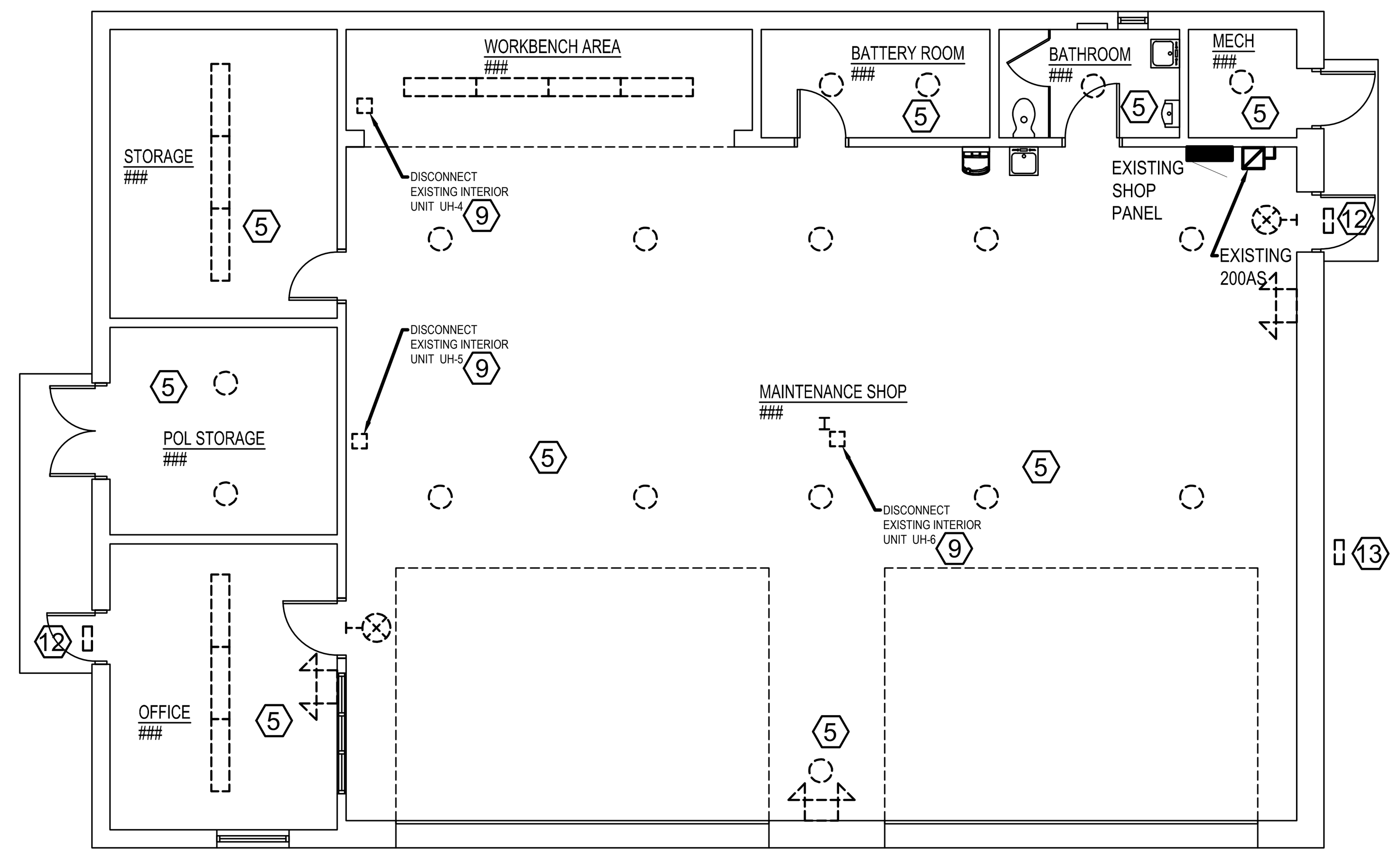


VEHICLE MAINTENANCE BUILDING ELECTRICAL DEMOLITION PLAN

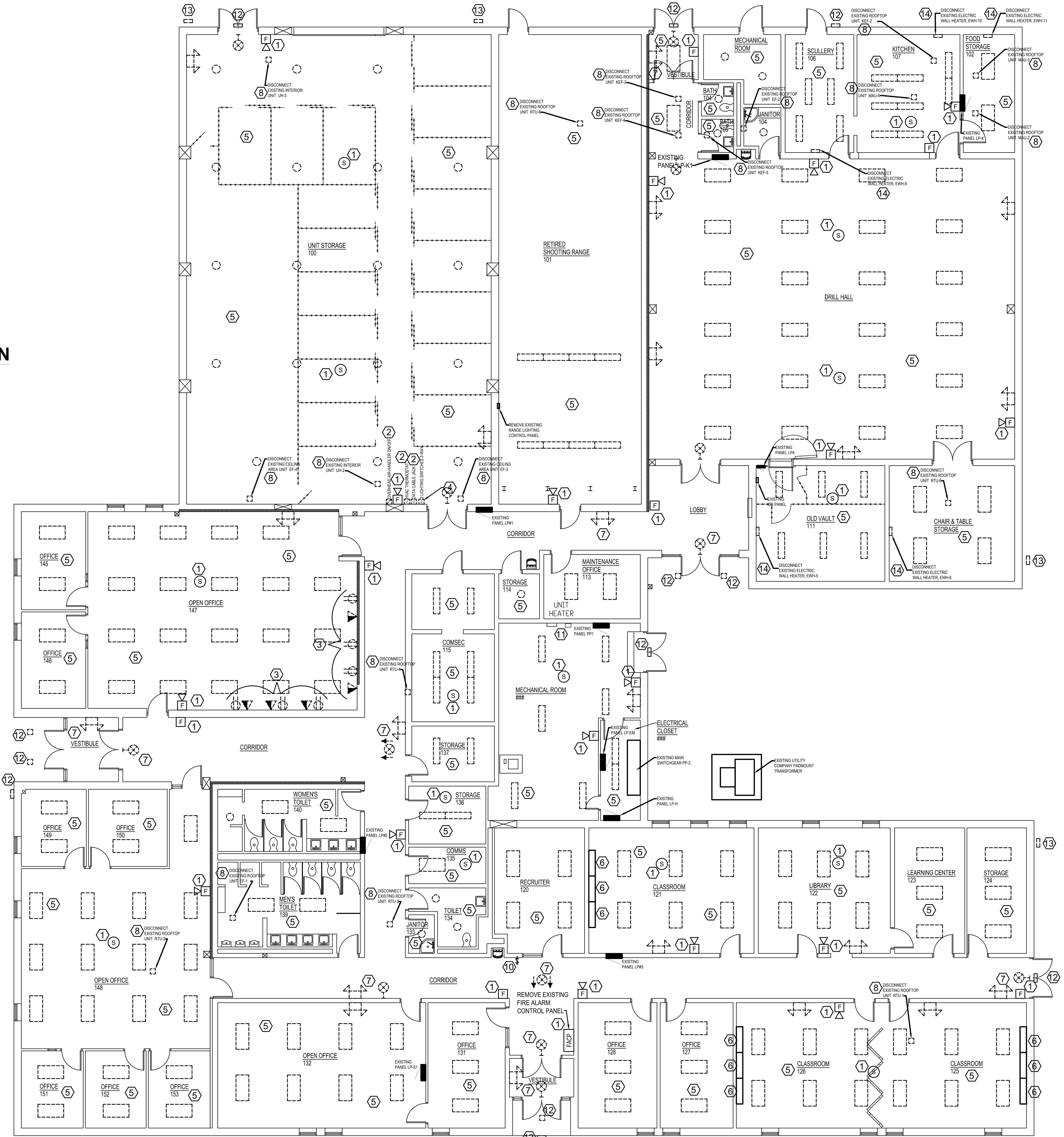
SCALE 1/8" = 1'-0"

ELECTRICAL & FIRE ALARM DEMOLITION PLAN KEY NOTES

1. REMOVE THE EXISTING FIRE ALARM SYSTEM IN ITS ENTIRETY INCLUDING THE FIRE ALARM CONTROL PANEL, FIELD DEVICES, CABLING, JUNCTION BOXES, AND RACEWAYS.
2. REMOVE THIS EXISTING DEVICE FROM THE WALL LOCATION INDICATED AND RELOCATE TO THE WALL AREA INDICATED.
3. REMOVE THESE SURFACE MOUNTED RACEWAY & RECEPTACLES, TELEPHONE AND DATA JACKS FROM THESE TWO WALLS TO MAKE WAY FOR THE NEW RESTROOM. REMOVE THE RACEWAYS AND CONDUCTORS AND CABLES BACK TO THEIR SOURCE.
4. REMOVE THESE DEVICES, DEVICE BOX, AND CONDUIT BACK TO ITS SOURCE.
5. REMOVE THE EXISTING LIGHTING FIXTURES, INCLUDING EMERGENCY AND EXIT LIGHTING FIXTURES, WITHIN THIS ROOM. COORDINATE LOCATION OF AND CONNECTION OF THE NEW LIGHTING FIXTURES WITH THE PROPOSED LIGHTING PLAN.
6. THESE BLACKBOARD ILLUMINATION LIGHTING FIXTURES AND THEIR CONTROL WALL SWITCHES SHALL REMAIN AND ARE CONVERTED TO LED IN THIS CONTRACT.
7. REMOVE THE EXISTING EMERGENCY AND EXIT LIGHTING FIXTURES IN THESE CORRIDORS. COORDINATE THE LOCATION OF AND CONNECTION OF THE NEW EMERGENCY AND EXIT LIGHTING FIXTURES WITH THE PROPOSED LIGHTING PLAN.
8. DISCONNECT EXISTING ROOF TOP MECHANICAL UNITS RTU-1 THROUGH RTU-6, EF-1, 2, 3, & 4, MAU-2, 3, & 4, AND KEF-2, 3, 4, AND 5. COORDINATE WITH THE MECHANICAL TRADES AND SHEET M2.0. WHERE NEW ROOF TOP MECHANICAL UNITS ARE TO BE INSTALLED IN REMOVED UNIT LOCATIONS, KEEP THE FEEDER CONDUCTORS AND CONDUIT FOR RECONNECTION, ALL OTHERS REMOVE CONDUIT BACK TO IT'S SOURCE. RE-LABEL BREAKER ACCORDINGLY.
9. DISCONNECT EXISTING INTERIOR UNIT HEATERS UH-4, 5, & 6 IN THE VEHICLE MAINTENANCE BUILDING.
10. REMOVE THIS LIGHT SWITCH DEVICE BOX AND OPERATE THE LIGHTING WITHIN THE NEW RECRUITER ROOM 120 VIA THE NEW OCCUPANCY SENSORS.
11. DISCONNECT EXISTING UNIT HEATER. COORDINATE WITH THE MECHANICAL TRADES AND SHEET M2.0. REMOVE REMOVE THE RACEWAYS AND CONDUCTORS AND CABLES BACK TO THEIR SOURCE.
12. REMOVE EXISTING EXTERIOR LIGHTING FIXTURES. COORDINATE LOCATION OF AND CONNECTION OF THE NEW LIGHTING FIXTURES WITH THE PROPOSED LIGHTING PLAN. REUSE EXISTING CIRCUIT. COORDINATE WITH ARCHITECTURAL TRADES FOR CHANGES IN SIDING. PATCH UNUSED OPENING WITH LIKE MATERIAL IF NEEDED.
13. REMOVE EXISTING EXTERIOR LIGHTING FIXTURES. REUSE SUPPORT CONDUIT FOR NEW FIXTURE. REUSE EXISTING CIRCUIT.
14. DISCONNECT EXISTING ELECTRIC WALL HEATER. COORDINATE WITH THE MECHANICAL TRADES AND SHEET M2.0. REMOVE THE RACEWAYS AND CONDUCTORS AND CABLES BACK TO THEIR SOURCE.

811

KNOW WHAT'S BELOW.
CALL BEFORE YOU DIG.



ARMORY DEMOLITION PLAN

SCALE 1/8" = 1'-0"

STATE OF MICHIGAN
DEPARTMENT OF TECHNOLOGY, MANAGEMENT AND BUDGET
FACILITIES AND BUSINESS SERVICES ADMINISTRATION
DESIGN AND CONSTRUCTION DIVISION
ADAM LACH, RA, DIRECTOR

RENOVATE ARMORY- WATERFORD

DEPARTMENT OF MILITARY AND VETERANS AFFAIRS
WATERFORD, MICHIGAN

DESIGNED	MLM	DATE	
DRAWN	MLM	10 OCT 2025	
CHECKED	BAB	05 JUL 2025	
APPROVED	KLM		

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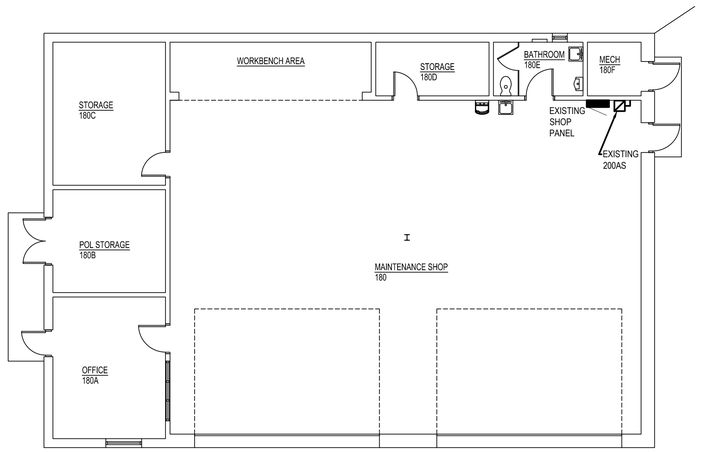
CONSTRUCTION	■
FINAL RECORD	□

IDENTIFICATION NO.	
PROJECT	2690023043
INDEX CODE	1390

SHEET
E1



PROPOSED VEHICLE MAINTENANCE BUILDING POWER PLAN

SCALE 1/8" = 1'-0"

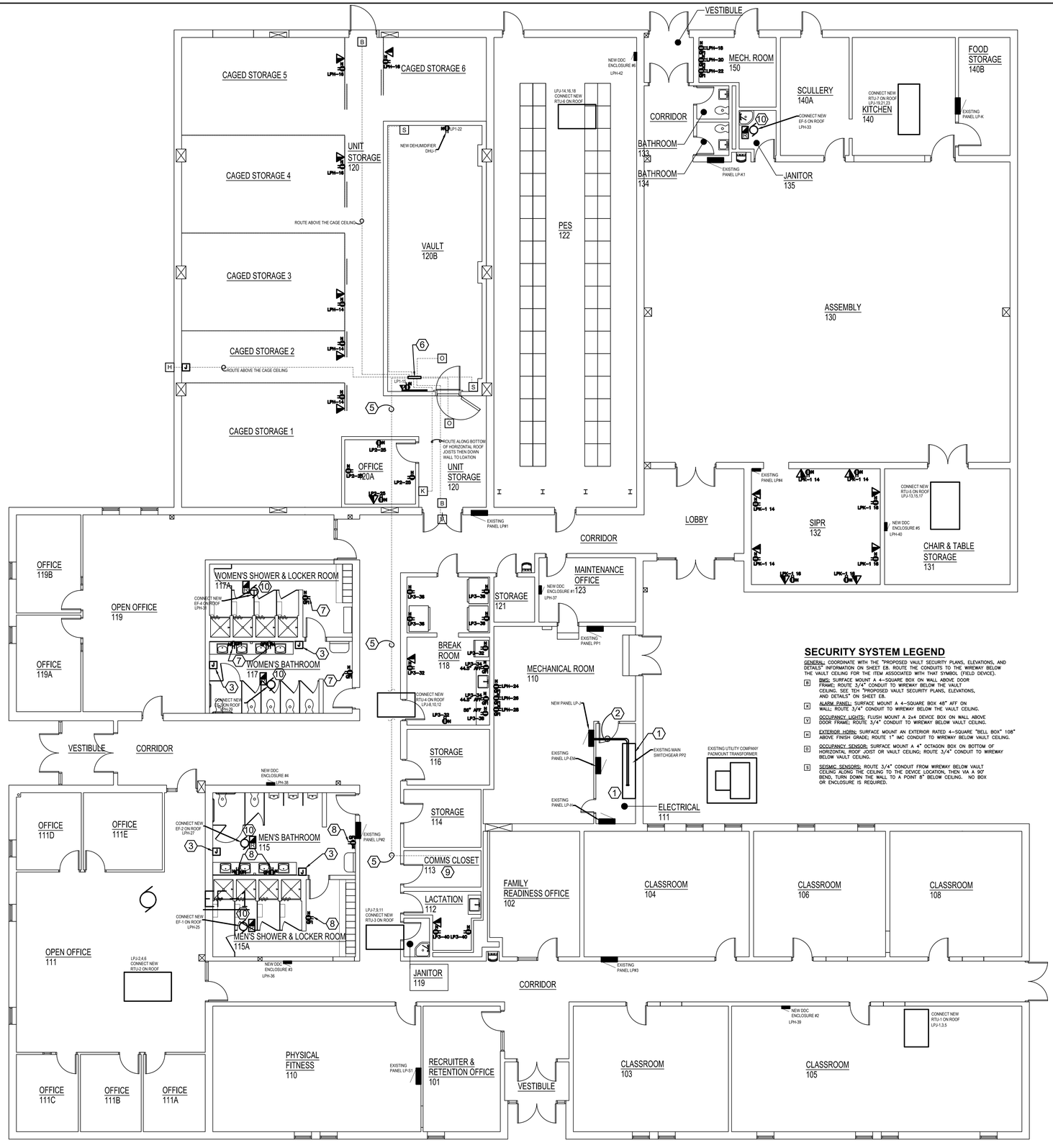
PROPOSED POWER PLAN KEY NOTES ⬡:

1. A NEW 400 AMPERE SWITCH IS REQUIRED TO BE INSTALLED IN THE MAIN SWITCHBOARD PP-2. THE FOLLOWING STEPS ARE TO BE CARRIED OUT BY THE CONTRACTOR IN PP-2:
   - A. REMOVE SWITCHES FOR LOADS RTU-1, RTU-2. RTU-3, AND THE SPARE 30A SWITCH NEXT TO THE RTU-3 SWITCH.
   - B. MOVE ALL REMAINING SWITCHES TO THE TOP OF THIS PP-2 SECTION. RECONNECT THEIR LOADS CONDUCTORS TO THE APPROPRIATE SWITCH. SPICE-ON ADDITIONAL CONDUCTOR IF NEEDED.
   - C. INSTALL A "NEW TO THIS BUILDING" 3-POLE/400 AMPERE FUSIBLE SWITCH INTO THE PP-2 SECTION.
   - D. INSTALL NEW BLANK COVER PLATES OVER OPEN SPACES AS NEEDED.
   - E. INSTALL THREE (3) NEW DUAL ELEMENT 400 AMPERE TYPE FRS IN THE NEW 3P/400A SWITCH.
2. FROM THE NEW 3P/400A SWITCH INSTALLED IN KEY NOTE #1 ABOVE, ROUTE TWO PARALLEL RUNS OF 4 #3/0 & 1 #3 GND, 2" CONDUIT OVERHEAD TO THE NEW PANEL LP-J LOCATED IN THE MECHANICAL ROOM 110.
3. INSTALL FLUSH MOUNTED JUNCTION BOX FOR NEW HAND DRYER UNIT AT 48" AFF. ROUTE NEW CIRCUIT INDICATED TO THIS JUNCTION BOX AND CONNECT THE HAND DRYER. COORDINATE EXACT HEIGHT WITH ARCHITECTURAL TRADES.
4. LOCATION OF 4'x4' FIRE RATED PLYWOOD BACKBOARD WITH THE ONE LENGTH OF WIREWAY JUST BELOW THE VAULT CEILING ABOVE THE PLYWOOD BACKBOARD. REFER TO THE "PROPOSED VAULT SECURITY PLANS, ELEVATIONS, AND DETAILS" ON SHEET E8 FOR ADDITIONAL INFORMATION.
5. PROVIDE A 1" IMC RACEWAY FROM THE EXISTING COMMS ROOM, ABOVE THE EXISTING DATA RACK, TO THE 4"x4"x20" WIREWAY THAT IS LOCATED BELOW THE NEW VAULT CEILING. ROUTE ABOVE SUSPENDED CEILING WHERE DROP CEILINGS ARE INSTALLED. THIS CONDUIT SHALL SHALL BE CONTINUOUS (NO JUNCTION BOXES ALLOWED). INSTALL TWO (2) CAT-6, 4-PAIR CABLES INSIDE THIS RACEWAY. PULL THESE CABLES INTO THE 4"x4"x20" WIREWAY LOCATED INSIDE THE VAULT ABOVE THE PLYWOOD BACKBOARD. PROVIDE ENOUGH EXTRA CABLE TO REACH THE FLOOR PLUS FIVE (5) FEET. TERMINATE BOTH ENDS OF EACH CABLE AND TEST PER SPECIFICATION.
6. 4" X 4" X 24" WIREWAY MOUNTED DIRECTLY ABOVE THE FIRE RATED PLYWOOD BACKBOARD. REFER TO KEYNOTE 4 ABOVE.
7. USE EXISTING RECEPTACLE CIRCUIT LP2-28 & 30 FOR NEW RECEPTACLES.
8. USE EXISTING RECEPTACLE CIRCUIT LP2-22 & 24 FOR NEW RECEPTACLES.
9. INSTALL NEW RACK AS SHOWN ON SHEET E6 AND PER SPECIFICATIONS. TERMINATE FIBER AND ALL NEW AND EXISTING DATA LINES TO NEW SETUP. REUSE EXISTING CABLE TRAY, WALL MOUNTED PLYWOOD BOARD, GROUNDING BAR.
10. NEW EXHAUST FAN. COORDINATE THE CONNECTION OF LOW-VOLTAGE WIRING WITH THE MECHANICAL TRADES, TO THE LOCAL LIGHTING OCCUPANCY SENSOR AUXILIARY CONTACT SET. CONNECT EXHAUST FAN TO CIRCUIT INDICATED. PROVIDE MANUAL MOTOR STARTED/RELAY.

NEW HVAC UNIT ELECTRICAL POWER CONNECTIONS & FEEDS

HVAC UNIT	UNIT LOAD		ELECTRICAL ITEM REQUIRED				NOTES
	VOLTAGE/PHASE	LOAD	ITEM(S) TO PROVIDE AND INSTALL	ITEM SIZE	FUSE SIZE	BRANCH CIRCUIT SIZE	
RTU-1	208V/3Ø	47 MCA / 70 MOP	CONDUIT AND WIRE FEEDER			4 #3 & #6GND, 1-1/2"C	1,2
RTU-2	208V/3Ø	49 MCA / 60 MOP	CONDUIT AND WIRE FEEDER			4 #4 & #8GND, 1-1/2"C	1,2
RTU-3	208V/3Ø	33 MCA / 50 MOP	CONDUIT AND WIRE FEEDER			4 #6 & #8GND, 1-1/4"C	1,2
RTU-4	208V/3Ø	33 MCA / 50 MOP	CONDUIT AND WIRE FEEDER			4 #6 & #8GND, 1-1/4"C	1,2
RTU-5	208V/3Ø	52 MCA / 70 MOP	CONDUIT AND WIRE FEEDER			4 #3 & #6GND, 1-1/2"C	1,2
RTU-6	208V/3Ø	32 MCA / 50 MOP	CONDUIT AND WIRE FEEDER			4 #6 & #8GND, 1-1/4"C	1,2
RTU-7	208V/3Ø	15 MCA / 20 MOP	CONDUIT AND WIRE FEEDER			4 #10 & #10GND, 3/4"C	1,2
EXHAUST FAN EF-1	120V/1Ø	1 A	MANUAL MOTOR STARTER AND RELAY	30A	NOTE 1	2 #12 & #12GND, 3/4"C	
EXHAUST FAN EF-2	120V/1Ø	1 A	MANUAL MOTOR STARTER AND RELAY	30A	NOTE 1	2 #12 & #12GND, 3/4"C	
EXHAUST FAN EF-3	120V/1Ø	1 A	MANUAL MOTOR STARTER AND RELAY	30A	NOTE 1	2 #12 & #12GND, 3/4"C	
EXHAUST FAN EF-4	120V/1Ø	1 A	MANUAL MOTOR STARTER AND RELAY	30A	NOTE 1	2 #12 & #12GND, 3/4"C	
EXHAUST FAN EF-5	120V/1Ø	1 A	MANUAL MOTOR STARTER AND RELAY	30A	NOTE 1	2 #12 & #12GND, 3/4"C	
DDC ENCLOSURE ENC-1 TO 6	120V/1Ø	—	DEDICATED CIRCUIT & GND	HARD CONNECTION		2 #12 & #12GND, 3/4"C	

HVAC UNIT ELECTRICAL POWER CONNECTIONS & FEEDS NOTES:
1. COORDINATE AND INSTALL THE SIZE OF FUSE RECOMMENDED BY HVAC UNIT MANUFACTURER.
2. ROUTE FEEDER FROM THE NEW PANEL J IN THE MECHANICAL ROOM TO UNIT LOCATION INDICATED.



SECURITY SYSTEM LEGEND

GENERAL: COORDINATE WITH THE "PROPOSED VAULT SECURITY PLANS, ELEVATIONS, AND DETAILS" INFORMATION ON SHEET E8. ROUTE THE CONDUITS TO THE WIREWAY BELOW THE VAULT CEILING FOR THE ITEM ASSOCIATED WITH THAT SYMBOL (FIELD DEVICE).

- B — BMS: SURFACE MOUNT A 4-SQUARE BOX ON WALL ABOVE DOOR FRAME; ROUTE 3/4" CONDUIT TO WIREWAY BELOW THE VAULT CEILING. SEE TEH "PROPOSED VAULT SECURITY PLANS, ELEVATIONS, AND DETAILS" ON SHEET E8.
- K — ALARM PANEL: SURFACE MOUNT A 4-SQUARE BOX 48" AFF ON WALL; ROUTE 3/4" CONDUIT TO WIREWAY BELOW VAULT CEILING.
- V — OCCUPANCY LIGHTS: FLUSH MOUNT A 2x4 DEVICE BOX ON WALL ABOVE DOOR FRAME; ROUTE 3/4" CONDUIT TO WIREWAY BELOW VAULT CEILING.
- H — EXTERIOR HORN: SURFACE MOUNT AN EXTERIOR RATED 4-SQUARE "BELL BOX" 108" ABOVE FINISH GRADE; ROUTE 1" IMC CONDUIT TO WIREWAY BELOW VAULT CEILING.
- O — OCCUPANCY SENSOR: SURFACE MOUNT A 4" OCTAGON BOX ON BOTTOM OF HORIZONTAL ROOF JOIST OR VAULT CEILING; ROUTE 3/4" CONDUIT TO WIREWAY BELOW VAULT CEILING.
- S — SEISMIC SENSORS: ROUTE 3/4" CONDUIT FROM WIREWAY BELOW VAULT CEILING ALONG THE CEILING TO THE DEVICE LOCATION, THEN VIA A 90° BEND, TURN DOWN THE WALL TO A POINT 8" BELOW CEILING. NO BOX OR ENCLOSURE IS REQUIRED.

PROPOSED ARMORY POWER PLAN

SCALE 1/8" = 1'-0"

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DESIGN AND CONSTRUCTION DIVISION
ADAM LACH, RA, DIRECTOR

RENOVATE ARMORY- WATERFORD

DEPARTMENT OF MILITARY AND VETERANS AFFAIRS
WATERFORD, MICHIGAN

DESIGNED	ALM
DRAWN	ALM
CHECKED	BAB
APPROVED	KSM
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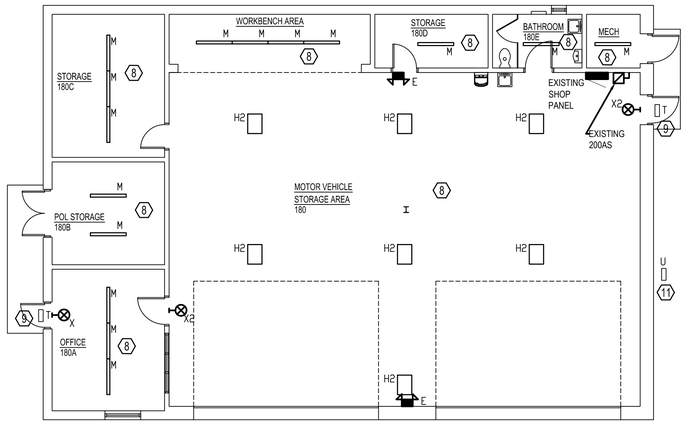


PROPOSED VEHICLE MAINTENANCE BUILDING LIGHTING PLAN

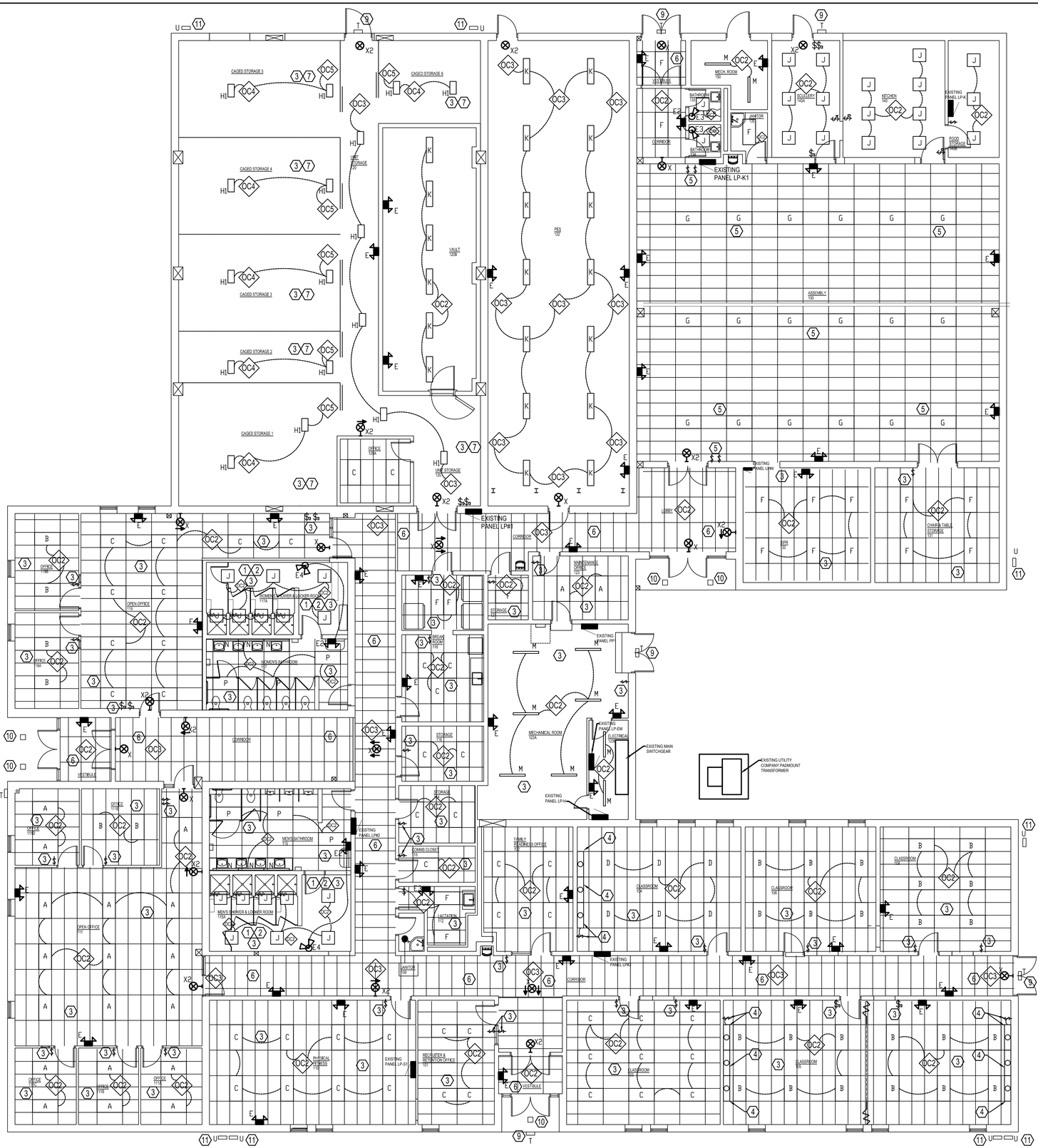
SCALE 1/8" = 1'-0"

PROPOSED ARMORY AND MAINTENANCE BLDG LIGHTING PLAN KEY NOTES ⬡:

1. FOR ELECTRICAL BRANCH CIRCUITS IN THE NEW MEN'S AND WOMEN'S SHOWER & LOCKER ROOMS, THE CONTRACTOR SHALL RELOCATED ANY EXISTING OR NEW JUNCTION BOXES REQUIRED ABOVE THE CEILING SUCH THAT THEY CAN BE REACHED FROM THE OPENING IN THE CEILINGS MADE BY NEW ACCESS DOORS.
2. COORDINATE NEW ABOVE CEILING JUNCTION BOXES IN THE NEW MEN'S AND WOMEN'S SHOWER & LOCKER ROOMS TO BE LOCATED ADJACENT TO, AND SERVICEABLE FROM, THE NEW CEILING ACCESS DOORS.
3. IN THIS ROOM, INSTALL THE NUMBER OF NEW LIGHTING FIXTURES WHERE INDICATED, CONNECT THESE NEW LIGHTING FIXTURES TO THE NEW OCCUPANCY SENSOR(S) SHOWN. CONNECT THE NEW LIGHTING FIXTURES, CONTROLLED BY THE NEW OCCUPANCY SENSOR(S) AND CONNECT TO THE EXISTING LIGHTING CIRCUIT WITHIN THIS ROOM. REMOVE THE EXISTING WALL SWITCHES FROM THEIR DEVICE BOXES ALONG WITH THE WIRING TO THEM AND RECONFIGURE THE HOT WIRING AND ROUTE DIRECTLY TO THE NEW OCCUPANCY SENSOR(S) FIRST, THEN TO THE NEW LIGHTING FIXTURES. PROVIDE AND INSTALL A NEW STAINLESS STEEL BLANK COVER PLATE AT THE OLD WALL SWITCH LOCATION(S).
4. FOR THESE 2-LAMP F40 WATT FLUORESCENT BLACKBOARD ILLUMINATION LIGHTING FIXTURES, KEEP THE WALL SWITCH AS THEIR CONTROL SWITCHING. REMOVE THE INTERNAL FLUORESCENT BALLAST ON EACH FIXTURE, INSTALL NEW TUBE SOCKETS, AND REWIRE FOR DIRECT 120VAC OPERATION. INSTALL TWO NEW 4-FOOT LED LAMPS IN EACH FIXTURE. PROVIDE LED RE-LAMP KITS BY THE MANUFACTURER OF THE BULK OF THE LIGHTING SUBMITTAL MANUFACTURER.
5. NEW TYPE G LIGHTING FIXTURES IN THE ASSEMBLY ROOM 130 SHALL REMAIN ON THE EXISTING WALL SWITCHES FOR CONTROL.
6. CORRIDORS AND THE MAINTENANCE OFFICE ROOM HAVE BEEN CONVERTED TO LED LIGHTING. CONTRACTOR ON THIS PROJECT SHALL INSTALL THE NEW OCCUPANCY SENSORS INDICATED TO CONTROL THE LIGHTING FIXTURES. WITHIN THESE AREAS, REMOVE THE EXISTING WALL SWITCHES AND REWIRE TO MAKE THE OCCUPANCY SENSORS CONTROL THE LIGHTING FIXTURES. ALL EMERGENCY LIGHTING AND EXIT FIXTURES SHOWN ARE NEW AND SHALL BE CONNECTED TO THE LOCAL LIGHTING CIRCUIT.
7. WITHIN THE CAGED STORAGE AREA, THE CAGE WILL BE INSTALLED FROM THE FLOOR TO THE HORIZONTAL STEEL ROOF JOISTS ABOVE WITH A CAGE CEILING OVER EACH SECTION. CONTRACTOR SHALL INSTALL THE NEW LIGHTING FIXTURES TO THE UNDERSIDE OF THE CAGE CEILING. THE FLOOR TO HORIZONTAL STEEL MEASUREMENT IS 12'-10" AFF. INSTALL THE OCCUPANCY SENSORS EITHER ON THE SIDE OF THE LIGHTING FIXTURE OR TO THE UNDERSIDE OF THE CAGE CEILING.
8. NEW TYPE H2 AND M LIGHTING FIXTURES IN THE MOTOR VEHICLE STORAGE AREA SHALL REMAIN ON THE EXISTING WALL SWITCHES FOR CONTROL.
9. REPLACE THE EXISTING EXTERIOR WALL PACKS WITH THE NEW ONES SHOWN. REUSE EXISTING CIRCUIT.
10. REPLACE THE EXISTING EXTERIOR 1' X 1' RECESSED LIGHTING WITH A COMPATIBLE LED SOLUTION.
11. REPLACE THE EXISTING EXTERIOR FIXTURE WITH THE NEW ONES SHOWN. REUSE EXISTING CIRCUIT. MODIFY CONDUIT AS NEEDED FOR MOUNTING. ADJUST ANGLE OF FIXTURE ACCORDINGLY.

GENERAL ELECTRICAL CONSTRUCTION NOTES (APPLIES TO ALL ELECTRICAL DRAWINGS & DETAILS):

1. SEAL ALL FIRE RATED WALL & CEILING PENETRATIONS.
2. COORDINATE LOCATIONS OF LIGHT FIXTURES WITH ALL PIPING, DUCTWORK, AND EQUIPMENT. MOUNT LIGHT FIXTURES TO ALLOW THE GREATEST POSSIBLE HEADROOM.
3. UNLESS OTHERWISE NOTED OR DETAILED, INSTALL ALL CONDUCTORS IN CONDUIT.
4. ALL WORK SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST ACCEPTED EDITION OF THE NATIONAL ELECTRICAL CODE AND ALL STATE AND LOCAL CODES.
5. PROVIDE EQUIPMENT GROUNDING CONDUCTORS IN EVERY POWER AND LIGHTING CONDUIT, ONE GROUNDING CONDUCTOR FOR EACH CIRCUIT.
6. ALL LIGHTING AND POWER CONDUCTORS SHALL BE 12 AWG MINIMUM.
7. MINIMUM CONDUIT SIZE SHALL BE 3/4" INTERNAL DIAMETER.
8. MC (METAL CLAD) CABLE SHALL NOT BE USED ON THIS PROJECT.
9. CONTRACTOR SHALL TRANSITION FROM PVC CONDUIT TO GALVANIZED RIGID METALLIC CONDUIT WHEN TURNING UP FROM BELOW A CONCRETE SLAB OR FROM BELOW GRADE TO ABOVE GRADE, WEATHER INDOORS OR OUTDOORS, BY INSTALLING A GALVANIZED METALLIC NINETY DEGREE ELBOW AND THEN CONTINUING ABOVE SLAB OR GRADE UTILIZING GALVANIZED RIGID METAL CONDUIT. THIS APPLIES TO ALL RACEWAYS FOR ALL SYSTEMS INCLUDING VOICE/DATA, UTILITY POWER AND/OR EMERGENCY POWER, LIGHTING, & COMMUNICATIONS SYSTEMS.
10. CONNECT ALL NEW EXIT LIGHTS AND EMERGENCY LIGHT UNITS TO THE LOCAL LIGHTING CIRCUIT AHEAD OF ANY SWITCHES OR OCCUPANCY SENSORS.



PROPOSED ARMORY LIGHTING PLAN

SCALE 1/8" = 1'-0"

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ADAM LACH, RA, DIRECTOR

RENOVATE ARMORY- WATERFORD

DEPARTMENT OF MILITARY AND VETERANS AFFAIRS
WATERFORD, MICHIGAN

DESIGNED	MLM
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APPROVED	XLM

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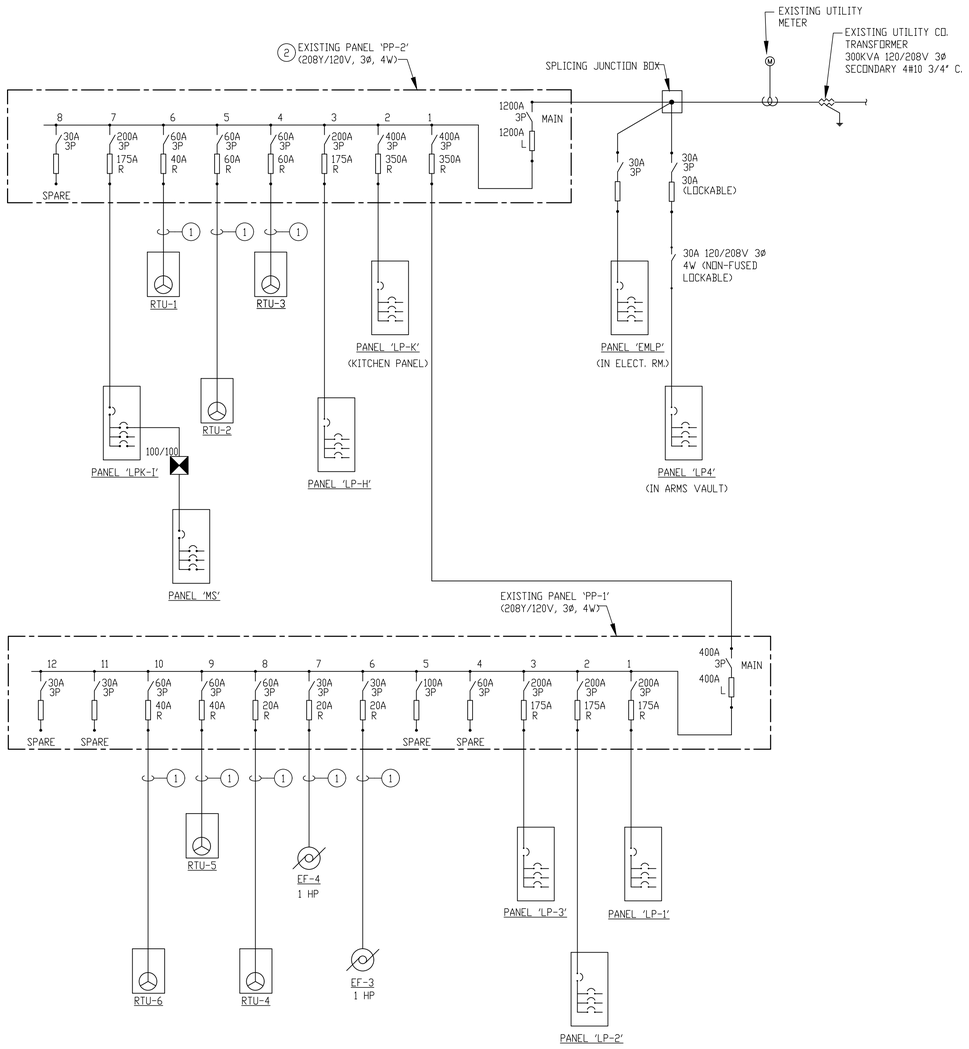
SHEET E3

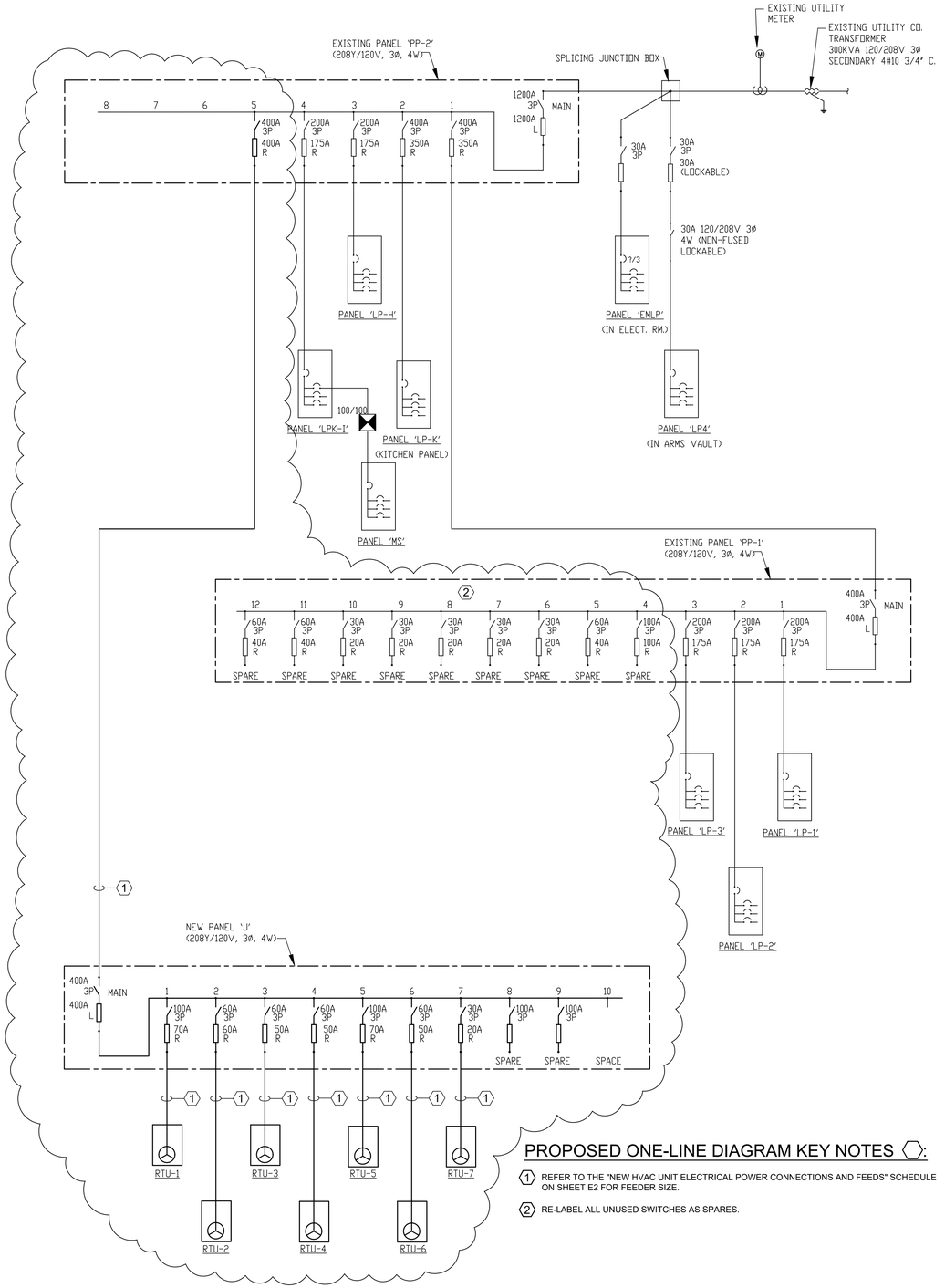


EXISTING ONE-LINE DIAGRAM

208Y/120VAC, 3ø, 4W

EXISTING ONE-LINE DIAGRAM KEY NOTES ◯:

1. DISCONNECT THIS FEEDER AND REMOVE.
2. REFER TO THE PROPOSED POWER PLAN KEY NOTES, NOTE #2 ON SHEET E2 FOR PP-2 WORK TO BE CARRIED OUT IN THIS CONTRACT.



PROPOSED ONE-LINE DIAGRAM

208Y/120VAC, 3ø, 4W

PROPOSED ONE-LINE DIAGRAM KEY NOTES ⬡:

1. REFER TO THE "NEW HVAC UNIT ELECTRICAL POWER CONNECTIONS AND FEEDS" SCHEDULE ON SHEET E2 FOR FEEDER SIZE.
2. RE-LABEL ALL UNUSED SWITCHES AS SPARES.

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WATERFORD, MICHIGAN

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DESIGNED	MLM
DRAWN	MLM
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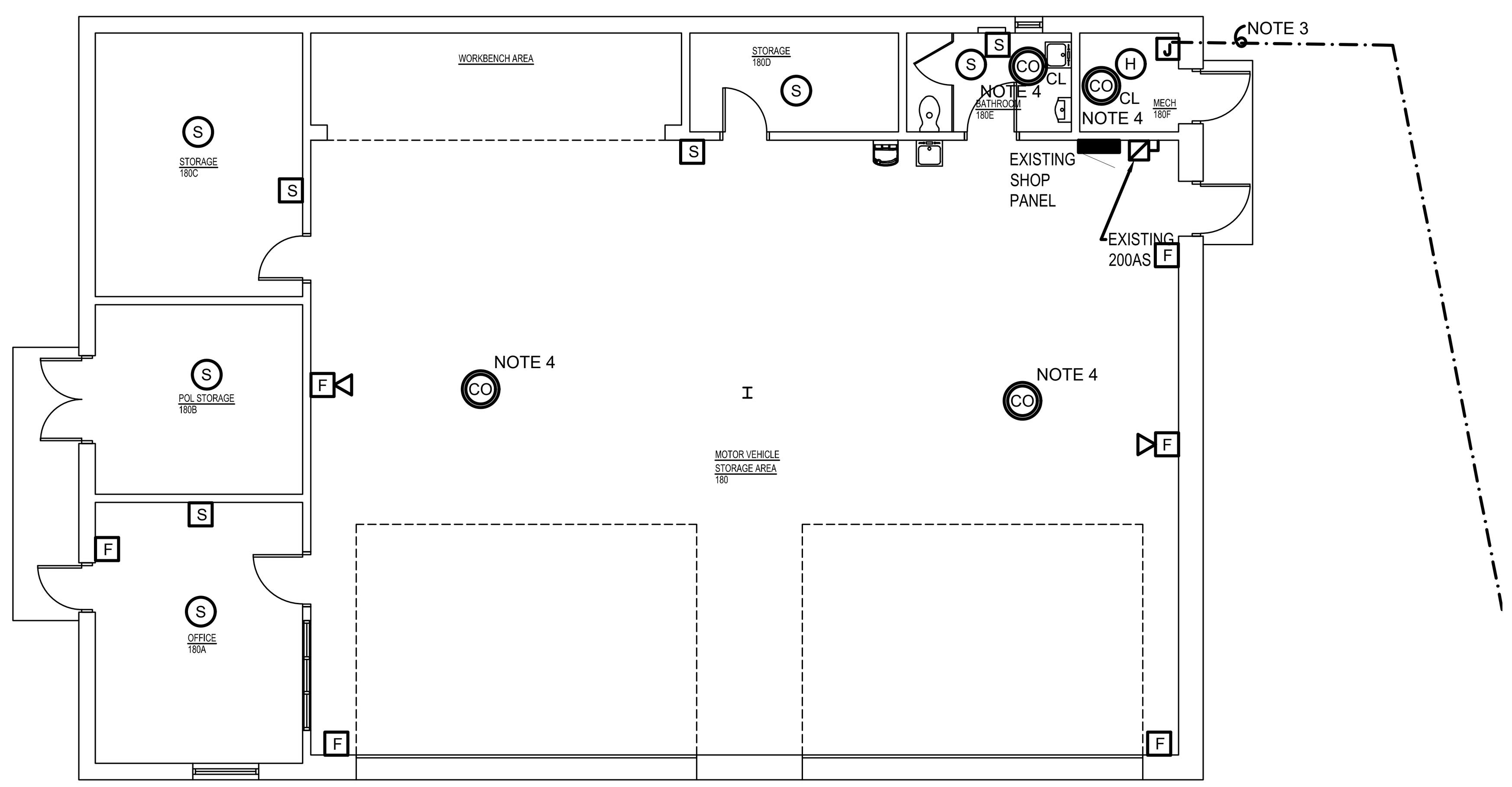


VEHICLE MAINTENANCE BUILDING PROPOSED FIRE ALARM PLAN

SCALE 1/8" = 1'-0"

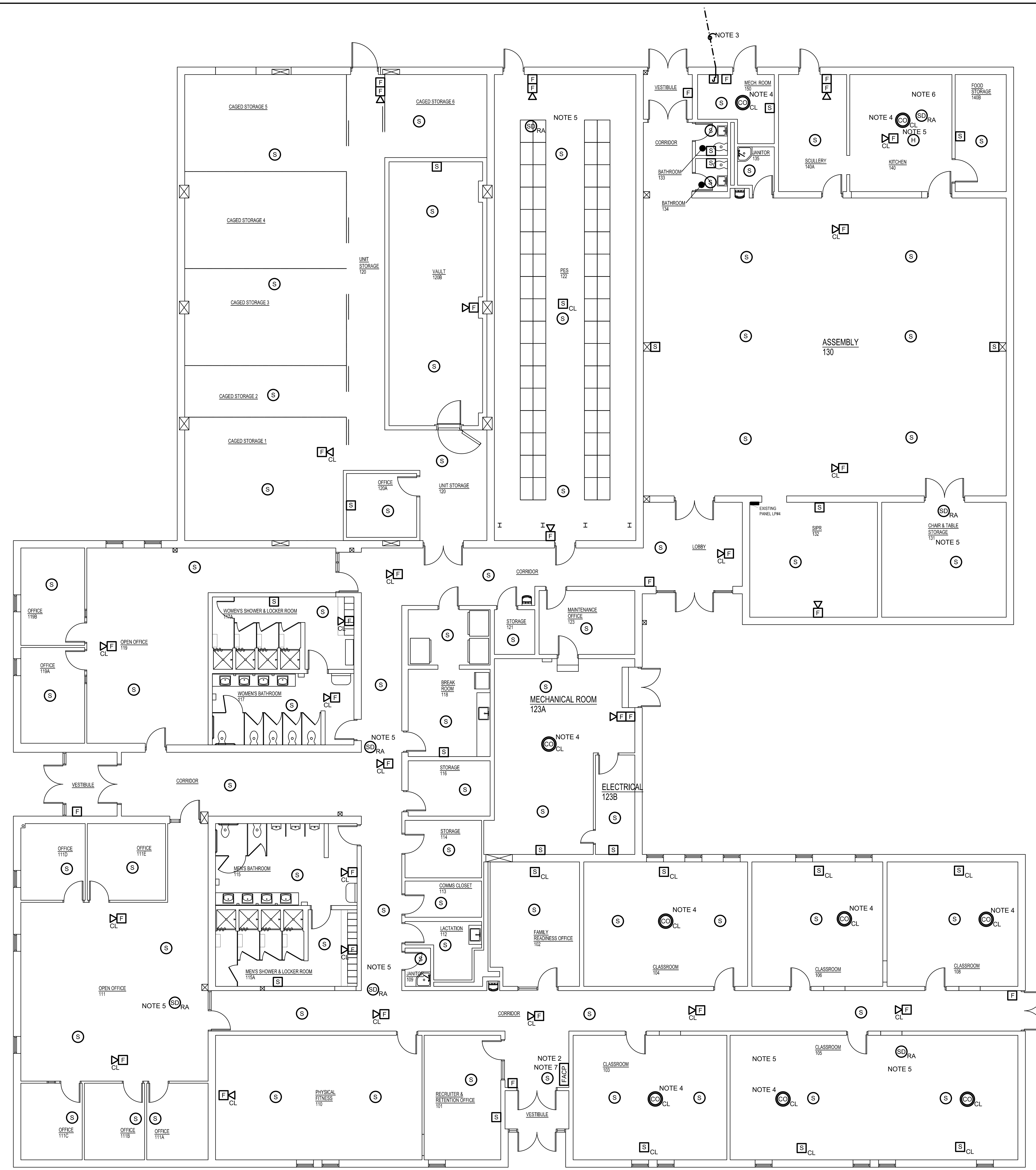
KNOW WHAT'S BELOW.
CALL BEFORE YOU DIG.

PROPOSED FIRE ALARM PLAN NOTES:

1. REMOVE THE EXISTING FIRE ALARM SYSTEM IN ITS ENTIRETY.
2. INSTALL A COMPLETELY NEW ADDRESSABLE FIRE ALARM SYSTEM. LOCATE THE NEW FIRE ALARM CONTROL PANEL IN THE SAME LOCATION AS THE EXISTING/REMOVED FIRE ALARM CONTROL PANEL. REFER TO THE FIRE ALARM SPECIFICATION FOR ADDITIONAL REQUIREMENTS.
3. PROVIDE AND INSTALL TWO 1" RIGID METAL CONDUIT RACEWAYS UNDERGROUND FROM THE ARMORIES REAR (NORTH) MECHANICAL ROOM TO THE VEHICLE MAINTENANCE SHOP AND INTO THE LOCATION INDICATED. PULL THE NECESSARY CABLES THROUGH THESE CONDUITS TO CONNECT THE VEHICLE MAINTENANCE SHOP TO THE ARMORIES NEW FIRE ALARM CONTROL PANEL.
4. PLEASE NOTE THE ADDITION OF CARBON MONOXIDE DETECTORS AND THEIR CONNECTION TO THE FIRE ALARM SYSTEM. THESE ARE PART OF THIS CONTRACT.
5. FOR THE SEVEN (7) NEW ROOF TOP UNITS, CONNECT THEIR INTEGRAL DUCT SMOKE DETECTORS TO THE NEW FIRE ALARM SYSTEM.
6. CONNECT THE EXISTING KITCHEN VENTILATION SYSTEM'S FIRE SUPPRESSION ALARM TO THE NEW FIRE ALARM SYSTEM.
7. CONNECT NEW FIRE ALARM PANEL TO FIRE ALARM MONITORING COMMUNICATOR USING PRUDENTIAL ALARM.

FIRE ALARM LEGEND

- S — SMOKE DETECTOR, CEILING MOUNTED
- SD RA — DUCT TYPE SMOKE DETECTOR, RETURN DUCT
- H — HEAT DETECTOR, CEILING MOUNTED
- FIRE ALARM (FA) HORN/STROBE - WALL MOUNT
- FA MANUAL PULL STATION W/FIRE HORN/STROBE ABOVE
- CL — FIRE ALARM HORN/STROBE - CEILING MOUNT
- F — FIRE ALARM MANUAL PULL STATION
- S — FIRE ALARM STROBE ONLY - WALL MOUNT
- S CL — FIRE ALARM STROBE ONLY - CEILING MOUNT
- FIRE ALARM HORN ONLY
- FACP — FIRE ALARM CONTROL PANEL
- ARAP — FIRE ALARM REMOTE ANNUNCIATOR PANEL
- FIRE ALARM/WATER RISER TAMPER SWITCH
- FIRE ALARM/WATER RISER FLOW SWITCH
- CO CL — CARBON MONOXIDE DETECTOR, CEILING MOUNTED



PROPOSED FIRE ALARM PLAN

SCALE 1/8" = 1'-0"

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SHEET
E5

HAND HOLE SCHEDULE

MARK	DESCRIPTION	BOX MANUFACTURER & CATALOG NUMBER	COVER MANUFACTURER & CATALOG NUMBER	REMARKS	NOTES
HH-A	PRECAST POLYMER CONCRETE ENCLOSURE NOMINAL INTERIOR DIMENSIONS: 30"W x 48"L x 48" DEEP	QUAZITE #PG3048BA48 ANSI TIER: 22	QUAZITE #PG3048HH21 ANSI TIER: 22	COVER SHALL HAVE "FIBER OPTICS" LOGO	1
HH-B	PRECAST POLYMER CONCRETE ENCLOSURE NOMINAL INTERIOR DIMENSIONS: 11"W x 18"L x 18" DEEP	QUAZITE #PG1118BA18 ANSI TIER: 22	QUAZITE #PG1118HH29 ANSI TIER: 22	COVER SHALL HAVE "LIGHTING" LOGO	1

HAND HOLE SCHEDULE NOTES:
1. CONTRACTOR MAY SUBSTITUTE HANDHOLES BY OTHER MANUFACTURERS IF EQUAL IN ALL RESPECTS. SUBMIT SHOP DRAWING FOR ALL SUBSTITUTIONS.

MINIMUM BURIAL DEPTHS BELOW GRADE*

PRIMARY ELECTRICAL	SECONDARY ELECTRICAL (INCLUDING GROUNDING)	TELEPHONE	VIDEO OR SECURITY	FIBER OPTIC
40"	36"	30"	30"	30"

*FOR ALL ELECTRICAL & COMMUNICATIONS SYSTEMS, THESE MEASUREMENTS ARE BELOW FINISHED GRADE.

LIGHTING FIXTURE SCHEDULE

MARK	DESCRIPTION	MANUFACTURER & CAT. NO.	LAMPS	MOUNTING TYPE	REMARKS	NOTES
A	LED 2X4 TROFFER	H.E. WILLIAMS, INC. #HETLG-S24-L57-850-FP-(L49)-DRV-UNV	W/UNIT 5000K	GRID MOUNT	120V OPERATION	1,2
B	LED 2X4 TROFFER	H.E. WILLIAMS, INC. #HETLG-S24-L57-850-FP-(L60)-DRV-UNV	W/UNIT 5000K	GRID MOUNT	120V OPERATION	1,2
C	LED 2X4 TROFFER	H.E. WILLIAMS, INC. #HETLG-S24-L57-850-FP-(L45)-DRV-UNV	W/UNIT 5000K	GRID MOUNT	120V OPERATION	1,2
D	LED 2X4 TROFFER	H.E. WILLIAMS, INC. #HETLG-S24-L93-850-FP-(L75)-DRV-UNV	W/UNIT 5000K	GRID MOUNT	120V OPERATION	1,2
E	EMERGENCY LIGHTING 2-HEAD UNIT	H.E. WILLIAMS, INC. #EMER/CP/AD,I/LED-WHT-D	W/UNIT	SURFACE MOUNT	120V OPERATION AND BATTERY BACK-UP	1,2
E2	EMERGENCY LIGHTING 2-HEAD DAMP LOCATION UNIT	H.E. WILLIAMS, INC. #EMER/LED-WHT-OPTIONS-SDT-RC-D-DRHL-WHT-SDT	W/UNIT	SURFACE MOUNT	120V OPERATION AND BATTERY BACK-UP AND REMOTE HEAD LIGHT	1
F	LED 2X4 TROFFER	H.E. WILLIAMS, INC. #HETLG-S24-L93-850-FA-(L85)-DRV-UNV	W/UNIT 5000K	GRID MOUNT	120V OPERATION	1,2
G	LED 2X4 TROFFER	H.E. WILLIAMS, INC. #HETLG-S24-L93-850-FA-(L85)-DIM-UNV	W/UNIT 5000K	GRID MOUNT	120V OPERATION	1,2
H1	LED COMPACT MODULAR HIGH BAY	H.E. WILLIAMS, INC. #GH-2-L120-850-FA-(L119)-GC2/Y18/10-DIM-UNV	W/UNIT 5000K 11,949 LUMENS	CABLE & BEAM CLAMP MOUNT	120V OPERATION	1,2
H2	LED COMPACT MODULAR HIGH BAY	H.E. WILLIAMS, INC. #GH-2-L240-850-FA-(L210)-GC2/Y18/10-DIM-UNV	W/UNIT 5000K 21,132 LUMENS	CABLE & BEAM CLAMP MOUNT	120V OPERATION	1,2
J	LED 2X2 FLANGE MOUNT, WET LOCATION RATED	H.E. WILLIAMS, INC. #MCTF-22-L34-850-FAFG12125-(L25)-DRV-UNV	W/UNIT 5000K	FLANGE MOUNT TO HARD PAN CEILING	120V OPERATION	1,2
K	LED SURFACE MOUNT WRAPAROUND	H.E. WILLIAMS, INC. #18-4-L90-940-AF-(L50)-DIM-UNV	W/UNIT 4000K	SURFACE MOUNT	120V OPERATION	
L	LED SURFACE MOUNT WRAPAROUND (NOT USED)	H.E. WILLIAMS, INC. #39-4-L30-950-A-(L290)-DIM-UNV	W/UNIT 5000K	SURFACE MOUNT	120V OPERATION	1,2
M	LED SURFACE MOUNT WRAPAROUND	H.E. WILLIAMS, INC. #76R-4-L72-950-(L61)-DIM-UNV	W/UNIT 5000K	CHAIN OR CABLE WITH BEAM CLAMP	120V OPERATION	1,2
N	LED SURFACE WALL MOUNT UP/DOWN	H.E. WILLIAMS, INC. #WMA-4-L40-830-AF-(L30)-DRV-UNV	W/UNIT 3000K	WALL MOUNT	120V OPERATION	1,2
P	LED 2X4 TROFFER	H.E. WILLIAMS, INC. #HETLG-S24-L57-830-FP-(L45)-DRV-UNV	W/UNIT 3000K	GRID MOUNT	120V OPERATION	1,2
R	EXTERIOR 16' POLE MOUNTED LED FIXTURE	FIXTURE: BEACON/CURRENT LIGHTING #VP-1-160L-50-5K7-4W-UNV-AAU-DBT / POLE: BEACON/CURRENT LIGHTING #RSA-B-S-16-40-B-1-B3-BLS	W/UNIT 5000K	16' POLE MOUNT	120V OPERATION	1,2
S	INTERIOR HI-BAY LED FIXTURE W/OCC SENSOR	ORION/HARRIS LIGHTING "STARTLINE GEN 2" #HHSL2-436L-UNV-850-LAFG-LD40-6BDTL201	W/UNIT 5000K	CHAIN OR PENDENT MOUNT	120V OPERATION, ORDER WITH NEW CORD	1,2
T	EXTERIOR WALL PACK WITH EMERGENCY BACKUP	H. E. WILLIAMS, INC. #VWPH-L30/750-T3-DBZ-SDGL-EM/10WC	W/UNIT 5000K	WALL MOUNT	120V OPERATION AND BATTERY BACK-UP	1,2
U	EXTERIOR BUILDING MOUNTED LED FIXTURE	FIXTURE: BEACON/CURRENT LIGHTING #VP-1-160L-50-5K7-4W-UNV-WA-DBT	W/UNIT 5000K	MOUNT TO EX. CONDUIT/WALL	120V OPERATION	1,2
V	EXTERIOR SOLAR LED ADJUSTABLE FLAGPOLE SPOTLIGHT	LUMEGEN FLG_ST_SF813 - LG-FLG-CRE-6	W/UNIT 6500K	MOUNT TO EX. FLAGPOLE	BATTERY OPERATION	
X	LED EXIT LIGHT, GREEN LETTERS WITH EMERGENCY BATTERY PACK	H.E. WILLIAMS, INC. #EXIT-G-EM-WHT-OPTIONS-SDT-D	LED W/UNIT	SURFACE MOUNT	120V OPERATION, BATTERY BACK-UP	1
X2	LED EXIT LIGHT, GREEN LETTERS WITH EMERGENCY BATTERY PACK & TWO EMERGENCY LIGHTS	H.E. WILLIAMS, INC. #EXIT/EM/LED-G-EM-WHT-OPTIONS-SDT-D	LED W/UNIT	SURFACE MOUNT	120V OPERATION, BATTERY BACK-UP	1
X3	LED EXIT LIGHT, GREEN LETTERS WITH EMERGENCY BATTERY WITH TWO LIGHT HEADS & DAMP RATED	H.E. WILLIAMS, INC. #EXIT/EM/W-SF-G-WHT-OPTIONS-SDT-D	LED W/UNIT	SURFACE MOUNT	120V OPERATION, BATTERY BACK-UP	1
X4	LED REMOTE INTERIOR EMERGENCY LIGHT UNIT, TWO HEAD UNIT	H.E. WILLIAMS, INC. #DRHL	LED W/UNIT	SURFACE MOUNT	120V OPERATION, BATTERY BACK-UP	1

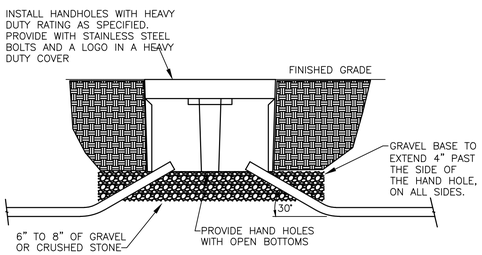
LIGHTING FIXTURE SCHEDULE NOTES:
1. CONTRACTOR MAY SUBSTITUTE LIGHTING FIXTURES BY OTHER MANUFACTURERS IF EQUAL IN ALL RESPECTS. SUBMIT SHOP DRAWING FOR ALL SUBSTITUTIONS.
2. PROVIDE INTERNAL SLOW BLOW FUSING IN EACH FIXTURE.

OCCUPANCY SENSOR SCHEDULE

MARK	MOUNTING LOCATION HEIGHT	MANUFACTURER & CAT. NO.	SENSOR TECHNOLOGY	ANGLE OF COVERAGE	NOTES
OC1	CEILING	THE WATT STOPPER #UT-300-3	ULTRASONIC	2200 SQ. FT.; 360°	1,2,3
OC2	CEILING	THE WATT STOPPER DT-300	COMBINATION PASSIVE INFRARED AND ULTRASONIC	1000 SQ. FT. 36 FT. 360°	1,2,3
OC3	CEILING - CORRIDOR	THE WATT STOPPER CX-100	PIR	2000 SQ. FT.; 55 FT. 180	1,2
OC4	CEILING AREA - LOW BAY	THE WATT STOPPER HBP-100	PASSIVE INFRARED	300 SQ. FT.; 180°	2,4
OC5	WALL - SWITCH BOX	THE WATT STOPPER #RT-100-W	PROGRAMMABLE TIMER	N/A	1,2

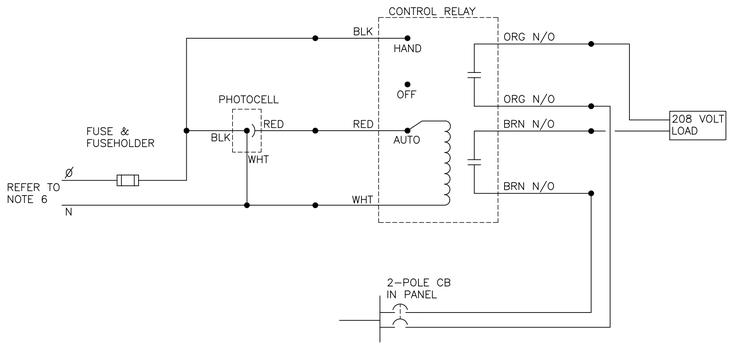
OCCUPANCY SENSOR SCHEDULE NOTES

1. PROVIDE WITH LIGHTING FIXTURE CIRCUIT CONTROL RELAY AND LOW-VOLTAGE POWER SUPPLY.
2. CONTRACTOR MAY SUBSTITUTE OCCUPANCY SENSORS BY OTHER MANUFACTURER IF EQUAL IN ALL RESPECTS. REFER TO SPECIFICATION SECTION 260923, LIGHTING CONTROL DEVICES.
3. PROVIDE WITH AN ISOLATED RELAY DRY CONTACT OUTPUT FOR INTERFACE WITH LOCAL EXHAUST FAN.
4. SET TO TIME OFF AT 20 MINUTES.



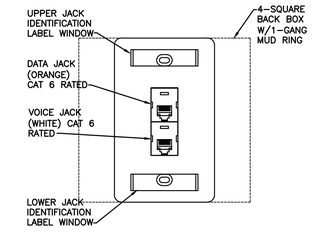
HAND HOLE INSTALLATION DETAIL

NO SCALE



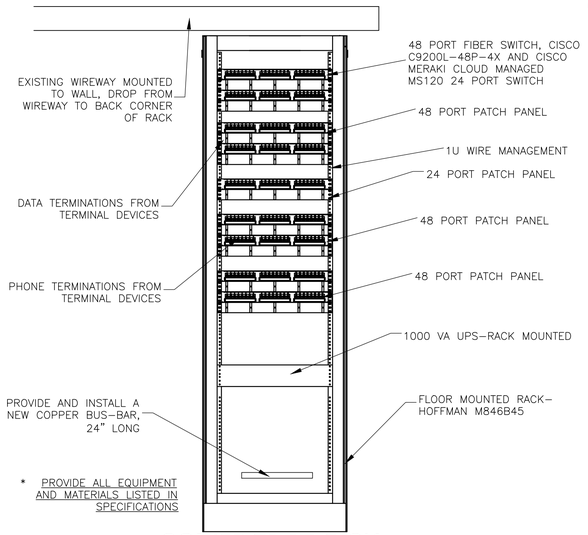
LIGHTING CONTROL CIRCUIT (LCC) DETAIL

LIGHTING CONTROL CIRCUIT (LCC) DETAIL NOTES:
A. COMPONENTS
1. PHOTOCELL: INTERMATIC #K4221C.
2. FUSE: BUSSMAN FNM/FNQ SERIES, SIZE AS REQUIRED FOR LOAD.
3. FUSE HOLDER: BUSSMAN BM SERIES, MOUNT IN CONTACTOR ENCLOSURE.
4. CONTROL RELAY: FUNCTIONAL DEVICES (www.FunctionalDevices.com, 800.888.5538) RIB #RIB01P30-S.
5. OVERALL ENCLOSURE-STEEL 4-11/16" JUNCTION BOX WITH BLANK COVER AND ID LABEL INDICATING "EXTERIOR LIGHTING CONTROL". MOUNT OVERALL ENCLOSURE 60" AFF IN LOCATION INDICATED ON THE PLANS.
6. UTILIZE OPEN CIRCUIT IN VEHICLE MAINTENANCE BUILDING'S PANEL.



DATA FACEPLATE DETAIL

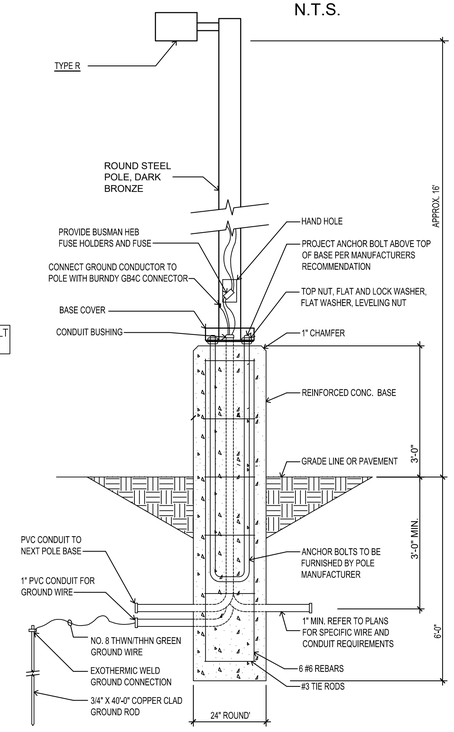
NOT TO SCALE



* PROVIDE ALL EQUIPMENT AND MATERIALS LISTED IN SPECIFICATIONS

COMM/DATA RACK

N.T.S.



LIGHTING POLE WITH BASE

N.T.S.

ELECTRICAL LEGEND

	GRID OR SURFACE MOUNTED LIGHTING FIXTURE, LETTER INDICATES TYPE.
	WALL OR CEILING MOUNTED LIGHTING FIXTURE
EX	"EX" INDICATES EXISTING-TO-REMAIN LIGHTING FIXTURE
	WALL OR CEILING MOUNTED LIGHTING FIXTURE, LETTER INDICATES TYPE.
	CEILING MOUNTED FIXTURE
	WALL MOUNTED FIXTURE
	WALL MOUNTED EMERGENCY LIGHT FIXTURE, PROVIDE NUMBER OF HEADS INDICATED IN LIGHTING FIXTURE SCHEDULE
	CEILING MOUNTED EMERGENCY LIGHT FIXTURE, PROVIDE NUMBER OF HEADS INDICATED IN LIGHTING FIXTURE SCHEDULE
	WALL/CEILING MOUNTED EXIT LIGHTING UNIT
	SINGLE-HEAD EMERGENCY LIGHT FIXTURE REMOTE CONNECTED TO UNIT INDICATED WITH #10AWG WIRE.
	DOUBLE-HEAD EMERGENCY LIGHT FIXTURE REMOTE CONNECTED TO UNIT INDICATED WITH #10AWG WIRE.
$	SINGLE POLE WALL SWITCH
$2	DOUBLE POLE WALL SWITCH
$3	3-WAY WALL SWITCH
$4	4-WAY WALL SWITCH
$T	THERMAL OVERLOAD SWITCH SUCH AS THE BUSSMAN SSU OR SSW UNIT. PROVIDE WITH BACK BOX AND CORRECTLY SIZED FUSE.
	EXISTING-TO-REMAIN 120V DUPLEX RECEPTACLE
	NEW 120V DUPLEX RECEPTACLE, CONNECT TO CIRCUIT INDICATED (MAY BE GFCI)
	TWO 120V DUPLEX RECEPTACLES IN A DOUBLE GANG BOX
	120V SIMPLEX RECEPTACLE
	120V GFI RECEPTACLE
WP	120V GFI RECEPTACLE WITH WEATHER PROOF COVER
	240V 2P RECEPTACLE
	SPECIAL RECEPTACLE OR CONNECTION - COORDINATE WITH EQUIPMENT SUPPLIER
EWC	ELECTRIC WATER COOLER GFI RECEPTACLE - MOUNT HORIZONTALLY BELOW THE WATER COOLER ON WALL. COORDINATE HEIGHT OF RECEPTACLE WITH PLUMBING TRADES.
CR	ROOF JOIST MOUNTED CABLE REEL. MOUNT SIMPLEX RECEPTACLE NEXT TO REEL UNIT, CONNECT TO CIRCUIT INDICATED.
	CABLE ANTENNA SYSTEM OUTLET (CATV) AND 120V RECEPTACLE MOUNTED AT HEIGHT INDICATED OR 20" BELOW CEILING. CONNECT RECEPTACLE TO CIRCUIT INDICATED.
	DATA JACKS (DATA DROP) LOCATION IN A DOUBLE GANG BOX WITH A SINGLE-GANG MUD RING, & TWO (2) CABLES TOTAL.
	PANELBOARD
	JUNCTION BOX
	MOTOR
	NON-FUSIBLE TYPE DISCONNECT SWITCH, SIZE AS NOTED
	FUSIBLE TYPE DISCONNECT SWITCH, SIZE AS NOTED
	COMBINATION MOTOR STARTER/DISCONNECT SWITCH, FUSIBLE TYPE. SIZE AS NOTED.
	MANUAL MOTOR STARTER WITH PROVISIONS FOR LOCKING OUT HANDLE
	MANUAL MOTOR STARTER WITH LOCK-OUT PROVISIONS AND ASSOCIATED CONTROL RELAY
	PUSH BUTTON STATION
	LIGHTING CONTACTOR AND ASSOCIATED EQUIPMENT
	OCCUPANCY SENSOR (x = REFER TO SENSOR SCHEDULE) ARROWS INDICATE SENSOR DIRECTION FOR DIRECTIONAL UNITS
	CIRCUIT CONNECTION & HOME RUN
ACT	ABOVE COUNTER TOP - MOUNT ITEM ABOVE COUNTER TOP BACKSPLASH. COORDINATE WITH GENERAL TRADES.
AFF	ABOVE FINISHED FLOOR
xxAS	AMPERE SWITCH, xx DENOTES SIZE
xxAF	AMPERE FUSE, xx DENOTES SIZE
SPA	SPEAKER - PUBLIC ADDRESS SYSTEM
HSPA	HORN SPEAKER - PUBLIC ADDRESS SYSTEM

FIRE ALARM LEGEND

	SMOKE DETECTOR, CEILING MOUNTED
DA	DUCT TYPE SMOKE DETECTOR, RETURN DUCT
	HEAT DETECTOR, CEILING MOUNTED
	FIRE ALARM (FA) HORN/STROBE - WALL MOUNT
	FA MANUAL PULL STATION W/FIRE HORN/STROBE ABOVE
	FIRE ALARM HORN/STROBE - CEILING MOUNT
	FIRE ALARM MANUAL PULL STATION
	FIRE ALARM STROBE ONLY - WALL MOUNT
CL	FIRE ALARM STROBE ONLY - CEILING MOUNT
	FIRE ALARM HORN ONLY
FACP	FIRE ALARM CONTROL PANEL
FARA	FIRE ALARM REMOTE ANNUNCIATOR PANEL
	FIRE ALARM/WATER FLOW TAMPER SWITCH

KNOW WHAT'S BELOW. CALL BEFORE YOU DIG.

STATE OF MICHIGAN
DEPARTMENT OF TECHNOLOGY, MANAGEMENT AND BUDGET
FACILITIES AND BUSINESS SERVICES BUREAU
DESIGN AND CONSTRUCTION DIVISION
ADAM LACH, RA, DIRECTOR

RENOVATE ARMORY- WATERFORD

DEPARTMENT OF MILITARY AND VETERANS AFFAIRS
WATERFORD, MICHIGAN

DESIGNED	MZM
DRAWN	MZM
CHECKED	BAB
APPROVED	KSM
DATE	10 OCT 2025 / 05 JUL 2025
ISSUED FOR	PRELIMINARY / CONSTRUCTION / FINAL RECORD
IDENTIFICATION NO.	
PROJECT	269002304
INDEX CODE	1390
SHEET	E6

EXISTING MAIN DISTRIBUTION PANEL PP-2

VOLTAGE RATING - 208/120V, 3-PH, 4 WIRE — BUSS AMPS - 1200A
LOCATION - ELECT ROOM #111 — MOUNTING - SURFACE
MAIN CIRCUIT BREAKER - 1200A
GE QMR

CKT. NO.	BRKR A	BRKR P	DESCRIPTION	LOAD VA	AØ VA	BØ VA	CØ VA
1					33470		
3	100	3	PANEL PP-1	96680		33970	
5							29240
7					12960		
9	200	3	PANEL LP-H	39260		12960	
11							13340
13					31342		
15	200	3	**NEW PANEL LP-J**	94026		31342	
17							31342
2					4190		
4	200	3	PANEL LPK-I	8330		3600	
6							540
8					33990		
10	30	3	LPK	96920		31430	
12							31500
14							
16	200	3	SPARE	0			
18							
			TOTALS (VA)	335216	#####	#####	#####
			TOTALS (A)	930	966	944	883

NOTES:
1. NEW CIRCUIT BREAKERS SHALL BE 65kAIC RATED.

EXISTING MAIN DISTRIBUTION PANEL PP-2

Noncontinuous Loads

Receptacle Load:	52060	VA Total	
FIRST 10,000 VA at 100% =		10,000	VA
REMAINDER OF VA at 50% =		21,030	VA
Subtotal		31,030	VA
Motor Load:	600	VA at 125% =	750 VA
Kitchen Load:	83240	VA at 65% =	54,106 VA
HVAC Load:	#####	VA at 100% =	145,596 VA
Other Loads:	12400	VA at 50% =	6,200 VA
Subtotal		206,652	VA

Continuous Loads

General Lighting	41320	VA at 125% =	51,650 VA
Total		289,332	VA

803 Amps at 208V, 3Ø

Service Calculations Based Upon the Following:
NEC Article 230.42.
Lighting: Per NEC 220.12 AND Table 220.12; NEC 220.42; and calculated at 125% as continuous load.
Fixed Electric Heating: per NEC 220.51 and calculated at 125% as continuous load per NEC 424.3(B).
Receptacles: Per NEC 220.43.
Mechanical / Motors: Per NEC 220.50, 430.24 - 430.26, 430.62, Table 430.250 and NEC 440.6, based upon the equipment served.
Elevators / Intermittent Duty Motors: Per NEC 430.22 and Table 430.22(E).
Noncoincident Loads: Per NEC 220.60 Where Electric Heating is the Largest Load when compared to Air Conditioning.
Commercial Kitchen Equipment: Per NEC 220.56 and Table 220.56.

EXISTING DISTRIBUTION PANEL PP-1

VOLTAGE RATING - 208/120V, 3-PH, 4 WIRE — BUSS AMPS - 400A
LOCATION - MECH ROOM #110 — MOUNTING - SURFACE
MAIN CIRCUIT BREAKER - 400A
SQUARE D QMB STYLE PANELBOARD

CKT. NO.	BRKR A	BRKR P	DESCRIPTION	LOAD VA	AØ VA	BØ VA	CØ VA
1					10440		
3	200	3	PANEL LP-1	30780		10990	
5							9350
7					10500		
9	200	3	PANEL LP-2	28110		10100	
11							7510
13							
15	100	3	SPARE				
17							
2					12530		
4	200	3	PANEL LP-3	37790		12880	
6							12380
8							
10	60	3	SPARE				
12							
14							
16	30	3	SPARE				
18							
			TOTALS (VA)	96680	33470	33970	29240
			TOTALS (A)	268	279	283	244

NOTES:
1. NEW CIRCUIT BREAKERS SHALL BE 65kAIC RATED.

EXISTING DISTRIBUTION PANEL PP-1

Noncontinuous Loads

Receptacle Load:	49360	VA Total	
FIRST 10,000 VA at 100% =		10,000	VA
REMAINDER OF VA at 50% =		19,680	VA
Subtotal		29,680	VA
Motor Load:	600	VA at 125% =	750 VA
Kitchen Load:	0	VA at 65% =	- VA
HVAC Load:	5000	VA at 100% =	5,000 VA
Other Loads:	8000	VA at 50% =	4,000 VA
Subtotal		9,750	VA

Continuous Loads

General Lighting	33720	VA at 125% =	42,150 VA
Total		81,580	VA

226 Amps at 208V, 3Ø

EXISTING PANEL LPH

VOLTAGE RATING - 208Y/120V, 3-PH, 4 WIRE — BUSS AMPS -200A
LOCATION - ELECTRICAL ROOM 111 — MOUNTING - SURFACE
MAIN CIRCUIT BREAKER -
SQUARE D NQOD STYLE PANELBOARD

CKT. NO.	BRKR A	BRKR P	DESCRIPTION	LOAD VA	AØ VA	BØ VA	CØ VA
1				1600	1600		
3	20	3	EWH-1 VESTIBLE A	1600		1600	
5				1600			1600
7				1600	1600		
9	20	3	EWH-3 VESTIBLE B	1600		1600	
11				1600			1600
13				1600	1600		
15	20	3	EWH-2 CORRIDOR A	1600		1600	
17				1600			1600
19				1600	1600		
21	20	3	EWH-4 LOBBY 112	1600		1600	
23				1600			1600
25	20	1	**EF-1**	180	180		
27	20	1	**EF-2**	180		180	
29	20	1	**EF-3**	180			180
31	20	1	**EF-4**	180	180		
33	20	1	**EF-5**	180		180	
35	20	1	**HAND DRYER 4**	1100			1100
37	20	1	**DDC ENCLOSURE 1**	500	500		
39	20	1	**DDC ENCLOSURE 2**	500		500	
41	20	1	**SPARE**	0			0
2				1600	1600		
4	20	3	EWH-7 VESTIBULE C	1600		1600	
6				1600			1600
8				1600	1600		
10	20	3	EWH-8 MECHANICAL 150	1600		1600	
12				1600			1600
14	20	1	**RECEPTACLE CAGE STORAGE 1, 2, 3**	540	540		
16	20	1	**RECEPTACLE CAGE STORAGE 4, 5, 6**	540		540	
18	20	1	**INSTANTANEOUS WATER HEATER 1**	180			180
20	20	1	**INSTANTANEOUS WATER HEATER 2**	180	180		
22	20	1	**INSTANTANEOUS WATER HEATER 3**	180		180	
24	20	1	**INSTANTANEOUS WATER HEATER 4**	180			180
26	20	1	**INSTANTANEOUS WATER HEATER 5**	180	180		
28	20	1	**INSTANTANEOUS WATER HEATER 6**	180		180	
30	20	1	**HAND DRYER 1**	1100			1100
32	20	1	**HAND DRYER 2**	1100	1100		
34	20	1	**HAND DRYER 3**	1100		1100	
36	20	1	**DDC ENCLOSURE 3**	500			500
38	20	1	**DDC ENCLOSURE 4**	500	500		
40	20	1	**DDC ENCLOSURE 5**	500		500	
42	20	1	**DDC ENCLOSURE 6**	500			500
			TOTALS (VA)		39260	12960	12960	13340
			TOTALS (A)		109	108	108	111

NOTES:
1. NEW CIRCUIT BREAKERS (INDICATED IN BOLD) SHALL BE 10kAIC RATED.

EXISTING PANEL LPK-1

VOLTAGE RATING - 208Y/120V, 3-PH, 4 WIRE — BUSS AMPS - 225A
LOCATION - ASSEMBLY ROOM 107 — MOUNTING - SURFACE
MAIN CIRCUIT BREAKER -
SQUARE D NQOD STYLE PANELBOARD

CKT. NO.	BRKR A	BRKR P	DESCRIPTION	LOAD VA	AØ VA	BØ VA	CØ VA
1	20	1	LIGHTING RM 109	1250	1250		
3	20	1	LIGHTING RM 109	1250		1250	
5	20	1	SPARE	0			0
7	30	1	4 RECEPTACLES	720	720		
9	20	1	SPARE	0		0	
11	20	1	SPARE	0			0
13	20	1	2 RECEPTACLES	360	360		
15	20	1	1 RECEPTACLES	180		180	
17	20	1	1 RECEPTACLES	180			180
19	20	1	1 RECEPTACLES	180	180		
21	20	1	CH #5	250		250	
23	20	1	SPARE	0			0
25			SPACE	100	100		
27			SPACE	0		0	
29			SPACE	0			0
31				0	0		
33				0		0	
35				0			0
37				0	0		
39				0		0	
41				0			0
2	30	1	LIGHTING	500	500		
4	20	1	LIGHTING	1200		1200	
6	20	1	SPARE	0			0
8	20	1	6 RECEPTACLES	1080	1080		
10	20	1	4 RECEPTACLES	720		720	
12	20	1	2 RECEPTACLES	360			360
14	20	1	SPARE	0	0		
16	20	1	SPARE	0		0	
18	20	1	SPARE	0			0
20	20	1	SPARE	0	0		
22			SPACE	0		0	
24			SPACE	0			0
26				0	0		
28				0		0	
30				0			0
32				0	0		
34				0		0	
36				0			0
38				0	0		
40				0		0	
42				0			0
			TOTALS (VA)		8330	4190	3600	540
			TOTALS (A)		23	35	30	5

NOTES:
1. NEW CIRCUIT BREAKERS (INDICATED IN BOLD) SHALL BE 10kAIC RATED.

EXISTING PANEL LPK

VOLTAGE RATING - 208Y/120V, 3-PH, 4 WIRE — BUSS AMPS -400A
LOCATION - FOOD STORAGE ROOM 106 — MOUNTING - SURFACE
MAIN CIRCUIT BREAKER -
SQUARE D NQOD STYLE PANELBOARD

CKT. NO.	BRKR A	BRKR P	DESCRIPTION	LOAD VA	AØ VA	BØ VA	CØ VA
1	20	1	OVERHEAD LIGHTING	1240	1240		
3	20	1	FAN RE3 AND MU3	820		820	
5	20	1	FAN RE2 AND MU2	820			820
7				2960	2960		
9	50	3	GARBAGE DISPOSAL #10	2960		2960	
11				2960			2960
13				7660	7660		
15	80	3	DISWASHER #9	7660		7660	
17				7660			7660
19				1200	1200		
21	20	3	MU-1	1200		1200	
23				1200			1200
25				3000	3000		
27	40	3	BOOSTER HEATER #18	3000		3000	
29				3000			3000
31				5000	5000		
33	60	3	BOOSTER HEATER #19	5000		5000	
35				5000			5000
37			HOOD EXHAUST SYSTEM	2600	2600		
39	30	3	RE#1	2600		2600	
41				2600			2600
2	30	1	MIXING MACHINE #29	1370	1370		
4	20	1	FROZEN FOOD CAB #34	1130		1130	
6	20	1	VEGETABLE PEELER #27	1170			1170
8	20	1	ICE MACHINE #35	1840	1840		
10	20	1	COLD FOOD #20 CAN OPENER #32	1170		1170	
12	20	1	SPARE	0			0
14	20	1	SPARE	0	0		
16	20	1	REFRIGERATOR #37	790		790	
18	20	1	3/4 HP	790			790
20	20	1	CONTROL CIRCUIT	200	200		
22	20		HOOD FIRE SYSTEM #41	100		100	
24	20		RE #4 AND DAMPER	900			900
26	25		PEELER DISPOSER #27	1920	1920		
28				2600		2600	
30	30	3	COFFEE MAKER #4	2600			2600
32				2600	2600		
34	20		SPARE	0		0	
36	20		IGNITION CIRCUITS 21, 23, 24, 25	400			400
38				2400	2400		
40	30	3	RE-7 AND MU-4	2400		2400	
42				2400			2400
			TOTALS (VA)		96920	33990	31430	31500
			TOTALS (A)		269	283	262	263

NOTES:
1. NEW CIRCUIT BREAKERS (INDICATED IN BOLD) SHALL BE 10kAIC RATED.

NEW PANEL LP-J

VOLTAGE RATING - 208Y/120V, 3-PH, 4 WIRE — BUSS AMPS -400A
LOCATION - ELECTRICAL ROOM 110 — MOUNTING - SURFACE
MAIN SWITCH SIZE - 3P/400A
SQUARE D QMB STYLE PANELBOARD

CKT. NO.	BRKR A	BRKR P	DESCRIPTION	LOAD VA	AØ VA	BØ VA	CØ VA
1				5644	5644		
3	100	3	RTU-1	5644		5644	
5				5644			5644
7				3963	3963		
9	60	3	RTU-3	3963		3963	
11				3963			3963
13				6244	6244		
15	100	3	RTU-5	6244		6244	
17				6244			6244
19				1801	1801		
21	30	3	RTU-7	1801		1801	
23				1801			1801
25				0	0		
27	60	3	SPARE	0		0	
29				0			0
31				0	0		
33	100	3	SPARE	0		0	
35				0			0
37				0	0		
39				0		0	
41				0			0
2				5884	5884		
4	60	3	RTU-2	5884		5884	
6				5884			5884
8				3963	3963		
10	60	3	RTU-4	3963		3963	
12				3963			3963
14				3843	3843		
16	60	3	RTU-6	3843		3843	
18				3843			3843
20				0	0		
22	30	3	SPARE	0		0	
24				0			0
26				0	0		
28	60	3	SPARE	0		0	
30				0			0
32				0	0		
34	100	3	SPARE	0		0	
36				0			0
38				0	0		
40				0		0	
42				0			0
			TOTALS (VA)	94026	31342	31342	31342
			TOTALS (A)	261	261	261	261

PANEL NOTES:
1. PROVIDE WITH INSULATED GROUNDING BAR.
2. PROVIDE WITH SOLID NEUTRAL BAR.
3. PROVIDE PANEL ENCLOSURE WITH A DOOR WITHIN DOOR TRIM COVER OPTION.

EXISTING PANEL LP1

VOLTAGE RATING - 208Y/120V, 3-PH, 4 WIRE — BUSS AMPS - 100A
LOCATION - CORRIDOR — MOUNTING - SURFACE
MAIN CIRCUIT BREAKER -
SQUARE D NQOD STYLE PANELBOARD

CKT. NO.	BRKR A	BRKR P	DESCRIPTION	LOAD VA	AØ VA	BØ VA	CØ VA
1	20	1	LIGHTING	800	800		
3	20	1	LIGHTING	600		600	
5	20	1	LIGHTING	500			500
7	30	1	LIGHTING	1400	1400		
9	20	1	LIGHTING	1400		1400	
11	20	1	LIGHTING	1200			1200
13	20	1	LIGHTING	800	800		
15	20	1	GAS FIRED HEATERS	350		350	
17	20	1	EXISTING EF2	600			600
19	20	1	4 RECEPTACLES	720	720		
21	20	1	2 RECEPTACLES	360		360	
23	20	1	5 RECEPTACLES	900			900
25	20	1	HV-1, HV-2 CONTROL	100	100		
27	20	1	5 RECEPTACLES	900		900	
29	20	1	5 RECEPTACLES	900			900
31	20	1	5 RECEPTACLES	900	900		
33	20	1	5 RECEPTACLES	900		900	
35	20	1	5 RECEPTACLES	900			900
37	20	1	SPARE	0	0		
39	20	1	SPARE	0		0	
41	20	1	SPARE	0			0
2	30	1	LIGHTING	1200	1200		
4	20	1	LIGHTING	1200		1200	
6	20	1	LIGHTING EXTERIOR	450			450
8	20	1	LIGHTING RIFLE RANGE	1000	1000		
10	20	1	LIGHTING RIFLE RANGE	1000		1000	
12	20	1	LIGHTING RM 110	600			600
14	20	1	WATER COOLER	200	200		
16	20	1	6 RECEPTACLES	1080		1080	
18	20	1	5 RECEPTACLES	900			900
20	20	1	SCRUBBER	1600	1600		
22	20	1	SCRUBBER	1600		1600	
24	20	1	LIGHTING RM 109	1200			1200
26	20	1	LIGHTING RM 109	1200	1200		
28	20	1	POWER SUPPLY	1000		1000	
30	20	2	TELEPHONE SERVICE	1000			1000
32				100	100		
34	20	1	PUMP P2	600		600	
36	20	1	POWER RIFLE RANGE CONTROL PANEL	200			200
38	20	1		420	420		
40	20	1	SPARE	0		0	
42	30	1	SPARE	0			0
			TOTALS (VA)		30780	10440	10990	9350
			TOTALS (A)		85	87	92	78

NOTES:
1. NEW CIRCUIT BREAKERS (INDICATED IN BOLD) SHALL BE 10kAIC RATED.

EXISTING PANEL LP2

VOLTAGE RATING - 208Y/120V, 3-PH, 4 WIRE — BUSS AMPS - 200A
LOCATION - CORRIDOR — MOUNTING - SURFACE
MAIN CIRCUIT BREAKER -
SQUARE D NQOD STYLE PANELBOARD

CKT. NO.	BRKR A	BRKR P	DESCRIPTION	LOAD VA	AØ VA	BØ VA	CØ VA
1	20	1	LIGHTING	900	900		
3	20	1	LIGHTING	400		400	
5	20	1	LIGHTING	600			600
7	30	1	LIGHTING	1120	1120		
9	20	1	BOILER CONTROL	200		200	
11	20	1	SPARE	0			0
13	20	1	SPARE	0	0		
15	20	1	SPARE	0		0	
17	20	1	CH #3	250			250
19	20	1	6 RECEPTACLES	1080	1080		
21	20	1	6 RECEPTACLES	1080		1080	
23	20	1	6 RECEPTACLES	1080			1080
25	20	1	**OFFICE 120A RECEPTACLES**	720	720		
27	20	1	4 RECEPTACLES	720		720	
29	20	1	4 RECEPTACLES	720			720
31	20	1	SPARE	0	0		
33	20	1	SPARE	0		0	
35	20	1	2 RECEPTACLES UNIT HEATER	360			360
37	20	1	4 RECEPTACLES	720	720		
39	20	1	REPRODUCTION	1000		1000	
41	20	1	SPARE	0			0
2	30	1	LIGHTING	800	800		
4	20	1	LIGHTING	1200		1200	
6	20	1	LIGHTING	1200			1200
8	20	1	BOILER ROOM	300	300		
10	20	1	BOILER ROOM	300		300	
12	20	1	SPARE	0			0
14	20	1	6 RECEPTACLES	1080	1080		
16	20	1	5 RECEPTACLES	900		900	
18	20	1	5 RECEPTACLES	900			900
20	20	1	5 RECEPTACLES	900	900		
22	20	1	3 RECEPTACLES	540		540	
24	20	1	3 RECEPTACLES	1200			1200
26	20	1	4 RECEPTACLES	720	720		
28	20	1	6 RECEPTACLES	1080		1080	
30	20	2	SPARE	0			0
32	20		6 RECEPTACLES	1080	1080		
34	20	1	SCRUBBER	1600		1600	
36	20	1	HOT WATER HEATER	1200			1200
38	20	1	6 RECEPTACLES	1080	1080		
40	20	1	6 RECEPTACLES	1080		1080	
42	30	1	SPARE	0			0
			TOTALS (VA)		28110	10500	10100	7510
			TOTALS (A)		78	88	84	63

NOTES:
1. NEW CIRCUIT BREAKERS (INDICATED IN BOLD) SHALL BE 10kAIC RATED.

EXISTING PANEL LP3

VOLTAGE RATING - 208Y/120V, 3-PH, 4 WIRE — BUSS AMPS - 200A
LOCATION - CORRIDOR — MOUNTING - SURFACE
MAIN CIRCUIT BREAKER -
SQUARE D NQOD STYLE PANELBOARD

CKT. NO.	BRKR A	BRKR P	DESCRIPTION	LOAD VA	AØ VA	BØ VA	CØ VA
1	20	1	LIGHTING	1200	1200		
3	20	1	LIGHTING	1200		1200	
5	20	1	LIGHTING	800			800
7	30	1	LIGHTING	600	600		
9	20	1	LIGHTING	1600		1600	
11	20	1	LIGHTING	1200			1200
13	20	1	6 RECEPTACLES	1200	1200		
15	20	1	SCRUBBER	1800		1800	
17	20	1	SCRUBBER	1800			1800
19	20	1	4 RECEPTACLES	720	720		
21	20	1	4 RECEPTACLES	720		720	
23	20	1	4 RECEPTACLES	720			720
25	20	1	SPARE	0	0		
27	20	1	6 RECEPTACLES	720		720	
29	20	1	PLUG HOLD	1200			1200
31	20	1	PLUG HOLD	1200	1200		
33	20	1	7 RECEPTACLES	1260		1260	
35	20	1	CH #2	400			400
37	20	1	SPARE	0	0		
39	20	1	SPARE	0		0	
41	20	1	SPARE	0			0
2	30	1	LIGHTING	1200	1200		
4	20	1	LIGHTING	1200		1200	
6	20	1	LIGHTING	1200			1200
8	20	1	LIGHTING	1550	1550		
10	20	1	EF-4	600		600	
12	20	1	EWC	1000			1000
14	20	1	PLUGMOLD	1200	1200		
16	20	1	6 RECEPTACLES	1080		1080	
18	20	1	6 RECEPTACLES	1080			1080
20	20	1	4 RECEPTACLES	720	720		
22	20	1	5 RECEPTACLES	900		900	
24	20	1	5 RECEPTACLES	900			900
26	20	1	4 RECEPTACLES	720	720		
28	20	1	6 RECEPTACLES	1080		1080	
30	20	1	6 RECEPTACLES	1080			1080
32	20	1	**BREAK ROOM 118 RECEPTACLES**	720	720		
34	20	1	**BREAK ROOM 118 RECEPTACLES**	360		360	
36	20	1	**BREAK ROOM 118 RECEPTACLES**	1000			1000
38	20	1	**BREAK ROOM 118 RECEPTACLES**	1500	1500		
40	20	1	**LACTACTION ROOM 112 RECEPTACLES**	360		360	
42	30	1	SPARE	0			0
			TOTALS (VA)		37790	12530	12880	12380
			TOTALS (A)		105	104	107	103

NOTES:
1. NEW CIRCUIT BREAKERS (INDICATED IN BOLD) SHALL BE 10kAIC RATED.

STATE OF MICHIGAN
DEPARTMENT OF TECHNOLOGY, MANAGEMENT AND BUDGET
FACILITIES ADMINISTRATION & BUSINESS SERVICES
DESIGN AND CONSTRUCTION DIVISION
ADAM LACH, RA, DIRECTOR

RENOVATE ARMORY- WATERFORD

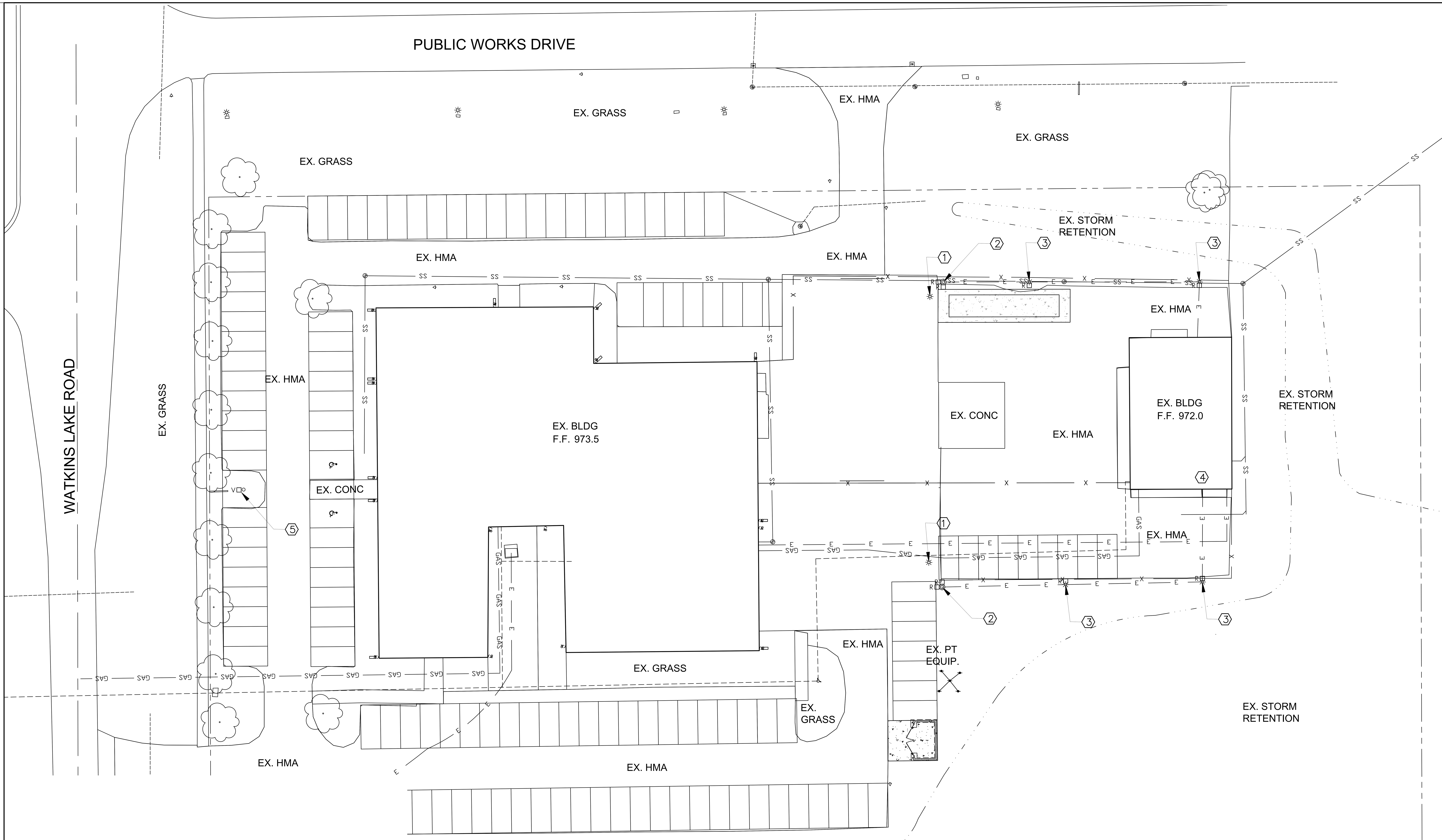
DEPARTMENT OF MILITARY AND VETERANS AFFAIRS
WATERFORD, MICHIGAN

DESIGNED	ALL
DRAWN	ALL
CHECKED	B.A.B.
APPROVED	ALL

ISSUED FOR	DATE
PRELIMINARY ■	10 OCT 2025
CONSTRUCTION ■	05 JUL 2025
FINAL RECORD □	

IDENTIFICATION NO.	
PROJECT	269002304 3
INDEX CODE	1390

SHEET E6.1



ELECTRICAL DEMOLITION AND NEW PLAN NOTES: ⟨#⟩

⟨1⟩ REMOVE THE EXISTING POLE AND LIGHTING FIXTURE SAVING THE POLE FOR REINSTALLATION IN THE NEW LOCATION INDICATED. THIS HAPPENS IN TWO (2) LOCATIONS.

⟨2⟩ REMOVE THE CIRCUIT BETWEEN THE POLE TO BE REMOVED AND THE NEXT POLE. HAND DIG BETWEEN THESE POLES, ROLL–UP THE BRANCH CIRCUIT AND REINSTALL THE BRANCH CIRCUIT ONCE THE NEW POLE BASE IS INSTALLED, SEE DETAIL ON SHEET E6. REINSTALL THE EXISTING LIGHTING POLE AT EACH LOCATION AFTER INSTALLING THE NEW POLE–TOP LIGHTING FIXTURES; TWO NEW FIXTURES FOR EACH POLE RELOCATED. NEW POLE–TOP LIGHTING FIXTURES ARE REQUIRED FOR ALL SIX (6) POLES INDICATED.

⟨3⟩ REMOVE THE LIGHTING FIXTURE FROM EXISTING POLE. INSTALL NEW FIXTURE INDICATED ON SHEET E6.

⟨4⟩ ADD LCC TO EXISTING EXTERIOR SITE LIGHTING CIRCUIT. SEE SHEET E6 FOR DETAILS.

⟨5⟩ INSTALL NEW FIXTURE INDICATED ON SHEET E6. ADJUST PER MANUFACTURERS RECOMMENDATIONS.

N

PARTIAL SITE ELECTRICAL DEMOLITION AND NEW WORK PLAN

SCALE 1" = 20'-0"

0 20' 40'
SCALE: 1" = 20'

811
KNOW WHAT'S BELOW.
CALL BEFORE YOU
DIG.

STATE OF MICHIGAN
DEPARTMENT OF TECHNOLOGY, MANAGEMENT AND BUDGET
FACILITIES AND BUSINESS SERVICES ADMINISTRATION
DESIGN AND CONSTRUCTION DIVISION
ADAM LACH, RA, DIRECTOR

RENOVATE ARMORY– WATERFORD
DEPARTMENT OF MILITARY AND VETERANS AFFAIRS
WATERFORD, MICHIGAN

DESIGNED	MLM	
DRAWN	MLM	
CHECKED	BAB	
APPROVED	KLM	

ISSUED FOR		DATE
PRELIMINARY	■	10 OCT 2025
CONSTRUCTION	■	05 JUL 2025
FINAL RECORD	□	

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PROJECT	2690023043
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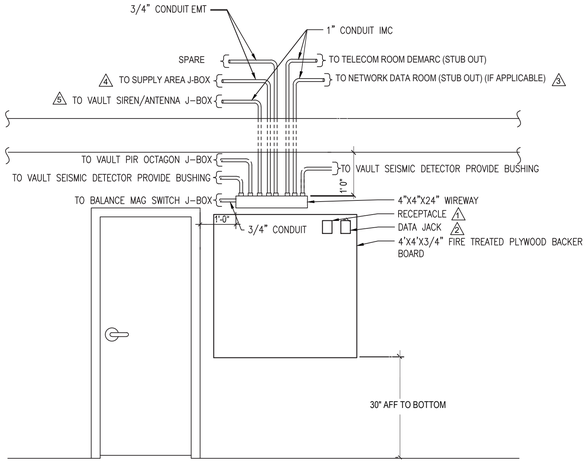
SHEET
E7



VAULT EQUIPMENT ARRANGEMENT AND ELEVATION (SECURE SIDE)

NOTES:

A SECURITY DEVICES AND ASSOCIATED WIRING SHALL BE PROVIDED BY DMVA IDS PERSONNEL OR TECHINICIAN.

B PROVIDE SECURITY SYSTEM CONDUIT, REACEWAYS, AND BUSHING TERMINATIONS AT APPROXIMATE LOCATIONS INDICATED. COORDINATE EXACT LOCATIONS AND REQUIREMENTS WITH DMVA IDS PERSONNEL OR TECHINICIAN. TELECOMMUNICATIONS, POWER, AND OTHER SYSTEMS BY ELECTRICAL CONTRACTOR.

CONDUIT SPECIFIC TO VAULT IDS

C DATA TRANSMISSION LINES THAT ARE LOCATED INSIDE THE PROTECTED AREA SHALL BE INSTALLED IN ELECTRIC METAL TUBING (EMT). THE EMT COUPLING AND CONNECTORS WILL BE COMPRESSION TYPE.

E WHEN DATA TRANSIMISSION LINES EXIT THE PROTECTED AREA BUT ARE STILL LOCATED INTERIOR TO THE BUILDING, THEY SHALL BE ENCLOSED IN INTERMEDIATE METAL CONDUIT (IMC). THE IMC COUPLING AND CONNECTORS WILL BE THREADED TYPE.

F WHEN TRANSMISSION LINES EXIT THE BUILDING, THEY WILL BE ENCLOSED IN RIGID METAL CONDUIT. THE RIGID COUPLING AND CONNECTORS WILL BE THREADED TYPE.

KEY NOTES:

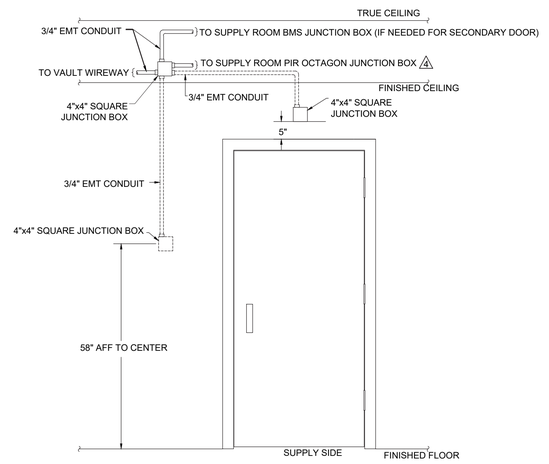
1 DEDICATED 120 VAC/20A CIRCUIT CONNECTED TO EMERGENCY POWER CIRCUIT (IF AVAILABLE). AC POWER PROVIDED BY STATE. PRINT PANEL AND CIRCUIT BREAKER INFORMATION ON COVER.

2 DATE JACK (GENERAL) SHALL NOT ROUTE THROUGH IDS WIREWAY.

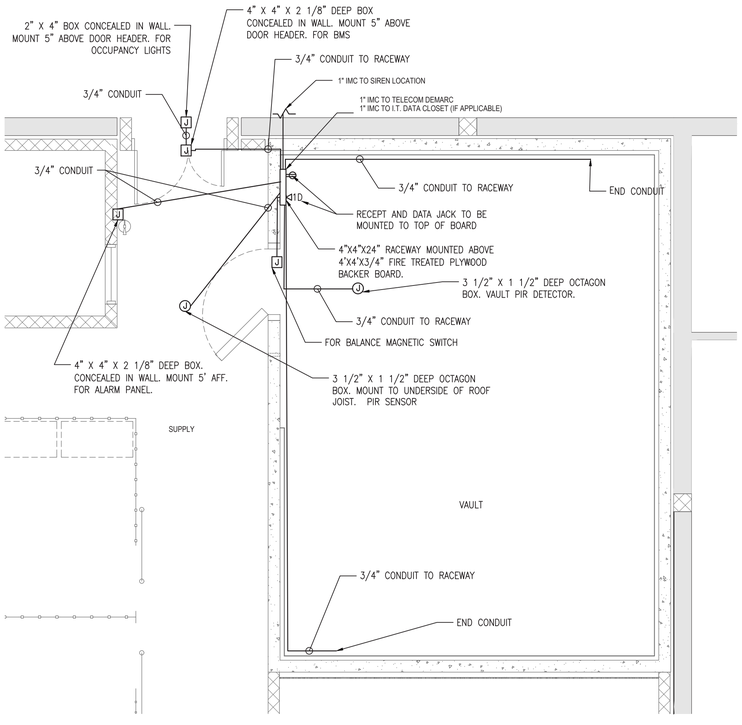
3 CONDUIT SHOULD ONLY BE ADDED IF DEMARK AND NETWORK SWITCH ARE NOT COLLOCATED.

4 CONDUIT TO SUPPLY AREA JUNCTION BOX MAY ROUTE THROUGH MOTION/PROXIMITY SENSOR OCTAGON BOX LOCATED IN SUPPLY AREA TO REDUCE CONDUIT INFRASTRUCTURE

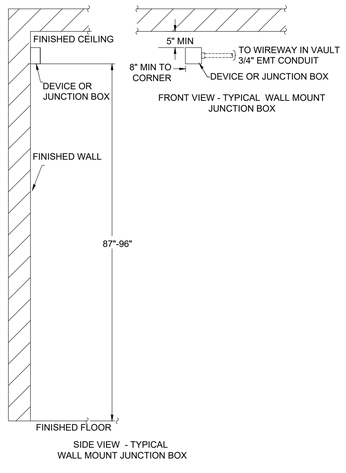
5 CONDUIT TO SIREN / ANTENNA JUNCTION BOX ABOVE VAULT. PIPING TO CONTINUE TO SIREN LOCATION COODINATED WITH DMVA IDS PERSONNEL OR TECHNICIAN.

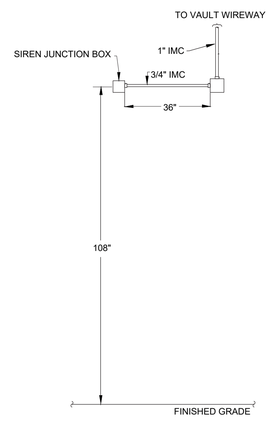


SUPPLY EQUIPMENT ARRANGEMENT AND ELEVATION



TYPICAL VAULT LAYOUT OVERVIEW





PROPOSED VAULT SECURITY PLANS, ELEVATIONS, AND DETAILS

NO SCALE

STATE OF MICHIGAN
DEPARTMENT OF TECHNOLOGY, MANAGEMENT, AND BUDGET
FACILITIES BUSINESS SERVICES ADMINISTRATION
DESIGN AND CONSTRUCTION DIVISION
ADAM LACH, RA, DIRECTOR

RENOVATE ARMORY- WATERFORD
DEPARTMENT OF MILITARY AND VETERANS AFFAIRS
WATERFORD, MICHIGAN

DESIGNED	MLL
DRAWN	MLL
CHECKED	BAB
APPROVED	KSL

DATE	
10 OCT 2025	
05 JUL 2025	

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PRELIMINARY	■
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SHEET E8