
 0 4 8 12

FLOOR PLAN GENERAL NOTES

1. REPLACE EXTERIOR MTL SIDING AND MTL ROOFING WITH NEW METAL PANELS, TYP.
2. SEE ROOM FINISH SCHEDULE ON SHEET A-601 FOR FINISHES.
3. REINSTALL EXIST SPLASH BLOCKS, TYP FOR 5. PROVIDE NEW SPLASH BLOCKS AT OTHER DS LOCATIONS.
4. PATCH EXIST CONC AS REQD AFTER PLUMB AND ELEC WORK, SEE C3/A-521



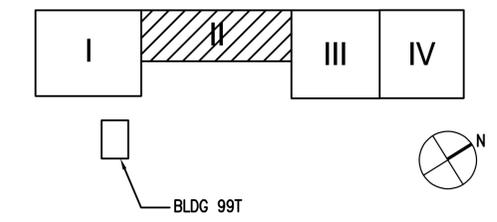
A/E INFO
 I CERTIFY THAT THIS DRAWING WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION.
 GLENN E. MASON
 LICENSED PROFESSIONAL ARCHITECT
 No. 4973
 HAWAII, U.S.A.
 EXPIRES APRIL 30, 2026

DATE	DESCRIPTION

LEGEND

- EXIST WALL
- NEW WALL
- WALL WITH INSULATION
- PARTITION TYPE, SEE SHT A-531 AND A-532
- DOOR. SEE SCHED ON SHT A-601 FOR WORK
- WINDOW. SEE SCHED ON SHT A-601 FOR WORK

KEY PLAN



- I. HIGH BAY AREA
- II. FUTURE OPEN OFFICE AREA
- III. RESTROOMS
- IV. MAINTENANCE BAYS

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

KALAELOA B90T RESTORATION
 PARTIAL FIRST FLOOR PLAN II

STATE OF HAWAII
 FACILITY MANAGEMENT OFFICE
 BUILDING 99T

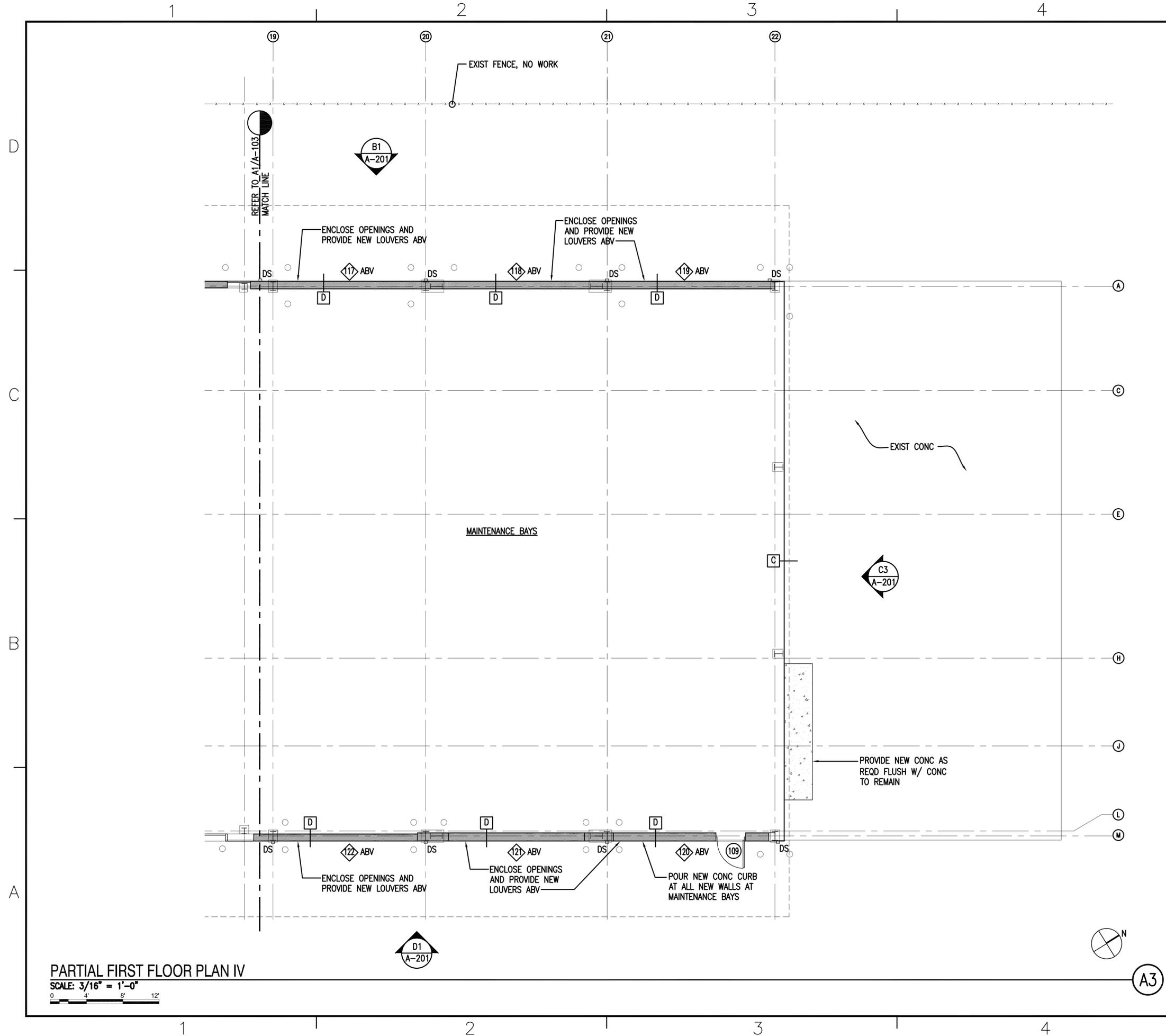
SCALE: **AS NOTED**

STATE JOB NO. **CA-202209-C**

FEDERAL PROJECT NO. **15H00074**

SHEET 19 OF 67

A-102



PARTIAL FIRST FLOOR PLAN IV
 SCALE: 3/16" = 1'-0"
 0 4 8 12

FLOOR PLAN GENERAL NOTES

1. REPLACE EXTERIOR MTL SIDING AND MTL ROOFING WITH NEW METAL PANELS, TYP.
2. SEE ROOM FINISH SCHEDULE ON SHEET A-601 FOR FINISHES.
3. REINSTALL EXIST SPLASH BLOCKS, TYP FOR 5. PROVIDE NEW SPLASH BLOCKS AT OTHER DS LOCATIONS.
4. PATCH EXIST CONC AS REQD AFTER PLUMB AND ELEC WORK, SEE C3/A-521



I CERTIFY THAT THIS DRAWING WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION.

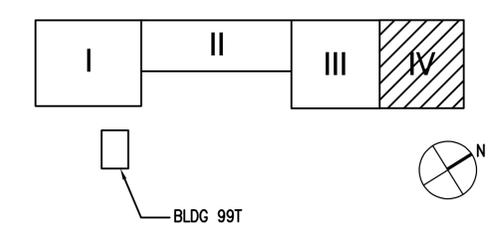
GLENN E. MASON
 LICENSED PROFESSIONAL ARCHITECT
 No. 4973
 HAWAII, U.S.A.
 EXPIRES APRIL 30, 2026

SYN	DESCRIPTION	DATE	APPR

LEGEND

- EXIST WALL
- NEW WALL
- WALL WITH INSULATION
- A1 PARTITION TYPE, SEE SHT A-531 AND A-532
- 101 DOOR. SEE SCHED ON SHT A-601 FOR WORK
- 101 WINDOW. SEE SCHED ON SHT A-601 FOR WORK

KEY PLAN



- I. HIGH BAY AREA
- II. FUTURE OPEN OFFICE AREA
- III. RESTROOMS
- IV. MAINTENANCE BAYS

100% FINAL DESIGN

03/22/2024

DES: GM DRW: EB CHK: GM

DEPARTMENT OF DEFENSE
 DESIGN AND PROJECT MANAGEMENT BRANCH
 KALAELOA, HAWAII

HAWAII ARMY NATIONAL GUARD
 FACILITY MANAGEMENT OFFICE
 BUILDING 90T

KALAELOA B90T RESTORATION

PARTIAL FIRST FLOOR PLAN IV

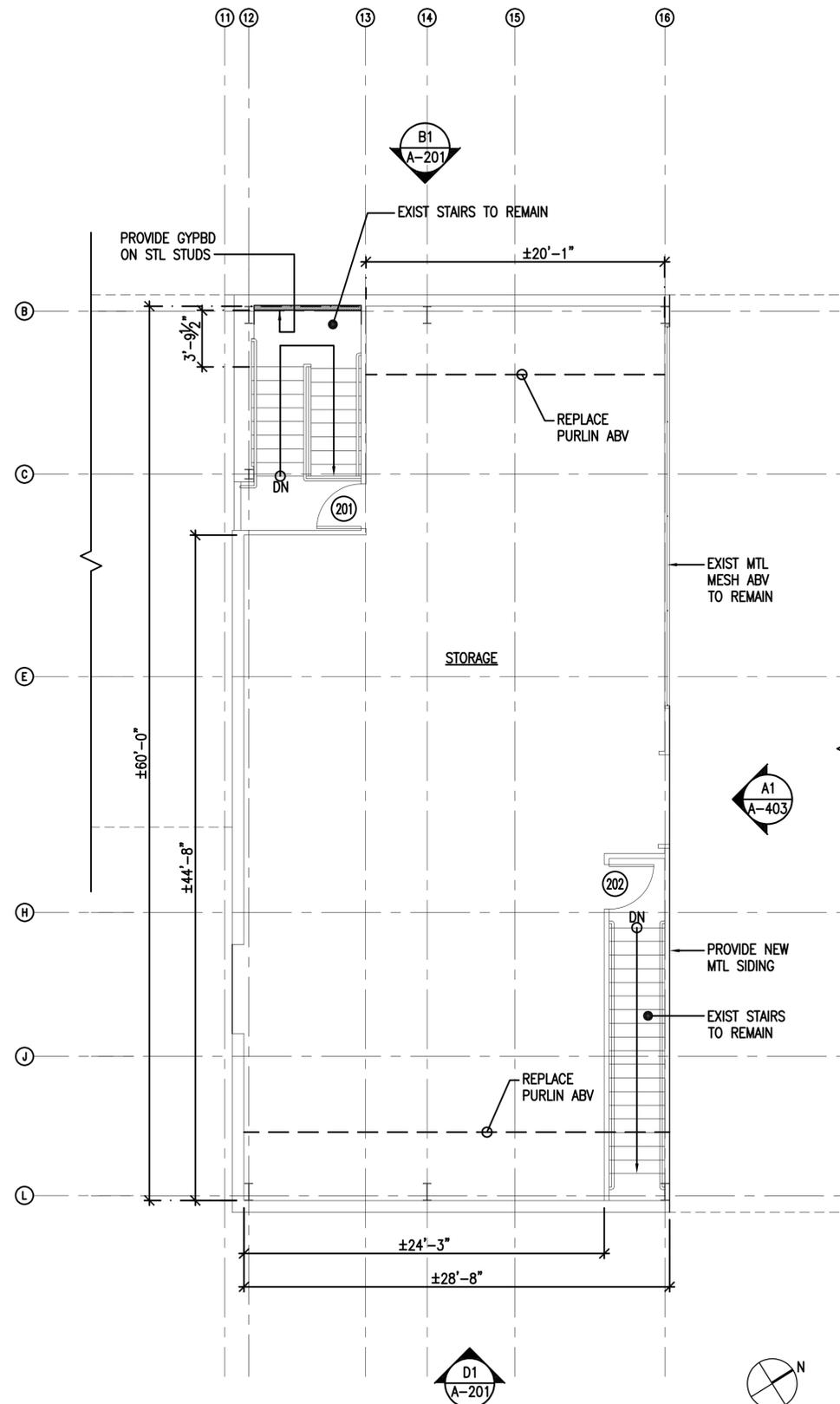
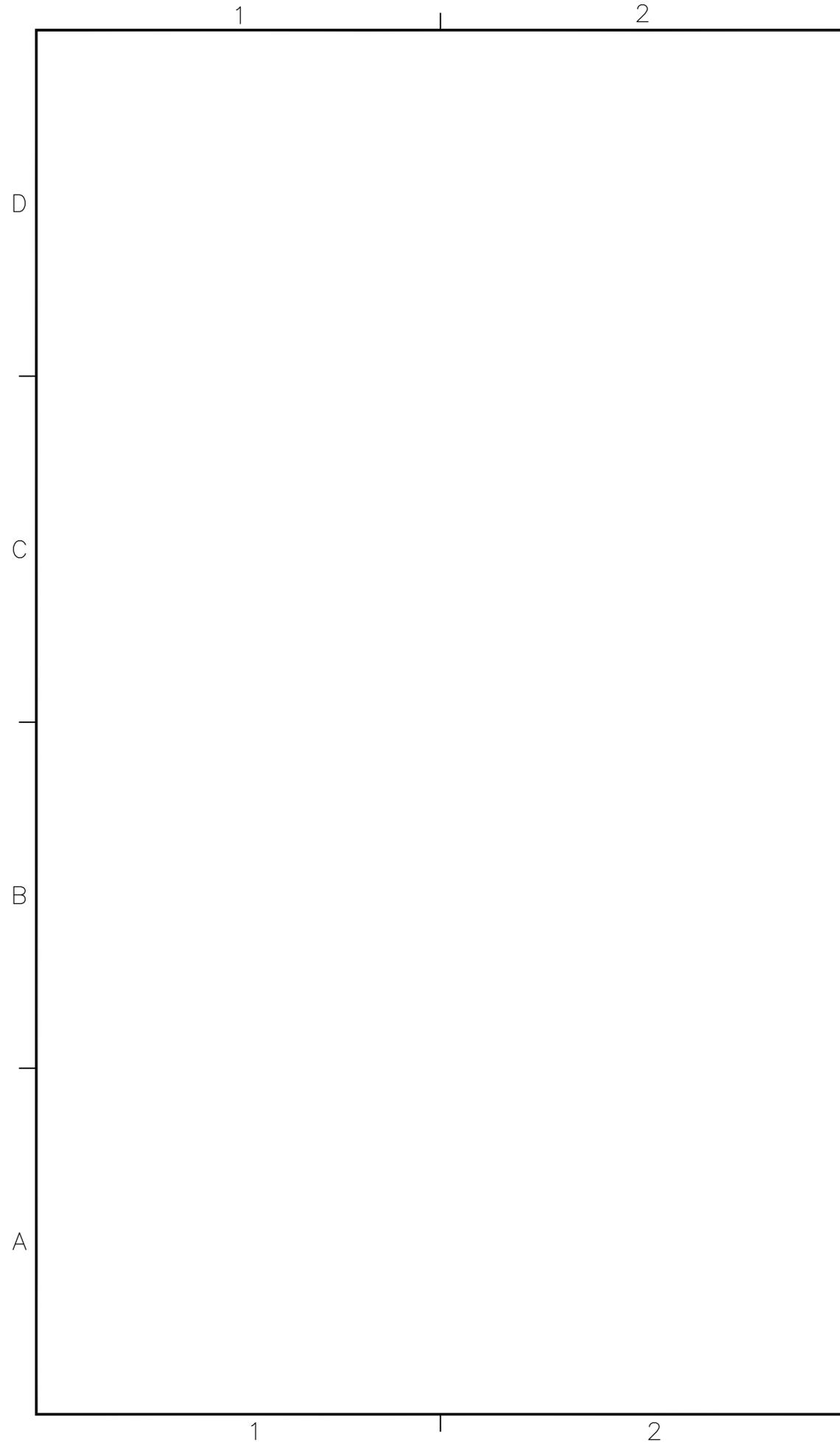
SCALE: AS NOTED

STATE JOB NO. CA-202209-C

FEDERAL PROJECT NO. 15H00074

SHEET 21 OF 67

A-104



UPPER FLOOR PLAN
 SCALE: 3/16" = 1'-0"
 0 4 8 12

FLOOR PLAN GENERAL NOTES

1. REPLACE EXTERIOR MTL SIDING AND MTL ROOFING WITH NEW METAL PANELS, TYP.
2. SEE ROOM FINISH SCHEDULE ON SHEET A-601 FOR FINISHES.
3. REINSTALL EXIST SPLASH BLOCKS, TYP FOR 5. PROVIDE NEW SPLASH BLOCKS AT OTHER DS LOCATIONS.
4. PATCH EXIST CONC AS REQD AFTER PLUMB AND ELEC WORK, SEE C3/A-521



A/E INFO

I CERTIFY THAT THIS DRAWING WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION.



EXPIRES APRIL 30, 2026 SEAL

SY#	DESCRIPTION	DATE	APPR

SUBMITTAL PHASE

100% FINAL DESIGN

SUBMITTAL DATE 03/22/2024

DES GM DRW EB CHK GM

DEPARTMENT OF DEFENSE

HAWAII ARMY NATIONAL GUARD

DESIGN AND PROJECT MANAGEMENT BRANCH

KALAELOA, HAWAII

STATE OF HAWAII

FACILITY MANAGEMENT OFFICE

BUILDING 90T

KALAELOA B90T RESTORATION

UPPER FLOOR PLAN

SCALE: AS NOTED

STATE JOB NO. CA-202209-C

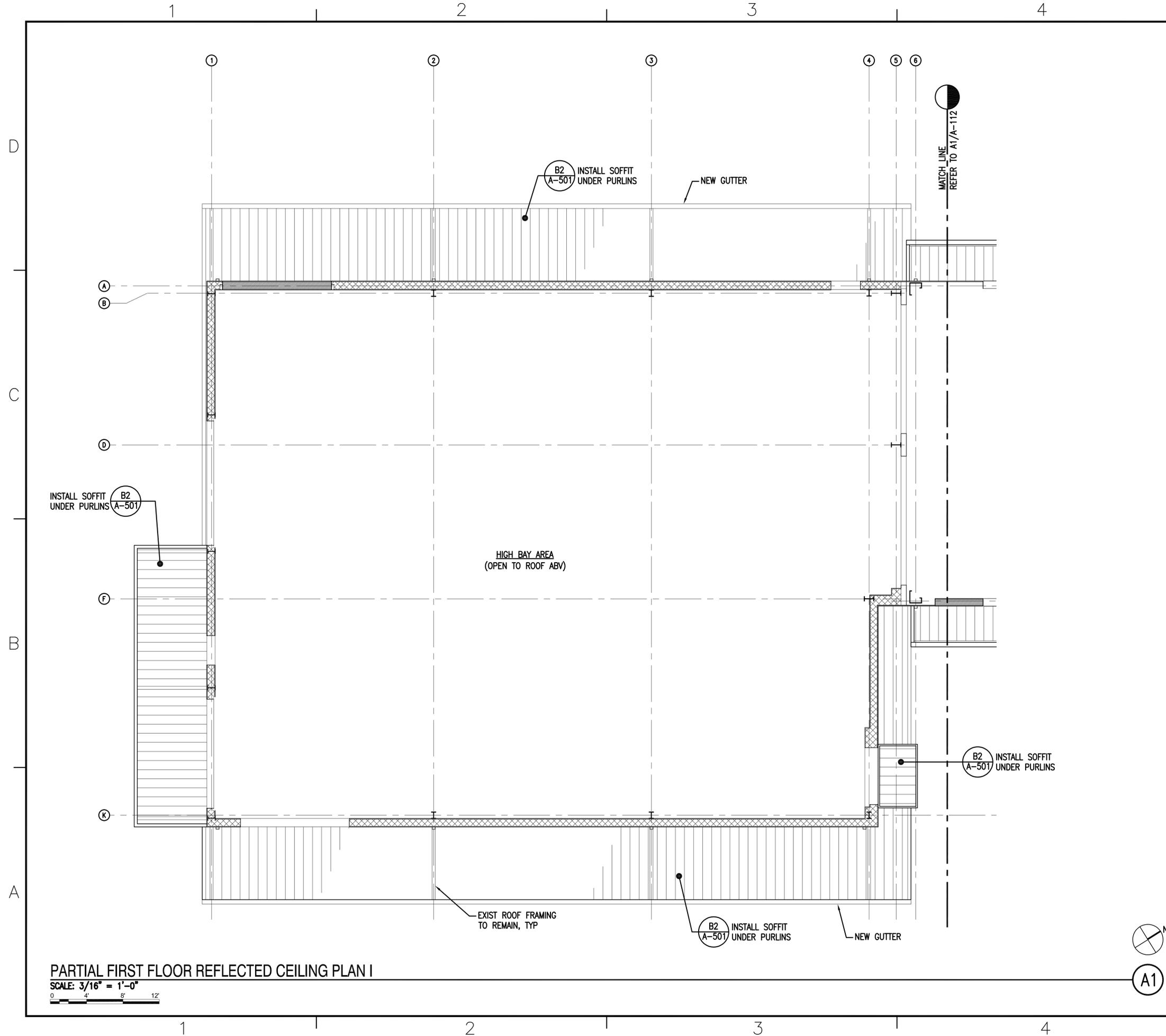
FEDERAL PROJECT NO. 15H00074

SHEET 22 OF 67

A-105

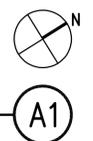
LEGEND

- EXIST WALL
- NEW WALL
- WALL WITH INSULATION
- (A1) PARTITION TYPE, SEE SHT A-531 AND A-532
- (101) DOOR. SEE SCHED ON SHT A-601 FOR WORK
- (101) WINDOW. SEE SCHED ON SHT A-601 FOR WORK

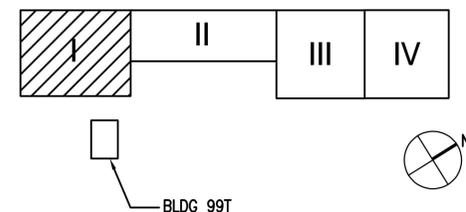


PARTIAL FIRST FLOOR REFLECTED CEILING PLAN I

SCALE: 3/16" = 1'-0"
 0 4 8 12



KEY PLAN



- I. HIGH BAY AREA
- II. FUTURE OPEN OFFICE AREA
- III. RESTROOMS
- IV. MAINTENANCE BAYS



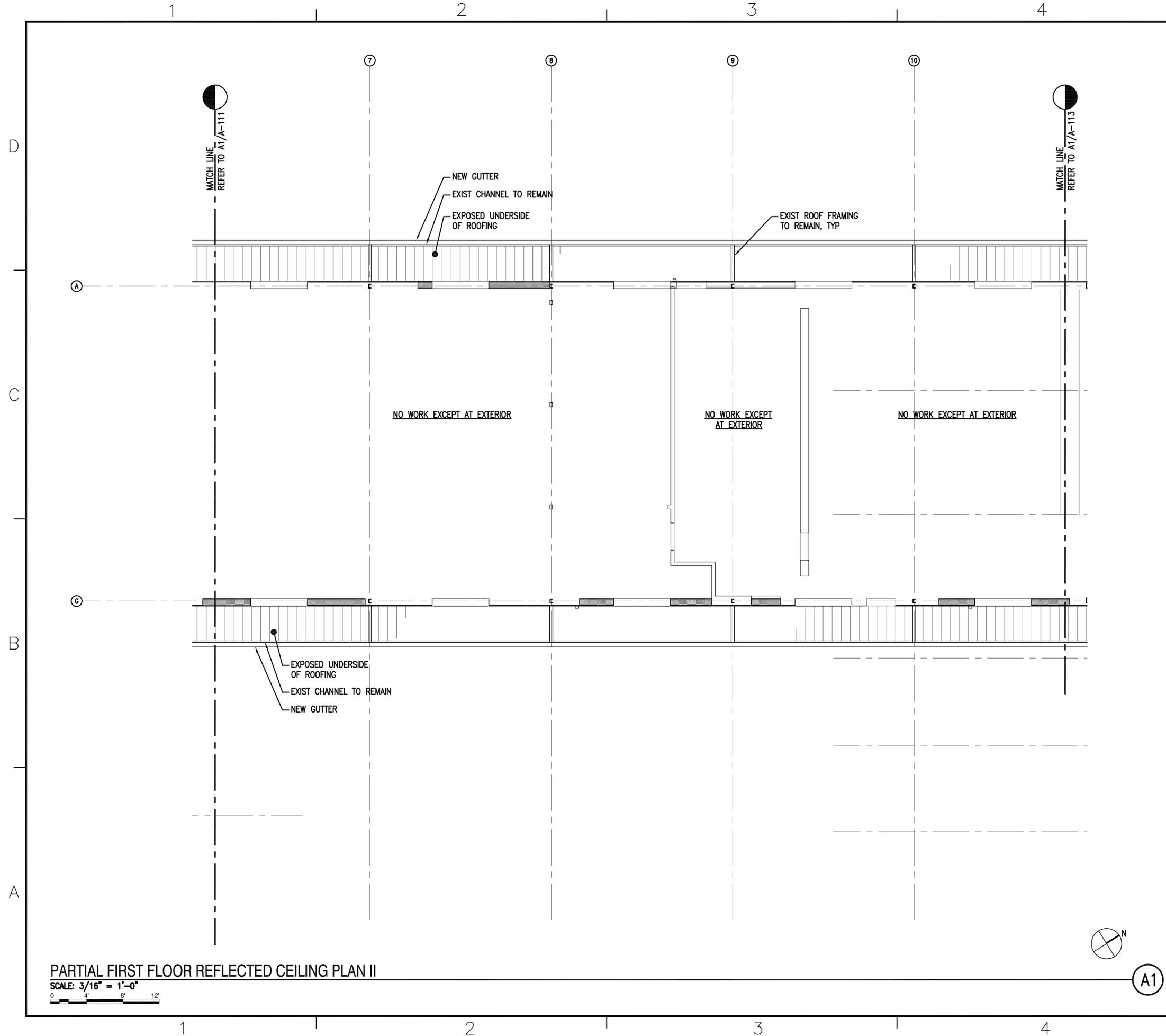
A/E INFO
 I CERTIFY THAT THIS DRAWING WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION.
 GLENN E. MASON
 LICENSED PROFESSIONAL ARCHITECT
 No. 4973
 HAWAII, U.S.A.
 EXPIRES APRIL 30, 2026 SEAL

DATE	DESCRIPTION

SUBMITTAL PHASE
 100% FINAL DESIGN
 SUBMITTAL DATE 03/22/2024
 DES GM DRW EB CHK GM

STATE OF HAWAII
 FACILITY MANAGEMENT OFFICE
 BUILDING 99T
 HAWAII ARMY NATIONAL GUARD
 DESIGN AND PROJECT MANAGEMENT BRANCH
 KALAELOA, HAWAII
KALAELOA B90T RESTORATION
 PARTIAL FIRST FLOOR REFLECTED CEILING PLAN I

SCALE: AS NOTED
 STATE JOB NO. CA-202209-C
 FEDERAL PROJECT NO. 15H00074
 SHEET 23 OF 67
A-111



A/E INFO

I CERTIFY THAT THIS DRAWING WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION.

GLENN E. MASON
LICENSED PROFESSIONAL ARCHITECT
No. 4973
HAWAII, U.S.A.
EXPIRES APRIL 30, 2026 SEAL

SYN	DESCRIPTION	DATE	APPR

SUBMITTAL PHASE
100% FINAL DESIGN
SUBMITTAL DATE 03/22/2024

DES	GM	DRW	EB	CHK	GM

STATE OF HAWAII
FACILITY MANAGEMENT OFFICE
BUILDING 99T

DEPARTMENT OF DEFENSE
DESIGN AND PROJECT MANAGEMENT BRANCH
KALAELOA, HAWAII

HAWAII ARMY NATIONAL GUARD
KALAELOA B90T RESTORATION
PARTIAL FIRST FLOOR REFLECTED CEILING PLAN II

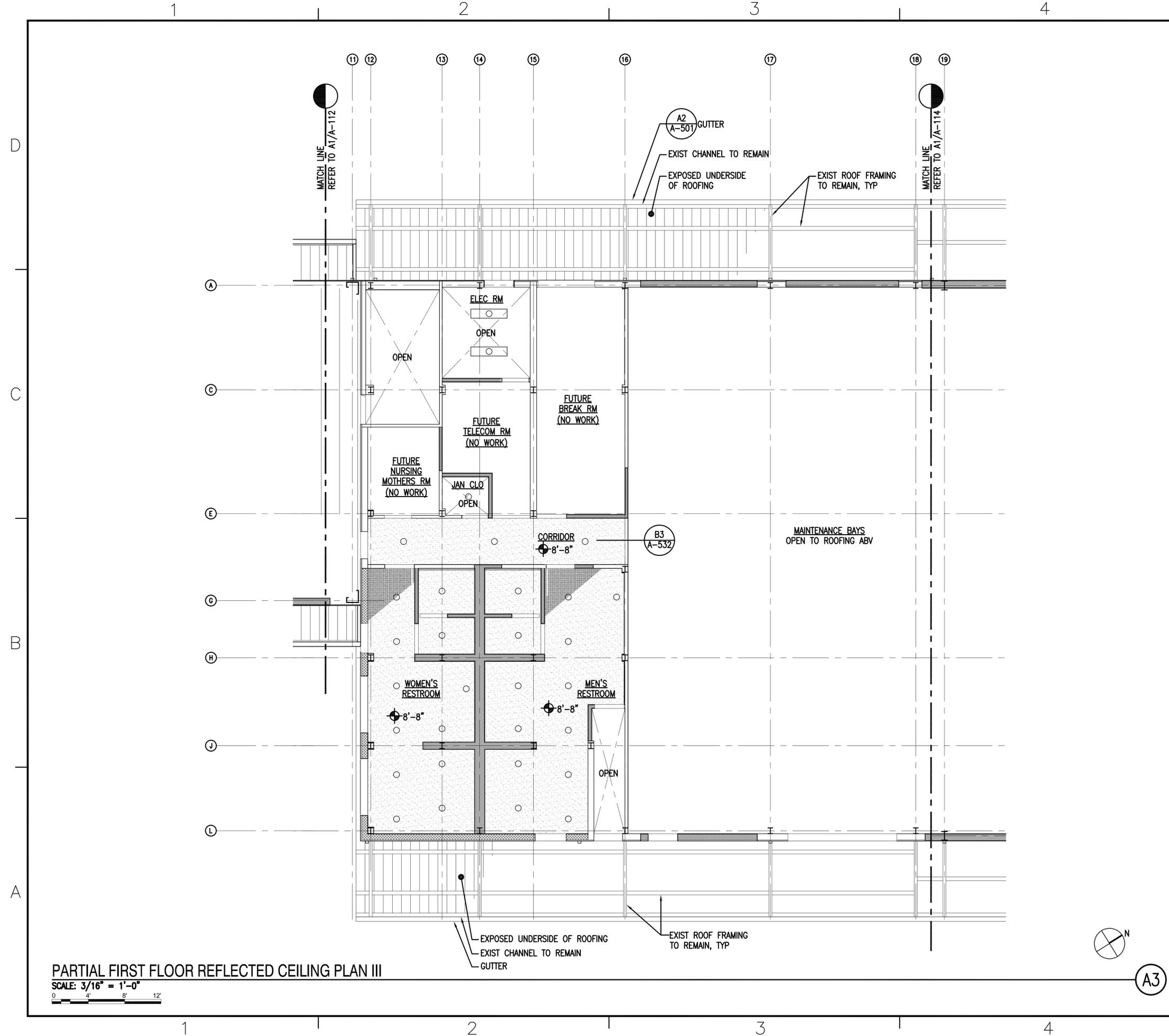
SCALE: AS NOTED

STATE JOB NO. CA-202209-C

FEDERAL PROJECT NO. 15H00074

SHEET 24 OF 67

A-112



PARTIAL FIRST FLOOR REFLECTED CEILING PLAN III
 SCALE: 3/16" = 1'-0"
 0 4 8 12

LEGEND

- PROVIDE NEW GYPBD CEILING
- CEILING HEIGHT

KEY PLAN

AS NOTED

I. HIGH BAY AREA
 II. FUTURE OPEN OFFICE AREA
 III. RESTROOMS
 IV. MAINTENANCE BAYS

HAWAII ARMY NATIONAL GUARD
 DESIGN AND PROJECT MANAGEMENT BRANCH
 KALAELOA, HAWAII

KALAELOA B90T RESTORATION
 PARTIAL FIRST FLOOR REFLECTED CEILING PLAN III

DES	GM	DRW	EB	CHK	GM

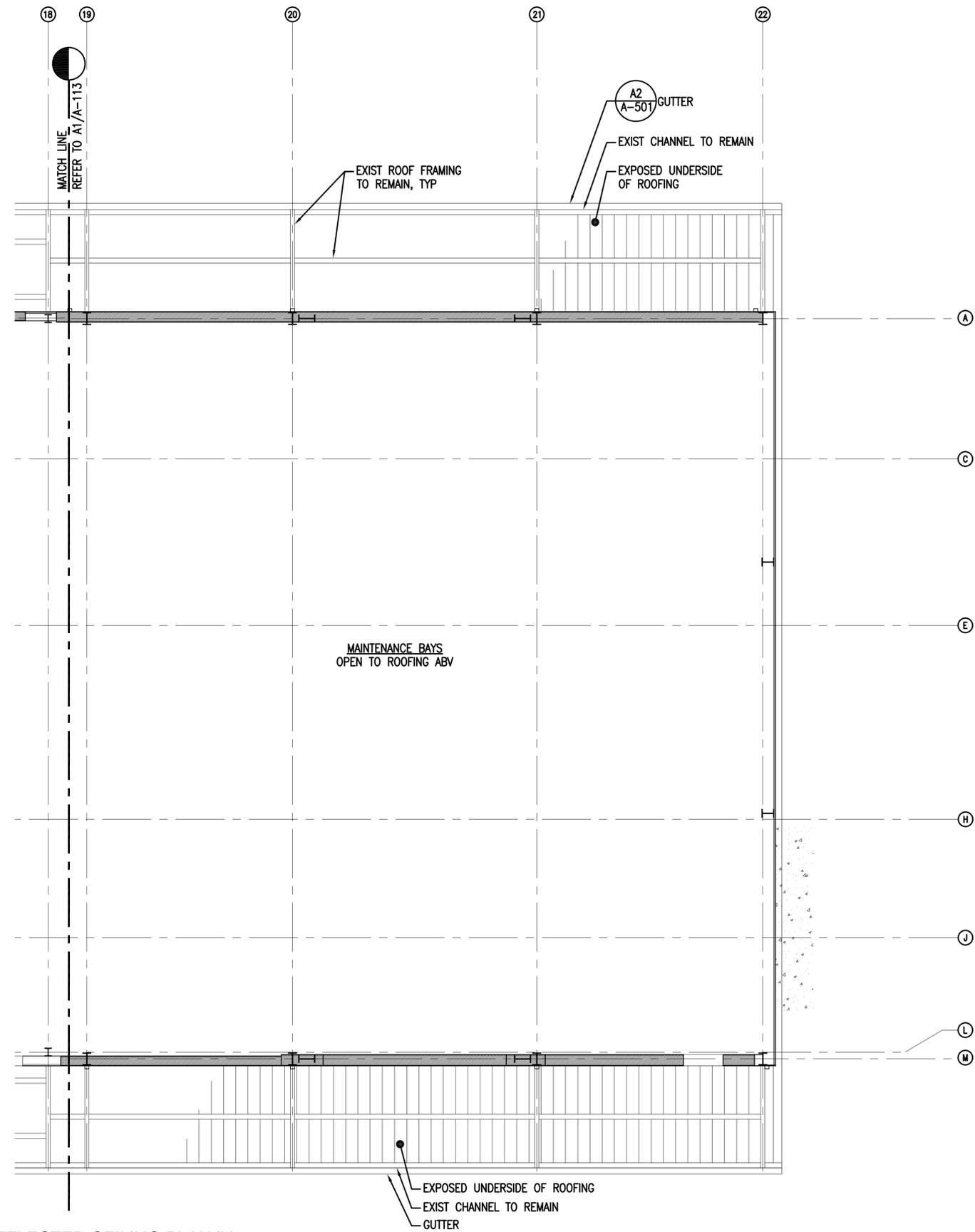
DEPARTMENT OF DEFENSE
 HAWAII ARMY NATIONAL GUARD
 FACILITY MANAGEMENT OFFICE
 BUILDING 90T

STATE OF HAWAII
 FACILITY MANAGEMENT OFFICE
 BUILDING 90T

SCALE: **AS NOTED**

STATE JOB NO. CA-202209-C
 FEDERAL PROJECT NO. 15H00074
 SHEET 25 OF 67

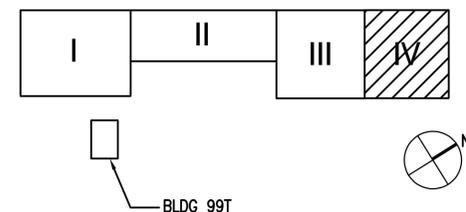
A-113



PARTIAL FIRST FLOOR REFLECTED CEILING PLAN IV

SCALE: 3/16" = 1'-0"
 0 4 8 12

KEY PLAN



- I. HIGH BAY AREA
- II. FUTURE OPEN OFFICE AREA
- III. RESTROOMS
- IV. MAINTENANCE BAYS



A/E INFO
 I CERTIFY THAT THIS DRAWING WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION.
 GLENN E. MASON
 LICENSED PROFESSIONAL ARCHITECT
 No. 4973
 HAWAII, U.S.A.
 EXPIRES APRIL 30, 2026 SEAL

SYN	DESCRIPTION	DATE	APPR

SUBMITTAL PHASE
 100% FINAL DESIGN
 SUBMITTAL DATE 03/22/2024
 DES GM DRW EB CHK GM

STATE OF HAWAII
 FACILITY MANAGEMENT OFFICE
 BUILDING 99T
 HAWAII ARMY NATIONAL GUARD
 DESIGN AND PROJECT MANAGEMENT BRANCH
 KALAELOA, HAWAII
KALAELOA B90T RESTORATION
 PARTIAL FIRST FLOOR REFLECTED CEILING PLAN IV

SCALE: AS NOTED
 STATE JOB NO. CA-202209-C
 FEDERAL PROJECT NO. 15H00074
 SHEET 26 OF 67
A-114

1

2

3

4

5

ROOF NOTES

1. REPLACE ALL ROOFING W/ NEW CORRUGATED METAL ROOFING
2. REPLACE ALL ROOF FLASHING
3. REPLACE ALL EXIST GUTTERS AND DS WITH NEW. PROVIDE NEW GUTTERS AND DS WHERE INDICATED
4. SEE MECH FOR VTR LOCATIONS, MECH PENETRATIONS, AND DETAILS.
5. ALL SKYLIGHTS ARE PART OF BID ALT 1.

KEY PLAN

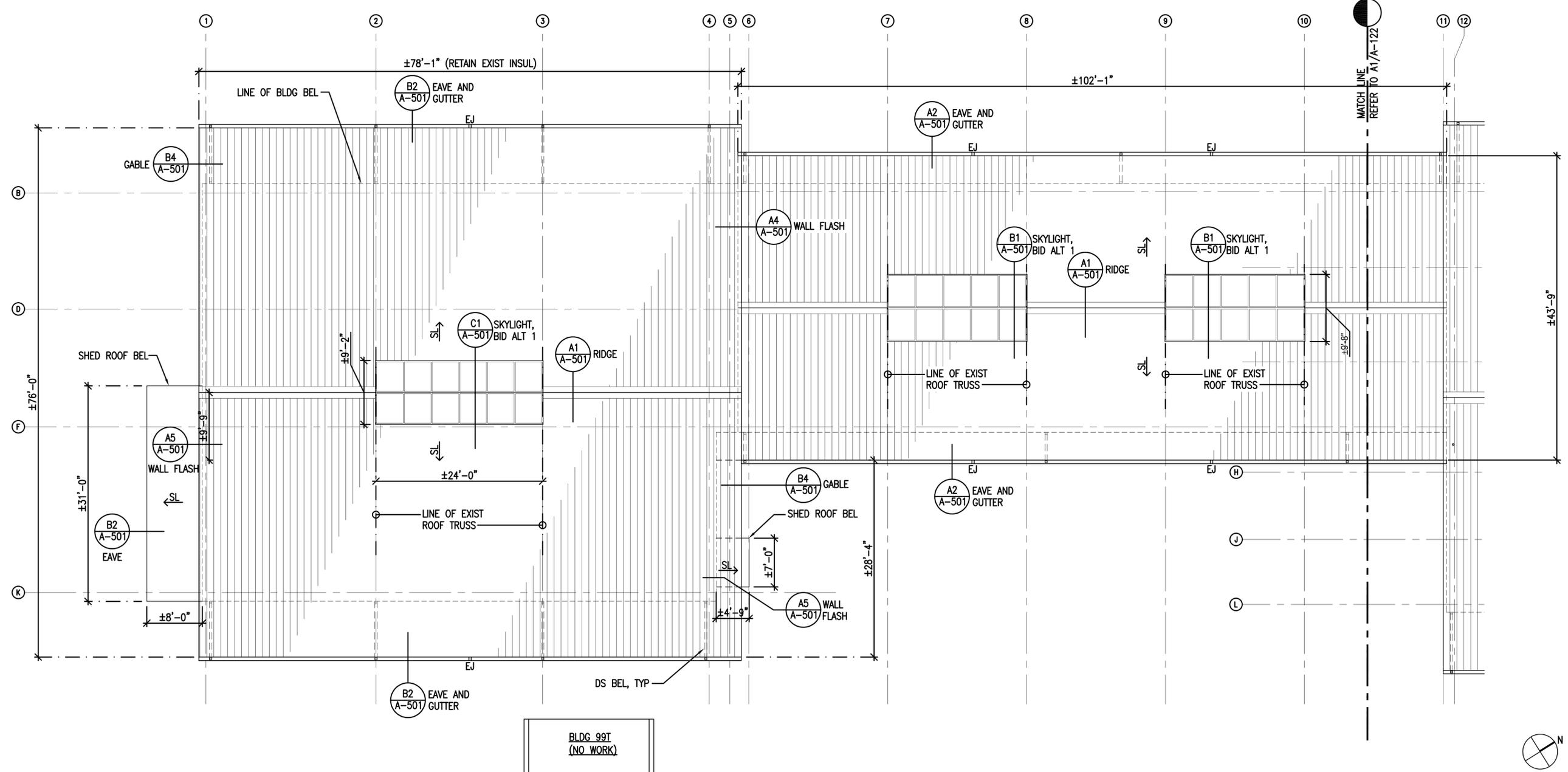


- I. HIGH BAY AREA
- II. FUTURE OPEN OFFICE AREA
- III. RESTROOMS
- IV. MAINTENANCE BAYS



A/E INFO
 I CERTIFY THAT THIS DRAWING WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION.
 GLENN E. MASON
 LICENSED PROFESSIONAL ARCHITECT
 No. 4973
 HAWAII, U.S.A.
 EXPIRES APRIL 30, 2026

ENTERPRISE STREET



BLDG 99T (NO WORK)

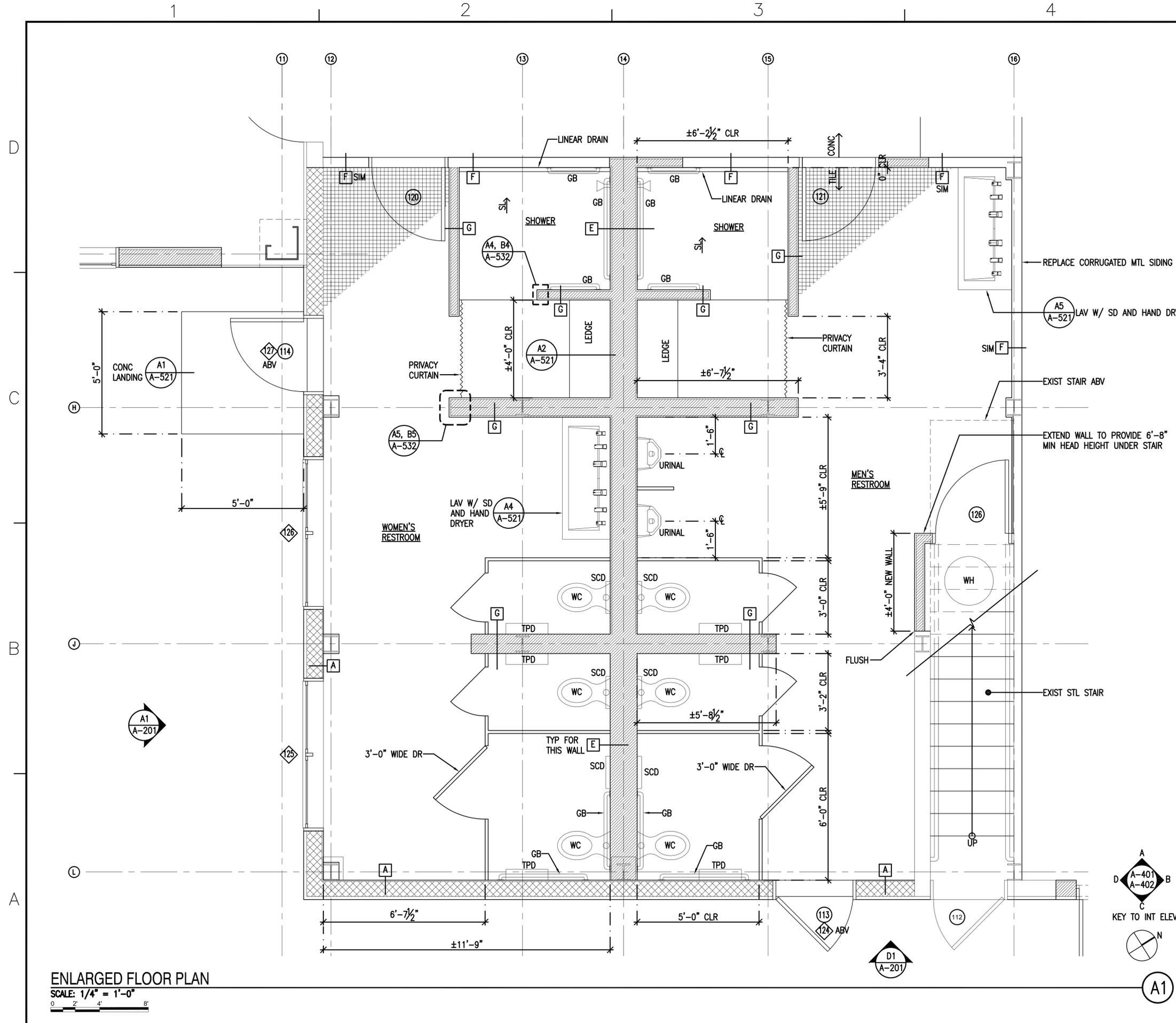
PARTIAL ROOF PLAN I - II
 SCALE: 3/32" = 1'-0"
 0 8' 16' 24'

SY#	DESCRIPTION	DATE	APPR.

SUBMITTAL PHASE
 100% FINAL DESIGN
 SUBMITTAL DATE 03/22/2024
 DES GM DRW EB CHK GM

DEPARTMENT OF DEFENSE
 HAWAII ARMY NATIONAL GUARD
 DESIGN AND PROJECT MANAGEMENT BRANCH
 KALAELOA, HAWAII
 KALAELOA B90T RESTORATION
 PARTIAL ROOF PLAN I - II
 BUILDING 90T

SCALE: AS NOTED
 STATE JOB NO. CA-202209-C
 FEDERAL PROJECT NO. 15H00074
 SHEET 27 OF 67
 A-121



ENLARGED FLOOR PLAN
 SCALE: 1/4" = 1'-0"
 0 2 4 8'

ENLARGED FLOOR PLAN NOTES

1. PROVIDE NEW PLUMBING FIXTURES, TYP
2. PROVIDE NEW TOILET PARTITIONS
3. PROVIDE NEW TOILET ACCESSORIES
4. SEE ROOM FINISH SCHEDULE ON SHT A-601 FOR FINISHES
5. PATCH EXIST CONC AS REQD AFTER PLUMB AND ELEC WORK, SEE C3/A-521



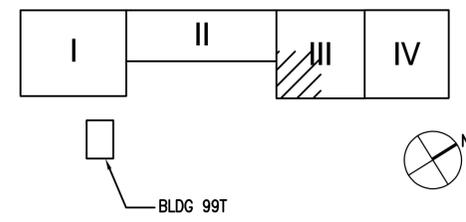
A/E INFO
 I CERTIFY THAT THIS DRAWING WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION.
 GLENN E. MASON
 LICENSED PROFESSIONAL ARCHITECT
 No. 4973
 HAWAII, U.S.A.
 EXPIRES APRIL 30, 2026

SYN	DESCRIPTION	DATE	APPR

LEGEND

- EXIST WALL
- NEW WALL
- WALL WITH NEW INSULATION
- PARTITION TYPE, SEE SHTS A-531 AND A-532
- DOOR. SEE SCHED ON SHT A-601 FOR WORK
- WINDOW. SEE SCHED ON SHT A-601 FOR WORK

KEY PLAN



- I. HIGH BAY AREA
- II. FUTURE OPEN OFFICE AREA
- III. RESTROOMS
- IV. MAINTENANCE BAYS

100% FINAL DESIGN

SUBMITAL DATE: 03/22/2024

DES: GM | DRW: EB | CHK: GM

DEPARTMENT OF DEFENSE
 DESIGN AND PROJECT MANAGEMENT BRANCH
 KALAELOA, HAWAII

HAWAII ARMY NATIONAL GUARD

KALAELOA B90T RESTORATION

ENLARGED FLOOR PLAN

STATE OF HAWAII
 FACILITY MANAGEMENT OFFICE
 BUILDING 90T

SCALE: AS NOTED

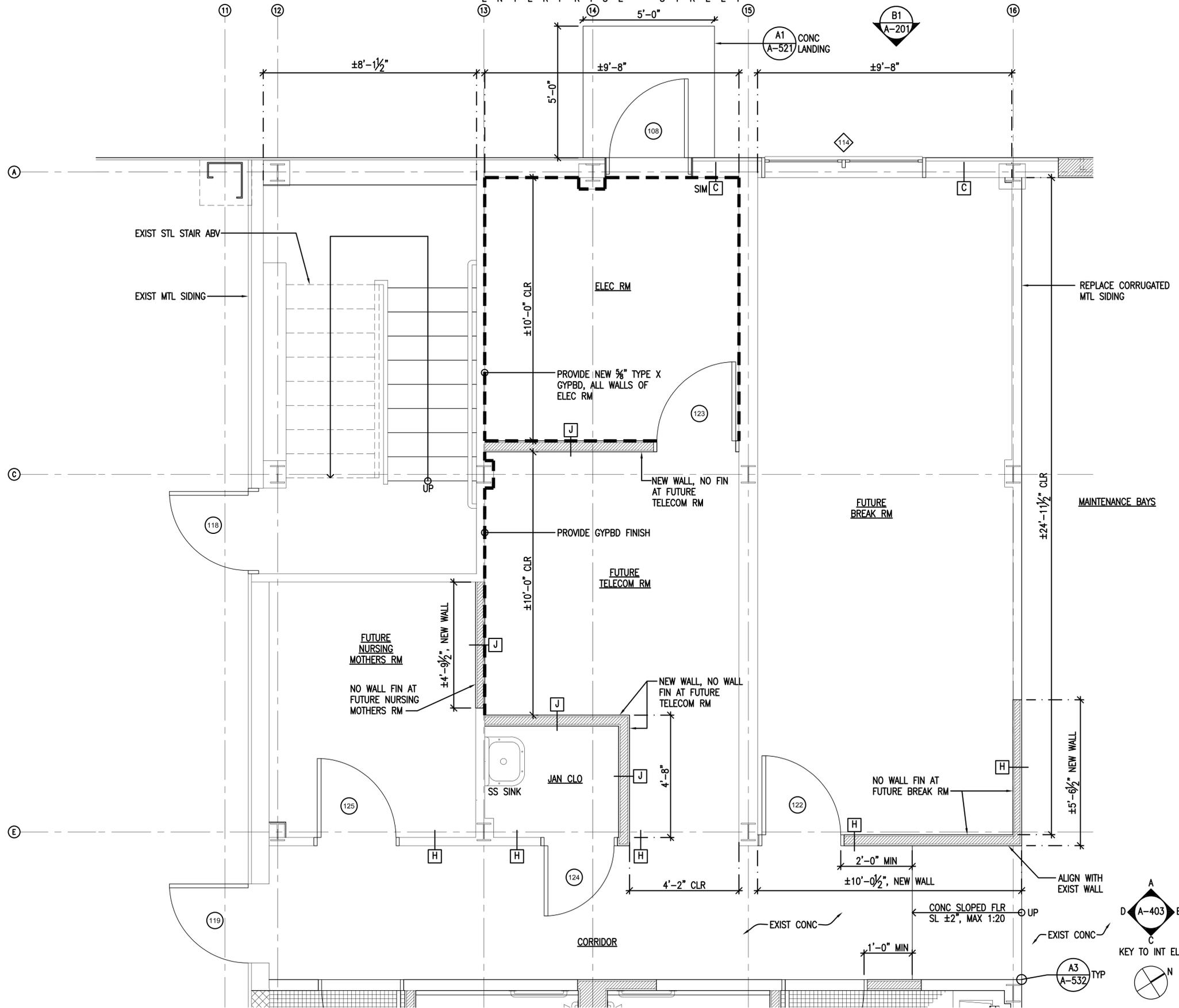
STATE JOB NO. CA-202209-C

FEDERAL PROJECT NO. 15H00074

SHEET 29 OF 67

A-131

ENTERPRISE STREET



ENLARGED FLOOR PLAN
 SCALE: 1/4" = 1'-0"
 0 2 4 8'

ENLARGED FLOOR PLAN NOTES

- SEE ROOM FINISH SCHEDULE ON SHT A-601 FOR FINISHES
- PATCH EXIST CONC AS REQD AFTER PLUMB AND ELEC WORK, SEE C3/A-521



I CERTIFY THAT THIS DRAWING WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION.

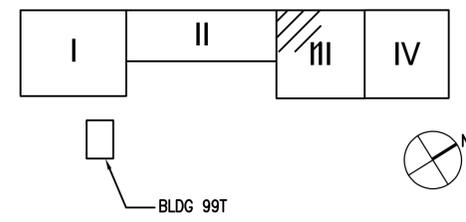
GLENN E. MASON
 LICENSED PROFESSIONAL ARCHITECT
 No. 4973
 HAWAII, U.S.A.
 EXPIRES APRIL 30, 2026

SYN	DESCRIPTION	DATE	APPR

LEGEND

- EXIST WALL
- NEW WALL
- WALL WITH NEW INSULATION
- A1 PARTITION TYPE, SEE SHTS A-531 AND A-532
- 101 DOOR. SEE SCHED ON SHT A-601 FOR WORK
- 101 WINDOW. SEE SCHED ON SHT A-601 FOR WORK

KEY PLAN



- I. HIGH BAY AREA
- II. FUTURE OPEN OFFICE AREA
- III. RESTROOMS
- IV. MAINTENANCE BAYS

100% FINAL DESIGN

03/22/2024

DES: GM DRAW: EB CHK: GM

DEPARTMENT OF DEFENSE
 DESIGN AND PROJECT MANAGEMENT BRANCH
 KALAELOA, HAWAII

HAWAII ARMY NATIONAL GUARD
 KALAELOA B90T RESTORATION
 ENLARGED FLOOR PLAN

AS NOTED

CA-202209-C

15H00074

SHEET 30 OF 67

A-132

1

2

3

4

5

D

C

B

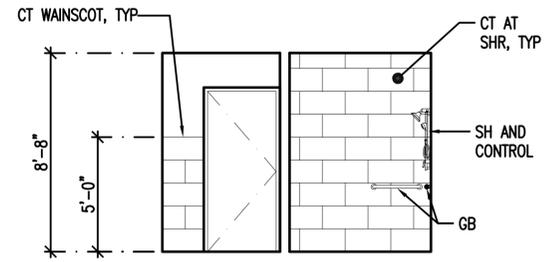
A

D

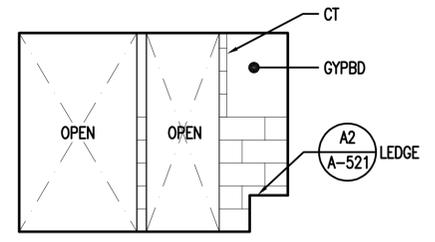
C

B

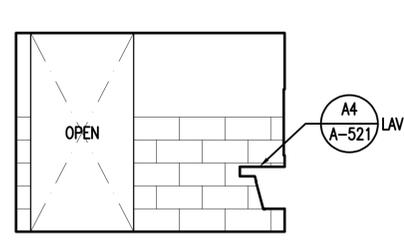
A



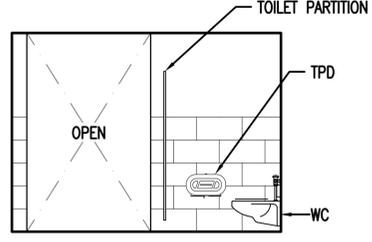
A



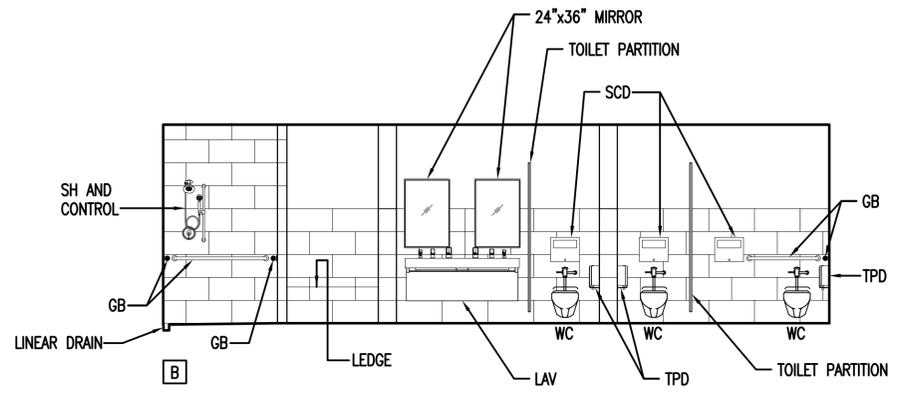
A1



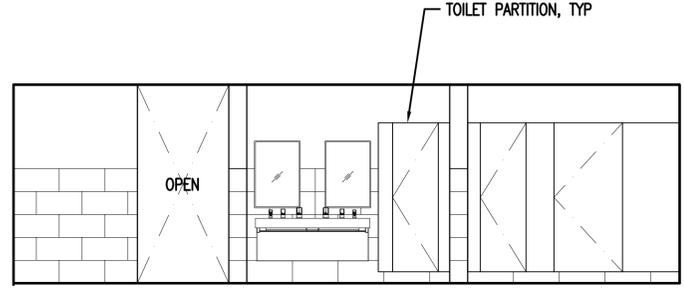
A2



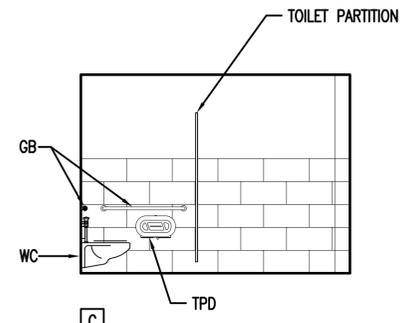
A3



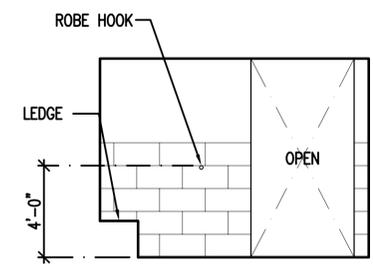
B



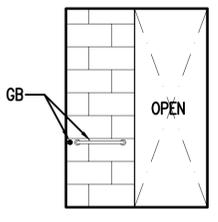
B1



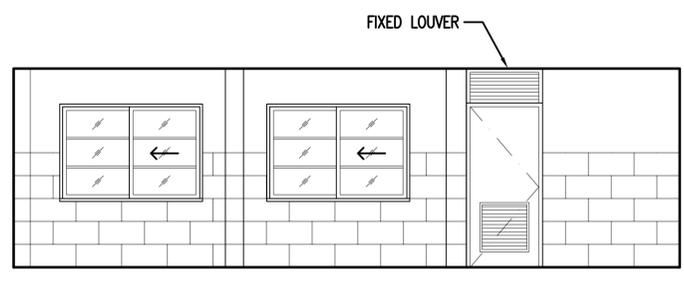
C



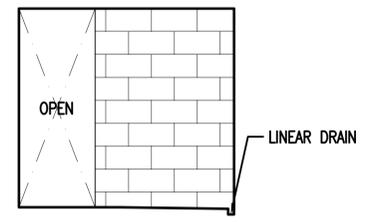
C1



C2



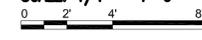
D



D1

WOMEN'S RESTROOM INTERIOR ELEVATIONS

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



A1



A/E INFO
I CERTIFY THAT THIS DRAWING WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION.
GLENN E. MASON
LICENSED PROFESSIONAL ARCHITECT
No. 4973
HAWAII, U.S.A.
EXPIRES APRIL 30, 2026

SY#	DESCRIPTION	DATE	APPR

SUBMITTAL PHASE
100% FINAL DESIGN
SUBMITTAL DATE
03/22/2024
DES GM
DRW EB
CHK GM

STATE OF HAWAII
FACILITY MANAGEMENT OFFICE
BUILDING 90T
HAWAII ARMY NATIONAL GUARD
DESIGN AND PROJECT MANAGEMENT BRANCH
KALAELOA, HAWAII
KALAELOA B90T RESTORATION
INTERIOR ELEVATIONS

SCALE: AS NOTED
STATE JOB NO. CA-202209-C
FEDERAL PROJECT NO. 15H00074
SHEET 32 OF 67
A-401

1

2

3

4

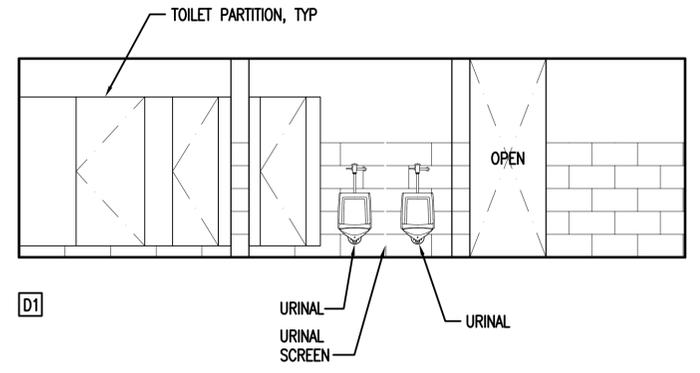
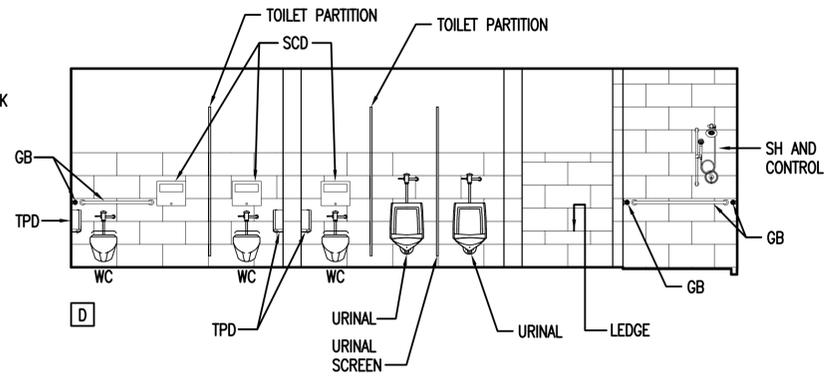
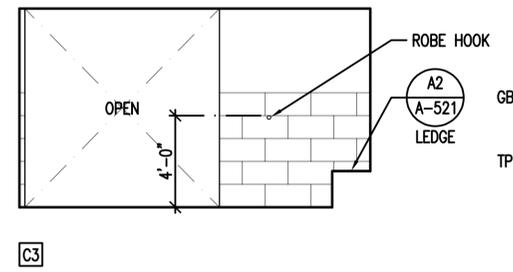
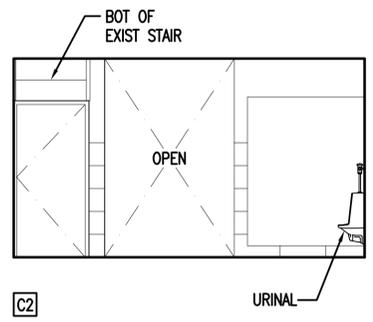
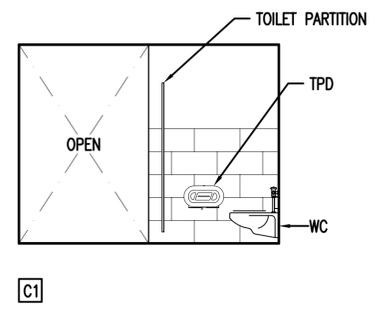
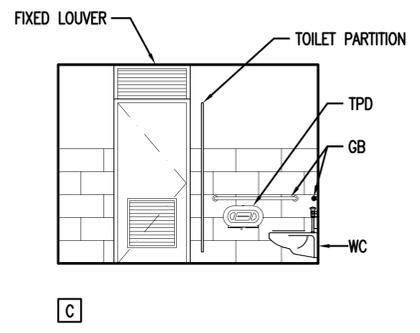
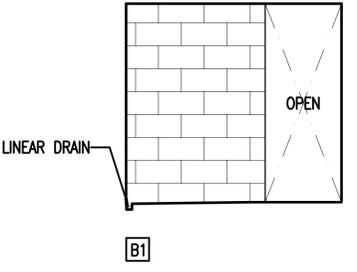
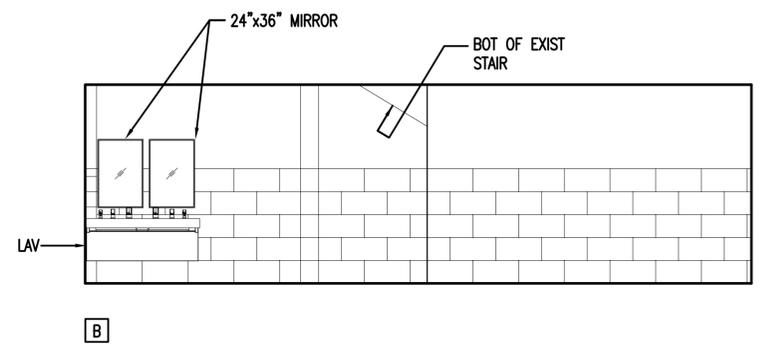
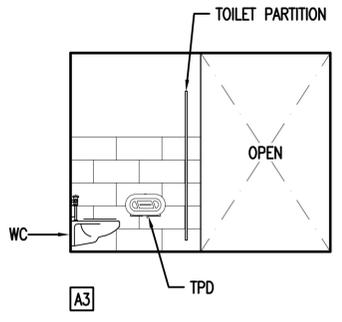
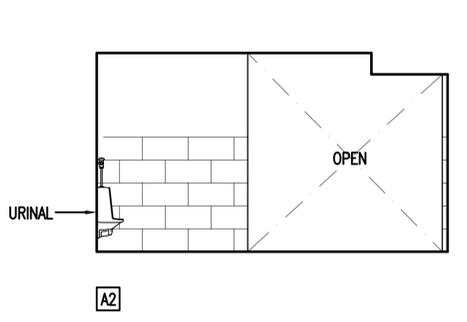
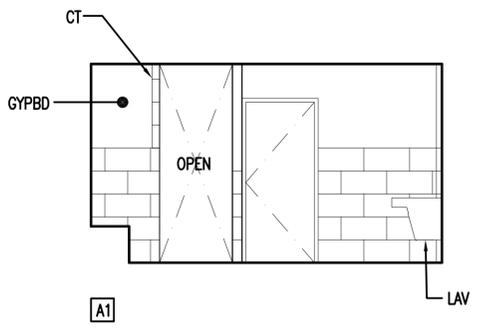
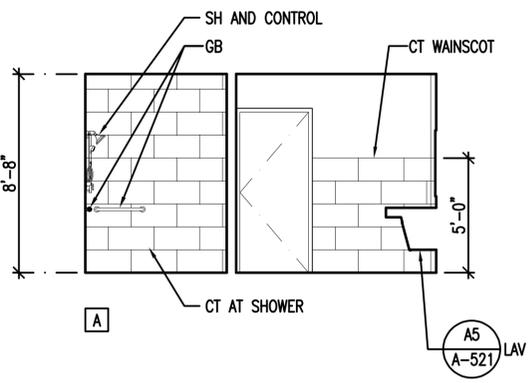
5

D

C

B

A



A/E INFO
 I CERTIFY THAT THIS DRAWING WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION.
 GLENN E. MASON
 LICENSED PROFESSIONAL ARCHITECT
 No. 4973
 HAWAII, U.S.A.
 EXPIRES APRIL 30, 2026

SYMBOL	DESCRIPTION	DATE	APPROVED

SUBMITTAL PHASE
 100% FINAL DESIGN
 SUBMITTAL DATE 03/22/2024
 DES GM DRW EB CHK GM

STATE OF HAWAII
 FACILITY MANAGEMENT OFFICE
 BUILDING 90T
 HAWAII ARMY NATIONAL GUARD
 DESIGN AND PROJECT MANAGEMENT BRANCH
 KALAELOA, HAWAII
 KALAELOA B90T RESTORATION
 INTERIOR ELEVATIONS

MEN'S RESTROOM INTERIOR ELEVATION
 SCALE: 1/4" = 1'-0"
 0 2 4 8'

A3

SCALE: AS NOTED
 STATE JOB NO. CA-202209-C
 FEDERAL PROJECT NO. 15H00074
 SHEET 33 OF 67
 A-402

1

2

3

4

5

D

C

B

A

1

2

3

4

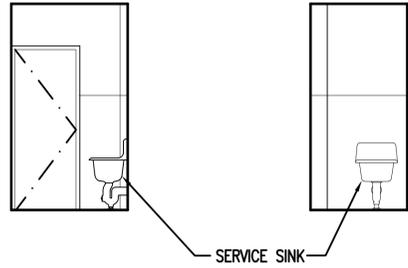
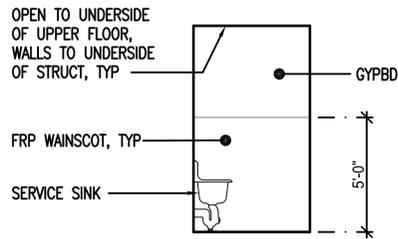
5

D

D

C

C



JAN CLO INTERIOR ELEVATIONS

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



A3



A/E INFO

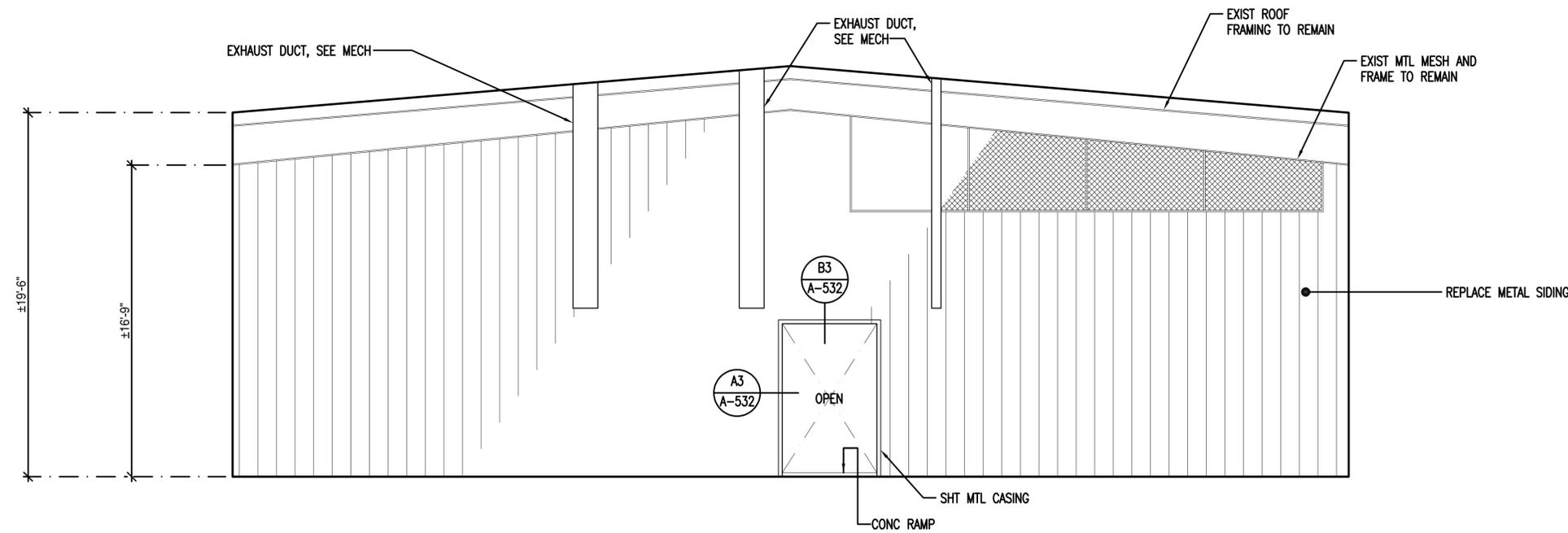
I CERTIFY THAT THIS DRAWING WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION.

GLENN E. MASON
LICENSED PROFESSIONAL ARCHITECT
No. 4973
HAWAII, U.S.A.

EXPIRES APRIL 30, 2026

DATE	DESCRIPTION

NOTES:
REMOVE EXIST MECH EQUIP, ELEC EQUIP, CONDUIT, AND BRACKETS TO ACCOMMODATE REPLACEMENT OF METAL SIDING.



MAINTENANCE BAY INTERIOR ELEVATION

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



A1

SUBMITTAL PHASE

100% FINAL DESIGN

SUBMITTAL DATE 03/22/2024

DES GM DRW EB CHK GM

STATE OF HAWAII
FACILITY MANAGEMENT OFFICE
BUILDING 90T

HAWAII ARMY NATIONAL GUARD
DESIGN AND PROJECT MANAGEMENT BRANCH
KALAELOA, HAWAII

KALAELOA B90T RESTORATION
INTERIOR ELEVATIONS

SCALE: AS NOTED

STATE JOB NO. CA-202209-C

FEDERAL PROJECT NO. 15H00074

SHEET 34 OF 67

A-403

1

2

3

4

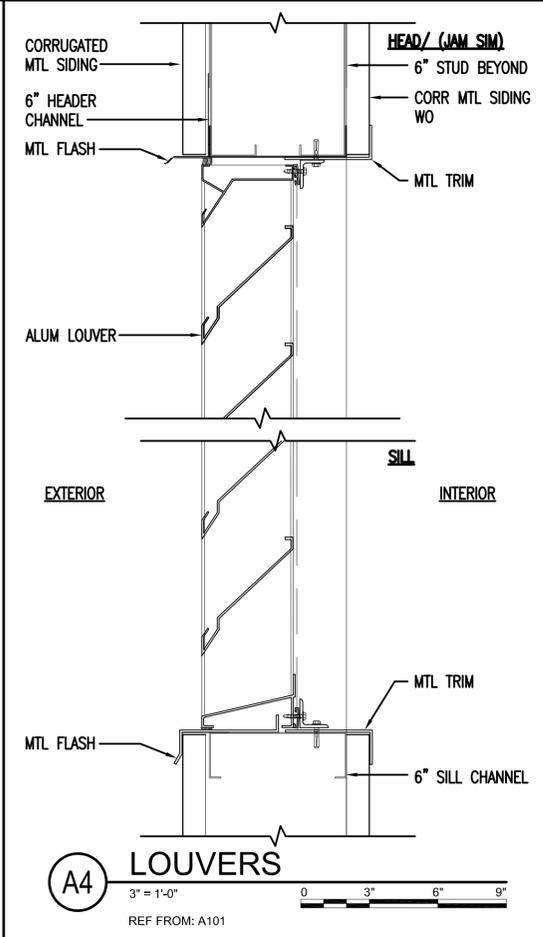
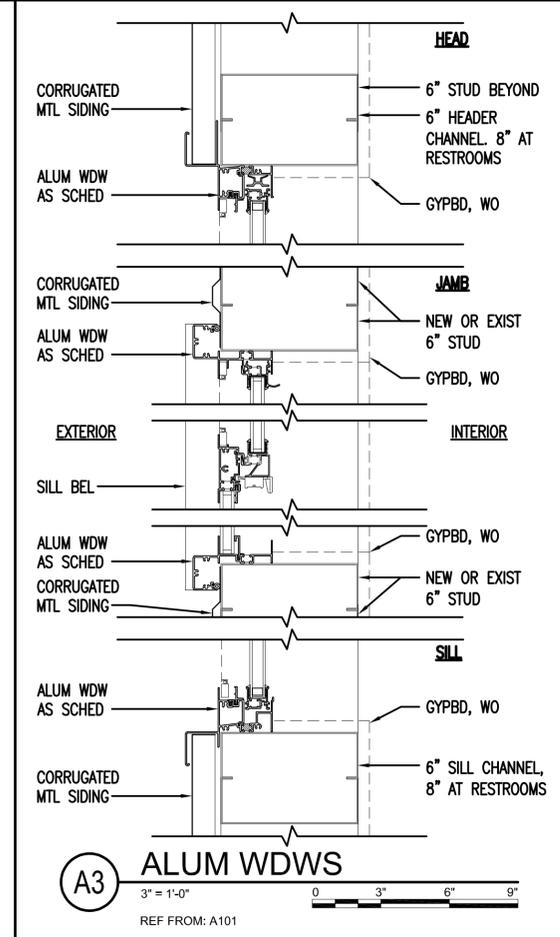
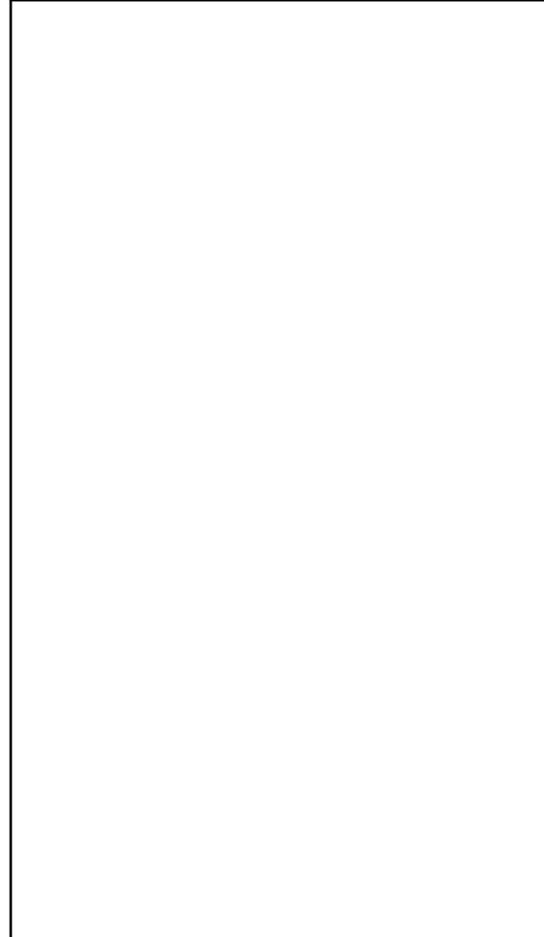
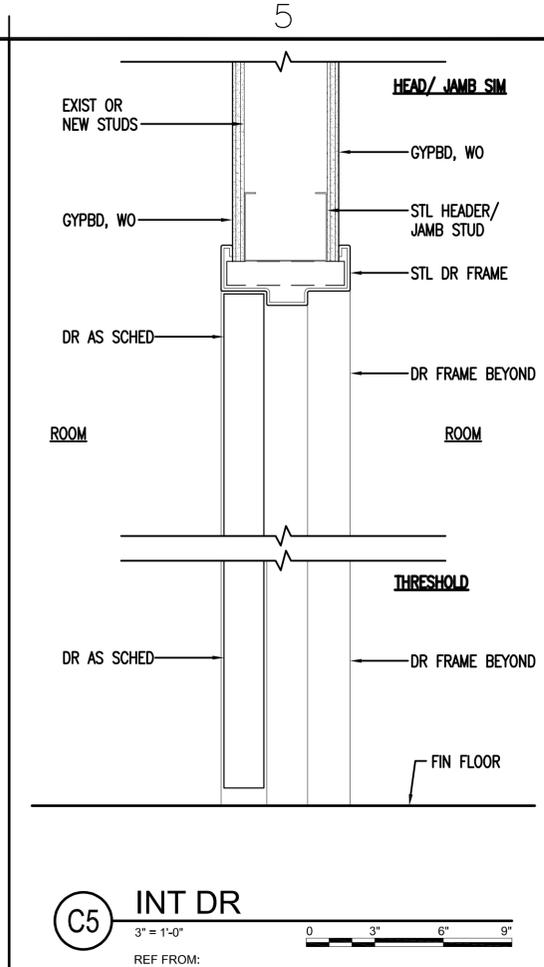
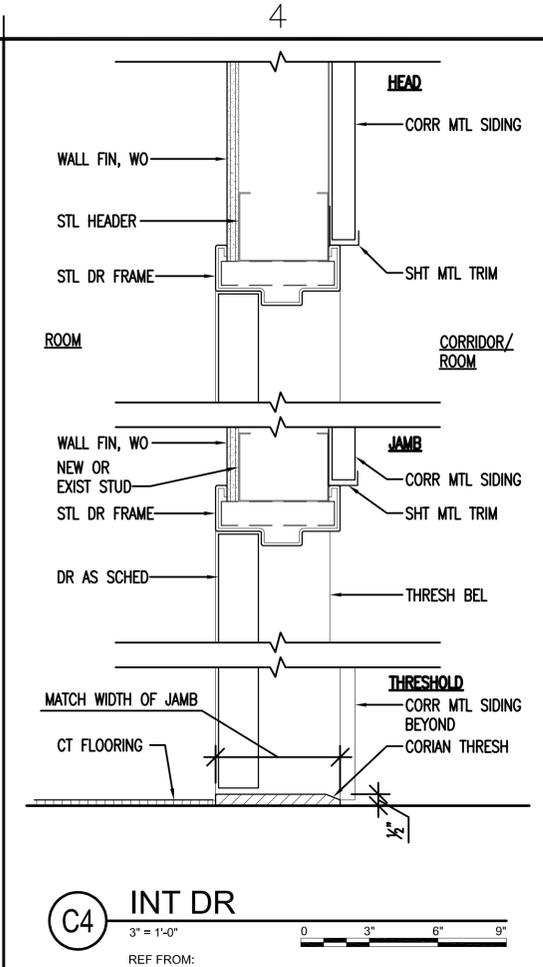
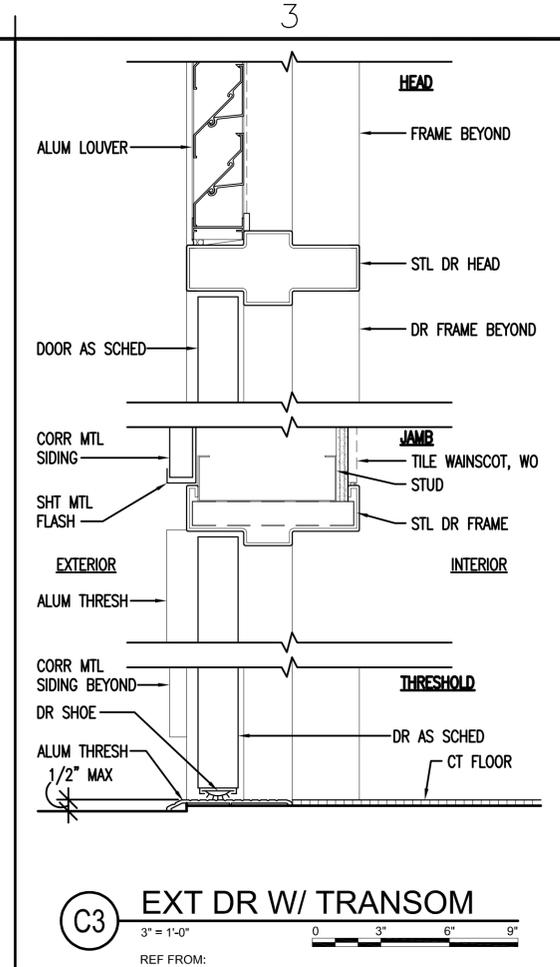
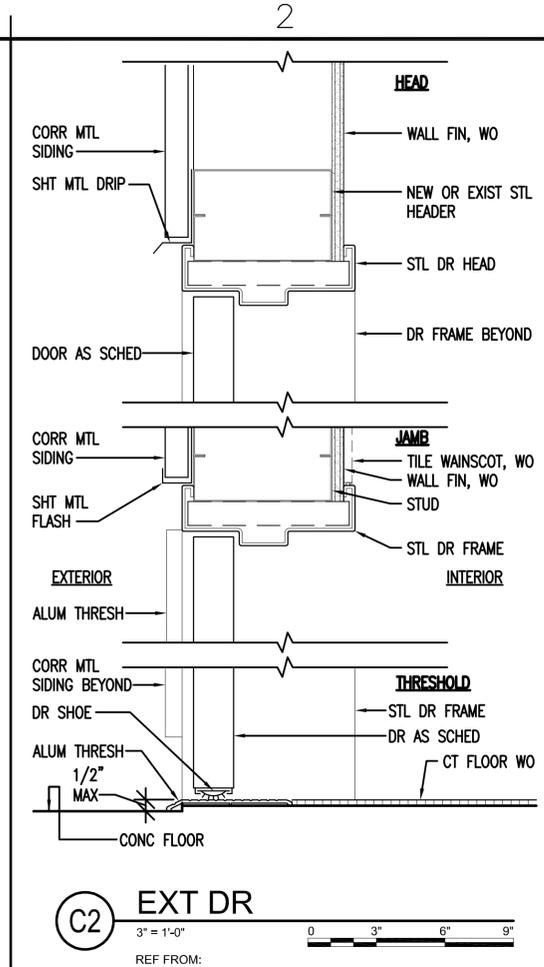
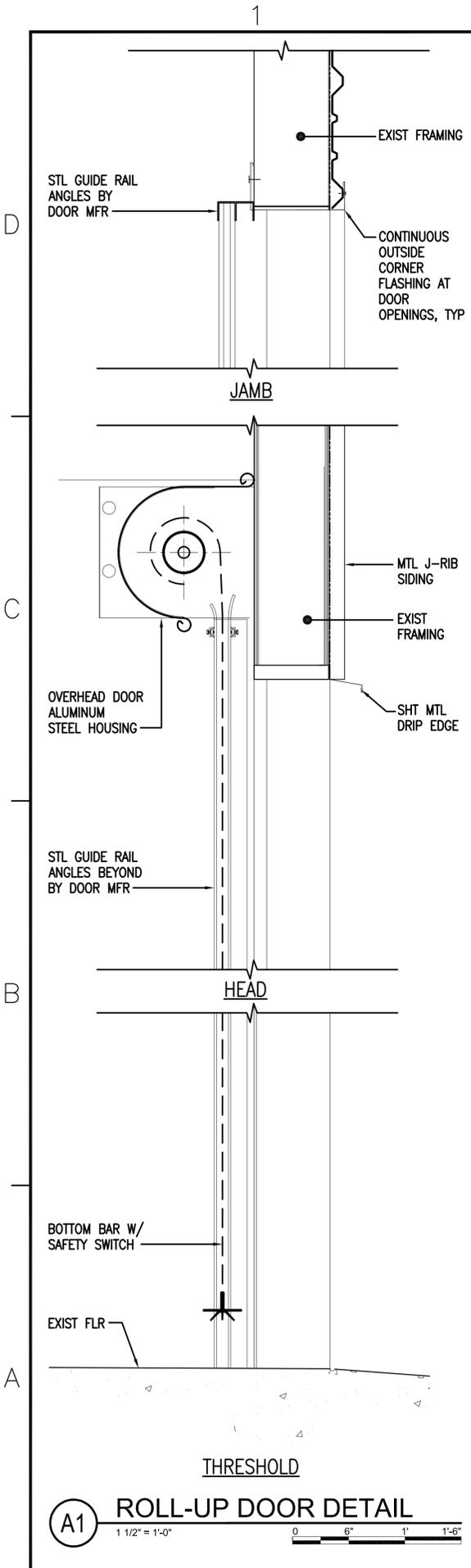
5

A

A

B

B



HAWAII ARMY NATIONAL GUARD

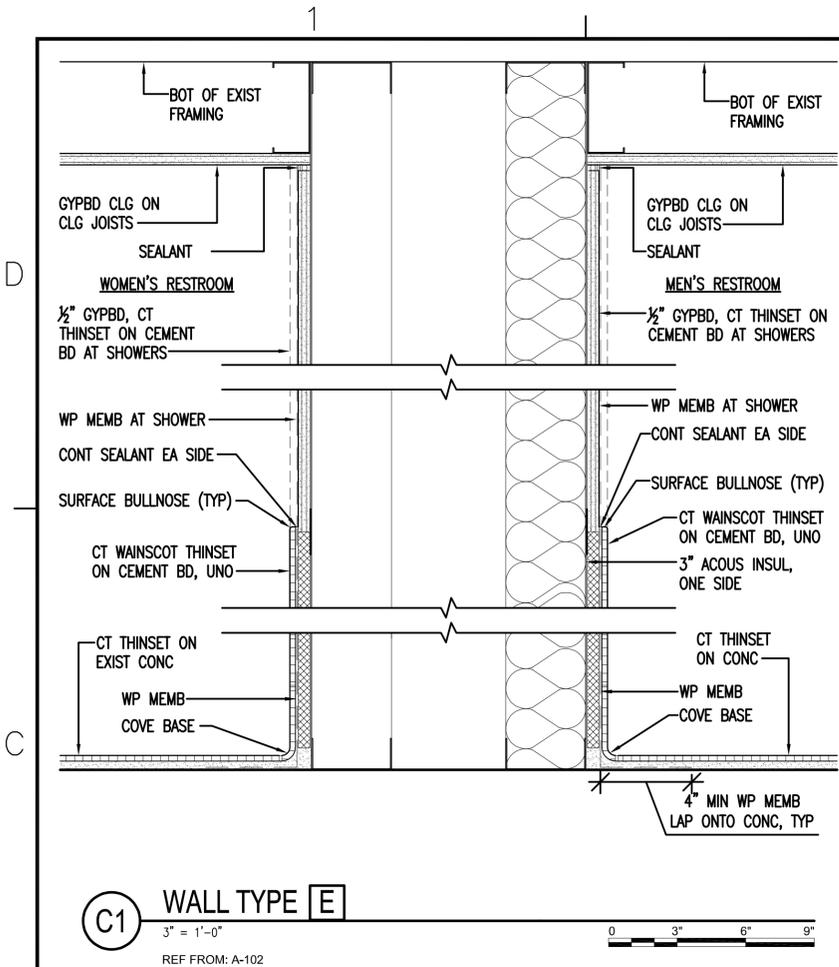
DESIGN AND PROJECT MANAGEMENT BRANCH
 KALAELOA, HAWAII

KALAELOA B90T RESTORATION

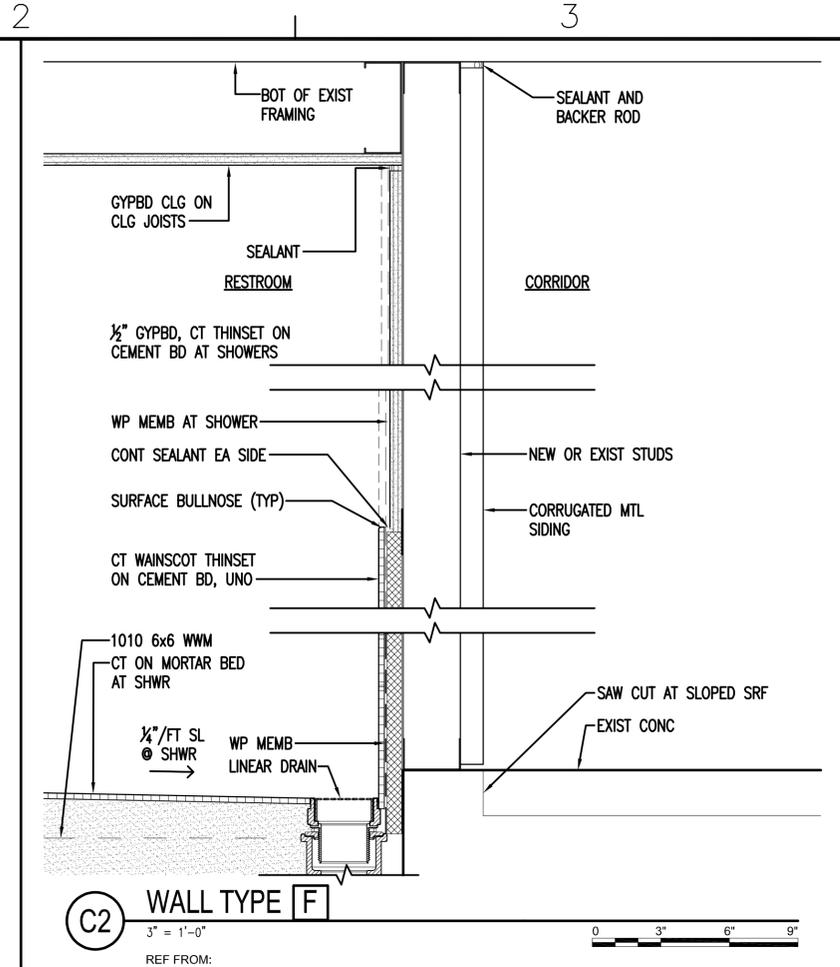
DOOR & WINDOW DETAILS

SUBMITTAL PHASE 100% FINAL DESIGN SUBMITTAL DATE 03/22/2024 DES: GM DRW: EB CHK: GM	STATE OF HAWAII FACILITY MANAGEMENT OFFICE BUILDING 90T SCALE: AS NOTED STATE JOB NO. CA-202209-C FEDERAL PROJECT NO. 15H00074 SHEET 36 OF 67
---	---

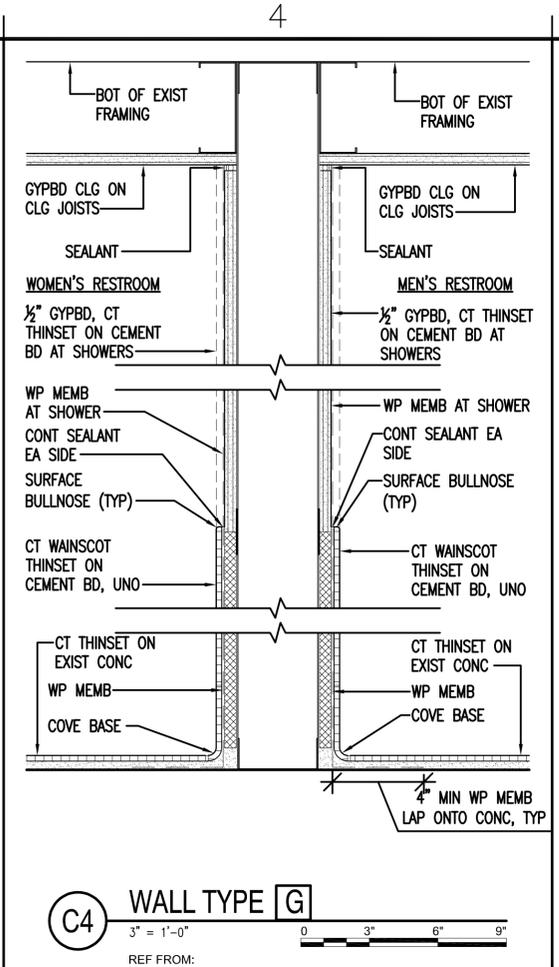
A-511



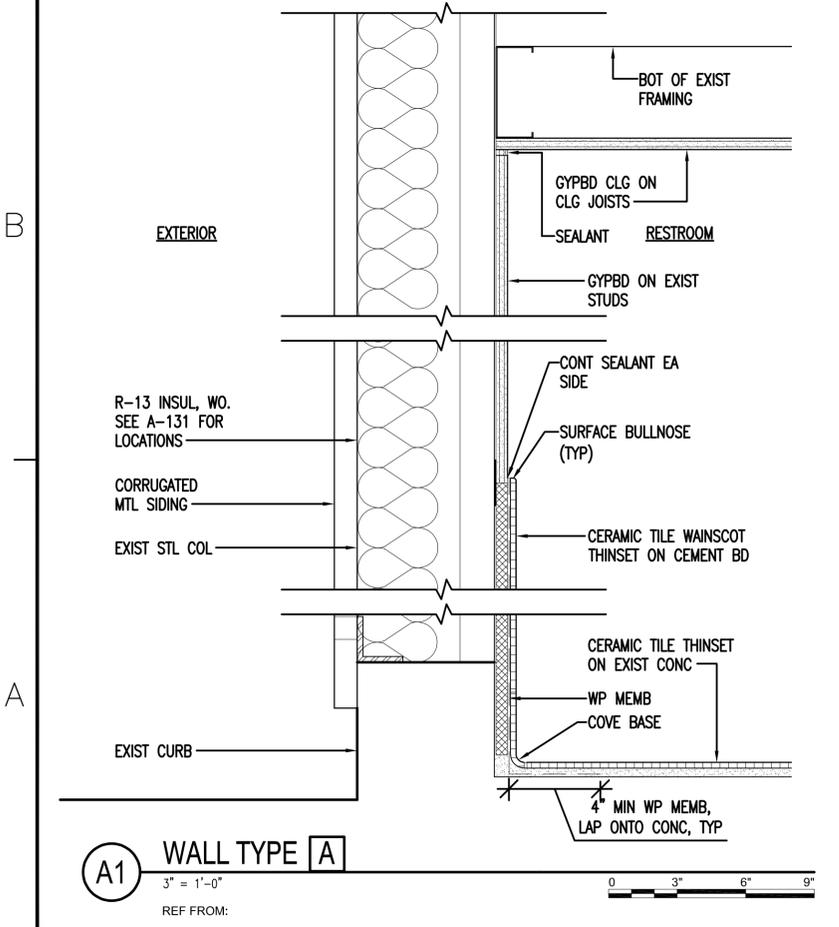
C1 WALL TYPE E
3" = 1'-0"
REF FROM: A-102



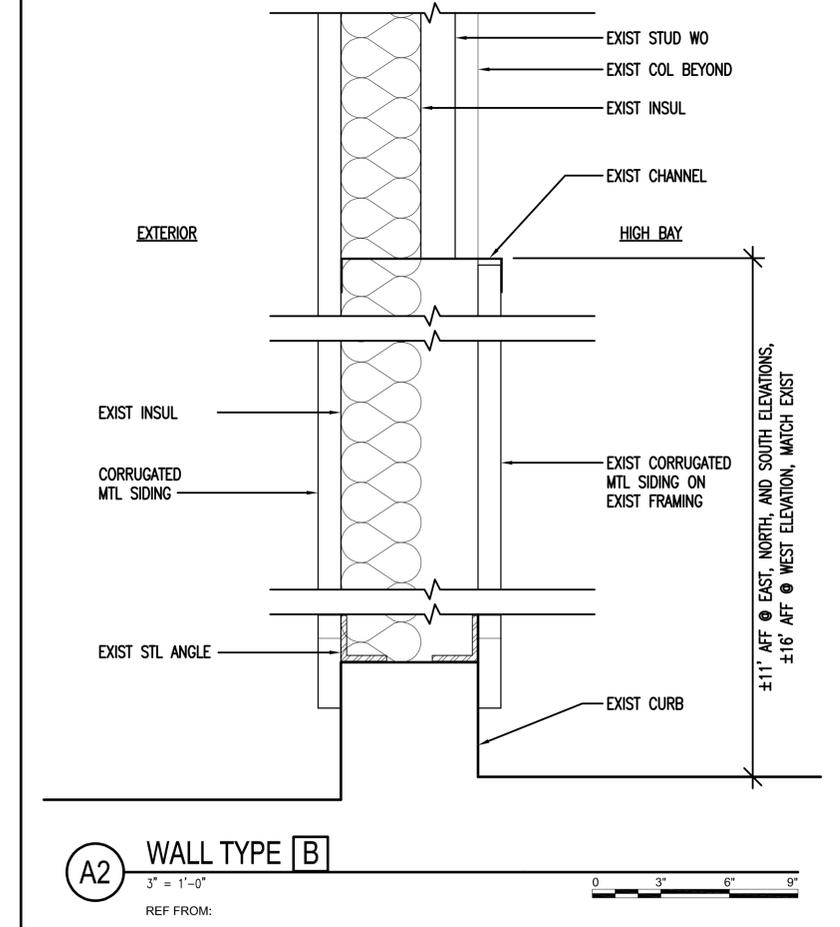
C2 WALL TYPE F
3" = 1'-0"
REF FROM:



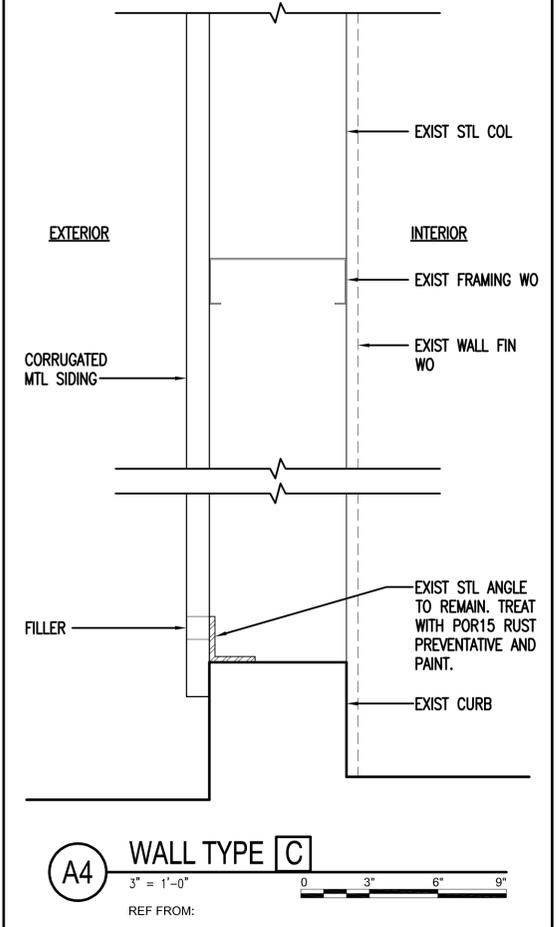
C4 WALL TYPE G
3" = 1'-0"
REF FROM:



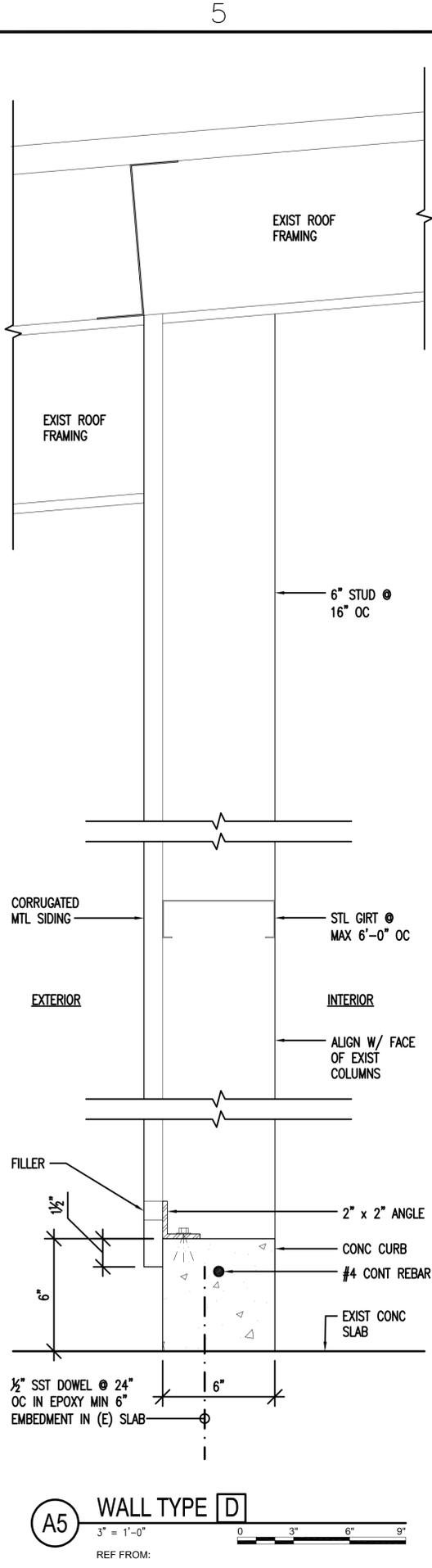
A1 WALL TYPE A
3" = 1'-0"
REF FROM:



A2 WALL TYPE B
3" = 1'-0"
REF FROM:



A4 WALL TYPE C
3" = 1'-0"
REF FROM:



A5 WALL TYPE D
3" = 1'-0"
REF FROM:



HAWAII ARMY NATIONAL GUARD

DESIGN AND PROJECT MANAGEMENT BRANCH
KALAELOA, HAWAII

KALAELOA B90T RESTORATION

BUILDING 90T

WALL SECTIONS

SUBMITTAL PHASE			
100% FINAL DESIGN			
SUBMITTAL DATE: 03/22/2024			
DES	GM	DRW	CHK
			GM
STATE OF HAWAII FACILITY MANAGEMENT OFFICE			
SCALE: AS NOTED			
STATE JOB NO. CA-202209-C			
FEDERAL PROJECT NO. 15H00074			
SHEET 38 OF 67			
A-531			

ROOM FINISH SCHEDULE								REMARKS
ROOM NAME	FLOOR	BASE	WALL A	WALL B	WALL C	WALL D	CEILING	
HIGH BAY AREA	CONC	---	EXIST, MTL	EXIST	EXIST	EXIST	---	
STAIR 1	CONC	---	GYP	---	---	---	EXIST	
FUTURE NURING MOTHERS RM	CONC	---	EXIST	EXIST,	EXIST	EXIST	---	
ELEC RM	CONC	RESIL	GYP	GYP	GYP	GYP	---	PROVIDE BASE AT WALLS W/ NEW FIN ONLY
TELECOM RM	CONC	---	---	EXIST	---	GYP	---	SEE A1/A-132 FOR FIN LOCATION
JAN CLO	CONC	---	FRP	FRP	FRP	FRP	---	
FUTURE BREAK RM	CONC	---	---	EXIST,	---	EXIST	---	
CORRIDOR	CONC	---	MTL	GYP	MTL	MTL	GYP	
WOMEN'S RESTROOM	CT	---	CT	CT	CT	CT	GYP	
MEN'S RESTROOM	CT	---	CT	CT	CT	CT	GYP	
WH CLO	CONC	---	---	---	---	---	---	
STAIR 2	CONC	---	EXIST	EXIST	EXIST	EXIST	EXIST	
MAINTENANCE BAYS	CONC	---	---	---	---	---	---	
UPPER FLOOR	EXIST	---	EXIST	EXIST	EXIST	EXIST	---	

PAINT COLORS	
P1	GYPBD INTERIOR WALLS, BENJAMIN MOORE, COLOR: 968 "DUNE WHITE"
P2	GYPBD CEILINGS, BENJAMIN MOORE, COLOR: 869 "OXFORD WHITE"

MATERIAL KEY	
FLOOR	
CT	CERAMIC TILE
CONC	EXIST CONC
BASE	
RESIL 1	ALTRO RESILIENT BASE; MATCH FLOOR
---	NO FIN
WALL	
EXIST	EXIST FIN TO REMAIN
MTL	MTL J-RIB SIDING
GYP	1/2" GYPBD
CT 2	CT WAINSCOT, FULL HT CT AT SHOWERS
FRP	FRP WAINSCOT ON 1/2" CEM BD
---	NO FIN
CEILING	
GYP	GYPBD
---	NO FIN

MATERIAL SCHEDULE

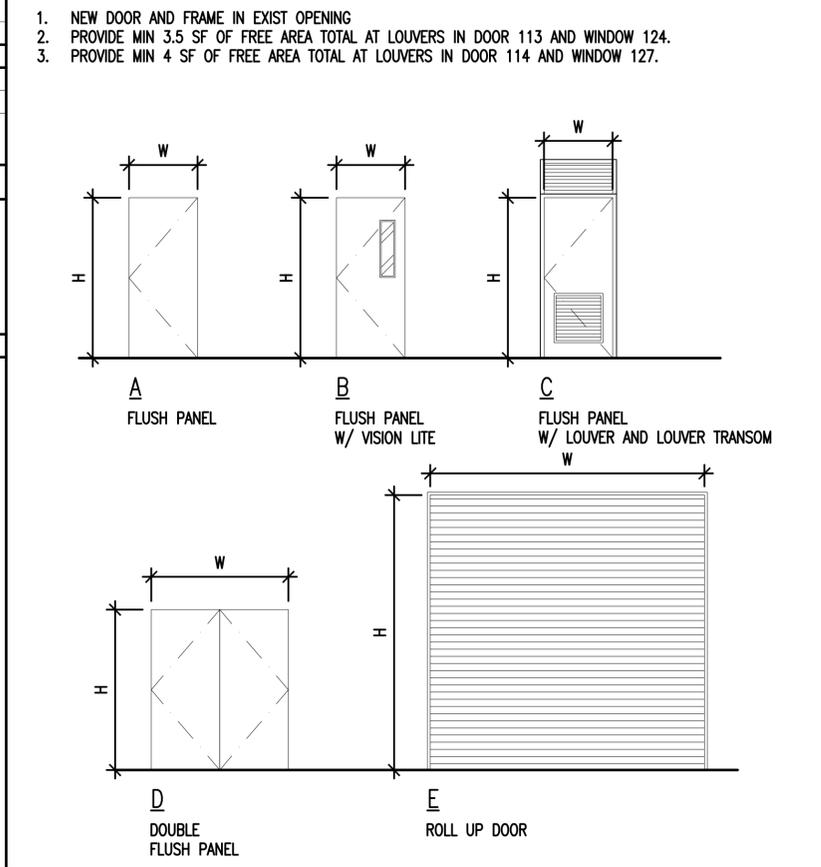
NOTE:
ALL PRODUCTS OR MATERIALS NOTED BELOW ARE INCLUDED AS QUALITY REFERENCES AND EQUIVALENT PRODUCTS ARE ACCEPTABLE. CONTRACTOR SHALL PROVIDE PRODUCT LITERATURE FOR ITEMS BELOW FOR REVIEW & APPROVAL BY THE STATE.

MATERIAL	PRODUCT
CERAMIC TILE (CT)	DALTILE, KEYSTONES, COLORBODY PORCELAIN MOSAICS, 1x1 MOSAIC, COLOR/ PATTERN: DK22 "ALMOND BLEND", FINISH: MATTE
CERAMIC TILE 2 (CT2)	CROSSVILLE, RETRO ACTIVE 2.0, PORCELAIN STONE, 12x24, COLOR: RET04 "EMPRESS WHITE", FINISH: UNPOLISHED WITH CROSS-SHEEN (UPS)
RESILIENT BASE (RESIL 1)	BURKE, UNICOLOR, MERCER VINYL-TYPE TV, SIZE: 4", COLOR: 204 "GRAY (FOG)"
FIBERGLASS REINFORCED PLASTIC (FRP)	CRANE COMPOSITES, VARIETEX, TEXTURE: LINEN, COLOR: 1130 "COTTON WHITE"
SOLID SURFACE (SINK)	CORIAN, COLOR: "DOESKIN"
TOILET PARTITIONS	BRADLEY, BRADMAR SOLID PLASTIC, COLOR: M227 "TOFFEE"

DOOR SCHEDULE										
DOOR NO.	DOOR SIZE (W X H) VIF	TYPE	THICKNESS	DETAILS				HDWE SET	SHEET #	REMARKS
				HEAD	JAMB	THRESH	---			
101	3'-0" X 7'-0"	A	1 3/4"	C2	C2	C2	03	A-511		
102	±6'-0" X ±7'-0"	D	---	---	---	---	02	---	EXIST DR AND FRAME TO REMAIN	
103	±12'-0" X ±12'-0"	E	---	---	---	---	01	---	EXIST DR AND FRAME TO REMAIN	
104	±12'-0" X ±12'-0"	E	---	---	---	---	01	---	EXIST DR AND FRAME TO REMAIN	
105	±3'-0" X ±7'-0"	A	---	---	---	---	03	---	EXIST DR AND FRAME TO REMAIN	
106	±13'-8" X ±12'-0"	E	---	---	---	---	01	---	EXIST DR AND FRAME TO REMAIN	
107	±3'-0" X ±7'-0"	A	---	---	---	---	03	---	EXIST DR AND FRAME TO REMAIN	
108	3'-0" X 7'-0"	A	1 3/4"	C2	C2	C2	03	A-511		
109	3'-0" X 7'-0"	A	1 3/4"	C2	C2	C2	03	A-511		
110	±12'-0" X ±14'-0"	E	---	A1	A1	A1	08	A-511	SEE DOOR NOTE 1	
111	3'-0" X 7'-0"	A	1 3/4"	C2	C2	C2	03	A-511		
112	±3'-0" X ±7'-0"	A	---	---	---	---	03	---	EXIST DR AND FRAME TO REMAIN	
113	3'-0" X 7'-0"	C	1 3/4"	C3	C3	C3	04	A-511	SEE DOOR NOTE 2	
114	3'-0" X 7'-0"	C	1 3/4"	C3	C3	C3	04	A-511	SEE DOOR NOTE 3	
115	±3'-0" X ±7'-0"	A	---	---	---	---	01	---	EXIST DR AND FRAME TO REMAIN	
116	±14'-0" X ±10'-0"	E	---	---	---	---	01	---	EXIST DR AND FRAME TO REMAIN	
117	±14'-0" X ±10'-0"	E	---	---	---	---	01	---	EXIST DR AND FRAME TO REMAIN	
118	±3'-0" X ±7'-0"	A	1 3/4"	C4	C4	C5	06	A-511		
119	±3'-0" X ±7'-0"	B	1 3/4"	C4	C4	C5	06	A-511		
120	3'-0" X 7'-0"	A	1 3/4"	C4	C4	C4	05	A-511		
121	3'-0" X 7'-0"	A	1 3/4"	C4	C4	C4	05	A-511		
122	3'-0" X 7'-0"	B	1 3/4"	C4	C4	C5	05	A-511		
123	3'-0" X 7'-0"	A	1 3/4"	C5	C5	C5	05	A-511		
124	2'-8" X 7'-0"	A	1 3/4"	C4	C4	C5	06	A-511		
125	3'-0" X 7'-0"	A	1 3/4"	C4	C4	C5	06	A-511		
126	3'-0" X 7'-0"	A	1 3/4"	C5	C5	C5	07	A-511		
201	±3'-0" X ±7'-0"	A	---	---	---	---	01	---	EXIST DR AND FRAME TO REMAIN	
202	±3'-0" X ±7'-0"	A	---	---	---	---	01	---	EXIST DR AND FRAME TO REMAIN	

DOOR NOTES:

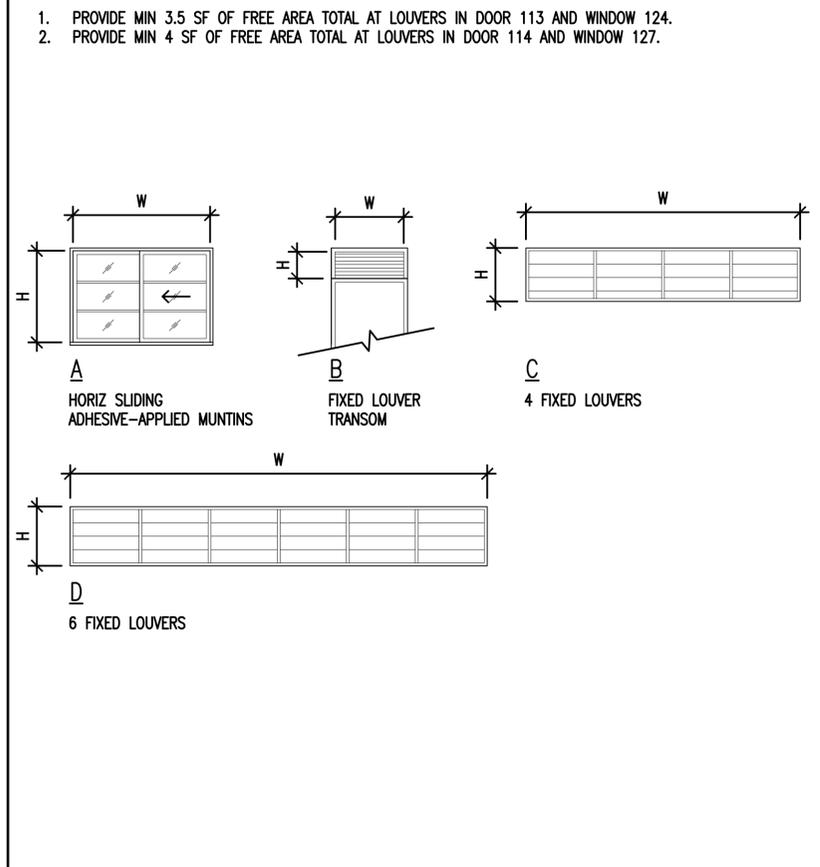
- NEW DOOR AND FRAME IN EXIST OPENING
- PROVIDE MIN 3.5 SF OF FREE AREA TOTAL AT LOUVERS IN DOOR 113 AND WINDOW 124.
- PROVIDE MIN 4 SF OF FREE AREA TOTAL AT LOUVERS IN DOOR 114 AND WINDOW 127.



WINDOW SCHEDULE										
WDW NO.	WINDOW SIZE (W X H) VIF	TYPE	DETAILS			SHEET #	REMARKS			
			HEAD	JAMB	SILL					
101	6'-0" X 4'-0"	A	A3	A3	A3	A-511				
102	6'-0" X 4'-0"	A	A3	A3	A3	A-511				
103	6'-0" X 4'-0"	A	A3	A3	A3	A-511				
104	6'-0" X 4'-0"	A	A3	A3	A3	A-511				
105	6'-0" X 4'-0"	A	A3	A3	A3	A-511				
106	±18'-0" X ±2'-4"	D	---	---	---	---	EXIST LOUVERS AND FRAME TO REMAIN			
107	±18'-0" X ±2'-4"	D	---	---	---	---	EXIST LOUVERS AND FRAME TO REMAIN			
108	±18'-0" X ±2'-4"	D	---	---	---	---	EXIST LOUVERS AND FRAME TO REMAIN			
109	6'-0" X 4'-0"	A	A3	A3	A3	A-511				
110	6'-0" X 4'-0"	A	A3	A3	A3	A-511				
111	6'-0" X 4'-0"	A	A3	A3	A3	A-511				
112	6'-0" X 4'-0"	A	A3	A3	A3	A-511				
113	6'-0" X 4'-0"	A	A3	A3	A3	A-511				
114	6'-0" X 4'-0"	A	A3	A3	A3	A-511				
115	12'-0" X 2'-4"	C	A4	A4	A4	A-511				
116	12'-0" X 2'-4"	C	A4	A4	A4	A-511				
117	12'-0" X 2'-4"	C	A4	A4	A4	A-511				
118	12'-0" X 2'-4"	C	A4	A4	A4	A-511				
119	12'-0" X 2'-4"	C	A4	A4	A4	A-511				
120	12'-0" X 2'-4"	C	A4	A4	A4	A-511				
121	12'-0" X 2'-4"	C	A4	A4	A4	A-511				
122	12'-0" X 2'-4"	C	A4	A4	A4	A-511				
123	12'-0" X 2'-4"	C	A4	A4	A4	A-511				
124	±3'-0" X ±1'-5"	B	A5	A5	A5	A-511	SEE WINDOW NOTE 1			
125	6'-0" X 4'-0"	A	A3	A3	A3	A-511	PROVIDE OBSCURE LAMINATED GLASS			
126	6'-0" X 4'-0"	A	A3	A3	A3	A-511	PROVIDE OBSCURE LAMINATED GLASS			
127	±3'-0" X ±1'-5"	B	A5	A5	A5	A-511	SEE WINDOW NOTE 2			
201	±21'-0" X ±3'-8"	---	---	---	---	---	EXIST METAL MESH AND FRAME TO REMAIN			
202	±18'-0" X ±3'-8"	---	---	---	---	---	EXIST METAL MESH AND FRAME TO REMAIN			
203	±21'-0" X ±3'-8"	---	---	---	---	---	EXIST METAL MESH AND FRAME TO REMAIN			
204	±21'-0" X ±3'-8"	---	---	---	---	---	EXIST METAL MESH AND FRAME TO REMAIN			
205	±18'-0" X ±3'-8"	---	---	---	---	---	EXIST METAL MESH AND FRAME TO REMAIN			
206	±21'-0" X ±3'-8"	---	---	---	---	---	EXIST METAL MESH AND FRAME TO REMAIN			

WINDOW NOTES:

- PROVIDE MIN 3.5 SF OF FREE AREA TOTAL AT LOUVERS IN DOOR 113 AND WINDOW 124.
- PROVIDE MIN 4 SF OF FREE AREA TOTAL AT LOUVERS IN DOOR 114 AND WINDOW 127.





HAWAII ARMY NATIONAL GUARD

DESIGN AND PROJECT MANAGEMENT BRANCH
KALAELOA, HAWAII

KALAELOA B90T RESTORATION

STATE OF HAWAII
FACILITY MANAGEMENT OFFICE
BUILDING 90T

SCHEDULES

100% FINAL DESIGN

SUBMITAL DATE: 03/22/2024

DES: GM | DRW: EB | CHK: GM

SCALE: **AS NOTED**

STATE JOB NO. CA-202209-C

FEDERAL PROJECT NO. 15H00074

SHEET 40 OF 67

A-601

1

2

3

4

5

D

C

B

A

D

C

B

A

FOR ENLARGED MECHANICAL AND PLUMBING DEMOLITION PLAN, SEE

A1 A3
MD401 MD401

FOR ENLARGED MECHANICAL AND PLUMBING NEW WORK PLAN, SEE

A1 A3
M-401 M-401



DATE	DESCRIPTION

SUBMITTAL PHASE
100% FINAL DESIGN

SUBMITTAL DATE
03/22/2024

DES	WT	DRW	AK	CHK	DJ
-----	----	-----	----	-----	----

DEPARTMENT OF DEFENSE
DESIGN AND PROJECT MANAGEMENT BRANCH
KALAELOA, HAWAII

STATE OF HAWAII
FACILITY MANAGEMENT OFFICE
BUILDING 90T
KALAELOA B90T RESTORATION
OVERALL MECHANICAL AND PLUMBING FLOOR PLAN

SCALE: AS NOTED

STATE JOB NO. CA-202209-C

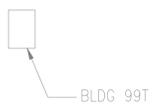
FEDERAL PROJECT NO. 15H00074

SHEET 42 OF 67

M-101

OVERALL MECHANICAL AND PLUMBING FLOOR PLAN

SCALE: 3/32" = 1'-0"
0 8' 16' 24'



A1



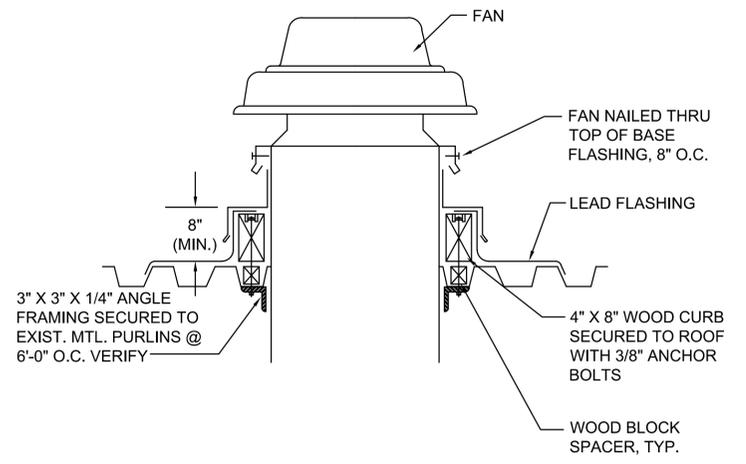
1

2

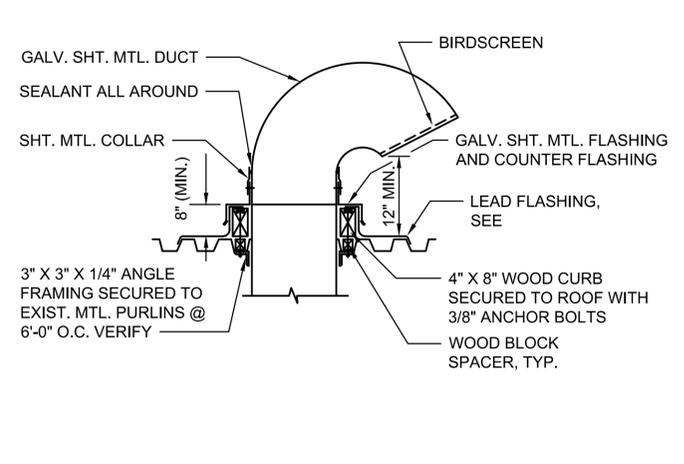
3

4

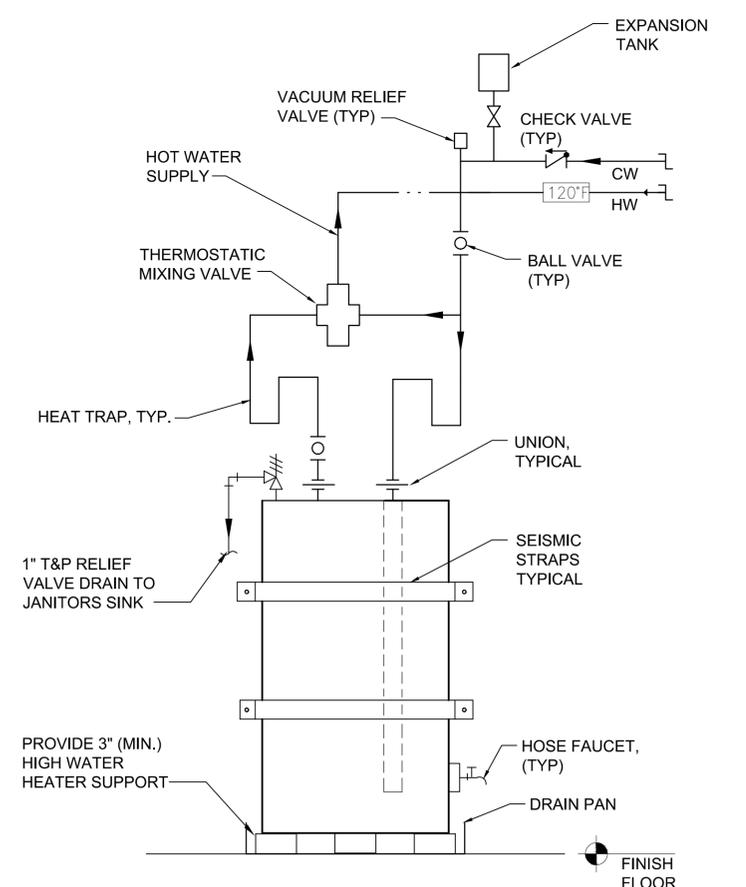
5



C1 POWER ROOF VENTILATOR DETAIL
SCALE: NTS

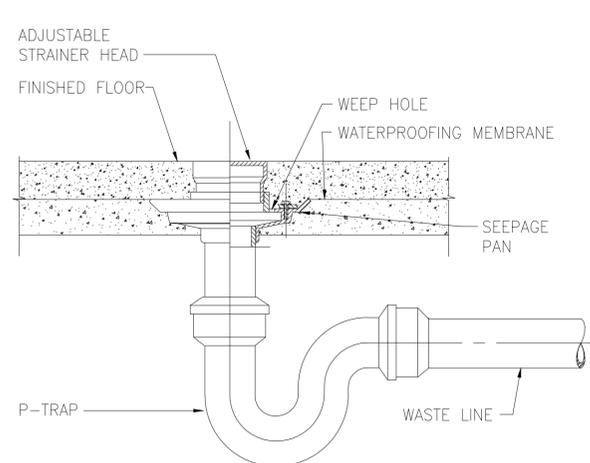


C2 GOOSENECK DETAIL
SCALE: NTS

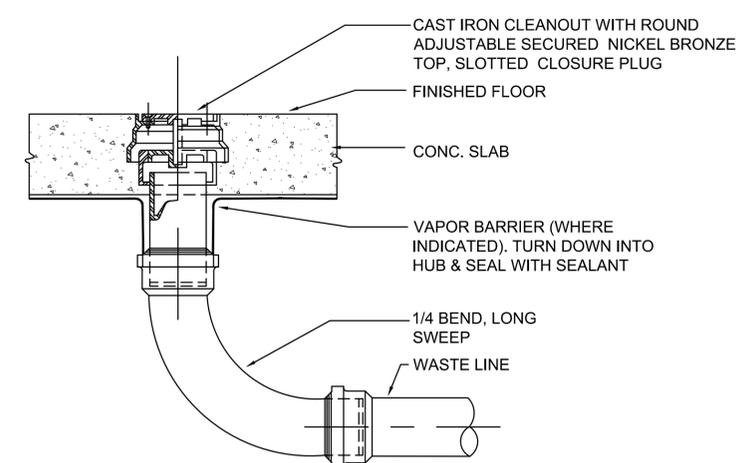


A1 ELECTRIC WATER HEATER
SCALE: NTS

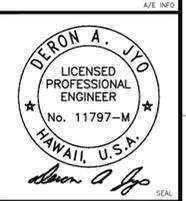
NOTE: REFER TO MANUFACTURER'S PUBLISHED INSTALLATION INSTRUCTIONS



A2 FLOOR DRAIN DETAIL
SCALE: NTS



A4 FLOOR CLEAN-OUT AT FINISHED FLOOR DETAIL
SCALE: NTS



DATE	DESCRIPTION

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

100% FINAL DESIGN
SUBMITTAL DATE: 03/22/2024
DES: WT | DRW: AK | CHS: DJ

STATE OF HAWAII
FACILITY MANAGEMENT OFFICE
BUILDING 90T

KALAELOA B90T RESTORATION
MECHANICAL DETAILS

SCALE: AS NOTED
STATE JOB NO. CA-202209-C
FEDERAL PROJECT NO. 15H00074
SHEET 45 OF 67
M-501

EXHAUST FAN SCHEDULE

UNIT	AREA SERVED	LOCATION	FAN DATA				ELECTRICAL					MAX. DBA	REMARKS
			TYPE	MOTOR SIZE	AIRFLOW (CFM)	ESP (IN WATER)	V / P / HZ	FLA	RLA	MCA	MOCP		
PRV-1	WOMEN'S RESTROOM	ROOF	POWER ROOF VENTILATOR	0.5 HP	1380	0.80	115 / 1 / 60	6.4	-	8	15	64	PROVIDE WITH INTEGRAL DISCONNECT SWITCH. INTERLOCK WITH LIGHT SWITCH.
PRV-2	MEN'S RESTROOM	ROOF	POWER ROOF VENTILATOR	0.75 HP	1620	1.15	115 / 1 / 60	8.8	-	11	15	65	PROVIDE WITH INTEGRAL DISCONNECT SWITCH. INTERLOCK WITH LIGHT SWITCH.
PRV-3	ELECTRICAL ROOM	ROOF	POWER ROOF VENTILATOR	0.25 HP	120	0.50	115 / 1 / 60	2.85	-	4	15	49	PROVIDE WITH INTEGRAL DISCONNECT SWITCH. EXHAUST FAN SHALL BE ON 24/7.
CEF-1	JANITOR'S CLOSET	JANITOR'S CLOSET CEILING	CEILING EXHAUST FAN	61 W	50	0.50	115 / 1 / 60	0.46	-	-	-	18	EXHAUST FAN SHALL BE ON 24/7.

ELECTRIC WATER HEATER SCHEDULE

UNIT	LOCATION	CAPACITY (GALLONS)	HEIGHT (IN)	DIAMETER (IN)	WATER INLET (F)	WATER OUTLET (F)	INPUT (WATTS)	UPPER ELEMENT WATTAGE	LOWER ELEMENT WATTAGE	ELECTRICAL					REMARKS
										V / P / HZ	FLA	RLA	MCA	MOCP	
EWH-1	MEN'S RESTROOM EWH CLOSET	80	60	24	70	140	12100	6050	6050	208 / 3 / 60	50	-	-	-	

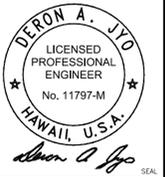
EXPANSION TANK SCHEDULE

UNIT	LOCATION	SYSTEM SERVED	ACCEPTANCE VOLUME (GAL)	PRECHARGE (PSI)	REMARKS
ET-1	MEN'S RESTROOM EWH CLOSET	EWH-1 DOMESTIC HW	5	60	

PLUMBING FIXTURE SCHEDULE

SYMBOL	DESCRIPTION	TRAP SIZE	WASTE	VENT	HOT WATER	COLD WATER	NOTES
P-1	WATER CLOSET, WALL MOUNTED FLUSH VALVE	INTEGRAL	4"	2"	-	1"	1.28 GPF LOW FLOW FLUSH TYPE
P-1A	WATER CLOSET, WALL MOUNTED FLUSH VALVE, ACCESSIBLE	INTEGRAL	4"	2"	-	1"	1.28 GPF LOW FLOW FLUSH TYPE
P-2	URINAL, WALL MOUNTED, LOW FLOW FLUSH VALVE, ACCESSIBLE	INTEGRAL	2"	2"		3/4"	.125 GPF LOW FLOW FLUSH VALVE
P-2A	URINAL, WALL MOUNTED, LOW FLOW FLUSH VALVE, ACCESSIBLE	INTEGRAL	2"	2"		3/4"	.125 GPF LOW FLOW FLUSH VALVE
P-3A	LAVATORY, DUAL FAUCET WITH TROUGH BASIN, ACCESSIBLE	1-1/4"	2"	2"	1/2"	1/2"	0.5 GPM, LOW FLOW, INTEGRATED SINK SYSTEM WITH SOAP DISPENSER AND HAND DRYER, SENSOR OPERATED, PROVIDE MIXING VALVES PER ASSE 1070
P-4	SERVICE SINK	3"	2"	2"	3/4"	3/4"	2.2 GPM
P-5A	SHOWER, ACCESSIBLE	2"	2"	2"	1/2"	1/2"	1.5 GPM SHOWER HEAD, PROVIDE WITH THERMOSTATIC MIXING VALVE, HANDSPRAYER WITH ON/OFF, SLIDE BAR, 60" FLEXIBLE METAL HOSE, PROVIDE WITH LINEAR DRAIN
FD	FLOOR DRAIN	2"	2"	2"	-	-	PROVIDE TRAP PRIMER

NOTES: 1. FIXTURES SHALL BE CERTIFIED LEAD FREE
2. SEE ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHTS



SYMBOL	DESCRIPTION	DATE	APPROVAL

SUBMITTAL PHASE
100% FINAL DESIGN

SUBMITTAL DATE
03/22/2024

DESIGNER: WT, DRAWN: AK, CHECKED: DJ

STATE OF HAWAII
FACILITY MANAGEMENT OFFICE
HAWAII ARMY NATIONAL GUARD
DEPARTMENT OF DEFENSE
DESIGN AND PROJECT MANAGEMENT BRANCH
KALAELOA, HAWAII
BUILDING 90T
KALAELOA B90T RESTORATION
EQUIPMENT AND PLUMBING FIXTURE SCHEDULE

SCALE: AS NOTED

STATE JOB NO. CA-202209-C

FEDERAL PROJECT NO. 15H00074

SHEET 46 OF 67

M-601

ELECTRICAL GENERAL NOTES:

1. ALL WORK SHOWN ON THE ELECTRICAL DRAWINGS IS NEW UNLESS OTHERWISE NOTED. ALL MATERIALS SHALL BE NEW AND "LISTED" OR "LABELED" AS DEFINED BY THE NATIONAL ELECTRICAL CODE (NEC). WORK INCLUDES INSTALLATION OF ALL ELECTRICAL SYSTEMS COMPLETE AND OPERATIONAL AS LIMITED BY THE INTENT OF THE CONTRACT DOCUMENTS.
2. ALL WORK SHALL COMPLY WITH THE NATIONAL ELECTRICAL CODE (NEC), NATIONAL ELECTRICAL SAFETY CODE, AND THE UNIFIED FACILITIES CRITERIA STANDARDS. 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.
3. STRUCTURES UNDERGOING CONSTRUCTION, ALTERATION, OR DEMOLITION OPERATIONS, INCLUDING THOSE IN UNDERGROUND LOCATIONS, SHALL COMPLY WITH NFPA 241, STANDARD FOR SAFEGUARDING CONSTRUCTION, ALTERATION, AND DEMOLITION OPERATIONS, AND NFPA 1, AS LOCALLY AMENDED.
4. FIRE SAFETY DURING ALTERATION:
 - a. NFPA 1, 16.4.4.1 WHERE THE BUILDING IS PROTECTED BY FIRE PROTECTION SYSTEMS, SUCH SYSTEMS SHALL BE MAINTAINED OPERATIONAL AT ALL TIMES DURING ALTERATION.
 - b. NFPA 1, 16.4.4.2 WHERE ALTERATION REQUIRES MODIFICATION OF A PORTION OF THE FIRE PROTECTION SYSTEM, THE REMAINDER OF THE SYSTEM SHALL BE KEPT IN SERVICE AND THE FIRE DEPARTMENT SHALL BE NOTIFIED.
 - c. NFPA 1, 16.4.4.3 WHEN IT IS NECESSARY TO SHUT DOWN THE SYSTEM, THE AHJ SHALL HAVE THE AUTHORITY TO REQUIRE ALTERNATE MEASURES OF PROTECTION UNTIL THE SYSTEM IS RETURNED TO SERVICE.
 - d. NFPA 1, 10.7.1.1 AS NECESSARY DURING EMERGENCIES, MAINTENANCE, DRILLS, PRESCRIBED TESTING, ALTERATIONS, OR RENOVATIONS, PORTABLE OR FIXED FIRE-EXTINGUISHING SYSTEMS OR DEVICES OR ANY FIRE-WARNING SYSTEM SHALL BE PERMITTED TO BE MADE INOPERATIVE OR INACCESSIBLE. A FIRE WATCH SHALL BE REQUIRED AS SPECIFIED IN SECTIONS 13.3.3.6.5.2(4)(b), 13.7.1.5.3, 16.5.4, 34.6.3.3, 41.2.2.6, 41.2.2.7, 41.2.4, 41.3.5, 41.4.1, 34.5.4.3, AND 25.1.8 AT NO COST TO THE AHJ. NFPA 1, AS LOCALLY AMENDED.
5. THE DRAWINGS DO NOT REFLECT ALL THE EXISTING CONDITIONS THAT MAY BE ENCOUNTERED DURING CONSTRUCTION. VISIT THE PROJECT SITE AND BECOME FAMILIAR WITH THE READILY OBSERVABLE EXISTING CONDITIONS, THE EXTENT OF ANY DEMOLITION, RELOCATION, RECONNECTION, AND THE NEW WORK PRIOR TO BIDDING. REPORT ANY READILY OBSERVABLE DISCREPANCIES AND/OR DIFFERENCES BETWEEN THE EXISTING CONDITIONS AND THE CONSTRUCTION DOCUMENTS TO THE CONTRACTING OFFICER. RESOLVE ALL READILY OBSERVABLE DISCREPANCIES AND QUESTIONS PRIOR TO THE START OF WORK. BID SUBMISSION SHALL BE CONSIDERED AS EVIDENCE THAT THE CONTRACTOR HAS VISITED THE SITE AND RESOLVED ALL READILY OBSERVABLE DISCREPANCIES AND QUESTIONS AND NO EXTRA PAYMENT WILL BE AUTHORIZED FOR WORK REQUIRED BY THE CONTRACTOR'S FAILURE TO DO SO.
6. SHOULD PHASING AND SEQUENCING OF THE ELECTRICAL WORK BE REQUIRED: COORDINATE ALL ELECTRICAL WORK WITH THE WORK OF THE OTHER TRADES AND SCHEDULE WORK TO MINIMIZE THE NUMBER AND DURATION OF ELECTRICAL OUTAGES AND IMPACT TO THE OPERATIONS IN OR ADJACENT TO THE PROJECT AREA. COORDINATE ACCESS TO THE PROJECT AREA AND SCHEDULE ALL REQUIRED SYSTEM OUTAGES WITH THE CONTRACTING OFFICER.
7. VERIFY AND COORDINATE ALL PENETRATIONS WITH THE STRUCTURAL AND ARCHITECTURAL DRAWINGS PRIOR TO THE START OF CONSTRUCTION. OBTAIN APPROVAL BEFORE MAKING ANY PENETRATIONS THROUGH STRUCTURAL MEMBERS OR FIRE RATED WALLS AND CEILINGS.
8. SCAN (E.G. X-RAY, ELECTROMAGNETIC, ETC.) ALL CONCRETE WALLS OR FLOOR STRUCTURES PRIOR TO COMMENCING WITH CORING/DRILLING WORK FOR PENETRATIONS TO AVOID DAMAGING THE EXISTING REINFORCING STEEL.
9. COORDINATE AND PROVIDE ACCESS PANELS FOR ALL CONCEALED ELECTRICAL EQUIPMENT, DEVICES, BOXES, AND CONDUIT BODIES SO THAT THEY ARE ACCESSIBLE.
10. TONING: EXISTING UNDERGROUND UTILITY LINES INDICATED ON THE DRAWINGS ARE SHOWN IN APPROXIMATE LOCATIONS BASED ON TOPOGRAPHIC SURVEY AND/OR BEST AVAILABLE "RECORD" DRAWINGS AND ARE SUBJECT TO FIELD VERIFICATION BY THE CONTRACTOR. CONTRACTOR SHALL BE RESPONSIBLE FOR TONING THE PROPOSED ROUTES OF THE PROJECT DUCTLINES TO IDENTIFY ANY POTENTIAL CONFLICTS PRIOR TO EXCAVATION. DAMAGE TO EXISTING UTILITIES CAUSED BY THE CONTRACTOR, AS A RESULT OF THE FAILURE TO TONE THE ROUTE PRIOR TO EXCAVATION WORK, WILL REQUIRE THE CONTRACTOR TO REPAIR THE DAMAGE AT NO ADDITIONAL COST TO THE PROJECT. THE DAMAGED UTILITIES SHALL BE REPAIRED/RESTORED TO ITS ORIGINAL WORKING CONDITION AND TO THE SATISFACTION OF THE CONTRACTING OFFICER.
11. PROVIDE ALL LABOR, EQUIPMENT, AND HAULING/DISPOSAL SERVICE FOR DEWATERING EFFORTS FOR NEW BELOW GRADE EXCAVATION/TRENCHING IF GROUND WATER IS ENCOUNTERED IN THE PROJECT AREA.
12. WORK INCIDENTAL TO THE CONTRACT AND NECESSARY TO COMPLETE THE PROJECT, ALTHOUGH NOT SPECIFICALLY REFERRED TO IN THE CONTRACT DOCUMENTS, SHALL BE FURNISHED AND PERFORMED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE PROJECT. AN EXAMPLE OF SUCH INCIDENTAL WORK ARE OUTLET BOXES, JUNCTION BOXES, AND PULL BOXES REQUIRED FOR THE INSTALLATION OF ELECTRICAL DEVICES, LIGHTING FIXTURES, AND EQUIPMENT. ALL INCIDENTAL WORK SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH THE NEC.
13. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE ALL CONDUIT AND WIRING FOR THE POWER CONNECTION TO ALL EQUIPMENT AS INDICATED IN THE DRAWINGS AND

- SPECIFICATIONS. ALL INCIDENTAL CONDUIT AND WIRING REQUIRED FOR A COMPLETE AND OPERATIONAL SYSTEM MAY NOT BE SHOWN IN THE DRAWINGS OR SPECIFICATIONS. CONTRACTOR SHALL COORDINATE INCIDENTAL CONDUIT AND WIRING REQUIREMENTS BETWEEN ALL TRADES TO ENSURE THE INCIDENTAL CONDUIT AND WIRING IS PROVIDED AND THE AFFECTED SYSTEMS OPERATE AS INTENDED.
14. THE LOCATION OF ALL ELECTRICAL APPARATUS AND DEVICES SHOWN ON THE DRAWINGS ARE APPROXIMATE AND BEFORE INSTALLING, STUDY THE ARCHITECTURAL, STRUCTURAL, AND MECHANICAL DETAILS, THEN MAKE INSTALLATION IN THE MOST LOGICAL MANNER. CIRCUIT ROUTING IS TYPICAL AND MAY BE VARIED IN ANY MANNER. ANY PIECE OF EQUIPMENT/DEVICE MAY BE RELOCATED WITHIN 10' BEFORE INSTALLATION AT THE DIRECTION OF THE CONTRACTING OFFICER WITHOUT ADDITIONAL CHARGE TO THE PROJECT.
 15. SHOULD PROJECT CONDITIONS REQUIRE REARRANGEMENT OF THE PROJECT'S WORK, THE CONTRACTOR SHALL MARK SUCH CHANGES ON THE AS-BUILT DRAWINGS. IF THESE CHANGES REQUIRE AN ALTERNATE METHOD TO THOSE SPECIFIED IN THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL SUBMIT DRAWINGS TO REFLECT THE PROPOSED ALTERNATE METHODS TO THE CONTRACTING OFFICER FOR REVIEW AND APPROVAL. THE CONTRACTOR SHALL NOT PROCEED UNTIL APPROVAL IS OBTAINED. REARRANGEMENT OF WORK FOR THE PURPOSE OF COORDINATION SHALL NOT BE CONSIDERED AN ITEM FOR EXTRA COST.
 16. DISCONNECT AND REMOVE ALL ELECTRICAL APPARATUS, LIGHT FIXTURES, WIRING DEVICES, JUNCTION BOXES, AND ASSOCIATED FEEDER AND BRANCH CIRCUIT WIRING IN THE PROJECT AREA, UNLESS OTHERWISE NOTED. THE DEMOLITION DRAWINGS ARE INTENDED TO SHOW THE GENERAL LIMITS OF THE SCOPE OF WORK AND MAY NOT SHOW ALL THE EXISTING DEVICES, CONDUIT RUNS, ETC. FEEDER AND BRANCH CIRCUIT WIRING TO BE REMOVED SHALL BE DISCONNECTED FROM ITS SOURCE. REMOVE ALL CONDUCTORS, CONDUIT, AND CONDUIT SUPPORT STRUCTURES WHERE ACCESSIBLE. PATCH/REPAIR WALL, FLOOR, AND CEILING DAMAGES AS A RESULT OF THE REMOVAL WORK.
 17. THE ELECTRICAL DRAWINGS ARE BASED ON PROPOSED EQUIPMENT. VERIFY ALL SYSTEM REQUIREMENTS (ELECTRICAL, MECHANICAL, FIRE ALARM, SPECIALTY SYSTEMS, ETC.) WITH THE SELECTED SYSTEM'S MANUFACTURER OR AUTHORIZED REPRESENTATIVE PRIOR TO COMMENCING WITH ANY WORK. COORDINATE RATINGS OF OVERCURRENT PROTECTION DEVICES, DISCONNECT SWITCHES, CONDUIT, AND WIRING TO MATCH THE ACTUAL EQUIPMENT SUPPLIED FOR THE PROJECT. CORRECT ALL DISCREPANCIES SO AS TO PROVIDE A COMPLETE AND OPERATIONAL SYSTEM. RECORD CHANGES ON THE AS-BUILT DRAWINGS.
 18. ALL EQUIPMENT AND APPARATUS SHALL BE CAPABLE OF FITTING IN THE SPACES SHOWN WHILE MEETING THE MANUFACTURER'S RECOMMENDED ACCESS REQUIREMENTS AND APPLICABLE CODE REQUIREMENTS. REVIEW ALL SPACES WHERE EQUIPMENT IS TO BE INSTALLED PRIOR TO ORDERING OF EQUIPMENT AND NOTIFY THE CONTRACTING OFFICER OF ANY INADEQUATE CLEARANCES OR CONDITIONS THAT WILL PREVENT THE PROPER INSTALLATION, MAINTENANCE, AND OPERATION OF THE EQUIPMENT.
 19. CONFIRM THE TYPE OF CEILING BEING INSTALLED PRIOR TO ORDERING LUMINAIRES AND TRIMS FOR PROPER COORDINATION. LUMINAIRES INDICATED MAY NOT EXPRESSLY CONFORM TO THE TYPE OF CEILING OR OPENING PROVIDED BY OTHER TRADES.
 20. CONCEAL ALL CONDUIT WHEREVER REASONABLY POSSIBLE; EXPOSED CONDUITS ARE PERMITTED ONLY WHERE SPECIFICALLY SHOWN ON THE DRAWINGS. ALL EXPOSED CONDUITS IN FINISHED AREAS SHALL BE INSTALLED IN THE LEAST VISIBLE LOCATIONS. CARE SHALL BE TAKEN TO INSTALL CONDUIT IN THE MOST AESTHETICALLY PLEASING MANNER.
 21. WHERE DEVICES, EQUIPMENT, BOXES, AND OTHER ELECTRICAL MATERIALS ARE INDICATED TO BE OF WEATHERPROOF (WP) CONSTRUCTION, THE INTERCONNECTING RACEWAYS, INCLUDING COUPLINGS AND CONNECTORS, SHALL BE LISTED FOR AND INSTALLED TO PROVIDE A COMPLETE WEATHERPROOF / WET LOCATION INSTALLATION. ALL INCIDENTAL MATERIALS REQUIRED TO COMPLETE THE INSTALLATION SHALL ALSO BE OF WEATHERPROOF / WET LOCATION LISTING.
 22. WIRING DEVICES AND CONDUITS SHALL BE FLUSH MOUNTED, WHEREVER REASONABLY POSSIBLE. WHERE NEW DEVICES ARE INDICATED TO BE INSTALLED IN EXISTING WALLS, FISH THE CONDUIT DOWN INTO THE EXISTING WALL CAVITY AND KEEP DISTURBANCES TO THE EXISTING WALLS TO A MINIMUM. WHERE OBSTRUCTIONS ARE ENCOUNTERED OR CUTTING OF THE WALL TO ACCOMPLISH THE WIRING DEVICE AND CONDUIT INSTALLATION IS UNAVOIDABLE, CONSULT WITH THE CONTRACTING OFFICER PRIOR TO COMMENCING ANY WORK.
 23. PROVIDE TYPEWRITTEN CIRCUIT DIRECTORIES FOR ALL PANELS, NEW OR MODIFIED, REFLECTING THE CIRCUIT ARRANGEMENTS AS THEY WERE ACTUALLY INSTALLED.
 24. AN ADHESIVE VINYL NAMEPLATE SHALL BE PROVIDED FOR ALL SWITCHES, RECEPTACLES, MODULAR FURNITURE POWER CONNECTIONS, DISCONNECT SWITCHES, MOTOR STARTERS, AND MISCELLANEOUS DEVICES REQUIRING POWER. THE NAMEPLATE SHALL INDICATE THE PANELBOARD SERVING THE DEVICE AND THE CORRESPONDING CIRCUIT ASSIGNMENT. LETTERING SHALL BE A MINIMUM OF 1/4" HIGH. UTILIZE BROTHER "P-TOUCH" LABEL MAKER OR APPROVED SUBSTITUTE.
 25. A GREEN, EQUIPMENT GROUND CONDUCTOR SIZED IN ACCORDANCE WITH THE NEC ARTICLE 250 SHALL BE INSTALLED IN ALL FEEDER AND BRANCH CIRCUITS WHETHER INDICATED ON CONTRACT DRAWINGS OR NOT. INSTALL THIS CONDUCTOR IN ALL RACEWAYS INCLUDING THOSE INSTALLED FOR SWITCH LEGS AND ATTACH TO THE DEVICE, LUMINAIRE, OR EQUIPMENT USING A SUITABLE GROUNDING LUG.

26. DO NOT USE A COMMON NEUTRAL FOR MULTIPLE BRANCH CIRCUITS INSTALLED IN A COMMON CONDUIT. PROVIDE A DEDICATED NEUTRAL FOR EACH INDIVIDUAL CIRCUIT. WHERE MULTIPLE DEDICATED NEUTRALS ARE INSTALLED IN A COMMON CONDUIT, PROVIDE COLOR CODING OF THE DIFFERENT NEUTRAL CONDUCTORS IN ACCORDANCE WITH THE NEC (WHITE, GRAY, THREE CONTINUOUS WHITE OR GRAY STRIPES, ETC.)
27. PROVIDE NYLON PULLSTRINGS IN ALL EMPTY CONDUITS UNLESS OTHERWISE INDICATED.
28. THE TELECOMMUNICATIONS RACEWAY SYSTEM INSTALLATION SHALL COMPLY WITH TIA/EIA AND BICSI STANDARDS UNLESS OTHERWISE NOTED.
29. CONDUIT BODIES (E.G. LB, LR, ETC.) SHALL NOT BE PERMITTED IN THE TELECOMMUNICATIONS RACEWAY SYSTEMS UNLESS SPECIFICALLY INDICATED TO BE UTILIZED AND LISTED FOR TELECOMMUNICATIONS SYSTEM USE.
30. PROVIDE INSULATED BUSHINGS AT ALL TELECOMMUNICATIONS CONDUIT TERMINATIONS AT ALL BOXES, BACKBOARDS, AND CONDUIT STUBS.
31. ALL SURFACE MOUNTED DEVICES SHALL BE INSTALLED UTILIZING FACTORY PAINTED SURFACE MOUNTING ACCESSORIES AND MATCHING DEVICE BOXES FOR THE MOST AESTHETICALLY PLEASING INSTALLATION.
32. PROVIDE KNOCK-OUT PLUGS FOR ALL UNUSED CONDUIT PENETRATIONS IN BOXES AND ENCLOSURES DUE TO CONDUIT REMOVAL.
33. PENETRATIONS THROUGH FIRE-RATED WALLS, CEILINGS, AND FLOORS SHALL BE SEALED TO MAINTAIN FIRE RATINGS. UTILIZE 3M CP25, PUTTY 303, OR OTHER SUITABLE UL-LISTED SEALING SYSTEM.
34. PATCH, REFINISH, AND PAINT ALL PENETRATIONS THROUGH WALLS AND SLABS TO MATCH FINISH OF ADJACENT SURFACES.
35. RESTORE/REPAIR ANY DAMAGE TO EXISTING SURFACES RESULTING FROM THE INSTALLATION OF NEW ELECTRICAL ITEMS. THE AREAS REPAIRED SHALL MATCH THE ADJACENT SURFACES IN TEXTURE, FINISH, AND COLOR.
36. PAINTING OF ELECTRICAL EQUIPMENT:
 - a. INTERIOR LOCATIONS - PRIME AND PAINT ALL EXPOSED CONDUITS, BOXES, FITTINGS, SUPPORT CHANNELS, MOUNTING HARDWARE, AND ACCESSORIES WITH TWO FINISH COATS TO MATCH THE SURFACE ON WHICH THEY ARE MOUNTED OR TO MATCH THE FINISH OF THE ADJACENT SURFACES. EQUIPMENT SURFACES/COMPONENTS WITH A FACTORY-APPLIED PAINT FINISH NEED NOT BE PAINTED.
 - b. EXTERIOR LOCATIONS - PRIME ALL EXPOSED CONDUITS, BOXES, FITTINGS, SUPPORT CHANNELS, MOUNTING HARDWARE, AND ACCESSORIES WITH A 2-PART EPOXY PRIMER AND FINISH WITH 2 COATS OF AN ALIPHATIC ACRYLIC URETHANE PAINT. PAINT FINISH TO MATCH THE SURFACE ON WHICH THEY ARE MOUNTED OR TO MATCH THE FINISH OF THE ADJACENT SURFACES. STAINLESS STEEL MATERIALS NEED NOT BE PAINTED.
41. FOR ALL SWITCHGEAR, SWITCHBOARDS, AND PANELBOARDS, PROVIDE A PERMANENTLY AFFIXED PLAQUE INDICATING THE SOURCE OF THE POWER SERVING THE APPARATUS IN QUESTION IN ACCORDANCE WITH THE NEC.
42. ELECTRICAL EQUIPMENT SUPPORTING HVAC EQUIPMENT INSTALLED ABOVE SUSPENDED CEILINGS SHALL COMPLY WITH THE NEC FOR WORKSPACE CLEARANCE IN AREAS OF LIMITED ACCESS.
43. LIGHTING SYSTEM CONTROLS FUNCTIONAL TESTING: PROVIDE ALL MATERIALS AND LABOR REQUIRED TO TEST THE LIGHTING SYSTEM CONTROLS TO ENSURE THAT THE CONTROL HARDWARE AND SOFTWARE ARE CALIBRATED, ADJUSTED, PROGRAMMED, AND IN PROPER WORKING CONDITION IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL PERFORM AND DOCUMENT THE FUNCTIONAL TESTING WHICH SHALL BE IN ACCORDANCE WITH THE APPLICABLE PARAGRAPHS OF THE COUNTY'S ENERGY CODE. THE DESIGNER OF RECORD SHALL WITNESS THE FUNCTIONAL TESTING. THE TESTING DOCUMENTATION SHALL BE PROVIDED TO THE DESIGNER OF RECORD FOR REVIEW AND APPROVAL PRIOR TO PROJECT CLOSE-OUT.
44. ALL ELECTRIFIED UTILIZATION EQUIPMENT, CONTROL DEVICES, CONTROL CIRCUITING, AND SEPARATELY MOUNTED MOTOR STARTERS/CONTROLLERS ARE SPECIFIED AND PROVIDED UNDER THE APPLICABLE SPECIFICATION SECTIONS. ALL LINE VOLTAGE POWER TO THE ELECTRIFIED UTILIZATION EQUIPMENT SHALL BE PROVIDED UNDER THE ELECTRICAL CONTRACT DOCUMENTS.
45. FOR ELECTRIFIED UTILIZATION EQUIPMENT, COORDINATE THE MOUNTING HEIGHT OF THE ASSOCIATED JUNCTION BOX, DISCONNECT SWITCH, OR STARTER/CONTROLLER WITH THE ACTUAL EQUIPMENT SUPPLIED.
46. SEISMICALLY BRACE EQUIPMENT AND CONDUIT AS REQUIRED IN ACCORDANCE WITH THE CURRENT TECHNICAL MANUAL FOR SEISMIC DESIGN FOR BUILDINGS, TM 5-809-10 (ARMY), NAVFAC P-355 (NAVY), AFM 88-3, CHAP.13 (AIR FORCE). SEE STRUCTURAL DRAWINGS FOR SEISMIC ZONE LEVEL.
47. ALL CONDUITS ENTERING THE BUILDING FROM THE EXTERIOR SHALL BE SEALED TO PREVENT ENTRANCE OF MOISTURE, GASES, AND RODENTS.
48. WHERE A FIRE ALARM SYSTEM EVENT IS REQUIRED TO TURN "ON" EGRESS OR OTHER AUTOMATICALLY CONTROLLED LIGHTING FIXTURES, COORDINATE ALL INTERFACE REQUIREMENTS WITH THE FIRE ALARM SYSTEM SUPPLIER AND APPROPRIATE INSTALLING CONTRACTOR.



Daniel A. Mendenhall

REV	DATE	DESCRIPTION

100% FINAL DESIGN
 SUBMITAL DATE: 03/22/2024
 DES: JL | DRW: ISE | CHG: GM

STATE OF HAWAII
 FACILITY MANAGEMENT OFFICE
 HAWAII ARMY NATIONAL GUARD
 DESIGN AND PROJECT MANAGEMENT BRANCH
 KALAELOA, HAWAII
 BUILDING 90T
KALAELOA B90T RESTORATION
 GENERAL NOTES

SCALE: AS NOTED
 STATE JOB NO. CA-202209-C
 FEDERAL PROJECT NO. 15H00074
 SHEET 49 OF 67
 E-002

1

2

3

4

5

D

C

B

A

D

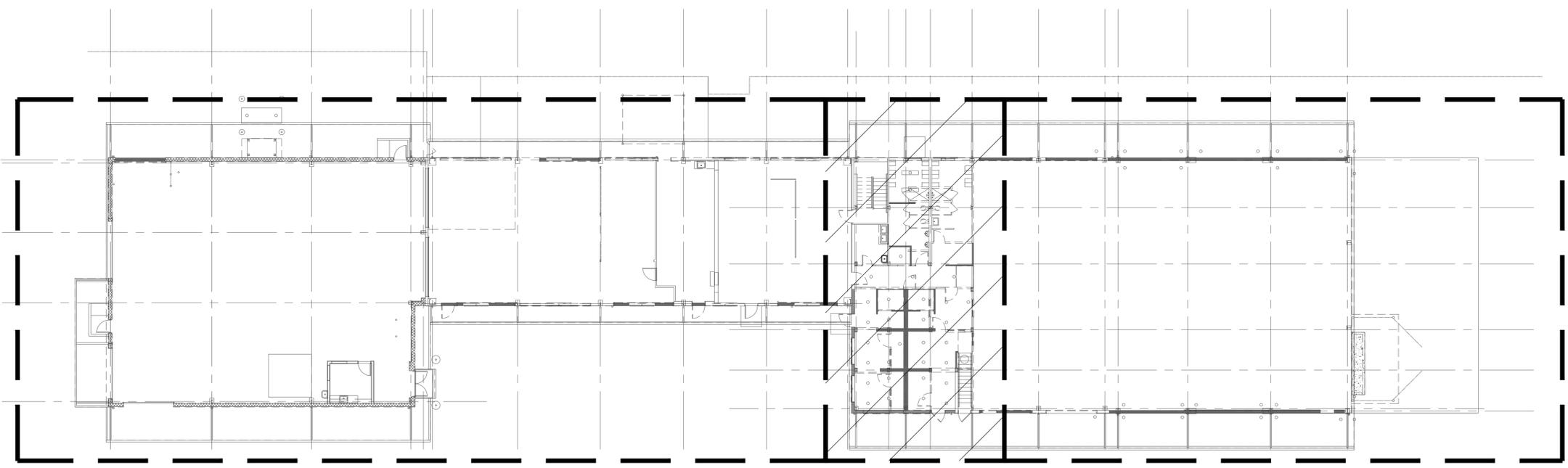
C

B

A

ENTERPRISE STREET

LANGLEY STREET



BLDG 99T

FOR THIS AREA:
NO ELECTRICAL DEMOLITION WORK IS REQUIRED.

- FOR THIS AREA:
- A. PROJECT AREA IS AT THE FIRST FLOOR LEVEL: DISCONNECT AND REMOVE ALL EXISTING ELECTRICAL LIGHTING, POWER AND TELECOMMUNICATIONS SYSTEMS DEVICES AND EQUIPMENT IN ITS ENTIRETY TO ALLOW FOR RESTORATION WORK.
 - B. UPPER FLOOR AREA IS NOT WITHIN THE PROJECT SCOPE OF WORK: NO ELECTRICAL DEMOLITION WORK IS REQUIRED.
 - C. TWO (2) STAIRS ARE NOT WITHIN THE PROJECT SCOPE OF WORK: NO ELECTRICAL DEMOLITION WORK IS REQUIRED.
 - D. COORDINATE AND CONFIRM EXTENTS AND LIMITS OF DEMOLITION WORK WITH ARCHITECTURAL PLANS.

FOR THIS AREA:
NO ELECTRICAL DEMOLITION WORK IS REQUIRED.



BLDG 99T

OVERALL PLAN - DEMO

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

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

A1



DATE	DESCRIPTION

100% FINAL DESIGN
 SUBMITTAL DATE: 03/22/2024

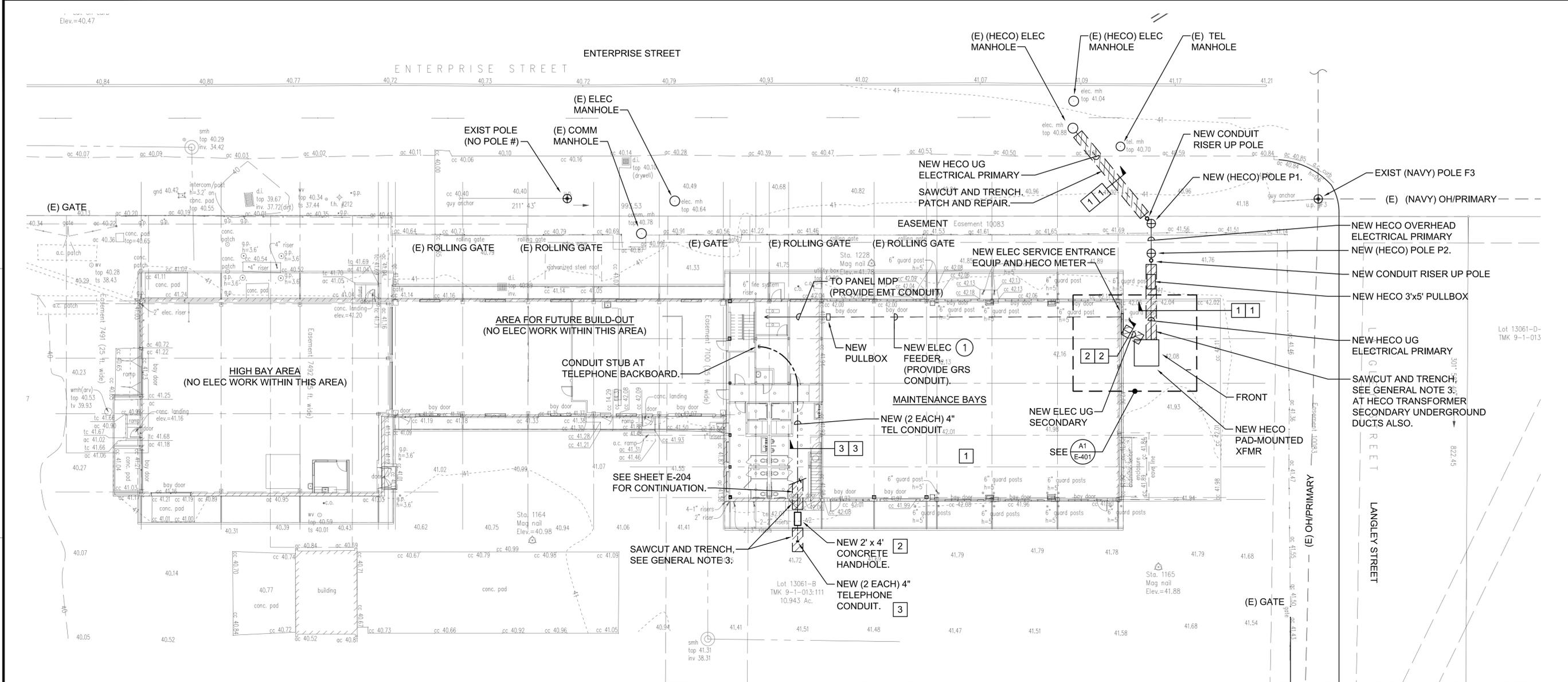
DES	JL	DRW	ISE	CHK	GM
-----	----	-----	-----	-----	----

DEPARTMENT OF DEFENSE
 DESIGN AND PROJECT MANAGEMENT BRANCH
 KALAELOA, HAWAII

HAWAII ARMY NATIONAL GUARD
 KALAELOA B90T RESTORATION
 OVERALL PLAN - DEMO

STATE OF HAWAII
 FACILITY MANAGEMENT OFFICE
 BUILDING 90T

SCALE: AS NOTED
 STATE JOB NO. CA-202209-C
 FEDERAL PROJECT NO. 15H00074
 SHEET 50 OF 67
 ED101



ELECTRICAL POWER - NOTES:

- 1 NEW ELECTRICAL POWER BRANCH CIRCUIT FEEDER.
 - A. PROVIDE GRS CONDUIT WHERE RUN EXPOSED WITHIN MAINTENANCE BAYS AREA.
 - B. SURFACE MOUNTED, EXPOSED, FASTENED TO STEEL STRUCTURAL MEMBERS OF EXISTING METAL BUILDING.
 - C. LOCATE HIGH ABOVE FINISHED FLOOR AND BAY DOOR OPENINGS, FASTENED TO UNDERSIDE OF STEEL STRUCTURAL MEMBERS, APPROXIMATELY +/- 18'-0" AFF.

TELEPHONE - NOTES:

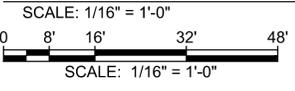
- 1 NEW (2 EACH) 4" UNDERGROUND CONDUIT FOR TELEPHONE. SEE SHEET E-204 FOR ADDITIONAL INFORMATION.
- 2 NEW 2' x 4' CONCRETE HANDHOLE. TRAFFIC RATED. LOCATE IN ASPHALT PAVEMENT AREA, PAST EXISTING CONCRETE THRESHOLD OF DOOR INTO MEN'S RESTROOM. COORDINATE EXACT LOCATION WITH GOVERNMENT.
- 3 NEW (2 EACH) 4" UNDERGROUND CONDUIT FOR TELEPHONE.
 - A. STUB AND CAP APPROXIMATELY 5-FEET PAST CONCRETE HANDHOLE.
 - B. FOR FUTURE (BUILDING 90T) UNDERGROUND TELEPHONE CONNECTION FROM EXISTING BUILDING 117.
 - C. BUILDING 117 IS LOCATED ON THE NORTHEAST-SIDE OF LANGLEY STREET WITH RESPECT TO BUILDING 90T.
 - D. THE EXISTING GOVERNMENT TELEPHONE SYSTEM "HUB" IS LOCATED WITHIN BUILDING 117.
 - E. COORDINATE LOCATION OF CONDUIT STUBS WITH GOVERNMENT IT (INFORMATION TECHNOLOGY) DEPARTMENT.

GENERAL NOTES:

- 1. PROVIDE GRS (GALVANIZED RIGID STEEL) CONDUIT FOR ALL CONDUIT RUN EXPOSED AT BUILDING EXTERIOR.
- 2. WHERE UNDERGROUND PVC CONDUITS TRANSITION FROM BELOW GRADE TO ABOVE GRADE:
 - A. PROVIDE 90-DEGREE (GRS) GALVANIZED RIGID STEEL RADIUS FACTORY ELBOW, AND CONTINUE WITH GRS CONDUIT TO ABOVE GRADE.
 - B. PROVIDE COUPLING BELOW GRADE TO TRANSITION FROM PVC CONDUIT TO GRS CONDUIT.
 - C. EXPOSED CONDUIT ABOVE FINISHED GRADE SHALL BE (GRS) GALVANIZED RIGID STEEL, UNLESS OTHERWISE NOTED.
- 3. FOR NEW UNDERGROUND DUCTS:
 - A. AT LOCATIONS OF EXISTING CONCRETE SLAB: SAWCUT, EXCAVATE, TRENCH, BACKFILL, PATCH AND REPAIR EXISTING CONCRETE SLAB AS NEEDED. SEE ARCHITECTURAL DRAWINGS

FOR REPAIR WORK REQUIREMENTS OF EXISTING CONCRETE SLAB.

ELECTRICAL SITE PLAN - NEW



A1



HAWAIIAN NATIONAL GUARD



Garrett A. Masuda
Professional Engineer
No. 9756-E
HAWAII, U.S.A.

SYMBOL	DESCRIPTION	DATE	APPROVED

SUBMITTAL PHASE	100% FINAL DESIGN
SUBMITTAL DATE	03/22/2024
DESIGNER	JL
DRAWN	ISE
CHECKED	GM

DEPARTMENT OF DEFENSE	KALAELOA, HAWAII
DESIGN AND PROJECT MANAGEMENT BRANCH	KALAELOA, HAWAII
KALAELOA B90T RESTORATION	ELECTRICAL SITE PLAN - NEW
STATE OF HAWAII	BUILDING 90T

SCALE:	AS NOTED
STATE JOB NO.	CA-202209-C
FEDERAL PROJECT NO.	15H00074
SHEET	52 OF 67
ES102	

1

2

3

4

5

D

C

B

A

D

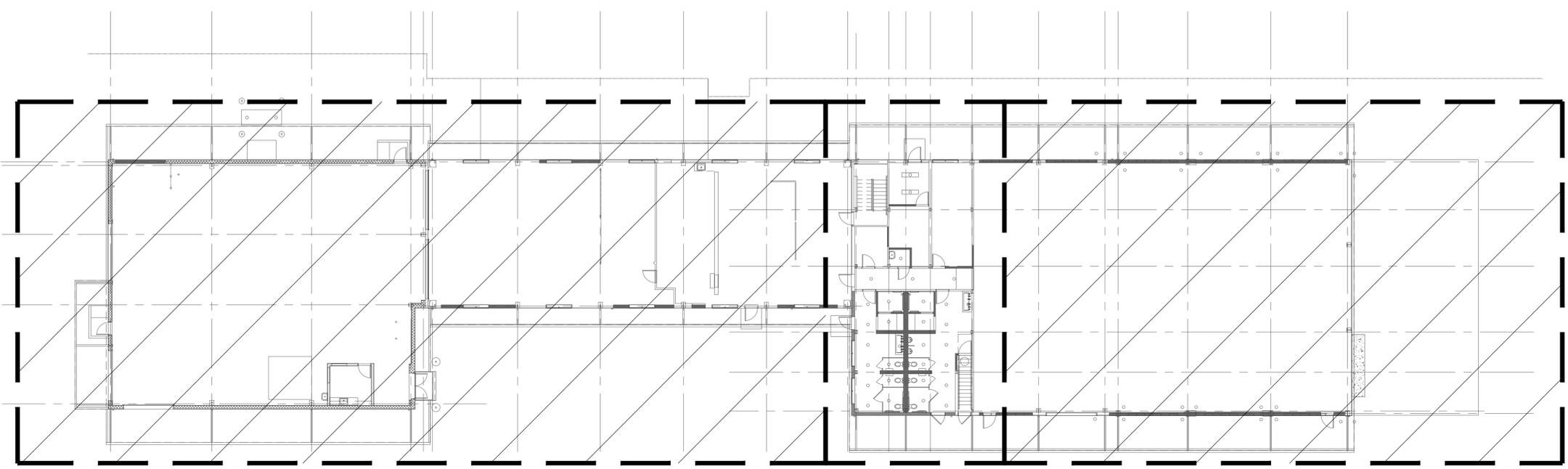
C

B

A

ENTERPRISE STREET

LANGLEY STREET



BLDG 99T

BLDG 785T

FOR THIS AREA:
NO ELECTRICAL WORK IS REQUIRED.

FOR THIS AREA:
A. PROJECT AREA IS AT THE FIRST FLOOR LEVEL.
B. UPPER FLOOR AREA IS NOT WITHIN THE PROJECT SCOPE OF WORK.
C. TWO (2) STAIRS AREAS ARE NOT WITHIN THE PROJECT SCOPE OF WORK.

FOR THIS AREA:
NO ELECTRICAL WORK IS REQUIRED.

OVERALL PLAN
 SCALE: 1/16" = 1'-0"
 0 8' 16' 32' 48'
 SCALE: 1/16" = 1'-0"

A1



A/E INFO
 GARRETT A. MASUDA
 LICENSED PROFESSIONAL ENGINEER
 No. 9756-E
 HAWAII, U.S.A.
 Janet A. Mendenhall

SYMBOL	DESCRIPTION	DATE	APPROVED

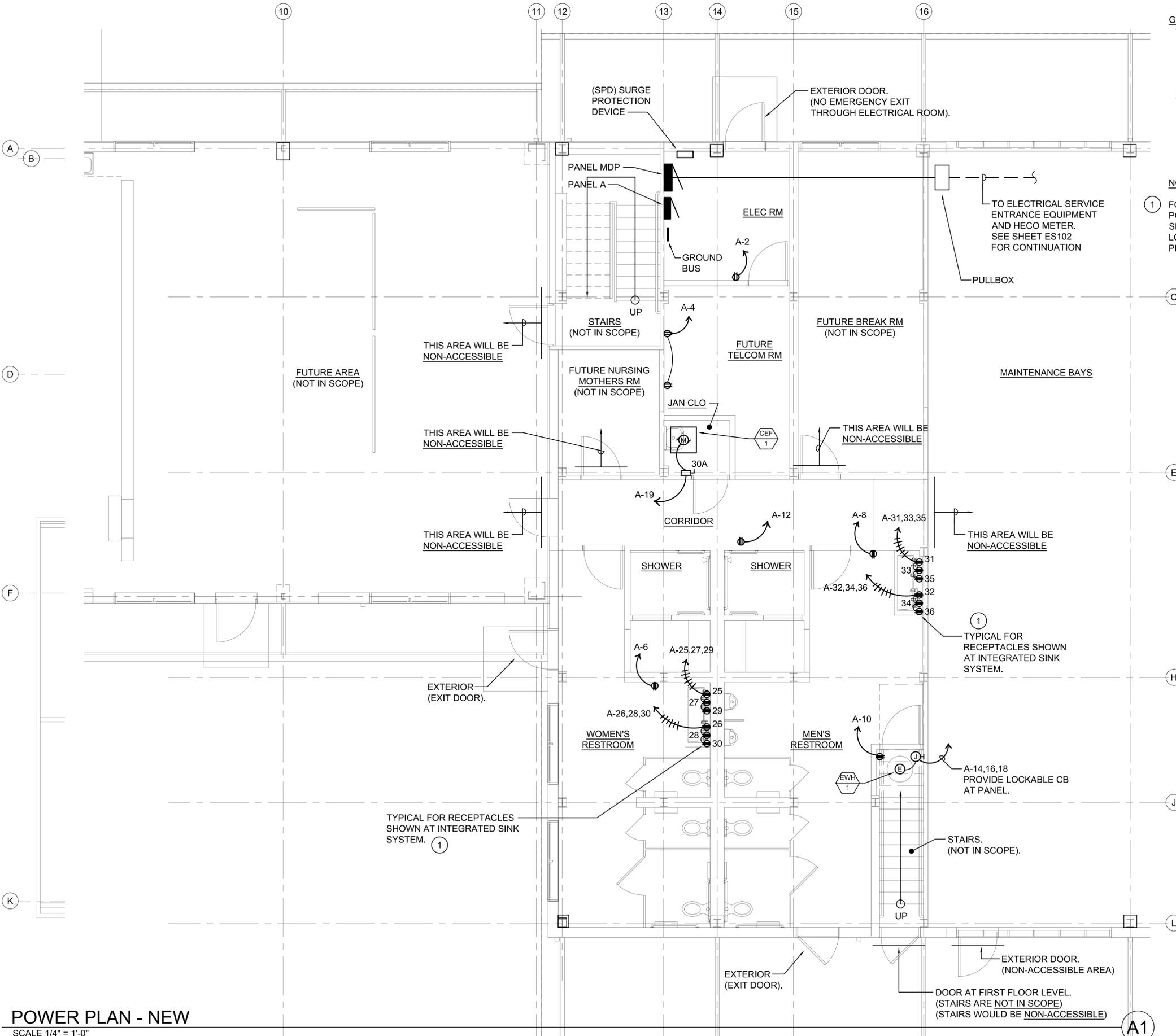
SUBMITTAL PHASE
 100% FINAL DESIGN
 SUBMITTAL DATE 03/22/2024
 DES JL DRW ISE CHK GM

STATE OF HAWAII
 FACILITY MANAGEMENT OFFICE
 HAWAII ARMY NATIONAL GUARD
 DESIGN AND PROJECT MANAGEMENT BRANCH
 KALAELOA, HAWAII
 BLDG 90T
 KALAELOA B90T RESTORATION
 OVERALL PLAN

SCALE: AS NOTED
 STATE JOB NO. CA-202209-C
 FEDERAL PROJECT NO. 15H00074
 SHEET 53 OF 67
 E101

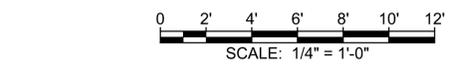
1 2 3 4 5

D
C
B
A



- GENERAL NOTES:**
- FOR MECHANICAL CEF-1:
PROVIDE ALL NECESSARY ELECTRICAL OVERCURRENT PROTECTION, DISCONNECTING MEANS, AND CONDUCTORS NECESSARY PER MANUFACTURER REQUIREMENTS AND EQUIPMENT NAMEPLATE DATA AS REQUIRED.
 - FOR MECHANICAL EWH-1:
PROVIDE ALL NECESSARY ELECTRICAL OVERCURRENT PROTECTION, DISCONNECTING MEANS, AND CONDUCTORS NECESSARY PER MANUFACTURER REQUIREMENTS AND EQUIPMENT NAMEPLATE DATA AS REQUIRED.

- NOTES:**
- FOR 120V RECEPTACLES AT SINK SYSTEM WITH INTEGRAL (120V POWERED, PLUG-IN) FAUCET, SOAP DISPENSER AND HAND DRYER: SEE MANUFACTURER CATALOG CUT INFORMATION FOR LOCATIONS OF 120V RECEPTACLES REQUIRED FOR (120V POWERED, PLUG-IN) FAUCET, SOAP DISPENSER AND HAND DRYER.



POWER PLAN - NEW
SCALE 1/4" = 1'-0"



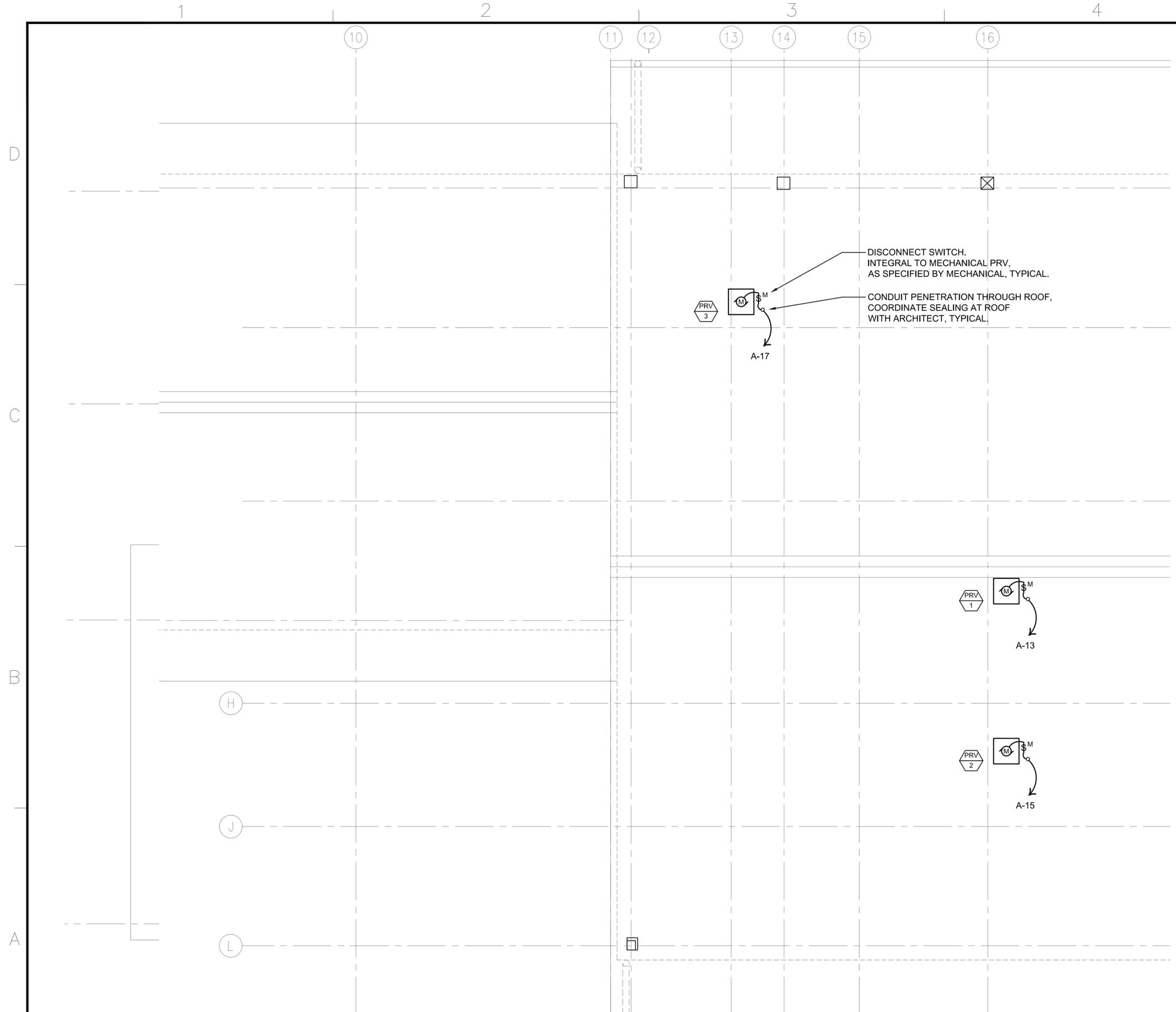
A/E INFO
 GARRET A. MASUDA
 LICENSED PROFESSIONAL ENGINEER
 No. 9756-E
 HAWAII, U.S.A.
Garret A. Masuda

DATE	DESCRIPTION

SUBMITTAL PHASE
 100% FINAL DESIGN
 SUBMITTAL DATE
 03/22/2024
 DES JL DRW ISE CHS GM

DEPARTMENT OF DEFENSE
 DESIGN AND PROJECT MANAGEMENT BRANCH
 KALAELOA, HAWAII
 HAWAII ARMY NATIONAL GUARD
 KALAELOA B90T RESTORATION
 BUILDING 90T
 POWER PLAN - NEW

SCALE: AS NOTED
 STATE JOB NO. CA-202209-C
 FEDERAL PROJECT NO. 15H00074
 SHEET 54 OF 67
 E-201



- GENERAL NOTES:**
1. ALL CONDUITS RUN EXPOSED TO THE BUILDING EXTERIOR SHALL BE GALVANIZED RIGID STEEL.
 2. ALL CONDUIT FITTINGS INSTALLED EXPOSED TO THE BUILDING EXTERIOR SHALL BE WATERTIGHT.
 3. FOR NEW MECHANICAL (PRV) POWER ROOF VENTILATORS: SEE MECHANICAL PLANS FOR EXACT LOCATIONS.

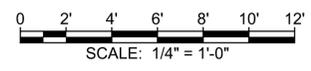
DISCONNECT SWITCH, INTEGRAL TO MECHANICAL PRV, AS SPECIFIED BY MECHANICAL, TYPICAL.

CONDUIT PENETRATION THROUGH ROOF, COORDINATE SEALING AT ROOF WITH ARCHITECT, TYPICAL.

A-17

A-13

A-15



ROOF PLAN - NEW
SCALE 1/4" = 1'-0"

(A1)



SYMBOL	DESCRIPTION	DATE	APPROVED

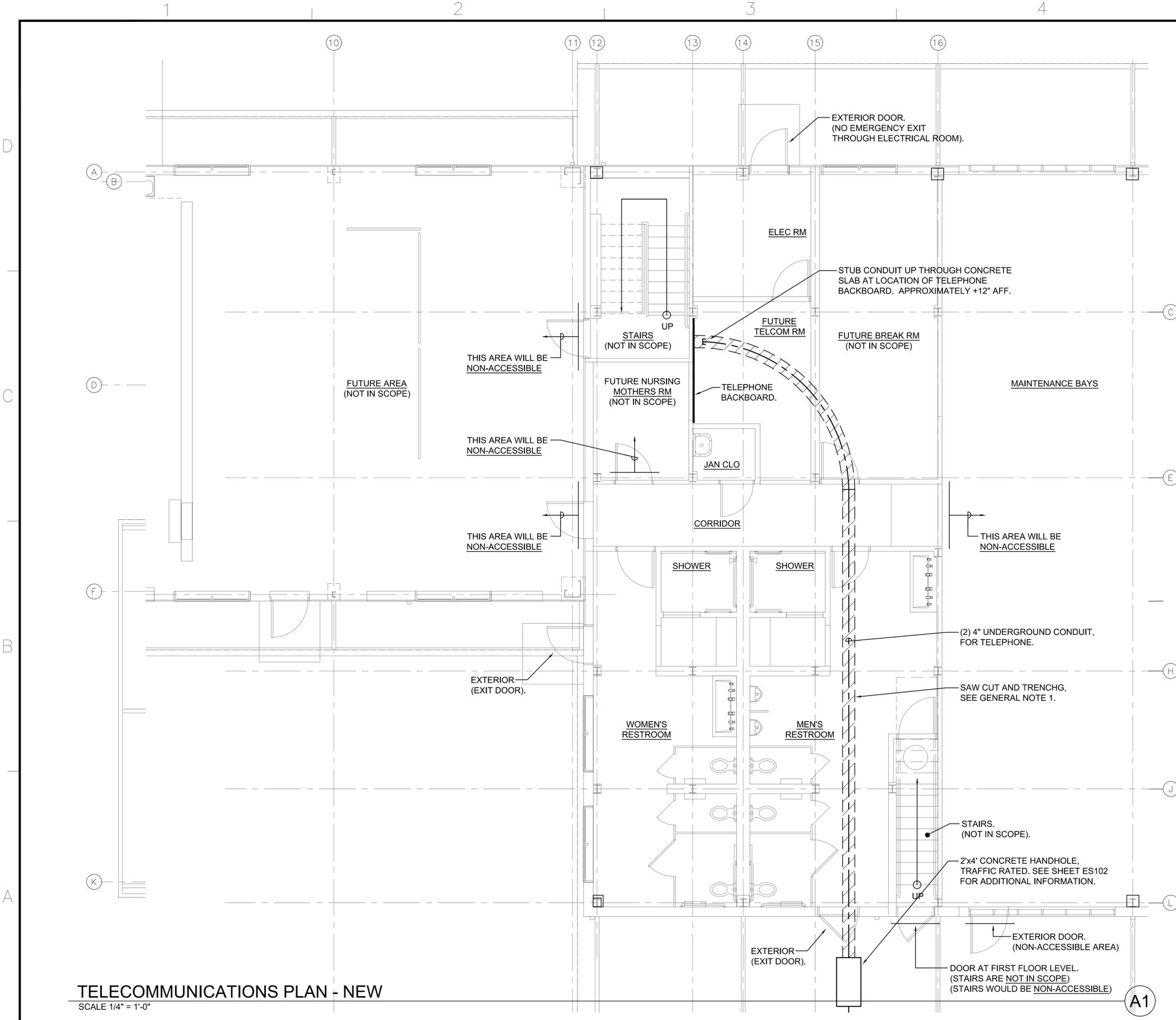
100% FINAL DESIGN
SUBMITTAL DATE: 03/22/2024
DES: JL | DRW: ISE | CHK: GM

DEPARTMENT OF DEFENSE
DESIGN AND PROJECT MANAGEMENT BRANCH
KALAELOA, HAWAII

HAWAII ARMY NATIONAL GUARD
KALAELOA B90T RESTORATION
ROOF PLAN - NEW

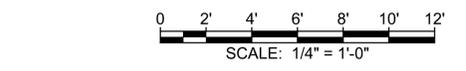
STATE OF HAWAII
FACILITY MANAGEMENT OFFICE
BUILDING 90T

SCALE: AS NOTED
STATE JOB NO. CA-202209-C
FEDERAL PROJECT NO. 15H00074
SHEET 55 OF 67
E-202



- GENERAL NOTES:**
- FOR NEW UNDERGROUND DUCTS:
 - AT LOCATIONS OF EXISTING CONCRETE SLAB: SAWCUT, TRENCH, EXCAVATE, BACKFILL, PATCH AND REPAIR EXISTING CONCRETE SLAB AS NEEDED.
 - SEE ARCHITECTURAL DRAWINGS FOR REPAIR WORK REQUIREMENTS OF EXISTING CONCRETE SLAB.

TELECOMMUNICATIONS PLAN - NEW
SCALE 1/4" = 1'-0"







Garrett A. Masuda

SYMBOL	DESCRIPTION	DATE	APPROVED

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

KALAELOA B90T RESTORATION
TELECOMMUNICATIONS PLAN - NEW

STATE OF HAWAII
FACILITY MANAGEMENT OFFICE
BUILDING 90T

SUBMITTAL PHASE		100% FINAL DESIGN
SUBMITTAL DATE		03/22/2024
DES	DRW	ISE
JL	ISE	GM

SCALE:	AS NOTED
STATE JOB NO.	CA-202209-C
FEDERAL PROJECT NO.	15H00074
SHEET	57 OF 67
E-204	

1

2

3

4

5

D

C

B

A

D

C

B

A



SYMBOL	DESCRIPTION	DATE	APPROVED

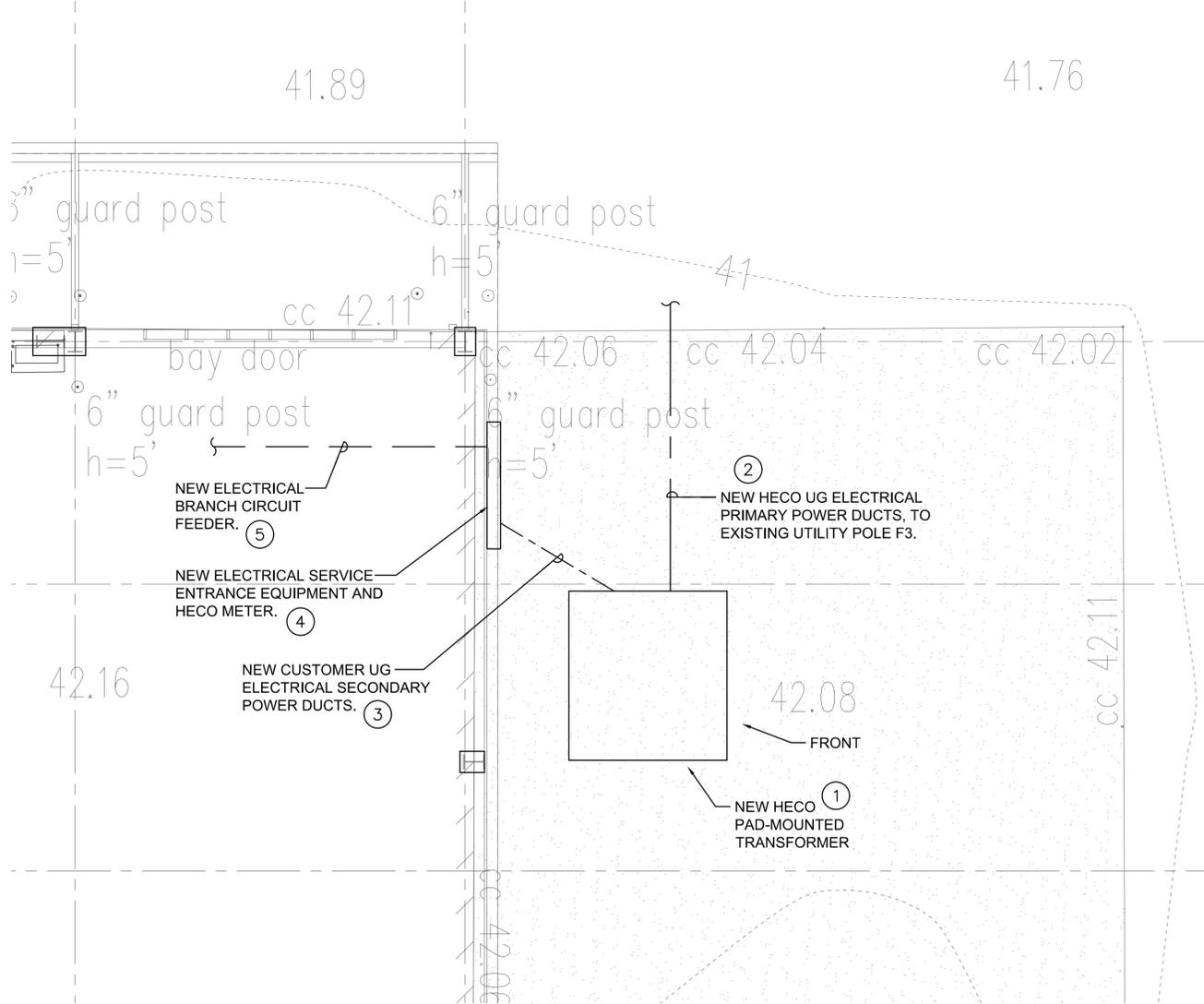
SUBMITTAL PHASE	
100% FINAL DESIGN	
SUBMITTAL DATE 03/22/2024	
DES	GM
DRW	GM
ISE	GM
CHK	GM

STATE OF HAWAII
 FACILITY MANAGEMENT OFFICE
 BUILDING 90T

DEPARTMENT OF DEFENSE
 DESIGN AND PROJECT MANAGEMENT BRANCH
 KALAELOA, HAWAII

HAWAII ARMY NATIONAL GUARD
 KALAELOA B90T RESTORATION
 ENLARGED PLANS

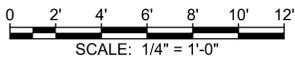
SCALE:	AS NOTED
STATE JOB NO.	CA-202209-C
FEDERAL PROJECT NO.	15H00074
SHEET	58 OF 67
E-401	



- NOTES:**
- ① NEW HECO PAD-MOUNTED TRANSFORMER.
 1. LOCATION TO BE COORDINATED WITH HECO.
 2. PROTECTIVE POST BARRIERS TO BE PROVIDED AS DETERMINED AND COORDINATED WITH HECO.
 3. REMOVE EXISTING CONCRETE PAD AS NEEDED FOR INSTALLATION OF NEW HECO CONCRETE PAD FOR HECO PAD-MOUNTED TRANSFORMER.
 4. COORDINATE WITH ARCHITECT AND CIVIL AS NEEDED.
 5. CONCRETE PAD FOR HECO PAD-MOUNTED TRANSFORMER SHALL BE FOR 75-300 KVA, 3-PHASE HECO PAD-MOUNTED TRANSFORMER, UNLESS OTHERWISE DETERMINED BY HECO.
 6. CONCRETE PAD SHALL BE PER HECO STANDARD REQUIREMENTS.
 7. ELECTRICAL CONTRACTOR SHALL ENSURE THAT ALL HECO CLEARANCE REQUIREMENTS ARE MET.
 - ② NEW HECO UNDERGROUND ELECTRICAL PRIMARY POWER DUCTS. TO BE COORDINATED WITH HECO.
 - ③ NEW CUSTOMER UNDERGROUND ELECTRICAL SECONDARY POWER DUCTS.
 - ④ NEW ELECTRICAL SERVICE ENTRANCE EQUIPMENT AND HECO METER.
 - A. MOUNTED TO EXTERIOR OF BUILDING.
 - B. PROVIDE MOUNTING SUPPORTS, BRACKETS AND HARDWARE AS NEEDED.
 - C. ALL MOUNTING SUPPORTS, BRACKETS, HARDWARE AND FASTENERS SHALL BE STAINLESS STEEL.
 - ⑤ NEW ELECTRICAL POWER BRANCH CIRCUIT FEEDER. SEE SHEET ES102 FOR ADDITIONAL INFORMATION.

ENLARGED PLAN - NEW HECO TRANSFORMER
 SCALE: 1/4" = 1'-0"

A1



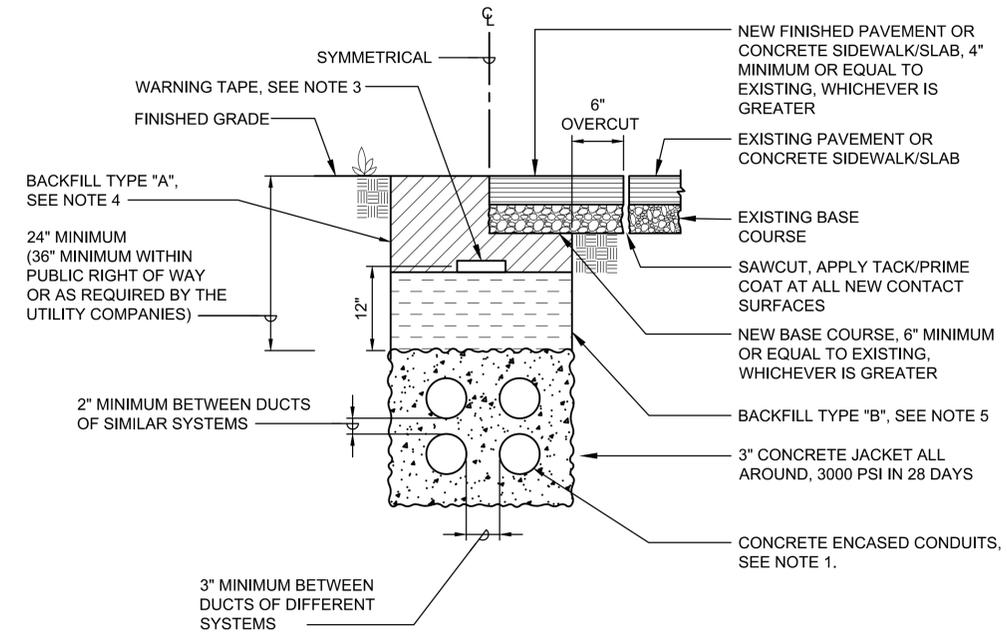
1

2

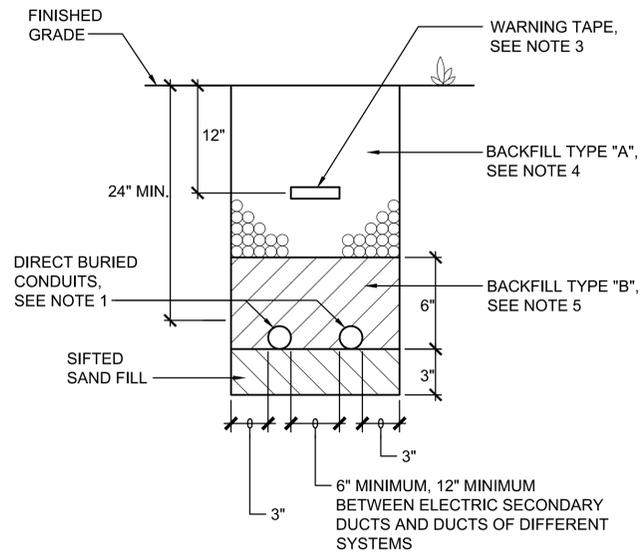
3

4

5



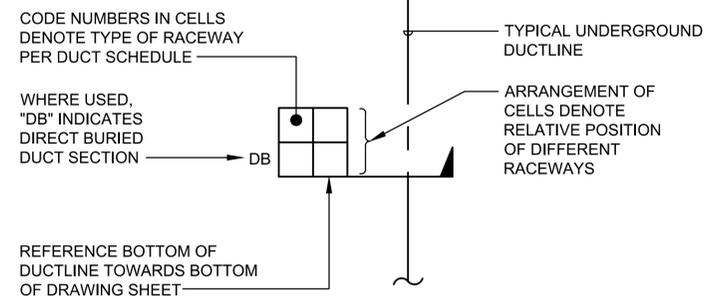
1 TYPICAL CONCRETE ENCASED DUCT SECTION
E-703 NOT TO SCALE



2 TYPICAL DIRECT BURIED DUCT SECTION
E-703 NOT TO SCALE

DUCT SECTION NOTES:

1. CONDUITS SHALL BE PVC SCHEDULE 40 UNLESS OTHERWISE NOTED.
2. PROVIDE ALL EMPTY/SPARE CONDUITS WITH PULLSTRING. PROVIDE ALL EMPTY/SPARE TELECOMMUNICATIONS CONDUIT WITH MULETAPE.
3. WARNING TAPE SHALL BE 5 MIL THICK X 3" WIDE AND SHALL BE LAID THE ENTIRE LENGTH OF THE DUCTLINE. TAPE SHALL HAVE A CONTINUOUS METALLIC BACKING AND CORROSION RESISTANT FOIL CORE. WARNING AND IDENTIFICATION TO BE IMPRINTED ON THE TAPE SHALL READ "CAUTION BURIED ELECTRICAL (OR TELECOMMUNICATIONS) CABLE BELOW." MESSAGE SHALL BE REPEATED APPROXIMATELY EVERY 10 FEET, MINIMUM. TAPE COLOR SHALL BE AS FOLLOWS:
ELECTRICAL - RED COLOR
TELECOMMUNICATIONS - ORANGE COLOR
4. BACKFILL TYPE "A": NON-CONTAMINATED NATIVE SOIL MATERIAL WHICH DOES NOT CONTAIN MORE THAN 50% GRAVEL AND ALSO DOES NOT CONTAIN HARD LUMPS OF EARTH 3 INCHES IN GREATEST DIMENSION, ROCKS LARGER THAN 1 INCH IN LARGEST DIMENSION, HIGHLY PLASTIC CLAY, POORLY GRADED SAND AND GRAVEL, ORGANICS, DEBRIS, OR OTHER UNSUITABLE OR DELETERIOUS MATERIALS. 95% COMPACTION.
5. BACKFILL TYPE "B": NON-CONTAMINATED NATIVE SOIL MATERIAL WHICH DOES NOT CONTAIN MORE THAN 20% BY VOLUME OF ROCK PARTICLES. MIXTURE MUST PASS THROUGH A 1/2" MESH SCREEN. 95% COMPACTION.
6. WHERE ELECTRICAL OR TELECOMMUNICATIONS DUCTLINES CROSS OTHER UTILITIES, MAINTAIN A MINIMUM OF 12" VERTICAL SEPARATION BETWEEN THE ELECTRICAL/TELECOMMUNICATIONS DUCTS AND THE OTHER UTILITY LINES (GAS, WATER, SEWER, DRAIN, ETC.).
7. DUCTS OF OTHER SYSTEMS ARE NOT ALLOWED ABOVE HECO DUCTS.



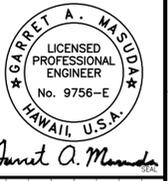
3 DUCT SECTION FLAG CODE
E-703 NOT TO SCALE

NOTE:

1. DUCT SECTIONS SHALL BE CONCRETE ENCASED UNLESS OTHERWISE NOTED.

DUCT SCHEDULE

NO.	DESCRIPTION	REMARKS
1	4" PVC SCHED 40, HECO UNDERGROUND PRIMARY POWER.	SEE ONE-LINE DIAGRAM FOR ADDITIONAL INFORMATION.
2	3" PVC SCHED 40, ELECTRICAL UNDERGROUND SECONDARY POWER.	SEE ONE-LINE DIAGRAM FOR ADDITIONAL INFORMATION.
2	4" PVC SCHED 40, TELEPHONE, CONDUIT ONLY.	FOR FUTURE CONNECTION OF TELEPHONE SERVICE.



SYMBOL	DESCRIPTION	DATE	APPROVED

SUBMITTAL PHASE			
100% FINAL DESIGN			
SUBMITTAL DATE 03/22/2024			
DES	JL	DRW	ISE
			CHK
			GM

DEPARTMENT OF DEFENSE
DESIGN AND PROJECT MANAGEMENT BRANCH
KALAELOA, HAWAII

HAWAII ARMY NATIONAL GUARD
BUILDING 90T

KALAELOA B90T RESTORATION
DUCT SECTION DETAILS

SCALE:	AS NOTED
STATE JOB NO.	CA-202209-C
FEDERAL PROJECT NO.	15H00074
SHEET	59 OF 67
E-501	

1

2

3

4

5

D

C

B

A



Garrett A. Masuda

SYMBOL	DESCRIPTION	DATE	REVISION

DESIGN	JL	DATE	03/22/2024
CHECK	ISE	DATE	

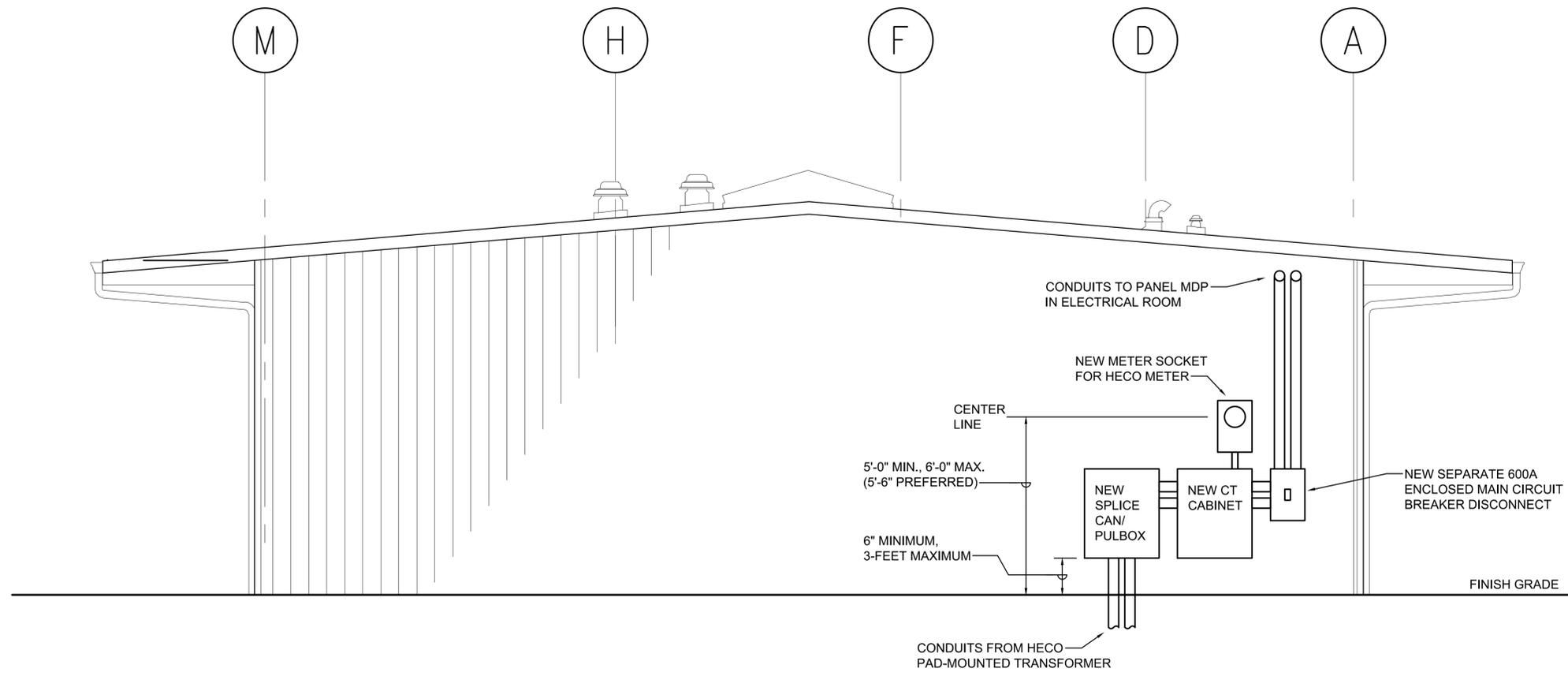
DEPARTMENT OF DEFENSE
 DESIGN AND PROJECT MANAGEMENT BRANCH
 KALAELOA, HAWAII

HAWAII ARMY NATIONAL GUARD
 KALAELOA B90T RESTORATION
 BUILDING 90T
 DETAILS

SCALE:	AS NOTED
STATE JOB NO.	CA-202209-C
FEDERAL PROJECT NO.	15H00074
SHEET	60 OF 67
E-502	

GENERAL NOTES:

1. SEE ONE-LINE DIAGRAM FOR ADDITIONAL INFORMATION.
2. FOR HECO REQUIRED CLEARANCES AROUND METERING EQUIPMENT: PROVIDE CLEARANCES AROUND ALL METERING EQUIPMENT (METER SOCKET, SPICE CAN/PULLBOX, CT CAN, RACEWAY, SWITCHBOARD, SWITCHGEAR, ETC.) PER HECO ELECTRIC SERVICE INSTALLATION MANUAL (LATEST EDITION), AS REQUIRED.
3. PROVIDE NEC WORKING SPACE AND DEDICATED ELECTRICAL SPACE FOR ELECTRICAL EQUIPMENT PER NEC, AS REQUIRED.



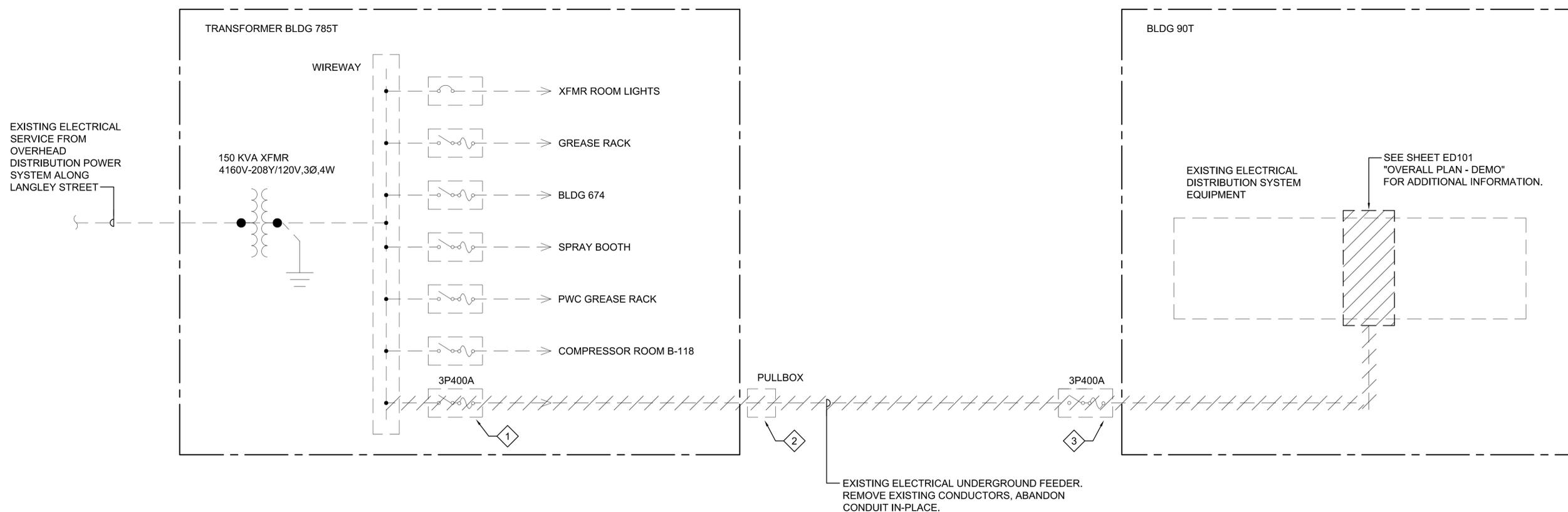
1 ELEVATION - ELECTRICAL SERVICE EQUIPMENT
 NOT TO SCALE

NOTES - DEMO:

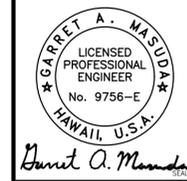
- 1 EXISTING DISCONNECT SWITCH, TO BE REMOVED.
- 2 EXISTING PULLBOX, TO BE REMOVED.
 - A. REMOVE EXISTING CONDUIT PENETRATION INTO BLDG 785T, PATCH AND SEAL BUILDING PENETRATION AS NEEDED.
 - B. CAP ABANDONED UNDERGROUND CONDUIT SERVING BLDG 90T. PROVIDE LAMINATED LABEL FASTENED TO CONDUIT, LABEL TO READ "ABANDONED CONDUIT, SERVING BLDG 90T".
- 3 EXISTING DISCONNECT SWITCH, TO BE REMOVED.
 - A. CAP ABANDONED UNDERGROUND CONDUIT SERVING DISCONNECT SWITCH FROM BLDG 785T. PROVIDE LAMINATED LABEL FASTENED TO CONDUIT, LABEL TO READ "ABANDONED CONDUIT, FROM BLDG 785T".

GENERAL NOTES:

- 1. BLDG 785T: ALL EXISTING ELECTRICAL EQUIPMENT WITHIN TRANSFORMER BUILDING 785T HAS EITHER BEEN VANDALIZED OR IS NON-OPERATIONAL.
- 2. BLDG 90T: ALL EXISTING ELECTRICAL EQUIPMENT WITHIN BUILDING 90T HAS EITHER BEEN VANDALIZED OR IS NON-OPERATIONAL. ALL EXISTING ELECTRICAL DISTRIBUTION SYSTEM EQUIPMENT WITHIN THE PROJECT AREA AND AS DETERMINED TO BE WITHIN THE SCOPE OF WORK OF THE PROJECT SHALL BE BE REMOVED IN ITS ENTIRETY, UNLESS OTHERWISE DETERMINED BY THE GOVERNMENT.
- 3. COORDINATE AND CONFIRM WITH THE GOVERNMENT AND ARCHITECT AS REQUIRED.



1 ONE-LINE DIAGRAM - DEMO
NOT TO SCALE



DATE	DESCRIPTION

DES	JL	DRW	ISE	CHK	GM
-----	----	-----	-----	-----	----

DEPARTMENT OF DEFENSE
HAWAII ARMY NATIONAL GUARD
DESIGN AND PROJECT MANAGEMENT BRANCH
KALAELOA, HAWAII
BUILDING 90T
KALAELOA B90T RESTORATION
ONE-LINE DIAGRAM - DEMO

SCALE: AS NOTED
STATE JOB NO. CA-202209-C
FEDERAL PROJECT NO. 15H00074
SHEET 61 OF 67
E-601

NOTES:

- 1 NEW PROPOSED HECO PAD MOUNTED TRANSFORMER:
 - A. RATED: _____ KVA (TO BE DETERMINED BY HECO)
 - B. PRIMARY: _____ KV (TO BE DETERMINED BY HECO).
 - C. SECONDARY: 208Y/120V, 3PH, 4W
 - D. MAXIMUM SHORT CIRCUIT CURRENT AVAILABLE AT THE TRANSFORMER SECONDARY TERMINAL NOT TO EXCEED _____ RMS SYMMETRICAL AMPERES (TO BE PROVIDED BY HECO).
 - E. NEW PAD MOUNTED TRANSFORMER TO BE PROVIDED (BY HECO).
 - F. PROVISION OF NEW HECO PAD MOUNTED TRANSFORMER (BY HECO) TO BE COORDINATED AND CONFIRMED BY HECO.
 - G. ELECTRICAL CONTRACTOR TO COORDINATE INSTALLATION OF NEW HECO PAD MOUNTED TRANSFORMER WITH HECO .
- 2 PROVIDE NEW CONCRETE PAD FOR NEW PROPOSED HECO PADMOUNTED TRANSFORMER:
 - A. CONCRETE PAD SHALL BE FOR 75-300 KVA, 3-PHASE PADMOUNTED TRANSFORMERS.
 - B. (UG) UNDERGROUND DUCTS & STRUCTURES, PER HECO STANDARD 30-5011 (LATEST VERSION).
 - C. SHALL BE PER HECO STANDARDS.
 - D. TO BE COORDINATED AND CONFIRMED BY HECO.
- 3 PROVIDE NEW SPLICE CAN/PULLBOX:
 - A. PER HECO ELECTRIC SERVICE INSTALLATION MANUAL, NINTH EDITION (CHAPTER 3.7) "IF MORE THAN ONE CONDUCTOR PER PHASE IS REQUIRED, CONTACT THE COMPANY (HECO) FOR SPLICE CAN SIZE". PROVIDE NEMA 4X, STAINLESS STEEL.
 - B. SPLICE CAN/PULLBOX SHALL BE SEALABLE, PER HECO STANDARDS.
 - C. SEE HECO DRAWINGS FOR THIS PROJECT FOR ADDITIONAL INFORMATION.
- 4 PROVIDE NEW CT CABINET:
 - A. 42" x 42" x 11" DEEP.
 - B. PER HECO ELECTRIC SERVICE INSTALLATION MANUAL, NINTH EDITION (CHAPTER 4.7) TRANSFORMER -RATED METERING, TABLE 4-5 (FOR MAXIMUM NUMBER AND SIZE OF CONDUCTORS) OF (THREE 500 KCMIL COPPER PER PHASE OR SMALLER). USING TYPE C (FLAT, HORIZONTAL BRACKETS) AND TYPE Z (VERTICAL BRACKETS) FOR MOUNTING OF CURRENT TRANSFORMERS.
 - C. PROVIDE NEMA 4X, STAINLESS STEEL.
 - D. CT CABINET SHALL BE SEALABLE, PER HECO STANDARDS.
 - E. CONFIRM CT CABINET SIZE AND TYPE WITH HECO.
 - F. SEE HECO DRAWINGS FOR THIS PROJECT FOR ADDITIONAL INFORMATION.

NOTES - CONTINUED:

- 5 NEW METER SOCKET (FOR NEW HECO METER) 120/208Y, 3PH, 4W SERVICE:
 - A. COMMERCIAL METER SOCKET, OUTDOOR, 316 STAINLESS STEEL.
 - B. (____) KAIC RATING, PENDING RATING OF NEW PROPOSED HECO PAD MOUNTED TRANSFORMER, BY HECO.
 - C. 13 JAWS (CONFIRM WITH HECO REQUIREMENTS).
 - D. PROVISIONS FOR INSTALLATION OF COMMERCIAL TEST BY-PASS (CONFIRM WITH HECO REQUIREMENTS).
- 6 PROVIDE NEW SEPARATE 600A, ENCLOSED MAIN CIRCUIT BREAKER DISCONNECT.
 - A. (____) KAIC RATING, TO BE DETERMINED PENDING RATING OF NEW PROPOSED HECO PAD MOUNTED TRANSFORMER, BY HECO).
 - B. OUTDOOR, 316 STAINLESS STEEL.
- 7 PROVIDE NEW (SPD) SURGE SUPPRESSION DEVICES:
 - A. TYPE 2, SUITABLE FOR CONNECTION ON THE LOAD-SIDE OF A SERVICE DISCONNECT OVERCURRENT DEVICE.
 - B. INSTALL PER MANUFACTURER REQUIREMENTS.
 - C. SHALL NOT BE INSTALLED INSIDE A PANELBOARD OR SWITCHBOARD ENCLOSURE.
 - D. SHALL BE CONNECTED IN PARALLEL TO THE POWER SOURCE, KEEPING THE CONDUCTORS AS SHORT AND STRAIGHT AS PRACTICALLY POSSIBLE.
 - E. MAXIMUM ALLOWED LEAD LENGTH SHALL BE 3-FEET AVOIDING 90-DEGREE BENDS.
 - F. INSTALLED AND IN COMPLIANCE WITH NEC ARTICLE 242 - OVERVOLTAGE PROTECTION.

FEEDER SCHEDULE:

- 1 NEW HECO PRIMARY CONDUIT RISER AT POLE. PER HECO STANDARDS AND REQUIREMENTS, COORDINATE WITH HECO AS REQUIRED.
- 2 NEW UNDERGROUND PRIMARY POWER.
 - A. PROVIDE TWO (2) EACH 4" CONDUITS, PER HECO STANDARDS.
 - B. PRIMARY CABLE BY HECO.
 - C. COORDINATE WITH HECO AS REQUIRED..
- 3 NEW 600A UNDERGROUND SECONDARY POWER. PROVIDE TWO (2) EACH (3"C., 4#350 KCMIL, 1#1 GND).
- 4 NEW 600A SECONDARY POWER. TWO (2) EACH (3"C., 4#350 KCMIL, 1#1 GND).
- 5 NEW 225A BRANCH CIRCUIT FEEDER. 2.5"C., 4#4/0, 1#2 GND.
- 6 CONNECTION OF (SPD) SURGE SUPPRESSION DEVICE.
 - A. CONNECT PER MANUFACTURERS REQUIREMENTS.
 - B. CONNECT PER NEC ARTICLE 242 - OVERVOLTAGE PROTECTION REQUIREMENTS.

LOAD ALLOWANCE FOR FUTURE BUILD-OUT OF ENTIRE FACILITY.

BASED ON ALLOWABLE LOAD OF 12VA / SQUARE FEET, PER UNIFIED FACILITIES CRITERIA (UFC) 3-501-01 "ELECTRICAL ENGINEERING", CHAPTER 3-2.3 LOAD ANALYSIS:

LOCATION	AREA (SQ. FT.)
ENTIRE FIRST FLOOR	15,625
ENTIRE UPPER FLOOR	1,802
TOTAL SQUARE FEET	17,427

AT 12VA / SQUARE FEET: ALLOWABLE VA = 209,124 VA
 FOR 208/120V, 3PH, 4W SERVICE: AMPACITY = 580.9 AMPS

WORK RELATED TO HECO - NOTES:

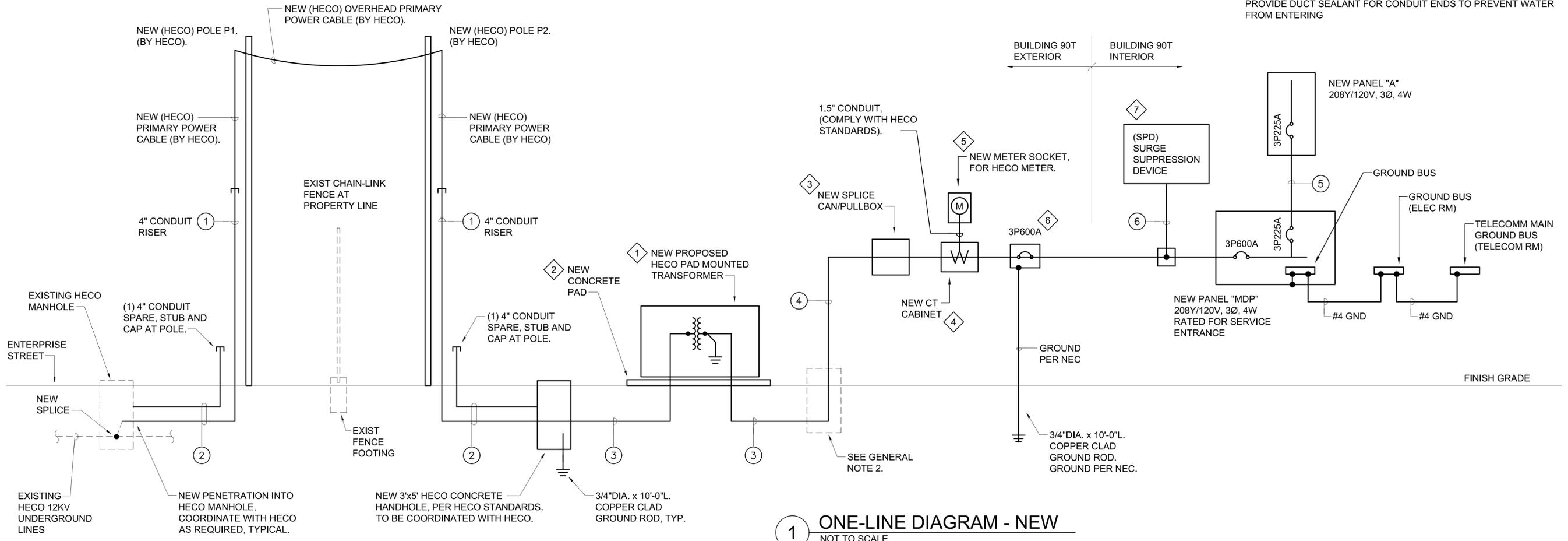
- 1. SEE "WORK RELATED TO (HECO) HAWAIIAN ELECTRIC COMPANY - NOTES", SHEET E-001 FOR ADDITIONAL INFORMATION.

AMPERE INTERRUPTING CAPACITY (AIC) RATING OF EQUIPMENT - NOTES:

- 1. THE (AIC) RATING OF THE FOLLOWING EQUIPMENT IS PENDING INFORMATION TO BE PROVIDED BY HECO:
 - A. NEW HECO PADMOUNTED TRANSFORMER
 - B. METER SOCKET
 - C. 600A ENCLOSED MAIN CIRCUIT BREAKER DISCONNECT
 - D. (SPD) SURGE SUPPRESSION DEVICE
 - E. MAIN DISTRIBUTION PANEL MDP
 - F. ELECTRICAL PANEL A

GENERAL NOTES:

- 1. PROVIDE GRS (GALVANIZED RIGID STEEL) CONDUIT FOR ALL CONDUIT RUN EXPOSED AT BUILDING EXTERIOR.
- 2. WHERE UNDERGROUND PVC CONDUITS TRANSITION FROM BELOW GRADE TO ABOVE GRADE:
 - A. PROVIDE 90-DEGREE (GRS) GALVANIZED RIGID STEEL RADIUS FACTORY ELBOW, AND CONTINUE WITH GRS CONDUIT TO ABOVE GRADE.
 - B. PROVIDE COUPLING BELOW GRADE TO TRANSITION FROM PVC CONDUIT TO GRS CONDUIT.
 - C. EXPOSED CONDUIT ABOVE FINISHED GRADE SHALL BE (GRS) GALVANIZED RIGID STEEL, UNLESS OTHERWISE NOTED.
- 3. FOR ALL UNDERGROUND DUCTS: PROVIDE DUCT SEALANT FOR CONDUIT ENDS TO PREVENT WATER FROM ENTERING



1 ONE-LINE DIAGRAM - NEW
NOT TO SCALE

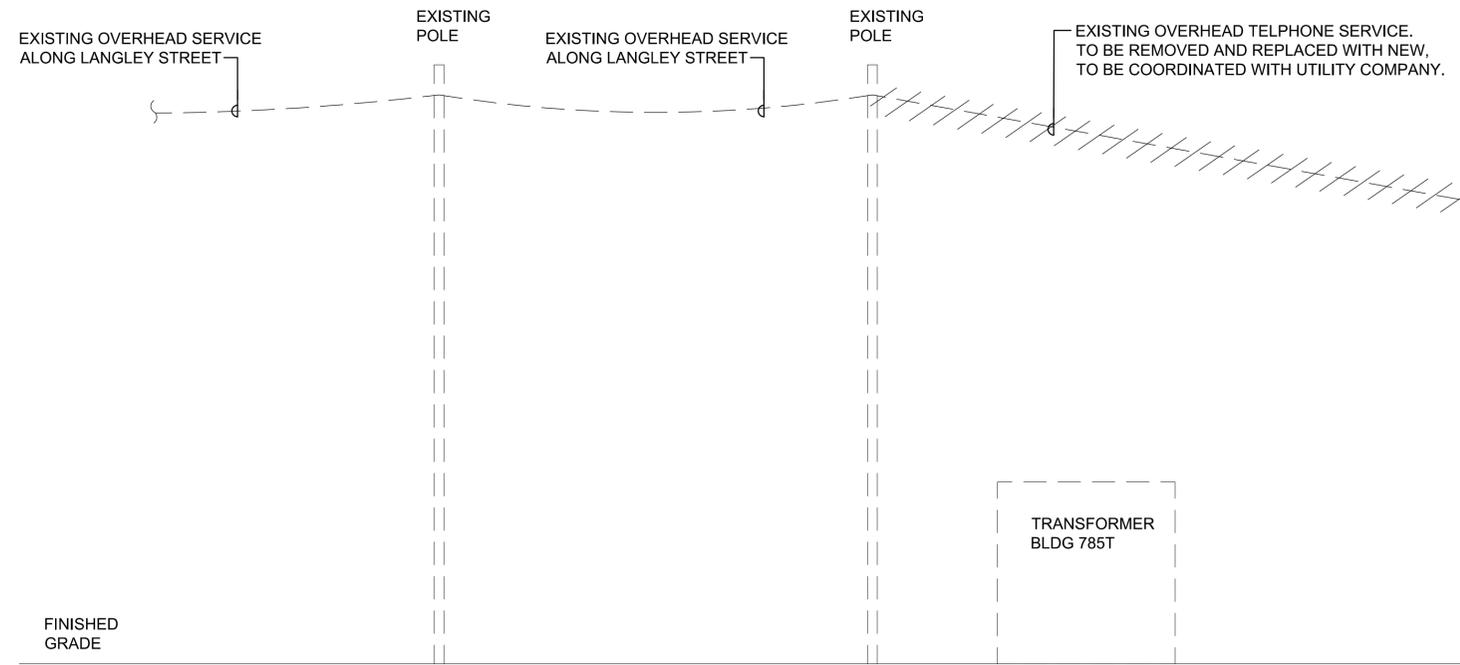


SYMBOL	DESCRIPTION	DATE	APPROVED

100% FINAL DESIGN
 SUBMITTAL DATE: 03/22/2024

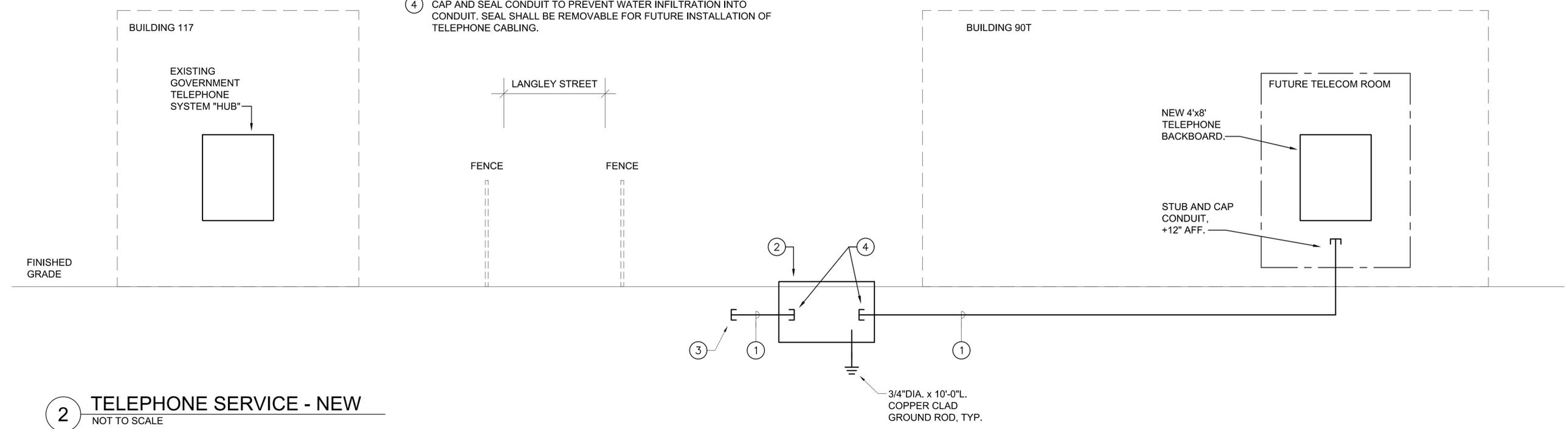
DEPARTMENT OF DEFENSE
 HAWAIIAN ARMY NATIONAL GUARD
 DESIGN AND PROJECT MANAGEMENT BRANCH
 KALAELOA, HAWAII
 BUILDING 90T
 KALAELOA B90T RESTORATION
 ONE-LINE DIAGRAM - NEW

SCALE: AS NOTED
 STATE JOB NO. CA-202209-C
 FEDERAL PROJECT NO. 15H00074
 SHEET 62 OF 67
 E-602



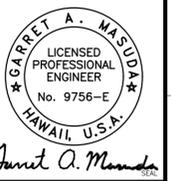
1 TELEPHONE SERVICE - DEMO
NOT TO SCALE

- NOTES:**
- ① NEW (2-EACH) 4" CONDUIT ONLY, TELEPHONE CONDUIT.
 - ② NEW 2'x4' TELEPHONE CONCRETE HANDHOLE, TRAFFIC RATED. COVER SHALL INDICATE "TELEPHONE" (CONFIRM LABELING OF COVER WITH GOVERNMENT).
 - ③ STUB, CAP AND SEAL CONDUIT 5- FEET FROM FROM HANDHOLE. FOR FUTURE TELEPHONE CONNECTION TO EXISTING GOVERNMENT TELEPHONE SYSTEM "HUB" LOCATED WITHIN BUILDING 117.
 - ④ CAP AND SEAL CONDUIT TO PREVENT WATER INFILTRATION INTO CONDUIT. SEAL SHALL BE REMOVABLE FOR FUTURE INSTALLATION OF TELEPHONE CABLING.



2 TELEPHONE SERVICE - NEW
NOT TO SCALE

- NOTES:**
- 1. NEW TELEPHONE CONDUIT AND HANDHOLE PROVISIONS TO BE COORDINATED WITH GOVERNMENT IT (INFORMATION TECHNOLOGY) DEPARTMENT.
 - 2. TELEPHONE SERVICE (CONDUIT AND CABLING PROVISIONS AND REQUIREMENTS) FROM EXISTING GOVERNMENT TELEPHONE SYSTEM "HUB" LOCATED WITHIN BUILDING 117 TO BE DETERMINED AND PROVIDED IN THE FUTURE.



SYMBOL	DESCRIPTION	DATE	APPROVED

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

STATE OF HAWAII
FACILITY MANAGEMENT OFFICE
BUILDING 90T

KALAELOA B90T RESTORATION

TELEPHONE SERVICE - DEMO AND NEW

SCALE: AS NOTED

STATE JOB NO. CA-202209-C

FEDERAL PROJECT NO. 15H00074

SHEET 63 OF 67

E-603

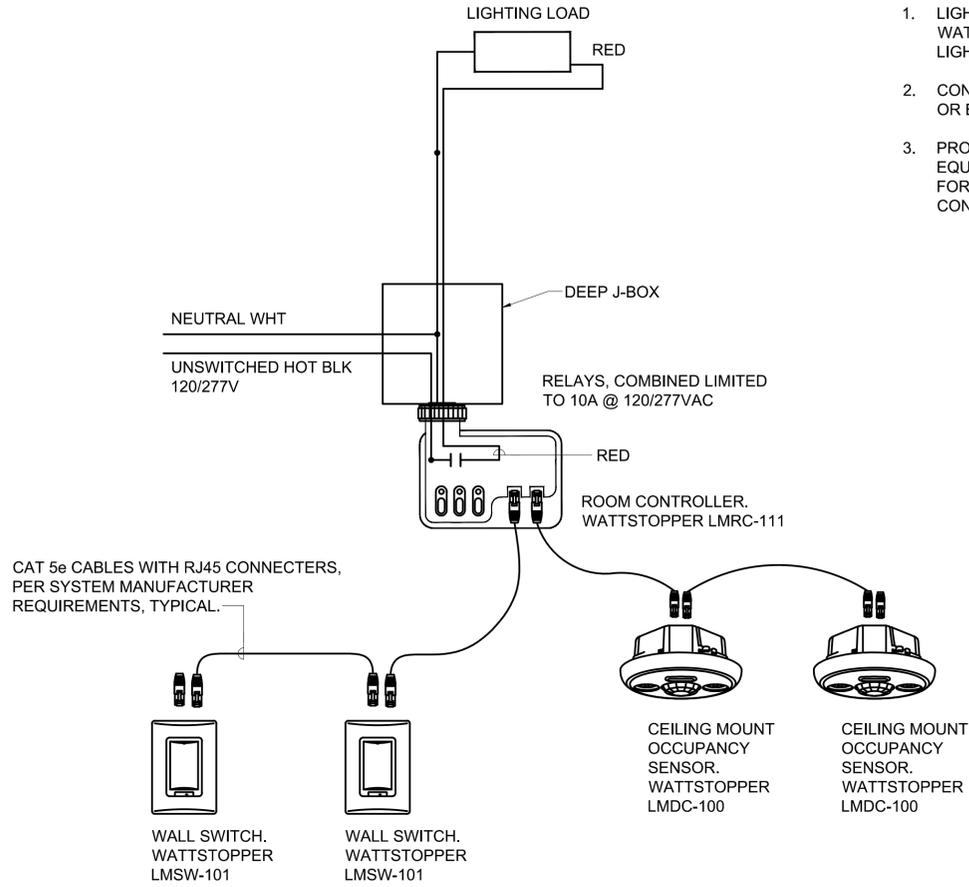
1

2

3

4

5

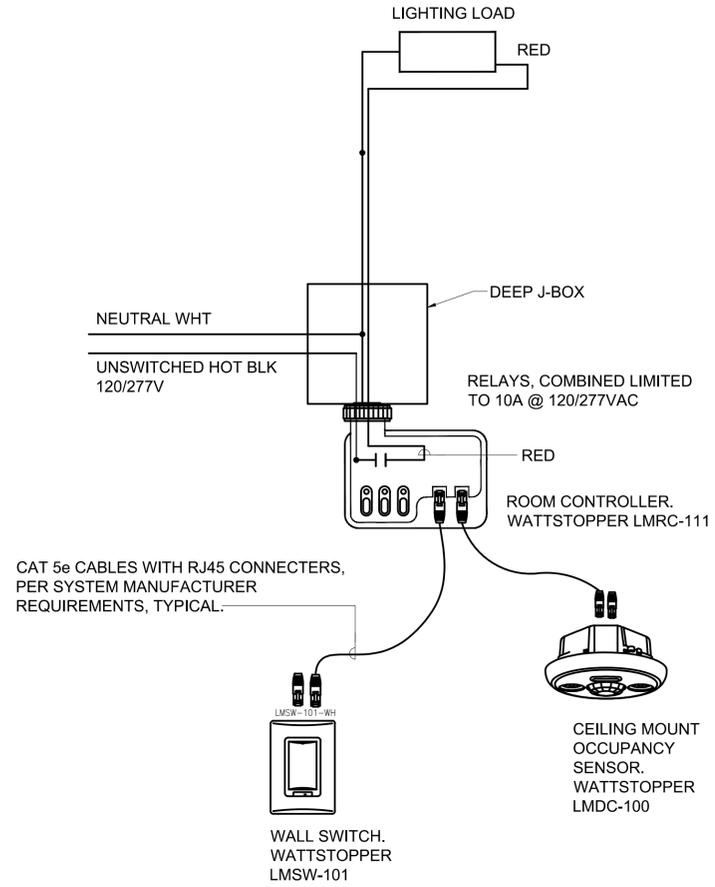


1

LIGHTING CONTROLS - TYPICAL RESTROOM
NOT TO SCALE

GENERAL NOTES:

1. LIGHTING CONTROLS DIAGRAM SHOWN IS BASED ON WATTSTOPPER DIGITAL LIGHTING MANAGEMENT (DLM) LIGHTING CONTROLS SYSTEM AND COMPONENTS.
2. CONTRACTOR SHALL PROVIDE APPROVED SYSTEM OF EQUAL OR BETTER PERFORMANCE.
3. PROVIDE ALL NECESSARY COMPONENTS, CABLING AND EQUIPMENT PER SYSTEM MANUFACTURER REQUIREMENTS FOR A COMPLETE AND FULLY OPERATIONAL LIGHTING CONTROLS SYSTEM.



2

LIGHTING CONTROLS - CORRIDOR
NOT TO SCALE



Garret A. Masuda

SYMBOL	DESCRIPTION	DATE	APPROVED

SUBMITTAL PHASE		100% FINAL DESIGN
SUBMITTAL DATE		03/22/2024
DES	JL	DRW
		ISE
		CHK
		GM

STATE OF HAWAII
FACILITY MANAGEMENT OFFICE
BUILDING 90T

DEPARTMENT OF DEFENSE
DESIGN AND PROJECT MANAGEMENT BRANCH
KALAELOA, HAWAII

KALAELOA B90T RESTORATION

DIAGRAMS

SCALE:	AS NOTED
STATE JOB NO.	CA-202209-C
FEDERAL PROJECT NO.	15H00074
SHEET	64 OF 67
E-604	

1

2

3

4

5

