GENERAL ABBREVIATIONS

A

AFF - ABOVE FINISHED FLOOR
ALT - ALTERNATE
AP - ACCESS PANEL

B

BOP - BOTTOM OF PIPE ELEV.

C

CA - COMBUSTION AIR
CAV - CONSTANT AIR VOLUME
CFM - CUBIC FEET PER MINUTE
CL - CENTERLINE
CLG - CEILING
COND - CONDENSATE/CONDENSER
CONN - CONNECTION/CONNECT
COP - CENTER OF PIPE

D

DB - DRY BULB TEMPERATURE
DDC - DIRECT DIGITAL CONTROL
DTC - DATA TERMINAL CABINET

E

EL - ELEVATION
EMCS - ENERGY MONITORING AND CONTROL SYSTEM
ESP - EXTERNAL STATIC PRESSURE
EWT - ENTERING WATER TEMP.

F

FA - FIELD ADJUSTABLE
FC - FAIL CLOSED
FD - FLOOR DRAIN
FID - FIELD INTERFACE DEVICE
FLA - FULL LOAD AMPS
FO - FAIL OPEN

G

GA - GAUGE

H

HD - HUB DRAIN

I

IE - INVERT ELEVATION

K

kW - KILOWATTS

L

LWT - LEAVING WATER TEMP.

N

NA - NOT APPLICABLE
NC - NORMALLY CLOSED
NIC - NOT IN CONTRACT
NO - NORMALLY OPEN
NPS - NOMINAL PIPE SIZE
NPT - NATIONAL PIPE THREAD
NTS - NOT TO SCALE

O

OC - ON CENTER
OED - OPEN END DUCT
OV - OUTLET VELOCITY

P

Pa - PASCALS
PaA - PASCALS ABSOLUTE
PaG - PASCALS GAUGE
PD - PRESSURE DROP

R

RA - RETURN AIR
RPM - REVOLUTIONS PER MINUTE

S

SAN - SANITARY
SOG - SLAB ON GRADE
SP - STATIC PRESSURE
SV - SUPPLY VALVE

T

TOP - TOP OF PIPE ELEVATION
TOS - TOP OF SLAB/ TOP OF STEEL
TSP - TOTAL STATIC PRESSURE

V

VP - VELOCITY PRESSURE
VTR - VENT THRU ROOF

W

W - WASTE
WB - WET BULB
WC - WATER COLUMN
WG - WATER GAUGE

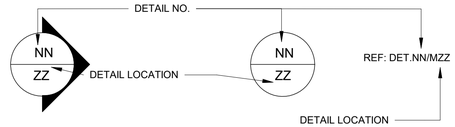
PIPING SYMBOLS

- CONTINUATION
- DROP IN PIPE
- VALVE IN RISER
- ELBOW
- ELBOW UP
- ELBOW DOWN
- TEE
- UNION
- UNION, FLANGED
- TOP CONNECTION
- BOTTOM CONNECTION
- PIPE PITCH
- VTR — VENT THRU ROOF
- CONCENTRIC REDUCER
- ECCENTRIC REDUCER
- PRV — PRESSURE RELIEF
- PRESSURE REDUCING VALVE
- TPRV — TEMP & PRESS RELIEF
- ANCHOR
- BALL JOINT
- EXPANSION LOOP
- GUIDE
- EXPANSION JOINT
- FLEXIBLE CONNECTOR
- PRESSURE/TEMPERATURE TEST PORT)
- NFWH — NON-FREEZING WALL HYDRANT
- FLOOR DRAIN WITH TRAP
- FD CO — FLOOR DRAIN WITH CLEANOUT
- FLOOR SINK WITH HALF GRATE
- FLOOR SINK WITH FULL GRATE
- DIRECTION OF FLOW
- FLOOR PENETRATION
- WH — WALL HYDRANT
- WCO — WALL CLEANOUT
- HB — HOSE BIB
- WATER HAMMER ARRESTOR/ACCESS
- THERMOMETER
- THERMOMETER WELL
- STRAINER W/BLOW-OFF AND HOSE CONNECTION
- PRESSURE GAUGE WITH COCK
- PS — PRESSURE SWITCH
- FS — FLOW SWITCH
- AV — AIR VENT, AUTOMATIC
- AIR VENT, MANUAL
- AS — AIR SEPARATOR
- FLOW METER, ORIFICE
- PETE'S PLUG

VALVES

- BALL VALVE
- GLOBE VALVE
- GATE VALVE
- CHECK VALVE
- PLUG VALVE
- SOLENOID VALVE
- CALIBRATED BALANCING VALVE
- AUTOMATIC BALANCING VALVE
- BUTTERFLY VALVE
- MODULATING TWO-WAY
- S — SOLENOID TWO-WAY
- THREE-WAY

REFERENCE SYMBOLOGY



PIPING SYSTEMS

- DOMESTIC COLD WATER
- DOMESTIC HOT WATER
- DOMESTIC HOT WATER RETURN
- SS — SANITARY SEWER
- V — VENT
- NG — NATURAL GAS
- A — COMPRESSED AIR
- F — FIRE PROTECTION
- NPW — NON-POTABLE WATER (PURPLE PIPE) PIPES SHALL BE MARKED WITH "NONPOTABLE WATER, DO NOT DRINK"
- CHS — CHILLED WATER SUPPLY
- CHR — CHILLED WATER RETURN
- HWS — HEATING WATER SUPPLY
- HWR — HEATING WATER RETURN
- CD — CONDENSATE DRAIN
- CWS — CONDENSER WATER SUPPLY
- CWR — CONDENSER WATER RETURN
- RS — REFRIGERANT SUCTION
- RL — REFRIGERANT LIQUID
- RD — ROOF DRAIN

GENERAL NOTES

A. REFER TO SPECIFICATIONS FOR MATERIALS AND METHODS OF CONSTRUCTION.

B. ALL FLOOR MOUNTED EQUIPMENT IN MECHANICAL ROOM SHALL BE MOUNTED ON 6" HIGH HOUSEKEEPING PADS. THESE PADS SHALL EXTEND 6" BEYOND THE FOOTPRINT OF THE EQUIPMENT IN ALL DIRECTIONS.

C. WHERE PIPE SIZES ARE NOT INDICATED, THEY SHALL BE IN ACCORDANCE WITH THE INTERNATIONAL PLUMBING CODE (LATEST EDITION). DOMESTIC COLD WATER PIPING SHALL BE LIMITED TO 5 FPS. DOMESTIC HOT WATER PIPING SHALL BE LIMITED TO 4 FPS.

D. TRAP PRIMER LINES SHALL BE 1/2" TYPE K COPPER. TRAP PRIMER VALVES/DISTRIBUTORS SHALL BE PROVIDED FOR ALL FLOOR DRAINS AND FLOOR SINKS. TRAP PRIMER VALVE/DISTRIBUTORS SHALL BE LOCATED IN THE NEAREST ACCESSIBLE LOCATION AND PROVIDED WITH ACCESS PANELS.

E. DRAWINGS ARE SCHEMATIC AND ARE TO SHOW DESIGN INTENT, AND IT ISTHE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE PLACEMENTS.

F. REFER TO MECHANICAL SHEETS FOR ADDITIONAL DETAILS.

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SUBMITTED BY:
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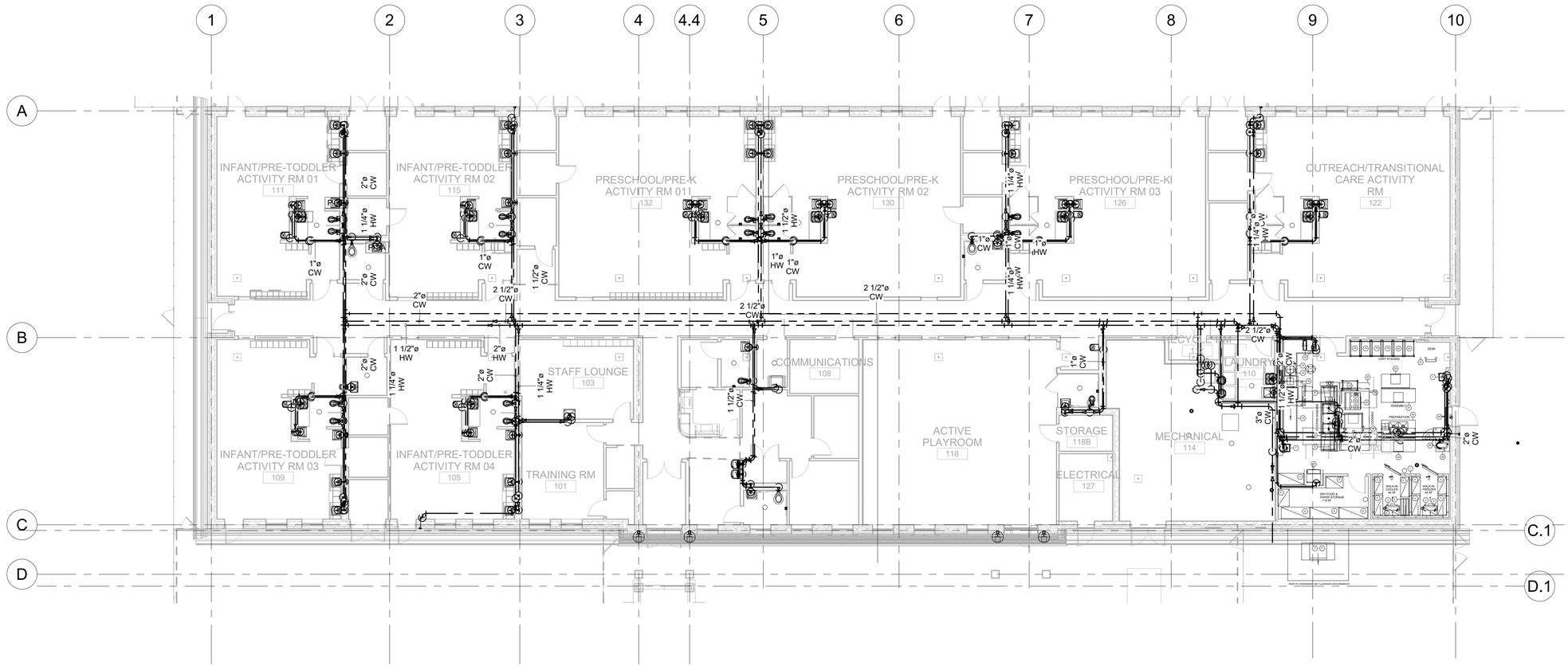
CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
PROJECT NO. 75662

PLUMBING GENERAL NOTES AND LEGENDS

SHEET ID

P-001



1 PLUMBING OVERALL PLAN

3/32" = 1'-0"

0' 4' 8' 16' 32' 64'

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

N

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CHILD DEVELOPMENT CENTER
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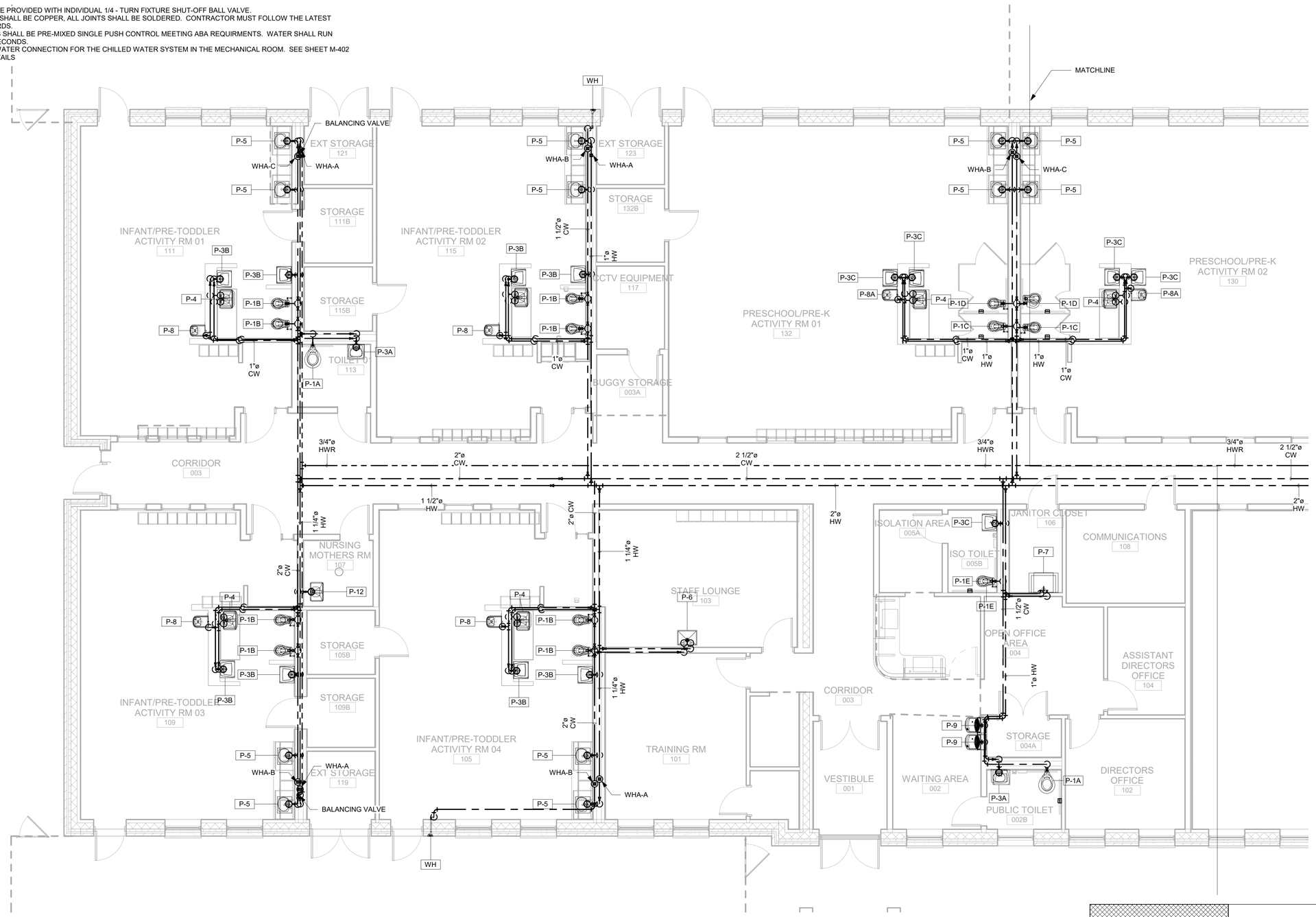
PROJECT NO. 75662

PLUMBING OVERALL FLOOR PLAN

SHEET ID

P-100

NOTES:
1. ALL FLOOR PENETRATIONS SHALL BE PROVIDED WITH A PVC SLEEVE SCHEDULE 40.
2. ALL CW, HW AND HWR PIPES SHALL BE RUN ABOVE CEILING AND COME DOWN IN THE CHASES PROVIDED BY THE ARCHITECT.
3. WATER HAMMER ARRESTOR ARE INDENTIFY AS WH-X. SEE WATER HAMMER ARRESTOR SCHEUDLE.
4. ALL DOMESTIC COLD WATER BRANCH CONNECTIONS MUST BE PROVIDED WITH A SHUT-OFF VALVE, 1/4 - TURN BALL VALVE FULL PIPE BORE SIZE.
5. ALL FIXTURES SHALL BE PROVIDED WITH INDIVIDUAL 1/4 - TURN FIXTURE SHUT-OFF BALL VALVE.
6. ALL DOMESTIC PIPING SHALL BE COPPER, ALL JOINTS SHALL BE SOLDERED. CONTRACTOR MUST FOLLOW THE LATEST FT HAMILTON STANDARDS.
7. TOILET AREA FAUCETS SHALL BE PRE-MIXED SINGLE PUSH CONTROL MEETING ABA REQUIRMENTS. WATER SHALL RUN FOR AT LEAST 10-20 SECONDS.
8. PROVIDE A MAKE-UP WATER CONNECTION FOR THE CHILLED WATER SYSTEM IN THE MECHANICAL ROOM. SEE SHEET M-402 FOR CONNECTION DETAILS



1 DOMESTIC WATER FLOOR PLAN A
3/16" = 1'-0"

SCALE: 3/16" = 1'-0"

A B

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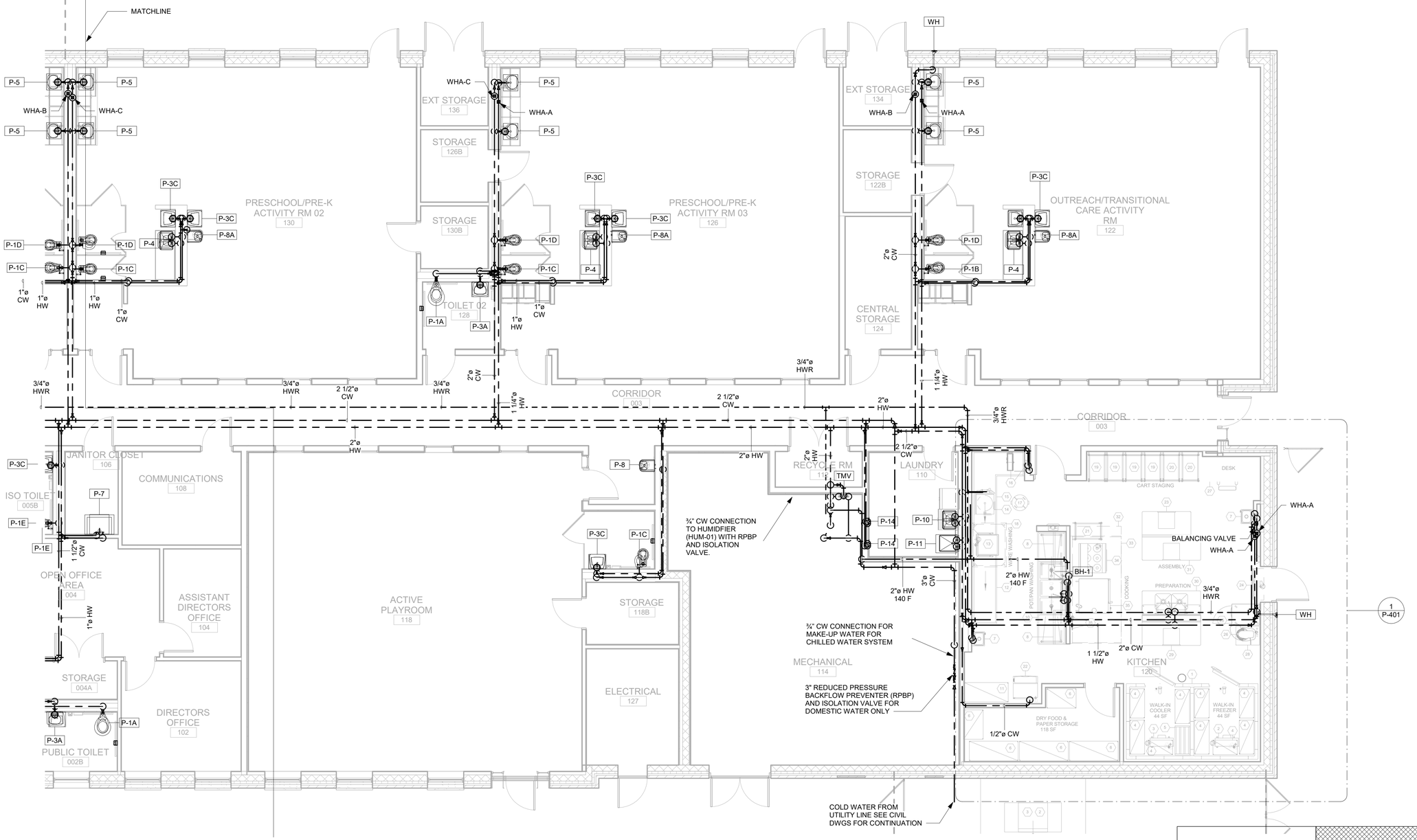
DOMESTIC WATER PIPING PLAN

SHEET ID
P-101

NOTES:
1. ALL FLOOR PENETRATIONS SHALL BE PROVIDED WITH A PVC SLEEVE SCHEDULE 40.
2. ALL CW, HW AND HWR PIPES SHALL BE RUN ABOVE CEILING AND COME DOWN IN THE CHASES PROVIDED BY THE ARCHITECT.
3. WATER HAMMER ARRESTOR ARE INDENTIFY AS WH-X. SEE WATER HAMMER ARRESTOR SCHEUDLE.
4. ALL DOMESTIC COLD WATER BRANCH CONNECTIONS MUST BE PROVIDED WITH A SHUT-OFF VALVE, 1/4 - TURN BALL VALVE FULL PIPE BORE SIZE.
5. ALL FIXTURES SHALL BE PROVIDED WITH INDIVIDUAL 1/4 - TURN FIXTURE SHUT-OFF BALL VALVE.
6. ALL DOMESTIC PIPING SHALL BE COPPER, ALL JOINTS SHALL BE SOLDERED. CONTRACTOR MUST FOLLOW THE LATEST FT HAMILTON STANDARDS.
7. TOILET AREA FAUCETS SHALL BE PRE-MIXED SINGLE PUSH CONTROL MEETING ABA REQUIRMENTS. WATER SHALL RUN FOR AT LEAST 10-20 SECONDS.
8. PROVIDE A MAKE-UP WATER CONNECTION FOR THE CHILLED WATER SYSTEM IN THE MECHANICAL ROOM. SEE SHEET M-402 FOR CONNECTION DETAILS



1 DOMESTIC WATER FLOOR PLAN B
3/16" = 1'-0"

SCALE: 3/16" = 1'-0"

A B

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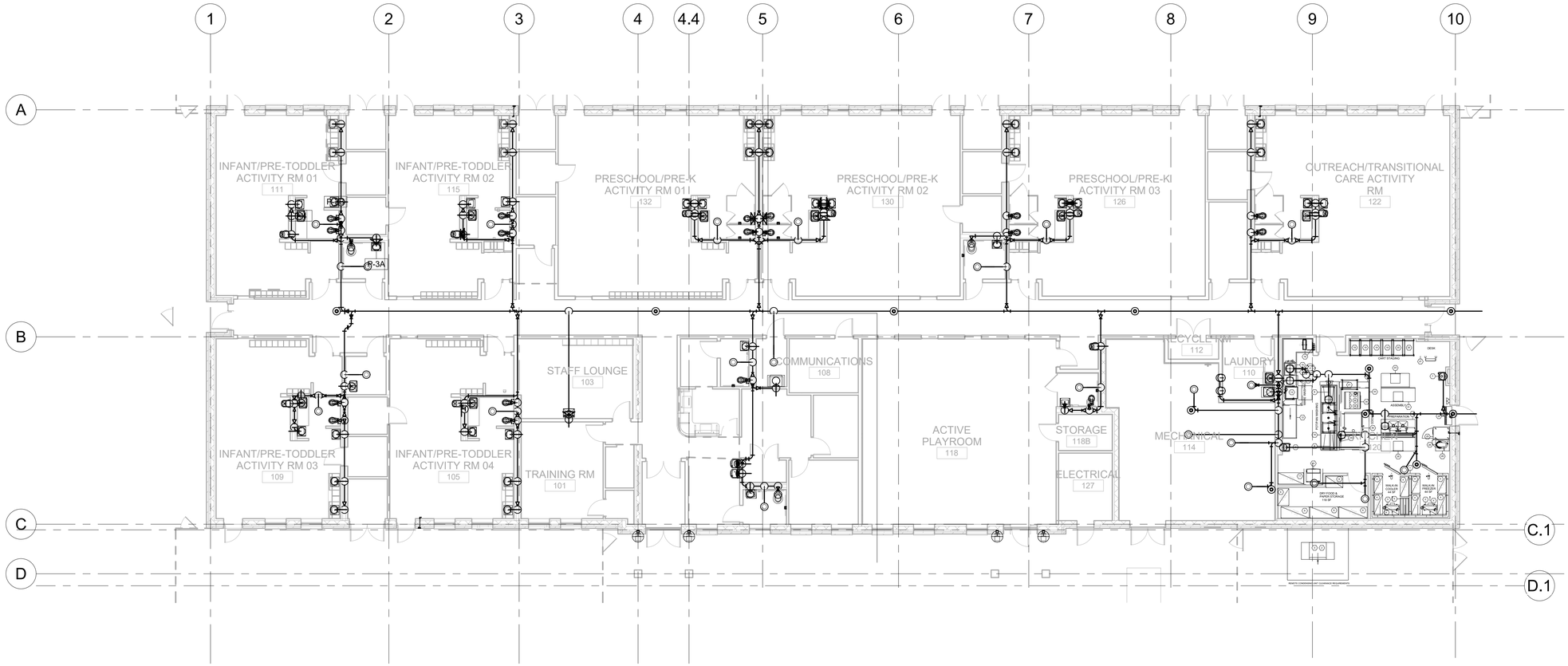
DOMESTIC WATER PIPING PLAN II

SHEET ID
P-102



1 SANITARY WASTE OVERALL PLAN

3/32" = 1'-0"

0' 4' 8' 16' 32' 64'

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

N

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PROJECT NO. 75662

SANITARY WASTE OVERALL PLAN

SHEET ID

P-103

NOTES:
1. ALL SANITARY PIPING SHALL HAVE A ¼ INCH PER FOOT SLOPE.
2. ALL SANITARY TEE CONNECTIONS SHALL BE OF THE TYPE Y-TEE.
3. ALL FLOOR DRAINS VENT TO THE NEAREST VENT BRANCHSTACK.
4. COORDINATE ALL PIPING ENTRY/EXIT BUILDING WITH CIVIL DISCIPLINE PRIOR TO EXCAVATION AND CONCRRETE WORK.
5. ALL SANITARY PIPING ARE BURIED BELOW FINISH FLOOR.
6. FLOOR SINKS LOCATED IN THE KITCHEN AREA SHALL BE VENT TO THE NEAREST VENT STACK

MATCHLINE

EXT STORAGE 121
STORAGE 111B
STORAGE 115B
INFANT/PRE-TODDLER ACTIVITY RM 01 111
TOILET 01 113
EXT STORAGE 123
INFANT/PRE-TODDLER ACTIVITY RM 02 115
STORAGE 132B
CCTV EQUIPMENT 117
BUGGY STORAGE 003A
PRESCHOOL/PRE-K ACTIVITY RM 01 132
PRESCHOOL/PRE-K ACTIVITY RM 02 130
NURSING MOTHERS RM 107
STORAGE 105B
STORAGE 109B
EXT STORAGE 119
INFANT/PRE-TODDLER ACTIVITY RM 03 109
INFANT/PRE-TODDLER ACTIVITY RM 04 105
STAFF LOUNGE 103
TRAINING RM 101
STROLLER/ CAR SEAT STORAGE 002C
STORAGE 101A
VESTIBULE 001
ISOLATION AREA 005A
ISO TOILET 005B
JANITOR CLOSET 106
COMMUNICATIONS 108
RECEPTION 005
OPEN OFFICE AREA 004
ASSISTANT DIRECTORS OFFICE 104
STORAGE 004A
WAITING AREA 002
PUBLIC TOILET 002B
DIRECTORS OFFICE 102

P-1A, P-1B, P-1C, P-1D, P-1E, P-3A, P-3B, P-3C, P-4, P-5, P-7, P-8, P-8A, P-9, P-12, FD-A, FCO
3"ø SAN, 4"ø SAN, 0.25:1

1 SANITARY WASTE PLAN A
3/16" = 1'-0"

SCALE: 3/16" = 1'-0"

A | B

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CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
PROJECT NO. 75662

SANITARY WASTE PLAN A

SHEET ID
P-104

NOTES:
1. ALL SANITARY PIPING SHALL HAVE A ¼ INCH PER FOOT SLOPE.
2. ALL SANITARY TEE CONNECTIONS SHALL BE OF THE TYPE Y-TEE.
3. ALL FLOOR DRAINS VENT TO THE NEAREST VENT BRANCHSTACK.
4. COORDINATE ALL PIPING ENTRY/EXIT BUILDING WITH CIVIL DISCIPLINE PRIOR TO EXCAVATION AND CONCRRETE WORK.
5. ALL SANITARY PIPING ARE BURIED BELOW FINISH FLOOR.
6. FLOOR SINKS LOCATED IN THE KITCHEN AREA SHALL BE VENT TO THE NEAREST VENT STACK

MATCHLINE

PRESCHOOL/PRE-K ACTIVITY RM 02 130
EXT STORAGE 136
STORAGE 126B
PRESCHOOL/PRE-K ACTIVITY RM 03 126
STORAGE 130B
TOILET 02 128
OUTREACH/TRANSITIONAL CARE ACTIVITY RM 122
CORRIDOR 003
CORRIDOR 003
JANITOR CLOSET 106
ISO TOILET 005B
COMMUNICATIONS 108
ASSISTANT DIRECTORS OFFICE 104
OPEN OFFICE AREA 004
STORAGE 004A
WAITING AREA 002
PUBLIC TOILET 002B
DIRECTORS OFFICE 102
ACTIVE PLAYROOM 118
STORAGE 118B
ELECTRICAL 127
RECYCLE RM 112
LAUNDRY 110
MECHANICAL 114
KITCHEN 120
CART STAGING
DESK
WARE WASHING
POT/PAN WASHING
ASSEMBLY
PREPARATION
COOKING
DRY FOOD & PAPER STORAGE 118 SF
WALK-IN COOLER 44 SF
WALK-IN FREEZER 44 SF
REMOTE CONDENSING UNIT CLEARANCE REQUIREMENTS

3"ø SAN
4"ø SAN
3"ø W
4"ø W
1 1/2"ø W
P-1A P-1B P-1C P-1D P-3A P-3C P-4 P-8 P-8A P-10 P-11 P-13 P-14
FD-A FD-B FCO
0.25:1

4 INCHES SANITARY PIPE INV 35.12. SEE CIVIL DWGS FOR CONTINUATION.

4 INCHES WASTE PIPE TO GREASE INTERCEPTOR SEE CIVIL DWGS FOR CONTINUATION.

1 SANITARY WASTE PLAN B
3/16" = 1'-0"

SCALE: 3/16" = 1'-0"

A B

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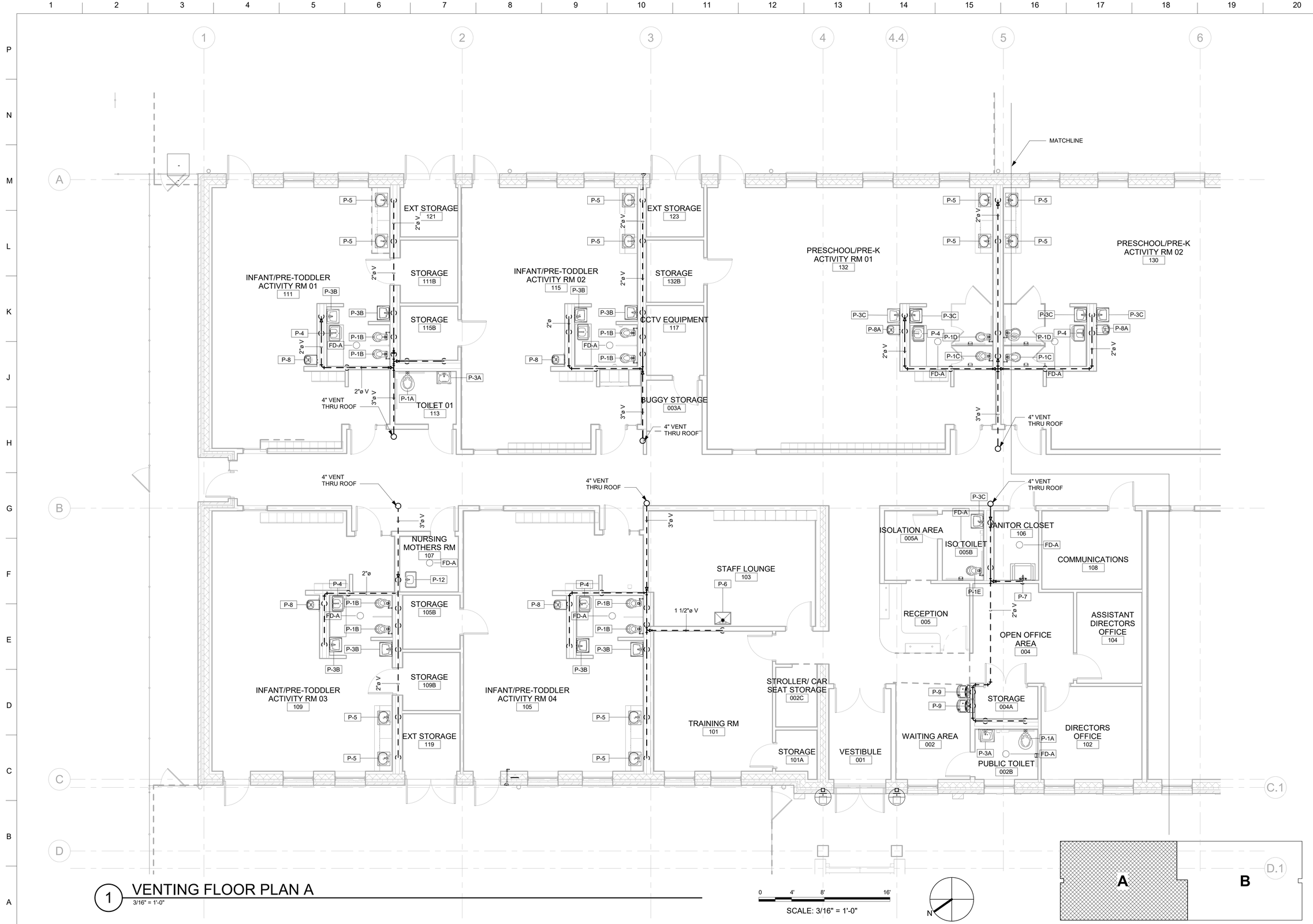
PROJECT NO. 75662

SANITARY WASTE PLAN B

SHEET ID
P-105



1 VENTING FLOOR PLAN A
3/16" = 1'-0"

SCALE: 3/16" = 1'-0"

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VENTING PLAN A

SHEET ID

P-106

MATCHLINE

EXT STORAGE 136
STORAGE 126B
STORAGE 130B
PRESCHOOL/PRE-K ACTIVITY RM 03 126
TOILET 02 128
EXT STORAGE 134
STORAGE 122B
OUTREACH/TRANSITIONAL CARE ACTIVITY RM 122
CENTRAL STORAGE 124
CORRIDOR 003
RECYCLE RM 112
LAUNDRY 110
ACTIVE PLAYROOM 118
STORAGE 118B
ELECTRICAL 127
MECHANICAL 114
KITCHEN 120
CART STAGING
WARE WASHING
POT/PAN WASHING
COOKING
ASSEMBLY
PREPARATION
WALK-IN COOLER 44 SF
WALK-IN FREEZER 44 SF
DRY FOOD & PAPER STORAGE 118 SF
MECHANICAL YARD 125
REMOTE CONDENSING UNIT CLEARANCE REQUIREMENTS

P-1A P-1B P-1C P-1D P-3A P-3C P-4 P-5 P-7 P-8 P-8A P-10 P-11 P-13 P-14 FD-A FD-B 2"ø V 3"ø V 4" VENT THRU ROOF

1 VENTING FLOOR PLAN B
3/16" = 1'-0"

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

N

A B

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CHILD DEVELOPMENT CENTER
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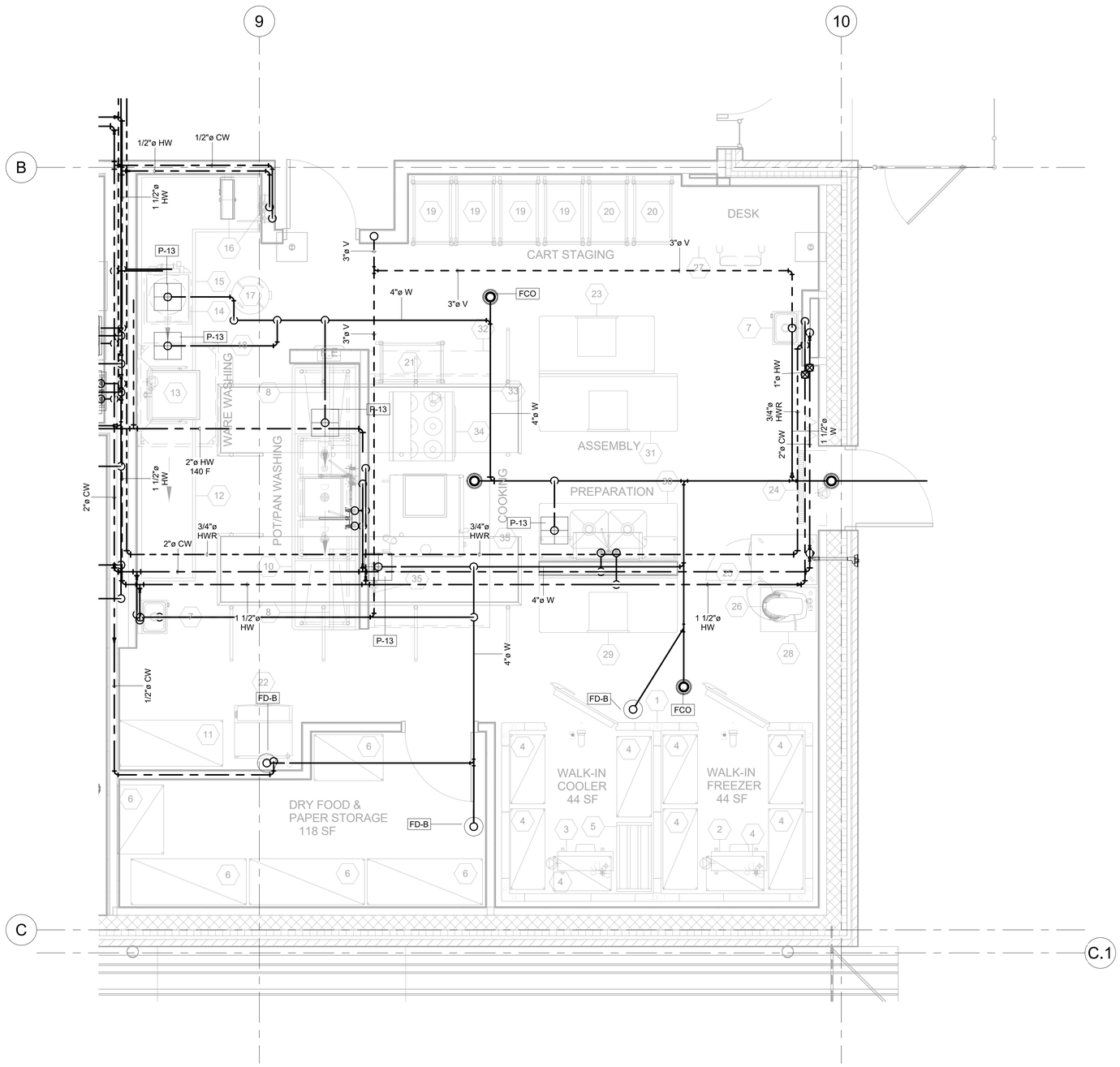
PROJECT NO. 75662

VENTING PLAN B

SHEET ID
P-107

NOTES:

1. SEE FOOD SERVICE EQUIPMENT DRAWINGS FOR MORE INFORMATION.



1 ENLARGE KITCHEN PLAN

3/8" = 1'-0"

0 2' 4' 8'

SCALE: 3/8" = 1'-0"

N

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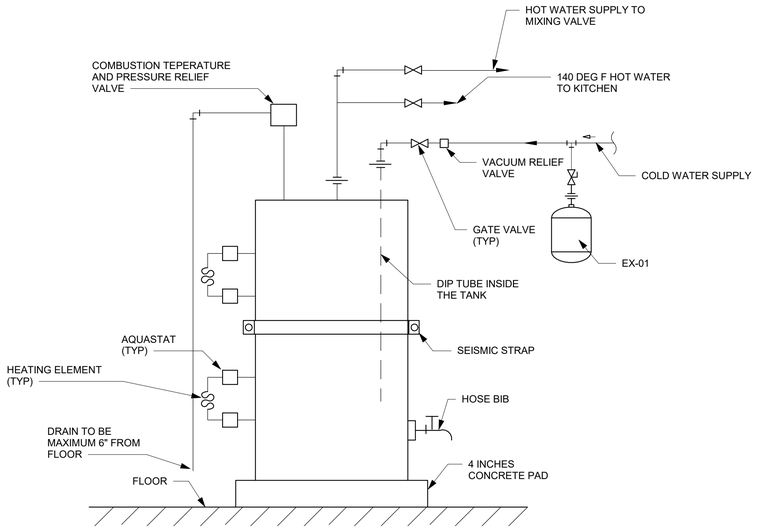
CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
PROJECT NO. 75662

KITCHEN

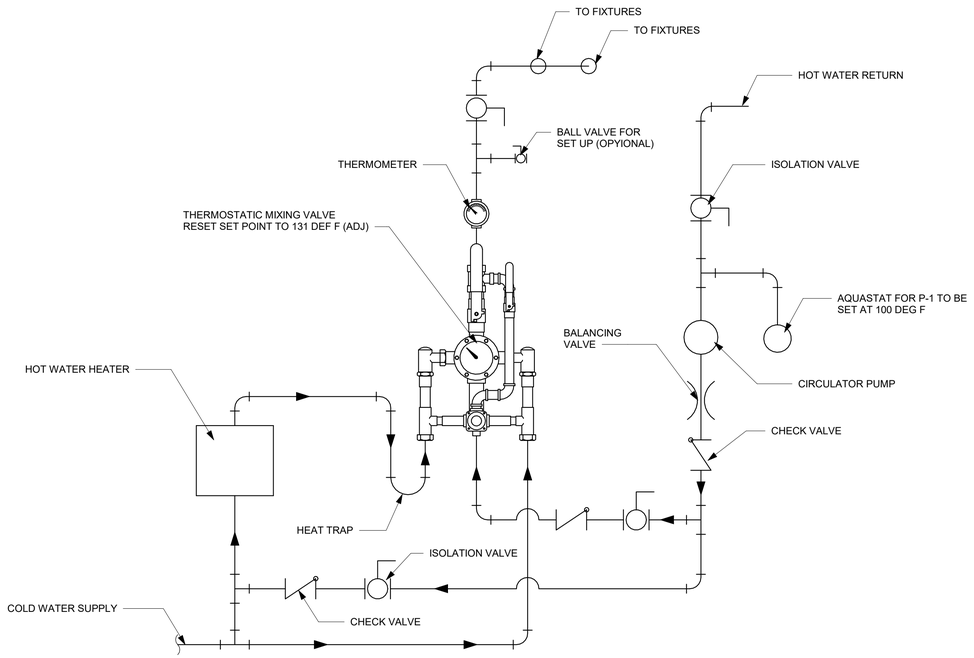
SHEET ID

P-401



1 ELECTRIC WATER HEATER DETAIL

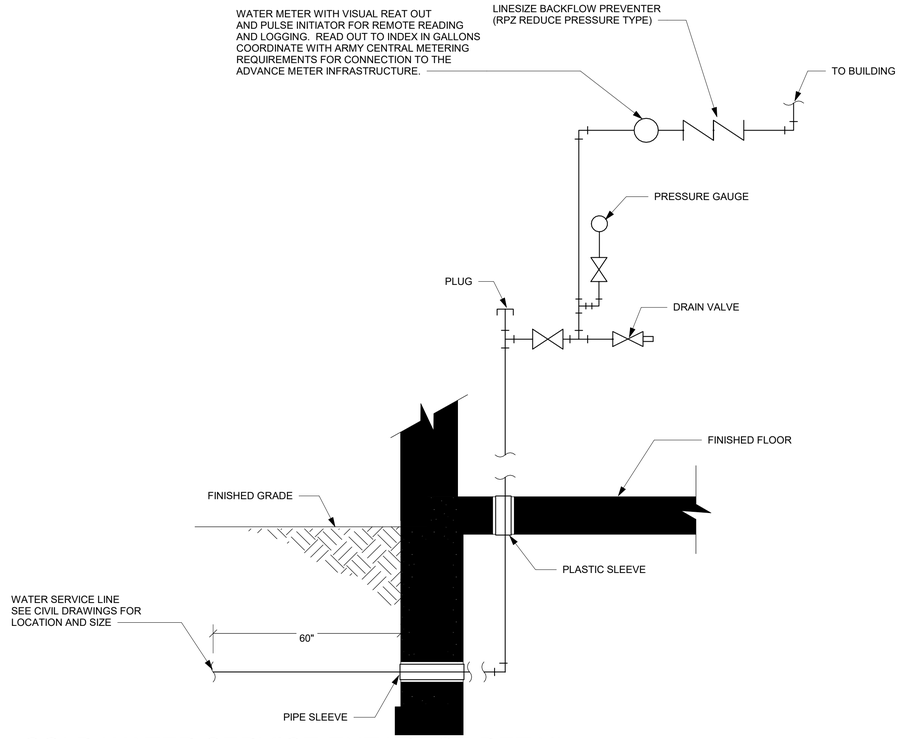
NTS



NOTE: A SEPARATE "POINT-OF-USE" MIXING VALVE TO BE PROVIDED AT EACH LAVATORY (NOT SHOWN HERE)

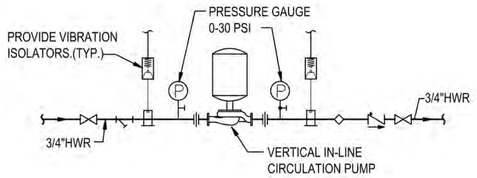
2 MIXING VALVE DETAIL

NTS



3 COLD WATER SERVICE ENTARNCE DETAIL (TYP)

NTS



4 INLINE PUMP DETAIL

NTS

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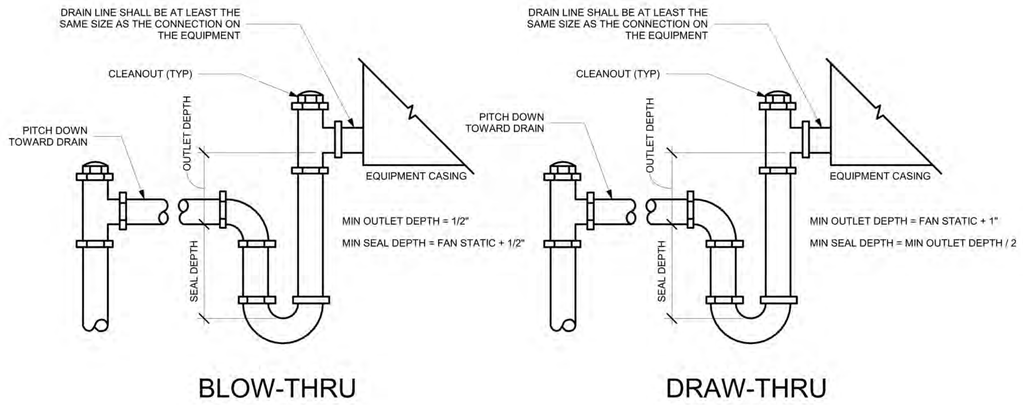
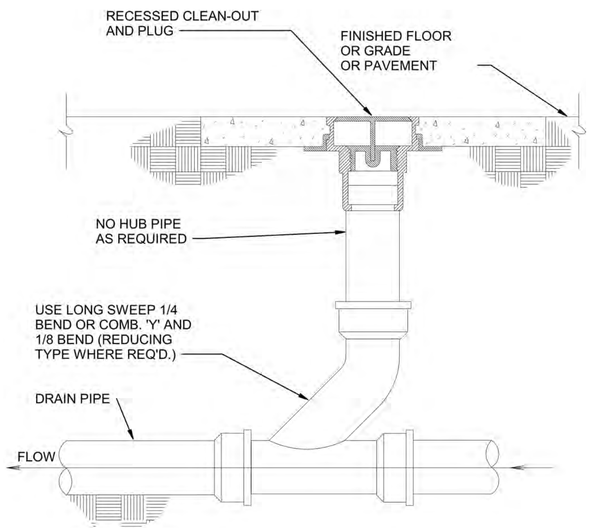
PLUMBING DETAILS

SHEET ID

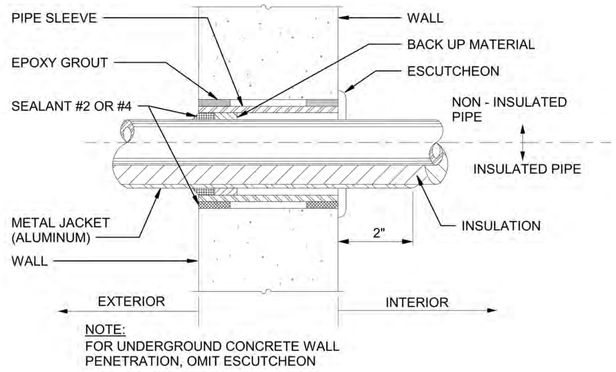
P-501



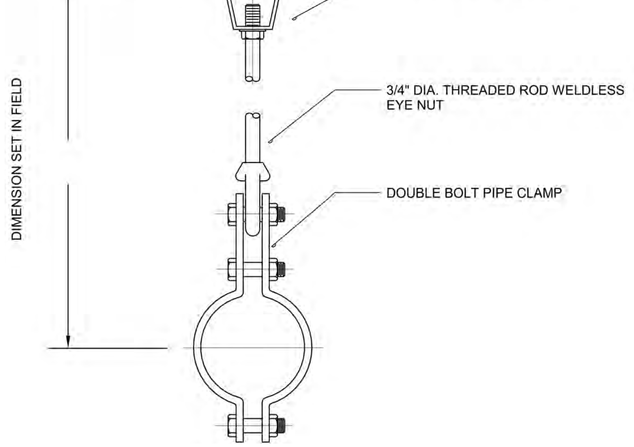
1 CONDENSATE DRAIN DETAIL
NTS



2 FLOOR CLEANOUT DETAIL
NTS



3 PIPE PENETRATION DETAIL
NTS



4 PIPE SUPPORT DETAIL
NTS

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

ISSUE DATE: AUGUST 29, 2025
SOLICITATION NO.: W912DS24F0031
CONTRACT NO.: W912DS15D0007

DESIGNED BY: FWB
DRAWN BY: FWB
CHECKED BY: CHECKED
SUBMITTED BY:
SIZE: ANSI D

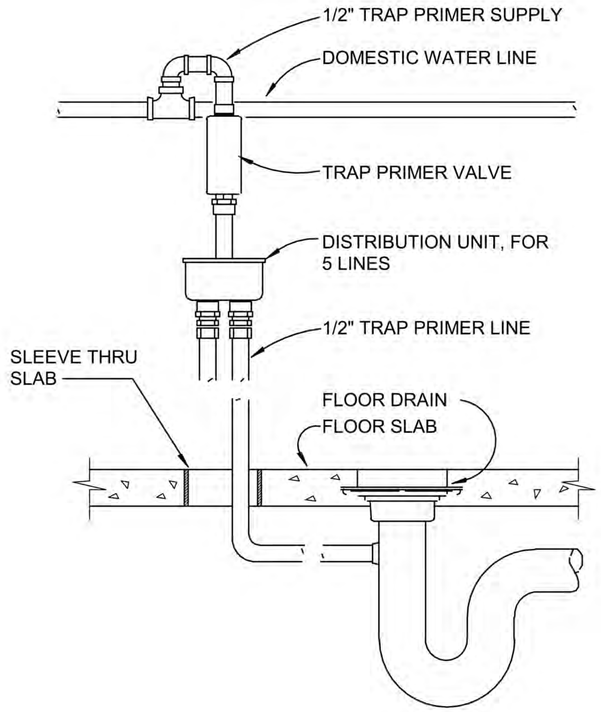
US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK, NY 10278

CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
PROJECT NO. 75662

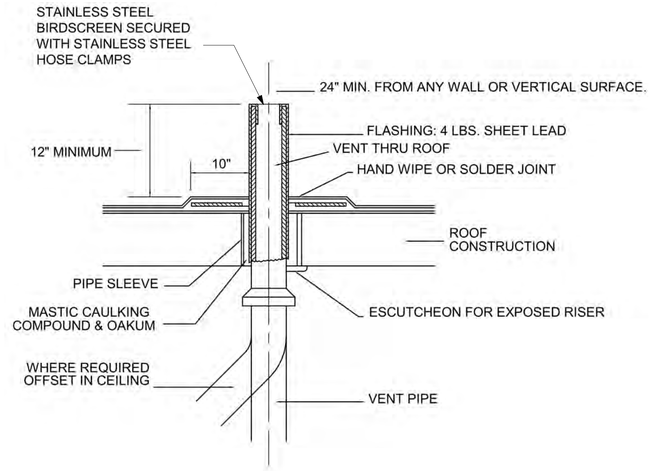
PLUMBING DETAILS

SHEET ID

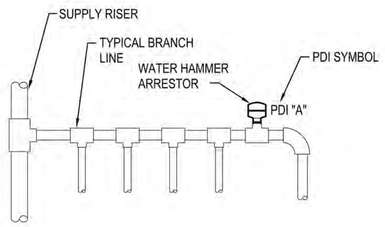
P-502



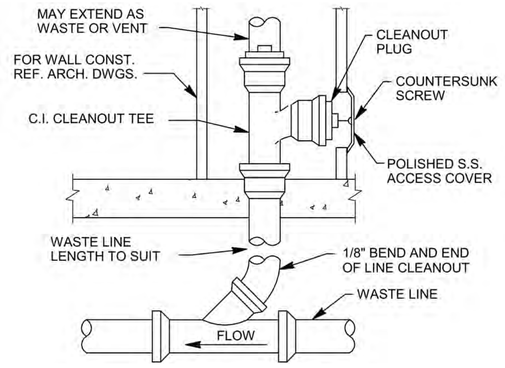
1 TRAP PRIMER DETAIL
NTS



2 VENT THRU ROOF DETAIL
NTS



3 WATER HAMMER ARRESTOR DETAIL
NTS



4 WALL CLEANOUT DETAIL
NTS

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MARK	DESCRIPTION	DATE

DESIGNED BY: FWB
DRAWN BY: FWB
CHECKED BY: CHIEF
SUBMITTED BY:
SIZE: ANSI D
ISSUE DATE: AUGUST 29, 2025
SOLICITATION NO.: W912DS24F0031
CONTRACT NO.: W912DS15D0007

US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK, NY 10278

CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
PROJECT NO. 75682

PLUMBING DETAILS

SHEET ID
P-503

PLUMBING FIXTURE SCHEDULE

ABBREV	MARK	DESCRIPTION	MAX. FLOWRATE (GPM OR GPF)	MINIMUM CONNECTION SIZES				REMARKS
				CW	HW	WASTE	VENT	
WC	P-1	WATER COSET (1.28 GPF)	1.28	1"	N/A	4"	2"	ADULT FIXTURE, FLOOR MOUNTED
AWC	P-1A	ACCESIBLE WATER CLOSET (1.28 GPF)	1.28	1"	N/A	4"	2"	ADULT FIXTURE FLOOR MOUNTED, MANUAL ACTIVATION, HANDICAP ACCESSIBLE
WC	P-1B	WATER COSET (1.28 GPF)	1.28	1"	N/A	4"	2"	PEDIATRIC FIXTURE, FLOOR MOUNTED, 10"-11" AFF TO RIM
WC	P-1C	WATER COSET (1.28 GPF)	1.28	1"	N/A	4"	2"	PEDIATRIC FIXTURE, FLOOR MOUNTED, 13"-14" AFF TO RIM
WC	P-1D	WATER COSET (1.28 GPF)	1.28	1"	N/A	4"	2"	PEDIATRIC FIXTURE, FLOOR MOUNTED, ABA 10" - 11" AFF TO RIM
WC	P-1E	WATER COSET (1.28 GPF)	1.28	1"	N/A	4"	2"	PEDIATRIC FIXTURE, FLOOR MOUNTED, 15" AFF TO RIM
ALAV	P-3A	LAVATORY (0.5 GPM)	0.50	1/2"	1/2"	1-1/2"	1-1/2"	ADULT FIXTURE, WALL MOUNTED, ABA
LAV	P-3B	LAVATORY (0.5 GPM)	0.50	1/2"	1/2"	1-1/2"	1-1/2"	PEDIATRIC FIXTURE, WALL MOUNTED, 17" AFF TO RIM, PRE-MIXED SINGLE PUSH CONTROL ABA FAUCET, 15-20 SECONDS TIMER MINIMUM (ADJUSTABLE)
LAV	P-3C	LAVATORY (0.5 GPM)	0.50	1/2"	1/2"	1-1/2"	1-1/2"	PEDIATRIC FIXTURE, WALL MOUNTED, 20" AFF TO RIM, PRE-MIXED SINGLE PUSH CONTROL ABA FAUCET, 15-20 SECONDS TIMER MINIMUM (ADJUSTABLE)
SK	P-4	DIAPER CHANGING TABLE SINK (0.5 GPM)	0.50	1/2"	1/2"	1-1/2"	1-1/2"	SINK IS INTEGRAL FIXTURE SEE INTERIORS FOR DETAILS
SK	P-5	FOOD PREP/ARTS SINK (0.5 GPM)	0.50	1/2"	1/2"	1-1/2"	1-1/2"	UNDERMOUNTED STAINLESS STEEL WITH WIDESPREAD FAUCET
KS	P-6	KITCHEN SINK (0.5 GPM)	0.50	1/2"	1/2"	1-1/2"	1-1/2"	304 SS , 18 GA SINK, UNDERMOUNT DUAL BOWL 16"X19"X7-1/2" EA, OVERALL 18" X 42", BASIS OF DESIGN: JUST MFG# UD-1842-A OR APPROVED EQUAL, INCLUDING "GB" GARBAGE DISPOSER BELOW
MS	P-7	MOP SINK (1.5 GPM)	1.50	3/4"	3/4"	3"	1-1/2"	PRE-CAST TERRAZO OR S.S; MIN 24' X 24' X10' HT. W/S.S CAP ON ALL CURBS; W/WALL MTD CHROME FAUCET, VACUME-BREAKER; PAIL-HOOK; 3/4' D. 30' HOSE
DF	P-8	DRINKING FOUNTAIN	N/A	3/4"	3/4"	1-1/4"	1-1/2"	WALL MOUNTED, 17" AFF TO RIM. PROVIDE A WALL PLATE BACKSPLASH
DF	P-8A	DRINKING FOUNTAIN	N/A	3/4"	3/4"	1-1/4"	1-1/2"	WALL MOUNTED, 20" AFF TO RIM. PROVIDE A WALL PLATE BACKSPLASH
EWC	P-9	ELECTRIC WATER COOLER (SINGLE UNIT)	N/A	1/2"	N/A	1-1/4"	1-1/4"	SINGLE UNIT (STANDARD & ACCESSIBLE) WITH BOTTLE FILL-UP
LS	P-10	LAUNDRY ROOM SINK	0.5	1/2"	1/2"	1-1/2"	1-1/2"	UNDERMOUNTED STAINLESS STEEL
LT	P-11	LAUNDRY TRAY	2.2	1/2"	1/2"	1-1/2"	1-1/2"	4-LEG STAND, ONE PIECE MOLDED TUB IMPACT RESISTANT POLYPROPLYENE 40"x24"x34" APPROX. DIMENSIONS
NS	P-12	NURSING MOTHER'S ROOM SINK	0.50	1/2"	1/2"	1-1/2"	1-1/2"	UNDERMOUNTED ABA LAVATORY 22"X18"X10" DEEP SINK WITH A GOOSE NECK FAUCET
FS	P-13	FLOOR SINK	_	_	_	4"	2-1/2"	12X12x6 STAINLESS STEEL, CORROSSION RESSISTANT WITH SEDIMENT BUCKET. 3/4 GRATE WITH OPENING FOR DRAINAGE PIPING
WM	P-14	WASHING MACHINE CONNECTION BOX		3/4"	3/4"	2"	1-1/4"	SEE INTERIORS FOR REQUIREMENT. ALL SHALL BE PROVIDED WITH RECESS VALVE BOXES FOR WASHING MACHINE HOSE CONNECTIONS.
FD-A		FLOOR DRAIN (TYPE A)	_	_	_	3"	2-1/2"	FLUSH, FINISHED CHROME-BRASS, WITH TRAP BARRIER SEAL
FD-B		FLOOR DRAIN (TYPE B)	_	_	_	4"	2-1/2"	FLUSH, FINISHED CHROME-BRASS, WITH TRAP BARRIER SEAL
FWCO		FINISHED WALL CLEAN OUT	_	_	_	_	_	FINISHED CHROME-BRASS
FCO		FINISHED FLOOR CLEAN OUT	_	_	_	_	_	FINISHED FLOOR CLEAN OUT, ADJUSTABLE FLUSHED TO FLOOR, NICKEL BRONZE FINISHED. (SAME MATERIAL AND FINISH AS DRAINAGE PIPE)
CO		CLEAN OUT	_	_	_	_	_	CLEAN OUT (SAME MATERIAL AND FINISH AS DRAINAGE PIPE)
HB		HOSE BIB		3/4"	_	_	_	PROVIDE WITH VACUUM BREAKER
WH		WALL HYDRANT (FREEZE-PROOF TYPE)		3/4"	_	_	_	PROVIDE WITH VACUUM BREAKER

BOOSTER HEATING SCHEDULE

DESIGNATION	LOCATION	INPUT (kW)	ELECTRICAL DATA (V/PH/HZ)	AMPS	NOTES
BH-1	KITCHEN	9 kW	480/3/60	10.8	1, 2

1. PROVIDE DISCONNECT SWITCH
2. PROVIDE COMPLETE WITH CONTROLS, SAFETY OVERRIDES, ISOLATION AND SAFETY VALVES

WATER HEATER SCHEDULE

DESIGNATION	LOCATION	INPUT (kW)	STORAGE (GAL)	RECOVERY @ 100 DEG F (GPH)	DIMENSIONS (HT" x DIA")	ELECTRICAL DATA	Amperage Draw	REMARK
DWH-1	MECH RM	75 kW	100	310	61-0" x 28"	480V/ 3PH /60HZ	150 Amps	SEE NOTES: 1 THRU 5

NOTES:

1. PROVIDE LOCAL SAFETY DISCONNECT SWITCH.
2. PROVIDE MINIMUM 10 YEAR WARRANTY
3. SET-POINT TEMPERATURE OF WATER HEATER SHALL BE 140 DEG F; SET FINAL MIXED TEMP AT 131 DEG F AT CENTRAL MIXING VALVE (SEE PLUMBING DETAILS)
4. WATER HEATER SHALL BE ASME RATED; APPROXIMATE SHIPPING WEIGHT 750 LBS.
5. ELECTRICAL AND VOLTAGE CHARACTERISTICS LISTED IS TENTATIVE, CONTRACTOR MAY PROPOSE ALTERNATIVE OPTION PROVIDED IT BE COORDINATED WITH ELECTRICAL DISCIPLINE.

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

ISSUE DATE: AUGUST 29, 2025
SOLICITATION NO.: W912DS24F0031
CONTRACT NO.: W912DS19D0007

DESIGNED BY: FWB
DRAWN BY: FWB
CHECKED BY: CHARLES
SUBMITTED BY:
SIZE: ANSI D

US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK, NY 10278

CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
PROJECT NO. 75682

PLUMBING SCHEDULES

SHEET ID

P-601

WATER HAMMER ARRESTER SCHEDULE

DESIGNATION	DESCRIPTION	TYPE	FIXTURE UNITS	REMARKS
WHA-AA	WATER HAMMER ARRESTER	AA	1-3	
WHA-A	WATER HAMMER ARRESTER	A	1-11	SEE NOTES: #1 THRU #2
WHA-B	WATER HAMMER ARRESTER	B	12-32	
WHA-C	WATER HAMMER ARRESTER	C	33-60	

NOTES:
1.PROVIDE COMMERCIAL-TYPE WATER HAMMER ARRESTER
2. SIZE AND LOCATE IN ACCORDANCE WITH PDI WH 201, WATER HAMMER ARRESTERS STANDARD AND MANUFACTURER'S RECOMMENDATION

PLUMBING EXPANSION TANK SCHEDULE

DESIGNATION	LOCATION	SERVICE	TANK ACCEPTANCE VOLUME (GALLONS)	TANK VOLUME (GALLONS)	MAXIMUM OPERATING PRESSURE (PSI)
EX-01	MECHANICAL ROOM	DOMESTIC HOT WATER HEATER	1.1	5	150

HOT WATER RECIRCULATION PUMPS

MARK	DESIGNATION	SERVICE		PUMP TYPE	SPEED	SEQUENCE	LOCATION	FLOWRATE	DISCHARGE PRESSURE	RPM	IMPELLAR DIAMETER (IN.)	% EFFICIENCY	MOTOR				REMARKS
		SYSTEM	OPERATION					GPM	FT HD				POWER (HP)	VOLTS	PH	HZ	
1	P-1	DOMESTIC HOT WATERHEATER CIRCULATING PUMP	DUTY	IN-LINE	CONSTANT	INDEX TO START/STOP VIA ACQUASTAT	MECHANICAL ROOM	5	25	3,300	2.0	24.20	1/6	208	1	60	SEE NOTES: 1, 2, & 3

NOTES:
1. CAPACITIES AND RATINGS ARE FOR 100% WATER.
2. PROVIDE LOCAL SAFETY DISCONNECT SWITCH.
3. PROVIDE ACQUASTAT TO INITIATE PUMP "START / STOP". SET PUMP TO START AT 100 DEG F (ADJUSTABLE) AND BELOW, SET PUMP TO STOP AT 122 DEG F AND ABOVE. (SEE PLUMBING DWG DETAIL)

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

ISSUE DATE: AUGUST 29, 2025
SOLICITATION NO.: W912DS22#F0031
CONTRACT NO.: W912DS15D0007

DESIGNED BY: FWB
DRAWN BY: FWB
CHECKED BY: Checker
SUBMITTED BY:
SIZE: ANSI D

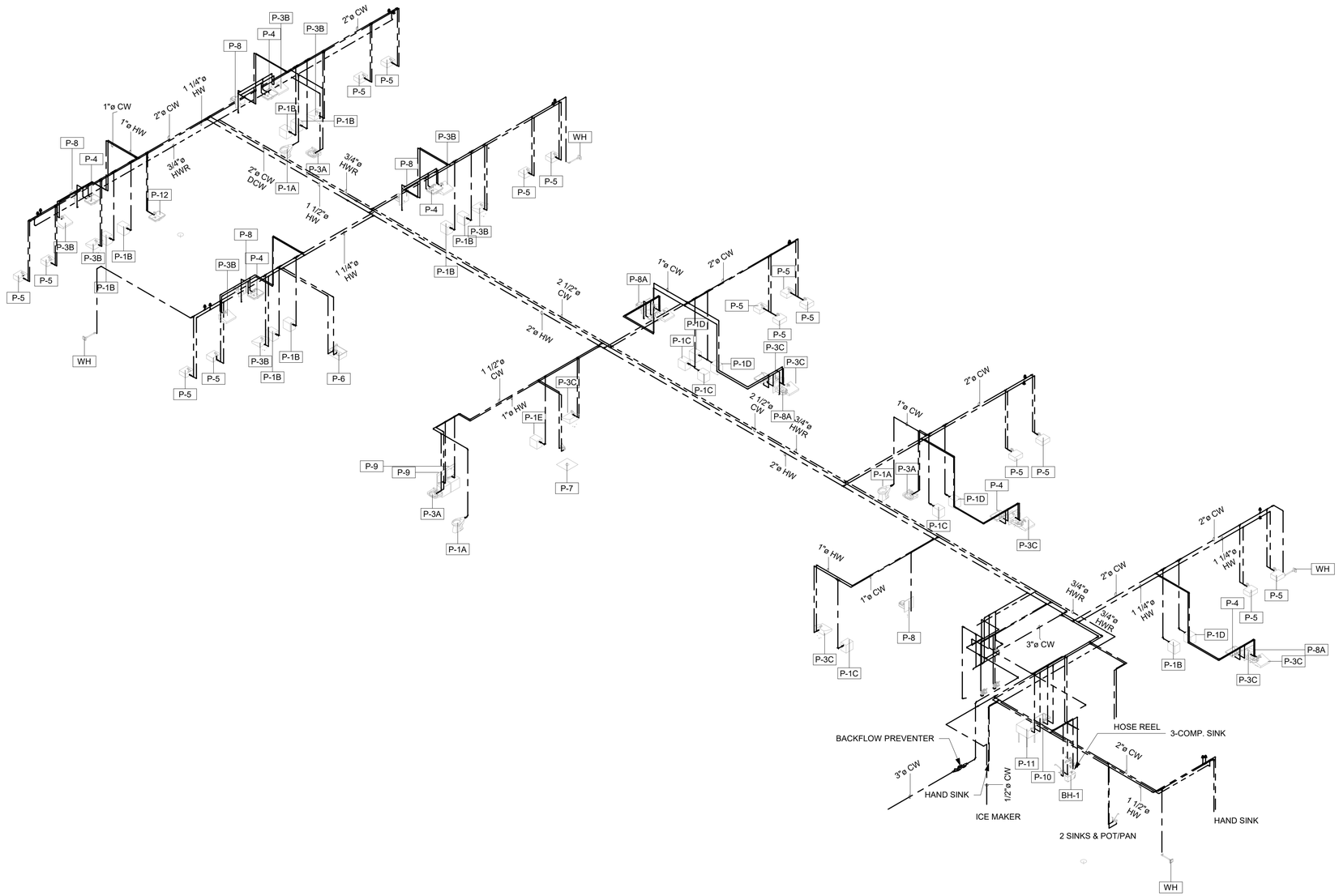
US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK, NY 10278

CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
PROJECT NO. 75682

PLUMBING SCHEDULES II

SHEET ID

P-602



1 DOMESTIC WATER ISOMETRIC

NTS

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

ISSUE DATE: AUGUST 29, 2025
SOLICITATION NO.: W912DS24F0031
CONTRACT NO.: W912DS15D0007

DESIGNED BY: FWB
DRAWN BY: FWB
CHECKED BY: CHECKED
SUBMITTED BY:
SIZE: ANSI D

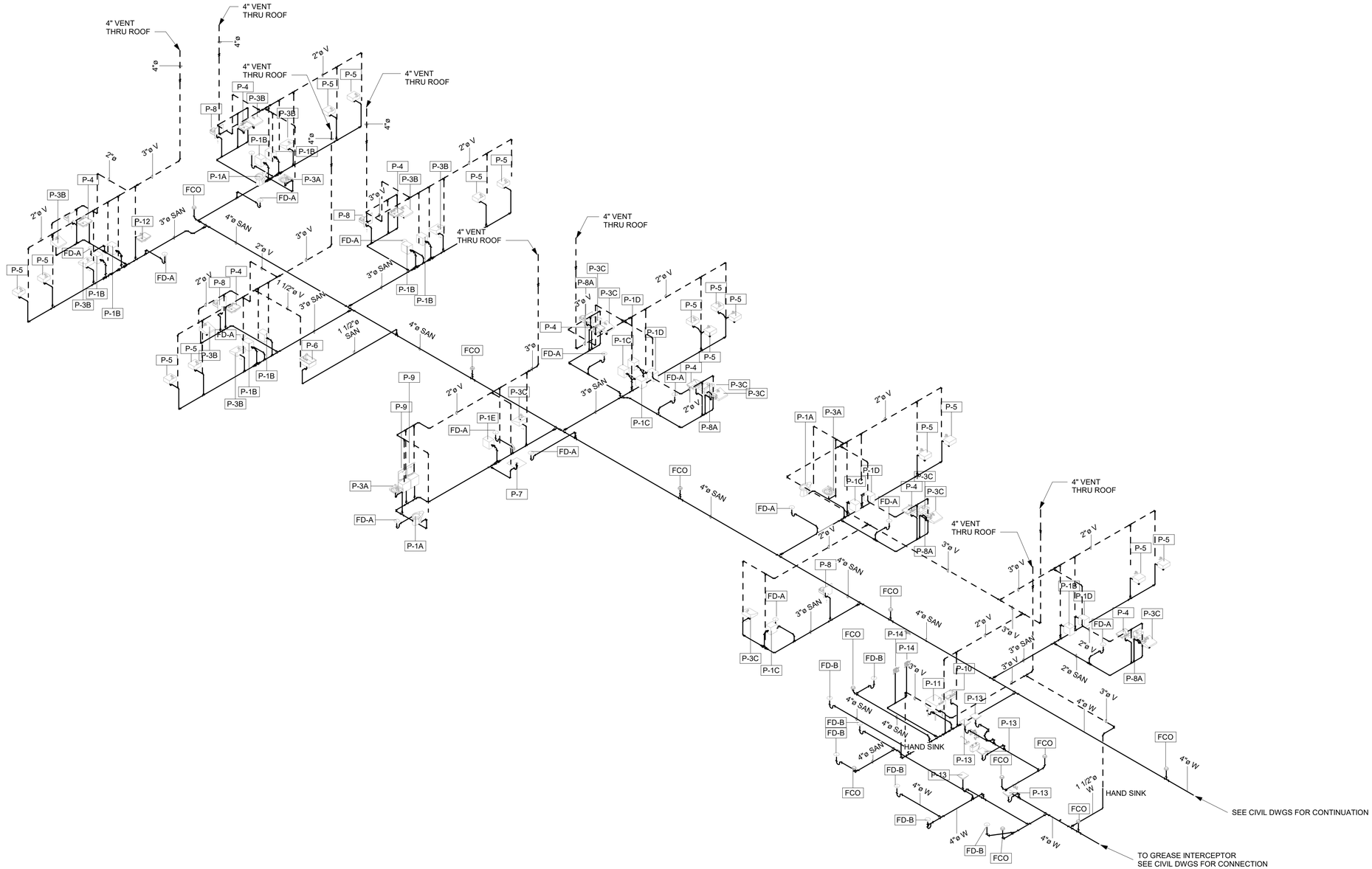
US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK, NY 10278

CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
PROJECT NO. 75662

DOMESTIC WATER RISER DIAGRAM

SHEET ID

P-701



1 SANITARY WASTE ISOMETRIC
NTS

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

DESIGNED BY: FWB
DRAWN BY: FWB
CHECKED BY: Checker
SUBMITTED BY:
SIZE: ANSI D

ISSUE DATE: AUGUST 29, 2025
SOLICITATION NO.: W912DS24F0031
CONTRACT NO.: W912DS15D0007

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NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK, NY 10278

CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
PROJECT NO. 75662

SANITARY WASTE DRAINAGE RISER DIAGRAM

SHEET ID

P-702

GENERAL ABBREVIATIONS

A	----------
AD	ACCESS DOOR
AFF	ABOVE FINISHED FLOOR
AFMS	AIR FLOW MEASURING STATION
AHU	AIR HANDLING UNIT
AL	ACOUSTIC LINING
AP	ACCESS PANEL
ATC	AUTOMATIC TEMPERATURE CONTROL
B	----------
BHP	BRAKE HORSEPOWER
BOD	BOTTOM OF DUCT
BOP	BOTTOM OF PIPE
BTU	BRITISH THERMAL UNITS
BTUH	BTU'S PER HOUR
C	----------
CC	COOLING COIL
CD	CEILING DIFFUSER
CDR	CEILING DIFFUSER, ROUND
CFM	CUBIC FEET PER MINUTE
COND	CONDENSATE
COR	CONTRACTING OFFICER'S REP
CV	CONVECTOR
D	----------
DB	DRY BULB
DIA	DIAMETER
DN	DOWN
DPT	DIFFERENTIAL PRESSURE TRANSMITTER
DV	DRAIN VALVE
E	----------
EA	EXHAUST AIR
EAC	EXHAUST AIR CONTROLLER
EAT	ENTERING AIR TEMPERATURE
EF	EXHAUST FAN
EL	ELEVATION
ESP	EXTERNAL STATIC PRESSURE
EWT	ENTERING WATER TEMPERATURE
EXH	EXHAUST
F	----------
°F	DEGREE FAHRENHEIT
F.D.	FLOOR DRAIN
FOB	FLAT ON BOTTOM
FOT	FLAT ON TOP
F&T	FLOAT & THERMOSTATIC TRAP
FPM	FEET PER MINUTE
FTR	FINNED TUBE RADIATION
FPB	FAN-POWERED BOX
G	----------
GAL	GALLONS
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GR	GRILLE
H	----------
HC	HEATING COIL
HP	HORSEPOWER
HX	HEAT EXCHANGER
I	----------
INF	INFILTRATION
L	----------
LAT	LEAVING AIR TEMPERATURE
LB	POUND
LBD	LINEAR BAR DIFFUSER
LBG	LINEAR BAR GRILLE
LF	LINEAR FEET
LV	LOUVER
M	----------
MBH	THOUSAND BTU'S PER HOUR
N	----------
(N)	NEW
NC	NORMALLY CLOSED
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
O	----------
OA	OUTSIDE AIR
OAI	OUTSIDE AIR INTAKE
OBD	OPPOSED BLADE DAMPER
P	----------
PHC	PREHEAT COIL
PRV	PRESSURE REDUCING VALVE
PSI	POUNDS PER SQUARE INCH
R	----------
RA	RETURN AIR
RG	RETURN GRILLE
RH	RELATIVE HUMIDITY
RHC	REHEAT COIL
RL	REFRIGERANT LIQUID
RPM	REVOLUTIONS PER MINUTE
RS	REFRIGERANT SUCTION
S	----------
SA	SUPPLY AIR
SAT	SOUND ATTENUATOR
SF	SMOKE FIRE DAMPER
SG	SUPPLY GRILLE
SP	STATIC PRESSURE
T	----------
TG	TRANSFER GRILLE
TOD	TOP OF DUCT
TOP	TOP OF PIPE
TSP	TOTAL STATIC PRESSURE
TYP	TYPICAL
V	----------
V	VENT
VAV	VARIABLE AIR VOLUME
VD	VOLUME DAMPER
VRF	VARIABLE REFRIGERANT FLOW
W	----------
WB	WET BULB

PIPING SYMBOLS

- AIR OR STEAM VENT
- Ø — DIAMETER
- DIRECTION OF FLOW
- FLEXIBLE CONNECTION
- DPT — DIFFERENTIAL PRESSURE TRANSMITTER
- PITCH OF PIPE, DOWN
- PRESSURE GAUGE AND VALVE
- P/T — PRESSURE / TEMPERATURE PLUG
- REDUCER, CONCENTRIC
- REDUCER, ECCENTRIC STRAIGHT CROWN
- REDUCER, ECCENTRIC STRAIGHT INVERT
- RISER OR ELBOW DOWN
- RISER UP AND DOWN ELBOW UP
- STEAM TRAP
- STRAINER
- STRAINER W/GATE VALVE W/NIPPLE & CAP
- THERMOMETER
- THERMOMETER WELL
- T — THERMOSTAT
- UNION OR FLANGED CONNECTION
- VALVE, AUTOMATIC FLOW CONTROL
- VALVE, BALANCING
- VALVE, CHECK
- VALVE, DRAIN W/NIPPLE & CAP
- VALVE, SHUT-OFF
- S — VALVE, SOLENOID
- VALVE, TWO-WAY CONTROL

PIPING NOMENCLATURE

- CHWR — CHILLED WATER RETURN
- CHWS — CHILLED WATER SUPPLY
- D — DRAIN LINEBOILER BLOW DOWN
- HWR — HEATING WATER RETURN
- HWS — HEATING WATER SUPPLY
- LPC — LOW PRESSURE CONDENSATE
- LPS — LOW PRESSURE STEAM
- V — VENT, ATMOSPHERIC

AIR DISTRIBUTION, GENERAL SYMBOLS & NOMENCLATURE

- TRANSFER DUCT, SEE DETAIL
- TRANSFER DUCT, SEE DETAIL W/RETURN/TRANSFER GRILLE
- TRANSFER DUCT, SEE DETAIL W/RETURN/TRANSFER GRILLE
- AIR CUSHION, 12" LONG MIN.
- AIR CUSHION, 12" LONG MIN.
- VOLUME DAMPER
- DAMPER (TYPE AS INDICATED; BD, BDD, MOD, FD, SD/FD, VD, ETC.)
- Ø — DIAMETER
- DOOR LOUVER (FREE AREA IN SQ. FEET)
- U — DOOR UNDERCUT
- D — DUCT DROP (SLOPING)
- DUCT DROP (90°)
- R — DUCT RISE (SLOPING)
- DUCT RISE (90°) (RISE AND DROP IN DIRECTION OF AIR FLOW)
- TRANSFER AIR
- D — DUCT MOUNTED SMOKE DETECTOR
- FLEXIBLE CONNECTION
- FLEXIBLE DUCTWORK
- FLEXIBLE DUCTWORK
- HUMIDIFIER (DUCT MOUNTED)
- T S — TEMPERATURE SENSOR
- H S — HUMIDITY SENSOR
- CO_2 S — CARBON DIOXIDE SENSOR
- DUCT TRASITION (RECTANGULAR TO RECTANGULAR)
- DUCT TRASITION (RECTANGULAR TO ROUND)
- AFMS — AIR FLOW MEASURING STATION
- M — MOTORIZED DAMPER

AIR DEVICE DESIGNATION

( ) 8X8 CD-1 (3-3/4) 250 - 2W

- QUANTITY (IF MORE THAN ONE)
- CONNECTION SIZE, SINGLE DIMENSION INDICATES ROUND CONNECTION. FOR RECTANGULAR NECK, FIRST DIMENSION IS THE PLAN HORIZONTAL DIMENSION.
- TYPE IDENTIFICATION (SEE SCHEDULE)
- NO. & SIZE OF SLOTS (TYPE LPD ONLY)
- BLOW DIRECTION WHERE APPLICABLE (TYPE CD 4-WAY UNLESS NOTED OTHERWISE); (TYPE LPD 2-WAY UNLESS NOTED OTHERWISE)
- AIR QUANTITY - CFM

- 22 x 10 — RECTANGULAR DUCT (FIRST NUMBER INDICATES PLAN DIMENSION, SECOND NUMBER INDICATES DEPTH)
- 22 x 10 — FLAT OVAL DUCT
- 12" Ø — ROUND DUCT (12" Ø DIAMETER)
- RADIUS ELBOW (NO TURNING VANES)
- HARD ELBOW (WITH TURNING VANES)
- DUCT TRANSITION (RECTANGULAR TO RECTANGULAR)
- DUCT TRANSITION (RECTANGULAR TO ROUND)
- RECTANGULAR SUPPLY DUCT UP
- RECTANGULAR SUPPLY DUCT DOWN
- 22x10 B / 14x10 T — DUCT INDICATION FOR STACKING T= TOP; B= BOTTOM
- 22x10 T / 14x10 B — DUCT INDICATION FOR STACKING T= TOP; B= BOTTOM
- VOLUME DAMPER
- DAMPER (TYPE AS INDICATED; BD, BDD, MOD, FD, SD/FD, ETC.)
- SPLITTER DAMPER
- T/H — TEMP / HUMID SENSOR (DUCT MOUNTED)
- AV — AUDIO VISUAL ALARM
- DUCTWORK WITH INSULATION
- 8X14 / LFD-1 300 — FLEXIBLE BRANCH DUCT CONNECTION TO DIFFUSER. CONICAL BELL MOUTH OR SQUARE/ROUND BOOT FITTING WITH VOLUME DAMPER.
- ROUND INLET CONNECTION TO LAMINAR FLOW DIFFUSER (CFM INDICATED)
- 14X10 — BRANCH DUCT CONNECTION TO DIFFUSER WITH VOLUME DAMPER.
- SQUARE INLET CONNECTION TO DIFFUSER
- SUPPLY DIFFUSER
- EXHAUST GRILLE
- RETURN GRILLE

GENERAL NOTES

1. THE PLANS SHOW PIPING AND DUCTWORK DIAGRAMATICALLY AND DO NOT SHOW ALL OFFSETS, DROPS AND RISERS OF RUNS. THE CONTRACTOR SHALL ALLOW FOR ROUTING PIPING AND DUCTWORK TO AVOID OBSTRUCTIONS.

2. COORDINATE MECHANICAL REQUIREMENTS WITH STRUCTURAL, ARCHITECTURAL, ELECTRICAL, PLUMBING, FIRE PROTECTION AND OTHER TRADES IN ORDER TO FIT MECHANICAL ITEMS WITHIN THE AVAILABLE SPACE. THIS SHOULD BE COMPLETED BEFORE ANY TYPE OF EQUIPMENT INSTALLATION BEGINS.

3. THE MECHANICAL LEGEND ON THIS DRAWING TAKES PRECEDENCE OVER THE LEGEND PROVIDED ON THE TITLE SHEET.

4. FOR MECHANICAL EQUIPMENT SUPPORTED BY TRUSSES, SUPPORT SHALL BE LOCATED AT TRUSS PANEL POINTS.

5. ALL EQUIPMENT PADS SHALL EXTEND 6 INCHES AROUND THE PERIMETER OF EQUIPMENT. SEE STRUCTURAL AND CIVIL DRAWINGS FOR ALL OTHER PAD REQUIREMENTS.

6. UNLESS OTHERWISE NOTED, ALL DUCTWORK SHOWN ON M- SHEETS SHALL BE CONSTRUCTED IN ACCORDANCE WITH SPECIFICATION SECTION 23 30 00 AND SHALL MEET ALL REQUIREMENTS OF SMACNA SEAL CLASS A. SEE SPECIFICATION SECTION 23 30 00 FOR ALLOWABLE DUCT LEAKAGE RATE BASED ON LEAKAGE CLASS CL6.

7. DUCT DIMENSIONS NOTED ARE SIZED AS CLEAR INTERIOR DUCT DIMENSIONS AND DO NOT TAKE INTO ACCOUNT SOUND LINING AND EXTERIOR INSULATION REQUIREMENTS.

8. COORDINATE THERMOSTAT LOCATIONS WITH EQUIPMENT AND FURNITURE LAYOUT.

9. REFER TO ARCHITECTURAL DRAWINGS FOR LOUVER DIMENSIONS. SEE STRUCTURAL DRAWINGS FOR LINTEL DETAILS AND NOTES.

10. PROVIDE ACCESS TO ALL VOLUME DAMPERS, FIRE DAMPERS, AND VALVES.

11. REFER TO THE MECHANICAL EQUIPMENT SCHEDULES FOR ALL EQUIPMENT SIZES AND CAPACITIES.

12. THE CONTRACTOR SHALL VERIFY ALL MECHANICAL EQUIPMENT LOCATIONS AND BE RESPONSIBLE FOR ALL RELATED CLEARANCES IN THE FIELD. PROVIDE ADEQUATE MAINTENANCE CLEARANCE AROUND ALL EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE CLEARANCE IN FRONT OF ALL ELECTRICAL PANELS PER NATIONAL ELECTRIC CODE REQUIREMENTS. COORDINATE EXACT LOCATION OF ALL OUTDOOR EQUIPMENT IN THE FIELD WITH CONTRACTING OFFICER.

13. RUN PIPING, DUCTS AND INSTALL EQUIPMENT PARALLEL WITH OR AT RIGHT ANGLES TO THE WALLS OF THE BUILDING UNLESS SHOWN OTHERWISE ON THE DRAWINGS. PARALLELED RUNS SHALL BE STRAIGHT AND TRUE WITH OFFSETS UNIFORM AND SYMMETRICAL.

14. PRIOR TO INSULATING, PRESSURE TEST ALL PIPING AND DUCTWORK.

15. SEE STRUCTURAL DWGS FOR ATFP BRACING FOR OVERHEAD EQUIPMENT.

16. OVERALL PLANS DO NOT SHOW ALL DUCTWORK SIZING. REFER TO PART PLANS.

17. PROVIDE ACCESS PANELS IN WALLS AND CEILINGS FOR ALL CONCEALED EQUIPMENT INSTALLED. SIZE ACCESS PANELS AS REQUIRED TO ALLOW WORKING CLEARANCE.

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MARK	DESCRIPTION	DATE

ISSUE DATE: AUGUST 29, 2025
SOLICITATION NO.: W912DS24F0031
CONTRACT NO.: W912DS15D0007

DESIGNED BY: Designer
DRAWN BY: Author
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SUBMITTED BY:
SIZE: ANSI D

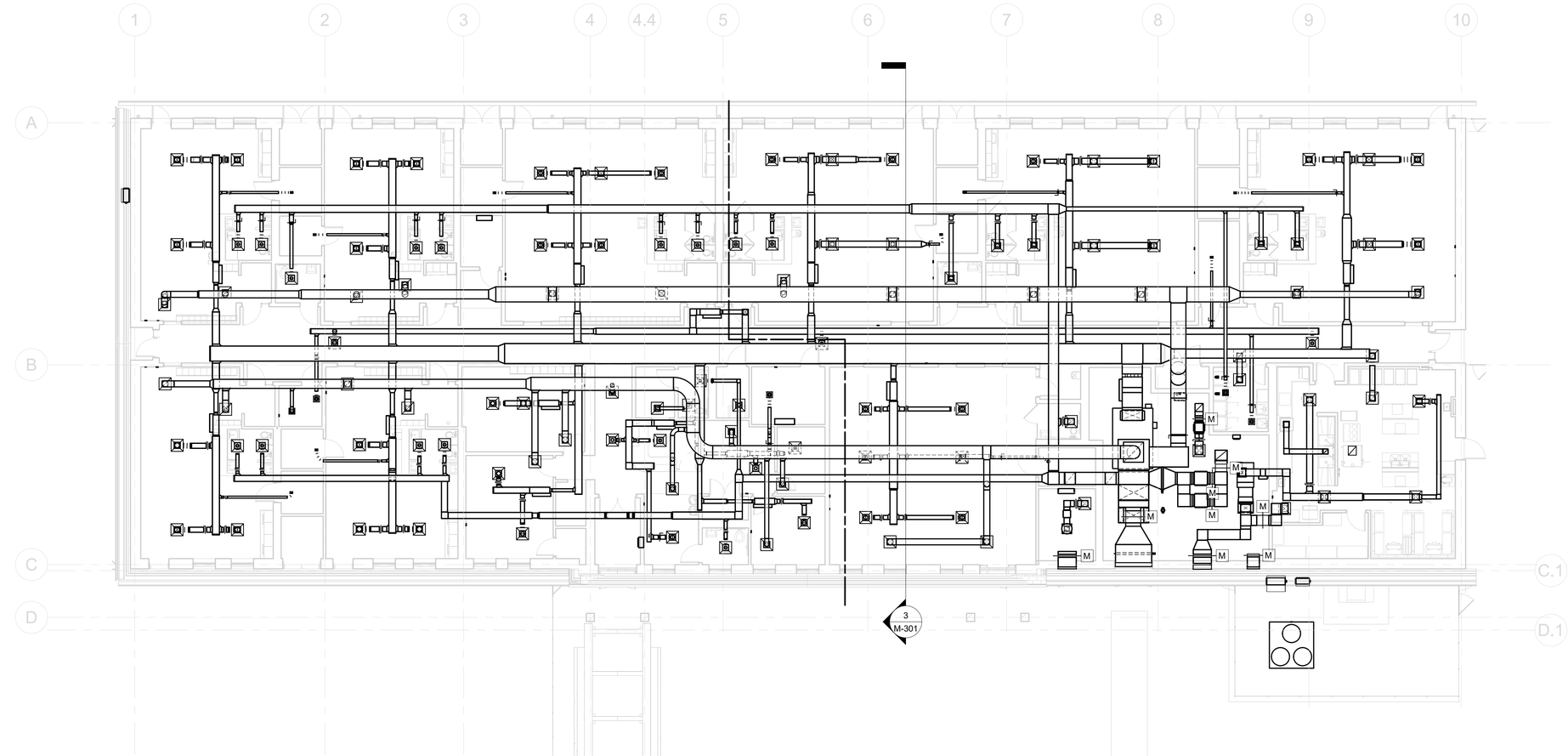
US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK, NY 10278

CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
PROJECT NO. 75662

MECHANICAL GENERAL NOTES AND LEGENDS

SHEET ID

M-001



1 FLOOR PLAN - DUCTWORK - OVERALL

3/32" = 1'-0"

PLAN NORTH

0' 4' 8' 16' 32' 64'

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

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CHILD DEVELOPMENT CENTER
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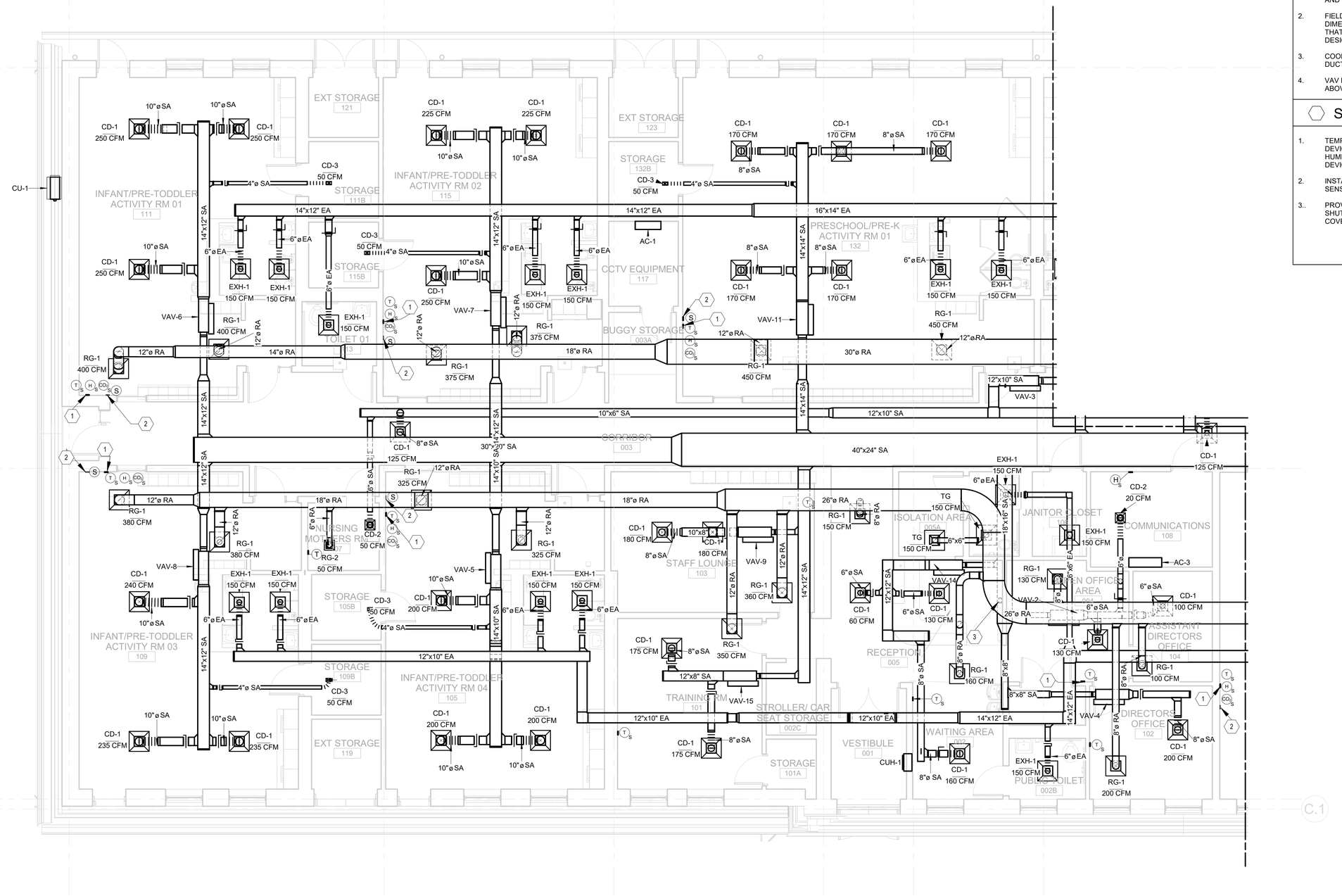
FLOOR PLAN - OVERALL

SHEET ID

M-101



1 FLOOR PLAN - DUCTWORK - AREA A

3/16" = 1'-0"

GENERAL SHEET NOTES

1. LAYOUTS ARE SCHEMATIC. PROVIDE ANY ADDITIONAL DROPS, RISES, OR OFFSETS REQUIRED FOR A COMPLETE INSTALLATION. COORDINATE EXACT ROUTING OF WORK WITH ALL OTHER DISCIPLINES AND OBSTRUCTIONS. COORDINATE EXACT LOCATIONS OF CEILING MOUNTED DEVICES WITH LIGHTS, CEILING GRID, AND OTHER OBSTRUCTIONS.
2. FIELD VERIFY ALL MEASUREMENTS AND DIMENSIONS OF PROPOSED EQUIPMENT TO ENSURE THAT THE EQUIPMENT WILL FIT IN THE DESIGNATED SPACE.
3. COORDINATE WITH STRUCTURAL TO ROUTE RETURN DUCTWORK THROUGH METAL TRUSS SPACE.
4. VAV BOXES SHALL BE MOUNTED NO MORE THAN 24" ABOVE FINISHED CEILING.

SHEET KEYNOTES

1. TEMPERATURE AND AIR QUAILITY MONITORING DEVICE. DEVICE SHALL MONITOR SPACE TEMPERATURE, SPACE HUMIDITY, AND SPACE CARBON DIOXIDE LEVELS. MOUNT DEVICE AT 48" AFF. DEVICE SHALL BE TAMPER PROOF.
2. INSTALL SECOND SPACE TEMPERATURE SENSOR 12" AFF. SENSOR SHALL BE FLUSH WITH WALL.
3.. PROVIDE MANUAL EMERGENCY HVAC SYSTEM SHUT-OFF BUTTON WITH A NON-LOCKING PROTECTIVE COVER ON THE WALL BEHIND THE RECEPTION DESK.

PLAN NORTH

0 2' 4' 8' 12'

SCALE: 3/16"=1'-0"

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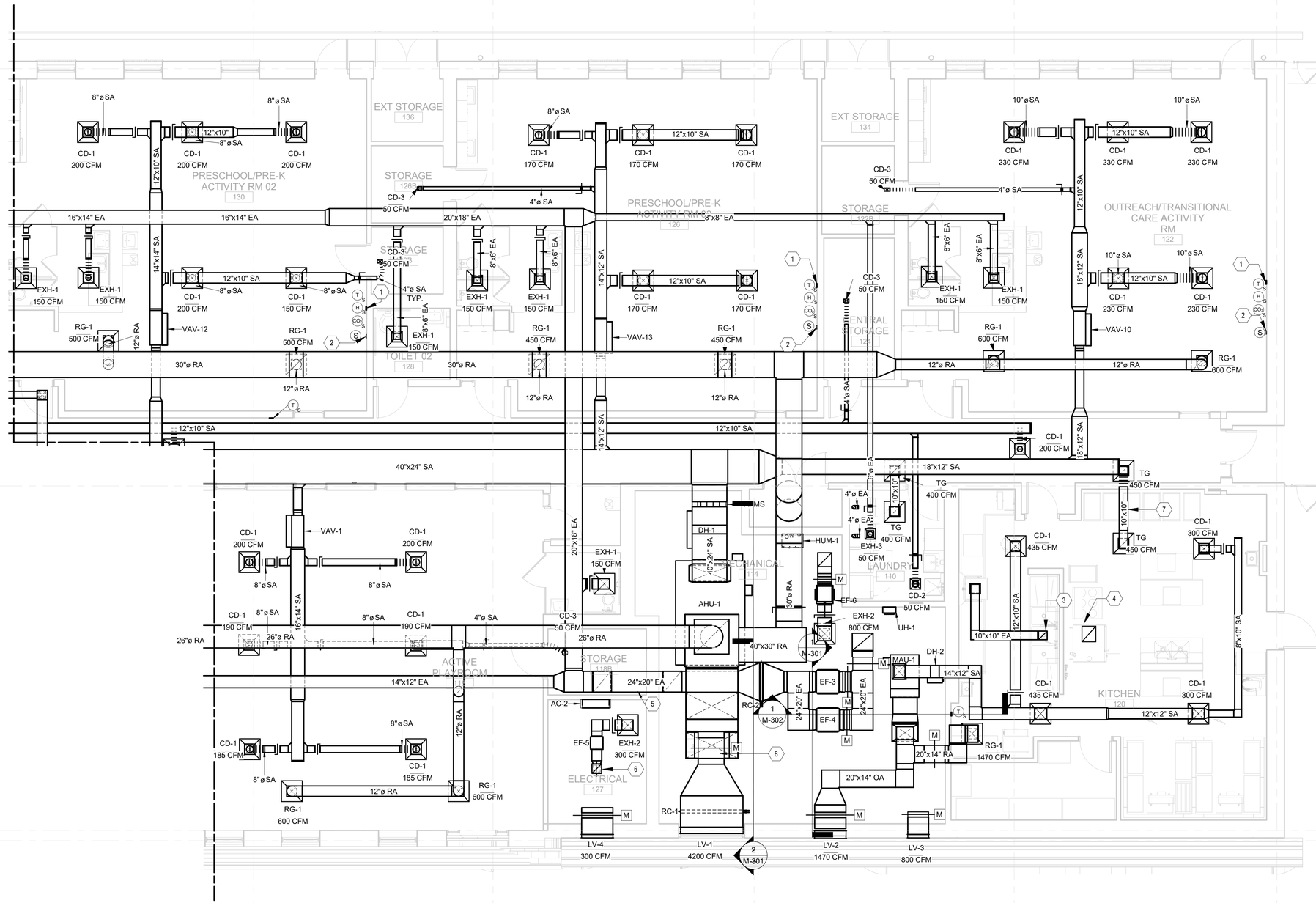
FLOOR PLAN - AREA A

SHEET ID

M-102



GENERAL SHEET NOTES

1. LAYOUTS ARE SCHEMATIC. PROVIDE ANY ADDITIONAL DROPS, RISES, OR OFFSETS REQUIRED FOR A COMPLETE INSTALLATION. COORDINATE EXACT ROUTING OF WORK WITH ALL OTHER DISCIPLINES AND OBSTRUCTIONS. COORDINATE EXACT LOCATIONS OF CEILING MOUNTED DEVICES WITH LIGHTS, CEILING GRID, AND OTHER OBSTRUCTIONS.
2. FIELD VERIFY ALL MEASUREMENTS AND DIMENSIONS OF PROPOSED EQUIPMENT TO ENSURE THAT THE EQUIPMENT WILL FIT IN THE DESIGNATED SPACE.
3. COORDINATE WITH STRUCTURAL TO ROUTE RETURN DUCTWORK THROUGH METAL TRUSS SPACE.
4. VAV BOXES SHALL BE MOUNTED NO MORE THAN 24" ABOVE FINISHED CEILING.
5. INSTALL INTAKE LOUVERS MINIMUM 10 FEET ABOVE FINISHED GRADE.

SHEET KEYNOTES

1. TEMPERATURE AND AIR QUAILITY MONITORING DEVICES. DEVICE SHALL MONITOR SPACE TEMPERATURE, SPACE HUMIDITY, AND SPACE CARBON DIOXIDE LEVELS. MOUNT DEVICE AT 48" AFF. DEVICE SHALL BE TAMPER PROOF.
2. INSTALL SECOND SPACE TEMPERATURE SENSOR 12" AFF. SENSOR SHALL BE FLUSH WITH WALL.
3. 10"x10" EXHAUST DUCT SERVING DISHWASHER HOOD. ROUTE DUCT UP THROUGH ROOF TO EF-1.
4. 12"x10" EXHAUST DUCT SERVING KITCHEN HOOD. PROVIDE GREASE RESERVOIR AT BOTTOM OF CONNECTION TO HOOD. ROUTE DUCT UP THROUGH ROOF TO EF-2 IN ACCORDANCE WITH NFPA 96 REQUIREMENTS AND MANUFACTURERS RECOMMENDATIONS.
5. ROUTE DUCT SECTION ABOVE SHEAR WALL THROUGH METAL TRUSS. COORDINATE WITH OTHER DISCIPLINES AND OBSTRUCTIONS.
6. 8" x 8" EXHAUST DUCT UP TO GV-2. PROVIDE MOTORIZED DAMPER.
7. PROVIDE 0.02" W.G. BAROMETRIC DAMPER.
8. PROVIDE AIR FLOW MEASURING STATION IN THE VERTICAL OF DUCT.

1 FLOOR PLAN - DUCTWORK - AREA B

3/16" = 1'-0"

SCALE: 3/16"=1'-0"

PLAN NORTH

US Army Corps of Engineers ®

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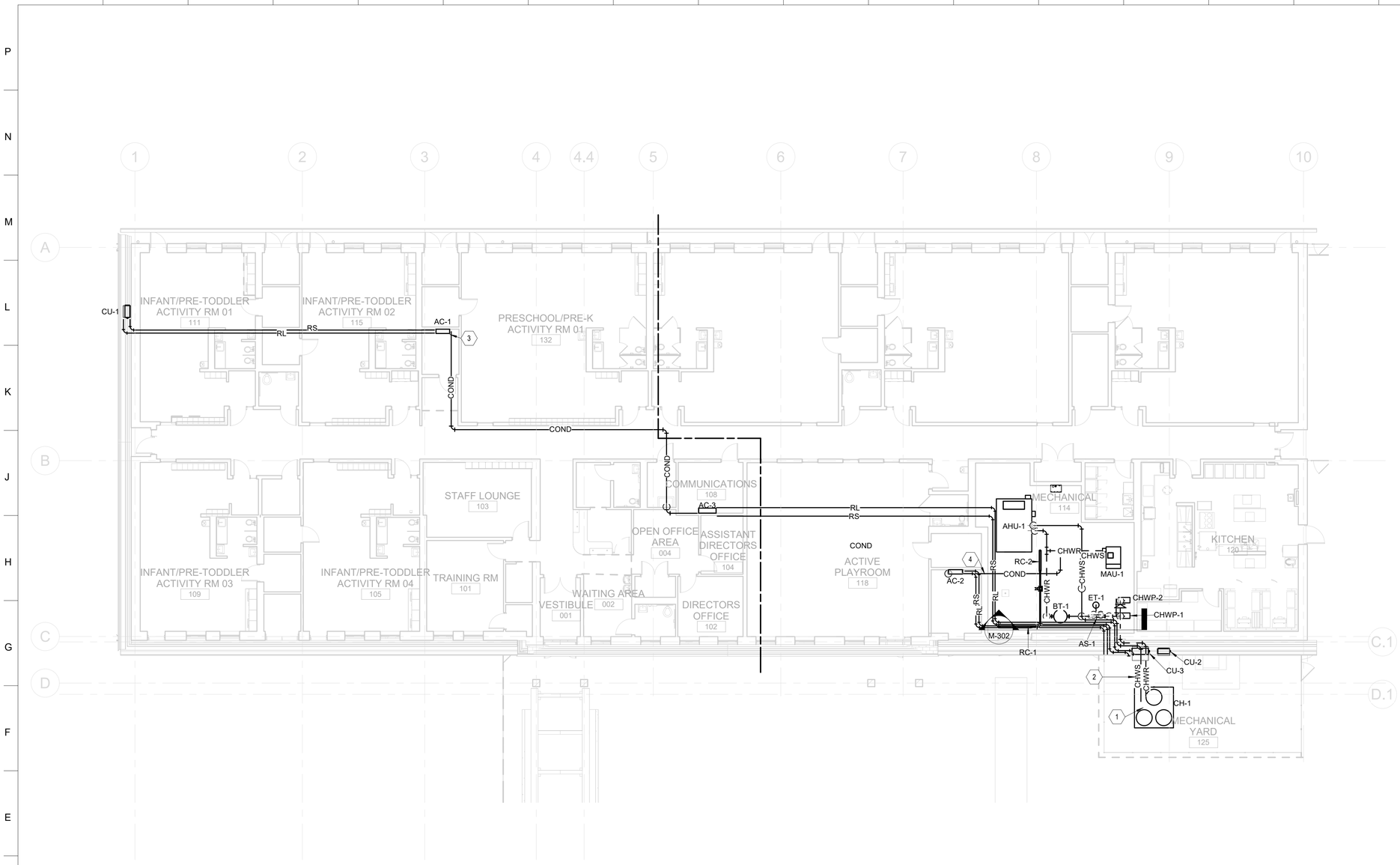
FLOOR PLAN - AREA B

SHEET ID

M-103



1 FLOOR PLAN - MECHANICAL PIPING
3/32" = 1'-0"

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

PLAN NORTH

GENERAL SHEET NOTES

1. LAYOUTS ARE SCHEMATIC. PROVIDE ANY ADDITIONAL DROPS, RISES, OR OFFSETS REQUIRED FOR A COMPLETE INSTALLATION. COORDINATE EXACT ROUTING OF WORK WITH ALL OTHER DISCIPLINES AND OBSTRUCTIONS.
2. FIELD VERIFY ALL MEASUREMENTS AND DIMENSIONS OF PROPOSED EQUIPMENT TO ENSURE THAT THE EQUIPMENT WILL FIT IN THE DESIGNATED SPACE.
3. REFRIGERATION PIPING SHOWN FOR BEST ROUTING APPROXIMATION. CONTRACTOR SHALL DETERMINE THE BEST ROUTING AND SHORTEST PIPING LENGTHS AND SIZE PIPES IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
4. PROVIDE INSULATION FOR ALL PIPING.
5. SEE CIVIL DRAWINGS FOR DETAILS ON THE MECHANICAL YARD.

SHEET KEYNOTES

1. PROVIDE CH-1 WITH 6" THICK CONCRETE PAD (SIZED 6" LARGER THAN EQUIPMENT IN ALL SIDES).
2. EXTERIOR CHILLED WATER PIPING SHALL BE PROVIDED WITH PEDESTAL SUPPORT.
3. ROUTE CONDENSATE PIPING TO JANITOR'S CLOSET SINK TO CONNECT TO SANITARY WITH INDIRECT CONNECTION.
4. ROUTE CONDENSATE PIPING TO NEAREST FLOOR DRAIN IN MECHANICAL ROOM. CONNECT TO SANITARY WITH INDIRECT CONNECTION.

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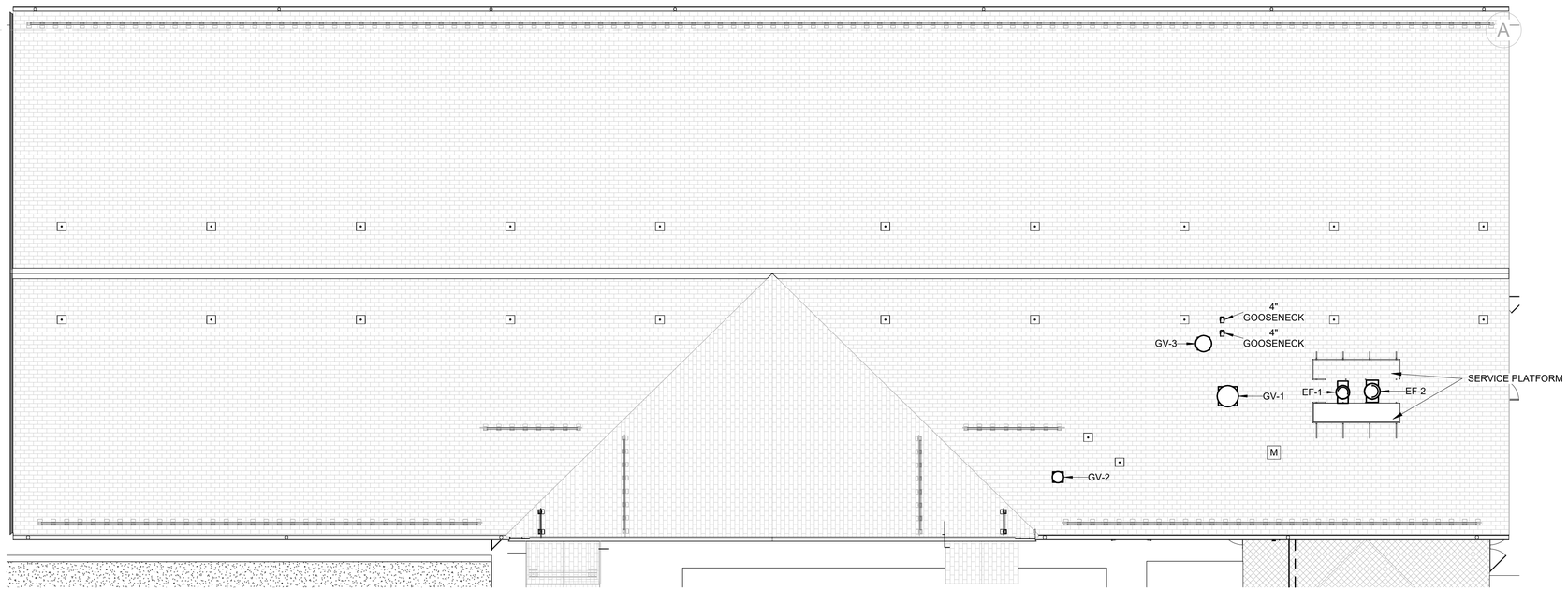
PROJECT NO. 75662

FLOOR PLAN - MEHCANICAL PIPING

SHEET ID
M-104

GENERAL SHEET NOTES

1. REFER TO SHEET A-405 FOR DETAILS ON THE SERVICE PLATFORM.
2. INSTALL EXHAUST FAN IN ACCORDANCE WITH NFPA 96 REQUIREMENTS.



1 ROOF PLAN
3/32" = 1'-0"

0' 4' 8' 16' 32' 64'

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

PLAN NORTH

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
	35% SUBMISSION	04/03/2023
	30% SUBMISSION	02/15/2023

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PROJECT NO. 75662

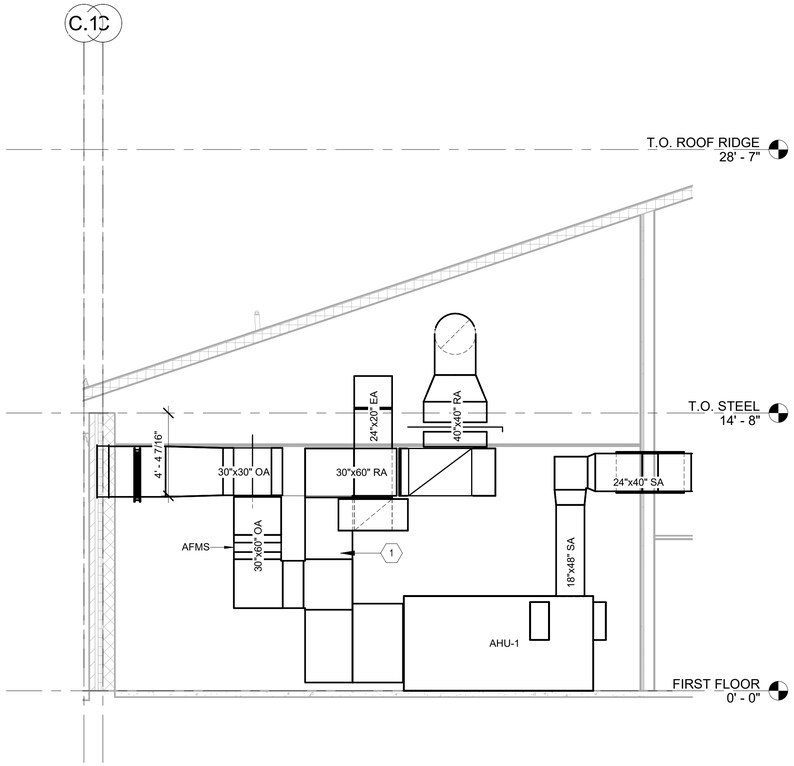
MECHANICAL ROOF PLAN

SHEET ID

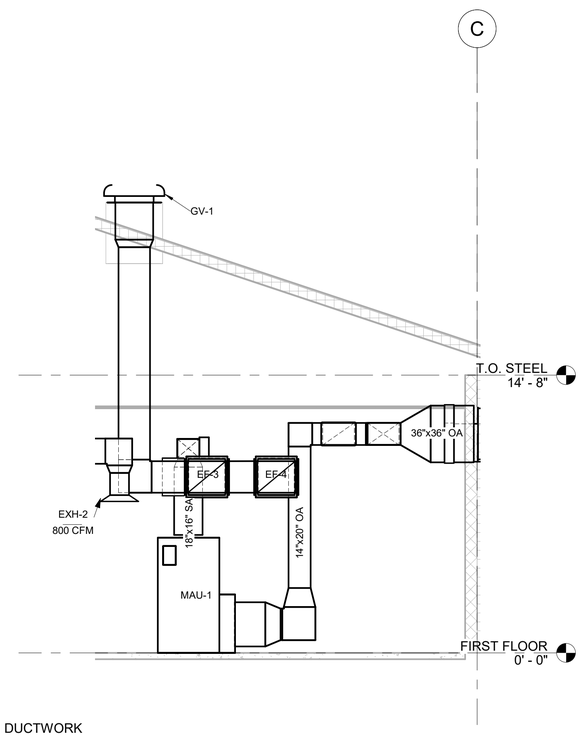
M-105

SHEET KEYNOTES

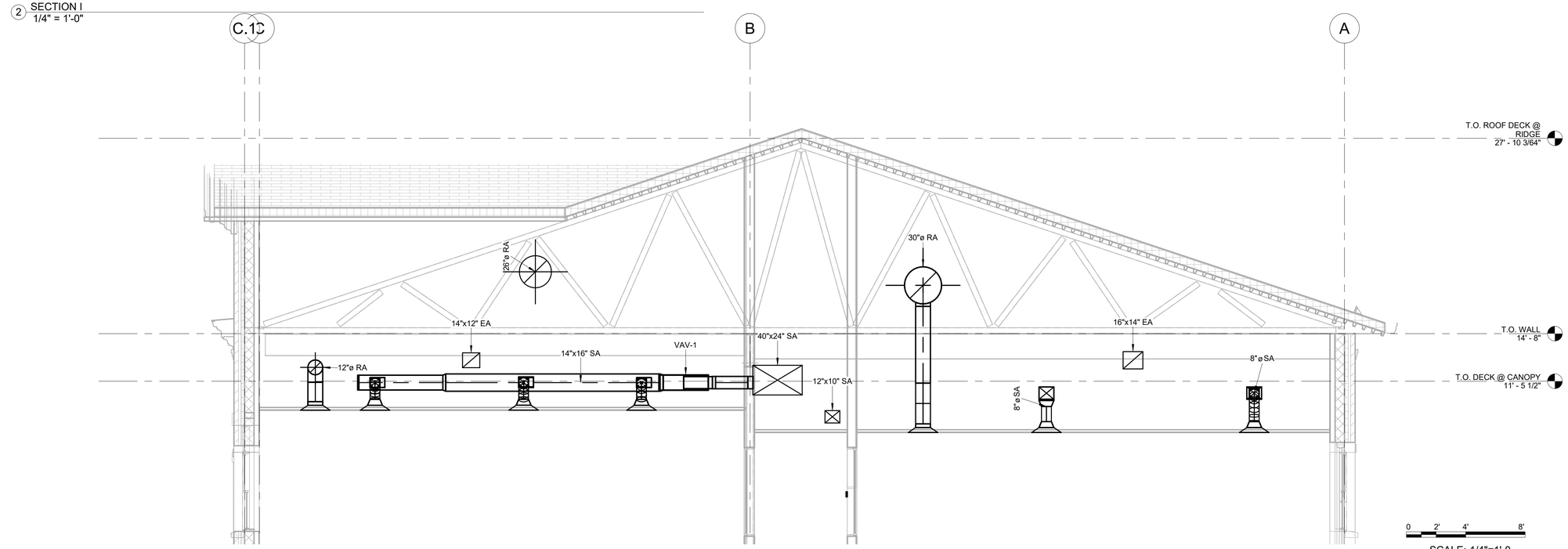
1. PROVIDE TWO 30"x30" SIDE BY SIDE INDEPENDENTLY CONTROLLED MODULATING DAMPERS IN VERTICAL OF DUCT.



1 MECHANICAL ROOM DUCTWORK SECTION II
1/4" = 1'-0"



2 MECHANICAL ROOM DUCTWORK SECTION I
1/4" = 1'-0"



3 MECHANICAL SECTION
1/4" = 1'-0"

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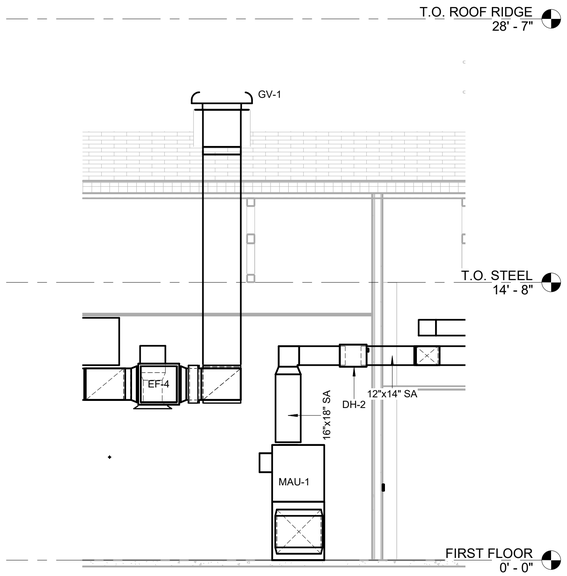
CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
PROJECT NO. 75682

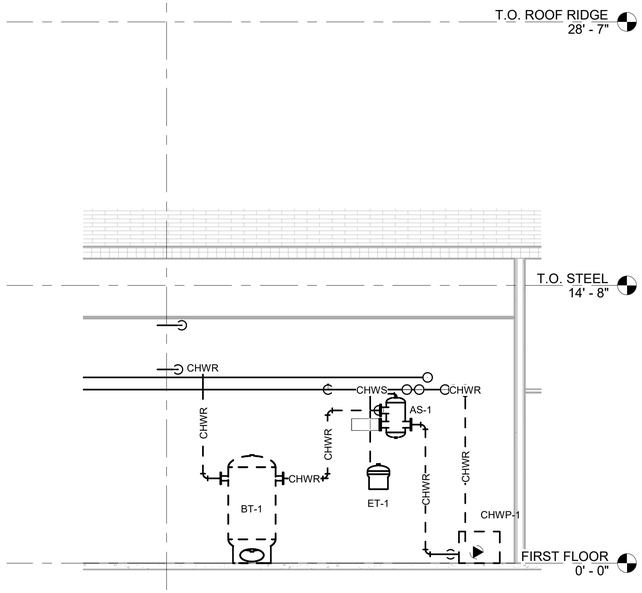
MECHANICAL SECTIONS

SHEET ID

M-301



1 MECHANICAL ROOM DUCTWORK SECTION III
1/4" = 1'-0"



2 MECHANICAL ROOM PIPING SECTION
1/4" = 1'-0"

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

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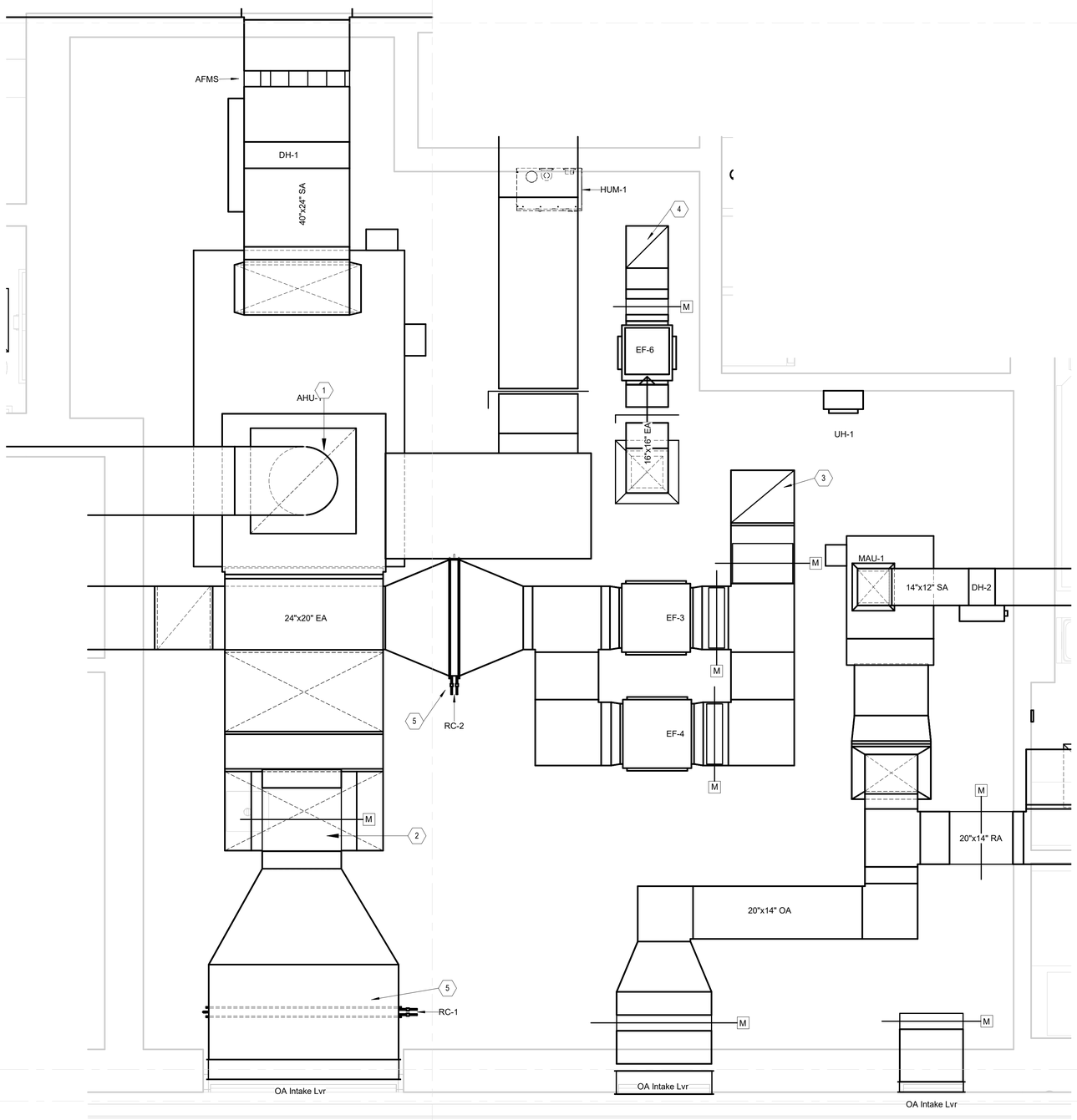
CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
PROJECT NO. 75682

MECHANICAL SECTIONS

SHEET ID
M-302



1 ENLARGED PLAN - MECHANICAL ROOM DUCTWORK
1/2" = 1'-0"

SCALE: 1/2"=1'-0

PLAN NORTH

GENERAL SHEET NOTES

1. LAYOUTS ARE SCHEMATIC. PROVIDE ANY ADDITIONAL DROPS, RISES, OR OFFSETS REQUIRED FOR A COMPLETE INSTALLATION. COORDINATE EXACT ROUTING OF WORK WITH ALL OTHER DISCIPLINES AND OBSTRUCTIONS. COORDINATE EXACT LOCATIONS OF CEILING MOUNTED DEVICES WITH LIGHTS, CEILING GRID, AND OTHER OBSTRUCTIONS.
2. FIELD VERIFY ALL MEASUREMENTS AND DIMENSIONS OF PROPOSED EQUIPMENT TO ENSURE THAT THE EQUIPMENT WILL FIT IN THE DESIGNATED SPACE.
3. PROVIDE 6" THICK EQUIPMENT PADS. THESE PADS SHALL EXTEND 6" BEYOND THE FOOTPRINT OF THE EQUIPMENT IN ALL DIRECTIONS. FINAL EQUIPMENT PAD SIZE TO BE BASED ON EQUIPMENT MANUFACTURER REQUIREMENTS.

SHEET KEYNOTES

1. PROVIDE BALANCING DAMPER IN THE VERTICAL OF RETURN DUCT BRANCH.
2. PROVIDE AIR FLOW MEASURING STATION IN THE VERTICAL OF DUCT.
3. 24"x20" EXHAUST DUCT UP TO GV-1.
4. 16"x16" EXHAUST DUCT UP TO GV-3.
5. PROVIDE RUN AROUND COIL WITH REMOVABLE FILTER UPSTREAM OF COIL. PROVIDE ACCESS DOORS UPSTREAM AND DOWNSTREAM TO PERMIT CLEANING.

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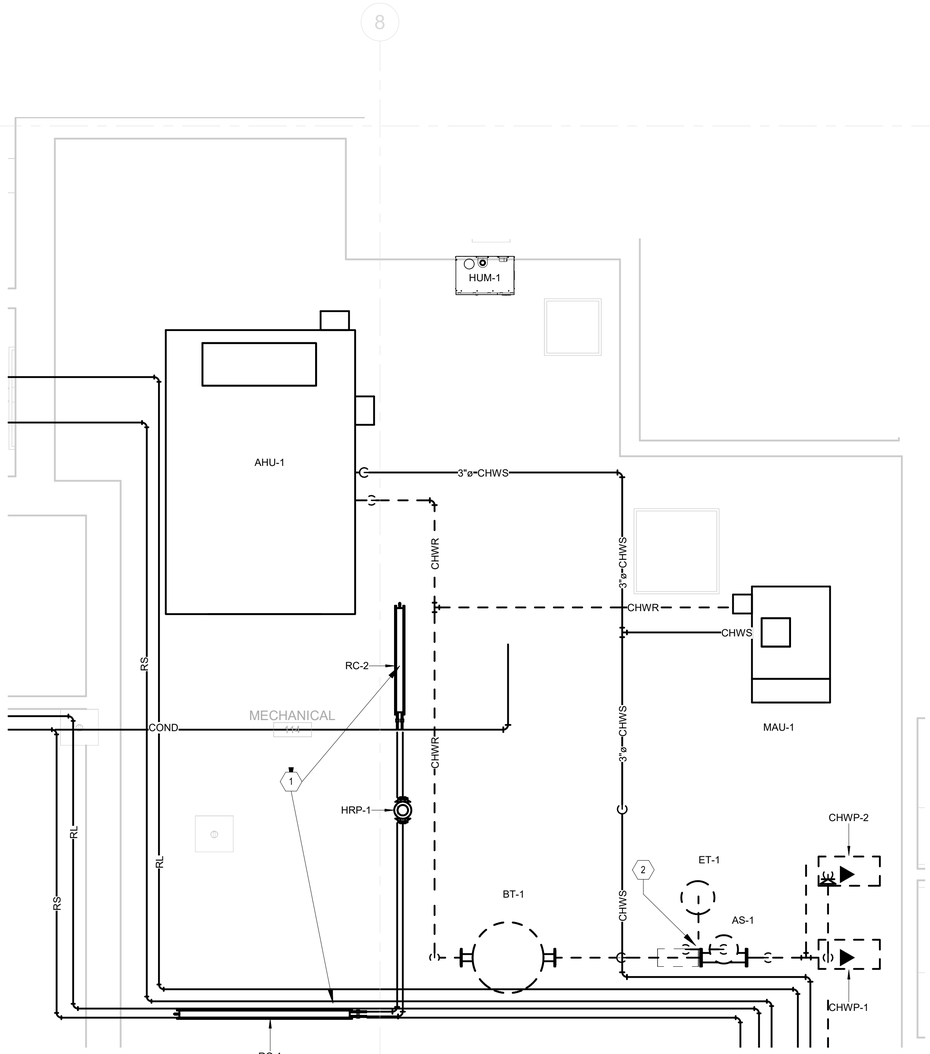
CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
PROJECT NO. 75662

ENLARGED PLANS

SHEET ID

M-401



1 ENLARGED PLAN - MECHANICAL ROOM PIPING
3/8" = 1'-0"

GENERAL SHEET NOTES

1. LAYOUTS ARE SCHEMATIC. PROVIDE ANY ADDITIONAL DROPS, RISES, OR OFFSETS REQUIRED FOR A COMPLETE INSTALLATION. COORDINATE EXACT ROUTING OF WORK WITH ALL OTHER DISCIPLINES AND OBSTRUCTIONS. COORDINATE EXACT LOCATIONS OF CEILING MOUNTED DEVICES WITH LIGHTS, CEILING GRID, AND OTHER OBSTRUCTIONS.
2. FIELD VERIFY ALL MEASUREMENTS AND DIMENSIONS OF PROPOSED EQUIPMENT TO ENSURE THAT THE EQUIPMENT WILL FIT IN THE DESIGNATED SPACE.
3. PROVIDE 6" THICK EQUIPMENT PADS. THESE PADS SHALL EXTEND 6" BEYOND THE FOOTPRINT OF THE EQUIPMENT IN ALL DIRECTIONS. FINAL EQUIPMENT PAD SIZE TO BE BASED ON EQUIPMENT MANUFACTURER REQUIREMENTS.
4. INSTALL FLOW METERS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

SHEET KEYNOTES

1. PROVIDE GLYCOL RUN-AROUND COIL LOOP FOR HEAT RECOVERY WITH IN-LINE PUMP (HRP-1).
2. PROVIDE CONNECTION TO MAIN DOMESTIC WATER SUPPLY LINE FOR CHILLED WATER SYSTEM MAKE-UP WATER.

0 1' 2' 4' 6'
SCALE: 3/8"=1'-0"

PLAN NORTH

US Army Corps of Engineers ®

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CHILD DEVELOPMENT CENTER
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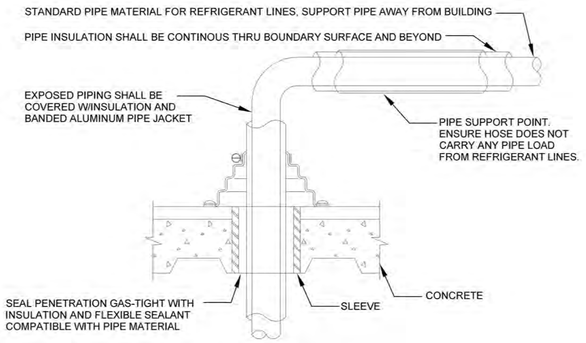
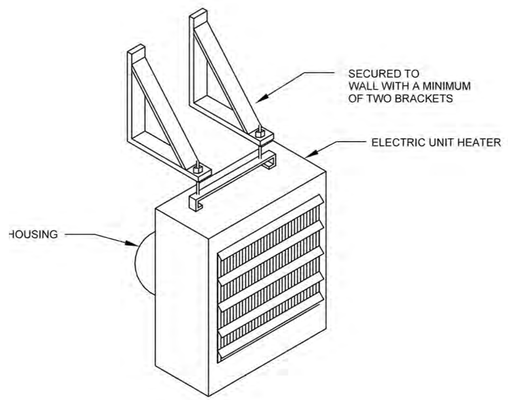
PROJECT NO. 75682

ENLARGED PLANS

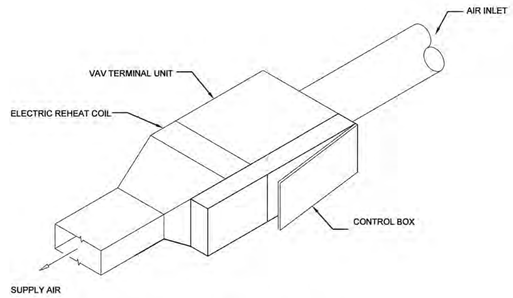
SHEET ID
M-402



1 TYPICAL REFRIGERANT LINE PENETRATION DETAIL
NTS

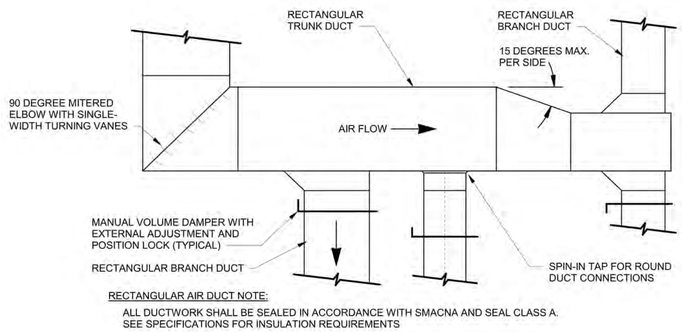


2 TYPICAL ELECTRIC UNIT HEATER DETAIL
NTS



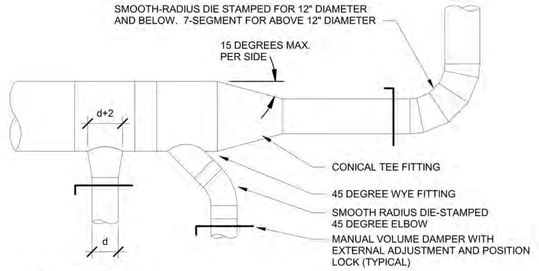
NOTE: PROVIDE MINIMUM 3-5 DIAMETERS OF STRAIGHT DUCT AT INLET.

3 TYPICAL SINGLE DUCT VAV BOX WITH ELECTRIC REHEAT
NTS



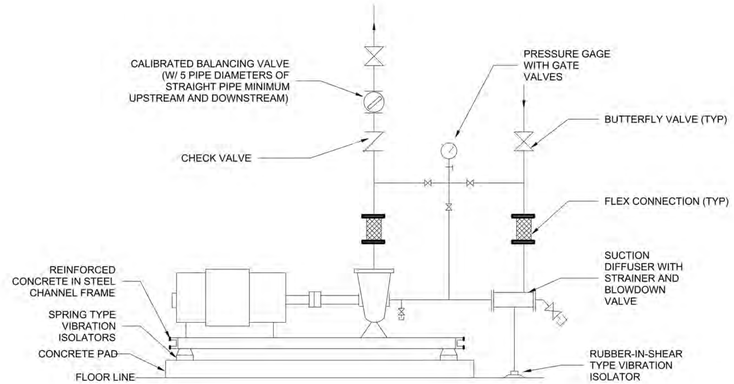
RECTANGULAR AIR DUCT NOTE:
ALL DUCTWORK SHALL BE SEALED IN ACCORDANCE WITH SMACNA AND SEAL CLASS A. SEE SPECIFICATIONS FOR INSULATION REQUIREMENTS

4 TYPICAL BRANCH DUCT CONNECTION
NTS

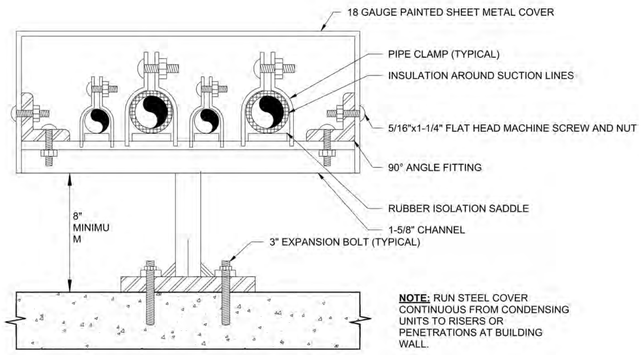


ROUND AIR DUCT NOTE:
ALL DUCTWORK SHALL BE SEALED IN ACCORDANCE WITH SMACNA AND SEAL CLASS A. SEE SPECIFICATIONS FOR INSULATION REQUIREMENTS. VAV DAMPERS MUST BE UPSTREAM OF BALANCE DAMPERS

5 TYPICAL ROUND DUCT CONSTRUCTION
NTS

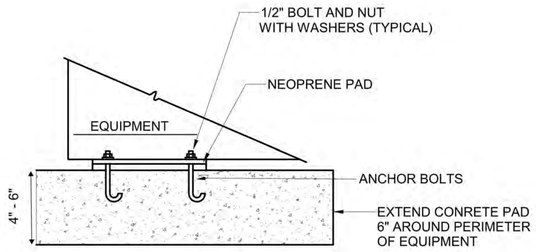


6 TYPICAL END SUCTION PUMP
NTS



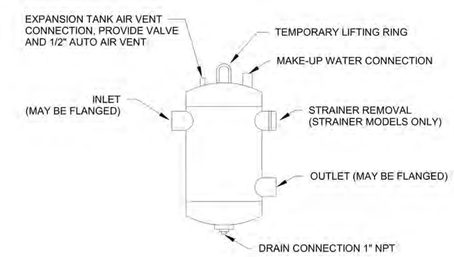
NOTE: RUN STEEL COVER CONTINUOUS FROM CONDENSING UNITS TO RISERS OR PENETRATIONS AT BUILDING WALL.

TYPICAL OUTDOOR PIPING SUPPORT DETAIL
7 NTS



FINAL EQUIPMENT PAD SIZE TO BE BASED ON EQUIPMENT MANUFACTURER REQUIREMENTS

8 TYPICAL EQUIPMENT PAD DETAIL
NTS



9 TYPICAL AIR SEPARATOR DETAIL
NTS

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
	35% SUBMISSION	04/03/2023
	30% SUBMISSION	02/15/2023

ISSUE DATE: AUGUST 29, 2025
SOLICITATION NO.: W912DS24R0031
CONTRACT NO.: W912DS15D0007
DESIGNED BY: Designer
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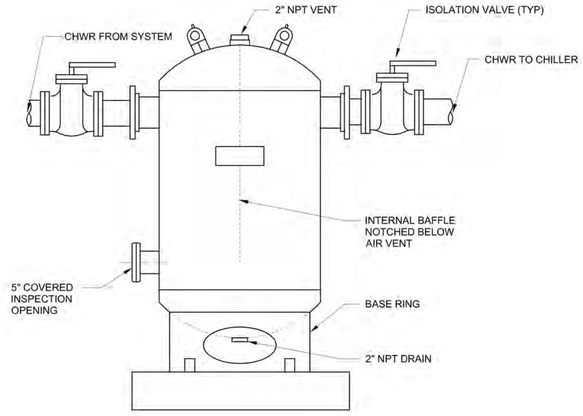
US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK, NY 10278

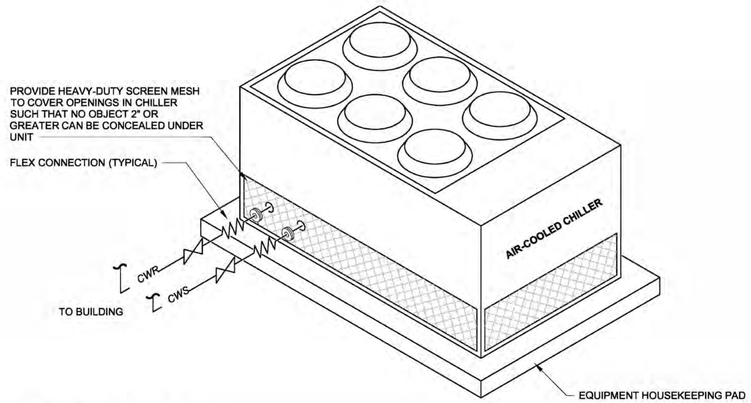
CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
PROJECT NO. 75662

DETAILS

SHEET ID
M-501

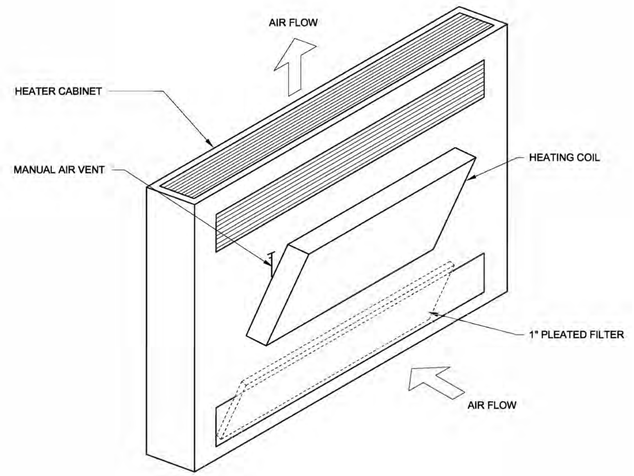


1 TYPICAL BUFFER TANK DETAIL
NTS

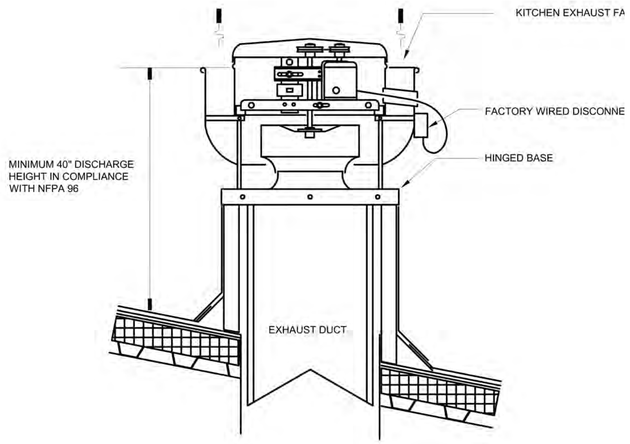


AIR-COOLED CHILLER DETAIL NOTES:
1. PROVIDE SUPPORTS FOR ABOVE-GROUND PIPING AND MOUNT 12" ABOVE HOUSE KEEPING PAD.
2. MAINTAIN MAINTENANCE AND AIRFLOW CLEARANCE ALL SIDES IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

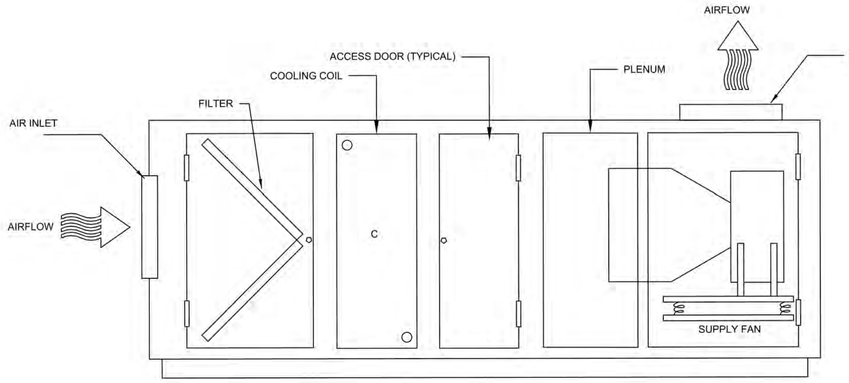
2 TYPICAL AIR-COOLED CHILLER
NTS



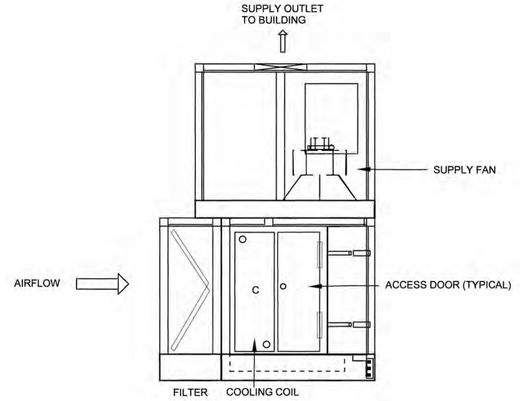
3 TYPICAL CABINET UNIT HEATER DETAIL
NTS



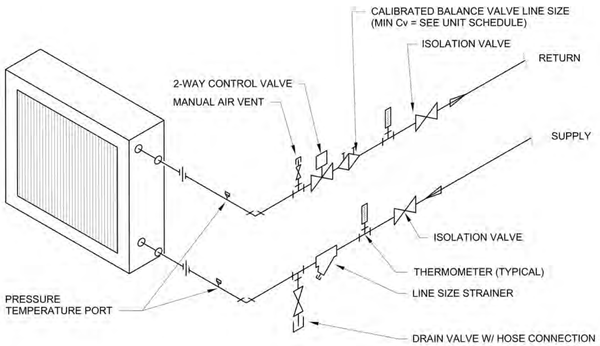
4 TYPICAL KITCHEN EXHAUST FAN DETAIL
NTS



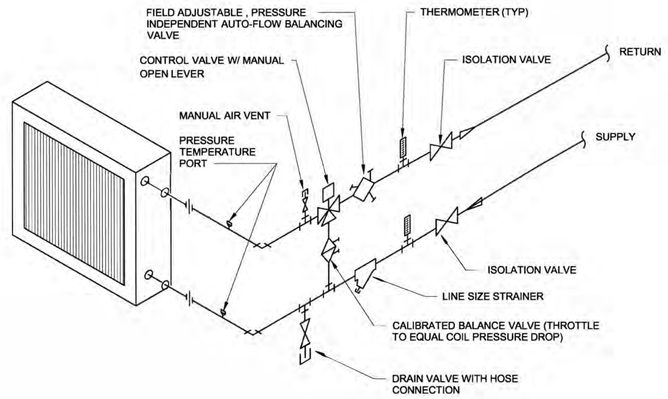
5 TYPICAL AIR HANDLING UNIT DETAIL
NTS



6 TYPICAL MAKE-UP AIR UNIT DETAIL
NTS



7 TYPICAL 2-WAY COIL PIPING DETAIL
NTS



8 TYPICAL 3-WAY COIL PIPING DETAIL
NTS

US Army Corps of Engineers ®

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	30% SUBMISSION	02/15/2023

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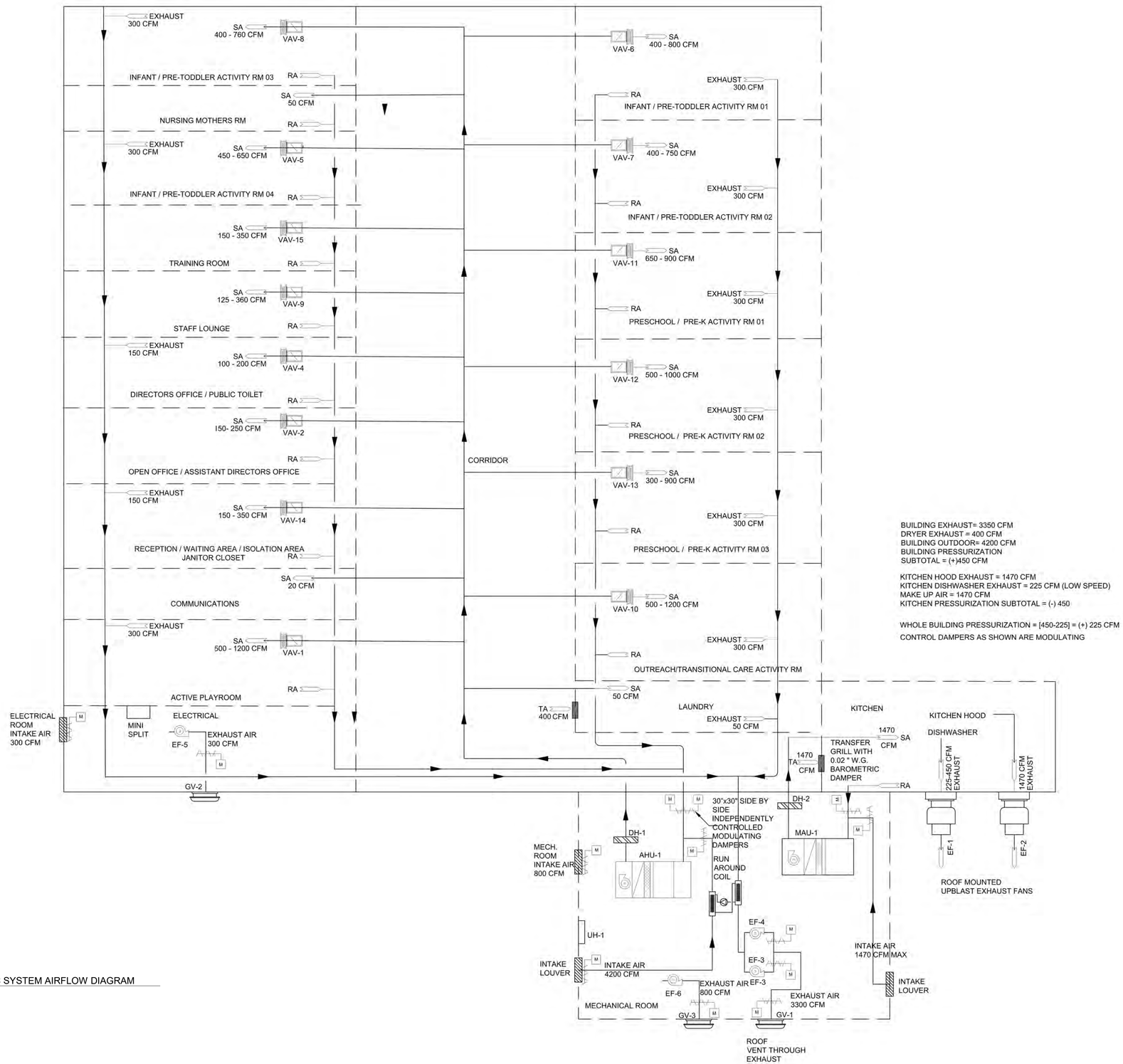
US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK, NY 10278

CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
PROJECT NO. 75682

DETAILS

SHEET ID

M-502



BUILDING EXHAUST= 3350 CFM
DRYER EXHAUST = 400 CFM
BUILDING OUTDOOR= 4200 CFM
BUILDING PRESSURIZATION
SUBTOTAL = (+)450 CFM

KITCHEN HOOD EXHAUST = 1470 CFM
KITCHEN DISHWASHER EXHAUST = 225 CFM (LOW SPEED)
MAKE UP AIR = 1470 CFM
KITCHEN PRESSURIZATION SUBTOTAL = (-) 450

WHOLE BUILDING PRESSURIZATION = [450-225] = (+) 225 CFM
CONTROL DAMPERS AS SHOWN ARE MODULATING

1 HVAC SYSTEM AIRFLOW DIAGRAM
NTS

US Army Corps of Engineers ®

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US ARMY CORPS OF ENGINEERS
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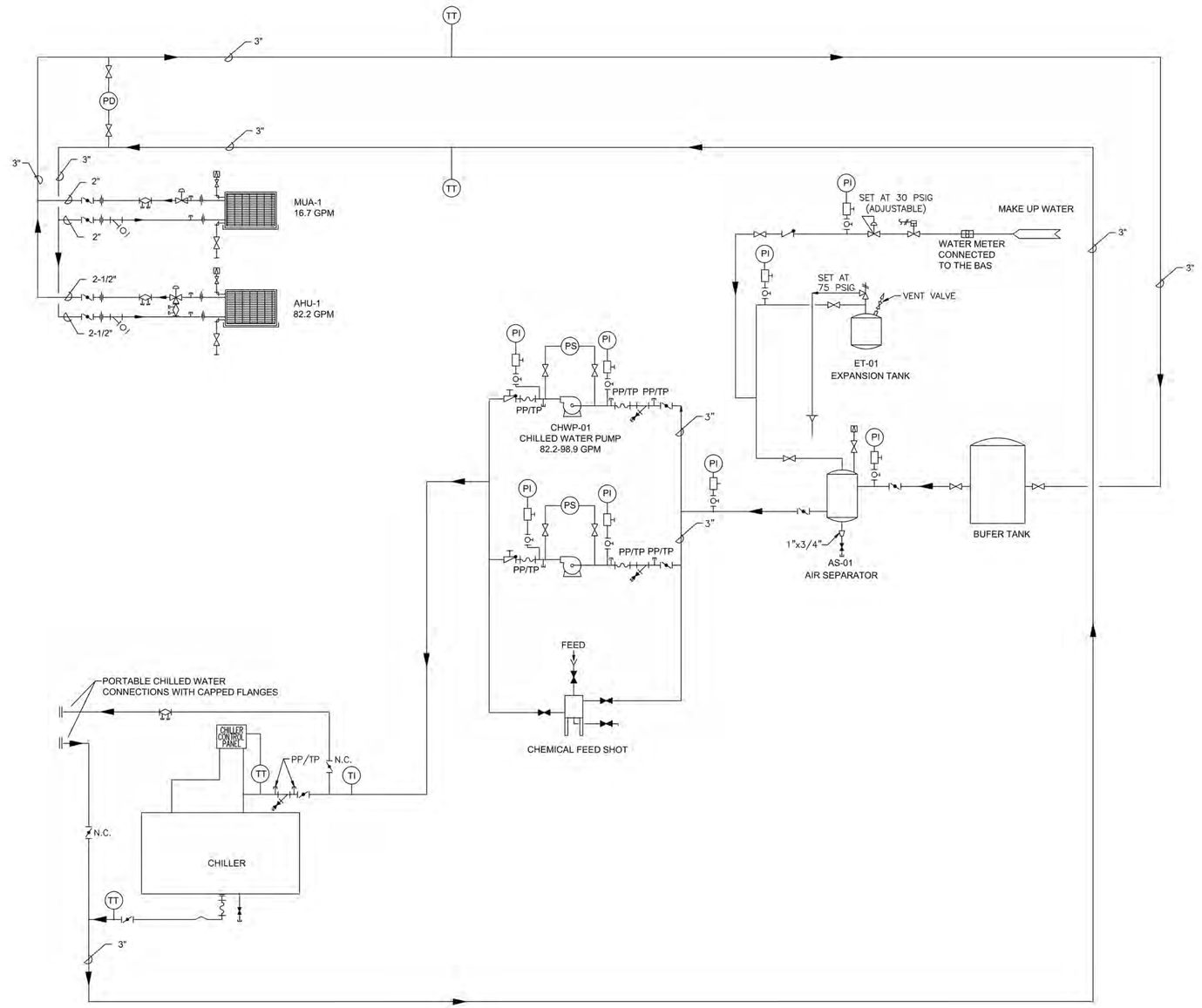
26 FEDERAL PLAZA, NEW YORK, NY 10278

CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
PROJECT NO. 75662

HVAC SYSTEM AIRFLOW DIAGRAM

SHEET ID

M-503



1 CHILLED WATER SYSTEM FLOW DIAGRAM
NTS

US Army Corps of Engineers ®

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CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
PROJECT NO. 75682

CHILLED WATER SYSTEM FLOW DIAGRAM

SHEET ID

M-504

AIR HANDLING UNIT SCHEDULE

TAG	LOCATION	SUPPLY AIR (CFM)	OUTDOOR AIR (CFM)	SUPPLY FAN DATA				CHILLED WATER COOLING COIL						
				TOTAL HP	FAN ESP	V/PH	TOTAL CAPACITY	SENSIBLE CAPACITY	EAT (DB)	EAT(WB)	LAT (DB)	LAT (WB)	EWT (°F)	LWT (°F)	FLOW (GPM)
AHU-1	MECH ROOM	5025-10320	4200	15	2.5 IN-WG	480/3	475 MBH	328 MBH	82.9	68.4	54	53.7	42	54	82.2
MAU-1	MECH ROOM	750-1470	1470	1.5	1.25 IN-WG	480/3	95 MBH	58 MBH	90	73	54	53.7	42	54	16.7

NOTES:
1. PROVIDE MERV-8 PREFILTER, MERV-13 FINAL SUPPLY FILTER. COIL SIZES FOR MAX 500 FPM AND NO MOISTURE CARRY OVER.
2. PROVIDE EACH UNIT WITH DEDICATED VARIABLE FREQUENCY DRIVE, H-O-A SWITCH DISCONNECT
3. VFD's TO BE ACCESSIBLE WITHOUT HAVING TO OPEN ACCESS DOOR WITHIN THE PATH OF AIRFLOW
4. ALL ACCESS DOORS TO BE PROVIDED WITH HANDLES AND DRAIN PAN SHALL BE 316 SS.
5. PROVIDE THE UNIT INCLUDING COOLING COILS WITH SEA COAST COATING AND STAINLESS STEEL DRAIN PAN
6. CHILLED WATER FLOWS ARE BASED ON 30% PROPYLENE GLYCOL SOLUTION AND SEACOAST COATED COOLING COILS AND MAXIMUM WATER PRESSURE DROP OF 16 FT WG.
7. ALL CONTROL AND BALANCING VALVES SHALL BE SIZED FOR PROPER CONTROL AT SPECIFIED FLOW RANGE AND AVAIALBLE PRESSURE.
8. BASIS OF DESIGN IS "CARRIER".
9. CHILLER RATED FOR MIN. 50 GPM FLOW

EXHAUST FAN SCHEDULE

TAG	LOCATION	FAN TYPE	SERVICE	AIR FLOW (CFM)	E.S.P. (IN.-WG)	ELECTRICAL DATA		
						MOTOR HP	VOLT	PHASE
EF-1	ROOF	ROOF MOUNTED UPBLAST	DISHWASHER	450	0.8	0.33	120	1
EF-2	ROOF	ROOF MOUNTED UPBLAST	KITCHEN HOOD	1470	1	1.00	460	1
EF-3,4	MECHANICAL ROOM	DUCTED INLINE	CENTRAL EXH. SYSTEM	3300	3	2.50	460	3
EF-5	ELECTRICAL ROOM	DUCTED INLINE	ELECTRICAL ROOM CLG	300	0.3	0.25	120	1
EF-6	MECHANICAL ROOM	DUCTED INLINE	MECHANICAL ROOM CLG	800	0.3	0.25	120	1
GV-1	ROOF	GRAVITY VENT	EF-3,4 RELIEF	3300	0.15	DOES NOT REQUIRE POWER		
GV-2	ROOF	GRAVITY VENT	EF-5 RELIEF	300	0.15	DOES NOT REQUIRE POWER		
GV-3	ROOF	GRAVITY VENT	EF-6 RELIEF	800	0.15	DOES NOT REQUIRE POWER		

NOTES:
1. PROVIDE ALUMINUM EF'S AND GV'S WITH MORTORIZED DAMPERS (EXCEPT FOR EF- 2 WHICH SHALL NOT HAVE MOTROIZED DAMPER).
2. PROVIDE SUSPENSION MOUNTING SYSTEM WITH VIBRATION ISOLATORS.
3. ALL UNITS SHALL BE PROVIDED H-O-A SWITCHES, STARTERS AND DISCONNECTS.
4. ALL UNITS SHALL PROVIDE OPERATIONAL STATUS TO BAS (SEE CONTROL DWGS FOR ADDITIONAL INFORMATION).
5. PROVIDE EF-2, 3, & 4 WITH VARIABLE FREQUENCY DRIVES, AND H-O-A SWITCHES.
6. PROVIDE EF-1 WITH 2-SPEED MOTOR .
7. PROVIDE ALL ROOF MOUNTED UNITS WITH ROOF CURBS.
8. EF-3, 4 SHALL BE PROVIDED WITH SEISMIC BRACING/SUPPORTS.

AIR COOLED SCROLL CHILLER SCHEDULE

TAG	LOCATION	CHILLER PERFORMANCE		CHILLED WATER					COMPRESSORS				ELECTRICAL DATA		
		NOMINAL TONS	EER	GPM	% GLYCOL	EWT (°F)	LWT (°F)	PRESSURE DROP (FT-WG)	REFRIGERANT TYPE	TYPE	QTY	MIN. CAP %	MCA	MOCP	V/PH/HZ
CH-1	MECH YARD	50	10.22	98.9	30	54	42	6.33	R-32	SCROLL	2	9	112.7	125	460/3/60

NOTES:
1. PROVIDE WITH ELECTRONIC EXPANSION VALVE, INBOARD MICROPORCESSOR
2. PROVIDE PRE-WIRED FACTORY MOUNTED DISCONNECTS AND CONTROL TRANSFORMERS
3. PROVIDE BACNET INTERFACE CARD
4. UNIT SHALL INCLUDE SEA COAST COATED COIL AND FRAME AND SOUND ATTENUATION BLANKET.
5. CHILLER CAPACITY AT CHILLED WATER OPERATING TEMPERATURES SHOWN AND 95 DEG F AMBIENT CONDITIONS SHALL BE 46.8 TONS.
6. BASIS OF DESIGN IS "CARRIER".

VARIABLE AIR VOLUME TERMINAL UNIT WITH ELECTRIC REHEAT SCHEDULE

TAG	SERVING	INLET DIA IN	AIRFLOWS		CAPACITY (MBH)	ELECTRIC REHEAT/ HEATING COIL		EAT(DB) DEG F	LAT(DB) DEG F	V/PH	REMARKS
			MAX (CFM)	MIN (CFM)		HEATING CFM	CAPACITY (kW)				
VAV-1	ACTIVE PLAYROOM	10	1200	500-750	24.3	750	7.1	60	90	277/1	MINIMUM FLOW WILL BE ADJUSTED BASED ON ROOM CO2 SENSOR
VAV-2	ASSISTANT DIRECTOR'S OFFICE/OPEN OFFICE	6	250	100	4.9	150	1.4	60	90	277/1	
VAV-3	CORRIDORS	8	650	300	13.0	400	3.8	60	90	277/1	
VAV-4	DIRECTOR'S OFFICE	6	200	100	4.1	125	1.2	60	90	277/1	
VAV-5	INFANT/PRE-TODDLER ACTIVITY 04	8	650	450	14.6	450	4.3	60	90	277/1	
VAV-6	INFANT/PRE-TODDLER ACTIVITY 01	8	800	400-650	16.2	500	4.7	60	90	277/1	MINIMUM FLOW WILL BE ADJUSTED BASED ON ROOM CO2 SENSOR
VAV-7	INFANT/PRE-TODDLER ACTIVITY 02	8	750	400-550	15.2	470	4.5	60	90	277/1	MINIMUM FLOW WILL BE ADJUSTED BASED ON ROOM CO2 SENSOR
VAV-8	INFANT/PRE-TODDLER ACTIVITY 03	8	760	400-600	15.4	475	4.5	60	90	277/1	MINIMUM FLOW WILL BE ADJUSTED BASED ON ROOM CO2 SENSOR
VAV-9	STAFF LOUNGE	6	360	125	7.3	225	2.1	60	90	277/1	
VAV-10	OUTREACH/TRANSITIONAL CARE ACTIVITY RM	10	1200	500-750	24.3	750	7.1	60	90	277/1	MINIMUM FLOW WILL BE ADJUSTED BASED ON ROOM CO2 SENSOR
VAV-11	PRESCHOOL/PRE-KINDERGARTEN ACTIVITY 01	10	900	650	17.8	550	5.2	60	90	277/1	
VAV-12	PRESCHOOL/PRE-KINDERGARTEN ACTIVITY 02	10	1000	500-700	20.4	630	6.0	60	90	277/1	MINIMUM FLOW WILL BE ADJUSTED BASED ON ROOM CO2 SENSOR
VAV-13	PRESCHOOL/PRE-KINDERGARTEN ACTIVITY 03	10	900	300-650	18.3	565	5.4	60	90	277/1	MINIMUM FLOW WILL BE ADJUSTED BASED ON ROOM CO2 SENSOR
VAV-14	RECEPTION	6	350	150	7.1	220	2.1	60	90	277/1	
VAV-15	TRAINING ROOM	6	350	150	7.1	220	2.1	60	90	277/1	

NOTES:
1. MAX RADIATED NC FOR VAV BOXES SHALL BE 24 (INCLUDES ATTENUATION TRANSFER FUNCTION OBTAINED FROM TABLES IN ARI STANDARD 885-90
2. PROVIDE UNIT WITH SCR CONTROL OF HEAT/REHEAT COILS
3. SOUND DATA SHALL BE OBTAINED FROM TESTS CONDUCTED IN ACCORDANCE WITH ARI STANDARD 880-94
4. PROVIDE DOUBLE WALL INSULATED UNITS WITH MICROPROSSOR CONTROL AND DISCONNECTS
5. BASIS OF DESIGN IS "CARRIER".

MINI SPLIT SYSTEM UNIT SCHEDULE

INDOOR UNIT TAG	SERVING	COOLING CAPACITY	INDOOR FAN DATA		EVAPORATOR COIL DATA					INDOOR UNIT ELECTRICAL DATA			OUTDOOR UNIT TAG	OUTDOOR UNIT ELECTRICAL DATA				OUTDOOR UNIT OPERATING TEMPERATURE
			AIRLOW (MAX.)	FAN HP	ENTERING AIR °F		LEAVING AIR °F		TOTAL MBH	MCA	FLA	V/P/HZ		MCA	MOCP	FAN HP	V/PH/HZ	AMBIENT TEMPERATURE °F (MAX./MIN.)
		BTU/H			DB	WB	DB	WB										
AC-1	CCTV EQUIPMENT	12,000	385	0.04	72	56	58	50	12.00	1.00	0.19	208/1/60	CU-1	11	28	0.06	208/1/60	115 DB/-15 DB
AC-2	ELECTRICAL	12,000	385	0.04	72	56	58	50	12.00	1.00	0.19	208/1/60	CU-2	11	28	0.06	208/1/60	115 DB/-15 DB
AC-3	COMMUNICATIONS	24,000	775	0.09	72	56	58	50	24.00	1.00	0.27	208/1/60	CU-3	19	26	0.12	208/1/60	115 DB/-15 DB

NOTES:
1. PROVIDE BOTH INDOOR AND OUTDOOR UNITS WITH DISCONNECTS
2. PROVIDE MFR. MOUNTING BRACKET AND WALL MOUNTED THERMOSTATS (W/BACNET INTERFACE FOR TEMP, HUMIDITY SENSING AND ALARM) FOR INDOOR UNITS
3. INDOOR UNITS ARE POWERED BY THE OUTDOOR UNITS AND OUTDOOR UNITS SHALL INLCUDE APPROVED WALL MOUNTING BRACKETS AT MIN. 60" ABOVE FINISHED GRADE.
4. PROVIDE SECONDARY DRAIN PAN AND CONDENSATE PUMP

ERV RUN AROUND COIL

TAG	LOCATION	AIRSIDE COIL DATA						FLUID SIDE COIL DATA					COIL CAPACITY (BTU)
		SUPPLY AIR (CFM)	SUMMER ENTERING COIL AIR DB/WB (°F)	SUMMER LEAVING COIL AIR DB/WB (°F)	WINTER ENTERING COIL AIR DB/WB (°F)	WINTER LEAVING COIL AIR DB/WB (°F)	AIR PRESSURE DROP (IN.-WG)	SUMMER ENTERING FLUID TEMP (°F)	WINTER ENTERING FLUID TEMP (°F)	FLUID FLOW (GPM)	PRESSURE DROP (FT-W)	GLYCOL % (PG)	
RC-1	MECH ROOM (OUTDOOR AIR INTAKE)	4200	90/73	90	14.1	34.8	0.19	80	43	30	4.5	30	40,367
RC-2	MECH ROOM (EXHAUST)	3300	70	81.3	70/58.4	47/46.9	0.61	82.8	35.8	30	4.5	30	100,823

NOTES:
1. PROVIDE MERV-7 FILTERS AT UPSTREAM OF COILS
2. PROVIDE COPPER COILS WITH CORROSION RESISTANT COATING CONNECTED BY INSULATED 1.5" TYPE I COPPER TUBING.
3. FLOWS ARE BASED ON 30% PG GLYCOL SOLUTION

US Army Corps of Engineers ®

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NEW YORK DISTRICT
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CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
PROJECT NO. 75662

EQUIPMENT SCHEDULE

SHEET ID

M-601

EXPANSION TANK SCHEDULE

TAG	LOCATION	SERVICE	CAPACITY (GAL)	MAX. ACCEPTANCE VOLUME (GAL)	MAX. OPERATING PRESSURE (PSIG)
ET-1	MECHANICAL ROOM	CHILLED WATER	20	7	125

NOTES:
1. CORROSION INHIBITOR COATED
2. SIZE OF TANK AND ACCEPTANCE VOLUME IS MINIMUM REQUIREMENT

ELECTRIC UNIT HEATER SCHEDULE

TAG	LOCATION	TYPE	HEATING CAPACITY	VOLT	PHASE
UH-1	MECHANICAL ROOM	WALL MOUNT	3 kW	480	3
CUH-1	VESTIBULE	WALL RECESSED	1.5 kW	480	1

NOTE: PROVIDE WITH DISCONNECT AND THERMOSTATIC CONTROLS W/ BACNET INTERFACE.

BUFFER TANK SCHEDULE

TAG	LOCATION	SERVICE	CAPACITY (GAL)	WORKING PRESSURE (PSIG)
BT-1	MECHANICAL ROOM	CHILLED WATER	150	125

NOTES:
1. ASME STAMPED VERTICAL TANK WITH PERMANENT NAMEPLATE
2. PROVIDE WITH AUTOMATIC AIRVENT, SEISMIC RATED LEGS, INTERNAL BAFFLE, EXTERNAL INSULATION JACKET, 3" FLANKED INLET AND OUTLET

AIR SEPARATOR SCHEDULE

TAG	LOCATION	SERVICE	FLOW (GPM)	PIPE SIZE (IN)
AS-1	MECHANICAL ROOM	CHILLED WATER	130	3

NOTES:
1. PROVIDE WITH AUTOMATIC AIR RELEASE VALVE, SIDE OR BOTTOM PARTICLE DISCHARGE VALVE
2. UNIT MUST BE ASME CERTIFIED

PUMP SCHEDULE

TAG	SERVICE	GPM	HD (FT WG.)	SERVICE °F	HP	V
CHWP-1	PRIMARY CHW	98.9	65	42	5	460/3
CHWP-2	PRIMARY CHW	98.9	65	42	5	460/3
HRP-1	ERV RUNAROUND LOOP	30	20	35	1/2	120/1

1. ALL PUMPS SIZED FOR 30% PROPYLENE GLYCOL SOLUTION. EACH PUMP SHALL INCLUDE ISOLATION & BALANCE VALVES, STRAINER & BACKCHECK VALVE.
2. CHWP-1 AND 2 ARE REDUNDANT AND SHALL BE PROVIDED WITH A VFD, DISCONNECT AND H-O-A SWITCH WITH BACNET INTERFACE.
3. HRP-1 PUMP SHALL BE AN IN-LINE PUMP AND SHALL BE ENERGIZED BY BAS WHEN SYSTEM IS IN "OCCUPIED MODE". CHWP-1 & 2 SHALL BE BASED MOUNTED, END-SUCTION STYLE.

DUCT HEATER

TAG	SERVICE	SIZE INCHES	EAT (DB) DEG F	LAT (DB) DEG F	SUPPLY AIR CFM	CAPACITY		POWER SUPPLY
						MBH	KW	
DH-1	AHU-1	48X24	33	65	6480	224	66	480/3
DH-2	MAU-1	14X12	14	80	750-1470	105	31	480/3

NOTES:
1. PROVIDE UNITS WITH SCR CONTROLLERS, AIRFLOW SAFETY SWITCH, BACNET INTERFACE AND DISCONNECT SWITCHES.

HUMIDIFIER SCHEDULE

TAG	LOCATION	DUCT SIZE (IN.)	HTG CFM	HTG SA TEMP	HUMIDITY RATIO ENT	HUMIDITY RATIO LVG	CAPACITY		POWER SUPPLY
HUM-1	MECH ROOM	48X24	6480	65 DEG F	0.0023	0.008	164 LBS/HR	48 kW	480/3

NOTE: PROVIDE WITH DUCT DISPERSION TUBE, DISCONNECT SWITCH, MICROPROCESSOR CONTROLS, AND BACNET INTERFACE

AIR DEVICE SCHEDULE

TAG	SERVICE	SIZE (IN)	P.D. IN WG
CD-1	SUPPLY	24 x 24	0.1
CD-2	SUPPLY	12 x 12	0.1
CD-3	SUPPLY	4 x 6	0.1
RG-1	RETURN	24 x 24	0.1
RG-2	RETURN	12 x 12	1.1
TG	TRANSFER	24 x 24	0.1
EXH-1	EXHAUST	24 x 24	0.1
EXH-2	EXHAUST	20 x 20	0.1
EXH-3	EXHAUST	12 x 12	0.1
LV-1	LOUVER	72 x 32	0.1
LV-2	LOUVER	36 x 32	0.1
LV-3	LOUVER	24 x 24	0.1
LV-4	LOUVER	36 x 12	0.1

NOTES:
1. PROVIDE NECK SIZE AND LOW NOISE LEVEL CFM AS SHOWN ON PLANS.
2. LOUVERS SHALL BE RATED FOR LOW WATER PENETRATION AT WIND DRIVEN RAIN (CLASS A) W/ 4" BLADES AND INCLUDE REMOVABLE INSECT SCREEN, LOW-LEAKAGE MOTORIZED DAMPERS. SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION
3. ALL CD, RG AND EXH GRILLES/DIFFUSERS SHALL BE INCLUDE OBD'S

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

ISSUE DATE: AUGUST 29, 2025
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US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK, NY 10278

CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
PROJECT NO. 75682

EQUIPMENT SCHEDULE

SHEET ID

M-602

SYMBOLS, ABBREVIATIONS, AND GENERAL NOTES

HVAC CONTROLS SYMBOLS

W-X-Y-Z ##
DEVICE SYMBOL, GENERIC
USED TO REPRESENT SENSORS, INSTRUMENTS SAFETIES, AND OTHER CONTROL DEVICES
W-X-Y-Z (SEE ABBREVIATIONS AND ACRONYMS)
GENERIC USAGE TO SHOW LOCATION OF DEVICE; PROCESS OR DEVICE BEING MEASURED OR CONTROLLED; SIGNAL TYPE; MODIFIERS AND OTHER APPLICATION INFORMATION

W-X-Y-Z ##
DEVICE SYMBOL, GENERIC
MULTIPLE OUTPUT DEVICE WHERE AT LEAST 1 OUTPUT IS ALWAYS SAFETY INTERLOCK

W-X-Y-Z
DDC ##
DIR
REV
DEVICE SYMBOL, CONTROLLER
DDC : DIRECT DIGITAL CONTROL
: DEVICE NUMBER
DIR : DIRECT CONTROL ACTION, OR
REV : REVERSE CONTROL ACTION
W-X-Y-Z (SEE ABBREVIATIONS AND ACRONYMS)
GENERIC USAGE TO SHOW LOCATION OF DEVICE; PROCESS OR DEVICE BEING MEASURED OR CONTROLLED; SIGNAL TYPE; MODIFIERS AND OTHER APPLICATION INFORMATION

ACTUATOR, ELECTRIC

AFMA
AIR FLOW MEASUREMENT ARRAY,
WITH FLOW TRANSMITTER
SEE "DEVICE SYMBOL, GENERIC"

AFMA
FAN INLET AIR FLOW MEASUREMENT ARRAY,
WITH FLOW TRANSMITTER
SEE "DEVICE SYMBOL, GENERIC"

CO
CARBON MONOXIDE SENSOR

OCCUPANCY SENSOR

COIL, COOLING

EC
COIL, ELECTRIC HEATING

X / Y
COIL, X / Y: INDICATES COIL TYPE.
C / C: COOLING COIL
H / C: HEATING COIL
D / X: DIRECT EXPANSION COIL
HG / C: HOT GAS REHEAT COIL
HC: HEATING/COOLING COIL INCLUDING WSHP HX.

CONTROL SIGNAL LINE, LOW VOLTAGE

CT
CURRENT TRANSFORMER/SWITCH

DAMPER, BALANCING

DAMPER, PARALLEL BLADE
D-## NORMALLY OPEN OR CLOSED AS SHOWN
= DAMPER NUMBER AS SHOWN IN DAMPER SCHEDULE

D-##
DAMPER, OPPOSED BLADE
NORMALLY OPEN OR CLOSED AS SHOWN
= DAMPER NUMBER AS SHOWN IN DAMPER SCHEDULE

T OCC
WALL TEMPERATURE SENSOR.
"OCC" INDICATES OCCUPANCY OVERRIDE BUTTON.

HS H
HUMIDITY SENSOR, SPACE

SP
DUCT STATIC PRESSURE SENSOR

CO2
DUCT MOUNTED CARBON DIOXIDE SENSOR

ES
EMERGENCY SHUT-OFF SWITCH

BUILDING/SPACE DIFFERENTIAL PRESSURE SENSORS

CO
CARBON MONOXIDE SENSOR

B
BINARY HARDWARE INPUT

A
ANALOG HARDWARE INPUT

B
BINARY HARDWARE OUTPUT

A
ANALOG HARDWARE OUTPUT

ANALOG OR BINARY SIGNAL INPUT

ANALOG OR BINARY SIGNAL OUTPUT

HEAT EXCHANGER

M#
MOTOR

MS-#
MOTOR STARTER

Rxx
RELAY COIL
xx = SEQUENTIAL RELAY (SOLENOID) NUMBER

Rxx-YY
RELAY COIL CONTACT
NORMALLY OPEN
xx = RELAY COIL NUMBER
YY = CONTACT NUMBER

CO2
CARBON DIOXIDE SENSOR, SPACE MOUNTED.

Rxx-YY
RELAY COIL CONTACT
NORMALLY CLOSED
xx = RELAY COIL NUMBER
YY = CONTACT NUMBER

XF
FAN
X = FAN TYPE (RF, SF, EF)

FILTER

LDP ##
LOCAL DISPLAY PANEL
= SEQUENTIAL NUMBER (WHEN MORE THAN 1 LDP)

P
PRESSURE GAUGE

HUMIDITY SENSOR, DUCT MOUNTED

H
L
PRESSURE SWITCH, DIFFERENTIAL, WITH GAGE
H = HIGH PRESSURE TAP
L = LOW PRESSURE TAP
SEE "DEVICE SYMBOL, GENERIC"

PUMP

RST-BUT
RESET BUTTON FOR SAFETY RESET

SMOKE DETECTOR, DUCT-MOUNTED
SEE "DEVICE SYMBOL, GENERIC"

SWITCH, MANUAL

T
TEMPERATURE GAUGE

T
TEMPERATURE SENSOR, AVERAGING
or TEMPERATURE LOW LIMIT / FREEZESTAT
SEE "DEVICE SYMBOL, GENERIC"

T
TEMPERATURE SENSOR, POINT
SEE "DEVICE SYMBOL, GENERIC"

STAT
THERMOSTAT WITH SPECIFIED I/O FUNCTIONS

THERMOWELL IN PIPE

VALVE, BALANCING

V-##
NC
VALVE, NORMALLY CLOSED
WITH SPRING RETURN FAILSAFE
= VALVE NUMBER AS SHOWN IN VALVE SCHEDULE

V-##
NO
VALVE, NORMALLY OPEN
WITH SPRING RETURN FAILSAFE
= VALVE NUMBER AS SHOWN IN VALVE SCHEDULE

V-##
COM NO
NC
VALVE, 3-WAY DIVERTING
WITH SPRING RETURN FAILSAFE
NO = NORMALLY OPEN
NC = NORMALLY CLOSED
COM = COMMON PORT
= VALVE NUMBER AS SHOWN IN VALVE SCHEDULE

V-##
NO COM
NC
VALVE, 3-WAY MIXING
WITH SPRING RETURN FAILSAFE
NO = NORMALLY OPEN
NC = NORMALLY CLOSED
COM = COMMON PORT
= VALVE NUMBER AS SHOWN IN VALVE SCHEDULE

VFD
XX-C XX-SS XX-S
VARIABLE FREQUENCY DRIVE
XX = PROCESS/DEVICE BEING CONTROLLED
SS = START/STOP COMMAND
S = STATUS FEEDBACK (ON/OFF)
C = 4-20 mA, VDC, or SNVT CONTROL SIGNAL

HVAC ABBREVIATIONS

2P	TWO-POSITION (CONTROL SIGNAL)
ABV	ABOVE
ACU	AIR CONDITIONING UNIT
ADJ	ADJUSTABLE
AFMA	AIRFLOW MEASUREMENT ARRAY
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHU	AIR HANDLING UNIT
AI	ANALOGUE INPUT
ALM	ALARM
AO	ANALOGUE OUTPUT
APD	AIR PRESSURE DROP
AS	AIR SEPERATOR
BLW	BELOW
BAS	BUILDING AUTOMATION SYSTEM
BCP	BOILER CIRCULATOR PUMP
BF	BYPASS FEEDER
BHP	BRAKE HORSEPOWER
BI	BINARY INPUT
BLDG	BUILDING
BO	BINARY OUTPUT
BOD	BOTTOM OF DUCT
BOP	BOTTOM OF PIPE
BTU(H)	BRITISH THERMAL UNIT (PER HOUR)
BUT	BUTTON
C	COMMAND (MODULATING CONTROL SIGNAL)
CFM	CUBIC FEET PER MINUTE
CLG	COOLING
CO	CARBON MONOXIDE
CO2	CARBON DIOXIDE
COM	COMMON
COP	COEFFICIENT OF PERFORMANCE
CS	CURRENT SENSOR
CT	CURRENT TRANSFORMER/SWITCH
CU	CONDENSING UNIT
D	DAMPER
DA	DISCHARGE AIR
DB	DEADBAND DDC DIRECT DIGITAL CONTROL(LER)
DB	DRY BULB
DIFF	DIFFERENCE
DIR	DIRECT (CONTROL ACTION)
DIS	DISABLE
DISP	DISPLAY
DN	DOWN
DOAS	DEDICATED OUTSIDE AIR SYSTEM
DX	DIRECT EXPANSION (UNIT)
EA	EXHAUST AIR
EAL	EXHAUST AIR LOUVER
EAT	ENTERING AIR TEMPERATURE
EER	ENERGY EFFICIENCY RATIO
EF	EXHAUST FAN
EG	EXHAUST GRILLE
ENA	ENABLE
ER	EXHAUST REGISTER
ET	EXPANSION TANK
EUH	ELECTRIC UNIT HEATER
F	FLOW
FAP	FIRE ALARM PANEL
FIN	FINISHED
FFL	FINISHED FLOOR
FLA	FULL LOAD AMPS
FLR	FLOOR
FLS	FLOW SWITCH
FLT	FILTER
FS	FLOAT SWITCH
H	HUMIDITY OR ENTHALPY (BASED ON CONTEXT)
HL	HIGH LIMIT
HRC	HEAT RECOVERY COIL
HTG	HEATING
HWP	HOT WATER PUMP
HUM	HUMIDIFIER
HW	HOT WATER
HWR	HOT WATER RETURN
HWS	HOT WATER SUPPLY
HS	HUMIDITY SENSOR
HX	HEAT EXCHANGER
IN	INCHES
I/O	INPUT/OUTPUT
KIP	KILOPOUND
LAT	LEAVING AIR TEMPERATURE
LDP	LOCAL DISPLAY PANEL
LL	LOW LIMIT
LWT	LEAVING WATER TEMPERATURE
M&C	MONITORING & CONTROL (SOFTWARE)
MA	MIXED AIR
MBH	THOUSANDS OF BTU PER HOUR
MERV	MINIMUM EFFICIENCY REPORTING VALUE
MINOA	MINIMUM OUTSIDE AIR
MHP	MOTOR HORSEPOWER
MOD	MOTOR OPERATED DAMPER
MS	MOTOR STARTER
MAU	MAKEUP AIR UNIT
N/A	NOT APPLICABLE
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
OA	OUTSIDE AIR
OAL	OUTSIDE AIR LOUVER
OCC	OCCUPIED
OWS	OPERATOR WORKSTATION
P	PRESSURE OR PUMP (KNOWN BY CONTEXT)
PH	PHASE
PRV	PRESSURE REDUCING VALVE
PMP	PUMP
PPM	PARTS PER MILLION
R	RELAY
RA	RETURN AIR
REV	REVERSE (CONTROL ACTION)
RF	RETURN FAN
RG	RETURN GRILLE
RH	RELATIVE HUMIDITY
RR	RETURN REGISTER
RLA	RELIEF AIR OR RUNNING LOAD AMPS
RM	ROOM
RST	RESET
RT	RATE
S	STATUS
SA	SUPPLY AIR
SD	SUPPLY DIFFUSER
SEC	SECONDARY
SF	SUPPLY FAN
SG	SUPPLY GRILLE
SMK	SMOKE
SP	SETPOINT
(E/T)SP	(EXTERNAL / TOTAL) STATIC PRESSURE
SR	SUPPLY REGISTER
SS	START/STOP COMMAND
STAT	THERMOSTAT
SYS	SYSTEM
SCHD	SCHEDULER
T	TEMPERATURE
TAP	TAP, PRESSURE
UMCS	UTILITY MONITORING CONTROL SYSTEM
UNOCC	UNOCCUPIED
V	VALVE
VAV	VARIABLE AIR VOLUME
VD	VOLUME DAMPER
VFD	VARIABLE FREQUENCY DRIVE
WB	WET BULB (TEMPERATURE)
W(C/G)	WATER (COLUMN / GAUGE)
ZN	ZONE

NOTE: NOT ALL SYMBOLS AND ABBREVIATIONS USED

US Army Corps of Engineers ®

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US ARMY CORPS OF ENGINEERS
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CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
PROJECT NO. 75662

CONTROLS LEGEND, SYMBOLS, AND ABBREVIATIONS

SHEET ID
M-801

POINT SCHEDULE INSTRUCTIONS FOR CONTRACTOR

GENERAL:

1) THE CONTRACT DRAWING POINTS SCHEDULES ASSUME THAT THE ENTIRE SEQUENCE OF OPERATION IS PERFORMED IN A SINGLE PIECE OF DDC HARDWARE. IN CASES WHERE MULTIPLE PIECES OF DDC HARDWARE ARE USED (INCLUDEING CEA-709.1 NETWORKED SENSORS AND ACTUATORS), SEPARATE THE POINTS SCHEDULE INTO SEPARATE TABLES EACH WITH IT'S OWN HEADER INFORMATION (SEE BELOW) SO THAT EACH PIECE OF DDC HARDWARE HAS A TABLE DEDICATED TO IT. ALL TABLES FOR A SINGLE SEQUENCE OF OPERATION SHALL BE ON A SINGLE DRAWING WHICH MAY SPAN MULTIPLE SHEETS. SHOW COMMUNICATION BETWEEN MULTIPLE PIECES OF DDC HARDWARE PERFORMING A COMMON SEQUENCE THROUGH THE USE OF NVI AND NVO ENTRIES IN THE 1/0 COLUMN (SEE 1/0 COLUMN INSTRUCTIONS BELOW), ADDING ROWS TO THE TABLE(S) AS NEEDED.

2) ENTRIES SHOWN BRACKETED AS:<_> ARE REQUIRED ENTRIES. SOME ENTRIES WITHOUT BRACKETS MAY BE REQUIRED IN SOME INSTANCES AS DESCRIBED IN THESE INSTRUCTIONS.
SPACES WHERE NO ENTRY IS ORDINARILY REQUIRED CONTAINS A TILDE:"-" (EQUIVALENT TO AN "N/A" OR NULL VALUE)
WHEN AN ENTRY APPEARS INSIDE OF BRACKETS, IT IS A RECOMMENDED ENTRY THAT MUST BE VERIFIED OR CHANGED BY THE APPROPRIATE PARTY (AS INDICATED BY THE BRACKET TYPE). WHEN EDITING THE POINT SCHEDULES, DELETE THE BRACKETS AFTER VERIFYING/PROVIDING THE ENTRY. DO NOT LEAVE CELLS BLANK, INSTEAD SHOW THE TILDE("-") TO INDICATE A NULL VALUE OR THAT NO FURTHER ENTRY IS REQUIRED.

HEADER INFORMATION INSTRUCTIONS:

1) DDC HARDWARE IDENTIFIER: SHOW THE IDENTIFIER FOR EACH PIECE OF DDC HARDWARE. MAINTAIN CONSISTENCY AND UNIQUENESS OF DDC HARDWARE IDENTIFIERS BETWEEN ALL DRAWINGS.

2) DDC HARDWARE LOCATION: SHOW THE PHYSICAL LOCATION OF THE DEVICE. LOCATION SHALL INCLUDE THE BUILDING AND ROOM NUMBER AND MAY ALSO INCLUDE FURTHER INFORMATION SUCH AS ENCLOSURE/PANEL IDENTIFICATION.

3) NODE ADDRESS: SHOW THE DOMAIN, SUBNET AND NODE ADDRESSES FOR ALL DEVICES ON THE NETWORK.

4) NODE ID: SHOW THE MANUFACTURER SUPPLIED NODE ID (ALSO CALLED THE NEURONID) FOR EACH DEVICE.

"GENERAL" COLUMNS:

1) NAME COLUMN: SHOW POINT NAMES AS NEEDED AND AS INDICATED BY BRACKETS(<_>). THE NAME SHALL BE CONSISTENT WITH POINT NAMES SHOWN ON ALL OTHER DRAWINGS AND SHALL USE THE ESTABLISHED POINT ABBREVIATIONS.

2) SETTING COLUMN: CONFIGURE DEVICES TO USE THE SETPOINTS AND SETTINGS SHOWN. WHEN A SETPOINT OR SETTING IS NOT SHOWN, USE VALUES IN ACCORDANCE WITH THE SPECIFICATION AND SHOW THE SETPOINT OR SETTING USED. INCLUDE THE APPROPRIATE ENGINEERING UNITS FOR ENTRIES IN THIS COLUMN.

3) RANGE COLUMN: CONFIGURE DEVICES TO USE THE RANGES SHOWN. WHEN A RANGE IS NOT SHOWN, USE VALUES IN ACCORDANCE WITH THE SPECIFICATION AND SHOW RANGE USED. FOR SENSORS SHOW THE ACTUAL SENSOR RANGE (THIS RANGE MUST AT LEAST ENCOMPASS THE RANGE SPECIFIED IN SECTION 25 10 10). FOR DAMPER ACTUATORS SHOW THE ACTUAL RANGE OVER WHICH THE VALVE OR DAMPER IS ACTUATED. INCLUDE THE APPROPRIATE ENGINEERING UNITS FOR ENTRIES IN THIS COLUMN.

4) 1/0 TYPE COLUMN: SHOW THE 1/0 TYPE FOR EACH POINT AS ONE (OR MORE) OF THE FOLLOWING:
* AI FOR ANALOG INPUTS
* AO FOR ANALOG OUTPUTS
* BI FOR BINARY INPUTS
* BO FOR BINARY OUTPUTS
* NVO FOR NETWORK VARIABLE OUTPUTS (BOUND TO ANOTHER PIECE OF DDC HARDWARE)
* NVI FOR NETWORK VARIABLE INPUTS (BOUND FROM ANOTHER PIECE OF DDC HARDWARE)

IF MORE THAN ONE PIECE OF DDC HARDWARE IS USED TO IMPLEMENT A SEQUENCE AND THE VALUE OF A PHYSICAL INPUT TO ONE IS NEEDED BY THE OTHER, SHOW THE POINT AS BOTH A HARDWARE INPUT (AI OR BI) AND A NETWORK VARIABLE OUTPUT (NVO) ON THE FIRST AND AS A NETWORK VARIABLE (NVI) TO THE OTHER DDC HARDWARE.SIMILARLY FOR OUTPUTS SHOW A NETWORK VARIABLE OUTPUT (NVO) ON ONE CONTROLLER, AND A NETWORK VARIABLE INPUT (NVI) AND HARDWARE OUTPUT (AO OR BO) ON THE OTHER.
AN ENTRY OF NVO IS ONLY REQUIRED FOR OUTPUTS THAT ARE USED BY ANOTHER PIECE OF DDC HARDWARE; POINTS THAT HAVE OUTPUTS ONLY FOR DISPLAY OR TRENDING AT AN LDPOR BY THE M&C SOFTWARE ARE ASSUMED TO BE NVOS AND DO NOT NEED AN NVO ENTRY IN THE 1/0 COLUMN.

5) CONFIG TYPE: INDICATES WHETHER A POINT IS "C"ONFIGURABLE OR "H"ARDWARE.

LDP AND BAS DISPLAY COLUMNS:

1) LDP VIEW/OVERIDE COLUMN: PROVIDE AN LDP AND CONFIGURE THE BUILDING CONTROL NETWORK AND THE LDP TO DISPLAY POINTS MARKED WITH A "X". FOR EACH POINT WITH AN "O" IN THIS COLUMN PROVIDE AN INPUT FOR THE POINT BY WHICH THE VALUE OF THE POINT CAN BE OVERRIDDEN AND PROVIDE AN LDP (IF NOT ALREADY PROVIDED) AND CONFIGURE THE BUILDING CONTROL NETWORK AND THE LDP TO ALLOW AN OPERATOR TO OVERRIDE (WRITE TO) THE POINT FROM THE LDP.

2) UMCS GRAPHICAL VIEW/OVERIDE: A "X" IN THIS COLUMN INDICATES THAT THE POINT MUST BE AVAILABLE FROM THE DDC HARDWARE PERFORMING THE SEQUENCE FOR THIS SYSTEM. FOR EACH POINT WITH AN "O" IN THIS COLUMN PROVIDE AN INPUT FOR THE POINT BY WHICH THE VALUE OF THE POINT CAN BE OVERRIDDEN AND CONFIGURE THE BUILDING CONTROL NETWORK TO ALLOW AN OPERATOR TO OVERRIDE (WRITE TO) THE POINT FROM THEM & C INTERFACE.

ALARMS COLUMNS:

1) ALARM CONDITION COLUMN: FOR EACH POINT WITH AN ENTRY IN THIS COLUMN PROVIDE AN OUTPUT FOR THE POINT. USE THE ALARM LIMITS SHOWN TO CONFIGURE ALARM GENERATION FOR THE POINT AT THE UMCS SOFTWARE.

2) ALARM PRIORITY COLUMN: WHEN CONFIGURING THE ALARM HANDLING AT THEM & C SOFTWARE, USE THE ALARM PRIORITY SHOWN TO DETERMINE IF THE ALARM IS CRITICAL (GRIT) OR INFORMATIONAL (INFO).

OTHER:

1) SYSTEM RESET BUTTON (RST-BUT): IF THE "1/0 TYPE" COLUMN CONTAINS "BI", THE SYSTEM SHALL BE CAPABLE OF BEING RESET VIA A LOCAL HARDWARE PUSH-BUTTON.

2) SYSTEM OCCUPANCY (SYS-OCC): SHOW OCC, UNOCC, WUCD (WARM-UP/COOL-DOWN) IN THE RANGE COLUMN BASED ON THE SYSTEM-SPECIFIC SEQUENCE OF OPERATIONS AND OCCUPANCY SCHEDULE.

3) MINIMUM OUTSIDE AIR (MINOA) FLOW: FOR SYSTEMS CONTROLLING TO A MINOA SETPOINT, USE THE MINOA-F-SP SHOWN WHEN CONFIGURING THE DDC HARDWARE PERFORMING THE SEQUENCE OF OPERATION. FOR OTHER SYSTEMS SET THE MINIMUM OUTSIDE AIR FLOW TO THE MINIMUM OUTSIDE AIR FLOW SETTING SHOWN AS SPECIFIED.

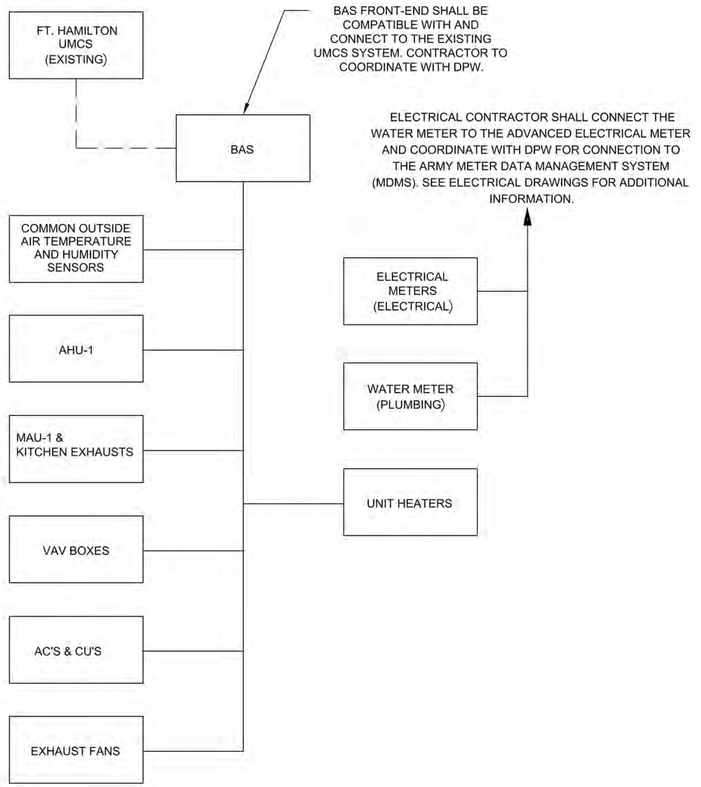
4) PID LOOP SETTINGS: SHOW ALL PID LOOP SETTINGS IN THE SETTINGS COLUMN, INCLUDING ENGINEERING UNITS FOR EACH SETTING. ADJUST ROW HEIGHT AS NEEDED TO SHOW ALL PID SETTINGS.

5) FILTERS: WHEN FILTER PRESSURES ARE SHOWN, INSTALL FILTER PRESSURE SWITCHES. SHOW LOADED FILTER (HIGH-LIMIT) SETPOINT FOR EACH FILTER.

6) OTHER POINTS: INSTALL SENSORS FOR MONITORING PURPOSES ONLY.

7) NAME COLUMN: USE THE POINTS NAMES SHOWN ON THE POINTS SCHEDULE FOR ALL GRAPHIC DISPLAYS.

BAS ARCHITECTURE SCHEMATIC



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US ARMY CORPS OF ENGINEERS
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26 FEDERAL PLAZA, NEW YORK, NY 10278

CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
PROJECT NO. 75682

CONTROLS POINTS SCHEDULE INSTRUCTIONS AND BAS ARCHITECTURE

SHEET ID

M-802

SEQUENCE OF OPERATION: AHU-1

1. BUILDING AUTOMATION SYSTEM INTERFACE:

   THE BUILDING AUTOMATION SYSTEM (BAS) SHALL SEND THE CONTROLLER OCCUPIED BYPASS, MORNING WARM-UP/PRE-COOL, OCCUPIED/UNOCCUPIED AND ZONE SPACE TEMPERATURES. IF COMMUNICATION IS LOST WITH THE BAS, THEN THE CONTROLLER SHALL OPERATE USING DEFAULT MODES AND SETPOINTS.

2. OCCUPIED TEMPERATURE CONTROL:

   THE CHILLED WATER COOLING AND THE ELECTRIC RESISTANCE HEAT SHALL CONTROL TO MAINTAIN THE ACTIVE DISCHARGE AIR TEMPERATURE SETPOINT.
   THE DISCHARGE AIR TEMPERATURE SETPOINT SHALL BE LINEARLY RESET BASED ON THE OUTSIDE AIR TEMPERATURE (OAT) AS FOLLOWS: AT AN OAT OF 70 DEG F (ADJ), THE DISCHARGE AIR SETPOINT SHALL BE 55 DEG F (ADJ). AT AN OAT OF 55 DEG F (ADJ), THE DISCHARGE AIR SETPOINT SHALL BE 68 DEG F (ADJ). IF THE DISCHARGE AIR TEMPERATURE SENSOR FAILS, THE CHILLED WATER COOLING AND ELECTRIC RESISTANCE HEAT SHALL CONTROL TO MAINTAIN A RETURN AIR TEMPERATURE SETPOINT OF 70 DEG F (ADJ). AN ALARM SHALL ANNUNCIATE AT THE BAS REFERENCING THE FAILED SENSORS.

3. UNOCCUPIED TEMPERATURE CONTROL:

   WHEN ANY SPACE TEMPERATURE IS BELOW THE UNOCCUPIED HEATING SETPOINT OF 62.0 DEG. F (ADJ., THE SUPPLY FAN SHALL BE COMMANDED ON, THE RETURN AIR DAMPER SHALL REMAIN OPEN, AND THE OUTSIDE AIR DAMPER SHALL REMAIN CLOSED. THE DISCHARGE AIR SETPOINT SHALL BE SET TO 85 DEG F (ADJ.). WHEN THE SPACE TEMPERATURE RISES ABOVE THE UNOCCUPIED HEATING SETPOINT PLUS THE UNOCCUPIED DIFFERENTIAL OF 3.0 DEG. F (ADJ., THE AIR HANDLER SHALL SHUT DOWN. SUBJECT TO THE MINIMUM RUN TIME OF 1 HR (ADJ). WHEN THE SPACE TEMPERATURE IS ABOVE THE UNOCCUPIED COOLING SETPOINT 80 DEG. F(ADJ., THE SUPPLY FAN SHALL BE COMMANDED ON, THE RETURN DAMPER SHALL BE OPEN, THE OUTSIDE AIR DAMPER SHALL REMAIN CLOSED AND THE CHILLED WATER SYSTEM SHALL BE ACTIVATED. THE DISCHARGE AIR SETPOINT SHALL BE SET TO 55 DEG F (ADJ). WHEN THE SPACE TEMPERATURE FALLS BELOW THE UNOCCUPIED COOLING SETPOINT MINUS THE UNOCCUPIED DIFFERENTIAL OF 3.0 DEG. F (ADJ., THE CHILLED WATER SYSTEM AND THE AIR HANLDER SHALL BE DISABLED SUBJECT TO THE REQUIRED MINIMUM RUN TIMES.

4. PRECOOL/PREHEAT:

   THE BAS SHALL DETERMINE WHEN THE UNIT SHOULD START PRIOR TO THE OCCUPIED SCHEDULE. THE AIR HANDLER SHALL OPERATE AS IN THE OCCUPIED MODE EXCEPT THE OUTSIDE AIR DAMPER SHALL BE CLOSED, RETURN AIR DAMPER SHALL BE OPEN, AND THE EXHAUST FANS SHALL BE OFF, WHEN THE SPACE TEMPERATURES REACH THEIR OCCUPIED SETPOINTS, THE UNIT SHALL TRANSITION TO THE OCCUPIED MODE.

5. OCCUPIED BYPASS:

   THE BAS SHALL MONITOR THE STATUS OF THE OCCUPANCY OVERIDE BUTTONS OF THE SPACE TEMPERATURE SENSORS. WHEN AN OCCUPIED BYPASS REQUEST IS RECEIVED FROM A SPACE SENSOR, THE UNIT SHALL TRANSITION FROM ITS CURRENT OCCUPANCY MODE TO OCCUPIED BYPASS MODE FOR AN A PERIOD OF TWO HOURS (ADJ). THE UNIT SHALL OPERATE AS DEFINED IN THE OCCUPIED MODE.

6. AIR HANDLING UNIT FAN CONTROL:

   DURING INITIAL UNIT STARTUP, THE MODULATING BYPASS AND RETURN DAMPERS (MTD SIDE BY SIDE) SHALL BE OPENED AND THE OUTSIDE AIR DAMPER SHALL BE CLOSED. THE SUPPLY FAN SHALL START WITH THE FAN SPEED MODULATED TO MAINTAIN THE DOWNSTREAM PRESSURE SENSOR AT 1.0 IN WC (ADJ) (SENSOR ⅔ DOWNSTREAM FROM AHU & AS DETERMINED DURING TAB). ONCE THE STATIC PRESSURE SETPOINT IS REACHED, THE DAMPERS SHALL OPERATE AS DEFINED IN THE VENTILATION CONTROL SEQUENCE AND THE BUILDING EXHAUST FAN EF-3 OR 4 (REDUNDANT) COMMANDED TO START. A PRESSURE SWITCH SHALL MONITOR THE DIFFERENTIAL PRESSURE ACROSS THE FAN IF THE SWITCH DOES NOT INDICATE AIRFLOW WITHIN 1 MINUTE OF THE REQUEST TO START A FAN FAILURE ALARM SHALL ANNUNCIATE.

   STATIC PRESSURE SET POINT:

   RESET THE STATIC PRESSURE SET POINT BETWEEN MINIMUM AND MAXIMUM VALUES TO MAINTAIN THE MAX VAV DAMPER POSITION BETWEEN 80% (ADJ) AND 90% (ADJ). LIMIT SET POINT CHANGE BY 0.1 IN.WC (ADJ) EVERY 5 MINUTES (ADJ). THE MINIMUM AND MAXIMUM PRESSURE RESET VALUES SHALL BE DETERMINED DURING TAB BY PLACING ALL VAV BOXES TO MINIMUM AND MAXIMUM FLOW RESPECTIVELY.

7. VENTILATION CONTROL:

   AFTER THE AIR HANDLER HAS PERFORMED IT'S INITITAL STARTUP, THE HEAT RECOVERY PUMP ON THE RUN AROUND COIL SHALL START. THE MODULATING RETURN DAMPER SHALL REMAIN OPEN. THE OUTSIDE AIR DAMPER SHALL SLOWLY OPEN TO 100% AND THE BYPASS DAMPER SHALL CLOSE. THE RETURN DAMPER SHALL THEN MODULATE TO MAINTAIN THE CURRENT VENTILATION AIRFLOW SETPOINT AS SENSED BY THE OUTDOOR AIR FLOW STATION. THE OUTSIDE AIRFLOW SHALL BE SET TO 4200 CFM (ADJ). BUILDING PRESSURE SENSOR (ZN-P) SHALL BE MONITORED AND ALARMED IF IT DROPS BELOW 0.01 0R ABOVE .12 INCHES WG (ADJ).

8. HUMIDIFICATION SEQUENCE:

   THE DDC SHALL MONITOR BOTH THE RETURN AIR AND SUPPLY AIR HUMIDITY SENSORS. THE HUMIDIFIER SHALL BE ENABLED WHENEVER THE RETURN AIR RELATIVE HUMIDITY IS BELOW THE SETPOINT OF 35% RH (ADJ) AND THE OUTSIDE AIR TEMPERTAURE IS BELOW 55 DEG F. HUMIDIFIER SHALL MAINTAIN THE RETURN AIR HUMIDITY SETPOINT AS STATED IN THE HUMIDIFIER SEQUENCE. THIS LOOP SHALL BE DISABLED WHEN THE RETURN AIR HUMIDITY IS GREATER THAN 45% RH (ADJ). AN ALARM SHALL BE GENERATED WHEN THE RETURN AIR HUMIDITY FALLS BELOW 25% RH (ADJ) OR RISES ABOVE 65% RH (ADJ)

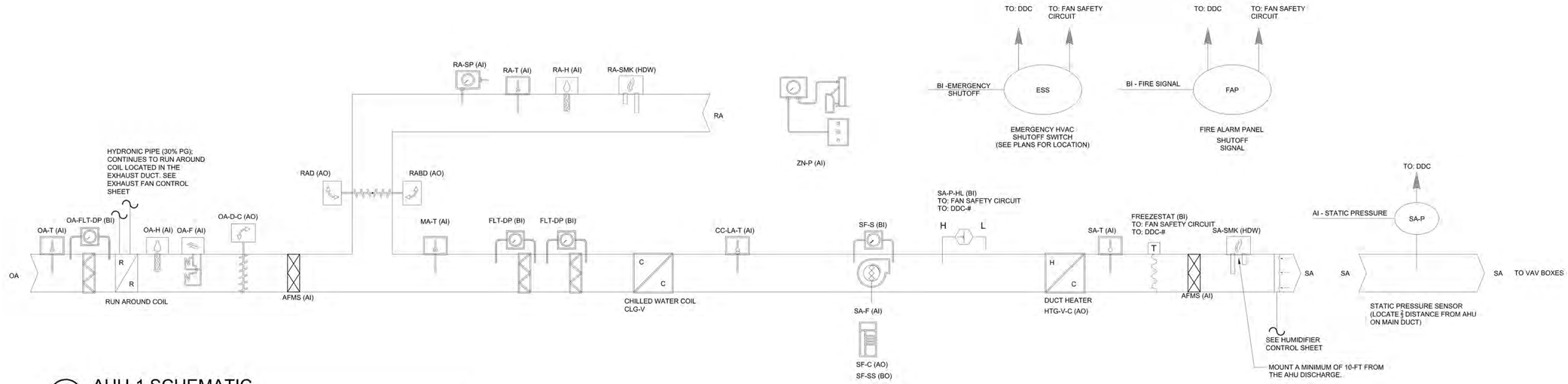
9. FILTER STATUS

   DIFFERENTIAL PRESSURE SWITCHES SHALL MONITOR THE DIFFERENTIAL PRESSURE ACROSS EACH FILTER WHEN THE FAN IS RUNNING. IF THE SWITCH CLOSES DURING NORMAL OPERATION A DIRTY FILTER ALARM SHALL ANNUNCIATE AT THE BAS.

10. FIRE/SMOKE ALARM:
    THE UNIT SHALL SHUT DOWN IN RESPONSE TO A SIGNAL FROM THE SMOKE DETECTOR OR FIRE ALARM PANEL INDICATING THE PRESENCE OF SMOKE. THE SMOKE DETECTOR SHALL BE INTERLOCKED TO THE UNIT THROUGH THE DRY CONTACTS OF THE SMOKE DETECTOR. A MANUAL RESET OF THE SMOKE DETECTOR SHALL BE REQUIRED TO RESTART THE UNIT.

11. EMERGENCY HVAC SWITCH (ESS)

    WHEN ACTIVATED THE EXHAUST FANS AND AIR HANDLER SHALL SHUT DOWN. ALL OUTSIDE DAMPERS SHALL BE CLOSED.



A1 AHU-1 AHU-1 SCHEMATIC
NTS

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

ISSUE DATE: AUGUST 29, 2025
SOLICITATION NO.: W912DS24F0031
CONTRACT NO.: W912DS19D0007

DESIGNED BY: Designer
DRAWN BY: Author
CHECKED BY: Checker
SUBMITTED BY:
SIZE: ANSI D

US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK, NY 10278

CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
PROJECT NO. 75662

AHU-1 CONTROL SCHEMATIC AND SEQUENCE OF OPERATIONS

SHEET ID

M-803

1 AHU-1 POINTS SCHEDULE

FUNCTION	NAME	DESCRIPTION	DDC HARDWARE ID	SETTING (WITH UNITS)	RANGE (WITH UNITS)	IO TYPE	HOA REQ'D	CONFIG. TYPE	M&C VIEW AND OVRD	LDP VIEW AND OVRD	TREND REQ'D	ALARMING: ALARM CONDITION	ALARMING: ALARM PRIORITY	ALARMING: M&C ROUTING	PRIMARY POINT INFORMATION: OBJECT TYPE AND INSTANCE NUMBER (AND PROPERTY ID)	PRIMARY POINT INFORMATION: NAME	PRIMARY POINT INFORMATION: TYPE NIAGARA ID	NETWORK DATA EXCHANGE: DATA FROM	NETWORK DATA EXCHANGE: DATA TO	OVERRIDES: OBJECT TYPE & INSTANCE NUMBER OR COMMANDABLE	OVERRIDES: NAME TYPE	TREND OBJECT LOCATION (L OR R), TYPE AND INSTANCE NUMBER (PROVIDE DDC ID FOR REMOTE IN NOTES)	ALARM INFORMATION: ALARM TYPE (PROVIDE DDC ID FOR REMOTE IN NOTES)	ALARM INFORMATION: NOTIFICATION CLASS OBJECT INSTANCE NUMBER	ALARM INFORMATION: EVENT ENROLLMENT OBJECT INSTANCE NUMBER	CONFIGURATION INFORMATION
PROOFS & SAFETIES	SF-S	SUPPLY FAN STATUS	<___>		ON/OFF	BI			V	V	X	SUPPLY FAN PROOF FAILED	CRIT	[ ]	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>
	SAP-HL	SUPPLY AIR PRESSURE HIGH LIMIT			ALM/NORMAL	BI			V	V	X	ALM	CRIT													
	HTG-DA-T-LL	HEATING COIL DISCHARGE TEMPERATURE LOW LIMIT SWITCH	<___>	42 DEG F	ALM/NORMAL	BI			V	V	X	ALM	CRIT	[ ]	<___>	<___>	<___>	<___>	< >	< >	<___>	<___>	<___>	<___>	<___>	<___>
	FAP	FIRE ALARM PANEL SIGNAL			ALM/NORMAL	BI			V	V	X															
	SA-SMK	SUPPLY AIR SMOKE	<___>		ALM/NORMAL	BI			V	V	X	ALM	CRIT	[ ]	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>
	RA-SMK	RETURN AIR SMOKE	<___>		ALM/NORMAL	BI			V	V	X	ALM	CRIT	[ ]	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>
	ESS	EMERGENCY SHUTDOWN SWITCH SIGNAL	<___>		ALM/NORMAL	BI			V	V	X															
	RST-BUT	SYSTEM RESET BUTTON	<___>			NET-IN			VO	VO					<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>				<___>
SUPPLY FAN CONTROL	ZN-P	BUILDING PRESSURE	<___>		0-1.0 IN WC	AI			V	V	X				<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>
	SYS-OCC	OCCUPANCY INPUT (FROM SYSTEM SCHEDULER)	<___>			NET-IN	X		VO	VO	X				<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>				<___>
	SF-SS	SUPPLY FAN START/STOP	< >		ON/OFF	BO	X		VO	VO	X				< >	< >	< >	< >	< >	< >	< >	< >				< >
	SF-C	SUPPLY FAN SPEED COMMAND	<___>		0-100%	AO	X		VO	VO	X				<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>
	SF-C-MIN	SUPPLY FAN SPEED COMMAND MINIMUM		25%					VO	VO	X				< >	< >	< >	< >	< >	< >	< >	< >				< >
	SF-S	SUPPLY FAN FLOW STATUS				BI	X					SUPPLY FAN PROOF FAILED	CRIT	[ ]	<___>	<___>	<___>	<___>	<___>						<___>
	AFMS	TYPICAL AIR FLOW MONITORING STATION	<___>		0-15000 CFM	AI	X								<___>	<___>	<___>	<___>	<___>							<___>
	SA-P	DIFFERENTIAL PRESSURE SENSOR	<___>		0-20 PSID	AI	X		V	V	X	MORE THAN 20% FROM SETPOINT	CRIT	[ ]	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>
	SAP-SP	DIFFERENTIAL PRESSURE SETPOINT	<___>		0-20 PSID		X		VO	VO	X				<___>	<___>	<___>	<___>	<___>				<___>	<___>	<___>	<___>
	SF-HOA	SUPPLY FAN SWITCH POSITION		H-O-A					V	V	X				<___>	<___>	<___>	<___>	<___>							<___>
															<___>	<___>	<___>	<___>	<___>							<___>
MINIMUM OUTSIDE AIRFLOW	OAD-C	OUTSIDE AIR DAMPER COMMAND	<___>		0-100%	AO	X		VO	VO	X				<___>	<___>	<___>	<___>	<___>						<___>	<___>
	OAD-POS	OUTSIDE AIR DAMPER POSITION	<___>		0-100%	AI	X		V	V	X	MORE THAN 10% FROM COMMAND	INFO	[ ]	<___>	<___>	<___>	<___>	<___>						<___>	<___>
	OA-F-SP	OUTSIDE AIR FLOW SETPOINT		4200 CFM	4000-5500 CFM		X		VO	VO	X				<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>				<___>
	AFMS	TYPICAL AIR FLOW			0-5000 CFM	AI	X		V	V	X	MORE THAN 10% FROM SETPOINT	CRIT	[ ]	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>				<___>
	RA-F	RETURN AIR FLOW			0-5000 CFM	AI	X		V	V	X				<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>				<___>
	RA-SP	RETURN AIR PRESSURE			0-2.0 IN WC	AI	X		V	V	X				<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>				<___>
	RAD-B-C	RETURN AIR BYPASS DAMPER COMAND			OPEN/CLOSED	BO	X		VO	VO	X				< >	< >	< >	< >	< >	< >	< >	< >				< >
	RAD-C	RETURN AIR MODULATING DAMPER COMAND			0-100%	AO	X		VO	VO	X				<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>				<___>
	RAD-B-POS	RETURN AIR BYPASS DAMPER POSITION			OPEN/CLOSED	BI	X		V	V	X	MORE THAN 10% FROM COMMAND	INFO	[ ]	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>				<___>
	RAD-POS	RETURN AIR MODULATING DAMPER POSITION			0-100%	AI	X		V	V	X	STATUS MISMATCH	INFO	[ ]	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>				<___>
	OA-T	OUTSIDE AIR TEMPERATURE	<___>	DEG F		AI	X		V	V	X				<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>
	MA-T	MIXED AIR TEMPERATURE	<___>	DEG F		AI	X		V	V	X				<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>				<___>
		PROPORTIONAL CONSTANT	<___>	<___>																						<___>
	RETURN AIR DAMPER IN	INTEGRAL CONSTANT	<___>	<___>																						<___>
	PID LOOP SETTINGS BIAS		<___>	<___>																						<___>
		MAXIMUM OUTPUT	< >	< >																						< >
		MINIMUM OUTPUT	<___>	<___>																						<___>
															<___>	<___>	<___>	<___>	<___>							<___>
AHU SUPPLY TEMPERATURE CONTROL	SA-T	SUPPLY AIR TEMPERATURE	<___>		<___>	AI	X		V	V	X	MORE THAN 5 DEG F FROM SETPOINT	INFO	[ ]	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>
	SA-T SP	SUPPLY AIR TEMPERATURE SETPOINT		VARIES			X		VO	VO	X				< >	< >	< >	< >	< >	<___>	<___>	<___>				<___>
	OA-T	OUTSIDE AIR TEMPERATURE	<___>	DEG F		AI	X		V	V	X				<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>
	MA-T	MIXED AIR TEMPERATURE	<___>	DEG F		AI	X		V	V	X				<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>				<___>
	RA-T	RETURN AIR TEMPERATURE	<___>	DEG F		AI	X		V	V	X				<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>
	RA-H	RETURN AIR HUMIDITY	<___>	DEG F		AI	X		V	V	X	MORE THAN 65% RH OR LESS THAN 20%	CRIT	[ ]	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>
	HTC-V-C	HEATING COIL COMMAND	<___>		0-100%	AO	X		VO	VO	X				<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>
		PROPORTIONAL CONSTANT	<___>	<___>																						<___>
	HEATING COIL PID LOOP SETTINGS	INTEGRAL CONSTANT	<___>	<___>																						<___>
		BIAS	< >	< >																						< >
		MAXIMUM OUTPUT	< >	< >																						< >
		MINIMUM OUTPUT	<___>	<___>																						<___>
		<___>	<___>	<___>																						<___>
	CC-LAT	COOLING COIL LEAVING AIR TEMP	<___>			AI	X		V	V	X	MORE THAN 5 DEG F FROM SETPOINT	INFO	[ ]	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>
	CC-LAT-SP	COOLING COIL TEMPERATURE SETPOINT					X		VO	VO	X				<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>				<___>
	CC-VC	COOLING COIL VALVE COMMAND	<___>		0-100% OPEN	AO	X		VO	VO	X				<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>
		PROPORTIONAL CONSTANT	<___>	<___>																						<___>
	COOLING COIL VALVE PID LOOP SETTINGS	INTEGRAL CONSTANT	<___>	<___>																						<___>
		BIAS	< >	< >																						< >
		MAXIMUM OUTPUT	<___>	<___>																						<___>
		MINIMUM OUTPUT	<___>	<___>																						<___>
		<___>	<___>	<___>																						<___>
															<___>	<___>	<___>	<___>	<___>							<___>
MISC POINTS	FLT-DP	TYP. AIR FILTER PRESSURE HIGH LIMIT SWITCH			ALM/NORMAL	BI		H	V	V	X	ALM	INFO	[ ]	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>

Notes:

1) THE CONTRACTOR SHALL COMPLETE THE POINTS SCHEDULE AS INDICATED IN THE SPECIFICATION AND IN ACCORDANCE WITH THE POINTS SCHEDULE INSTRUCTIONS DRAWING.
2) UNIT MANUFACTURERS PROOFS AND SAFETIES: THE CONTRACTOR SHALL SHOW EACH PROOF AND SAFETY AS A SEPARATE ROW.
3) UNIT STATUS: SERVES AS A MONITORED POINT AT THE M&C SOFTWARE (FRONTEND) AND AS A HEATING/COOLING REQUEST TO THE BOILER, HEAT EXCHANGER, AND/OR CHILLER SERVING THIS SYSTEM.
4) DDC HW ID FOR DEVICE CONTAINING TREND OBJECT FOR REMOTE TRENDING FOR THIS SYSTEM: <___>
5) DDC HW ID FOR DEVICE CONTAINING EVENT ENROLLMENT OBJECT FOR REMOTE ALARMING FOR THIS SYSTEM: <___>
6) DDC HW IF FOR DEVICE CONTAINING SIMPLE SCHEDULER OBJECT (OR SYSTEM SCHEDULER SEQUENCE OF OPERATIONS) FOR THIS SYSTEM: <___>

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

DESIGNED BY: Designer
DRAWN BY: Author
CHECKED BY: Checker
SUBMITTED BY:
ISSUE DATE: AUGUST 29, 2025
SOLICITATION NO.: W912DS24F0031
CONTRACT NO.: W912DS15D0007
SIZE: ANSI D

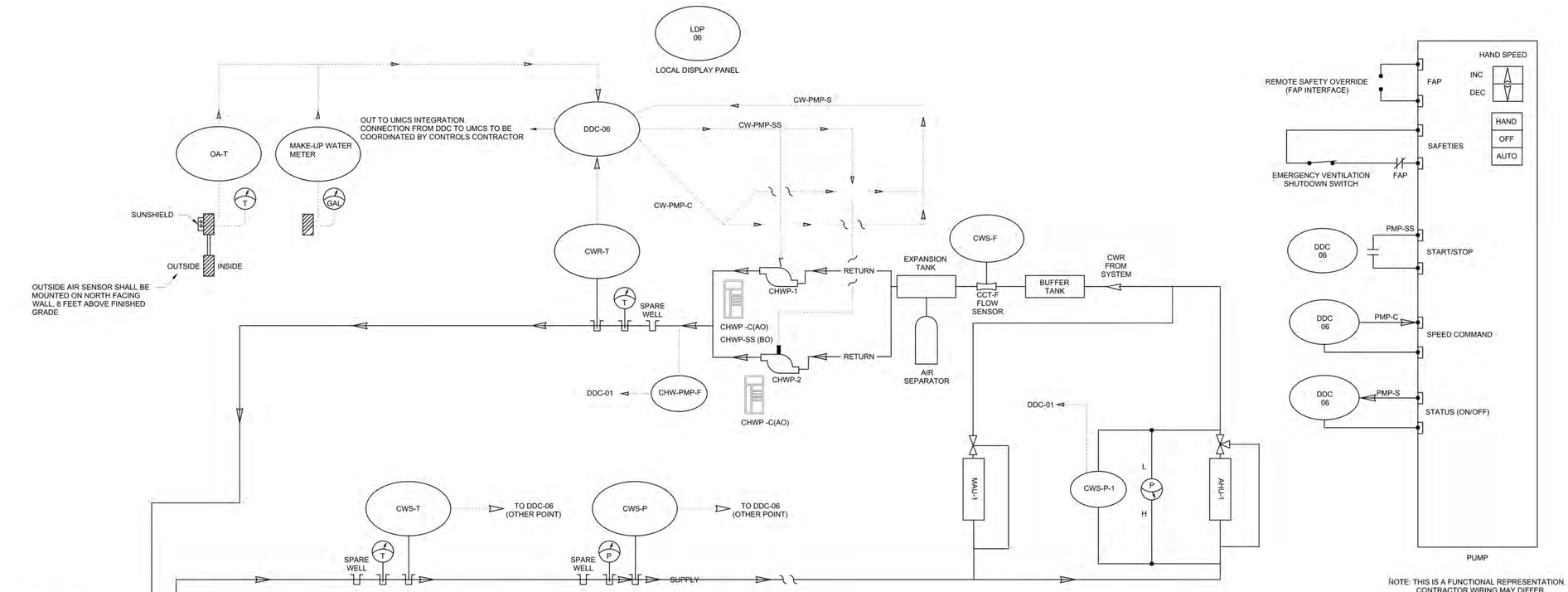
US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK, NY 10278

CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
PROJECT NO. 75662

AHU-1 POINTS SCHEDULE

SHEET ID

M-804



NOTE: THIS IS A FUNCTIONAL REPRESENTATION. CONTRACTOR WIRING MAY DIFFER.

B1 CH-1 AND CHWP-1 &2 CONTROL SCHEMATIC

NTS

SEQUENCE OF OPERATION: HYDRONIC CHILLED WATER COOLING SYSTEM

INSTALL DDC HARDWARE TO PERFORM THIS SEQUENCE OF OPERATION AND TO PROVIDE INPUTS AND OUTPUTS AS SPECIFIED AND SHOWN ON THE POINTS SCHEDULE. UNLESS OTHERWISE SPECIFIED, ALL MODULATING CONTROL SHALL BE PROPORTIONAL-INTEGRAL (PI) CONTROL. ALL SETPOINTS SHALL BE ADJUSTABLE AT THE FRONT END .

SYSTEM ENABLE AND LOOP ENABLE:

A. THIS SYSTEM SHALL MONITOR THE ENABLED STATUS OF ALL EQUIPMENT SERVED BY THIS SYSTEM. IF ONE OR MORE PIECES OF EQUIPMENT SERVED BY THIS SYSTEM ARE CALLING FOR COOLING, AND THE AMBIENT TEMPERATURE RISES ABOVE 60 DEGREES F (ADJ), THIS SYSTEM SHALL BE ENABLED (SYS-ENA). AFTER EQUIPMENT SERVED BY THIS SYTEM ARE NO LONGER CALLING FOR COOLING OR THE OUTSIDE AIR TEMPERATURE DROPS BELOW 55 DEGREES F (ADJ), THE SYSTEM SHALL OPERATE FOR A MINIMUM OF 60 MINUTES (ADJ) BEFORE BEING DISABLED.

B. WHEN THIS SYSTEM IS ENABLED (SYS-ENA), THE LEAD CHILLED WATER PUMP SHALL START AND INITIATE THE PRESSURE CONTROL LOOP. WHEN THE CHILLED WATER FLOW METER SHOWS A MINIMUM OF 45 GPM (ADJ), THE CHILLER SHALL BE ENABLED.

C. IF THE CHILLED WATER FLOW DOES NOT INCREASE ABOVE 45 GPM WITHIN 5 MINUTES (ADJ), A PUMP FAILURE SHALL BE INITIATED AND THE LAG PUMP SHALL START.

D. CHILLED WATER PUMPS SHALL BE ALTERNATED TO PRODUCE EQUAL RUN TIME. DURING SWITCHOVER, A TIME DELAY OF 30 SECONDS SHALL BE PROVIDED BETWEEN STARTING AND STOPPING OF THE PUMPS. ALL EQUIPMENT SHALL BE ROTATED ON TUESDAYS AT 6 AM LOCAL TIME. IN THE EVENT A PUMP FAILS, THE LAG PUMP SHALL START.

PROOFS AND SAFETIES:

DDC HARDWARE SHALL MONITOR ALL PROOFS AND SAFETIES

PROOFS
- CHILLED WATER PUMP STATUS (CWP-1-PMP-S)
- CHILLED WATER PUMP STATUS (CWP-2 PMP-S)
- CHILLER STATUS

SAFETIES

NONE

CHILLER CONTROL:

THE CHILLED WATER TEMPERATURE SETPOINT SHALL BE ABLE TO BE ADJUSTED VIA THE BUILDINGS AUTOMATION SYSTEM. IF THE CHILLER UNIT FAILS OR PUMP FAILS, THE CHILLER'S DDC CONTROL SYSTEM SHALL SIGNAL A FAILURE ALARM IDENTIFYING WHAT THE SPECIFIC FAILURE IS. CHILLER INTERNAL OPERATIONAL DATA SHALL BE DISPLAYED. A REMOTE ALARM RESET OPTION SHALLBE PROVIDED TO RESET THE INTERNAL CHILLER ALARM. THE CHILLER'S DDC SYSTEM SHALL TIME STAMP AND STORE THE EVENT.

PUMP CONTROL:

PUMP SPEED SHALL BE MODULATED TO MAINTAIN THE DIFFERENTIAL PRESSURE SETPOINT OF 10 PSID (ADJ) AS INDICATED ON THE DIFFERENTIAL PRESSURE SENSOR LOCATED AT AHU-01. FINAL SETPOINT SHALL BE DETERMINED DURING TAB. SET DP SETPOINT TO MAINTAIN FULL FLOW AT BOTH CHILLED WATER COILS. AN ALARM SHALL BE GENERATED IF THE PUMP IS AT 100% SPEED AND UNABLE TO MAINTAIN DP SETPOINT. IF A PUMP FAILS DURING OPERATION, THE LAG PUMP SHALL START.

HAND-OFF-AUTO SWITCH (ONE PER PUMP CHWP-1 AND CHWP-2):
THE CHILLED WATER PUMP MOTOR UNIT SHALL HAVE AN INTEGRAL H-O-A SWITCH:

WITH THE H-O-A SWITCH IN HAND POSITION, THE PUMP SHALL START AND RUN CONTINUOUSLY. PUMP SPEED SHALL BE UNDER MANUAL-OPERATOR CONTROL.

WITH THE H-O-A SWITCH IN OFF POSITION, THE PUMP SHALL BE OFF.

WITH THE H-O-A SWITCH IN AUTO POSITION, THE PUMP SHALL RUN SUBJECT TO THE CHILLED WATER PUMP START/ISTOP (CW-PMP-SS) COMMAND AND PUMP SPEED SHALL BE UNDER CONTROL OF THE DDC SYSTEM.

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

ISSUE DATE: AUGUST 29, 2025
SOLICITATION NO.: W912DS24F0031
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DESIGNED BY: Designer
DRAWN BY: Author
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US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK, NY 10278

CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
PROJECT NO. 75662

CHILLER CONTROL SCHEMATIC AND SEQUENCE OF OPERATIONS

SHEET ID

M-805

1 CHILLER POINTS SCHEDULE

FUNCTION	NAME	DESCRIPTION	DDC HARDWARE ID	SETTING (WITH UNITS)	RANGE (WITH UNITS)	IO TYPE	HOA REQ'D	CONFIG. TYPE	M&C VIEW AND OVRD	LOP VIEW AND OVRD	TREND REQ'D	ALARMING			PRIMARY POINT INFORMATION				NETWORK DATA		OVERRIDES			TREND OBJECT LOCATION (L OR R), TYPE AND INSTANCE NUMBER (PROVIDE DDC ID FOR REMOTE IN NOTES)	ALARM INFORMATION			CONFIGURATION INFORMATION
												ALARM CONDITION	ALARM PRIORITY	M&C ROUTING	OBJECT TYPE AND INSTANCE NUMBER (AND PROPERTY ID)	NAME	TYPE	NIAGARA ID	DATA FROM	DATA TO	OBJECT TYPE & INSTANCE NUMBER OR COMMANDABLE	NAME	TYPE		ALARM TYPE (PROVIDE DDC ID FOR REMOTE IN NOTES)	NOTIFICATION CLASS OBJECT INSTANCE NUMBER	EVENT ENROLLMENT OBJECT INSTANCE NUMBER	
PROOFS & SAFETIES	CHW-PRIM-PMP1-S	CHILLED WATER PRIMARY PUMP 1 STATUS	<___>		ON/OFF	BI			V	V		PRIMARY PUMP PROOF FAILED [info] [crit]		[___]	<___>			<___>	<___><___>								
	CHW-PRIM-PMP2-S	CHILLED WATER PRIMARY PUMP 2 STATUS	<___>		ON/OFF	BI			V	V		SECONDARY PUMP PROOF FAILED [info] [crit]		[___]	<___>			<___>	<___><___>								
START/STOP/PUMP SPEED CONTROL	SYS-ENA	SYSTEM ENABLE	<___>		ENABLE/DISABLE	NET-IN			VO						BV <___>			<___>	<___><___>		<___>	<___><___>					
	CHW-PMP1-SS	CHILLED WATER PUMP 1 START/STOP	<___>		START/STOP	BO	X		VO	V					<___>	<___>	<___>	<___>	<___><___>		<___>	<___><___>					
	CHW-PMP2-SS	CHILLED WATER PUMP 2 START/STOP	<___>		START/STOP	BO	X		VO	V					<___>	<___>	<___>	<___>	<___><___>		<___>	<___><___>					
	CHW-PMP-S-C	CHILLED WATER PUMP SPEED COMMAND	<___>		25-100%	AO	X		VO	V					<___>	<___>	<___>	<___>	<___><___>		<___>	<___><___>					
	CHWPMP-P	CHILLED WATER DIFFERENTIAL PRESSURE - AHU-01	<___>		0-20 PSID	AI			V	V	X	*MORE THAN 20% ABOVE OR BELOW SETPOINT	CRIT		<___>	<___>	<___>	<___>	<___><___>				<___>	[___]	[___]	[___]	
	CHW-PMP-P-SP	CHILLED WATER DIFFERENTIAL PRESSURE SETPOINT		10 PSID	0-20 PSID	AO		C	VO	VO	X				<___>	<___>	<___>	<___>	<___><___>		<___>	<___><___>					<___>
	CHW-PMP-S	CHILLED WATER PRIMARY PUMP STATUS	<___>		ON/OFF	AO	X		V	V	X	FAILURE TO START	CRIT		<___>	<___>	<___>	<___>	<___><___>		<___>	<___><___>					
	CHW-F	CHILLED WATER PRIMARY FLOW RATE	<___>		GPM	AI			V	V	X	LESS THAN 40 GPM AFTER THE SYSTEM HAS BEEN ENABLED FOR 30 MINUTES	CRIT		<___>	<___>	<___>	<___>	<___><___>		<___>	<___><___>					
	CHILLED WATER PUMP SPEED PID LOOP SETTINGS	PROPORTIONAL CONSTANT	<___>	<___>				C																			<___>
		INTEGRAL CONSTANT	<___>	<___>				C																			<___>
		BIAS	<___>	<___>				C																			<___>
		MAXIMUM OUTPUT	<___>	<___>				C																			<___>
		MINIMUM OUTPUT	<___>	<___>				C																			<___>
			<___>	<___>				C																			<___>
	CH-SS	CHILLER START/STOP	<___>		ENABLE/DISABLE	BO			VO	VO	X				<___>			<___>	<___><___>								
	CH-S	CHILLER UNIT STATUS (SEE NOTES)	<___>		ON/OFF	BI			V	V	X	FAILURE TO START	CRIT		<___>			<___>	<___><___>								
CHILLER TEMPERATURE CONTROL	CHWS-T	CHILLED WATER SUPPLY TEMPERATURE	<___>		<___>	AI			V	V	X	CHWS-T MORE THAN 4 DEG F ABOVE OR BELOW CHWS-T-SP, AFTER THE SYSTEM HAS BEEN ENABLED FOR 30 MINUTES	CRIT		<___>			<___>	<___><___>					<___>	[___]	[___]	[___]	
	CHWS-T-SP	CHILLED WATER SUPPLY TEMPERATURE SETPOINT		42 DEG F	<___>			C	VO	VO	X				<___>	<___>	<___>	<___>	<___><___>		<___>	<___><___>		<___>			<___>
SYSTEMS SERVED	CLG-RQST	CLG RQST FROM: AHU-01, MAU-01	<___>		HVAC_COOL/ HVAC_OFF	NET-IN			v		X				BV <___>		HVAC_STAT US	<___>	<___><___>								
OTHER POINTS	CHWR-T	CHILLED WATER RETURN TEMPERATURE	<___>		0-100 DEG F	AI			V	V	X				<___>			<___>	<___><___>					<___>	[___]	[___]	[___]	
	CH-R-CL	CURRENT LIMIT	<___>	[___AMP]	[AMP]																							
	CH-L/R-SUC-T	SUCTION TEMPERATURE	<___>		[DEG F]	AI			V	V	X				<___>	<___>	<___>	<___>	<___><___>		<___>	<___><___>		<___>			
	CH-L/R-DIS-T	DISCHARGE TEMPERATURE	<___>		[DEG F]	AI			V	V	X				<___>	<___>	<___>	<___>	<___><___>		<___>	<___><___>		<___>			
	CH-L/R-OIL-T	OIL TEMPERATURE	<___>		[DEG F]	AI			V	V	X				<___>	<___>	<___>	<___>	<___><___>		<___>	<___><___>		<___>			
	CH-L/R-OIL-P	OIL PRESSURE	<___>		[PSI]	AI			V	V	X				<___>	<___>	<___>	<___>	<___><___>					<___>			
	CH-L/R-SUC-P	SUCTION PRESSURE	<___>		[PSI]	AI			V	V	X	<___>	[info] [crit]	[___]	<___>	<___>	<___>	<___>	<___><___>					<___>	[___]	[___]	[___]	
	CH-L/R-DIS-P	DISCHARGE PRESSURE	<___>		[PSI]	AI			V	V	X	<___>	[info] [crit]	[___]	<___>	<___>	<___>	<___>	<___><___>					<___>	[___]	[___]	[___]	
	CH-L/R-FL-AMP	FULL LOAD AMP	<___>		0 - < > k VA				V	V	X				<___>		SNVT_power	<___>	<___><___>					<___>			
	CH-L/R-SUCSH-T	SUCTION SUPERHEAT TEMPERATURE	<___>		[DEG F]	AI			V	V	X				<___>	<___>	<___>	<___>	<___><___>		<___>	<___><___>		<___>			
	CH-L/R-DISSH-T	DISCHARGE SUPERHEAT TEMPERATURE	<___>		[DEG F]	AI			V	V	X				<___>	<___>	<___>	<___>	<___><___>		<___>	<___><___>		<___>			
	OA-T	OUTSIDE AIR AMBIENT TEMPERATURE	<___>	[___DEG F]	[DEG F]	AI			V	V	X																

Notes:

1) THE CONTRACTOR SHALL COMPLETE THE POINTS SCHEDULE AS INDICATED IN THE SPECIFICATION AND IN ACCORDANCE WITH THE POINTS SCHEDULE INSTRUCTIONS DRAWING.
2) UNIT MANUFACTURERS PROOFS AND SAFETIES: THE CONTRACTOR SHALL SHOW EACH PROOF AND SAFETY AS A SEPARATE ROW.
3) UNIT STATUS: SERVES AS A MONITORED POINT AT THE M&C SOFTWARE (FRONT-END) AND AS A COOLING/COOLING REQUEST TO THE BOILER, COOL EXCHANGER, AND/OR CHILLER SERVING THIS SYSTEM.
4) DDC CHW ID FOR DEVICE CONTAINING TREND OBJECT FOR REMOTE TRENDING FOR THIS SYSTEM: <____>
5) DDC CHW ID FOR DEVICE CONTAINING EVENT ENROLLMENT OBJECT FOR REMOTE ALARMING FOR THIS SYSTEM: <____>
6) DDC CHW IF FOR DEVICE CONTAINING SIMPLE SCHEDULER OBJECT (OR SYSTEM SCHEDULER SEQUENCE OF OPERATIONS) FOR THIS SYSTEM: <____>
7) FOR LEAD/LAG PUMPS, FANS, OR CHILLERS, INSERT ADDITIONAL ROWS TO REPRESENT ALL DEVICES (E.G., CW-PMP1-S, CWPMP2-S, ETC)

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

ISSUE DATE: AUGUST 29, 2025
SOLICITATION NO.: W912DS23F0031
CONTRACT NO.: W912DS15D0007

DESIGNED BY: Designer
DRAWN BY: Author
CHECKED BY: Checker
SUBMITTED BY:
SIZE: ANSI D

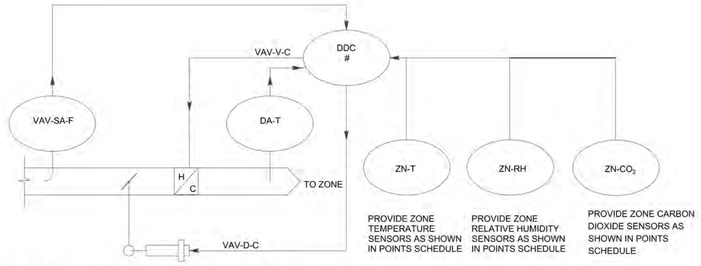
US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK, NY 10278

CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
PROJECT NO. 75682

CHILLER POINTS SCHEDULE

SHEET ID

M-806



V1 VAV BOX WITH ELECTRIC REHEAT

NTS

VAV BOX WITH REHEAT COIL SEQUENCE OF OPERATIONS:

INSTALL DOC HARDWARE TO PERFORM THIS SEQUENCE OF OPERATION AND TO PROVIDE INPUTS, OUTPUTS, AND ALARMS AS SPECIFIED AND SHOWN ON THE POINTS SCHEDULE. UNLESS OTHERWISE SPECIFIED, ALL MODULATING CONTROL SHALL BE PROPORTIONAL-INTEGRAL (PI) CONTROL.

ZONE TEMPERATURE CONTROL:

UPON A RISE IIN ZONE TEMPERATURE ABOVE THE ZONE TEMPERATURE COOLING SETPOINT (ZN-T-CLG-SP), THE AIRFLOW SETPOINT SHALL BE MODULATED TO MAINTAIN THE ZONE TEMPERATURE SETPOINT.. UPON A FALL IN ZONE TEMPERATURE BELOW THE HEATING SETPOINT, THE ELECTRIC REHEAT COIL SHALL FIRST BE MODULATED TO MAINTAIN A DISCHARGE AIR SETPOINT OF 85 DEG F (ADJ). ONCE THE DISCHARGE AIR TEMPERATURE SETPOINT IS REACHED, THE VAV AIRFLOW SETPOINT SHALL BE SET TO THE REHEAT FLOW VALUE SHOWN ON THE EQUIPMENT SCHEDULE. THE DISCHARGE AIR TEMPERATURE SETPOINT SHALL BE MAINTAINED. IF THE SPACE TEMPERATURE SETPOINT IS NOT REACHED WITHIN 10 MINUTES (ADJ), THE VAV AIRFLOW SETPOINT SHALL ITHEN NCREIASE UP TO THE VAV MAX AIR FLOW SETPOINT.
WHEN THE ZONE TEMPERATURE IS BETWEEN THE HEATNG AND COOLING TEMPERATURE SETPOINTS, THE VAV BOX SHALL MAINTAIN THIE VAV BOX MINIMUM AIRFLOW SETPOIINT AS SHOWN ON THE SCHEDULE.

DEMAND CONTROLLED VENTILATION:

IF THE ZONE CO2 CONCENTRATION REACHES THE ZONE CO2 MAXIMUM SETPOINT(ADJ), THE VAV BOX AIRFLOW SETPOINT SHALL BE SET TO THE VAV CO2 AIRFLOW SETPOINT AS SHOWN ON THE EQUIPMENT SCHEDULE. SPACE TEMPERATURE SHALL BE MAINTAINED DURING THIS MODE.

MONITORING:

THE ZONE TEMPERATURE SENSOR INSTALLED NEAR THE FLOOR AND RH SENSOR AT MOUNTED AT 48" AFF SHALL BE FOR MONITORING AND ALARMING ONLY.

VAV BOX WITH REHEAT

												ALARMING			PRIMARY POINT INFORMATION				NETWORK DATA EXCHANGE		OVERRIDES			TREND OBJECT LOCATION (L OR R), TYPE AND INSTANCE NUMBER (PROVIDE DDC ID FOR REMOTE IN NOTES)	ALARM INFORMATION			CONFIGURATION INFORMATION
FUNCTION	NAME	DESCRIPTION	DDC HARDWARE ID	SETTING (WITH UNITS)	RANGE (WITH UNITS)	IO TYPE	HOA REQ'D	CONFIG. TYPE	M&C VIEW AND OVRD	LDP VIEW AND OVRD	TREND REQ'D	ALARM CONDITION	ALARM PRIORITY	M&C ROUTING	OBJECT TYPE AND INSTANCE NUMBER (AND PROPERTY ID)	NAME	TYPE	NIAGARA ID	DATA FROM	DATA TO	OBJECT TYPE & INSTANCE NUMBER OR COMMANDABLE	NAME TYPE			ALARM TYPE (PROVIDE DDC ID FOR REMOTE IN NOTES)	NOTIFICATION CLASS OBJECT INSTANCE NUMBER	EVENT ENROLLMENT OBJECT INSTANCE NUMBER	
PROOFS & SAFETIES		UNIT MANUFACTURER'S SAFETIES (SEE NOTES)		<___>	ALM/NORMAL	BI			~	~	~	ALARM	CRIT	X	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>		<___>	<___>	<___>	<___>	<___>
START/STOP	SYS-OCC	OCCUPANCY INPUT (FROM SYSTEM SCHEDULER)	<___>		<___>	NET-IN			VO	VO	X				MSV <___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>		<___>	<___>	<___>	<___>	<___>
	ZN-OCC	ZONE OCCUPANCY INPUT (OCCUPANCY SENSOR/OVERRIDE)	<___>		<___>	BI			V	V	X				MSV <___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>		<___>	<___>	<___>	<___>	<___>
	EFF-OCC	EFFECTIVE OCCUPANCY	<___>		<___>	NET-OUT			V	V	X				MSV <___>	<___>	OCCUPANCY	<___>	<___>	<___>	<___>	<___>		<___>	<___>	<___>	<___>	<___>
	UNIT STATUS	UNIT STATUS (HTG AND/OR CLG REQUEST)	<___>*		HVAC_COOL/ HVAC_HEAT/ HVAC_OFF	NET-OUT			V	V	X				<___>	<___>	HVAC_STATUS	<___>	<___>	<___>	<___>	<___>		<___>	<___>	<___>	<___>	<___>
ZONE TEMPERATURE CONTROL	ZN-T	ZONE TEMPERATURE	<___>		<___>	AI			V	V	X	** ZN-T IS MORE THAN 4 DEG F ABOVE OR BELOW ZN-T-SP	CRIT	X	<___>	<___>	TEMP_P	<___>	<___>	<___>	<___>	<___>		<___>	<___>	<___>	<___>	<___>
	ZN-T-CLG-SP	ZONE TEMPERATURE COOLING SETPOINT		74 DEG F (ADJ.)	70-77 DEG F	AO			VO	VO	X				<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>		<___>				<___>
	ZN-T-HTG-SP	ZONE TEMPERATURE HEATING SETPOINT		68 DEG F (ADJ.)	65-72 DEG F	AO			VO	VO	X				<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>		<___>				<___>
	ZN-T-SP-CLG	UNOCC ZONE TEMPERATURE COOLING SETPOINT FOR UNOCCUPIED MODE		82 DEG F (ADJ)	75-85 DEG F	AO			VO	VO	X				< >	< >	< >	< >	< >	< >	< >	< >		< >	< >	< >	< >	< >
	ZN-T-SP-HTG	UNOCC ZONE TEMPERATURE HEATING SETPOINT FOR UNOCCUPIED MODE		62 DEG F (ADJ)	55-65 DEG F	AO			VO	VO	X				< >	< >	< >	< >	< >	< >	< >	< >		< >	< >	< >	< >	< >
	VAV-SA-F	VAV SUPPLY AIR FLOW	<___>		CFM	AI			V	V	X	MORE THAN 20% FROM SETPOINT	CRIT	X	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>		<___>	<___>	<___>	<___>	<___>
	VAV-SA-F-SP	VAV SUPPLY AIR FLOW SETPOINT			CFM	AO			VO	VO	X				<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>		<___>				<___>
	VAV-SA-F-SP-MIN	VAV SUPPLY AIR FLOW MINIMUM		[CFM]		AO			VO	VO					< >	< >	< >	< >	< >	< >				< >				< >
	VAV-SA-F-SP-MAX	VAV SUPPLY AIR FLOW MAXIMUM		[CFM]		AO			VO	VO					< >	< >	< >	< >	< >	< >				< >				< >
	VAV-D-C	VAV DAMPER COMMAND	<___>		0-100% OPEN	AO			VO	VO	X				<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>		<___>	<___>	<___>	<___>	<___>
	VAV-DA-T	VAV DISCHARGE AIR TEMPERATURE	< >			AI			V	V	X	ABOVE 120 DEG F.	CRIT	X	< >	< >	TEMP_P	< >	< >	< >				< >	< >	< >	< >	< >
	VAV-DA-T-HTG-SP	VAV REHEAT DISCHARGE AIR TEMPERATURE SETPOINT (ADJ)	< >	85 DEG F (ADJ)	80-100 DEG F	AO			V	V	X				< >	< >	TEMP_P	< >	< >	< >				< >	< >	< >	< >	< >
	VAV-HTG-C	VAV HEAT ELEMENT COMMAND	< >		0-100%	AO			VO	VO	X				< >	< >	< >	< >	< >	< >	< >	< >		< >	< >	< >	< >	< >
	VAV DAMPER PID LOOP SETTINGS	PROPORTIONAL CONSTANT	< >	< >																								< >
		INTEGRAL CONSTANT	< >	< >																								< >
		BIAS	< >	< >																								< >
		MAXIMUM OUTPUT	< >	< >																								< >
		MINIMUM OUTPUT	< >	< >																								< >
	VAV HEATING ELEMENT PID LOOP SETTINGS	< >	< >	< >																								< >
		PROPORTIONAL CONSTANT	< >	< >																								< >
		INTEGRAL CONSTANT	< >	< >																								< >
		BIAS	< >	< >																								< >
		MAXIMUM OUTPUT	< >	< >																								< >
		MINIMUM OUTPUT	< >	< >																								< >
		< >	< >	< >																								< >
																											0	0	< >
OTHER POINTS	ZN-T-FLOOR	ZONE TEMPERATURE FLOOR LEVEL	< >			AI			V	V	X	MORE THAN 4 DEG F FROM SETPOINT	CRIT	X	< >	< >	TEMP_P	< >	< >	< >				< >	< >	< >	< >	< >
	ZN-RH	ZONE RH AT 48 INCHES AFF LEVEL	< >			AI			V	V	X	MORE THAN 10% FROM SETPOINT	CRIT	X	< >	< >	RH_P	< >	< >	< >				< >	< >	< >	< >	< >
DEMAND CONTROLED VENTILATION (DCV)	ZN-CO2	ZONE CO2	<___>	PPM		AI			V	V	X	MORE THAN 800 PPM	CRIT	X	< >	< >	< >	< >	< >	< >	< >	< >		< >	< >	< >	< >	< >
	ZN-CO2-MAX-SP	ZONE CO2 MAXIMUM		600 PPM		AO			VO	VO	X				< >	< >	< >	< >	< >	< >	< >	< >		< >				< >
	ZN-CO2-MIN-SP	ZONE CO2 MINIMUM		400 PPM		AO			VO	VO	X				< >	< >	< >	< >	< >	< >	< >	< >		< >				< >
	VAV-SA-F-SP-CO2	VAV AIR FLOW SETPOINT DEMAND CONTROLLED VENTILATION		[CFM]		AO			VO	VO					< >	< >	< >	< >	< >	< >				< >				< >

Notes:
1) THE CONTRACTOR SHALL COMPLETE THE POINTS SCHEDULE AS SPECIFIED AND AS DESCRIBED IN THE POINTS SCHEDULE INSTRUCTIONS DRAWING.
2) UNIT MANUFACTURERS PROOFS AND SAFETIES: THE CONTRACTOR SHALL SHOW EACH PROOF AND SAFETY AS A SEPARATE ROW.
3) SYS-OCC: AS DESCRIBED IN THE POINTS SCHEDULE INSTRUCTIONS, OVERRIDE OF SYS-OCC IS ACCOMPLISHED THROUGH THE SYSTEM SCHEDULER.
4) ALARM CONDITIONS MARKED WITH A DOUBLE ASTERISK (**) SHALL BE ACTIVE ONLY WHEN THE SYSTEM IS IN OCCUPIED MODE AND HAS BEEN IN OCCUPIED MODE FOR MORE THAN 30 MINUTES.
5) UNIT STATUS: SERVES AS A MONITORED POINT AT THE M&C SOFTWARE (FRONT-END) AND AS A HEATING/COOLING REQUEST TO THE BOILER, HEAT EXCHANGER, AND/OR CHILLER SERVING THIS SYSTEM.

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

ISSUE DATE: AUGUST 29, 2025
SOLICITATION NO.: W912DS24F0031
CONTRACT NO.: W912DS15D0007

DESIGNED BY: Designer
DRAWN BY: Author
CHECKED BY: Checker
SUBMITTED BY:
SIZE: ANSI D

US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK, NY 10278

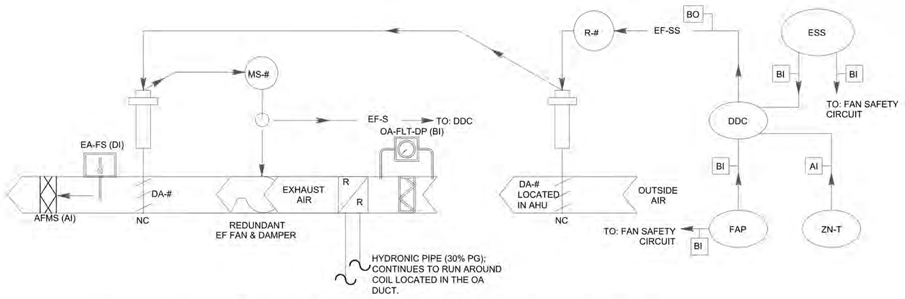
CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
PROJECT NO. 75662

VAV BOX WITH ELECTRIC REHEAT CONTROLS AND POINTS SCHEDULE

SHEET ID

M-807

EXHAUST FAN 3&4 CONTROL SEQUENCE



1. SYSTEM ENABLE/ DISABLE:

THE BUILDING DDC SYSTEM SHALL ENABLE EXHAUST FANS 3 & 4 DURING THE OCCUPIED AND OCCUPIED BYPASS MODES ONLY. DURING THE UNOCCUPIED OR PRECOOL/PREHEAT MODE, THE EXHAUST FANS SHALL BE DISABLED. EXHAUST DAMPER SHALL BE PROVIDED WITH AN SEND SWITCH. FAN WILL NOT START UNTIL THE DAMPER IS PROVEN OPEN. EXHAUST FANS 3 & 4 SHALL ALTERNATE BASED ON RUN TIME OR FAILURE OF AN INDIVIDUAL FAN. FAN AND DAMPER ALARMS SHALL BE PROVIDED.

RUN AROUND COIL:

THE HEAT RECOVERY PUMPS SHALL OPERATE WHENEVER EF-3 OR 4 OPERATES. PUMP SHALL BE DISABLED WHEN EF-3 AND 4 ARE OFF.

2. PROOFS AND SAFETIES

FAN SHALL NOT START, OR SHALL BE SHUT DOWN, UPON THE FOLLOWING CONDITIONS VIA HARDWIRE INTERLOCK:

a. FIRE ALARM PANEL (FAP) SIGNALS THE FAN OFF

b. EMERGENCY SHUTOFF SWITCH (ESS) SIGNAL RECEIVED

E1 EXHAUST FAN EF-3&4 CONTROL SCHEMATIC

DEVICE INSTANCE: <___>
DEVICE LOCATION: _____<VARIES>
DEVICE NAME: <___>

DEVICE MS/TP BAUD RATE: <___>
DEVICE ADDRESS SWITCH: <___>
DEVICE MAC ADDRESS: <___>

FUNCTION	NAME	DESCRIPTION	SETTING (WITH UNITS)	RANGE (WITH UNITS)	I/O TYPE	HOA REQ'D	LDP AND M&C DISPLAY					OVERRIDES				ALARMS			
							LDP VIEW REQ'D	M&C DISP REQ'D	M&C TREND REQ'D	M&C BACNET OBJECT TYPE	M&C BACNET OBJECT NAME	LDP OVRD REQ'D	M&C OVRD REQ'D	BACNET OBJECT TYPE	BACNET OBJECT NAME	ALARM CONDITION (SEE NOTES)	ALARM PRIORITY	M&C ROUTING
PROOFS & SAFETIES	EF-S	EXHAUST FAN STATUS	~	ON/OFF	BI	~ XX ~				<___>	<___>	~	X	<___>	<___>	EXHAUST FAN STATUS DOES NOT MATCH COMMAND	CRIT	<___>
	ESS	EMERGENCY SHUTDOWN SWITCH	~	ALARM/NORMAL	BI	~	~	~	~	<___>	<___>	~	X	<___>	<___>	ALARM	CRIT	<___>
	FAP	FIRE ALARM PANEL SHUTDOWN SIGNAL	~ALARM/NORMAL		BI	~	~	~	~	<___>	<___>	~	X	<___>	<___>	ALARM	CRIT	<___>
	RST-BUT	SYSTEM RESET PUSH BUTTON	~	~	BI	~	~	~	~	<___>	<___>	~	X	<___>	<___>	~		~
UNIT CONTROL	EF-SS	EXHAUST FAN START/STOP	ON/OFF		BO	~	~	X	~	<___>	<___>	X	X	<___>	<___>	~		~
	SYS-OCC	SYSTEM OCCUPANCY MODE	~	OCCUPIED/UNOCCUPIED	NVI	~	X	X	~	<___>	<___>	X	X	<___>	<___>	~		~

NOTES:
1. THE CONTRACTOR SHALL COMPLETE THE POINTS SCHEDULE AS SPECIFIED AND AS DESCRIBED IN THE POINTS SCHEDULE INSTRUCTIONS DRAWING. POINTS SHOWN ARE MINIMUM REQUIREMENTS.
2. UNIT MANUFACTURERS PROOFS AND SAFETIES: THE CONTRACTOR SHALL SHOW EACH PROOF AND SAFETY AS A SEPARATE ROW.
3. SYS-OCC: AS DESCRIBED IN THE POINTS SCHEDULE INSTRUCTIONS, OVERRIDE OF SYS-OCC IS ACCOMPLISHED THROUGH THE SYSTEM SCHEDULER.
4. ALARM CONDITIONS MARKED WITH AN ASTERISK (*) SHALL BE ACTIVE ONLY WHEN THE SYSTEM IS IN OCCUPIED MODE AND HAS BEEN IN OCCUPIED MODE FOR MORE THAN: * = 5 MINUTES ** = 30 MINUTES
5. UNIT STATUS: SERVES AS A MONITORED POINT AT THE M&C SOFTWARE (FRONT-END) AND AS A HEATING/COOLING REQUEST TO THE BOILER, HEAT EXCHANGER, AND/OR CHILLER SERVING THIS SYSTEM.

NOTE:
ANY CHANGES MADE IN BUILDING LEVEL CONTROL WILL AFFECT UMCS POINT SCHEDULE. M&C ALARM ROUTING TO BE COORDINATED WITH OWNER AND ASSIGNED/PROGRAMMED/LINKED BY THE BAS CONTRACTOR.

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

ISSUE DATE: AUGUST 29, 2025
SOLICITATION NO.: W912DS24F0031
CONTRACT NO.: W912DS19D0007

DESIGNED BY: Designer
DRAWN BY: Author
CHECKED BY: Checker
SUBMITTED BY:
SIZE: ANSI D

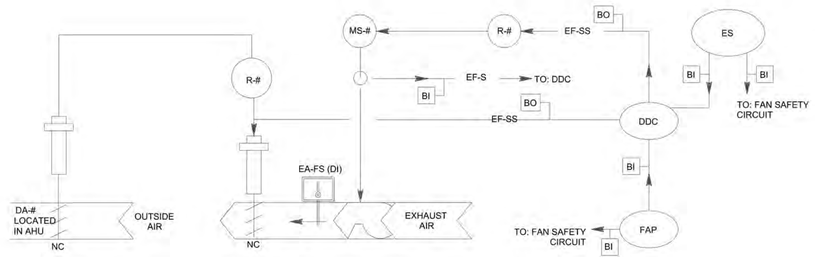
US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK, NY 10278

CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
PROJECT NO. 75662

EXHAUST FAN 3-4 CONTROLS AND POINTS LIST

SHEET ID

M-808



EXHAUST FAN EF-5&6 SEQUENCE OF OPERATIONS

1. SYSTEM ENABLE/DISABLE: THE BUILDING DDC SYSTEM SHALL ENABLE OR DISABLE THE FAN PER THE FOLLOWING SEQUENCE OF OPERATIONS. FANS SHALL RUN BASED ON THE ROOM TEMPERATURE OR VIA MANUAL OVERRIDE SWITCH.

2. HAND-OFF-AUTO SWITCH: EACH EXHAUST FAN MOTOR STARTER SHALL EACH HAVE A H-O-A SWITCH:

   a. HAND: WITH THE H-O-A SWITCH IN HAND POSITION, THE EF SHALL START AND RUN CONTINUOUSLY.

   b. OFF: WITH THE H-O-A SWITCH IN OFF POSITION,THE FAN SHALL STOP.

   c. AUTO: WITH THE H-O-A SWITCH IN AUTO POSITION, THE OA AND EA MOTRIZED DAMPERS SHALL OPEN, FAN SHALL RUN SUBJECT TOTHE EXHAUST FAN START/STOP (EF-SS) COMMAND BASED ON ROOM TEMPERATURE ABOVE SETPOINT 0F 85 DEF F (ADJ.).

3. PROOFS AND SAFETIES

   FAN SHALL NOT START, OR MUST SHUT DOWN, UPON THE FOLLOWING CONDITIONS VIA HARDWIRE INTERLOCK:

   a. EF-FS DOES NOT PROVE

   b. FIRE ALARM PANEL (FAP) SIGNALS THE FAN OFF

   c. EMERGENCY SHUTOFF SWITCH (ESS) SIGNAL RECEIVED

4. SYSTEM ENABLE AND LOOP ENABLE

   THE EXHAUST FAN SHALL SHALL RUN SUBJECT TO ITS PROOF AND SAFETIES. WHEN ROOM TEMERATURE RISES ABOVE SET POINT, THE FAN MUST START AND RUN CONTINUOUSLY. WHEN THE ROOM TEMPERATURE DROPS BELOW THE SET POINT, SIGNAL THE EXHAUST FAN TO STOP.

E2 EXHAUST FAN EF-5&6 CONTROL SCHEMATIC

NTS

EXHAUST FANS EF-5 AND EF-6

													ALARMING			PRIMARY POINT INFORMATION				NETWORK DATA EXCHANGE		OVERRIDES			TREND OBJECT LOCATION (L OR R), TYPE AND INSTANCE NUMBER (PROVIDE DDC ID FOR REMOTE IN NOTES)	ALARM INFORMATION			CONFIGURATION INFORMATION
FUNCTION	NAME	DESCRIPTION	DDC HARDWARE ID	SETTING (WITH UNITS)	RANGE (WITH UNITS)	IO TYPE	HOA REQ'D	CONFIG. TYPE	M&C VIEW AND OVRD	LDP VIEW AND OVRD	TREND REQ'D	ALARM CONDITION	ALARM PRIORITY	M&C ROUTING	OBJECT TYPE AND INSTANCE NUMBER (AND PROPERTY ID)	SNVT NAME	SNVT TYPE	NIAGARA ID	DATA FROM	DATA TO	OBJECT TYPE & INSTANCE NUMBER OR COMMANDABLE	SNVT NAME	SNVT TYPE		ALARM TYPE (PROVIDE DDC ID FOR REMOTE IN NOTES)	NOTIFICATION CLASS OBJECT INSTANCE NUMBER	EVENT ENROLLMENT OBJECT INSTANCE NUMBER	
PROOFS & SAFETIES	FA	FIRE ALARM SIGNAL	<__>		ALMINORMAL	BI		C			X	ALM	CRIT	[__]	<__>	<__>	<__>	<__>	<__>	<__>				<__>				<__>
	ESS	EMERGENCY SHUTDOWN SWITCH SIGNAL	<__>		ALMINORMAL	BI			V	V	X	ALM	CRIT																
START/STOP	EF-S/EL	EXHAUST FAN ON/AUTO/OFF SELECT SWITCH	<__>		HAND/OFF/AUTO				VO	VO	X	SWITCH IS IS IN HAND	INFO	[__]	<__>	<__>	<__>	<__>	<__><__>		<__><__>	<__>	<__>	<__>	<__>	<__>	<__>	<__>
	EF-5/6-S/S	EXHAUST FLOW START/STOP	<__>		ON/OFF	BO			VO	VO	X			[__]	<__>	<__>	<__> HVAC_STATUS <__>		<__><__>		<__>	<__>	<__>	<__>	<__>	<__>	<__>	<__>
	EF-5/6-S-F	EXHAUST FLOW SWITCH STATUS - DP	<__>		ON/OFF	BI			V	V	X	NO FLOW - COMMANDED ON	CRIT	[__]	<__>	<__>	<__> HVAC_STATUS <__>		<__><__>		<__>	<__>	<__>	<__>	<__>	<__>	<__>	<__>
	EF-5/6-S	EXHAUST FAN STATUS - MOTOR	<__>		ON/OFF	BI			V	V	X	STATUS MISMATCH	CRIT	[__]	<__>	<__>	<__> HVAC_STATUS <__>		<__><__>		<__>	<__>	<__>	<__>	<__>	<__>	<__>	<__>
	EF-5/6-EAD-C	EXHAUST FAN DAMPER COMMAND	<__>		OPEN/CLOSED	BO			VO	VO	X			[__]	<__>	<__>	<__> HVAC_STATUS <__>		<__><__>		<__>	<__>	<__>	<__>	<__>	<__>	<__>	<__>
	EF-5/6-OAD-C	OUTSIDE AIR DAMPER COMMAND	<__>		OPEN/CLOSED	BO			VO	VO	X			[__]	<__>	<__>	<__> HVAC_STATUS <__>		<__><__>		<__>	<__>	<__>	<__>	<__>	<__>	<__>	<__>
	EF-5/6-EAD-S	EXHAUST FAN DAMPER STATUS	<__>		OPEN/CLOSED	BI			V	V	X	STATUS MISMATCH	CRIT	[__]	<__>	<__>	<__> HVAC_STATUS <__>		<__><__>		<__>	<__>	<__>	<__>	<__>	<__>	<__>	<__>
	EF-5/6-OAD-S	OUTSIDE AIR DAMPER STATUS	<__>		OPEN/CLOSED	BI			V	V	X	STATUS MISMATCH	CRIT	[__]	<__>	<__>	<__> HVAC_STATUS <__>		<__><__>		<__>	<__>	<__>	<__>	<__>	<__>	<__>	<__>
ZONE TEMPERATURE CONTROL	ZN-T	ZONE TEMPERATURE	<__>			AI			V	V	X	ZN-T IS MORE THAN 90 DEG F	CRIT	[__]	<__>	<__>	TEMP_P	<__>	<__><__>		<__>	<__>	<__>	<__>	<__>	<__>	<__>	<__>
	ZN-T-SP	ZONE TEMPERATURE SETPOINT	<__>	85 DEG F	70-85 DEG F	AO			VO	VO	X				<__>	<__>	TEMP_P	<__>	<__><__>		<__>	<__>	<__>	<__>	<__>	<__>	<__>	<__>

Notes:
1) THE CONTRACTOR SHALL COMPLETE THE POINTS SCHEDULE AS INDICATED IN THE SPECIFICATION AND IN ACCORDANCE WITH THE POINTS SCHEDULE INSTRUCTIONS DRAWING.
2) UNIT MANUFACTURERS PROOFS AND SAFETIES: THE CONTRACTOR SHALL SHOW EACH PROOF AND SAFETY AS A SEPARATE ROW.
3) UNIT STATUS: SERVES AS A MONITORED POINT AT THE M&C SOFTWARE (FRONT-END) AND AS A HEATING/COOLING REQUEST TO THE BOILER, HEAT EXCHANGER, AND/OR CHILLER SERVING THIS SYSTEM (IF APPLICABLE)
4) DDC HW ID FOR DEVICE CONTAINING TREND OBJECT FOR REMOTE TRENDING FOR THIS SYSTEM: <___>
5) DDC HW ID FOR DEVICE CONTAINING EVENT ENROLLMENT OBJECT FOR REMOTE ALARMING FOR THIS SYSTEM: <___>
6) DDC HW IF FOR DEVICE CONTAINING SIMPLE SCHEDULER OBJECT (OR SYSTEM SCHEDULER SEQUENCE OF OPERATIONS) FOR THIS SYSTEM: <___>

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

ISSUE DATE: AUGUST 29, 2025
SOLICITATION NO.: W912DS24F0031
CONTRACT NO.: W912DS15D0007

DESIGNED BY: Designer
DRAWN BY: Author
CHECKED BY: Checker
SUBMITTED BY:
SIZE: ANSI D

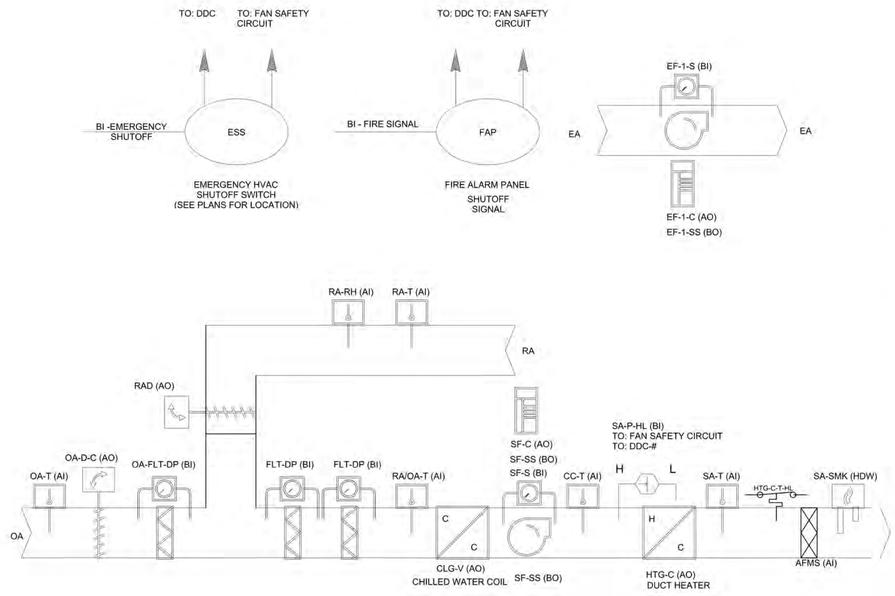
US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK, NY 10278

CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
PROJECT NO. 75662

EXHAUST FAN 5-6 CONTROLS AND POINTS LIST

SHEET ID

M-809



MUA-1 AND EF-1 & 2 KITCHEN EXHAUST FANS SEQUENCE OF OPERATIONS

1. THE BUILDING AUTOMATION SYSTEM (BAS) SHALL SEND THE CONTROLLER OCCUPIED/ UNOCCUPIED.
2. OCCUPIED MODE:
   MAKEUP AIR UNIT (MUA-1) AND THE DISHWASHER EXHAUST FAN (EF-1 LOW SPEED) SHALL OPERATE CONTINUOUSLY DURING THE OCCUPIED MODE. THE KITCHEN HOOD EXHAUST FAN (EF-2) SHALL BE INDEXED TO RUN AT THE KITCHEN HOOD CONTROL PANEL AND THE DISHWASHER EXHAUST FAN EF-1 (HIGH SPEED) SHALL OPERATE WHEN INDEXED TO RUN BY ITS LOCAL CONTROL PANEL. IN THE EVENT THAT THE KITCHEN HOOD EXHAUST FAN (EF-2) IS OPERATED OUTSIDE OF THE OCCUPIED SCHEDULE, THE MAU-1 SHALL CONTINUE TO RUN AT IT A CFM EQUAL TO EF-2 WHILE THE KITCHEN HOOD IS ACTIVE. THE EF-1 OA AND EA DAMPERS SHALL MODULATE OPEN WITH END SWITCH PROOFS THAT PERMIT FAN OPERATION.
3. MAU-01 DAMPER CONTROL:
   WHEN THE KITCHEN HOOD EXHAUST FAN (EF-2) OPERATES, THE MAKE UP AIR UNIT (MAU-1) OUTSIDE AIR DAMPER (OAD) SHALL FULLY OPEN AND THE RETURN DAMPER SHALL CLOSE. WHEN EF-2 IS NOT OPERATING, THE RETURN DAMPER SHALL BE OPEN AND THE OAD SHALL BE CLOSED.
4. MAU-01 SAFETIES:
   THE MAU UNIT MUST ACCEPT AN EMERGENCY SHUTDOWN SWITCH (ESS) AND FIRE ALARM PANEL (FAP) INPUT SIGNAL WHICH TAKE PRECEDENCE OVER ALL OTHER PROOFS AND SAFETIES. ACTIVATION OF THE ESS SHALL DISABLE EF-1. ACTIVATION OF THE FIRE ALARM SHALL DISABLE MAU-01 AND EF-1 AND THEIR RESPECTIVE OUTSIDE AIR AND EXHAUST AIR DAMPERS SHALL CLOSE. EF-2 SHALL REMAIN ON.
5. MAU-01 HEATING CONTROL:
   WHEN THE OUTSIDE AIR TEMPERATURE (OA-T) IS LESS THAN 55 DEG F (ADJ), THE HEATING COIL SHALL BE ACTIVE. THE CONTROLLER SHALL MODULATE THE ELECTRIC DUCT HEATER TO MAINTAIN THE ZONE TEMPERATURE AT 68 DEG F (ADJ). DISCHARGE AIR TEMPERATURE SETPOINT SHALL RESET BETWEEN 55 AND 80 DEG F (ADJ) BASED ON THE HEATING DEMAND. WHEN OA-T IS GREATER THAN THE HEATING LOCKOUT SETPOINT, THE ELECTRIC HEAT SHALL BE OFF. IF THE ZONE TEMPERATURE FALLS BELOW A LOW LIMIT TEMPERATURE SETPOINT OF 50 DEG F (ADJ), MAU-1 SHALL BE SEQUENCED OFF AND AN ALARM SHALL BE GENERATED AT THE BAS.
6. MAU-01 COOLING CONTROL:
   WHEN THE OUTSIDE AIR TEMPERATURE (OAT) IS GREATER THAN 60 DEG F (ADJ), THE COOLING COIL SHALL BE ACTIVE. THE COOLING COIL SHALL MODULATE TO MAINTAIN THE COOLING ZONE TEMPERATURE OF 76 DEG F (ADJ). THE DISCHARGE AIR TEMPERATURE SETPOINT SHALL BE RESET BETWEEN 55 AND 65 DEG F (ADJ) BASED ON THE COOLING DEMAND. IF THE ZONE TEMPERATURE RISES ABOVE THE HIGH LIMIT OF 85 DEG F (ADJ), AN ALARM SHALL BE GENERATED.
7. MAU-01 FAN SPEED CONTROL:
   WHEN THE KITCHEN HOOD EXHAUST FAN IS OPERATING, THE MAU-01 FAN SPEED SHALL BE SET AT A FIXED SPEED TO MAINTAIN 1470 CFM (ADJ). THE SPEED SHALL BE DETERMINED DURING TESTING AND BALANCING. WHEN THE KICTHEN HOOD EXHAUST FAN (EF-02) IS NOT OPERATING, THE SPEED SHALL MODULATE BETWEEN 750 AND 1470 CFM TO MAINTAIN THE ZONE TEMP SETPOINT.
8. DURING UNOCCUPIED TIMES THE UNITS SHALL CYCLE ON/OFF TO MAINTAIN THE UNOCCUPIED SETPOINTS OF 55 AND 85 DEG F (ADJ). UNIT SHALL OPERATE WITH THE OAD CLOSED AND THE RETURN DAMPER OPEN.

(M1) MUA-1 AND EF-1&2 KITCHEN EXHAUST SCHEMATIC

NTS

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

DESIGNED BY: Designer
DRAWN BY: Author
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SUBMITTED BY:

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US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK, NY 10278

CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
PROJECT NO. 75662

MAU-1 AND KITCHEN EXHAUST CONTROLS

SHEET ID

M-810

MAU-1 AND KITCHEN EXHAUST POINTS SCHEDULE

1

KITCHEN MAKEUP AIR UNIT AND EXHAUST FANS

FUNCTION	NAME	DESCRIPTION	DDC HARDWARE ID	SETTING (WITH UNITS)	RANGE (WITH UNITS)	IO TYPE	HOA REQ'D	CONFIG. TYPE	M&C VIEW AND OVRD	LDP VIEW AND OVRD	TREND REQ'D	ALARMING			PRIMARY POINT INFORMATION				NETWORK DATA EXCHANGE		OVERRIDES			TREND OBJECT LOCATION (L OR R), TYPE AND INSTANCE NUMBER (PROVIDE DDC ID FOR REMOTE IN NOTES)	ALARM INFORMATION			CONFIGURATION INFORMATION
												ALARM CONDITION	ALARM PRIORITY	M&C ROUTING	OBJECT TYPE AND INSTANCE NUMBER (AND PROPERTY ID)	SNVT NAME	SNVT TYPE	NIAGARA ID	DATA FROM	DATA TO	OBJECT TYPE & INSTANCE NUMBER OR COMMANDABLE	SNVT NAME	SNVT TYPE		ALARM TYPE (PROVIDE DDC ID FOR REMOTE IN NOTES)	NOTIFICATION CLASS OBJECT INSTANCE NUMBER	EVENT ENROLLMENT OBJECT INSTANCE NUMBER	
PROOFS & SAFETIES	HTG-C-T-LL	DUCT HEATER TEMPERATURE LOW LIMIT SWITCH	<___>	[39 DEG F]	ALM/NORMAL	BI		H			X	ALM	CRIT	[___]	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>
	HTG-C-T-HL	DUCT HEATER TEMPERATURE HIGH LIMIT SWITCH	<___>	<___>	ALM/NORMAL	BI		H			X	ALM	CRIT	[___]	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>
	ESS	EMERGENCY SHUTDOWN SWITCH SIGNAL	<___>		ALM/NORMAL	BI						EMERGENCY SHUTDOWN SIGNAL	CRIT	[___]	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>
	FAP	FIRE ALARM PANEL SIGNAL	<___>		ALM/NORMAL	BI						FIRE ALARM SIGNAL	CRIT	[___]	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>
	SA-P-HL	SUPPLY AIR PRESSURE HIGH LIMIT	<___>		ALM/NORMAL	BI		C				ALM	CRIT	[___]	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>
	SA-SMK	SUPPLY AIR SMOKE	<___>		ALM/NORMAL	BI		H	V	V	X	ALM	CRIT	[___]	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>
	RST-BUT	SYSTEM RESET BUTTON (FOR SAFETIES)	<___>			[___]			VO	VO					<___>	<___>	<___>	<___>	<___>	<___>				<___>	<___>	<___>	<___>	<___>
FAN CONTROL	SYS-OCC	OCCUPANCY INPUT (FROM SYSTEM SCHEDULER)	<___>		<___>	NET-IN			VO	VO	X				MSV <___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>
	SF-SS	SUPPLY FAN START/STOP	<___>		ON/OFF	BO	X		VO	VO	X	ALM	CRIT	[___]	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>
	SF-S	SUPPLY FAN STATUS	<___>		ON/OFF	BI			V	V	X	ALM	CRIT	[___]	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>
	SF-C	SUPPLY FAN SPEED COMMAND				AO			VO	VO	X			[___]	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>
	EF-1-SS	DISHWASHER EXHAUST FAN START/STOP	<___>		ON/OFF	BO	X		VO	VO	X			[___]	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>
	EF-2-S	KITCHEN HOOD EXHAUST FAN EF-2 STATUS	<___>		ON/OFF	BI			V	V	X			[___]	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>
	EF-1-C	DISHWASHER EXHAUST FAN EF-1 SPEED COMMAND HI/LO SPEED	<___>		50-100%	AO			VO	VO	X			[___]	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>
	EF-1-S	DISHWASHER EXHAUST FAN EF-1 STATUS	<___>		ON/OFF	BI			V	V	X	ALM	CRIT	[___]	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>
DAMPER CONTROL	RA-D-C	RETURN AIR DAMPER COMMAND	<___>		0-100%	AO			VO	VO	X			[___]	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>
	OA-D-C	OUTSIDE AIR DAMPER COMMAND	<___>		0-100%	AO			VO	VO	X			[___]	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>
	RA-D-S	RETURN AIR DAMPER POSITION	<___>		0-100%	AI			V	V	X	>5% MISMATCH	CRIT	[___]	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>
	OA-D-S	OUTSIDE AIR DAMPER POSITION	<___>		0-100%	AI			V	V	X	>5% MISMATCH	CRIT	[___]	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>
ZONE TEMPERATURE CONTROL:	OA-T AND OA/RA-T	OUTSIDE AND OUTSIDE/RETURN AIR TEMPERATURE	<___>		<___>	AI			V	VO	X			[___]	<___>	<___>	TEMP_P	<___>	<___>	<___>								<___>
	ZN-T	ZONE TEMPERATURE	<___>		<___>	AI			V	VO	X	LESS THAN 50 DEG F OR GREATER THAN 85 DEG F	CRIT	[___]	<___>	<___>	TEMP_P	<___>	<___>	<___>	<___>	<___>	<___>		<___>	<___>	<___>	<___>
	ZN-T-HTG	ZONE TEMPERATURE HEATING SETPOINT	<___>	68 DEG F	<___>	AI																						
	ZN-T-CLG	ZONE TEMPERATURE COOLING SETPOINT	<___>	76 DEG F	<___>	AI																						
	SA-T AND CC-T	SUPPLY AND COOLING COIL AIR TEMPERATURE	<___>			AI			V	VO	X	LESS THAN 50 DEG F OR GREATER THAN 100 DEG F	CRIT	[___]	<___>	<___>	TEMP_P	<___>	<___>	<___>	<___>	<___>	<___>		<___>				<___>
	SA-T-HTG	SUPPLY AIR TEMPERATURE HEATING SETPOINT	<___>		55-90 DEG F				V	VO	X				<___>			<___>	<___>	<___>	<___>	<___>	<___>		<___>	<___>	<___>	<___>	<___>
	SA-T-CLG	SUPPLY AIR TEMPERATURE COOLING SETPOINT	<___>		55-65 DEG F			C	VO	VO	X				<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>		<___>			<___>
HEATING COIL COOLING COIL	HEATING VALVE PID LOOP SETTINGS	PROPORTIONAL CONSTANT	<___>					C																				<___>
		INTEGRAL CONSTANT	<___>	<___>				C																				<___>
		BIAS	<___>	<___>				C			X																	<___>
		MAXIMUM OUTPUT	<___>	<___>				C																				<___>
		MINIMUM OUTPUT	<___>	<___>				C																				<___>
		<___>	<___>	<___>				C																				<___>
	COOLING VALVE PID LOOP SETTINGS	PROPORTIONAL CONSTANT	<___>	<___>				C																				<___>
		INTEGRAL CONSTANT	<___>	<___>				C																				<___>
		BIAS	<___>	<___>				C																				<___>
		MAXIMUM OUTPUT	<___>	<___>				C																				<___>
		MINIMUM OUTPUT	<___>	<___>				C																				<___>
		<___>	<___>	<___>				C																				<___>
OTHER POINTS	FLT-DP	PRE AND FINAL AIR FILTER PRESSURE HIGH LIMIT SWITCHES	<___>	<___>	ALM/NORMAL	BI		H	V	V	X	ALM	INFO	[___]	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>
	OA-FLT-DP	OUTSIDE AIR FILTER PRESSURE HIGH LIMIT SWITCHES	<___>	<___>	ALM/NORMAL	BI		H	V	V	X	ALM	INFO	[___]	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>
	RA-RH	RETURN AIR RELATIVE HUMIDITY	<___>	<___>	ALM/NORMAL	AI			V	VO	X				<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>
	RA-T	RETURN AIR TEMPERATURE	<___>	<___>	ALM/NORMAL	AI			V	VO	X	LESS THAN 50 DEG F OR GREATER THAN 85 DEG F	CRIT	[___]	<___>	<___>	TEMP_P	<___>	<___>	<___>	<___>	<___>	<___>		<___>	<___>	<___>	<___>

Notes:

1) THE CONTRACTOR SHALL COMPLETE THE POINTS SCHEDULE AS INDICATED IN THE SPECIFICATION AND IN ACCORDANCE WITH THE POINTS SCHEDULE INSTRUCTIONS DRAWING.
2) UNIT MANUFACTURERS PROOFS AND SAFETIES: THE CONTRACTOR SHALL SHOW EACH PROOF AND SAFETY AS A SEPARATE ROW.
3) UNIT STATUS: SERVES AS A MONITORED POINT AT THE M&C SOFTWARE (FRONT-END) AND AS A HEATING/COOLING REQUEST TO THE BOILER, HEAT EXCHANGER, AND/OR CHILLER SERVING THIS SYSTEM.
4) DDC H/W ID FOR DEVICE CONTAINING TREND OBJECT FOR REMOTE TRENDING FOR THIS SYSTEM: <___>
5) DDC H/W ID FOR DEVICE CONTAINING EVENT ENROLLMENT OBJECT FOR REMOTE ALARMING FOR THIS SYSTEM: <___>
6) DDC H/W IF FOR DEVICE CONTAINING SIMPLE SCHEDULER OBJECT (OR SYSTEM SCHEDULER SEQUENCE OF OPERATIONS) FOR THIS SYSTEM: <___>
7) MINOA-D-MAX AND MINOA-D-MIN: CONTRACTOR DOCUMENTS THE PERCENT DAMPER POSITION AT THE DESIGNER SPECIFIED CFM

US Army Corps of Engineers ®

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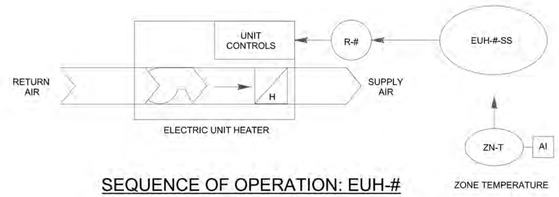
US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK, NY 10278

CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
PROJECT NO. 75682

MAU-1 AND KITCHEN EXHAUST POINTS SCHEDULE

SHEET ID

M-811

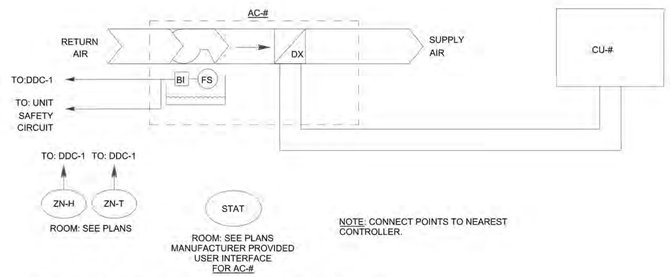


SEQUENCE OF OPERATION: EUH-#

1. UNIT SHALL OPERATE ON THE MANUFACTURER PROVIDED CONTROLS. DDC SYSTEM TO MONITOR SPACE TEMPERATURE .

U1 ELECTRIC UNIT HEATER CONTROLS

NTS



C1 SPLIT SYSTEM AIR CONDITIONER CONTROL SCHEMATIC

NTS

SPLIT SYSTEM AIR CONDITIONING SEQUENCE OF OPERATIONS

1. UNIT SHALL OPERATE ON THE MANUFACTURER PROVIDED CONTROLS. DDC SYSTEM TO MONITOR POINTS LISTED IN SEQUENCE.

2. AUTO/HEAT/COOL/OFF

a. THE HEAT PUMP SHALL RUN IN ACCORDANCE WITH THE HEAT PUMP MANUFACTURER'S CONTROL PANEL.

3. OCCUPANCY MODES: NOT APPLICABLE

4. SAFETIES: THE UNIT SHALL RUN SUBJECT TO THE UNIT MANUFACTURER'S SAFETIES.

5. SPACE TEMPERATURE CONTROL

THE UNIT SHALL CYCLE TO MAINTAIN SPACE TEMPERATURE AT SETPOINT.

a. COOLING SEASON: 72 DEG F (ADJ).
b. HEATING SEASON: 65 DEG F (ADJ).

6. BAS MONITORING & CONTROL

THE BUILDING AUTOMATION SYSTEM SHALL MONITOR ROOM TEMPERATURE, FAN STATUS, HEAT PUMP ALARM STATUS (NORMAL/ALARM), AND CONDENSATE HIGH LEVEL ALARM. HIGH LEVEL ALARM FLOAT SWITCH SHALL INTERLOCKED WITH THE UNIT CONTROLLER AND SHUT THE UNIT OFF AND GENERATE A LOCAL AUDIBLE ALARM NEXT TO THE UNIT ALONG WITH AN ALARM GENERATED AT THE BAS.

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CONTRACT NO.: W912DS15D0007

DESIGNED BY: Designer
DRAWN BY: Author
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SUBMITTED BY:
SIZE: ANSI D

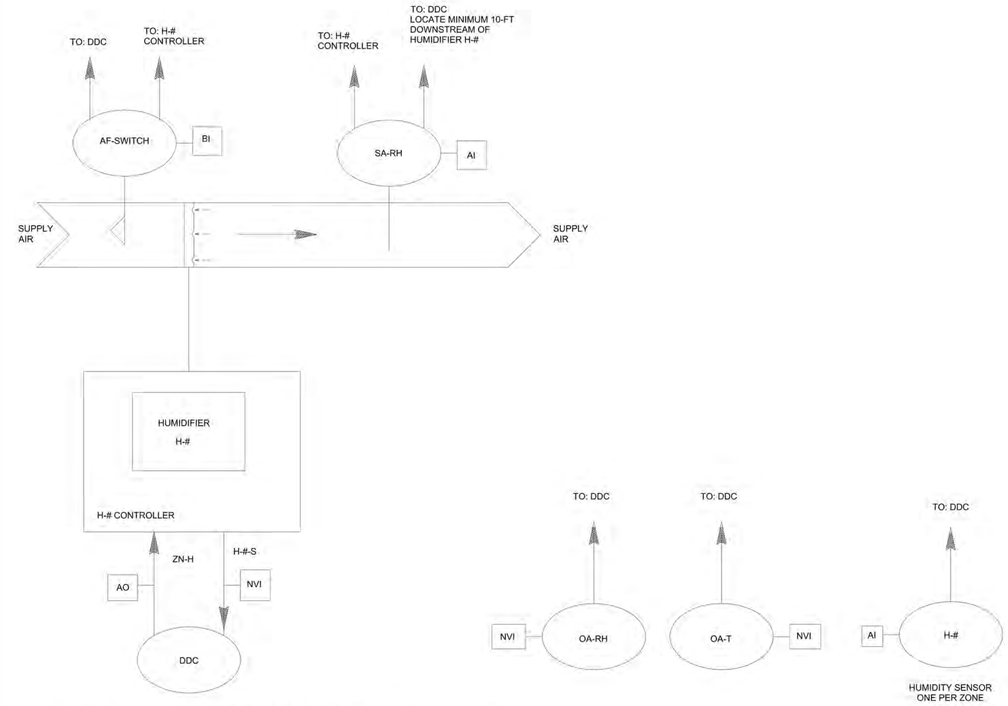
US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK, NY 10278

CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
PROJECT NO. 75662

UNIT HEATERS AND SPLIT UNITS CONTROLS

SHEET ID

M-812



H1 HUMIDIFIER CONTROL SCHEMATIC
NTS

HUMIDIFIER SEQUENCE OF OPERATIONS

CONTRACTOR SHALL INSTALL DDC HARDWARE TO PERFORM THIS SEQUENCE OF OPERATION AND TO PROVIDE NETWORK VARIABLE INPUTS, OUTPUTS AND ALARMS AS SPECIFIED. UNLESS OTHERWISE SPECIFIED, ALL MODULATING CONTROL SHALL BE PROPORTIONAL-INTEGRAL-DERIVATIVE (PID) CONTROL.

ALL SEQUENCES STATED HEREIN SHALL BE CONTROLLED VIA THE UNIT CONTROLLER. BACnet COMMUNICATION INTERFACE TO THE BUILDING AUTOMATION SYSTEM SHALL SIGNAL ALARMS, PROVIDE MONITORING DATA AND OUTPUT INFORMATION, AND PERMIT SETPOINT CHANGES.

A. HAND-OFF-AUTO SWITCHES:
THE UNIT CONTROLLER SHALL ACCEPT A FIRE ALARM PANEL (FAP) SIGNAL THAT TAKES PRECEDENCE OVER ALL OTHER INPUTS AND SWITCHES AND SHALL STOP THE UNIT. THE HUMIDIFIER SHALL ACCEPT AN OCCUPANT ACCESSIBLE EMERGENCY SHUTOFF SWITCH AS SHOWN. THE UNIT CONTROLLER SHALL HAVE AN H-O-A SWITCH:

(1) HAND: WITH THE H-O-A SWITCH IN HAND POSITION, THE UNIT CONTROLLER SHALL SEQUENCE THE UNIT TO START. THE UNIT'S RATE OF INJECTION SHALL BE UNDER MANUAL CONTROL.

(2) OFF: WITH THE H-O-A SWITCH IN OFF POSITION, THE UNIT SHALL REMAIN OFF.

(3) AUTO: WITH THE H-O-A SWITCH IN AUTO POSITION, THE UNIT SHALL RUN SUBJECT TO THE UNIT START/STOP SIGNAL AND SAFETIES. THE UNIT SHALL BE UNDER CONTROL OF THE UNIT CONTROLLER AND SYSTEM INPUTS.

B. THE SYSTEM SHALL OBTAIN ITS ENABLE COMMANDS FROM AHU-01.

C. PROOFS AND SAFETIES:

(1) THE SUPPLY FAN, EXHAUST FAN, AND ALL CONTROL LOOPS SHALL BE SUBJECT TO PROOFS AND SAFETIES. SAFETIES SHALL BE DIRECT-HARDWIRE INTERLOCKED TO THE FAN MOTOR STARTER CIRCUIT. DDC HARDWARE SHALL MONITOR ALL PROOFS AND SAFETIES AND FAILURE OF ANY PROOF OR ACTIVATION OF ANY SAFETY SHALL RESULT IN ALL CONTROL LOOPS BEING DISABLED AND THE UNIT BEING COMMANDED OFF UNTIL RESET.

(2) PROOFS:

(a) AIR FLOW SWITCH (AF-SWITCH)
(b) FIRE ALARM PANEL SIGNAL
(c) SUPPLY AIR RELATIVE HUMIDITY HIGH LIMIT (SA-RH-HL)
(d) EMERGENCY SHUTOFF (ESS)

D. SPACE HUMIDIFICATION: WHEN THIS LOOP IS ENABLED, THE HUMIDIFIER CONTROLLER SHALL PROPORTIONALLY MODULATE THE HUMIDIFIER TO MANTAIN THE AHU-01 RETURN AIR HUMIDITY SETPOINT OF 30% (ADJ). THE BAS. THE HUMIDIFIER CONTROLLER SHALL PROVIDE A SIGNAL TO THE DDC INDICATING THE HUMIDIFIER'S STATUS.

THIS LOOP SHALL BE DISABLED:
(a) UPON THE FAILURE OF THE AIR FLOW SWITCH (AF-SWITCH) TO PROVE THAT AIRFLOW IS PRESENT
(b) WHEN THE SUPPLY AIR RELATIVE HUMIDITY (SA-RH) EXCEEDS THE HIGH-LIMIT SETPOINT (SA-RH-HL).
(c) FIRE ALARM PANEL SIGNAL RECEIVED
(d) EMERGENCY SHUTDOWN SWITCH SIGNAL RECEIVED
(e) AHU-01 DOES NOT CALL FOR HUMIDIFICATION.

E. ALARMS:
ANY ZONE HUMIDITY SENSOR READS BELOW 25% RH OR ABOVE 65% RH FOR A PERIOD OF 60 MINUTES DURING THE OCCUPIED MODE.

UNIT DOES NOT SHOW AN ON STATUS WHEN COMMANDED TO RUN.

SUPPLY AIR RELATIVE HUMIDITY HIGH LIMIT I(SA-RH-HL) IS REACHED

HUMIDIFIER CONTROL

FUNCTION	NAME	DESCRIPTION	DDC HARDWARE ID	SETTING (WITH UNITS)	RANGE (WITH UNITS)	IO TYPE	HOA REQ'D	CONFIG. TYPE	M&C VIEW AND OVRD	LDP VIEW AND OVRD	TREND REQ'D	ALARM CONDITION	ALARM PRIORITY	M&C ROUTING	OBJECT TYPE AND INSTANCE NUMBER (AND PROPERTY ID)	NAME	TYPE	NIAGARA ID	DATA FROM	DATA TO	OBJECT TYPE & INSTANCE NUMBER OR COMMANDABLE	NAME TYPE		ALARM TYPE (PROVIDE DDC ID FOR REMOTE IN NOTES)	NOTIFICATION CLASS OBJECT INSTANCE NUMBER	EVENT ENROLLMENT OBJECT INSTANCE NUMBER
PROOFS & SAFETIES	AF-SWITCH	SUPPLY AIR FLOW SWITCH	<___>		ON/OFF	BI			V	V	X	SUPPLY AIR FLOW PROOF FAILED	CRIT	[___]	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>
	SA-RH-HL	SUPPLY AIR RELATIVE HUMIDITY HIGH LIMIT	<___>	95% RH	ALM/NORMAL	BI		H	V	V	X	ALM	CRIT	[___]	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>
	FAP	FIRE ALARM PANEL INPUT	<___>		ALM/NORMAL	BI		H	V	V	X	ALM	CRIT	[___]	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>
	ESS	EMERGENCY SWITCH	<___>		ALM/NORMAL	BI		H	V	V	X	ALM	CRIT	[___]	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>
	RST-BUT	SYSTEM RESET BUTTON (FOR SAFETIES)	<___>			BO			VO	VO	~				<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>		
START/STOP	SYS-ENABLE	SYSTEM ENABLE FROM AHU-01	<___>		ENABLE/DISABLE	BI			VO	VO	X			[___]	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>
	UNIT STATUS	UNIT STATUS	<___>		ON/OFF	NET-OUT			V	V	X	FAILED TO START	CRIT	[___]	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>		
HUMIDITY CONTROL	ZN-RH	ZONE RELATIVE HUMIDITY	<___>		0 - 100% RH	AI			V	V	X	ZN-RH IS MORE THAN 65% RH OR BELOW 25% RH.	CRIT	[___]	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>
	SA-RH	SUPPLY AIR RELATIVE HUMIDITY	<___>		0 - 100% RH	AI			V	V	X	SA-RH IS ABOVE 90% RH	CRIT	[___]	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>
	RA-RH	RETURN AIR RELATIVE HUMIDITY	<___>		0 - 100% RH	AI			V	V	X	RA-RH IS ABOVE 65% RH	CRIT	[___]	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>
	RA-RH-SP	RETURN AIR RELATIVE HUMIDITY SETPOINT		35% RH	25-65% RH	AO		C	VO	VO	X				<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>	<___>		

Notes:
1) THE CONTRACTOR SHALL COMPLETE THE POINTS SCHEDULE AS INDICATED IN THE SPECIFICATION AND IN ACCORDANCE WITH THE POINTS SCHEDULE INSTRUCTIONS DRAWING.
2) UNIT MANUFACTURERS PROOFS AND SAFETIES. THE CONTRACTOR SHALL SHOW EACH PROOF AND SAFETY AS A SEPARATE ROW.
3) UNIT STATUS: SERVES AS A MONITORED POINT AT THE M&C SOFTWARE (FRONT-END) AND AS A HEATING/COOLING REQUEST TO THE BOILER, HEAT EXCHANGER, AND/OR CHILLER SERVING THIS SYSTEM.
4) DDC HW ID FOR DEVICE CONTAINING TREND OBJECT FOR REMOTE TRENDING FOR THIS SYSTEM: <___>
5) DDC HW ID FOR DEVICE CONTAINING EVENT ENROLLMENT OBJECT FOR REMOTE ALARMING FOR THIS SYSTEM: <___>
6) DDC HW IF FOR DEVICE CONTAINING SIMPLE SCHEDULER OBJECT (OR SYSTEM SCHEDULER SEQUENCE OF OPERATIONS) FOR THIS SYSTEM: <___>

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

ISSUE DATE: AUGUST 29, 2025
SOLICITATION NO.: W912DS24F0031
CONTRACT NO.: W912DS15D0007

DESIGNED BY: Designer
DRAWN BY: Author
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HUMIDIFIER CONTROLS AND POINTS SCHEDULE

SHEET ID
M-813

INTERIOR AND SITE LIGHTING

A1z, B1z — 2 FT x 4 FT RECESSED LED FIXTURE. LETTER INDICATES TYPE PER FIXTURE SCHEDULE. IF PRESENT, '1' INDICATES BATTERY BACK-UP AND 'z' INDICATES CONTROL ZONE.

C1z — 1 FT x 4 FT SURFACE LED FIXTURE. LETTER INDICATES TYPE PER FIXTURE SCHEDULE. IF PRESENT, '1' INDICATES BATTERY BACK-UP AND 'z' INDICATES CONTROL ZONE.

D, D1 DW, DW1 — 2 FT x 2 FT RECESSED LED FIXTURE. LETTER INDICATES TYPE PER FIXTURE SCHEDULE. IF PRESENT, '1' INDICATES BATTERY BACK-UP AND 'z' INDICATES CONTROL ZONE.

F1z — 2 FT x 2 FT RECESSED LED FIXTURE. LETTER INDICATES TYPE PER FIXTURE SCHEDULE. IF PRESENT, '1' INDICATES BATTERY BACK-UP AND 'z' INDICATES CONTROL ZONE.

G1z — 4" CONTINUOUS RECESSED LED FIXTURE. LETTER INDICATES TYPE PER FIXTURE SCHEDULE. IF PRESENT, '1' INDICATES BATTERY BACK-UP AND 'z' INDICATES CONTROL ZONE.

H1z — 6 IN ROUND DOWNLIGHT LED FIXTURE. LETTER AND NUMBER INDICATE TYPE PER FIXTURE SCHEDULE. IF PRESENT, '1' INDICATES BATTERY BACK-UP AND 'z' INDICATES CONTROL ZONE.

I1z — 2 FT x 2 FT RECESSED LED FIXTURE. LETTER INDICATES TYPE PER FIXTURE SCHEDULE. IF PRESENT, '1' INDICATES BATTERY BACK-UP AND 'z' INDICATES CONTROL ZONE.

Jz — 4 IN CYLINDRICAL PENDANT LED FIXTURE. LETTER INDICATES TYPE PER FIXTURE SCHEDULE. IF PRESENT, 'z' INDICATES CONTROL ZONE

K1z — 4 IN X 4 FT SUSPENDED/SURFACE MOUNTED LED FIXTURE. LETTER INDICATES TYPE PER FIXTURE SCHEDULE. IF PRESENT, '1' INDICATES BATTERY BACK-UP AND 'z' INDICATES CONTROL ZONE.

L1z — 4 IN CONTINUOUS RECESSED LED FIXTURE. LETTER INDICATES TYPE PER FIXTURE SCHEDULE. IF PRESENT, '1' INDICATES BATTERY BACK-UP AND 'z' INDICATES CONTROL ZONE.

M — 2 FT UNDER CABINET LED FIXTURE. LETTER INDICATES TYPE PER FIXTURE SCHEDULE.

N1 — LED WALL LUMINAIRE. LETTER INDICATES TYPE PER FIXTURE SCHEDULE, '1' INDICATES BATTERY BACK-UP.

O1 — LED CANOPY FIXTURE. LETTER INDICATES TYPE PER SITE FIXTURE SCHEDULE, '1' INDICATES BATTERY BACK-UP.

P-Y — AREA LED FIXTURE ON 30 FT POLE. LETTER INDICATES TYPE PER SITE FIXTURE SCHEDULE, 'Y' INDICATES NUMBER OF FIXTURES ON THE SAME POLE.

Q,Q1 — LED CANOPY FIXTURE. LETTER INDICATES TYPE PER SITE FIXTURE SCHEDULE, '1' INDICATES BATTERY BACK-UP.

X1/X2 — EXIT SIGN WITH DIRECTIONAL ARROWS AS INDICATED, CEILING MOUNTING. 'X1' INDICATES SINGLE FACE, 'X2' INDICATES DOUBLE FACE.

X1/X2 — EXIT SIGN WITH DIRECTIONAL ARROWS AS INDICATED, WALL MOUNTING. 'X1' INDICATES SINGLE FACE, 'X2' INDICATES DOUBLE FACE.

$YXz — LOW VOLTAGE WALL-MOUNTED TOGGLE SWITCH. IF PRESENT, 'X' DENOTES 'D' FOR DIMMER SWITCH. 'Y' DENOTES SWITCH TYPE: '3' - 3-WAY, '4' - 4-WAY, 'M' - MOTOR RATED, 'GD' - GARBAGE DISPOSER. IF APPLICABLE, 'z' DENOTES CONTROL ZONE. WHERE MULTIPLE ZONES ARE LISTED, DESIGN CALLS FOR SEPARATE SWITCHES FOR EACH ZONE. WHERE SEVERAL ZONES ARE SHOWN NEXT TO A TOGGLE/SCENE WALL STATION/DIMMER/ 3-WAY DIMMER/ 3-WAY/ 4-WAY DIMMER/ 4-WAY SWITCH SYMBOL PROVIDE A DEDICATED TOGGLE/SCENE WALL STATION/DIMMER/ 3-WAY DIMMER/ 3-WAY/ 4-WAY DIMMER/ 4-WAY SWITCH FOR EACH LIGHTING CONTROL ZONE. FOR EXAMPLE '$3Dabcd' DENOTES FOUR 3-WAY DIMMER SWITCHES: '$3Da', '$3Db', '$3Dc', AND '$3Dd'. REFER TO SHEET E-002 FOR TYPICAL MOUNTING HEIGHTS.

DH — CEILING MOUNTED DAYLIGHT HARVESTING SENSOR

PC — EXTERIOR MOUNTED PHOTOCELL

POWER

AF/POLE/UF — UNFUSED DISCONNECT SWITCH. SIZE AS SHOWN

AF/POLE/AT — FUSED DISCONNECT SWITCH. SIZE FUSES FOR EQUIPMENT BASED ON MANUFACTURER'S RECOMMENDATIONS

SURFACE MOUNTED PANELBOARD OR AUTOMATIC TRANSFER SWITCH AS INDICATED

RECESSED MOUNTED PANELBOARD

X — CEILING MOUNTED OUTLET - DUPLEX RECEPTACLE, 20 AMP, 125 VOLT, 2 POLE, 3 WIRE GROUNDED TYPE FOR CEILING, UON. 'X' DENOTES RECEPTACLE TYPE: 'G' - GROUND FAULT CIRCUIT INTERRUPTOR, 'V' - AUDIO-VISUAL.

X — WALL MOUNTED NEMA 5-20 DUPLEX RECEPTACLE, UON. 'X' DENOTES RECEPTACLE MOUNTING HEIGHT IN INCHES AND/OR RECEPTACLE TYPE: 'A' - ABOVE COUNTER,'C' - ABOVE CUBBIES, 'TV' - CATV, 'T' - TAMPER RESISTANT, 'G' - GROUND FAULT CIRCUIT INTERRUPTOR, 'W' - WEATHERPROOF LOCKABLE, 'PVM' - PARENTAL VIEWING MONITOR, 'PVW' - PARENTAL VIEWING WORKSTATION.

X — WALL MOUNTED QUADRUPLEX RECEPTACLE (2 DUPLEX RECEPTACLES IN A 2 GANG BOX) WITH SAME RATINGS AS A DUPLEX RECEPTACLE, UON. 'X' DENOTES RECEPTACLE MOUNTING HEIGHT IN INCHES AND/OR RECEPTACLE TYPE: 'A' - ABOVE COUNTER,'C' - ABOVE CUBBIES, 'TV' - CATV, 'T' - TAMPER RESISTANT, 'G' - GROUND FAULT CIRCUIT INTERRUPTOR, 'W' - WEATHERPROOF LOCKABLE,

XU — WALL MOUNTED COMBINATION (2) 3.1-ARM USB TYPE-A CHARGING PORTS / (1) NEMA 5-20 POWER OUTLET RECEPTACLE, UON. 'X' DENOTES RECEPTACLE MOUNTING HEIGHT IN INCHES AND/OR RECEPTACLE TYPE: 'A' - ABOVE COUNTER, 'T' - TAMPER RESISTANT, 'G' - GROUND FAULT CIRCUIT INTERRUPTOR, 'U'-USB.

WIRING

A-21 — EXPOSED UNLESS NOTED OTHERWISE ON PLAN. SEE DESCRIPTION OF HASH MARKS. ARROW INDICATES HOMERUN TO PANEL "A", CIRCUIT 21.

FLEXIBLE CONDUIT CONNECTION

HASH MARKS INDICATES NUMBER OF CONDUCTORS RAN IN CONDUIT. NO HASH MARKS INDICATES 1 #12 PHASE CONDUCTOR, 1#12 GROUNDED CONDUCTOR AND 1 #12 GREEN EQUIPMENT GROUND IN 3/4" CONDUIT.

GROUNDING

AIR TERMINAL

GROUND ROD IN A TEST WELL

GROUND ROD

GROUND RING

DOWN CONDUCTOR CONNECTION TO GROUND

LIGHTNING PROTECTION ROOF CONDUCTOR

SITE POWER

UEx — EXISTING UNDERGROUND ELECTRICAL LINE

UE — NEW UNDERGROUND ELECTRICAL LINE

EP — EXISTING OVERHEAD ELECTRICAL LINE.

EXISTING ITEMS TO BE REMOVED

E MH — EXISTING ELECTRICAL MANHOLE

C MH — EXISTING COMMUNICATIONS MANHOLE

EXISTING TRANSFORMER

T — NEW TRANSFORMER. DASHED LINE AROUND TRANSFORMER INDICATES CONCRETE PAD.

M — NEW MANUAL TRANSFER SWITCH. DASHED LINE AROUND TRANSFORMER INDICATES CONCRETE PAD.

E SB — NEW POWER SPLICE BOX

G — QUICK CONNECT JUNCTION BOX FOR PORTABLE GENERATOR.

E MH — NEW POWER MANHOLE

POWER (CONT'D)

GROUNDING BUS BAR

DM — DIGITAL METER

J P / J P — WALL/CEILING MOUNTED POWER JUNCTION BOX.

EPO — WALL MOUNTED EMERGENCY POWER OFF SWITCH.

X X X — WALL/CEILING/FLOOR MOUNTED SPECIAL PURPOSE DEDICATED TWIST-LOCK RECEPTACLE, UON. 'X' DENOTED VOLTAGE IF PRESENT. CONTRACTOR SHALL COORDINATE WITH GOVERNMENT FOR EXACT LOCATION AND REQUIREMENTS.

M — MOTOR, SIZE AS SHOWN.

ABBREVIATIONS

A	AMPERE
AC	ABOVE COUNTER
ADA	AMERICANS WITH DISABILITIES ACT
AF	AMPERE FRAME
AFF	ABOVE FINISHED FLOOR
AL	ALUMINUM
AT	AMPERE TRIP
AV	AUDIO-VISUAL
1/C	ONE CONDUCTOR
BATT	BATTERY
C	CONDUIT
CAB	CABINET
CB	CIRCUIT BREAKER
CH	CHILLER
CKT	CIRCUIT
CONV	CONVENIENCE
COR	CONTRACTING OFFICER'S REPRESENTATIVE
CORR	CORRIDOR
CU	COPPER
DM	DIGITAL METER
EF	EXHAUST FAN
ELEC	ELECTRICAL
EMT	ELECTRICAL METALLIC TUBING
EWC	ELECTRIC WATER COOLER
FACP	FIRE ALARM CONTROL PANEL
FM	FREQUENCY MODULATION
FT	FOOT/FEET
GB	GROUND BAR
GEN	GENERATOR
GFI	GROUND FAULT PROTECTION
HAOR	HEATING AIR CONDITIONING REFRIGERATION
HP	HORSEPOWER
HT	HEIGHT
HZ	HERTZ
IN	INCH(ES)
J-BOX	JUNCTION BOX
KWH	KILOWATT HOUR
KP	KITCHEN PANEL
LED	LIGHT EMITTING DIODE
LSI	LONG-TIME, SHORT-TIME, INSTANTANEOUS PROTECTION
LSIG	LONG-TIME, SHORT-TIME, INSTANTANEOUS, GROUND-FAULT PROTECTION
LP	LIGHTING PANEL
LTG	LIGHT(ING) FIXTURE
MAX	MAXIMUM
MCB	MOLDED CASE CIRCUIT BREAKER
MDP	MAIN DISTRIBUTION PANEL
MECH	MECHANICAL
MGB	MAIN ELECTRICAL GROUND BAR
MH	MAINTENANCE HOLE
MIN	MINIMUM
MLO	MAIN LUGS ONLY
MP	MECHANICAL PANEL
MTD	MOUNTED
NEC	NATIONAL ELECTRICAL CODE
NO.	NUMBER
NTS	NOT TO SCALE
PH	PHASE
PIR	PASSIVE INFRARED
PLC	PROGRAMMABLE LOGIC CONTROLLER
REC	RECEPTACLE(S)
RGS	RIGID GALVANIZED STEEL
RM	ROOM/ROOMS
RP	RECEPTACLE PANEL
SPD	SURGE PROTECTIVE DEVICE
STS	STATIC TRANSFER SWITCH
SWBD	SWITCHBOARD
SWGR	SWITCHGEAR
TECH	TECHNICAL
TEMP	TEMPERATURE
TP	TELECOMMUNICATIONS PANEL
TYP	TYPICAL
UF	UNFUSED
UON	UNLESS OTHERWISE NOTED
UPS	UNINTERRUPTIBLE POWER SUPPLY
V	VOLT
VA	VOLTAMPERE
VFD	VARIABLE FREQUENCY DRIVE
VOLT	VOLTAGE
VVD	VARIABLE VOLUME DAMPER
W	WATTS
WP	WATERPROOF
XFMR	TRANSFORMER

GENERAL NOTES

1. REFER TO SHEET E002 FOR ADDITIONAL SYMBOLS, ABBREVIATIONS, NOTES, AND TYPICAL DEVICE MOUNTING HEIGHTS.
2. ALL SYMBOLS AND/OR DESIGNATIONS SHOWN ON THE LEGEND MAY NOT APPEAR ON THE DRAWINGS.
3. PERFORM WORK IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE AND OTHER CODES AND STANDARDS AS INTERPRETED BY THE AUTHORITY HAVING JURISDICTION.
4. THESE DOCUMENTS CALL FOR FINISHED WORK, TESTED AND READY FOR OPERATION.
5. ELECTRICAL DRAWINGS ARE DIAGRAMMATIC AND DO NOT SHOW NECESSARY OFFSETS, BENDS, ELBOWS, JUNCTION BOXES, OR OTHER SPECIFIC ELEMENTS WHICH MAY BE REQUIRED FOR PROPER INSTALLATION OF WORK AND DOES NOT ILLUSTRATE EXACT ROUTING CONSIDERING FIELD CONDITIONS, TRENCHING, PRACTICAL PULLING TENSION, AND CODES.
6. UON, DETAILS ARE DIAGRAMMATIC AND ARE PROVIDED FOR INFORMATION PURPOSES ONLY.
7. CONTROL/POWER WIRING REQUIRED BUT NOT SHOWN FOR, AND NOT LIMITED TO, FIRE ALARM SYSTEM COMPONENTS, FIRE PROTECTION SYSTEM COMPONENTS, THERMOSTATS, CONTROLLERS, VARIABLE FREQUENCY DRIVE CONTROLS, EQUIPMENT MANUFACTURER CONTROL PANELS, DAMPER MOTORS, VARIABLE VOLUME CONTROLS AND MOTORS, VALVES, SMOKE DAMPERS, SENSING DEVICES (TEMPERATURE, PRESSURE, HUMIDITY, LEVEL, FLOW, VOLUME, ON-OFF, FIRE ALARM DEVICES) SHALL BE SUPPLIED AND INSTALLED TO PROVIDE A COMPLETE AND USABLE FACILITY AS SPECIFIED. THE CONTRACTING OFFICER SHALL DIRECT THE CONTRACTOR TO WHICH POWER PANEL TO USE TO SUPPLY ABOVE CONTROLS.
8. THE WORD 'PROVIDE' SHALL BE UNDERSTOOD TO MEAN 'FURNISH AND INSTALL.'
9. SPACE ABOVE DROPPED CEILINGS IS LIMITED. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH ALL OTHER TRADES.
10. MOTOR STARTERS AND/OR DISCONNECT SWITCHES ARE NOT ALWAYS SHOWN AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING THE MOTOR STARTERS/DISCONNECT SWITCHES FOR ALL MECHANICAL/HVAC LOADS.
11. COMBINATION STARTERS MAY BE FURNISHED AT CONTRACTOR'S OPTION WHERE DISCONNECT SWITCHES ARE REQUIRED ADJACENT TO MOTOR STARTERS.
12. MOUNTING HEIGHTS FOR SAFETY SWITCHES AND MOTOR STARTERS SHALL BE 60 INCHES AFF TO TOP OF BOX EXCEPT WHERE HIGHER MOUNTING IS REQUIRED TO ASSURE THAT BOTTOMS OF BOXES ARE AT A MINIMUM OF 2 INCHES AFF. THE LOCATION OF EXHAUST FANS, A/C UNITS, MOTOR STARTERS, AND OTHER MOTORS SHOWN ON THE ELECTRICAL DRAWINGS ARE GENERAL LOCATIONS. THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE MECHANICAL CONTRACTOR FOR SPECIFIC LOCATIONS.
13. ALL DIMENSIONAL DATA IS IN INCHES UNLESS OTHERWISE INDICATED.
14. ELECTRICAL CONDUCTORS SHALL BE 12AWG MINIMUM. CONDUITS SHALL BE SIZED AS INDICATED ON DRAWINGS, 3/4 INCH MINIMUM.
15. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING THE REQUIRED NUMBER OF WIRES TO CIRCUIT ANY DEVICE/EQUIPMENT TO THE PANELBOARD.
16. CONTRACTOR SHALL PROVIDE LIGHTNING PROTECTION AS PER NFPA 780.
17. A SEPARATE GREEN GROUNDING CONDUCTOR SHALL BE RUN WITH ALL CIRCUITS.
18. FULL SIZE NEUTRALS SHALL BE RUN WITH EVERY BRANCH CIRCUIT. THE USE OF SHARED NEUTRALS FOR BRANCH CIRCUITS IS NOT PERMITTED.
19. ALL CONDUIT RUNS SHALL BE EQUIPPED WITH A PULL STRING WITH MINIMUM TEST RATING OF 200 LB. CONDUITS SHALL HAVE BUSHINGS INSTALLED TO PROTECT CABLES.
20. CONCRETE ENCASE EXTERIOR UNDERGROUND PVC SCHEDULE 40 FOR LIGHTING CIRCUITS IN PAVED AREAS SUBJECT TO VEHICULAR TRAFFIC.
21. WHEN MORE THAN THREE CURRENT CARRYING CONDUCTORS ARE USED IN A CONDUIT, THE ALLOWABLE AMPACITY OF THE CONDUCTORS SHALL BE REDUCED AS INDICATED IN NFPA 70.
22. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE ACCURACY AND/OR COMPLETENESS OF UTILITIES SHOWN ON THE DRAWINGS PRIOR TO ANY CONSTRUCTION ACTIVITY AND TO REPORT DISCREPANCIES TO THE COR.
23. FIRE SEAL ALL CONDUIT PENETRATIONS THROUGH FIRE RATED WALLS AND SLABS. SEAL FIRE RATING SHALL BE EQUAL TO OR GREATER THAN THE FIRE RATING OF THE WALL OR SLAB THROUGH WHICH THE CONDUIT PASSES.
24. FIELD VERIFY DIMENSIONS AND ELEVATIONS PRIOR TO THE START OF WORK.
25. MODIFICATIONS TO THESE DOCUMENTS DUE TO UNFORESEEN FIELD CONDITIONS MUST BE APPROVED BY THE COR AND INDICATED ON THE RECORD DRAWINGS.
26. THE CONTRACTOR ASSUMES RESPONSIBILITY FOR MAKING DESIGN MODIFICATIONS WHEN PROVIDING EQUIPMENT OTHER THAN THAT SPECIFIED OR APPROVED AS EQUAL. MODIFICATIONS AND SUBSTITUTIONS MUST BE SEALED BY THE CONTRACTOR'S LICENSED PROFESSIONAL AND APPROVED BY THE COR. INDICATE MODIFICATIONS ON THE RECORD DRAWINGS.
27. PROVIDE NEW EQUIPMENT LISTED AND LABELED FOR ITS INTENDED USE UNLESS INSTRUCTED OTHERWISE.
28. PRIOR TO FINAL ACCEPTANCE, CLEAN DEVICES, DEVICE PLATES, CABINETS, LUMINARIES, AND/OR OTHER EQUIPMENT PROVIDED UNDER THIS CONTRACT.
29. REPAIR OR REPLACE, AS DIRECTED BY THE COR AND AT NO ADDITIONAL COST TO THE GOVERNMENT, ITEMS DAMAGED DURING THE COURSE OF THIS WORK.
30. REPLACE AND RETEST DEFECTIVE WIRING, DEVICES AND EQUIPMENT THAT IS ENCOUNTERED DURING THE COURSE OF TESTING TO THE SATISFACTION OF THE COR.
31. COORDINATE DUCTBANK AND CONDUIT CROSSINGS WITH ALL EXISTING AND NEW UTILITIES. MINIMUM BURIAL DEPTHS AND SUFFICIENT CLEARANCES BETWEEN NEW AND EXISTING UTILITIES AND/OR STRUCTURES SHALL BE COORDINATED WITH RESPECTIVE DISCIPLINES AND MAINTAINED IN ACCORDANCE WITH APPLICABLE CODES AND AUTHORITY HAVING JURISDICTION. NEW UTILITIES SHALL BE PLACED ABOVE OR BELOW EXISTING UTILITIES/STRUCTURES AT CROSSINGS IN ACCORDANCE WITH REQUIRED DEPTHS AND CLEARANCES.
32. DO NOT SCALE ANY DRAWINGS. DIMENSIONS TAKEN FROM CENTERLINE OF DEVICE OR GANG BOX SHALL BE FOLLOWED. COMMUNICATIONS DEVICES ARE SHOWN FOR LOCATION AND TYPE ONLY.
33. NO ONE CONDUIT SEGMENT SHALL BE MORE THAN 100 FT WITHOUT THE INSERTION OF A PULL BOX.
34. AT NO TIME SHALL A CONDUIT RUN EXCEED A TOTAL OF 180° BEND WITHOUT THE INSERTION OF A PULL BOX.
35. 'XXX-1' SHOWN NEXT TO THE ELECTRICAL SYMBOL INDICATES THE PANEL AND THE CIRCUIT NUMBER TO WHICH THAT DEVICE IS HOMERUN. CAPITAL LETTER AND NUMBER, IF APPLICABLE, NEXT TO LIGHT FIXTURE DESIGNATE FIXTURE TYPE GIVEN IN THE FIXTURE SCHEDULE. LOWER CASE LETTER NEXT TO THE LIGHT FIXTURE INDICATES CONTROL ZONE, IF APPLICABLE.
36. ADDITIONALLY, ALL OVERHEAD UTILITIES AND OTHER FIXTURES WEIGHING 31 POUNDS (14 KG) OR MORE (EXCLUDING DISTRIBUTED SYSTEMS SUCH AS PIPING NETWORKS THAT COLLECTIVELY EXCEED THAT WEIGHT) ARE REQUIRED TO USE EITHER RIGID OR FLEXIBLE SYSTEMS TO MINIMIZE THE LIKELIHOOD THAT THEY WILL FALL AND INJURE BUILDING OCCUPANS. ALL EQUIPMENT MOUNTINGS MUST RESIST FORCES OF 0.5 TIMES THE EQUIPMENT WEIGHT IN ANY HORIZONTAL DIRECTION AND 1.5 TIMES THE EQUIPMENT WEIGHT IN THE DOWNWARD DIRECTION.
37. METAL CLAD CABLE IS PROHIBITED FOR USE ON THIS PROJECT WITH THE EXCEPTION OF USING IT ONLY AS THE FINAL CONNECTION OF THE LIGHTING FIXTURES AND IS LIMITED TO A MAXIMUM OF 6 FEET (1829).

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

ISSUE DATE: AUGUST 29, 2025
SOLICITATION NO.: W912DS23F0031
CONTRACT NO.: W912DS19BD007

DESIGNED BY: K.SCHNEIDLER
DRAWN BY: K. SCHNEIDLER
CHECKED BY: M. GRIMALDI
SUBMITTED BY: Y. BARRETT
SIZE: ANSI D

US ARMY CORPS OF ENGINEERS NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK NY 10278

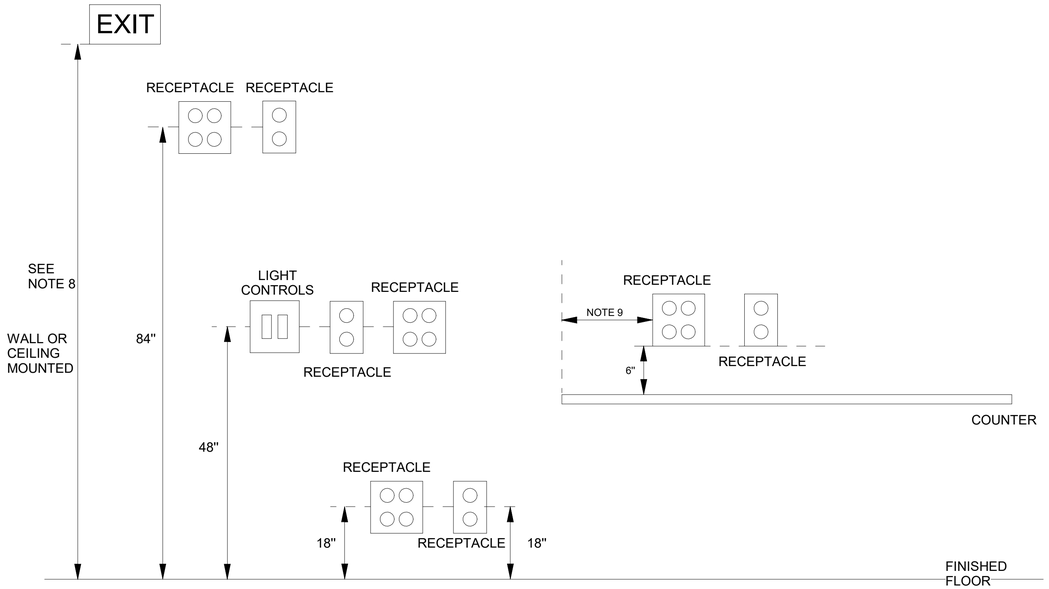
CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
PROJECT NO. 75662

ELECTRICAL - LEGEND - POWER AND LIGHTING

SHEET ID

E-001

TYPICAL POWER FIXTURES AND EXIT SIGNS MOUNTING HEIGHTS, UON



GENERAL NOTES

1. REFER TO SHEET E001 FOR SYMBOLS, ABBREVIATIONS, AND NOTES.
2. MOUNTING HEIGHTS DO NOT APPLY TO SECURITY DEVICES.
3. ALL MOUNTING HEIGHTS SHALL BE MEASURED FROM FINISHED FLOOR TO CENTERLINE OF DEVICE EXCEPT EXIT SIGNS AND ABOVE COUNTERTOP DEVICES.
4. ALL DEVICES SHALL BE INSTALLED AT THE MOUTING HEIGHT INDICATED ON THIS DETAIL, UON.
5. COORDINATE WITH ARCHITECTURAL AND INTERIOR PLANS AND ELEVATIONS FOR EXACT LOCATIONS AND MOUNTING HEIGHTS OF MONITORS.
6. MOUNT 6 IN. ABOVE COUNTERTOP OR ASSOCIATED BACK SPLASH. REFER TO ARCHITECTURAL AND INTERIOR DRAWINGS.
7. FOR AUDIO-VISUAL SYSTEM, COORDINATE INSTALLATION REQUIREMENTS WITH GOVERNMENT.
8. REFER TO NFPA 101 FOR MOUNTING LOCATIONS.
9. MINIMUM 18 IN. FROM THE EDGE OF THE COUNTERTOP (TYP).

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

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SOLICITATION NO.: W912DS24F0031
CONTRACT NO.: W912DS19D0007

DESIGNED BY: K.SCHNEIDLER
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CHECKED BY: M. CHEUNG
SUBMITTED BY: Y. BARRETT
SIZE: ANSI D

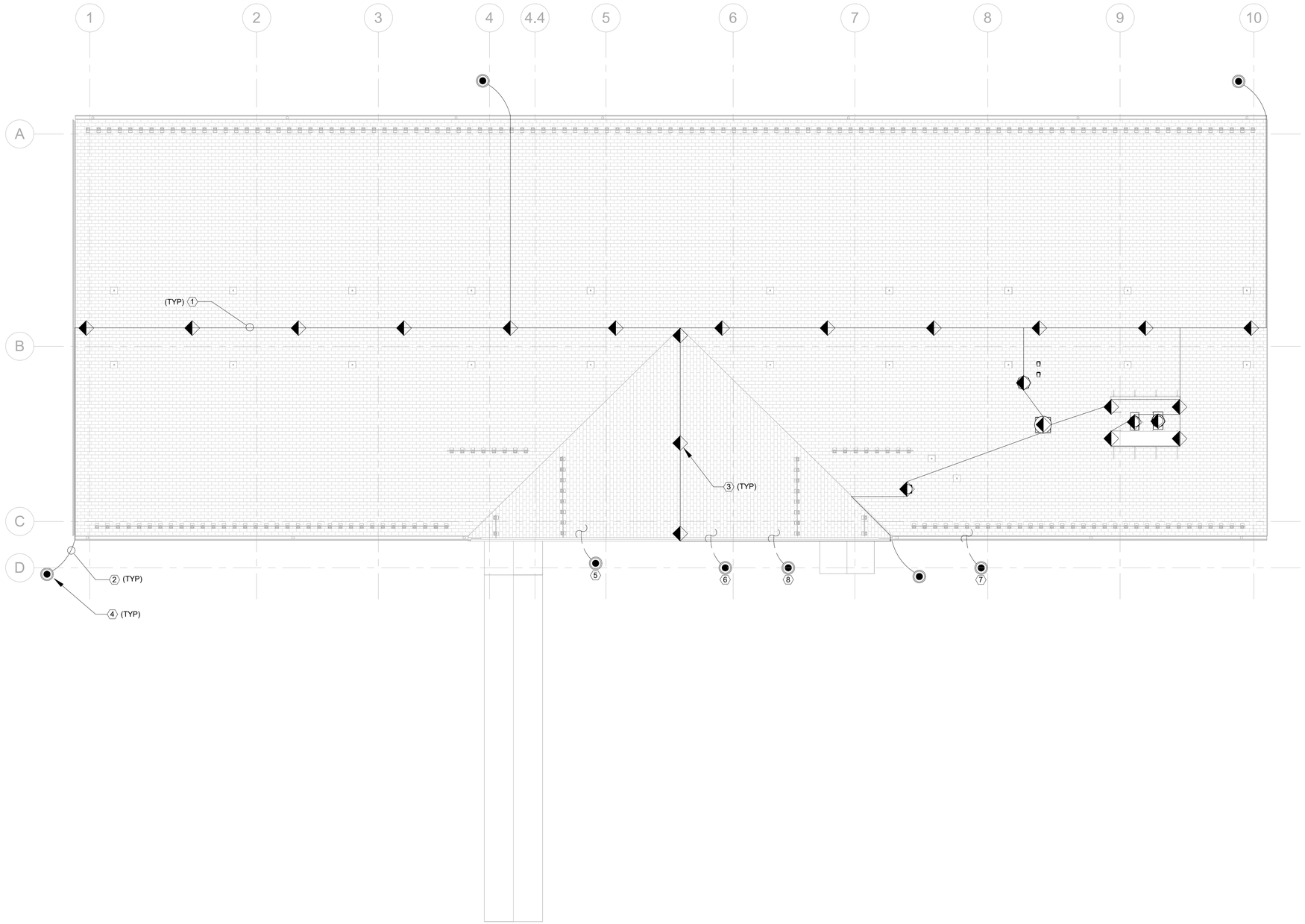
US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK, NY 10278

CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
PROJECT NO. 75662

ELECTRICAL - LEGEND - TYPICAL POWER FIXTURES AND EXIT SIGNS MOUNTING HEIGHTS

SHEET ID

E-002



A1 ELECTRICAL - LIGHTNING PROTECTION & GROUNDING PLAN

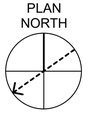
3/32" = 1'-0"

GENERAL NOTES

1. REFER TO SHEET E-001 FOR ELECTRICAL SYMBOLS, ABBREVIATIONS, AND GENERAL NOTES.
2. THE LAYOUT OF THE LIGHTNING PROTECTION / GROUNDING SYSTEMS COMPONENTS, CONDUCTORS, AND INTERCONNECTIONS IS DIAGRAMMATIC AND ITENDED TO SHOW THE MINIMUM ACCEPTABLE SYSTEM LAYOUT. IT IS THE SOLE RESPONSBILITY OF THE CONTRACTOR TO VERIFY CONDITIONS IN THE FIELD AND PROVIDE A COMPLETE AND WORKING SYSTEM IN COMPLIANCE WITH NFPA, UFC, AND UL.
3. PROVIDE ALL BONDING TO ALL SECONDARY METAL BODIES.
4. REFER TO THE ARCHITECTURAL, STRUCTURAL, AND MECHANICAL PLANS FOR ADDITIONAL DETAILS, TYPES OF MATERIALS, AND EQUIPMENT LOCATIONS.
5. ALL CONDUCTORS SHALL BE COPPER, UON.

SHEET KEYNOTES

1. #2 BARE COPPER MAIN CONDUCTOR
2. #1/0 BARE COPPER DOWN CONDUCTOR
3. AIR TERMINAL
4. GROUND ROD IN A TEST WELL
5. #4/0 AWG COPPER WITH MINIMUM STRAND SIZE OF 17 GAUGE COPPER WIRE FROM GROUND ROD TO MAIN ELECTRICAL GROUNDING BAR.
6. #4/0 AWG COPPER WITH MINIMUM STRAND SIZE OF 17 GAUGE COPPER WIRE FROM GROUND ROD TO WATER MAIN.
7. #4/0 AWG COPPER WITH MINIMUM STRAND SIZE OF 17 GAUGE COPPER WIRE FROM GROUND ROD TO BUILDING STEEL.
8. #4/0 AWG COPPER WITH MINIMUM STRAND SIZE OF 17 GAUGE COPPER WIRE FROM GROUND ROD TO GAS MAIN.



0 8' 16' 32'

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

US Army Corps of Engineers ®

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DESIGNED BY: K.SCHNEDLER
DRAWN BY: K. SCHNEDLER
CHECKED BY: M. GIURGIU
SUBMITTED BY: Y. BARRETT
SIZE: ANSI D

ISSUE DATE: AUGUST 29, 2025
SOLICITATION NO.: W912DS23F0031
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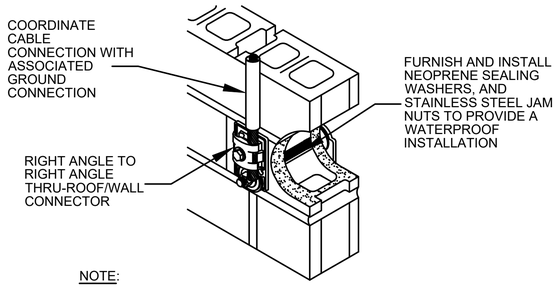
US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK NY 10278

CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
PROJECT NO. 75662

ELECTRICAL - LIGHTNING PROTECTION AND GROUNDING PLAN

SHEET ID

EG101

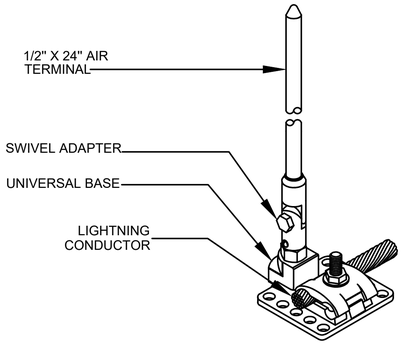


NOTE:

1. DEVICE AND ASSOCIATED COMPONENTS SHALL BE COORDINATED WITH THE BUILDING WATERPROOF WORK.

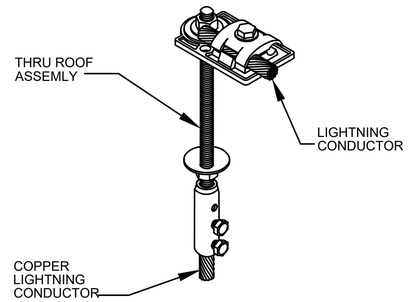
L1 DETAIL - THROUGH WALL ASSEMBLY

NOT TO SCALE



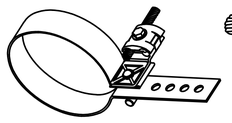
L7 DETAIL - STRIKE TERMINATION DEVICE "A2"

NOT TO SCALE

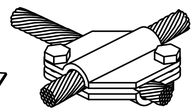


L12 DETAIL - THRU ROOF ASSEMBLY "T1"

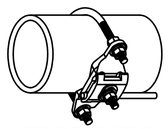
NOT TO SCALE



STRAP TYPE PIPE CLAMP

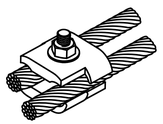


CROSS RUN CONNECTOR

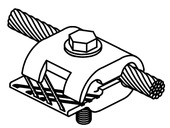


STRAP TYPE PIPE CLAMP

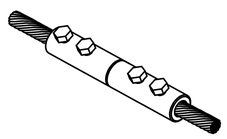
PARALLEL SPLICER



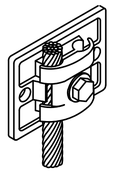
1 BOLT PARALLEL CLAMP



CABLE TO FLAT METAL CLAMP



CONNECTOR

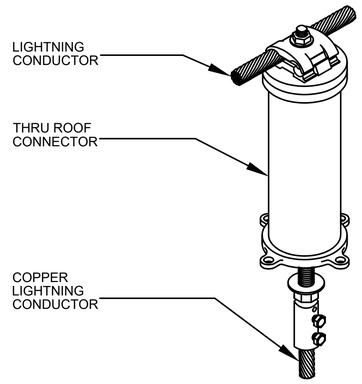


BONDING PLATE

SECONDARY BONDING LUG

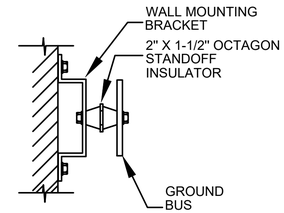
E1 DETAIL - TYPICAL BONDING/SPLICING

NOT TO SCALE



E8 DETAIL - THRU ROOF ASSEMBLY "T2"

NOT TO SCALE

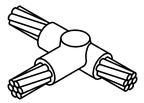


NOTE:

1. GROUND BUSSES SHALL UTILIZE COMPRESSION CONNECTORS THAT ARE IRREVERSIBLE.

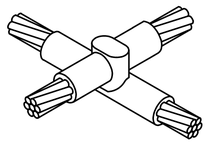
F13 DETAIL - GROUND BUS

NOT TO SCALE



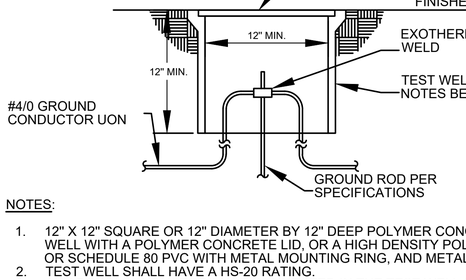
D13 DETAIL - TEE EXOTHERMIC WELD CONNECTION

NOT TO SCALE



A13 DETAIL - CROSS EXOTHERMIC WELD CONNECTION

NOT TO SCALE

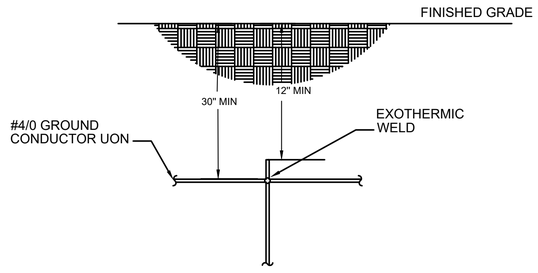


NOTES:

1. 12" X 12" SQUARE OR 12" DIAMETER BY 12" DEEP POLYMER CONCRETE TEST WELL WITH A POLYMER CONCRETE LID, OR A HIGH DENSITY POLYETHYLENE OR SCHEDULE 80 PVC WITH METAL MOUNTING RING, AND METAL LID.
2. TEST WELL SHALL HAVE A HS-20 RATING.
3. ANY DOWN CONDUCTORS NOT CONNECTED IN THE TEST WELL SHALL HAVE MECHANICAL CONNECTIONS TO THE GROUND ROD.

A2 DETAIL - TEST WELL

NOT TO SCALE



A8 DETAIL - GROUND ROD

NOT TO SCALE

GENERAL NOTES

THE CONTRACTOR SHALL PROVIDE A DEDICATED ROOF LIGHTNING PROTECTION SYSTEM AS OUTLINED BELOW AND SPECIFIED:

1. ENSURE THAT ALL POINTS ARE WITHIN 2 FT. OF OUTSIDE STRUCTURE EDGE, OUTSIDE CORNERS, AND RIDGE ENDS, AND THAT MINIMUM PROJECTION ABOVE PROJECT OBJECT IS 10 IN.
2. MAINTAIN HORIZONTAL OR DOWNWARD COURSING OF MAIN CONDUCTOR AND ENSURE THAT ALL BENDS HAVE AT LEAST AN 8 IN. RADIUS AND DO NOT EXCEED 90 DEGREES.
3. ATTACH ALL EXPOSED ROOF AND BONDING CABLES AT A MAXIMUM OF 3 FT. ON CENTER. VERIFY COMPATIBILITY OF ADHESIVE WITH MANUFACTURER ON ALL ROOF APPLICATIONS PRIOR TO INSTALLATION.
4. GROUND ELECTRODES SHALL BE INSTALLED NOT LESS THAN 1 FT. BELOW GRADE AND MINIMUM 3 FT. FROM THE FOUNDATIONS. DRIVEN RODS SHALL PENETRATE EARTH AT LEAST 10 FT.
5. LIGHTNING PROTECTION SYSTEM SHALL BE INSTALLED TO ENSURE PROPER CODE COMPLIANCE AND SYSTEM CERTIFICATION BY AN APPROVED UL LIGHTNING PROTECTION CERTIFIED INSTALLER.
6. ROOF LIGHTNING AIR TERMINALS AND GROUNDING SHALL BE LAID OUT AND INSTALLED BY CERTIFIED LIGHTNING PROTECTION INSTALLATION AS REQUIRED BY LATEST EDITION OF NFPA ROOF LIGHTNING PROTECTION CODE.
7. ALL MATERIALS TO BE UL APPROVED WITH "A" LABELS ON CONDUCTORS AT 10 FT. INTERVALS AND "B" LABELS ON ALL AIR TERMINALS.
8. COMPLETED INSTALLATION AS SHOWN SHALL BEAR UL MASTER LABEL "C" TO BE SECURED BY SYSTEM INSTALLER PER UL96A.
9. PROVIDE OWNER WITH MASTER LIGHTNING PROTECTION CERTIFICATION LABEL.
10. LIGHTNING PROTECTION SYSTEM TO BE TESTED IN ACCORDANCE WITH NFPA 780 AND UFC REQUIREMENTS.

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

DESIGNED BY: K. SCHNEDLER
DRAWN BY: K. SCHNEDLER
CHECKED BY: C. CASTELLI
SUBMITTED BY: Y. BARRETT
SIZE: ANSI D
ISSUE DATE: AUGUST 29, 2025
SOLICITATION NO.: W912DS23F0031
CONTRACT NO.: W912DS18D0007

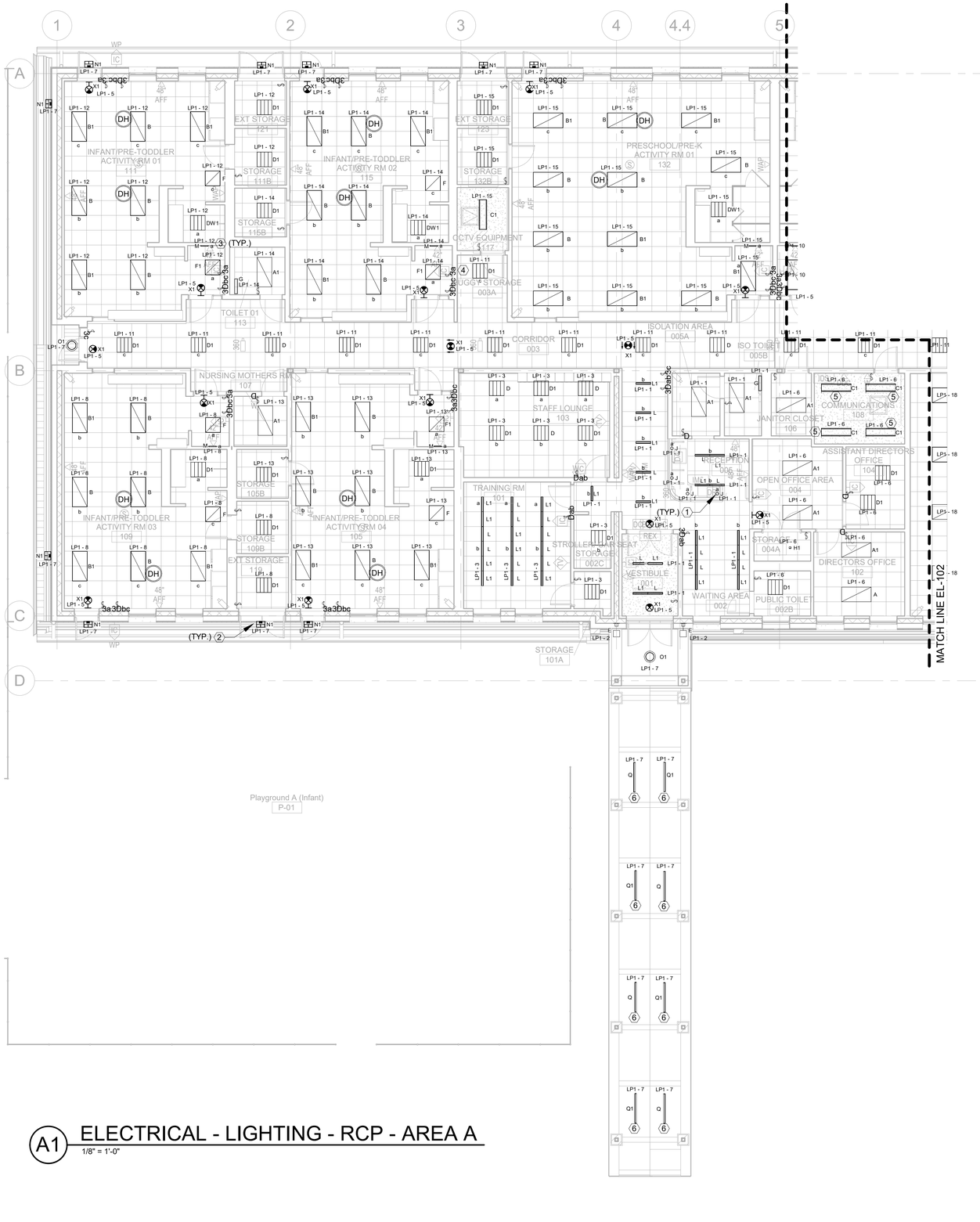
US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK NY 10278

CHILD DEVELOPMENT CENTER
FORT HAMILTON, NEW YORK
PROJECT NO. 75662

ELECTRICAL - GROUNDING DETAILS

SHEET ID

EG501



A1 ELECTRICAL - LIGHTING - RCP - AREA A

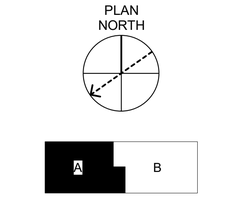
1/8" = 1'-0"

GENERAL NOTES

1. REFER TO SHEET E001 FOR ELECTRICAL SYMBOLS, ABBREVIATIONS, AND GENERAL NOTES.
2. REFER TO ES102 FOR SITE LIGHTING PLAN AND SITE LIGHTING FIXTURE SCHEDULE
3. REFER TO EL601 FOR LIGHTING CONTROLS INFORMATION.
4. ALL LIGHTING FIXTURES SHALL MEET BUY AMERICAN ACT AND SHALL BE PROVIDED WITH CERTIFICATE OF COMPLIANCE.
5. CONTRACTOR SHALL PROVIDE LIGHTING CALCULATIONS AND LIGHTING FIXTURE CUTSHEETS.

SHEET KEYNOTES

1. SUSPEND J-TYPE FIXTURES 6 IN FROM THE CEILING.
2. N1-TYPE FIXTURE MOUNTED 10' AFF.
3. COORDINATE THE PLACEMENT OF UNDER CABINET LUMINAIRE TYPE M WITH THE FURNITURE.
4. LUMINAIRE IN BUGGY STORAGE WILL BE WIRED TO THE COORIDOR LIGHT SWITCH
5. CONTRACTOR TO COORDINATE LIGHTING LOCATION WITH CABLE TRAY AND RACK LAYOUT.
6. FIXTURES SHALL BE MOUNTED AND COORDINATED WITH THE LOCATION OF ALUMINUM SOFFITS.



0 4' 8' 16'

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

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

DESIGNED BY: K.SCHNEDLER
DRAWN BY: K. SCHNEDLER
CHECKED BY: M. GIURGIU
SUBMITTED BY: Y. BARRETT
SIZE: ANSI D
ISSUE DATE: AUGUST 29, 2025
SOLICITATION NO.: W912DS23F0031
CONTRACT NO.: W912DS19D0007

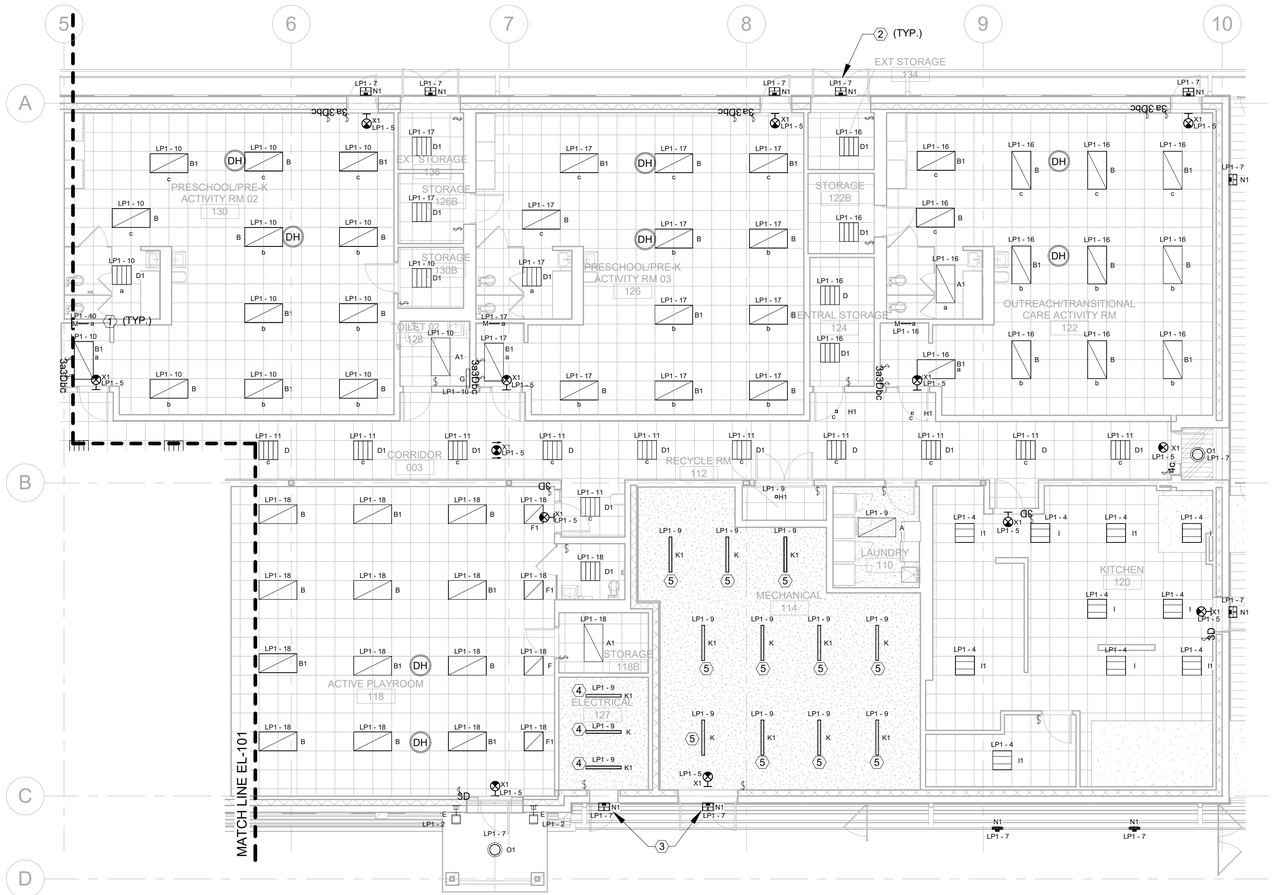
US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK NY 10278

CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
PROJECT NO. 75662

ELECTRICAL - LIGHTING - RCP - AREA A

SHEET ID

EL101



A1 ELECTRICAL - LIGHTING - RCP - AREA B

1/8" = 1'-0"

GENERAL NOTES

1. REFER TO SHEET E001 FOR ELECTRICAL SYMBOLS, ABBREVIATIONS, AND GENERAL NOTES.
2. REFER TO ES102 FOR SITE LIGHTING PLAN AND SITE LIGHTING FIXTURE SCHEDULE
3. REFER TO EL601 FOR LIGHTING CONTROLS INFORMATION.
4. ALL LIGHTING FIXTURES SHALL MEET BUY AMERICAN ACT AND SHALL BE PROVIDED WITH CERTIFICATE OF COMPLIANCE.
5. INTEGRAL HOOD LIGHTING IS REQUIRED TO MAINTAIN PROPER LIGHT LEVELS AT THE FOOD PREPARATION SURFACE UNDER THE EXHUAST HOOD.
6. CONTRACTOR SHALL PROVIDE LIGHTING CALCULATIONS AND LIGHTING FIXTURE CUTSHEETS.

SHEET KEYNOTES

1. COORDINATE THE PLACEMENT OF UNDER CABINET LUMINAIRE TYPE M WITH THE FURNITURE.
2. N1-TYPE FIXTURE MOUNTED 10' AFF.
3. MOUNTED AT 9'6", COORDINATE WITH THE LOCATION OF THE LOUVER.
4. MOUNTED AT 9'0", COORDINATE WITH LOCATION OF OTHER DISCIPLINE'S EQUIPMENT.
5. MOUNTED AT 8'0", COORDINATE WITH LOCATION OF OTHER DISCIPLINE'S EQUIPMENT.

PLAN NORTH

A B

0 4' 8' 16'

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

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

ISSUE DATE: AUGUST 29, 2025
SOLICITATION NO.: W912DS24F0031
CONTRACT NO.: W912DS19BD007

DESIGNED BY: K.SCHNEIDLER
DRAWN BY: K. SCHNEIDLER
CHECKED BY: M. CUSUMANO
SUBMITTED BY: Y. BARRETT
SIZE: ANSI D

US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK, NY 10278

CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
PROJECT NO. 75662

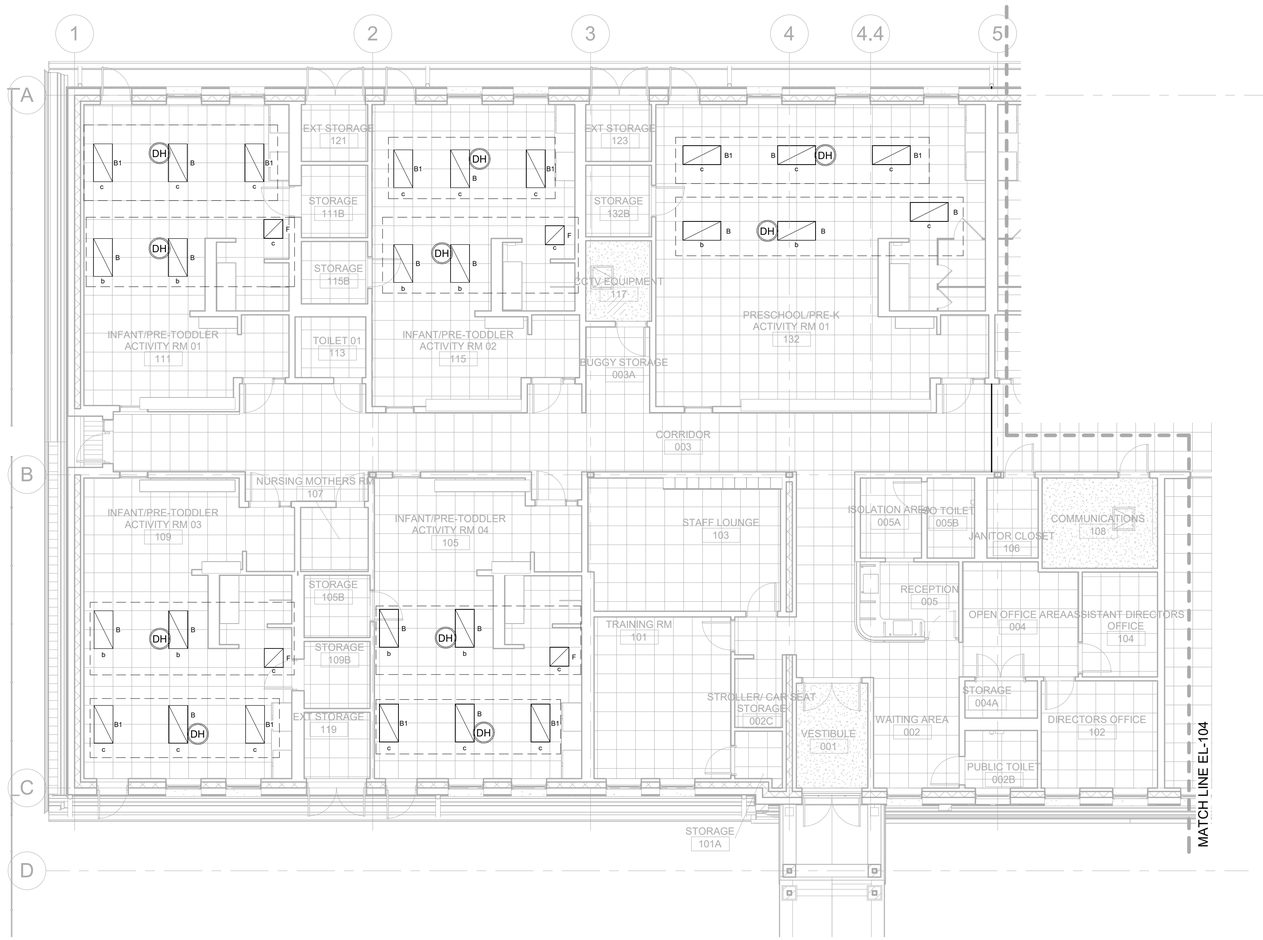
ELECTRICAL - LIGHTING - RCP - AREA B

SHEET ID

EL102

GENERAL NOTES

1. REFER TO SHEET E001 FOR ELECTRICAL SYMBOLS, ABBREVIATIONS, AND GENERAL NOTES.
2. LUMINAIRES WITHIN DASHED ZONES ARE TO BE CONTROLLED BY THE DAYLIGHT HARVESTING SENSORS WITHIN THE SAME DASHED ZONES.
3. TARGET ILLUMINATION FOR EACH DAYLIGHT HARVESTING ZONE MUST BE ON AVERAGE 50 FOOTCANDLES AT 30" AFF.



A5 ELECTRICAL - LIGHTING - RCP - DAYLIGHT HARVESTING - AREA A

1/8" = 1'-0"

PLAN NORTH

A B

0 4' 8' 16'

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

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

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SOLICITATION NO.: W912DS24F0031
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DESIGNED BY: K.SCHNEIDLER
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SUBMITTED BY: Y. BARRETT
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US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK NY 10278

CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
PROJECT NO. 75662

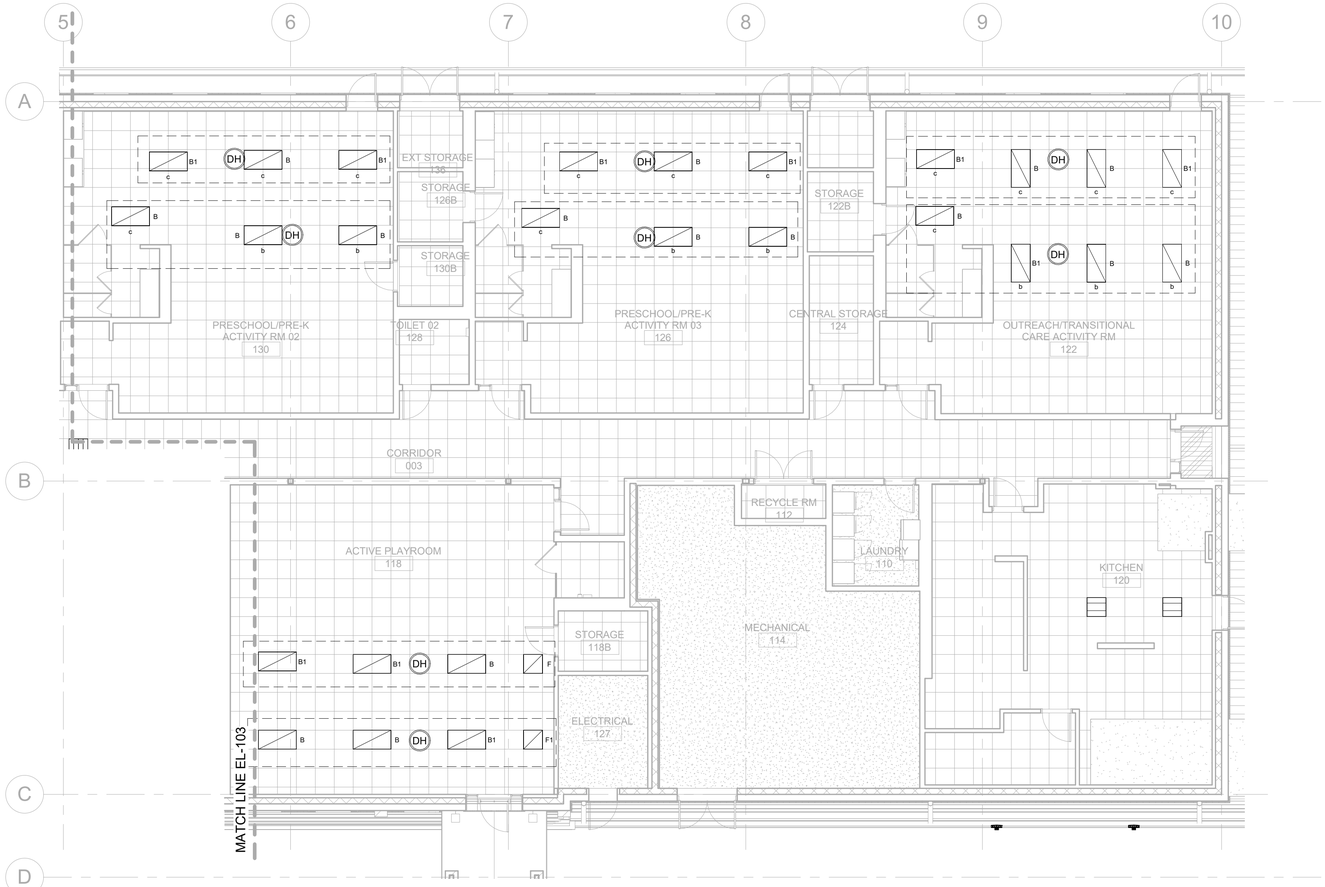
ELECTRICAL - LIGHTING - RCP - DAYLIGHT HARVESTING - AREA A

SHEET ID

EL103

GENERAL NOTES

1. REFER TO SHEET E001 FOR ELECTRICAL SYMBOLS, ABBREVIATIONS, AND GENERAL NOTES.
2. LUMINAIRES WITHIN DASHED ZONES ARE TO BE CONTROLLED BY THE DAYLIGHT HARVESTING SENSORS WITHIN THE SAME DASHED ZONES.
3. TARGET ILLUMINATION FOR EACH DAYLIGHT HARVESTING ZONE MUST BE ON AVERAGE 50 FOOTCANDLES AT 30" AFF.



A5 ELECTRICAL - LIGHTING - RCP - DAYLIGHT HARVESTING - AREA B

1/8" = 1'-0"

PLAN NORTH

A | B

0 4' 8' 16'

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

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

ISSUE DATE: AUGUST 29, 2025
SOLICITATION NO.: W912DS24F0031
CONTRACT NO.: W912DS19DD007

DESIGNED BY: K.SCHNEDLER
DRAWN BY: K. SCHNEDLER
CHECKED BY: M. GIGLIO
SUBMITTED BY: Y. BARRETT
SIZE: ANSI D

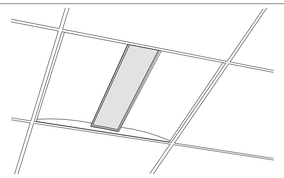
US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK NY 10278

CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
PROJECT NO. 75662

ELECTRICAL - LIGHTING - RCP - DAYLIGHT HARVESTING - AREA B

SHEET ID

EL104



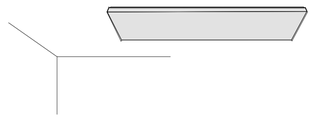
NOTE: THIS SKETCH IS A NON-PROPRIETARY GRAPHIC REPRESENTATION OF A LUMINAIRE THAT MAY MEET THE SPECIFICATION REQUIREMENTS. IT IS NOT INTENDED TO INDICATE A CERTAIN MANUFACTURER OR PREFERENCE.

LUMINAIRE REQUIREMENTS:

1. HOUSING - HEAVY GAUGE COLD ROLLED STEEL OR DIE CAST ALUMINUM. SIZE SHOWN AS INDICATED IN LUMINAIRE SCHEDULE.
2. OPTICS - FROSTED ACRYLIC OR POLYCARBONATE LENS WITH DIE FORMED COLD ROLLED SHEET STEEL REFLECTORS.
3. LIGHT SOURCE - SOLID STATE LEDS, 3500K CCT UON, MINIMUM 90 CRI UON, AND MINIMUM EFFICACY OF 100 LUMENS/WATT UON. INITIAL LUMEN OUTPUT AS INDICATED IN LUMINAIRE SCHEDULE.
4. DRIVER - REPLACEABLE, INTEGRAL, HIGH-EFFICIENCY DIMMABLE DRIVER WITH MINIMUM 0.9 PF, OPERATING VOLTAGE OF 277V, THERMAL MANAGEMENT, AND < 20% THD. ON/OFF CONTROL AND FULLY DIMMABLE DOWN TO 10% MINIMUM OR AS INDICATED IN LUMINAIRE SCHEDULE.
5. CERTIFICATION - UL LISTED FOR DRY OR DAMP LOCATION, ROHS COMPLIANT. DLC QUALIFIED. COMPLIES WITH IES LM79, LM80 AND TM21 TESTING STANDARDS.
6. MOUNTING - RECESSED IN HARD OR ACOUSTICAL TILE CEILING.
7. OPTIONS - EMERGENCY BATTERY BACK-UP, INTEGRAL OCCUPANCY/VACANCY SENSOR, VARIOUS SIZE AND OUTPUT OPTIONS, SURFACE-MOUNTING KIT.

DIRECT/INDIRECT LED LUMINAIRE ①

REVISED: NOVEMBER 2020 | LIGHTING PLATE: NL-1



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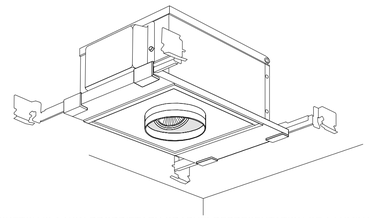
LUMINAIRE REQUIREMENTS:

1. HOUSING - DIE-FORMED, COLD ROLLED STEEL, WITH REINFORCEMENT RIBS FOR RIGIDITY; ENDCAPS SAME MATERIAL AS HOUSING, SECURED TABS,SCREWS, OR RIVETS. SIZE AS INDICATED IN LUMINAIRE SCHEDULE.
2. OPTICS - ACRYLIC OR POLYCARBONATE LENS AS INDICATED IN LUMINAIRE SCHEDULE.
3. LIGHT SOURCE - SOLID STATE LEDS, 3500K CCT UON, MINIMUM 90 CRI UON, AND MINIMUM EFFICACY OF 110 LUMENS/WATT UON. INITIAL LUMEN OUTPUT AS INDICATED IN LUMINAIRE SCHEDULE.
4. DRIVER - REPLACEABLE, INTEGRAL, HIGH-EFFICIENCY DRIVER WITH MINIMUM 0.9 PF, OPERATING VOLTAGE OF 277V, THERMAL MANAGEMENT, AND < 20% THD. ON/OFF CONTROL AND FULLY DIMMABLE DOWN TO 10% MINIMUM OR AS INDICATED IN LUMINAIRE SCHEDULE.
5. CERTIFICATION - UL LISTED FOR DRY OR DAMP LOCATION, ROHS COMPLIANT, DLC QUALIFIED. COMPLIES WITH IES LM79, LM80 AND TM21 TESTING STANDARDS.
6. MOUNTING - SURFACE MOUNTED.
7. OPTIONS - EMERGENCY BATTERY BACK-UP, INTEGRAL OCCUPANCY/VACANCY SENSOR, VARIOUS SIZE AND OUTPUT OPTIONS.

SURFACE LED WRAPAROUND ②

REVISED: NOVEMBER 2020 | LIGHTING PLATE: NL-3



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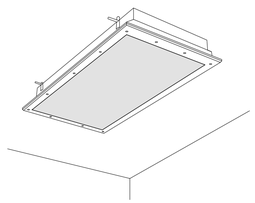
LUMINAIRE REQUIREMENTS:

1. HOUSING - COLD-ROLLED STEEL OR DIE CAST ALUMINUM, WITH HEAT SINK AND FIELD AIMING CAPABILITY. APERTURE SIZE AND SHAPE AS INDICATED IN LUMINAIRE SCHEDULE.
2. LIGHT SOURCE - SOLID STATE LEDS, 3500K CCT UON, MINIMUM 90 CRI UON, AND MINIMUM EFFICACY OF 70 LUMENS/WATT UON. INITIAL LUMEN OUTPUT AS INDICATED IN LUMINAIRE SCHEDULE.
3. DRIVER - REPLACEABLE, INTEGRAL, HIGH-EFFICIENCY DIMMABLE DRIVER WITH MINIMUM 0.9 PF, OPERATING VOLTAGE OF 277V, THERMAL MANAGEMENT, AND < 20% THD. ON/OFF CONTROL AND FULLY DIMMABLE DOWN TO 10% MINIMUM OR AS INDICATED IN LUMINAIRE SCHEDULE.
4. CERTIFICATION - UL LISTED FOR DRY OR DAMP LOCATION, ROHS COMPLIANT. COMPLIES WITH IES LM79, LM80 AND TM21 TESTING STANDARDS.
5. MOUNTING - RECESSED IN HARD OR ACOUSTICAL TILE CEILING. PROVIDE T-BAR HANGERS FOR INSTALLATION IN ACOUSTICAL TILE CEILINGS OR TABS WHEN MOUNTING IN HARD CEILINGS.
6. OPTIONS - EMERGENCY BATTERY BACK-UP, VARIOUS ACRYLIC OR POLYCARBONATE LENSES, REFLECTORS, LOUVERS, AND TRIMS. VARIOUS BEAM ANGLES. IC-RATED HOUSING.

ADJUSTABLE RECESSED DOWNLIGHT

REVISED: NOVEMBER 2020 | LIGHTING PLATE: ③ NL-11



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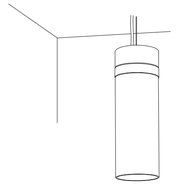
LUMINAIRE REQUIREMENTS:

1. HOUSING - HEAVY GAUGE COLD ROLLED STEEL OR DIE CAST ALUMINUM. STAINLESS STEEL FASTENERS. SIZE AS INDICATED IN LUMINAIRE SCHEDULE.
2. OPTICS - POLYCARBONATE OR GLASS LENS.
3. LIGHT SOURCE - SOLID STATE LEDS, 3500K CCT UON, MINIMUM 90 CRI UON, AND MINIMUM EFFICACY OF 90 LUMENS/WATT UON. INITIAL LUMEN OUTPUT AS INDICATED IN LUMINAIRE SCHEDULE.
4. DRIVER - REPLACEABLE, INTEGRAL, HIGH-EFFICIENCY DIMMABLE DRIVER WITH MINIMUM 0.9 PF, OPERATING VOLTAGE OF 277V, THERMAL MANAGEMENT, AND < 20% THD. ON/OFF CONTROL AND FULLY DIMMABLE DOWN TO 10% MINIMUM OR AS INDICATED IN LUMINAIRE SCHEDULE.
5. CERTIFICATION - UL LISTED FOR WET LOCATION, ROHS COMPLIANT, DLC QUALIFIED. COMPLIES WITH IES LM79, LM80 AND TM21 TESTING STANDARDS. NSF CERTIFIED.
6. MOUNTING - RECESSED IN HARD CEILING OR SURFACE MOUNTED WITH STAINLESS STEEL MOUNTING HARDWARE.
7. OPTIONS - EMERGENCY BATTERY BACK-UP, INTEGRAL OCCUPANCY/VACANCY SENSOR, VARIOUS SIZE AND OUTPUT OPTIONS.

LED FOOD SERVICE LIGHT ④

REVISED: NOVEMBER 2020 | LIGHTING PLATE: NL-20



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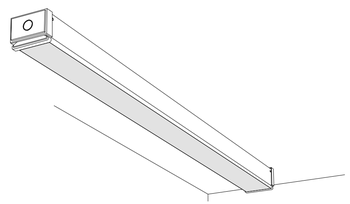
LUMINAIRE REQUIREMENTS:

1. HOUSING - ALUMINUM STAINLESS STEEL HOUSING.
2. OPTICS - GLASS OR ACRYLIC SHADE.
3. LIGHT SOURCE - SOLID STATE LEDS, 3500K CCT UON, MINIMUM 90 CRI UON, AND MINIMUM EFFICACY OF 40 LUMENS/WATT UON. INITIAL LUMEN OUTPUT AS INDICATED IN LUMINAIRE SCHEDULE.
4. DRIVER - REPLACEABLE, INTEGRAL, HIGH-EFFICIENCY DIMMABLE DRIVER WITH MINIMUM 0.9 PF, OPERATING VOLTAGE OF 277V, THERMAL MANAGEMENT, AND < 20% THD. ON/OFF CONTROL AND FULLY DIMMABLE DOWN TO 10% MINIMUM OR AS INDICATED IN LUMINAIRE SCHEDULE.
5. CERTIFICATION - UL LISTED FOR DRY LOCATION, ROHS COMPLIANT. COMPLIES WITH IES LM79, LM80 AND TM21 TESTING STANDARDS.
6. MOUNTING - AIRCRAFT CABLE OR STEM WITH CANOPY.
7. OPTIONS - SHAPE AND STYLE, LENSES, AND FIELD-ADJUSTABLE CABLE.

LED DECORATIVE ACCENT PENDANT

REVISED: NOVEMBER 2020 | LIGHTING PLATE: ⑤ NL-17



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LUMINAIRE REQUIREMENTS:

1. HOUSING - EXTRUDED ALUMINUM OR WELDED STEEL HOUSING WITH SNAP-ON END CAPS. SIZE AS INDICATED IN LUMINAIRE SCHEDULE.
2. OPTICS - DIFFUSE ACRYLIC LENS.
3. LIGHT SOURCE - SOLID STATE LEDS, 3500K CCT UON, MINIMUM 90 CRI UON, AND MINIMUM EFFICACY OF 90 LUMENS/WATT UON. INITIAL LUMEN OUTPUT AS INDICATED IN LUMINAIRE SCHEDULE.
4. DRIVER - REPLACEABLE, INTEGRAL, HIGH-EFFICIENCY DIMMABLE DRIVER WITH MINIMUM 0.9 PF, OPERATING VOLTAGE OF 277V, THERMAL MANAGEMENT, AND < 20% THD. ON/OFF CONTROL AND FULLY DIMMABLE DOWN TO 10% MINIMUM OR AS INDICATED IN LUMINAIRE SCHEDULE.
5. CERTIFICATION - UL LISTED FOR DAMP OR WET LOCATION, ROHS COMPLIANT. DLC QUALIFIED. COMPLIES WITH IES LM79, LM80 AND TM21 TESTING STANDARDS.
6. MOUNTING - PENDANT, STEM, OR SURFACE MOUNTED WITH STAINLESS STEEL MOUNTING HARDWARE.
7. OPTIONS - INTEGRAL OCCUPANCY SENSOR, EMERGENCY BATTERY BACK-UP, VARIOUS PROFILE DIMENSIONS AND RUN LENGTHS, AND VARIOUS CLEAR OR FROSTED POLYCARBONATE LENSES.

LED INDUSTRIAL LIGHT ⑥

REVISED: NOVEMBER 2020 | LIGHTING PLATE: NL-23

GENERAL NOTES

1. REFER TO SHEET E001 FOR GENERAL NOTES, LEGENDS, AND SYMBOLS.
2. ALL LIGHTING FIXTURES SHALL MEET BUY AMERICAN ACT AND SHALL BE PROVIDED WITH CERTIFICATE OF COMPLIANCE.
3. CONTRACTOR SHALL PROVIDE LIGHTING CALCULATIONS AND LIGHTING FIXTURE CUTSHEETS.
4. REFER TO EL601 FOR LIGHTING FIXTURE SCHEDULES.

SHEET KEYNOTES

1. A/A1, B/B1, D/D1/DW/DW1, F/F1-TYPE LIGHTING FIXTURES.
2. C/C1-TYPE LIGHTING FIXTURES.
3. H/H1-TYPE LIGHTING FIXTURE.
4. I/I1-TYPE LIGHTING FIXTURE.
5. J-TYPE LIGHTING FIXTURE.
6. K/K1-TYPE LIGHTING FIXTURE.

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

ISSUE DATE: AUGUST 29, 2025
SOLICITATION NO.: W912DS23F0031
CONTRACT NO.: W912DS19DD007

DESIGNED BY: K.SCHNEDLER
DRAWN BY: K. SCHNEDLER
CHECKED BY: M. GRIEGO
SUBMITTED BY: Y. BARRETT
SIZE: ANSI D

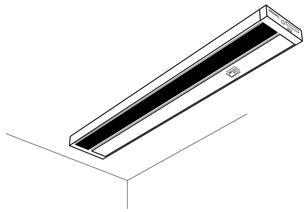
US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK, NY 10278

CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
PROJECT NO. 75662

ELECTRICAL - LIGHTING - DETAILS

SHEET ID

EL501



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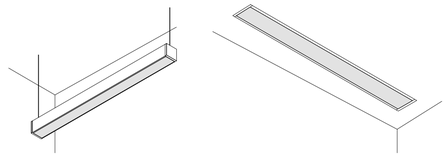
LUMINAIRE REQUIREMENTS:

1. HOUSING - EXTRUDED ALUMINUM OR WELDED STEEL HOUSING. LENGTH AS INDICATED IN LUMINAIRE SCHEDULE.
2. OPTICS - DIFFUSE ACRYLIC OR POLYCARBONATE LENS.
3. LIGHT SOURCE - SOLID STATE LEDS, 3500K CCT UON, MINIMUM 90 CRI UON, AND MINIMUM EFFICACY OF 60 LUMENS/WATT UON. INITIAL LUMEN OUTPUT AS INDICATED IN LUMINAIRE SCHEDULE.
4. DRIVER - REPLACEABLE, INTEGRAL, HIGH-EFFICIENCY DIMMABLE DRIVER WITH MINIMUM 0.9 PF, OPERATING VOLTAGE OF 277V, THERMAL MANAGEMENT, AND < 20% THD. ON/OFF CONTROL AND FULLY DIMMABLE DOWN TO 10% MINIMUM OR AS INDICATED IN LUMINAIRE SCHEDULE.
5. CERTIFICATION - UL LISTED FOR DRY LOCATION, ROHS COMPLIANT. COMPLIES WITH IES LM79, LM80 AND TM21 TESTING STANDARDS.
6. MOUNTING - SURFACE MOUNTED WITH STAINLESS STEEL MOUNTING HARDWARE.
7. OPTIONS - OCCUPANCY SENSOR, PROFILE DIMENSIONS AND RUN LENGTHS, INTEGRAL ROCKER SWITCH, END-TO-END CONNECTIONS, AND CLEAR OR FROSTED POLYCARBONATE LENSES.

LED UNDERCABINET LIGHT ①

REVISED:	NOVEMBER 2020	LIGHTING PLATE:	NL-15



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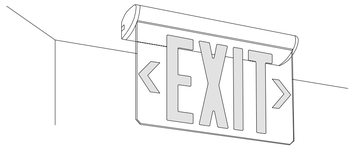
LUMINAIRE REQUIREMENTS:

1. HOUSING - HEAVY GAUGE COLD ROLLED STEEL, EXTRUDED ALUMINUM, OR DIE CAST ALUMINUM BODY. SIZE AS INDICATED IN LUMINAIRE SCHEDULE.
2. OPTICS - FROSTED ACRYLIC OR POLYCARBONATE LENS. LAMBERTIAN, NARROW, WIDE, OR ASYMMETRIC LIGHT DISTRIBUTION AS INDICATED IN LUMINAIRE SCHEDULE.
3. LIGHT SOURCE - SOLID STATE LEDS, 3500K CCT UON, MINIMUM 90 CRI UON, AND MINIMUM EFFICACY OF 90 LUMENS/WATT UON. INITIAL LUMEN OUTPUT AS INDICATED IN LUMINAIRE SCHEDULE.
4. DRIVER - REPLACEABLE, INTEGRAL, HIGH-EFFICIENCY DRIVER WITH MINIMUM 0.9 PF, OPERATING VOLTAGE OF 277V, THERMAL MANAGEMENT, AND < 20% THD. ON-OFF CONTROL AND FULLY DIMMABLE DOWN TO 10% MINIMUM OR AS INDICATED IN LUMINAIRE SCHEDULE.
5. CERTIFICATION - UL LISTED FOR DRY OR DAMP LOCATION, ROHS COMPLIANT, DLC QUALIFIED. COMPLIES WITH IES LM79, LM80 AND TM21 TESTING STANDARDS.
6. MOUNTING - PENDANT, STEM, OR SURFACE MOUNTED WITH STAINLESS STEEL MOUNTING HARDWARE, OR RECESSED IN HARD OR ACOUSTICAL TILE CEILING.
7. OPTIONS - EMERGENCY BATTERY BACK-UP, INTEGRAL OCCUPANCY/VACANCY SENSOR, VARIOUS PROFILE DIMENSIONS AND RUN LENGTHS, AND VARIOUS CLEAR OR FROSTED POLYCARBONATE LENSES, BAFFLES, OR LOUVERS.

LINEAR LED SLOT ②

REVISED:	NOVEMBER 2020	LIGHTING PLATE:	NL-4



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LUMINAIRE REQUIREMENTS:

1. HOUSING - EXTRUDED ALUMINUM WITH CLEAR ACRYLIC EDGE-LIT PANEL.
2. LIGHT SOURCE - SOLID STATE LEDS.
3. DRIVER - INTEGRAL, HIGH-EFFICIENCY DRIVER WITH MINIMUM 0.9 PF, OPERATING VOLTAGE OF 277V, THERMAL MANAGEMENT, AND < 20% THD.
4. CERTIFICATION - NFPA 101, UL LISTED FOR DAMP OR WET LOCATION, AND ROHS COMPLIANT.
5. MOUNTING - SURFACE MOUNTED ON CEILING AND/OR WALL.
6. OPTIONS - RED OR GREEN LETTERING, ONE- OR TWO-SIDED. BATTERY BACKUP.

EDGE-LIT EXIT SIGN ③

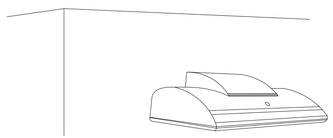
REVISED:	NOVEMBER 2020	LIGHTING PLATE:	NL-27

GENERAL NOTES

1. REFER TO SHEET E001 FOR GENERAL NOTES, LEGENDS, AND SYMBOLS.
2. ALL LIGHTING FIXTURES SHALL MEET BUY AMERICAN ACT AND SHALL BE PROVIDED WITH CERTIFICATE OF COMPLIANCE.
3. CONTRACTOR SHALL PROVIDE LIGHTING CALCULATIONS AND LIGHTING FIXTURE CUTSHEETS.
4. REFER TO EL601 FOR LIGHTING FIXTURE SCHEDULES.

SHEET KEYNOTES

1. M -TYPE LIGHTING FIXTURES.
2. L/L1-TYPE LIGHTING FIXTURE.
3. X1/X2-TYPE LIGHTING FIXTURE.
4. N1-TYPE LIGHTING FIXTURES.
5. P1-P4- TYPE LIGHTING FIXTURE.
6. O1 - TYPE LIGHTING FIXTURE.



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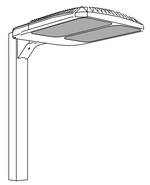
LUMINAIRE REQUIREMENTS:

1. HOUSING - DIE-CAST OR EXTRUDED ALUMINUM WITH INTEGRAL PASSIVE COOLING MECHANISM. HEAT SINK INCORPORATED DIRECTLY INTO HOUSING OR DRIVER COMPARTMENT.
2. OPTICS - PRECISION MOLDED ACRYLIC LENS WITH TYPE II, III, OR IV DISTRIBUTIONS. BUG UPLIGHT RATING OF U0, WITH GLARE RATING AS DETERMINED BY LIGHTING ZONE INSTALLED.
3. LIGHT SOURCE - SOLID STATE LEDS, 3000K CCT UON, MINIMUM 70 CRI UON, AND MINIMUM EFFICACY OF 80 LUMENS/WATT UON. INITIAL LUMEN OUTPUT AS INDICATED IN LUMINAIRE SCHEDULE.
4. DRIVER - REPLACEABLE, INTEGRAL, HIGH-EFFICIENCY DIMMABLE DRIVER WITH MINIMUM 0.9 PF, OPERATING VOLTAGE OF 277V, THERMAL MANAGEMENT, AND < 20% THD. ON-OFF CONTROL AND FULLY DIMMABLE DOWN TO 10% MINIMUM OR AS INDICATED IN LUMINAIRE SCHEDULE.
5. CERTIFICATION - UL LISTED FOR WET LOCATION, ROHS COMPLIANT. COMPLIES WITH IES LM79, LM80 AND TM21 TESTING STANDARDS.
6. MOUNTING - SURFACE MOUNTED WITH STAINLESS STEEL MOUNTING HARDWARE.
7. OPTIONS - VARIOUS LIGHT DISTRIBUTIONS. INTEGRAL MOTION SENSOR, PHOTOCELL, BATTERY BACK-UP.

LED WALL PACK ④

REVISED:	NOVEMBER 2020	LUMINAIRE PLATE:	XL-10



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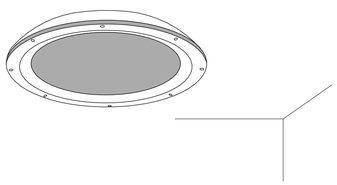
LUMINAIRE REQUIREMENTS:

1. HOUSING - DIE-CAST ALUMINUM HOUSING WITH POWDER COAT FINISH.
2. OPTICS - INJECTION MOLDED OPTICS WITH TYPE I, II, III, IV, OR V DISTRIBUTIONS. BUG UPLIGHT RATING OF U0, WITH GLARE RATING AS DETERMINED BY LIGHTING ZONE INSTALLED.
3. LIGHT SOURCE - SOLID STATE LEDS, 3000K CCT UON, MINIMUM 70 CRI UON, AND MINIMUM EFFICACY OF 100 LUMENS/WATT UON. INITIAL LUMEN OUTPUT AS INDICATED IN LUMINAIRE SCHEDULE.
4. DRIVER - REPLACEABLE, INTEGRAL, HIGH-EFFICIENCY DIMMABLE DRIVER WITH THERMAL MANAGEMENT. ON-OFF CONTROL AND FULLY DIMMABLE DOWN TO 10% MINIMUM OR AS INDICATED IN LUMINAIRE SCHEDULE. MEETS ELEVATED 10KV/10KA REQUIREMENTS PER IEEE.
5. CERTIFICATION - UL LISTED FOR WET LOCATION, ROHS COMPLIANT. COMPLIES WITH IES LM79, LM80 AND TM21 TESTING STANDARDS.
6. MOUNTING - ARM-MOUNTED ON POLE.
7. OPTIONS - MOUNTING ARM LENGTH, LIGHT DISTRIBUTION, HOUSE-SIDE SHIELD, PHOTOCELL, INTEGRAL MOTION SENSOR, AND ANSI 7-PIN RECEPTACLE.

LED PARKING LOT LUMINAIRE ⑤

REVISED:	NOVEMBER 2020	LIGHTING PLATE:	XL-5



NOTE: THIS SKETCH IS A NON-PROPRIETARY GRAPHIC REPRESENTATION OF A LUMINAIRE THAT MAY MEET THE SPECIFICATION REQUIREMENTS. IT IS NOT INTENDED TO INDICATE A CERTAIN MANUFACTURER OR PREFERENCE.

LUMINAIRE REQUIREMENTS:

1. HOUSING - DIE-CAST ALUMINUM HOUSING WITH POWDER COAT FINISH.
2. OPTICS - INJECTION MOLDED ACRYLIC EDGE-LIT LENS.
3. LIGHT SOURCE - SOLID STATE LEDS, 3000K CCT UON MINIMUM 80 CRI UON, AND MINIMUM EFFICACY OF 110 LUMENS/WATT UON. INITIAL LUMEN OUTPUT AS INDICATED IN LUMINAIRE SCHEDULE.
4. DRIVER - REPLACEABLE, INTEGRAL, HIGH-EFFICIENCY DIMMABLE DRIVER WITH MINIMUM 0.9 PF, OPERATING VOLTAGE OF 277V, THERMAL MANAGEMENT, AND < 20% THD. ON/OFF CONTROL AND DIMMABLE AS INDICATED IN LUMINAIRE SCHEDULE.
5. CERTIFICATION - UL LISTED FOR DAMP LOCATION, ROHS COMPLIANT. COMPLIES WITH IES LM79, LM80 AND TM21 TESTING STANDARDS.
6. MOUNTING - SURFACE MOUNTED WITH STAINLESS STEEL MOUNTING HARDWARE.
7. OPTIONS - INTEGRAL MOTION SENSOR, PHOTOCELL, EMERGENCY BATTERY BACK-UP.

LED PARKING GARAGE LUMINAIRE ⑥

REVISED:	NOVEMBER 2020	LIGHTING PLATE:	XL-6

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

ISSUE DATE: AUGUST 29, 2025
SOLICITATION NO.: W912DS23F0031
CONTRACT NO.: W912DS19BD007

DESIGNED BY: K.SCHNEIDLER
DRAWN BY: K. SCHNEIDLER
CHECKED BY: M. GRIEGO
SUBMITTED BY: Y. BARRETT
SIZE: ANSI D

US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK, NY 10278

CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
PROJECT NO. 75662

ELECTRICAL - LIGHTING - DETAILS

SHEET ID

EL502

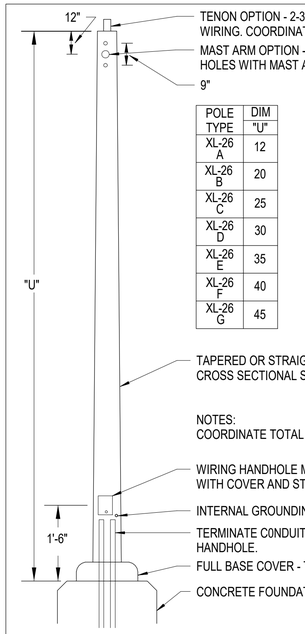
NOTE: THIS SKETCH IS A NON-PROPRIETARY GRAPHIC REPRESENTATION OF A LUMINAIRE THAT MAY MEET THE SPECIFICATION REQUIREMENTS. IT IS NOT INTENDED TO INDICATE A CERTAIN MANUFACTURER OR PREFERENCE.

LUMINAIRE REQUIREMENTS:

1. SHADE - CLEAR GLASS PANEL.
2. OPTICS - INJECTION MOLDED OPTICS WITH TYPE I, II, III, IV, OR V DISTRIBUTIONS. BUG UPLIGHT RATING OF U0, WITH GLARE RATING AS DETERMINED BY LIGHTING ZONE INSTALLED.
3. LIGHT SOURCE - SOLID STATE LEDS, 3000K CCT UON, MINIMUM 70 CRI UON, AND MINIMUM EFFICACY OF 110 LUMENS/WATT UON. INITIAL LUMEN OUTPUT AS INDICATED IN LUMINAIRE SCHEDULE.
4. DRIVER - REPLACEABLE, INTEGRAL, HIGH-EFFICIENCY DIMMABLE DRIVER WITH MINIMUM 0.9 PF, OPERATING VOLTAGE OF 120V, THERMAL MANAGEMENT, AND < 20% THD. ON-OFF CONTROL AND FULLY DIMMABLE DOWN TO 10% MINIMUM OR AS INDICATED IN LUMINAIRE SCHEDULE. MEETS ELEVATED 10KV/10KA REQUIREMENTS PER IEEE.
5. CERTIFICATION - UL LISTED FOR WET LOCATION, ROHS COMPLIANT. COMPLIES WITH IES LM79, LM80 AND TM21 TESTING STANDARDS.
6. MOUNTING - WALL MOUNTED.

EXTERIOR LANTERN LUMINAIRE ①

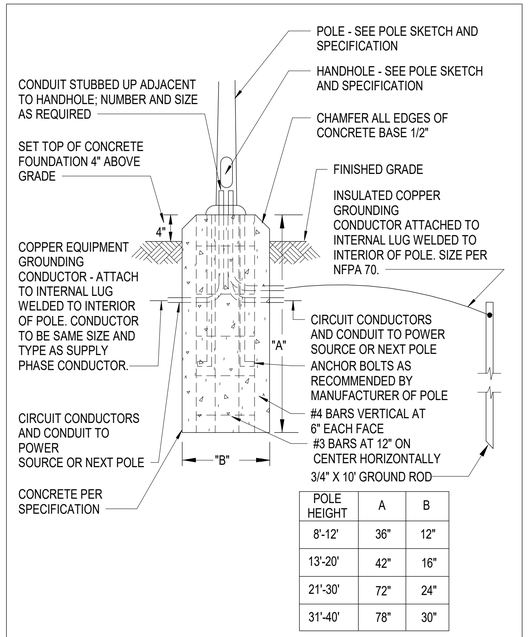
REVISED:	LIGHTING PLATE:



POLE TYPE	DIM "U"
XL-26 A	12
XL-26 B	20
XL-26 C	25
XL-26 D	30
XL-26 E	35
XL-26 F	40
XL-26 G	45

ANCHOR BASE STEEL/ALUMINUM POLE

REVISED:	NOVEMBER 2020	LUMINAIRE PLATE:	XL-19



POLE HEIGHT	A	B
8'-12'	36"	12"
13'-20'	42"	16"
21'-30'	72"	24"
31'-40'	78"	30"

ANCHOR BASE POLE FOUNDATION

REVISED:	NOVEMBER 2020	LUMINAIRE PLATE:	XL-21

GENERAL NOTES

1. REFER TO SHEET E001 FOR GENERAL NOTES, LEGENDS, AND SYMBOLS.
2. ALL LIGHTING FIXTURES SHALL MEET BUY AMERICAN ACT AND SHALL BE PROVIDED WITH CERTIFICATE OF COMPLIANCE.
3. CONTRACTOR SHALL PROVIDE LIGHTING CALCULATIONS AND LIGHTING FIXTURE CUTSHEETS.
4. REFER TO EL601 FOR LIGHTING FIXTURE SCHEDULES.

SHEET KEYNOTES

1. E -TYPE LIGHTING FIXTURES.

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

ISSUE DATE: AUGUST 29, 2025
SOLICITATION NO.: W912DS23F0031
CONTRACT NO.: W912DS19BD007

DESIGNED BY: K.SCHNEDLER
DRAWN BY: K. SCHNEDLER
CHECKED BY: M. CHISOLM
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SIZE: ANSI D

US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
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CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
PROJECT NO. 75662

ELECTRICAL - LIGHTING - DETAILS

SHEET ID

EL503

LIGHTING FIXTURE SCHEDULE

TYPE	DESCRIPTION	LAMP	WATTS	VOLTAGE	CCT	MOUNTING	NOTES
A	2' X 4' LED LIGHT FIXTURE	LED	32 W	277V	3500K	RECESSED	2' x 4' FIXTURE, SMOOTH REFLECTOR STYLE, SQUARE SMOOTH DIFFUSER EXTRUDED FROM IMPACT MODIFIED ACRYLIC, SUITABLE FOR DAMP LOCATIONS, 4000 LUMEN, 90CRI, DIMMING DRIVER.
A1	SAME AS TYPE A WITH BATTERY BACK UP	LED	32 W	277V	3500K	RECESSED	2' x 4' FIXTURE, SMOOTH REFLECTOR STYLE, SQUARE SMOOTH DIFFUSER EXTRUDED FROM IMPACT MODIFIED ACRYLIC, SUITABLE FOR DAMP LOCATIONS, 4000 LUMEN, 90CRI, DIMMING DRIVER, EMERGENCY BATTERY BACKUP.
B	2' X 4' LED LIGHT FIXTURE	LED	48 W	277V	3500K	RECESSED	2' X 4' FIXTURE, 22-GUAGE DIE-FORMED CRS HOUSING, IMPACT-RESISTANT LENS, 0.5" FLAT EXTRUDED ALUMINUM DOOR FRAME, 5600 LUMEN, 90CRI, #12 0.187" THICK ACRYLIC SHIELDING CHEMICALLY WELDED TO CLEAR 0.177" THICK POLYCARBONATE, DIMMING DRIVER.
B1	SAME AS TYPE B WITH BATTERY BACK UP	LED	48 W	277V	3500K	RECESSED	2' X 4' FIXTURE, 22-GUAGE DIE-FORMED CRS HOUSING, IMPACT-RESISTANT LENS, 0.5" FLAT EXTRUDED ALUMINUM DOOR FRAME, 5600 LUMEN, 90CRI, #12 0.187" THICK ACRYLIC SHIELDING CHEMICALLY WELDED TO CLEAR 0.177" THICK POLYCARBONATE, DIMMING DRIVER, EMERGENCY BATTERY BACKUP.
C1	1' X 4' LED SURFACE MOUNT WITH BATTERY BACKUP	LED	27 W	277V	3500K	SURFACE	1' X 4' FIXTURE, 22-GUAGE DIE-FORMED CRS HOUSING, SUITABLE FOR DAMP LOCATIONS, FROSTED RIBBED ACRYLIC DIFFUSER SHIELDING, 3000 LUMEN, 90CRI, DIMMING DRIVER, EMERGENCY BATTERY BACKUP.
D	2' X 2' LED LIGHT FIXTURE	LED	27 W	277V	3500K	RECESSED	2' X 2' FIXTURE, SMOOTH REFLECTOR STYLE, 3300 LUMEN, 90CRI, SQUARE SMOOTH DIFFUSER EXTRUDED FROM IMPACT MODIFIED ACRYLIC, DIMMING DRIVER.
D1	SAME AS TYPE D WITH BATTERY BACK UP	LED	27 W	277V	3500K	RECESSED	2' X 2' FIXTURE, SMOOTH REFLECTOR STYLE, 3300 LUMEN, 90CRI, SQUARE SMOOTH DIFFUSER EXTRUDED FROM IMPACT MODIFIED ACRYLIC, DIMMING DRIVER, EMERGENCY BATTERY BACKUP.
DW1	2' X 2' LED LIGHT FIXTURE WET LISTED WITH BATTERY BACKUP	LED	27 W	277V	3500K	RECESSED	2' X 2' FIXTURE, SMOOTH REFLECTOR STYLE, 3300 LUMEN, 90CRI, SQUARE SMOOTH DIFFUSER EXTRUDED FROM IMPACT MODIFIED ACRYLIC, SUITABLE FOR DAMP LOCATIONS, DIMMING DRIVER, EMERGENCY BATTERY BACKUP.
E	EXTERIOR LANTERN LIGHT	LED	20 W	277V	3500K	SURFACE	SMALL LANTERN, SURFACE FIXTURE, TEXTURED BLACK HOUSING, CLEAR GLASS PANELS, WET RATED.
F	2' X 2' LED LIGHT FIXTURE	LED	54.4 W	277V	3500K	RECESSED	2' X 2' FIXTURE, 22-GUAGE DIE-FORMED CRS HOUSING, IMPACT-RESISTANT LENS, 0.5" FLAT EXTRUDED ALUMINUM DOOR FRAME, 5800 LUMEN, 90CRI, #12 0.187" THICK ACRYLIC SHIELDING CHEMICALLY WELDED TO CLEAR 0.177" THICK POLYCARBONATE, DIMMING DRIVER.
F1	SAME AS TYPE F WITH BATTERY BACK UP	LED	54.4 W	277V	3500K	RECESSED	2' X 2' FIXTURE, 22-GUAGE DIE-FORMED CRS HOUSING, IMPACT-RESISTANT LENS, 0.5" FLAT EXTRUDED ALUMINUM DOOR FRAME, 5800 LUMEN, 90CRI, #12 0.187" THICK ACRYLIC SHIELDING CHEMICALLY WELDED TO CLEAR 0.177" THICK POLYCARBONATE, DIMMING DRIVER, EMERGENCY BATTERY BACKUP.
G	2' ABOVE MIRROR VANITY LUMINAIRE	LED	20 W	277V	3500K	SURFACE/WALL	2' FIXTURE, EXTRUDED ALUMINUM WITH DIE-CAST END PLATES, FLAT DIFFUSE ACRYLIC LENS, 1500 LUMEN, 90CRI, DIMMING DRIVER.
H1	2" SQUARE ADJUSTABLE DOWNLIGHT WITH BATTERY BACK UP	LED	11.5 W	277V	3500K	RECESSED	SQUARE ADJUSTABLE DOWNLIGHT FIXTURE, DIE-CAST ALUMINUM SPN AND STAMPED ARTICULATING MECHANISM HOUSING, GALVANIZED STEEL SPLICE COMPARTMENT WITH DRIVER ENCLOSURE, 700 LUMEN, 90CRI, FLUSH LENS WITH WIDE DISTRIBUTION,1/2" FLANGE, WHITE TEXTURE POWDER COAT, DIMMING DRIVER, EMERGENCY BATTERY BACKUP.
I	2' X 2' RECESSED MOUNTED FOOD ZONE FIXTURE	LED	42 W	277V	3500K	RECESSED	2' X 2' SURFACE MOUNTED FIXTURE, LISTED FOR FOOD ZONE AND WET LOCATIONS, POLISHED 304 STAINLESS STEEEL HOUSING AND DOOR, 4,600 LUMEN, 3 ROWS OF LEDS, 90CRI, 0.135" P12 PRISMATIC IMPACT RESISTANT ACRYLIC, DIMMING DRIVER.
I1	SAME AS TYPE I WITH BATTERY BACK UP	LED	42 W	277V	3500K	RECESSED	2' X 2' SURFACE MOUNTED FIXTURE, LISTED FOR FOOD ZONE AND WET LOCATIONS, POLISHED 304 STAINLESS STEEEL HOUSING AND DOOR, 4,600 LUMEN, 3 ROWS OF LEDS, 90CRI, 0.135" P12 PRISMATIC IMPACT RESISTANT ACRYLIC, DIMMING DRIVER, EMERGENCY BATTERY BACKUP
J	4" CYLINDER LED FIXTURE	LED	7 W	277V	3500K	SUSPENDED	CYLINDER FIXTURE, EXTRUDED ALUMINUM HOUSING WITH DIE-CAST ALUMINUM ACCENT RING, 500 LUMEN, 90CRI, WHITE TEXTURED HOUSING FINISH, OPEN REFLECTOR WITH WIDE DISTRIBUTION, CLEAR SEMI-SPECULAR ANODIZE REFLECTOR FINISH, DIMMING DRIVER
K	4' WRAP LED FIXTURE	LED	29 W	277V	3500K	SURFACE/SUSPENDED	WRAP LED FIXTURE, IMPACT RESISTANT, DOUBLE CHANNEL HOUSING OF 0.40" 3003 ALUMINUM CONSTRUCTION, LISTED FOR WET LOCATION, FROSTED ACRYLIC OPTION, WHITE CRS EXTRUDED HOUSING, 1 ROW OF LEDS, 90CRI, DIMMING DRIVER.
K1	SAME AS TYPE K WITH BATTERY BACK UP	LED	29 W	277V	3500K	SURFACE/SUSPENDED	WRAP LED FIXTURE, IMPACT RESISTANT, DOUBLE CHANNEL HOUSING OF 0.40" 3003 ALUMINUM CONSTRUCTION, LISTED FOR WET LOCATION, FROSTED ACRYLIC OPTION, WHITE CRS EXTRUDED HOUSING, 1 ROW OF LEDS, 90CRI, DIMMING DRIVER, EMERGENCY BATTERY BACKUP.
L	2" CONTINUOUS LED FIXTURE	LED	7 W	277V	3500K	RECESSED	EXTRUDED ALUMINUM HOUSING, EXTRUDED FLAT DIFFUSE ACRYLIC LENS, 400 LUMEN, 90CRI, DIMMING DRIVER.
L1	SAME AS TYPE L WITH BATTERY BACK UP	LED	7 W	277V	3500K	RECESSED	EXTRUDED ALUMINUM HOUSING, EXTRUDED FLAT DIFFUSE ACRYLIC LENS, 400 LUMEN, 90CRI, DIMMING DRIVER, EMERGENCY BATTERY BACKUP.
M	2' UNDERCABINET LUMINAIRE	LED	11.4 W	277V	3500K	SURFACE	20 GAUGE DIE-FORMED HOUSING, FROSTED ACRYLIC, PATTERN #12 0.125" THICK SHIELDING, 92% MIN. AVE. REFLECTIVE WHITE POLYESTER POWDER COAT BLEND FINISH, 90CRI, DIMMING DRIVER, 1200 LUMEN.
N1	WALL PACK WITH BATTERY BACK UP	LED	13 W	277V	3000K	SURFACE/WALL	DIE-CAST ALUMINUM HOUSING, ACRYLIC LENS, 350MA DRIVE CURRENT, 1400 LUMEN, 70CRI, TYPE II SHORT DISTRIBUTION, DIMMING DRIVER, DARK BRONZE COLOR, B0-UO-G1, MOTION SENSOR, EMERGENCY BACK-UP BATTERY, SUITABLE FOR DAMP LOCATIONS
O1	CANOPY LIGHT WITH BATTERY BACK UP	LED	28 W	277V	3000K	SURFACE	SURFACE FIXTURE, LOW PROFILE, DIE-CAST, ALUMINUM HOUSING, 80 CRI, 2700 LUMEN, RECTANGULAR WIDE DISTRIBUTION, BRONZE COLOR, EMERGENCY BATTERY BACK-UP, B2-U0-G2, HOUSE SHIELD, MOTION SENSOR, SUITABLE FOR DAMP LOCATIONS.
Q	LED STRIPLIGHT	LED	59 W	277V	3000K	SURFACE	48", SYMMETRIC, 7,000 LUMENS, DROP LENS, MVOLT, 90CRI, ON/OFF PHOTOCELL (PRE-WIRED), GALVANIZED FIXTURE WITH BLACK PLASTIC LENS END CAPS, SUITABLE FOR DAMP LOCATIONS.
Q1	SAME AS TYPE Q WITH BATTERY BACKUP	LED	59 W	277V	3000K	SURFACE	48", SYMMETRIC, 7,000 LUMENS, DROP LENS, MVOLT, 90CRI, 10W EMERGENCY BATTERY PACK, ON/OFF PHOTOCELL (PRE-WIRED), GALVANIZED FIXTURE WITH BLACK PLASTIC LENS END CAPS, SUITABLE FOR DAMP LOCATIONS.
X1	SINGLE FACE LED EXIT SIGN	LED	4.5 W	277V	-	CEILING/WALL	PREMIUM-GRADE EXTRUDED ALUMINUM HOUSING, RED LETTER COLORING, CLEAR PANEL, ANODIZED ALUMINUM HOUSING COLOR, EXIT SIGN SHIELD/COVER WHERE INDICATED ON FLOOR PLANS, EMERGENCY BATTERY BACKUP.

GENERAL NOTES

1. REFER TO SHEET E001 FOR GENERAL NOTES, LEGENDS, AND SYMBOLS.
2. REFER TO ES102 FOR SITE LIGHTING FIXTURE SCHEDULE.
3. REFER TO EL602 FOR LIGHTING CONTROLS INFORMATION.
4. THE LAYOUT OF THE LIGHTING SYSTEM IS DIAGRAMMATIC. THE CONTRACTOR SHALL PROVIDE LIGHTING CALCULATIONS AND LIGHTING FIXTURE CUTSHEETS.
5. ALL LIGHTING FIXTURES SHALL MEET BUY AMERICAN ACT AND SHALL BE PROVIDED WITH CERTIFICATE OF COMPLIANCE.
6. DIMMABLE LIGHTING FIXTURES SHALL NOT OSCILLATE VISIBLY AT LOW INTENSITIES.

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

ISSUE DATE: AUGUST 29, 2025
SOLICITATION NO.: W912DS23F0031
CONTRACT NO.: W912DS15D0007

DESIGNED BY: K.SCHNEDLER
DRAWN BY: K. SCHNEDLER
CHECKED BY: M. GUGLIELMI
SUBMITTED BY: Y. BARRETT
SIZE: ANSI D

US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK NY 10278

CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
PROJECT NO. 75662

ELECTRICAL - LIGHTING - LIGHT FIXTURE SCHEDULE

SHEET ID

EL601

LIGHTING CONTROLS

SPACE DESCRIPTION	MANUAL CONTROLS	ZONING AND DIMMING
ACTIVITY ROOMS	LOCAL CONTROL DIMMER SWITCHES AND DAYLIGHT HARVESTING PHOTOCELL SENSORS	SEPARATE CONTROLS FOR SIGN-IN DESK AND TOILET (TO BE ZONED TOGETHER) AND 2 ZONES IN ACTIVITY SPACE AND DIMMABLE TO 10%, MANUAL ON TO 100%, AUTO DAYLIGHT RESPONSE (DAYLIGHT HARVESTING) WITH CONTINUOUS DIMMER PER LUMINAIRE DOWN TO 10%, MANUAL FULL OFF
BUGGY STORAGE	DIMMER SWITCH	ZONED TO CORRIDOR, ON/OFF SWITCH LOCATED IN CORRIDOR
CCTV ROOM	WALLBOX SWITCH	NONE
COMM ROOMS	WALLBOX SWITCH	NONE
CORRIDORS	WALLBOX SWITCH	NONE
ELECTRICAL ROOM	WALLBOX SWITCH	NONE
INDIVIDUAL OFFICE	DIMMER SWITCH, TOGGLE SWITCH ON LUMINAIRE FOR TASK LIGHTING	SEPARATE CONTROLS FOR AMBIENT AND TASK LIGHTING
ISOLATION ROOM	DIMMER SWITCH	DIMMABLE TO 10%
JANITOR CLOSET	WALLBOX SWITCH	NONE
KITCHEN	DIMMER SWITCH	DIMMABLE FROM 30% TO 70% OR FULL POWER
LACTATION ROOM	DIMMER SWITCH	SEPARATE CONTROLS FOR DOWNLIGHT AND AMBIENT UPLIGHT
LAUNDRY ROOM	DIMMER SWITCH	DIMMABLE
MECHANICAL ROOM	WALLBOX SWITCH	NONE
OPEN OFFICE	DIMMER SWITCH, TOGGLE SWITCH ON LUMINAIRE FOR TASK LIGHTING	SEPARATE CONTROLS FOR AMBIENT AND TASK LIGHTING
RECEPTION	DIMMER SWITCH	ZONED AND DIMMABLE TO 10%
RESTROOM	WALLBOX SWITCH	NONE
STAFF LOUNGE	DIMMER SWITCH	ZONED AND DIMMABLE
STORAGE ROOMS	WALLBOX SWITCH	NONE
TRAINING ROOM	DIMMER SWITCH	ZONED AND DIMMABLE TO 10%
VESTIBULES	WALLBOX SWITCH	EACH ZONE IS NO MORE THAN 2500 SQ FT
WAITING AREA	DIMMER SWITCH	ZONED AND DIMMABLE TO 10%
CANOPY ENTRANCE	SCHEDULER, MOTION SENSING, DIMMER	ON AT DUSK, AUTOMATICALLY DIM TO 30% AFTER ACTIVITY HAS NOT BEEN DETECTED FOR 10 MINUTES, AUTOMATICALLY DIMMING TO 30% WITHIN 1 HOUR OF BUSINESS CLOSE AND AUTOMATIC FULL ON WITHIN 1 HOUR BEFORE BUSINESS OPEN WITH AUTOMATIC DIM TO 30% AFTER ACTIVITY HAS NOT BEEN DETECTED FOR 10 MINUTES, AUTO FULL OFF AT DAWN.
BUILDING MOUNT LANTERNS	SCHEDULER, MOTION SENSING, DIMMER	ON AT DUSK, AUTOMATICALLY REDUCE POWER TO 30% AFTER ACTIVITY HAS NOT BEEN DETECTED FOR 15 MINUTES, OFF AT DAWN.
PARKING LOT	SCHEDULER, DIMMER	ON AT DUSK, AUTOMATIC DIM TO 30% WITHIN 15 MINUTES AFTER BUSINESS CLOSE AND AUTOMATIC FULL ON WITHIN 15 MINUTES BEFORE BUSINESS OPENS, OFF AT DAWN.
EXTERIOR EGRESS LANDINGS	CONTROLLED BY EMERGENCY LED DRIVER (BATTERY BACKUP) ONLY	LUMINAIRES ARE TO PROVIDE EMERGENCY EGRESS LIGHTING ONLY

GENERAL NOTES

1. REFER TO SHEET E001 FOR GENERAL NOTES, LEGENDS, AND SYMBOLS.
2. REFER TO ES102 FOR SITE LIGHTING FIXTURE SCHEDULE.
3. THE LAYOUT OF THE LIGHTING SYSTEM IS DIAGRAMMATIC AND INTENDED TO SHOW A BASIC SYSTEM LAYOUT THAT MEETS ALL UFC CRITERIA, IESNA LEVELS AND ASHRAE STANDARDS.
4. LOCAL LIGHTING CONTROLS AND ALL SEQUENCING WILL BE IMPLEMENTED IN ACCORDANCE WITH ASHRAE 90.1 - CHAPTER 9 "LIGHTING" AND UFC 3-530-01.
5. ALL LIGHTING FIXTURES SHALL MEET BUY AMERICAN ACT AND SHALL BE PROVIDED WITH CERTIFICATE OF COMPLIANCE.
6. THE CONTRACTOR SHALL PROVIDE LIGHTING CALCULATIONS AND LIGHTING FIXTURE CUTSHEETS.
7. DAYLIGHTING CONTROLS WILL BE INCORPORATED IN COMPLIANCE WITH ASHRAE 90.1 CHAPTER 9 AND UFC 3-530-01. CONTROLS WILL REDUCE ELECTRIC LIGHTING IN RESPONSE TO DAYLIGHT USING CONTINUOUS DIMMING.

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

ISSUE DATE: AUGUST 29, 2025
SOLICITATION NO.: W912DS25F0031
CONTRACT NO.: W912DS15D0007

DESIGNED BY: K. SCHNEDLER
DRAWN BY: K. SCHNEDLER
CHECKED BY: M. CHOU
SUBMITTED BY: Y. BARRETT
SIZE: ANSI D

US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK, NY 10278

CHILD DEVELOPMENT CENTER
FORT HAMILTON, NEW YORK
PROJECT NO. 75682

ELECTRICAL - LIGHTING - LIGHT FIXTURE CONTROLS

SHEET ID

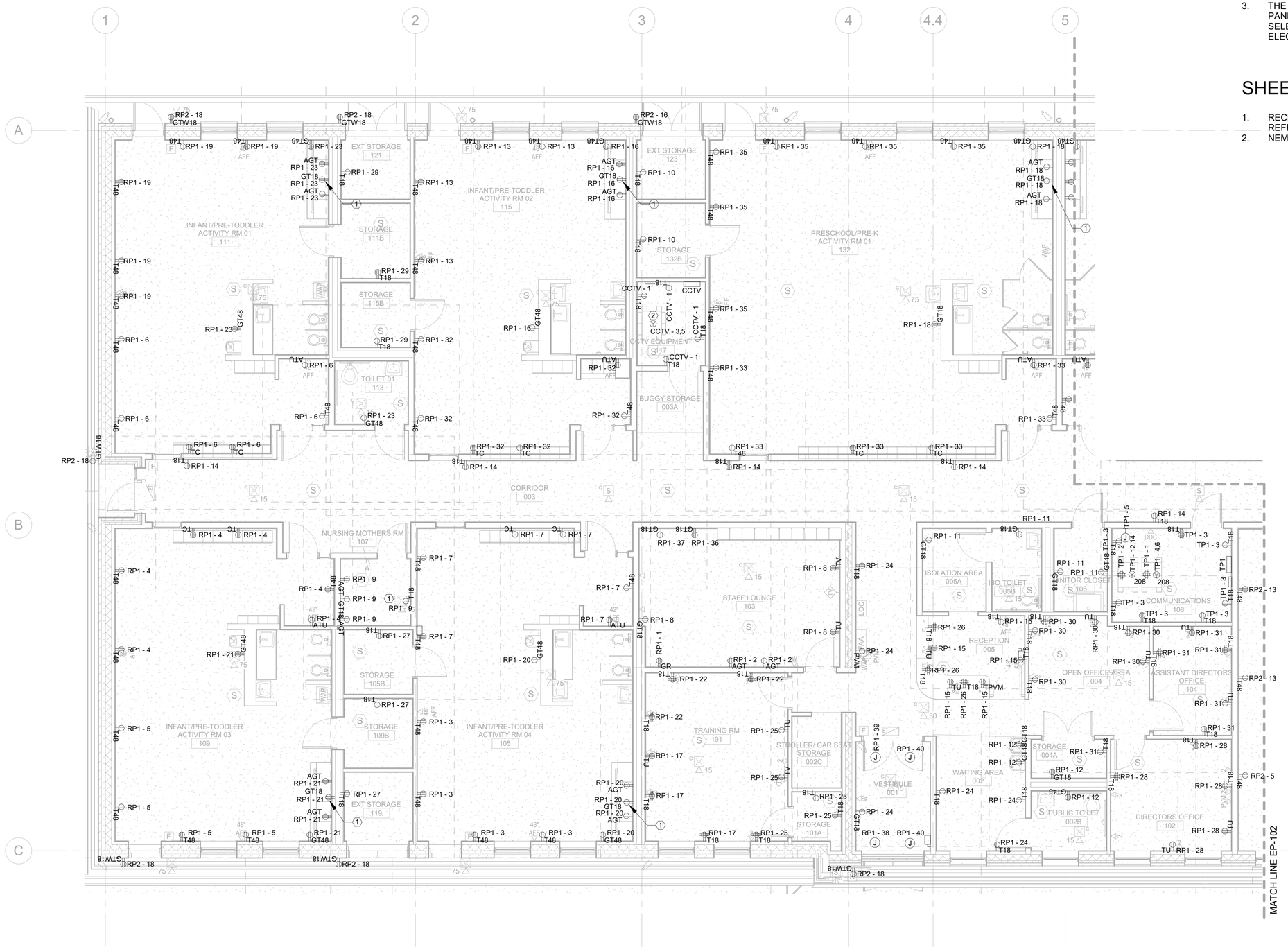
EL602

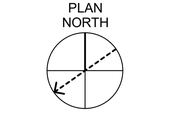
GENERAL NOTES

1. REFER TO SHEET E001 FOR ELECTRICAL SYMBOLS, ABBREVIATIONS, AND GENERAL NOTES.
2. THE CONTRACTOR SHALL COORDINATE THE POWER LAYOUT WITH THE FURNITURE AND EQUIPMENT.
3. THE CONTRACTOR IS RESPONSIBLE FOR SIZING THE PANELBOARDS BASED ON THE BREAKER FRAMES SELECTED AND FOR THE LAYOUT/SIZING OF ELECTRICAL EQUIPMENT.

SHEET KEYNOTES

1. RECEPTACLE FOR UNDER THE COUNTER REFRIGERATOR
2. NEMA 3A, 125V RECEPTACLE





0 4' 8' 16'

SCALE: 3/16" = 1'-0"

A1 ELECTRICAL - POWER - AREA A

3/16" = 1'-0"

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

DESIGNED BY: K.SCHNEDLER
DRAWN BY: K. SCHNEDLER
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SUBMITTED BY: Y. BARRETT
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ISSUE DATE: AUGUST 29, 2025
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US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK NY 10278

CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
PROJECT NO. 75662

ELECTRICAL - POWER - AREA A

SHEET ID

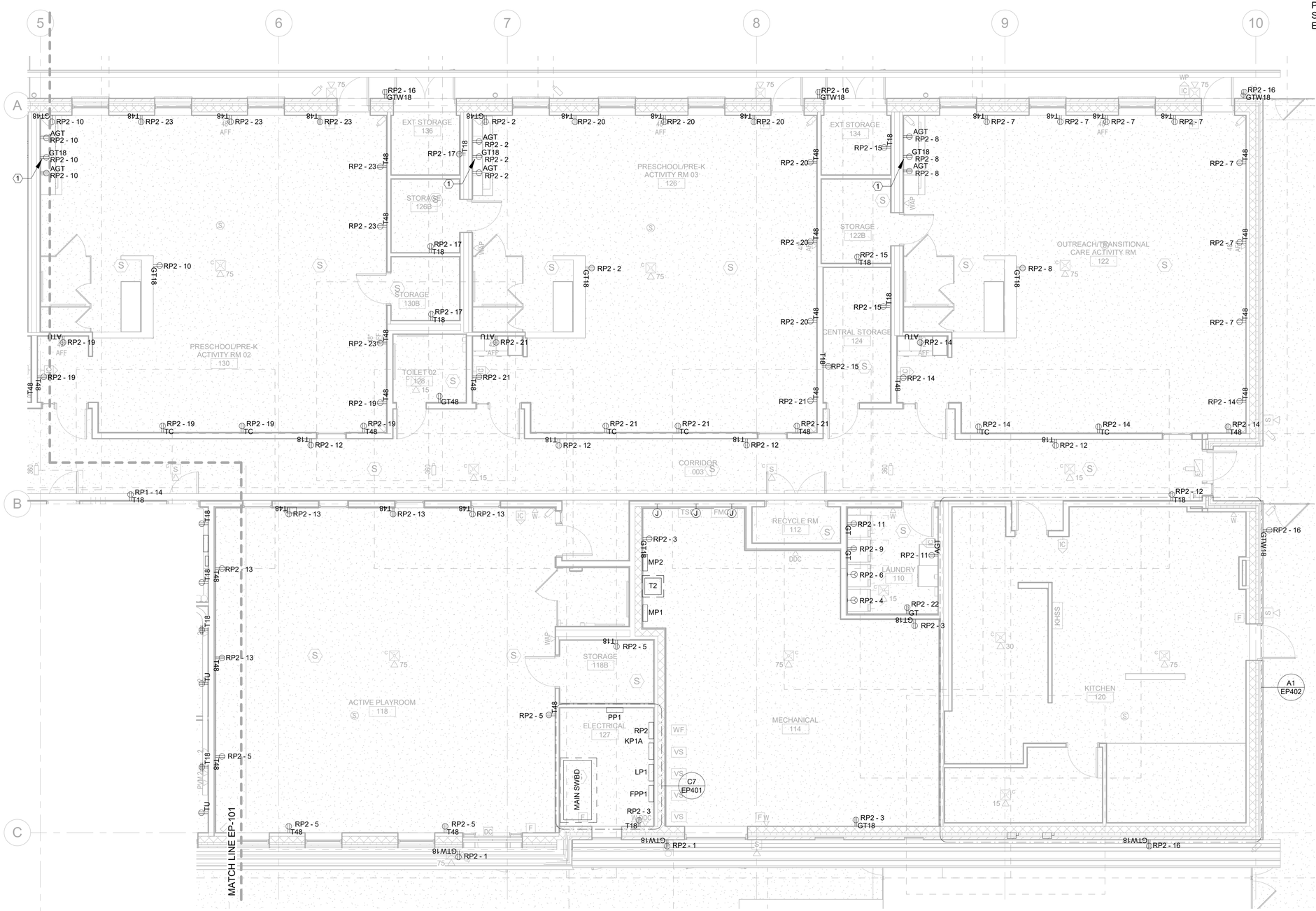
EP101

GENERAL NOTES

1. REFER TO SHEET E001 FOR ELECTRICAL SYMBOLS, ABBREVIATIONS, AND GENERAL NOTES.
2. THE CONTRACTOR SHALL COORDINATE THE POWER LAYOUT WITH THE FURNITURE AND EQUIPMENT.
3. THE CONTRACTOR IS RESPONSIBLE FOR SIZING THE PANELBOARDS BASED ON THE BREAKER FRAMES SELECTED AND FOR THE LAYOUT/SIZING OF ELECTRICAL EQUIPMENT.

SHEET KEYNOTES

1. RECEPTACLE FOR UNDER THE COUNTER REFRIGERATOR



PLAN NORTH

A | B

0 4' 8' 16'

SCALE: 3/16" = 1'-0"

A1 ELECTRICAL - POWER - AREA B

3/16" = 1'-0"

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

DESIGNED BY: K.SCHNEIDLER
DRAWN BY: K. SCHNEIDLER
CHECKED BY: M. GARCIA
SUBMITTED BY: Y. BARRETT
SIZE: ANSI D

ISSUE DATE: AUGUST 29, 2025
SOLICITATION NO.: W912DS23F0031
CONTRACT NO.: W912DS15D0007

US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK NY 10278

CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
PROJECT NO. 75662

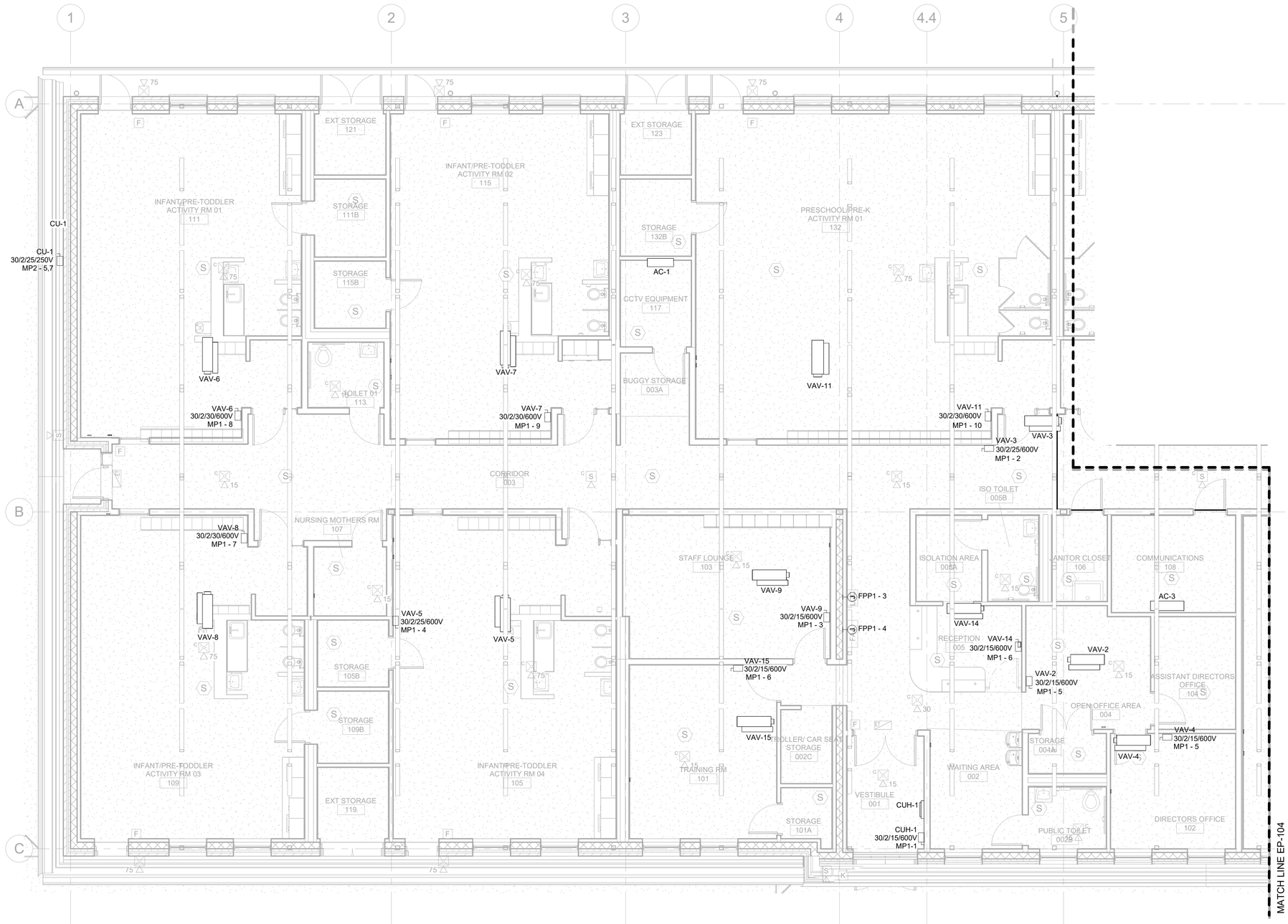
ELECTRICAL - POWER - AREA B

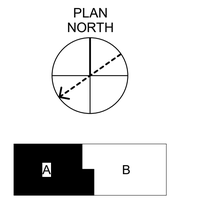
SHEET ID

EP102

GENERAL NOTES

1. REFER TO SHEET E001 FOR ELECTRICAL SYMBOLS, ABBREVIATIONS, AND GENERAL NOTES.
2. THE CONTRACTOR SHALL COORDINATE THE POWER LAYOUT WITH THE HVAC EQUIPMENT.





SCALE: 3/16" = 1'-0"

A1 ELECTRICAL - POWER - DISCONNECTING MEANS - AREA A
3/16" = 1'-0"

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

ISSUE DATE: AUGUST 29, 2025
SOLICITATION NO.: W912DS23F0031
CONTRACT NO.: W912DS19BD007

DESIGNED BY: K.SCHNEIDLER
DRAWN BY: K. SCHNEIDLER
CHECKED BY: M.CHRISTMAN
SUBMITTED BY: Y. BARRETT
SIZE: ANSI D

US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK NY 10278

CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
PROJECT NO. 75682

ELECTRICAL - POWER - DISCONNECTING MEANS - AREA A

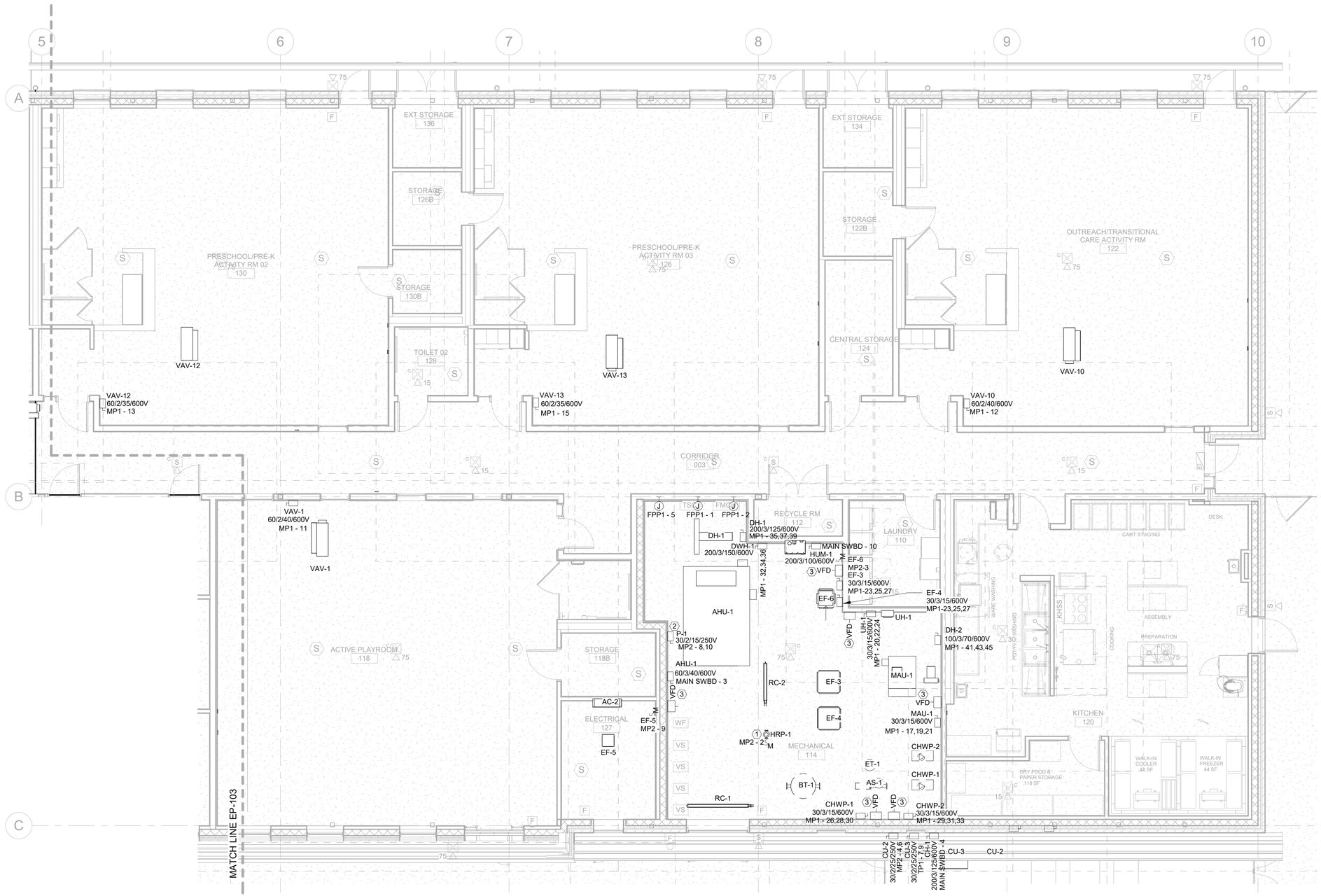
SHEET ID
EP103

GENERAL NOTES

1. REFER TO SHEET E001 FOR ELECTRICAL SYMBOLS, ABBREVIATIONS, AND GENERAL NOTES.
2. THE CONTRACTOR SHALL COORDINATE THE POWER LAYOUT WITH THE HVAC EQUIPMENT.

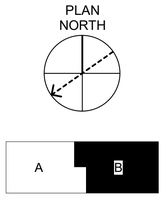
SHEET KEY NOTES

1. MOTOR RATED SWITCH FOR HRP-1. COORDINATE LOCATION WITH EQUIPMENT AND MECHANICAL CONTRACTOR.
2. DISCONNECT SWITCH FOR P-1. COORDINATE LOCATION WITH EQUIPMENT AND PLUMBING CONTRACTOR.
3. VARIABLE FREQUENCY DRIVE (VFD) FOR MECHANICAL EQUIPMENT. VFD SHALL BE FURNISHED BY MECHANICAL CONTRACTOR AND INSTALLED BY ELECTRICAL CONTRACTOR PER SPECIFICATION 26 29 23. ELECTRICAL CONTRACTOR SHALL COORDINATE EXACT LOCATION OF VFD WITH MECHANICAL CONTRACTOR.



A1 ELECTRICAL - POWER - DISCONNECTING MEANS - AREA B

3/16" = 1'-0"



0 4' 8' 16'

SCALE: 3/16" = 1'-0"

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

DESIGNED BY: K.SCHNEDLER
DRAWN BY: K. SCHNEDLER
CHECKED BY: M. GIURGIU
SUBMITTED BY: Y. BARRETT
SIZE: ANSI D
ISSUE DATE: AUGUST 29, 2025
SOLICITATION NO.: W912DS23F0031
CONTRACT NO.: W912DS19D0007

US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK NY 10278

CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
PROJECT NO. 75662

ELECTRICAL - POWER - DISCONNECTING MEANS - AREA B

SHEET ID

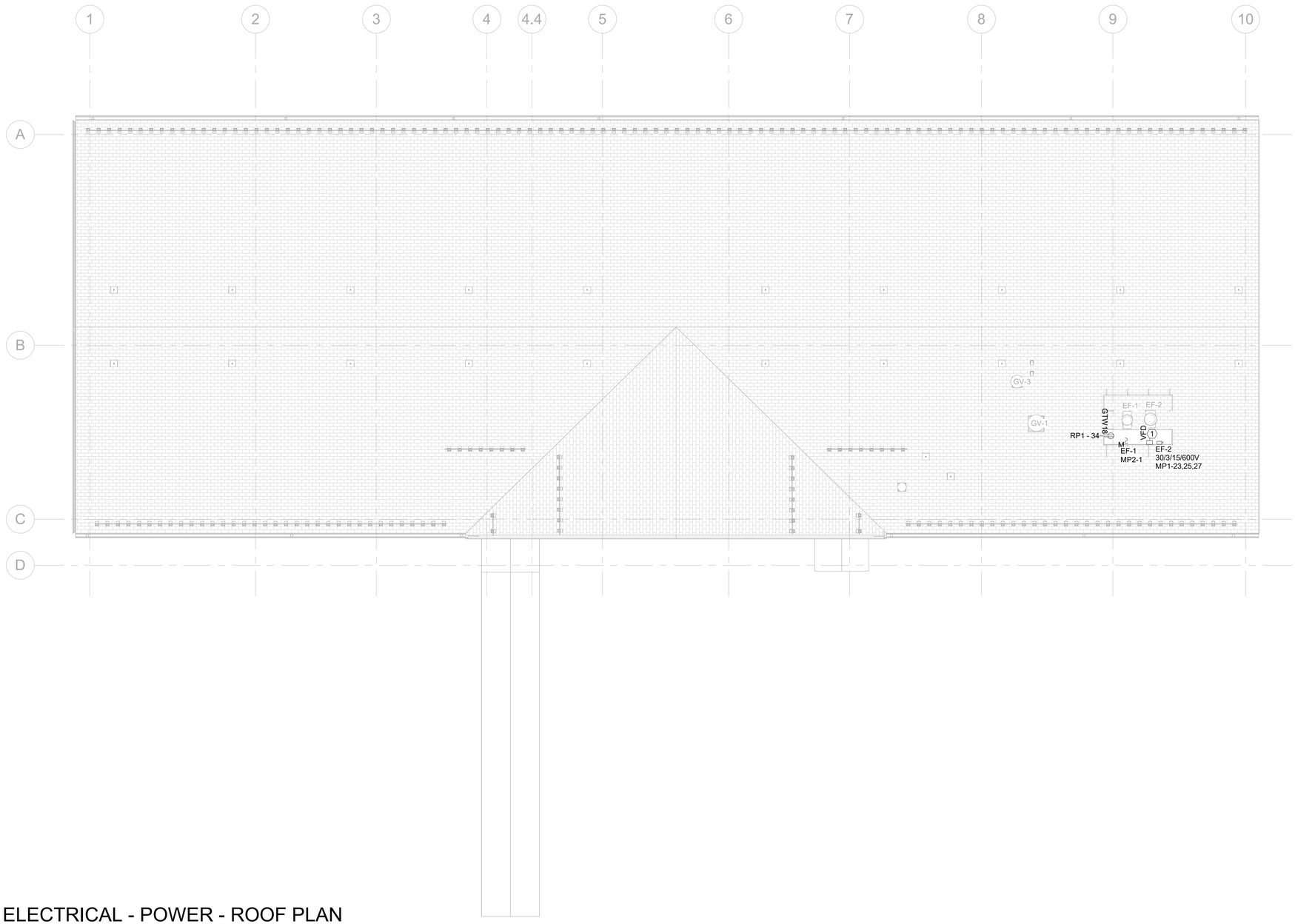
EP104

GENERAL NOTES

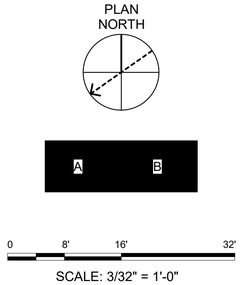
1. REFER TO SHEET E001 FOR ELECTRICAL SYMBOLS, ABBREVIATIONS, AND GENERAL NOTES.
2. THE CONTRACTOR SHALL COORDINATE THE POWER LAYOUT WITH THE HVAC EQUIPMENT.

SHEET KEY NOTES

1. VARIABLE FREQUENCY DRIVE (VFD) FOR MECHANICAL EQUIPMENT. VFD SHALL BE FURNISHED BY MECHANICAL CONTRACTOR AND INSTALLED BY ELECTRICAL CONTRACTOR PER SPECIFICATION 26 29 23. ELECTRICAL CONTRACTOR SHALL COORDINATE EXACT LOCATION OF VFD WITH MECHANICAL CONTRACTOR.



B1 ELECTRICAL - POWER - ROOF PLAN
3/32" = 1'-0"



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

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

ISSUE DATE: AUGUST 29, 2025
SOLICITATION NO.: W912DS23F0031
CONTRACT NO.: W912DS19D0007

DESIGNED BY: K.SCHNEDLER
DRAWN BY: K. SCHNEDLER
CHECKED BY: M. GIURGIU
SUBMITTED BY: Y. BARRETT
SIZE: ANSI D

US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK NY 10278

CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
PROJECT NO. 75662

ELECTRICAL - POWER - ROOF PLAN

SHEET ID

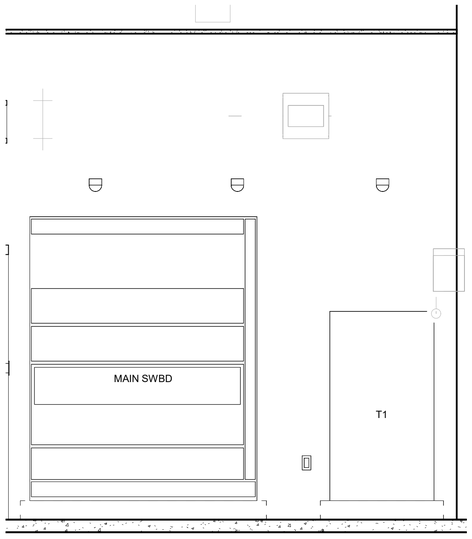
EP105

GENERAL NOTES

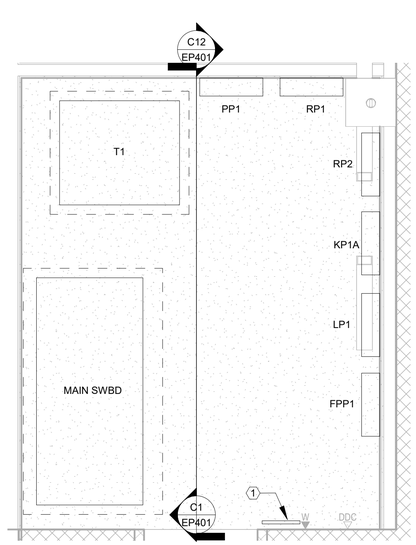
1. REFER TO SHEET E001 FOR ELECTRICAL SYMBOLS, ABBREVIATIONS, AND GENERAL NOTES.

SHEET KEYNOTES

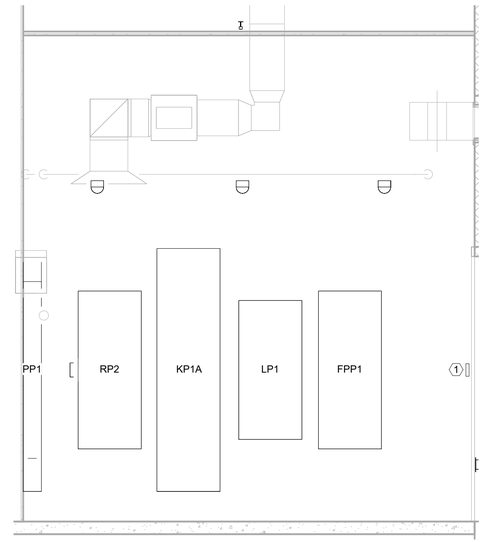
1. GROUND BAR



C1 POWER - ELEC RM 127 - NE WALL ELEVATION
1/2" = 1'-0"



C7 ELECTRICAL ROOM 127
1/2" = 1'-0"



C12 POWER - ELEC RM 127 - SW WALL ELEVATION
1/2" = 1'-0"

0 1' 2' 4'
SCALE: 1/2" = 1'-0"

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

ISSUE DATE: AUGUST 29, 2025
SOLICITATION NO.: W912DS24F0031
CONTRACT NO.: W912DS19D0007

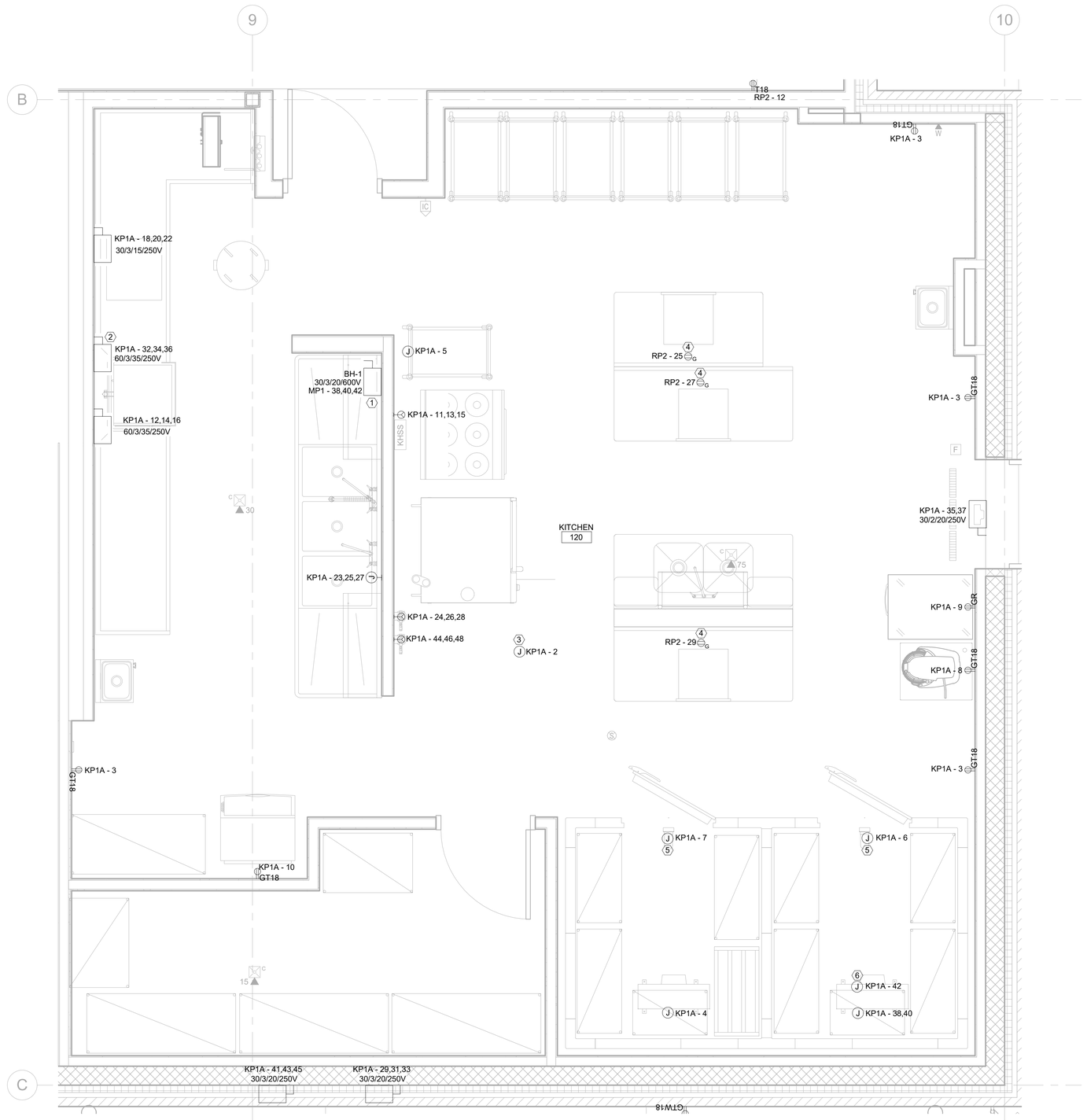
DESIGNED BY: K.SCHNEDLER
DRAWN BY: K. SCHNEDLER
CHECKED BY: M. GIMELLI
SUBMITTED BY: Y. BARRETT
SIZE: ANSI D

US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK NY 10278

CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
PROJECT NO. 75662

ELECTRICAL - POWER - PART PLANS AND ELEVATIONS

SHEET ID
EP401



A1 ELECTRICAL - POWER - KITCHEN 120
1/2" = 1'-0"

GENERAL NOTES

1. REFER TO SHEET E001 FOR ELECTRICAL SYMBOLS, ABBREVIATIONS, AND GENERAL NOTES.
2. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE RECEPTACLES, SPECIAL RECEPTACLES, CONNECTION TYPES, DISCONNECT SIZE TYPES, LOCATIONS AND ADDITIONAL REQUIREMENTS WITH FOOD SERVICE EQUIPMENT MANUFACTURER/CONTRACTOR.

SHEET KEY NOTES

1. DISCONNECT SWITCH FOR BH-1. COORDINATE WITH KITCHEN EQUIPMENT AND PLUMBING CONTRACTOR FOR EXACT LOCATION.
2. PROVIDE INTERWIRE AND CONDUITS BETWEEN DISHWASHER VENT FAN CONTROL AND ROOFTOP EXHAUST FAN. COORDINATE WITH FOOD SERVICE EQUIPMENT CONTRACTOR FOR REQUIREMENTS.
3. PROVIDE INTERWIRE AND CONDUITS BETWEEN HOOD MOUNTED SWITCHES, HOOD TIMER PANEL AND ROOFTOP EXHAUST AIR FAN(S). COORDINATE WITH FOOD SERVICE CONTRACTOR FOR REQUIREMENTS.
4. PROVIDE DROP CORD FROM THE CEILING FOR CONVENIENCE RECEPTACLES. COORDINATE WITH FOOD SERVICE EQUIPMENT CONTRACTOR FOR REQUIREMENTS.
5. INSTALL LIGHT FIXTURES AND PROVIDE INTERWIRE AND CONDUITS BETWEEN LIGHTS AND LIGHT SWITCH. COORDINATE WITH FOOD SERVICE EQUIPMENT CONTRACTOR FOR REQUIREMENTS.
6. HEAT TRACE FURNISHED BY THE FOOD SERVICE EQUIPMENT CONTRACTOR. INSTALL HEAT TRACE. CONTRACTOR IS RESPONSIBLE FOR COORDINATION WITH FOOD SERVICE EQUIPMENT CONTRACTOR FOR REQUIREMENTS. PROVIDE CONNECTIONS, WIRING, CONDUITS, AND BREAKER SIZE AS REQUIRED.

0 1' 2' 4'
SCALE: 1/2" = 1'-0"

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

ISSUE DATE: AUGUST 29, 2025
SOLICITATION NO.: W912DS24F0031
CONTRACT NO.: W912DS19D0007

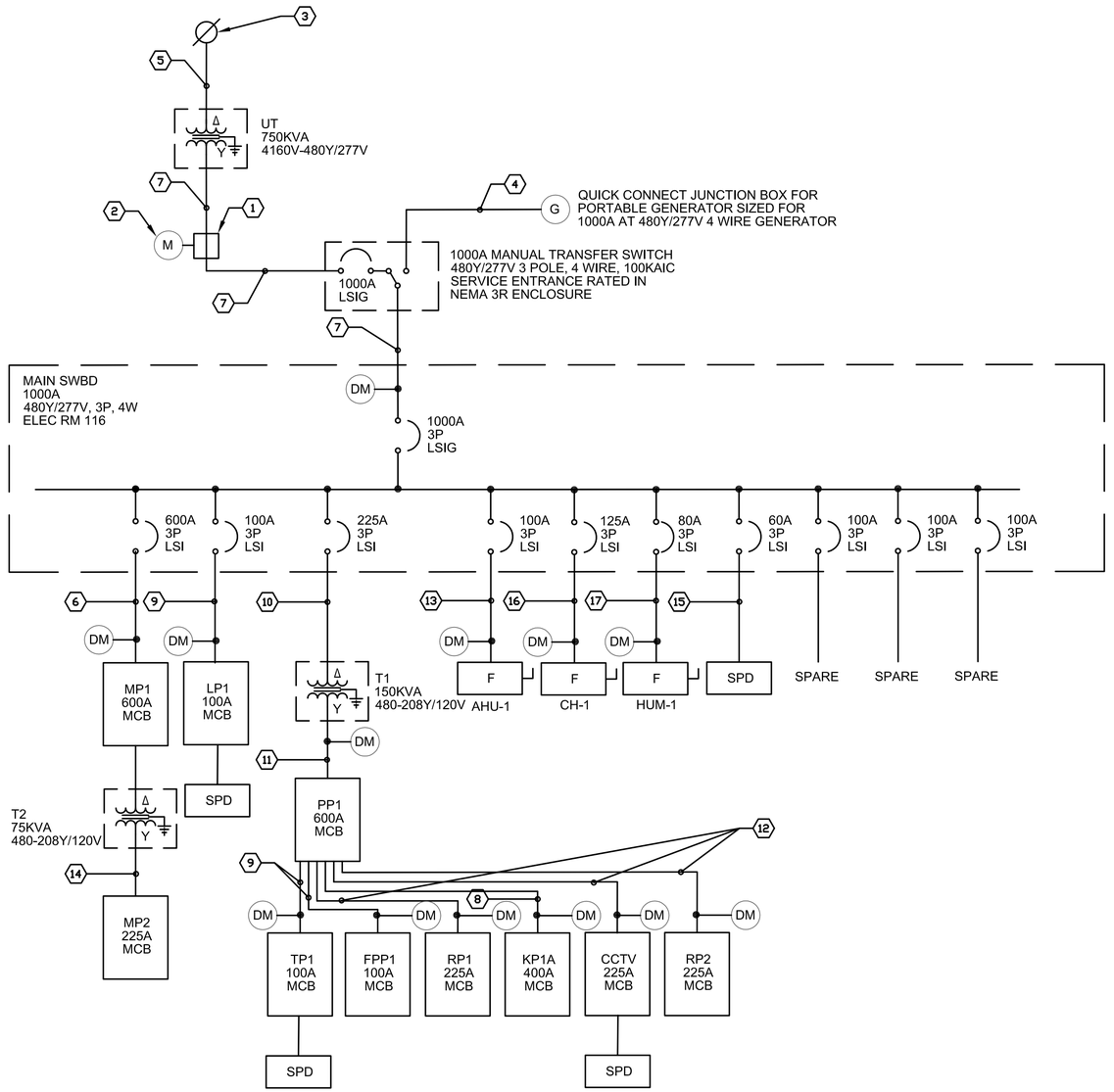
DESIGNED BY: K.SCHNEIDLER
DRAWN BY: K. SCHNEIDLER
CHECKED BY: M. CHIELLI
SUBMITTED BY: Y. BARRETT
SIZE: ANSI D

US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK, NY 10278

CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
PROJECT NO. 75662

ELECTRICAL - POWER - PART PLANS AND ELEVATIONS

SHEET ID
EP402



A1 ELECTRICAL - POWER- SINGLE LINE DIAGRAM

NOT TO SCALE

GENERAL NOTES

1. REFER TO SHEET E001 FOR ELECTRICAL SYMBOLS, ABBREVIATIONS, AND GENERAL NOTES.
2. ALL CIRCUIT BREAKERS 100A AND ABOVE SHALL BE 100% FOR THEIR AMPACITY.
3. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE ACCURACY OR COMPLETENESS OF UTILITIES SHOWN ON THIS DRAWING WITH THE FACILITY MANAGER PRIOR TO ANY CONSTRUCTION ACTIVITY AND REPORT DISCREPANCIES TO THE COR.
4. MINIMAL BURIAL DEPTHS AND SUFFICIENT CLEARANCES BETWEEN NEW AND EXISTING UTILITIES AND/OR STRUCTURES SHALL BE COORDINATED WITH THE RESPECTIVE DISCIPLINES AND MAINTAINED IN ACCORDANCE WIT HAPLICABLE CODES AND AUTHORITY HAVING JURISDICTION. NEW UTILITIES SHALL BE PLACED ABOVE OR BELOW EXISTING UTILITIES/STRUCTURES AT CROSSINGS IN ACCORDANCE WITH REQUIRED DEPTHS AND CLEARANCES.
5. ALL EMPTY CONDTUIS SHALL BE PROVIDED WITH PULL STRINGS.
6. EACH COMMUNICATIONS, SECURITY, AND LIGHTING PANEL SHALL BE PROVIDED WITH EXTERIOR MOUNTED SURGE PROTECTIVE DEVICE.
7. DASHED LINE AROUND EQUIPMENT REPRESENTS A CONCRETE EQUIPMENT PAD.
8. CONTRACTOR IS RESPONSIBLE FOR INSTALLING ALL CONDUIT AND WIRING BETWEEN ALL ELECTRIC METERS AND WATER METERS (SEE MECHANICAL DRAWINGS FOR WATER METER LOCATIONS) AS WELL AS CONNECTION TO THE BAS SYSTEM.
9. THE CONTRACTOR IS RESPONSIBLE FOR SIZING THE PANELBOARDS BASED ON THE BREAKER FRAMES SELECTED AND FOR THE LAYOUT/SIZING OF ELECTRICAL EQUIPMENT.

SHEET KEYNOTES

1. CONTRACTOR SHALL PROVIDE CT CABINET.
2. CONTRACTOR SHALL PROVIDE UTILITY METER. CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH DPW FOR METER REQUIREMENTS
3. UTILITY POLE 119, CONTRACTOR SHALL REPLACE EXISTING FUSE CUTOUTS WITH NEW AND PROVIDE NEW 200A FUSES.
4. 4 WAY - 4" PVC SCHEDULE CONCRETE ENCASED DUCTBANK PROVIDED BY CONTRACTOR. CONTRACTOR SHALL PROVIDE THREE PARALLEL SETS OF (4 - #600 KCMIL + 1 - #1AWG GROUND IN 4" CONDUIT).
5. 2 WAY - 5" PVC SCHEDULE 40 CONCRETE ENCASED DUCTBANK PROVIDED BY CONTRACTOR. CONTRACTOR SHALL PROVIDE (3) #1/0 AWG COPPER EPR 5KV MV-105 + #6AWG COPPER GROUND IN 5" CONDUIT.
6. TWO PARALLEL SETS OF (4) 350KCMIL + (1) #1AWG GROUND IN 3" CONDUIT
7. 6 WAY - 4" PVC SCHEDULE CONCRETE ENCASED DUCTBANK PROVIDED BY CONTRACTOR. CONTRACTOR SHALL PROVIDE THREE PARALLEL SETS OF (4 - #600 KCMIL + 1 - #3/0 GROUND IN 4" CONDUIT).
8. (4) 600KCMIL + (1) #3AWG GROUND IN 4" CONDUIT.
9. (4) #1AWG + (1) #8AWG GROUND IN 1-1/2" CONDUIT.
10. (3) #4/0AWG + (1) #4AWG GROUND IN 2" CONDUIT
11. TWO PARALLEL SETS OF (4) 350KCMIL + (1) #1/0AWG GROUND IN 3" CONDUIT
12. (4) #4/0AWG + (1) #4AWG GROUND IN 2-1/2" CONDUIT.
13. (4) #3AWG + (1) #8AWG GROUND IN 1-1/2" CONDUIT.
14. (4) #4/0AWG + (1) #2AWG GROUND IN 2-1/2" CONDUIT.
15. SIZED PER SPD MANUFACTURER RECOMMENDATIONS.
16. (4) #1AWG + (1) #6AWG GROUND IN 2" CONDUIT.
17. (4) #3AWG + (1) #8AWG GROUND IN 1-1/4" CONDUIT.

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

DESIGNED BY: K. SCHNEDLER
DRAWN BY: K. SCHNEDLER
CHECKED BY: M. CURCIO
SUBMITTED BY: Y. BARRETT
SIZE: ANSI D

ISSUE DATE: AUGUST 29, 2025
SOLICITATION NO.: W912DS25F0031
CONTRACT NO.: W912DS15D0007

US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK NY 10278

CHILD DEVELOPMENT CENTER
FORT HAMILTON, NEW YORK
PROJECT NO. 75662

ELECTRICAL - POWER - SINGLE LINE DIAGRAM

SHEET ID

EP601

MAIN SWBD

LOCATION: ELECTRICAL 127 | **VOLTS:** 480/277 Wye | **A.I.C. RATING:** 65 KAIC
MOUNTING: FLOOR | **PHASES:** 3 | **MAINS RATING:** 1000 A
WIRES: 4 | **MCB RATING:** 1000 A

CKT	DESCRIPTION	SETS	NO	SIZE	C	A	P	A	B	C
1	LP1	1	3/1/1	3-#1, 1-#1, 1-#8	1-1/2"	100 A	3	3.41	3.04	3.02
2	PPI (VIA T1)	1	3/0/1	3-#4/0, 1-#4	2"	225 A	3	74.81	76.51	77.24
3	AHU-1	1	3/1/1	3-#8, 1-#8, 1-#10	1-1/2"	40 A	3	6.50	6.50	6.50
4	CH-1	1	3/1/1	3-#1, 1-#1, 1-#6	2"	125 A	3	28.62	28.62	28.62
5	SPD	--	--	--	--	60 A	1	0.00		
6	SPARE	--	--	--	--	100 A	1	0.00		
7	SPARE	--	--	--	--	100 A	1	0.00		
8	SPARE	--	--	--	--	100 A	1	0.00		
9	MP1	2	3/1/1	2 runs of 3-#350, 1-#350, 1-#1	3"	600 A	3	106.93	106.22	106.07
10	HUM-1	1	3/1/1	3-#1, 1-#1, 1-#8	1-1/4"	100 A	3	20.00	20.00	20.00
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
						TOTAL LOAD:		240.23 kVA	240.80 kVA	241.39 kVA
						TOTAL AMPS:		867 A	870 A	872 A

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
DATA EQUIPMENT	8320 VA	100.00%	8320 VA		
ELECTRIC CLOTHES DRYER	3600 VA	100.00%	3600 VA	**TOTAL CONN. LOAD:**	722425 VA
HVAC	501419 VA	100.00%	501419 VA	**TOTAL EST. DEMAND:**	651417 VA
KITCHEN EQUIPMENT	106150 VA	65.00%	68997 VA	**TOTAL CONN:**	869 A
LIGHTING - EXT	280 VA	125.00%	350 VA	**TOTAL EST DEMAND:**	784 A
LIGHTING	9182 VA	100.00%	9182 VA		
POWER	10203 VA	100.00%	10203 VA		
RECEPTACLE	77844 VA	56.42%	43922 VA		

PP1

LOCATION: ELECTRICAL 127 | **VOLTS:** 120/208 Wye | **A.I.C. Rating:** 22K
SUPPLY FROM: T1 | **PHASES:** 3 | **Mains Type:** MCB
MOUNTING: Surface | **WIRES:** 4 | **Mains Rating:** 600 A
ENCLOSURE: Type 1 | **% NEUTRAL:** 100.00% | **MCB Rating:** 600 A

CKT	DESCRIPTION	SETS	NO	SIZE	C	A	P	A	B	C	P	A	C	SIZE	NO	SETS	DESCRIPTION	CKT
1								2.40 8.76										2
3	CCTV	1	3/1/1	3-#4/0, 1-#4/0, 1-#4	2-1/2"	225 A	3		1.25 10.62		3	225 A	2-1/2"	3-#4/0, 1-#4/0, 1-#4	3/1/1	1	RP2	4
5										1.25 11.76								6
7								2.47 45.48										8
9	TP1	1	3/1/1	3-#1, 1-#1, 1-#8	1-1/2"	100 A	3		6.31 42.35		3	400 A	4"	3-#600, 1-#600, 1-#3	3/1/1	1	KP1A	10
11										4.86 45.71								12
13								14.30 0.00										14
15	RP1	1	3/1/1	3-#4/0, 1-#4/0, 1-#4	2-1/2"	225 A	3		14.58 0.00		3	30 A	--	--	--	--	SPD	16
17										12.96 0.00								18
19								1.40 --			1	--	--	--	--	--	SPACE	20
21	FPP1	1	3/1/1	3-#1, 1-#1, 1-#8	1-1/2"	100 A	3		1.40 --		1	--	--	--	--	--	SPACE	22
23										0.70 --	1	--	--	--	--	--	SPACE	24
25	SPACE	--	--	--	--	--	1	-- --			1	--	--	--	--	--	SPACE	26
27	SPACE	--	--	--	--	--	1		-- --		1	--	--	--	--	--	SPACE	28
29	SPACE	--	--	--	--	--	1			-- --	1	--	--	--	--	--	SPACE	30
31	SPACE	--	--	--	--	--	1	-- 0.00										32
33	SPACE	--	--	--	--	--	1		-- 0.00		3	20 A	--	--	--[1]	--	SPARE	34
35	SPARE	--	--	--	--	20 A	1			0.00 0.00								36
37	SPARE	--	--	--	--	20 A	1	0.00 0.00			1	20 A	--	--	--	--	SPARE	38
39	SPARE	--	--	--	--	20 A	1		0.00 0.00		1	20 A	--	--	--	--	SPARE	40
41	SPARE	--	--	--	--	20 A	1			0.00 0.00	1	20 A	--	--	--	--	SPARE	42
						TOTAL LOAD:		74.81 kVA	76.51 kVA	77.24 kVA								
						TOTAL AMPS:		623 A	640 A	646 A								

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
Electric Clothes Dryer	3600 VA	100.00%	3600 VA		
HVAC	25939 VA	100.00%	25939 VA	**Total Conn. Load:**	229 kVA
Kitchen Equipment - Non-Dwelling Unit	106150 VA	65.00%	68997 VA	**Total Est. Demand:**	157 kVA
RECEPTACLE	77844 VA	56.42%	43922 VA	**Total Conn.:**	634 A
Power	2500 VA	100.00%	2500 VA	**Total Est. Demand:**	437 A
DATA EQUIPMENT	8320 VA	100.00%	8320 VA		
FIRE PROTECTION	4200 VA	100.00%	4200 VA		

Notes:
PROVIDE LOCKABLE RED LIFE SAFETY CIRCUIT BREAKER FOR FIRE PROTECTION POWER PANEL CIRCUIT (19, 21, 23).

FPP1

LOCATION: ELECTRICAL 127 | **VOLTS:** 120/208 Wye | **A.I.C. Rating:** 22K
SUPPLY FROM: PP1 | **PHASES:** 3 | **Mains Type:** MCB
MOUNTING: Surface | **WIRES:** 4 | **Mains Rating:** 100 A
ENCLOSURE: Type 1 | **MCB Rating:** 100 A

CKT	DESCRIPTION	SETS	NO	SIZE	C	A	P	A	B	C	P	A	C	SIZE	NO	SETS	DESCRIPTION	CKT
1	FMCU	1	1/1/1	1-#12, 1-#12, 1-#12	3/4"	20 A	1	0.70 0.70			1	20 A	3/4"	1-#12, 1-#12, 1-#12	1/1/1	1	FTR	2
3	LOC	1	1/1/1	1-#10, 1-#10, 1-#10	3/4"	20 A	1		0.70 0.70		1	20 A	3/4"	1-#10, 1-#10, 1-#10	1/1/1	1	FAA	4
5	TSC	1	1/1/1	1-#12, 1-#12, 1-#12	3/4"	20 A	1			0.70 --	1	--	--	--	--	--	SPACE	6
7	SPACE	--	--	--	--	--	1	-- --			1	--	--	--	--	--	SPACE	8
9	SPACE	--	--	--	--	--	1		-- --		1	--	--	--	--	--	SPACE	10
11	SPACE	--	--	--	--	--	1			-- --	1	--	--	--	--	--	SPACE	12
13	SPACE	--	--	--	--	--	1	-- --			1	--	--	--	--	--	SPACE	14
15	SPACE	--	--	--	--	--	1		-- --		1	--	--	--	--	--	SPACE	16
17	SPACE	--	--	--	--	--	1			-- --	1	--	--	--	--	--	SPACE	18
19	SPACE	--	--	--	--	--	1	-- --			1	--	--	--	--	--	SPACE	20
21	SPACE	--	--	--	--	--	1		-- --		1	--	--	--	--	--	SPACE	22
23	SPACE	--	--	--	--	--	1			-- --	1	--	--	--	--	--	SPACE	24
25	SPACE	--	--	--	--	--	1	-- --			1	--	--	--	--	--	SPACE	26
27	SPACE	--	--	--	--	--	1		-- --		1	--	--	--	--	--	SPACE	28
29	SPACE	--	--	--	--	--	1			-- --	1	--	--	--	--	--	SPACE	30
31	SPACE	--	--	--	--	--	1	-- --			1	--	--	--	--	--	SPACE	32
33	SPARE	--	--	--	--	20 A	1		0.00 --		1	--	--	--	--	--	SPACE	34
35	SPARE	--	--	--	--	20 A	1			0.00 0.00	1	20 A	--	--	--	--	SPARE	36
37	SPARE	--	--	--	--	20 A	1	0.00 0.00			1	20 A	--	--	--	--	SPARE	38
39	SPARE	--	--	--	--	20 A	1		0.00 0.00		1	20 A	--	--	--	--	SPARE	40
41	SPARE	--	--	--	--	20 A	1			0.00 0.00	1	20 A	--	--	--	--	SPARE	42
						TOTAL LOAD:		1.40 kVA	1.40 kVA	0.70 kVA								
						TOTAL AMPS:		13 A	13 A	6 A								

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
FIRE PROTECTION	3500 VA	100.00%	3500 VA		
				Total Conn. Load:	4 kVA
				Total Est. Demand:	4 kVA
				Total Conn.:	10 A
				Total Est. Demand:	10 A

Notes:

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

ISSUE DATE: AUGUST 29, 2025
SOLICITATION NO.: W912DS23F0031
CONTRACT NO.: W912DS19D0007

DESIGNED BY: K.SCHNEDLER
DRAWN BY: K. SCHNEDLER
CHECKED BY: M. FIELD
SUBMITTED BY: Y. BARRETT
SIZE: ANSI D

US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK, NY 10278

CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
PROJECT NO. 75662

ELECTRICAL - PANEL SCHEDULES

SHEET ID

EP701

MP1

LOCATION: MECHANICAL 114
SUPPLY FROM: MAIN SWBD
MOUNTING: Surface
ENCLOSURE: Type 1

VOLTS: 480/277 Wye
PHASES: 3
WIRES: 4

A.I.C. Rating: 65K
Mains Type: MCB
Mains Rating: 600 A
MCB Rating: 600 A

CKT	DESCRIPTION	SE...	NO	SIZE	C	A	P	A		B		C		P	A	C	SIZE	NO	SE...	DESCRIPTION	CKT
1	CUH-1	1	1/1/1	1-#12, 1-#12, 1-#12	3/4"	15 A	1	1.88	5.63					1	25 A	3/4"	1-#10, 1-#10, 1-#10	1/1/1	1	VAV-3	2
3	VAV-9	1	1/1/1	1-#12, 1-#12, 1-#12	3/4"	15 A	1			3.13	5.63			1	25 A	3/4"	1-#8, 1-#8, 1-#8	1/1/1	1	VAV-5	4
5	VAV-2, VAV-4	1	1/1/1	1-#10, 1-#10, 1-#10	3/4"	30 A	1					3.88	6.00	1	30 A	3/4"	1-#8, 1-#8, 1-#8	1/1/1	1	VAV-14, VAV-15	6
7	VAV-8	1	1/1/1	1-#6, 1-#6, 1-#6	3/4"	30 A	1	6.63	7.00					1	30 A	3/4"	1-#6, 1-#6, 1-#6	1/1/1	1	VAV-6	8
9	VAV-7	1	1/1/1	1-#8, 1-#8, 1-#8	3/4"	30 A	1			6.50	7.88			1	30 A	3/4"	1-#8, 1-#8, 1-#8	1/1/1	1	VAV-11	10
11	VAV-1	1	1/1/1	1-#8, 1-#8, 1-#10	3/4"	40 A	1					10.50	10.50	1	40 A	3/4"	1-#8, 1-#8, 1-#10	1/1/1	1	VAV-10	12
13	VAV-12	1	1/1/1	1-#8, 1-#8, 1-#10	3/4"	35 A	1	8.75	1.92												14
15	VAV-13	1	1/1/1	1-#8, 1-#8, 1-#10	3/4"	35 A	1			6.75	1.21			3	125 A	1 1/2"	3-#1, 1-#6	3/0/1	1	MP2 (VIA T2)	16
17												0.83	0.06								18
19	MAU-1	1	3/1/1	3-#12, 1-#12, 1-#12	3/4"	15 A	3	0.83	1.25												20
21										0.83	1.25			3	15 A	3/4"	3-#12, 1-#12, 1-#12	3/1/1	1	UH-1	22
23												1.55	1.25								24
25	EF-2, EF-3, EF-4	1	3/1/1	3-#10, 1-#10, 1-#10	3/4"	30 A	3	1.55	1.55												26
27										1.55	1.55			3	15 A	3/4"	3-#12, 1-#12, 1-#12	3/1/1	1	CHWP-1	28
29												1.55	1.55								30
31	CHWP-2	1	3/1/1	3-#12, 1-#12, 1-#12	3/4"	15 A	3	1.55	31.25												32
33										1.55	31.25			3	150 A	2"	3-#3/0, 1-#6	3/0/1	1	DWH-1	34
35												25.00	31.25								36
37	DH-1	1	3/1/1	3-#1, 1-#1, 1-#6	2"	125 A	3	25.00	1.73												38
39										25.00	1.73			3	20 A	3/4"	3-#12, 1-#12	3/0/1	1	BH-1	40
41												10.42	1.73								42
43	DH-2	1	3/1/1	3-#4, 1-#4, 1-#8	1"	70 A	3	10.42	--					1	--	--	--	--	--	SPACE	44
45										10.42	0.00			1	20 A	--	--	--	--	SPARE	46
47	SPARE	--	--	--	--	20 A	1					0.00	0.00	1	20 A	--	--	--	--	SPARE	48
49	SPARE	--	--	--	--	20 A	1	0.00	0.00					1	20 A	--	--	--	--	SPARE	50
51	SPARE	--	--	--	--	20 A	1			0.00	0.00			1	20 A	--	--	--	--	SPARE	52
53	SPARE	--	--	--	--	20 A	1					0.00	0.00	1	20 A	--	--	--	--	SPARE	54
					TOTAL LOAD:			106.93 kVA		106.22 kVA		106.07 kVA									
					TOTAL AMPS:			386 A		384 A		383 A									

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
HVAC	310114 VA	100.00%	310114 VA		
Other	1409 VA	100.00%	1409 VA	**Total Conn. Load:**	319 kVA
Power	7703 VA	100.00%	7703 VA	**Total Est. Demand:**	319 kVA
				Total Conn.:	384 A
				Total Est. Demand:	384 A

Notes:

MP2

LOCATION: MECHANICAL 114
SUPPLY FROM: T2
MOUNTING: Surface
ENCLOSURE: Type 1

VOLTS: 120/208 Wye
PHASES: 3
WIRES: 4

A.I.C. Rating: 22K
Mains Type: MCB
Mains Rating: 225 A
MCB Rating: 225 A

CKT	DESCRIPTION	SETS	NO	SIZE	C	A	P	A		B		C		P	A	C	SIZE	NO	SETS	DESCRIPTION	CKT
1	EF-1	1	1/1/1	1-#12, 1-#12, 1-#12	3/4"	20 A	1	0.47	1.18					1	15 A	3/4"	1-#12, 1-#12, 1-#12	1/1/1	1	HRP-1	2
3	EF-6	1	1/1/1	1-#12, 1-#12, 1-#12	3/4"	20 A	1			0.23	0.03										4
5	CU-1/ACCU-1	1	2/1/1	2-#10, 1-#10, 1-#10	3/4"	25 A	2					0.03	0.03	2	25 A	3/4"	2-#10, 1-#10, 1-#10	2/1/1	1	CU-2/ACCU-2	6
7								0.03	0.25												8
9	EF-5	1	1/1/1	1-#12, 1-#12, 1-#12	3/4"	15 A	1			0.70	0.25			2	15 A	3/4"	2-#12, 1-#12, 1-#12	2/1/1	1	P-1	10
11	SPACE	--	--	--	--	--	1					--	--	1	--	--	--	--	--	SPACE	12
13	SPACE	--	--	--	--	--	1	--	--					1	--	--	--	--	--	SPACE	14
15	SPACE	--	--	--	--	--	1			--	--			1	--	--	--	--	--	SPACE	16
17	SPACE	--	--	--	--	--	1					--	--	1	--	--	--	--	--	SPACE	18
19	SPACE	--	--	--	--	--	1	--	--					1	--	--	--	--	--	SPACE	20
21	SPACE	--	--	--	--	--	1			--	--			1	--	--	--	--	--	SPACE	22
23	SPACE	--	--	--	--	--	1					--	--	1	--	--	--	--	--	SPACE	24
25	SPACE	--	--	--	--	--	1	--	--					1	--	--	--	--	--	SPACE	26
27	SPACE	--	--	--	--	--	1			--	--			1	--	--	--	--	--	SPACE	28
29	SPACE	--	--	--	--	--	1					--	--	1	--	--	--	--	--	SPACE	30
31	SPACE	--	--	--	--	--	1	--	--					1	--	--	--	--	--	SPACE	32
33	SPACE	--	--	--	--	--	1			--	--			1	--	--	--	--	--	SPACE	34
35	SPARE	--	--	--	--	20 A	1					0.00	--	1	--	--	--	--	--	SPACE	36
37	SPARE	--	--	--	--	20 A	1	0.00	0.00					1	20 A	--	--	--	--	SPARE	38
39	SPARE	--	--	--	--	20 A	1			0.00	0.00			1	20 A	--	--	--	--	SPARE	40
41	SPARE	--	--	--	--	20 A	1					0.00	0.00	1	20 A	--	--	--	--	SPARE	42
					TOTAL LOAD:			1.92 kVA		1.21 kVA		0.06 kVA									
					TOTAL AMPS:			17 A		12 A		0 A									

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
HVAC	612 VA	100.00%	612 VA		
Other	1409 VA	100.00%	1409 VA	**Total Conn. Load:**	3 kVA
Power	1166 VA	100.00%	1166 VA	**Total Est. Demand:**	3 kVA
				Total Conn.:	9 A
				Total Est. Demand:	9 A

Notes:

US Army Corps of Engineers ®

DATE | DESCRIPTION | MARK

ISSUE DATE: AUGUST 29, 2025
SOLICITATION NO.: W912DS23F0031
CONTRACT NO.: W912DS19D0007

DESIGNED BY: K.SCHNEIDLER
DRAWN BY: K. SCHNEIDLER
CHECKED BY: M.HERMAN
SUBMITTED BY: Y. BARRETT
SIZE: ANSI D

US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK NY 10278

CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
PROJECT NO. 75662

ELECTRICAL - PANEL SCHEDULES

SHEET ID

EP702

LP1

LOCATION: ELECTRICAL 127
SUPPLY FROM: MAIN SWBD
MOUNTING: Surface
ENCLOSURE: Type 1

VOLTS: 480/277 Wye
PHASES: 3
WIRES: 4

A.I.C. Rating: 22K
Mains Type: MCB
Mains Rating: 100 A
MCB Rating: 100 A

CKT	DESCRIPTION	SETS	NO	SIZE	C	A	P	A		B		C		P	A	C	SIZE	NO	SETS	DESCRIPTION	CKT
1	REC 005, WAIT 002, VEST 001, ISO 005A & 005B	1	1/1/1	1-#12, 1-#12, 1-#12	3/4"	20 A	1	0.10	0.28					1	20 A	3/4"	1-#12, 1-#12, 1-#12	1/1/1	1	EXT ENTRANCE LIGHTS	2
3	TRAIN RM 101, LOUNGE 103, STOR 002C & 101A	1	1/1/1	1-#12, 1-#12, 1-#12	3/4"	20 A	1			0.14	0.42			1	20 A	3/4"	1-#12, 1-#12, 1-#12	1/1/1	1	KITCHEN	4
5	EXIT SIGNS	1	1/1/1	1-#12, 1-#12, 1-#12	3/4"	20 A	1					0.16	0.36	1	20 A	3/4"	1-#12, 1-#12, 1-#12	1/1/1	1	OFF 004, 102, 104, JC 106, STOR 004A, RR 002B,...	6
7	EXT BUILDING	1	1/1/1	1-#12, 1-#12, 1-#12	3/4"	20 A	1	0.24	0.53					1	20 A	3/4"	1-#12, 1-#12, 1-#12	1/1/1	1	ACTIVITY RM 109, STOR 109B & 119	8
9	MECH RM, ELEC RM, LAUNDRY, RECYCLE	1	1/1/1	1-#12, 1-#12, 1-#12	3/4"	20 A	1			0.45	0.68			1	20 A	3/4"	1-#12, 1-#12, 1-#12	1/1/1	1	ACTIVITY RM 130, STOR 130B, TOILET 128	10
11	CORRIDOR	1	1/1/1	1-#12, 1-#12, 1-#12	3/4"	20 A	1					0.48	0.53	1	20 A	3/4"	1-#12, 1-#12, 1-#12	1/1/1	1	ACTIVITY RM 111, STOR 121 &111B	12
13	ACTIVITY RM 105, MOTHER'S 107, STOR 105B	1	1/1/1	1-#12, 1-#12, 1-#12	3/4"	20 A	1	0.54	0.55					1	20 A	3/4"	1-#12, 1-#12, 1-#12	1/1/1	1	ACTIVITY RM 115, TOILET 113, STOR 115B	14
15	ACTIVITY RM 132, CCTV 117, STOR 123 & 132B	1	1/1/1	1-#12, 1-#12, 1-#12	3/4"	20 A	1			0.69	0.70			1	20 A	3/4"	1-#12, 1-#12, 1-#12	1/1/1	1	ACTIVITY RM 122, STOR 122B, 124 & 134	16
17	ACTIVITY RM 126, STOR 126B & 136	1	1/1/1	1-#12, 1-#12, 1-#12	3/4"	20 A	1					0.66	0.85	1	20 A	3/4"	1-#12, 1-#12, 1-#12	1/1/1	1	ACTIVITY RM 118, STOR 118B	18
19	SE SITE LIGHTING	1	1/1/1	1-#12, 1-#12, 1-#12	1"	20 A	1	0.56	0.64					1	20 A	1"	1-#12, 1-#12, 1-#12	1/1/1	1	NW SITE LIGHTING	20
21														1	--	--	--	--	--	SPACE	22
23	SPD	--	--	--	--	30 A	3					0.00	--	1	--	--	--	--	--	SPACE	24
25								0.00	--					1	--	--	--	--	--	SPACE	26
27	SPACE	--	--	--	--	--	1			--	--			1	--	--	--	--	--	SPACE	28
29	SPACE	--	--	--	--	--	1					--	--	1	--	--	--	--	--	SPACE	30
31	SPACE	--	--	--	--	--	1	--	--					1	--	--	--	--	--	SPACE	32
33	SPACE	--	--	--	--	--	1			--	--			1	--	--	--	--	--	SPACE	34
35	SPARE	--	--	--	--	20 A	1					0.00	--	1	--	--	--	--	--	SPACE	36
37	SPARE	--	--	--	--	20 A	1	0.00	0.00					1	20 A	--	--	--	--	SPARE	38
39	SPARE	--	--	--	--	20 A	1			0.00	0.00			1	20 A	--	--	--	--	SPARE	40
41	SPARE	--	--	--	--	20 A	1					0.00	0.00	1	20 A	--	--	--	--	SPARE	42
					TOTAL LOAD:			3.41 kVA		3.04 kVA		3.02 kVA									
					TOTAL AMPS:			12 A		11 A		11 A									

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
Lighting - Exterior	280 VA	125.00%	350 VA		
Lighting	9182 VA	100.00%	9182 VA	**Total Conn. Load:**	9 kVA
				Total Est. Demand:	10 kVA
				Total Conn.:	11 A
				Total Est. Demand:	11 A

Notes:

KP1A

LOCATION: ELECTRICAL 127
SUPPLY FROM: PP1
MOUNTING: Surface
ENCLOSURE: Type 1

VOLTS: 120/208 Wye
PHASES: 3
WIRES: 4

A.I.C. Rating:
Mains Type: MCB
Mains Rating: 400 A
MCB Rating: 400 A

CKT	DESCRIPTION	SETS	NO	SIZE	C	A	P	A		B		C		P	A	C	SIZE	NO	SETS	DESCRIPTION	CKT
1	SPARE	--	--	--	--	20 A	1	0.00	1.80					1	20 A	3/4"	1-#10, 1-#10, 1-#10	1/1/1	1	EXHAUST HOOD	2
3	KITCHEN COVN GFCI REC	1	1/1/1	1-#12, 1-#12, 1-#12	3/4"	20 A	1			0.72	0.16			1	20 A	1"	1-#12, 1-#12, 1-#12	1/1/1	1	COOLER REFRIGERATION SYSTEM...	4
5	FIRE SUPRESSION SYSTEM	1	1/1/1	1-#8, 1-#8, 1-#8	3/4"	20 A	1					1.80	2.40	1	25 A	3/4"	1-#8, 1-#8, 1-#8	1/1/1	1	WALK IN FREEZER	6
7	WALK IN COOLER	1	1/1/1	1-#8, 1-#8, 1-#8	3/4"	25 A	1	2.40	0.96					1	20 A	3/4"	1-#10, 1-#10, 1-#10	1/1/1	1	20 QT BANCH MIXER	8
9	1- DOOR REACH-IN REFRIGERATOR	1	1/1/1	1-#12, 1-#12, 1-#12	3/4"	20 A	1			0.62	1.20			1	20 A	3/4"	1-#12, 1-#12, 1-#12	1/1/1	1	UNDERCOUNTER ICE MAKER	10
11												7.08	3.07								12
13	6 BURNER RANGE W/ OVEN BASE	1	3/0/1	3-#4, 1-#8	1-1/4"	70 A	3	7.08	3.07					3	35 A	1"	3-#8, 1-#10	3/0/1	1	BUILT-IN BOOSTER HEATER	14
15										7.08	3.07										16
17	SHUNT TRIP	--	--	--	--	--	1					--	0.38								18
19	SPARE	--	--	--	--	20 A	1	0.00	0.38					3	15 A		3-#12, 1-#12	3/0/1	1	SCRAPPER/COLLECTOR	20
21	SPARE	--	--	--	--	20 A	1			0.00	0.38										22
23												4.50	9.33								24
25	SINK HEATER	1	3/0/1	3-#6, 1-#10	3/4"	50 A	3	4.50	9.33					3	80 A	1-1/4"	3-#3, 1-#8	3/0/1	1	TOP COMBINATION OVEN W/ FILTER	26
27										4.50	9.33										28
29												0.08	--	1	--	--	--	--	--	SHUNT TRIP	30
31	REMOTE CONDENSING UNIT (COOLER)	1	3/0/1	3-#12, 1-#12	3/4"	20 A	3	0.08	3.23												32
33										0.08	3.23			3	35 A	1"	3-#8, 1-#10	3/0/1	1	DISHWASHER	34
35												0.68	3.23								36
37	AIR CURTAIN	1	2/0/1	2-#12, 1-#12	3/4"	20 A	2	0.68	1.22												38
39	SPARE	--	--	--	--	20 A	1			0.00	1.22			2	20 A		2-#12, 1-#12	2/0/1	1	FREEZER REFRIGERATION SYSTEM (EVAPORATOR)	40
41												1.42	2.40	1	20 A		1-#10, 1-#10, 1-#10	1/1/1	1	HEAT TRACE	42
43	REMOTE CONDENSING UNIT (FREEZER)	1	3/0/1	3-#12, 1-#12	3/4"	20 A	3	1.42	9.33												44
45										1.42	9.33			3	80 A	1-1/4"	3-#3, 1-#8	3/0/1	1	BOTTOM COMBINATION OVEN W/ FILTER	46
47	SPARE	--	--	--	--	20 A	1					0.00	9.33								48
49	SPARE	--	--	--	--	20 A	1	0.00	--					1	--	--	--	--	--	SHUNT TRIP	50
51	SPARE	--	--	--	--	20 A	1			0.00	0.00			1	20 A	--	--	--	--	SPARE	52
53	SPARE	--	--	--	--	20 A	1					0.00	0.00	1	20 A	--	--	--	--	SPARE	54
					TOTAL LOAD:			45.48 kVA		42.35 kVA		45.71 kVA									
					TOTAL AMPS:			383 A		353 A		385 A									

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
HVAC	25883 VA	100.00%	25883 VA		
Kitchen Equipment - Non-Dwelling Unit	104150 VA	65.00%	67697 VA	**Total Conn. Load:**	134 kVA
RECEPTACLE	3504 VA	100.00%	3504 VA	**Total Est. Demand:**	97 kVA
				Total Conn.:	371 A
				Total Est. Demand:	269 A

Notes:

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

ISSUE DATE: AUGUST 29, 2025
SOLICITATION NO.: W912DS24F0031
CONTRACT NO.: W912DS19D0007

DESIGNED BY: K.SCHNEIDLER
DRAWN BY: K. SCHNEIDLER
CHECKED BY: M. GRIDLEY
SUBMITTED BY: Y. BARRETT
SIZE: ANSI D

US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK, NY 10278

CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
PROJECT NO. 75662

ELECTRICAL - PANEL SCHEDULES

SHEET ID

EP703

RP1

LOCATION: ELECTRICAL 127
SUPPLY FROM: PP1
MOUNTING: Surface
ENCLOSURE: Type 1

VOLTS: 120/208 Wye
PHASES: 3
WIRES: 4

A.I.C. Rating: 22K
Mains Type: MCB
Mains Rating: 225 A
MCB Rating: 225 A

CKT	DESCRIPTION	SETS	NO	SIZE	C	A	P	A		B		C		P	A	C	SIZE	NO	SETS	DESCRIPTION	CKT
1	LOUNGE 103 REFRIGERATOR	1	1/1/1	1-#12, 1-#12, 1-#12	3/4"	20 A	1	0.18	0.36					1	20 A	3/4"	1-#12, 1-#12, 1-#12	1/1/1	1	LOUNGE 103 GFCI REC	2
3	ACTIVITY RM 105 REC	1	1/1/1	1-#10, 1-#10, 1-#10	3/4"	20 A	1			0.72	1.08			1	20 A	1"	1-#6, 1-#6, 1-#6	1/1/1	1	ACTIVITY RM 109 REC	4
5	ACTIVITY RM 109 REC	1	1/1/1	1-#8, 1-#8, 1-#8	1"	20 A	1					0.72	1.08	1	20 A	1"	1-#6, 1-#6, 1-#6	1/1/1	1	ACTIVITY RM 111 REC	6
7	ACTIVITY RM 105 REC	1	1/1/1	1-#8, 1-#8, 1-#8	1"	20 A	1	1.08	0.54					1	20 A	3/4"	1-#12, 1-#12, 1-#12	1/1/1	1	LOUNGE 103 REC	8
9	NURSING MOTHER'S RM 107 REC	1	1/1/1	1-#8, 1-#8, 1-#8	3/4"	20 A	1			1.14	1.20			1	20 A	1"	1-#6, 1-#6, 1-#6	1/1/1	1	STOR 123, 132B	10
11	TOILET 005B & JC 106 GFCI REC	1	1/1/1	1-#10, 1-#10, 1-#10	3/4"	20 A	1					0.72	0.72	1	20 A	3/4"	1-#12, 1-#12, 1-#12	1/1/1	1	TOILET 002B, STOR 004A, WAIT 002 GFCI REC	12
13	ACTIVITY RM 115 REC	1	1/1/1	1-#8, 1-#8, 1-#8	1"	20 A	1	0.72	3.00					1	20 A	1"	1-#3, 1-#3, 1-#3	1/1/1	1	NE CORRIDOR REC	14
15	RECEPTION REC	1	1/1/1	1-#8, 1-#8, 1-#8	3/4"	20 A	1			1.74	0.90			1	20 A	1"	1-#8, 1-#8, 1-#8	1/1/1	1	ACTIVITY RM 115 GFCI REC	16
17	TRAINING RM REC	1	1/1/1	1-#10, 1-#10, 1-#10	3/4"	20 A	1					0.90	0.90	1	20 A	3/4"	1-#10, 1-#10, 1-#10	1/1/1	1	ACTIVITY RM 132 GFCI REC	18
19	ACTIVITY RM 111 REC	1	1/1/1	1-#6, 1-#6, 1-#6	1"	20 A	1	0.90	0.90					1	20 A	3/4"	1-#10, 1-#10, 1-#10	1/1/1	1	ACTIVITY RM 105 GFCI REC	20
21	ACTIVITY RM 109 GFCI REC	1	1/1/1	1-#8, 1-#8, 1-#8	1"	20 A	1			0.90	1.08			1	20 A	1"	1-#8, 1-#8, 1-#8	1/1/1	1	TRAINING RM REC	22
23	ACTIVITY RM 111 GFCI REC	1	1/1/1	1-#6, 1-#6, 1-#6	1"	20 A	1					1.08	2.34	1	20 A	3/4"	1-#6, 1-#6, 1-#6	1/1/1	1	WAITING AREA, VEST, & PVM REC	24
25	TRAINING RM 101 & STOR 101A REC	1	1/1/1	1-#6, 1-#6, 1-#6	1"	20 A	1	1.92	1.08					1	20 A	3/4"	1-#10, 1-#10, 1-#10	1/1/1	1	RECEPTION REC	26
27	STOR 119, 109B, 105B REC	1	1/1/1	1-#6, 1-#6, 1-#6	1"	20 A	1			1.80	1.26			1	20 A	3/4"	1-#10, 1-#10, 1-#10	1/1/1	1	DIRECTORS OFFICE 102	28
29	STOR 121, 111B, 115B REC	1	1/1/1	1-#4, 1-#4, 1-#4	1"	20 A	1					1.80	1.44	1	20 A	3/4"	1-#8, 1-#8, 1-#8	1/1/1	1	OPEN OFFICE 004 REC	30
31	ASSISTANT DIR OFFICE 104 & STOR 004A REC	1	1/1/1	1-#8, 1-#8, 1-#8	3/4"	20 A	1	1.86	1.08					1	20 A	1"	1-#6, 1-#6, 1-#6	1/1/1	1	ACTIVITY RM 115 REC	32
33	ACTIVITY RM 132 REC	1	1/1/1	1-#8, 1-#8, 1-#8	1"	20 A	1			1.08	0.18			1	20 A	3/4"	1-#12, 1-#12, 1-#12	1/1/1	1	MECH EQUIP ROOF REC	34
35	ACTIVITY RM 132 REC	1	1/1/1	1-#8, 1-#8, 1-#8	1"	20 A	1					1.08	0.18	1	20 A	3/4"	1-#12, 1-#12, 1-#12	1/1/1	1	STAFF LOUNGE VEND	36
37	STAFF LOUNGE VEND	1	1/1/1	1-#12, 1-#12, 1-#12	3/4"	20 A	1	0.18	0.50					1	20 A	3/4"	1-#12, 1-#12, 1-#12	1/1/1	1	DOOR LOCK	38
39	DOOR LOCK	1	1/1/1	1-#12, 1-#12, 1-#12	3/4"	20 A	1			0.50	1.00			1	20 A	1"	1-#10, 1-#10, 1-#10	1/1/1	1	DOOR POWER	40
41	SPACE	--	--	--	--	--	1					--	--	1	--	--	--	--	--	SPACE	42
43	SPACE	--	--	--	--	--	1	--	--					1	--	--	--	--	--	SPACE	44
45	SPARE	--	--	--	--	20 A	1			0.00	--			1	--	--	--	--	--	SPACE	46
47	SPARE	--	--	--	--	20 A	1					0.00	0.00	1	20 A	--	--	--	--	SPARE	48
49	SPARE	--	--	--	--	20 A	1	0.00	0.00					1	20 A	--	--	--	--	SPARE	50
51	SPARE	--	--	--	--	20 A	1			0.00	0.00			1	20 A	--	--	--	--	SPARE	52
53	SPARE	--	--	--	--	20 A	1					0.00	0.00	1	20 A	--	--	--	--	SPARE	54
						TOTAL LOAD:		14.30 kVA		14.58 kVA		12.96 kVA									
						TOTAL AMPS:		121 A		123 A		108 A									

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
Kitchen Equipment - Non-Dwelling Unit	2000 VA	80.00%	1600 VA		
RECEPTACLE	39840 VA	62.55%	24920 VA	Total Conn. Load:	42 kVA
				Total Est. Demand:	27 kVA
				Total Conn.:	116 A
				Total Est. Demand:	74 A

Notes:

RP2

LOCATION: ELECTRICAL 127
SUPPLY FROM: PP1
MOUNTING: Surface
ENCLOSURE: Type 1

VOLTS: 120/208 Wye
PHASES: 3
WIRES: 4

A.I.C. Rating: 22K
Mains Type: MCB
Mains Rating: 225 A
MCB Rating: 225 A

CKT	DESCRIPTION	SETS	NO	SIZE	C	A	P	A		B		C		P	A	C	SIZE	NO	SETS	DESCRIPTION	CKT
1	EXT GFCI REC	1	1/1/1	1-#12, 1-#12, 1-#12	3/4"	20 A	1	0.36	1.08					1	20 A	3/4"	1-#10, 1-#10, 1-#10	1/1/1	1	ACTIVITY RM 126 GFCI REC	2
3	MECH AND ELEC RM REC	1	1/1/1	1-#12, 1-#12, 1-#12	3/4"	20 A	1			0.72	1.80			1	20 A	3/4"	1-#10, 1-#10, 1-#10	1/1/1	1	CLOTHES DRYER REC	4
5	ACTIVE PLAYRM 118 & STOR 118B REC	1	1/1/1	1-#12, 1-#12, 1-#12	3/4"	20 A	1					0.90	1.80	1	20 A	3/4"	1-#10, 1-#10, 1-#10	1/1/1	1	CLOTHES DRYER REC	6
7	OUTREACH RM 122 REC	1	1/1/1	1-#8, 1-#8, 1-#8	1"	20 A	1	1.26	0.72					1	20 A	3/4"	1-#12, 1-#12, 1-#12	1/1/1	1	OUTREACH RM 122 GFCI REC	8
9	WASHING MACHINE REC	1	1/1/1	1-#12, 1-#12, 1-#12	3/4"	20 A	1			0.72	0.90			1	20 A	1"	1-#8, 1-#8, 1-#8	1/1/1	1	ACTIVITY RM GFCI REC	10
11	WASHING MACHINE REC	1	1/1/1	1-#12, 1-#12, 1-#12	3/4"	20 A	1					0.90	3.00	1	20 A	3/4"	1-#6, 1-#6, 1-#6	1/1/1	1	SW CORRIDOR REC	12
13	ACTIVE PLAYRM 118 REC	1	1/1/1	1-#12, 1-#12, 1-#12	3/4"	20 A	1	0.90	1.08					1	20 A	3/4"	1-#10, 1-#10, 1-#10	1/1/1	1	OUTREACH RM 122 REC	14
15	STOR 134, 122B REC	1	1/1/1	1-#6, 1-#6, 1-#6	3/4"	20 A	1			2.40	1.08			1	20 A	1"	1-#6, 1-#6, 1-#6	1/1/1	1	EXT GFCI REC	16
17	STOR 136, 126B, & 130B REC	1	1/1/1	1-#8, 1-#8, 1-#8	3/4"	20 A	1					1.80	1.08	1	20 A	1"	1-#6, 1-#6, 1-#6	1/1/1	1	EXT GFCI REC	18
19	ACTIVITY RM 130 REC	1	1/1/1	1-#10, 1-#10, 1-#10	3/4"	20 A	1	1.08	1.08					1	20 A	3/4"	1-#10, 1-#10, 1-#10	1/1/1	1	ACTIVITY RM 126 REC	20
21	ACTIVITY RM 126 REC	1	1/1/1	1-#12, 1-#12, 1-#12	3/4"	20 A	1			1.08	0.72			1	20 A	3/4"	1-#12, 1-#12, 1-#12	1/1/1	1	LAUNDRY RM GFCI REC	22
23	ACTIVITY RM 130 REC	1	1/1/1	1-#8, 1-#8, 1-#8	1"	20 A	1					1.08	--	1	--	--	--	--	--	SPACE	24
25	30X60 MOBILE WORKTABLE	1	1/1/1	1-#12, 1-#12, 1-#12	3/4"	20 A	1	1.20	--					1	--	--	--	--	--	SPACE	26
27	30X72 MOBILE WORKTABLE	1	1/1/1	1-#12, 1-#12, 1-#12	3/4"	20 A	1			1.20	--			1	--	--	--	--	--	SPACE	28
29	30X72 MOBILE WORKTABLE	1	1/1/1	1-#12, 1-#12, 1-#12	3/4"	20 A	1					1.20	--	1	--	--	--	--	--	SPACE	30
31	SPACE	--	--	--	--	--	1	--	--					1	--	--	--	--	--	SPACE	32
33	SPACE	--	--	--	--	--	1			--	--			1	--	--	--	--	--	SPACE	34
35	SPARE	--	--	--	--	20 A	1					0.00	--	1	--	--	--	--	--	SPACE	36
37	SPARE	--	--	--	--	20 A	1	0.00	0.00					1	20 A	--	--	--	--	SPARE	38
39	SPARE	--	--	--	--	20 A	1			0.00	0.00			1	20 A	--	--	--	--	SPARE	40
41	SPARE	--	--	--	--	20 A	1					0.00	0.00	1	20 A	--	--	--	--	SPARE	42
						TOTAL LOAD:		8.76 kVA		10.62 kVA		11.76 kVA									
						TOTAL AMPS:		73 A		91 A		100 A									

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
Electric Clothes Dryer	3600 VA	100.00%	3600 VA		
RECEPTACLE	27540 VA	68.16%	18770 VA	Total Conn. Load:	31 kVA
				Total Est. Demand:	22 kVA
				Total Conn.:	86 A
				Total Est. Demand:	62 A

Notes:

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

ISSUE DATE: AUGUST 29, 2025
SOLICITATION NO.: W912DS23F0031
CONTRACT NO.: W912DS19D0007

DESIGNED BY: K.SCHNEDLER
DRAWN BY: K. SCHNEDLER
CHECKED BY: M. GIURGIU
SUBMITTED BY: Y. BARRETT
SIZE: ANSI D

US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK NY 10278

CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
PROJECT NO. 75662

ELECTRICAL - PANEL SCHEDULES

SHEET ID

EP704

TP1

LOCATION: COMMUNICATIONS 108
SUPPLY FROM: PP1
MOUNTING: SURFACE
ENCLOSURE: Type 1

VOLTS: 120/208 Wye
PHASES: 3
WIRES: 4

A.I.C. Rating: 22K
Mains Type: MCB
Mains Rating: 100 A
MCB Rating: 100 A

CKT	DESCRIPTION	SETS	NO	SIZE	C	A	P	A		B		C		P	A	C	SIZE	NO	SETS	DESCRIPTION	CKT
1	COMM RACK QUAD REC	1	1/1/1	1-#12, 1-#12, 1-#12	3/4"	20 A	1	0.18	0.18					1	20 A	3/4"	1-#12, 1-#12, 1-#12	1/1/1	1	COMM RACK QUAD REC	2
3	COMM 108 REC	1	1/1/1	1-#10, 1-#10, 1-#10	3/4"	20 A	1			4.20	2.08			2	30 A	3/4"	2-#10, 1-#10	2/0/1	1	COMM RACK	4
5	JUNCTION BOX - IDS PANEL	1	1/1/1	1-#12, 1-#12, 1-#12	3/4"	20 A	1					0.70	2.08								6
7	CU-3/ACCU-3	1	2/1/1	2-#10, 1-#10, 1-#10	3/4"	25 A	2	0.03	--					1	--	--	--	--	--	SPACE	8
9										0.03	--			1	--	--	--	--	--	SPACE	10
11	SPACE	--	--	--	--	--	1					--	2.08	2	30 A	3/4"	2-#10, 1-#10	2/0/1	1	COMM RACK	12
13								0.00	2.08												14
15	SPD	--	--	--	--	30 A	3			0.00	--			1	--	--	--	--	--	SPACE	16
17												0.00	--	1	--	--	--	--	--	SPACE	18
19	SPACE	--	--	--	--	--	1	--	--					1	--	--	--	--	--	SPACE	20
21	SPACE	--	--	--	--	--	1			--	--			1	--	--	--	--	--	SPACE	22
23	SPACE	--	--	--	--	--	1					--	--	1	--	--	--	--	--	SPACE	24
25	SPACE	--	--	--	--	--	1	--	--					1	--	--	--	--	--	SPACE	26
27	SPACE	--	--	--	--	--	1			--	--			1	--	--	--	--	--	SPACE	28
29	SPACE	--	--	--	--	--	1					--	--	1	--	--	--	--	--	SPACE	30
31	SPACE	--	--	--	--	--	1	--	--					1	--	--	--	--	--	SPACE	32
33	SPACE	--	--	--	--	--	1			--	--			1	--	--	--	--	--	SPACE	34
35	SPARE	--	--	--	--	20 A	1					0.00	--	1	--	--	--	--	--	SPACE	36
37	SPARE	--	--	--	--	20 A	1	0.00	0.00					1	20 A	--	--	--	--	SPARE	38
39	SPARE	--	--	--	--	20 A	1			0.00	0.00			1	20 A	--	--	--	--	SPARE	40
41	SPARE	--	--	--	--	20 A	1					0.00	0.00	1	20 A	--	--	--	--	SPARE	42
					TOTAL LOAD:			2.47 kVA		6.31 kVA		4.86 kVA									
					TOTAL AMPS:			21 A		56 A		44 A									

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
HVAC	56 VA	100.00%	56 VA		
RECEPTACLE	4560 VA	100.00%	4560 VA	**Total Conn. Load:**	14 kVA
DATA EQUIPMENT	8320 VA	100.00%	8320 VA	**Total Est. Demand:**	14 kVA
FIRE PROTECTION	700 VA	100.00%	700 VA	**Total Conn.:**	38 A
				Total Est. Demand:	38 A

Notes:

CCTV

LOCATION: CCTV EQUIPMENT 117
SUPPLY FROM: PP1
MOUNTING: Surface
ENCLOSURE: Type 1

VOLTS: 120/208 Wye
PHASES: 3
WIRES: 4

A.I.C. Rating: 22K
Mains Type: MCB
Mains Rating: 100 A
MCB Rating: 100 A

CKT	DESCRIPTION	SETS	NO	SIZE	C	A	P	A		B		C		P	A	C	SIZE	NO	SETS	DESCRIPTION	CKT
1	CCTV 117 REC	1	1/1/1	1-#12, 1-#12, 1-#12	3/4"	20 A	1	2.40	0.00					3	30 A	--	--	--	--	SPD	2
3	CCTV EQUIP RACK	1	2/1/1	2-#10, 1-#10, 1-#10	3/4"	30 A	2			1.25	0.00										4
5												1.25	0.00								6
7	SPACE	--	--	--	--	--	1	--	--					1	--	--	--	--	--	SPACE	8
9	SPACE	--	--	--	--	--	1			--	--			1	--	--	--	--	--	SPACE	10
11	SPACE	--	--	--	--	--	1					--	--	1	--	--	--	--	--	SPACE	12
13	SPACE	--	--	--	--	--	1	--	--					1	--	--	--	--	--	SPACE	14
15	SPACE	--	--	--	--	--	1			--	--			1	--	--	--	--	--	SPACE	16
17	SPACE	--	--	--	--	--	1					--	--	1	--	--	--	--	--	SPACE	18
19	SPACE	--	--	--	--	--	1	--	--					1	--	--	--	--	--	SPACE	20
21	SPACE	--	--	--	--	--	1			--	--			1	--	--	--	--	--	SPACE	22
23	SPACE	--	--	--	--	--	1					--	--	1	--	--	--	--	--	SPACE	24
25	SPACE	--	--	--	--	--	1	--	--					1	--	--	--	--	--	SPACE	26
27	SPACE	--	--	--	--	--	1			--	--			1	--	--	--	--	--	SPACE	28
29	SPACE	--	--	--	--	--	1					--	--	1	--	--	--	--	--	SPACE	30
31	SPACE	--	--	--	--	--	1	--	--					1	--	--	--	--	--	SPACE	32
33	SPACE	--	--	--	--	--	1			--	--			1	--	--	--	--	--	SPACE	34
35	SPARE	--	--	--	--	20 A	1					0.00	--	1	--	--	--	--	--	SPACE	36
37	SPARE	--	--	--	--	20 A	1	0.00	0.00					1	20 A	--	--	--	--	SPARE	38
39	SPARE	--	--	--	--	20 A	1			0.00	0.00			1	20 A	--	--	--	--	SPARE	40
41	SPARE	--	--	--	--	20 A	1					0.00	0.00	1	20 A	--	--	--	--	SPARE	42
					TOTAL LOAD:			2.40 kVA		1.25 kVA		1.25 kVA									
					TOTAL AMPS:			20 A		10 A		10 A									

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
RECEPTACLE	2400 VA	100.00%	2400 VA		
Power	2500 VA	100.00%	2500 VA	**Total Conn. Load:**	5 kVA
				Total Est. Demand:	5 kVA
				Total Conn.:	14 A
				Total Est. Demand:	14 A

Notes:

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

ISSUE DATE: AUGUST 29, 2025
SOLICITATION NO.: W912DS23F0031
CONTRACT NO.: W912DS19D0007

DESIGNED BY: K.SCHNEDLER
DRAWN BY: K. SCHNEDLER
CHECKED BY: M. CHEDAL
SUBMITTED BY: Y. BARRETT
SIZE: ANSI D

US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK, NY 10278

CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
PROJECT NO. 75662

ELECTRICAL - PANEL SCHEDULES

SHEET ID

EP705

HVAC AND PLUMBING EQUIPMENT CONNECTION SCHEDULE

EQUIPMENT TAG	ROOM NAME	ROOM NUMBER	VOLTAGE/ PHASE/ HERTZ	HP/KW	FLA	MCA	MOCP	SAFETY SWITCH FRAME/POLE/FUSE	SAFETY SWITCH ENCLOSURE (NEMA)	MANUFACTURER SUPPLIED STARTER/ CONTROLLER, UON	STARTER TYPE	RECEPTACLE CIRCUIT	REMARKS
ACCU-1	CCTV EQUIPMENT	117	208/1/60	0.04 HP	0.19	1	15	NOTE 6	-	-	-	CCTV-1	POWERED VIA CU-1
ACCU-2	ELECTRICAL ROOM	127	208/1/60	0.04 HP	0.19	1	15	NOTE 6	-	-	-	RP2-3	POWERED VIA CU-2
ACCU-3	COMMUNICATIONS	108	208/1/60	0.09 HP	0.27	1	15	NOTE 6	-	-	-	TP1-1	POWERED VIA CU-3
AHU-1	MECHANICAL ROOM	114	480/3/60	15 HP	-	-	-	60/3/40	NEMA 1	Y	VFD	RP2-3	
CH-1	MECHANICAL YARD	NA	460/3/60	-	-	112.7	125	200/3/125	NEMA 3R	Y	-	RP2-23	
CHWP-1	MECHANICAL ROOM	114	460/3/60	5 HP	-	-	-	30/3/15	NEMA 1	Y	VFD	RP2-3	
CHWP-2	MECHANICAL ROOM	114	460/3/60	5 HP	-	-	-	30/3/15	NEMA 1	Y	VFD	RP2-3	
HRP-1	MECHANICAL ROOM	114	120/1/60	1/2 HP	9.8	-	-	NOTE 3	-	N	-	RP2-3	
CU-1	MECHANICAL YARD	NA	208/1/60	0.06 HP	-	11	28	30/2/25	NEMA 3R	Y	-	RP2-23	
CU-2	MECHANICAL YARD	NA	208/1/60	0.06 HP	-	11	28	30/2/25	NEMA 3R	Y	-	RP2-23	
CU-3	MECHANICAL YARD	NA	208/1/60	0.12 HP	-	19	26	30/2/25	NEMA 3R	Y	-	RP2-23	
CUH-1	VESTIBULE	001	480/1/60	1.5 KW	-	-	-	30/2/15	-	Y	-	RP1-24	
DH-1	MECHANICAL ROOM	114	480/3/60	66 KW	-	-	-	200/3/125	NEMA 1	Y	-	RP2-2	
DH-2	MECHANICAL ROOM	114	480/3/60	31 KW	-	-	-	100/3/70	NEMA 1	Y	-	RP2-2	
EF-1	ROOF	NA	115/1/60	0.33 HP	-	-	-	NOTE 3	-	Y	-	RP1-34	
EF-2	ROOF	NA	460/3/60	1 HP	-	-	-	30/3/15	NEMA 1	Y	VFD	RP1-34	
EF-3	MECHANICAL ROOM	114	460/3/60	2.5 HP	-	-	-	30/3/15	NEMA 1	Y	VFD	RP2-3	
EF-4	MECHANICAL ROOM	114	460/3/60	2.5 HP	-	-	-	30/3/15	NEMA 1	Y	VFD	RP2-3	
EF-5	ELECTRICAL ROOM	127	120/1/60	.25 HP	-	-	-	NOTE 3	-	N	-	RP2-3	
EF-6	MECHANICAL ROOM	114	120/1/60	.25 HP	-	-	-	NOTE 3	-	N	-	RP2-3	
HUM-1	MECHANICAL ROOM	114	480/3/60	48 KW	-	-	-	200/3/100	NEMA 1	Y	-	RP2-3	
MAU-1	MECHANICAL ROOM	114	480/3/60	1.5 HP	-	-	-	30/3/15	NEMA 1	Y	VFD	RP2-3	
UH-1	MECHANICAL ROOM	114	480/3/60	3 KW	-	-	-	30/3/15	NEMA 1	Y	-	RP2-3	
VAV-1	ACTIVE PLAYROOM	118	277/1/60	7.1 KW	-	-	-	60/2/40	NEMA 1	Y	-	RP2-15	
VAV-2	OPEN OFFICE AREA	004	277/1/60	1.4 KW	-	-	-	30/2/15	NEMA 1	Y	-	RP1-30	
VAV-3	CORRIDOR	003	277/1/60	3.8 KW	-	-	-	30/2/25	NEMA 1	Y	-	RP1-24	
VAV-4	DIRECTOR'S OFFICE	102	277/1/60	1.2 KW	-	-	-	30/2/15	NEMA 1	Y	-	RP1-28	
VAV-5	INFANT/PRE-TODDLER ACTIVITY 04	105	277/1/60	4.3 KW	-	-	-	30/2/25	NEMA 1	Y	-	RP1-7	
VAV-6	INFANT/PRE-TODDLER ACTIVITY 01	111	277/1/60	4.7 KW	-	-	-	30/2/30	NEMA 1	Y	-	RP1-6	
VAV-7	INFANT/PRE-TODDLER ACTIVITY 02	115	277/1/60	4.5 KW	-	-	-	30/2/30	NEMA 1	Y	-	RP1-32	
VAV-8	INFANT/PRE-TODDLER ACTIVITY 03	109	277/1/60	4.5 KW	-	-	-	30/2/30	NEMA 1	Y	-	RP1-4	
VAV-9	STAFF LOUNGE	103	277/1/60	2.1 KW	-	-	-	30/2/15	NEMA 1	Y	-	RP1-8	
VAV-10	OUTREACH/TRANSITIONAL CARE ACTIVITY RM	122	277/1/60	7.1 KW	-	-	-	60/2/40	NEMA 1	Y	-	RP2-16	
VAV-11	PRESCHOOL/PRE-KINDERGARTEN ACTIVITY 01	132	277/1/60	5.2 KW	-	-	-	30/2/30	NEMA 1	Y	-	RP1-33	
VAV-12	PRESCHOOL/PRE-KINDERGARTEN ACTIVITY 02	130	277/1/60	6.0 KW	-	-	-	60/2/35	NEMA 1	Y	-	RP1-21	
VAV-13	PRESCHOOL/PRE-KINDERGARTEN ACTIVITY 03	126	277/1/60	5.4 KW	-	-	-	60/2/35	NEMA 1	Y	-	RP2-20	
VAV-14	RECEPTION	005	277/1/60	2.1 KW	-	-	-	30/2/15	NEMA 1	Y	-	RP1-15	
VAV-15	TRAINING ROOM	101	277/1/60	2.1 KW	-	-	-	30/2/15	NEMA 1	Y	-	RP1-25	
BH-1	KITCHEN	120	480/3/60	9 KW	-	-	-	30/3/20	NEMA 1	Y	-	KP1-3	
DWH-1	MECHANICAL ROOM	114	480/3/60	75 KW	-	-	-	200/3/150	NEMA 1	Y	-	RP2-3	
P-1	MECHANICAL ROOM	114	208/1/60	1/6 HP	-	-	-	30/2/15	NEMA 1	Y	-	RP2-4	

NOTES:
(1) FURNISHED AND INSTALLED BY DIVISION 26 UNLESS NOTED OTHERWISE. WHERE FUSE IS REQUIRED, PROVIDE FUSE PER MANUFACTURER RECOMMENDATIONS.
(2) FURNISH AND INSTALL WP/GFCI RECEPTACLE ON OR WITHIN 25' OF UNIT. REFER TO NEC 2023 FOR TAMPER-RESISTANT RECEPTACLE REQUIREMENTS.
(3) MOTOR RATED SWITCH WITH THERMAL OVERLOAD PROTECTION; PROVIDE PILOT LIGHT.
(4) VFDs SHALL BE PROVIDED BY SPECIFICATION 26 29 23.
(5) REFER TO SHEETS EP701-EP707 PANEL SCHEDULES.
(6) FED FROM ASSOCIATED CU. CONTRACTOR IS RESPONSIBLE TO PROVIDE WIRING AND PATHWAYS BETWEEN THE UNITS.

FIRE PROTECTION EQUIPMENT CONNECTION SCHEDULE

EQUIPMENT TAG	ROOM NAME	ROOM NUMBER	VOLTAGE/ PHASE/ HERTZ	HP/KW	FLA	MCA	MOCP	SAFETY SWITCH FRAME/POLE/FUSE	SAFETY SWITCH ENCLOSURE (NEMA)	MANUFACTURER SUPPLIED STARTER/ CONTROLLER, UON	RECEPTACLE CIRCUIT	REMARKS
FMCU	MECHANICAL ROOM	114	120/1/60	-	6	-	-	-	-	-	RP2-2	LOCKABLE LIFESAFETY CIRCUIT BREAKER
TSC	MECHANICAL ROOM	114	120/1/60	-	6	-	-	-	-	-	RP2-2	LOCKABLE LIFESAFETY CIRCUIT BREAKER
FTR	MECHANICAL ROOM	114	120/1/60	-	6	-	-	-	-	-	RP2-2	LOCKABLE LIFESAFETY CIRCUIT BREAKER
FAA	CORRIDOR	003	120/1/60	-	6	-	-	-	-	-	RP1-24	LOCKABLE LIFESAFETY CIRCUIT BREAKER
LOC	CORRIDOR	003	120/1/60	-	6	-	-	-	-	-	RP1-24	LOCKABLE LIFESAFETY CIRCUIT BREAKER

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

ISSUE DATE: AUGUST 29, 2025
SOLICITATION NO.: W912DS25F0031
CONTRACT NO.: W912DS15D0007

DESIGNED BY: K. SCHNEDLER
DRAWN BY: K. SCHNEDLER
CHECKED BY: K. KAUFFELD
SUBMITTED BY: Y. BARRETT
SIZE: ANSI D

US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK NY 10278

CHILD DEVELOPMENT CENTER
FORT HAMILTON, NEW YORK
PROJECT NO. 75662

ELECTRICAL - HVAC & EQUIPMENT SCHEDULE

SHEET ID

EP706

FOOD SERVICE EQUIPMENT SCHEDULE

DESCRIPTION	HP/KW	FLA	MCA	MOCP	CONNECTION	VOLTAGE	PHASE	COMMENTS
WALK-IN COOLER/FREEZER	-	(2) 20.0	-	-	JUNCTION BOX	120	1	
FREEZER REFRIGERATION SYSTEM (EVAPORATOR)	-	11.7	-	-	JUNCTION BOX	208	1	
REMOTE CONDENSING UNIT (FREEZER)	-	11.8	-	-	30/3/20	208	3	FUSED DISCONNECT SWITCH, NEMA 3R ENCLOSED
COOLER REFRIGERATION SYSTEM (EVAPORATOR)	-	1.3	-	-	JUNCTION BOX	120	1	
REMOTE CONDENSING UNIT (COOLER)	-	0.65	-	-	30/3/20	208	3	FUSED DISCONNECT SWITCH, NEMA 3R ENCLOSED
SINK HEATER	9 KW	37.5	-	-	JUNCTION BOX	208	3	
DISHWASHER	-	26.9	-	-	60/3/35	208	3	FUSED DISCONNECT SWITCH, NEMA 3R ENCLOSED
BUILT-IN BOOSTER HEATER	-	25.6	-	-	60/3/35	208	3	FUSED DISCONNECT SWITCH, NEMA 3R ENCLOSED
SCRAPPER/COLLECTOR	.75 HP	3.2	-	-	30/3/15	208	3	FUSED DISCONNECT SWITCH, NEMA 3R ENCLOSED
UNDERCOUNTER ICE MAKER	-	10	-	-	RECEPTACLE	120	1	RECEPTACLE TO BE NEMA 5-15P RATED
30X60 MOBILE WORKTABLE	-	15	-	-	RECEPTACLE	120	1	RECEPTACLE TO BE NEMA 5-15P RATED
AIR CURTAIN	-	6.5	-	-	30/2/20	208	1	FUSED DISCONNECT SWITCH, NEMA 1 ENCLOSED
1 DOOR REACH-IN REFRIGERATOR	-	5.2	-	-	RECEPTACLE	120	1	RECEPTACLE TO BE NEMA 5-15P RATED
20 QT BENCH MIXER	-	8	-	-	RECEPTACLE	120	1	RECEPTACLE TO BE NEMA 5-15P RATED
30X72 MOBILE WORKTABLE	-	15	-	-	RECEPTACLE	120	1	RECEPTACLE TO BE NEMA 5-15P RATED
30X72 MOBILE WORKTABLE	-	15	-	-	RECEPTACLE	120	1	RECEPTACLE TO BE NEMA 5-15P RATED
FIRE SUPRESSION SYSTEM	-	15	-	-	JUNCTION BOX	120	1	
EXHAUST HOOD	-	15	-	-	JUNCTION BOX	120	1	
6 BURNER RANGE W/ OVEN BASE	17 KW	-	-	-	SPECIAL RECEPTACLE	208	3	
TOP COMBINATION OVEN W/ FILTER	22.4 KW	62.2	-	-	SPECIAL RECEPTACLE	208	3	
BOTTOM COMBINATION OVEN W/ FILTER	22.4 KW	62.2	-	-	SPECIAL RECEPTACLE	208	3	

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

DESIGNED BY: K. SCHNEDLER
DRAWN BY: K. SCHNEDLER
CHECKED BY: M. CHOU
SUBMITTED BY: Y. BARRETT
SIZE: ANSI D

ISSUE DATE: AUGUST 29, 2025
SOLICITATION NO.: W912DS23F0031
CONTRACT NO.: W912DS18D0007

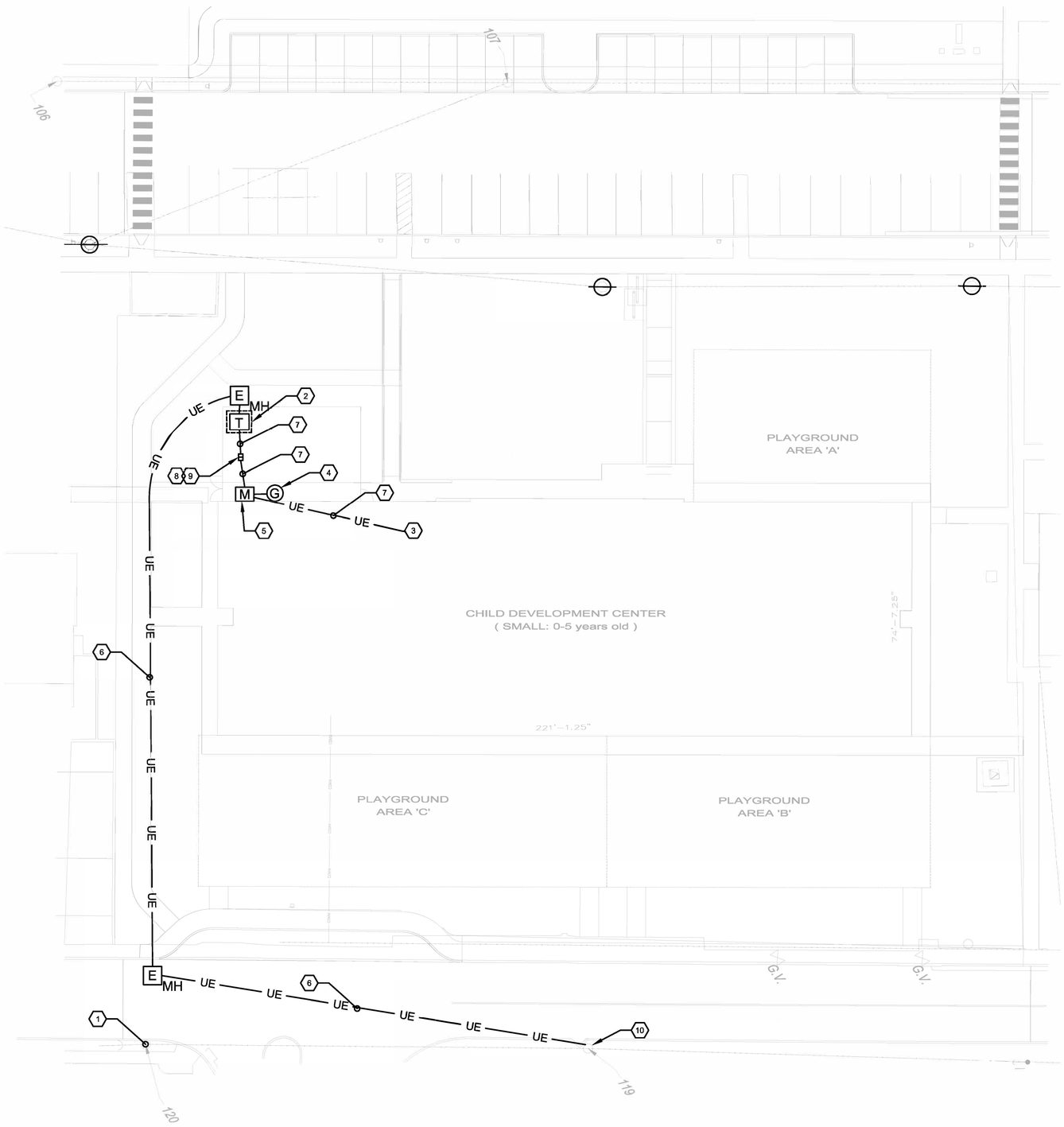
US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK, NY 10278

CHILD DEVELOPMENT CENTER
FORT HAMILTON, NEW YORK
PROJECT NO. 75682

ELECTRICAL - HAVC & EQUIPMENT SCHEDULES

SHEET ID

EP707



A1 ELECTRICAL - POWER - SITE PLAN
5/8" = 1' 0"

GENERAL NOTES

1. REFER TO SHEETS E001 FOR SYMBOLS, ABBREVIATIONS, AND GENERAL NOTES.
2. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE ACCURACY AND COMPLETENESS OF UTILITIES SHOWN ON THIS DRAWING WITH THE FACILITY MANAGER PRIOR ANY CONSTRUCTION ACTIVITY AND REPORT DISCREPANCIES TO THE COR.
3. MINIMUM BURIAL DEPTHS AND SUFFICIENT CLEARANCES BETWEEN NEW AND EXISTING UTILITIES AND/OR STRUCTURES SHALL BE COORDINATED WITH THE RESPECTIVE DISCIPLINES AND MAINTAINED IN ACCORDANCE WITH APPLICABLE CODES AND AUTHORITY HAVING JURISDICTION. NEW UTILITIES SHALL BE PLACED ABOVE OR BELOW EXISTING UTILITIES/STRUCTURES AT CROSSINGS IN ACCORDANCE WITH REQUIRED DEPTHS AND CLEARANCES.
4. ALL EMPTY CONDUITS SHALL BE PROVIDED WITH PULL STRINGS.
5. REFER TO SHEET EG101 FOR GROUNDING AND LIGHTNING PROTECTION INFORMATION.
6. REFER TO EP600 SERIES FOR ONE LINE DIAGRAMS.
7. PROVIDE BOLLARDS FOR EXTERIOR ELECTRICAL EQUIPMENT PER UFC 3-550-01.
8. ELECTRICAL SERVICE SHALL BE PROVIDED TO THE SITE BY THE CONTRACTOR. THE CONTRACTOR SHALL CONTRACT DIRECTLY TO MAKE THE SERVICE CONNECTION.
9. CONTRACTOR IS RESPONSIBLE FOR PROVIDING PRIMARY DUCTBANK, UNDERGROUND STRUCTURES, SPLICE BOXES, TRANSFORMER PAD, DUCT BANK FROM THE TRANSFORMER TO THE METER, METER SOCKET, THE PRIMARY SERVICE CONDUCTORS, PAD-MOUNTED TRANSFORMER, UTILITY METER, CT, AND SECONDARY CONDUCTORS FROM THE TRANSFORMER TO THE METER.

SHEET KEYNOTES

1. 'FEEDER A' EXISTING BASE OVERHEAD POWER LINE
2. NEW 750KVA TRANSFORMER AND NEW CONCRETE PAD
3. CONNECTION TO MAIN SWBD IN ELEC RM 127
4. CONTRACTOR SHALL PROVIDE 1000A/480Y-277V/4 WIRE GENERATOR QUICK CONNECT JUNCTION BOX FOR PORTABLE GENERATOR.
5. CONTRACTOR SHALL PROVIDE MANUAL TRANSFER SWITCH WITH SERVICE RATED MAIN CIRCUIT BREAKER.
6. CONTRACTOR SHALL PROVIDE 2-WAY 5" PVC SCHEDULE 40 CONCRETE ENCASED DUCTBANK
7. CONTRACTOR SHALL PROVIDE 6-WAY 4" SCHEDULE 40 PVC CONCRETE ENCASED DUCTBANK, OF WHICH 2 CONDUITS ARE SPARES.
8. METER AND METER SOCKET
9. CT CABINET
10. EXISTING UTILITY POLE 119, CONTRACTOR SHALL REPLACE EXISTING FUSE CUTOUTS WITH NEW CUT OFF SWITCH FUSES AT 200A.

N

0 6" 1' 2'
SCALE: 5/8" = 1'-0"

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

ISSUE DATE: AUGUST 29, 2025
SOLICITATION NO.: W912DS25F0031
CONTRACT NO.: W912DS-18D0007

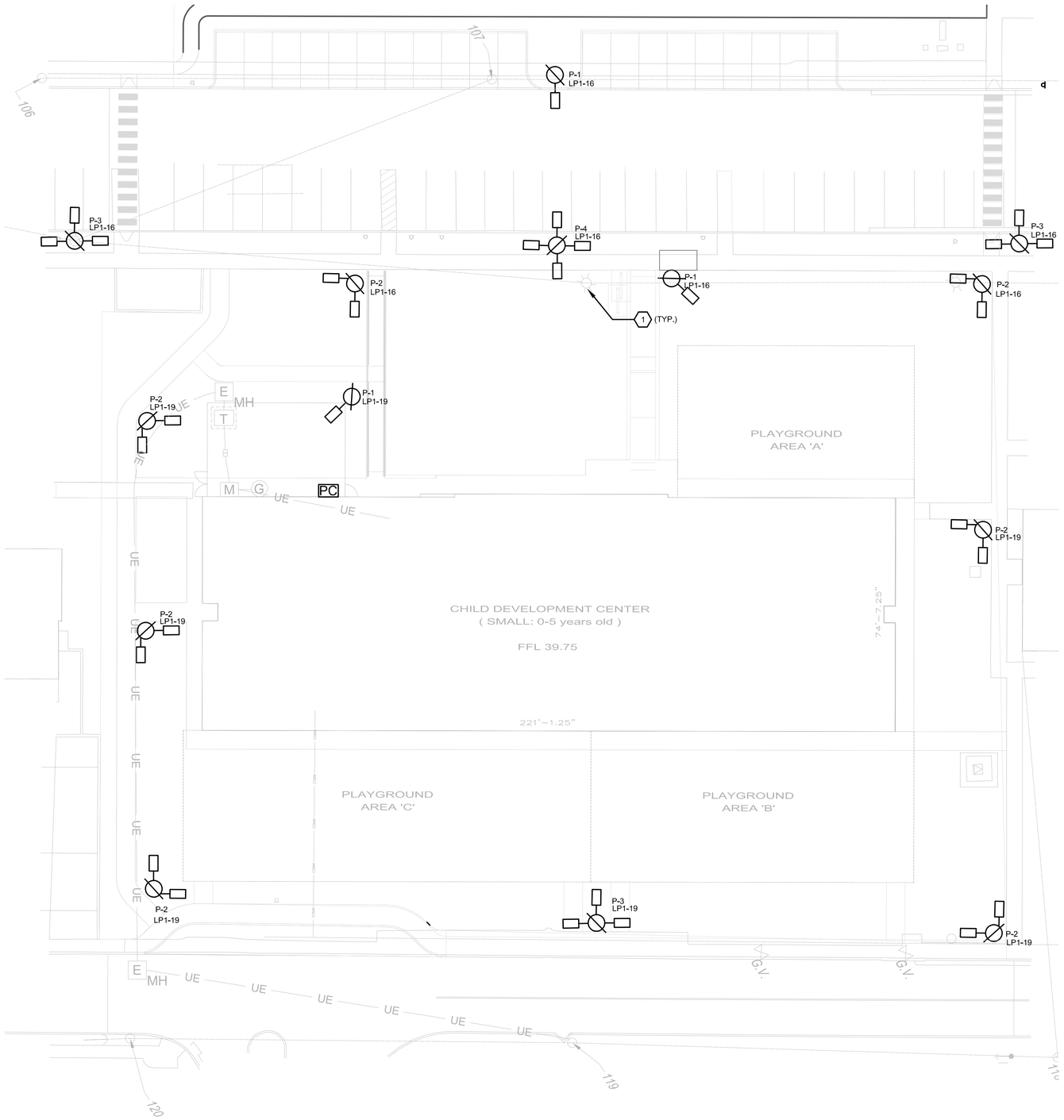
DESIGNED BY: K. SCHNEDLER
DRAWN BY: K. SCHNEDLER
CHECKED BY: M. GRIEGO
SUBMITTED BY: Y. BARRETT
SIZE: ANSI D

US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK NY 10278

CHILD DEVELOPMENT CENTER
FORT HAMILTON, NEW YORK
PROJECT NO. 75662

ELECTRICAL - POWER - SITE PLAN

SHEET ID
ES101



A1 ELECTRICAL - LIGHTING - SITE PLAN

5/8" = 1' 0"

GENERAL NOTES

1. REFER TO E001 FOR SYMBOLS, ABBREVIATIONS, AND GENERAL NOTES.
2. REFER TO EL100 SERIES, EL601 FOR INTERIOR, ENTRANCE/EXIT, AND CANOPY LIGHTING LAYOUT AND SCHEDULE, AND TO EL602 FOR LIGHTING CONTROLS INFORMATION.
3. REFER TO SITE CIVIL DRAWINGS FOR COMPLETE UTILITIES PLANS.
4. LIGHTING FIXTURE PLACEMENT IS DIAGRAMMATIC. CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH OTHER DISCIPLINES TO VERIFY UTILITY LOCATIONS. REFER TO CIVIL AND LANDSCAPE DRAWINGS FOR LOCATION OF UTILITIES.
5. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE ACCURACY AND COMPLETENESS OF UTILITIES SHOWN ON THIS DRAWING WITH THE FACILITY MANAGER PRIOR TO ANY CONSTRUCTION ACTIVITY AND REPORT DISCREPANCIES TO THE COR.
6. MINIMUM BURIAL DEPTHS AND SUFFICIENT CLEARANCES BETWEEN NEW AND EXISTING UTILITIES AND/OR STRUCTURES SHALL BE COORDINATED WITH THE RESPECTIVE DISCIPLINES AND MAINTAINED IN ACCORDANCE WITH APPLICABLE CODES AND AUTHORITY HAVING JURISDICTION. NEW UTILITIES SHALL BE PLACED ABOVE OR BELOW EXISTING UTILITIES/STRUCTURES AT CROSSINGS IN ACCORDANCE WITH REQUIRED DEPTHS AND CLEARANCES.
5. ALL EMPTY CONDUITS SHALL BE PROVIDED WITH PULL STRINGS.
6. REFER TO STRUCTURAL DRAWINGS AND EARTHWORK SPECIFICATIONS FOR ADDITIONAL DUCT BANK REQUIREMENTS.
7. FOR SITE LIGHTS, PROVIDE 2" SCHEDULE 40 PVC CONCRETE ENCASED UNDER ROADS AND ASPHALT AND 2" SCHEDULE 80 PVC DIRECT BURIED CONDUIT IN ALL OTHER AREAS. PROVIDE HANDHOLES AS REQUIRED.
8. CONTRACTOR SHALL SUBMIT LIGHTING CALCULATIONS ALONG WITH LIGHT FIXTURE CUTSHEETS. ALL LIGHT FIXTURES WILL BE ENERGY EFFICIENT, LED TYPE, AND MUST MEET THE BUY AMERICAN ACT.
9. CONTRACTOR RESPONSIBLE FOR SIZING THE WIRING IN CONSIDERATION OF VOLTAGE DROP AND LOAD BALANCING.
10. LIGHT FIXTURES SHOWN ON PLAN ARE NTS AND FOR DIAGRAMMATIC LOCATION ONLY.
11. LIGHT FIXTURES SHALL NOT BE PLACED IN PLAYGROUND AREAS.

SHEET KEYNOTES

1. ALL EXISTING POLE LIGHTING, INCLUDING POLES, SHALL BE DEMOLISHED WITHIN THIS AREA. DEMOLISH LIGHTS, POLES, PATHWAYS, AND WIRING BACK TO ITS POWER SUPPLY.

SITE LIGHTING FIXTURES SCHEDULE

TYPE MARK	DESCRIPTION	VOLTAGE	LAMP	WATTAGE	INITIAL COLOR TEMP.	MOUNTING	B-U-G RATING	COUNT	NOTES
P-1	LED AREA SINGLE LUMINAIRE WITH PHOTOCELL AND 20FT ALUMINUM POST	277 V	LED	38 W	3000 K	POLE	B1-U0-G1	3	FIXTURE: 4,376 LUMENS, TYPE III MEDIUM DISTRIBUTION, ROUND POLE MOUNTING, DARK BRONZE COLOR, 7-PIN RECEPTACLE. DIMMING DRIVER, MOTION SENSOR. POLE: 20 FT ROUND POLE, 6 IN. SHAFT, SINGLE FIXTURE MOUNTING, DARK BRONZE COLOR.
P-2	LED AREA TWO-WAY LUMINAIRE WITH PHOTOCELL AND 20FT ALUMINUM POST	277 V	LED	76 W	3000 K	POLE	B1-U0-G1	7	FIXTURE: 8,752 LUMENS, TYPE III MEDIUM DISTRIBUTION, ROUND POLE MOUNTING, DARK BRONZE COLOR, 7-PIN RECEPTACLE. DIMMING DRIVER, MOTION SENSOR. POLE: 20FT ROUND POLE, 6 IN. SHAFT, TWO FIXTURES SEPARATED BY 90 DEGREES MOUNTING, DARK BRONZE COLOR.
P-3	LED AREA THREE-WAY LUMINAIRES WITH PHOTOCELL AND 20FT ALUMINUM POST	277 V	LED	144 W	3000 K	POLE	B1-U0-G1	3	FIXTURE: 13,128 LUMENS, TYPE III MEDIUM DISTRIBUTION, ROUND POLE MOUNTING, DARK BRONZE COLOR, 7-PIN RECEPTACLE. DIMMING DRIVER, MOTION SENSOR. POLE: 20FT ROUND POLE, 6 IN. SHAFT, THREE FIXTURES SEPARATED BY 90 DEGREES MOUNTING, DARK BRONZE COLOR
P-4	LED AREA FOUR-WAY LUMINAIRES WITH PHOTOCELL AND 20FT ALUMINUM POST	277 V	LED	152 W	3000 K	POLE	B1-U0-G1	1	FIXTURE: 17,504 LUMENS, TYPE III MEDIUM DISTRIBUTION, ROUND POLE MOUNTING, DARK BRONZE COLOR, 7-PIN RECEPTACLE. DIMMING DRIVER, MOTION SENSOR. POLE: 20FT ROUND POLE, 6 IN. SHAFT, FOUR FIXTURES SEPARATED BY 90 DEGREES MOUNTING, DARK BRONZE COLOR

N

0 6" 1' 2'

SCALE: 5/8" = 1'-0"

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

DESIGNED BY: K. SCHNEDLER
DRAWN BY: K. SCHNEDLER
CHECKED BY: M. GRECO
SUBMITTED BY: Y. BARRETT
SIZE: ANSI D

ISSUE DATE: AUGUST 29, 2025
SOLICITATION NO.: W912DS23F0031
CONTRACT NO.: W912DS15D0007

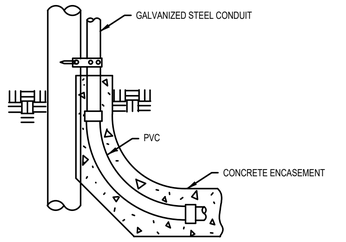
US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK, NY 10278

CHILD DEVELOPMENT CENTER
FORT HAMILTON, NEW YORK
PROJECT NO. 75662

ELECTRICAL - LIGHTING - SITE PLAN

SHEET ID

ES102

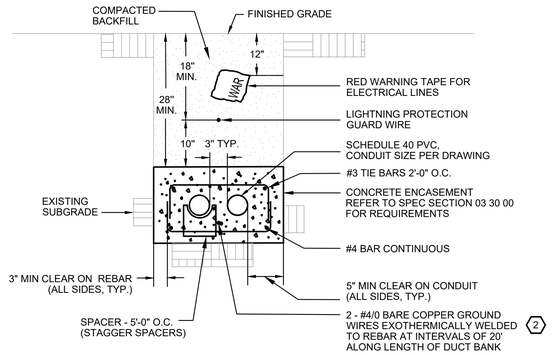


NOTES

1. ON CONDUIT RISER FOR PRIMARY CIRCUITS, ELIMINATE SERVICE CAP AND PROVIDE GROUNDING TYPE INSULATING BUSHING.
2. BOND CONDUIT TO POLE GROUND AND SYSTEM NEUTRAL (IF EXISTING).
3. SPACE STRAPS AT MAXIMUM OF 4' INTERVALS.

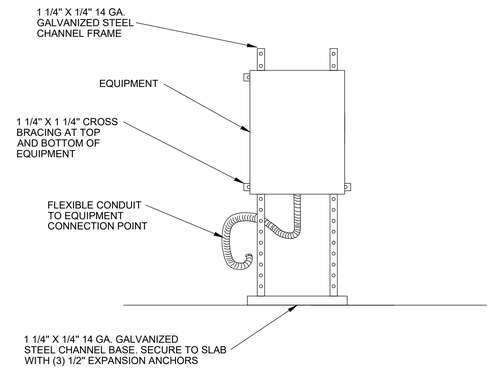
J1 UNDERGROUND TO POLE TRANSITION (TYP)

NOT TO SCALE



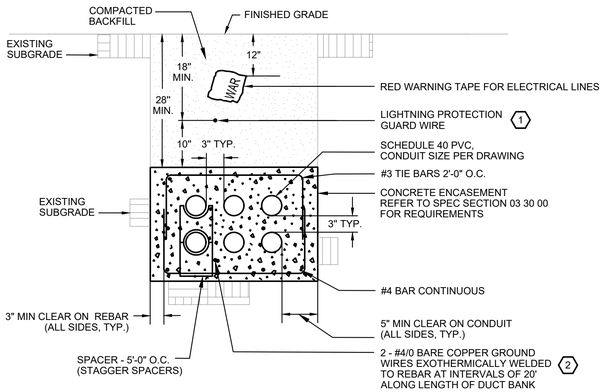
J6 2-WAY CONCRETE ENCASED DUCTBANK (TYP.)

NOT TO SCALE 3



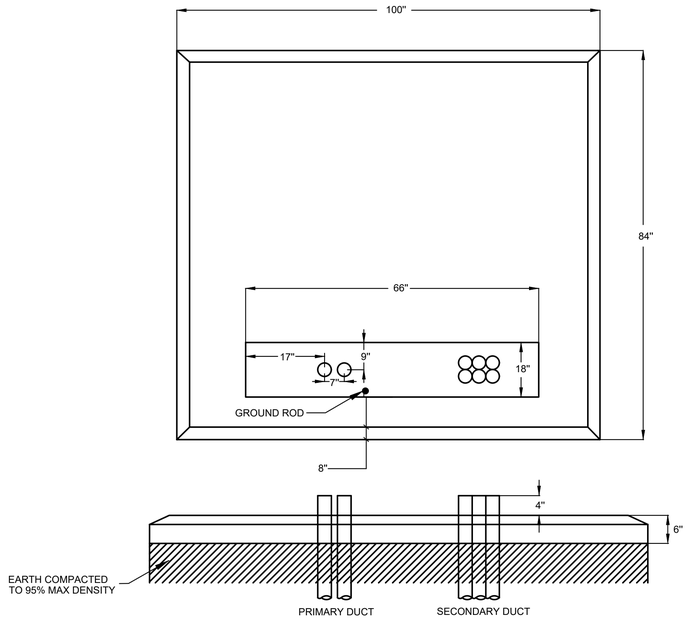
K12 EQUIPMENT MOUNTING

NOT TO SCALE



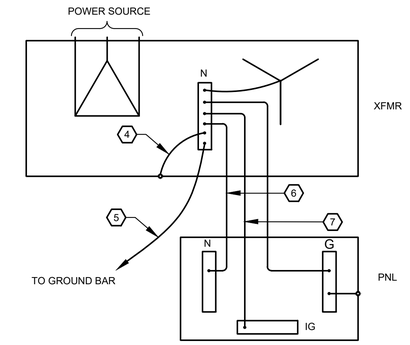
E11 6-WAY CONCRETE ENCASED DUCTBANK (TYP.)

NOT TO SCALE 3



A5 3-PHASE TRANSFORMER PAD/CONDUIT

NOT TO SCALE



A11 TRANSFORMER & PANEL GROUNDING (TYP.)

NOT TO SCALE 8

GENERAL NOTES

1. REFER TO SHEET E001 FOR SYMBOLS, ABBREVIATIONS, AND GENERAL NOTES.

SHEET KEYNOTES

1. #1/0 BARE COPPER LIGHTNING PROTECTION GUARD WIRE. (INSTALL 10" ABOVE TOP OF DUCT BANK) CONNECT TO LIGHTNING PROTECTION LOOP GROUND RING, AND MANHOLE GROUND RING.
2. PROVIDE 3/4" DIAMETER 10'-0" LONG GROUND RODS AT INTERVALS OF MAXIMUM 100' ALONG LENGTH OF DUCT BANK AND BOND GROUND WIRE TO GROUND ROD.
3. PROVIDE PULL WIRE IN ALL EMPTY DUCT
4. EQUIPMENT BONDING JUMPER SIZED PER NEC TABLE 250.66.
5. GROUNDING ELECTRODE CONDUCTOR SIZED PER NEC TABLE 250.66.
6. NEUTRAL CONDUCTOR - REFER TO ONE-LINE DIAGRAM.
7. SYSTEM BONDING JUMPER SIZED PER NEC TABLE 250.66.
8. CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE WITH BASE REQUIREMENTS FOR EQUIPMENT AND INSTALLATION.

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

ISSUE DATE: AUGUST 29, 2025
SOLICITATION NO.: W912DS23F0031
CONTRACT NO.: W912DS19D0007

DESIGNED BY: K. SCHNEDLER
DRAWN BY: K. SCHNEDLER
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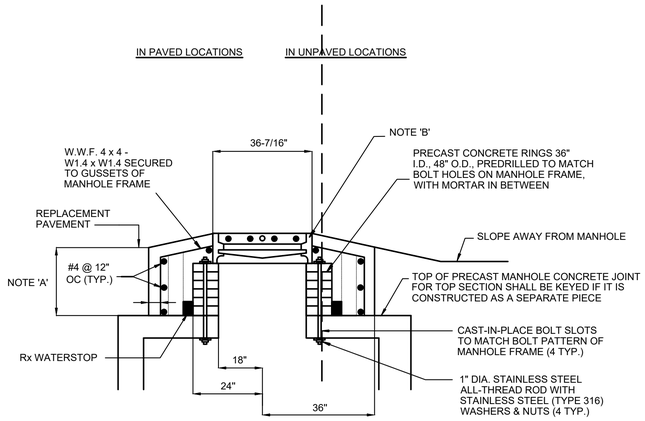
US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK NY 10278

CHILD DEVELOPMENT CENTER
FORT HAMILTON, NEW YORK
PROJECT NO. 75662

ELECTRICAL - SITE DETAILS

SHEET ID

ES501



NOTE A:

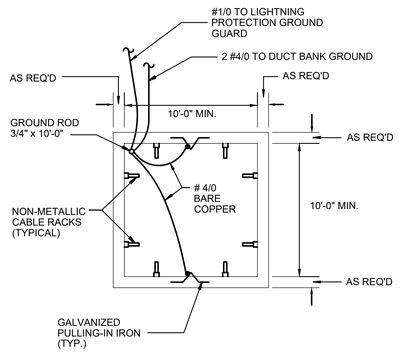
ADJUST ELEVATION WITH CONCRETE RINGS TO PROVIDE A MINIMUM OF 28 INCHES OF SOIL COVER OVER DUCT BANK. ADD ROWS OF #4 REINFORCING STEEL AS NEEDED SO THAT SPACING DOES NOT EXCEED 12 INCHES ON CENTER

NOTE B:

MANHOLE LID ABD FRAME-NEENAH MODEL R-1751-C FOR MANHOLE. ELECTRICAL MANHOLES DO NOT REQUIRE LOCKING BOLTS.

J1 MANHOLE ENTRY RISER

NOT TO SCALE

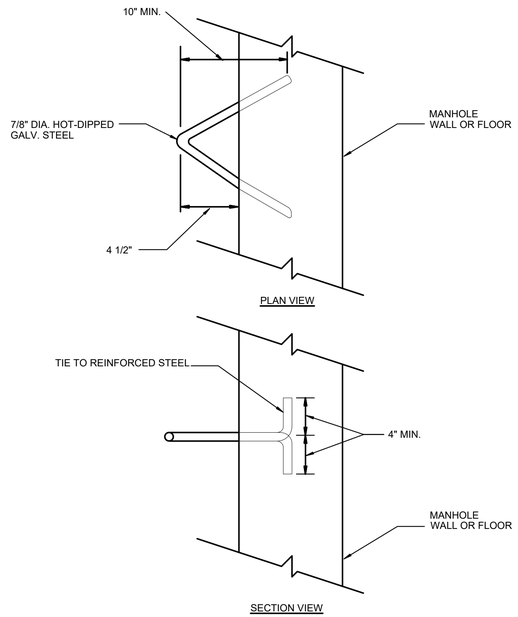


NOTE:

CABLE RACKS FOR MANHOLES: HIGH PERFORMANCE POLYMER, 3 - TIER SADDLE RACKS WITH 2" THROAT OPENING TO HOLD 3 - 750 MCM CABLES. ALL CONNECTIONS HARDWARE IS STAINLESS STEEL.

J7 MANHOLE WITH GROUNDING CABLE RACKS AND SUPPORT MANHOLE

NOT TO SCALE

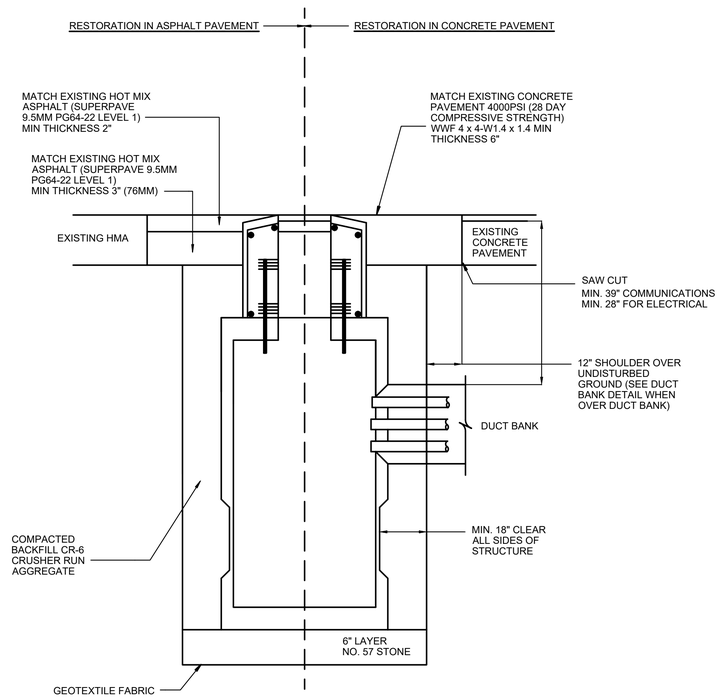


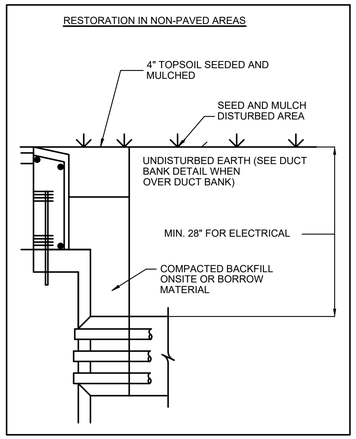
H13 PULLING - IN IRON

NOT TO SCALE

GENERAL NOTES

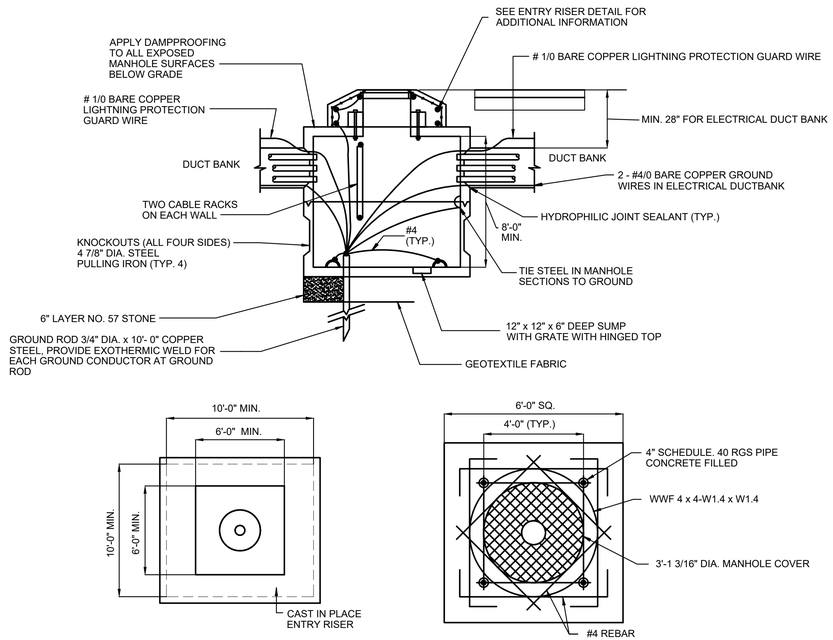
1. REFER TO SHEETS E001-E003 FOR GENERAL NOTES, LEGENDS, AND SYMBOLS.
2. REFER TO ES100 SERIES FOR SITE PLAN AND DUCT BANK INFORMATION.
3. CONDUIT SHALL BE TRANSITIONED TO UL LISTED, RIGID GALVANIZED STEEL CONDUIT (RGS) WITHIN 10 FT OF BOOTH ENTRY.
4. ALL CONDUIT VERTICAL TURN UPS SHALL BE GRS, HOT DIPPED.
5. CONDUITS USED IN ELECTRICAL DUCT BANKS SHALL BE TYPE EPC-40- PVC WITH MATCHING FITTINGS BY THE SAME MANUFACTURER.
6. ELECTRICAL DUCT BANK CONCRETE WILL BE TYPE II OR I/II PORTLAND CEMENT (ASTM C150) THAT HAS A SLUMP OF 2 TO 4 IN AND ACQUIRES A COMPRESSIVE STRENGTH OF 3000 PSI IN 28 DAYS. DYED RED TO PROVIDE PERMANENT MARKING OF DUCT BANKS CONTAINING ELECTRICAL CABLES.
7. PROVIDE COMPRESSION TYPE DUCT PLUGS FOR DUCTS LEFT EMPTY THAT WILL PRODUCE A POSITIVE SEAL IN UNUSED DUCTS AGAINST WATER AND GAS. PLUGS SHALL BE MADE OF EXPANSIVE POLYURETHANE COMPRESSED WITH POLY-PROPYLENE PLATES AND BOLTS.
8. PROVIDE MEASURING POLYESTER PULLING TAPE WITH PERMANENTLY PRINTED MEASUREMENTS IN ONE FOOT INCREMENTS AND MINIMUM 1200 LB. AVERAGE BREAKING STRENGTH. ADJUST BREAKING STRENGTH BASED ON WIRE TO BE PULLED AND LENGTH OF DUCT. PROVIDE TWO PULL STRINGS/TAPE IN EACH DUCT.
9. SET EXCAVATION SO TOP OF ELECTRICAL DUCT BANK CONCRETE ENCASEMENT WILL BE NOT LESS THAN 28 IN. BELOW FINISHED GRADE OR TOP OF PAVING.
10. PROVIDE HYDROPHILIC WATERSTOP MATERIAL AROUND JOINT BETWEEN MANHOLE KNOCKOUT AND DUCT BANK.
11. INCREASE WIDTH AND DEPTH OF DUCT BANK SECTION BY 1 IN. IN EACH DIRECTION WITHIN 60 IN. OF JOINT WITH MANHOLE. SUPPORT THIS SECTION OF DUCT BANK ON A 6 IN. LAYER OF #57 STONE.
12. MANHOLE COVER SHALL BE PERMANENTLY ENGRAVED TO INDICATE "ELECTRIC."





A2 EXCAVATION AND BACKFILL FOR PRECAST MANHOLE AND HANDHOLES

NOT TO SCALE



A13 ELECTRIC PRECAST MANHOLE

NOT TO SCALE

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

DESIGNED BY: K. SCHNEIDLER
DRAWN BY: K. SCHNEIDLER
CHECKED BY: M. MICHAUD
SUBMITTED BY: Y. BARRETT
SIZE: ANSI D
ISSUE DATE: AUGUST 29, 2025
SOLICITATION NO.: W912DS23F0031
CONTRACT NO.: W912DS19D0007

US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK NY 10278

CHILD DEVELOPMENT CENTER
FORT HAMILTON, NEW YORK
PROJECT NO. 75662

ELECTRICAL - SITE DETAILS

SHEET ID

ES502

ABBREVIATIONS

1P	1 POLE (2P, 3P, 4P, ETC.)
AMP	AMPERE
AC	ABOVE COUNTER
ACLG	ABOVE CEILING
ADO	AUTOMATIC DOOR OPENER
AF	AMP FRAME
AFC	ABOVE FINISHED CEILING
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AFI	ARC FAULT CIRCUIT INTERRUPTER
AHU	AIR HANDLING UNIT
AL	ALUMINUM
AMP	AMPERE
AT	AMP TRIP
ATS	AUTOMATIC TRANSFER SWITCH
AUX	AUXILIARY
AV	AUDIO VISUAL
AWG	AMERICAN WIRE GAUGE
BATT	BATTERY
BJ	BONDING JUMPER
BLDG	BUILDING
BMS	BUILDING MANAGEMENT SYSTEM
CATV	CABLE TELEVISION
CB	CIRCUIT BREAKER
CCTV	CLOSED CIRCUIT TELEVISION
CKT	CIRCUIT
CLG	CEILING
CONT	CONTINUATION OR CONTINUOUS
CT	CURRENT TRANSFORMER
CU	COPPER
DET	DETAIL
DIA	DIAMETER
DISC	DISCONNECT
DIST	DISTRIBUTION
DN	DOWN
EGC	EQUIPMENT GROUNDING CONDUCTOR
ELEC	ELECTRIC, ELECTRICAL
ELEV	ELEVATOR
ELU	EMERGENCY LIGHTING UNIT
EM	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
EWC	ELECTRIC WATER COOLER
EXP	EXPLOSION PROOF
FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
FLR	FLOOR
FLUOR	FLUORESCENT
GA	GAUGE
GALV	GALVANIZED
GEC	GROUNDING ELECTRODE CONDUCTOR
GEN	GENERATOR
GFI	GROUND FAULT CIRCUIT INTERRUPTER
GND	GROUND
GRS	GALVANIZED RIGID STEEL (CONDUIT)
HOA	HANDS-OFF-AUTOMATIC SWITCH
HP	HORSEPOWER
HV	HIGH VOLTAGE
HVAC	HEATING, VENTILATING AND AIR CONDITIONING
IG	ISOLATED GROUND
IMC	INTERMEDIATE METAL CONDUIT
IR	INFRARED
J-BOX	JUNCTION BOX
KV	KILOVOLT
KVA	KILOVOLT-AMPERE
KVAR	KILOVOLT-AMPERE REACTIVE
KW	KILOWATT
KWH	KILOWATT HOUR
LOC	LOCATE OR LOCATION
LPS	LIGHTNING PROTECTION SYSTEM
LTG	LIGHTING
LV	LOW VOLTAGE
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MDC	MAIN DISTRIBUTION CENTER
MDP	MAIN DISTRIBUTION PANEL
MECH	MECHANICAL
MFR	MANUFACTURER
MG	MOTOR GENERATOR
MH	MANHOLE
MIC	MICROPHONE
MIN	MINIMUM
MISC	MISCELLANEOUS
MLO	MAIN LUGS ONLY
MSBD	MAIN SWITCHBOARD
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
PA	PUBLIC ADDRESS
PB	PULL BOX OR PUSHBUTTON
PF	POWER FACTOR
PH	PHASE
PNL	PANEL
PRI	PRIMARY
PT	POTENTIAL TRANSFORMER
PVC	POLYVINYL CHLORIDE (CONDUIT)
QTY	QUANTITY
RCPT	RECEPTACLE
REQD	REQUIRED
RM	ROOM
RSC	RIGID STEEL CONDUIT
SBJ	SYSTEM BONDING JUMPER
SCH	SCHEDULE
SEC	SECONDARY
SHT	SHEET
SPKR	SPEAKER
SSBJ	SUPPLY-SIDE BONDING JUMPER
STD	STANDARD
SW	SWITCH
SWBD	SWITCHBOARD
SYM	SYMMETRICAL
SYS	SYSTEM
TEL	TELEPHONE
TV	TELEVISION
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSION
TYP	TYPICAL
UH	UNIT HEATER
UON	UNLESS OTHERWISE NOTED
UPS	UNINTERRUPTIBLE POWER SUPPLY
V	VOLT
VA	VOLT-AMPERES
VFD	VARIABLE FREQUENCY DRIVE
W	WATT
W/	WITH
W/O	WITHOUT
WP	WEATHERPROOF
XFMR	TRANSFORMER

LEGEND

TELECOM SYMBOLS

WALL / CEILING / FLOOR

DATA OUTLET

TELEPHONE OUTLET

DATA/TELEPHONE OUTLET

OUTLET MODIFIERS:
- #: NUMBER OF RJ-45 JACKS
- ##': HEIGHT AFF OC
- AC: ABOVE COUNTER
- W: SINGLE OUTLET FOR WALL PHONE. MOUNT 54" AFF UON.
- DDC: SINGLE OUTLET FOR ENERGY MANAGEMENT SYSTEMS. MOUNT 54" AFF UON.
- WAP: WIRELESS ACCESS POINT PORT - SINGLE RJ-45 WALL MOUNTED OUTLET MOUNTED 18" AFC. MUST BE PERMANENTLY FIXED TO BUILDING STRUCTURE.
- PVM: PARENTAL VIEWING MONITOR WORKSTATION OUTLET

WIRELESS ACCESS POINT

TV OUTLET
PVM: PARENTAL VIEWING MONITOR

NURSE CALL SYMBOLS

N — NURSE CALL CORRIDOR LIGHT
NUMBER OF LIGHTS AS INDICATED

X — NURSE CALL DEVICE
- B: CODE BLUE
- D: DUTY STATION
- E: EMERGENCY
- P: PATIENT CALL
- S: STAFF

XXXX — NURSE CALL CONTROL UNIT
- NCAP: NURSE CALL ANNUNCIATOR PANEL
- NCHS: NURSE CALL HOST CONTROLLER
- NCPA: NURSE CALL POWER SUPPLY
- NCTC: NURSE CALL TERMINAL CABINET
- NCUPS: UNINTERRUPTIBLE POWER SUPPLY

SECURITY SYMBOLS

SECURITY CAMERA
- PTZ: PAN/TILT/ZOOM
- 360: 360-DEGREE CAMERA

CR — CARD READER

CK — CARD READER WITH KEYPAD

KP — ELECTRONIC KEYPAD

CC TV — CLOSED CIRCUIT TV OUTLET

DC — DOOR CONTACT/POSITION SWITCH

ES — ELECTRIC STRIKE

EL — ELECTRIC LOCKING DEVICE

IMS — INTERCOM MASTER STATION

IC — INTERCOM SUBSTATION

S — CEILING SPEAKER W/ MICROPHONE

ML — MAGNETIC LOCK

RX — REQUEST TO EXIT BUTTON

REX — REQUEST TO EXIT SENSOR

MD — MOTION DETECTOR

XXX — SECURITY CONTROL UNIT
- SCP: SECURITY CONTROL PANEL
- SPS: SECURITY POWER SUPPLY UNIT
- IDS: IDS ALARM PANEL

DA — DURESS ALARM

DR — DOOR RELEASE

SITE SYMBOLS

HH — COMMUNICATIONS HANDHOLE

– –COMM– – UNDERGROUND COMMUNICATIONS

TWV — TRACER WIRE VAULT

GENERAL TELECOM NOTES

1. SYMBOLS, NOTES AND ABBREVIATIONS ON THIS SHEET ARE STANDARD AND MAY NOT ALL APPEAR ON THIS PROJECT.
2. REFER TO DIVISIONS 27, 28 AND 33 SPECIFICATIONS FOR TELECOMMUNICATION SYSTEM ITEMS.
3. VERIFY QUANTITY OF ALL PATCH PANELS AND OTHER RELATED COMPONENTS NEEDED FOR A COMPLETE AND WORKING TELECOMMUNICATIONS CABLING SYSTEM WITH AN ADDITIONAL 25% SPARE.
4. DETERMINE THE EXACT ROUTING OF RACEWAYS.
5. COORDINATE ALL RACEWAY PENETRATIONS AND PROVIDE FIREPROOFING AS APPLICABLE. FOR ALL PENETRATIONS OF FLOORS AND FIRE RATED WALLS, SELF-SEALING, RE-ENTERABLE, MECHANICAL FIRESTOP ASSEMBLIES ARE REQUIRED.
6. CABLE TRAY SHALL NOT TRAVERSE THROUGH WALLS. CABLE TRAY SHALL BE TRANSITIONED TO METAL SLEEVES OR TO SELF-SEALING, RE-ENTERABLE, MECHANICAL FIRESTOP ASSEMBLIES (WHERE APPLICABLE).
7. THE MAXIMUM PERMANENT HORIZONTAL LINK DISTANCE SHALL BE 295 FEET AND THE MAXIMUM HORIZONTAL CHANNEL (LINK PLUS WORKSTATION CABLES AND PATCH CORDS) SHALL BE 328 FEET.
8. ALL HORIZONTAL DATA CABLING SHALL BE CAT 6A INSTALLED IN A MINIMUM 1" CONDUIT FROM TELECOM OUTLET LOCATIONS TO THE CABLE TRAY UNLESS OTHERWISE NOTED.
9. CABLE INSTALLED IN UNDER SLAB OR IN SLAB CONDUITS SHALL BE LISTED FOR WET LOCATIONS. PLENUM RATED CABLE SHALL NOT BE INSTALLED IN ANY UNDERGROUND OR IN SLAB CONDUIT. OSP RATED CABLE SHALL NOT BE INSTALLED IN PLENUM SPACE.
10. IN OUTDOOR AREAS, PROVIDE OSP CABLES RATED FOR OUTDOOR USE, FILLED WITH A WATER BLOCKING COMPOUND.
11. TERMINATE CAT 6A CABLE ON 8-PIN 8-CONDUCTOR (RJ-45) CONNECTORS USING PIN/PAIR ASSIGNMENTS IN ACCORDANCE WITH TIA 568-C.0, T568B PIN-OUT SEQUENCE. RJ-45 CONNECTORS SHALL BE CAT 6A.
12. TERMINATE OPTICAL FIBER CABLES WITH LC-TYPE CONNECTORS.
13. PROVIDE TRAPEZE-MOUNTED (PREFERABLE) CABLE TRAY OR WALL-MOUNTED IF TRAPEZE MOUNTING IS NOT POSSIBLE. CENTER-HUNG CABLE TRAY IS PROHIBITED.
14. DO NOT INSTALL CABLE TRAY IN HARD CEILING AREAS.
15. PROVIDE A MINIMUM OF 12 INCHES OF CLEARANCE ABOVE THE TOP OF THE CABLE TRAYS AND A MINIMUM OF 3 INCHES CLEARANCE BELOW CABLE TRAYS. CLEARANCE BELOW CABLE TRAY SHALL BE FROM THE BOTTOM OF THE SUPPORT STRUCTURE.
16. CABLE TRAYS MAY BE USED FOR ALL LOW VOLTAGE SIGNALING CABLE.
17. GREEN IS THE REQUIRED CABLE JACKET AND OUTLET JACK COLOR FOR ALL HORIZONTAL CAT 6A DATA CABLING, UNLESS OTHERWISE NOTED.
18. PROVIDE COPPER CONDUCTORS FOR GROUND CONNECTIONS. USE OF ALUMINUM GROUNDING CONDUCTORS IS PROHIBITED.
19. EQUIPMENT (PIPING, DUCTWORK, MACHINERY, ETC.) THAT DOES NOT SERVE THE TER OR TRS SHALL NOT BE INSTALLED ABOVE, BELOW (I.E. IN OR UNDER SLAB) OR IN THESE IT SPACES NOR WILL THIS EQUIPMENT PASS THROUGH OR ENTER THE TER OR TRS.
20. INITIAL FILL CAPACITY OF EACH FLOOR PENETRATION OR WALL SLEEVE SHALL NOT EXCEED 40 PERCENT. IN EACH INSTANCE, ONE SPARE, EMPTY PENETRATION OR SLEEVE SHALL ALSO BE PROVIDED.
21. ALL PATCH PANELS AND JACKS SHALL BE FROM THE SAME MANUFACTURER.
22. WIRELESS ACCESS POINT OUTLETS SHALL BE MOUNTED ON THE WALL AT 8 FEET AFF IN HIGH CEILING AREAS AND AREAS WITH NON-ACCESSIBLE CEILINGS UNLESS NOTED OTHERWISE. IN STANDARD HEIGHT ACCESSIBLE CEILING APPLICATIONS, MOUNT THE OUTLET 18 INCHES AFC.
23. ALL TELECOMMUNICATIONS GROUNDING AND BONDING SHALL BE IAW TIA 607-D.
24. PRIMARY BONDING BUSBAR (PBB) AND SECONDARY BONDING BUSBARS (SBB) SHALL BE MOUNTED AT 7 FEET 0 INCHES (84 INCHES).
25. ALL TELECOMMUNICATIONS GROUNDING AND BONDING CONDUCTORS SHALL BE TERMINATED WITH TWO HOLE, LONG BARREL, IRREVERSIBLE COMPRESSION LUGS.
26. REMOVE PAINT AND/OR POWDER COATING FROM GROUNDING AND BONDING SURFACES AND APPLY A NON-OXIDAL COMPOUND ON ALL TELECOMMUNICATIONS GROUNDING AND BONDING SURFACES PRIOR TO MAKING THE CONNECTION.

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

PLOT DATE: 9/25/2025 2:54:27 PM

ISSUE DATE: AUGUST 29, 2025
SOLICITATION NO.: W912DS23F0031
CONTRACT NO.: W912DS19D0007

DESIGNED BY: B. GADDIE
DRAWN BY: B. GADDIE
CHECKED BY: J. CRAWFELL
SUBMITTED BY:
SIZE: ANSI D

US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK, NY 10278

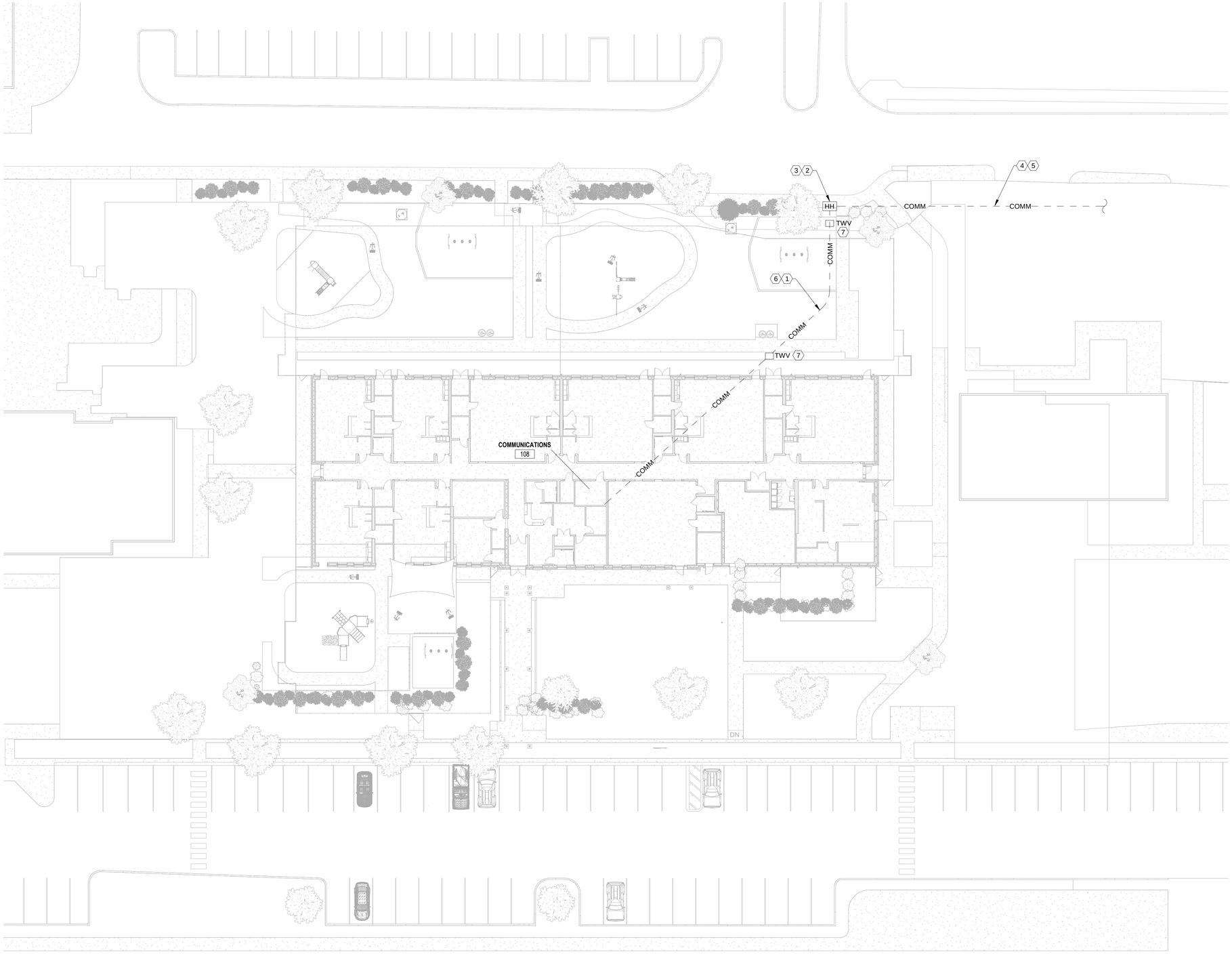
CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
PROJECT NO. 75662

GENERAL TELECOMMUNICATIONS NOTES AND LEGEND

SHEET ID

T-001

RTA



1 TELECOMMUNICATIONS SITE PLAN
SCALE: 1" = 20'-0"

GENERAL NOTES

1. SEE SHEET T-001 FOR TELECOMMUNICATIONS LEGEND AND SYMBOLS.
2. IN ACCORDANCE WITH THE COMMON CABLING INITIATIVE, CABLE TRAYS MAY BE USED FOR ALL LOW VOLTAGE SIGNALING CABLE.
3. ALL PENETRATIONS ARE TO BE PROPERLY FIRESTOPPED. RESEALABLE, RE-ENTERABLE, MECHANICAL FIRESTOPPING ASSEMBLIES MUST BE USED FOR ALL FLOOR SLEEVES AND FOR PENETRATIONS OF FIRE RATED WALLS.
4. ALL CONDUITS, RACKS, CABINETS, CABLE TRAYS TO BE PROPERLY BONDED AND GROUNDED.
5. ALL HORIZONTAL CABLING TO BE CAT 6A RATED AND CMP LISTED WITH GREEN CABLE JACKET UNLESS OTHERWISE NOTED.
6. ALL JACKS ARE TO BE RJ45, GREEN IN COLOR, TERMINATED TO T568B UNLESS OTHERWISE NOTED.
7. EACH SECTION OF CABLE TRAY SHALL BE BONDED TOGETHER.

KEY NOTES

1 2-WAY 4" CONCRETE ENCASED TELECOMMUNICATIONS DUCT BANK. PROVIDE 25-PAIR COPPER CABLE AND 24-STRAND SINGLE MODE FIBER OPTIC CABLE IN (2) 4" SCH. 80 PVC CONDUITS. PROVIDE (1) 3" 3-CELL FABRIC MESH INNERDUCT IN ONE OF THE CONDUITS. ROUTE FIBER CABLING INSIDE ONE CELL OF THE INNERDUCT. ROUTE COPPER CABLING IN THE CONDUIT WITHOUT INNERDUCT. CONCRETE ENCASEMENT SHALL EXTEND UNDER THE BUILDING FOOTPRINT TO SPAN THE ENTIRE LENGTH OF THE CONDUIT RUN. REFER TO DUCT BANK DETAIL ON SHEET TS501.

2 EXISTING HANDHOLE HH49. BUILD OUT HANDHOLE INTO FULL SIZED MANHOLE. ALL EXISTING CABLING AND CABLE SPLICES MUST BE PROTECTED FROM DAMAGE THROUGHOUT WORK. PROVIDE GROUNDING AND BONDING FOR THE MANHOLE AND THE EXISTING COPPER SPLICE CASE IN ACCORDANCE WITH THE NEC AND TIA-607. REFER TO MANHOLE DETAIL ON SHEET TS501.

3 NEW 25-PAIR COPPER CABLES TO BE PICKED UP FROM HH49. SPLICE INTO EXISTING COPPER CABLING INSIDE HANDHOLE.

4 EXISTING TELECOMMUNICATIONS DUCTBANK TO MANHOLE MH48, LOCATED APPROXIMATELY 310 FEET AWAY. ROUTE NEW 24-STRAND SINGLE MODE FIBER OPTIC CABLING IN EXISTING CONDUITS FROM MH48 TO HH49. FIELD VERIFY EXACT MANHOLE LOCATION, DUCT ROUTING, AND SUITABILITY OF EXISTING CONDUITS TO ACCEPT NEW CABLING.

5 NEW 24-STRAND FIBER OPTIC CABLES TO BE PICKED UP FROM MH48. SPLICE INTO EXISTING FIBER OPTIC CABLING INSIDE MANHOLE. ALL FIBER SPLICING TO BE ACCOMPLISHED BY A CORE ALIGNMENT FUSIUON SPLICER.

6 DEVELOP PROFILE FOR DUCT BANK SHOWING SLOPING TO NEW MANHOLE AND PROVIDE TO FT. DRUM NEC.

7 TRACER WIRE VAULT. PROVIDE 1'x1' SQUARE PAD POURED AROUND VAULT.

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

PLOT DATE: 9/25/2025 2:55:15 PM

DESIGNED BY: B. GADDIE
DRAWN BY: B. GADDIE
CHECKED BY: J. GREENWELL
SUBMITTED BY:
SIZE: ANSI D
ISSUE DATE: AUGUST 29, 2025
SOLICITATION NO.: W912DS23F0031
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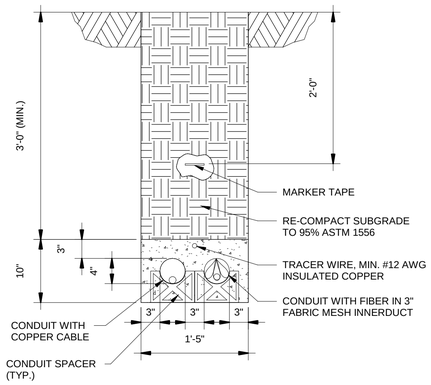
US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK, NY 10278

CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
PROJECT NO. 75662
TELECOMMUNICATIONS SITE PLAN

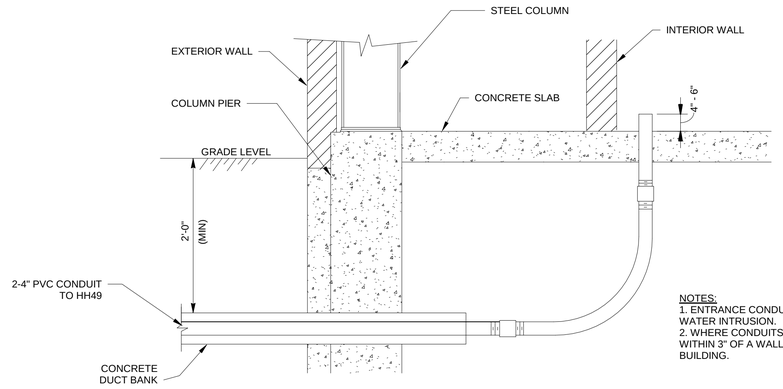
SHEET ID
TS101

RTA



1 CONCRETE ENCASED COMMUNICATIONS 2 WAY DUCT BANK

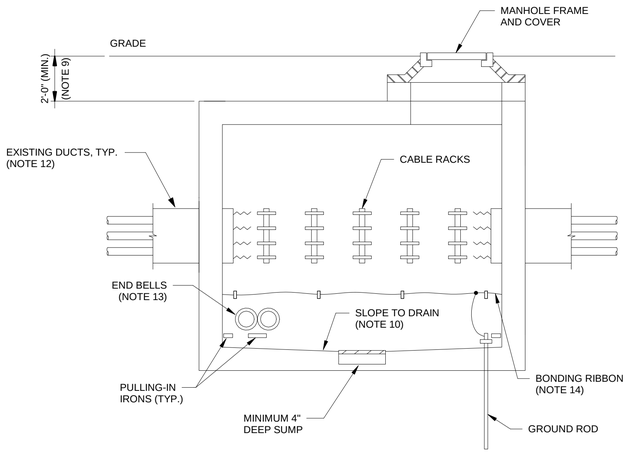
SCALE: NTS



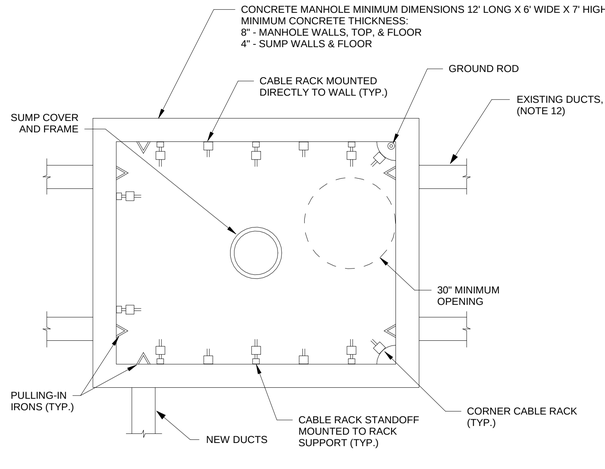
NOTES:
1. ENTRANCE CONDUITS MUST BE PLUGGED AND SEALED TO PREVENT WATER INTRUSION.
2. WHERE CONDUITS ENTERING THROUGH FLOOR CANNOT BE PLACED WITHIN 3" OF A WALL, CONDUITS MUST ENTER A PULL BOX WITHIN THE BUILDING.

2 COMMUNICATIONS CONDUIT ENTRANCE DETAIL

SCALE: NTS



SECTION VIEW



PLAN VIEW

MANHOLE NOTES:

1. BARS SHALL BE MINIMUM #4 ROUND DEFORMED.
2. WALLS AND FLOOR SHALL HAVE BARS AT 12" MINIMUM ON CENTERS WITH MINIMUM 12" HOOK AT CORNERS & INTERSECTIONS.
3. TOP SHALL HAVE BARS AT 4" ON CENTER MINIMUM LATERALLY AND LONGITUDINALLY AS APPROPRIATE, EXCEPT THAT AT OPENINGS BARS EACH WAY AT 45° TO AND LOCATED ABOVE LATERAL OR PROVIDE AN ADDITIONAL BAR AT 2" SPACING AND 2 DIAGONAL LONGITUDINAL BARS.
4. REINFORCING DATA SHOWN IN NOTES 1-3 IS MINIMUM. REINFORCING SHALL BE INCREASED WHERE REQUIRED TO SUIT ACTUAL FIELD CONDITIONS.
5. COVERS SHALL LOCK UTILIZING 5-SIDED TAMPER RESISTANT BOLTS. ANY SPECIAL TOOLS REQUIRED TO REMOVE LOCKING DEVICES ARE TO BE PROVIDED TO FT. DRUM NEC.
6. MANHOLE COVERS SHALL HAVE THE LEGEND "COMMUNICATIONS" CAST INTO THE COVER.
7. MANHOLE COVER/RIM SHALL BE CAPABLE OF WITHSTANDING H20 HIGHWAY LOADING.
8. GRADE RINGS SHALL BE PRECAST CONCRETE.
9. FINAL DEPTH OF MANHOLE TO BE APPROVED BY FT. DRUM NEC BASED ON MEASURED DEPTH OF EXISTING DUCTS.
10. FLOOR TO PROVIDE 1% CONSTANT SLOPE TO SUMP.
11. PROVIDE SUMP WITH REMOVABLE GRATED OR PERFORATED COVER OF SUFFICIENT STRENGTH TO SUPPORT EXPECTED LOADS.
12. SUBMIT DRAWING INDICATING DEPTH OF EXISTING DUCTS AND PROJECTED ENTRY INTO MANHOLE TO FT. DRUM NEC FOR APPROVAL.
13. NEW DUCTS SHALL BE LOCATED TO BE AT LEAST 1'-0" FROM THE FLOOR AND 4" FROM THE SIDE WALLS.
14. ROUTE BONDING RIBBON ALONG INTERIOR PERIMETER OF MANHOLE. BOND ALL METALLIC COMPONENTS WITHIN THE MANHOLE, INLCUDING RACKING HARDWARE AND SPLICE CASES, TO THE BONDING RIBBON..
15. ALL EXISTING CABLES ARE TO BE RACKED INSDIE THE NEW MANHOLE.

3 COMMUNICATIONS DISTRIBUTION MANHOLE

SCALE: NTS

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

PLOT DATE: 9/25/2025 2:55:15 PM

ISSUE DATE: AUGUST 29, 2025
SOLICITATION NO.: W912DS23F0031
CONTRACT NO.: W912DS19D0007

DESIGNED BY: B. GADDIE
DRAWN BY: B. GADDIE
CHECKED BY: J. LOFTUS/W. HALL
SUBMITTED BY:
SIZE: ANSI D

US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK, NY 10278

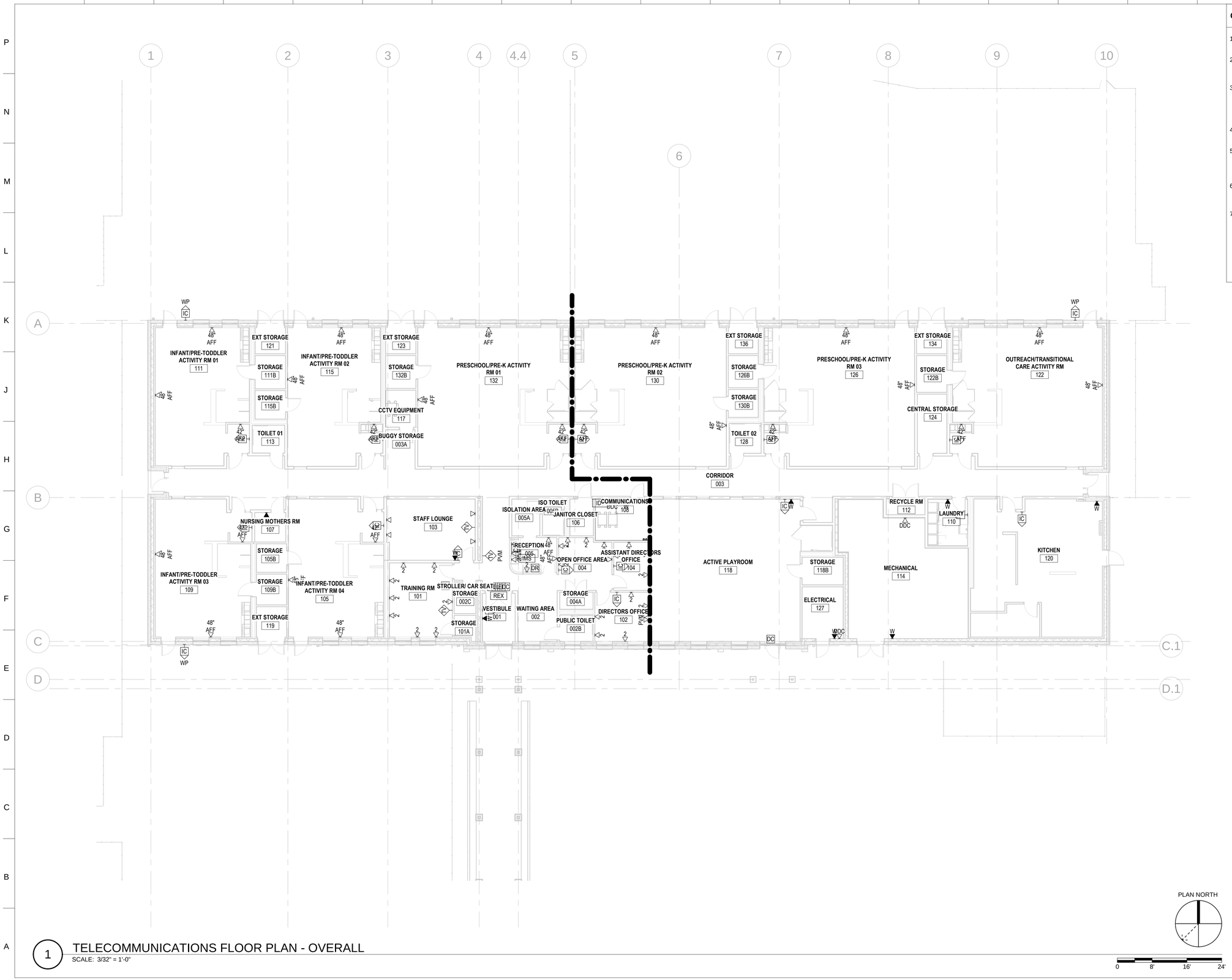
CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
PROJECT NO. 75662

TELECOMMUNICATIONS SITE DETAILS

SHEET ID

TS501

RTA



1 TELECOMMUNICATIONS FLOOR PLAN - OVERALL

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

GENERAL NOTES

1. SEE SHEET T-001 FOR TELECOMMUNICATIONS LEGEND AND SYMBOLS.
2. IN ACCORDANCE WITH THE COMMON CABLING INITIATIVE, CABLE TRAYS MAY BE USED FOR ALL LOW VOLTAGE SIGNALING CABLE.
3. ALL PENETRATIONS ARE TO BE PROPERLY FIRESTOPPED. RESEALABLE, RE-ENTERABLE, MECHANICAL FIRESTOPPING ASSEMBLIES MUST BE USED FOR ALL FLOOR SLEEVES AND FOR PENETRATIONS OF FIRE RATED WALLS.
4. ALL CONDUITS, RACKS, CABINETS, CABLE TRAYS TO BE PROPERLY BONDED AND GROUNDED.
5. ALL HORIZONTAL CABLING TO BE CAT 6A RATED, CMP LISTED WITH GREEN CABLE JACKET, AND ROUTED TO THE NEC EQUIPMENT CABINET UNLESS OTHERWISE NOTED.
6. ALL JACKS ARE TO BE RJ45, GREEN IN COLOR, TERMINATED TO T568B UNLESS OTHERWISE NOTED.
7. EACH SECTION OF CABLE TRAY SHALL BE BONDED TOGETHER.

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

PLOT DATE: 9/25/2025 2:54:29 PM

ISSUE DATE: AUGUST 29, 2025
SOLICITATION NO.: W912DS23F0031
CONTRACT NO.: W912DS19D0007

DESIGNED BY: B. GADDIE
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CHECKED BY: J. GREENWELL
SUBMITTED BY:
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US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK, NY 10278

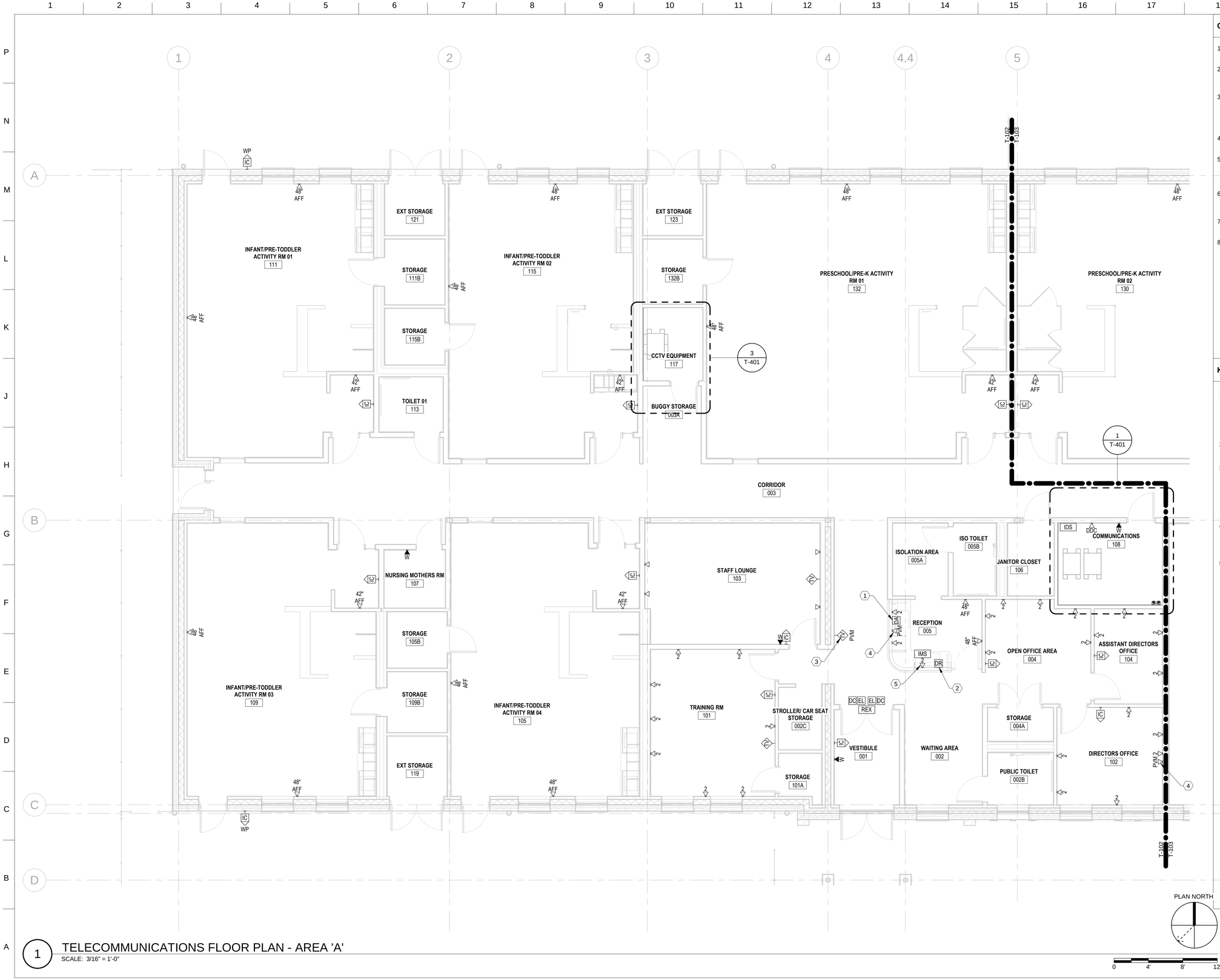
CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
PROJECT NO. 75662

TELECOMMUNICATIONS FLOOR PLAN - OVERALL

SHEET ID

T-101

RTA



GENERAL NOTES

1. SEE SHEET T-001 FOR TELECOMMUNICATIONS LEGEND AND SYMBOLS.
2. IN ACCORDANCE WITH THE COMMON CABLING INITIATIVE, CABLE TRAYS MAY BE USED FOR ALL LOW VOLTAGE SIGNALING CABLE.
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7. EACH SECTION OF CABLE TRAY SHALL BE BONDED TOGETHER.
8. INTERCOM SPEAKER LOCATIONS ARE APPROXIMATE. ADJUST FINAL QUANTITIES AND LOCATIONS TO ENSURE ADEQUATE COVERAGE AND INTELLIGIBILITY.

KEY NOTES

1 DURESS ALARM. PROVIDE SILENT ACTIVATION BUTTON MOUNTED UNDER LOWER COUNTERTOP. ALARM SHALL REPORT DIRECTLY TO THE DIRECTORATE OF EMERGENCY SERVICES (DES) LOCATED IN BUILDING 406. COORDINATE WITH DES FOR EXACT CONNECTION REQUIREMENTS.

2 MANUAL OVERRIDE DOOR RELEASE BUTTON FOR BUZZER ENTRY SYSTEM.

3 PARENTAL VIEWING MONITOR. PROVIDE PULL BOX AND A MINIMUM 1" EMT PATHWAY FROM MONITOR LOCATION TO THE PVM WORKSTATION AT THE RECEPTION DESK. COORDINATE EXACT LOCATION AND MOUNTING HEIGHT WITH FINAL EQUIPMENT LAYOUT. MONITOR PROVIDED AND INSTALLED BY OTHERS.

4 PARENTAL VIEWING MONITOR WORKSTATION OUTLET. PROVIDE (1) CAT6A CABLE FROM OUTLET TO CCTV EQUIPMENT ROOM 117. LEAVE 20' EXCESS CABLE COILED ABOVE CCTV EQUIPMENT RACK.

5 ONE OUTLET TO BE USED FOR AUDIO/VISUAL INTERCOM MASTER STATION.

US Army Corps of Engineers ®

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US ARMY CORPS OF ENGINEERS
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26 FEDERAL PLAZA, NEW YORK, NY 10278

CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
PROJECT NO. 75662

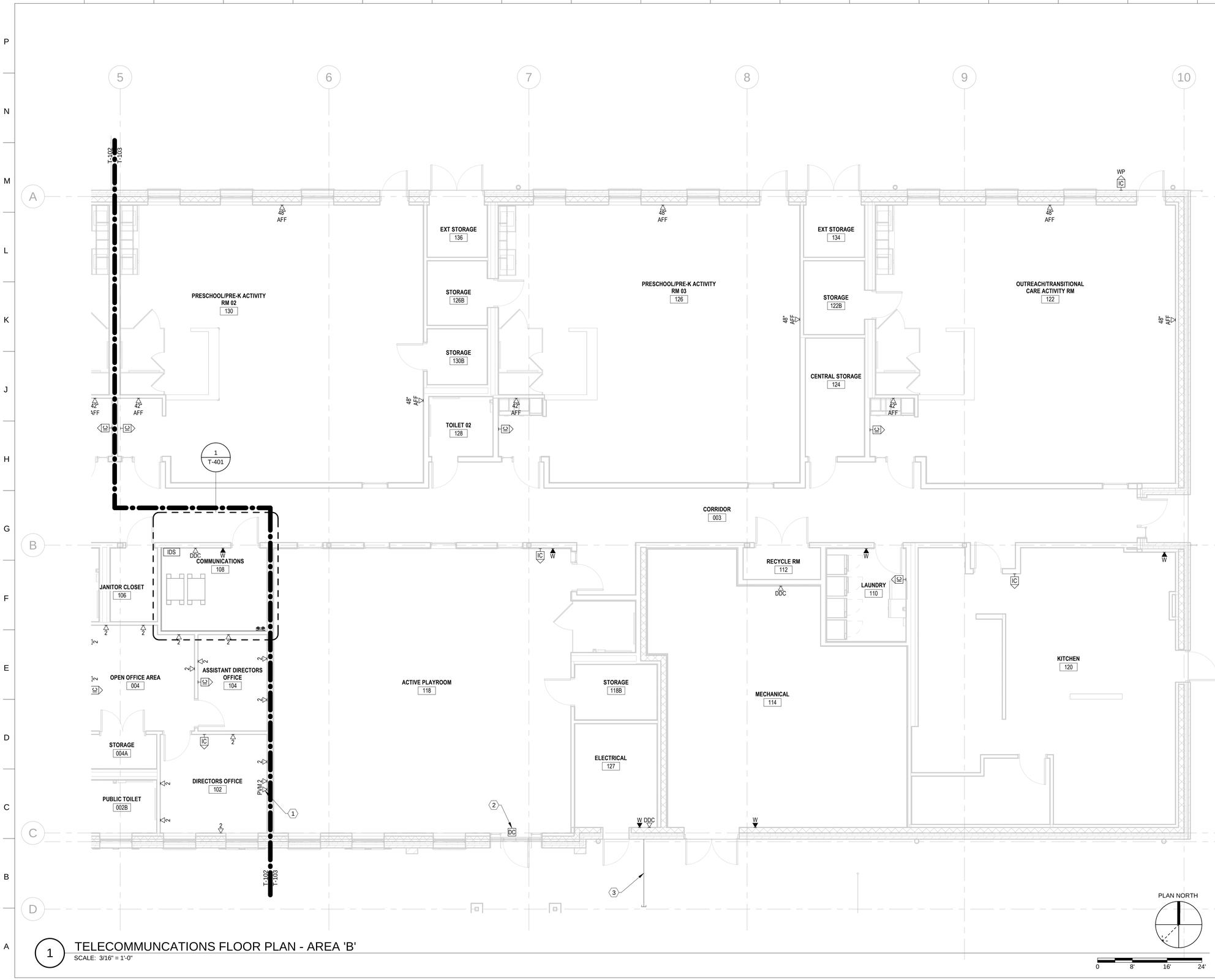
TELECOMMUNICATIONS FLOOR PLAN - AREA 'A'

SHEET ID

T-102

1 TELECOMMUNICATIONS FLOOR PLAN - AREA 'A'
SCALE: 3/16" = 1'-0"

RTA



1 TELECOMMUNCATIONS FLOOR PLAN - AREA 'B'
SCALE: 3/16" = 1'-0"

PLAN NORTH

0 8' 16' 24'

GENERAL NOTES

1. SEE SHEET T-001 FOR TELECOMMUNICATIONS LEGEND AND SYMBOLS.
2. IN ACCORDANCE WITH THE COMMON CABLING INITIATIVE, CABLE TRAYS MAY BE USED FOR ALL LOW VOLTAGE SIGNALING CABLE.
3. ALL PENETRATIONS ARE TO BE PROPERLY FIRESTOPPED. RESEALABLE, RE-ENTERABLE, MECHANICAL FIRESTOPPING ASSEMBLIES MUST BE USED FOR ALL FLOOR SLEEVES AND FOR PENETRATIONS OF FIRE RATED WALLS.
4. ALL CONDUITS, RACKS, CABINETS, CABLE TRAYS TO BE PROPERLY BONDED AND GROUNDED.
5. ALL HORIZONTAL CABLING TO BE CAT 6A RATED, CMP LISTED WITH GREEN CABLE JACKET, AND ROUTED TO THE NEC EQUIPMENT CABINET UNLESS OTHERWISE NOTED.
6. ALL JACKS ARE TO BE RJ45, GREEN IN COLOR, TERMINATED TO T568B UNLESS OTHERWISE NOTED.
7. EACH SECTION OF CABLE TRAY SHALL BE BONDED TOGETHER.
8. INTERCOM SPEAKER LOCATIONS ARE APPROXIMATE. ADJUST FINAL QUANTITIES AND LOCATIONS TO ENSURE ADEQUATE COVERAGE AND INTELLIGIBILITY.

KEY NOTES

1 PARENTAL VIEWING MONITOR WORKSTATION OUTLET. PROVIDE (1) CAT6A CABLE FROM OUTLET TO CCTV EQUIPMENT ROOM 117. LEAVE 20' EXCESS CABLE COILED ABOVE CCTV EQUIPMENT RACK.

2 EQUIP DOOR WITH INTRUSION ALARM. ALARM SHALL BE DISTINCTLY DIFFERENT SOUND FROM FIRE ALARM, AND MUST BE CAPABLE OF BEING HEARD AT RECEPTION DESK.

3 PROVIDE 2" UNDERGROUND CONDUIT STUBBED OUT TO A POINT 5' BEYOND SIDEWALK AND CAPPED FOR FUTURE CATV SERVICE CABLING. FROM ELECTRICAL 127, ROUTE 2" CONDUIT TO FUTURE SERVICE PROVIDER EQUIPMENT LOCATION IN COMMUNICATIONS 108.

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

PLOT DATE: 9/25/2025 2:54:30 PM

DESIGNED BY: B. GADDIE
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CHECKED BY: J. POWELL
SUBMITTED BY:

ISSUE DATE: AUGUST 29, 2025
SOLICITATION NO.: W912DS23F0031
CONTRACT NO.: W912DS19D0007
SIZE: ANSI D

US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK, NY 10278

CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
PROJECT NO. 75682

TELECOMMUNICATIONS FLOOR PLAN - AREA 'B'

SHEET ID

T-103

RTA

GENERAL NOTES

1. SEE SHEET T-001 FOR TELECOMMUNICATIONS LEGEND AND SYMBOLS.
2. IN ACCORDANCE WITH THE COMMON CABLING INITIATIVE, CABLE TRAYS MAY BE USED FOR ALL LOW VOLTAGE SIGNALING CABLE.
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7. EACH SECTION OF CABLE TRAY SHALL BE BONDED TOGETHER.

EXT STORAGE 121
STORAGE 111B
STORAGE 115B
TOILET 01 113
INFANT/PRE-TODDLER ACTIVITY RM 01 111
INFANT/PRE-TODDLER ACTIVITY RM 02 S5
EXT STORAGE 123
STORAGE 132B
CCTV EQUIPMENT
BUGGY STORAGE 003A
PRESCHOOL/PRE-K ACTIVITY RM 01 S32
PRESCHOOL/PRE-K ACTIVITY RM 02 S30
EXT STORAGE 136
STORAGE 126B
STORAGE 130B
TOILET 02 128
PRESCHOOL/PRE-K ACTIVITY RM 03 S26
EXT STORAGE 134
STORAGE 122B
CENTRAL STORAGE 124
OUTREACH/TRANSITIONAL CARE ACTIVITY RM 122 S
CORRIDOR 003
NURSING MOTHERS RM 107
STORAGE 105B
STORAGE 109B
EXT STORAGE 119
INFANT/PRE-TODDLER ACTIVITY RM 03 109 S
INFANT/PRE-TODDLER ACTIVITY RM 04 105
STAFF LOUNGE 103
TRAINING RM 101
STROLLER/ CAR SEAT STORAGE 002C
STORAGE 101A
VESTIBULE 001
ISOLATION AREA 005A
ISO TOILET 005B
JANITOR CLOSET 106
COMMUNICATIONS 108
RECEPTION 005
OPEN OFFICE AREA 004
ASSISTANT DIRECTORS OFFICE 104
WAITING AREA 002
STORAGE 004A
PUBLIC TOILET 002B
DIRECTORS OFFICE 102
ACTIVE PLAYROOM 118 S
STORAGE 118B
ELECTRICAL 127
RECYCLE RM 112
LAUNDRY 110
MECHANICAL 114
WAP
PVM
360

PLAN NORTH

0 8' 16' 24'

1 TELECOMMUNICATIONS CEILING PLAN - OVERALL
SCALE: 3/32" = 1'-0"

US Army Corps of Engineers ®

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SOLICITATION NO.: W912DS23F0031
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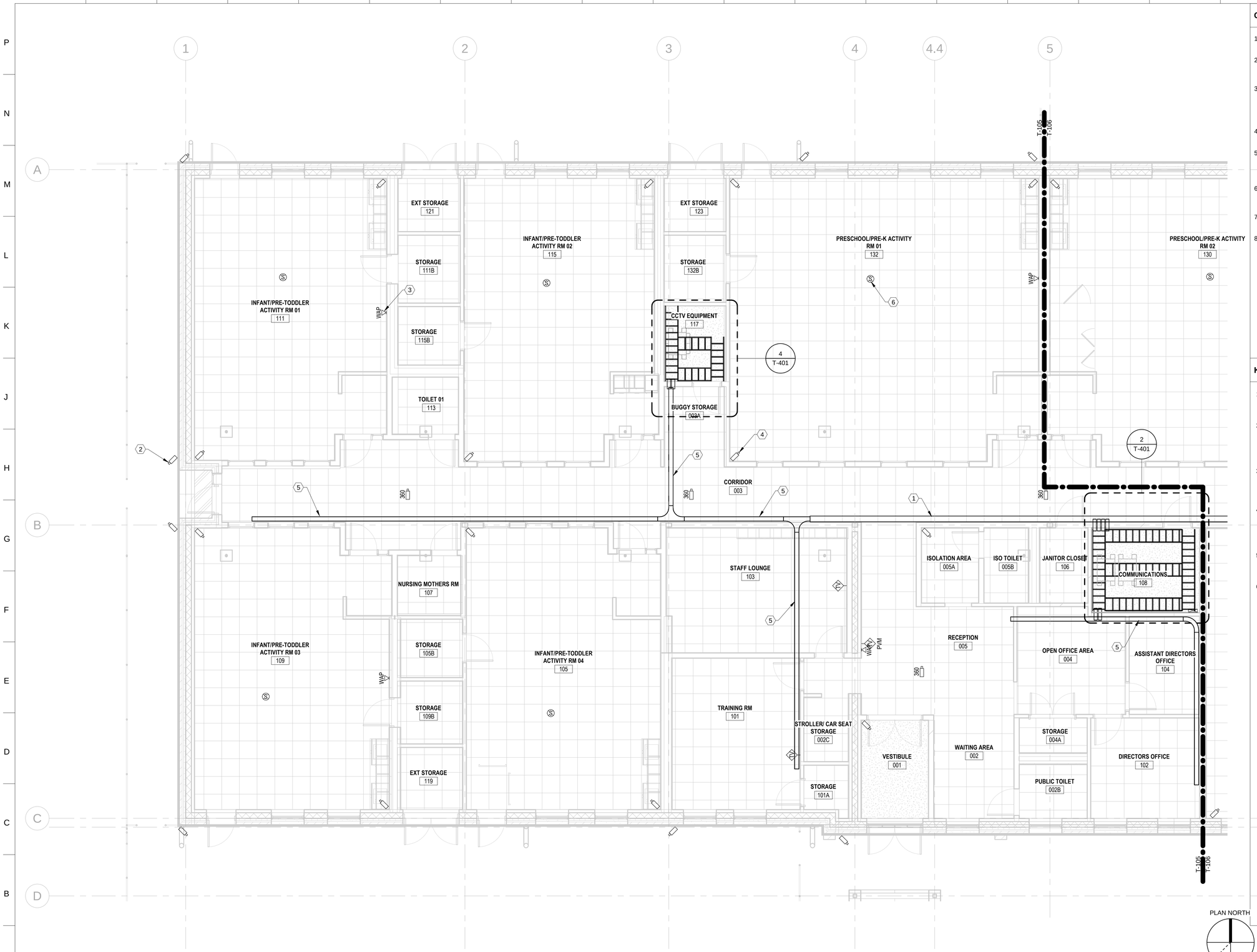
US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK, NY 10278

CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
PROJECT NO. 75662

TELECOMMUNICATIONS CEILING PLAN - OVERALL

SHEET ID
T-104

RTA



1 TELECOMMUNICATIONS CEILING PLAN - AREA 'A'
SCALE: 3/16" = 1'-0"

GENERAL NOTES

1. SEE SHEET T-001 FOR TELECOMMUNICATIONS LEGEND AND SYMBOLS.
2. IN ACCORDANCE WITH THE COMMON CABLING INITIATIVE, CABLE TRAYS MAY BE USED FOR ALL LOW VOLTAGE SIGNALING CABLE.
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7. EACH SECTION OF CABLE TRAY SHALL BE BONDED TOGETHER.
8. INTERCOM SPEAKER LOCATIONS ARE APPROXIMATE. ADJUST FINAL QUANTITIES AND LOCATIONS TO ENSURE ADEQUATE COVERAGE AND INTELLIGIBILITY.

KEY NOTES

1 8" W X 4" D BASKET TYPE CABLE TRAY MOUNTED 8'-6" AFF TO BOTTOM OF TRAY. SEE DETAILS ON SHEET T-503 FOR MORE INFORMATION.

2 EXTERIOR WALL MOUNTED CCTV CAMERA. PROVIDE NEMA RATED WEATHERPROOF JUNCTION BOX AND 1" EMT CONDUIT TO CCTV EQUIPMENT ROOM 117 OR NEAREST CABLE TRAY LOCATION. CAMERA AND CABLING BY OTHERS. (TYPICAL)

3 WIRELESS ACCESS POINT (WAP) OUTLET. PROVIDE 1" EMT CONDUIT TO COMMUNICATIONS 108 OR NEAREST CABLE TRAY LOCATION FOR WAP CABLING. CABLING BY OTHERS. (TYPICAL)

4 CEILING MOUNTED CCTV CAMERA. PROVIDE JUNCTION BOX AND 1" EMT CONDUIT TO CCTV EQUIPMENT ROOM 117 OR NEAREST CABLE TRAY LOCATION. CAMERA AND CABLING BY OTHERS. (TYPICAL)

5 6" W X 4" D BASKET TYPE CABLE TRAY MOUNTED 8'-6" AFF TO BOTTOM OF TRAY. SEE DETAILS ON SHEET T-503 FOR MORE INFORMATION.

6 PROVIDE MANUFACTURER RECOMMENDED CABLING IN 3/4" CONDUIT TO INTERCOM SUBSTATION WITHIN SAME ROOM. (TYPICAL)

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

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SOLICITATION NO.: W912DS23F0031
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SUBMITTED BY:
SIZE: ANSI D

US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK, NY 10278

CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
PROJECT NO. 75662

TELECOMMUNICATIONS CEILING PLAN - AREA 'A'

SHEET ID
T-105

RTA

1 TELECOMMUNICATIONS CEILING PLAN - AREA 'B'

SCALE: 3/16" = 1'-0"

GENERAL NOTES

1. SEE SHEET T-001 FOR TELECOMMUNICATIONS LEGEND AND SYMBOLS.
2. IN ACCORDANCE WITH THE COMMON CABLING INITIATIVE, CABLE TRAYS MAY BE USED FOR ALL LOW VOLTAGE SIGNALING CABLE.
3. ALL PENETRATIONS ARE TO BE PROPERLY FIRESTOPPED. RESEALABLE, RE-ENTERABLE, MECHANICAL FIRESTOPPING ASSEMBLIES MUST BE USED FOR ALL FLOOR SLEEVES AND FOR PENETRATIONS OF FIRE RATED WALLS.
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KEY NOTES

1 8" W X 4" D BASKET TYPE CABLE TRAY MOUNTED 8'-6" AFF TO BOTTOM OF TRAY. SEE DETAILS ON SHEET T-503 FOR MORE INFORMATION.

2 CEILING MOUNTED CCTV CAMERA. PROVIDE JUNCTION BOX AND 1" EMT CONDUIT TO CCTV EQUIPMENT ROOM 117 OR NEAREST CABLE TRAY LOCATION. CAMERA AND CABLING BY OTHERS. (TYPICAL)

3 EXTERIOR WALL MOUNTED CCTV CAMERA. PROVIDE NEMA RATED WEATHERPROOF JUNCTION BOX AND 1" EMT CONDUIT TO CCTV EQUIPMENT ROOM 117 OR NEAREST CABLE TRAY LOCATION. CAMERA AND CABLING BY OTHERS. (TYPICAL)

4 WIRELESS ACCESS POINT (WAP) OUTLET. PROVIDE 1" EMT CONDUIT TO COMMUNICATIONS 108 OR NEAREST CABLE TRAY LOCATION FOR WAP CABLING. CABLING BY OTHERS. (TYPICAL)

5 6" W X 4" D BASKET TYPE CABLE TRAY MOUNTED 8'-6" AFF TO BOTTOM OF TRAY. SEE DETAILS ON SHEET T-503 FOR MORE INFORMATION.

6 PROVIDE MANUFACTURER RECOMMENDED CABLING IN 3/4" CONDUIT TO INTERCOM SUBSTATION WITHIN SAME ROOM. (TYPICAL)

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

PLOT DATE: 9/25/2025 2:54:37 PM

DESIGNED BY: B. GADDIE
DRAWN BY: B. GADDIE
CHECKED BY: J. GREENWELL
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SIZE: ANSI D

ISSUE DATE: AUGUST 29, 2025
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US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK, NY 10278

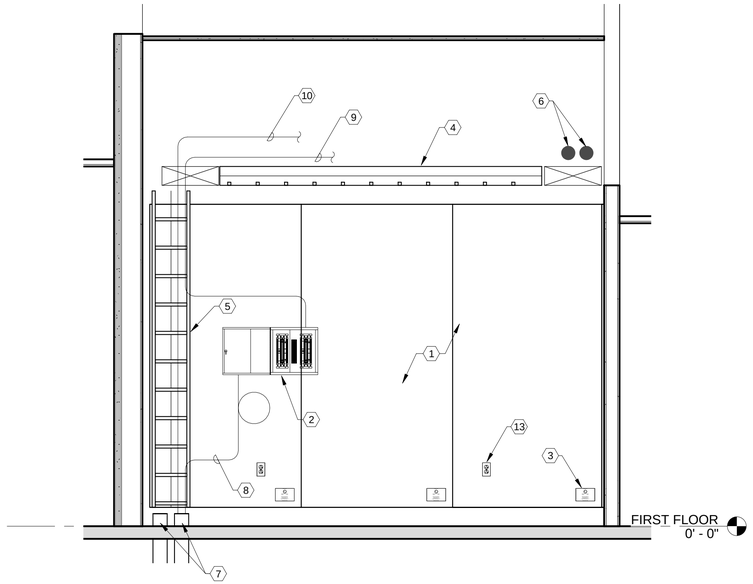
CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
PROJECT NO. 75662

TELECOMMUNICATIONS CEILING PLAN - AREA 'B'

SHEET ID

T-106

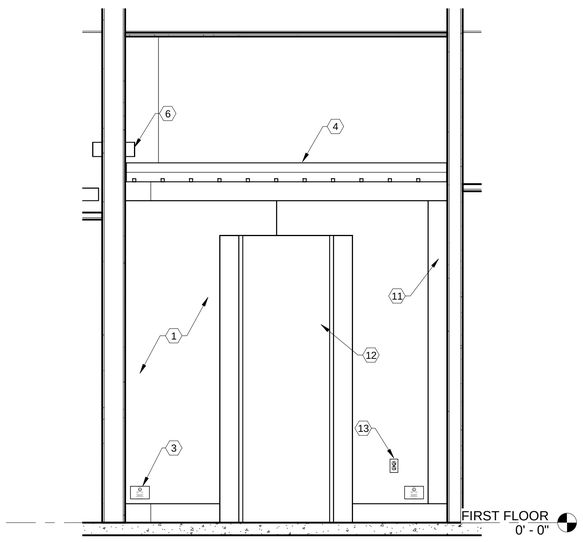
RTA



1
T-401

COMMUNICATIONS 108 NORTH WALL ELEVATION

1/2" = 1'-0"



2
T-401

CCTV 117 EAST WALL ELEVATION

1/2" = 1'-0"

GENERAL NOTES

1. SEE SHEET T-001 FOR TELECOMMUNICATIONS LEGEND AND SYMBOLS.
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KEY NOTES

1 8' H X 4' W AC GRADE, VOID FREE, FIRE RATED PLYWOOD BACKBOARDS. MOUNT 6" AFF WITH THE BEST SIDE TOWARD THE ROOM. COVER LENGTH OF ENTIRE WALL. PLYWOOD TO BE FINISHED WITH TWO COATS OF FIRE-RETARDANT PAINT. (1) FIRE-RATED STAMP TO BE LEFT UNPAINTED AND VISIBLE ON EACH SHEET OF PLYWOOD. PAINT PRIOR TO INSTALLATION OF ANY EQUIPMENT. FASTEN PLYWOOD PERMANENTLY TO THE WALL BY MEANS OF WALL ANCHORS UTILIZING GALVANIZED, ZINC PLATED, OR STAINLESS STEEL HARDWARE WITH A FLAT HEAD. FINISHED INSTALLATION SHALL HAVE FLUSH APPEARANCE WITH COUNTERSUNK SCREW HEADS TO PREVENT SPLITTING OF THE PLYWOOD. DRYWALL SCREWS ARE NOT ACCEPTABLE.

2 25 PAIR OSP COPPER CABLE BUILDING ENTRANCE PROTECTOR FOR COPPER BACKBONE CABLE.

3 FIRE-RATED STAMPS SHALL BE VISIBLE ON EACH SHEET OF PLYWOOD. DO NOT PAINT OVER FIRE-RATED PLYWOOD. (TYPICAL)

4 18" W LADDER RACK WITH RUNGS WELDED AT 12" INTERVALS. (TYPICAL)

5 12 INCHES WIDE VERTICAL LADDER RACK.

6 4" WALL SLEEVES. IF WALL IS FIRE-RATED, THEN SELF-SEALABLE, RE-ENTERABLE, MECHANICAL FIRE-STOPPING UNITS ARE REQUIRED. (TYPICAL)

7 (2) 4" CONDUITS, ONE WITH (1) 3" 3 CELL FABRIC MESH INNER-DUCT FROM EXISTING HANDHOLE HH-49. ROUTE UNDER SLAB TO BUILDING EXTERIOR. SEE TELECOMMUNICATIONS SITE PLANS FOR CONTINUATION.

8 25 PAIR COPPER BACKBONE CABLE TO WALL MOUNTED BUILDING ENTRANCE PROTECTOR.

9 25 PAIR COPPER BACKBONE CABLE TO PATCH PANEL IN NEC EQUIPMENT CABINET.

10 12 STRAND OSP SM FOC TO PATCH PANEL IN NEC EQUIPMENT CABINET.

11 SBB MOUNTED 7'-0" AFF.

12 7' H X 36" D X 19" W 2 POST EQUIPMENT RACKS, RMU MARKINGS, CAPABLE OF SUPPORTING UP TO 1500 LBS STATIC LOAD (TYPICAL). MINIMUM CLEARANCE AT FRONT OR REAR OF RACK IS 36".

13 NEMA 5-20R DUPLEX CONVENIENCE RECEPTACLES PLACED AT 6' INTERVALS AROUND THE PERIMETER OF THE ROOM MOUNTED AT 6" AFF. (TYPICAL)

US Army Corps of Engineers ®

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CHILD DEVELOPMENT CENTER
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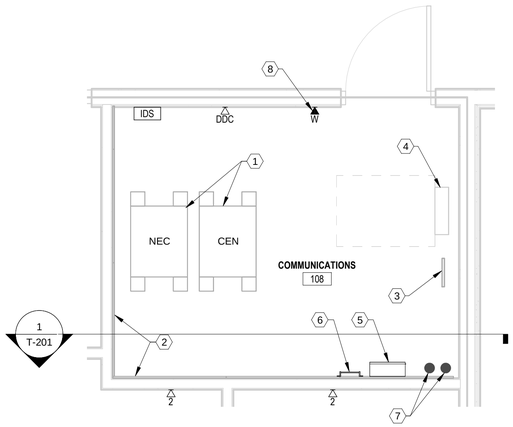
PROJECT NO. 75682

TELECOMMUNICATIONS ELEVATIONS

SHEET ID

T-201

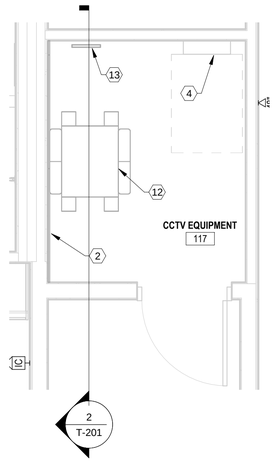
RTA



1 / T-102 ENLARGED TELECOM FLOOR PLAN - COMMUNICATIONS 108

3/8" = 1'-0"

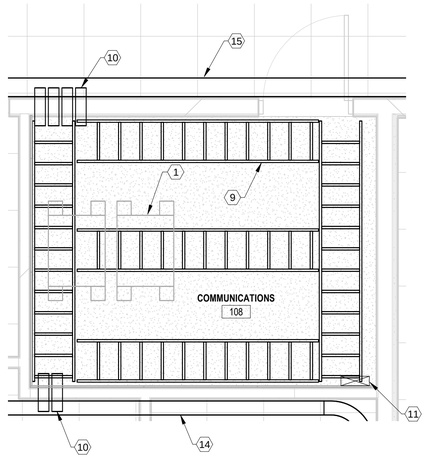
0 2' 4' 6'



3 / T-102 ENLARGED TELECOM FLOOR PLAN - CCTV EQUIPMENT 117

3/8" = 1'-0"

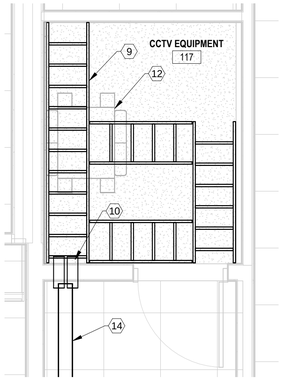
0 2' 4' 6'



2 / T-105 ENLARGED TELECOM CEILING PLAN - COMMUNICATIONS 108

3/8" = 1'-0"

0 2' 4' 6'



4 / T-105 ENLARGED TELECOM CEILING PLAN - CCTV EQUIPMENT 117

3/8" = 1'-0"

0 2' 4' 6'

GENERAL NOTES

1. SEE SHEET T-001 FOR TELECOMMUNICATIONS LEGEND AND SYMBOLS.
2. IN ACCORDANCE WITH THE COMMON CABLING INITIATIVE, CABLE TRAYS MAY BE USED FOR ALL LOW VOLTAGE SIGNALING CABLE.
3. ALL PENETRATIONS ARE TO BE PROPERLY FIRESTOPPED. RESEALABLE, RE-ENTERABLE, MECHANICAL FIRESTOPPING ASSEMBLIES MUST BE USED FOR ALL FLOOR SLEEVES AND FOR PENETRATIONS OF FIRE RATED WALLS.
4. ALL CONDUITS, RACKS, CABINETS, CABLE TRAYS TO BE PROPERLY BONDED AND GROUNDED.
5. ALL HORIZONTAL CABLING TO BE CAT 6A RATED, CMP LISTED WITH GREEN CABLE JACKET, AND ROUTED TO THE NEC EQUIPMENT CABINET UNLESS OTHERWISE NOTED.
6. ALL JACKS ARE TO BE RJ45, GREEN IN COLOR, TERMINATED TO T568B UNLESS OTHERWISE NOTED.
7. EACH SECTION OF CABLE TRAY SHALL BE BONDED TOGETHER.
8. INTERCOM SPEAKER LOCATIONS ARE APPROXIMATE. ADJUST FINAL QUANTITIES AND LOCATIONS TO ENSURE ADEQUATE COVERAGE AND INTELLIGIBILITY.

KEY NOTES

1 7' H X 30" D X 24" W 4 POST LOCKABLE EQUIPMENT CABINETS, RMU MARKINGS, CAPABLE OF SUPPORTING UP TO 2000 LBS STATIC LOAD (TYPICAL). MINIMUM CLEARANCE AT FRONT OR REAR OF RACK IS 36".

2 8' H X 4' W AC GRADE, VOID FREE, FIRE RATED PLYWOOD BACKBOARDS. MOUNT 6" AFF WITH THE BEST SIDE TOWARD THE ROOM. COVER LENGTH OF ENTIRE WALL. PLYWOOD TO BE FINISHED WITH TWO COATS OF FIRE-RETARDANT PAINT. (1) FIRE-RATED STAMP TO BE LEFT UNPAINTED AND VISIBLE ON EACH SHEET OF PLYWOOD. PAINT PRIOR TO INSTALLATION OF ANY EQUIPMENT. FASTEN PLYWOOD PERMANENTLY TO THE WALL BY MEANS OF WALL ANCHORS UTILIZING GALVANIZED, ZINC PLATED, OR STAINLESS STEEL HARDWARE WITH A FLAT HEAD. FINISHED INSTALLATION SHALL HAVE FLUSH APPEARANCE WITH COUNTERSUNK SCREW HEADS TO PREVENT SPLITTING OF THE PLYWOOD. DRYWALL SCREWS ARE NOT ACCEPTABLE.

3 PBB MOUNTED 7'-0" AFF. SEE DETAIL 5 ON SHEET E-504.

4 DEDICATED TELECOM ROOM ELECTRICAL PANEL. SEE POWER PLANS.

5 25 PAIR OSP COPPER CABLE BUILDING ENTRANCE PROTECTOR FOR COPPER BACKBONE CABLE.

6 110 BLOCK FOR COPPER BACKBONE CABLE.

7 (2) 4" CONDUITS, ONE WITH (1) 3" 3 CELL FABRIC MESH INNER-DUCT FROM EXISTING HANDHOLE HH-49. ROUTE UNDER SLAB TO BUILDING EXTERIOR. SEE TELECOMMUNICATIONS SITE PLANS FOR CONTINUATION.

8 STANDARD WALL PHONE OUTLET, MOUNT AT 48" AFF.

9 18" W LADDER RACK WITH RUNGS WELDED AT 12" INTERVALS. (TYPICAL)

10 4" WALL SLEEVES. IF WALL IS FIRE-RATED, THEN SELF-SEALABLE, RE-ENTERABLE, MECHANICAL FIRE-STOPPING UNITS ARE REQUIRED. (TYPICAL)

11 12 INCHES WIDE VERTICAL LADDER RACK.

12 7" H X 36" D X 19" W 2 POST EQUIPMENT RACKS, RMU MARKINGS, CAPABLE OF SUPPORTING UP TO 1500 LBS STATIC LOAD (TYPICAL). MINIMUM CLEARANCE AT FRONT OR REAR OF RACK IS 36".

13 SBB MOUNTED 7'-0" AFF.

14 6" W X 4" D BASKET TYPE CABLE TRAY MOUNTED 8'-6" AFF TO BOTTOM OF TRAY. SEE DETAILS ON SHEET T-503 FOR MORE INFORMATION.

15 8" W X 4" D BASKET TYPE CABLE TRAY MOUNTED 8'-6" AFF TO BOTTOM OF TRAY. SEE DETAILS ON SHEET T-503 FOR MORE INFORMATION.

PLAN NORTH

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

PLOT DATE: 9/25/2025 2:54:39 PM

ISSUE DATE: AUGUST 29, 2025
SOLICITATION NO.: W912DS23F0031
CONTRACT NO.: W912DS19D0007

DESIGNED BY: B. GADDIE
DRAWN BY: B. GADDIE
CHECKED BY: J. LOFSTEDT
SUBMITTED BY:
SIZE: ANSI D

US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK, NY 10278

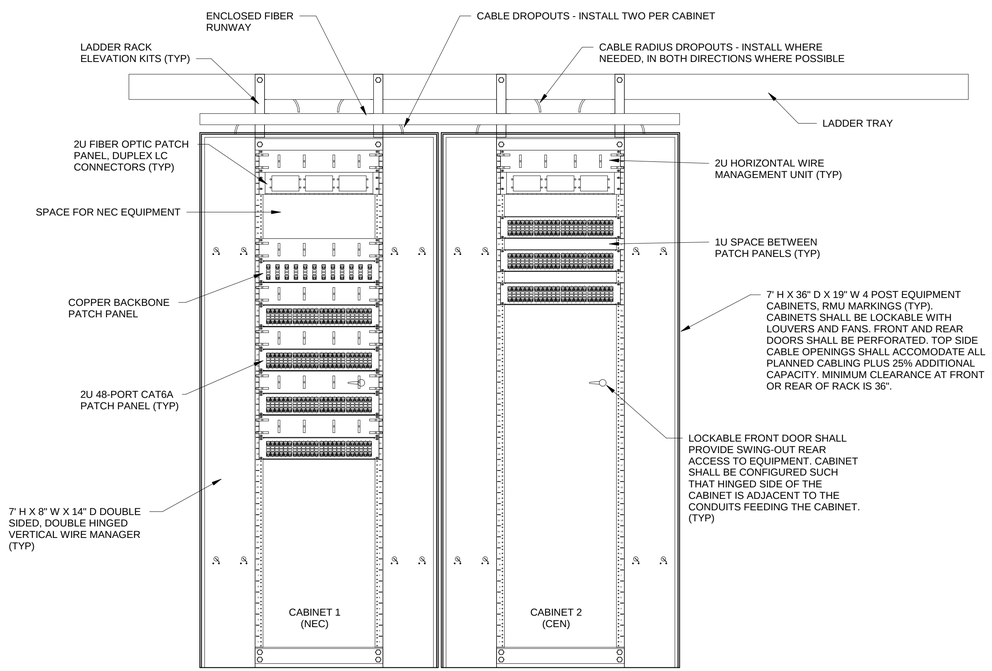
CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
PROJECT NO. 75682

ENLARGED PLANS

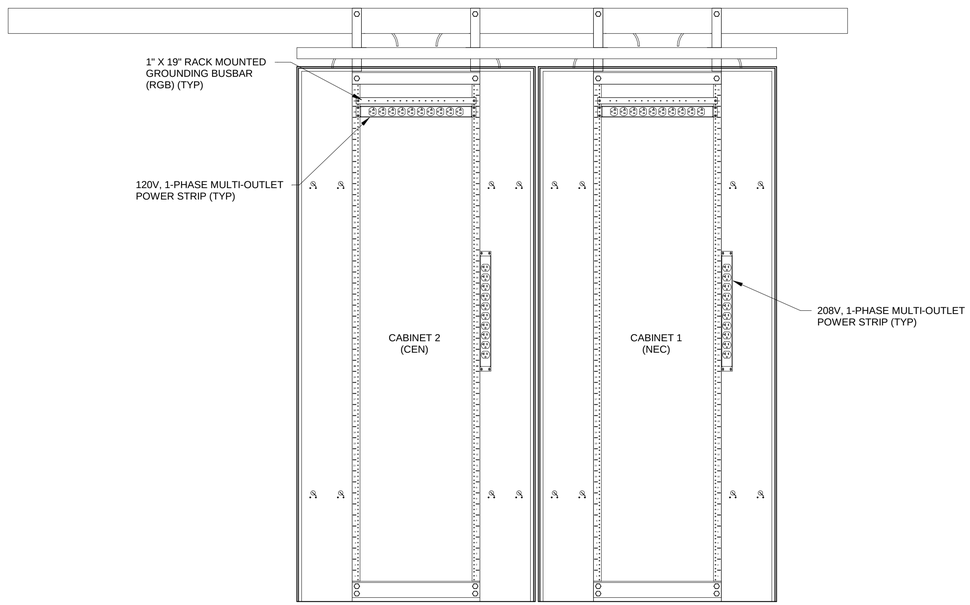
SHEET ID

T-401

RTA



1 COMMUNICATIONS CABINETS FRONT ELEVATION
SCALE: NTS



2 COMMUNICATIONS CABINETS REAR ELEVATION
SCALE: NTS

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

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SIZE: ANSI D
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CHILD DEVELOPMENT CENTER
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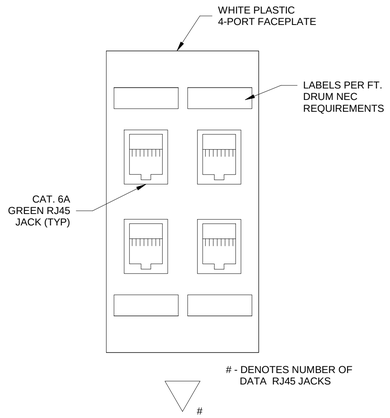
PROJECT NO. 75662

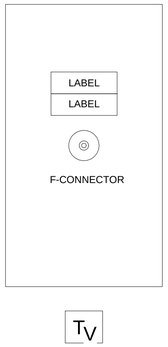
TELECOMMUNICATIONS DETAILS

SHEET ID
T-501

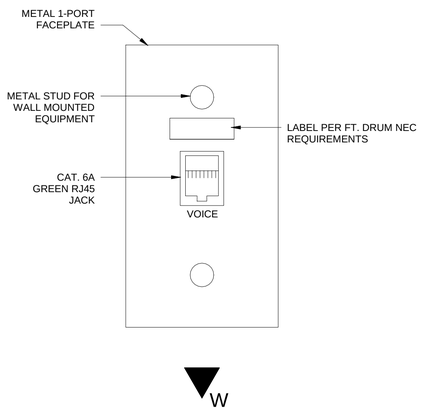
RTA



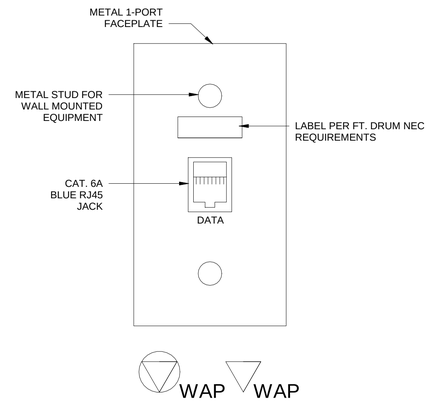
1 DATA OUTLET
SCALE: NTS



4 TV OUTLET
SCALE: NTS



2 WALL PHONE OUTLET
SCALE: NTS



3 WAP OUTLET
SCALE: NTS

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CHILD DEVELOPMENT CENTER
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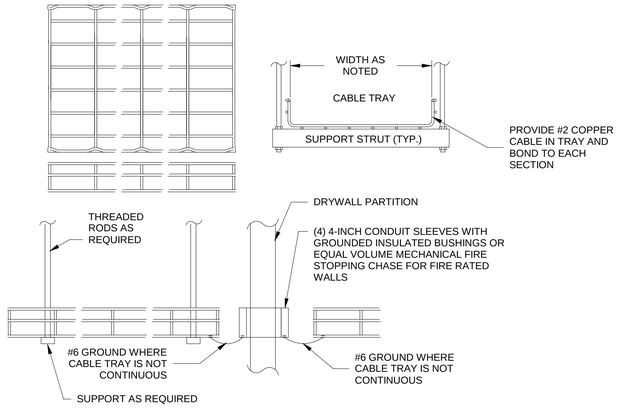
TELECOMMUNICATIONS DETAILS

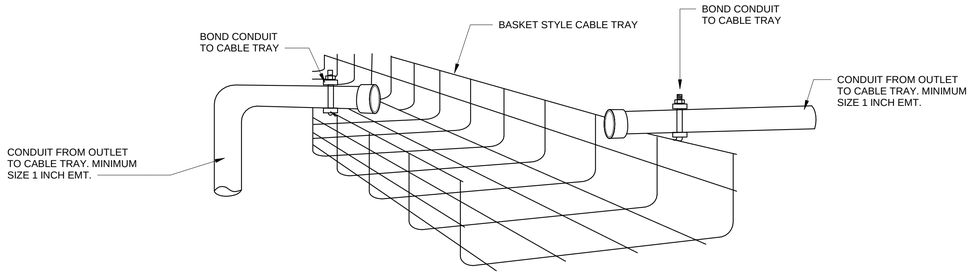
SHEET ID
T-502

RTA

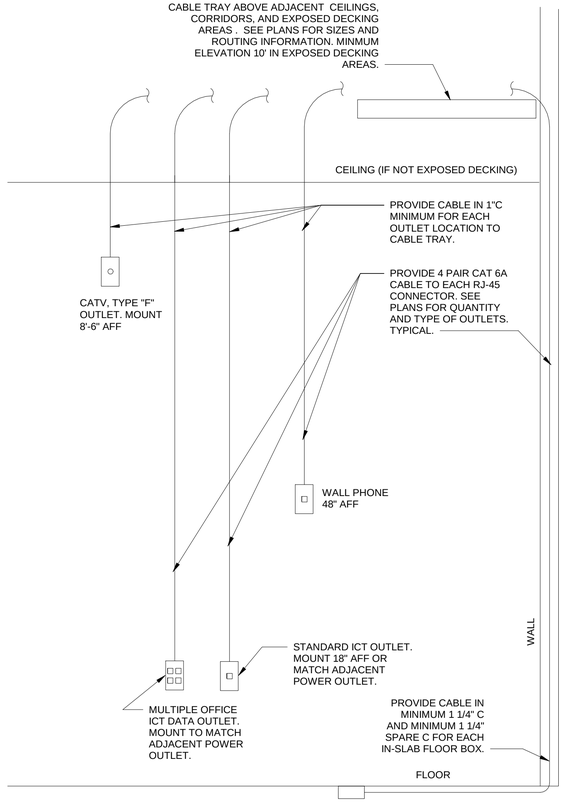


NOTES:
1. PROVIDE COVER FOR THREADED RODS TO PREVENT DAMAGE TO CABLES IN ANY LOCATION WHERE CABLES MAY BE SUBJECT TO CONTACT WITH THE RODS.

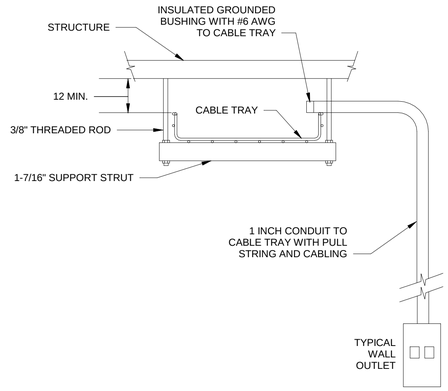
1 BASKET CABLE TRAY, TYP
SCALE: NTS



3 CONDUIT TO CABLE TRAY DIAGRAM DETAIL
SCALE: NTS



2 TYPICAL OUTLET DISTRIBUTION DIAGRAM
SCALE: NTS



4 TYPICAL TELECOMMUNICATIONS WALL OUTLET DETAIL
SCALE: NTS

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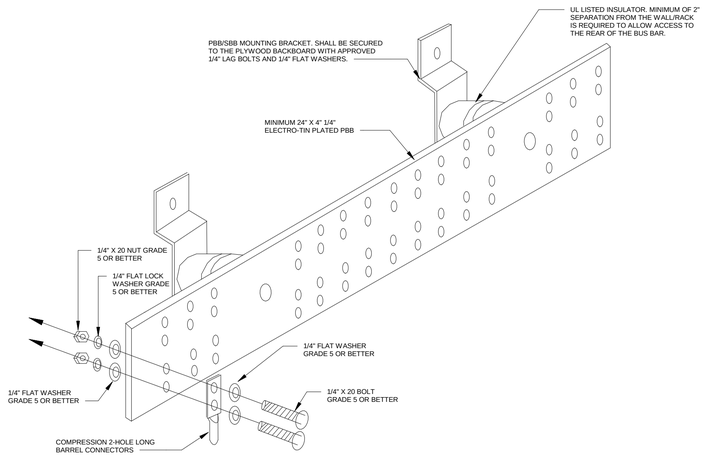
CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
PROJECT NO. 75662

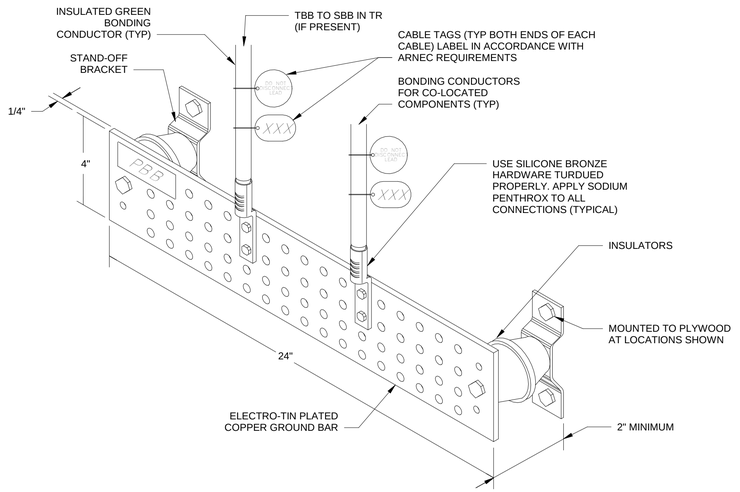
TELECOMMUNICATIONS DETAILS

SHEET ID
T-503

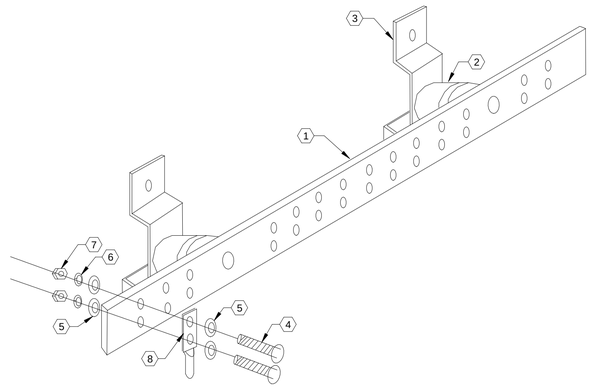
RTA



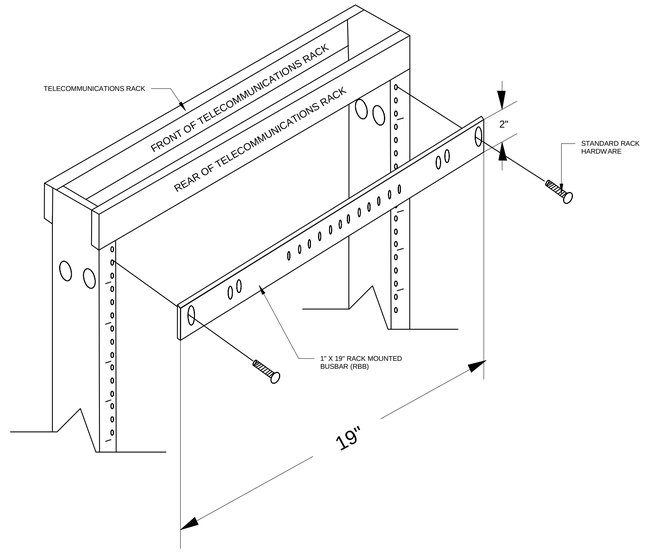
1 PRIMARY BONDING BUSBAR DETAIL
SCALE: NTS



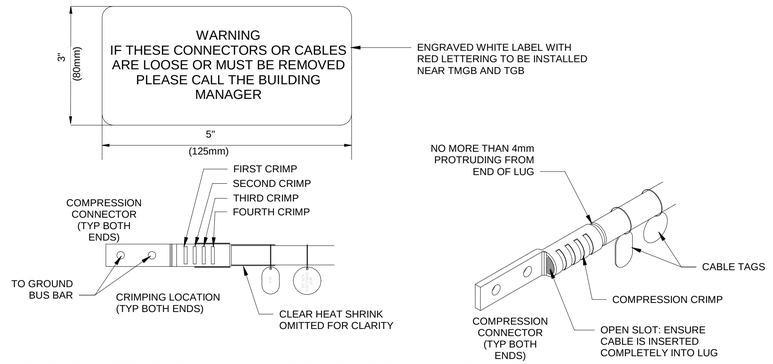
2 PBB CONNECTION DETAIL
SCALE: NTS



4 SECONDARY BONDING BUSBAR DETAIL
SCALE: NTS



5 RBB ENLARGED DETAIL
SCALE: NTS



6 TYPICAL TELECOMMUNICATIONS GROUNDING LUG DETAIL
SCALE: NTS

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

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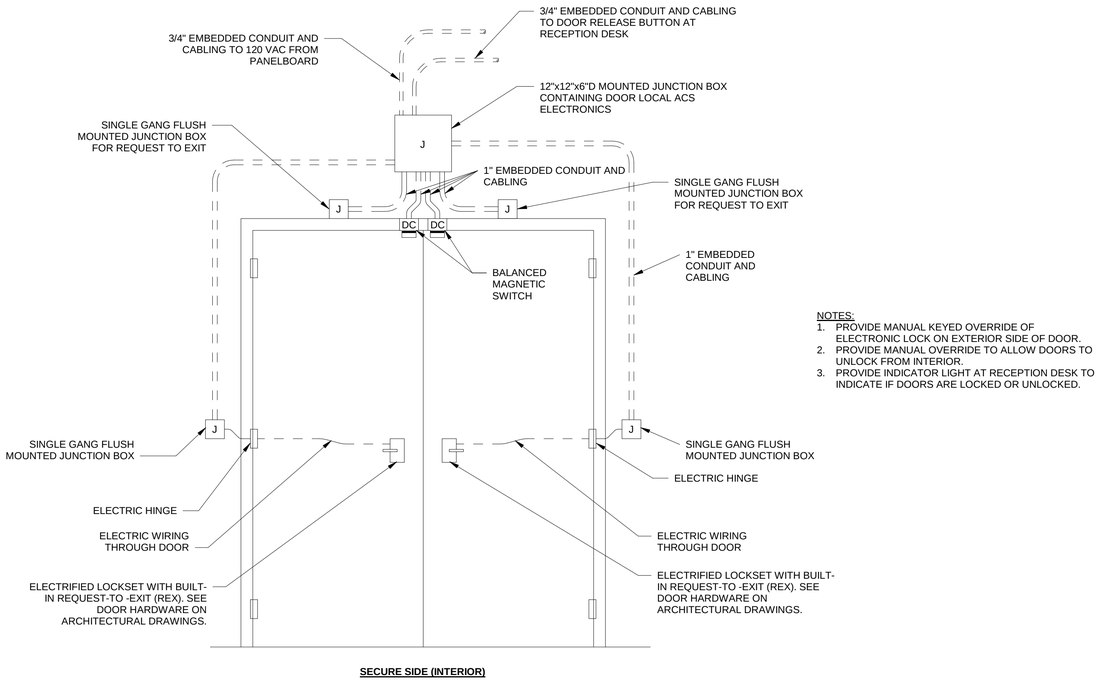
NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK, NY 10278

CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
PROJECT NO. 75662

TELECOMMUNICATIONS DETAILS

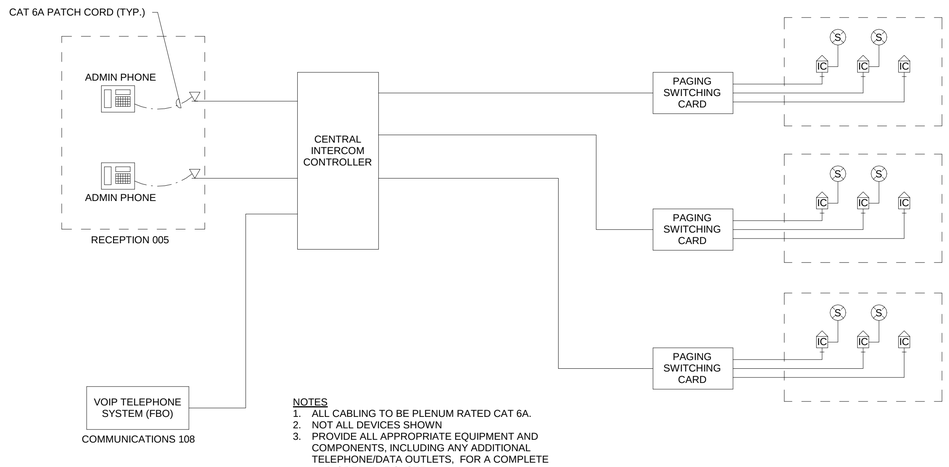
SHEET ID
T-504

RTA



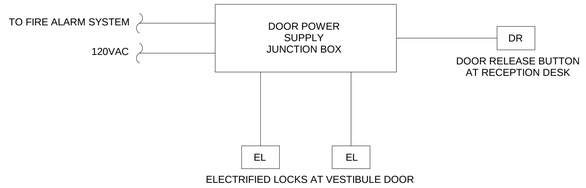
NOTES:
1. PROVIDE MANUAL KEYED OVERRIDE OF ELECTRONIC LOCK ON EXTERIOR SIDE OF DOOR.
2. PROVIDE MANUAL OVERRIDE TO ALLOW DOORS TO UNLOCK FROM INTERIOR.
3. PROVIDE INDICATOR LIGHT AT RECEPTION DESK TO INDICATE IF DOORS ARE LOCKED OR UNLOCKED.

1 ACCESS CONTROL DOUBLE DOOR DETAIL
SCALE: NTS

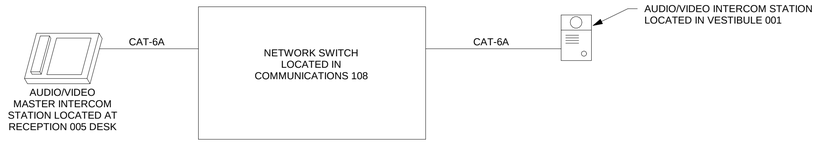


NOTES
1. ALL CABLING TO BE PLENUM RATED CAT 6A.
2. NOT ALL DEVICES SHOWN
3. PROVIDE ALL APPROPRIATE EQUIPMENT AND COMPONENTS, INCLUDING ANY ADDITIONAL TELEPHONE/DATA OUTLETS, FOR A COMPLETE AND OPERABLE SYSTEM.

2 TYPICAL INTERCOM RISER DIAGRAM
SCALE: NTS



4 DOOR RELEASE RISER DIAGRAM
SCALE: NTS



NOTES
1. UPON ACTIVATION OF INTERCOM STATION, MASTER STATION WILL BE NOTIFIED. MASTER STATION MAY THEN ANSWER CALL AND BEGIN TWO-WAY COMMUNICATION WHILE OBSERVING VIDEO FEED. MASTER STATION MAY THEN GRANT ACCESS TO BUILDING BY ACTIVATING REMOTE DOOR RELEASE. DOORS WILL RE-LOCK AFTER 30 SECONDS OR AS DETERMINED BY OWNER.

3 AUDIO/VIDEO INTERCOM DIAGRAM
SCALE: NTS

US Army Corps of Engineers ®

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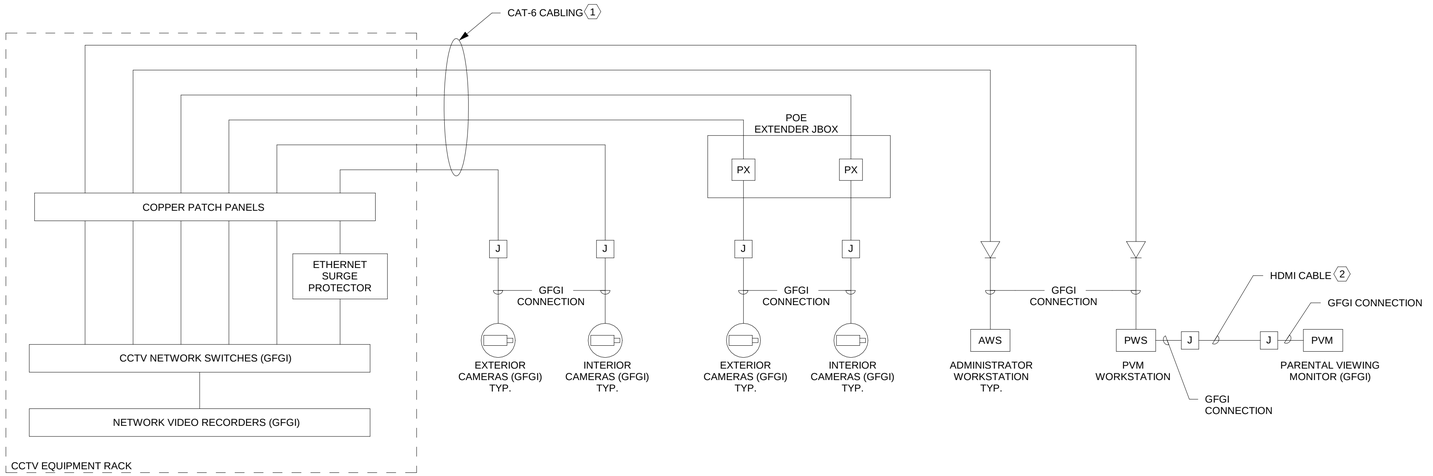
CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
PROJECT NO. 75662

SECURITY DETAILS

SHEET ID

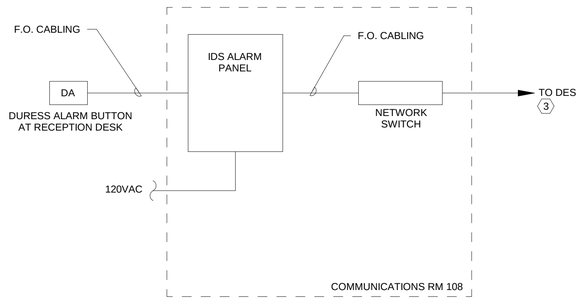
T-505

RTA



1 CCTV SYSTEM RISER DIAGRAM

SCALE: NTS



2 DURESS ALARM RISER DIAGRAM

SCALE: NTS

GENERAL NOTES

1. SEE SHEET T-001 FOR TELECOMMUNICATIONS LEGEND AND SYMBOLS.
2. IN ACCORDANCE WITH THE COMMON CABLING INITIATIVE, CABLE TRAYS MAY BE USED FOR ALL LOW VOLTAGE SIGNALING CABLE.
3. ALL PENETRATIONS ARE TO BE PROPERLY FIRESTOPPED. RESEALABLE, RE-ENTERABLE, MECHANICAL FIRESTOPPING ASSEMBLIES MUST BE USED FOR ALL FLOOR SLEEVES AND FOR PENETRATIONS OF FIRE RATED WALLS.
4. ALL CONDUITS, RACKS, CABINETS, CABLE TRAYS TO BE PROPERLY BONDED AND GROUNDED.
5. ALL HORIZONTAL CABLING TO BE CAT 6A RATED, CMP LISTED WITH GREEN CABLE JACKET, AND ROUTED TO THE NEC EQUIPMENT CABINET UNLESS OTHERWISE NOTED.
6. ALL JACKS ARE TO BE RJ45, GREEN IN COLOR, TERMINATED TO T568B UNLESS OTHERWISE NOTED.
7. EACH SECTION OF CABLE TRAY SHALL BE BONDED TOGETHER.
8. INTERCOM SPEAKER LOCATIONS ARE APPROXIMATE. ADJUST FINAL QUANTITIES AND LOCATIONS TO ENSURE ADEQUATE COVERAGE AND INTELLIGIBILITY.

KEY NOTES

1 CABLING BY OTHERS. SEE NOTES ON PLANS FOR MORE INFORMATION.

2 ROUTE HDMI CABLE IN EMT CONDUIT TO WALL MOUNTED SINGLE GANG JUNCTION BOX AT PARENTAL VIEWING MONITOR LOCATION. TERMINATE CABLE TO HDMI FACEPLATE COVER.

3 COORDINATE WITH DES AND FT. DRUM NEC TO PROVIDE CONNECTION OF DURESS ALARM TO THE EXISTING STARWATCH IDS SYSTEM.

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NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK, NY 10278

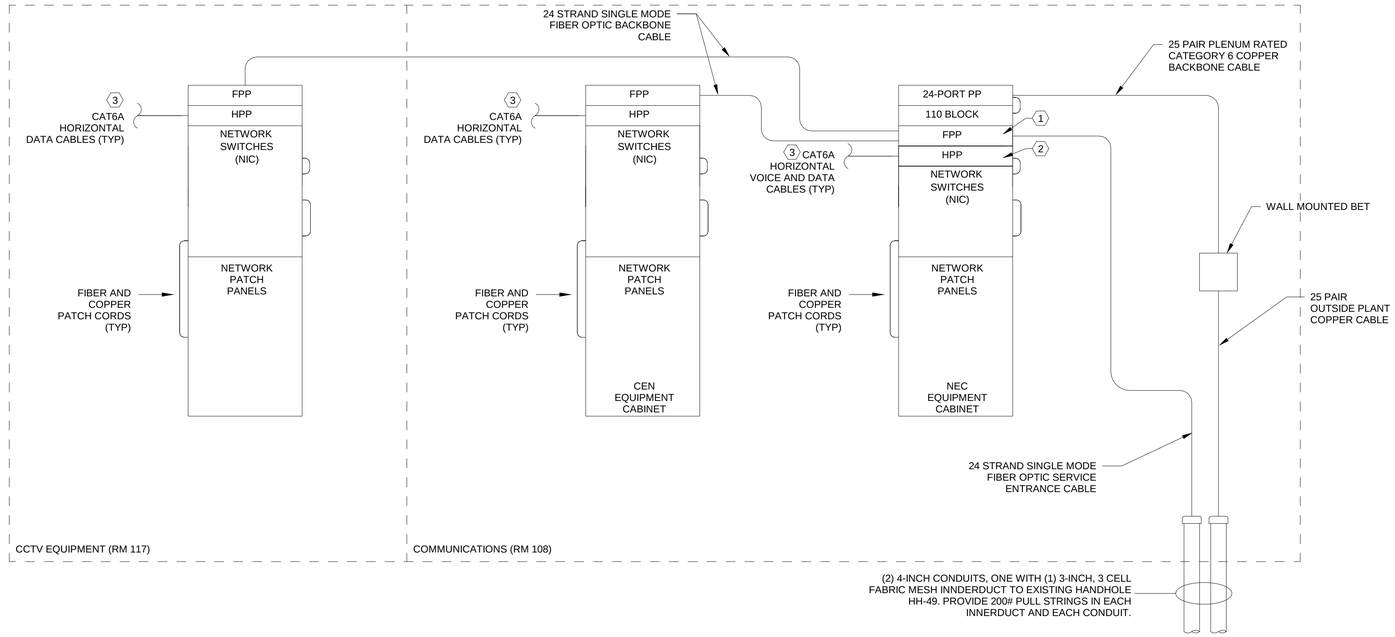
CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
PROJECT NO. 75662

SECURITY DETAILS

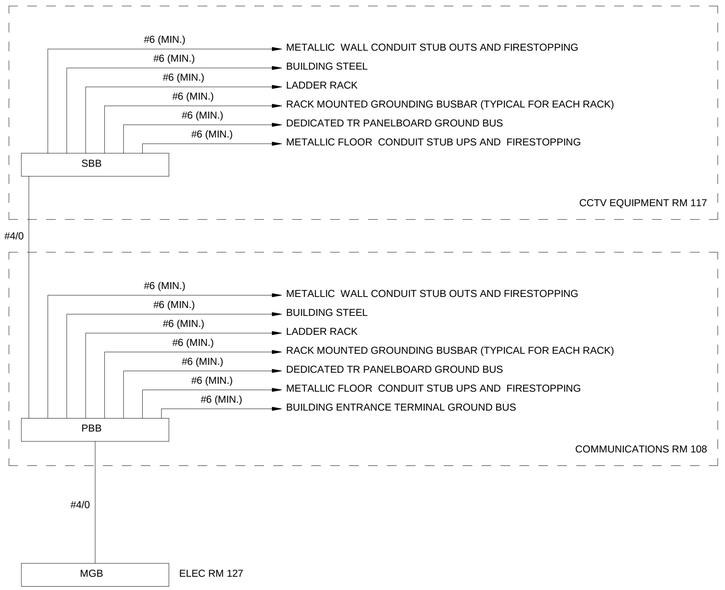
SHEET ID

T-506

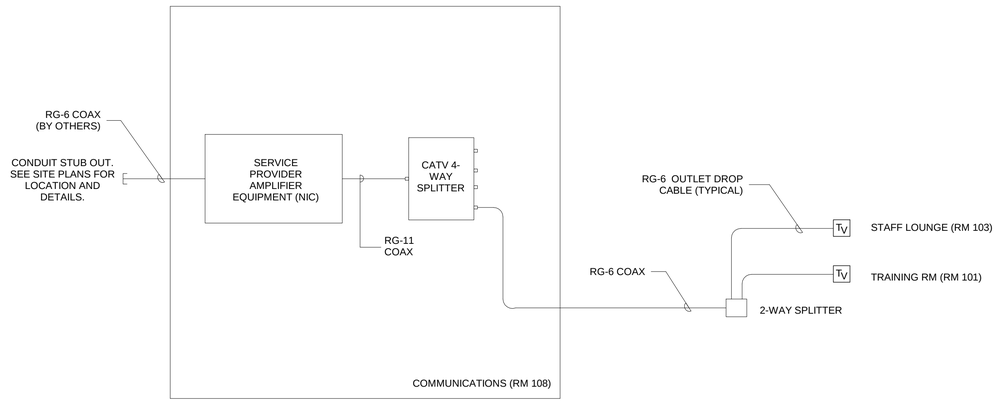
RTA



1 TELECOMMUNICATIONS ONE-LINE DIAGRAM
SCALE: NTS



2 TELECOMMUNICATIONS GROUNDING ONE-LINE DIAGRAM
SCALE: NTS



3 CATV ONE-LINE DIAGRAM
SCALE: 12" = 1'-0"

GENERAL NOTES

1. SEE SHEET T-001 FOR TELECOMMUNICATIONS LEGEND AND SYMBOLS.
2. EQUIPMENT PLACEMENTS ARE DIAGRAMMATIC IN NATURE. FOR WALL ELEVATIONS, REFER TO SHEET T-201. FOR EQUIPMENT RACK ELEVATIONS, REFER TO SHEET T-501.
3. ALL FIBER CABLES TO BE TERMINATED WITH DUPLEX LC CONNECTORS.
4. ALL PATCH PANELS AND PATCH CORDS SHALL BE RATED CAT 6A.

KEY NOTES

1 FIBER OPTIC PATCH PANEL. (TYPICAL)

2 HORIZONTAL CABLE PATCH PANEL WITH RJ-45 CAT6A JACKS. (TYPICAL)

3 HORIZONTAL CABLES ROUTED IN CONDUIT/CABLE TRAY FROM OUTLET LOCATION DIRECTLY TO PATCH PANEL IN RACK. (TYPICAL)

US Army Corps of Engineers ®

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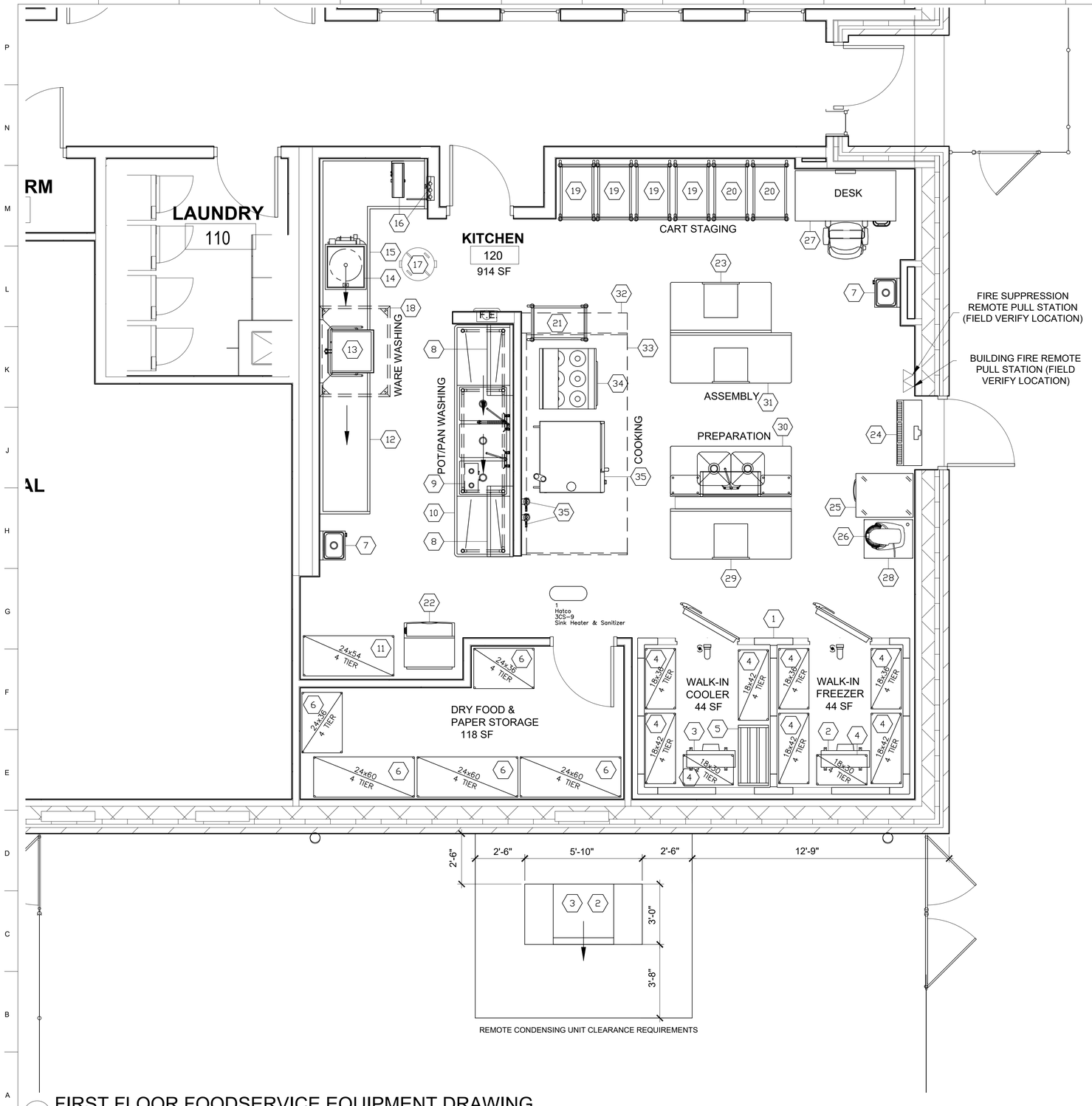
26 FEDERAL PLAZA, NEW YORK, NY 10278

CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
PROJECT NO. 75662

TELECOMMUNICATIONS ONE-LINES

SHEET ID
T-701

RTA



1 FIRST FLOOR FOODSERVICE EQUIPMENT DRAWING
3/8" = 1'-0"

FT HAMILTON CHILD DEV. CTR. FOODSERVICE EQUIPMENT SCHEDULE			
Item No	Furnished By	Qty	Equipment Category
1	CFCI	1	Walk-in Cooler/Freezer
2	CFCI	1 lot	Freezer Refrigeration System
3	CFCI	1 lot	Cooler Refrigeration System
4	CFCI	1 lot	Shelving Units
5	CFCI	1	Dunnage Rack
6	CFCI	1 lot	Shelving Units
7	CFCI	2	Hand Sinks
8	CFCI	2	Sorting Shelves
9	CFCI	1	Sink Heater
10	CFCI	1	3 Compartment Sink
11	CFCI	1	Pot/Pan Drying Rack
12	CFCI	1	Clean Dishtable
13	CFCI	1	Dishwasher w/Built-in Booster Heater
14	CFCI	1	Scrapper/Collector
15	CFCI	1	Soiled Dishtable
16	CFCI	1	Hose Reel w/Control Panel
17	GFGI	1	Mobile Garbage Can
18	CFCI	1	Condensate Hood
19	GFGI	4	3 Shelf Utility Cart (Toddler)
20	GFGI	2	3 Shelf Utility Cart (Infant)
21	GFGI	1	4 Shelf Utility Cart (Preschool)
22	CFCI	1	Undercounter Ice Maker
23	CFCI	1	30x60 Mobile Worktable
24	CFCI	1	Air Curtain
25	CFCI	1	1 Door Reach-in Refrigerator
26	CFCI	1	20 QT Banch Mixer
27	GFGI	1	Desk & Chair
28	CFCI	1	Mobile Mixer Stand
29	CFCI	1	30x72 Mobile Worktable
30	CFCI	1	Prep Table w/2 Sinks & Pot/Pan Rack
31	CFCI	1	30x72 Mobile Worktable
32	CFCI	1	Fire Suppression System
33	CFCI	1	Exhaust Hood
34	CFCI	1	6 Burner Range w/Oven Base
35	CFCI	1	Double Stacked Combination Oven w/Filters

Contractor Furnished Contractor Installed
Government Furnished Contractor Installed
Government Furnished Government Installed

COMMERCIAL KITCHEN CONSULTING LLC — Functional Design Solutions

0' 4' 8' 16' 32' 64'
SCALE: 3/32"=1'-0"

N

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
		08/27/2024
		04/03/2023

DESIGNED BY: MDB
DRAWN BY: MDB
CHECKED BY: C COMEGYS
SUBMITTED BY:
SIZE: ANSI D

ISSUE DATE: SEPTEMBER 18, 2025
SOLICITATION NO.: W912DS25R0051
CONTRACT NO.: W912DS19D007

US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK, NY 10278

NOT FOR CONSTRUCTION

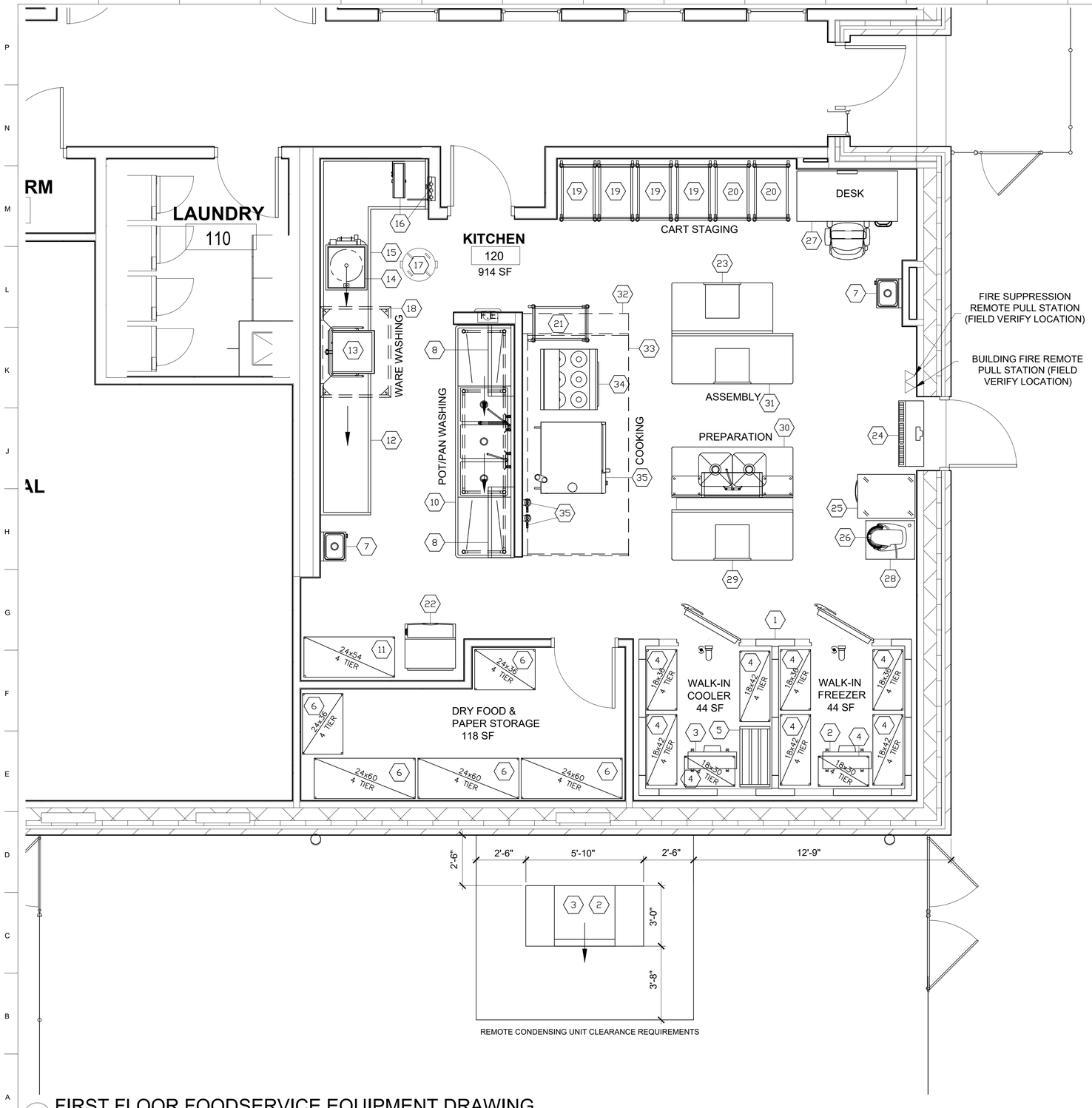
CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
Project No. 75662

FIRST FLOOR
FOODSERVICE EQUIPMENT DRAWING

SHEET ID
QF-101

File Path:
Plot Date:

100% SUBMITTAL



1 FIRST FLOOR FOODSERVICE EQUIPMENT DRAWING
3/8" = 1'-0"

FT HAMILTON CHILD DEV. CTR. FOODSERVICE EQUIPMENT SCHEDULE			
Item No	Furnished By	Qty	Equipment Category
1	CFCI	1	Walk-in Cooler/Freezer
2	CFCI	1 lot	Freezer Refrigeration System
3	CFCI	1 lot	Cooler Refrigeration System
4	CFCI	1 lot	Shelving Units
5	CFCI	1	Dunnage Rack
6	CFCI	1 lot	Shelving Units
7	CFCI	2	Hand Sinks
8	CFCI	2	Sorting Shelves
9		---	Spare Number
10	CFCI	1	3 Compartment Sink
11	CFCI	1	Pot/Pan Drying Rack
12	CFCI	1	Clean Dishtable
13	CFCI	1	Dishwasher w/Built-in Booster Heater
14	CFCI	1	Scrapper/Collector
15	CFCI	1	Soiled Dishtable
16	CFCI	1	Hose Reel w/Control Panel
17	GFGI	1	Mobile Garbage Can
18	CFCI	1	Condensate Hood
19	GFGI	4	3 Shelf Utility Cart (Toddler)
20	GFGI	2	3 Shelf Utility Cart (Infant)
21	GFGI	1	4 Shelf Utility Cart (Preschool)
22	CFCI	1	Undercounter Ice Maker
23	CFCI	1	30x60 Mobile Worktable
24	CFCI	1	Air Curtain
25	CFCI	1	1 Door Reach-in Refrigerator
26	CFCI	1	20 QT Banch Mixer
27	GFGI	1	Desk & Chair
28	CFCI	1	Mobile Mixer Stand
29	CFCI	1	30x72 Mobile Worktable
30	CFCI	1	Prep Table w/2 Sinks & Pot/Pan Rack
31	CFCI	1	30x72 Mobile Worktable
32	CFCI	1	Fire Suppression System
33	CFCI	1	Exhaust Hood
34	CFCI	1	6 Burner Range w/Oven Base
35	CFCI	1	Double Stacked Combination Oven w/Filters

Contractor Furnished Contractor Installed
Government Furnished Contractor Installed
Government Furnished Government Installed

COMMERCIAL KITCHEN CONSULTING LLC — Functional Design Solutions

0' 4' 8' 16' 32' 64'
SCALE: 3/32"=1'-0"

N

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

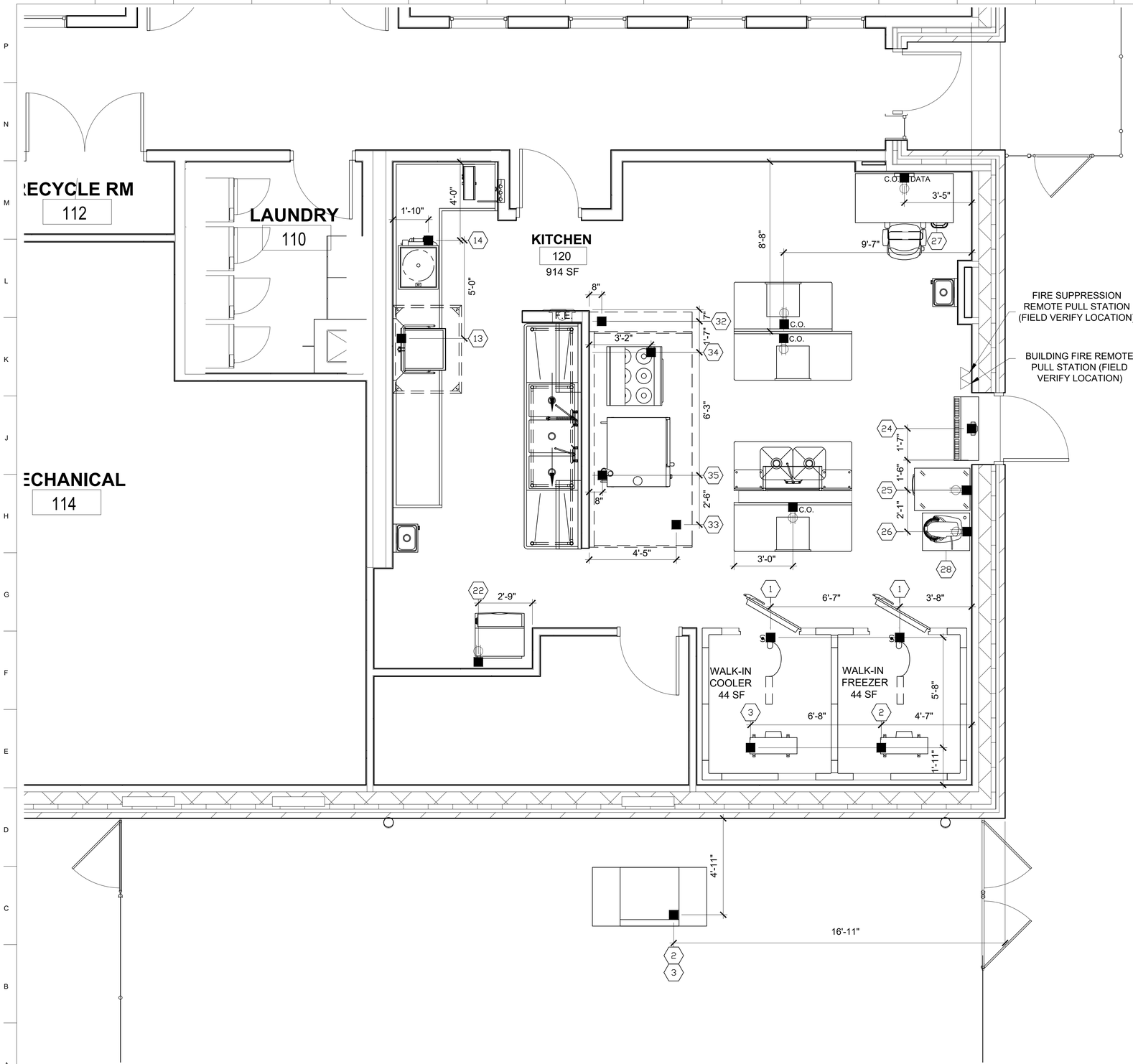
DESIGNED BY: MDB
DRAWN BY: MDB
CHECKED BY: C COMEGYS
SUBMITTED BY:
SIZE: ANSI D
ISSUE DATE: AUGUST 29, 2025
SOLICITATION NO.:
CONTRACT NO.:

US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK, NY 10278

CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
Project No. 75662

FIRST FLOOR
FOODSERVICE EQUIPMENT DRAWING

SHEET ID
QF-101



1 FIRST FLOOR FOODSERVICE EQUIPMENT ELECTRICAL POC DRAWING
3/8" = 1'-0"

SYMBOL/ ABBREVIATION SCHEDULE					
PLUMBING - HEATING			ELECTRICAL		
C.W.	●	COLD WATER	E.C.	■	ELECTRIC CONNECTION
H.W.	●	HOT WATER	J.B.	▨	JUNCTION BOX
G	◆	GAS	S.R.	■⊃	SINGLE RECEPTACLE
S	⊘	STEAM SUPPLY	D.R.	■⊃	DUPLEX RECEPTACLE
R	⊘	STEAM RETURN	C.O.	■⊃	CONVENIENCE OUTLET
PC	⊕	PIPE CONNECTION	R.C.	△	REMOTE CONNECTION
W	◉	WASTE	SW	▨	SWITCH
I.W.	◉	INDIRECT WASTE			REMOTE MANUAL FIRE PULL
F.D.	◉	FLOOR DRAIN		◇	ELECTRIC LIGHT
F.S.	◉	FLOOR SINK	KW		KILOWATT
FFD.	◉	FUNNEL FLOOR DRAIN	HP		MOTOR HORSEPOWER
BTU		BRITISH THERMAL UNIT	AMP		AMPERE
MISCELLANEOUS					
DFA		DOWN FROM ABOVE	AFF		ABOVE FINISHED FLOOR
S.P.		STATIC PRESSURE	NIC		NOT IN KITCHEN CONTRACT
CFM		CUBIC FEET PER MINUTE	OW		OUT OF WALL
TEO		TOP OF ELECTRICAL OUTLET	ETR		EXISTING TO REMAIN

NOTE

THIS PLAN IS AN INSTRUMENT OF SERVICE PREPARED FOR THE CONVENIENCE OF THE ARCHITECT, ENGINEERS, AND BIDDERS. IT IS AS ACCURATE AS CAN BE DETERMINED AT THIS DATE. WE WILL NOT BE RESPONSIBLE FOR ANY DISCREPANCIES WHICH MAY DEVELOP BETWEEN LOCATIONS OF CONNECTIONS SHOWN AND ACTUAL LOCATIONS OF CONNECTIONS OF FIXTURES FURNISHED. THE FOOD SERVICE EQUIPMENT CONTRACTOR WILL FURNISH DIMENSIONED PLANS. CONNECTIONS SHOWN ARE APPROX. LOCATIONS AND ARE FOR REFERENCE ONLY!

COMMERCIAL KITCHEN CONSULTING LLC — Functional Design Solutions

0' 4' 8' 16' 32' 64'
SCALE: 3/32"=1'-0"

N

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

DESIGNED BY: MDB
DRAWN BY: MDB
CHECKED BY: C COMEGYS
SUBMITTED BY:
SIZE: ANSI D

ISSUE DATE: AUGUST 29, 2025
SOLICITATION NO.:
CONTRACT NO.:

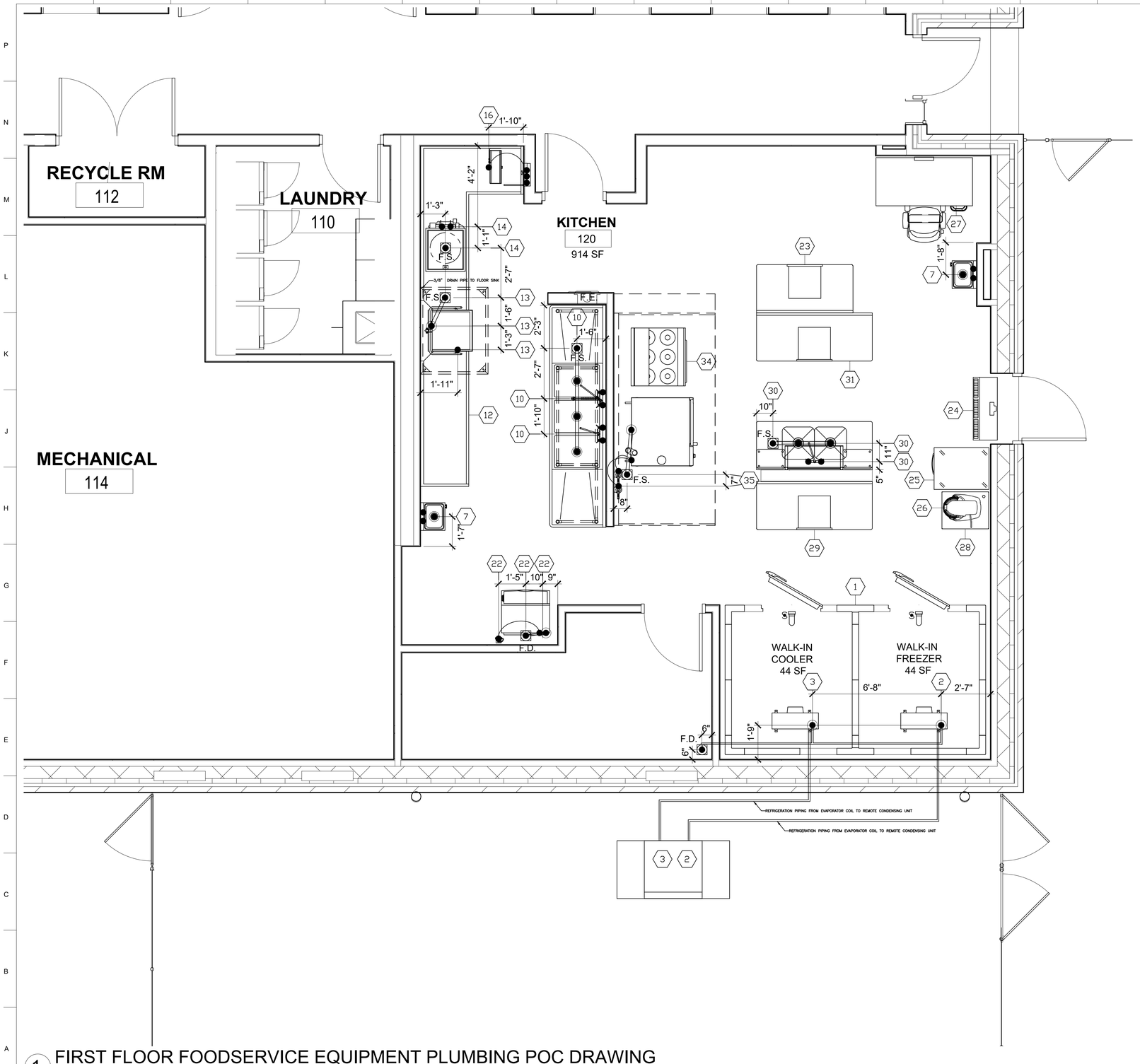
US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK, NY 10278

CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
Project No. 75662

FIRST FLOOR
FOODSERVICE EQUIPMENT
ELECTRICAL POC DRAWING

SHEET ID

QF-102



1 FIRST FLOOR FOODSERVICE EQUIPMENT PLUMBING POC DRAWING
3/8" = 1'-0"

SYMBOL/ ABBREVIATION SCHEDULE					
PLUMBING - HEATING			ELECTRICAL		
C.W.	●	COLD WATER	E.C.	■	ELECTRIC CONNECTION
H.W.	●	HOT WATER	J.B.	⊠	JUNCTION BOX
G	◆	GAS	S.R.	■⊂	SINGLE RECEPTACLE
S	⊗	STEAM SUPPLY	D.R.	■⊂	DUPLEX RECEPTACLE
R	⊗	STEAM RETURN	C.O.	■⊂	CONVENIENCE OUTLET
PC	⊕	PIPE CONNECTION	R.C.	△	REMOTE CONNECTION
W	◉	WASTE	SW	⊘	SWITCH
I.W.	◉	INDIRECT WASTE			REMOTE MANUAL FIRE PULL
F.D.	◉	FLOOR DRAIN		☼	ELECTRIC LIGHT
F.S.	◉	FLOOR SINK	KW		KILOWATT
FFD.	◉	FUNNEL FLOOR DRAIN	HP		MOTOR HORSEPOWER
BTU		BRITISH THERMAL UNIT	AMP		AMPERE
MISCELLANEOUS					
DFA		DOWN FROM ABOVE	AFF		ABOVE FINISHED FLOOR
S.P.		STATIC PRESSURE	NIC		NOT IN KITCHEN CONTRACT
CFM		CUBIC FEET PER MINUTE	OW		OUT OF WALL
TEO		TOP OF ELECTRICAL OUTLET	ETR		EXISTING TO REMAIN

NOTE

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0' 4' 8' 16' 32' 64'
SCALE: 3/32"=1'-0"

N

COMMERCIAL KITCHEN CONSULTING LLC — Functional Design Solutions

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

ISSUE DATE: AUGUST 29, 2025
SOLICITATION NO.:
CONTRACT NO.:

DESIGNED BY: MDB
DRAWN BY: MDB
CHECKED BY: C COMEGYS
SUBMITTED BY: YS
SIZE: ANSI D

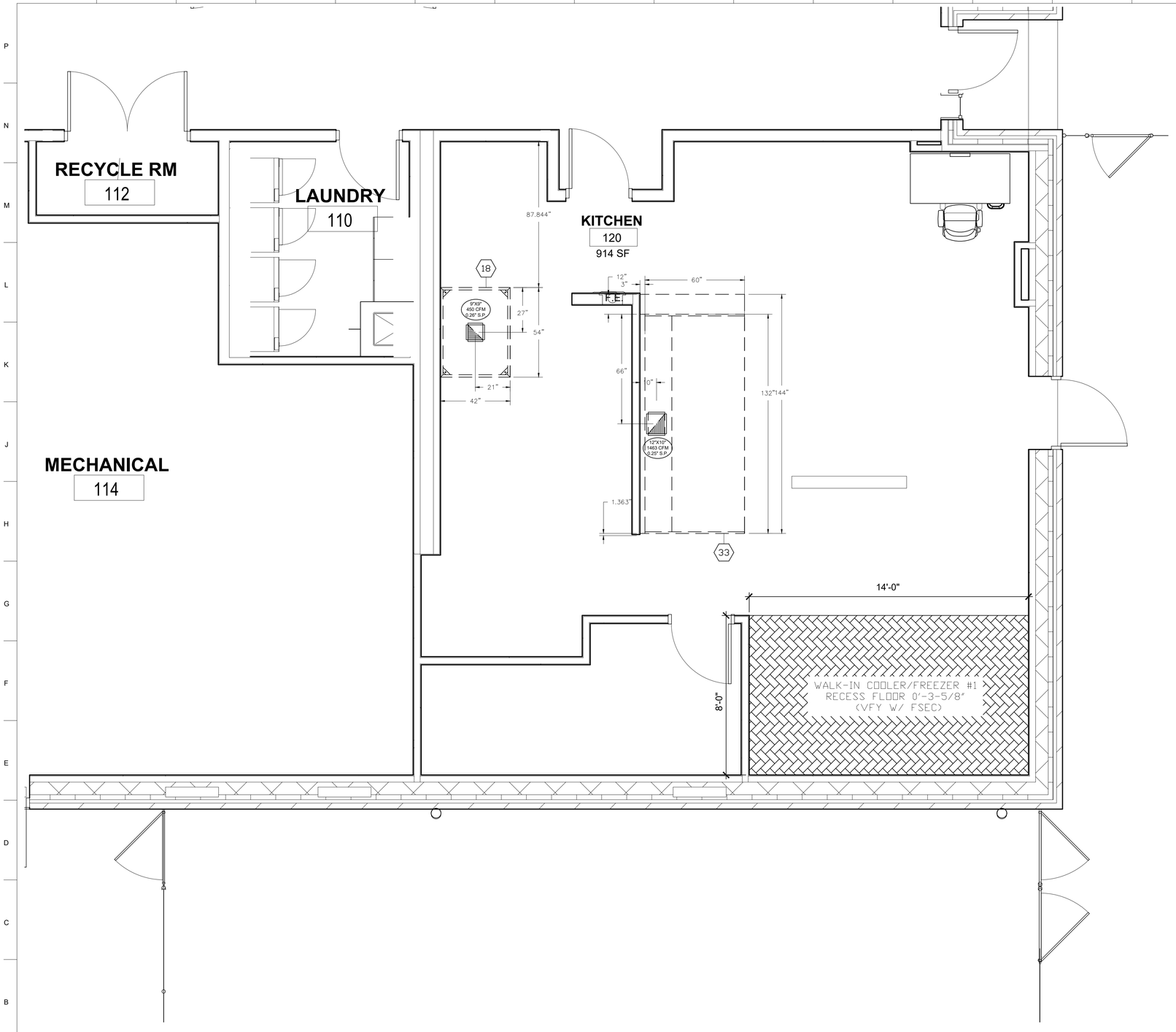
US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK, NY 10278

CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
Project No. 75662

FIRST FLOOR
FOODSERVICE EQUIPMENT
PLUMBING POC DRAWING

SHEET ID

QF-103



SYMBOL/ ABBREVIATION SCHEDULE					
PLUMBING - HEATING			ELECTRICAL		
C.W.	●	COLD WATER	E.C.	■	ELECTRIC CONNECTION
H.W.	●	HOT WATER	J.B.	▽	JUNCTION BOX
G	◆	GAS	S.R.	■	SINGLE RECEPTACLE
S	⊗	STEAM SUPPLY	D.R.	■	DUPLEX RECEPTACLE
R	⊗	STEAM RETURN	C.O.	■	CONVENIENCE OUTLET
PC	⊕	PIPE CONNECTION	R.C.	△	REMOTE CONNECTION
W	◉	WASTE	SW		SWITCH
I.W.	◉	INDIRECT WASTE			REMOTE MANUAL FIRE PULL
F.D.	◉	FLOOR DRAIN		◇	ELECTRIC LIGHT
F.S.	◉	FLOOR SINK	KW		KILOWATT
FFD.	◉	FUNNEL FLOOR DRAIN	HP		MOTOR HORSEPOWER
BTU		BRITISH THERMAL UNIT	AMP		AMPERE
MISCELLANEOUS					
DFA	DOWN FROM ABOVE		AFF	ABOVE FINISHED FLOOR	
S.P.	STATIC PRESSURE		NIC	NOT IN KITCHEN CONTRACT	
CFM	CUBIC FEET PER MINUTE		OW	OUT OF WALL	
TEO	TOP OF ELECTRICAL OUTLET		ETR	EXISTING TO REMAIN	

NOTE

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0' 4' 8' 16' 32' 64'

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

N

1 FIRST FLOOR FOODSERVICE EQUIPMENT HVAC & FLOOR RECESS DRAWING

3/8" = 1'-0"

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

DESIGNED BY: MDB
DRAWN BY: MS
CHECKED BY: C COMEGYS
SUBMITTED BY:
SIZE: ANSI D

ISSUE DATE: AUGUST 29, 2025
SOLICITATION NO.:
CONTRACT NO.:

US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK, NY 10278

CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
Project No. 75662

FIRST FLOOR
FOODSERVICE EQUIPMENT HVAC &
FLOOR RECESS DRAWING

SHEET ID

QF-104

FT HAMILTON CHILD DEV. CTR. FOODSERVICE EQUIPMENT MEP POC SCHEDULE

Item No	Furnished By	Qty	Equipment Category	Amps	KW	HP	Volts	Phase	Direct	Electrical AFF (in)	Plug	NEMA	Electrical Remarks	Cold Water Size (in)	Hot Water Size (in)	Cold Water AFF (in)	Hot Water AFF (in)	Direct Drain Size (in)	Direct Drain AFF (in)	Indir Drain Size (in)	Indir Drain AFF (in)	Plumbing Remarks	HVAC Exhaust Duct Size (in)	HVAC Exhaust CFM	HVAC Remarks	Item No
1	CFCI	1	Walk-in Cooler/Freezer	(2) 20.0			120	1	X	78			Note# M									No Plumbing Req.			No HVAC Req.	1
2	CFCI	1	Freezer Refrigeration System (Evaporator)	11.7			208/230	1	X											1	78	Notes# B, E & F			No HVAC Req.	2
		1	Remote Condensing Unit	11.8			208/230	3	X													Note# F				
3	CFCI	1	Cooler Refrigeration System (Evaporator)	1.3			120	1	X											1	78	Notes# B & F			No HVAC Req.	3
		1	Remote Condensing Unit	.65			208/230	3	X													Note# F				
4	CFCI	1 lot	Shelving Units										No Electrical Req.									No Plumbing Req.			No HVAC Req.	4
5	CFCI	1	Dunnage Rack										No Electrical Req.									No Plumbing Req.			No HVAC Req.	5
6	CFCI	1 lot	Shelving Units										No Electrical Req.									No Plumbing Req.			No HVAC Req.	6
7	CFCI	2	Hand Sinks										No Electrical Req.	0.5	0.5	33.5	33.5	1.5	28						No HVAC Req.	7
8	CFCI	2	Sorting Shelves										No Electrical Req.									No Plumbing Req.			No HVAC Req.	8
9		---	Spare Number										---									---			---	9
10	CFCI	1	3 Compartment Sink										No Electrical Req.	(2) 0.5	(2) 0.5					(3) 2		Notes# A & B			No HVAC Req.	10
11	CFCI	1	Pot/Pan Drying Rack										No Electrical Req.									No Plumbing Req.			No HVAC Req.	11
12	CFCI	1	Clean Dishtable										No Electrical Req.									No Plumbing Req.			No HVAC Req.	12
13	CFCI	1	Dishwasher	26.9			208/240	3	X	12			Note# J	0.75		9				.625	40	Notes# A, B & I			No HVAC Req.	13
			Built-in Booster Heater	25.6			208/240	3	X	12					0.75		12								No HVAC Req.	
14	CFCI	1	Scrapper/Collector	3.2		0.75	208	3	X	17				0.75	0.75	18	18			2	7	Notes# A & B			No HVAC Req.	14
15	CFCI	1	Soiled Dishtable										No Electrical Req.									No Plumbing Req.			No HVAC Req.	15
16	CFCI	1	Hose Reel w/Control Panel										No Electrical Req.	0.5	0.5	48	48					Note# C			No HVAC Req.	16
17	GFGI	1	Mobile Garbage Can										No Electrical Req.									No Plumbing Req.			No HVAC Req.	17
18	CFCI	1	Condensate Hood										No Electrical Req.							0.5		Note# B	9 x 9	450	Refer to Halton Drawings	18
19	GFGI	4	3 Shelf Utility Cart (Toddler)										No Electrical Req.									No Plumbing Req.			No HVAC Req.	19
20	GFGI	2	3 Shelf Utility Cart (Infant)										No Electrical Req.									No Plumbing Req.			No HVAC Req.	20
21	GFGI	1	4 Shelf Utility Cart (Preschool)										No Electrical Req.									No Plumbing Req.			No HVAC Req.	21
22	CFCI	1	Undercounter Ice Maker	10			120	1		8	X	5-15P		0.375		8				(2) 0.5	8	Notes# B & D			No HVAC Req.	22
23	CFCI	1	30x60 Mobile Worktable	15			120	1			X	5-15R	Note# L									No Plumbing Req.			No HVAC Req.	23
24	CFCI	1	Air Curtain	6.5			208	1	X	84												No Plumbing Req.			No HVAC Req.	24
25	CFCI	1	1 Door Reach-in Refrigerator	5.2			120	1			X	5-15P										No Plumbing Req.			No HVAC Req.	25
26	CFCI	1	20 QT Banch Mixer	8.0			120	1			X	5-15P										No Plumbing Req.			No HVAC Req.	26
27	GFGI	1	Desk & Chair																			No Plumbing Req.			No HVAC Req.	27
28	CFCI	1	Mobile Mixer Stand										No Electrical Req.									No Plumbing Req.			No HVAC Req.	28
29	CFCI	1	30x72 Mobile Worktable	15			120	1			X	5-15R	Note# L									No Plumbing Req.			No HVAC Req.	29
30	CFCI	1	Prep Table w/2 Sinks & Pot/Pan Rack										No Electrical Req.	0.5	0.5	34	34			1.5	24	Notes# A & B			No HVAC Req.	30
31	CFCI	1	30x72 Mobile Worktable	15			120	1			X	5-15R	Note# L									No Plumbing Req.			No HVAC Req.	31
32	CFCI	1	Fire Suppression System	15.0			120	1	X	96			Notes# H & K									No Plumbing Req.			No HVAC Req.	32
33	CFCI	1	Exhaust Hood	15.0			120	1	X	102			Note# G									No Plumbing Req.	12 x 10	1463	Refer to Halton Drawings	33
34	CFCI	1	6 Burner Range w/Oven Base		17		208	3	X	6												No Plumbing Req.			No HVAC Req.	34
35	CFCI	1	Top Combination Oven w/Filter	62.2	22.4		208	3	X	46				.75		46				2.0	46	Notes# A, B & D			No HVAC Req.	35
35	CFCI	1	Bottom Combination Oven w/Filter	103.8	37.4		208	3	X	5				.75		5				2.0	5	Notes# A, B & D			No HVAC Req.	35

Contractor Furnished Contractor Installed
Government Furnished Contractor Installed
Government Furnished Government Installed

GENERAL NOTES:

- **"A"** Waste should be connected to grease interceptor.
- **"B"** Plumbing contractor to interpipe waste to floor drain or floor sink.
- **"C"** Interpipe from control panel to hose reel.
- **"D"** Plumbing contractor to interpipe from water filter to unit.
- **"E"** Foodservice equipment contractor to supply heat tape for condensate pipe. Electrical contractor to wire heat tape.
- **"F"** Foodservice equipment contractor to interpipe all refrigeration piping between unit and remote condesning unit.
- **"G"** Electrical contractor to interwire between hood mounted switches, hood timer panel and rooftop exhaust air fan(s).
- **"H"** Electrical contactor/shunt trip breaker by EC
- **"I"** Plumbing contractor is to provide a 3/4" cold water connection for drain water tempering valve.
- **"J"** Electrical contrctor shall interwire between dishwasher vent fan control and rooftop exhaust fan
- **"K"** Fire Suppression system; Electrical contractor shall interconnect between control panel and building fire alarm system.
- **"L"** Provide drop cord from the ceiling for convenience outlet
- **"M"** Electrical contractor to install light fixtures (supplied by FSEC) and interwire lights & light switch.

Note: The Contractor shall verify ALL information on this drawing, including NEMA outlet configurations and connections, prior to ordering, by submitting catalog cuts. These drawings shall be read in conjunction with the Mechanical, Plumbing and Electrical drawings. Contractors shall verify MEP requirements for all existing equipment.

COMMERCIAL KITCHEN CONSULTING LLC — Functional Design Solutions

0' 4' 8' 16' 32' 64'

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

N

1 FIRST FLOOR FOODSERVICE EQUIPMENT MEP POC SCHEDULE
NTS

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

ISSUE DATE: AUGUST 29, 2025
SOLICITATION NO.:
CONTRACT NO.:

DESIGNED BY: MDB
DRAWN BY: MB
CHECKED BY: C COMEGYS
SUBMITTED BY:
SIZE: ANSI D

US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK, NY 10278

CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
Project No. 75662

FIRST FLOOR
FOODSERVICE EQUIPMENT
MEP POC SCHEDULE

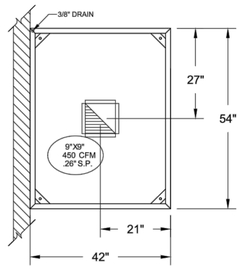
SHEET ID

QF-105

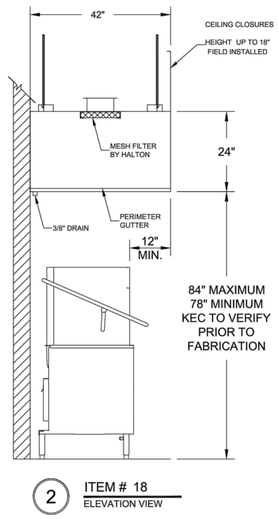
HOOD INFORMATION TABLE

HOOD NUMBER	HOOD MODEL	EXHAUST AIR FLOW REQUIREMENTS						GREASE EXTRACTOR				HOOD CONSTRUCTION	HOOD WEIGHT (LBS)
		EXHAUST CFM	TOTAL HOOD STATIC PRESSURE	T.A.B. PORT STATIC PRESSURE	EXHAUST COLLAR QTY.	EXHAUST COLLAR LENGTH	EXHAUST COLLAR WIDTH	QTY.	SIZE L	SIZE H	TYPE		
18	CH	450	.26"		1	9"	9"					ALL 18 GA. 304 S.S.	202

TOTAL EXH. CFM = 450



2
1 ITEM # 18
PLAN VIEW



2 ITEM # 18
ELEVATION VIEW

GENERAL SPECIFICATIONS

1- HOOD IS NSF LISTED.

2- ALL INSTALLATION WORK IS TO BE PERFORMED BY QUALIFIED PERSONS AND IN ACCORDANCE WITH STATE AND LOCAL BUILDING CODE REQUIREMENTS.

3- ALL EXHAUST DUCTWORK AND TRANSITIONS ARE TO BE PROVIDED BY THE HVAC CONTRACTOR.

4- CLEARANCE FROM HOOD AND DUCTS TO COMBUSTIBLE MATERIAL SHALL BE PER APPLICABLE BUILDING CODES.

5- FOR PROPER OPERATION OF THE HOOD SYSTEM, IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO HAVE THE HOOD BALANCED AND TESTED TO ENSURE THAT THE EXHAUST AND SUPPLY REQUIREMENTS OF THE HOOD ARE MET.

INSTALLATION REQUIREMENTS

KITCHEN EQUIPMENT CONTRACTOR'S REQUIREMENTS

1- PROVIDE DRAWINGS TO APPROPRIATE TRADES REFERENCING UTILITY SERVICE AND COORDINATE FINAL CONNECTION.

2- DELIVER, ASSEMBLE AND INSTALL HALTON SYSTEM PER DRAWING.

3- FURNISH WIRING AND PLUMBING DIAGRAMS TO END USER.

4- THE K.E.C MUST INFORM HOOD MFG OF ANY CHANGES IN EQUIPMENT OR BUILDING STRUCTURE. FIELD MODIFICATIONS ARE THE RESPONSIBILITY OF THE K.E.C.

5- IF HOOD EXHAUST VOLUME DAMPERS ARE PROVIDED, THE K.E.C. IS RESPONSIBLE FOR THEIR INSTALLATION OR TO MAKE ARRANGEMENTS WITH OTHER TRADES FOR THEIR INSTALLATION.

ELECTRICAL CONTRACTOR'S REQUIREMENTS

1- PROVIDE AND CONNECT ALL REQUIRED VOLTAGES, CONNECTORS, WIRING, CONDUIT, ETC., PER NEC AND ALL APPLICABLE LOCAL CODES.

ELECTRICAL EQUIPMENT REQUIREMENTS

FLUORESCENT LIGHT FIXTURE
40 WATT MAX BULB= .57 AMP EA.

RECESSED INCANDESCENT LIGHT FIXTURE
150 WATT MAX BULB= 1.25 AMP EA.

GLOBE INCANDESCENT LIGHT FIXTURE
100 WATT MAX BULB= .83 AMP EA.

HCL LIGHT FIXTURES= .12 AMP EA.

LED LIGHT FIXTURES= .30 AMP EA.

ALL HOOD CIRCUITS ARE NOT TO EXCEED 15 AMP

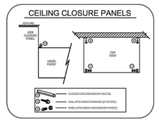
LIGHT BULBS, IF REQUIRED, ARE TO BE PROVIDED BY OTHERS

CEILING HEIGHT NOTE

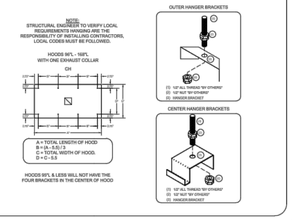
IF HOOD MFG COMPANY IS TO PROVIDE CEILING CLOSURE PANELS, THE EXACT DIMENSION OF THE FINISHED CEILING HEIGHT MUST BE PROVIDED PRIOR TO RELEASE.

FINISHED CEILING HEIGHT A.F.F.: _____

CEILING CLOSURE PANELS



HANGER BRACKET LAYOUT



1 CONDENSATE HOOD ITEM# 18 DRAWING
NTS

COMMERCIAL KITCHEN CONSULTING LLC — Functional Design Solutions

0' 4' 8' 16' 32' 64'
SCALE: 3/32"=1'-0"

N

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

DESIGNED BY: MDB
DRAWN BY: MDB
CHECKED BY: C COMEGYS
SUBMITTED BY:
SIZE: ANSI D
ISSUE DATE: AUGUST 29, 2025
SOLICITATION NO.:
CONTRACT NO.:

US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK, NY 10278

CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
Project No. 75662

CONDENSATE HOOD ITEM# 18 DRAWING

SHEET ID
QF-106

HOOD INFORMATION TABLE

EXHAUST AIR FLOW REQUIREMENTS						GREASE EXTRACTOR				HOOD CONSTRUCTION	HOOD WEIGHT (LBS)
EXHAUST CFM	TOTAL HOOD STATIC PRESSURE	T.A.B. PORT STATIC PRESSURE	EXHAUST COLLAR QTY.	EXHAUST COLLAR LENGTH	EXHAUST COLLAR WIDTH	QTY.	SIZE L	SIZE H	TYPE		
1463	.25"	.14"	1	12"	10"	6	20"	13"	KSA	ALL 18 GA. 304 S.S.	962
						1	11"	13"			

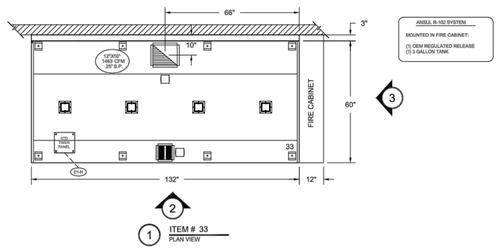
TOTAL EXH. CFM = 1463

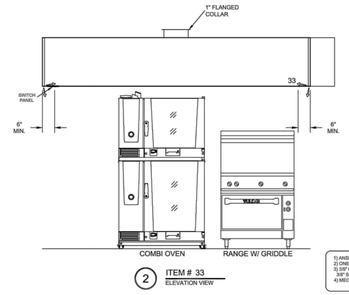
ELECTRICAL CONNECTION SCHEDULE

CONNECTION #	CONNECTION DESCRIPTION	FROM	TO
E1-H	120V, 15AMP - HOOD LIGHT POWER - 3 WIRES	BUILDING SOURCE	HOOD # 33

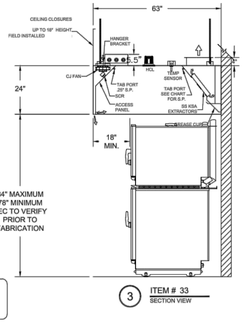
MAKE UP AIR GUIDELINES

- VELOCITY MEASURED AT THE LOWER FRONT LIP OF THE HOOD SHALL NOT EXCEED 75 FPM.
- TRANSFER AIR FROM PARTS OF THE BUILDING OTHER THAN THE KITCHEN SHALL NOT EXCEED 50 FPM VELOCITY.
- NO SLOT, 2–WAY, 3–WAY OR 4–WAY CEILING DIFFUSER SHALL PROVIDE AIRFLOW DIRECTED AT HOOD, MUST INSTALL DIFFUSERS MINIMUM OF 48" [1219 MM] AWAY FROM ALL OPEN SIDES OF HOODS*.

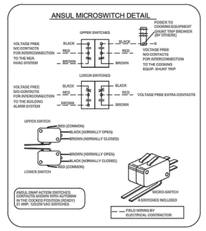


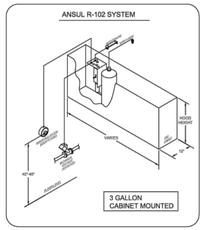


NOTE
T-STAT IS FACTORY PRE-SET FOR 95 DEGREES, IF SPACE CONDITIONS EXCEED 95 DEGREES, ADJUSTMENT MAY BE MADE IN A FIELD INSTALLATION OF THE T-STAT CALL BOX EQUIPMENT. THE T-STAT IS FOR USE WITH HALTON EQUIPMENT ONLY. IF USED WITH OTHER THAN HALTON, T-STAT IS A SAFETY INTERLOCK ONLY. IT IS NOT INTENDED AS A PRIMARY MEANS OF ENGAGING THE EXHAUST FAN.



1) ANSUL R-102 FIRE SYSTEM
2) ONE TANK SYSTEM (2 GALLON)
3) 3/8" BLACK IRON PIPING (CONCEALED)
3/4" S.S. APPLIANCE DROPS (EXPOSED)
4) MECHANICAL GAS VALVE = (ADVISE SIZE)





GENERAL SPECIFICATIONS

1- HOOD CONSTRUCTION AND DESIGN MEETS NFPA 96, IMC SECTION 507 AND UL 710 STANDARD.

2- HOOD IS NSF AND ETL LISTED UNDER THE FOLLOWING FILE NUMBER: ETL #1031432/NSF#ET-001

3- ALL INSTALLATION WORK IS TO BE PERFORMED BY QUALIFIED PERSONS AND IN ACCORDANCE WITH STATE AND LOCAL BUILDING CODE REQUIREMENTS.

4- THE INSTALLATION SHALL BE IN ACCORDANCE WITH NFPA 96, REMOVAL OF SMOKE AND GREASE LADEN VAPORS FROM COMMERCIAL COOKING EQUIPMENT.

5- ALL EXHAUST DUCTWORK AND TRANSITIONS ARE TO BE PROVIDED BY THE HVAC CONTRACTOR.

6- CLEARANCE FROM HOOD AND DUCTS TO COMBUSTIBLE MATERIAL SHALL BE PER APPLICABLE BUILDING CODES.

7- FOR PROPER OPERATION OF THE HOOD SYSTEM, IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO HAVE THE HOOD BALANCED AND TESTED TO ENSURE THAT THE EXHAUST AND SUPPLY REQUIREMENTS OF THE HOOD ARE MET.

INSTALLATION REQUIREMENTS

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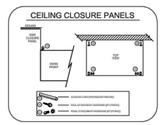
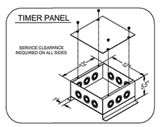
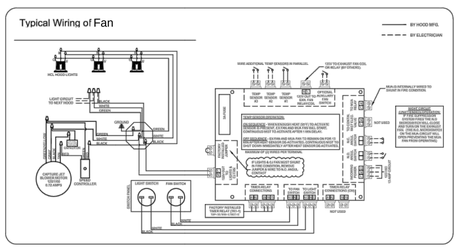
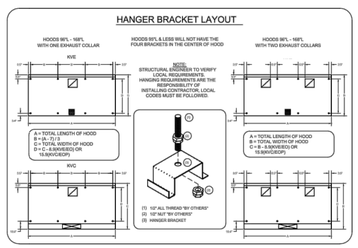








1 EXHAUST HOOD ITEM# 33 DRAWING
NTS

0' 4' 8' 16' 32' 64'
SCALE: 3/32"=1'-0"

N

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

ISSUE DATE: AUGUST 29, 2025
SOLICITATION NO.:
CONTRACT NO.:

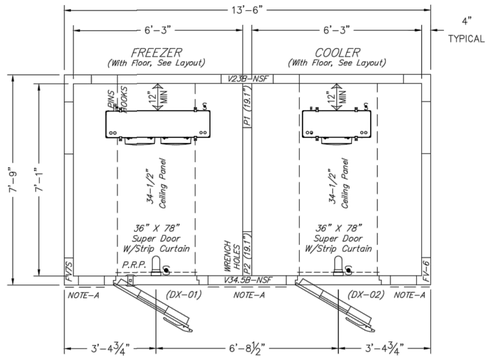
DESIGNED BY: MDB
DRAWN BY: MDB
CHECKED BY: C COMEGYS
SUBMITTED BY:
SIZE: ANSI D

US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK, NY 10278

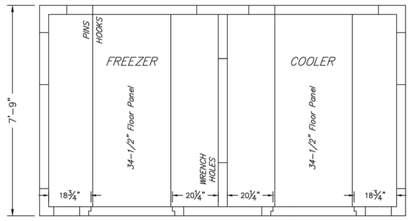
CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
Project No. 75662

EXHAUST HOOD ITEM# 33 DRAWING

SHEET ID
QF-107



Ceiling & Vertical Layout



Floor Layout

PLAN VIEW– A
SCALE: 1/2" = 1'-0"

SPECIFICATIONS

13'-6" X 7'-9" X 8'-6" (With Floor)

INSTALLATION
- INDOOR
- LOADING HEIGHT – AT LEAST 18" OF OPEN SPACE MUST BE MAINTAINED BETWEEN TOP OF PRODUCT AND CEILING PANELS

INSULATION
- FOAMED IN–PLACE POURED URETHANE

EXTERIOR FINISH
- STUCCO ALUMINUM

INTERIOR FINISH
- STUCCO ALUMINUM

FLOOR FINISH
- (INTERIOR) 1/8" DIAMOND TREAD (3/4" PLYWOOD)
- (EXTERIOR) STUCCO ALUMINUM

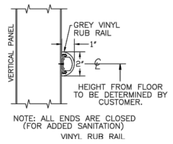
DOORS/ACCESSORIES
- (2) 36" X 78" LEFT SWING HINGED WALK–IN DOOR

Door Options:
(2) Super Doors: 3rd Hinge & 36" High Dia. Tread In & Out
(2) Radius Depression Type Stepplate
(2) 14" X 14" Obs. Window (Heated) W/Ext. Cross–Over Cord
(1) Pressure Relief Port
(2) Strip Curtain (Shipped Loose)
(2) Modularm 75LC W/Mag. Contact
(2) Motion Detector
(1) IP1 Panic Button

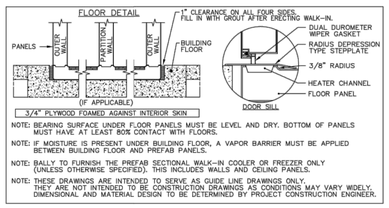
REFRIGERATION – BY BALLY (CONDENSING UNIT MOUNTED OUTDOORS)

QTY	H/P	PILOT TYPE		POWER SUPPLY	COMPRESSOR FLA	LRA	QTY	FAN MTRS HP	FLA	TOTAL WATTS DEFROST	AMPS	MCA	MAX FUSE	AMP'S
1	2.0	W448A		208–230/3/60	8.6	58	1	1			9.6	11.8	20	1
1				208–230/1/60			2	1/15	0.6	1890	8.2	10.1	15	1
1	0.6	W448A		208–230/1/60	4.4	30	1		1		5.4	6.5	15	C
1				115/1/60			1	1/15	1		1	1.3	15	C

- ALL CONDENSATION DRAIN LINES MUST BE SLOPED 1/12. 1" ——— 1'-0" INSTALLATION
- FREEZER CONDENSATION DRAIN LINES MUST BE HEATED, INSULATED AND TRAPPED INDIVIDUALLY. BY OTHERS



NOTE: ALL ENDS ARE CLOSED (FOR ADDED SANITATION)
VINYL RUB RAIL



NOTE: BEARING SURFACE UNDER FLOOR PANELS MUST BE LEVEL AND DRY. BOTTOM OF PANELS MUST HAVE AT LEAST 80% CONTACT WITH FLOORS.

NOTE: IF MOISTURE IS PRESENT UNDER BUILDING FLOOR, A VAPOR BARRIER MUST BE APPLIED BETWEEN BUILDING FLOOR AND PREFAB PANELS.

NOTE: BALLY TO FURNISH THE PREFAB SECTIONAL WALK–IN COOLER OR FREEZER ONLY (UNLESS OTHERWISE SPECIFIED). THIS INCLUDES WALLS AND CEILING PANELS.

NOTE: THESE DRAWINGS ARE INTENDED TO SERVE AS GUIDE LINE DRAWINGS ONLY. THEY ARE NOT INTENDED TO BE CONSTRUCTION DRAWINGS AS CONDITIONS MAY VARY WIDELY. DIMENSIONAL AND MATERIAL DESIGN TO BE DETERMINED BY PROJECT CONSTRUCTION ENGINEER.

NSF

1 WALK-IN COOLER/FREEZER ITEM# 1 DRAWING
NTS

COMMERCIAL KITCHEN CONSULTING LLC — Functional Design Solutions

0' 4' 8' 16' 32' 64'
SCALE: 3/32"=1'-0"

N

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

DESIGNED BY: MDB
DRAWN BY: MB
CHECKED BY: C COMEGYS
SUBMITTED BY:
SIZE: ANSI D
ISSUE DATE: AUGUST 29, 2025
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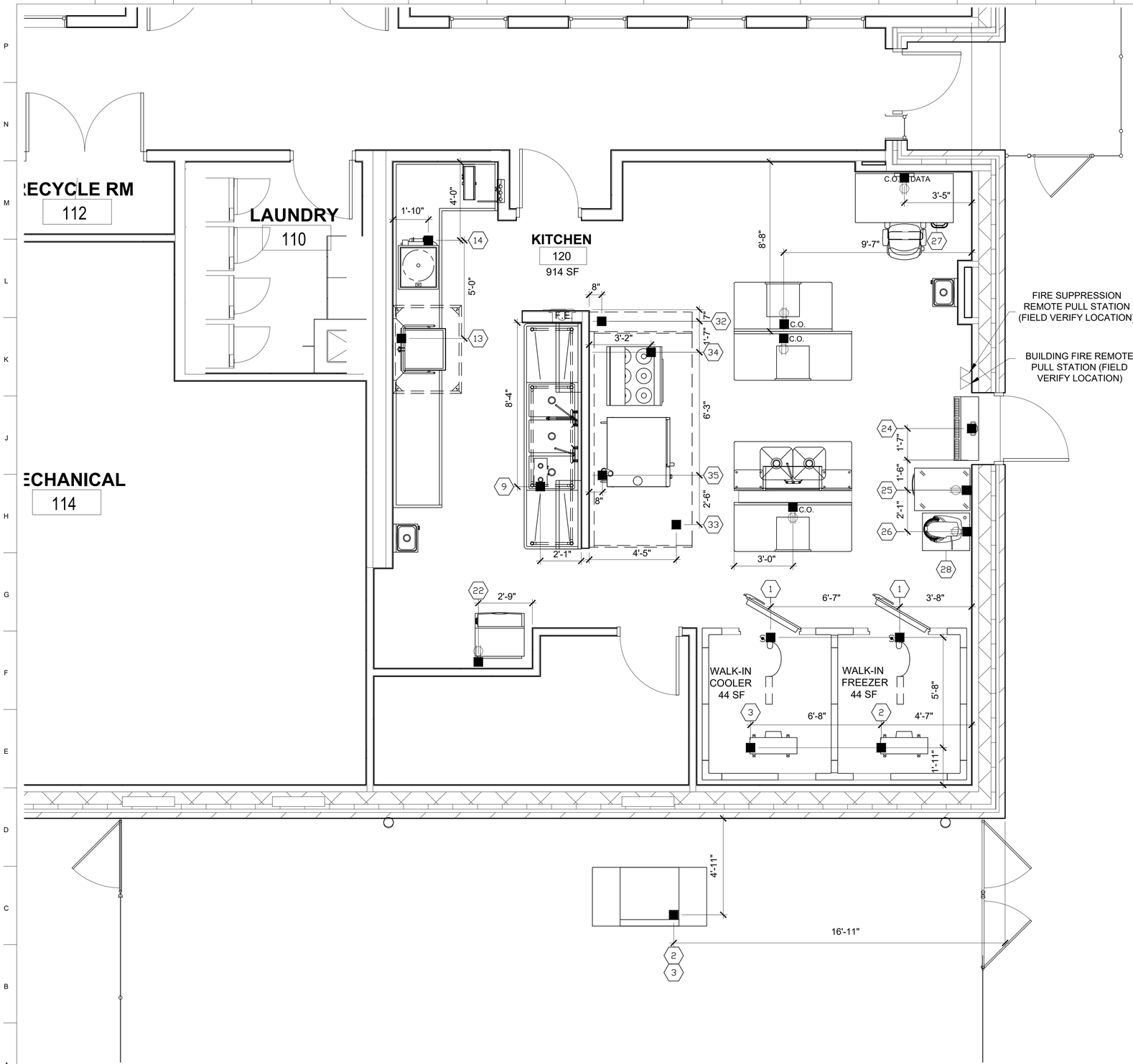
US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK, NY 10278

CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
Project No. 75662

WALK-IN COOLER/FREEZER ITEM# 1 DRAWING

SHEET ID
QF-108



1 FIRST FLOOR FOODSERVICE EQUIPMENT ELECTRICAL POC DRAWING
3/8" = 1'-0"

SYMBOL/ ABBREVIATION SCHEDULE					
PLUMBING - HEATING			ELECTRICAL		
C.W.	●	COLD WATER	E.C.	■	ELECTRIC CONNECTION
H.W.	●	HOT WATER	J.B.	▨	JUNCTION BOX
G	◆	GAS	S.R.	■⊃	SINGLE RECEPTACLE
S	⊘	STEAM SUPPLY	D.R.	■⊃	DUPLEX RECEPTACLE
R	⊘	STEAM RETURN	C.O.	■⊃	CONVENIENCE OUTLET
PC	⊕	PIPE CONNECTION	R.C.	△	REMOTE CONNECTION
W	◉	WASTE	SW	▨	SWITCH
I.W.	◉	INDIRECT WASTE			REMOTE MANUAL FIRE PULL
F.D.	◉	FLOOR DRAIN		◇	ELECTRIC LIGHT
F.S.	◉	FLOOR SINK	KW		KILOWATT
FFD.	◉	FUNNEL FLOOR DRAIN	HP		MOTOR HORSEPOWER
BTU		BRITISH THERMAL UNIT	AMP		AMPERE
MISCELLANEOUS					
DFA		DOWN FROM ABOVE	AFF		ABOVE FINISHED FLOOR
S.P.		STATIC PRESSURE	NIC		NOT IN KITCHEN CONTRACT
CFM		CUBIC FEET PER MINUTE	OW		OUT OF WALL
TEO		TOP OF ELECTRICAL OUTLET	ETR		EXISTING TO REMAIN

NOTE

THIS PLAN IS AN INSTRUMENT OF SERVICE PREPARED FOR THE CONVENIENCE OF THE ARCHITECT, ENGINEERS, AND BIDDERS. IT IS AS ACCURATE AS CAN BE DETERMINED AT THIS DATE. WE WILL NOT BE RESPONSIBLE FOR ANY DISCREPANCIES WHICH MAY DEVELOP BETWEEN LOCATIONS OF CONNECTIONS SHOWN AND ACTUAL LOCATIONS OF CONNECTIONS OF FIXTURES FURNISHED. THE FOOD SERVICE EQUIPMENT CONTRACTOR WILL FURNISH DIMENSIONED PLANS. CONNECTIONS SHOWN ARE APPROX. LOCATIONS AND ARE FOR REFERENCE ONLY!

COMMERCIAL KITCHEN CONSULTING LLC — Functional Design Solutions

0' 4' 8' 16' 32' 64'
SCALE: 3/32"=1'-0"

N

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
		08/27/2024
		04/03/2023

File Path:

Plot Date:

DESIGNED BY: MDB
DRAWN BY: MDB
CHECKED BY: C COMEGYS
SUBMITTED BY:
SIZE: ANSI D

ISSUE DATE: SEPTEMBER 18, 2025
SOLICITATION NO.: W912DS25R0051
CONTRACT NO.: W912DS19D0007

US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK, NY 10278

NOT FOR CONSTRUCTION

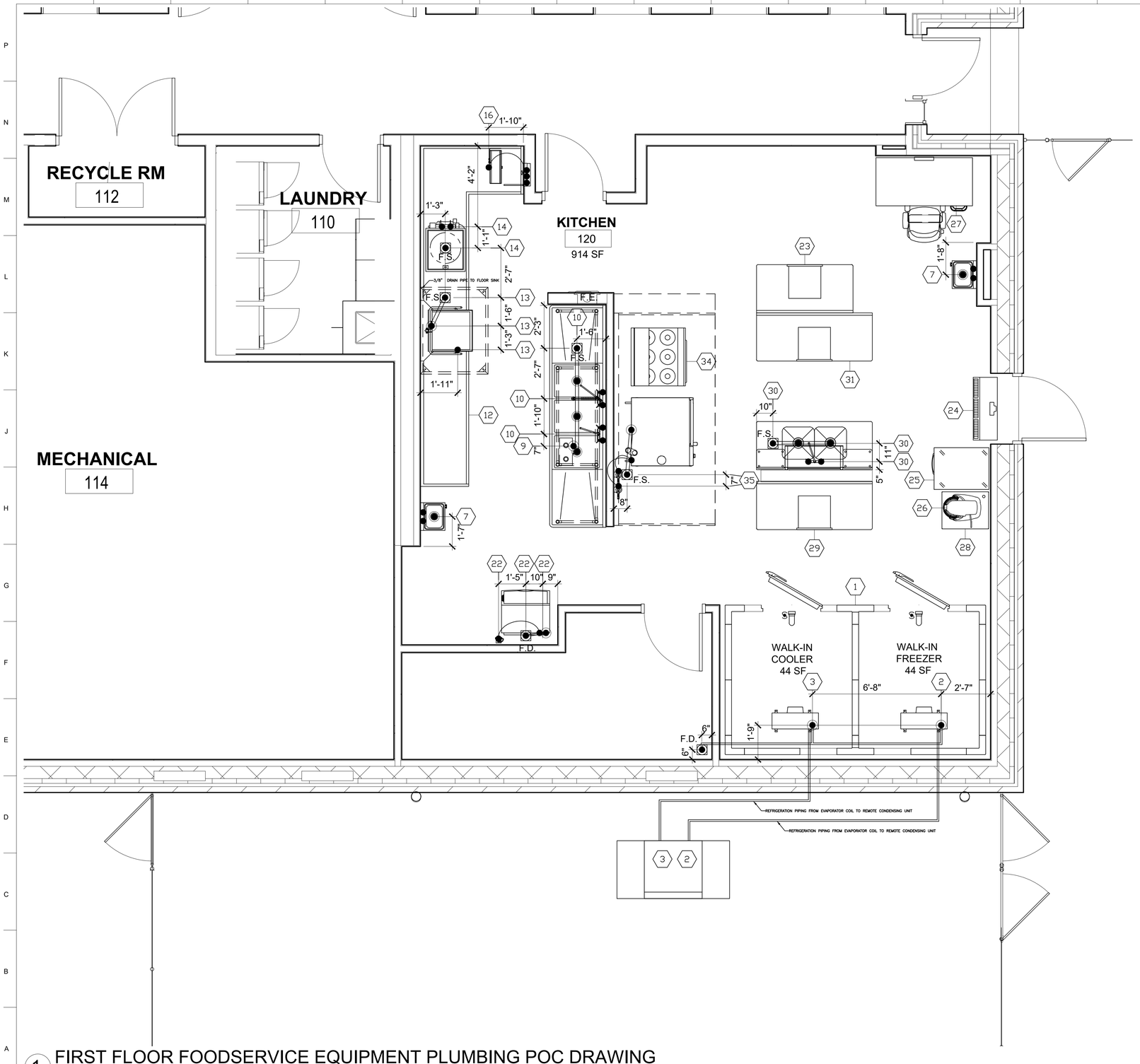
CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
Project No. 75662

FIRST FLOOR
FOODSERVICE EQUIPMENT
ELECTRICAL POC DRAWING

SHEET ID

QF-102

100% SUBMITTAL



1 FIRST FLOOR FOODSERVICE EQUIPMENT PLUMBING POC DRAWING
3/8" = 1'-0"

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

SYMBOL/ ABBREVIATION SCHEDULE					
PLUMBING - HEATING			ELECTRICAL		
C.W.	●	COLD WATER	E.C.	■	ELECTRIC CONNECTION
H.W.	●	HOT WATER	J.B.	▨	JUNCTION BOX
G	◆	GAS	S.R.	■⬭	SINGLE RECEPTACLE
S	⊗	STEAM SUPPLY	D.R.	■⬭	DUPLEX RECEPTACLE
R	⊗	STEAM RETURN	C.O.	■⬭	CONVENIENCE OUTLET
PC	⊕	PIPE CONNECTION	R.C.	△	REMOTE CONNECTION
W	◉	WASTE	SW	▨	SWITCH
I.W.	◉	INDIRECT WASTE			REMOTE MANUAL FIRE PULL
F.D.	◉	FLOOR DRAIN		⊹	ELECTRIC LIGHT
F.S.	◉	FLOOR SINK	KW		KILOWATT
FFD.	◉	FUNNEL FLOOR DRAIN	HP		MOTOR HORSEPOWER
BTU		BRITISH THERMAL UNIT	AMP		AMPERE
MISCELLANEOUS					
DFA		DOWN FROM ABOVE	AFF		ABOVE FINISHED FLOOR
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DESIGNED BY: MDB
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US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK, NY 10278

NOT FOR CONSTRUCTION

CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
Project No. 75662

FIRST FLOOR
FOODSERVICE EQUIPMENT
PLUMBING POC DRAWING

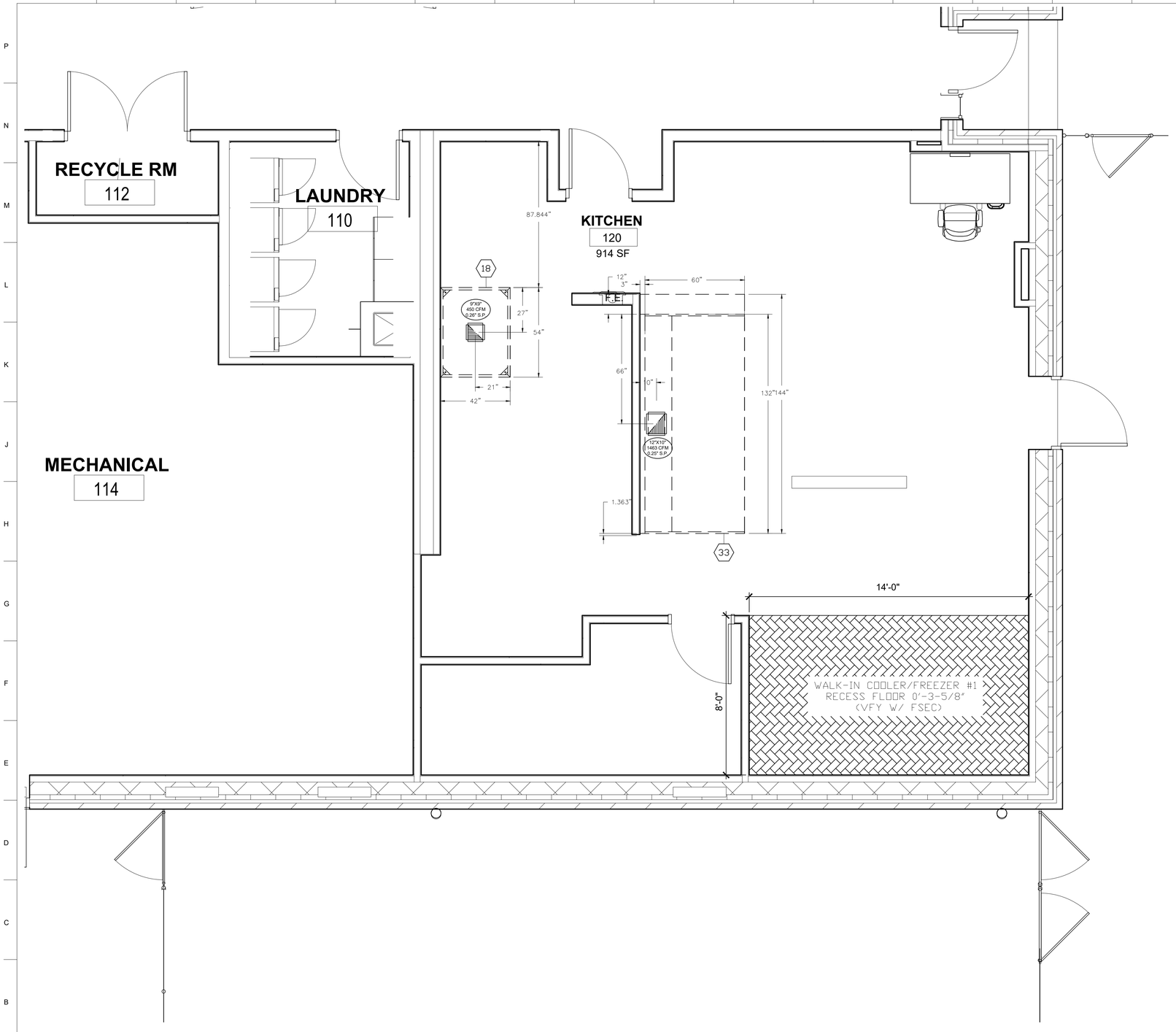
SHEET ID

QF-103

File Path:

Plot Date:

100% SUBMITTAL



SYMBOL/ ABBREVIATION SCHEDULE					
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S	⊗	STEAM SUPPLY	D.R.	■◯	DUPLEX RECEPTACLE
R	⊗	STEAM RETURN	C.O.	■◯	CONVENIENCE OUTLET
PC	⊕	PIPE CONNECTION	R.C.	△	REMOTE CONNECTION
W	◉	WASTE	SW	◇	SWITCH
I.W.	◉	INDIRECT WASTE			REMOTE MANUAL FIRE PULL
F.D.	◉	FLOOR DRAIN		◇	ELECTRIC LIGHT
F.S.	◉	FLOOR SINK	KW		KILOWATT
FFD.	◉	FUNNEL FLOOR DRAIN	HP		MOTOR HORSEPOWER
BTU		BRITISH THERMAL UNIT	AMP		AMPERE
MISCELLANEOUS					
DFA	DOWN FROM ABOVE		AFF	ABOVE FINISHED FLOOR	
S.P.	STATIC PRESSURE		NIC	NOT IN KITCHEN CONTRACT	
CFM	CUBIC FEET PER MINUTE		OW	OUT OF WALL	
TEO	TOP OF ELECTRICAL OUTLET		ETR	EXISTING TO REMAIN	

NOTE

THIS PLAN IS AN INSTRUMENT OF SERVICE PREPARED FOR THE CONVENIENCE OF THE ARCHITECT, ENGINEERS, AND BIDDERS. IT IS AS ACCURATE AS CAN BE DETERMINED AT THIS DATE.WE WILL NOT BE RESPONSIBLE FOR ANY DISCREPANCIES WHICH MAY DEVELOP BETWEEN LOCATIONS OF CONNECTIONS SHOWN AND ACTUAL LOCATIONS OF CONNECTIONS OF FIXTURES FURNISHED. THE FOOD SERVICE EQUIPMENT CONTRACTOR WILL FURNISH DIMENSIONED PLANS. CONNECTIONS SHOWN ARE APPROX. LOCATIONS AND ARE FOR REFERENCE ONLY!

1 FIRST FLOOR FOODSERVICE EQUIPMENT HVAC & FLOOR RECESS DRAWING
3/8" = 1'-0"

0' 4' 8' 16' 32' 64'
SCALE: 3/32"=1'-0"

N

COMMERCIAL KITCHEN CONSULTING LLC — Functional Design Solutions

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
		08/27/2024
		04/02/2023

DESIGNED BY: MDB
DRAWN BY: MS
CHECKED BY: C COMEGYS
SUBMITTED BY:
SIZE: ANSI D

US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK, NY 10278

NOT FOR CONSTRUCTION

ISSUE DATE: SEPTEMBER 18, 2025
SOLICITATION NO.: W912DS25T0051
CONTRACT NO.: W912DS19D007

CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
Project No. 75662

FIRST FLOOR
FOODSERVICE EQUIPMENT HVAC & FLOOR RECESS DRAWING

SHEET ID
QF-104

Plot Date:
File Path:

100% SUBMITTAL

FT HAMILTON CHILD DEV. CTR. FOODSERVICE EQUIPMENT MEP POC SCHEDULE

Item No	Furnished By	Qty	Equipment Category	Amps	KW	HP	Volts	Phase	Direct	Electrical AFF (in)	Plug	NEMA	Electrical Remarks	Cold Water Size (in)	Hot Water Size (in)	Cold Water AFF (in)	Hot Water AFF (in)	Direct Drain Size (in)	Direct Drain AFF (in)	Indir Drain Size (in)	Indir Drain AFF (in)	Plumbing Remarks	HVAC Exhaust Duct Size (in)	HVAC Exhaust CFM	HVAC Remarks	Item No
1	CFCI	1	Walk-in Cooler/Freezer	(2) 20.0			120	1	X	78			Note# M									No Plumbing Req.			No HVAC Req.	1
2	CFCI	1	Freezer Refrigeration System (Evaporator)	11.7			208/230	1	X											1	78	Notes# B, E & F			No HVAC Req.	2
		1	Remote Condensing Unit	11.8			208/230	3	X													Note# F				
3	CFCI	1	Cooler Refrigeration System (Evaporator)	1.3			120	1	X											1	78	Notes# B & F			No HVAC Req.	3
		1	Remote Condensing Unit	.65			208/230	3	X													Note# F				
4	CFCI	1 lot	Shelving Units										No Electrical Req.									No Plumbing Req.			No HVAC Req.	4
5	CFCI	1	Dunnage Rack										No Electrical Req.									No Plumbing Req.			No HVAC Req.	5
6	CFCI	1 lot	Shelving Units										No Electrical Req.									No Plumbing Req.			No HVAC Req.	6
7	CFCI	2	Hand Sinks										No Electrical Req.	0.5	0.5	33.5	33.5	1.5	28						No HVAC Req.	7
8	CFCI	2	Sorting Shelves										No Electrical Req.									No Plumbing Req.			No HVAC Req.	8
9	CFCI	1	Sink Heater	37.5	9.0		208	3	X	15										.75	15	Note# B			No HVAC Req.	9
10	CFCI	1	3 Compartment Sink										No Electrical Req.	(2) 0.5	(2) 0.5					(3) 2		Notes# A & B			No HVAC Req.	10
11	CFCI	1	Pot/Pan Drying Rack										No Electrical Req.									No Plumbing Req.			No HVAC Req.	11
12	CFCI	1	Clean Dishtable										No Electrical Req.									No Plumbing Req.			No HVAC Req.	12
13	CFCI	1	Dishwasher	26.9			208/240	3	X	12			Note# J	0.75		9				.625	40	Notes# A, B & I			No HVAC Req.	13
			Built-in Booster Heater	25.6			208/240	3	X	12					0.75		12								No HVAC Req.	
14	CFCI	1	Scrapper/Collector	3.2		0.75	208	3	X	17				0.75	0.75	18	18			2	7	Notes# A & B			No HVAC Req.	14
15	CFCI	1	Soiled Dishtable										No Electrical Req.									No Plumbing Req.			No HVAC Req.	15
16	CFCI	1	Hose Reel w/Control Panel										No Electrical Req.	0.5	0.5	48	48					Note# C			No HVAC Req.	16
17	GFGI	1	Mobile Garbage Can										No Electrical Req.									No Plumbing Req.			No HVAC Req.	17
18	CFCI	1	Condensate Hood										No Electrical Req.							0.5		Note# B	9 x 9	450	Refer to Halton Drawings	18
19	GFGI	4	3 Shelf Utility Cart (Toddler)										No Electrical Req.									No Plumbing Req.			No HVAC Req.	19
20	GFGI	2	3 Shelf Utility Cart (Infant)										No Electrical Req.									No Plumbing Req.			No HVAC Req.	20
21	GFGI	1	4 Shelf Utility Cart (Preschool)										No Electrical Req.									No Plumbing Req.			No HVAC Req.	21
22	CFCI	1	Undercounter Ice Maker	10			120	1		8	X	5-15P		0.375		8				(2) 0.5	8	Notes# B & D			No HVAC Req.	22
23	CFCI	1	30x60 Mobile Worktable	15			120	1			X	5-15R	Note# L									No Plumbing Req.			No HVAC Req.	23
24	CFCI	1	Air Curtain	6.5			208	1	X	84												No Plumbing Req.			No HVAC Req.	24
25	CFCI	1	1 Door Reach-in Refrigerator	5.2			120	1			X	5-15P										No Plumbing Req.			No HVAC Req.	25
26	CFCI	1	20 QT Banch Mixer	8.0			120	1			X	5-15P										No Plumbing Req.			No HVAC Req.	26
27	GFGI	1	Desk & Chair																			No Plumbing Req.			No HVAC Req.	27
28	CFCI	1	Mobile Mixer Stand										No Electrical Req.									No Plumbing Req.			No HVAC Req.	28
29	CFCI	1	30x72 Mobile Worktable	15			120	1			X	5-15R	Note# L									No Plumbing Req.			No HVAC Req.	29
30	CFCI	1	Prep Table w/2 Sinks & Pot/Pan Rack										No Electrical Req.	0.5	0.5	34	34			1.5	24	Notes# A & B			No HVAC Req.	30
31	CFCI	1	30x72 Mobile Worktable	15			120	1			X	5-15R	Note# L									No Plumbing Req.			No HVAC Req.	31
32	CFCI	1	Fire Suppression System	15.0			120	1	X	96			Notes# H & K									No Plumbing Req.			No HVAC Req.	32
33	CFCI	1	Exhaust Hood	15.0			120	1	X	102			Note# G									No Plumbing Req.	12 x 10	1463	Refer to Halton Drawings	33
34	CFCI	1	6 Burner Range w/Oven Base		17		208	3	X	6												No Plumbing Req.			No HVAC Req.	34
35	CFCI	1	Top Combination Oven w/Filter	62.2	22.4		208	3	X	46				.75		46				2.0	46	Notes# A, B & D			No HVAC Req.	35
35	CFCI	1	Bottom Combination Oven w/Filter	103.8	37.4		208	3	X	5				.75		5				2.0	5	Notes# A, B & D			No HVAC Req.	35

Contractor Furnished Contractor Installed
Government Furnished Contractor Installed
Government Furnished Government Installed

GENERAL NOTES:

- **"A"** Waste should be connected to grease interceptor.
- **"B"** Plumbing contractor to interpipe waste to floor drain or floor sink.
- **"C"** Interpipe from control panel to hose reel.
- **"D"** Plumbing contractor to interpipe from water filter to unit.
- **"E"** Foodservice equipment contractor to supply heat tape for condensate pipe. Electrical contractor to wire heat tape.
- **"F"** Foodservice equipment contractor to interpipe all refrigeration piping between unit and remote condesning unit.
- **"G"** Electrical contractor to interwire between hood mounted switches, hood timer panel and rooftop exhaust air fan(s).
- **"H"** Electrical contactor/shunt trip breaker by EC
- **"I"** Plumbing contractor is to provide a 3/4" cold water connection for drain water tempering valve.
- **"J"** Electrical contrctor shall interwire between dishwasher vent fan control and rooftop exhaust fan
- **"K"** Fire Suppression system; Electrical contractor shall interconnect between control panel and building fire alarm system.
- **"L"** Provide drop cord from the ceiling for convenience outlet
- **"M"** Electrical contractor to install light fixtures (supplied by FSEC) and interwire lights & light switch.

Note: The Contractor shall verify ALL information on this drawing, including NEMA outlet configurations and connections, prior to ordering, by submitting catalog cuts. These drawings shall be read in conjunction with the Mechanical, Plumbing and Electrical drawings. Contractors shall verify MEP requirements for all existing equipment.

0' 4' 8' 16' 32' 64'

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

N

1 FIRST FLOOR FOODSERVICE EQUIPMENT MEP POC SCHEDULE
NTS

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
		08/27/2024
		04/05/2023

ISSUE DATE: SEPTEMBER 18, 2025
SOLICITATION NO.: W912DS25T0051
CONTRACT NO.: W912DS19D0007

DESIGNED BY: MDB
DRAWN BY: MDB
CHECKED BY: C COMEGYS
SUBMITTED BY:
SIZE: ANSI D

US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK, NY 10278

NOT FOR CONSTRUCTION

CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
Project No. 75662

FIRST FLOOR
FOODSERVICE EQUIPMENT
MEP POC SCHEDULE

SHEET ID

QF-105

File Path:

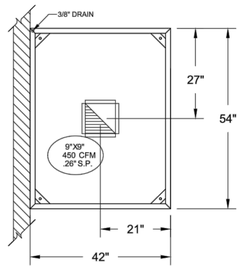
Plot Date:

100% SUBMITTAL

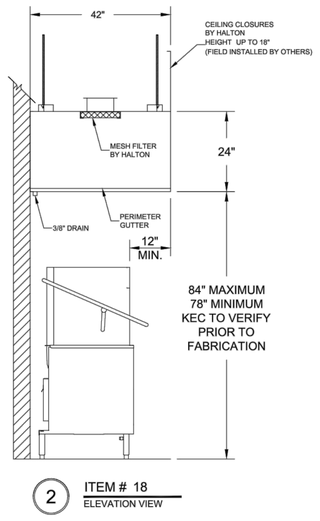
HOOD INFORMATION TABLE

HOOD NUMBER	HOOD MODEL	EXHAUST AIR FLOW REQUIREMENTS						GREASE EXTRACTOR				HOOD CONSTRUCTION	HOOD WEIGHT (LBS)
		EXHAUST CFM	TOTAL HOOD STATIC PRESSURE	T.A.B. PORT STATIC PRESSURE	EXHAUST COLLAR			QTY.	SIZE		TYPE		
					QTY.	LENGTH	WIDTH		L	H			
18	CH	450	.26"		1	9"	9"					ALL 18 GA. 304 S.S.	202

TOTAL EXH. CFM = 450



2
1 ITEM # 18
PLAN VIEW



2 ITEM # 18
ELEVATION VIEW

GENERAL SPECIFICATIONS

1- HOOD IS NSF LISTED.

2- ALL INSTALLATION WORK IS TO BE PERFORMED BY QUALIFIED PERSONS AND IN ACCORDANCE WITH STATE AND LOCAL BUILDING CODE REQUIREMENTS.

3- ALL EXHAUST DUCTWORK AND TRANSITIONS ARE TO BE PROVIDED BY THE HVAC CONTRACTOR.

4- CLEARANCE FROM HOOD AND DUCTS TO COMBUSTIBLE MATERIAL SHALL BE PER APPLICABLE BUILDING CODES.

5- FOR PROPER OPERATION OF THE HOOD SYSTEM, IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO HAVE THE HOOD BALANCED AND TESTED TO ENSURE THAT THE EXHAUST AND SUPPLY REQUIREMENTS OF THE HOOD ARE MET.

INSTALLATION REQUIREMENTS

KITCHEN EQUIPMENT CONTRACTOR'S REQUIREMENTS

1- PROVIDE DRAWINGS TO APPROPRIATE TRADES REFERENCING UTILITY SERVICE AND COORDINATE FINAL CONNECTION.

2- DELIVER, ASSEMBLE AND INSTALL HALTON SYSTEM PER DRAWING.

3- FURNISH WIRING AND PLUMBING DIAGRAMS TO END USER.

4- THE K.E.C MUST INFORM HOOD MFG OF ANY CHANGES IN EQUIPMENT OR BUILDING STRUCTURE. FIELD MODIFICATIONS ARE THE RESPONSIBILITY OF THE K.E.C.

5- IF HOOD EXHAUST VOLUME DAMPERS ARE PROVIDED, THE K.E.C. IS RESPONSIBLE FOR THEIR INSTALLATION OR TO MAKE ARRANGEMENTS WITH OTHER TRADES FOR THEIR INSTALLATION.

ELECTRICAL CONTRACTOR'S REQUIREMENTS

1- PROVIDE AND CONNECT ALL REQUIRED VOLTAGES, CONNECTORS, WIRING, CONDUIT, ETC., PER NEC AND ALL APPLICABLE LOCAL CODES.

ELECTRICAL EQUIPMENT REQUIREMENTS

FLUORESCENT LIGHT FIXTURE
40 WATT MAX BULB= .57 AMP EA.

RECESSED INCANDESCENT LIGHT FIXTURE
150 WATT MAX BULB= 1.25 AMP EA.

GLOBE INCANDESCENT LIGHT FIXTURE
100 WATT MAX BULB= .83 AMP EA.

HCL LIGHT FIXTURES= .12 AMP EA.

LED LIGHT FIXTURES= .30 AMP EA.

ALL HOOD CIRCUITS ARE NOT TO EXCEED 15 AMP

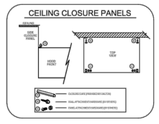
**LIGHT BULBS, IF REQUIRED,
ARE TO BE PROVIDED BY OTHERS**

CEILING HEIGHT NOTE

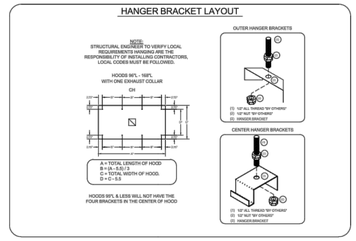
IF HOOD MFG COMPANY IS TO PROVIDE CEILING CLOSURE PANELS, THE EXACT DIMENSION OF THE FINISHED CEILING HEIGHT MUST BE PROVIDED PRIOR TO RELEASE.

FINISHED CEILING HEIGHT A.F.F.: _____

CEILING CLOSURE PANELS



HANGER BRACKET LAYOUT



1 CONDENSATE HOOD ITEM# 18 DRAWING
NTS

COMMERCIAL KITCHEN CONSULTING LLC — Functional Design Solutions

0' 4' 8' 16' 32' 64'
SCALE: 3/32"=1'-0"

N

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
		08/27/2024
		04/03/2023

File Path:

Plot Date:

ISSUE DATE: SEPTEMBER 18, 2025
SOLICITATION NO.: W912DS25R0051
CONTRACT NO.: W912DS19D0007

DESIGNED BY: MDB
DRAWN BY: MDB
CHECKED BY: C COMEGYS
SUBMITTED BY: YS
SIZE: ANSI D

US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK, NY 10278

NOT FOR CONSTRUCTION

CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
Project No. 75662

CONDENSATE HOOD ITEM# 18 DRAWING

SHEET ID
QF-106

100% SUBMITTAL

HOOD INFORMATION TABLE

HOOD NUMBER	HOOD MODEL	EXHAUST AIR FLOW REQUIREMENTS						GREASE EXTRACTOR				HOOD CONSTRUCTION	HOOD WEIGHT (LBS)
		EXHAUST CFM	TOTAL HOOD STATIC PRESSURE	T.A.B. PORT STATIC PRESSURE	EXHAUST COLLAR			QTY.	SIZE		TYPE		
					QTY.	LENGTH	WIDTH		L	H			
33	KVE	1463	.25"	.14"	1	12"	10"	6	20"	13"	KSA	ALL 18 GA. 304 S.S.	962
								1	11"	13"			

TOTAL EXH. CFM = 1463

ELECTRICAL CONNECTION SCHEDULE

CONNECTION #	CONNECTION DESCRIPTION	FROM	TO
E1-H	120V, 15AMP - HOOD LIGHT POWER - 3 WIRES	BUILDING SOURCE	HOOD # 33

MAKE UP AIR GUIDELINES

- VELOCITY MEASURED AT THE LOWER FRONT LIP OF THE HOOD SHALL NOT EXCEED 75 FPM.
- TRANSFER AIR FROM PARTS OF THE BUILDING OTHER THAN THE KITCHEN SHALL NOT EXCEED 50 FPM VELOCITY.
- NO SLOT, 2-WAY, 3-WAY OR 4-WAY CEILING DIFFUSER SHALL PROVIDE AIRFLOW DIRECTED AT HOOD. MUST INSTALL DIFFUSERS MINIMUM OF 48" [1219 MM] AWAY FROM ALL OPEN SIDES OF HOODS*.

*EXCEPTION–HALTON KCDs MAY BE PLACED 24" [610 MM] AWAY FROM ALL OPEN SIDES OF HOODS.

1 ITEM # 33
PLAN VIEW

ANSUL R-102 SYSTEM
MOUNTED IN FIRE CABINET:
(1) OEM REGULATED RELEASE
(1) 3 GALLON TANK

2 ITEM # 33
ELEVATION VIEW

1) ANSUL R-102 FIRE SYSTEM
2) ONE TANK SYSTEM (3 GALLON)
3) 3/8" BLACK IRON PIPING (CONCEALED)
3/8" S.S. APPLIANCE DROPS (EXPOSED)
4) MECHANICAL GAS VALVE = (ADVISE SIZE)

NOTE
T-STAT IS FACTORY PRE-SET FOR 95 DEGREES, IF SPACE CONDITIONS EXCEED 95 DEGREES WITHOUT COOKING TAKING PLACE, THEN A FIELD ADJUSTMENT OF THE T-STAT WILL BE REQUIRED BY PERSONNEL OTHER THAN HALTON. T-STAT IS A SAFETY INTERLOCK ONLY. IT IS NOT INTENDED AS A PRIMARY MEANS OF ENGAGING THE EXHAUST FAN.

3 ITEM # 33
SECTION VIEW

ANSUL MICROSWITCH DETAIL

ANSUL R-102 SYSTEM

GENERAL SPECIFICATIONS

1- HOOD CONSTRUCTION AND DESIGN MEETS NFPA 96, IMC SECTION 507 AND UL 710 STANDARD.

2- HOOD IS NSF AND ETL LISTED UNDER THE FOLLOWING FILE NUMBER: ETL #103143204PRT-001

3- ALL INSTALLATION WORK IS TO BE PERFORMED BY QUALIFIED PERSONS AND IN ACCORDANCE WITH STATE AND LOCAL BUILDING CODE REQUIREMENTS.

4- THE INSTALLATION SHALL BE IN ACCORDANCE WITH NFPA 96, REMOVAL OF SMOKE AND GREASE LADEN VAPORS FROM COMMERCIAL COOKING EQUIPMENT.

5- ALL EXHAUST DUCTWORK AND TRANSITIONS ARE TO BE PROVIDED BY THE HVAC CONTRACTOR.

6- CLEARANCE FROM HOOD AND DUCTS TO COMBUSTIBLE MATERIAL SHALL BE PER APPLICABLE BUILDING CODES.

7- FOR PROPER OPERATION OF THE HOOD SYSTEM, IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO HAVE THE HOOD BALANCED AND TESTED TO ENSURE THAT THE EXHAUST AND SUPPLY REQUIREMENTS OF THE HOOD ARE MET.

INSTALLATION REQUIREMENTS

KITCHEN EQUIPMENT CONTRACTOR'S REQUIREMENTS

1- PROVIDE DRAWINGS TO APPROPRIATE TRADES REFERENCING UTILITY SERVICE AND COORDINATE FINAL CONNECTION.

2- DELIVER, ASSEMBLE AND INSTALL HALTON SYSTEM PER DRAWING.

3- FURNISH WIRING AND PLUMBING DIAGRAMS TO END USER.

4- THE K.E.C MUST INFORM HOOD MFG. OF ANY CHANGES IN EQUIPMENT OR BUILDING STRUCTURE. FIELD MODIFICATIONS ARE THE RESPONSIBILITY OF THE K.E.C.

5- IF HOOD MANUAL EXHAUST VOLUME DAMPERS ARE PROVIDED, THE K.E.C. IS RESPONSIBLE FOR THEIR INSTALLATION OR TO MAKE ARRANGEMENTS WITH OTHER TRADES FOR THEIR INSTALLATION.

6- IF HOOD MODEL KVL BACKSHELF STYLE HOODS ARE PROVIDED, THE K.E.C. IS RESPONSIBLE FOR THE INSTALLATION OF THE CAPTURE-JET FAN.

ELECTRICAL CONTRACTOR'S REQUIREMENTS

1- PROVIDE AND CONNECT ALL REQUIRED VOLTAGES, CONNECTORS, WIRING, CONDUIT, ETC., PER NEC AND ALL APPLICABLE LOCAL CODES.

ELECTRICAL EQUIPMENT REQUIREMENTS

FLUORESCENT LIGHT FIXTURE 40 WATT MAX BULB= .67 AMP EA.

RECESSED INCANDESCENT LIGHT FIXTURE 150 WATT MAX BULB= 1.25 AMP EA.

GLOBE INCANDESCENT LIGHT FIXTURE 100 WATT MAX BULB= .83 AMP EA.

HCL LIGHT FIXTURES= .12 AMP EA.

LED LIGHT FIXTURES= .30 AMP EA

CAPTURE JET FAN= .72 AMP EA

ALL HOOD CIRCUITS ARE NOT TO EXCEED 15 AMP

LIGHT BULBS, IF REQUIRED, ARE TO BE PROVIDED BY OTHERS

CEILING CLOSURE PANELS

CEILING HEIGHT NOTE

IF HOOD COMPANY IS TO PROVIDE CEILING CLOSURE PANELS, THE EXACT DIMENSION OF THE FINISHED CEILING HEIGHT MUST BE PROVIDED PRIOR TO RELEASE.

FINISHED CEILING HEIGHT A.F.F.: __________

TIMER PANEL

CAPTURE JET CLEARANCE DETAIL

Capture Jet ® Fan Cover Clearance

Patented Capture Jet ® technology perimeter air jets improve capture and containment of heat and grease emissions. It is very important to leave air space above and around the Capture Jet ® air intake cover on the top of the Halton hood. Please leave 2 inches of clearance on the top and sides of the perforated Capture Jet ® intake cover to allow unimpeded entrance of air into the Capture Jet ® fan.

Typical Wiring of Capture-Jet Fan W/HALTON SUPPLIED SWITCH PANEL

HANGER BRACKET LAYOUT

KSA GREASE EXTRACTOR

EFFECTIVE AREA = 1.25 SQUARE FEET PER FULL EXTRACTOR
EFFECTIVE AREA = 0.75 SQUARE FEET PER HALF EXTRACTOR
SEE HOOD SUBMITTAL DRAWINGS FOR EXTRACTOR QUANTITY

EXTRACTION OF CONTAMINANTS FROM THE EXHAUST AIR IS PROVIDED BY THE KSA MULTI-CYCLONE GREASE EXTRACTORS. EFFICIENT GREASE EXTRACTION IS ACHIEVED BY FORCING THE EXHAUST AIR TO SPIRAL CONTINUOUSLY IN THE SAME DIRECTION IN THE MULTIPLE CHAMBERS OF THE EXTRACTOR, THUS SEPARATING THE GREASE PARTICLES FROM THE AIR FLOW CENTRIFUGALLY.
HIGH EXTRACTION EFFICIENCY AND LOW PRESSURE LOSS OVER THE KSA REMAIN PRACTICALLY CONSTANT.

KSA REMOVAL TOOL

PERFORMANCE CRITERIA

OTHER MANUFACTURERS WISHING TO OFFER AN ALTERNATE TO THE SPECIFIED MANUFACTURER MUST APPLY FOR PERMISSION TO DO SO IN WRITING FROM THE OFFICE OF THE SPECIFYING CONSULTANT. APPLICATION MUST BE RECEIVED BY THE CONSULTANT AT LEAST TEN WORKING DAYS PRIOR TO THE BID DATE. ANY ALTERNATE SYSTEM MUST MEET CONSTRUCTION AND PERFORMANCE REQUIREMENTS AND EFFICIENCIES AS OUTLINED IN THIS SPECIFICATION.

REQUESTS FOR APPROVAL MUST INCLUDE GREASE FILTRATION PERFORMANCE DATA (MICRON SIZE VS. EXTRACTION EFFICIENCY) AND MANUFACTURERS OWN EXHAUST AIR FLOW CALCULATIONS BASED ON THE CONVECTIVE HEAT LOAD OF COOKING EQUIPMENT BENEATH THE HOOD.

EFFICIENCY COMPARISON DATA TO BE PERFORMED IN ACCORDANCE WITH THE MOST CURRENT ASTM STANDARD F1704 AND INCLUDE RESULTS FOR THE REQUIRED CAPTURE AND CONTAINMENT EXHAUST AIR FLOW IN ACCORDANCE WITH THE "TEST METHOD TO DETERMINE THE THRESHOLD OF CAPTURE AND CONTAINMENT." DATA MUST INCLUDE THERMAL IMAGING RESULTS VALIDATING CONFORMANCE TO ASTM F1704 AND SUPPLY AIR TEMPERATURE REQUIREMENT OF 74°F.

MAKE UP AIR WILL BE CALCULATED SO THAT THE SAME AMOUNT OF AIR WILL BE TAKEN FROM THE ZONE AS IS REQUIRED BY THE SPECIFIED SYSTEM. AN ADDITIONAL LOAD CANNOT BE PLACED ON THE KITCHEN HVAC SYSTEM.

MANUFACTURER MUST PROVIDE A WRITTEN GUARANTEE OF PERFORMANCE, ENSURING THE SPECIFYING ENGINEER THAT THE SYSTEM WILL PERFORM TO THE ENGINEER'S SATISFACTION WHEN INSTALLED AND BALANCED ACCORDING TO DESIGN AIR FLOWS AND RESULTS OF ASTM STANDARD F1704 TEST. (AS DETERMINED BY TAB PORTS AND PRESSURE VS. AIR FLOW CURVES.) CONSULTANT RESERVES THE RIGHT TO REJECT ANY SYSTEM WHICH, WHEN INSTALLED, DOES NOT PROVIDE CAPTURE AND CONTAINMENT AT THE THRESHOLD FLOW RATE DETERMINED IN ASTM F1704. REJECTED SYSTEM MUST BE REPLACED WITH SPECIFIED SYSTEM, WITH ALL REPLACEMENT COSTS PAID BY MANUFACTURER OF REJECTED SYSTEM.

ANY CHANGES IN THE SPECIFIED SIZING OF POWER WIRING, FAN SIZE, HORSEPOWER REQUIREMENTS, OR GAS LINES DUE TO THE USE OF ANY SYSTEM OTHER THAN THAT WHICH IS SPECIFIED IS THE RESPONSIBILITY OF THE ALTERNATE HOOD MANUFACTURER, AND MUST BE COORDINATED BY THE HOOD MANUFACTURER AND CONTRACTORS INVOLVED.

1 EXHAUST HOOD ITEM# 33 DRAWING
NTS

COMMERCIAL KITCHEN CONSULTING LLC — Functional Design Solutions

0' 4' 8' 16' 32' 64'
SCALE: 3/32"=1'-0"

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
		04/03/2023
		08/27/2024

DESIGNED BY: MDB
DRAWN BY: MDB
CHECKED BY: C COMEGYS
SUBMITTED BY:
SIZE: ANSI D
ISSUE DATE: SEPTEMBER 18, 2025
SOLICITATION NO.: W912DS23F0031
CONTRACT NO.: W912DS19D007

US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK, NY 10278

NOT FOR CONSTRUCTION

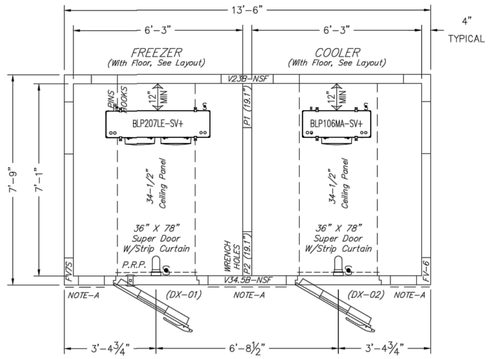
CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
Project No. 75662

EXHAUST HOOD ITEM# 33 DRAWING

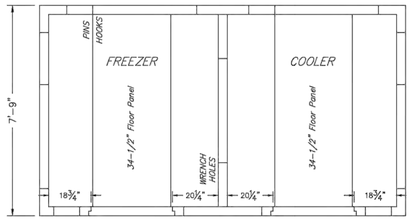
SHEET ID
QF-107

File Path:
Plot Date:

100% SUBMITTAL



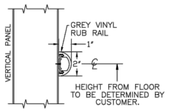
Ceiling & Vertical Layout



Floor Layout

PLAN VIEW— A

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



NOTE: ALL ENDS ARE CLOSED (FOR ADDED SANITATION)
ECOFLEX VINYL RUB RAIL
(SEE INSTRUCION: IM-365-93)

SPECIFICATIONS

13'-6" X 7'-9" X 8'-6" (With Floor)

INSTALLATION
- INDOOR
- LOADING HEIGHT – AT LEAST 18" OF OPEN SPACE MUST BE MAINTAINED BETWEEN TOP OF PRODUCT AND CEILING PANELS

INSULATION
- FOAMED IN-PLACE POURED URETHANE
- BALLY PANELS AND DOORS ARE CERTIFIED COMPLIANT WITH CURRENT FEDERAL DOE REGULATIONS FOR WALK IN COOLERS & FREEZERS
- BALLY PANELS AND DOORS EXCEED MINIMUM R-VALUES* FOR COOLERS (MINIMUM R-25, EXCLUDING FLOORS), AND FREEZERS (MIN. R-32, EXCEPT FLOORS, WHICH ARE MIN. R-28) *WHEN TESTED PER ASTM C518 TO FEDERAL REG. #431.304

EXTERIOR FINISH
- STUCCO ALUMINUM

INTERIOR FINISH
- STUCCO ALUMINUM

FLOOR FINISH
- (INTERIOR) 1/8" DIAMOND TREAD (3/4" PLYWOOD)
- (EXTERIOR) STUCCO ALUMINUM

DOORS/ACCESSORIES
- (2) 36" X 78" LEFT SWING HINGED WALK-IN DOOR

  Door Options:
  - (2) Super Doors: 3rd Hinge & 36" High Dia. Tread In & Out
  - (2) Radius Depression Type Stepplate
  - (2) 14" X 14" Obs. Window (Heated) W/Ext. Cross-Over Cord
  - (1) Pressure Relief Port
  - (2) Strip Curtain (Shipped Loose)
  - (2) Modularm 75LC W/Mag. Contact
  - (2) Motion Detector
  - (1) IP1 Panic Button

REFRIGERATION – BY BALLY (CONDENSING UNIT MOUNTED OUTDOORS)

QTY	H/P	INTST TYPE	MODEL NUMBER	POWER SUPPLY	COMPRESSOR RLA	LRA	FAN MTRS QTY	HP	FLA	TOTAL WATTS DEFROST	AMPS	MCA	MAX FUSE	AMP'S
1	2.0	W448A	BEZ2020LB-HT300	208-230/3/60	8.6	58	1		1		9.6	11.8	20	F
1			BLP207LE-SDI-SV+	208-230/1/60			2	1/15	0.6	1890	8.2	10.3	15	F
1	0.6	W448A	BEH400MB-HS2201	208-230/1/60	4.4	30	1		1		5.4	6.5	15	C
1			BLP106MA-310-SV+	115/1/60			1	1/15	1		1	1.3	15	C

– ALL CONDENSATION DRAIN LINES MUST BE SLOPED 1/12. 1" ——— 1/2" INSULATION
– FREEZER CONDENSATION DRAIN LINES MUST BE HEATED, INSULATED AND TRAPPED INDIVIDUALLY. BY OTHERS

- (2) HEATED AND INSULATED RECEIVER
- (1) DR600 Condenser Stand

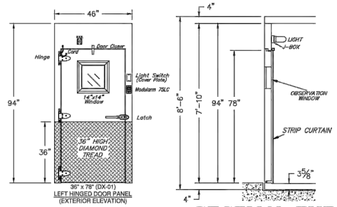
– NOTE: REFRIGERATION IS BEING MANUFACTURED WITH SMART-VAP TECHNOLOGY. (2) SEPARATE POWER SOURCES; (1) TO THE CONDENSING UNIT AND (1) TO THE SMARTVAP EVAPORATOR ARE REQUIRED.

GENERAL NOTES
– NOTE-A: BALLY TO FURNISH SERIES 2000 ECOFLEX VINYL RUB-RAILS MOUNTED ON EXPOSED EXTERIOR (BY OTHERS). COLOR: GREY. 1-ROW MOUNTED.

– NOTE: BALLY TO FURNISH (2) K1809-3 LED LIGHTS W/STRIPS (17" LONG). LIGHTS MOUNTED AND WIRED BY OTHERS. (LIGHTS SHIPPED LOOSE) (DOOR LIGHT SWITCH 12-AMP MAXIMUM)
ALL CONDUIT ENDS AT J-BOXES MUST BE SEALED INTERNALLY BY INSTALLER (AFTER WIRES ARE RUN).

– NOTE: BALLY TO FURNISH STUCCO ALUMINUM CLOSURE TRIM ADVISE: QUANTITY AND TYPE REQUIRED. CLOSURE TRIM MOUNTED BY OTHERS.

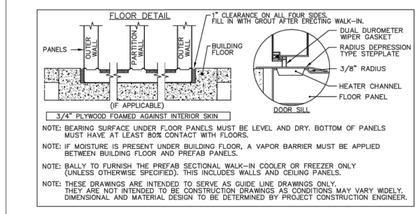
– NOTE: BALLY TO FURNISH 3/4" PLYWOOD FOAMED IN PLACE AGAINST INTERIOR SKIN OF FLOOR PANELS.



SECTION THRU ENTRANCE DOOR

SCALE: 3/8" = 1'-0"

SHEET 1 OF 1

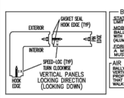


NOTE: BEARING SURFACE UNDER FLOOR PANELS MUST BE LEVEL AND DRY. BOTTOM OF PANELS MUST HAVE AT LEAST 80% CONTACT WITH FLOORS.

NOTE: IF MOISTURE IS PRESENT UNDER BUILDING FLOOR, A VAPOR BARRIER MUST BE APPLIED BETWEEN BUILDING FLOOR AND PREFAB PANELS.

NOTE: BALLY TO FURNISH THE PREFAB SECTIONAL WALK-IN COOLER OR FREEZER ONLY (UNLESS OTHERWISE SPECIFIED). THIS INCLUDES WALLS AND CEILING PANELS.

NOTE: THESE DRAWINGS ARE INTENDED TO SERVE AS GUIDE LINE DRAWINGS ONLY. THEY ARE NOT INTENDED TO BE CONSTRUCTION DRAWINGS AS CONDITIONS MAY VARY WIDELY. DIMENSIONAL AND MATERIAL DESIGN TO BE DETERMINED BY PROJECT CONSTRUCTION ENGINEER.



BALLY FLOOR PANEL GUIDELINES

STATIONARY LOAD
NOT TO EXCEED 150 LBS. PER SQ. FT. (UNIFORMLY DISTRIBUTED)
MOBILE EQUIPMENT (ROLLERS OR CASTERS)
NOT TO EXCEED 1,000 LBS. PER SQ. FT. (UNIFORMLY DISTRIBUTED WITH FINISHED FLOORING UNDER ENTIRE FOOT PRINT)
(MAXIMUM 2,000 LBS. PER SQ. FT. FOOT PRINT MAY BE USED AS LONG AS OVERALL LOAD DOES NOT EXCEED 1,000 LBS. PER SQ. FT.)
FORK-LIFT LOAD
NOT TO EXCEED 50% OF MAXIMUM CAPACITY OF FORK-LIFT (MAXIMUM CAPACITY TO BE DETERMINED BY FORK-LIFT MANUFACTURER)

AIR GAP/CIRCULATION RECOMMENDATION:
BALLY RECOMMENDS AN AIR GAP BETWEEN WALLS AND BUILDING STRUCTURE. BALLY RECOMMENDS THAT THE WALK-IN, EQUIPMENT, AND ALL PIPING FOR THE WALK-IN, BE LOCATED FOR EASY ACCESS FOR WALK-IN, AND WITHIN AN ENCLOSED AREA.

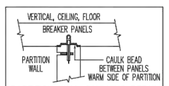
S - ELECTRICAL CONNECTION

THIS DRAWING IS TO BE USED FOR "APPROVAL ONLY".

-> DO NOT USE THIS DRAWING FOR INSTALLATION!

EVERY SHIPPED ORDER WILL HAVE A FINALIZED "AS-BUILT" DRAWING.

NSF



PARTITION WALL CAULKING DETAIL

ADDED PRECAUTION AGAINST VAPOR LEAKS, BALLY RECOMMENDS THAT ALL PARTITION WALL PANELS TO (VERTICAL, CEILING, FLOOR) BREAKER PANELS: "JOINTS BE CAULKED DURING ASSEMBLY."

[redacted]

SIGNED APPROVAL

SIGNED _____

DATE _____

PLEASE READ

THIS DRAWING HAS BEEN CAREFULLY CHECKED BY OUR DRAFTING DEPARTMENT. HOWEVER, SHOULD ANY DISCREPANCIES BE FOUND, OR IF THIS DRAWING IS NOT APPROVED AS SUBMITTED, BE CERTAIN THAT YOU CHECK THEM CAREFULLY.

NOTE – THIS ORDER WILL NOT BE SCHEDULED FOR PRODUCTION UNTIL RECEIPT OF APPROVED DRAWINGS BY BALLY.

IMPORTANT – PLEASE READ

THESE DRAWINGS ARE NOT TO BE CONSIDERED AS APPROVED BY LOCAL OR STATE BUILDING AUTHORITIES.

THEY HAVE BEEN PREPARED SOLELY FOR THE GUIDANCE OF REGISTERED ARCHITECTS AND ENGINEERS AND FOR THE ASSISTANCE OF LOCAL CONTRACTORS IN THE PREPARATION OF THE PROJECT. IT IS THE DUTY OF THE ARCHITECT OR ENGINEER TO ASSURE THE BUILDING DIRECTOR, LOCAL OFFICIALS, AND OTHERS CONCERNED WITH THE PROJECT, FROM HIS OR ENGINEER TO ASSURE THE BUILDING DIRECTOR, BALLY REFRIGERATED BOXES INC., IN PREPARING THESE DRAWINGS AND SPECIFICATIONS, DOES NOT ASSUME ANY RESPONSIBILITY FOR THE SUCCESSFUL COMPLETION OR USAGE OF THE STRUCTURE DESCRIBED.

THE DRAWINGS AND SPECIFICATIONS DESCRIBE A BUILDING ASSEMBLED FROM BALLY PANELS INSULATED WITH URETHANE, "FOAMED-IN-PLACE". THE SIZE AND SHAPE IS THAT WHICH MOST CLEARLY MEETS DIMENSIONS SUBMITTED BY THE USER.

BALLY REFRIGERATED BOXES INC., PROVIDES PANELS FREQUENTLY SPECIFIED BY OTHERS, AND IS NOT RESPONSIBLE FOR THE SELECTION OR RECOMMENDATION BY OTHERS OF THE PANEL FINISH FOR ANY BUILDING OR WALK-IN APPLICATION.

REV	DESCRIPTION	BY	DATE
1	REMOVE FUSED DISCONNECT SWITCHES; ADD DR600 CONDENSER STAND.	MJF	06/27/24

[redacted]

FOR

FORT HAMILTON

CHILD DEVELOPMENT CENTER

DRAWING NUMBER	14691AD	DATE	05/22/23
DRAWN BY	MJH	ORDER NUMBER	14691
CHK'D BY	DATE CHK'D	CHK'D BY	

COMMERCIAL KITCHEN CONSULTING LLC — Functional Design Solutions

0' 4' 8' 16' 32' 64'

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

N

1 WALK-IN COOLER/FREEZER ITEM# 1 DRAWING
NTS

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
		08/27/2024
		04/05/2023

File Path:

Plot Date:

DESIGNED BY: MDB
DRAWN BY: DE
CHECKED BY: C COMEGYS
SUBMITTED BY:
SIZE: ANSI D

ISSUE DATE: SEPTEMBER 18, 2025
SOLICITATION NO.: W912DS25F0051
CONTRACT NO.: W912DS19D0007

US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK, NY 10278

NOT FOR CONSTRUCTION

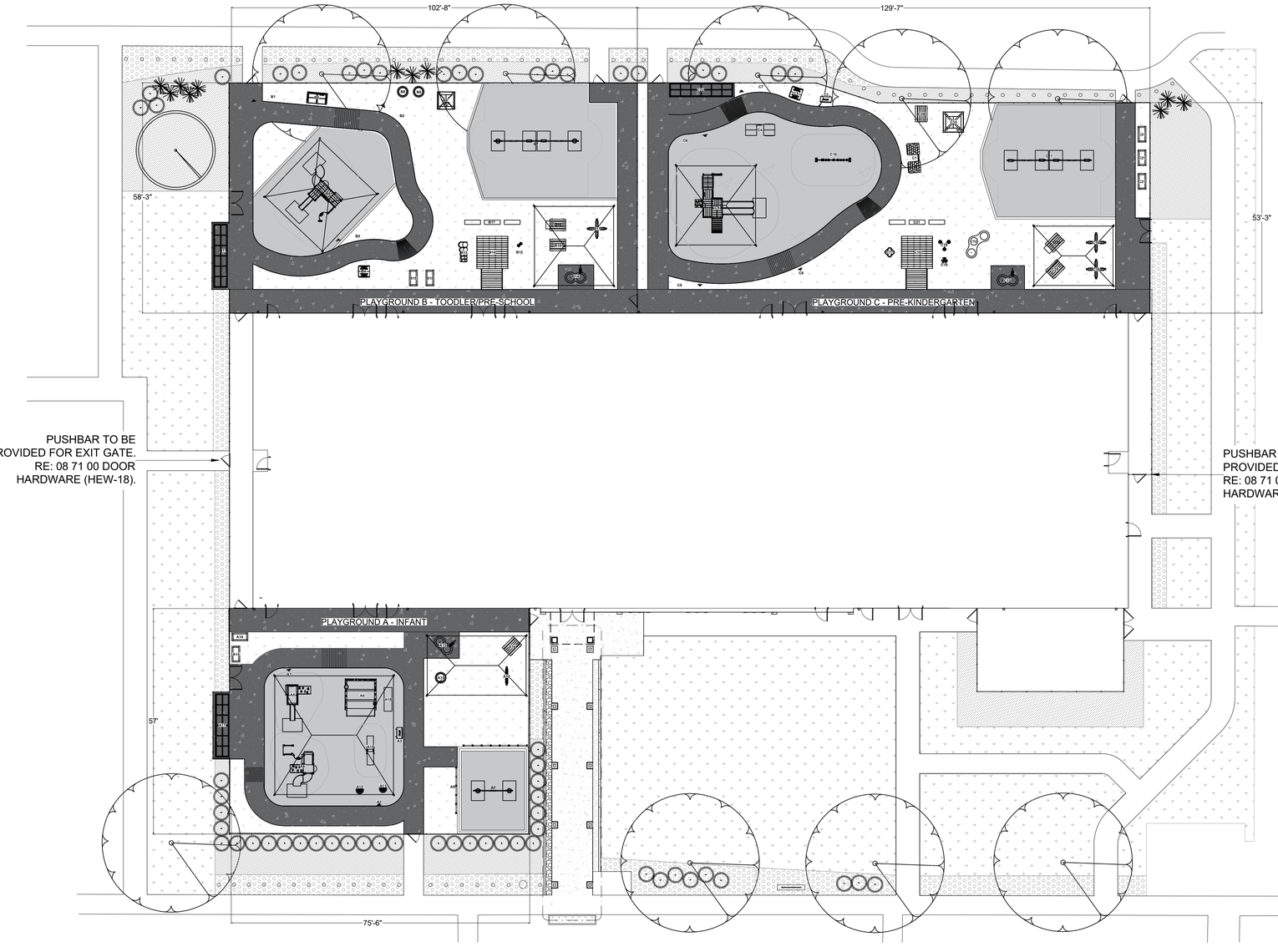
CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
Project No. 75662

WALK-IN COOLER/FREEZER ITEM# 1 DRAWING

SHEET ID

QF-108

100% SUBMITTAL



LEGEND:

- LIGHT DUTY CONCRETE
- POURED IN PLACE SAFETY SURFACE; COLOR: MIXED BLEND OF PAMPAS IVORY 50% / CHESTNUT BROWN 50%
- SODDED TURF GRASS
- SAFETY AREA
- SWING/CHILD SAFETY FENCE

PLAYGROUND AREA:

PLAYGROUND A:	3,993 SF
PLAYGROUND B:	5,529 SF
PLAYGROUND C:	6,651 SF
TOTAL AREA:	16,173 SF

NOTES:

1. SEE CIVIL DRAWINGS FOR POURED IN PLACE SURFACING DETAILS AND DRAINAGE LAYOUT WITHIN THE PLAYGROUND AREAS.
2. FINAL LOCATION OF ALL MANUFACTURED PLAYGROUND EQUIPMENT SHALL BE COORDINATED WITH FT HAMILTON PRIOR TO INSTALLATION.
3. SHADE STRUCTURE POSTS ARE PROHIBITED FROM BEING PLACED ON SIDEWALKS AND TRIKE PATHS. LOCATED BASED ON DRAWINGS.
4. ALL POLES FOR SHADE STRUCTURES AND PLAY EQUIPMENT SHALL BE ROUNDED WITH PADDING INSTALLED.

B1 PLAYGROUND PLAN
1" = 15'

15' 0 15' 30'
SCALE: 1" = 15'
GRAPHIC SCALE

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

File Path: P:\113267\113267-001\33 - PLANNING & GIS\08_WORKING FILES\AUTOCAD\100% SUBMISSION

Plot Date: 8/28/2025 4:00:00 PM

DESIGNED BY:	A. BLOXDORF
DRAWN BY:	A. BLOXDORF
CHECKED BY:	D. FLYNN
SUBMITTED BY:	A. STARK
SIZE:	ANSI D
ISSUE DATE:	AUGUST 29, 2025
SOLICITATION NO.:	W912DS23F0031
CONTRACT NO.:	W912DZ21P0007

US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK, NY 10278

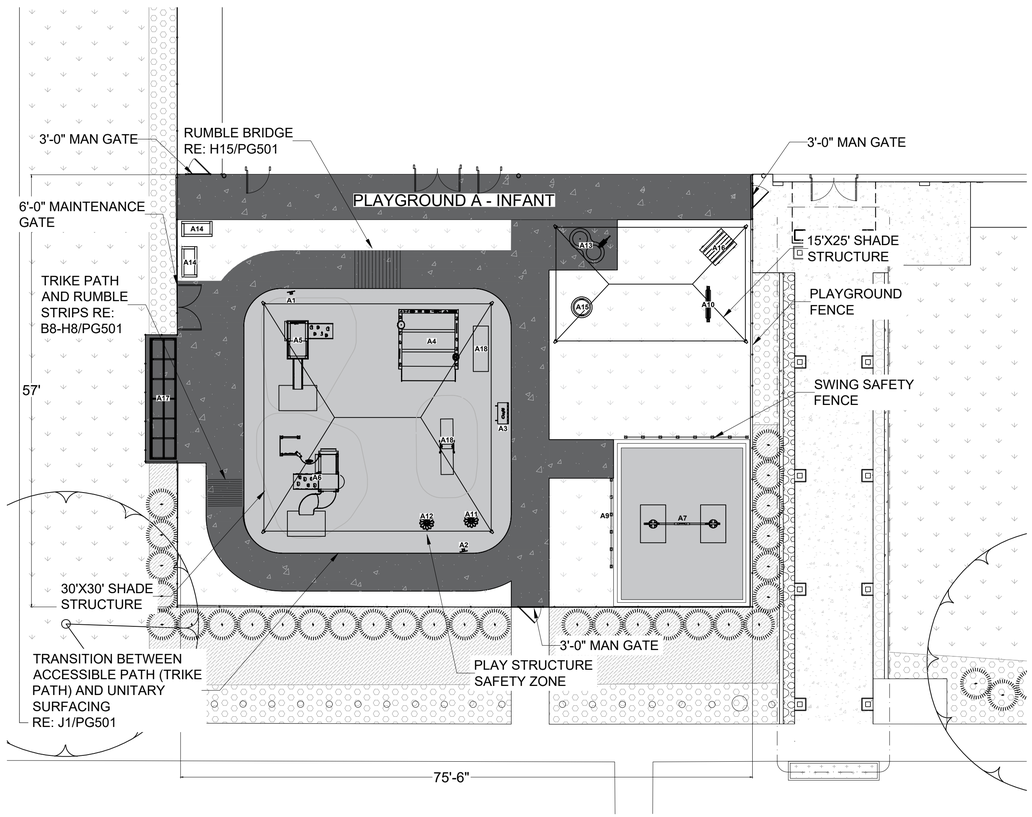
NOT FOR CONSTRUCTION

CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
Project No. 75662

PLAYGROUND PLAN

SHEET ID

PG100



F1 INFANT PLAYGROUND PLAN

1" = 10'

LEGEND:

- LIGHT DUTY CONCRETE
- POURED IN PLACE SAFETY SURFACE; COLOR: MIXED BLEND OF PAMPAS IVORY 50% / CHESTNUT BROWN 50%
- SODDED TURF GRASS
- SAFETY AREA
- SWING/CHILD SAFETY FENCE

10' 0 10' 20'

SCALE: 1" = 10'

GRAPHIC SCALE

NOTES:

1. SEE CIVIL DRAWINGS FOR POURED IN PLACE SURFACING DETAILS AND DRAINAGE LAYOUT WITHIN THE PLAYGROUND AREAS.
2. FINAL LOCATION OF ALL MANUFACTURED PLAYGROUND EQUIPMENT SHALL BE COORDINATED WITH FT HAMILTON PRIOR TO INSTALLATION.
3. SHADE STRUCTURE POSTS ARE PROHIBITED FROM BEING PLACED ON SIDEWALKS AND TRIKE PATHS. LOCATED BASED ON DRAWINGS.
4. ALL POLES FOR SHADE STRUCTURES AND PLAY EQUIPMENT SHALL BE ROUNDED WITH PADDING INSTALLED.

No	Description	Qty	Model	Color	Material	Dimensions	Description/Requirements
PLAYGROUND A - INFANT (6 WEEKS - 24 MONTHS)							
PLAY AREA							
A1	Traffic Signs for Playground (Trike Crossing)	1	Trike Traffic Signs (In Ground)	Yellow	HDPE/suitable strengthened molded plastic, SS hardware	10-15"L X 10"W X 42"	1x in ground pole w/ flat traffic sign attached
A2	Traffic Signs for Playground (Speed Limit)	1	Trike Traffic Signs (In Ground)	White	" "	10-15"L X 10"W X 42"	" "
A3	Building Facades	1	Café	Green	" "	34"L x 21"W x 80"H	1x in ground café façade play stand w/ storefront panel/ attached shelf & half roof
-	Rumble Bridge	1	Arch Trike Bridge	Brown	HDPE/suitable strengthened molded plastic, SS hardware, Wood composite	6'L x 5'W	1x gently arched bridge for trike path enhancement in place of rumble strips. In ground installation
-	Rumble Strip	1	Rumble Strip	N/A	Concrete Scoring	Per Detail	
-	30'x30' Shade Structure	1	SkyWays Hip	Beige	Powder Coat SS/Fabric Shade	30'L x 30'W x 10'H	Round Poles w/ Padding. In Ground Installation
-	15'x25' Shade Structure	1	SkyWays Hip	Beige	" "	15'L x 25'W x 10'H	" "
A4	Crawler	1	Infant Corral 8'x9' w/ Ramp	Nature Rocks	HDPE/suitable strengthened molded plastic, SS hardware, washable marine grade heavy duty fabric.	114"L x 96"W x 20"H	1x corral complete w/ low-profile interactive panels & bumps, 1x removable padded fabric base made of washable heavy duty marine grade fabric, engraved shapes & sensory play items. In ground installation
A5	Interactive Fun Center	1	Tiger Swallowtail (Infant)	Nature Rocks	HDPE/suitable strengthened molded plastic, SS hardware, heavy duty shatter resistant polycarbonate, rubberized/padded outdoor high density polyethylene flooring, anodized aliminum/suitable alternative pipe	107"L x 77"W x 84"H	Interactive Fun Center w/ 1x infant slide & optional infant slide hood, 1x photo & mirror panel, 1x chime/music panel, 1x infant rock ramp w/ handle panels, 1x shape/geometry panel, 1x infant step & handle panels, 1x roof to cover main structure. In ground installation.
-	Kick Mat	1	Kick Mat	Brown	Rubber/recycled rubber	3.5'L x 5'W	1x 2" thick playground mat w/ at least 4' fall rating to be located at base of slide
A6	Climber	1	Fantasia (Infant)	Nature Rocks	HDPE/suitable strengthened molded plastic, SS hardware, heavy duty shatter resistant polycarbonate, rubberized/padded outdoor high density polyethylene flooring, anodized aliminum/suitable alternative pipe	124"L x 102"W x 45"H	Climber Play Structure w/ 1x slide w/ handle panels, 1x rock ramp w/ handle panels, 1x photo/interative panel w/ telescope/kaleidoscope, 1x themed doorway panel, 1x infant hight (low) curved driving panel (steering wheel), 1x regular photo panel, 2x infant steps w/ 3x handles, 1x bubble panel, 1x ovals & gears (or other movable/interactive) panel. In ground installation.
-	Kick Mat	1	Kick Mat	Brown	Rubber	3.5'L x 5'W	1x 2" thick playground mat w/ at least 4' fall rating to be located at base of slide
A7	T-swing	1	T-Swing (7') 2-Seat	Nature Rocks	Coated steel pipe w/ SS welds, SS hardware	120"L X 3"W X 84"H	Round Poles w/ Padding . In ground installation.
-	Bucket Seat Swings	2	Full Bucket Seat	Green Structure/Green Chain/Tan Seat	Plastic Covered SS/Rubber	-	
-	Kick Mats	2	Kick Mats	Brown	Rubber	3.5'L x 5'W	1x 2" thick playground mat w/ at least 4' fall rating to be located at base of swings
A8	Belly Swing	1	Belly Swing	Nature Rocks	Coated steel pipe w/ SS welds, SS hardware, washable heavy duty marine grade fabric	29"H x 24"W Swing Frame	1x 78"L x 20"W Removable, washable, heavy duty marine grade fabric safety pad. In ground installation.
A9	Infant Barrier Walls	2	Modular Pipe Rail w/ Window Panel	Brown Pipe Rail Panels	HDPE/suitable strengthened molded plastic, SS hardware, Wood composite	24"H	Barrier walls should include two gates for two different areas of egress for the swings. In ground installation.
ART / MUSIC							
A10	Permanent Art Easel	1	4' Wide Paint Panels	Tan/Brown	HDPE, Heavy-duty/shatter resistant polycarbonate, SS hardware	55"L x 8"W x 53"H	In ground installation required; 2x sides of polycarbonate sheets, 6x-8x cupholders per side.
A11	Musical Instrument	1	Daisy Petal Drum	Daisy	Powder Coat SS	56"L x 16"W x 15"H Frame	In ground installation required.
A12	Musical Instrument	1	Sunflower Petal Drum	Sunflower	" "	56"L x 16"W x 15"H Frame	" "
OTHER							
A13	Water Play Area	1	Double Spout & Splash w/ Pump & Reservoir	Green/Brown/Tan	HDPE, Heavy-duty/shatter resistant polycarbonate, SS hardware	64"L x 53"W x 20"H	Requires: 1x Water spout & under basin reservoir, 2x drain plugs, 1x for each water basin bowl. In ground installation
A14	Planter Box	2	RSP Planter	Tan	" "	48"L x 24"W x 12"H	In ground installation.
A15	Nature Bowl	1	Single Nature Bowl w/ Bubble Lid	Green/Brown/Tan	" "	33"D x 20"H	Requires: 1x Drain plug, 1x bubble lid
A16	Table w/ 4 Seats	1	ADA Picnic Table 4'	Brown/Tan	HDPE/suitable strengthened molded plastic, SS hardware, Wood composite	48"L x 36"W x 20"H	In ground installation, must be installed w/ ease of wheelchair access in mind.
A17	Trike Garage	1	Trike Garage 6-Bay	Green/Tan	HDPE, Heavy-duty/shatter resistant polycarbonate, SS hardware	16'L x 42"W x 60"H	Requires: 1x trike garage w/ six (6) bays. Must be covered on three sides & the roof. Short sides should be clear polycarbonate. Must be surface mounted on concrete
A18	Adult Bench w/ Back	1	6' Adult Bench w/ Back	Brown Supports/Tan Top	HDPE/suitable strengthened molded plastic, SS hardware	72"L x 26"D x 34"H	Adult sized bench, in ground installation.

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

File Path: P:\113267\113267-001\33 - PLANNING & GIS\08_WORKING FILES\AUTOCAD\100% SUBMISSION

Plot Date: 8/28/2025 4:00:00 PM

DESIGNED BY:	A. BLOXDORF
DRAWN BY:	A. BLOXDORF
CHECKED BY:	D. FLYNN
SUBMITTED BY:	A. STARR
SIZE:	
ANSI D	
ISSUE DATE:	AUGUST 29, 2025
SOLICITATION NO.:	W912DS23F0031
CONTRACT NO.:	W912DZ21P0007

US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK, NY 10278

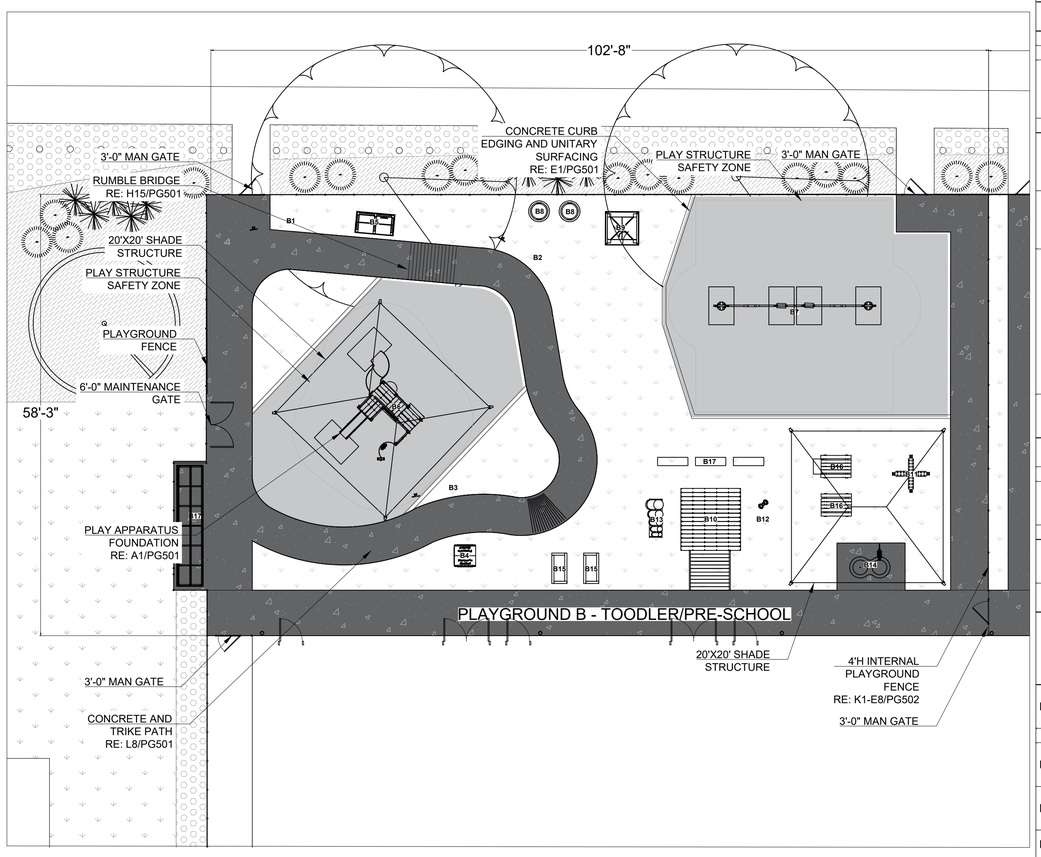
NOT FOR CONSTRUCTION

CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
Project No. 75662

INFANT PLAYGROUND PLAN

SHEET ID

PG101



F1 TODDLER/PRESCHOOL PLAYGROUND PLAN

1" = 10'

LEGEND:

- LIGHT DUTY CONCRETE
- POURED IN PLACE SAFETY SURFACE; COLOR: MIXED BLEND OF PAMPAS IVORY 50% / CHESTNUT BROWN 50%
- SODDED TURF GRASS
- SAFETY AREA

NOTES:

1. SEE CIVIL DRAWINGS FOR POURED IN PLACE SURFACING DETAILS AND DRAINAGE LAYOUT WITHIN THE PLAYGROUND AREAS.
2. FINAL LOCATION OF ALL MANUFACTURED PLAYGROUND EQUIPMENT SHALL BE COORDINATED WITH FT HAMILTON PRIOR TO INSTALLATION.
3. SHADE STRUCTURE POSTS ARE PROHIBITED FROM BEING PLACED ON SIDEWALKS AND TRIKE PATHS. LOCATED BASED ON DRAWINGS.
4. ALL POLES FOR SHADE STRUCTURES AND PLAY EQUIPMENT SHALL BE ROUNDED WITH PADDING INSTALLED.

10' 0 10' 20'

SCALE: 1" = 10'

GRAPHIC SCALE

EQUIPMENT MATRIX

PLAYGROUND B - TODDLER/PRE-SCHOOL (2-5 YEARS)

PLAY AREA							
B1	Traffic Signs for Playground (Trike Crossing)	1	Trike Traffic Signs (In Ground)	Yellow	HDPE/suitable strengthened molded plastic, SS hardware	10-15"L X 10"W X 42"	1x in ground pole w/ flat traffic sign attached
B2	Traffic Signs for Playground (Yield)	1	Trike Traffic Signs (In Ground)	Red	" "	10-15"L X 10"W X 42"	" "
B3	Traffic Signs for Playground (Stop)	1	Trike Traffic Signs (In Ground)	Red	" "	10-15"L X 10"W X 42"	" "
-	Rumble Bridge	1	Rumble Bridge	Brown	HDPE/suitable strengthened molded plastic, SS hardware, Wood composite	5'W x 6'L	1x gently arched bridge for trike path enhancement in place of rumble strips. In ground installation
-	Rumble Strip	1	Rumble Strip	N/A	Concrete Scoring	Per Detail	
B4	Building Facades	1	Farmer's Market	Green	RSP/Eco Flat Plastic	35"L X 35"W X 80"H	1x in ground 4-post Farmer's Market façade play stand w/ storefront panel/ attached shelf & half roof
B5	Building Facades	1	Fire Station	Red	HDPE/suitable strengthened molded plastic, SS hardware, SS pipe	61"L X 34"W X 80"H	1x in ground 6-post fire station façade play stand w/ front panel/ attached interactive elements & roof
B6	Play Structure	1	Sea Critters	Nature Rocks	HDPE/suitable strengthened molded plastic, SS hardware, heavy duty shatter resistant polycarbonate, anodized aliminum/suitable alternative pipe	137"L x 126"W x 54"H	Large Play Structure for 20-25 with: 2x slides, 1x tunnel/covered element, 1x chime panel, 1x bubble panel, 1x photo mirror panel, 1x window panel, 1x curved panel with steering wheel, 2x interactive gear/color panels, 1x ADA transfer deck with two handle panels, 1x combo step with 2 handles
-	Kick Mats	2	Kick Mats	Brown	Rubber	3.5'L x 5'W	1x 2" thick playground mat w/ at least 4' fall rating to be located at base of slide
B7	Swingset	1	7' T-Swing (4 Seats)	Nature Rocks	Coated steel pipe w/ SS welds, SS hardware	33'L x 28'W x 7'H	Round Poles w/ Padding . In ground installation.
-	Full Bucket Seats	2	Full Bucket Seats	Green Structure/Green Chain/Tan Seat	Plastic Covered SS/Rubber	-	
-	Kick Mats	4	Kick Mats	Brown	Rubber	3.5'L x 5'W	1x 2" thick playground mat w/ at least 4' fall rating to be located at base of swings
-	Belt Seats	2	Belt Seats	Green Structure/Green Chain/Tan Seat	Plastic Covered SS/Rubber	-	
B8	Nature Bowl	2	Single Nature Bowl w/ Bubble Lid	Green/Brown/Tan	HDPE, Heavy-duty/shatter resistant polycarbonate, SS hardware	33"D x 24"**H**	Requires: 1x Drain plug, 1x bubble lid each per bowl
-	20'x20' Shade Structure	2	SkyWays Hip	Beige	Powder Coat SS/Fabric Shade	20'L x 20'W x 10'**H**	Round Poles w/ Padding
B9	Elevated Sand Hut	1	Elevated Sand Hut	Nature Rocks	HDPE/suitable strengthened molded plastic, SS hardware, heavy duty shatter resistant polycarbonate, SS pipe, Marine grade fabric flag	64"L x 64"W x 90"**H**	1x Elevated container for sand with non-pinching lid, 1x shade structure for above sand container
B10	Drama Deck and ADA Ramp	1	Drama Deck w/ Ramp	Nature Rocks	HDPE/suitable strengthened molded plastic, SS hardware	12' 10"L x 7' 3 1/2"W x 8 1/2"H	1x ADA compliant outdoor stage structure with 1x reinforced trellis, 1x ADA ramp
ART / MUSIC							
B11	Permanent Art Easel	1	2' Wide Paint Panels, Quadra	Tan/Brown	HDPE, Heavy-duty/shatter resistant polycarbonate, SS hardware	60"L x 60"W x 50"**H**	In ground installation required; 2x sides of polycarbonate sheets, 4x cupholders per side.
B12	Musical Instrument	1	Temple Block Tree	Sliver	HDPE, Powder Coat SS	57"H x 8'-16.5"W	Post with reinforced blocks with range of percussive tones. Mallets attached with cable.
B13	Musical Instrument	1	Tuned Drums (Set of 5)	Green/Tan	HDPE/suitable strengthened molded plastic, SS hardware	15", 12", 10", 8", 6"D; 23"-29"**H**	5 tuned drums to be used with hands or mallets
OTHER							
B14	Water Play Area	1	Double Spout & Splash w/ Pump & Reservoir	Green/Brown/Tan	HDPE, Heavy-duty/shatter resistant polycarbonate, SS hardware	64"L x 53"W x 24"**H**	Requires: 1x Water spout & under basin reservoir, 2x drain plugs, 1x for each water basin bowl. In ground installation
B15	Planter Box	2	RSP Planter	Tan	" "	48"L x 24"W x 12"H	In ground installation.
B16	Table w/ 4 Seats	2	Picnic Table (1); ADA Picnic Table (1)	Brown/Tan	HDPE/suitable strengthened molded plastic, SS hardware, Wood composite	48"L x 36"W x 24"**H**	In ground installation, must be installed w/ ease of wheelchair access in mind.
B17	Preschool Flat Bench	3	Preschool Flat Bench	Brown Supports/Tan Top	" "	4'L x 13"W x 8 3/4"H	In ground installation.
B18	Trike Garage	1	6-Bay Trike Garage	Green/Tan	" "	16'L x 42"W x 60"H	Requires: 1x trike garage w/ six (6) bays. Must be covered on three sides & the roof. Short sides should be clear polycarbonate. Must be surface mounted on concrete

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

File Path: P:\13267\13267-001\33 - PLANNING & GIS\08_WORKING FILES\AUTOCAD\100% SUBMISSION

Plot Date: 8/28/2025 4:00:00 PM

DESIGNED BY:	A. BLOXDORF
DRAWN BY:	A. BLOXDORF
CHECKED BY:	D. FLYNN
SUBMITTED BY:	A. STARK
SIZE:	ANSI D
ISSUE DATE:	AUGUST 29, 2025
SOLICITATION NO.:	W912DS23F0031
CONTRACT NO.:	W912DZ19D0007

US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK, NY 10278

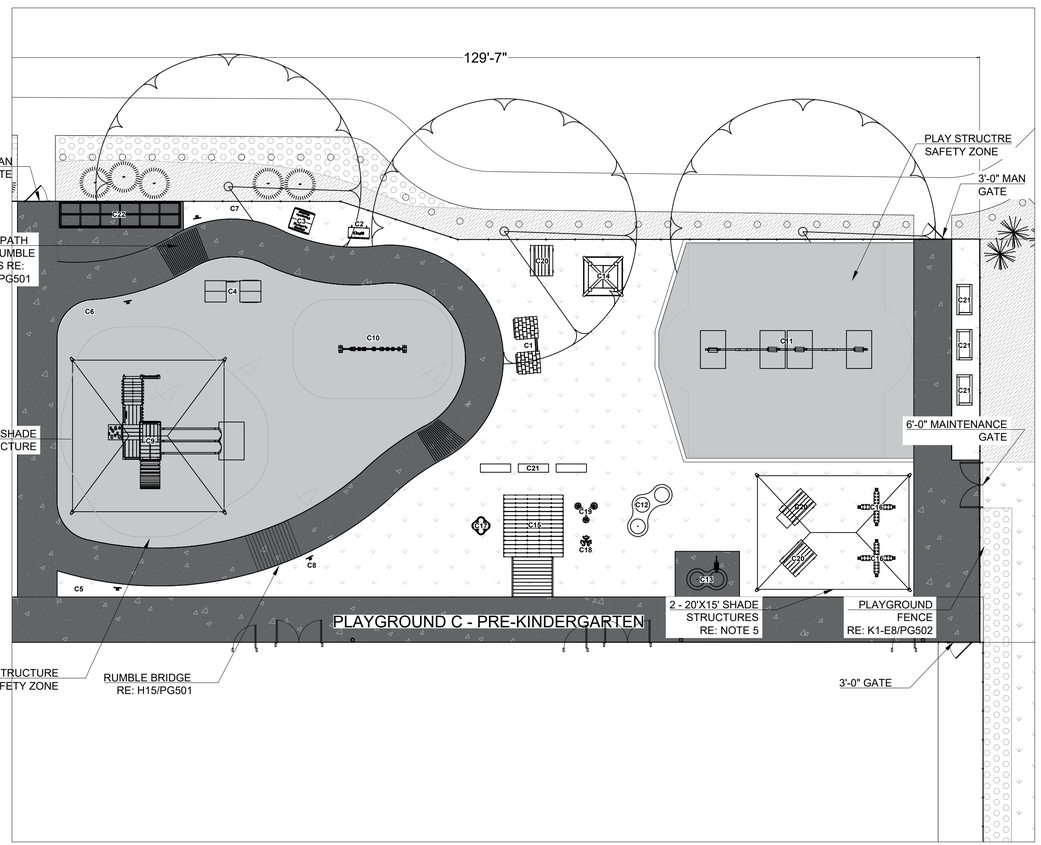
NOT FOR CONSTRUCTION

CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
Project No. 75662

TODDLER/PRESCHOOL PLAYGROUND PLAN

SHEET ID

PG102



F1 PRE-KINDERGARTEN PLAYGROUND PLAN

1" = 10'

LEGEND:

- LIGHT DUTY CONCRETE
- POURED IN PLACE SAFETY SURFACE; COLOR: MIXED BLEND OF PAMPAS IVORY 50% / CHESTNUT BROWN 50%
- SODDED TURF GRASS
- SAFETY AREA

NOTES:

1. SEE CIVIL DRAWINGS FOR POURED IN PLACE SURFACING DETAILS AND DRAINAGE LAYOUT WITHIN THE PLAYGROUND AREAS.
2. FINAL LOCATION OF ALL MANUFACTURED PLAYGROUND EQUIPMENT SHALL BE COORDINATED WITH FT HAMILTON PRIOR TO INSTALLATION.
3. SHADE STRUCTURE POSTS ARE PROHIBITED FROM BEING PLACED ON SIDEWALKS AND TRIKE PATHS. LOCATED BASED ON DRAWINGS.
4. ALL POLES FOR SHADE STRUCTURES AND PLAY EQUIPMENT SHALL BE ROUNDED WITH PADDING INSTALLED.

10' 0 10' 20'

SCALE: 1" = 10'

GRAPHIC SCALE

EQUIPMENT MATRIX

PLAYGROUND C - PRE-KINDERGARTEN (3-5 YEARS)

PLAY AREA							
C1	Building Facades	1	Village Houses	Green/Tan	HDPE/suitable strengthened molded plastic, SS hardware, SS pipe	91"L x 38"W x 73"H	1x in ground 8-post house façade play stand w/ panel, attached shelf & roofs, 2x attached planters
C2	Building Facades	1	Café	Blue	' "	34"L x 21"W x 80"H	1x in ground 2-post café façade play stand w/ storefront panel/attached shelf & half roof
C3	Building Facades	1	Farmer's Market	Blue	' "	35"L X 35"W X 80"H	1x in ground 4-post Farmer's Market façade play stand w/ storefront panel/ attached shelf & half roof
C4	Building Facades	1	Fire & Police Station Combo	Blue/Red	' "	89"L X 35"W X 80"H	1x 6-post fire/police station
C5	Traffic Signs for Playground (Trike Cr	1	Trike Traffic Signs (In Ground)	Yellow	HDPE/suitable strengthened molded plastic, SS hardware	10-15"L X 10"W X 42"	1x in ground pole w/ flat traffic sign attached
C6	Traffic Signs for Playground (Stop)	1	Trike Traffic Signs (In Ground)	Red	' "	10-15"L X 10"W X 42"	' "
C7	Traffic Signs for Playground (Speed L	1	Trike Traffic Signs (In Ground)	White	' "	10-15"L X 10"W X 42"	' "
C8	Traffic Signs for Playground (Yield)	1	Trike Traffic Signs (In Ground)	Red	' "	10-15"L X 10"W X 42"	' "
-	Rumble Bridge	1	Rumble Bridge	Brown	HDPE/suitable strengthened molded plastic, SS hardware, Wood composite	5'W x 6'L	1x gently arched bridge for trike path enhancement in place of rumble strips. In ground installation
-	Rumble Strip	3	Rumble Strip	N/A	Concrete Scoring	Per Detail	
C9	Play Structure	1	Boston (Mini)	Nature Rocks	HDPE/suitable strengthened molded plastic, SS hardware, heavy duty shatter resistant polycarbonate, anodized aliminum/suitable alternative pipe	28'W x 28'L x 54"H	Play structure for 32-48: 4x platforms, 2x slides, 2x climber elements, 1x music panel, 4x interactive/imaginative play panels, 10x handle panels, roof covering at least 2 platforms.
-	Kick Mats	2	Kick Mats	Brown	Rubber	3.5'L x 5'W	1x 2" thick playground mat w/ at least 4' fall rating to be located at base of slide, 1 per slide
C10	Climber	1	Bouldering Wall (Play-Fit)	Nature Rocks	HDPE/suitable strengthened molded plastic, SS hardware, Wood composite	11'L x 2'W x 5'H	In ground installation, wall with 2 sides able to be climed using rock handholds.
C11	Swingset	1	7' T-Swing (4 Seats)	Nature Rocks	Coated steel pipe w/ SS welds, SS hardware	33'W x 28'L x 54"H	Round poles with padding, in ground installation.
-	Belt Seats	4	Belt Seats	Green Structure/Green Chain/Tan Seat	Plastic Covered SS/Rubber	-	
-	Kick Mats	4	Kick Mats	Brown	Rubber	3.5'L x 5'W	1x 2" thick playground mat w/ at least 4' fall rating to be located under each swing. 1 per swing.
C12	Nature Bowl	1	Triple Nature Bowls	Green/Brown/Tan	HDPE, Heavy-duty/shatter resistant polycarbonate, SS hardware	96"L x 48"W x 24"H	1 Nature bowl with 3 bowls in 1. requires 1x drain plug and 1x bubble lid per bowl
-	20'x20' Shade Structure	1	SkyWays Hip	Beige	Powder Coat SS/Fabric Shade	20'L x 20'W x 10'H	Round Poles w/ Padding
-	20'x15' Shade Structure	2	SkyWays Hip	Beige	' "	20'L x 15'W x 10'H	Round Poles w/ Padding
C13	Water Play Area	1	Double Spout & Splash w/ Pump & Rese	Green/Brown/Tan	HDPE, Heavy-duty/shatter resistant polycarbonate, SS hardware	53"L x 33"W X 24"H	Requires: 1x Water spout & under basin reservoir, 2x drain plugs, 1x for each water basin bowl. In ground installation
C14	Elevated Sand Hut	1	Elevated Sand Hut	Nature Rocks	HDPE/suitable strengthened molded plastic, SS hardware, heavy duty shatter resistant polycarbonate, SS pipe	64"L x 64"W x 90"H	1x Elevated container for sand with non-pinching lid, 1x shade structure for above sand container
C15	Drama Deck and ADA Ramp	1	Drama Deck w/ Ramp	Nature Rocks	HDPE/suitable strengthened molded plastic, SS hardware, Wood composite	12' 10"L x 7' 3 1/2"W x 8 1/2"H	1x ADA compliant outdoor stage structure with 1x reinforced trellis, 1x ADA ramp
ART / MUSIC							
C16	Permanent Art Easel	2	4' Wide Paint Panels	Tan/Brown	HDPE, Heavy-duty/shatter resistant polycarbonate, SS hardware	59"L x 59"W x 49"H	In ground installation required; 2 sides of polycarbonate sheets, 6-8 cupholders per side
C17	Musical Instrument	1	Quad Drum Table	Green/Tan	HDPE/suitable strengthened molded plastic, SS hardware	27"L x 27"W x 17"H	4x drum heads on a stand, to be used with hands
C18	Musical Instrument	1	Harmony Flowers	Major	SS hardware, aluminum	25"W x 46"H	3x metal percussive flower sculptures on a single pole that emit pure tone when struck with attached mallets.
C19	Musical Instrument	1	Harmony Bells	Minor	' "	47"W x 65"H	' "
STORAGE							
C20	Table w/ 4 Seats	3	Picnic Table (1); ADA Picnic Table (1)	Brown/Tan	HDPE/suitable strengthened molded plastic, SS hardware, Wood composite	48"L x 36"W x 24"H	In ground installation, must be installed w/ ease of wheelchair access in mind.
C21	Preschool Flat Bench	3	Preschool Flat Bench	Brown Supports/Tan Top	' "	4'L x 13"W x 8 3/4"H	in ground installation
C22	Planter Box	3	RSP Planter	Tan	HDPE, Heavy-duty/shatter resistant polycarbonate, SS hardware	48"L x 24"W x 12"H	in ground installation
C23	Trike Garage	1	6-Bay Trike Garage	Green/Tan	' "	16'L x 42"W x 60"H	Requires: 1x trike garage w/ six (6) bays. Must be covered on three sides & the roof. Short sides should be clear polycarbonate. Must be surface mounted on concrete

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

File Path: P:\13267\13267-001\33 - PLANNING & GIS\08_WORKING FILES\AUTOCAD\100% SUBMISSION

Plot Date: 8/28/2025 4:00:00 PM

DESIGNED BY:	A. BLOXDORF
DRAWN BY:	A. BLOXDORF
CHECKED BY:	D. FLYNN
SUBMITTED BY:	A. STARR
SIZE:	ANSI D
ISSUE DATE:	AUGUST 29, 2025
SOLICITATION NO.:	W912DS23F0031
CONTRACT NO.:	W912DZ21D0007

US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK, NY 10278

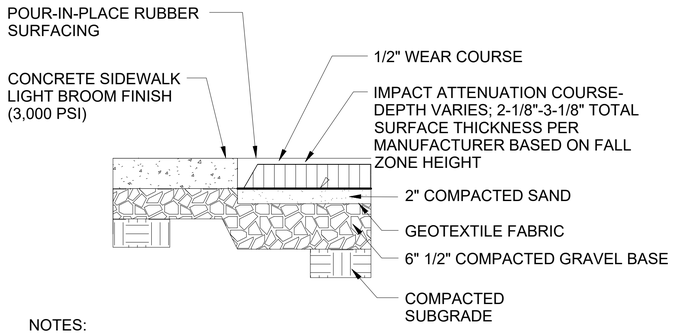
NOT FOR CONSTRUCTION

CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
Project No. 75662

PRE-KINDERGARTEN PLAYGROUND PLAN

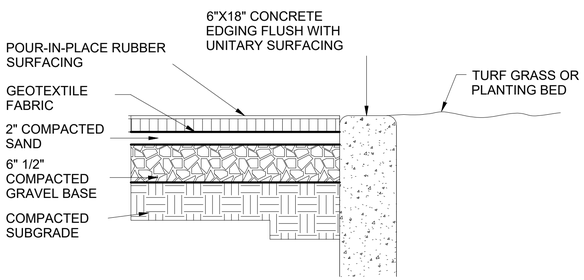
SHEET ID

PG103

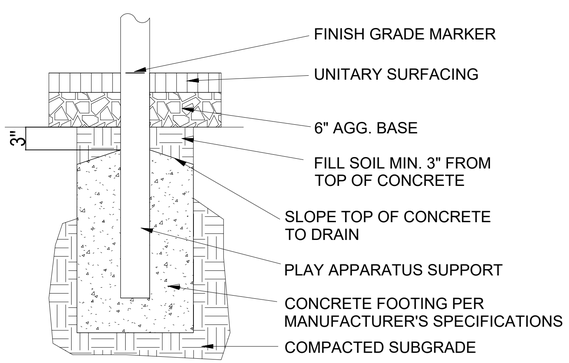


NOTES:
1. UNITARY SURFACING SHALL BE POUR-IN-PLACE BY ACCEPTED CONTRACTOR.
2. SURFACING SHALL BE IN ACCORDANCE WITH THE ASTM STANDARD F1292. MANUFACTURERS SHALL PROVIDE TEST RESULTS TO INDICATE APPROPRIATE DEPTHS FOR THE MAXIMUM FALL HEIGHT OF THE PLAYGROUND EQUIPMENT.
3. WEAR COURSE SHALL MATCH THE COLORS AND DESIGN AS SPECIFIED.
4. SUBMIT PRODUCT SAMPLES, DATA & COLOR CHARTS FOR REVIEW PRIOR TO INSTALLATION.
5. INSTALLATION SHALL BE PER MANUFACTURER'S SPECIFICATIONS.
6. AGGREGATE BASE SHALL BE PER MANUFACTURER'S SPECIFICATIONS.
7. AGGREGATE BASE SHALL SLOPE TO DRAIN AND SHALL MAINTAIN POROSITY FOR DIRECT DRAINAGE. SEE CIVIL DRAWINGS FOR PLAYGROUND DRAINAGE SYSTEM.

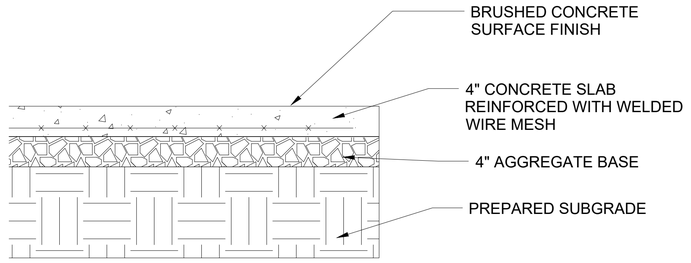
J1 TRANSITION BETWEEN ACCESSIBLE PATH AND UNITARY SURFACING
1" = 1'-0"



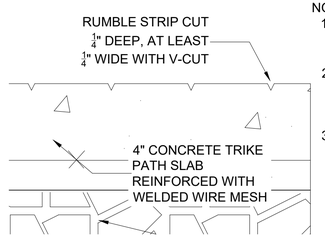
E1 CONCRETE CURB EDGING AND UNITARY SURFACING
1" = 1'-0"



A1 PLAY APPARATUS FOUNDATION
1" = 10'

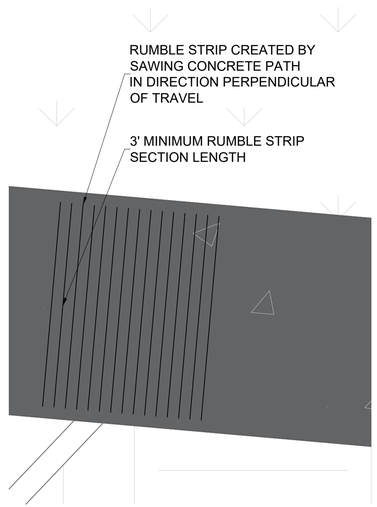


L8 CONCRETE AND TRIKE PATH DETAIL
1" = 10'

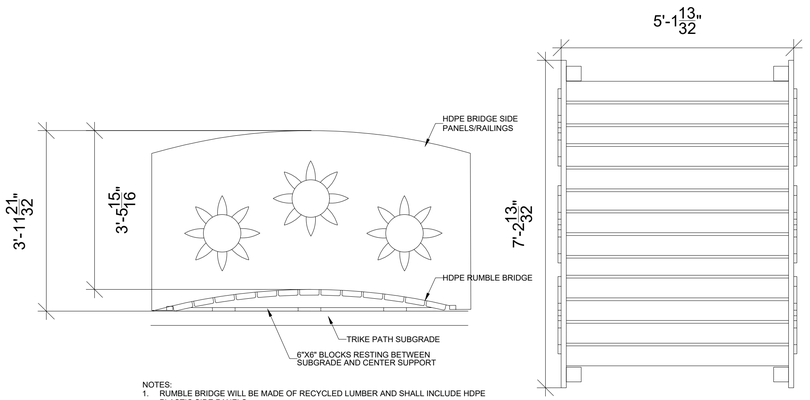


NOTE:
1. A SET OF RUMBLE STRIPS IN A MINIMUM OF TWO (2) LOCATIONS MUST BE PROVIDED IN THE TRIKE PATH IN EACH PLAYGROUND.
2. CUTS MUST BE 1/4" DEEP AND AT LEAST 1/4" WIDE WITH V-CUT AND 3" APART O.C. THEY MUST END WITHIN 3" OF THE EDGE OF TRIKE PATH PAVEMENT.
3. STAMPED CONCRETE IS AN ACCEPTABLE ALTERNATIVE TO THE CUT STRIPS.

H8 TRIKE PATH RUMBLE STRIP DETAIL
1" = 2'-6"



B8 RUMBLE STRIP DETAIL PLAN
1" = 20'



NOTES:
1. RUMBLE BRIDGE WILL BE MADE OF RECYCLED LUMBER AND SHALL INCLUDE HDPE PLASTIC SIDE PANELS.
2. L-BRACKETS WILL BE USED ON THE UNDERSIDE OF THE BRIDGE TO SECURE IT.
3. CONCRETE WILL BE POURED WHERE BRIDGE IS TO BE LOCATED SO THAT IT SITS FLUSH WITH THE SURFACE OF THE TRIKE PATH.
4. COORDINATE WITH MANUFACTURER PRIOR TO ORDERING AND INSTALLATION. SITE DIMENSIONS, SIZE AND ORIENTATION, EXISTING UTILITIES, SOIL CONDITIONS, DRAINAGE SOLUTIONS, AND TOPOGRAPHY SHOULD BE OBTAINED AND EVALUATED.

A13 RUMBLE BRIDGE
1" = 20'

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

ISSUE DATE: AUGUST 29, 2025
SOLICITATION NO.: W912DS23F0031
CONTRACT NO.: W912DQ21D0007

DESIGNED BY: A. BLOXDORF
DRAWN BY: A. BLOXDORF
CHECKED BY: D. TWINA
SUBMITTED BY: A. STARR
SIZE: ANSI D

US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK, NY 10278

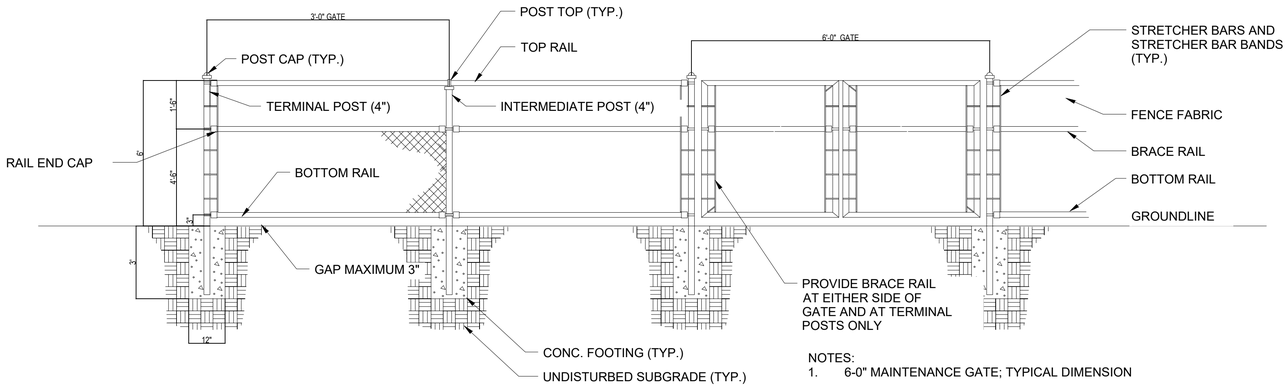
NOT FOR CONSTRUCTION

CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
Project No. 75662

PLAYGROUND PLAN DETAILS

SHEET ID
PG501

File Path: P:\13267\13267-001\33 - PLANNING & GIS\08_WORKING FILES\AUTOCAD\100% SUBMISSION
Plot Date: 8/28/2025 3:55:00 PM

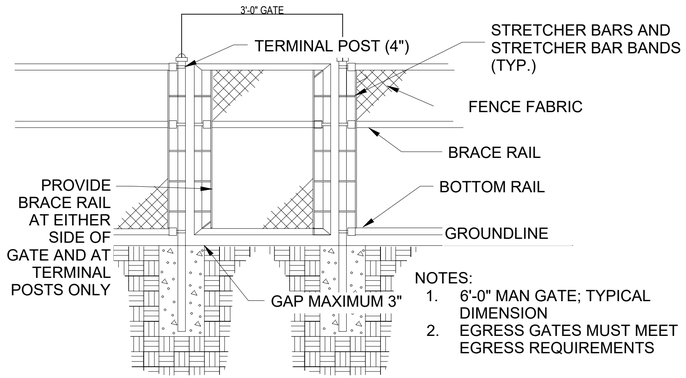


NOTES:
1. 6'-0" MAINTENANCE GATE; TYPICAL DIMENSION

K1 TYPICAL 6'-0" MAINTENANCE GATE AND FENCE ELEVATION
1" = 25'

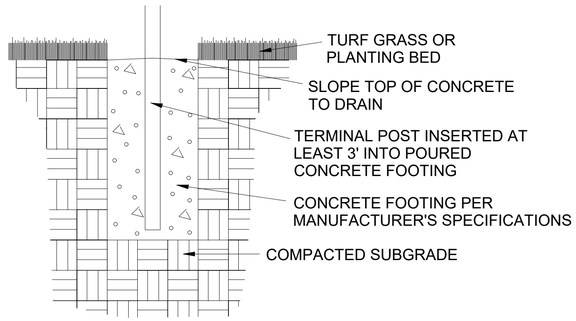
FENCING NOTES:

1. OUTDOOR PLAY AREAS MUST BE ENTIRELY FENCED. THE THREE (3) PLAYGROUNDS MUST BE CONNECTED WITHIN AN OVERALL FENCED AREA, BUT MUST BE SEPARATED BY FENCING AND GATES.
2. ALL FENCING MUST BE VINYL COATED CHAIN-LINK SECURITY TYPE MINIMUM 6' HIGH AT THE PERIMETER AND 4' HIGH TO SUB-DIVIDE PLAY AREAS BY AGE GROUP. GUIDE WIRES, WIRE FASTENERS USED TO SECURE FENCE FABRIC TO POLES, TOP RAILS, ETC., SHALL ALSO BE VINYL COATED. BOLT THREADS, NUTS, AND ENDS OF WIRE FASTENERS SHALL FACE AWAY FROM THE PLAYGROUND AREAS. IF THERE ARE AREAS WHERE FENCE FABRIC BOLT THREADS AND NUTS ARE REQUIRED TO FACE A PLAYGROUND, THE BOLTS SHOULD BE TRIMMED TO NO MORE THAN TWO EXPOSED THREADS. ALL SHARP EDGES SHALL BE DRESSED WITH A FILE. ANY WIRE FASTENERS USED TO SECURE THE FENCE FABRIC TO PIPING (POLES, ETC.) WHERE THE CUT ENDS FACE AN OUTDOOR ACTIVITY AREAS, WILL BE FLUSH CUT TO REDUCE THE INTRODUCTION OF CUTTING EDGES ON THE ENDS OF THE WIRES, AND THEY WILL BE POINTED DOWNWARD. A TOP RAIL IS REQUIRED ON THE FENCE.
3. GATES SHOULD OPEN AT A MINIMUM OF 90 DEGREES IN BOTH DIRECTIONS (180 DEGREES TOTAL.) A MINIMUM OF 1 GATE SHOULD BE PROVIDED WITHIN THE PERIMETER FENCING OF EACH PLAYGROUND AREA IN ADDITION TO THE GATES CONNECTING THE PLAY AREAS. EXIT GATES SHALL BE PROVIDED WITH ADULT CONTROLLED SECURING DEVICES TO ALLOW ACCESS FOR EMERGENCY AND MAINTENANCE VEHICLES AS WELL AS EGRESS FROM THE BUILDING. GATE WIDTH SHALL ACCOMMODATE CRIB EGRESS.
4. FENCING AND GATES SHOULD BE INSTALLED SO THAT NO GAPS GREATER THAN 3" EXIST UNDER THE FENCE. ANY MORE THAN 3" WOULD ALLOW FOR ANIMALS TO ENTER THE PLAYGROUND OR ALLOW CHILDREN TO BECOME TRAPPED OR ESCAPE THE PLAYGROUND AREA. ALL FENCING MUST COMPLY WITH THE CURRENT VERSION OF ASTM F2049.
5. SEE DOOR HARDWARE SPECIFICATION 08 71 00 (HW-18) FOR GATE HARDWARE DETAILS.



NOTES:
1. 6'-0" MAN GATE; TYPICAL DIMENSION
2. EGRESS GATES MUST MEET EGRESS REQUIREMENTS

E1 TYPICAL 3'-0" MAN GATE ELEVATION
1" = 25'



E8 TYPICAL FENCE CONCRETE FOOTER
1" = 10'

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MARK	DESCRIPTION	DATE

File Path: P:\13267\13267-001\33 - PLANNING & GIS\08_WORKING FILES\AUTOCAD\90% SUBMISSION

Plot Date: 5/13/2025 1:42:00 PM

DESIGNED BY: A. BLOXDORF	ISSUE DATE: AUGUST 29, 2025
DRAWN BY: A. BLOXDORF	SOLICITATION NO.: W912DS23F0031
CHECKED BY: D. NOWAK	CONTRACT NO.: W912DZ19D0007
SUBMITTED BY: A. STARR	
SIZE: ANSI D	

US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK, NY 10278

NOT FOR CONSTRUCTION

CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
Project No. 75662

PLAYGROUND PLAN DETAILS

SHEET ID

PG502

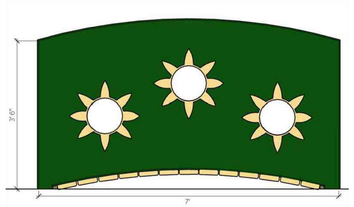
NOTES:
1. MATERIALS: HDPE OR SUITABLE STRENGTHENED MOLDED PLASTIC ALTERNATIVE, STAINLESS STEEL HARDWARE.
2. DIMENSIONS: 10"-15" L x 10" W x 42" H
3. REQUIREMENTS: MUST BE INSTALLED IN GROUND, POLE MUST HAVE FLAT TRAFFIC SIGN ATTACHED, TRAFFIC SIGN MUST SHOW ONE OF THE FOLLOWING: SPEED LIMIT, YIELD, HANDICAP SPACE, TRIKE CROSSING, OR STOP SIGN. IF MORE THAN 1 SIGN IS USED, ENSURE TO VARY SIGN STYLES WHEN POSSIBLE.

L1 TRIKE TRAFFIC SIGNS
NTS

NOTES:
1. MATERIALS: HDPE OR SUITABLE STRENGTHENED MOLDED PLASTIC ALTERNATIVE, STAINLESS STEEL HARDWARE.
2. DIMENSIONS:34" L X 21" W X 80" H
3. REQUIREMENTS: INSTALLED IN GROUND, 2 POST CAFE PLAY STAND WITH A STOREFRONT PANEL, SHELF, AND HALF ROOF ELEMENT.

L5 BUILDING FAÇADE - CAFE
NTS

NOTES:
1. MATERIALS: HDPE OR SUITABLE STRENGTHENED MOLDED PLASTIC, STAINLESS STEEL HARDWARE, WOOD COMPOSITE.
2. DIMENSIONS: 6' L X 5' W
3. REQUIREMENTS: GENTLY ARCHED BRIDGE FOR TRIKE PATH ENHANCEMENT. TO BE USED IN PLACE OF RUMBLE STRIPS. THE SIDES OF THE BRIDGE CONNECTED TO THE PATH SHOULD BE FLUSH WITH THE PATH. THE SIDES OF THE BRIDGE PARALLEL TO THE PATH SHOULD HAVE RAISED EDGES OR RAILS TO PREVENT TRIPPING OR TUMBLING OFF THE SIDES OF THE BRIDGE.



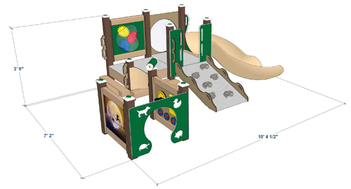
M9 RUMBLE BRIDGE
NTS

NOTES:
1. MATERIALS: HDPE/SUITABLE STRENGTHENED MOLDED PLASTIC, STAINLESS STEEL HARDWARE, WASHABLE MARINE GRADE HEAVY DUTY FABRIC..
2. DIMENSIONS: 114"L X 96"W X 20"H
3. REQUIREMENTS: INFANT CORRAL SHOULD INCLUDE LOW-PROFILE RAISED SIDES WHICH DOUBLE AS INTERACTIVE PANELS ENGRAVED WITH SHAPES AND SHOULD HAVE SENSORY PLAY ITEMS INCORPORATED IN THEM. THE MIDDLE AREA OF THE CORRAL SHOULD BE MOSTLY FLAT WITH SOME SMALL BUMPS TO ENCOURAGE CRAWLING AND STRENGTH BUILDING. THE MIDDLE AREA SHOULD ALSO HAVE A REMOVABLE WASHABLE PADDED BASE MADE OF HEAVY DUTY MARINE GRADE FABRIC.

M14 INFANT CRAWLER
NTS

NOTES:
1. MATERIALS: HDPE/SUITABLE STRENGTHENED MOLDED PLASTIC, SS HARDWARE, HEAVY DUTY SHATTER RESISTANT POLYCARBONATE, RUBBERIZED/PADDED OUTDOOR HIGH DENSITY POLYETHYLENE FLOORING, ANODIZED ALIMINUM/SUITABLE ALTERNATIVE PIPE.
2. DIMENSIONS: 107"L X 77"W X 84"H
3. REQUIREMENTS: INTERACTIVE FUN CENTER PLAY STRUCTURE SHOULD HAVE 1X INFANT SLIDE WITH OPTIONAL HOOD/COVER, 1X PHOTO/MIRROR PANEL, 1X MUSIC PANEL, 1X SHAPE/GEOMETRY PANEL, 1X INFANT LEVEL CLIMBING ELEMENT, 1X STEP, A ROOF TO COVER THE MAIN STRUCTURE, AND HANDLES AS NEEDED FOR SAFETY.

G1 INTERACTIVE FUN CENTER
NTS



NOTES:
1. MATERIALS: HDPE/SUITABLE STRENGTHENED MOLDED PLASTIC, SS HARDWARE, HEAVY DUTY SHATTER RESISTANT POLYCARBONATE, RUBBERIZED/PADDED OUTDOOR HIGH DENSITY POLYETHYLENE FLOORING, ANODIZED ALIMINUM/SUITABLE ALTERNATIVE PIPE
2. DIMENSIONS: 124"L X 102"W X 45"H
3. REQUIREMENTS: CLIMBER PLAY STRUCTURE: 1X SLIDE, 1X ROCK RAMP, 1X INTERACTIVE PHOTO/MIRROR PANEL, 1X THEMED DOORWAY PANEL, 1X INFANT HEIGHT CURVED STEERING WHEEL PANEL, 1X REGULAR PHOTO PANEL, 2X INFANT STEPS, 1X BUBBLE PANEL, 1X GEARS/INTERACTIVE/MOVABLE PANEL, ADD HANDLE PANELS, IN GROUND INSTALLATION.

G5 CLIMBER
NTS

NOTES:
1. MATERIALS: COATED STAINLESS STEEL PIPE, STAINLESS STEEL HARDWARE. FULL BUCKET SEATS WITH CHAIN ARE PLASTIC COVERED STAINLESS STEEL AND RUBBER..
2. DIMENSIONS: 120"L X 3"W X 84"H
3. REQUIREMENTS: IN GROUND INSTALLATION, HEAVY DUTY STEEL PIPE, SPACE SAVING. 2 BUCKET SEATS. EACH BUCKET SEAT IS SOLD SEPARATELY. T-SWING SHOULD BE 7" IN HEIGHT.

H9 T-SWING
NTS

NOTES:
1. MATERIALS: HIGH-DENSITY POLYETHYLENE MESH FABRIC SHADE, POWDER COATED STAINLESS STEEL STRUCTURE.
2. DIMENSIONS: 1X SHADE AT 30' L X 30' W X 10' H, 1X SHADE AT 15' L X 25' W X 10' H.
3. REQUIREMENTS: INSTALLED IN GROUND, POST SHOULD BE ROUND. PADDING MUST BE PURCHASED AND INCLUDED AS PART OF THE PACKAGE FOR SAFETY.

H13 SHADE STRUCTURE
NTS

NOTES:
1. MATERIALS: HDPE/SUITABLE STRENGTHENED MOLDED PLASTIC, SS HARDWARE, WOOD COMPOSITE.
2. DIMENSIONS: 24"H.
3. REQUIREMENTS: DESIGNED TO MEET INFANT AGE GROUP STANDARDS PER ASTM F-2373. BARRIERS MUST BE 24" HIGH AND INCLUDE TWO POINTS OF ACCESS TO BE OPENED BY ADULTS. ENSURE ANY GAPS OR PINCH-POINTS ARE CHILD-SAFE.

H17 INFANT BARRIER WALLS
NTS

NOTES:
1. MATERIALS: COATED STEEL PIPE W/ SS WELDS, SS HARDWARE, WASHABLE HEAVY DUTY MARINE GRADE FABRIC.
2. DIMENSIONS: 29"H X 24"W SWING FRAME.
3. REQUIREMENTS: INSTALLED IN GROUND. SHOULD INCLUDE REMOVABLE, WASHABLE, HEAVY DUTY MARINE GRADE FABRIC SAFETY PAD. DO NOT INSTALL ON GRASS.

D1 BELLY SWING
NTS

NOTES:
1. MATERIALS: HDPE, HEAVY-DUTY/SHATTER RESISTANT POLYCARBONATE, SS HARDWARE.
2. DIMENSIONS: 55"L X 8"W X 53"H.
3. REQUIREMENTS: INSTALLED IN GROUND. SHOULD INCLUDE 2 SIDES OF PAINTABLE, WASHABLE SURFACE, WITH 6-8 CUP HOLDERS ON EACH SIDE FOR PAINT AND PAINT BRUSHES.

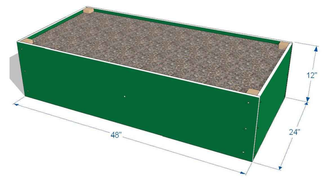
D5 PERMANENT ART EASEL
NTS

NOTES:
1. MATERIALS: DAISY AND SUNFLOWER PETAL DRUMS: POWDER COATED STAINLESS STEEL.
2. DIMENSIONS: 56"L X 16"W X 15"H FRAME. FLOWERS ~22" DIA.
3. REQUIREMENTS: IN GROUND INSTALLATION, STAINLESS STEEL DRUMS WITH ALUMINUM POWDER COATED PETALS SURROUNDING. RUBBER MALLETS SHOULD BE FASTENED TO THE STEMS BY CABLES. THE DRUMS SHOULD EMIT A STRONG PERCUSSIVE TONE WHEN STRUCK.

D9 MUSICAL INSTRUMENTS
NTS

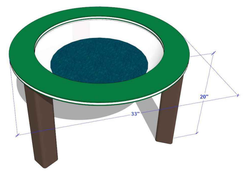
NOTES:
1. MATERIALS: HDPE, HEAVY-DUTY/SHATTER RESISTANT POLYCARBONATE, SS HARDWARE.
2. DIMENSIONS: 64"L X 53"W X 20"H.
3. REQUIREMENTS: IN GROUND INSTALLATION, SHOULD BE INSTALLED OVER CONCRETE. SHOULD INCLUDE 1X SPOUT AND UNDER BASIN RESERVOIR SYSTEM, 2X DRAIN PLUGS (ONE FOR EACH WATER BASIN BOWL), 1X BUBBLE LID PER BASIN BOWL IS ALSO NECESSARY.

D13 WATER PLAY AREA
NTS



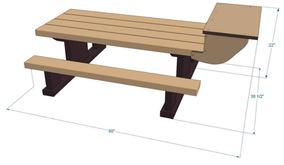
NOTES:
1. MATERIALS: HDPE, HEAVY-DUTY/SHATTER RESISTANT POLYCARBONATE, SS HARDWARE.
2. DIMENSIONS: 48"L X 24"W X 12"H.
3. REQUIREMENTS: PLANTERS SHOULD HAVE A BOTTOM TO KEEP DIRT INSIDE, BUT SHOULD BE ABLE TO DRAIN.

D17 PLANTER BOX
NTS



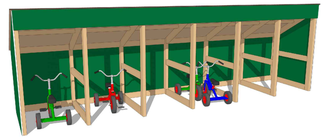
NOTES:
1. MATERIALS: HDPE, HEAVY-DUTY/SHATTER RESISTANT POLYCARBONATE, SS HARDWARE.
2. DIMENSIONS: 33"D X 20"H. SINGLE NATURE BOWL
3. REQUIREMENTS: INSTALLED IN GROUND. REQUIRES 1X DRAIN PLUG, 1X BUBBLE LID.

A1 NATURE BOWL
NTS



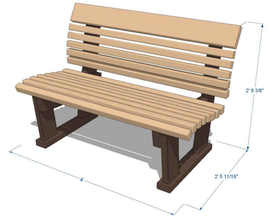
NOTES:
1. MATERIALS: HDPE/SUITABLE STRENGTHENED MOLDED PLASTIC, SS HARDWARE, WOOD COMPOSITE.
2. DIMENSIONS: 48"L X 36"W X 20"H.
3. REQUIREMENTS: IN GROUND INSTALLATION, MUST BE INSTALLED WITH EASE OF WHEELCHAIR ACCESS IN MIND

A6 TABLE WITH 4 SEATS
NTS



NOTES:
1. MATERIALS: HDPE, HEAVY-DUTY/SHATTER RESISTANT POLYCARBONATE, SS HARDWARE.
2. DIMENSIONS: 16'L X 42"W X 60"H - 6-BAY GARAGE
3. REQUIREMENTS: 1 TRIKE GARAGE WITH 6X BAYS. MUST BE COVERED ON 3 SIDES AND HAVE A ROOF. THE SHORT SIDES SHOULD BE TRANSPARENT POLYCARBONATE FOR SAFETY. THE GARAGE MUST BE SURFACE MOUNTED ON CONCRETE. .

A10 TRIKE GARAGE
NTS



NOTES:
1. MATERIALS: HDPE/SUITABLE STRENGTHENED MOLDED PLASTIC, SS HARDWARE, WOOD COMPOSITE.
2. DIMENSIONS: 72"L X 26"D X 34"H
3. REQUIREMENTS: ADULT SIZED BENCH. SHOULD BE INSTALLED IN GROUND UNDER A SHADE STRUCTURE.

A15 ADULT BENCH
NTS

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

ISSUE DATE:	AUGUST 29, 2025
SOLICITATION NO.:	W912DS23F0031
CONTRACT NO.:	W912DZ19D0007
SUBMITTED BY:	A. STARR
SIZE:	ANSI D

DESIGNED BY:	A. BLOXDORF
DRAWN BY:	A. BLOXDORF
CHECKED BY:	
QA BY:	

US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK, NY 10278

NOT FOR CONSTRUCTION

CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
Project No. 75662

PLAYGROUND EQUIPMENT NOTES - PLAYGROUND A

SHEET ID

PG503

File Path: P:\113267\113267-001\33 - PLANNING & GIS\08_WORKING FILES\AUTOCAD\100% SUBMISSION

Plot Date: 8/28/2025 3:59:00 PM

NOTES:
1. MATERIALS: HDPE OR SUITABLE STRENGTHENED MOLDED PLASTIC ALTERNATIVE, STAINLESS STEEL HARDWARE.
2. DIMENSIONS: 10"-15" L x 10" W x 42" H
3. REQUIREMENTS: MUST BE INSTALLED IN GROUND, POLE MUST HAVE FLAT TRAFFIC SIGN ATTACHED, TRAFFIC SIGN MUST SHOW ONE OF THE FOLLOWING: SPEED LIMIT, YIELD, HANDICAP SPACE, TRIKE CROSSING, OR STOP SIGN. IF MORE THAN 1 SIGN IS USED, ENSURE TO VARY SIGN STYLES WHEN POSSIBLE.

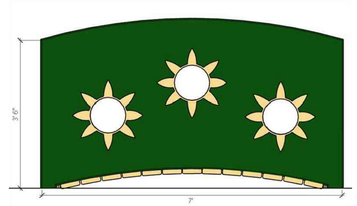
L1 TRIKE TRAFFIC SIGNS
NTS

NOTES:
1. MATERIALS: HDPE/SUITABLE STRENGTHENED MOLDED PLASTIC, SS HARDWARE, SS PIPE.
2. DIMENSIONS: 35"L X 35"W X 80"H
3. REQUIREMENTS: INSTALLED IN GROUND, 4-POST FARMER'S MARKET PLAY STAND WITH STOREFRONT PANEL, SHELF, AND ROOF ELEMENT.

L5 BUILDING FAÇADE - FARMER'S MARKET
NTS

NOTES:
1. MATERIALS: HDPE/SUITABLE STRENGTHENED MOLDED PLASTIC, SS HARDWARE, SS PIPE.
2. DIMENSIONS: 61"L X 34"W X 80"H
3. REQUIREMENTS: INSTALLED IN GROUND, 6-POST FIRE STATION PLAY STAND WITH FRONT PANEL, ATTACHED INTERACTIVE ELEMENTS, AND ROOF.

L9 BUILDING FAÇADE - FIRE STATION
NTS

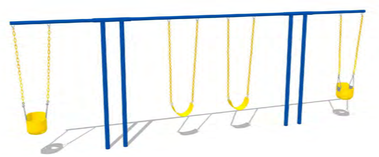


NOTES:
1. MATERIALS: HDPE OR SUITABLE STRENGTHENED MOLDED PLASTIC, STAINLESS STEEL HARDWARE, WOOD COMPOSITE.
2. DIMENSIONS: 6' L X 5' W
3. REQUIREMENTS: GENTLY ARCHED BRIDGE FOR TRIKE PATH ENHANCEMENT. TO BE USED IN PLACE OF RUMBLE STRIPS. THE SIDES OF THE BRIDGE CONNECTED TO THE PATH SHOULD BE FLUSH WITH THE PATH. THE SIDES OF THE BRIDGE PARALLEL TO THE PATH SHOULD HAVE RAISED EDGES OR RAILS TO PREVENT TRIPPING OR TUMBLING OFF THE SIDES OF THE BRIDGE.

L13 RUMBLE BRIDGE
NTS

NOTES:
1. MATERIALS: HDPE/SUITABLE STRENGTHENED MOLDED PLASTIC, SS HARDWARE, HEAVY DUTY SHATTER RESISTANT POLYCARBONATE, SS PIPE, MARINE GRADE FABRIC FLAG.
2. DIMENSIONS: 137"L X 126"W X 54"H
3. REQUIREMENTS: LARGE PLAY STRUCTURE FOR 20-25 WITH: 2X SLIDES, 1X TUNNEL/COVERED ELEMENT, 1X CHIME PANEL, 1X BUBBLE PANEL, 1X PHOTO MIRROR PANEL, 1X WINDOW PANEL, 1X CURVED PANEL WITH STEERING WHEEL, 2X INTERACTIVE GEAR/COLOR PANELS, 1X ADA TRANSFER DECK WITH TWO HANDLE PANELS, 1X COMBO STEP WITH 2 HANDLES.

L17 PLAY STRUCTURE
NTS

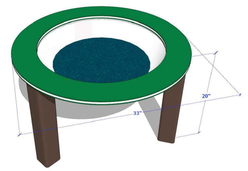


NOTES:
1. MATERIALS: COATED STAINLESS STEEL PIPE, STAINLESS STEEL HARDWARE. FULL BUCKET SEATS AND BELT SEATS WITH CHAIN ARE PLASTIC COVERED STAINLESS STEEL AND RUBBER.
2. DIMENSIONS: 33'L X 28'W X 7'H
3. REQUIREMENTS: IN GROUND INSTALLATION, HEAVY DUTY STEEL PIPE, SPACE SAVING. 2X BUCKET SEATS AND 2X BELT SEATS. EACH SEAT AND CHAIN SET IS SOLD SEPARATELY. T-SWING SHOULD BE 7' IN HEIGHT.

G1 T-SWING
NTS

NOTES:
1. MATERIALS: HIGH-DENSITY POLYETHYLENE MESH FABRIC SHADE, POWDER COATED STAINLESS STEEL STRUCTURE.
2. DIMENSIONS: 2X SHADES AT 20' L X 20' W X 10' H.
3. REQUIREMENTS: INSTALLED IN GROUND, POST SHOULD BE ROUND. PADDING MUST BE PURCHASED AND INCLUDED AS PART OF THE PACKAGE FOR SAFETY.

G5 SHADE STRUCTURE
NTS



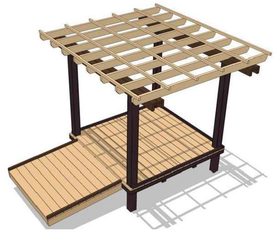
NOTES:
1. MATERIALS: HDPE, HEAVY-DUTY/SHATTER RESISTANT POLYCARBONATE, SS HARDWARE.
2. DIMENSIONS: 33"D X 20"H. SINGLE NATURE BOWL
3. REQUIREMENTS: INSTALLED IN GROUND. REQUIRES 1X DRAIN PLUG, 1X BUBBLE LID PER BOWL.

G9 NATURE BOWL
NTS

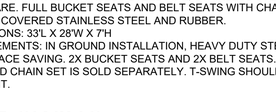
NOTES:
1. MATERIALS: HDPE/SUITABLE STRENGTHENED MOLDED PLASTIC, SS HARDWARE, HEAVY DUTY SHATTER RESISTANT POLYCARBONATE, SS PIPE, MARINE GRADE FABRIC FLAG.
2. DIMENSIONS: 64"L X 64"W X 90"H.
3. REQUIREMENTS: INSTALLED IN GROUND. 1X ELEVATED CONTAINER FOR SAND WITH NON-PINCHING LID, 1X SHADE STRUCTURE FOR ABOVE SAND CONTAINER.

H12 ELEVATED SAND HUT
NTS

NOTES:
1. MATERIALS: HDPE/SUITABLE STRENGTHENED MOLDED PLASTIC, COMPOSITE WOOD, SS HARDWARE.
2. DIMENSIONS: 12' 10"L X 7' 3 1/2"W X 8 1/2"H.
3. REQUIREMENTS: INSTALLED IN GROUND. 1X ADA COMPLIANT OUTDOOR STAGE STRUCTURE WITH 1X REINFORCED TRELLIS, 1X ADA RAMP.

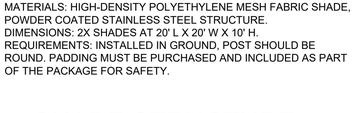


H16 DRAMA DECK AND ADA RAMP
NTS



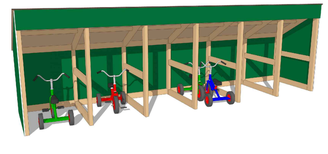
NOTES:
1. MATERIALS: HDPE/SUITABLE STRENGTHENED MOLDED PLASTIC, SS HARDWARE, WOOD COMPOSITE.
2. DIMENSIONS: 48"L X 36"W X 20"H.
3. REQUIREMENTS: IN GROUND INSTALLATION, MUST BE INSTALLED WITH EASE OF WHEELCHAIR ACCESS IN MIND

A1 TABLE WITH 4 SEATS
NTS



NOTES:
1. MATERIALS: HDPE/SUITABLE STRENGTHENED MOLDED PLASTIC, SS HARDWARE, WOOD COMPOSITE.
2. DIMENSIONS: 4'L X 13"W X 8 3/4"H.
3. REQUIREMENTS: IN GROUND INSTALLATION, SURFACE MOUNTING KIT SOLD SEPARATELY. MUST BE PURCHASED WITH BENCH.

A5 PRESCHOOL FLAT BENCH
NTS



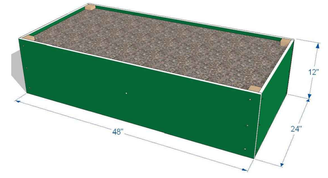
NOTES:
1. MATERIALS: HDPE, HEAVY-DUTY/SHATTER RESISTANT POLYCARBONATE, SS HARDWARE.
2. DIMENSIONS: 16'L X 42"W X 60"H - 6-BAY GARAGE
3. REQUIREMENTS: 1 TRIKE GARAGE WITH 6X BAYS. MUST BE COVERED ON 3 SIDES AND HAVE A ROOF. THE SHORT SIDES SHOULD BE TRANSPARENT POLYCARBONATE FOR SAFETY. THE GARAGE MUST BE SURFACE MOUNTED ON CONCRETE.

A9 TRIKE GARAGE
NTS

NOTES:
1. MATERIALS: HDPE, HEAVY-DUTY/SHATTER RESISTANT POLYCARBONATE, SS HARDWARE.
2. DIMENSIONS: 48"L X 24"W X 12"H.
3. REQUIREMENTS: IN GROUND INSTALLATION, SHOULD BE INSTALLED OVER CONCRETE. SHOULD INCLUDE 1X SPOUT AND UNDER BASIN RESERVOIR SYSTEM, 2X DRAIN PLUGS (ONE FOR EACH WATER BASIN BOWL), 1X BUBBLE LID PER BASIN BOWL IS ALSO NECESSARY.

D13 WATER PLAY AREA
NTS

NOTES:
1. MATERIALS: HDPE, HEAVY-DUTY/SHATTER RESISTANT POLYCARBONATE, SS HARDWARE.
2. DIMENSIONS: 48"L X 24"W X 12"H.
3. REQUIREMENTS: PLANTERS SHOULD HAVE A BOTTOM TO KEEP DIRT INSIDE, BUT SHOULD BE ABLE TO DRAIN.



D17 PLANTER BOX
NTS

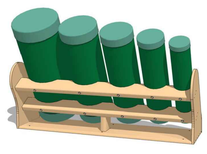
NOTES:
1. MATERIALS: HDPE, HEAVY-DUTY/SHATTER RESISTANT POLYCARBONATE, SS HARDWARE.
2. DIMENSIONS: 48"L X 24"W X 12"H.
3. REQUIREMENTS: IN GROUND INSTALLATION, MUST BE INSTALLED WITH EASE OF WHEELCHAIR ACCESS IN MIND

D1 PERMANENT ART EASEL
NTS

NOTES:
1. MATERIALS: HDPE, HEAVY-DUTY/SHATTER RESISTANT POLYCARBONATE, SS HARDWARE.
2. DIMENSIONS: 60"L X 60"W X 50"H.
3. REQUIREMENTS: INSTALLED IN GROUND. SHOULD INCLUDE 2 SIDES OF PAINTABLE, WASHABLE SURFACE, WITH 6-8 CUP HOLDERS ON EACH SIDE FOR PAINT AND PAINT BRUSHES.

D5 TEMPLE BLOCK TREE
NTS

NOTES:
1. MATERIALS: HDPE, POWDER COAT SS.
2. DIMENSIONS: 57"H X 8'-16.5"W.
3. REQUIREMENTS: INSTALLED IN GROUND. POST WITH REINFORCED BLOCKS WITH RANGE OF PERCUSSIVE TONES. MALLETS ATTACHED WITH CABLE.



NOTES:
1. MATERIALS: HDPE/SUITABLE STRENGTHENED MOLDED PLASTIC, SS HARDWARE.
2. DIMENSIONS: 15", 12", 10", 8", 6"D; 23"-29"H.
3. REQUIREMENTS: 5 TUNED DRUMS TO BE USED WITH HANDS OR MALLETS. DRUMS SHOULD INCLUDE A STAND LIKE THE ONE SHOWN ABOVE.

D9 TUNED DRUMS - SET OF 5
NTS

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

File Path: P:\13267\13267-001\33 - PLANNING & GIS\08_WORKING FILES\AUTOCAD\100% SUBMISSION

Plot Date: 8/28/2025 3:59:00 PM

DESIGNED BY:	A. BLOXDORF
DRAWN BY:	A. BLOXDORF
CHECKED BY:	D. YAN
SUBMITTED BY:	A. STARR
SIZE:	ANSI D
ISSUE DATE:	AUGUST 29, 2025
SOLICITATION NO.:	W912DS23F0031
CONTRACT NO.:	W912DZ19D0007

US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK, NY 10278

NOT FOR CONSTRUCTION

CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
Project No. 75662

PLAYGROUND EQUIPMENT NOTES - PLAYGROUND B

SHEET ID

PG504

NOTES:
1. MATERIALS: HDPE OR SUITABLE STRENGTHENED MOLDED PLASTIC ALTERNATIVE, STAINLESS STEEL HARDWARE.
2. DIMENSIONS: 10"-15" L x 10" W x 42" H
3. REQUIREMENTS: MUST BE INSTALLED IN GROUND, POLE MUST HAVE FLAT TRAFFIC SIGN ATTACHED, TRAFFIC SIGN MUST SHOW ONE OF THE FOLLOWING: SPEED LIMIT, YIELD, HANDICAP SPACE, TRIKE CROSSING, OR STOP SIGN. IF MORE THAN 1 SIGN IS USED, ENSURE TO VARY SIGN STYLES WHEN POSSIBLE.

M1 TRIKE TRAFFIC SIGNS
NTS

NOTES:
1. MATERIALS: HDPE/SUITABLE STRENGTHENED MOLDED PLASTIC, SS HARDWARE, SS PIPE.
2. DIMENSIONS: 89"L X 35"W X 80"H
3. REQUIREMENTS: INSTALLED IN GROUND, 8-POST FIRE STATION AND POLICE STATION COMBINATION PLAY STAND WITH INTERACTIVE FRONT PANEL, SHELF, AND ROOF ELEMENT.

M5 BUILDING FAÇADE - POLICE & FIRE STATION
NTS

NOTES:
1. MATERIALS: HDPE OR SUITABLE STRENGTHENED MOLDED PLASTIC ALTERNATIVE, STAINLESS STEEL HARDWARE.
2. DIMENSIONS:34" L X 21" W X 80" H
3. REQUIREMENTS: INSTALLED IN GROUND, 2 POST CAFE PLAY STAND WITH A STOREFRONT PANEL, SHELF, AND HALF ROOF ELEMENT.

M9 BUILDING FAÇADE - CAFE
NTS

NOTES:
1. MATERIALS: HDPE OR SUITABLE STRENGTHENED MOLDED PLASTIC ALTERNATIVE, STAINLESS STEEL HARDWARE.
2. DIMENSIONS:34" L X 21" W X 80" H
3. REQUIREMENTS: INSTALLED IN GROUND, 1X IN GROUND 8-POST HOUSE FAÇADE PLAY STAND W/ PANEL, ATTACHED SHELF & ROOFS, 2X ATTACHED PLANTERS

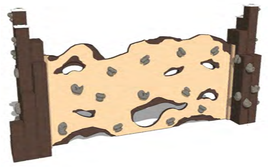
M13 BUILDING FAÇADE - VILLAGE HOUSES
NTS

NOTES:
1. MATERIALS: HDPE/SUITABLE STRENGTHENED MOLDED PLASTIC, SS HARDWARE, SS PIPE.
2. DIMENSIONS: 35"L X 35"W X 80"H
3. REQUIREMENTS: INSTALLED IN GROUND, 4-POST FARMER'S MARKET PLAY STAND WITH STOREFRONT PANEL, SHELF, AND ROOF ELEMENT.

M17 BUILDING FAÇADE - FARMER'S MARKET
NTS

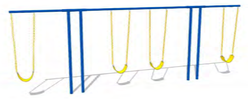
NOTES:
1. MATERIALS: HDPE/SUITABLE STRENGTHENED MOLDED PLASTIC, SS HARDWARE, HEAVY DUTY SHATTER RESISTANT POLYCARBONATE, ANODIZED ALIMINUM/SUITABLE ALTERNATIVE PIPE.
2. DIMENSIONS: 137"L X 126"W X 54"H
3. REQUIREMENTS: PLAY STRUCTURE FOR 32-48: 4X PLATFORMS, 2X SLIDES, 2X CLIMBER ELEMENTS, 1X MUSIC PANEL, 4X INTERACTIVE/IMAGINATIVE PLAY PANELS, 10X HANDLE PANELS, ROOF COVERING AT LEAST 2 PLATFORMS.

H1 PLAY STRUCTURE
NTS



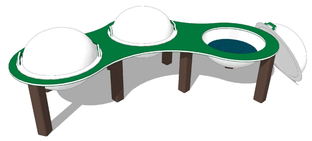
NOTES:
1. MATERIALS: HDPE/SUITABLE STRENGTHENED MOLDED PLASTIC, SS HARDWARE, WOOD COMPOSITE.
2. DIMENSIONS: 11'L X 2'W X 5'H
3. REQUIREMENTS: IN GROUND INSTALLATION, WALL WITH 2 SIDES ABLE TO BE CLIMED USING ROCK HANDHOLDS.

H4 CLIMBER
NTS



NOTES:
1. MATERIALS: COATED STAINLESS STEEL PIPE, STAINLESS STEEL HARDWARE. FULL BUCKET SEATS AND BELT SEATS WITH CHAIN ARE PLASTIC COVERED STAINLESS STEEL AND RUBBER.
2. DIMENSIONS: 33'L X 28"W X 7'H
3. REQUIREMENTS: IN GROUND INSTALLATION, HEAVY DUTY STEEL PIPE, SPACE SAVING. 4X BELT SEATS. EACH SEAT AND CHAIN SET IS SOLD SEPARATELY. T-SWING SHOULD BE 7' IN HEIGHT.

G7 T-SWING
NTS



NOTES:
1. MATERIALS: HDPE, HEAVY-DUTY/SHATTER RESISTANT POLYCARBONATE, SS HARDWARE.
2. DIMENSIONS: 96"L X 48"W X 24"H.
3. REQUIREMENTS: INSTALLED IN GROUND. 1 NATURE BOWL WITH 3 BOWLS IN 1. REQUIRES 1X DRAIN PLUG AND 1X BUBBLE LID PER BOWL.

G10 NATURE BOWL
NTS

NOTES:
1. MATERIALS: HIGH-DENSITY POLYETHYLENE MESH FABRIC SHADE, POWDER COATED STAINLESS STEEL STRUCTURE.
2. DIMENSIONS: 2X SHADES AT 20' L X 20' W X 10' H.
3. REQUIREMENTS: INSTALLED IN GROUND. POST SHOULD BE ROUND. PADDING MUST BE PURCHASED AND INCLUDED AS PART OF THE PACKAGE FOR SAFETY.

G13 SHADE STRUCTURE
NTS

NOTES:
1. MATERIALS: HDPE, HEAVY-DUTY/SHATTER RESISTANT POLYCARBONATE, SS HARDWARE.
2. DIMENSIONS: 64"L X 53"W X 20"H.
3. REQUIREMENTS: IN GROUND INSTALLATION, SHOULD BE INSTALLED OVER CONCRETE. SHOULD INCLUDE 1X SPOUT AND UNDER BASIN RESERVOIR SYSTEM, 2X DRAIN PLUGS (ONE FOR EACH WATER BASIN BOWL), 1X BUBBLE LID PER BASIN BOWL IS ALSO NECESSARY.

G17 WATER PLAY AREA
NTS

NOTES:
1. MATERIALS: HDPE/SUITABLE STRENGTHENED MOLDED PLASTIC, SS HARDWARE, HEAVY DUTY SHATTER RESISTANT POLYCARBONATE, SS PIPE.
2. DIMENSIONS: 64"L X 64"W X 90"H.
3. REQUIREMENTS: INSTALLED IN GROUND. 1X ELEVATED CONTAINER FOR SAND WITH NON-PINCHING LID, 1X SHADE STRUCTURE FOR ABOVE SAND CONTAINER.

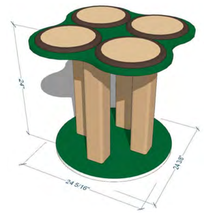
E1 ELEVATED SAND HUT
NTS

NOTES:
1. MATERIALS: HDPE/SUITABLE STRENGTHENED MOLDED PLASTIC, COMPOSITE WOOD, SS HARDWARE.
2. DIMENSIONS: 12' 10"L X 7' 3 1/2"W X 8 1/2"H.
3. REQUIREMENTS: INSTALLED IN GROUND. 1X ADA COMPLIANT OUTDOOR STAGE STRUCTURE WITH 1X REINFORCED TRELLIS, 1X ADA RAMP.

E5 DRAMA DECK AND ADA RAMP
NTS

NOTES:
1. MATERIALS: HDPE, HEAVY-DUTY/SHATTER RESISTANT POLYCARBONATE, SS HARDWARE.
2. DIMENSIONS: 55"L X 8"W X 53"H.
3. REQUIREMENTS: INSTALLED IN GROUND. SHOULD INCLUDE 2 SIDES OF PAINTABLE, WASHABLE SURFACE, WITH 6-8 CUP HOLDERS ON EACH SIDE FOR PAINT AND PAINT BRUSHES.

E10 PERMANENT ART EASEL
NTS

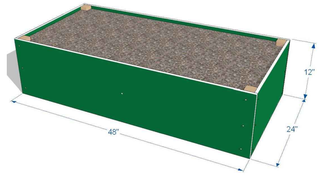


NOTES:
1. MATERIALS: HDPE/SUITABLE STRENGTHENED MOLDED PLASTIC, SS HARDWARE.
2. DIMENSIONS: 27"L X 27"W X 17"H.
3. REQUIREMENTS: INSTALLED IN GROUND. 4X DRUM HEADS ON A STAND, TO BE USED WITH HANDS.

E14 QUAD DRUM TABLE
NTS

NOTES:
1. MATERIALS: HDPE/SUITABLE STRENGTHENED MOLDED PLASTIC, SS HARDWARE.
2. DIMENSIONS: 25"W X 46"H.
3. REQUIREMENTS: INSTALLED IN GROUND. 3X METAL PERCUSSIVE FLOWER SCULPTURES ON A SINGLE POLE THAT EMIT PURE TONE WHEN STRUCK WITH ATTACHED MALLETS.

E18 HARMONY BELLS
NTS



NOTES:
1. MATERIALS: HDPE, HEAVY-DUTY/SHATTER RESISTANT POLYCARBONATE, SS HARDWARE.
2. DIMENSIONS: 48"L X 24"W X 12"H.
3. REQUIREMENTS: PLANTERS SHOULD HAVE A BOTTOM TO KEEP DIRT INSIDE, BUT SHOULD BE ABLE TO DRAIN.

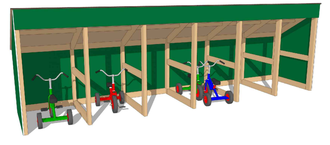
A1 PLANTER BOX
NTS

NOTES:
1. MATERIALS: HDPE/SUITABLE STRENGTHENED MOLDED PLASTIC, SS HARDWARE, WOOD COMPOSITE.
2. DIMENSIONS: 48"L X 36"W X 20"H.
3. REQUIREMENTS: IN GROUND INSTALLATION, MUST BE INSTALLED WITH EASE OF WHEELCHAIR ACCESS IN MIND

A5 TABLE WITH 4 SEATS
NTS

NOTES:
1. MATERIALS: HDPE/SUITABLE STRENGTHENED MOLDED PLASTIC, SS HARDWARE, WOOD COMPOSITE.
2. DIMENSIONS: 4'L X 13"W X 8 3/4"H.
3. REQUIREMENTS: IN GROUND INSTALLATION, SURFACE MOUNTING KIT SOLD SEPARATELY. MUST BE PURCHASED WITH BENCH.

A9 PRESCHOOL FLAT BENCH
NTS



NOTES:
1. MATERIALS: HDPE, HEAVY-DUTY/SHATTER RESISTANT POLYCARBONATE, SS HARDWARE.
2. DIMENSIONS: 16'L X 42"W X 60"H - 6-BAY GARAGE
3. REQUIREMENTS: 1 TRIKE GARAGE WITH 6X BAYS. MUST BE COVERED ON 3 SIDES AND HAVE A ROOF. THE SHORT SIDES SHOULD BE TRANSPARENT POLYCARBONATE FOR SAFETY. THE GARAGE MUST BE SURFACE MOUNTED ON CONCRETE.

A13 TRIKE GARAGE
NTS

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

ISSUE DATE: AUGUST 29, 2025
SOLICITATION NO.: W912DS23F0031
CONTRACT NO.: W912DZ19D0007

DESIGNED BY: A. BLOXDORF
DRAWN BY: A. BLOXDORF
CHECKED BY: D. LAWLESS
SUBMITTED BY: A. STARR
SIZE: ANSI D

US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
26 FEDERAL PLAZA, NEW YORK, NY 10278

NOT FOR CONSTRUCTION

CHILD DEVELOPMENT CENTER
USAG FORT HAMILTON, NEW YORK
Project No. 75662

PLAYGROUND EQUIPMENT NOTES - PLAYGROUND C

SHEET ID
PG505

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