#13 - ELECTRICAL

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STATE OF CONNECTICUT BRIAN P. MCKENNA No. 21640 LICENSED PROFESSIONAL ENGINEER

Brian P. McKenna
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REV.	DATE	DESCRIPTION	SHEET NO.
		REVISIONS	

FILENAME:

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STATE OF CONNECTICUT BRIAN P. MCKENNA No. 21640 LICENSED PROFESSIONAL ENGINEER

PROJECT TITLE:

WATERBURY BUS MAINTENANCE FACILITY REPLACEMENT

ADDRESS:

FROST BRIDGE ROAD
WATERTOWN, CONNECTICUT 06787

DRAWING TITLE:

ELECTRICAL DRAWING LIST

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ABBREVIATIONS

A	AMPERE
AC	ALTERNATING CURRENT
AF	AMPERE FRAME
AFF/G	ABOVE FINISHED FLOOR/GRADE
AIC	AMPERE INTERRUPTING CAPACITY
AT	AMPERE TRIP
AUX	AUXILIARY
A/V	AUDIBLE/VISUAL
AWG	AMERICAN WIRE GAUGE
BB	BACKBOARD
BCW	BARE COPPER WIRE
BATT	BATTERY
BTM	BOTTOM
BKR	BREAKER
BLDG	BUILDING
C	CONDUIT
CAT	CATEGORY
CAB	CABINET
CATV	COMMUNITY ACCESS TELEVISION (CABLE TELEVISION)
CB	CIRCUIT BREAKER
CIR	CIRCUIT
CKT	CIRCUIT
℄	CENTER LINE
CL&P	CONNECTICUT LIGHT AND POWER
CO	COMPANY
COMM	COMMUNICATIONS
CONN	CONNECTION, CONNECT
CPS	CAMERA POWER SUPPLY
CUH	CABINET UNIT HEATER
CT	CURRENT TRANSFORMER
CU	COPPER
CWA	CONSTANT WATTAGE AUTOTRANSFORMER
△	DELTA CONNECTION
D	DEEP
DB	DECIBEL
DET	DETECTOR
DIA	DIAMETER
DISC	DISCONNECT
DIST	DISTRIBUTION
DIV	DIVISION
DN	DOWN
DPW	DEPARTMENT OF PUBLIC WORKS
DVI	DIGITAL VISUAL INTERFACE
DWG	DRAWING
EA	EACH
EBH	ELECTRIC BASEBOARD HEATER
ECB	ENCLOSED CIRCUIT BREAKER
EF	EXHAUST FAN
EL	ELEVATION
ELEC	ELECTRIC(AL)
EM	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
ENCL	ENCLOSURE
EQUIP	EQUIPMENT
ETR	EXISTING TO REMAIN
EWC	ELECTRIC WATER COOLER
EXT	EXTERIOR
F	FUSE(D)
FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
FC	FOOTCANDLES
FIXT	FIXTURE
FLR	FLOOR
FLUOR	FLUORESCENT
FT	FOOT (FEET)
FUT	FUTURE
G, GND	GROUND
GALV	GALVANIZE(D)
GC	GENERAL CONTRACTOR
GFI	GROUND FAULT CIRCUIT INTERRUPTER
GFP	GROUND FAULT PROTECTION
HD	HEAVY DUTY
HGT	HEIGHT
HID	HIGH INTENSITY DISCHARGE
HO	HIGH OUTPUT
HOA	HAND-OFF-AUTOMATIC
HP	HORSEPOWER
HPF	HIGH POWER FACTOR
HPS	HIGH PRESSURE SODIUM
HTR	HEATER
HV	HIGH VOLTAGE
HW	HOT WATER
ID	IDENTIFY, IDENTIFICATION
INCAND	INCANDESCENT
JB	JUNCTION BOX
J.C.	JANITOR CLOSET
JCT	JUNCTION
KCM/Kcmil	THOUSAND CIRCULAR MILS
KCU	KEYBOARD CONTROL UNIT
KVA	KILO VOLT AMPERE
KW	KILOWATT
LGT	LIGHTING
LT(S)	LIGHT(S)
LED	LIGHT EMITTING DIODE
L	LOUVER
MAX	MAXIMUM
MCB	MAIN CIRCUIT BREAKER
MC	METAL CLAD CABLE
MFR	MANUFACTURER
MH	METAL HALIDE
MECH	MECHANICAL
MIN	MINIMUM
ML	MOTORIZED LOUVER
MLO	MAIN LUGS ONLY
MT	MOUNT
MTD	MOUNTED
MTR	MOTOR
N	NORTH
NEC	NATIONAL ELECTRICAL CODE
NF	NON-FUSED
NL	NIGHT LIGHT
No/ #	NUMBER
N.C.	NORMALLY CLOSED
N.O.	NORMALLY OPEN
NSM	NETWORK STORAGE MANAGER
OC	OVER COUNTER
OFTR	OPTICAL FIBER TERMINATION RACK
OL	OVERLOAD
P	POLE(S)
PA	PUBLIC ADDRESS
PNL	PANEL
POE	POWER OVER ETHERNET
PR	PAIR
PRI	PRIMARY
PWR	POWER
Ø	PHASE
PT	PRESSURE TREATED
PTZ	PAN TILT ZOOM
REC, R	RECEPTACLE
RGS	RIGID GALVANIZED STEEL
ROR	RATE OF RISE
RM	ROOM
SEC	SECONDARY
SH	SHIELDED
SPKR	SPEAKER
SW	SWITCH
ST	SHUNT-TRIP
SPD	SURGE PROTECTION DEVICE
SM	SYSTEM MANAGER
TEMP	TEMPORARY/TEMPERATURE
T-STAT	THERMOSTAT
TB	TERMINAL BOARD
TBR	TO BE REMOVED
TYP	TYPICAL
UE	UNDERGROUND ELECTRIC
UH	UNIT HEATER
UON	UNLESS OTHERWISE NOTED
UPS-BAT	UNINTERRUPTIBLE POWER SUPPLY BATTERY
UPS	UNINTERRUPTIBLE POWER SUPPLY
USB	UNIVERSAL SERIAL BUS
UT	UNDERGROUND TELEPHONE

ABBREVIATIONS - CON'T

V	VOLT, VOLTS
VA	VOLT-AMPERES
VC	VIRTUAL CONSOLE DISPLAY
W	WATT, WIRE
W/	WITH
WG	WIRE GUARD
WP	WEATHERPROOF
WS	WORK STATION
XFMR/T	TRANSFORMER
Y	WYE CONNECTION

RACEWAYS

- CONDUIT CONCEALED IN CEILING OR WALL
- CONDUIT CONCEALED UNDERGROUND OR UNDER FLOOR SLAB
- CONDUIT EXPOSED
- GROUNDING
- CONNECTED CONDUCTORS
- CROSSING OF CONDUCTORS NOT CONNECTED
- MDP # — HOMERUN BACK TO PANEL AND CIRCUIT AS INDICATED. DASHED LINE INDICATES BELOW GROUND; #,#,# MULTIPLE CIRCUITS
- MINIMUM 3/4" CONDUIT WITH #12 AWG WIRE. WHERE LARGER WIRING IS INDICATED TO REDUCE VOLTAGE DROP, PROVIDE WIRING AS INDICATED TO THE LAST FIXTURE, DEVICE, CIRCUIT CONTINUED OR CONNECTED TO EQUIPMENT INDICATED
- CABLE TRAY

DISTRIBUTION

- DISTRIBUTION BRANCH CIRCUIT PANELBOARD; RATED AS NOTED ON DRAWINGS
- 30/3 — NON-FUSED SAFETY SWITCH; DISC. AMP. RATING/POLES
- 60/3/60 — FUSED SAFETY SWITCH; DISC. AMP. RATING/POLES/FUSE AMP. RATING
- VFD — COMBINATION MAGNETIC MOTOR STARTER; SIZE AS SHOWN ON DRAWINGS AND SCHEDULES PROVIDED AND INSTALLED BY DIV. 26. VFD - VARIABLE FREQUENCY DRIVE, PROVIDED AND INSTALLED BY DIV. 26
- T — TRANSFORMER
- HH — HANDHOLE WITH RATED COVER
- MH — MANHOLE WITH RATED COVER
- CADWELD CONNECTION
- MECHANICAL CONNECTION

LIGHTING

- OS — WALL OCCUPANCY SENSOR WITH MANUAL OFF SWITCH IN RECESSED BOX; BOX WITH COVER
- OS — LONG RANGE WALL OCCUPANCY SENSOR WITH MANUAL OFF SWITCH IN RECESSED BOX; BOX WITH COVER
- $ — SINGLE POLE SWITCH WALL - MTD. 48" AFF TO CENTER
- $3 — THREEWAY - WALL MTD. 48" AFF TO CENTER
  - -LOWER CASE a,b,c,etc. INDICATES FIXTURE CONTROL
  - D - INDICATES DIMMER TYPE
  - M - MANUAL MOTOR STARTER (FRACTIONAL HORSEPOWER) WITH ON AUXILIARY N.O./N.C. CONTACTS
  - K - KEY OPERATED
  - OC-OCCUPANCY SENSOR TYPE SWITCH
  - W-DOUBLE POLE DOUBLE THROW SWITCH
- OS — CEILING MOUNTED DUAL TECHNOLOGY, INFRARED AND ULTRASONIC OCCUPANCY SENSOR AND POWER PACKS
- # X a — LIGHTING FIXTURE. REFER TO LIGHTING FIXTURE SCHEDULE FOR TYPE, LAMP, BALLAST, POWER REQUIREMENTS, MOUNTING HEIGHT AND MANUFACTURER.
  - X-INDICATES FIXTURE TAG INDENTIFICATION
  - a,b-INDICATES BALLAST CONTROL SWITCHING
  - #-INDICATES BRANCH CIRCUIT DESIGNATION
- LIGHT FIXTURE
- SHADING INDICATES FIXTURE WITH EMERGENCY BALLAST
- EXIT LIGHT - 7'-6" AFF WHEN WALL MOUNTED
  - -SHADING INDICATES FACE
  - -ARROW INDICATES CHEVRON DIRECTION
- DOWN LIGHT
- OUTDOOR WALL PACK
- SITE LIGHTING FIXTURE AND POLE
- TC — TIME CLOCK TORK MODEL #DZS SERIES 4 CHANNEL OR EQUAL
- POST TOP SIGHT LIGHTING FIXTURE.

NOTES TO LIGHT FIXTURES

1. SEE LIGHT FIXTURE SCHEDULE ON DRAWING FOR ADDITIONAL INFORMATION.

DEVICES AND APPURTENANCES

- WP — 20 AMP DUPLEX RECEPTACLE - 18" A.F.F UON UNLESS NOTED OTHERWISE
  - GFI - PROVIDE GROUND FAULT INTERRUPTER DEVICE
  - WP - PROVIDE WEATHERRPROOF BOX AND COVER
  - 0C - 6" OVER COUNTER
  - TV - AT TV LOCATION
- 20 AMP QUAD - 2 GANG DUPLEX RECEPTACLE
- SINGLE 20 AMP RECEPTACLE
- FLOOR DUPLEX RECEPTACLE
- FLOOR QUAD RECEPTACLE
  - P - DENOTES FIRE RATED POKE-THRU WITH TEL/DATA CAPACITY
- FLOOR DUPLEX RECEPTACLE
  - C - DENOTES CEILING MOUNTED
  - F - DENOTES FLOOR MOUNTED
- TELEPHONE MOUNTED 18" A.F.F. UON
  - W - DENOTES WALL MOUNTED 60" AF.F. UON
- EQUIPMENT RECEPTACLE: SINGLE RECEPTACLE NEMA CONFIGURATION AS INDICATED.
- EMERGENCY POWER OFF PUSHBUTTON STATION
- PUSHBUTTON STATION
- CS — CONTROL SWITCH
- STANDARD COMMUNICATIONS OUTLET
  - 2-GANG BACKBOX W/ (1) 1" CONDUIT TO 6" ABOVE ACCESSIBLE CEILING.
  - 1-GANG 3-PORT FACEPLATE.
  - (3) 8P8C RJ45-TYPE CAT-6 JACKS.
  - (3) 4UPT CAT-6 CABLES TO SERVING AREA DATA RACK MOUNTED 18" A.F.F. OR ABOVE MILLWORK AS INDICATED ON DRAWINGS.
- FLOOR COMMUNICATION OUTLET WITH 1" CONDUIT TO ACCESSIBLE CEILING SPACE
- TV — CATV OUTLET
  - 1-GANG BACKBOX W/ (1) 3/4" CONDUIT TO 6" ABOVE ACCESSIBLE CEILING
  - 1-GANG F-81 BARREL CONNECTOR FACEPLATE.
  - (1) F-81 BARREL CONNECTOR TYPE F-FITTING
  - (1) RG-6 COAXIAL CABLE TO DATA RACK 'A'
- J — JUNCTION BOX, SIZE AND TYPE AS NOTED OR REQUIRED BY NEC AND APPLICATION
- SPEAKER-CEILING MOUNTED
- S — HORN TYPE PA SPEAKER-WALL MOUNTED
- VC — PUBLIC ADDRESS VOLUME CONTROL SWITCH
- C — WIRELESS CLOCK, WALL MOUNTED 12" DIA. TYPICAL
  - -WG INDICATES WIRE GUARD
- ECB — ENCLOSED CIRCUIT BREAKER
  - -ST INDICATES SHUNT TRIP
- RIH — FLUID AND FUEL MANAGEMENT SYSTEM REMOTE ISLAND HEAD. PROVIDE (2) 120V POWER CIRCUITS AND A DATA CONNECTION TO EACH LOCATION
- S — SOLENOID VALVE

POWER & INSTRUMENTS FOR ONE-LINE

- MOTOR - NUMBER DENOTES HORSEPOWER
- SAFETY UNFUSED DISCONNECT SWITCH
- BREAKER ID → M1; AMPS FRAME → 20A; NO. of POLES → 3P — CIRCUIT BREAKER
- M — MANUAL MOTOR STARTER W/ OVERLOAD
- FUSE
- M — UTILITY METER
- GROUNDING CONNECTION
- 3/4"x10' COPPER GROUND ROD
- TRANSFORMER WITH ASSOCIATED KVA, PRIMARY VOLTAGE AND SECONDARY VOLTAGE.
- XXX — BRANCH CIRCUIT PANELBOARD WITH MAIN LUGS ONLY.
- TVSS — TRANSIENT VOLTAGE SURGE SUPPRESSOR.

GENERAL

- # — INDICATES CODED NOTE NUMBER
- # — INDICATES EQUIPMENT ITEM NUMBER
- 1 / E-3 — DETAIL NUMBER / DRAWING LOCATED ON
- FXX — INDICATES FEEDER IDENTIFICATION

FIRE ALARM

- FACP — FIRE ALARM CONTROL PANEL
- F — MANUAL FIRE ALARM STATION WITH ALARM COVER (48" AFF)
- 75 F — FIRE COMBINATION SPEAKER/STROBE ALARM (NUMBER INDICATES CANDELA RATING). SPEAKER SHALL BE 75 dbA MINIMUM. APPLIANCE SHALL BE 15 CANDELA IF NOT INDICATED.
- VISUAL ALARM APPLIANCE (NUMBER INDICATES CANDELA RATING). APPLIANCE SHALL BE 15 CANDELA IF NOT INDICATED.
- S WG D — SMOKE DETECTOR
  - D - SMOKE DETECTORS DEDICATED FOR DOOR HOLDER RELEASE
  - WG- SMOKE DETECTOR WITH WIREGUARD
- D — DUCT SMOKE DETECTOR WITH SAMPLING TUBE, REMOTE INDICATOR, AUXILIARY CONTACTS AND REMOTE KEY OPERATED RESET SWITCH
  - S - SUPPLY
  - R - RETURN
- H — HEAT DETECTOR; 135° FIXED TEMPERATURE U.O.N BY SUBSCRIPT NUMBER
- R 200° — RATE COMPENSATION HEAT DETECTOR
- SV — FIRE SUPPRESSION SOLENOID RELEASE VALVE
- PS — PRESSURE SWITCH, FURNISHED AND INSTALLED BY FP CONTRACTOR
- TS — TAMPER SWITCH, FURNISHED AND INSTALLED BY FP CONTRACTOR
- FS — FLOW SWITCH, FURNISHED AND INSTALLED BY FP CONTRACTOR
- CO — COMBINATION CARBON MONOXIDE/NITROGEN DIOXIDE 24VDC WALL MOUNTED 5'-0" ABOVE FINISHED FLOOR. BRASCH MODEL GSE-CM-ND-O
- FAA — FIRE ALARM ANNUNCIATOR PANEL
- B — FIRE PROTECTION ALARM BELL CONNECTED TO CARBON MONOXIDE SENSORS
- CEILING MOUNTED VISUAL ALARM APPLIANCE (NUMBER INDICATED CANDELA RATING)

SECURITY SYSTEM

- PC — PEDESTAL MOUNTED PROX READER
- SECURITY EQUIPMENT AND SECURITY EQUIPMENT RACK. DOOR INDICATES FRONT OF EQUIPMENT RACK.
- WALL MOUNTED SECURITY EQUIPMENT RACK AND SECURITY EQUIPMENT.
- POE — POWER OVER ETHERNET SWITCH, 10/100/1000, ALL NETWORK SWITCHES SHALL BE APPROVED BY SECURITY EQUIPMENT MANUFACTURER
- ES — ETHERNET SWITCH, 10/100/1000, ALL NETWORK SWITCHES SHALL BE APPROVED BY SECURITY EQUIPMENT MANUFACTURER
- KCU — KEYBOARD CONTROL UNIT
- KB — USB KEYBOARD/MOUSE
- NSM — NETWORK STORAGE MANAGER, SIZED FOR 9 DAYS OF STORAGE WITH AN ADDITIONAL 9 DAYS PRUNED STORAGE AT 15 IMAGES PER SECOND
- CPS — CAMERA POWER SUPPLY, PROVIDE PROVISION TO PADLOCK POWER SUPPLY, PADLOCK SHALL BE PROVIDED BY FACILITY
- SM — SECURITY SYSTEM MANAGER
- WS — SECURITY SYSTEM WORKSTATION
- UPS — ON-LINE UNINTERRUPTED POWER SUPPLY
- UPS-BAT — EXTERNAL BATTERY PACK FOR UPS
- OFTR — OPTICAL FIBER TERMINATION RACK
- TWO CHANNEL RACEWAY
- POE-E — POWER OVER ETHERNET EXTENDER. PROVIDE 6"x6"x4" NEMA 4X JUNCTION BOX WITH POE EXTENDER AT THE MIDWAY DISTANCE FOR SPECIFIED CAMERA. JUNCTION BOX TO BE PAINTED IN ACCESSIBLE LOCATION AND PAINTED YELLOW. PROVIDE PLACARD ON THE END OF CABLE CLEARLY INDICATING THAT THE CABLE HAS A POE EXTENDER ON THE LINE.
- SURGE-X — SURGE PROTECTION FOR EXTERIOR CAMERAS.
  - D = DATA SURGE FOR CAT 6 CABLE
  - P = POWER SURGE FOR 16/2 CABLE

SECURITY SYSTEM (CONT.)

- CARD ACCESS READER 48" A.F.F. MP = MINI PROXIMITY MULLION MOUNT
- DOOR POSITION SWITCH - RECESSED
- DOOR LOCKING HARDWARE ER = ELECTRO-MECHANICAL LOCK SET W/REQUEST TO EXIT
- ACS — ACCESS CONTROLLER
- 1320 — CARD READER MODULE
- PSM — MULTI-OUTPUT LOW VOLTAGE POWER SUPPLY
- PSX — SINGLE-OUTPUT LOW VOLTAGE POWER SUPPLY
- AC/FMS — WORKSTATION
  - AC/FMS = ACCESS CONTROL FACILITY MONITORING SYSTEM
  - BW = BADGING WORKSTATION
- FLAT PANEL LCD MONITOR WITH WALL MOUNT ARM, SIZE AT EACH LOCATION AS INDICATED ON DRAWINGS
- PTZ CAMERA STATION
- EX — FIXED CAMERA STATION
  - EX = EXTERIOR CAMERA STATION
- CS ### — CAMERA STATION CALL OUT
  - CS = CAMERA STATION
  - ###
    - CAMERA STATION NUMBER
    - FLOOR DESIGNATION
- CCTV — WORKSTATION
  - CCTV = CLOSED CIRCUIT TELEVISION
- RACKMOUNT MONITOR/KEYBOARD/MOUSE WITH KVM SWITCH
- NVD — NETWORK VIDEO DECODER
- W — WATERBUG SENSOR
- TEMPERATURE PROBE LOCATED INSIDE SECURITY EQUIPMENT RACK.
- EAU — ENVIRONMENTAL ALARM UNIT

GENERAL NOTES

1. GENERAL NOTES APPLY TO ALL CONTRACT DRAWINGS.
2. REFER TO CIVIL, ARCHITECTURAL, STRUCTURAL, MECHANICAL, PLUMBING, FIRE PROTECTION AND EQUIPMENT DRAWINGS FOR SYMBOLS ASSOCIATED WITH WORK OF OTHER TRADES.
3. FURNITURE LAYOUT WAS NOT DEFINED DURING DESIGN. LOCATION OF SWITCHES, RECEPTACLES, OUTLETS, ETC. ARE BASED ON BEST AVAILABLE INFORMATION. THE CONTRACTOR SHALL ASK FOR FURNITURE COORDINATION DRAWINGS PRIOR TO THE ROUGH-IN OF ALL ELECTRICAL BOXES .
4. CONDUIT RUNS SHOWN ARE DIAGRAMMATIC. EXACT LOCATION OF ALL CONDUIT RUNS SHALL BE DETERMINED IN THE FIELD. COORDINATE INSTALLATIONS TO AVOID CONFLICT WITH UTILITIES, FOUNDATIONS, EQUIPMENT, PIPING, DUCTWORK, ACCESS DOORS AND WORK BY OTHER TRADES.
5. CONCEAL CONDUITS AND/OR WIRING WITHIN WALLS, UNDERFLOORS AND/OR ABOVE CEILINGS EXCEPT FOR ELECTRICAL ROOMS, MECHANICAL ROOMS, GARAGE SPACES AND AS NOTED IN CONTRACT DOCUMENTS.
6. CONDUITS NOTED IN THE FEEDER SCHEDULE APPLY TO THE MAJORITY OF THE INSTALLATIONS. CONDUIT TYPES MAY BE MODIFIED IF APPROVED IN ADVANCE BY THE ENGINEER AND MEET THE FOLLOWING MINIMUM REQUIREMENTS: UNDERGROUND - SCHEDULE 80 PVC; EXTERIOR, WET/DAMP - RIGID GALVANIZED STEEL; DRY, INTERIOR - EMT.
7. NO WELDING OR DRILLING OF THE BUILDING STEEL IS PERMITTED WITHOUT PRIOR STRUCTURAL ENGINEER'S APPROVAL. CLAMPING IS TO BE USED EXCLUSIVELY.
8. PROVIDE ALL CONDUIT AND WIRING REQUIRED FOR CONNECTIONS BETWEEN EACH CAMERA STATION AND ITS ASSOCIATED SECURITY EQUIPMENT RACK.
9. PRIOR TO INSTALLATION OF ANY CONDUIT AND WIRING A COORDINATED MEETING WITH OWNER REPRESENATIVE AND THE CONTRACTOR SHALL BE CONDUCTED AND EACH CAMERA STATION LOCATION MUST BE FINALIZED AND ROUTING AGREED PRIOR TO START OF CONSTRUCTION.
10. SEPARATE ALL CAMERA STATION CABLING AND ROUTE TO APPROPRIATE EQUIPMENT RACK MOUNT ENCLOSURE. ALL CABLES TO BE LABELED WITH BRADY MARKERS OR EQUAL AND HOME RUN FROM CAMERA STATION BACK TO EQUIPMENT RACK MOUNT ENCLOSURE, NO SPLICES ALLOWED.
11. ALL WIRING TO BE PROVIDED BY THE ELECTRICAL CONTRACTOR. ALL WIRING MUST BE TESTED, CERTIFIED AND DOCUMENTED FOR GROUND, SHORT AND OPENS BY ELECTRICAL CONTRACTOR. CERTIFIED DOCUMENTS TO BE SUBMITTED FOR APPROVAL.
12. CAMERA STATIONS MOUNTING: FASTENERS AND SUPPORTS USED TO MOUNT CAMERA STATIONS HOUSING SHALL BE APPROPRIATE FOR USE WITH THE BUILDING STRUCTURES TO THAT THEY ARE BEING SECURED.
    A. CEILING MOUNTED CAMERA STATION HOUSINGS SHALL NOT BE SUPPORTED DIRECTLY FROM SUSPENDED CEILINGS, SUPPORT CAMERA STATIONS HOUSING FROM STRUCTURAL MEMBERS FROM ABOVE THE SUSPENDED CEILING USING HANGER RODS OR OTHER APPROVED METHODS.
13. PROVIDE A NAMEPLATE AT EACH CAMERA STATION, INDICATING CAMERA STATION, NAME OR NUMBER.
14. IN AREAS WHERE CAMERA EQUIPMENT, CAMERA PULL BOX AND CAMERA ENCLOSURE ARE EXPOSED, PROVIDE TAMPER PROOF HARDWARE.
15. CAMERA STATION AIMING:
    a. IN ROOMS (OR AREAS) WHERE MULTIPLE CAMERA STATIONS ARE SHOWN, THE CAMERA STATIONS SHALL BE LOCATED AND AIMED SO THAT THE ENTIRE ROOM IS COMPLETELY VIEWED BY THE CAMERAS IN THAT ROOM. THERE SHALL BE NO LOCATION WITHIN THE ROOM THAT IS NOT UNDER SURVEILLANCE BY AT LEAST ONE CAMERA STATION.
    b. EXTERIOR CAMERA STATIONS SHALL BE AIMED AS DIRECTED.
16. ELECTRICAL CONTRACTOR SHALL PROVIDE ANY AND ALL EQUIPMENT LIFTS TO ACCOMPLISH ITS TASKS.
17. EXACT MOUNTING HEIGHT OF CAMERA STATION MAY VARY DEPENDING ON CONCRETE CEILING STRUCTURE, HOWEVER BOTTOM OF CAMERA STATION HOUSING SHALL BE MOUNTED NO LOWER THAN 8'-3" AFF.
18. ALL ELECTRICAL WORK SHALL COMPLY WITH 2011 NFPA 70 NATIONAL ELECTRICAL CODE.

TELCOM GENERAL NOTES

1. ALL WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH THE LATEST CODES, RULES, AND ORDINANCES OF THE STATE OF CONNECTICUT AS WELL AS THE LATEST OSHA, EIA/TIA AND NEC STANDARDS, GUIDELINES, REQUIREMENTS AND CODES.
2. ALL TELECOMMUNICATIONS DRAWINGS SHALL BE READ IN CONJUNCTION WITH PROJECT ARCHITECTURAL, MEP AND CIVIL DRAWINGS AND SPECIFICATIONS AND ALL OTHER DRAWINGS AND SPECIFICATIONS RELATED TO THE PERFORMANCE OF THIS WORK.
3. REFER TO ELECTRICAL, CIVIL, STRUCTURAL, ARCHITECTURAL, MECHANICAL, FIRE ALARM AND SECURITY DRAWINGS PRIOR TO START OF WORK AND COORDINATE WITH THE ELECTRICAL CONTRACTOR TO VERIFY TELECOMMUNICATIONS CABLETRAY IN BDF, SERVER, ENTRANCE FACILITY AND IDF ROOMS ARE LOCATED AS REQUIRED AND ARE COORDINATED AND PLACED TO CLEAR DUCTS, PIPING, EQUIPMENT, AND OTHER OBSTRUCTIONS IN ALL SPACES SHARED WITH OTHER TRADES AND TO VERIFY CORRECT OUTLET LOCATIONS AS WELL AS ROUGH-IN FOR TELECOM WORK SUCH AS TELECOM OUTLET BACKBOXES, CONDUIT, FLOORBOXES, CORRIDOR CABLETRAY, CORES AND SLEEVES.
4. ALL MATERIALS AND EQUIPMENT USED ON THIS PROJECT SHALL BE NEMA APPROVED AND HAVE APPROVAL OF A NATIONALLY RECOGNIZED TESTING LAB.
5. PER NFPA 70, ARTICAL 100, ALL 4UTP, COAXIAL, FIBER OPTIC AND MULTIPAIR COPPER CABLING INSTALLED IN CONCRETE SLAB SHALL BE GEL FILLED OSP RATED AND SHALL BE INSTALLED IN CONDUIT FROM POINT OF TERMINATION TO POINT OF TERMINATION.
6. CONTRACTOR SHALL PROVIDE ALL CABLE, OUTLETS, FACEPLATES AND TERMINATION HARDWARE AS REQUIRED FOR A COMPLETE AND OPERATIONAL TELECOMMUNICATIONS INFRASTRUCTURE. BACKBOXES AND 3/4" CONDUITS TO ABOVE THE CEILING ARE PROVIDED BY OTHERS UNDER THE INDIVIDUAL BUILDING CONTRACTS.
7. CONDUIT ROUTINGS, CABLETRAY AND CABLING SHOWN ON DRAWINGS ARE ONLY DIAGRAMATIC AND DO NOT INDICATE ALL RESPECTIVE BENDS, ASSEMBLIES, FITTINGS, MOUNTING HARDWARE AND BOXES WHICH MAY BE REQUIRED. THE CONTRACTOR SHALL COORDINATE WITH THE ELECTRICAL CONTRACTOR AND VERIFY CONDUITS, CABLETRAY AND CABLES ARE INSTALLED AND ROUTED AS REQUIRED EXERCISING GOOD WORKMANSHIP AND IN COMPLIANCE WITH ALL APPLICABLE CODE.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFICATIONS AND COORDINATION OF ALL DIMENSIONS, SIZES, SYSTEM VOLTAGES, QUANTITIES, AND EXTENT OF WORK. THE CONTRACTOR SHALL CAREFULLY EXAMINE THE ARCHITECTURAL, CIVIL, ELECTRICAL, STRUCTURAL, MECHANICAL, PIPING, FIRE ALARM, BMS AND SECURITY DRAWINGS IN FULL AND UNDERSTAND THE NATURE AND SCOPE OF WORK. THESE DRAWINGS ARE STRICTLY SCHEMATIC, AND A COMPLETE COORDINATED, FUNCTIONAL, AND CODE/EIA-TIA INDUSTRY STANDARDS COMPLIANT SYSTEM IS INTENDED.
9. THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL, STRUCTURAL, MECHANICAL, ELECTRICAL, FIRE ALARM AND SECURITY DRAWINGS AND SPECIFICATIONS FOR COORDINATION AND EXTENT OF THE WORK OF THE VARIOUS TRADES.
10. WHERE THE WORK OF THIS TRADE WILL INTERFACE WITH THE WORK OF OTHER TRADES, ALL TRADES SHALL ASSIST IN WORKING OUT SPACE CONDITIONS, MAKE SATISFACTORY ADJUSTMENTS, AND BE PREPARED TO SUBMIT AND REVISE COORDINATED INSTALLATION DRAWINGS.
11. CONTRACTOR SHALL USE ONLY THOSE SYSTEM INSTALLATION METHODS ALLOWED IN THE SPECIFICATIONS.
12. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND LABELING ALL PENETRATION FIRE STOPPING FOR THE TELECOMMUNICATIONS OSP BACKBONE, ISP BACKBONE AND ISP HORIZONTAL DISTRIBUTION CABLE INFRASTRUCTURE.
13. AT MODULAR FURNITURE AND CASEWORK LOCATIONS, THE CONTRACTOR SHALL PROVIDE APPROPRIATE SIZED BACKBOX WHIP ASSEMBLY FACEPLATE AND PROVIDE WHIP FROM THE BACKBOX FACEPLATE ASSEMBLY TO THE MODULAR FURNITURE RACEWAY OR CASEWORK POINT OF ENTRY. THE CONTRACTOR SHALL ROUTE TELECOMMUNICATIONS CABLING FROM THE BACKBOX, THROUGH THE WHIP AND INTO THE MODULAR FURNITURE OR CASEWORK CABLE PATHWAY. IN MODULAR FURNITURE, TELECOMMUNICATIONS CABLING SHALL BE TERMINATED IN A MODULAR FURNITURE RACWAY COMPATIBLE FLUSH MOUNT FACEPLATE. IN CASEWORK, TELECOMMUNICATIONS CABLING SHALL BE TERMINATED IN SURFACE MOUNT BACKBOX SECURED TO CASEWORK 1'-6" A.F.F. UNLESS OTHERWISE NOTED.

** NOT ALL SYMBOLS MAY BE USED **

REV.	DATE	DESCRIPTION	SHEET NO.
		REVISIONS	

FILENAME:

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DESIGNER/DRAFTER: MJC

CHECKED BY: RB

SCALE: NOT TO SCALE

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ARCHITECT: WENDEL

ENGINEERS: ReSTL DESIGNERS, CLOUGH HARBOUR ASSOC., AI ENGINEERS, WENDEL

APPROVED BY: BPM

DATE: 06/11/2014

DESIGNED BY:
CLOUGH HARBOUR & ASSOCIATES
2139 SILAS DEANE HIGHWAY
SUITE 212
ROCKY HILL, CT
06067-2336

STATE OF CONNECTICUT — BRIAN P. McKENNA — No. 21640 — LICENSED PROFESSIONAL ENGINEER

PROJECT TITLE:
WATERBURY BUS MAINTENANCE FACILITY REPLACEMENT

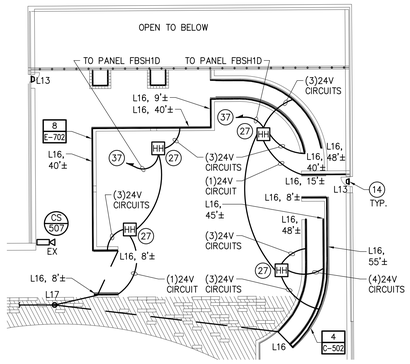
ADDRESS:
FROST BRIDGE ROAD
WATERTOWN, CONNECTICUT 06787

DRAWING TITLE:
ELECTRICAL ABBREVIATIONS, SYMBOLS & NOTES

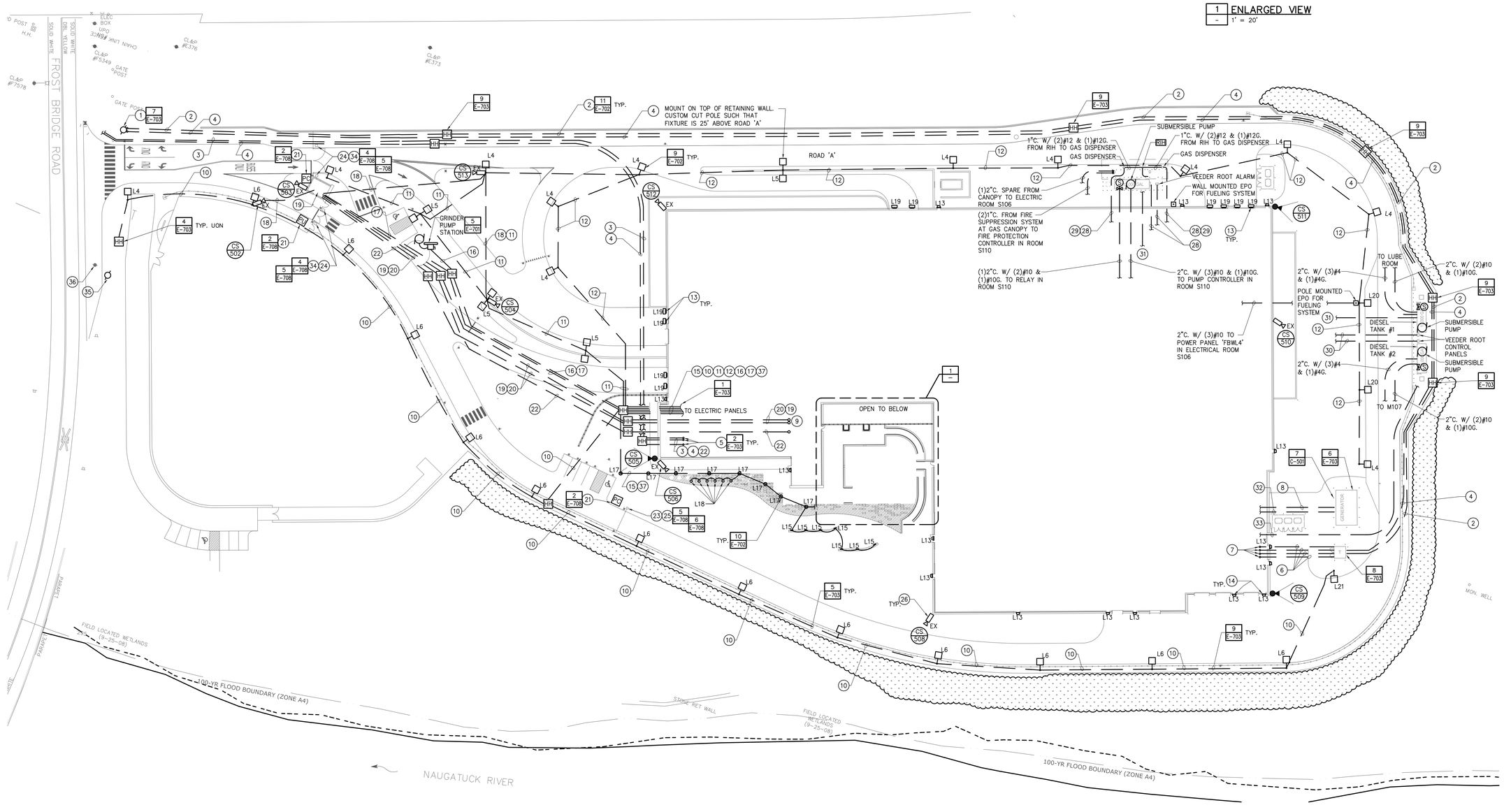
PROJECT NO. 431-0006

DRAWING NO. E-001

SHEET NO. 13.002



1 ENLARGED VIEW
- 1' = 20'



ELECTRICAL SITE PLAN
1' = 40'

Scale in feet 0 20' 40'

Scale in feet 0 40' 80'

GENERAL NOTES

1. CONNECTICUT UTILITY CONTACT; CL&P BRIAN MORGAN MORGABW@NU.COM (203)597-6106.
2. CONNECTICUT TELEPHONE AND CABLE SERVICES; AT&T BILL GUERRERA (203)575-6106.
3. ROUTE ALL SITE LIGHTING CIRCUITS THROUGH LIGHTING CONTROL PANEL "LCPA." REFER TO DRAWING E108 FOR LOCATION.
4. LIGHTPOLES ALONG ROADWAYS SHALL BE SETBACK 4'-0" FROM OUTSIDE EDGE OF PAVED SURFACE. SETBACK DISTANCE IS FROM CENTER OF POLE.
5. SEE CIVIL DETAIL 7 ON DWG C-501 FOR BOLLARDS AROUND GENERATOR AND TRANSFORMER.

CODED NOTES

1. UTILITY RISER POLE. SEE DETAIL 7 ON DRAWING E-703 FOR INSTALLATION INFORMATION.
2. (1) 4" CONDUITS WITH PULL CORD FOR UTILITY PRIMARY CABLE.
3. (2) 4" CONDUIT WITH PULL CORD FOR TELEPHONE AND CABLE SERVICE CABLES.
4. (1) 4" SPARE CONDUIT W/PULLCORD.
5. STUB-UP CONDUITS INTO FIRST FLOOR DATA CLOSET.
6. SECONDARY CONDUITS AND CONDUCTORS FROM TRANSFORMER TO SWITCHGEAR IN ELECTRICAL ROOM M132. SEE ELECTRICAL ONE LINE DIAGRAM ON DRAWING E-601 FOR NUMBER OF CONDUITS AND CONDUCTORS.
7. STUB-UP CONDUITS INTO SWITCHGEAR.
8. CONDUITS AND CONDUCTORS FROM GENERATOR TO TRANSFER SWITCH IN ELEC RM M132 AND CONTROLS. SEE ELECTRICAL ONE LINE DIAGRAM ON DRAWING E-601 FOR NUMBER OF CONDUITS AND CONDUCTORS.
9. STUB UP CONDUITS INTO FIRST FLOOR RADIO RM A110a FOR SECURITY CONNECTIONS ON SITE AT GUARD BOOTH.
10. LIGHTING CIRCUIT 1 (1932VA/277V) FROM PANEL FBSH1D. PROVIDE 1"C. WITH (2)#6,#6GND.
11. LIGHTING CIRCUIT 3 (1794VA/277V FROM PANEL FBSH1D. PROVIDE 1"C. WITH (2)#6,#6GND.
12. LIGHTING CIRCUIT 5 (966VA/277V) FROM PANEL FBSH1D. PROVIDE 1"C. WITH (2)#8,#8GND.
13. CONNECT EXTERIOR MOUNTED LIGHT FIXTURES ON SOUTH AND WEST WALLS TO CIRCUIT 2 PANEL FBSH1D. PROVIDE 1"C. W/2#8,#8G.
14. CONNECT EXTERIOR MOUNTED LIGHT FIXTURES ON NORTH AND EAST TO CIRCUIT 4 IN PANEL FBSH1D. PROVIDE 1"C. WITH 2#8,#8G.
15. COURTYARD LIGHTING PANEL TO CIRCUIT 6 PANEL FBSH1D. 1"C. W/(2)#10,#10G..
16. GRINDER PUMP STATION PROVIDE POWER FROM PANEL GH2.
17. POWER FROM GH2 TO GUARD BOOTH.
18. CONDUIT FOR SECURITY CAMERAS FROM GUARD BOOTH.
19. 2" CONDUIT FROM RADIO ROOM A110a TO GUARD BOOTH FOR SECURITY CONNECTIONS.
20. PROVIDE SPARE 4"C. FROM RADIO RM. A110a TO HANDHOLE.
21. PROVIDE PEDESTAL MOUNTED CARD READER.
22. 2"C. FOR TELE/DATA TO GUARD BOOTH.
23. PROVIDE 120V CIRCUIT TO VEHICLE BARRIER GATE. PROVIDE (1) 1"C. W/(2)#12 & (1)#12G. FROM PANEL GL1 FOR POWER TO VEHICLE BARRIER GATE.
24. PROVIDE 120V CIRCUITRY TO VEHICLE BARRIER GATE. PROVIDE (1) 1"C. W/(2)#12 & (1)#12G. FROM PANEL GSL1 FOR POWER TO VEHICLE BARRIER GATE.
25. PROVIDE CONDUIT AND DATA CABLES FROM VEHICLE BARRIER GATE TO ACCESS CONTROLLER LOCATED IN COMMUNICATIONS CLOSET A102b. REFER TO VEHICLE BARRIER GATE ONE-LINE DIAGRAM FOR ADDITIONAL INFORMATION.
26. PROVIDE CONDUIT AND WIRING FOR CAMERA STATION TO ASSOCIATED COMM. ROOM. REFER TO CCTV RISER DIAGRAM FOR SIZE OF CONDUIT AND WIRING TYPE. REFER TO CCTV CAMERA STATION SCHEDULE FOR ADDITIONAL INFORMATION.
27. PROVIDE A SEPARATE 277-24V LED DRIVER FOR EACH 24V CIRCUIT. SEE DETAIL 8 ON DRAWING E-702 FOR ADDITIONAL INFORMATION.
28. 1"C. W/(2)#8 & (1)#8G. TO PANEL 'FBWL4' IN ELECTRIC ROOM S106.
29. 1"C. W/(2)#10 & (1)#10G. TO HOOK ISOLATION BOX IN ROOM S110.
30. PROVIDE (1) 2"C. W/2#8,(1)#8G. TO ELECTRIC ROOM FOR POWER TO DIESEL DISPENSING AREA.
31. PROVIDE CONDUITS FOR PROCESS EQUIPMENT AS OUTLINED ON "D" SERIES DRAWINGS.
32. PROVIDE (2) 2" C. FROM GENERATOR TO BUILDING AND GROUNDS REPAIR M107 FOR POWER AND CONTROLS TO EQUIPMENT.
33. PROVIDE (2) 2" C. FROM DIESEL TANK #2 TO BUILDING AND GROUNDS REPAIR M107 FOR POWER TO EQUIPMENT.
34. PROVIDE CONDUIT AND DATA CABLES FROM ENTRANCE VEHICLE BARRIER GATE TO ACCESS CONTROLLER LOCATED IN GUARD BOOTH. REFER TO ENTRANCE VEHICLE BARRIER GATE ONE LINE DIAGRAM FOR ADDITIONAL INFORMATION.
35. NEW LOCATION OF RELOCATED UTILITY POLE #E369, COORDINATE WITH UTILITY.
36. EXISTING CL&P UTILITY POLE #E369 TO BE RELOCATED BY UTILITY, SHOWN FOR REFERENCE ONLY.
37. HANDRAIL LIGHTING TO CIRCUITS 7 AND 8 IN PANEL FBSH1D. 1"C W/(2)#10,#10G IN EACH.

REV.	DATE	DESCRIPTION	SHEET NO.
		REVISIONS	

FILENAME:

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DESIGNER/DRAFTER: CJE

CHECKED BY: RB

SCALE: AS NOTED

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ARCHITECT: WENDEL

APPROVED BY: BPM

ENGINEERS: ReSTL DESIGNERS, CLOUGH HARBOUR ASSOC., AI ENGINEERS, WENDEL

DATE: 06-11-14

DESIGNED BY:
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06067-2336

STATE OF CONNECTICUT
BRIAN P. MCGRAW
No. 21640
LICENSED
PROFESSIONAL ENGINEER

PROJECT TITLE:
WATERBURY BUS MAINTENANCE FACILITY REPLACEMENT

ADDRESS:
FROST BRIDGE ROAD
WATERTOWN, CONNECTICUT 06787

DRAWING TITLE:
ELECTRICAL SITE PLAN

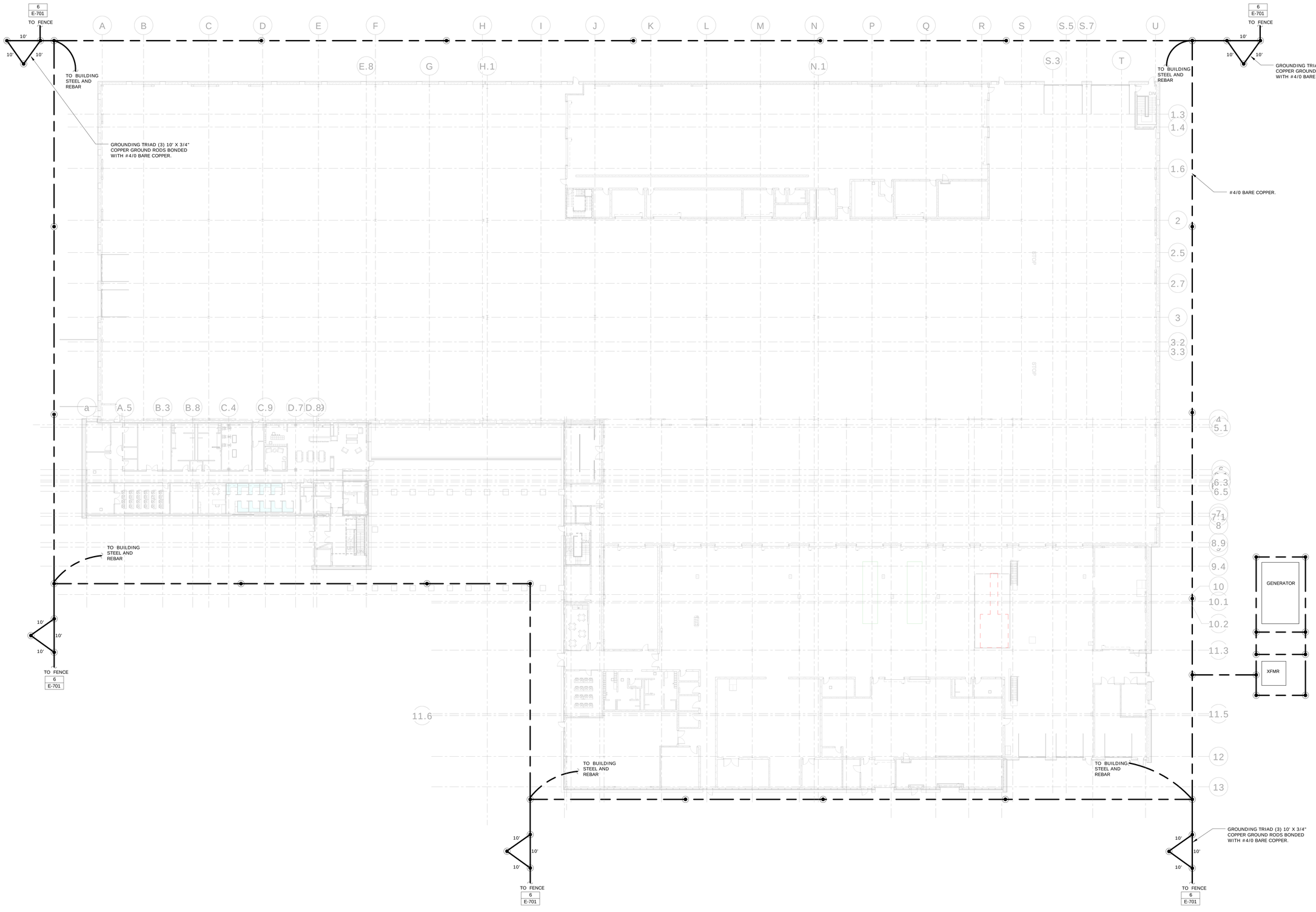
PROJECT NO. **3308.01D**

DRAWING NO. **E-002**

SHEET NO. **13.003**

GENERAL NOTES

1. PROVIDE GROUNDING PER SPECIFICATION SECTION 260526, PER THIS PLAN, PER NEC REQUIRMENTS AND PER DETAIL 1/E705.
2. ALL CONNECTIONS TO BLDG STEEL REBAR & GROUND RODS SAHLL BE ATTACHED VIA EXOTHERMIC WELDS.
3. SEE DETAIL 2 ON DRAWINGS E-705 FOR SERVICE GROUNDING.



1 ELECTRICAL GROUNDING PLAN - OVERALL
1" = 20'-0"

REV.	DATE	DESCRIPTION	SHEET NO.
		REVISIONS	

FILENAME:

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DESIGNER/DRAFTER: CJE

CHECKED BY: RB

SCALE: 1" = 20'-0"

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ARCHITECT: WENDEL

ENGINEERS: ReSTL DESIGNERS, CLOUGH HARBOUR ASSOC., AI ENGINEERS, WENDEL

APPROVED BY: BPM

DATE: 06/11/2014

DESIGNED BY:
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06067-2336

STATE OF CONNECTICUT
BRIAN P. McKENNA
No. 21640
LICENSED
PROFESSIONAL ENGINEER

PROJECT TITLE:
WATERBURY BUS MAINTENANCE FACILITY REPLACEMENT

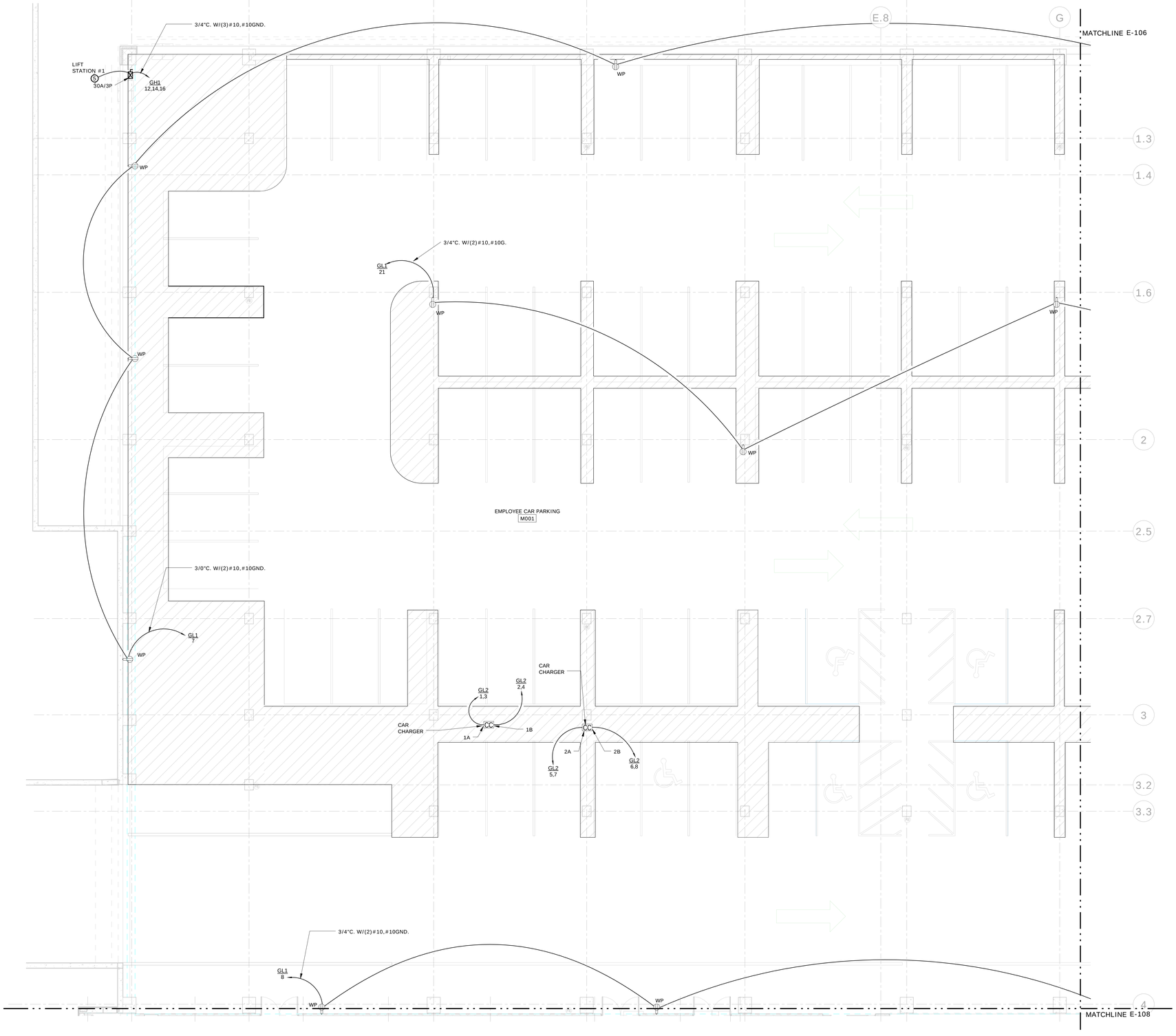
ADDRESS:
FROST BRIDGE ROAD
WATERTOWN, CONNECTICUT 06787

DRAWING TITLE:
ELECTRICAL OVERALL GROUNDING PLAN

PROJECT NO. 431-0006

DRAWING NO. E-003

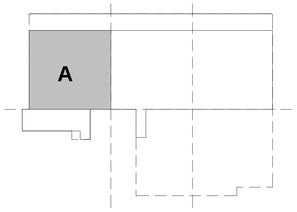
SHEET NO. 13.004



1 ELECTRICAL GROUND FLOOR POWER PLAN - AREA A
1/8" = 1'-0"

GENERAL NOTES

1. ALL RECEPTACLES SHOWN ON THIS PLAN TO BE MOUNTED AT 48"AFF. TO CENTER OF RECEPTACLE.



KEY PLAN

GRAPHIC SCALE (FEET)
1/8" = 1'-0"
0' 4' 8' 16' 24' 32' 40'

N

REV.	DATE	DESCRIPTION	SHEET NO.
		REVISIONS	

FILENAME:

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DESIGNER/DRAFTER: CJE

CHECKED BY: RB

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

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ARCHITECT: WENDEL

ENGINEERS: ReSTL DESIGNERS, CLOUGH HARBOUR ASSOC., AI ENGINEERS, WENDEL

APPROVED BY: BPM

DATE: 06/11/2014

DESIGNED BY:
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06067-2336

STATE OF CONNECTICUT
BRIAN P. McKENNA
No. 21640
LICENSED
PROFESSIONAL ENGINEER

PROJECT TITLE:
WATERBURY BUS MAINTENANCE FACILITY REPLACEMENT

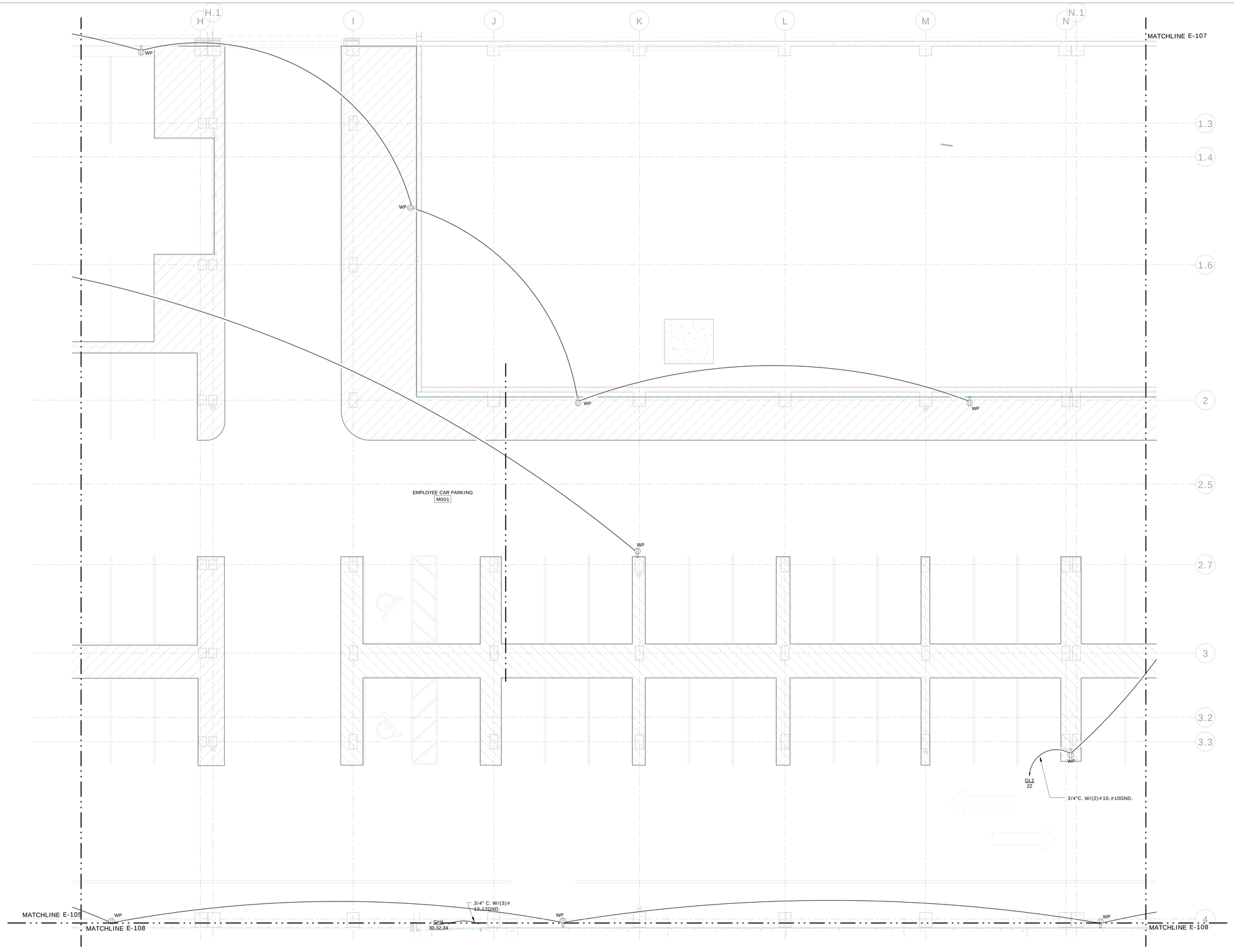
ADDRESS:
FROST BRIDGE ROAD
WATERTOWN, CONNECTICUT 06787

DRAWING TITLE:
ELECTRICAL GROUND FLOOR POWER PLAN - AREA A

PROJECT NO. 431-0006

DRAWING NO. E-105

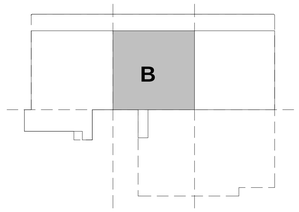
SHEET NO. 13.005



1 ELECTRICAL GROUND FLOOR POWER PLAN - AREA B
1/8" = 1'-0"

GENERAL NOTES

1. ALL RECEPTACLES SHOWN ON THIS PLAN TO BE MOUNTED AT 48"AFF. TO CENTER OF RECEPTACLE.



GRAPHIC SCALE (FEET)
1/8" = 1'-0"
0' 4' 8' 16' 24' 32' 40'

KEY PLAN

N

REV.	DATE	DESCRIPTION	SHEET NO.
		REVISIONS	

FILENAME:

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DESIGNER/DRAFTER: CJE

CHECKED BY: RB

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

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ARCHITECT: WENDEL

APPROVED BY: BPM

ENGINEERS: ReSTL DESIGNERS, CLOUGH HARBOUR ASSOC., AI ENGINEERS, WENDEL

DATE: 06/11/2014

DESIGNED BY:
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STATE OF CONNECTICUT
BRIAN P. McCONNELL
No. 21640
LICENSED
PROFESSIONAL ENGINEER

PROJECT TITLE:
WATERBURY BUS MAINTENANCE FACILITY REPLACEMENT

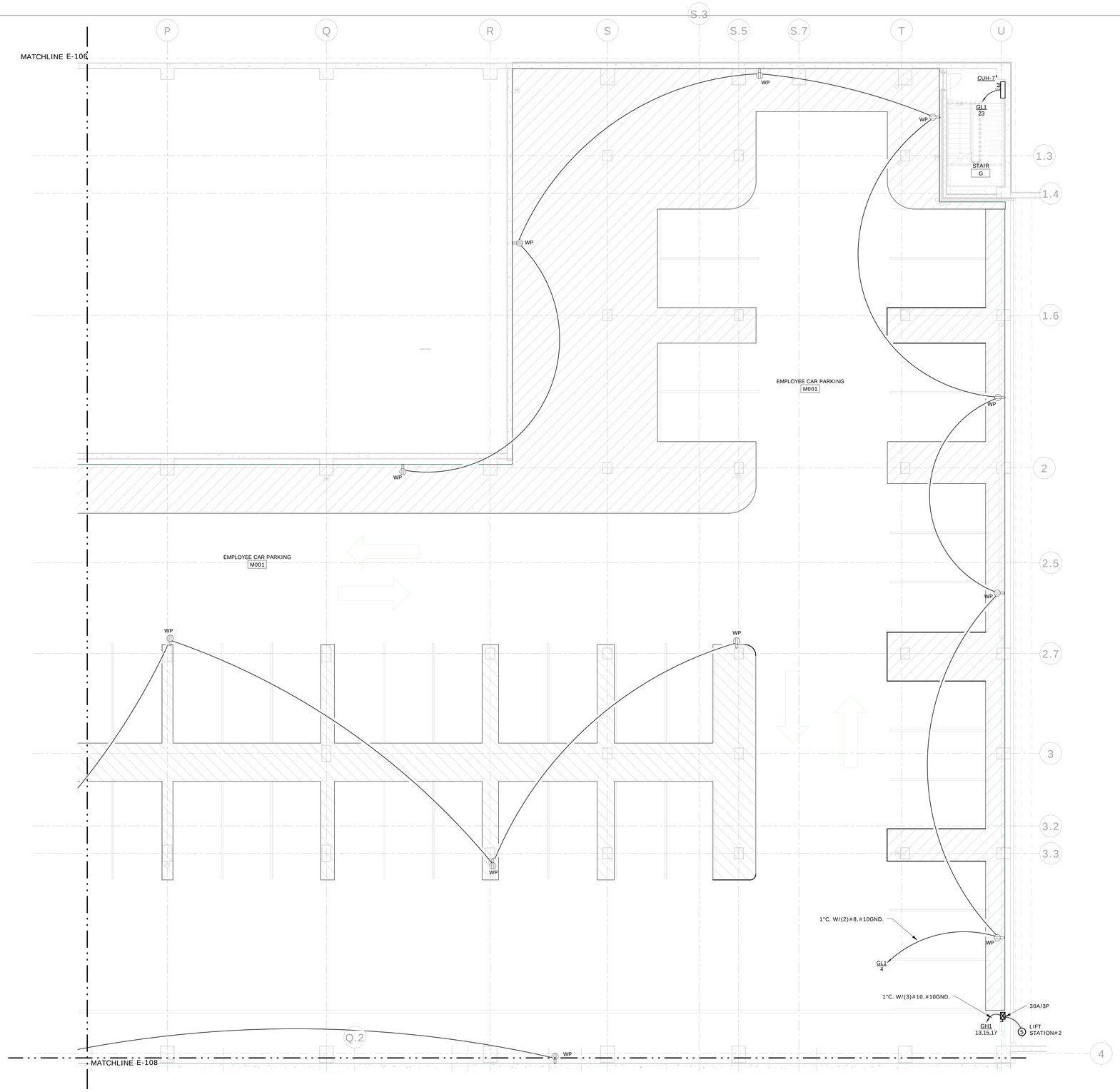
ADDRESS:
FROST BRIDGE ROAD
WATERTOWN, CONNECTICUT 06787

DRAWING TITLE:
ELECTRICAL GROUND FLOOR POWER PLAN - AREA B

PROJECT NO. 431-0006

DRAWING NO. E-106

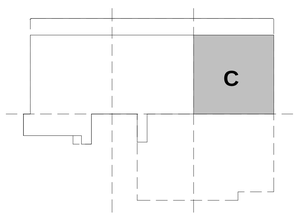
SHEET NO. 13.006



1 ELECTRICAL GROUND FLOOR POWER PLAN - AREA C
1/8" = 1'-0"

GENERAL NOTES

1. ALL RECEPTACLES SHOWN ON THIS PLAN TO BE MOUNTED AT 48"AFF. TO CENTER OF RECEPTACLE.



KEY PLAN

GRAPHIC SCALE (FEET)
1/8" = 1'-0"
0' 4' 8' 16' 24' 32' 40'

REV.	DATE	DESCRIPTION	SHEET NO.
		REVISIONS	

FILENAME:

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DESIGNER/DRAFTER: CJE
CHECKED BY: RB
SCALE: 1/8" = 1'-0"

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ARCHITECT: WENDEL
APPROVED BY: BPM
ENGINEERS: ReSTL DESIGNERS, CLOUGH HARBOUR ASSOC., AI ENGINEERS, WENDEL
DATE: 06/11/2014

DESIGNED BY:
CLOUGH HARBOUR & ASSOCIATES
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ROCKY HILL, CT
06067-2336

STATE OF CONNECTICUT
BRIAN P. McKENNA
No. 21640
LICENSED
PROFESSIONAL ENGINEER

PROJECT TITLE:
WATERBURY BUS MAINTENANCE FACILITY REPLACEMENT

ADDRESS:
FROST BRIDGE ROAD
WATERTOWN, CONNECTICUT 06787

DRAWING TITLE:
ELECTRICAL GROUND FLOOR POWER PLAN - AREA C

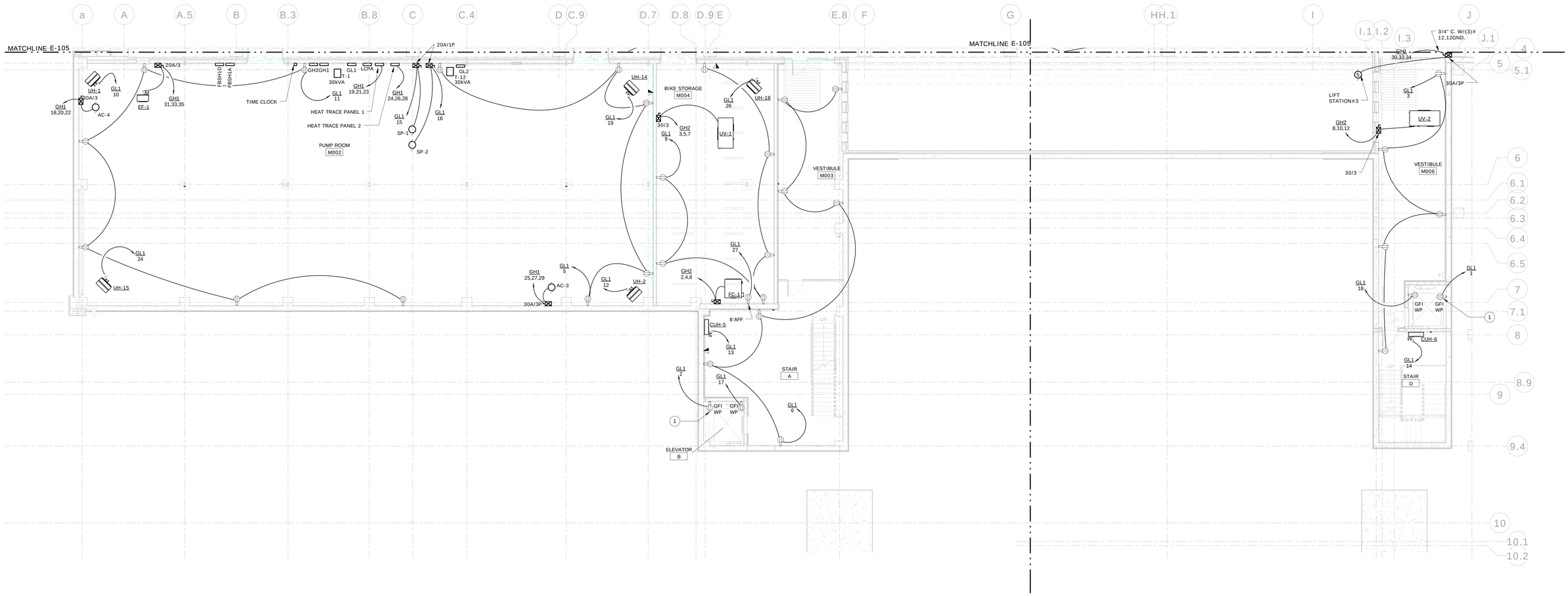
PROJECT NO. 431-0006
DRAWING NO. E-107
SHEET NO. 13.007

CODED NOTES (H)

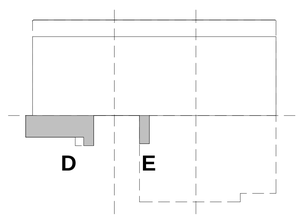
1 PROVIDE RECPTACLE FOR SUMP PUMP IN ELEVATOR PIT.

GENERAL NOTES

1. SEE DETAIL 5 ON E-701 FOR ADDITONAL INFORMATION.
2. ALL DATA AND TELEPHONE RECEPTACLES SHOWN ON THIS DWG, WIRING SHALL BE ROUTED TO MDF A ON DWG E112 IN ROOM A102b.



1 ELECTRICAL GROUND FLOOR POWER PLAN - AREA D & E
1/8" = 1'-0"



GRAPHIC SCALE (FEET)
1/8" = 1'-0"
0' 4' 8' 16' 24' 32' 40'

KEY PLAN

N

REV.	DATE	DESCRIPTION	SHEET NO.
		REVISIONS	

FILENAME:

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

DESIGNER/DRAFTER: CJE

CHECKED BY: RB

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

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ARCHITECT: WENDEL

ENGINEERS: ReSTL DESIGNERS, CLOUGH HARBOUR ASSOC., AI ENGINEERS, WENDEL

APPROVED BY: BPM

DATE: 06/11/2014

DESIGNED BY:
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2139 SILAS DEANE HIGHWAY
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ROCKY HILL, CT
06067-2336

STATE OF CONNECTICUT
BRIAN P. McKENNA
No. 21640
LICENSED
PROFESSIONAL ENGINEER

PROJECT TITLE:
WATERBURY BUS MAINTENANCE FACILITY REPLACEMENT

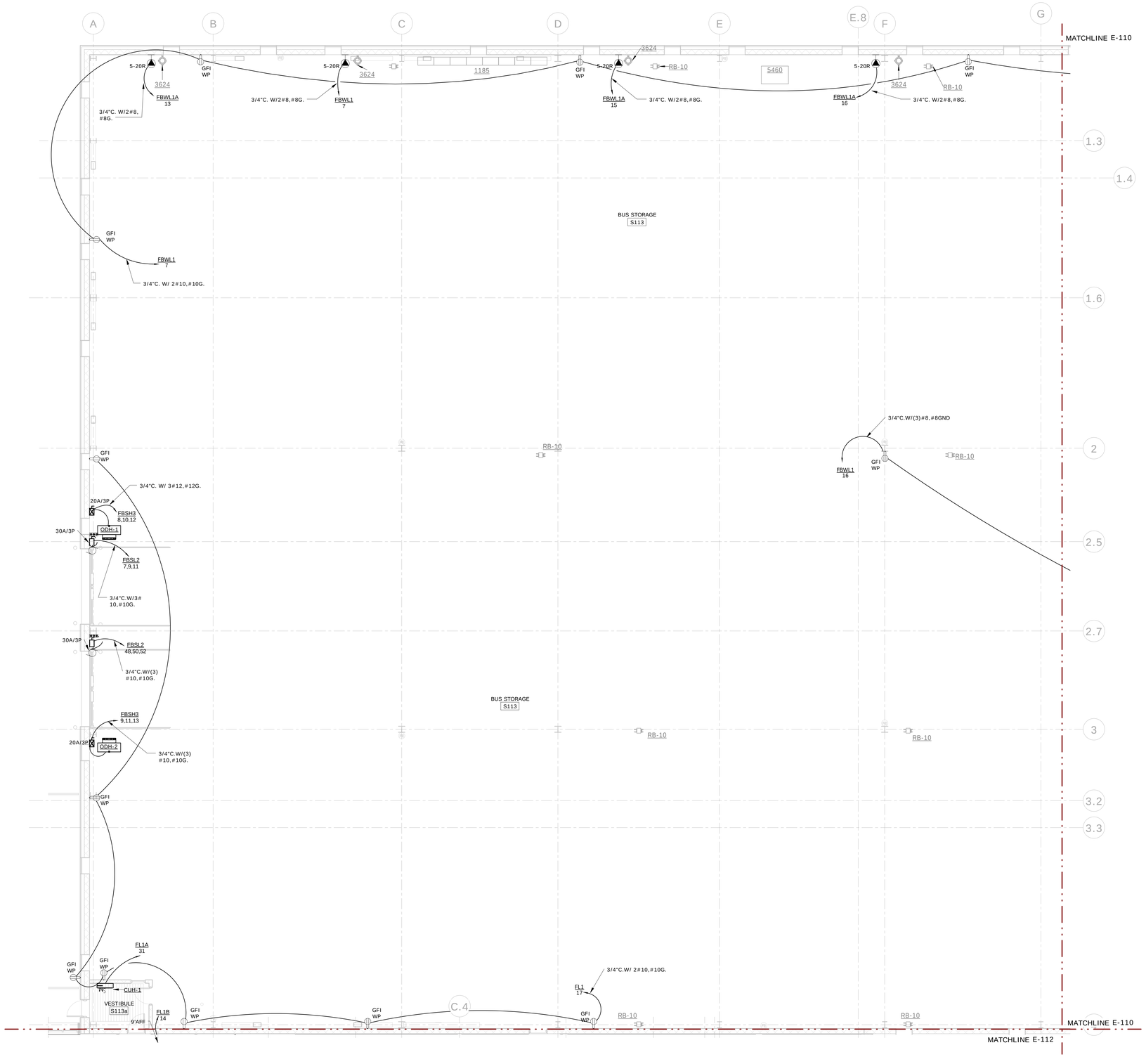
ADDRESS:
FROST BRIDGE ROAD
WATERTOWN, CONNECTICUT 06787

DRAWING TITLE:
ELECTRICAL GROUND FLOOR POWER PLAN - AREA D & E

PROJECT NO. **431-0006**

DRAWING NO. **E-108**

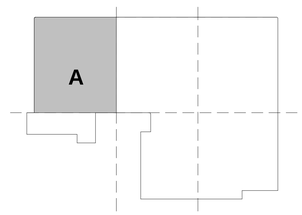
SHEET NO. **13.008**



1 ELECTRICAL FIRST FLOOR POWER PLAN - AREA A
1/8" = 1'-0"

GENERAL NOTES

1. ALL RECEPTACLES SHOWN ON THIS PLAN TO BE MOUNTED AT 48"AFF TO CENTER OF RECEPTACLE.
2. SEE ELECTRICAL EQUIPMENT SCHEDULES FOR CONDUIT AND WIRE SIZES UNLESS OTHERWISE NOTED.



KEY PLAN

GRAPHIC SCALE (FEET)
1/8" = 1'-0"
0' 4' 8' 16' 24' 32' 40'

N

REV.	DATE	DESCRIPTION	SHEET NO.
		REVISIONS	

FILENAME:

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DESIGNER/DRAFTER: CJE

CHECKED BY: RB

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

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ARCHITECT: WENDEL

ENGINEERS: ReSTL DESIGNERS, CLOUGH HARBOUR ASSOC., AI ENGINEERS, WENDEL

APPROVED BY: BPM

DATE: 06/11/2014

DESIGNED BY:
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SUITE 212
ROCKY HILL, CT
06067-2336

STATE OF CONNECTICUT
BRIAN P. McKENNA
No. 21640
LICENSED
PROFESSIONAL ENGINEER

PROJECT TITLE:
WATERBURY BUS MAINTENANCE FACILITY REPLACEMENT

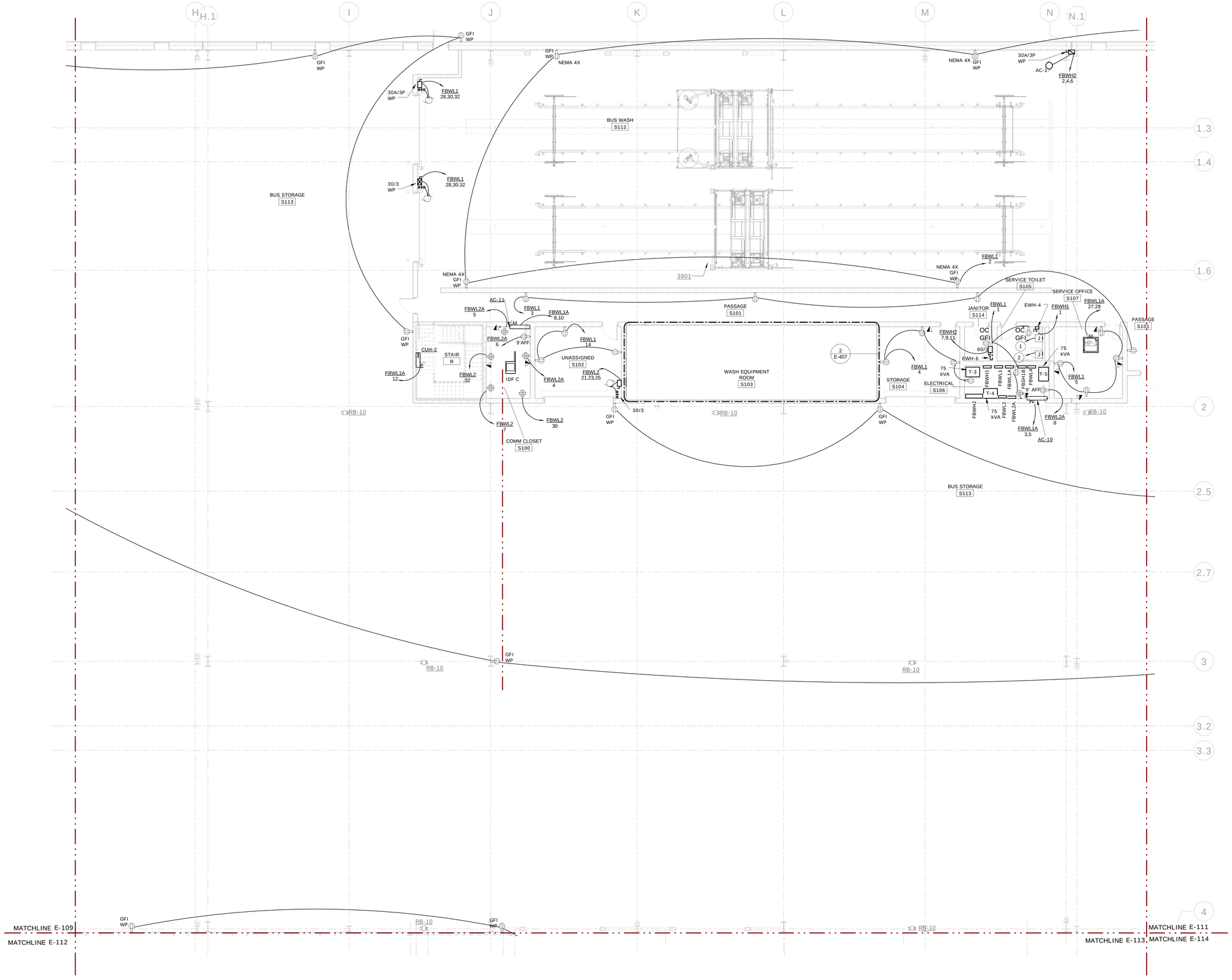
ADDRESS:
FROST BRIDGE ROAD
WATERTOWN, CONNECTICUT 06787

DRAWING TITLE:
ELECTRICAL FIRST FLOOR POWER PLAN - AREA A

PROJECT NO. 431-0006

DRAWING NO. E-109

SHEET NO. 13.009



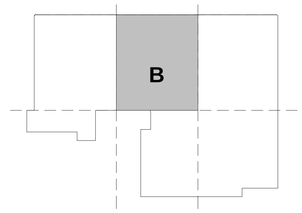
1 ELECTRICAL FIRST FLOOR POWER PLAN - AREA B
1/8" = 1'-0"

CODED NOTES

1 PROVIDE 120V, 20A POWER TO ELECTRONIC PROXIMITY LAVATORY FAUCETS.
2 PROVIDE 120V, 20A POWER TO WALL HUNG WATER CLOSETS AND URINALS.

GENERAL NOTES

1. ALL RECEPTACLES SHOWN IN BUS STORAGE WHALL BE MOUNTED AT 48"AFF TO CENTER OF RECEPTACLE.
2. SEE ELECTRICAL EQUIPMENT SCHEDULES FOR CONDUIT AND WIRE SIZES UNLESS OTHERWISE NOTED.
3. ALL DATA RECEPTACLES SHOWN ON THIS DWG, WIRING SHALL BE ROUTED TO IDF RACK 'C' IN ROOM S100.
4. SEE ENLARGED PLAN FOR ADDITIONAL REQUIREMENTS.



KEY PLAN

GRAPHIC SCALE (FEET)
1/8" = 1'-0"
0' 4' 8' 16' 24' 32' 40'

REV.	DATE	DESCRIPTION	SHEET NO.
		REVISIONS	

FILENAME:

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DESIGNER/DRAFTER: CJE
CHECKED BY: RB
SCALE: 1/8" = 1'-0"

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ARCHITECT: WENDEL
APPROVED BY: BPM
ENGINEERS: ReSTL DESIGNERS, CLOUGH HARBOUR ASSOC., AI ENGINEERS, WENDEL
DATE: 06/11/2014

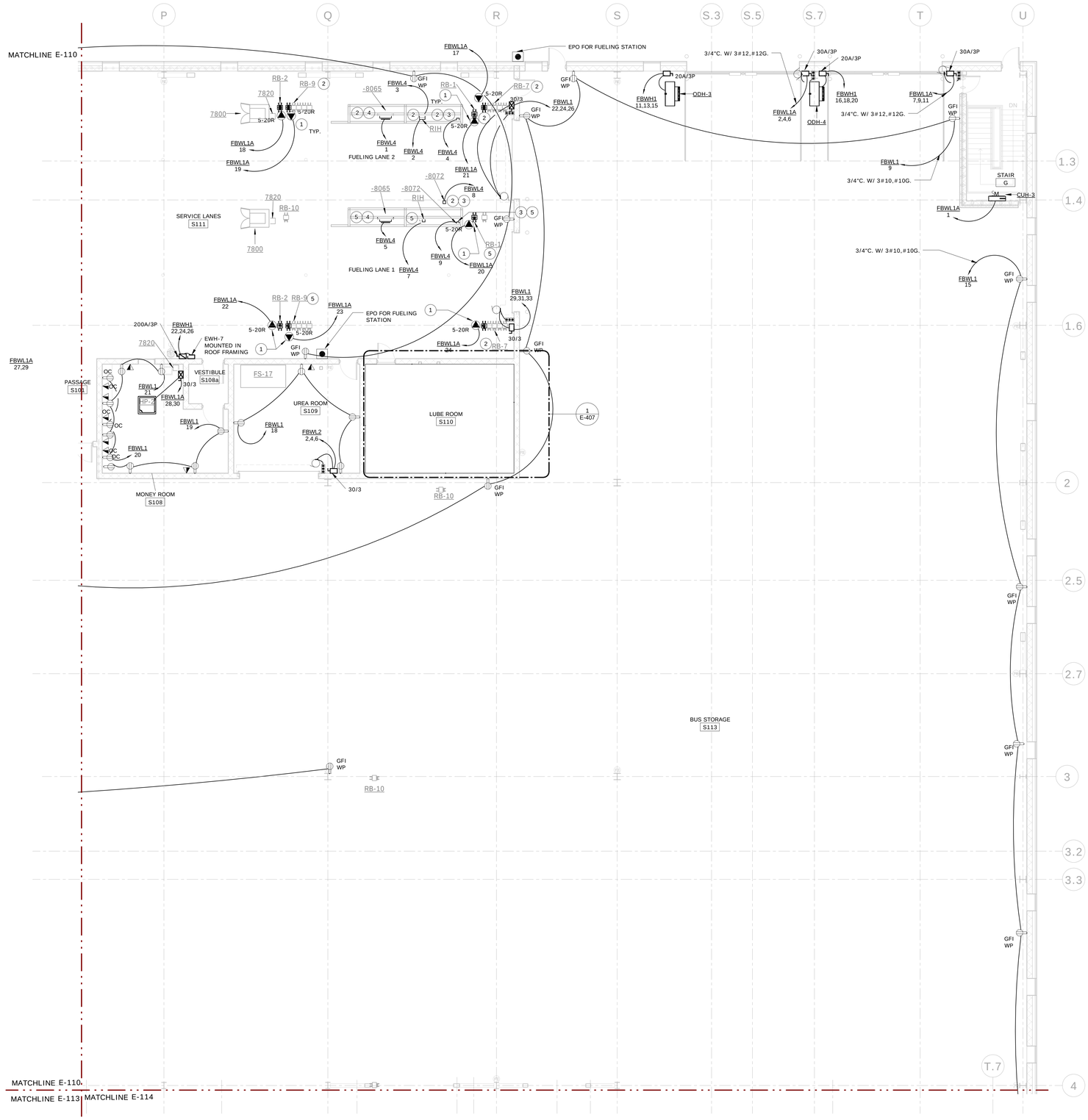
DESIGNED BY:
CLOUGH HARBOUR & ASSOCIATES
2139 SILAS DEANE HIGHWAY
SUITE 212
ROCKY HILL, CT
06067-2336

PROJECT TITLE:
WATERBURY BUS MAINTENANCE FACILITY REPLACEMENT

ADDRESS:
FROST BRIDGE ROAD
WATERTOWN, CONNECTICUT 06787

DRAWING TITLE:
ELECTRICAL FIRST FLOOR POWER PLAN - AREA B

PROJECT NO. 431-0006
DRAWING NO. E-110
SHEET NO. 13.010



1 ELECTRICAL FIRST FLOOR POWER PLAN - AREA C
1/8" = 1'-0"

CODED NOTES

1 MOUNT RECEPTACLE TO CEILING STRUCTURE FOR POWER TO CORD REEL.

2 PROVIDE (2) 120V, 20A CIRCUITS AND ONE DATA FOR FLUID AND FUEL MANAGEMENT REMOTE ISLAND HEAD (RIH). REFER TO DETAIL 2 ON DWGS E-705 FOR 120V CONNECTIONS BETWEEN RIH AND ASSOCIATED DEVICES.

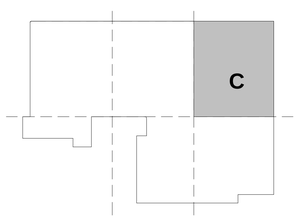
3 DIESEL FUEL METER DISPNESER. PROVIDE 120V/20A POWER FROM PANEL FBWL4 IN ELEC RM S106 TO EACH DISPENSER.

4 DIESEL FUEL METER DISPNESER. PROVIDE 120V/20A POWER FROM PANEL FBWL4 IN ELEC RM S106 TO EACH DISPENSER.

5 PROVIDE (2)120V, 20A CIRCUITS AND ONE DATA FOR FLUID AND FUEL MANAGEMENT SYSTEM REMOTE ISLAND HEAD (RIH). REFER RO DETAIL 2 ON DWG E705 FOR 120V CONNECTIONS BETWEEN RIH AND ASSOCIATED DEVICES.

GENERAL NOTES

1. ALL RECEPTACLES SHOWN IN BUS STORAGE SHALL BE MOUNTED AT 48" TO CENTER OF RECEPTACLE.
2. ALL DATA RECEPTACLES SHOWN ON THIS DWG, WIRING SHALL BE ROUTED TO IDF RACK 'C' IN ROOM S100.
3. SEE ENLARGED PLAN FOR ADDTIONAL REQUIREMENTS.
4. SEE ELECTRICAL EQUIPMENT SCHEDULES FOR CONDUIT AND WIRE SIZES UNLESS OTHERWISE NOTED.



GRAPHIC SCALE (FEET)
1/8" = 1'-0"
0' 4' 8' 16' 24' 32' 40'

KEY PLAN

REV.	DATE	DESCRIPTION	SHEET NO.
		REVISIONS	

FILENAME:

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DESIGNER/DRAFTER: CJE
CHECKED BY: RB
SCALE: 1/8" = 1'-0"

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ARCHITECT: WENDEL
APPROVED BY: BPM
ENGINEERS: ReSTL DESIGNERS, CLOUGH HARBOUR ASSOC., AI ENGINEERS, WENDEL
DATE: 06/11/2014

DESIGNED BY:
CLOUGH HARBOUR & ASSOCIATES
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SUITE 212
ROCKY HILL, CT
06067-2336

STATE OF CONNECTICUT
BRIAN P. McKENNA
No. 21640
LICENSED
PROFESSIONAL ENGINEER

PROJECT TITLE:
WATERBURY BUS MAINTENANCE FACILITY REPLACEMENT

ADDRESS:
FROST BRIDGE ROAD
WATERTOWN, CONNECTICUT 06787

DRAWING TITLE:
ELECTRICAL FIRST FLOOR POWER PLAN - AREA C

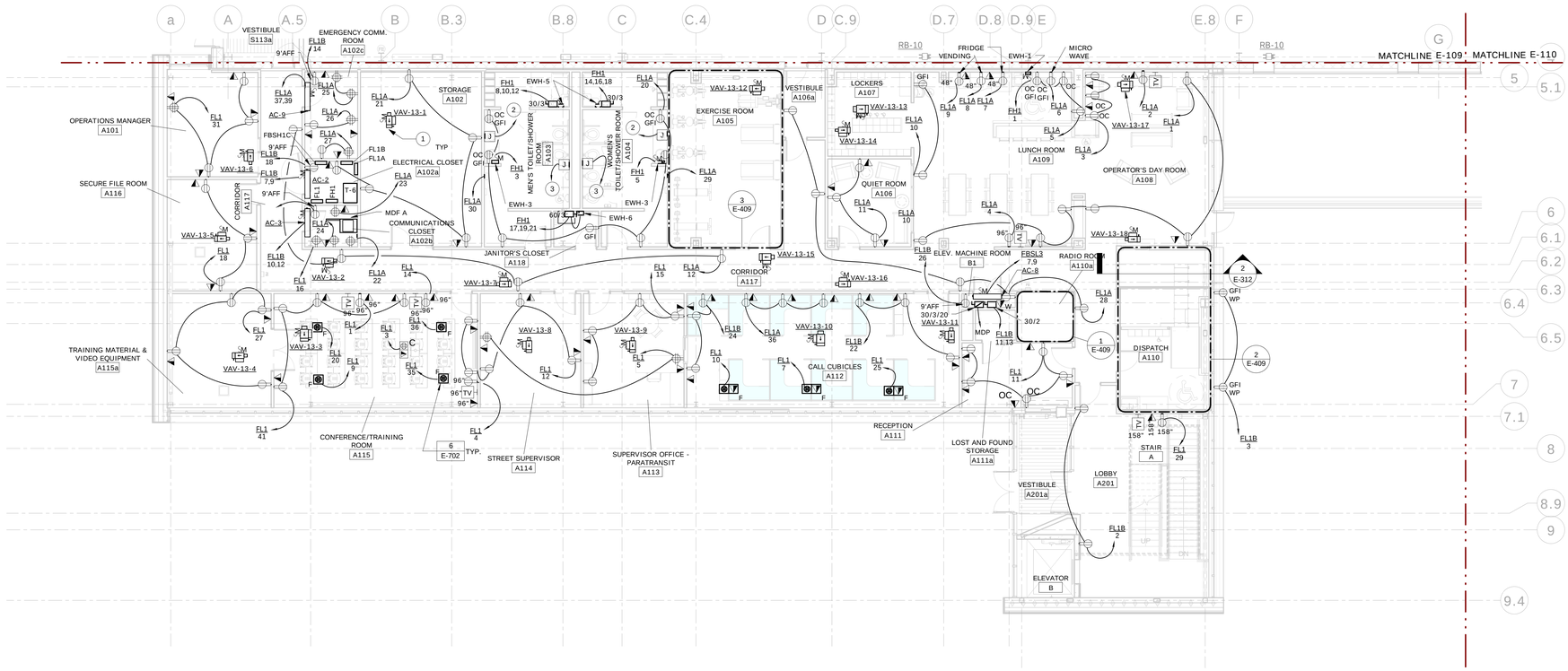
PROJECT NO. 431-0006
DRAWING NO. E-111
SHEET NO. 13.011

CODED NOTES (#)

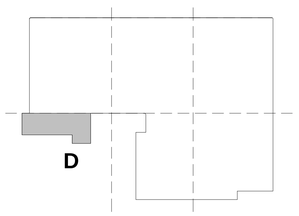
1. CONNECT VAV'S TO PANEL FL1A CIRCUIT 32 OR 34. LIMIT 8 VAV'S TO A CIRCUIT.
2. PROVIDE 120V, 20A CIRCUIT IN PANEL FL1B CIRCUIT FOR POWER TO ELECTRONIC PROXIMITY LAVATORY FAUCETS.
3. PROVIDE 120V, 20A CIRCUIT IN PANEL FL1B CIRCUIT FOR POWER TO WALL HUNG WATER CLOSETS AND URINALS.

GENERAL NOTES

1. ALL RECEPTACLES TO BE MOUNTED AT 48" AFF IN ALL GARAGE AREAS INCLUDING PARKING GARAGE, BUS STORAGE, MAINTENANCE BAYS, CHASSIS WASH, AND ERVICE LANES.
2. ALL DATA RECEPTACLES SHOWN ON THIS DWG, WIRING SHALL BE ROUTED TO DATA RACK IN ROOM A102b.
3. SEE ELECTRICAL EQUIPMENT SCHEDULES FOR CONDUIT AND WIRE SIZES.



1 ELECTRICAL FIRST FLOOR POWER PLAN - AREA D
1/8" = 1'-0"



GRAPHIC SCALE (FEET)
1/8" = 1'-0" 0' 4' 8' 16' 24' 32' 40'

KEY PLAN

REV.	DATE	DESCRIPTION	SHEET NO.
		REVISIONS	

FILENAME:

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DESIGNER/DRAFTER: CJE
CHECKED BY: RB
SCALE: 1/8" = 1'-0"

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ARCHITECT: WENDEL
APPROVED BY: BPM
ENGINEERS: ReSTL DESIGNERS, CLOUGH HARBOUR ASSOC., AI ENGINEERS, WENDEL
DATE: 06/11/2014

DESIGNED BY:
CLOUGH HARBOUR & ASSOCIATES
2139 SILAS DEANE HIGHWAY
SUITE 212
ROCKY HILL, CT
06067-2336

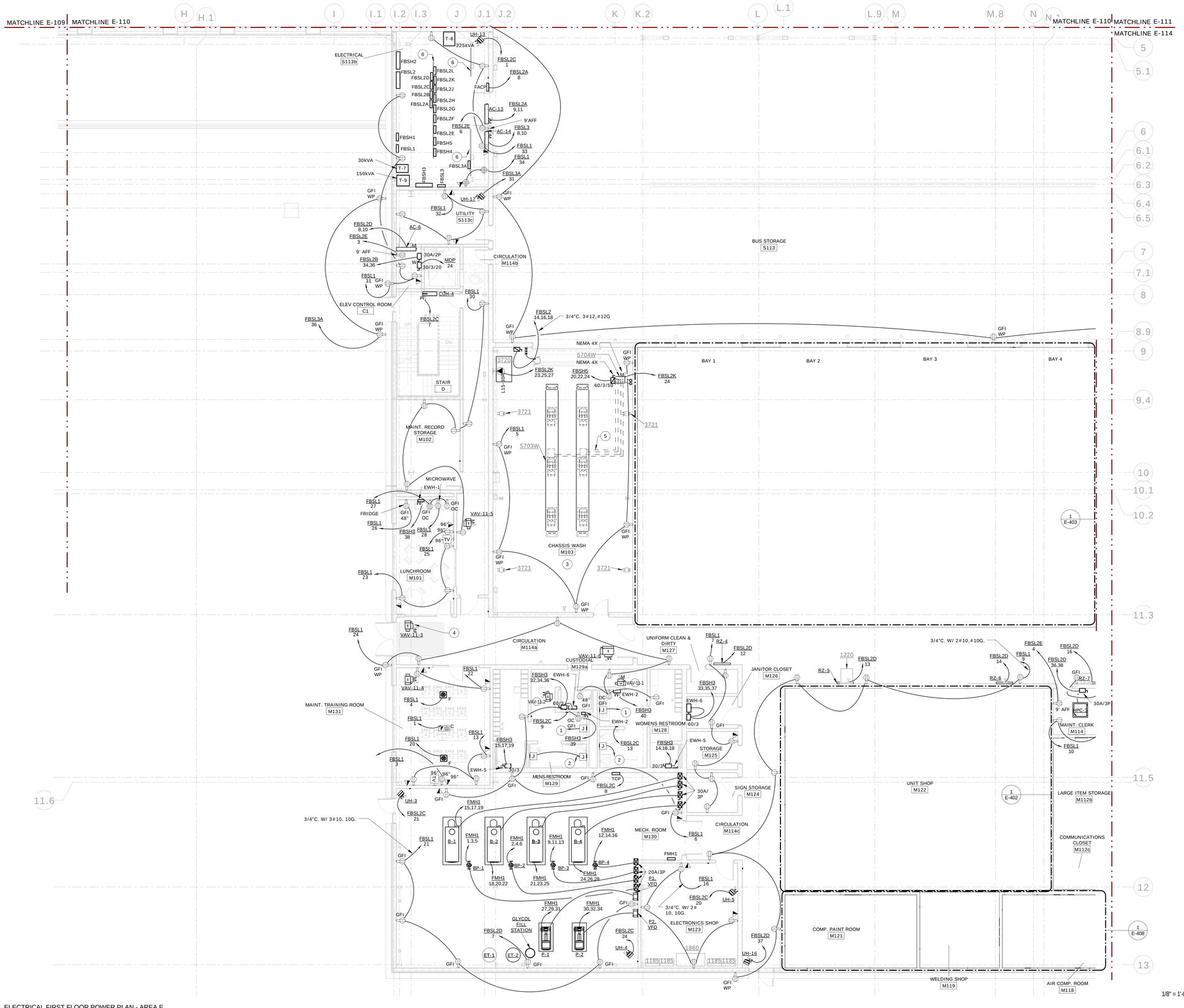
STATE OF CONNECTICUT · BRIAN P. McKENNA · No. 21640 · LICENSED PROFESSIONAL ENGINEER

PROJECT TITLE:
WATERBURY BUS MAINTENANCE FACILITY REPLACEMENT

ADDRESS:
FROST BRIDGE ROAD
WATERTOWN, CONNECTICUT 06787

DRAWING TITLE:
ELECTRICAL FIRST FLOOR POWER PLAN - AREA D

PROJECT NO. 431-0006
DRAWING NO. E-112
SHEET NO. 13.012



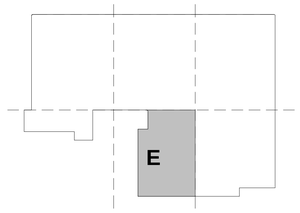
1 ELECTRICAL FIRST FLOOR POWER PLAN - AREA E
1/8" = 1'-0"

CODED NOTES

1. PROVIDE 120V, 20A CIRCUIT FROM PANEL FBSL2C FOR POWER TO ELECTRONIC PROXIMITY LAVATORY FAUCETS.
2. PROVIDE 120V, 20A CIRCUIT FROM PANEL FBSL2C FOR POWER TO WALL HUNG WATER CLOSETS AND URINALS.
3. ALL EQUIPMENT IN CHASSIS WASH WILL BE EXPOSED TO WATER SPRAY. PROVIDE DEVICES SUITABLE FOR ENVIROMENT. ALL DEVICES TO BE MOUNTED AT 48"AFF.
4. PROVIDE 120V, 20A CIRCUIT FROM PANEL FBSL3A TO POWER VAV'S. NO MORE THAN 8 VAV'S PER CIRCUIT.
5. PROVIDE (4) 2"C. IN SLAB FROM CONTROL PANEL TO LIFT PER LIFT MANUFACTURER'S REQUIREMENTS. ALL CONDUITS MUST USE SEALOFF IN ACCORDANCE TO LOCAL AND NATIONAL CODES AND MEET LIFT MANUFACTURER'S REQUIRMENTS. PROVIDE REQUIRED SPACE BETWEEN SEALOFF AND FLOOR GRADE AS REQUIRED BY LIFT MANUFACTURER.
6. PROVIDE 1-5/8" x 1-5/8" UNISTRUT FRAMING ALL MOUNTING HARDWARE AND ACCESSORIES TO SUPPORT PANELS IN MIDDLE OF ROOM.

GENERAL NOTES

1. ALL RECEPTACLES SHOWN IN BUS STORAGE SHALL BE MOUNTED 48" AFF. TO THE CENTER OF RECEPTACLE.
2. ALL DATA RECEPTACLES SHOWN ON THIS DWG, WIRING SHALL BE ROUTED TO IDF RACK 'B' IN ROOM M112C.
3. SEE ELECTRICAL EQUIPMENT SCHEDULES FOR CONDUIT AND WIRE SIZES UNLESS OTHERWISE NOTED.



KEY PLAN

GRAPHIC SCALE (FEET)
1/8" = 1'-0"
0' 4' 8' 16' 24' 32' 40'

REV.	DATE	DESCRIPTION	SHEET NO.
		REVISIONS	

FILENAME:

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DESIGNER/DRAFTER: CJE
CHECKED BY: RB
SCALE: 1/8" = 1'-0"

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ARCHITECT: WENDEL
APPROVED BY: BPM
ENGINEERS: ReSTL DESIGNERS, CLOUGH HARBOUR ASSOC., AI ENGINEERS, WENDEL
DATE: 06/11/2014

DESIGNED BY:
CLOUGH HARBOUR & ASSOCIATES
2139 SILAS DEANE HIGHWAY
SUITE 212
ROCKY HILL, CT 06067-2336

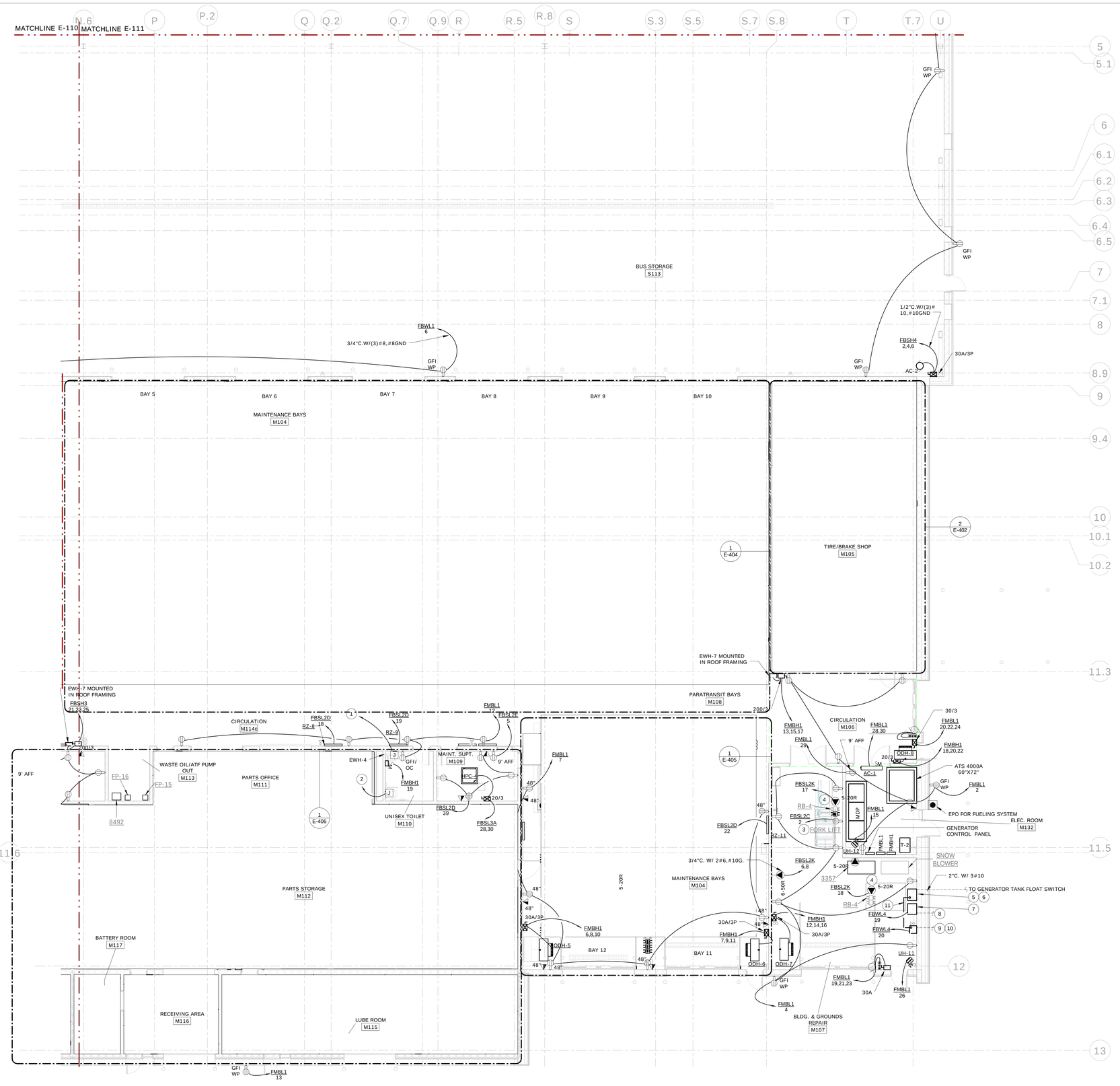
STATE OF CONNECTICUT BRIAN P. McCONNELL No. 21640 LICENSED PROFESSIONAL ENGINEER

PROJECT TITLE:
WATERBURY BUS MAINTENANCE FACILITY REPLACEMENT

ADDRESS:
FROST BRIDGE ROAD
WATERTOWN, CONNECTICUT 06787

DRAWING TITLE:
ELECTRICAL FIRST FLOOR POWER PLAN - AREA E

PROJECT NO. 431-0006
DRAWING NO. E-113
SHEET NO. 13.013



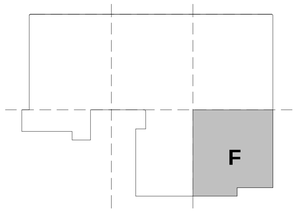
1 ELECTRICAL FIRST FLOOR POWER PLAN - AREA F
1/8" = 1'-0"

CODED NOTES (H)

1. PROVIDE 120V, 20A CIRCUIT FROM PANEL FBSL2C FOR POWER TO ELECTRONIC PROXIMITY LAVATORY FAUCETS.
2. PROVIDE 120V, 20A CIRCUIT FROM PANEL FBSL2C FOR POWER TO WALL HUNG WATER CLOSETS.
3. DEDICATED RECPTACLE FOR FORKLIFT CHARGING.
4. MOUNT RECEPTACLE TO CEILING STRUCTURE FOR POWER TO CORD REEL.
5. GENERATOR SUBMERSIBLE PUMP CONTROL BOX. PROVIDED BY EQUIPMENT VENDOR.
6. SUBMERSIBLE PUMP DOUBLE HOOK ISOLATION BOX.
7. SUBMERSIBLE PUMP SMART CONTROLLER
8. PROVIDE 2"C. W/ 3#4, 1#4G. TO SUBMERSIBLE PUMP AT EXTERIOR DIESEL TANK #2. SEE SITE PLAN FOR CONTINUATION.
9. PROVIDE 2"C. W/ 2#10, 1#10G. TO SOLENOID VAVLE AT EXTERIOR DIESEL TANK #2. SEE SITE PLAN FOR CONTINUATION.
10. RELAY FOR SOLENOID AT DIESEL TANK #2. PROVIDED BY EQUIPMENT VENDOR.
11. PROVIDE 3/4"C. W/ 3#12.

GENERAL NOTES

1. ALL RECEPTACLES SHOWN IN BUS STORAGE SHALL BE MOUNTED AT 48" AFF. TO THE CENTER OF THE RECEPTACLE.
2. ALL DATA RECEPTACLES SHOWN ON THIS DWG, WIRING SHALL BE ROUTED TO IDF RACK 'B' IN ROOM M112C.
3. SEE ELECTRICAL EQUIPMENT SCHEDULES FOR CONDUIT AND WIRE SIZES, UNLESS OTHERWISE NOTED.



KEY PLAN

GRAPHIC SCALE (FEET)
1/8" = 1'-0"
0' 4' 8' 16' 24' 32' 40'

REV.	DATE	DESCRIPTION	SHEET NO.
		REVISIONS	

FILENAME:

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DESIGNER/DRAFTER: CJE
CHECKED BY: RB
SCALE: 1/8" = 1'-0"

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ARCHITECT: WENDEL
APPROVED BY: BPM
ENGINEERS: ReSTL DESIGNERS, CLOUGH HARBOUR ASSOC., AI ENGINEERS, WENDEL
DATE: 06/11/2014

DESIGNED BY:
CLOUGH HARBOUR & ASSOCIATES
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SUITE 212
ROCKY HILL, CT 06067-2336

STATE OF CONNECTICUT BRIAN P. McKENNA No. 21640 LICENSED PROFESSIONAL ENGINEER

PROJECT TITLE: WATERBURY BUS MAINTENANCE FACILITY REPLACEMENT

ADDRESS: FROST BRIDGE ROAD WATERTOWN, CONNECTICUT 06787

DRAWING TITLE: ELECTRICAL FIRST FLOOR POWER PLAN - AREA F

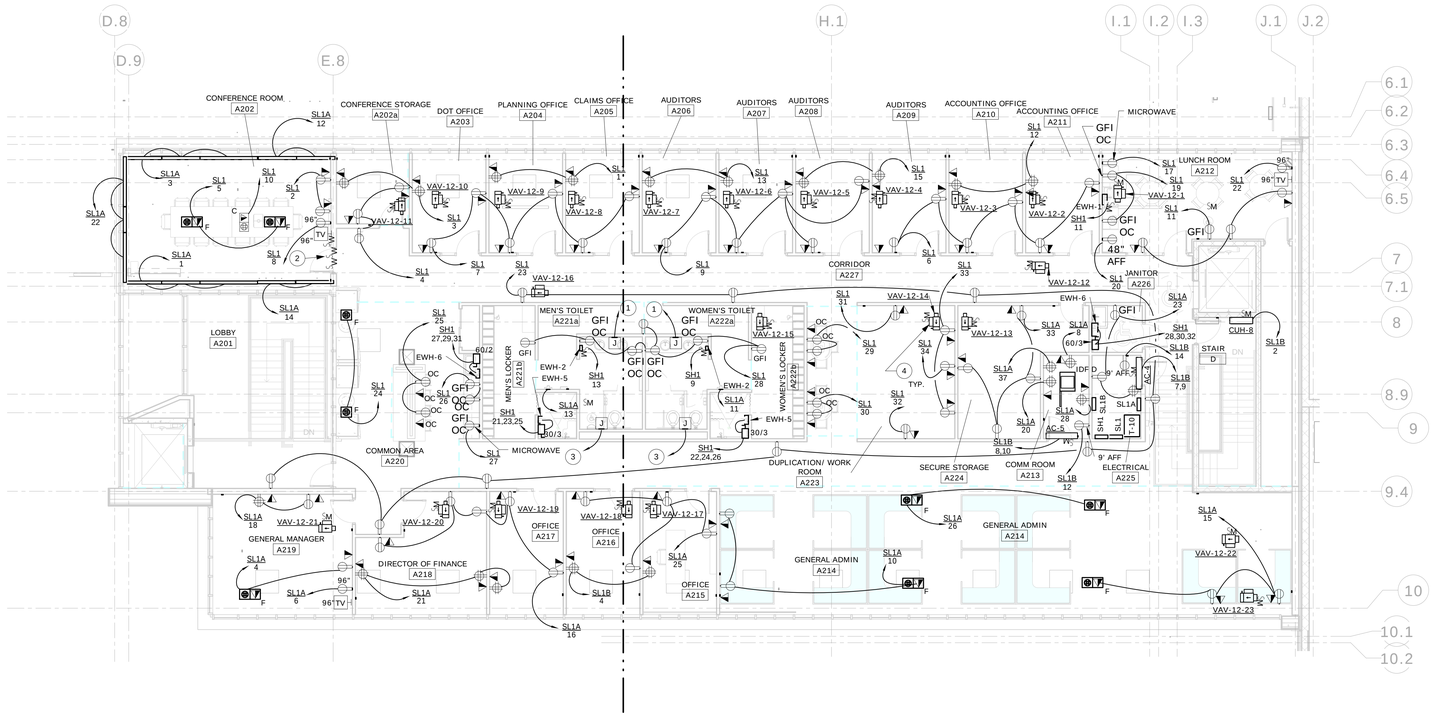
PROJECT NO. 431-0006
DRAWING NO. E-114
SHEET NO. 13.014

CODED NOTES (#)

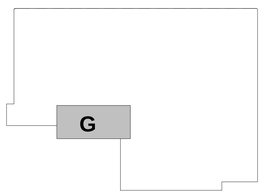
1. PROVIDE 120V, 20A CIRCUIT FROM PANEL SL1B TO POWER ELECTRONIC PROXIMITY LAVATORY FAUCETS.
2. SWITCH FOR WINDOW SHADES.
3. PROVIDE 120V, 20A CIRCUIT FROM PANEL SL1B TO POWER WALL HUNG WATER CLOSETS AND URINALS.
4. PROVIDE 120V, 20A CIRCUIT FROM PANEL SL1A CIRCUIT 9,24, AND 34 TO POWER VAV'S. NO MORE THAN 8 VAV'S PER CIRCUIT.

GENERAL NOTES

1. ALL DATA OUTLETS SHOWN ON THIS DWG, WIRING SHALL BE ROUTED TO IDF RACK D IN RM A213.



1 ELECTRICAL SECOND FLOOR POWER PLAN - AREA G
1/8" = 1'-0"



GRAPHIC SCALE (FEET)
1/8" = 1'-0" 0' 4' 8' 16' 24' 32' 40'

KEY PLAN

REV.	DATE	DESCRIPTION	SHEET NO.
		REVISIONS	

FILENAME:

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DESIGNER/DRAFTER: CJE

CHECKED BY: RB

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

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ARCHITECT: WENDEL

APPROVED BY: BPM

ENGINEERS: ReSTL DESIGNERS, CLOUGH HARBOUR ASSOC., AI ENGINEERS, WENDEL

DATE: 06/11/2014

DESIGNED BY:
CLOUGH HARBOUR & ASSOCIATES
2139 SILAS DEANE HIGHWAY
SUITE 212
ROCKY HILL, CT
06067-2336

STATE OF CONNECTICUT BRIAN P. McKENNA No. 21640 LICENSED PROFESSIONAL ENGINEER

PROJECT TITLE:
WATERBURY BUS MAINTENANCE FACILITY REPLACEMENT

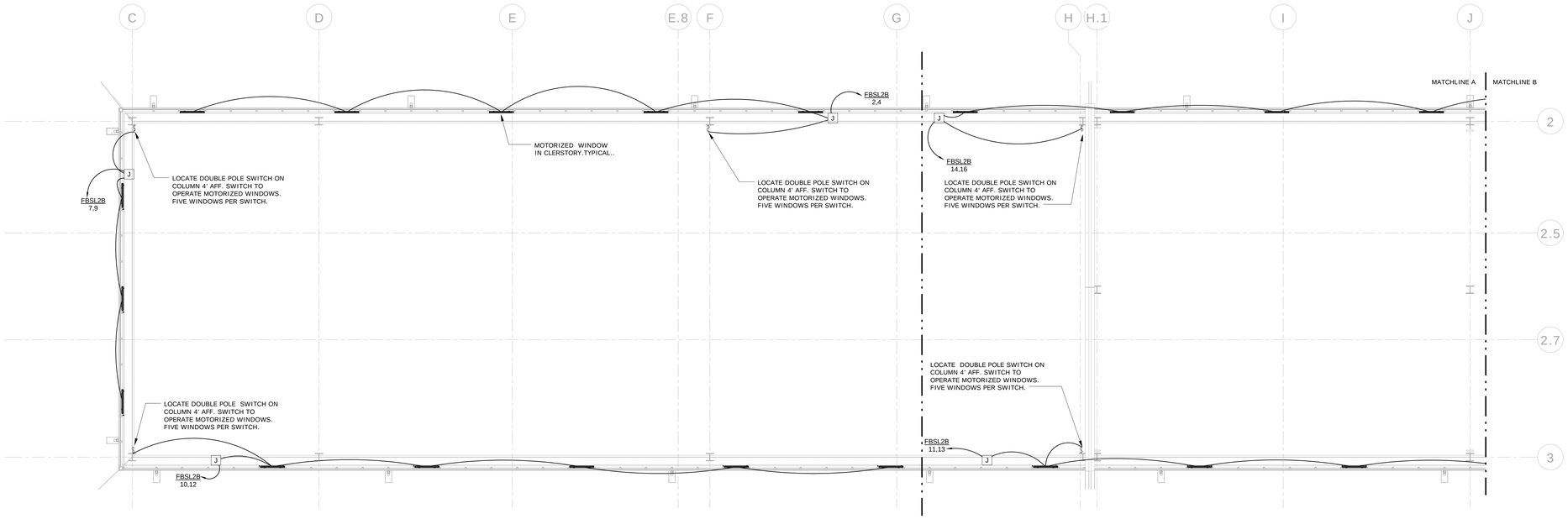
ADDRESS:
FROST BRIDGE ROAD
WATERTOWN, CONNECTICUT 06787

DRAWING TITLE:
ELECTRICAL SECOND FLOOR POWER PLAN - AREA G

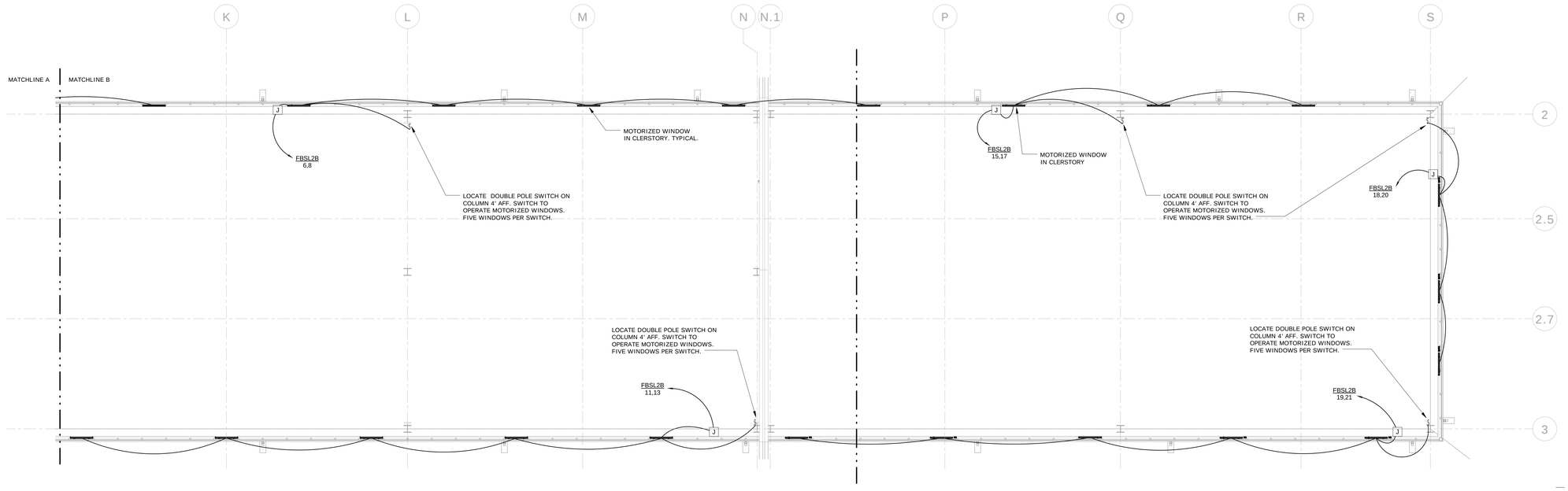
PROJECT NO. **431-0006**

DRAWING NO. **E-115**

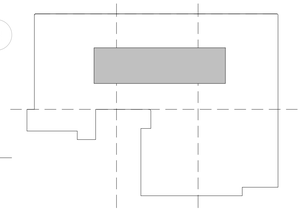
SHEET NO. **13.015**



1 ELECTRICAL POWER PLAN - CLERESTORY BUS STORAGE - A
1/8" = 1'-0"



2 ELECTRICAL POWER PLAN - CLERESTORY BUS STORAGE - B
1/8" = 1'-0"



KEY PLAN

GRAPHIC SCALE (FEET)
1/8" = 1'-0" 0' 4' 8' 16' 24' 32' 40'

REV.	DATE	DESCRIPTION	SHEET NO.
		REVISIONS	

FILENAME:

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

DESIGNER/DRAFTER: CJE

CHECKED BY: RB

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

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ARCHITECT: WENDEL

ENGINEERS: ReSTL DESIGNERS, CLOUGH HARBOUR ASSOC., AI ENGINEERS, WENDEL

APPROVED BY: BPM

DATE: 06/11/2014

DESIGNED BY:
CLOUGH HARBOUR & ASSOCIATES
2139 SILAS DEANE HIGHWAY
SUITE 212
ROCKY HILL, CT
06067-2336

STATE OF CONNECTICUT
BRIAN P. McKENNA
No. 21640
LICENSED
PROFESSIONAL ENGINEER

PROJECT TITLE:
WATERBURY BUS MAINTENANCE FACILITY REPLACEMENT

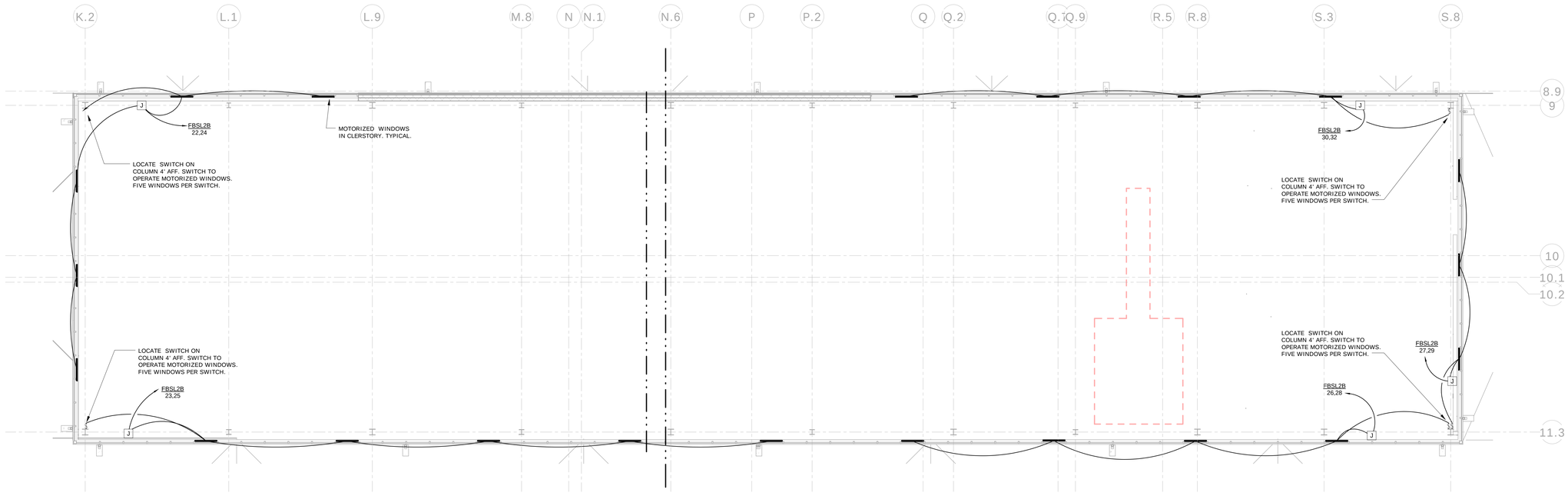
ADDRESS:
FROST BRIDGE ROAD
WATERTOWN, CONNECTICUT 06787

DRAWING TITLE:
ELECTRICAL POWER PLAN - BUS STORAGE CLERSTORY

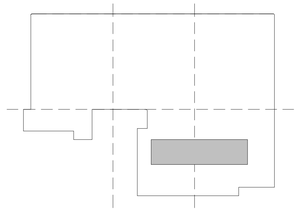
PROJECT NO. 431-0006

DRAWING NO. E-116

SHEET NO. 13.016



1 ELECTRICAL POWER PLAN - CLERESTORY MAINTENACE AREA
1/8" = 1'-0"



GRAPHIC SCALE (FEET)
1/8" = 1'-0" 0' 4' 8' 16' 24' 32' 40'

KEY PLAN

N

REV.	DATE	DESCRIPTION	SHEET NO.

REVISIONS

FILENAME:

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DESIGNER/DRAFTER: CJE

CHECKED BY: RB

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

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ARCHITECT: WENDEL

ENGINEERS: ReSTL DESIGNERS, CLOUGH HARBOUR ASSOC., AI ENGINEERS, WENDEL

APPROVED BY: BPM

DATE: 06/11/2014

DESIGNED BY:
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06067-2336

STATE OF CONNECTICUT
BRIAN P. MURPHY
No. 21640
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PROJECT TITLE:
WATERBURY BUS MAINTENANCE FACILITY REPLACEMENT

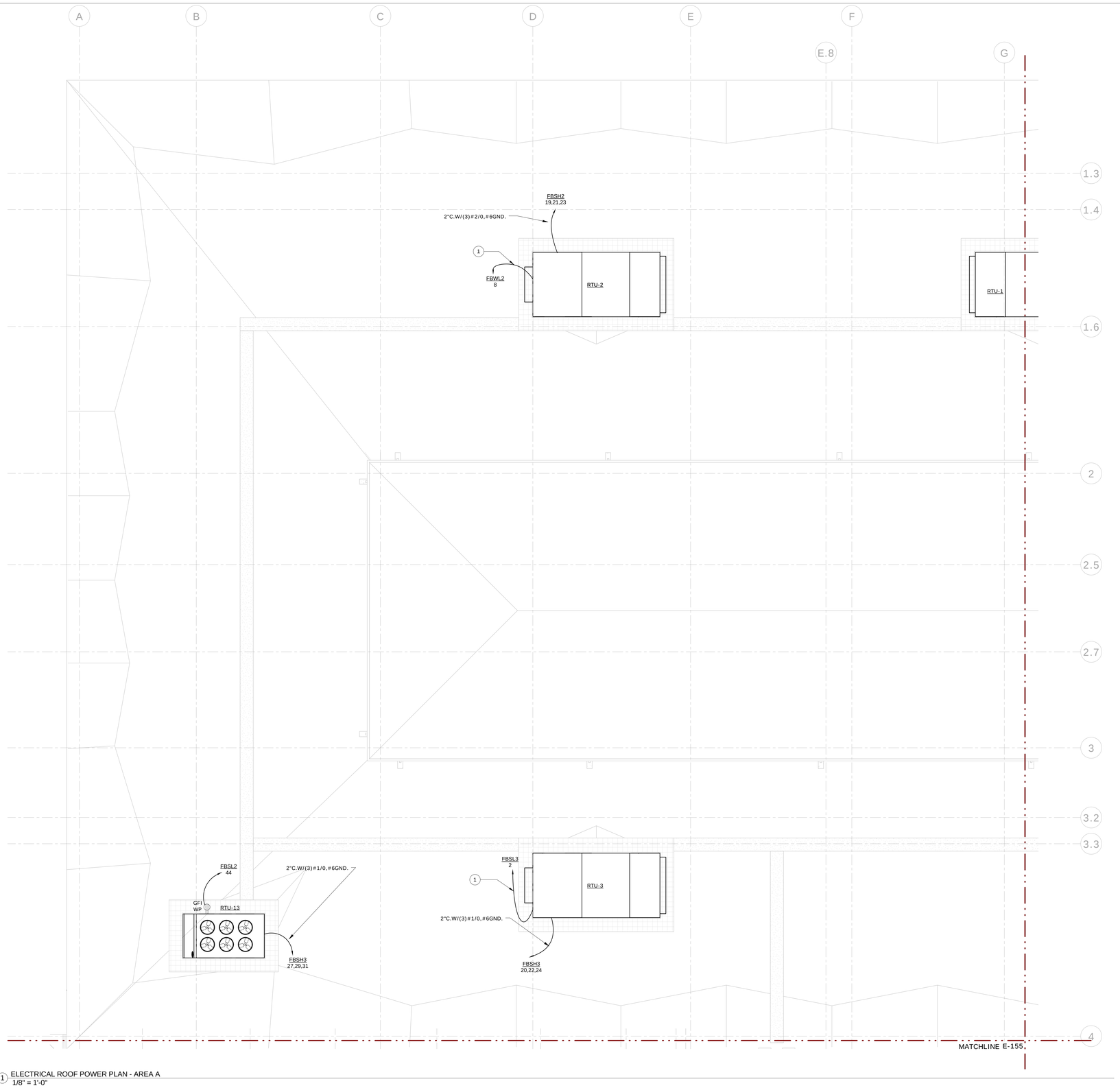
ADDRESS:
FROST BRIDGE ROAD
WATERTOWN, CONNECTICUT 06787

DRAWING TITLE:
ELECTRICAL POWER PLANS - MAINTENACE CLERSTORY

PROJECT NO. 431-0006

DRAWING NO. E-117

SHEET NO. 13.017



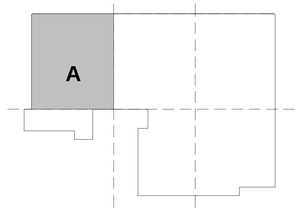
1 ELECTRICAL ROOF POWER PLAN - AREA A
1/8" = 1'-0"

CODED NOTES

1 RECEPTACLE INTERGRAL WITH RTU. CONNECT TO PANEL AND CIRCUIT AS INDICATED. PROVIDE 3/4"C, W/ #10, #10G.

GENERAL NOTES

1. SEE DWGS E-503 TO E-505 FOR CONDUIT AND WIRE SIZE FOR MECHANICAL EQUIPMENT.



GRAPHIC SCALE (FEET)
1/8" = 1'-0" 0' 4' 8' 16' 24' 32' 40'

KEY PLAN

N

REV.	DATE	DESCRIPTION	SHEET NO.
		REVISIONS	

FILENAME:

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

DESIGNER/DRAFTER: CJE

CHECKED BY: RB

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

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ARCHITECT: WENDEL

APPROVED BY: BPM

ENGINEERS: ReSTL DESIGNERS, CLOUGH HARBOUR ASSOC., AI ENGINEERS, WENDEL

DATE: 06/11/2014

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CLOUGH HARBOUR & ASSOCIATES
2139 SILAS DEANE HIGHWAY
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06067-2336

STATE OF CONNECTICUT
BRIAN P. McKENNA
No. 21640
LICENSED
PROFESSIONAL ENGINEER

PROJECT TITLE:
WATERBURY BUS MAINTENANCE FACILITY REPLACEMENT

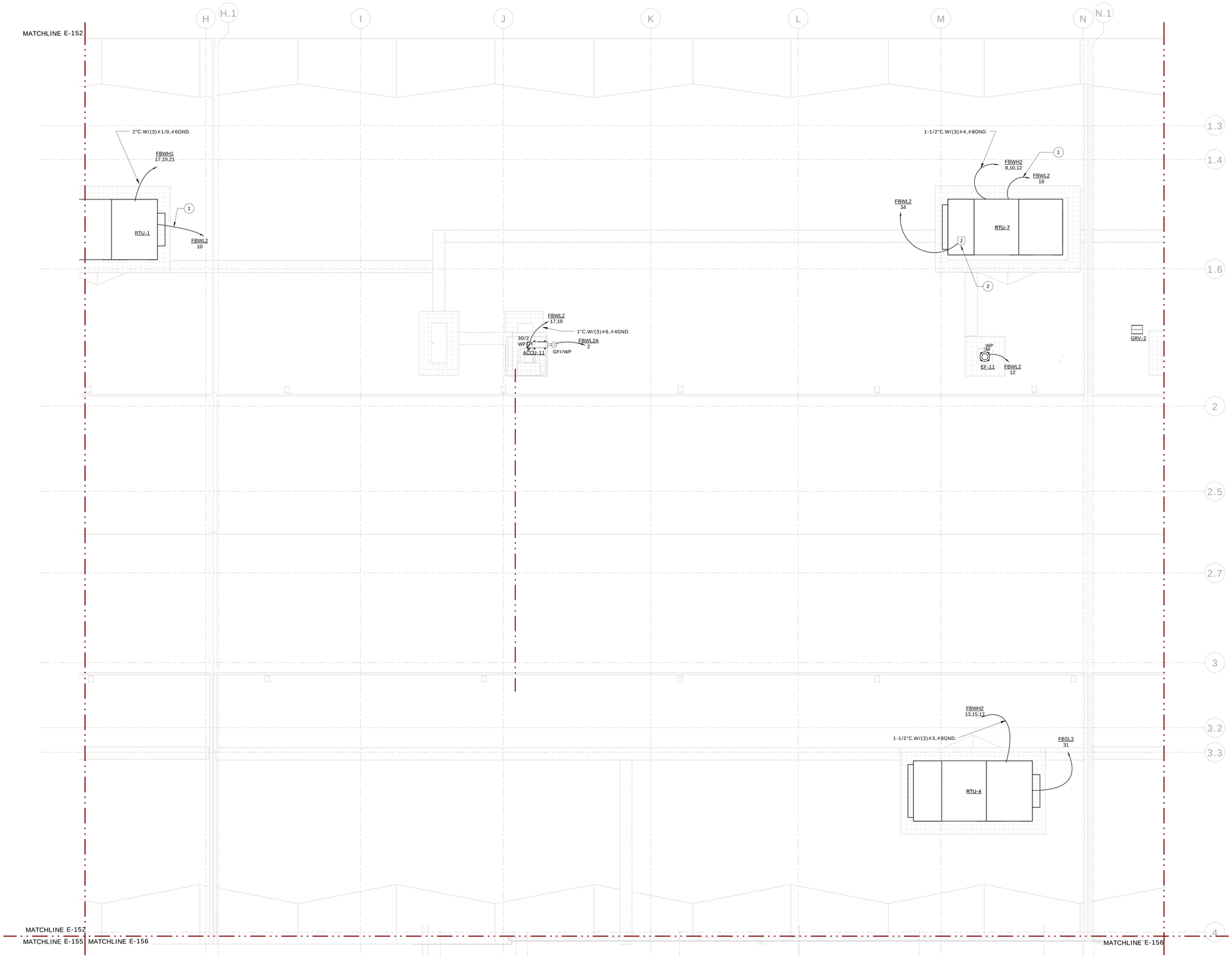
ADDRESS:
FROST BRIDGE ROAD
WATERTOWN, CONNECTICUT 06787

DRAWING TITLE:
ELECTRICAL ROOF POWER PLAN - AREA A

PROJECT NO. 431-0006

DRAWING NO. E-152

SHEET NO. 13.018



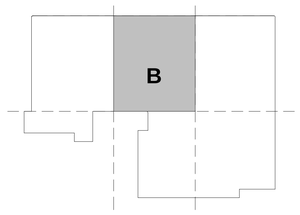
1 ELECTRICAL ROOF POWER PLAN - AREA B
1/8" = 1'-0"

CODED NOTES

1. RECEPTACLE INTERGRAL WITH RTU. CONNECT TO PANEL AND CIRCUIT AS INDICATED. PROVIDE 3/4"C, W/ #10, #10G.
2. JUNCTION BOX WITH POWER CONNECTION TO RTU HEAT TRACE. PROVIDE 3/4"C. W(2)#10,#10G TO PANEL AND CIRCUIT INDICATED.

GENERAL NOTES

1. SEE DWGS E-503 TO E-505 FOR CONDUIT AND WIRE SIZE FOR MECHANICAL EQUIPMENT.



KEY PLAN

GRAPHIC SCALE (FEET)
1/8" = 1'-0"
0' 4' 8' 16' 24' 32' 40'

N

REV.	DATE	DESCRIPTION	SHEET NO.
		REVISIONS	

FILENAME:

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DESIGNER/DRAFTER: CJE

CHECKED BY: RB

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

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ARCHITECT: WENDEL

ENGINEERS: ReSTL DESIGNERS, CLOUGH HARBOUR ASSOC., AI ENGINEERS, WENDEL

APPROVED BY: BPM

DATE: 06/11/2014

DESIGNED BY:
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ROCKY HILL, CT
06067-2336

STATE OF CONNECTICUT
BRIAN P. McKENNA
No. 21640
LICENSED
PROFESSIONAL ENGINEER

PROJECT TITLE:
WATERBURY BUS MAINTENANCE FACILITY REPLACEMENT

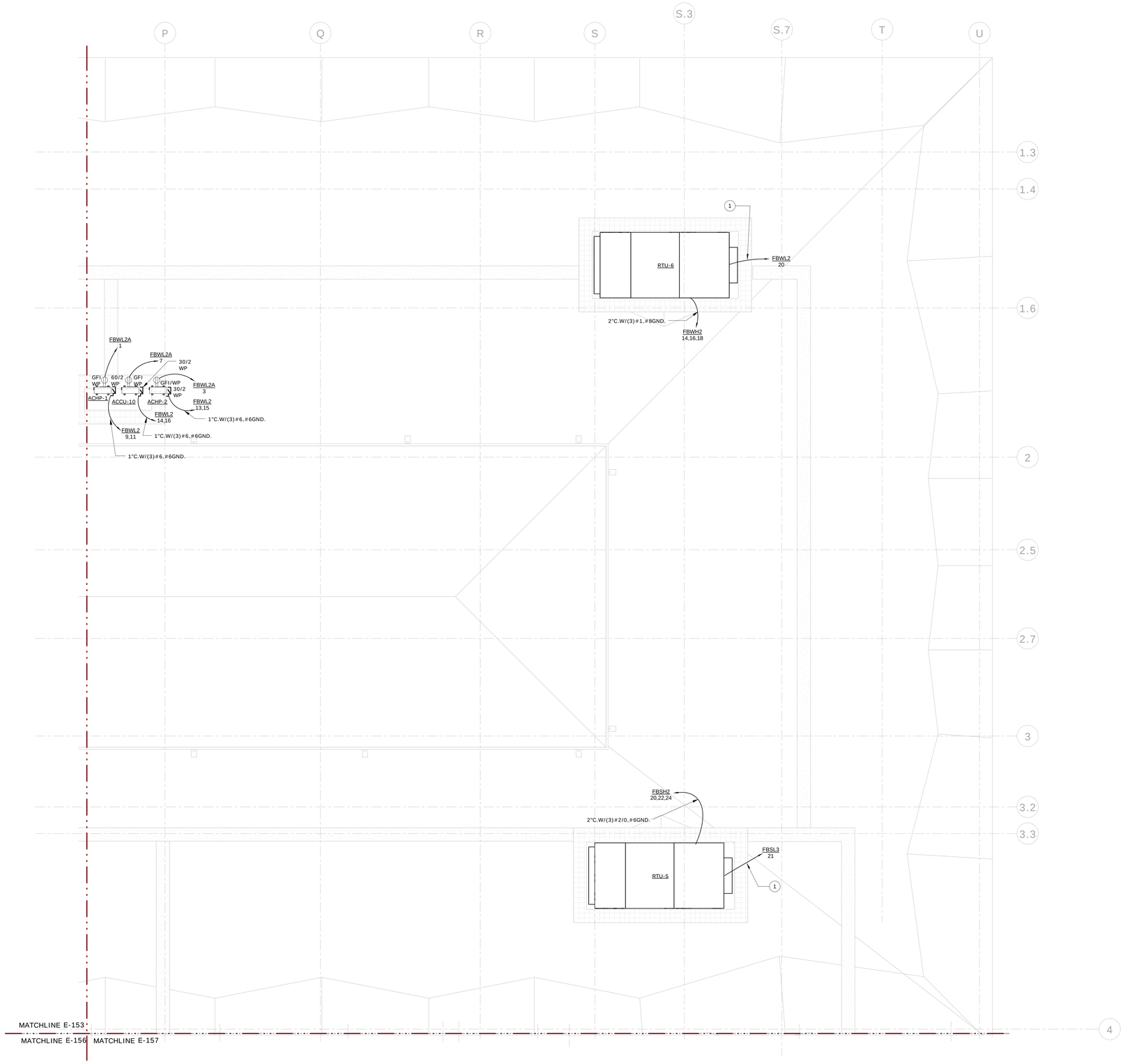
ADDRESS:
FROST BRIDGE ROAD
WATERTOWN, CONNECTICUT 06787

DRAWING TITLE:
ELECTRICAL ROOF POWER PLAN - AREA B

PROJECT NO. 431-0006

DRAWING NO. E-153

SHEET NO. 13.019



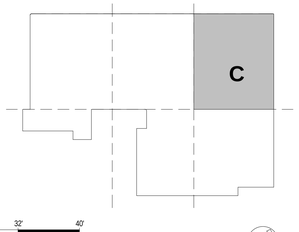
1 ELECTRICAL ROOF POWER PLAN - AREA C
1/8" = 1'-0"

CODED NOTES

1 RECEPTACLE INTERGRAL WITH RTU. CONNECT TO PANEL AND CIRCUIT AS INDICATED. PROVIDE 3/4"C, W/ #10, #10G.

GENERAL NOTES

1. SEE DWGS E-503 TO E-505 FOR CONDUIT AND WIRE SIZE FOR MECHANICAL EQUIPMENT.



KEY PLAN

GRAPHIC SCALE (FEET)
1/8" = 1'-0"
0' 4' 8' 16' 24' 32' 40'

N

REV.	DATE	DESCRIPTION	SHEET NO.
		REVISIONS	

FILENAME:

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DESIGNER/DRAFTER: CJE

CHECKED BY: RB

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

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ARCHITECT: WENDEL

APPROVED BY: BPM

ENGINEERS: ReSTL DESIGNERS, CLOUGH HARBOUR ASSOC., AI ENGINEERS, WENDEL

DATE: 06/11/2014

DESIGNED BY:
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ROCKY HILL, CT
06067-2336

STATE OF CONNECTICUT
BRIAN P. MCKENNA
No. 21640
LICENSED
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PROJECT TITLE:
WATERBURY BUS MAINTENANCE FACILITY REPLACEMENT

ADDRESS:
FROST BRIDGE ROAD
WATERTOWN, CONNECTICUT 06787

DRAWING TITLE:
ELECTRICAL ROOF POWER PLAN - AREA C

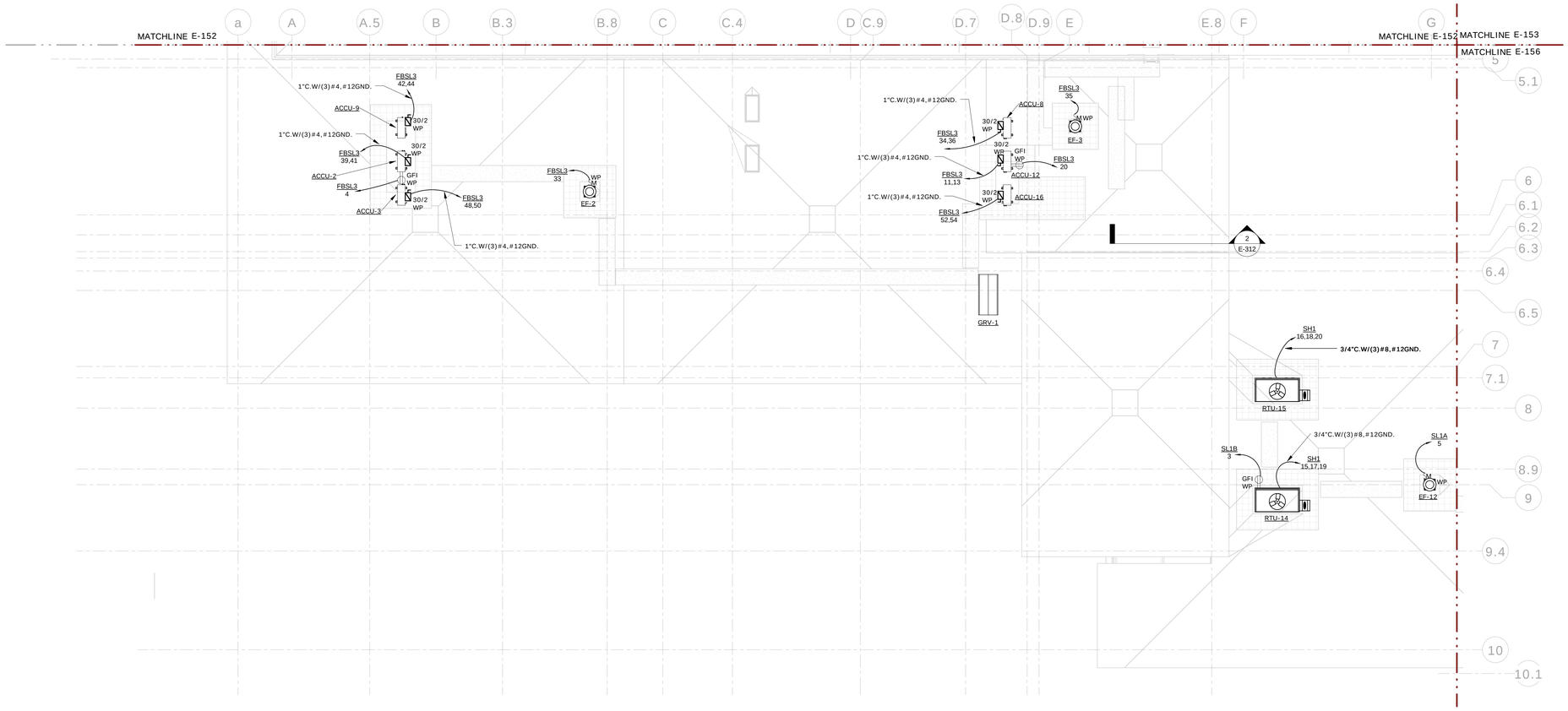
PROJECT NO. 431-0006

DRAWING NO. E-154

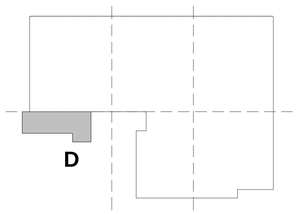
SHEET NO. 13.020

GENERAL NOTES

1. SEE DWGS E-503 TO E-505 FOR CONDUIT AND WIRE SIZE FOR MECHANICAL EQUIPMENT.



1 ELECTRICAL ROOF POWER PLAN - AREA D
1/8" = 1'-0"



GRAPHIC SCALE (FEET)
1/8" = 1'-0"
0' 4' 8' 16' 24' 32' 40'

KEY PLAN

N

REV.	DATE	DESCRIPTION	SHEET NO.
		REVISIONS	

FILENAME:

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DESIGNER/DRAFTER: CJE

CHECKED BY: RB

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

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ARCHITECT: WENDEL

ENGINEERS: ReSTL DESIGNERS, CLOUGH HARBOUR ASSOC., AI ENGINEERS, WENDEL

APPROVED BY: BPM

DATE: 06/11/2014

DESIGNED BY:
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SUITE 212
ROCKY HILL, CT
06067-2336

STATE OF CONNECTICUT
BRIAN P. McKEON
No. 21640
LICENSED
PROFESSIONAL ENGINEER

PROJECT TITLE:
WATERBURY BUS MAINTENANCE FACILITY REPLACEMENT

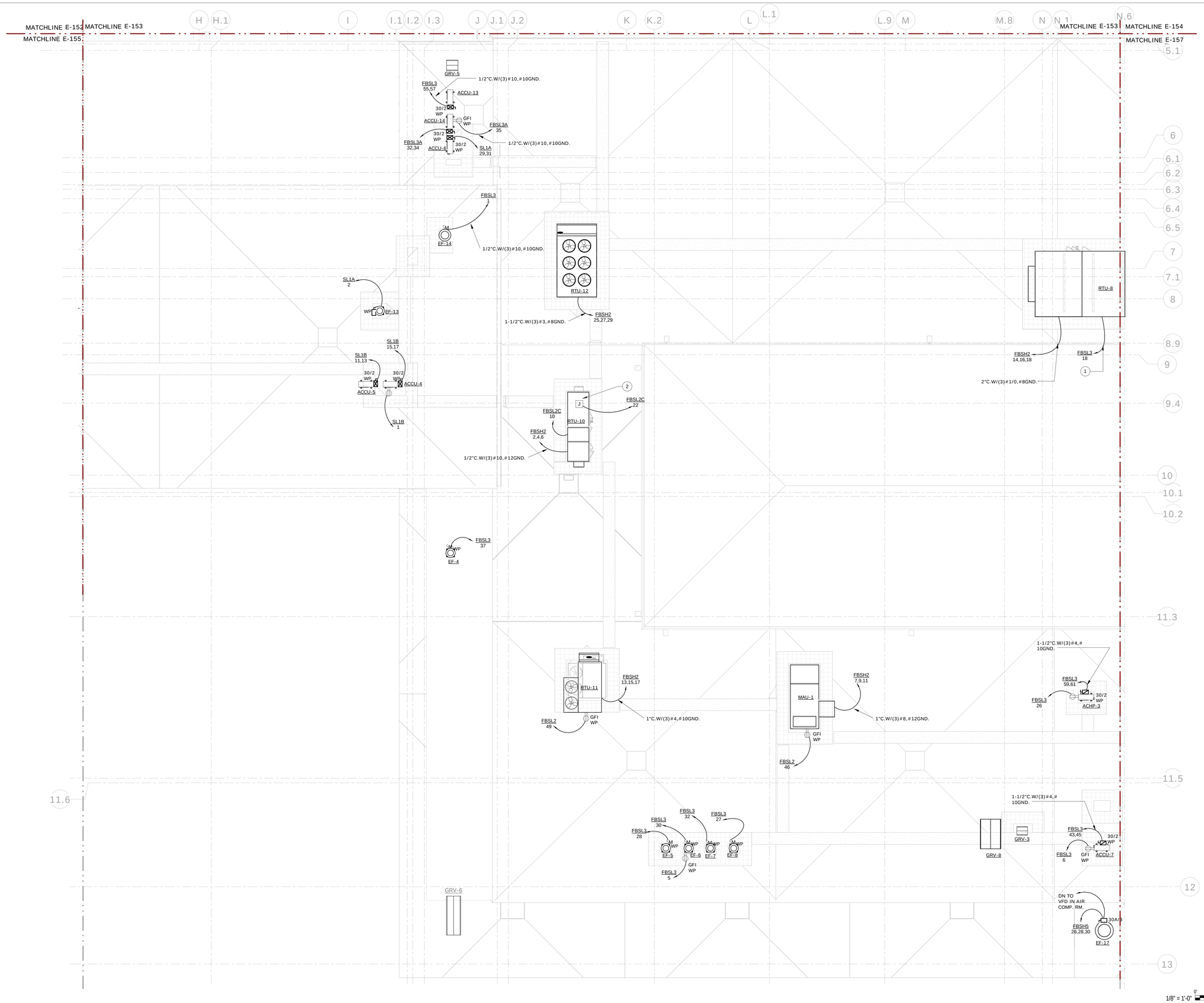
ADDRESS:
FROST BRIDGE ROAD
WATERTOWN, CONNECTICUT 06787

DRAWING TITLE:
ELECTRICAL ROOF POWER PLAN - AREA D

PROJECT NO. 431-0006

DRAWING NO. E-155

SHEET NO. 13.021

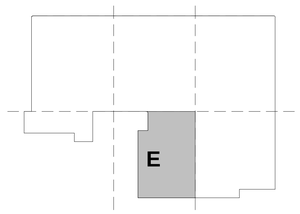


CODED NOTES

1. RECEPTACLE INTERGRAL WITH RTU. CONNECT TO PANEL AND CIRCUIT AS INDICATED. PROVIDE 3/4"C. W/ #10, #10G.
2. JUNCTION BOX WITH POWER CONNECTION TO RTU HEAT TRACE. PROVIDE 3/4"C. W(2)#10,#10G TO PANEL AND CIRCUIT INDICATED.

GENERAL NOTES

1. SEE DWGS E-503 TO E-505 FOR CONDUIT AND WIRE SIZE FOR MECHANICAL EQUIPMENT.



KEY PLAN

GRAPHIC SCALE (FEET)
1/8" = 1'-0"
0' 4' 8' 16' 24' 32' 40'

1 ELECTRICAL ROOF POWER PLAN - AREA E
1/8" = 1'-0"

REV.	DATE	DESCRIPTION	SHEET NO.
		REVISIONS	

FILENAME:

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DESIGNER/DRAFTER: CJE
CHECKED BY: RB
SCALE: 1/8" = 1'-0"

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ARCHITECT: WENDEL
APPROVED BY: BPM
ENGINEERS: ReSTL DESIGNERS, CLOUGH HARBOUR ASSOC., AI ENGINEERS, WENDEL
DATE: 06/11/2014

DESIGNED BY:
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ROCKY HILL, CT 06067-2336

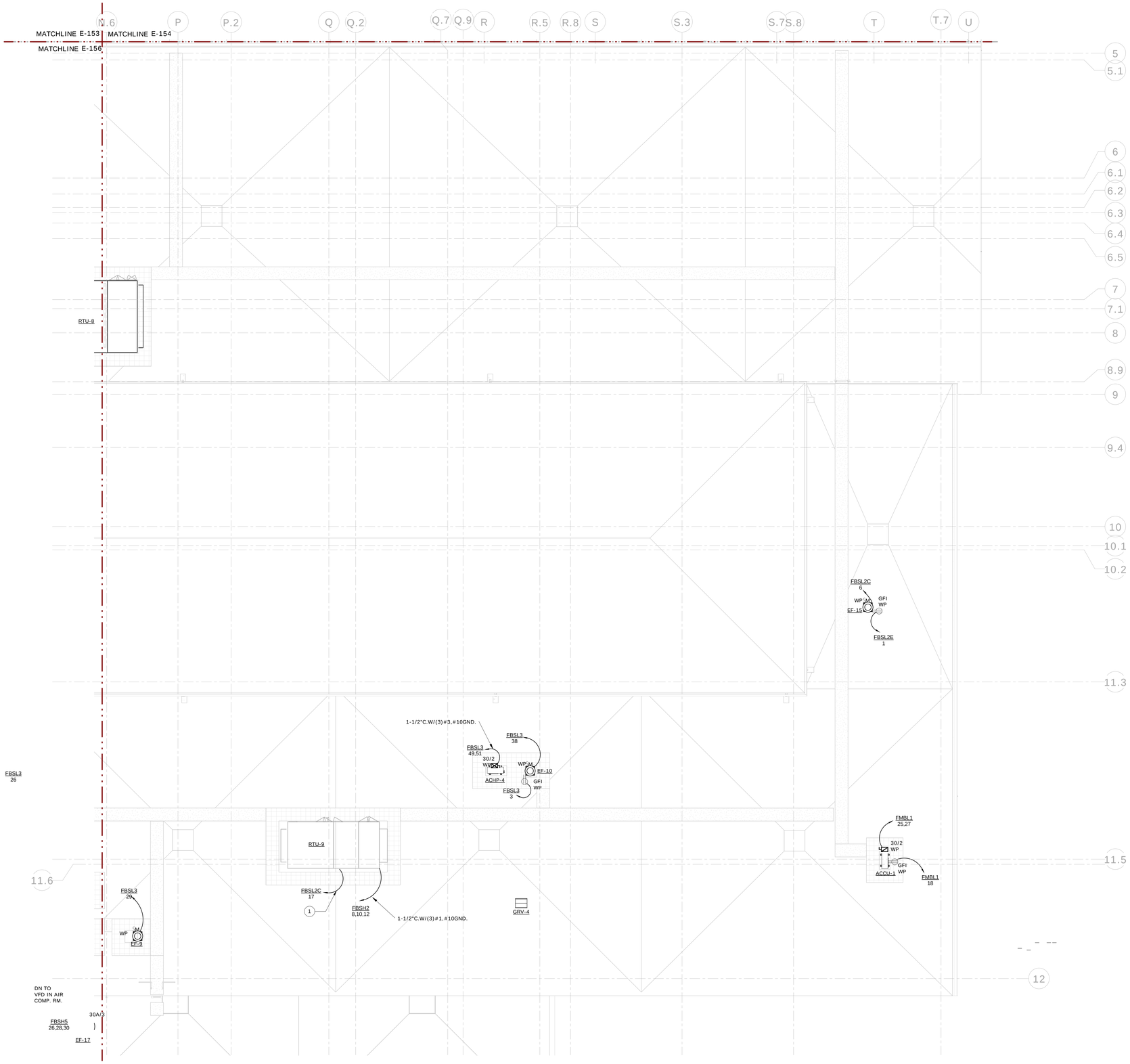
STATE OF CONNECTICUT
BRIAN P. MCKENNA
No. 21640
LICENSED
PROFESSIONAL ENGINEER

PROJECT TITLE:
WATERBURY BUS MAINTENANCE FACILITY REPLACEMENT

ADDRESS:
FROST BRIDGE ROAD
WATERTOWN, CONNECTICUT 06787

DRAWING TITLE:
ELECTRICAL ROOF POWER PLAN - AREA E

PROJECT NO. 431-0006
DRAWING NO. E-156
SHEET NO. 13.022



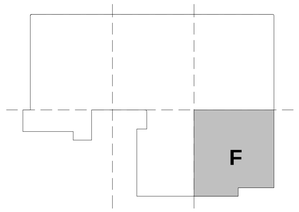
1 ELECTRICAL ROOF POWER PLAN - AREA F
1/8" = 1'-0"

CODED NOTES

1 RECEPTACLE INTERGRAL WITH RTU. CONNECT TO PANEL AND CIRCUIT AS INDICATED. PROVIDE 3/4"C, W/ #10, #10G.

GENERAL NOTES

1. SEE DWGS E-503 TO E-505 FOR CONDUIT AND WIRE SIZE FOR MECHANICAL EQUIPMENT.



KEY PLAN

GRAPHIC SCALE (FEET)
1/8" = 1'-0"
0' 4' 8' 16' 24' 32' 40'

N

REV.	DATE	DESCRIPTION	SHEET NO.
		REVISIONS	

FILENAME:

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DESIGNER/DRAFTER: CJE

CHECKED BY: RB

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

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ARCHITECT: WENDEL

APPROVED BY: BPM

ENGINEERS: ReSTL DESIGNERS, CLOUGH HARBOUR ASSOC., AI ENGINEERS, WENDEL

DATE: 06/11/2014

DESIGNED BY:
CLOUGH HARBOUR & ASSOCIATES
2139 SILAS DEANE HIGHWAY
SUITE 212
ROCKY HILL, CT
06067-2336

STATE OF CONNECTICUT
BRIAN P. McKENNA
No. 21640
LICENSED
PROFESSIONAL ENGINEER

PROJECT TITLE:
WATERBURY BUS MAINTENANCE FACILITY REPLACEMENT

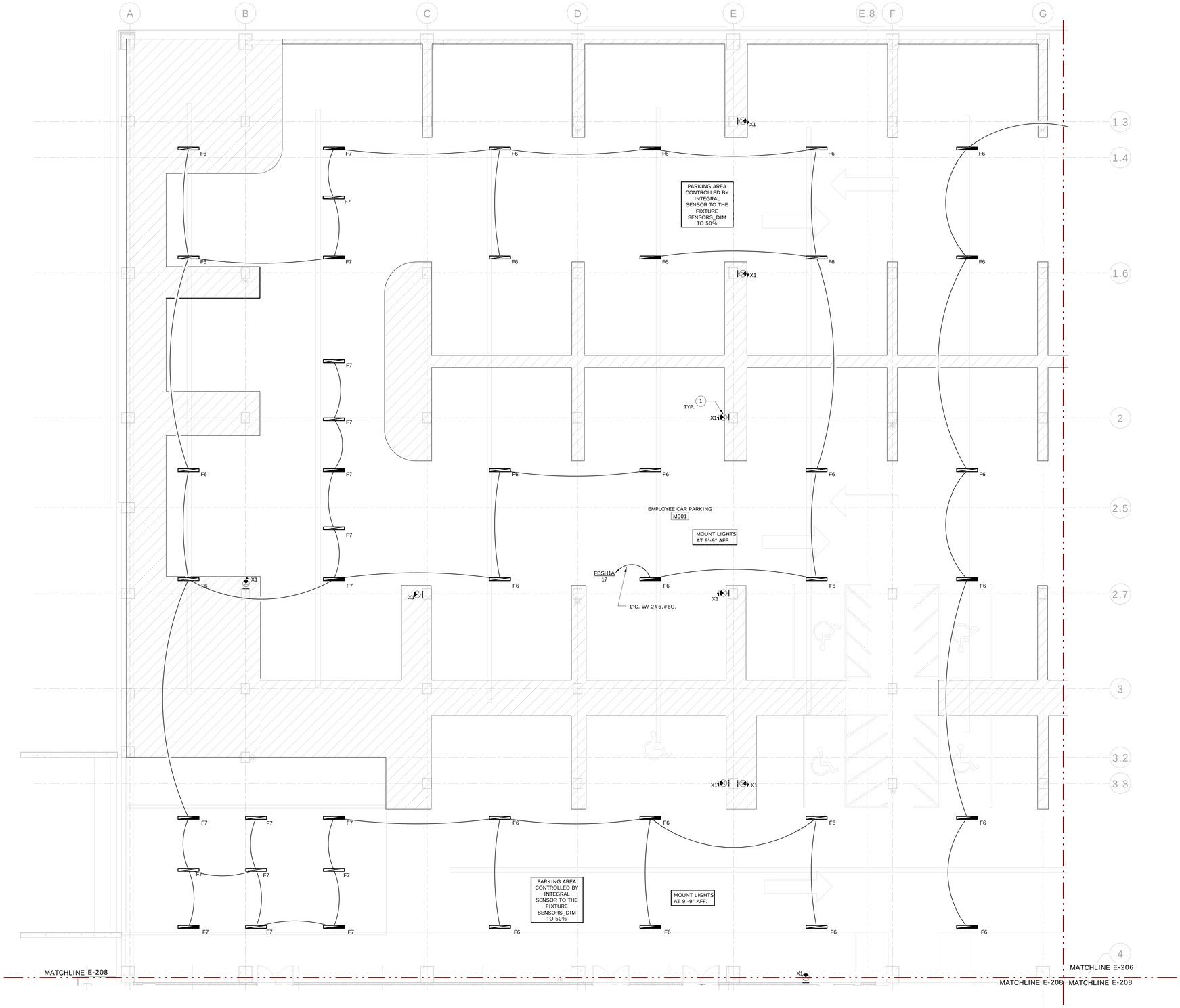
ADDRESS:
FROST BRIDGE ROAD
WATERTOWN, CONNECTICUT 06787

DRAWING TITLE:
ELECTRICAL ROOF POWER PLAN - AREA F

PROJECT NO. 431-0006

DRAWING NO. E-157

SHEET NO. 13.023



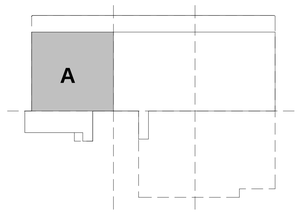
1 ELECTRICAL GROUND FLOOR LIGHTING PLAN - AREA A
1/8" = 1'-0"

CODED NOTES

1 CONNECT ALL EXIT SIGNS SHOWN ON THIS DWG TO PANEL FBSH1A CIRCUIT 2. UTILIZE 2#10,#10G. IN 3/4"C. FOR BRANCH WIRING.

GENERAL NOTES

1. REFER TO A-700 SERIES REFLECTED CEILING PLANS FOR ADDITIONAL INFORMATION.
2. CONNECT EMERGENCY LIGHTING BALLASTS IN FIXTURES AHEAD OF ALL SWITCHING OR CONTROL.
3. CONNECT EMERGENCY WALL PACKS TO LOCAL LIGHTING CIRCUIT AHEAD OF ALL SWITCHING OR CONTROL.
4. FIXTURES IN PARKING AREA TO BE CONTROLLED BY OCCUPANCY SENSOR INTEGRAL TO THE FIXTURE. FIXTURE TO DIM TO 50% OUTPUT WHEN SPACE IS NOT OCCUPIED.



GRAPHIC SCALE (FEET)
1/8" = 1'-0" 0' 4' 8' 16' 24' 32' 40'

KEY PLAN

N

REV.	DATE	DESCRIPTION	SHEET NO.
		REVISIONS	

FILENAME:

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

DESIGNER/DRAFTER: CJE

CHECKED BY: RB

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

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ARCHITECT: WENDEL

APPROVED BY: BPM

ENGINEERS: ReSTL DESIGNERS, CLOUGH HARBOUR ASSOC., AI ENGINEERS, WENDEL

DATE: 06/11/2014

DESIGNED BY:
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2139 SILAS DEANE HIGHWAY
SUITE 212
ROCKY HILL, CT
06067-2336

STATE OF CONNECTICUT
BRIAN P. MCGRATH
No. 21640
LICENSED
PROFESSIONAL ENGINEER

PROJECT TITLE:
WATERBURY BUS MAINTENANCE FACILITY REPLACEMENT

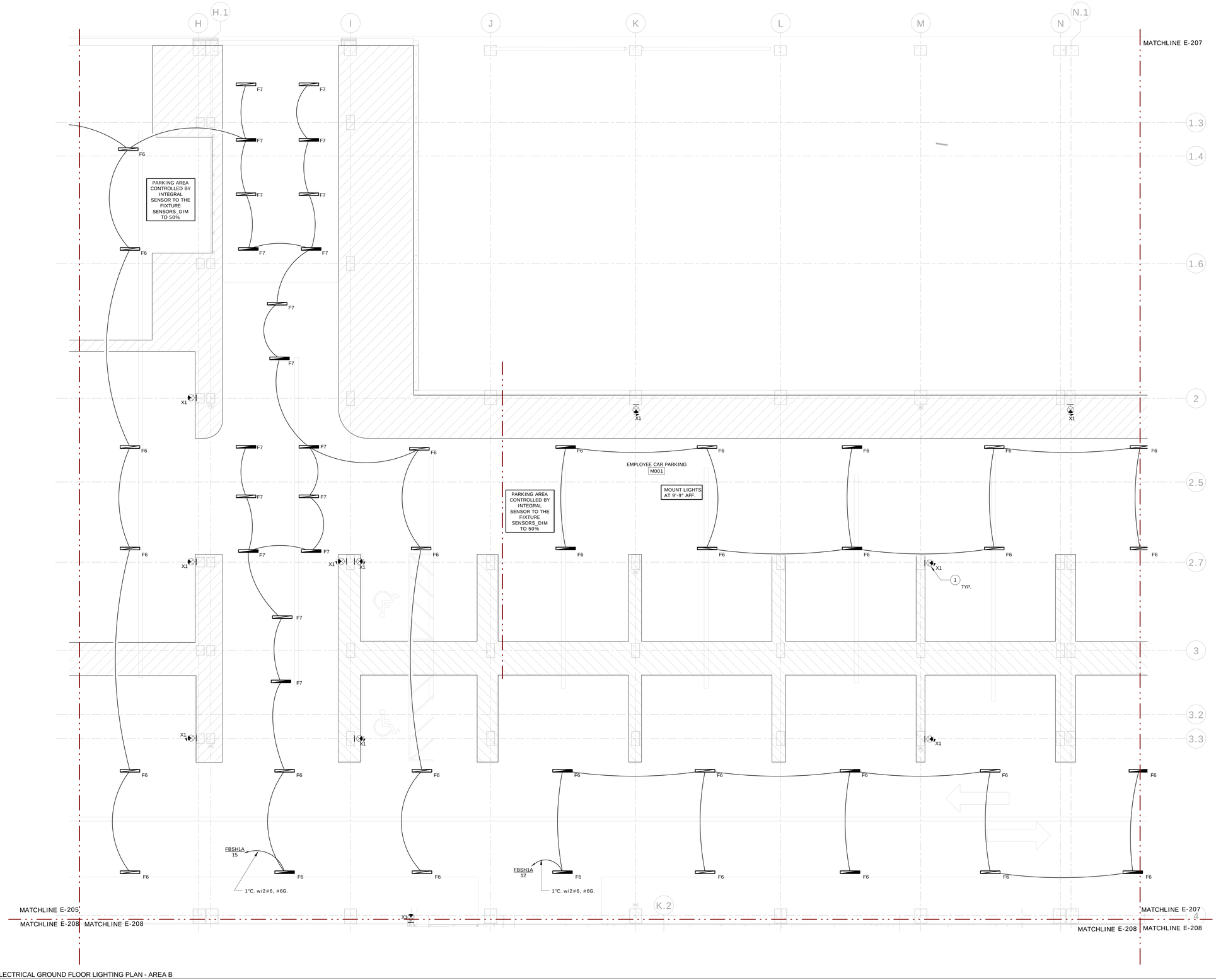
ADDRESS:
FROST BRIDGE ROAD
WATERTOWN, CONNECTICUT 06787

DRAWING TITLE:
ELECTRICAL GROUND FLOOR LIGHTING PLAN - AREA A

PROJECT NO. 431-0006

DRAWING NO. E-205

SHEET NO. 13.024



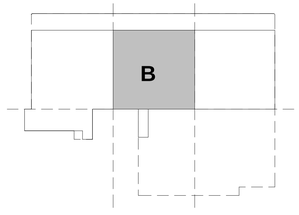
1 ELECTRICAL GROUND FLOOR LIGHTING PLAN - AREA B
1/8" = 1'-0"

CODED NOTES

1 CONNECT ALL EXIT SIGNS SHOWN ON THIS DWG TO PANEL FBSH1A CIRCUIT 2. UTILIZE 2#10,#10G. IN 3/4"C. FOR BRANCH WIRING.

GENERAL NOTES

1. REFER TO A-700 SERIES REFLECTED CEILING PLANS FOR ADDITIONAL INFORMATION.
2. CONNECT EMERGENCY LIGHTING BALLASTS IN FIXTURES AHEAD OF ALL SWITCHING OR CONTROL.
3. CONNECT EMERGENCY WALL PACKS TO LOCAL LIGHTING CIRCUIT AHEAD OF ALL SWITCHING OR CONTROL.
4. FIXTURES IN PARKING AREA TO BE CONTROLLED BY OCCUPANCY SENSOR INTEGRAL TO THE FIXTURE. FIXTURE TO DIM TO 50% OUTPUT WHEN SPACE IS NOT OCCUPIED.



KEY PLAN

GRAPHIC SCALE (FEET)
1/8" = 1'-0"
0' 4' 8' 16' 24' 32' 40'

REV.	DATE	DESCRIPTION	SHEET NO.
B	07/12/13	60% DESIGN DEVELOPMENT SUBMISSION	

REVISIONS

FILENAME:

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

DESIGNER/DRAFTER: CJE

CHECKED BY: RB

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

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ARCHITECT: WENDEL

APPROVED BY: BPM

ENGINEERS: ReSTL DESIGNERS, CLOUGH HARBOUR ASSOC., AI ENGINEERS, WENDEL

DATE: 06/11/2014

DESIGNED BY:
CLOUGH HARBOUR & ASSOCIATES
2139 SILAS DEANE HIGHWAY
SUITE 212
ROCKY HILL, CT
06067-2336

STATE OF CONNECTICUT
BRIAN P. MOORE
No. 21640
LICENSED
PROFESSIONAL ENGINEER

PROJECT TITLE:
WATERBURY BUS MAINTENANCE FACILITY REPLACEMENT

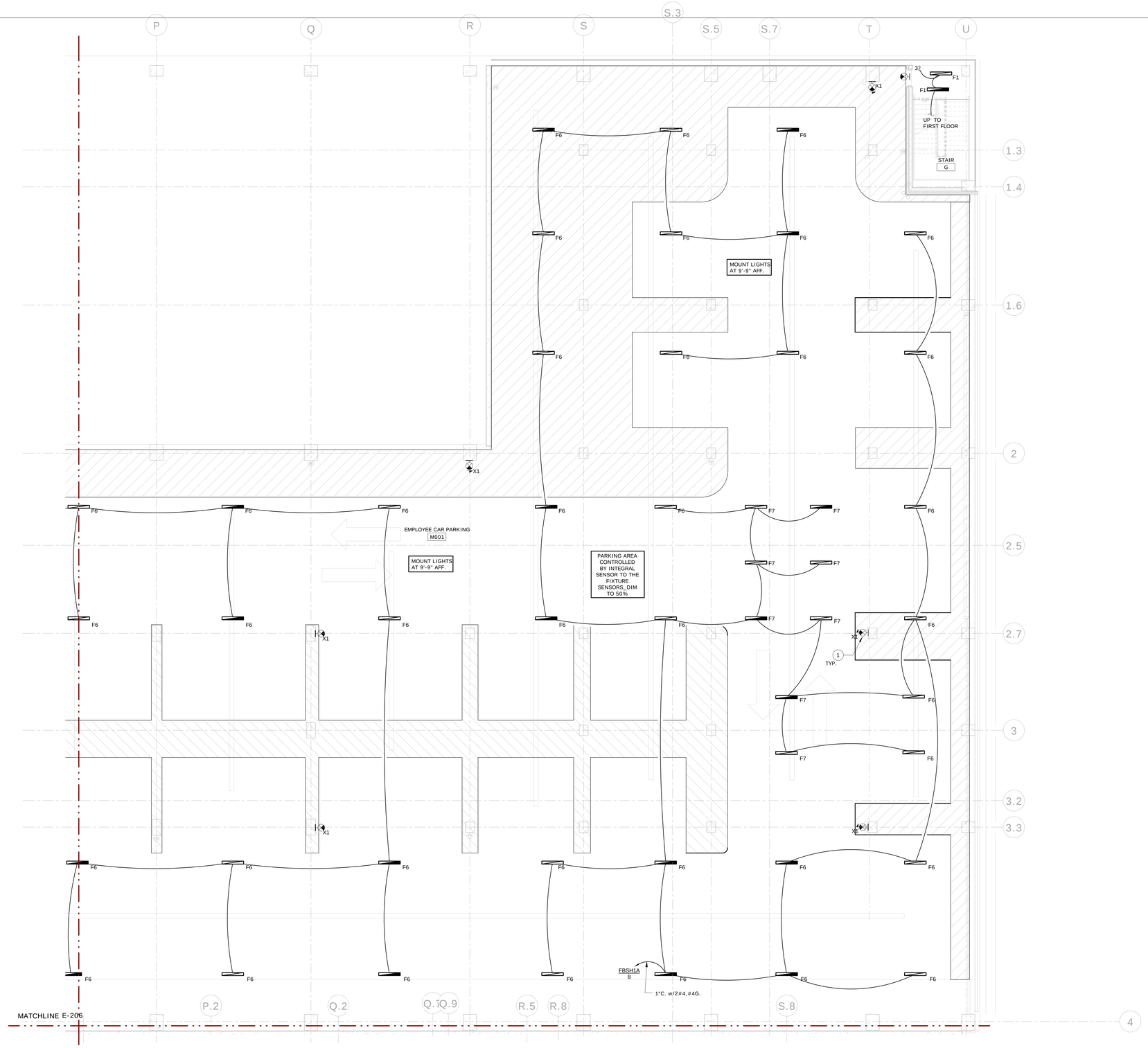
ADDRESS:
FROST BRIDGE ROAD
WATERTOWN, CONNECTICUT 06787

DRAWING TITLE:
ELECTRICAL GROUND FLOOR LIGHTING PLAN - AREA B

PROJECT NO. 431-0006

DRAWING NO. E-206

SHEET NO. 13.025



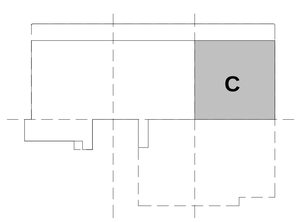
1 ELECTRICAL GROUND FLOOR LIGHTING PLAN - AREA C
1/8" = 1'-0"

CODED NOTES

1 CONNECT ALL EXIT SIGNS SHOWN ON THIS DWG TO PANEL FBSH1A CIRCUIT 2. UTILIZE 2#10,#10G. IN 3/4"C. FOR BRANCH WIRING.

GENERAL NOTES

1. REFER TO A-700 SERIES REFLECTED CEILING PLANS FOR ADDITIONAL INFORMATION.
2. CONNECT EMERGENCY LIGHTING BALLASTS IN FIXTURES AHEAD OF ALL SWITCHING OR CONTROL.
3. CONNECT EMERGENCY WALL PACKS TO LOCAL LIGHTING CIRCUIT AHEAD OF ALL SWITCHING OR CONTROL.
4. FIXTURES IN PARKING AREA TO BE CONTROLLED BY OCCUPANCY SENSOR INTEGRAL TO THE FIXTURE. FIXTURE TO DIM TO 50% OUTPUT WHEN SPACE IS NOT OCCUPIED.



GRAPHIC SCALE (FEET)
1/8" = 1'-0" 0' 4' 8' 16' 24' 32' 40'

KEY PLAN

N

REV.	DATE	DESCRIPTION	SHEET NO.
		REVISIONS	

FILENAME:

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

DESIGNER/DRAFTER: CJE

CHECKED BY: RB

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

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ARCHITECT: WENDEL

ENGINEERS: ReSTL DESIGNERS, CLOUGH HARBOUR ASSOC., AI ENGINEERS, WENDEL

APPROVED BY: BPM

DATE: 06/11/2014

DESIGNED BY:
CLOUGH HARBOUR & ASSOCIATES
2139 SILAS DEANE HIGHWAY
SUITE 212
ROCKY HILL, CT
06067-2336

STATE OF CONNECTICUT
BRIAN P. McKENNA
No. 21640
LICENSED
PROFESSIONAL ENGINEER

PROJECT TITLE:
WATERBURY BUS MAINTENANCE FACILITY REPLACEMENT

ADDRESS:
FROST BRIDGE ROAD
WATERTOWN, CONNECTICUT 06787

DRAWING TITLE:
ELECTRICAL GROUND FLOOR LIGHTING PLAN - AREA C

PROJECT NO. 431-0006

DRAWING NO. E-207

SHEET NO. 13.026

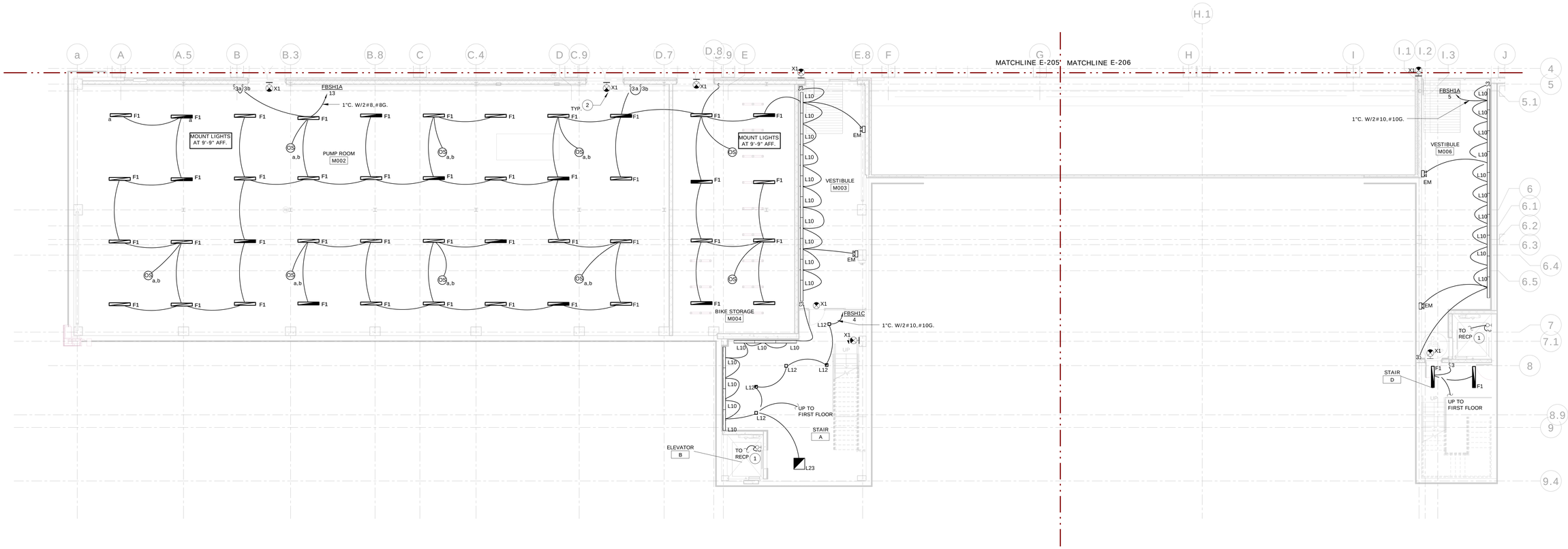
GENERAL NOTES

1. REFER TO A-700 SERIES REFLECTED CEILING PLANS FOR ADDITIONAL INFORMATION.
2. CONNECT EMERGENCY LIGHTING BALLASTS IN FIXTURES AHEAD OF ALL SWITCHING OR CONTROL.
3. CONNECT EMERGENCY WALL PACKS TO LOCAL LIGHTING CIRCUIT AHEAD OF ALL SWITCHING OR CONTROL..
4. FIXTURES IN PARKING AREA TO BE CONTROLLED BY OCCUPANCY SENSOR INTEGRAL TO THE FIXTURE. FIXTURE TO DIM TO 50% OUTPUT WHEN SPACE IS NOT OCCUPIED.

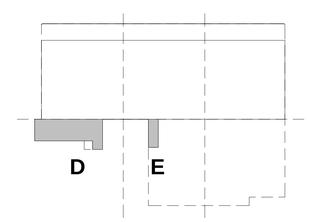
CODED NOTES

1 PROVIDE 20A, 120V CIRCUIT FROM PANEL "GL1" TO LIGHT AND RECEPTACLE IN ELEVATOR PIT. SIMILAR TO RAB LIGHTING MODEL VXBRLED26DG. REFER TO DETAIL 7 ON E-701.

2 CONNECT ALL EXIT SIGNS SHOWN ON THIS DWG TO PANEL FBSH1A CIRCUIT 2. UTILIZE 2#10,#10G. IN 3/4"C. FOR BRANCH WIRING.



1 ELECTRICAL GROUND FLOOR LIGHTING PLAN - AREA D & E
1/8" = 1'-0"



GRAPHIC SCALE (FEET)
1/8" = 1'-0" 0' 4' 8' 16' 24' 32' 40'

KEY PLAN

REV.	DATE	DESCRIPTION	SHEET NO.
		REVISIONS	

FILENAME:

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

DESIGNER/DRAFTER: CJE

CHECKED BY: RB

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

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ARCHITECT: WENDEL

ENGINEERS: ReSTL DESIGNERS, CLOUGH HARBOUR ASSOC., AI ENGINEERS, WENDEL

APPROVED BY: BPM

DATE: 06/11/2014

DESIGNED BY:
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2139 SILAS DEANE HIGHWAY
SUITE 212
ROCKY HILL, CT
06067-2336

STATE OF CONNECTICUT
BRIAN P. McKENNA
No. 21640
LICENSED
PROFESSIONAL ENGINEER

PROJECT TITLE:
WATERBURY BUS MAINTENANCE FACILITY REPLACEMENT

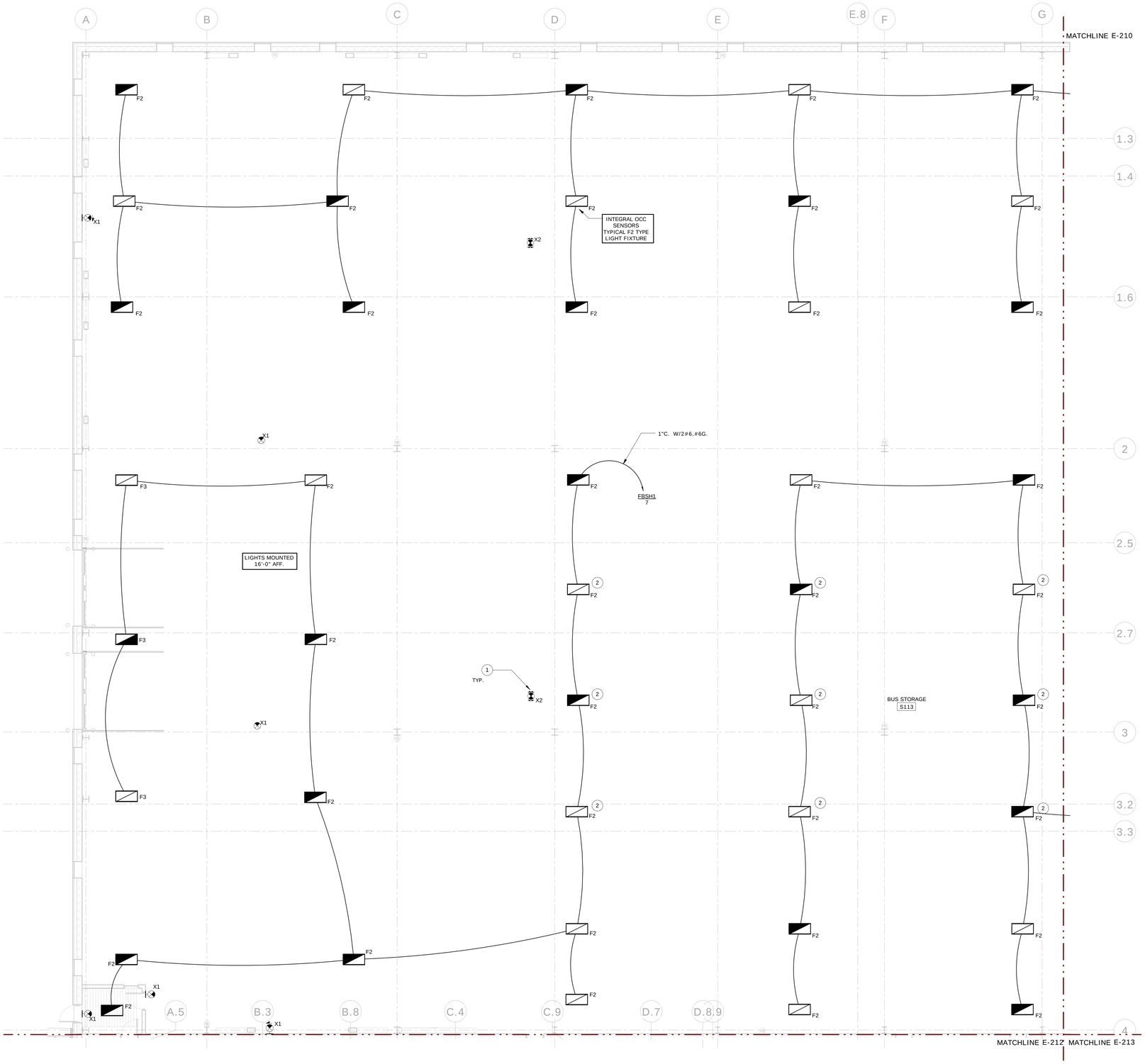
ADDRESS:
FROST BRIDGE ROAD
WATERTOWN, CONNECTICUT 06787

DRAWING TITLE:
ELECTRICAL GROUND FLOOR LIGHTING PLAN - AREA D & E

PROJECT NO. 431-0006

DRAWING NO. E-208

SHEET NO. 13.027



1 ELECTRICAL FIRST FLOOR LIGHTING PLAN - AREA A
1/8" = 1'-0"

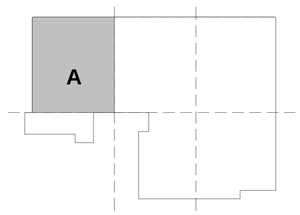
CODED NOTES

1 CONNECT ALL EXIT SIGNS SHOWN ON THIS DWG TO PANEL FBSH1 CIRCUIT 27. UTILIZE 2#10,#10G. IN 3/4"C. FOR BRANCH WIRING.

2 PROVIDE FIXTURE WITH EMBEDDED COMBINATION OCCUPANCY SENSOR/ PHOTOCELL AND POWER PACK RELAY. FIXTURE OPERATION SHALL BE AS FOLLOWS: MOTION-UPON SENSING MOTION (EITHER VEHILCE OR WALKING) FIXTURE WILL TURN ON, UNLESS PHOTOCELL DETERMINES AMBIENT LIGHT LEVELS ARE ADEQUATE. AFTER OWNER DEFINED TIME DELAY IF MOTION IS NOT VERIFIED FIXTURE WILL TURN OFF. PHOTOCELL-AMBIENT LIGHTING LEVELS DROP BELOW 25FC FIXTURE WILL BE ALLOWED TO BE TURNED ON VIA OCCUPANCY SENSOR. IF AMBIENT LIGHT LEVELS ARE ABOVE 25FC FIXTURE TO BE TURNED OFF.

GENERAL NOTES

1. REFER TO A-700 SERIES REFLECTED CEILING PLANS FOR ADDITIONAL INFORMATION.
2. CONNECT EMERGENCY LIGHTING BALLASTS IN FIXTURES AHEAD OF ALL SWITCHING OR CONTROL.
3. CONNECT EMERGENCY WALL PACKS TO LOCAL LIGHTING CIRCUIT AHEAD OF ALL SWITCHING OR CONTROL.
4. FIXTURES IN PARKING AREA TO BE CONTROLLED BY OCCUPANCY SENSOR INTEGRAL TO THE FIXTURE. FIXTURE TO DIM TO 50% OUTPUT WHEN SPACE IS NOT OCCUPIED.



KEY PLAN

GRAPHIC SCALE (FEET)
1/8" = 1'-0"
0' 4' 8' 16' 24' 32' 40'

N

REV.	DATE	DESCRIPTION	SHEET NO.
B	07/12/13	60% DESIGN DEVELOPMENT SUBMISSION	

REVISIONS

FILENAME:

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DESIGNER/DRAFTER: CJE

CHECKED BY: RB

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

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ARCHITECT: WENDEL

ENGINEERS: ReSTL DESIGNERS, CLOUGH HARBOUR ASSOC., AI ENGINEERS, WENDEL

APPROVED BY: BPM

DATE: 06/11/2014

DESIGNED BY:
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2139 SILAS DEANE HIGHWAY
SUITE 212
ROCKY HILL, CT
06067-2336

STATE OF CONNECTICUT
BRIAN P. McKENNA
No. 21640
LICENSED
PROFESSIONAL ENGINEER

PROJECT TITLE:
WATERBURY BUS MAINTENANCE FACILITY REPLACEMENT

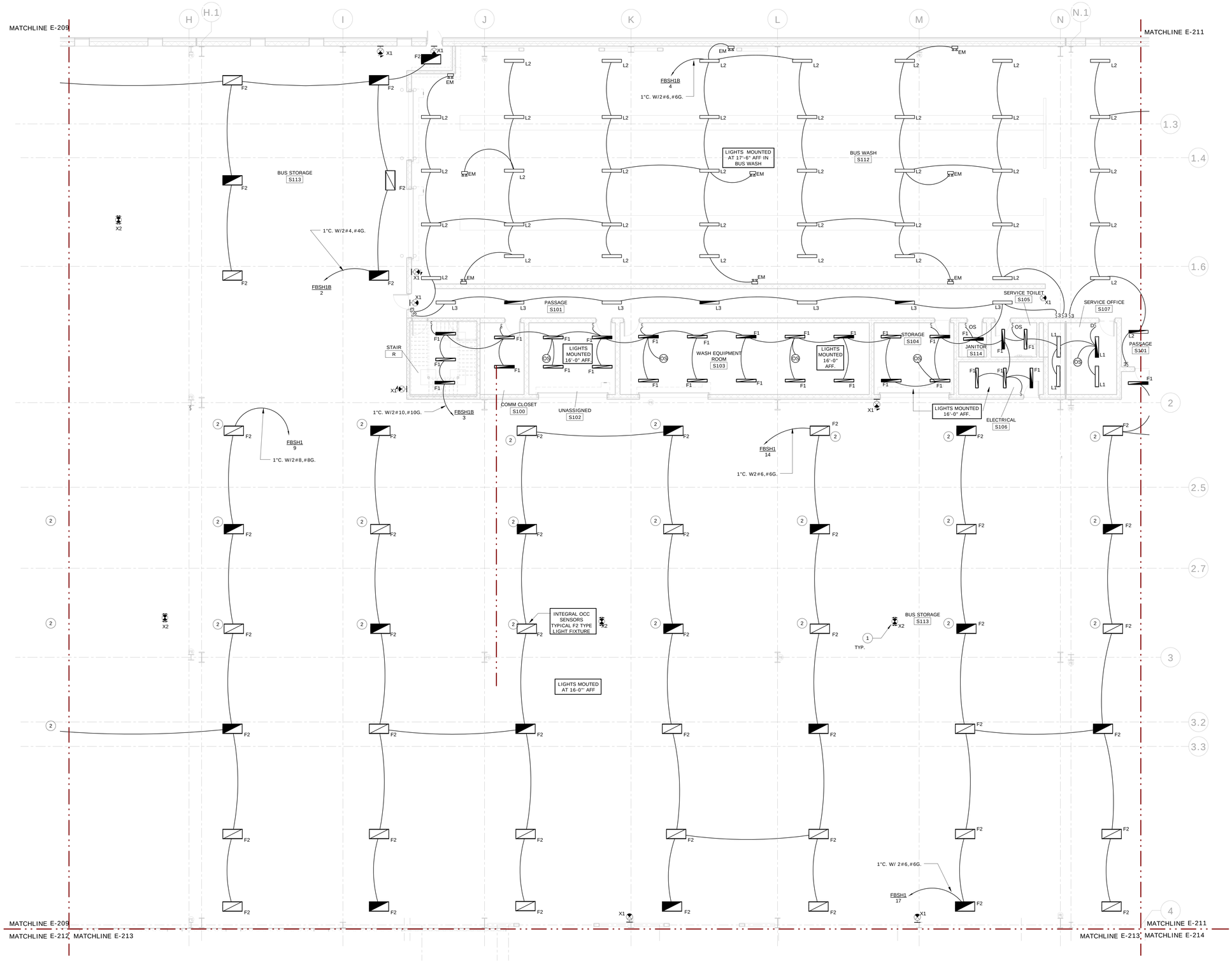
ADDRESS:
FROST BRIDGE ROAD
WATERTOWN, CONNECTICUT 06787

DRAWING TITLE:
ELECTRICAL FIRST FLOOR LIGHTING PLAN - AREA A

PROJECT NO. 431-0006

DRAWING NO. E-209

SHEET NO. 13.028



CODED NOTES (#)

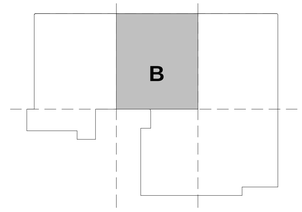
1 CONNECT ALL EXIT SIGNS SHOWN ON THIS DWG TO PANEL FBSH1 CIRCUIT 27. UTILIZE 2#10,#10G. IN 3/4"C. FOR BRANCH WIRING.

2 PROVIDE FIXTURE WITH EMBEDDED COMBINATION OCCUPANCY SENSOR/ PHOTOCELL AND POWER PACK RELAY. FIXTURE OPERATION SHALL BE AS FOLLOWS: MOTION-UPON SENSING MOTION (EITHER VEHICLE OR WALKING) FIXTURE WILL TURN ON, UNLESS PHOTOCELL DETERMINES AMBIENT LIGHT LEVELS ARE ADEQUATE. AFTER OWNER DEFINED TIME DELAY IF MOTION IS NOT VERIFIED FIXTURE WILL TURN OFF. PHOTOCELL-AMBIENT LIGHTING LEVELS DROP BELOW 25FC FIXTURE WILL BE ALLOWED TO BE TURNED ON VIA OCCUPANCY SENSOR. IF AMBIENT LIGHT LEVELS ARE ABOVE 25FC FIXTURE TO BE TURNED OFF.

GENERAL NOTES

1. REFER TO A-700 SERIES REFLECTED CEILING PLANS FOR ADDITIONAL INFORMATION.
2. CONNECT EMERGENCY LIGHTING BALLASTS IN FIXTURES AHEAD OF ALL SWITCHING OR CONTROL.
3. CONNECT EMERGENCY WALL PACKS TO LOCAL LIGHTING CIRCUIT AHEAD OF ALL SWITCHING OR CONTROL.
4. FIXTURES IN PARKING AREA TO BE CONTROLLED BY OCCUPANCY SENSOR INTEGRAL TO THE FIXTURE. FIXTURE TO DIM TO 50% OUTPUT WHEN SPACE IS NOT OCCUPIED.

(1) ELECTRICAL FIRST FLOOR LIGHTING PLAN - AREA B
1/8" = 1'-0"



KEY PLAN

GRAPHIC SCALE (FEET)
1/8" = 1'-0"
0' 4' 8' 16' 24' 32' 40'

REV.	DATE	DESCRIPTION	SHEET NO.
B	07/12/13	60% DESIGN DEVELOPMENT SUBMISSION	

REVISIONS

FILENAME:

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DESIGNER/DRAFTER: CJE

CHECKED BY: RB

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

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ARCHITECT: WENDEL

APPROVED BY: BPM

ENGINEERS: ReSTL DESIGNERS, CLOUGH HARBOUR ASSOC., AI ENGINEERS, WENDEL

DATE: 06/11/2014

DESIGNED BY:
CLOUGH HARBOUR & ASSOCIATES
2139 SILAS DEANE HIGHWAY
SUITE 212
ROCKY HILL, CT
06067-2336

STATE OF CONNECTICUT
BRIAN P. MURPHY
No. 21640
LICENSED
PROFESSIONAL ENGINEER

PROJECT TITLE:
WATERBURY BUS MAINTENANCE FACILITY REPLACEMENT

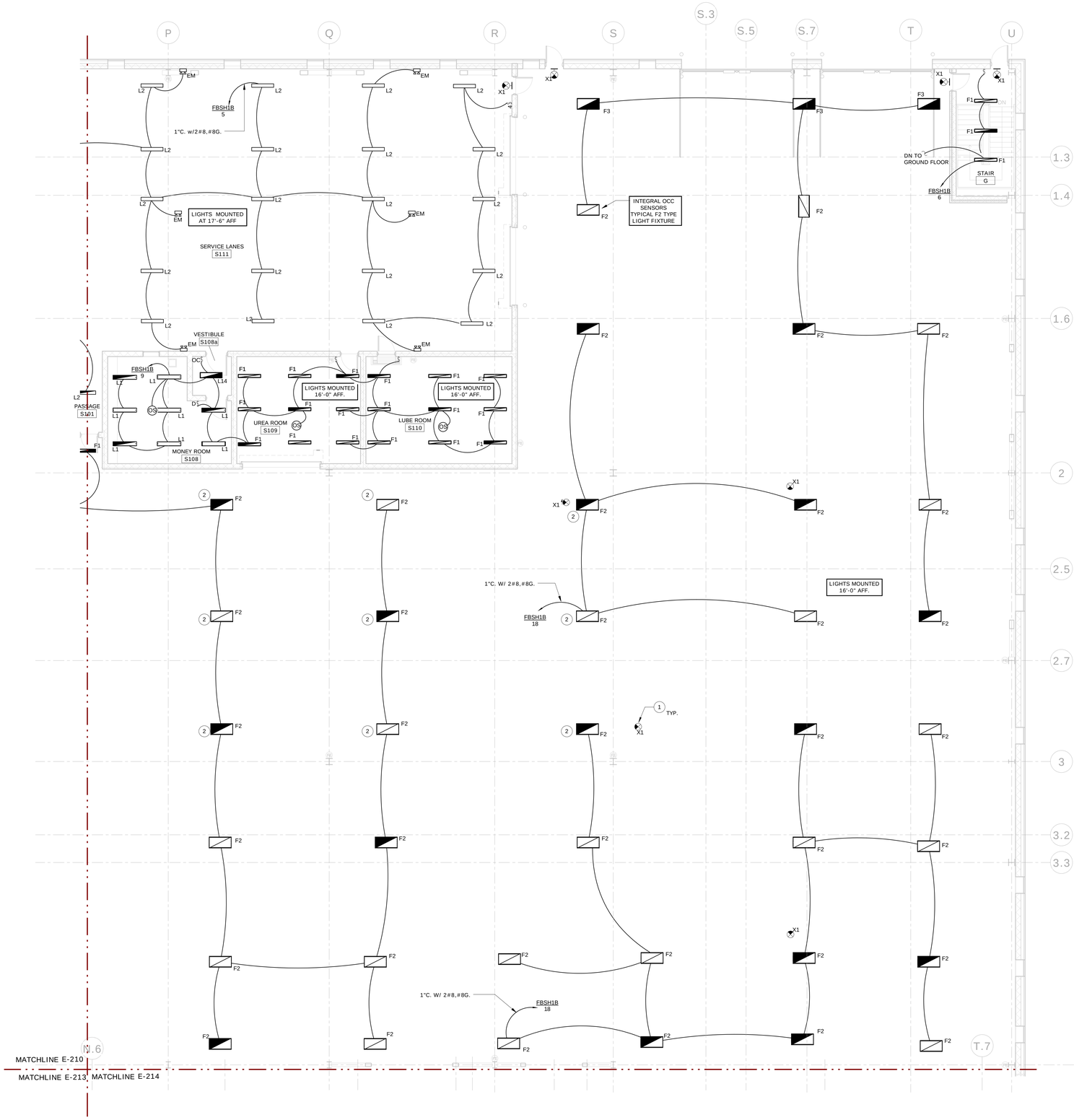
ADDRESS:
FROST BRIDGE ROAD
WATERTOWN, CONNECTICUT 06787

DRAWING TITLE:
ELECTRICAL FIRST FLOOR LIGHTING PLAN - AREA B

PROJECT NO. 431-0006

DRAWING NO. E-210

SHEET NO. 13.029



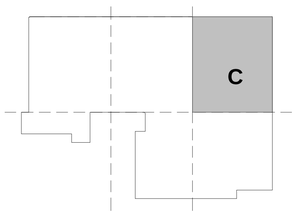
1 ELECTRICAL FIRST FLOOR LIGHTING PLAN - AREA C
1/8" = 1'-0"

CODED NOTES

1. CONNECT ALL EXIT SIGNS SHOWN ON THIS DWG TO PANEL FBSH1 CIRCUIT 27. UTILIZE 2#10,#10G. IN 3/4"C. FOR BRANCH WIRING.
2. PROVIDE FIXTURE WITH EMBEDDED COMBINATION OCCUPANCY SENSOR/ PHOTOCELL AND POWER PACK RELAY. FIXTURE OPERATION SHALL BE AS FOLLOWS: MOTION-UPON SENSING MOTION (EITHER VEHILCE OR WALKING) FIXTURE WILL TURN ON, UNLESS PHOTOCELL DETERMINES AMBIENT LIGHT LEVELS ARE ADEQUATE. AFTER OWNER DEFINED TIME DELAY IF MOTION IS NOT VERIFED FIXTURE WILL TURN OFF. PHOTOCELL-AMBIENT LIGHTING LEVELS DROP BELOW 25FC FIXTURE WILL BE ALLOWED TO BE TURNED ON VIA OCCUPANCY SENSOR. IF AMBIENT LIGHT LEVELS ARE ABOVE 25FC FIXTURE TO BE TURNED OFF.

GENERAL NOTES

1. REFER TO A-700 SERIES REFLECTED CEILING PLANS FOR ADDITIONAL INFORMATION.
2. CONNECT EMERGENCY LIGHTING BALLASTS IN FIXTURES AHEAD OF ALL SWITCHING OR CONTROL.
3. CONNECT EMERGENCY WALL PACKS TO LOCAL LIGHTING CIRCUIT AHEAD OF ALL SWITCHING OR CONTROL.
4. FIXTURES IN PARKING AREA TO BE CONTROLLED BY OCCUPANCY SENSOR INTEGRAL TO THE FIXTURE. FIXTURE TO DIM TO 50% OUTPUT WHEN SPACE IS NOT OCCUPIED.



KEY PLAN

GRAPHIC SCALE (FEET)
1/8" = 1'-0" 0' 4' 8' 16' 24' 32' 40'

REV.	DATE	DESCRIPTION	SHEET NO.
		REVISIONS	

FILENAME:

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DESIGNER/DRAFTER: CJE
CHECKED BY: RB
SCALE: 1/8" = 1'-0"

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ARCHITECT: WENDEL
ENGINEERS: ReSTL DESIGNERS, CLOUGH HARBOUR ASSOC., AI ENGINEERS, WENDEL
APPROVED BY: BPM
DATE: 06/11/2014

DESIGNED BY:
CLOUGH HARBOUR & ASSOCIATES
2139 SILAS DEANE HIGHWAY
SUITE 212
ROCKY HILL, CT 06067-2336

STATE OF CONNECTICUT BRIAN P. McKENNA No. 21640 LICENSED PROFESSIONAL ENGINEER

PROJECT TITLE:
WATERBURY BUS MAINTENANCE FACILITY REPLACEMENT

ADDRESS:
FROST BRIDGE ROAD
WATERTOWN, CONNECTICUT 06787

DRAWING TITLE:
ELECTRICAL FIRST FLOOR LIGHTING PLAN - AREA C

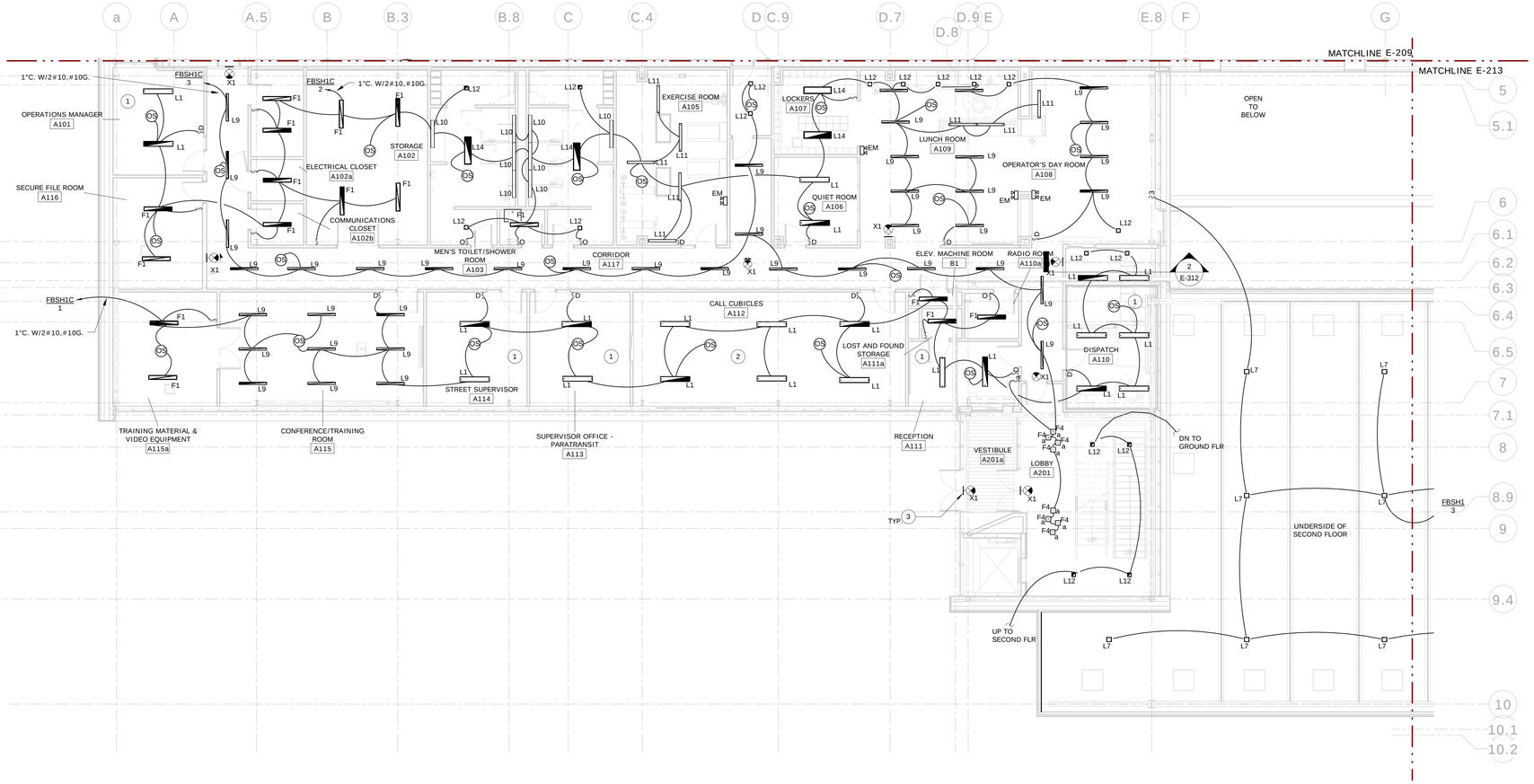
PROJECT NO. 431-0006
DRAWING NO. E-211
SHEET NO. 13.030

CODED NOTES

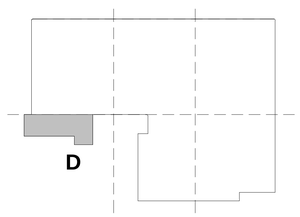
1. RECEPTACLE PROVIDE FOR TASK LIGHTING. TASK LIGHT TO BE SUPPLIED WITH INTEGRAL ON/OFF SWITCH.
2. EIGHT RECEPTACLES PROVIDED FOR TASK LIGHTING. TASK LIGHT TO BE SUPPLIED WITH INTEGRAL ON/OFF SWITCH.
3. CONNECT ALL EXIT SIGNS SHOWN ON THIS DWG TO PANEL FBSH1C CIRCUIT #. UTILIZE 2#10,#10G. IN 3/4"C. FOR BRANCH WIRING.

GENERAL NOTES

1. REFER TO A-700 SERIES REFLECTED CEILING PLANS FOR ADDITIONAL INFORMATION.
2. CONNECT EMERGENCY LIGHTING BALLASTS IN FIXTURES AHEAD OF ALL SWITCHING OR CONTROL.
3. CONNECT EMERGENCY WALL PACKS TO LOCAL LIGHTING CIRCUIT AHEAD OF ALL SWITCHING OR CONTROL.
4. FIXTURES IN PARKING AREA TO BE CONTROLLED BY OCCUPANCY SENSOR INTEGRAL TO THE FIXTURE. FIXTURE TO DIM TO 50% OUTPUT WHEN SPACE IS NOT OCCUPIED.



1 ELECTRICAL FIRST FLOOR LIGHTING PLAN - AREA D
1/8" = 1'-0"



GRAPHIC SCALE (FEET)
1/8" = 1'-0" 0' 4' 8' 16' 24' 32' 40'

KEY PLAN

REV.	DATE	DESCRIPTION	SHEET NO.
		REVISIONS	

FILENAME:

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

DESIGNER/DRAFTER: CJE
CHECKED BY: RB
SCALE: 1/8" = 1'-0"

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ARCHITECT: WENDEL
ENGINEERS: ReSTL DESIGNERS, CLOUGH HARBOUR ASSOC., AI ENGINEERS, WENDEL
APPROVED BY: BPM
DATE: 06/11/2014

DESIGNED BY:
CLOUGH HARBOUR & ASSOCIATES
2139 SILAS DEANE HIGHWAY
SUITE 212
ROCKY HILL, CT
06067-2336

STATE OF CONNECTICUT BRIAN P. McKENNA No. 21640 LICENSED PROFESSIONAL ENGINEER

PROJECT TITLE: WATERBURY BUS MAINTENANCE FACILITY REPLACEMENT

ADDRESS: FROST BRIDGE ROAD WATERTOWN, CONNECTICUT 06787

DRAWING TITLE: ELECTRICAL FIRST FLOOR LIGHTING PLAN - AREA D

PROJECT NO. 431-0006
DRAWING NO. E-212
SHEET NO. 13.031

1 ELECTRICAL FIRST FLOOR LIGHTING PLAN - AREA E
1/8" = 1'-0"

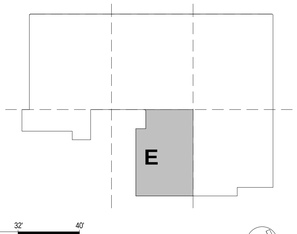
CODED NOTES

1 CLASS 1 OR 2, DIV 2 WITHIN 5FT OR 10FT OF OPEN SPRAY PAINT BOOTH.

2 CONNECT ALL EXIT SIGNS SHOWN ON THIS DWG TO PANEL FBSH1 CIRCUIT 31. UTILIZE 2#10,#10G. IN 3/4"C. FOR BRANCH WIRING.

GENERAL NOTES

1. REFER TO A-700 SERIES REFLECTED CEILING PLANS FOR ADDITIONAL INFORMATION.
2. CONNECT EMERGENCY LIGHTING BALLASTS IN FIXTURES AHEAD OF ALL SWITCHING OR CONTROL.
3. CONNECT EMERGENCY WALL PACKS TO LOCAL LIGHTING CIRCUIT AHEAD OF ALL SWITCHING OR CONTROL.
4. FIXTURES IN PARKING AREA TO BE CONTROLLED BY OCCUPANCY SENSOR INTEGRAL TO THE FIXTURE. FIXTURE TO DIM TO 50% OUTPUT WHEN SPACE IS NOT OCCUPIED.



KEY PLAN

GRAPHIC SCALE (FEET)
1/8" = 1'-0"
0' 4' 8' 16' 24' 32' 40'

REV.	DATE	DESCRIPTION	SHEET NO.
		REVISIONS	

FILENAME:

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DESIGNER/DRAFTER: CJE

CHECKED BY: RB

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

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ARCHITECT: WENDEL

ENGINEERS: ReSTL DESIGNERS, CLOUGH HARBOUR ASSOC., AI ENGINEERS, WENDEL

APPROVED BY: BPM

DATE: 06/11/2014

DESIGNED BY:
CLOUGH HARBOUR & ASSOCIATES
2139 SILAS DEANE HIGHWAY
SUITE 212
ROCKY HILL, CT
06067-2336

STATE OF CONNECTICUT
BRIAN P. MCKENNA
No. 21640
LICENSED
PROFESSIONAL ENGINEER

PROJECT TITLE:
WATERBURY BUS MAINTENANCE FACILITY REPLACEMENT

ADDRESS:
FROST BRIDGE ROAD
WATERTOWN, CONNECTICUT 06787

DRAWING TITLE:
ELECTRICAL FIRST FLOOR LIGHTING PLAN - AREA E

PROJECT NO. 431-0006

DRAWING NO. E-213

SHEET NO. 13.032

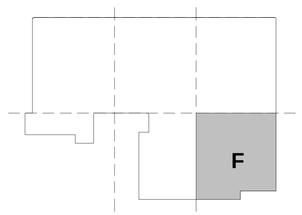
1 ELECTRICAL FIRST FLOOR LIGHTING PLAN - AREA F
1/8" = 1'-0"

CODED NOTES

1. RECEPTACLE PROVIDE FOR TASK LIGHTING. TASK LIGHT TO BE SUPPLIED WITH INTEGRAL ON/OFF SWITCH.
2. CORD REEL WITH RECEPTACLE PROVIDED FOR TASK LIGHTING IN MAINTENANCE BAYS M104 ONE RECEPTACLE PER BAY. MINIMUM OF 8. TASK LIGHT TO BE SUPPLIED WITH INTEGRAL ON/OFF SWITCH.
3. CLASS H3 HAZARDOUS AREA.
4. CONNECT ALL EXIT SIGNS SHOWN ON THIS DWG TO PANEL FBSH1 CIRCUIT 31. UTILIZE 2#10,#10G. IN 3/4"C. FOR BRANCH WIRING.

GENERAL NOTES

1. REFER TO A-700 SERIES REFLECTED CEILING PLANS FOR ADDITIONAL INFORMATION.
2. CONNECT EMERGENCY LIGHTING BALLASTS IN FIXTURES AHEAD OF ALL SWITCHING OR CONTROL.
3. CONNECT EMERGENCY WALL PACKS TO LOCAL LIGHTING CIRCUIT AHEAD OF ALL SWITCHING OR CONTROL.
4. FIXTURES IN PARKING AREA TO BE CONTROLLED BY OCCUPANCY SENSOR INTEGRAL TO THE FIXTURE. FIXTURE TO DIM TO 50% OUTPUT WHEN SPACE IS NOT OCCUPIED.



GRAPHIC SCALE (FEET)
1/8" = 1'-0"
0' 4' 8' 16' 24' 32' 40'

KEY PLAN

REV.	DATE	DESCRIPTION	SHEET NO.
		REVISIONS	

FILENAME:

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

DESIGNER/DRAFTER: CJE
CHECKED BY: RB
SCALE: 1/8" = 1'-0"

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ARCHITECT: WENDEL
APPROVED BY: BPM
ENGINEERS: ReSTL DESIGNERS, CLOUGH HARBOUR ASSOC., AI ENGINEERS, WENDEL
DATE: 06/11/2014

DESIGNED BY:
CLOUGH HARBOUR & ASSOCIATES
2139 SILAS DEANE HIGHWAY
SUITE 212
ROCKY HILL, CT
06067-2336

STATE OF CONNECTICUT BRIAN P. McCONNELL No. 21640 LICENSED PROFESSIONAL ENGINEER

PROJECT TITLE:
WATERBURY BUS MAINTENANCE FACILITY REPLACEMENT

ADDRESS:
FROST BRIDGE ROAD
WATERTOWN, CONNECTICUT 06787

DRAWING TITLE:
ELECTRICAL FIRST FLOOR LIGHTING PLAN - AREA F

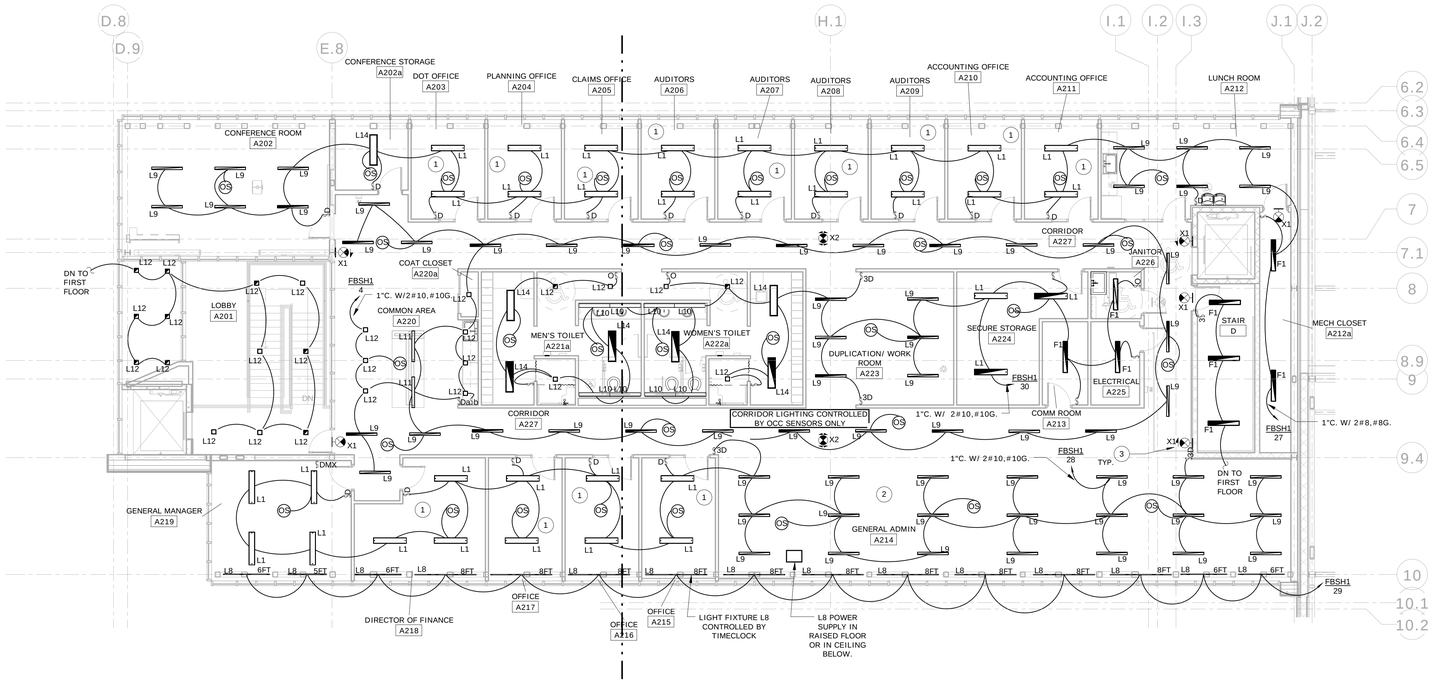
PROJECT NO. 431-0006
DRAWING NO. E-214
SHEET NO. 13.033

CODED NOTES

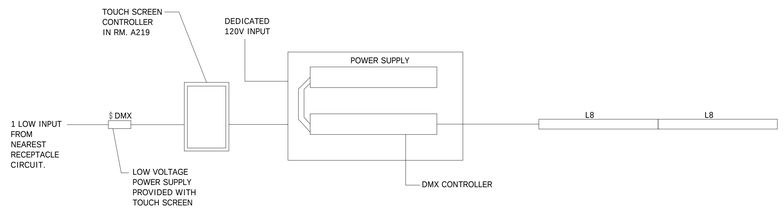
1. RECEPTACLE PROVIDE FOR TASK LIGHTING. TASK LIGHT OT BE SUPPLIED WITH INTEGRAL ON/OFF SWITCH.
2. EIGHT RECEPTACLES PROVIDED FOR TASK LIGHTING. TASK LIGHTING TO BE SUPPLIED WITH INTEGRAL ON/OFF SWITCH.
3. CONNECT ALL EXIT SIGNS SHOWN ON THIS DWG TO PANEL FBSH1 CIRCUIT 31. UTILIZE 2#10,#10G. IN 3/4"C. FOR BRANCH WIRING.

GENERAL NOTES

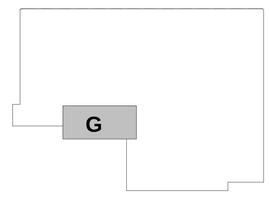
1. REFER TO A-700 SERIES REFLECTED CEILING PLANS FOR ADDITIONAL INFORMATION.
2. CONNECT EMERGENCY LIGHTING BALLASTS IN FIXTURES AHEAD OF ALL SWITCHING OR CONTROL.
3. CONNECT EMERGENCY WALL PACKS TO LOCAL LIGHTING CIRCUIT AHEAD OF ALL SWITCHING OR CONTROL.
4. FIXTURES IN PARKING AREA TO BE CONTROLLED BY OCCUPANCY SENSOR INTEGRAL TO THE FIXTURE. FIXTURE TO DIM TO 50% OUTPUT WHEN SPACE IS NOT OCCUPIED.



1 ELECTRICAL SECOND FLOOR LIGHTING PLAN - AREA G
1/8" = 1'-0"



2 FIXTURE L8 CONTROL DIAGRAM
NOT TO SCALE



GRAPHIC SCALE (FEET)
1/8" = 1'-0" 0' 4' 8' 16' 24' 32' 40'

KEY PLAN

REV.	DATE	DESCRIPTION	SHEET NO.
		REVISIONS	

FILENAME:

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

DESIGNER/DRAFTER: CJE
CHECKED BY: RB
SCALE: As indicated

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ARCHITECT: WENDEL
ENGINEERS: ReSTL DESIGNERS, CLOUGH HARBOUR ASSOC., AI ENGINEERS, WENDEL
APPROVED BY: BPM
DATE: 06/11/2014

DESIGNED BY:
CLOUGH HARBOUR & ASSOCIATES
2139 SILAS DEANE HIGHWAY
SUITE 212
ROCKY HILL, CT 06067-2336

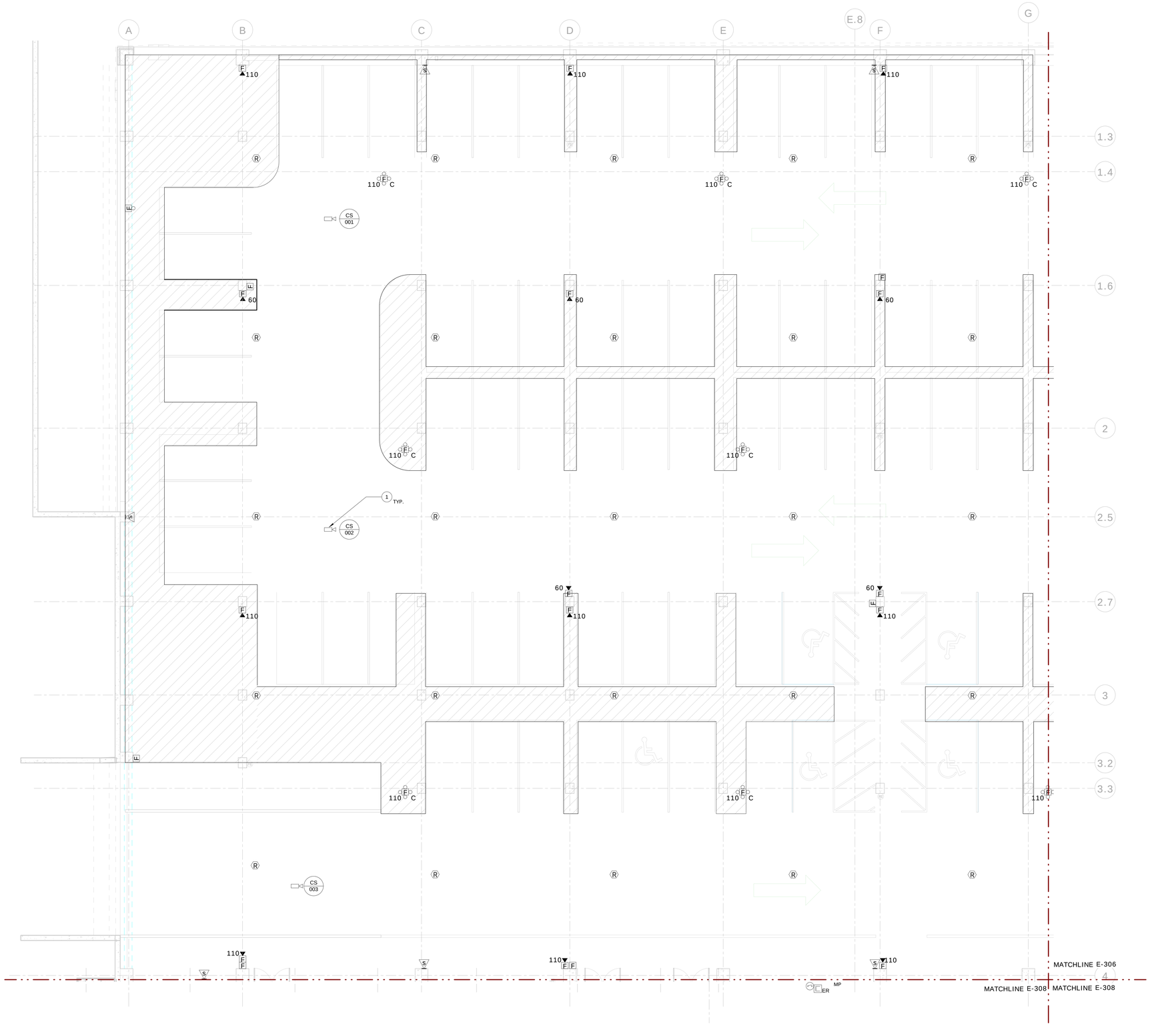
STATE OF CONNECTICUT BRIAN P. McKENNA No. 21640 LICENSED PROFESSIONAL ENGINEER

PROJECT TITLE:
WATERBURY BUS MAINTENANCE FACILITY REPLACEMENT

ADDRESS:
FROST BRIDGE ROAD
WATERTOWN, CONNECTICUT 06787

DRAWING TITLE:
ELECTRICAL SECOND FLOOR LIGHTING PLAN - AREA G

PROJECT NO. 431-0006
DRAWING NO. E-215
SHEET NO. 13.034



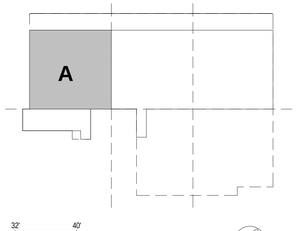
1 ELECTRICAL GROUND FLOOR SYSTEMS PLAN - AREA A
1/8" = 1'-0"

CODED NOTES

1 PROVIDE CONDUIT AND WIRING FOR CAMERA STATION TO ASSOCIATED COMM RM. REFER TO CCTV RISER DIAGRAM FOR SIZE OF CONDUIT AND WIRING TYPE AND CCTV CAMERA STATION SCHEDULE FOR ADDITIONAL INFORMATION.

GENERAL NOTES

1. SEE FIRE ALARM RISER DIAGRAM ON DRAWING E-701, DETAIL 1.



KEY PLAN

GRAPHIC SCALE (FEET)
1/8" = 1'-0"
0' 4' 8' 16' 24' 32' 40'

REV.	DATE	DESCRIPTION	SHEET NO.
B	07/12/13	60% DESIGN DEVELOPMENT SUBMISSION	

REVISIONS

FILENAME:

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DESIGNER/DRAFTER: CJE

CHECKED BY: RB

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

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ARCHITECT: WENDEL

APPROVED BY: BPM

ENGINEERS: ReSTL DESIGNERS, CLOUGH HARBOUR ASSOC., AI ENGINEERS, WENDEL

DATE: 06/11/2014

DESIGNED BY:
CLOUGH HARBOUR & ASSOCIATES
2139 SILAS DEANE HIGHWAY
SUITE 212
ROCKY HILL, CT 06067-2336

PROJECT TITLE:
WATERBURY BUS MAINTENANCE FACILITY REPLACEMENT

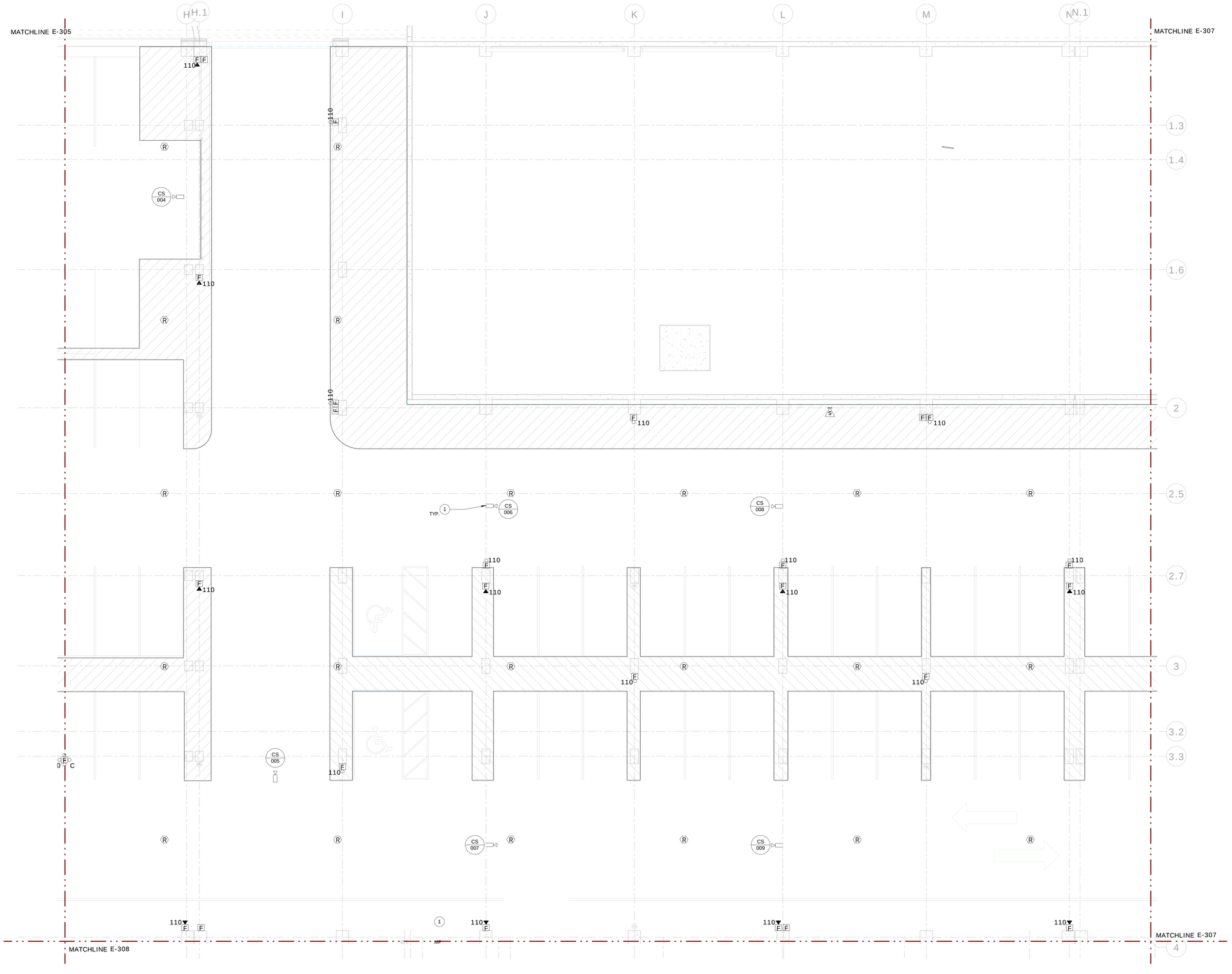
ADDRESS:
FROST BRIDGE ROAD
WATERTOWN, CONNECTICUT 06787

DRAWING TITLE:
ELECTRICAL GROUND FLOOR SYSTEMS PLAN - AREA A

PROJECT NO. 431-0006

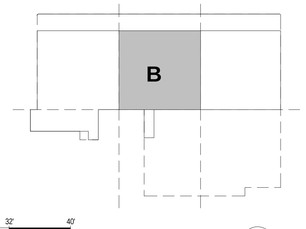
DRAWING NO. E-305

SHEET NO. 13.035



1 ELECTRICAL GROUND FLOOR SYSTEMS PLAN - AREA B
1/8" = 1'-0"

GRAPHIC SCALE (FEET)
1/8" = 1'-0" 0' 4' 8' 16' 24' 32' 40'



KEY PLAN

N

CODED NOTES

1 PROVIDE CONDUIT AND WIRING FOR CAMERA STATION TO ASSOCIATED COMM RM. REFER TO CCTV RISER DIAGRAM FOR SIZE OF CONDUIT AND WIRING TYPE AND CCTV CAMERA STATION SCHEDULE FOR ADDITIONAL INFORMATION.

GENERAL NOTES

1. SEE FIRE ALARM RISER DIAGRAM ON DRAWING E-701 DETAIL 1.

REV.	DATE	DESCRIPTION	SHEET NO.
		REVISIONS	

FILENAME:

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DESIGNER/DRAFTER: CJE

CHECKED BY: RB

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

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ARCHITECT: WENDEL

APPROVED BY: BPM

ENGINEERS: ReSTL DESIGNERS, CLOUGH HARBOUR ASSOC., AI ENGINEERS, WENDEL

DATE: 06/11/2014

DESIGNED BY:
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2139 SILAS DEANE HIGHWAY
SUITE 212
ROCKY HILL, CT
06067-2336

STATE OF CONNECTICUT
BRIAN P. McKENNA
No. 21640
LICENSED
PROFESSIONAL ENGINEER

PROJECT TITLE:
WATERBURY BUS MAINTENANCE FACILITY REPLACEMENT

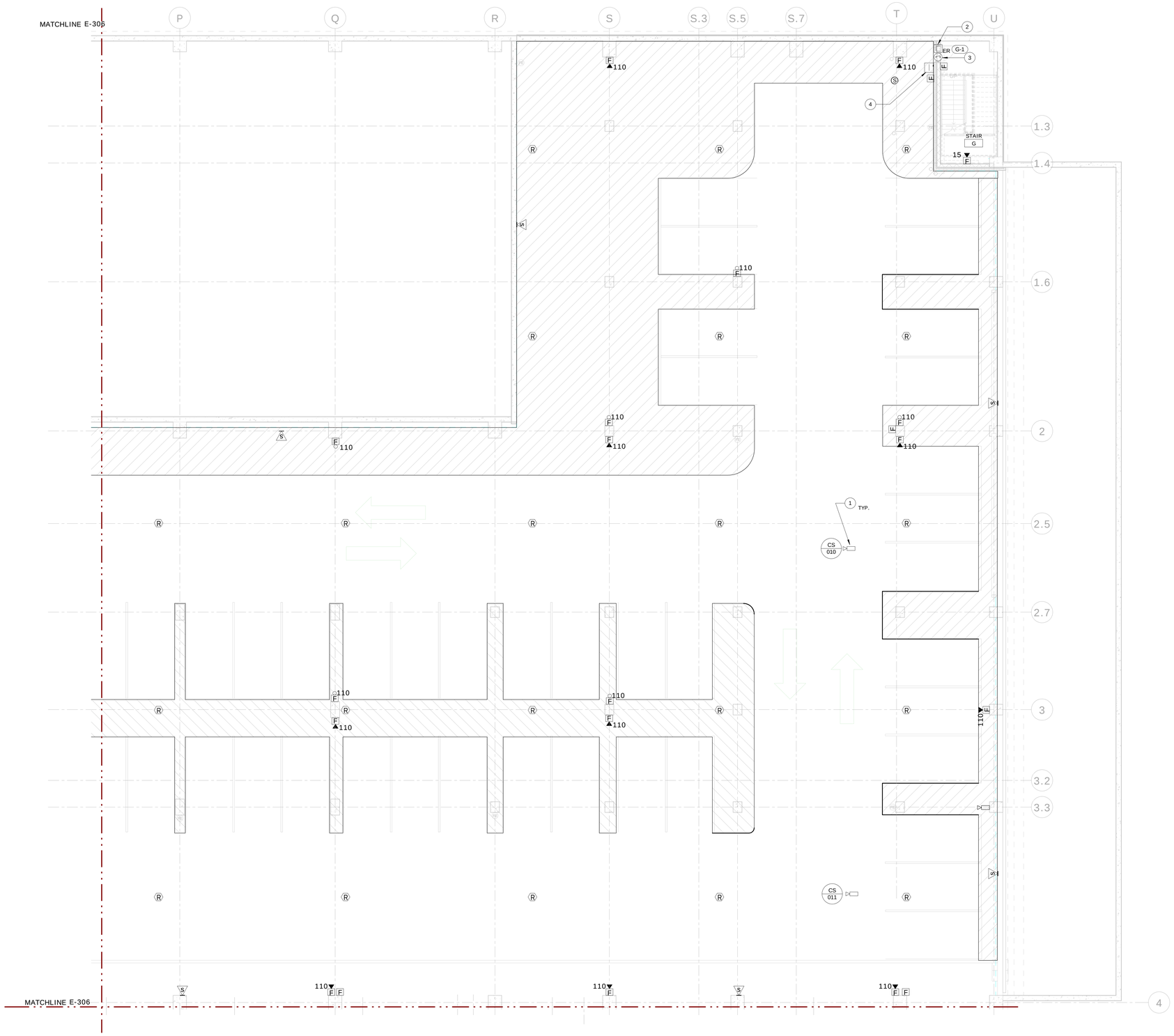
ADDRESS:
FROST BRIDGE ROAD
WATERTOWN, CONNECTICUT 06787

DRAWING TITLE:
ELECTRICAL GROUND FLOOR SYSTEMS PLAN - AREA B

PROJECT NO. **431-0006**

DRAWING NO. **E-306**

SHEET NO. **13.036**



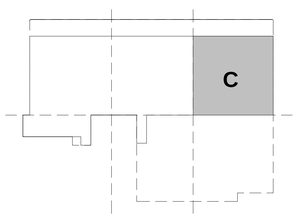
1 ELECTRICAL GROUND FLOOR SYSTEMS PLAN - AREA C
1/8" = 1'-0"

CODED NOTES

1. PROVIDE CONDUIT AND WIRING FOR CAMERA STATION TO ASSOCIATED COMM RM. REFER TO CCTV RISER DIAGRAM FOR SIZE OF CONDUIT AND WIRING TYPE AND CCTV CAMERA STATION SCHEDULE FOR ADDITIONAL INFORMATION.
2. ELECTRIC DOOR LOCKING HARDWARE NIC; PROVIDED BY OTHERS. REFER TO SECURITY DOOR DETAILS AND ACCESS CONTROL SYSTEM RISER DIAGRAM FOR ADDITIONAL INFORMATION.
3. PROVIDE DOOR POSITION SWITCH. REFER TO SECURITY DOOR DETAILS AND ACCESS CONTROL SYSTEM RISER DIAGRAM FOR ADDITIONAL INFORMATION.
4. PROVIDE CARD ACCESS READER. REFER TO SECURITY DOOR DETAILS AND ACCESS CONTROL SYSTEM RISER DIAGRAM FOR ADDITIONAL INFORMATION.

GENERAL NOTES

1. SEE FIRE ALARM RISER DIAGRAM ON DRAWING E-701 DETAIL 1.



GRAPHIC SCALE (FEET)
1/8" = 1'-0" 0' 4' 8' 16' 24' 32' 40'

KEY PLAN

REV.	DATE	DESCRIPTION	SHEET NO.
		REVISIONS	

FILENAME:

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

DESIGNER/DRAFTER: CJE

CHECKED BY: RB

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

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ARCHITECT: WENDEL

APPROVED BY: BPM

ENGINEERS: ReSTL DESIGNERS, CLOUGH HARBOUR ASSOC., AI ENGINEERS, WENDEL

DATE: 06/11/2014

DESIGNED BY:
CLOUGH HARBOUR & ASSOCIATES
2139 SILAS DEANE HIGHWAY
SUITE 212
ROCKY HILL, CT
06067-2336

STATE OF CONNECTICUT
BRIAN P. McKENNA
No. 21640
LICENSED
PROFESSIONAL ENGINEER

PROJECT TITLE:
WATERBURY BUS MAINTENANCE FACILITY REPLACEMENT

ADDRESS:
FROST BRIDGE ROAD
WATERTOWN, CONNECTICUT 06787

DRAWING TITLE:
ELECTRICAL GROUND FLOOR SYSTEMS PLAN - AREA C

PROJECT NO. **431-0006**

DRAWING NO. **E-307**

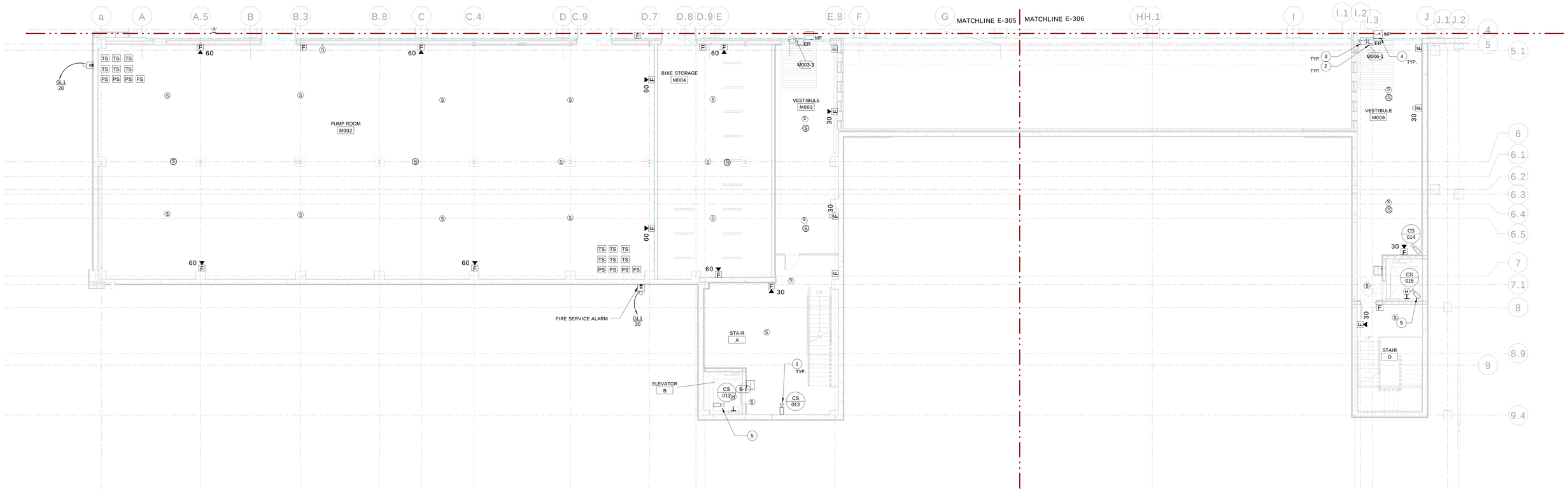
SHEET NO. **13.037**

CODED NOTES (#)

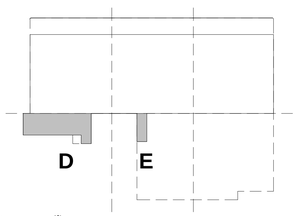
1. PROVIDE CONDUIT AND WIRING FOR CAMERA STATION TO ASSOCIATED COMM RM. REFER TO CCTV RISER DIAGRAM FOR SIZE OF CONDUIT AND WIRING TYPE AND CCTV CAMERA STATION SCHEDULE FOR ADDITIONAL INFORMATION.
2. ELECTRIC DOOR LOCKING HARDWARE NIC; PROVIDED BY OTHERS. REFER TO SECURITY DOOR DETAILS AND ACCESS CONTROL SYSTEM RISER DIAGRAM FOR ADDITIONAL INFORMATION.
3. PROVIDE DOOR POSITION SWITCH. REFER TO SECURITY DOOR DETAILS AND ACCESS CONTROL SYSTEM RISER DIAGRAM FOR ADDITIONAL INFORMATION.
4. PROVIDE CARD ACCESS READER. REFER TO SECURITY DOOR DETAILS AND ACCESS CONTROL SYSTEM RISER DIAGRAM FOR ADDITIONAL INFORMATION.
5. TRAVEL CABLE FOR CAMERA STATION NIC; PROVIDED BY OTHERS. COORDINATE EXACT LOCATION WITH ELEVATOR CONTRACTOR.

GENERAL NOTES

1. SEE FIRE ALARM RISER DIAGRAM ON DRAWING E-701 DETAIL 1.



1 ELECTRICAL GROUND FLOOR SYSTEMS PLAN - AREA D & E
1/8" = 1'-0"



GRAPHIC SCALE (FEET)
1/8" = 1'-0"
0' 4' 8' 16' 24' 32' 40'

KEY PLAN

REV.	DATE	DESCRIPTION	SHEET NO.
		REVISIONS	

FILENAME:

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DESIGNER/DRAFTER: CJE
CHECKED BY: RB
SCALE: 1/8" = 1'-0"

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ARCHITECT: WENDEL
APPROVED BY: BPM
ENGINEERS: ReSTL DESIGNERS, CLOUGH HARBOUR ASSOC., AI ENGINEERS, WENDEL
DATE: 06/11/2014

DESIGNED BY:
CLOUGH HARBOUR & ASSOCIATES
2139 SILAS DEANE HIGHWAY
SUITE 212
ROCKY HILL, CT
06067-2336

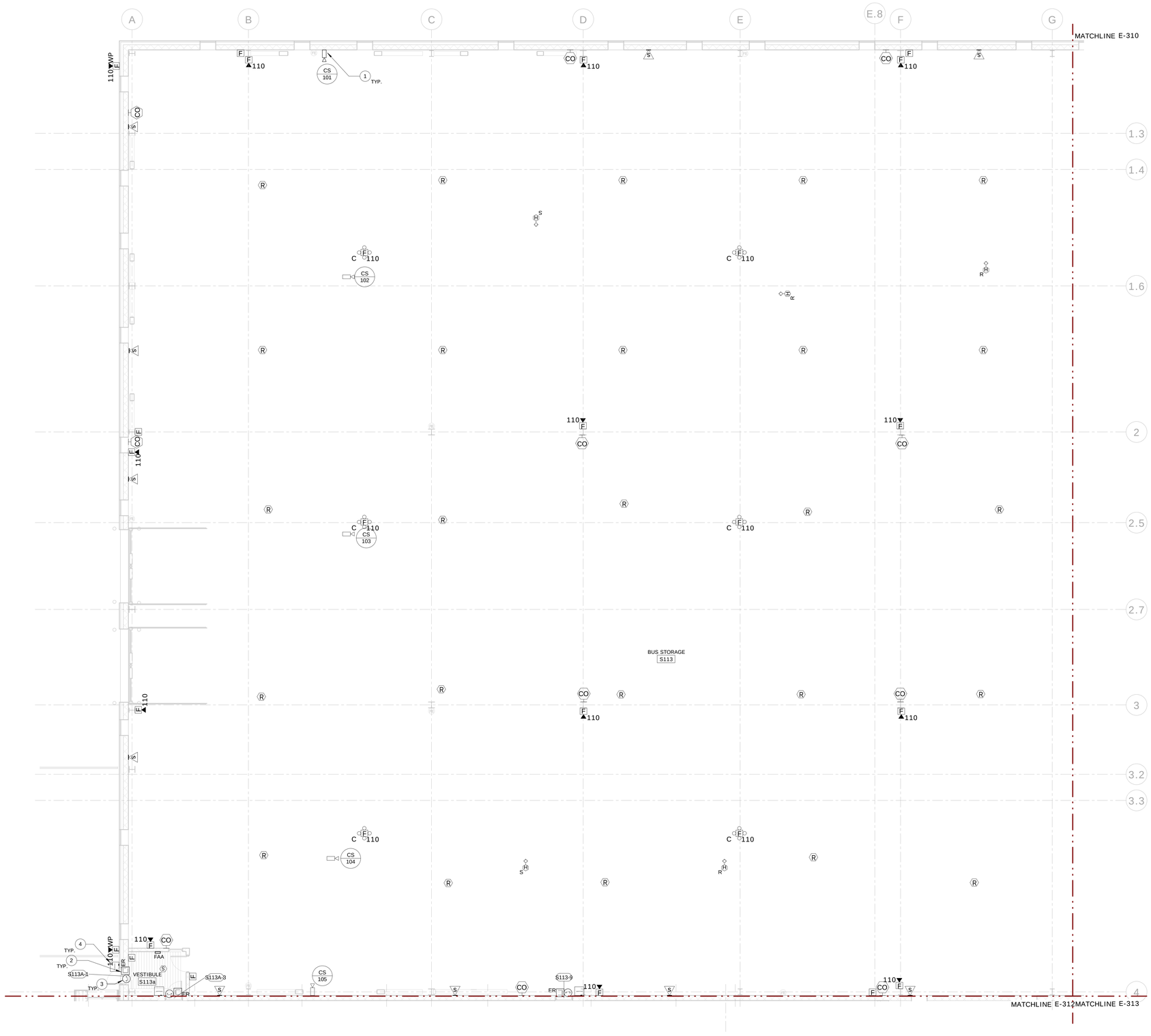
STATE OF CONNECTICUT
BRIAN P. MCKEE
No. 21640
LICENSED
PROFESSIONAL ENGINEER

PROJECT TITLE:
WATERBURY BUS MAINTENANCE FACILITY REPLACEMENT

ADDRESS:
FROST BRIDGE ROAD
WATERTOWN, CONNECTICUT 06787

DRAWING TITLE:
ELECTRICAL GROUND FLOOR SYSTEMS PLAN - AREA D & E

PROJECT NO. 431-0006
DRAWING NO. E-308
SHEET NO. 13.038



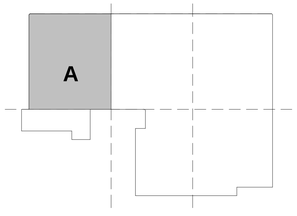
CODED NOTES

1. PROVIDE CONDUIT AND WIRING FOR CAMERA STATION TO ASSOCIATED COMM RM. REFER TO CCTV RISER DIAGRAM FOR SIZE OF CONDUIT AND WIRING TYPE AND CCTV CAMERA STATION SCHEDULE FOR ADDITIONAL INFORMATION.
2. ELECTRIC DOOR LOCKING HARDWARE NIC; PROVIDED BY OTHERS. REFER TO SECURITY DOOR DETAILS AND ACCESS CONTROL SYSTEM RISER DIAGRAM FOR ADDITIONAL INFORMATION.
3. PROVIDE DOOR POSITION SWITCH. REFER TO SECURITY DOOR DETAILS AND ACCESS CONTROL SYSTEM RISER DIAGRAM FOR ADDITIONAL INFORMATION.
4. PROVIDE CARD ACCESS READER. REFER TO SECURITY DOOR DETAILS AND ACCESS CONTROL SYSTEM RISER DIAGRAM FOR ADDITIONAL INFORMATION.

GENERAL NOTES

1. MOUNT BELL 10' AFG. BELL FOR FIRE SERVICE.
2. SEE FIRE ALARM RISER DIAGRAM ON DRAWING E-701 DETAIL 1.
3. SEE MECHANICAL DWGS FOR EXACT LOCATION OF DUCT SMOKE DETECTORS.

1 ELECTRICAL FIRST FLOOR SYSTEMS PLAN - AREA A
1/8" = 1'-0"



GRAPHIC SCALE (FEET)
1/8" = 1'-0"
0' 4' 8' 16' 24' 32' 40'

KEY PLAN

N

REV.	DATE	DESCRIPTION	SHEET NO.
		REVISIONS	

FILENAME:

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

DESIGNER/DRAFTER: CJE

CHECKED BY: RB

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

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ARCHITECT: WENDEL

APPROVED BY: BPM

ENGINEERS: ReSTL DESIGNERS, CLOUGH HARBOUR ASSOC., AI ENGINEERS, WENDEL

DATE: 06/11/2014

DESIGNED BY:
CLOUGH HARBOUR & ASSOCIATES
2139 SILAS DEANE HIGHWAY
SUITE 212
ROCKY HILL, CT
06067-2336

STATE OF CONNECTICUT
BRIAN P. MCGUIRE
No. 21640
LICENSED
PROFESSIONAL ENGINEER

PROJECT TITLE:
WATERBURY BUS MAINTENANCE FACILITY REPLACEMENT

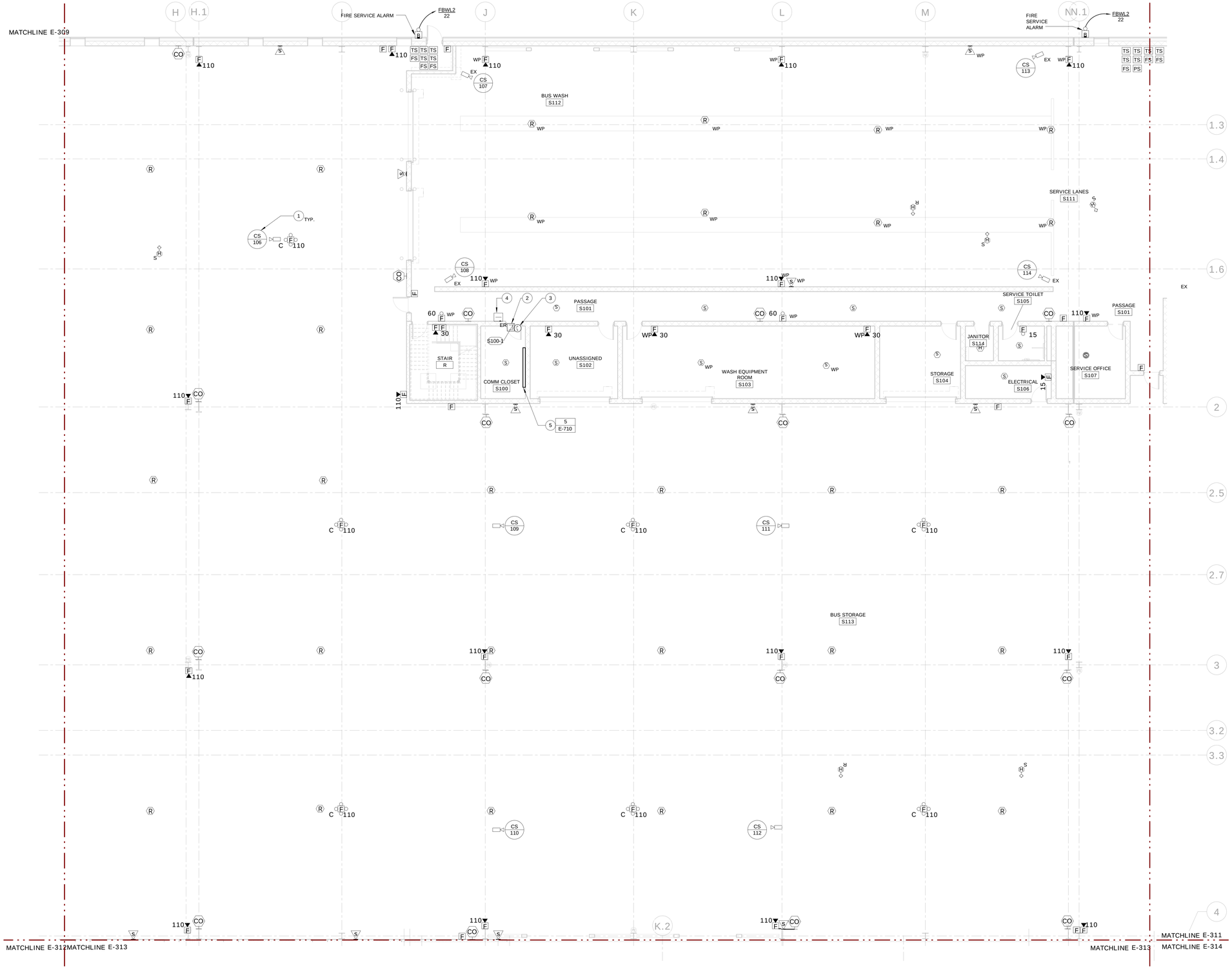
ADDRESS:
FROST BRIDGE ROAD
WATERTOWN, CONNECTICUT 06787

DRAWING TITLE:
ELECTRICAL FIRST FLOOR SYSTEMS PLAN - AREA A

PROJECT NO. **431-0006**

DRAWING NO. **E-309**

SHEET NO. **13.039**



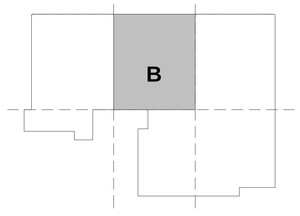
CODED NOTES

1. PROVIDE CONDUIT AND WIRING FOR CAMERA STATION TO ASSOCIATED COMM RM. REFER TO CCTV RISER DIAGRAM FOR SIZE OF CONDUIT AND WIRING TYPE AND CCTV CAMERA STATION SCHEDULE FOR ADDITIONAL INFORMATION.
2. ELECTRIC DOOR LOCKING HARDWARE NIC; PROVIDED BY OTHERS. REFER TO SECURITY DOOR DETAILS AND ACCESS CONTROL SYSTEM RISER DIAGRAM FOR ADDITIONAL INFORMATION.
3. PROVIDE DOOR POSITION SWITCH. REFER TO SECURITY DOOR DETAILS AND ACCESS CONTROL SYSTEM RISER DIAGRAM FOR ADDITIONAL INFORMATION.
4. PROVIDE CARD ACCESS READER. REFER TO SECURITY DOOR DETAILS AND ACCESS CONTROL SYSTEM RISER DIAGRAM FOR ADDITIONAL INFORMATION.
5. PROVIDE BACKBOARD SIZED FOR ACCESS CONTROL EQUIPMENT. MINIMUM SIZE SHALL BE 4'X'8'X3/4" WITH (2) COATS OF FIRE RETARDANT LATEX PAINT.

GENERAL NOTES

1. SEE FIRE ALARM RISER DIAGRAM ON DRAWING E-701 DETAIL 1.
2. SEE MECHANICAL DWGS FOR EXACT LOCATION OF DUCT SMOKE DETECTORS.

1 ELECTRICAL FIRST FLOOR SYSTEMS PLAN - AREA B
1/8" = 1'-0"



KEY PLAN

GRAPHIC SCALE (FEET)
1/8" = 1'-0"
0' 4' 8' 16' 24' 32' 40'

REV.	DATE	DESCRIPTION	SHEET NO.
		REVISIONS	

FILENAME:

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DESIGNER/DRAFTER: CJE
CHECKED BY: RB
SCALE: 1/8" = 1'-0"

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ARCHITECT: WENDEL
APPROVED BY: BPM
ENGINEERS: ReSTL DESIGNERS, CLOUGH HARBOUR ASSOC., AI ENGINEERS, WENDEL
DATE: 06/11/2014

DESIGNED BY:
CLOUGH HARBOUR & ASSOCIATES
2139 SILAS DEANE HIGHWAY
SUITE 212
ROCKY HILL, CT
06067-2336

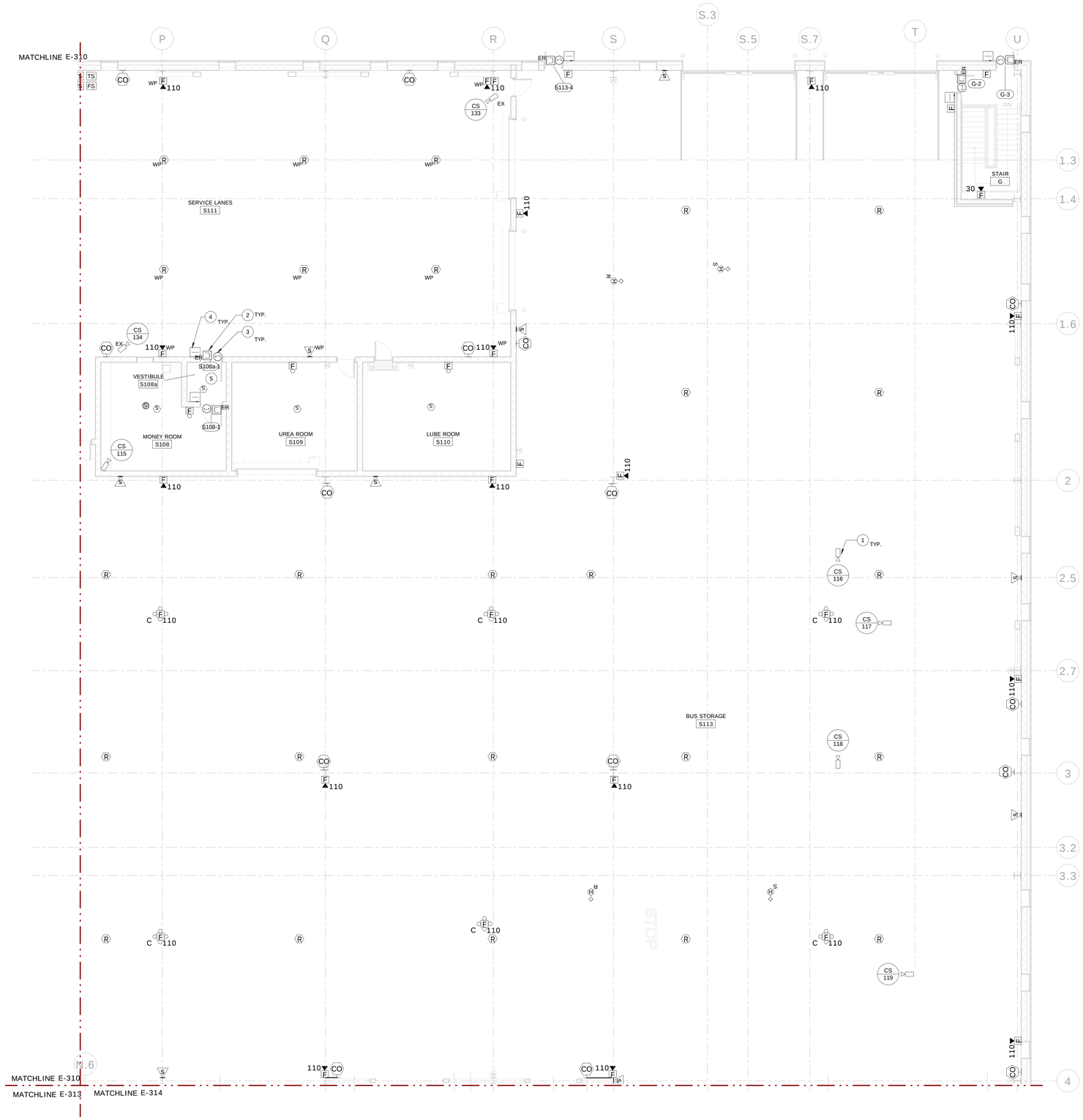
STATE OF CONNECTICUT
BRIAN P. McCONNELL
No. 21640
LICENSED
PROFESSIONAL ENGINEER

PROJECT TITLE:
WATERBURY BUS MAINTENANCE FACILITY REPLACEMENT

ADDRESS:
FROST BRIDGE ROAD
WATERTOWN, CONNECTICUT 06787

DRAWING TITLE:
ELECTRICAL FIRST FLOOR SYSTEMS PLAN - AREA B

PROJECT NO. 431-0006
DRAWING NO. E-310
SHEET NO. 13.040



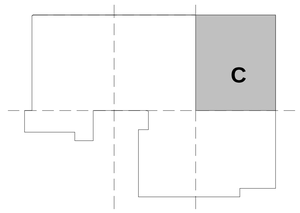
1 ELECTRICAL FIRST FLOOR SYSTEMS PLAN - AREA C
1/8" = 1'-0"

CODED NOTES

1. PROVIDE CONDUIT AND WIRING FOR CAMERA STATION TO ASSOCIATED COMM RM. REFER TO CCTV RISER DIAGRAM FOR SIZE OF CONDUIT AND WIRING TYPE AND CCTV CAMERA STATION SCHEDULE FOR ADDITIONAL INFORMATION.
2. ELECTRIC DOOR LOCKING HARDWARE NIC; PROVIDED BY OTHERS. REFER TO SECURITY DOOR DETAILS AND ACCESS CONTROL SYSTEM RISER DIAGRAM FOR ADDITIONAL INFORMATION.
3. PROVIDE DOOR POSITION SWITCH. REFER TO SECURITY DOOR DETAILS AND ACCESS CONTROL SYSTEM RISER DIAGRAM FOR ADDITIONAL INFORMATION.
4. PROVIDE CARD ACCESS READER. REFER TO SECURITY DOOR DETAILS AND ACCESS CONTROL SYSTEM RISER DIAGRAM FOR ADDITIONAL INFORMATION.
5. PROVIDE SALLYPORT INTERLOCK.

GENERAL NOTES

1. SEE FIRE ALARM RISER DIAGRAM ON DRAWING E-701 DETAIL 1.
2. SEE MECHANICAL DWGS FOR EXACT LOCATION OF DUCT SMOKE DETECTORS.



GRAPHIC SCALE (FEET)
1/8" = 1'-0" 0' 4' 8' 16' 24' 32' 40'

KEY PLAN

N

REV.	DATE	DESCRIPTION	SHEET NO.
		REVISIONS	

FILENAME:

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

DESIGNER/DRAFTER: CJE
CHECKED BY: RB
SCALE: 1/8" = 1'-0"

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ARCHITECT: WENDEL
APPROVED BY: BPM
ENGINEERS: ReSTL DESIGNERS, CLOUGH HARBOUR ASSOC., AI ENGINEERS, WENDEL
DATE: 06/11/2014

DESIGNED BY:
CLOUGH HARBOUR & ASSOCIATES
2139 SILAS DEANE HIGHWAY
SUITE 212
ROCKY HILL, CT
06067-2336

STATE OF CONNECTICUT
BRIAN P. MORRIS
No. 21640
LICENSED
PROFESSIONAL ENGINEER

PROJECT TITLE:
WATERBURY BUS MAINTENANCE FACILITY REPLACEMENT

ADDRESS:
FROST BRIDGE ROAD
WATERTOWN, CONNECTICUT 06787

DRAWING TITLE:
ELECTRICAL FIRST FLOOR SYSTEMS PLAN - AREA C

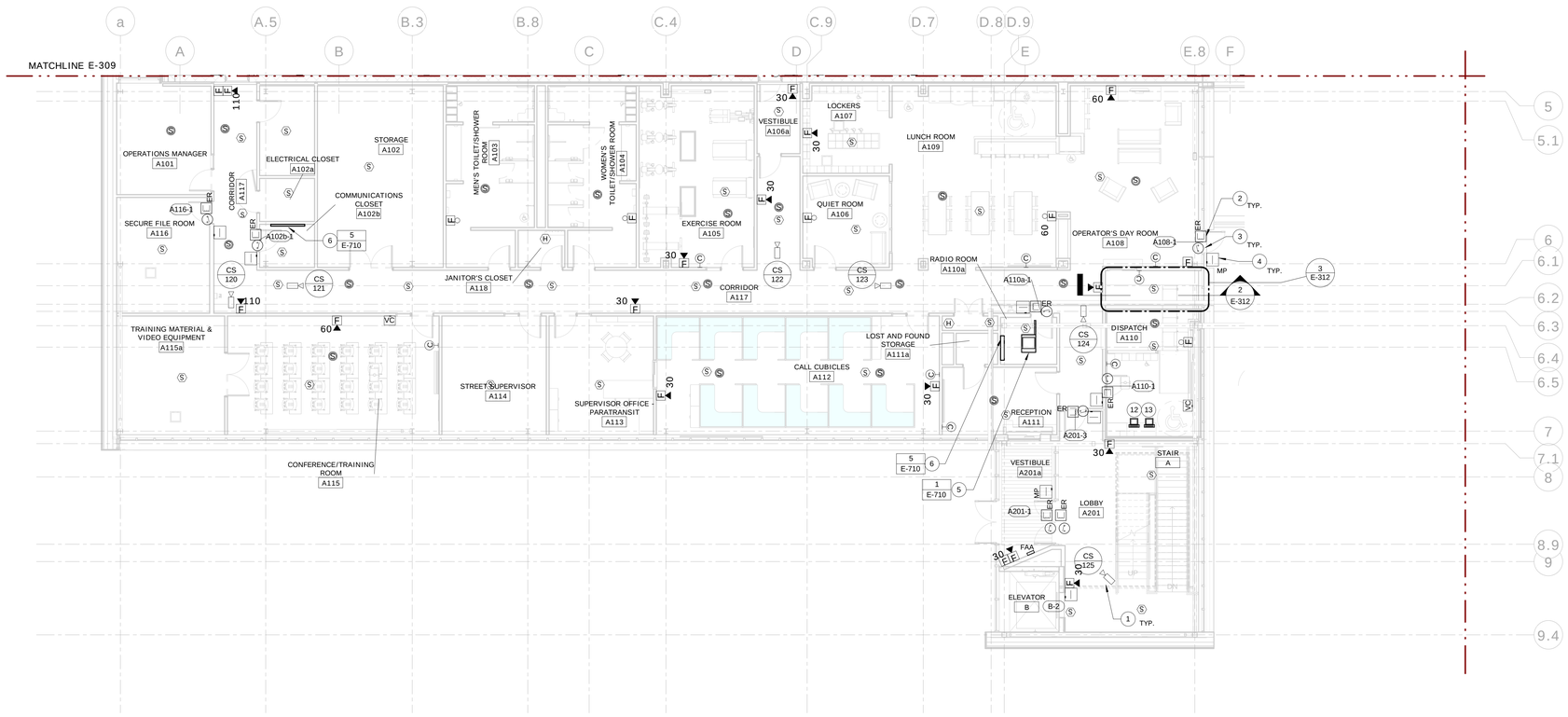
PROJECT NO. 431-0006
DRAWING NO. E-311
SHEET NO. 13.041

CODED NOTES (#)

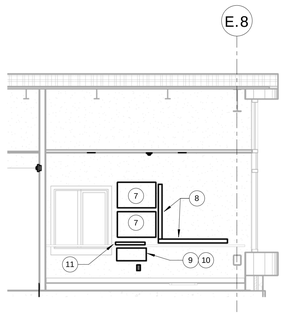
1. PROVIDE CONDUIT AND WIRING FOR CAMERA STATION TO ASSOCIATED COMM RM. REFER TO CCTV RISER DIAGRAM FOR SIZE OF CONDUIT AND WIRING TYPE AND CCTV CAMERA STATION SCHEDULE FOR ADDITIONAL INFORMATION.
2. ELECTRIC DOOR LOCKING HARDWARE NIC; PROVIDED BY OTHERS. REFER TO SECURITY DOOR DETAILS AND ACCESS CONTROL SYSTEM RISER DIAGRAM FOR ADDITIONAL INFORMATION.
3. PROVIDE DOOR POSITION SWITCH. REFER TO SECURITY DOOR DETAILS AND ACCESS CONTROL SYSTEM RISER DIAGRAM FOR ADDITIONAL INFORMATION.
4. PROVIDE CARD ACCESS READER. REFER TO SECURITY DOOR DETAILS AND ACCESS CONTROL SYSTEM RISER DIAGRAM FOR ADDITIONAL INFORMATION.
5. PROVIDE SECURITY EQUIPMENT RACK.
6. PROVIDE BACKBOARD SIZED FOR ACCESS CONTROL EQUIPMENT. MINIMUM SIZE SHALL BE 4'X8'X3/4" WITH (2) COATS OF FIRE RETARDANT LATEX PAINT.
7. PROVIDE (2) 32" LCD MONITORS. REFER TO CCTV RISER DIAGRAM FOR ADDITIONAL INFORMATION.
8. PROVIDE 2 CHANNEL STEEL WIREWAY.
9. PROVIDE UPS FOR POWER TO MONITORS AND VIRTUAL CONSOLE DISPLAY. PROVIDE (1) 20A 120V, CIRCUIT IN PANEL FL1 FOR DUPLEX RECEPTACLE FOR POWER TO UPS.
10. PROVIDE EQUIPMENT RACK (MIDDLE ATLANTIC DLBX OR APPROVED EQUAL) WITH FAN KIT AND MOUNT UNDER COUNTER, TO HOUSE VIRTUAL CONSOLE DISPLAY AND UPS. UPS MUST NOT BE DEEPER THAN 20".
11. PROVIDE KEYBOARD CONTROL UNIT.
12. PROVIDE ACCESS CONTROL FACILITY MONITORING SYSTEM WORKSTATION WITH ASSOCIATED PRINTERS.
13. PROVIDE BADGING WORKSTATION AND ASSOCIATED EQUIPMENT TO PRINT CABLES.

GENERAL NOTES

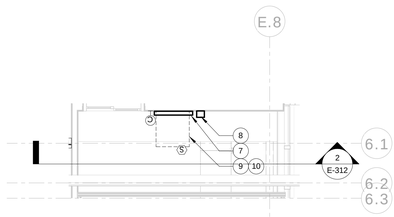
1. SEE FIRE ALARM RISER DIAGRAM ON DRAWING E-701 DETAIL 1.
2. SEE MECHANICAL DWGS FOR EXACT LOCATION OF DUCT SMOKE DETECTORS.



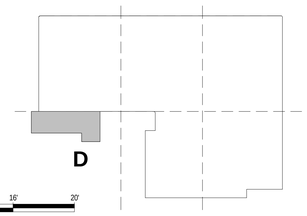
1 ELECTRICAL FIRST FLOOR SYSTEMS PLAN - AREA D
1/8" = 1'-0"



2 Dispatch RM A110 ELEVATION
1/4" = 1'-0"



3 ENLARGED DISPATCH RM A110
1/4" = 1'-0"



GRAPHIC SCALE (FEET)
1/4" = 1'-0" 0' 2' 4' 8' 12' 16' 20'
GRAPHIC SCALE (FEET)
1/8" = 1'-0" 0' 4' 8' 16' 24' 32' 40'

KEY PLAN

REV.	DATE	DESCRIPTION	SHEET NO.
		REVISIONS	

FILENAME:

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

DESIGNER/DRAFTER: CJE
CHECKED BY: RB
SCALE: As indicated

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ARCHITECT: WENDEL
ENGINEERS: ReSTL DESIGNERS, CLOUGH HARBOUR ASSOC., AI ENGINEERS, WENDEL
APPROVED BY: BPM
DATE: 06/11/2014

DESIGNED BY:
CLOUGH HARBOUR & ASSOCIATES
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SUITE 212
ROCKY HILL, CT 06067-2336

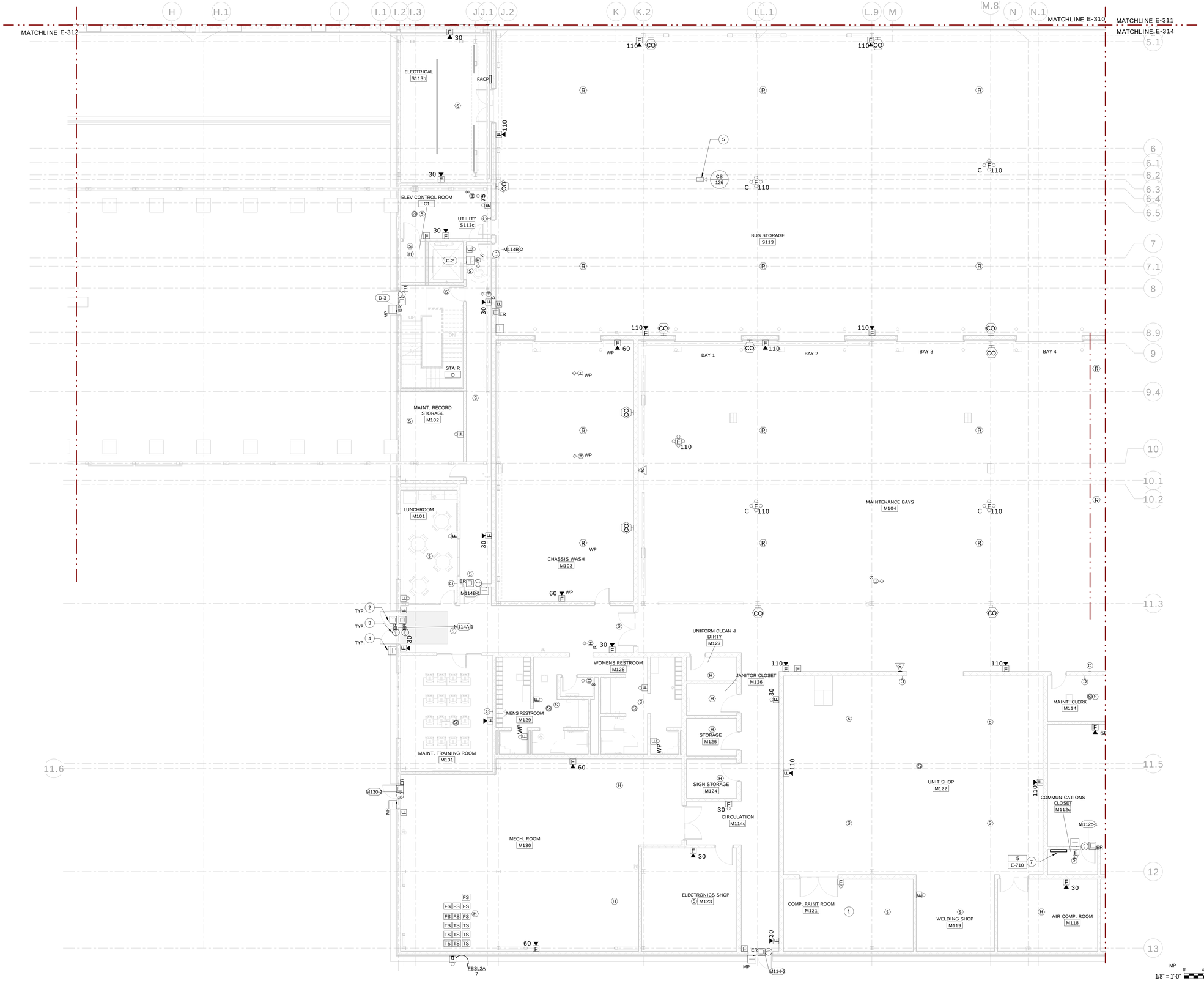
STATE OF CONNECTICUT BRIAN P. MORAN No. 21640 LICENSED PROFESSIONAL ENGINEER

PROJECT TITLE:
WATERBURY BUS MAINTENANCE FACILITY REPLACEMENT

ADDRESS:
FROST BRIDGE ROAD
WATERTOWN, CONNECTICUT 06787

DRAWING TITLE:
ELECTRICAL FIRST FLOOR SYSTEMS PLAN - AREA D

PROJECT NO. 431-0006
DRAWING NO. E-312
SHEET NO. 13.042



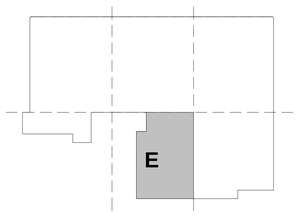
1 ELECTRICAL FIRST FLOOR SYSTEMS PLAN - AREA E
1/8" = 1'-0"

CODED NOTES

1. CLASS 1 OR 2, DIV 2 WITHIN 5 OR 10 FT OF OPEN SPRAY PAINT BOOTH.
2. ELECTRIC DOOR LOCKING HARDWARE NIC; PROVIDED BY OTHERS. REFER TO SECURITY DOOR DETAILS AND ACCESS CONTROL SYSTEM RISER DIAGRAM FOR ADDITIONAL INFORMATION.
3. PROVIDE DOOR POSITION SWITCH. REFER TO SECURITY DOOR DETAILS AND ACCESS CONTROL SYSTEM RISER DIAGRAM FOR ADDITIONAL INFORMATION.
4. PROVIDE CARD ACCESS READER. REFER TO SECURITY DOOR DETAILS AND ACCESS CONTROL SYSTEM RISER DIAGRAM FOR ADDITIONAL INFORMATION.
5. PROVIDE CONDUIT AND WIRING FOR CAMERA STATION TO ASSOCIATED COMM RM. REFER TO CCTV RISER DIAGRAM FOR SIZE OF CONDUIT AND WIRING TYPE AND CCTV CAMERA STATION SCHEDULE FOR ADDITIONAL INFORMATION.
7. PROVIDE BACKBOARD SIZED FOR ACCESS CONTROL EQUIPMENT. MINIMUM SIZE SHALL BE 4'X'8'X3/4" WITH (2) COATS OF FIRE RETARDANT LATEX PAINT.

GENERAL NOTES

1. SEE FIRE ALARM RISER DIAGRAM ON DRAWING E-701 DETAIL 1.
2. SEE MECHANICAL DWGS FOR EXACT LOCATION OF DUCT SMOKE DETECTORS.



GRAPHIC SCALE (FEET)
1/8" = 1'-0"
0' 4' 8' 16' 24' 32' 40'

KEY PLAN

REV.	DATE	DESCRIPTION	SHEET NO.
		REVISIONS	

FILENAME:

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DESIGNER/DRAFTER: CJE

CHECKED BY: RB

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

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ARCHITECT: WENDEL

APPROVED BY: BPM

ENGINEERS: ReSTL DESIGNERS, CLOUGH HARBOUR ASSOC., AI ENGINEERS, WENDEL

DATE: 06/11/2014

DESIGNED BY:
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SUITE 212
ROCKY HILL, CT
06067-2336

STATE OF CONNECTICUT
BRIAN P. MCCARTHY
No. 21640
LICENSED
PROFESSIONAL ENGINEER

PROJECT TITLE:
WATERBURY BUS MAINTENANCE FACILITY REPLACEMENT

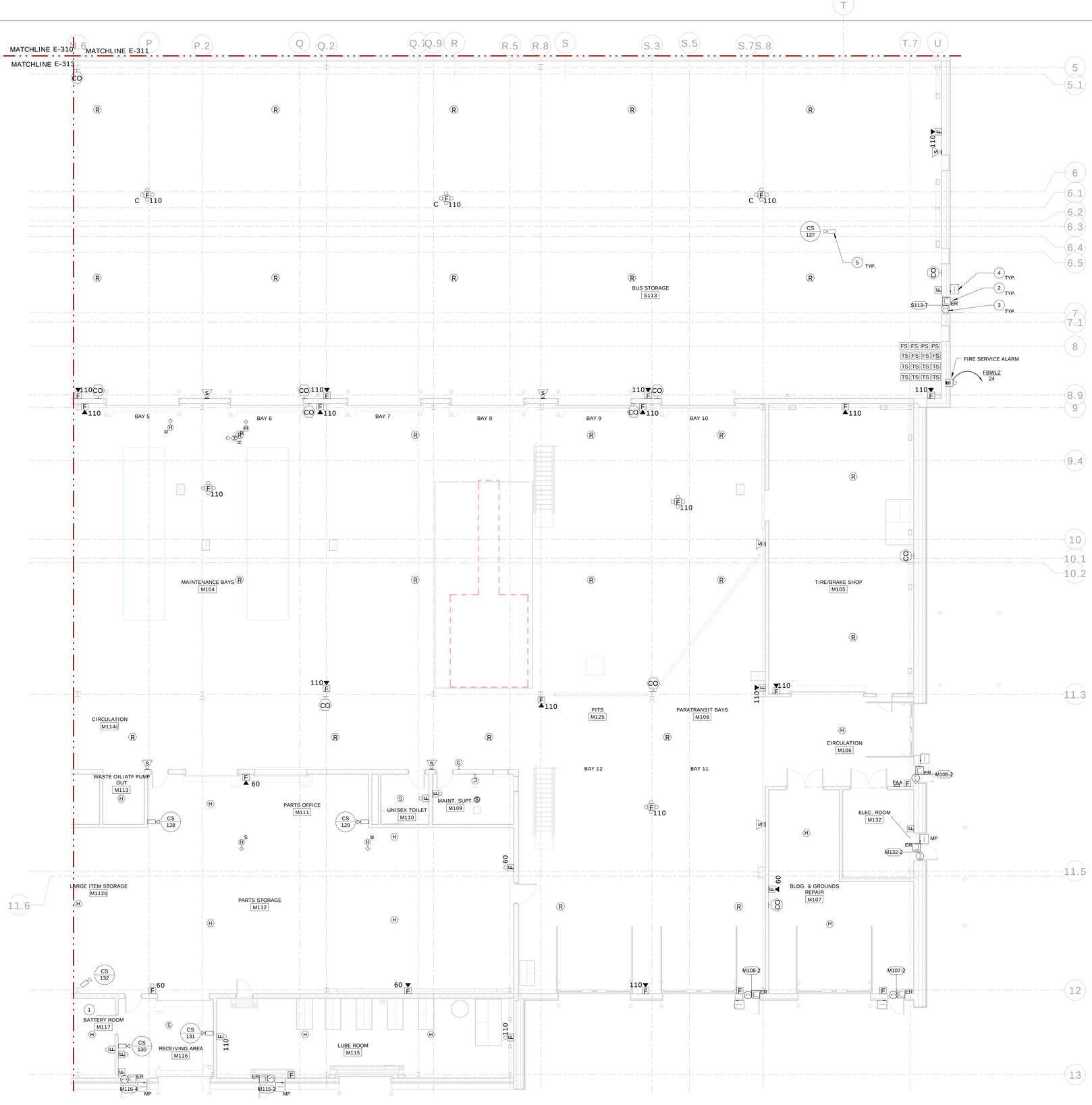
ADDRESS:
FROST BRIDGE ROAD
WATERTOWN, CONNECTICUT 06787

DRAWING TITLE:
ELECTRICAL FIRST FLOOR SYSTEMS PLAN - AREA E

PROJECT NO. 431-0006

DRAWING NO. E-313

SHEET NO. 13.043



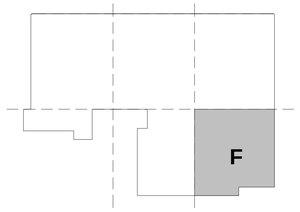
1 ELECTRICAL FIRST FLOOR SYSTEMS PLAN - AREA F
1/8" = 1'-0"

CODED NOTES

1. CLASS H3 HAZARDOUS AREA.
2. ELECTRIC DOOR LOCKING HARDWARE NIC; PROVIDED BY OTHERS. REFER TO SECURITY DOOR DETAILS AND ACCESS CONTROL SYSTEM RISER DIAGRAM FOR ADDITIONAL INFORMATION.
3. PROVIDE DOOR POSITION SWITCH. REFER TO SECURITY DOOR DETAILS AND ACCESS CONTROL SYSTEM RISER DIAGRAM FOR ADDITIONAL INFORMATION.
4. PROVIDE CARD ACCESS READER. REFER TO SECURITY DOOR DETAILS AND ACCESS CONTROL SYSTEM RISER DIAGRAM FOR ADDITIONAL INFORMATION.
5. PROVIDE CONDUIT AND WIRING FOR CAMERA STATION TO ASSOCIATED COMM RM. REFER TO CCTV RISER DIAGRAM FOR SIZE OF CONDUIT AND WIRING TYPE AND CCTV CAMERA STATION SCHEDULE FOR ADDITIONAL INFORMATION.

GENERAL NOTES

1. SEE FIRE ALARM RISER DIAGRAM ON DRAWING E-701 DETAIL 1.
2. SEE MECHANICAL DWGS FOR EXACT LOCATION OF DUCT SMOKE DETECTORS.



GRAPHIC SCALE (FEET)
1/8" = 1'-0"
0' 4' 8' 16' 24' 32' 40'

KEY PLAN

N

REV.	DATE	DESCRIPTION	SHEET NO.
		REVISIONS	

FILENAME:

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DESIGNER/DRAFTER: CJE
CHECKED BY: RB
SCALE: 1/8" = 1'-0"

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ARCHITECT: WENDEL
APPROVED BY: BPM
ENGINEERS: ReSTL DESIGNERS, CLOUGH HARBOUR ASSOC., AI ENGINEERS, WENDEL
DATE: 06/11/2014

DESIGNED BY:
CLOUGH HARBOUR & ASSOCIATES
2139 SILAS DEANE HIGHWAY
SUITE 212
ROCKY HILL, CT 06067-2336

STATE OF CONNECTICUT
BRIAN P. McKENNA
No. 21640
LICENSED
PROFESSIONAL ENGINEER

PROJECT TITLE:
WATERBURY BUS MAINTENANCE FACILITY REPLACEMENT

ADDRESS:
FROST BRIDGE ROAD
WATERTOWN, CONNECTICUT 06787

DRAWING TITLE:
ELECTRICAL FIRST FLOOR SYSTEMS PLAN - AREA F

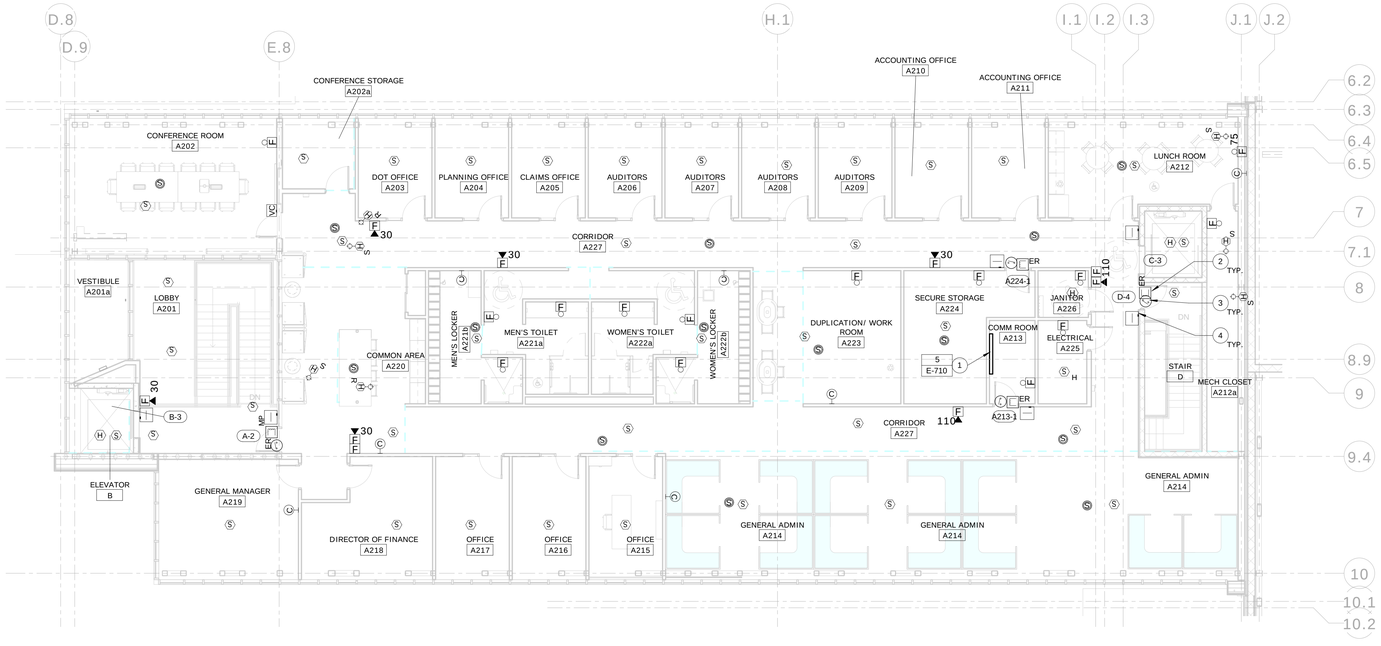
PROJECT NO. 431-0006
DRAWING NO. E-314
SHEET NO. 13.044

CODED NOTES (#)

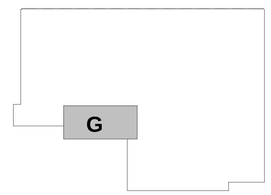
1. PROVIDE BACKBOARD SIZED FOR ACCESS CONTROL EQUIPMENT. MINIMUM SIZE SHALL BE 4'X'8'X3/4" WITH (2) COATS OF FIRE RETARDANT LATEX PAINT.
2. ELECTRIC DOOR LOCKING HARDWARE NIC; PROVIDED BY OTHERS. REFER TO SECURITY DOOR DETAILS AND ACCESS CONTROL SYSTEM RISER DIAGRAM FOR ADDITIONAL INFORMATION.
3. PROVIDE DOOR POSITION SWITCH. REFER TO SECURITY DOOR DETAILS AND ACCESS CONTROL SYSTEM RISER DIAGRAM FOR ADDITIONAL INFORMATION.
4. PROVIDE CARD ACCESS READER. REFER TO SECURITY DOOR DETAILS AND ACCESS CONTROL SYSTEM RISER DIAGRAM FOR ADDITIONAL INFORMATION.

GENERAL NOTES

1. SEE FIRE ALARM RISER DIAGRAM ON DRAWING E-701 DETAIL 1.



1 ELECTRICAL SECOND FLOOR SYSTEMS PLAN - AREA G
1/8" = 1'-0"



KEY PLAN

GRAPHIC SCALE (FEET)
1/8" = 1'-0"
0' 4' 8' 16' 24' 32' 40'

N

REV.	DATE	DESCRIPTION	SHEET NO.
		REVISIONS	

FILENAME:

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

DESIGNER/DRAFTER: CJE

CHECKED BY: RB

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

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ARCHITECT: WENDEL

APPROVED BY: BPM

ENGINEERS: ReSTL DESIGNERS, CLOUGH HARBOUR ASSOC., AI ENGINEERS, WENDEL

DATE: 06/11/2014

DESIGNED BY:
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2139 SILAS DEANE HIGHWAY
SUITE 212
ROCKY HILL, CT
06067-2336

STATE OF CONNECTICUT
BRIAN P. MCKENNA
No. 21640
LICENSED
PROFESSIONAL ENGINEER

PROJECT TITLE:
WATERBURY BUS MAINTENANCE FACILITY REPLACEMENT

ADDRESS:
FROST BRIDGE ROAD
WATERTOWN, CONNECTICUT 06787

DRAWING TITLE:
ELECTRICAL SECOND FLOOR SYSTEMS PLAN - AREA G

PROJECT NO. 431-0006

DRAWING NO. E-315

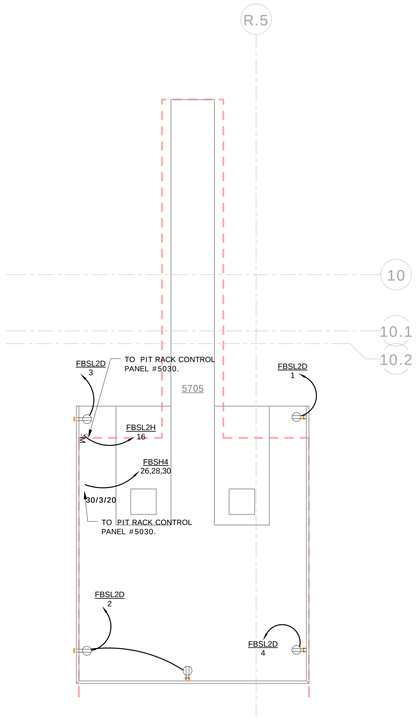
SHEET NO. 13.045

CODED NOTES (#)

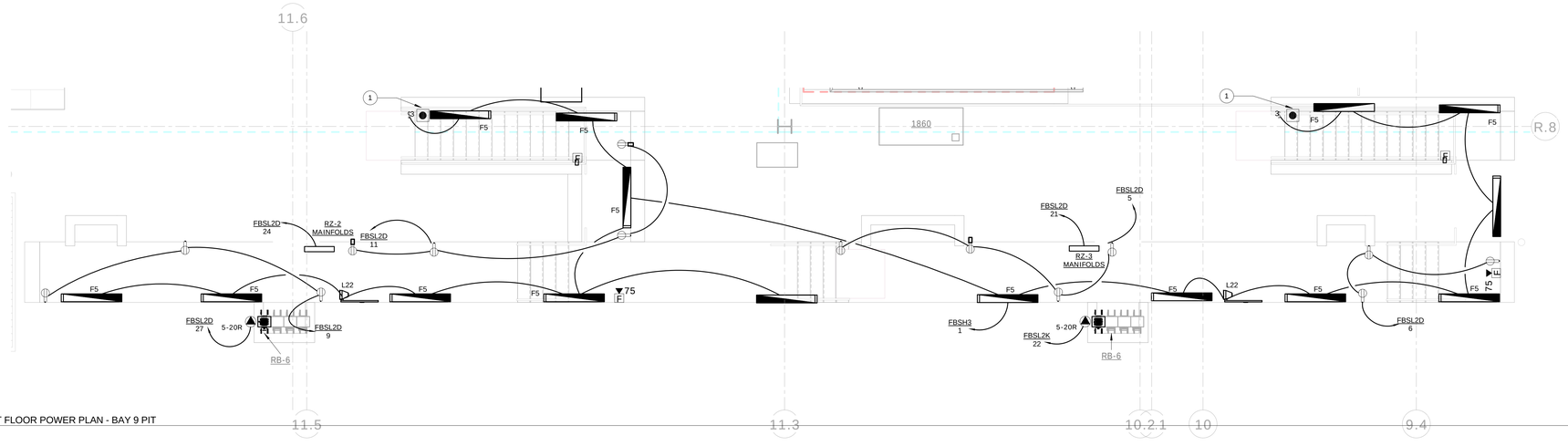
1. LIGHTING AND RECEPTACLE CIRCUITS GO THRU EPO. SEE DETAIL 3 ON DWG. E-704 FOR ADDITIONAL INFORMATION.

GENERAL NOTES

1. GARAGE PITS : CLASS 1 DIV 2 AREA.
2. ALL DEVICES IN PITS MUST MEET CLASSIFICATION REQUIREMENTS.
3. ALL RECEPTACLES TO BE MOUNTED AT 48" AFF IN ALL GARAGE AREAS INCLUDING PARKING GARAGE, BUS STORAGE, MAINTENANCE BAYS, CHASSIS WASH, AND SERVICE LANES.



1 ELECTRICAL FIRST FLOOR POWER PLAN - BAY 8 PIT
1/4" = 1'-0"



2 ELECTRICAL FIRST FLOOR POWER PLAN - BAY 9 PIT
1/4" = 1'-0"

GRAPHIC SCALE (FEET)
1/4" = 1'-0" 0' 2' 4' 8' 12' 16' 20'

REV.	DATE	DESCRIPTION	SHEET NO.
		REVISIONS	

FILENAME:

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DESIGNER/DRAFTER: CJE
CHECKED BY: RB
SCALE: 1/4" = 1'-0"

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ARCHITECT: WENDEL
APPROVED BY: BPM
ENGINEERS: ReSTL DESIGNERS, CLOUGH HARBOUR ASSOC., AI ENGINEERS, WENDEL
DATE: 06/11/2014

DESIGNED BY:
CLOUGH HARBOUR & ASSOCIATES
2139 SILAS DEANE HIGHWAY
SUITE 212
ROCKY HILL, CT
06067-2336

STATE OF CONNECTICUT BRIAN P. McKENNA No. 21640 LICENSED PROFESSIONAL ENGINEER

PROJECT TITLE:
WATERBURY BUS MAINTENANCE FACILITY REPLACEMENT

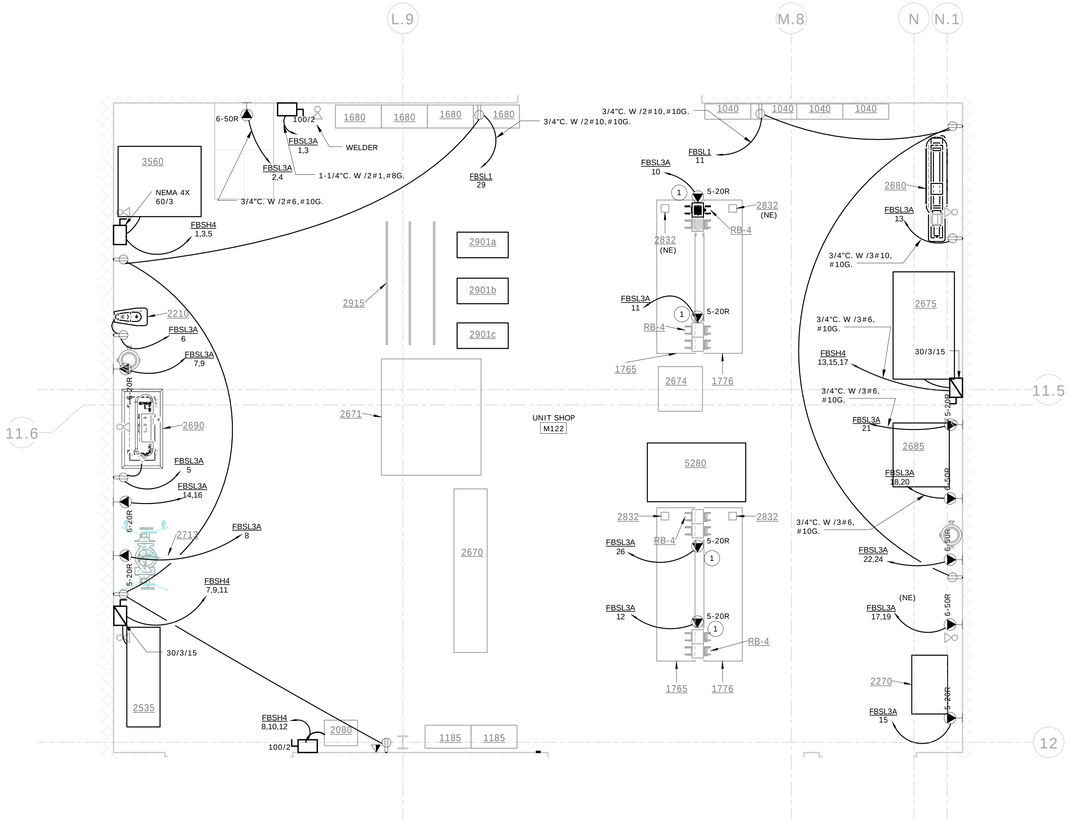
ADDRESS:
FROST BRIDGE ROAD
WATERTOWN, CONNECTICUT 06787

DRAWING TITLE:
ELECTRICAL FIRST FLOOR ENLARGED PLANS - PITS 8 & 9

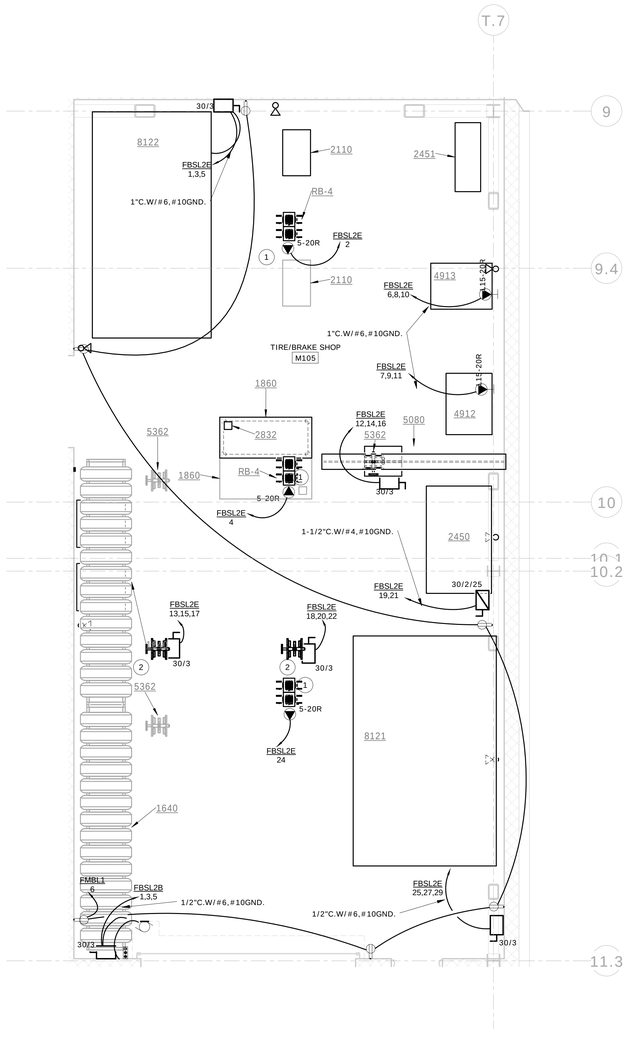
PROJECT NO. 431-0006
DRAWING NO. E-401
SHEET NO. 13.046

GENERAL NOTES

1. ALL RECEPTACLES TO BE MOUNTED AT 48" AFF IN ALL GARAGE AREAS INCLUDING PARKING GARAGE, BUS STORAGE, MAINTENANCE BAYS, CHASSIS WASH, AND SERVICE LANES.
2. SEE ELECTRICAL EQUIPMENT SCHEDULES FOR CONDUIT AND WIRE AND CONDUIT SIZES, UNLESS OTHERWISE NOTED.



1 ELECTRICAL FIRST FLOOR POWER PLAN - ENLARGED UNIT SHOP
1/4" = 1'-0"



2 ELECTRICAL FIRST FLOOR POWER PLAN - ENLARGED TIRE ROOM
1/4" = 1'-0"

CODED NOTES

1 MOUNT RECEPTACLE TO CEILING STRUCTURE FOR POWER TO CORD REEL.

CODED NOTES

1 MOUNT RECEPTACLE TO CEILING STRUCTURE FOR POWER TO CORD REEL.
2 MOUNT DISCONNECT TO CEILING STRUCTURE FOR POWER TO CHAIN HOIST.

GRAPHIC SCALE (FEET)
1/4" = 1'-0"
0' 2' 4' 8' 12' 16' 20'

REV.	DATE	DESCRIPTION	SHEET NO.
		REVISIONS	

FILENAME:

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DESIGNER/DRAFTER: CJE
CHECKED BY: RB
SCALE: 1/4" = 1'-0"

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ARCHITECT: WENDEL
ENGINEERS: ReSTL DESIGNERS, CLOUGH HARBOUR ASSOC., AI ENGINEERS, WENDEL
APPROVED BY: BPM
DATE: 06/11/2014

DESIGNED BY:
CLOUGH HARBOUR & ASSOCIATES
2139 SILAS DEANE HIGHWAY
SUITE 212
ROCKY HILL, CT 06067-2336

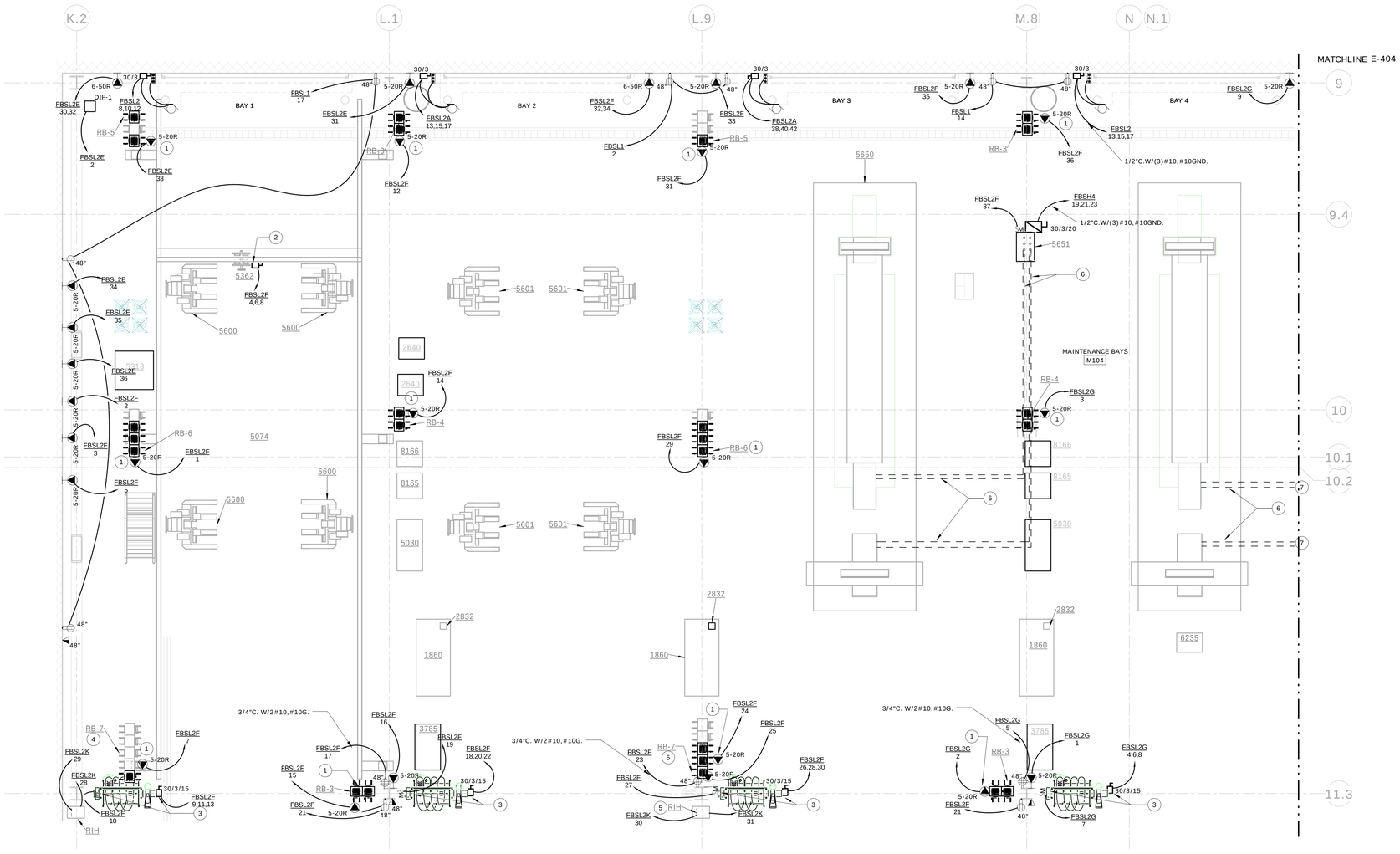
STATE OF CONNECTICUT BRIAN P. McKENNA No. 21640 LICENSED PROFESSIONAL ENGINEER

PROJECT TITLE:
WATERBURY BUS MAINTENANCE FACILITY REPLACEMENT

ADDRESS:
FROST BRIDGE ROAD
WATERTOWN, CONNECTICUT 06787

DRAWING TITLE:
ELECTRICAL ENLARGED PLAN - UNIT SHOP AND TIRE ROOM

PROJECT NO. 431-0006
DRAWING NO. E-402
SHEET NO. 13.047



1 ELECTRICAL FIRST FLOOR POWER PLAN - ENLARGED BAY 1 TO 4
1/4" = 1'-0"

CODED NOTES

1. MOUNT RECEPTACLE TO CEILING STRUCTURE FOR POWER TO CORD REEL.
2. MOUNT DISCONNECT TO CEILING STRUCTURE FOR POWER TO CHAIN HOIST.
3. MOUNT DISCONNECT TO CEILING STRUCTURE FOR POWER TO EXHAUST HOSE REEL.
4. PROVIDE (2)120V, 20A CIRCUITS AND ONE DATA DROP FOR FLUID AND FUEL MANAGEMENT SYSTEM REMOTE ISLAND HEAD (RIH). REFER TO DETAIL 1 ON DWG E705 FOR 120V CONNECTIONS BETWEEN RIH AND ASSOCIATED CORD REEL BANK.
5. PROVIDE (2)120V, 20A CIRCUITS AND ONE DATA DROP FOR FLUID AND FUEL MANAGEMENT SYSTEM REMOTE ISLAND HEAD (RIH). REFER TO DETAIL 1 ON DWG E705 FOR 120V CONNECTIONS BETWEEN RIH AND ASSOCIATED CORD REEL BANK.
6. PROVIDE (4) 2"C. IN SLAB FROM CONTROL PANEL TO LIFT PER LIFT MANUFACTURER'S REQUIREMENTS. ALL CONDUITS MUST USE SEALOFF IN ACCORDANCE TO LOCAL AND NATIONAL CODES AND MEET LIFT MANUFACTURER'S REQUIRMENTS. PROVIDE REQUIRED SPACE BETWEEN SEALOFF AND FLOOR GRADE AS REQUIRED BY LIFT MANUFACTURER.
7. SEE DRAWING E-404 FOR CONTINUATION.

GENERAL NOTES

1. ALL RECEPTACLES TO BE MOUNTED AT 48" AFF IN ALL GARAGE AREAS INCLUDING PARKING GARAGE, BUS STORAGE, MAINTENANCE BAYS, CHASSIS WASH, AND SERVICE LANES.
2. DATA DROP FOR RIH HEADS SHALL TERMINATE AT FLUID MANAGEMENT SERVER LOCATED IN COMM RM M112C.
3. SEE ELECTRICAL EQUIPMENT SCHEDULES FOR CONDUIT AND WIRE SIZES UNLESS OTHERWISE NOTED.

GRAPHIC SCALE (FEET)
1/4" = 1'-0" 0' 2' 4' 8' 12' 16' 20'

REV.	DATE	DESCRIPTION	SHEET NO.
		REVISIONS	

FILENAME:

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

DESIGNER/DRAFTER: CJE
CHECKED BY: RB
SCALE: 1/4" = 1'-0"

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ARCHITECT: WENDEL
APPROVED BY: BPM
ENGINEERS: ReSTL DESIGNERS, CLOUGH HARBOUR ASSOC., AI ENGINEERS, WENDEL
DATE: 06/11/2014

DESIGNED BY:
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ROCKY HILL, CT
06067-2336

STATE OF CONNECTICUT
BRIAN P. McKENNA
No. 21640
LICENSED
PROFESSIONAL ENGINEER

PROJECT TITLE:
WATERBURY BUS MAINTENANCE FACILITY REPLACEMENT

ADDRESS:
FROST BRIDGE ROAD
WATERTOWN, CONNECTICUT 06787

DRAWING TITLE:
ELECTRICAL ENLARGED PLAN - BAY 1 THRU 4

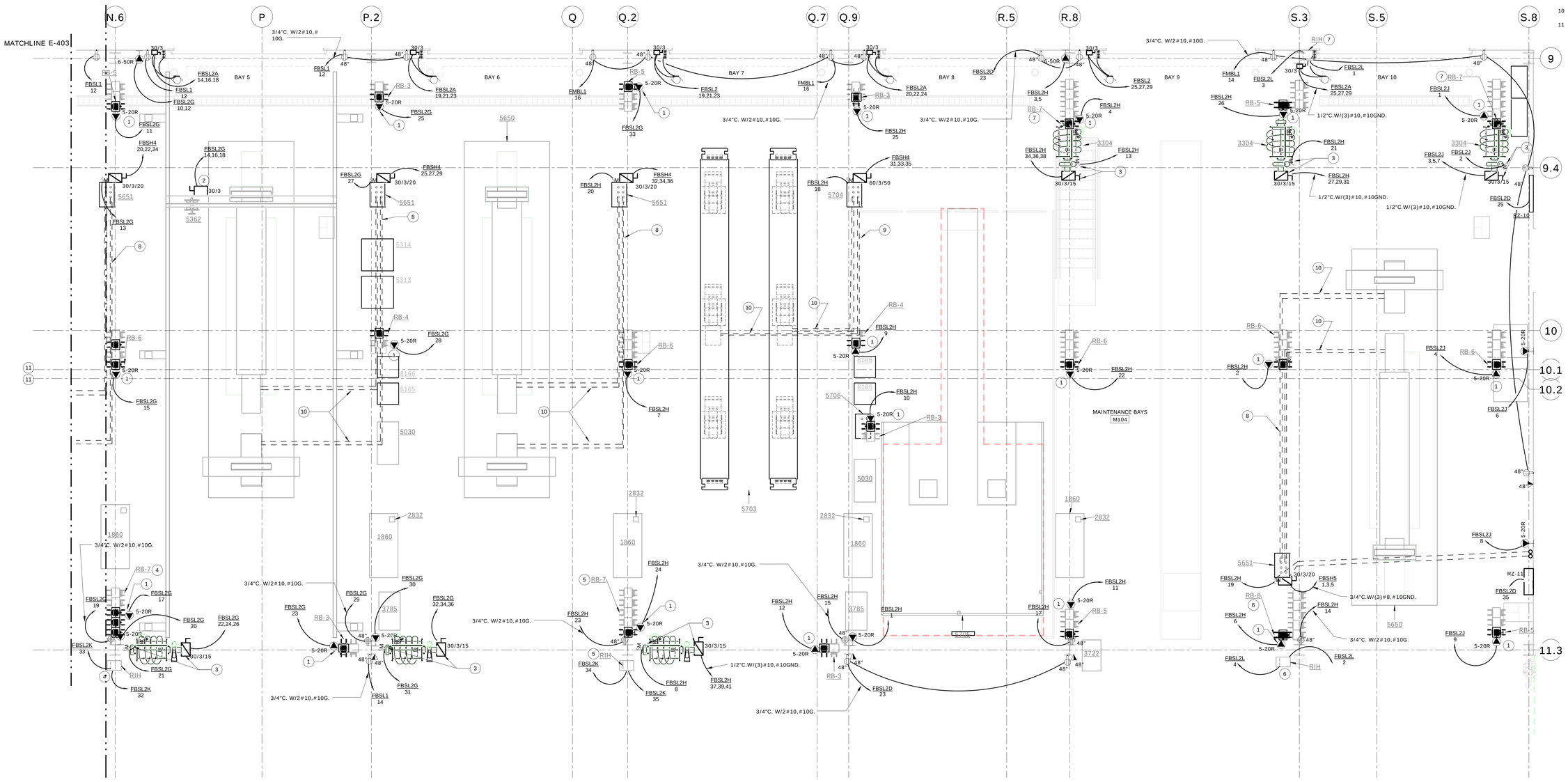
PROJECT NO. 431-0006
DRAWING NO. E-403
SHEET NO. 13.048

GENERAL NOTES

1. ALL RECEPTACLES TO BE MOUNTED AT 48" AFF AND MUST BE GFI TYPE IN ALL GARAGE AREAS INCLUDING PARKING GARAGE, BUS STORAGE, MAINTENANCE BAYS, CHASSIS WASH, AND SERVICE LANES.
2. DATA DROP FOR RIH HEADS SHALL TERMINATE AT FLUID MANAGEMENT SERVER LOCATED IN COMM RM M112C.
3. RIH DATA TO COMM RM S100.
4. REFER TO PROCESS DRAWINGS FOR EXACT LOCATIONS OF FUELING EQUIPMENT.
5. SEE ELECTRICAL EQUIPMENT SCHEDULES FOR CONDUIT AND WIRE SIZES, UNLESS OTHERWISE NOTED.

CODED NOTES

1 MOUNT RECEPTACLE TO CEILING STRUCTURE FOR POWER TO CORD REEL.
2 MOUNT DISCONNECT TO CEILING STRUCTURE FOR POWER TO CHAIN HOIST.
3 MOUNT DISCONNECT TO CEILING STRUCTURE FOR POWER TO EXHAUST HOSE REEL.
4 PROVIDE (2)120V, 20A CIRCUITS AND ONE DATA DROP FOR FLUID AND FUEL MANAGEMENT SYSTEM REMOTE ISLAND HEAD (RIH). REFER TO DETAIL 1 ON DWG E705 FOR 120V CONNECTIONS BETWEEN RIH AND ASSOCIATED CORD REEL BANK.
5 PROVIDE (2)120V, 20A CIRCUITS AND ONE DATA DROP FOR FLUID AND FUEL MANAGEMENT SYSTEM REMOTE ISLAND HEAD (RIH). REFER TO DETAIL 1 ON DWG E705 FOR 120V CONNECTIONS BETWEEN RIH AND ASSOCIATED CORD REEL BANK.
6 PROVIDE (2)120V, 20A CIRCUITS AND ONE DATA DROP FOR FLUID AND FUEL MANAGEMENT SYSTEM REMOTE ISLAND HEAD (RIH). REFER TO DETAIL 2 ON DWG E705 FOR 120V CONNECTIONS BETWEEN RIH AND ASSOCIATED CORD REEL BANK.
7 PROVIDE (2)120V, 20A CIRCUITS AND ONE DATA DROP FOR FLUID AND FUEL MANAGEMENT SYSTEM REMOTE ISLAND HEAD (RIH). REFER TO DETAIL 3 ON DWG E705 FOR 120V CONNECTIONS BETWEEN RIH AND ASSOCIATED CORD REEL BANK.
8 PROVIDE (4) 2"C. IN SLAB FROM CONTROL PANEL TO LIFT PER LIFT MANUFACTURER'S REQUIREMENTS. ALL CONDUITS MUST USE SEALOFF IN ACCORDANCE TO LOCAL AND NATIONAL CODES AND MEET LIFT MANUFACTURER'S REQUIREMENTS. PROVIDE REQUIRED SPACE BETWEEN SEALOFF AND FLOOR GRADE AS REQUIRED BY LIFT MANUFACTURER.
9 PROVIDE (4) 1"C. IN SLAB FROM CONTROL PANEL TO SERVICE LEG LOCATIONS PER LIFT MANUFACTURER'S REQUIREMENTS. ALL CONDUITS MUST USE SEALOFFS AND EXPLOSIONPROOF JUNCTION BOXES IN ACCORDANCE TO LOCAL AND NATIONAL CODES AND MEET LIFT MANUFACTURER'S REQUIREMENTS.
10 (2) 2" CONDUITS CONTINUED FROM LIFT CONTROLLER PANEL.
11 SEE DRAWING E-403 FOR CONTINUATION.



1 ELECTRICAL FIRST FLOOR POWER PLAN - ENLARGED BAY 5 TO 10
1/4" = 1'-0"

GRAPHIC SCALE (FEET)
1/4" = 1'-0"
0' 2' 4' 8' 12' 16' 20'

REV.	DATE	DESCRIPTION	SHEET NO.
		REVISIONS	

FILENAME:

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

DESIGNER/DRAFTER: CJE
CHECKED BY: RB
SCALE: 1/4" = 1'-0"

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ARCHITECT: WENDEL
ENGINEERS: ReSTL DESIGNERS, CLOUGH HARBOUR ASSOC., AI ENGINEERS, WENDEL
APPROVED BY: BPM
DATE: 06/11/2014

DESIGNED BY:
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STATE OF CONNECTICUT
BRIAN P. MCKENNA
No. 21640
LICENSED
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PROJECT TITLE:
WATERBURY BUS MAINTENANCE FACILITY REPLACEMENT

ADDRESS:
FROST BRIDGE ROAD
WATERTOWN, CONNECTICUT 06787

DRAWING TITLE:
ELECTRICAL ENLARGED PLAN - BAY 5 THRU 10

PROJECT NO. 431-0006
DRAWING NO. E-404
SHEET NO. 13.049

CODED NOTES (#)

1 MOUNT RECEPTACLE TO CEILING STRUCTURE FOR POWER TO CORD REELS.

2 MOUNT DISCONNECT TO CEILING STRUCTURE FOR POWER TO EXHAUST HOSE REELS.

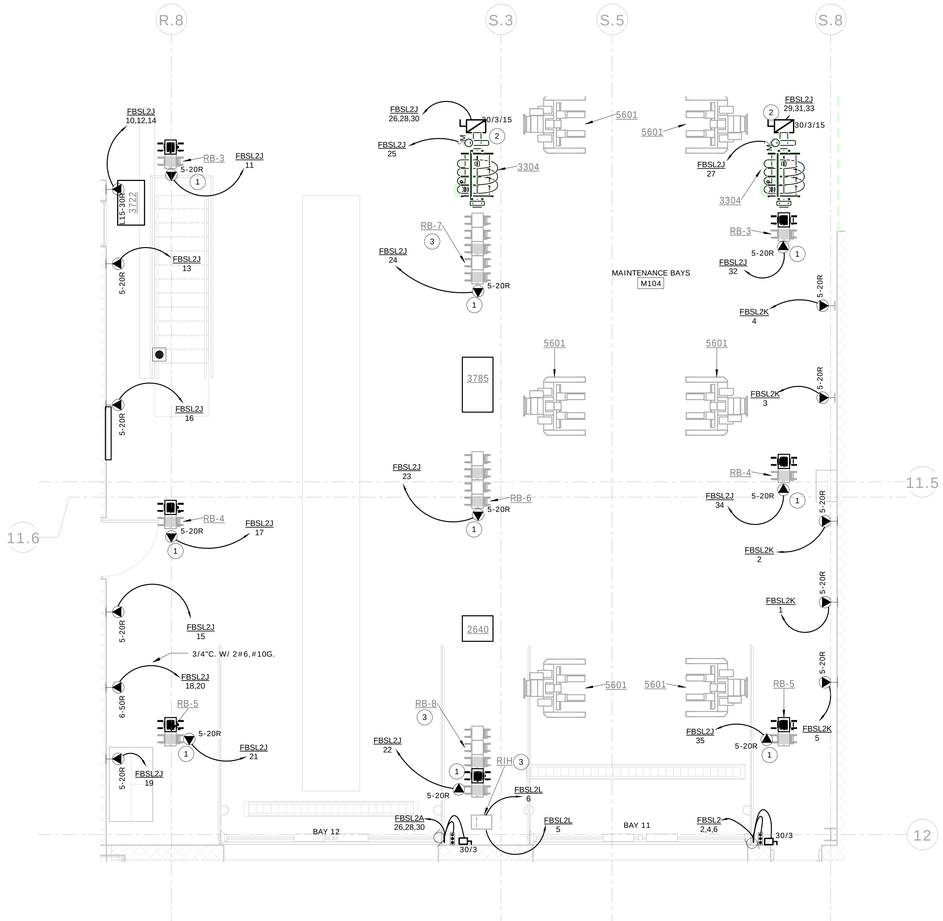
3 PROVIDE (2)120V, 20A CIRCUITS AND ONE DATA DROP FOR FLUID AND FUEL MANAGEMENT SYSTEM REMOTE ISLAND HEAD (RIH). REFER TO DETAIL 4 ON DWG E705 FOR 120V CONNECTIONS BETWEEN RIH AND ASSOCIATED CORD REEL BANK.

GENERAL NOTES

1. ALL RECEPTACLES TO BE MOUNTED AT 48" AFF IN ALL GARAGE AREAS INCLUDING PARKING GARAGE, BUS STORAGE, MAINTENANCE BAYS, CHASSIS WASH, AND SERVICE LANES.

2. DATA DROP FOR RIH HEADS SHALL TERMINATE AT FLUID MANAGEMENT SERVER LOCATED IN COMM RM M112C.

3. SEE ELECTRICAL EQUIPMENT SCHEDULES FOR CONDUIT AND WIRE SIZE UNLESS OTHERWISE NOTED.



1 ELECTRICAL FIRST FLOOR POWER PLAN - ENLARGED 11 & 12
1/4" = 1'-0"

GRAPHIC SCALE (FEET)
1/4" = 1'-0" 0' 2' 4' 8' 12' 16' 20'

REV.	DATE	DESCRIPTION	SHEET NO.
		REVISIONS	

FILENAME:

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DESIGNER/DRAFTER: CJE

CHECKED BY: RB

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

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ARCHITECT: WENDEL

ENGINEERS: ReSTL DESIGNERS, CLOUGH HARBOUR ASSOC., AI ENGINEERS, WENDEL

APPROVED BY: BPM

DATE: 06/11/2014

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STATE OF CONNECTICUT
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No. 21640
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PROJECT TITLE:
WATERBURY BUS MAINTENANCE FACILITY REPLACEMENT

ADDRESS:
FROST BRIDGE ROAD
WATERTOWN, CONNECTICUT 06787

DRAWING TITLE:
ELECTRICAL ENLARGED PLAN - BAY 11 & 12

PROJECT NO. **431-0006**

DRAWING NO. **E-405**

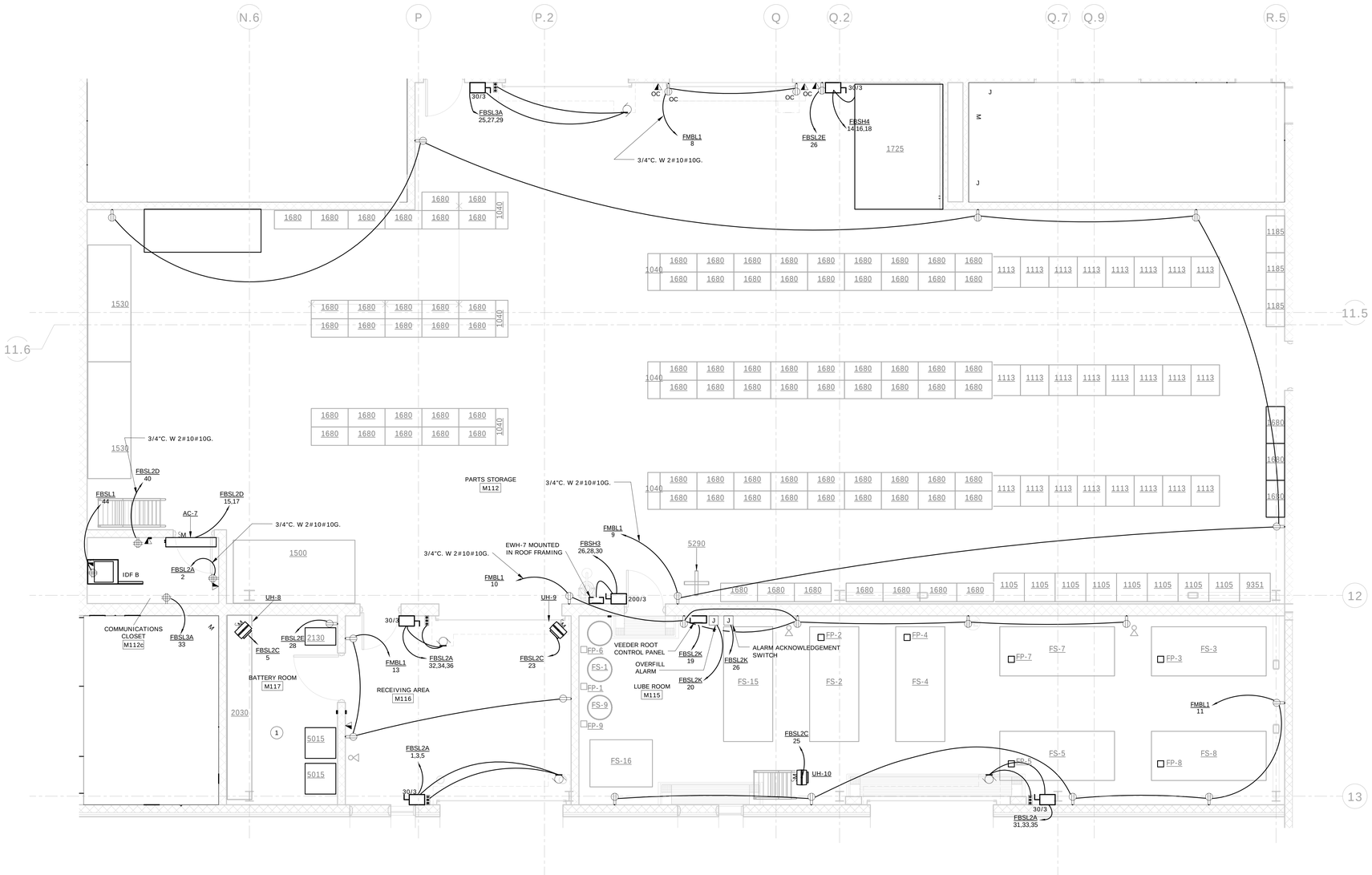
SHEET NO. **13.050**

CODED NOTES

1 CLASS H3 HAZARDOUS AREA. EVERYTHING IN THIS AREA MUST BE CLASSIFIED ACCORDINGLY.

GENERAL NOTES

1. ALL RECEPTACLES TO BE MOUNTED AT 48" AFF IN ALL GARAGE AREAS INCLUDING PARKING GARAGE, BUS STORAGE, MAINTENANCE BAYS, CHASSIS WASH, AND SERVICE LANES.
2. SEE ELECTRICAL EQUIPMENT SCHEDULES FOR CONDUIT AND WIRE WIRE SIZES UNLESS OTHERWISE NOTED.



1 ELECTRICAL FIRST FLOOR POWER PLAN - ENLARGED PARTS SHOP
1/4" = 1'-0"

GRAPHIC SCALE (FEET)
1/4" = 1'-0" 0' 2' 4' 8' 12' 16' 20'

REV.	DATE	DESCRIPTION	SHEET NO.
		REVISIONS	

FILENAME:

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DESIGNER/DRAFTER: CJE

CHECKED BY: RB

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

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ARCHITECT: WENDEL

ENGINEERS: ReSTL DESIGNERS, CLOUGH HARBOUR ASSOC., AI ENGINEERS, WENDEL

APPROVED BY: BPM

DATE: 06/11/2014

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STATE OF CONNECTICUT
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PROJECT TITLE:
WATERBURY BUS MAINTENANCE FACILITY REPLACEMENT

ADDRESS:
FROST BRIDGE ROAD
WATERTOWN, CONNECTICUT 06787

DRAWING TITLE:
ELECTRICAL ENLARGED PLAN - PARTS SHOP

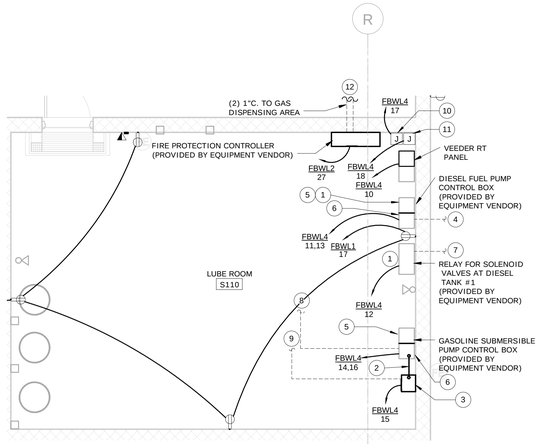
PROJECT NO. 431-0006

DRAWING NO. E-406

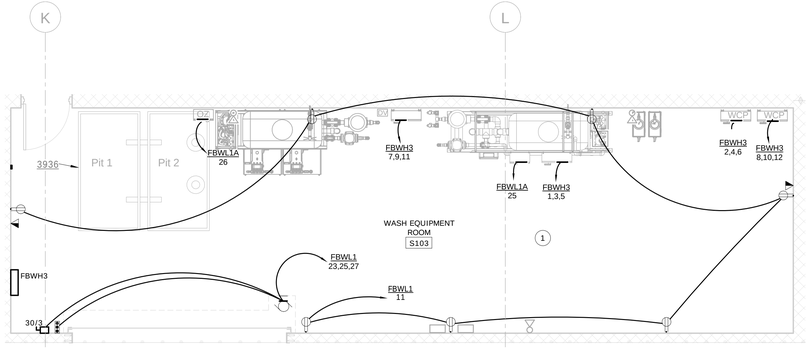
SHEET NO. 13.051

GENERAL NOTES

1. ALL RECEPTACLES TO BE MOUNTED AT 48" AFF IN ALL GARAGE AREAS INCLUDING PARKING GARAGE, BUS STORAGE, MAINTENANCE BAYS, CHASSIS WASH, AND SERVICE LANES.
2. SEE ELECTRICAL EQUIPMENT SCHEDULES FOR CONDUIT AND WIRE SIZES UNLESS OTHERWISE NOTED.



1 ELECTRICAL FIRST FLOOR POWER PLAN - ENLARGED LUBE RM
1/4" = 1'-0"



2 ELECTRICAL FIRST FLOOR POWER PLAN - ENLARGED WASH EQUIPMENT RM
1/4" = 1'-0"

CODED NOTES

1. SEE DETAIL 1 AND 2 ON DWGS E706 FOR INTERCONNECTION OF DEVICES FOR THE DIESEL DISPENSING SYSTEM.
2. PROVIDE 3/4"C. W/ 2#12,1#12G.
3. RELAY FOR SOLENOID VALVES AT GASOLINE TANKS. PROVIDED BY EQUIPMENT VENDOR.
4. PROVIDE 2"C. W/ 3#4,1#10G. TO SUBMERSIBLE PUMP AT EXTERIOR DIESEL TANK #1. SEE SITE PLAN FOR CONTINUATION.
5. SUBMERSIBLE PUMP DOUBLE HOOK ISOLATION BOX.
6. SUBMERSIBLE PUMP SMART CONTROLLER.
7. PROVIDE 2"C. W/ 2#10,1#10G. TO SOLENOID VALVE AT EXTERIOR DIESEL TANK #1. SEE SITE PLAN FOR CONTINUATION.
8. PROVIDE 2"C. W/ 3#10, 1#10G.TO SUBMERSIBLE PUMP AT EXTERIOR GAS TANK. SEE SITE PLAN FOR CONTINUATION.
9. PROVIDE 2"C. W/ 3#10, 1#10G.TO SUBMERSIBLE PUMP AT EXTERIOR GAS TANK. SEE SITE PLAN FOR CONTINUATION.
10. VEEDER ROOT PANEL OVERFILL ALARM. CIRCUIT TO PANEL FBWL4.
11. VEEDER ROOT ACKNOWLEDGEMENT SWITCH. CIRCUIT TO PANEL FBWL4.
12. SEE ELECTRICAL SITE PLAN E-002 FOR CONTINUATION.

CODED NOTES

1. POWER AND CONTROL WIRING FROM CONTROL PANELS (OZ,PCP,WCP) TO EQUIPMENT IN THIS ROOM BY EQUIPMENT MANUFACTURER.

GRAPHIC SCALE (FEET)
1/4" = 1'-0"
0' 2' 4' 8' 12' 16' 20'

REV.	DATE	DESCRIPTION	SHEET NO.
		REVISIONS	

FILENAME:

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DESIGNER/DRAFTER: CJE
CHECKED BY: RB
SCALE: 1/4" = 1'-0"

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ARCHITECT: WENDEL
APPROVED BY: BPM
ENGINEERS: ReSTL DESIGNERS, CLOUGH HARBOUR ASSOC., AI ENGINEERS, WENDEL
DATE: 06/11/2014

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STATE OF CONNECTICUT
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No. 21640
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PROJECT TITLE:
WATERBURY BUS MAINTENANCE FACILITY REPLACEMENT

ADDRESS:
FROST BRIDGE ROAD
WATERTOWN, CONNECTICUT 06787

DRAWING TITLE:
ELECTRICAL ENLARGED PLAN - LUBE AND WASH EQUIPMENT ROOM

PROJECT NO. 431-0006
DRAWING NO. E-407
SHEET NO. 13.052

CODED NOTES (#)

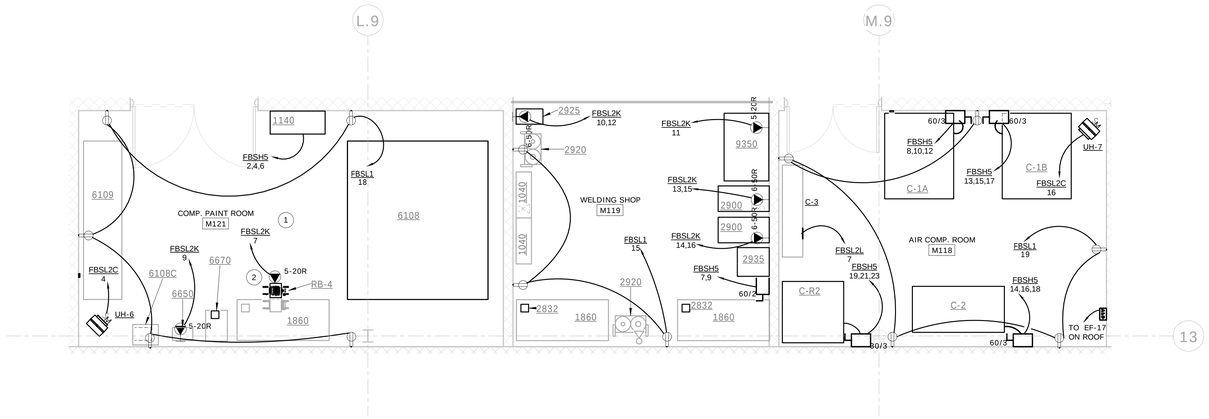
1 CLASS 1 OR CLASS 2, DIV 2 WITHIN 5 OR 10 FT OF OPEN SPRAY PAINT BOOTH.

2 MOUNT RECEPTACLE TO CEILING STRUCTURE FOR POWER TO CORD REELS.

GENERAL NOTES

1. ALL RECEPTACLES TO BE MOUNTED AT 48" AFF IN ALL GARAGE AREAS INCLUDING PARKING GARAGE, BUS STORAGE, MAINTENANCE BAYS, CHASSIS WASH, AND SERVICE LANES.

2. SEE ELECTRICAL EQUIPMENT SCHEDULES FOR CONDUIT AND WIRE SIZES UNLESS OTHERWISE INDICATED.



1 ELECTRICAL FIRST FLOOR POWER PLAN -ENLARGED PAINT, WELDING AND AIR COMPRESSOR RM
1/4" = 1'-0"

GRAPHIC SCALE (FEET)
1/4" = 1'-0" 0' 2' 4' 8' 12' 16' 20'

REV.	DATE	DESCRIPTION	SHEET NO.
		REVISIONS	

FILENAME:

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DESIGNER/DRAFTER: CJE

CHECKED BY: RB

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

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ARCHITECT: WENDEL

ENGINEERS: ReSTL DESIGNERS, CLOUGH HARBOUR ASSOC., AI ENGINEERS, WENDEL

APPROVED BY: BPM

DATE: 06/11/2014

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No. 21640
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PROJECT TITLE:
WATERBURY BUS MAINTENANCE FACILITY REPLACEMENT

ADDRESS:
FROST BRIDGE ROAD
WATERTOWN, CONNECTICUT 06787

DRAWING TITLE:
ELECTRICAL ENLARGED PLAN - PAINT RM, WELDING SHOP AND AIR COMP. ROOM

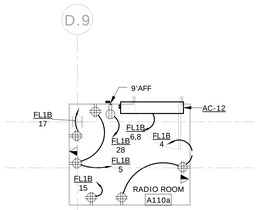
PROJECT NO. 431-0006

DRAWING NO. E-408

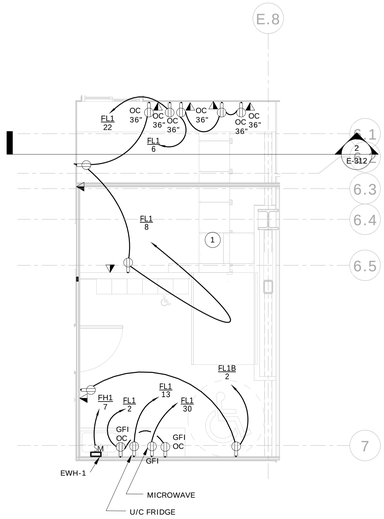
SHEET NO. 13.053

GENERAL NOTES

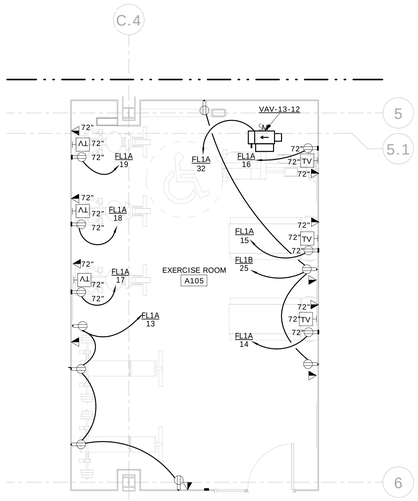
1. ALL RECEPTACLES TO BE MOUNTED AT 48" AFF IN ALL GARAGE AREAS INCLUDING PARKING GARAGE, BUS STORAGE, MAINTENANCE BAYS, CHASSIS WASH, AND SERVICE LANES.



1 ELECTRICAL FIRST FLOOR POWER PLAN - ENLARGED RADIO RM
1/4" = 1'-0"



2 ELECTRICAL FIRST FLOOR POWER PLAN - ENLARGED DISPATCH
1/4" = 1'-0"



3 ELECTRICAL FIRST FLOOR POWER PLAN - ENLARGED EXERCISE RM
1/4" = 1'-0"

CODED NOTES

1 GROUND RAISED FLOOR PER SPECIFICATION 260526.

GRAPHIC SCALE (FEET)
1/4" = 1'-0" 0' 2' 4' 8' 12' 16' 20'

REV.	DATE	DESCRIPTION	SHEET NO.
		REVISIONS	

FILENAME:

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DESIGNER/DRAFTER: CJE
CHECKED BY: RB
SCALE: 1/4" = 1'-0"

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ARCHITECT: WENDEL
APPROVED BY: BPM
ENGINEERS: ReSTL DESIGNERS, CLOUGH HARBOUR ASSOC., AI ENGINEERS, WENDEL
DATE: 06/11/2014

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06067-2336

STATE OF CONNECTICUT
BRIAN P. MCKEON
No. 21640
LICENSED
PROFESSIONAL ENGINEER

PROJECT TITLE:
WATERBURY BUS MAINTENANCE FACILITY REPLACEMENT

ADDRESS:
FROST BRIDGE ROAD
WATERTOWN, CONNECTICUT 06787

DRAWING TITLE:
ELECTRICAL ENLARGED PLAN - RADIO ROOM

PROJECT NO. 431-0006
DRAWING NO. E-409
SHEET NO. 13.054

LIGHT FIXTURE SCHEDULE

TAG	TYPE	DESCRIPTION	MOUNTING	LAMP(S)	VOLTS	MANUFACTURER & CATALOG NUMBER	COMMENTS	ALTERNATE 1 MANUFACTURERS & CATALOG NUMBERS	ALTERNATE 2 MANUFACTURERS & CATALOG NUMBERS
F1	FLUOR	2-LAMP INDUSTRIAL FIXTURE, SURFACE MOUNTED, LENSED AND GASKETED. CHAIN HUNG WHERE NEEDED.	SURFACE/ SUSPENDED	(2) 32W T8	MVOLT	LITHONIA LIGHTING DMW-2-32T8-MVOLT-GEB10PS-(EL14DW)-BCD-HC36	PROVIDE COLD START BALLAST WHERE REQUIRED. MADE IN THE USA. SEE NOTE #6	PHILIPS DAY-BRITE V2HWAE228-277-1/2-EB10R-TBK FKR-126 - CHAIN HANGER SET E7W - (EM BALLAST) LT - LOW TEMP BALLAST	COLUMBIA XEM4-228-RA-EPU-EL5H-CSHC-(BODINE B50)
F2	FLUOR	4-LAMP HIGH BAY FIXTURE, WIREGUARD. 95% REFLECTIVE. SUSPENDED. WIREGAURD. FIXTURE TO HAVE INTEGRAL OCCUPANCY SENSOR	SURFACE/ SUSPENDED	(4) 32W T8	MVOLT	LITHONIA LIGHTING FGB164-4-32WT8-N1-X20-NLWG-MVOLT-1/4-GEB10IS-LP835-WG-(EL14)-IBAC240M20-(nES PDT 7-nPP16)	PROVIDE COLD START BALLAST WHERE REQUIRED. MADE IN THE USA. SEE NOTE #6 AND 16	PHILIPS DAY-BRITE FBD432UNV-1/4-EBH-LPT841-TBNGUARD FBF/FBE-GRIPS - 5' CABLES & V-BRACKET-OCCUPANCY SENSOR E6LP - (E5ST)	COLUMBIA: LHA4-432-NST-4EU-EL5H-LHVQM20-LHVWG4-(EL141)OS2A
F3	FLUOR	6-LAMP HIGH BAY FIXTURE, WIREGUARD. 95% REFLECTIVE. SUSPENDED. WIREGAURD. EMERGENCY BATTERY PACK.	SURFACE/ SUSPENDED	(6) 32W T8	MVOLT	LITHONIA LIGHTING FGB164-6-32WT8-N1-X20-NLWG-MVOLT-2/3-GEB10IS-LP835-WG-(EL14)-IBAC240M20	PROVIDE COLD START BALLAST WHERE REQUIRED. MADE IN THE USA. SEE NOTE #6	PHILIPS DAY-BRITE FBD632UNV-2/3-EBH-LPT841-TBNGUARD FBF/FBE-GRIPS - 5' CABLES & V-BRACKET E6LP - (E5ST)	COLUMBIA: LHA4-632-NST-24EU-EL5H-LHVQM20-LHVWG4-(EL141)
F4	FLUOR	DECORATIVE PENDANT FIXTURE. 8.5"SQ x 40"H. WHITE LAMINATED GLASS.	CEILING PENDANT	(1)F38T5HO	277V	WINONA LIGHTING VIDRO 5620 5620-8-CSM-F39T5-277V-WLG-BAL-RMB-STD	MADE IN THE USA.	BETA-CALCO #NSCQUAD-45-1-OP-4X39T5HO-PC	BARBICAN: 10-40-ACB-OA/OA-BA-4X39T5
F5	FLUOR	CLASS 1 DIV 2 SURFACE MOUNTED	SURFACE	(2)32W T8	277V	PHOENIX LFSD SERIES LFSD-2-32-277-60HZ-EMB	MADE IN THE USA. SEE NOTE #6	PHILIPS DAY-BRITE HAZ-232-UNV-1/2-EB-(E5ST)	COLUMBIA: LDPI 384-T8-2L-4-277-(EL141)
F6	FLUOR	1x4 VAPOR TIGHT, IMPACT RESISTANT. HIGH PREFORMANCE SPECULAR REFLECTOR 95% REFLECTANCE. OCCUPANCY SENSOR FOR DAMP LOCATIONS AS NEEDED. DIMMING.	SURFACE	(2)32W T8	277V	LSI LIGHTING PGF-2-32-SSOD-OCS-HMB-277V-EGCHSMB UNIVERSAL BALLAST B332SR277S530	MADE IN THE USA. SEE NOTE #6	"LUMAX & PHILIPS LIGHTING CONTROLS VW23248-UNV-CO9-PR-DIM ADVANCE OCC SENSOR - LRM2250 w/UVPP"	COLUMBIA XEM4-232-DCA-EDU-M4R-OCC(UNIV B332SR277S530) -(EL141)
F7	FLUOR	1x4 VAPOR TIGHT, IMPACT RESISTANT. HIGH PREFORMANCE SPECULAR REFLECTOR 95% REFLECTANCE. OCCUPANCY SENSOR FOR DAMP LOCATIONS AS NEEDED. DIMMING.	SURFACE	(3)32W T8	277V	LSI LIGHTING PGF-3-32-SSOD-OCS-HMB-277V-EGCHSMB UNIVERSAL BALLAST B332SR277S530	MADE IN THE USA. SEE NOTE#6	"LUMAX & PHILIPS LIGHTING CONTROLS VW33248-UNV-CO9-PR-DIM ADVANCE OCC SENSOR - LRM2250 w/UVPP"	COLUMBIA XEM4-332-DCA-3EDU-M4R-OCC(UNIV B332SR277S530) -(EL141)
L1	LED	1X4 SUSPENDED FIXTURE. COLD ROLLED STEEL. LENS. DIMMABLE. . 60/40 DISTRIBUTION.	SUSPENDED	113W	MVOLT	PEERLESS BRUNO BRM9L-HI-SSH-4FT-277-EC -SCT-LP835-F1-15-C210-	SEE NOTE #6	"PINNACLE LIGHTING L6A100-35HO-4-AC48G1-277- 1E-W-DG"	METALUMEN RMEP8LED-35K-4-1-PC-M (EM AS REQUIRED)
L2	LED	WET LOCATION LISTED FIXTURE. FROSTED POLYCARBONATE HOUSING. WITH EMERGENCY BATTERY. ASYMMETRIC BEAM.	SURFACE/ SUSPENDED	114W	MVOLT	LITHONIA LIGHTING VAP-114LED-57-ASY-MVOLT-WLFEND2-(BSL722)	DLC COMPLIANT-EXACT FIXTURE ONLY. MADE IN THE USA. SEE NOTE #6	"LUMAX VWLED-87L-3K-48-9-FPR"	CERTOLUX CRV483832-LED850K103L UNV-B01-P70-V11-EM
L3	LED	WET LOCATION LISTED FIXTURE. FROSTED POLYCARBONATE HOUSING. WITH EMERGENCY BATTERY. ASYMMETRIC BEAM.	SURFACE/ SUSPENDED	39W	MVOLT	LITHONIA LIGHTING VAP-39LED-57-ASY-MVOLT-WLFEND2-(BSL722)	DLC COMPLIANT-EXACT FIXTURE ONLY. MADE IN THE USA. SEE NOTE #6	"LUMAX VWLED-87L-3K-48-9-FPR"	CERTOLUX CRV483823-LED850K44L UNV-B01-P70-V11-EM
L4	LED	LOW PROFILE SITE LIGHTING FIXTURE WITH TYPE 1 SHORT OPTICS. SINGLE HEAD. FINISH SELECTED BY ARCHITECT. PHOTOCELL 40K COLOR TEMP. SURGE PROTECTION.	POLE 25' AFG	138W MAX	MVOLT	LITHONIA LIGHTING DSX1 LED-40C-1000-40K-T1S-MVOLT -RPA-SF-PER-DLL-127F 1.5 JU-COLOR BY ARCHITECT. POLE #RSA-25-6G-*-FBC-USPOM-COLOR BY ARCHITECT * = FIELD VERIFY FIXTURE MOUNTING PRIOR TO ORDERING	DLC COMPLIANT. MADE IN THE USA. POLE COLOR TO MATCH FIXTURE COLOR SEE NOTE #5	"PHILIPS GARDCO & VALMONT P32-A1-1-2-140LA-NW-UNIV-F-PC / 1908-3050-5TP-D1"	BEACON - VIPER LARGE: VP-L-64NB-135-4K-T2-UNV-PCR-TL-RA-BBT POLE: UNITED LIGHTING STANDARDS: #RSA-6253
L5	LED	LOW PROFILE SITE LIGHTING FIXTURE WITH TYPE 1 SHORT OPTICS. DOUBLE HEAD. FINISH SELECTED BY ARCHITECT. PHOTOCELL. 40K COLOR TEMP. SURGE PROTECTION.	POLE 25' AFG	220W MAX	MVOLT	LITHONIA LIGHTING DSX1 LED-40C-1000-40K-T1S-MVOLT -RPA-SF-PER-DLL-127F 1.5 JU-COLOR BY ARCHITECT. POLE #RSA-25-6G-*-FBC-USPOM-COLOR BY ARCHITECT * = FIELD VERIFY FIXTURE MOUNTING PRIOR TO ORDERING	DLC COMPLIANT. MADE IN THE USA. POLE COLOR TO MATCH FIXTURE COLOR SEE NOTE #5	"PHILIPS GARDCO & VALMONT P32-A1-2-2-260LA-NW-UNIV -F-PC / 1908-3050-5TP-D2"	BEACON - VIPER LARGE: VP-L-96NB-220-4K-T2-UNV-PCR-TL-RA-BBT POLE: UNITED LIGHTING STANDARDS: #RSA-6253
L6	LED	LOW PROFILE SITE LIGHTING FIXTURE WITH TYPE 1 SHORT OPTICS. SINGLE HEAD/ HOUSE SIDE SHIELD. COLOR DETERMINED BY ARCHITECT. PHOTOCELL. 40K COLOR TEMP. SURGE PROTECTION.	POLE 25' AFG	209W MAX	MVOLT	LITHONIA LIGHTING DSX1 LED-60C-1000-40K-T1S-MVOLT -HS-RPA-SF-PER-DLL-127F 1.5 JU-COLOR BY ARCHITECT. POLE #RSA-25-6G-*-FBC-USPOM-COLOR BY ARCHITECT * = FIELD VERIFY FIXTURE MOUNTING PRIOR TO ORDERING	DLC COMPLIANT. MADE IN THE USA. POLE COLOR TO MATCH FIXTURE COLOR SEE NOTE #5	"PHILIPS GARDCO & VALMONT P32-A1-1-2-140LA-NW-UNIV-F-PC-EHHS / 1908-3050-5TP-D1"	BEACON - VIPER LARGE: VP-L-96NB-220-4K-T2-UNV-PCR-TL-RA-BBT POLE: UNITED LIGHTING STANDARDS: #RSA-6253
L7	LED	7.5"SQ DOWN LIGHT. EXTERIOR MOUNTED. SYMMETRICAL. DIECAST ALUMINUM FACEPLATE. ETCHED SAFETY GLASS, INTERNAL CROSS BAFFLE.	CEILING RECESSED	17.4W	277V	BEGA 6935LED	PROVIDE MADE IN USA LABEL	"PHILIPS COLOR KINETICS 523-000010-01 / 523-000009-11 / 523-000011-02"	WILA 661-569-SSA60-80-277-TCDS-WL
L8	LED	SURFACE MOUNT LIGHT CHANNEL RGB. LINK FIXTURE END TO END.ALUMINUM EXTRUSTION. REMOTE RGB 400W POWER SUPPLY WITH DMX DRIVER. TOUCH SCREEN CONTROLLER.	SURFACE	2.6W/FT	24VDC	EDGE LIGHTING LCSM-24V-XXX-RGB-SA- LC-MCL-075-CTP-FLEXIBLE CONNECTOR LC-CFX-LENGTH AS NEEDED POWER SUPPLY- PSB-400W-24VDC-RGB	XXX=FIXTURE LENGTH NOTED ON DWGS. MADE IN THE USA. PROVIDE WITH ALL REQUIRED CONNECTORS, AND MOUNTING HARDWARE	"PHILIPS COLOR KINETICS 123-000079-36 / 108-000055-03 / 106-000004-00 / 109-000018-00"	TRAXON 1PXL COVE LIGHT XR RGB WITH LIGHT DRIVE RGB CONTROLLER. PROVIDE ALL CONNECTORS, DATA INJECTORS AND EXTRACTORS AS NEEDED.
L9	LED	4" RECESSED SLOT LIGHT. DIMMABLE. EXTRUDED ALUMINUM TRIM. STEEL BACKBOX HOUSING. POWDER COAT TEXTURE FINISH. 35K COLOR. ARMSTRONG TECHZONE CEILING. REMOTE TEST SWITCH.	CEILING RECESSED	7.10W/FT 500LM PER FOOT	UNV	PINNACLE LIGHTING ETA4-35-*-TECHZONE-UNV-1D-W-(1B) * = REFER TO FLOOR PLANS FOR EXACT FIXTURE LENGTH	MADE IN THE USA. SEE NOTE #6		SELUX LR4TZ-1L35-35-LW-SH-4-FINISH -277-(EM2)
L10	LED	6" X 4' WALL GRAZER. ADJUSTABLE. STEEL HOUSING. 35K COLOR TEMP.	RECESSED	8W/FT 500LM PER FOOT	277	LITECONTROL WS-L60-*-MO-35K-CWM-G- NDM-277-LCD, * = REFER TO FLOOR PLANS FOR EXACT LENGTH	MADE IN THE USA.	"PINNACLE LIGHTING EV3WG-35K-4-GX-UNV-W"	PRUDENTIAL BIO-PSTD-FLSH-LED35HO-LENGTH-SAL-TMW-D1G-SC-UNV
L11	LED	LINEAR DIRECT PENDANT. DIMMABLE. DIE FORMED AND WELDED STEEL. REFLECTOR. STEEL WITH HIGH REFLECTANCE WHITE FINISH. LENS, EXTRUDED FROSTED ACRYLIC SOFT GLOW LENS.	SUSPENDED	7.25W/FT	277V	LITECONTROL P-D-L44-04-SGL-MO-CWM-NG M-1CWQ-277-FAI/ACC	MADE IN THE USA.	PINNACLE LIGHTING EX4-A-N-35HO-4'-AC48G1-UNV-IC-W	DAYOLITE PTP44L-DP-35K-4400L-4-AC-W-U
L12	LED	6" SQUARE DOWNLIGHT. SELF-FLANGED SEMI SPECULAR, MATTE-DIFFUSE LOWER REFLECTOR. GALVANIZED STEEL CONSTRUCTION. TOOLESS ADJUSTMENT. COLOR TEMP 35K.	RECESSED	33.6W	277V	GOTHAM LIGHTING EVO-SQ-35-22-6WR-277-SF-(EL)	MADE IN THE USA. SEE NOTE #6	"PHILIPS LIGHTOLIER C6X6L1520DL35KCCLW / C6X6L20N2"	WILA 661 7 6 SSA60 80 277
L13	LED	EXTERIOR SHARP CUTOFF FIXTURE WITH EMERGENCY BATTERY PACK. 40K COLOR TEMP. FINISH SELECTED BY ARCHITECT. PHOTOCELL.	WALL MOUNTED	24W	277V	LITHONIA LIGHTING WSQ LED-1-700MA-SR3-MVOLT-PE-ELCW	DLC COMPLIANT. MADE IN THE USA.	"BARRON TRACE-LITE TLED111-DT-BB-PC1"	HUBBEL QSP-20LU-5K-2-050-DB--PC(X)

LIGHT FIXTURE SCHEDULE

TAG	TYPE	DESCRIPTION	MOUNTING	LAMP(S)	VOLTS	MANUFACTURER & CATALOG NUMBER	COMMENTS	ALTERNATE 1 MANUFACTURERS & CATALOG NUMBERS	ALTERNATE 2 MANUFACTURERS & CATALOG NUMBERS
L14	LED	1X4 LENSED FIXTURE. STEEL ASSEMBLY. ACRYLIC REFRACTOR WITH POLYMER LIGHT-DIFFUSING FILM. DRYWALL ADAPTOR WHERE NEEDED.	SURFACE /RECESSED	41W	MVOLT	LITHONIA LIGHTING RTL4-40L-D41-LP835-(EL14L)-DGA14	DLC COMPLIANT. MADE IN THE USA. SEE NOTE #6	"PHILIPS DAY-BRITE 1STF35K8354DSUNV"	COLUMBIA LEPC14-40HLG-LL-EDU-EL141-FK14
L15	LED	EXTERIOR RECESSED WALL WITH STEP BAFFLE. DIE CAST ALUMINUM FACEPLATE CLEAR TEMPERED GLASS DIFFUSER. ASYMMETRICAL REFLECTOR. -30DEGREE START. 5-7/8"x5-7/8"x4-1/8". 30K COLOR TEMP.	RECESSED	6.5W	277V	BEGA 2248LED	PROVIDE MADE IN USA LABEL	"FC LIGHTING FCSL500-120V-LED-3K1000"	BETA CALCO 820 8712
L16	LED	EFFICIENT-TEC INTERNATIONAL LLC. ZARIA STYLE. ALUMINUM FINISH. 42" HANDRAIL.	HAND RAIL	4.4W PER LF	120/ 277V	EFFICIENT-TEC - ZARIA, FIELD DETERMINE EXACT LENGHTS REQUIRED PRIOR TO ORDERING	LENGTH NOTED ON DWGS. ARE NOMINAL AND ARE TO BE FIELD VERIFIED PRIOR TO ORDERING.		BEACON HAND RAIL
L17	LED	LIGHT COLUMN BOLLARD. 6" DIA. STAINLESS STEEL WITH SATIN FINISH. ACRYLIC LENS. KENTE SHIELD. COLOR TEMP 40K.	BOLLARD	(4)L10T8 10W T8 LINEAR LED	277V	FORMS+SURFACES LBLCO-604-SATIN-180 SHIELD WITH KENTE-(4X) L10 T8-SURFACE MOUNT	MADE IN THE USA.	"QUATTRO LIGHTING MER940/24-L3-GAO-36/LEDL-DT2/X"	PRISMA 075846
L18	LED	ROUND FLAG POLE LIGHT. FLUSH MOUNTED INGROUND LIGHT. AIMABLE. 30K COLOR TEMP. ARCHITECT TO SELECT FINISH COLOR.	INGROUND	18W LED 3000K	MVOLT	HYDREL LIGHTING M9710-A-18LED-WHT30K-MVOLT-SP-FLC20-12S-LP	MADE IN THE USA.	"PHILIPS HADCO I12-SS-NF-W"	KIM LTV81EB SP 18L 4K UV
L19	LED	BUILDING MOUNT LIGHTING FIXTURE WITH TYPE FORWARD THROW OPTICS. FINISH SELECTED BY ARCHITECT. PHOTOCELL. 30K COLOR TEMP.	SURFACE	109W	MVOLT	LITHONIA LIGHTING DSXW2 LED-30C-1000-30K-TFMT-MVOLT-PE-SF	DLC COMPLIANT. MADE IN THE USA.	"BARRON TRACE-LITE TLED110-32-DT-BB-PC1"	SPAULDING CL1-A-60LU-3K-5M-DB-WB- F(X)-PR(X) UNLS POLE
L20	LED	LOW PROFILE SITE LIGHTING FIXTURE WITH TYPE 3M OPTICS. SINGLE HEAD. FINISH SELECTED BY ARCHITECT. PHOTOCELL 40K COLOR TEMP. SURGE PROTECTION.	POLE 25' AFG	138W MAX	MVOLT	LITHONIA LIGHTING DSX1 LED-40C-1000-40K-T3M-MVOLT-RPA-SF-PER-DLL-127F 1.5 JU-COLOR BY ARCHITECT. POLE #RSA-25-6G-*-FBC-USPOM-COLOR BY ARCHITECT * = FIELD VERIFY FIXTURE MOUNTING PRIOR TO ORDERING	DLC COMPLIANT. MADE IN THE USA. POLE COLOR TO MATCH FIXTURE COLOR SEE NOTE #5	"PHILIPS GARDCO & VALMONT P32-A1-1-3-140LA-NW-UNIV-F-PC / 1908-3050-5TP-D1"	BEACON - VIPER LARGE: VP-L-64NB-135-4K-T2-UNV-PCR-TL-RA-BBT POLE: UNITED LIGHTING STANDARDS: #RSA-6253
L21	LED	LOW PROFILE SITE LIGHTING FIXTURE WITH FORWARD THROW OPTICS. SINGLE HEAD. FINISH SELECTED BY ARCHITECT. PHOTOCELL 40K COLOR TEMP. SURGE PROTECTION.	POLE 25' AFG	138W MAX	MVOLT	LITHONIA LIGHTING DSX1 LED-40C-1000-40K-TFTM-MVOLT RPA-SF-PER-DLL-127F 1.5 JU-COLOR BY ARCHITECT. POLE #RSA-25-6G-*-FBC-CUSTOM-COLOR BY ARCHITECT * = FIELD VERIFY FIXTURE MOUNTING PRIOR TO ORDERING	DLC COMPLIANT. MADE IN THE USA. POLE COLOR TO MATCH FIXTURE COLOR SEE NOTE #5	"PHILIPS GARDCO & VALMONT P32-A1-1-4-140LA-NW-UNIV-F-PC / 1908-3050-5TP-D1"	BEACON - VIPER LARGE: VP-L-64NB-135-4K-T2-UNV-PCR-TL-RA-BBT POLE: UNITED LIGHTING STANDARDS: #RSA-6253
L22	LED	CLASS 1 DIV 1 FIXTURE. SWING ARM. ROTATABLE HEAD. CORROSION RESISTANT, CAST ALUMINUM.	SURFACE	39W	277V	PHOENIX DLXLED-FL	MADE IN THE USA.		
L23	LED	25" SQUARE LED FIXTURE WITH A MICROPRISMATIC COVER. ADJUSTABLE CABLE SUSPENSION. NON-DIMMING. 90 MIN. EMERGENCY BATTERY PACK. 35K COLOR TEMP.	SUSPENDED	36W	277V	XAL N677-745-0250-7171-P-70	MADE IN THE USA.	ZUMTOBEL LFSLED-22-40W-K35-MP-DV-SKW070-EM	LITHONIA LIGHTING 2TLX233LRWA19D38 LP835EL14L
X1	LED	UNIVERSAL SURFACE MOUNTING EXIT SIGN . GREEN LETTERS. 90 MINUTE BATTERY BACKUP AND SELF DIAGNOSTICS	SURFACE	1.2W	277V	LITHONIA LIGHTING LQC-W-1-G-ELN-SD	MADE IN THE USA. PENDANT MOUNT IN BUS STORAGE. MOUNTING HIGHTS VARIED.	"BARRON EXITRONICS 402-WB-WW"	EMERGILITE PRECEPTOR DIE CAST ALUM EXIT SIGN SINGLE FACE
X1	LED	DOUBLE FACE UNIVERSAL SURFACE MOUNTING EXIT SIGN . GREEN LETTERS. 90 MINUTE BATTERY BACKUP ND SELF DIAGNOSTICS	SURFACE	1.2W	277V	LITHONIA LIGHTING LQC-W-2-G-ELN-SD	MADE IN THE USA. PENDANT MOUNT IN BUS STORAGE. MOUNTING HIGHTS VARIED.	"BARRON EXITRONICS 402-WB-WW"	EMERGILITE PRECEPTOR DIE CAST ALUM EXIT SIGN DOUBLE FACE
EM	LED	EMERGENCY WALL PACK. 2LED HEADS. COMPACT LOW PROFILE. IMPACT RESISTANT HOUSING. SCRATCH/CORROSION PROOF. MAINTENANCE FREE, SELF DIAGNOSTICS, 90 MINUTE BATTERY BACKUP.	SURFACE	(2)1.5W	277V	LITHONIA LIGHTING ELM2-LED-SD	MADE IN THE USA.	"BARRON EXITRONICS LED90-G2"	DUAL LITE EV2I SELF DIAGNOSTIC
EM1	INCAN	EMERGENCY BATTERY LIGHTING UNIT WITH NEMA 4X ENCLOSURE PENDANT AND OR WALL MOUNTED MAINTENANCE FREE, SELF DIAGNOSTICS, 90 MINUTE BATTERY BACKUP.	PENDANT AND OR WALL	(2)-50W PAR 36	277/24	LITHONIA: #INDX24100-W-N5024S-PREM-SEL-ELAINDXCM2-ELA-IND-PM	MADE IN THE USA.	PHILIPS CHLORIDE: RN-4-1-H-PO-2-IC-ICIR-NUMK	DUAL LITE N4X14-12V

NOTES:

1. FIXTURES MADE IN THE USA.
2. ARCHITECT TO SELECT FINISH WHERE NOTED.
3. FOR FIXTURE TYPES L4, L5, L6, L20 & L21 FIXTURE SHALL BE 25' AFG CUSTOM CUT POLE AS REQUIRED.
4. PHOTOCELL BUTTONS TO MATCH FIXTURE COLOR.
5. LED INTERIOR COLOR TEMP TO BE 35K. EXTERIOR TO BE 40K.
6. PROVIDE EMERGENCY BATTERY BALLAST/DRIVER IN ALL HALF SHADED FIXTURES. FOR FIXTURES UTILIZING T8 32W FLUORESCENT LAMPS PROVIDE EMERGENCY BATTERY BALLAST WITH A MINIMUM LUMEN OUTPUT RATING OF 1100 LUMENS.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING CEILING TYPES IN EACH SPACE AND FOR PROVIDING THE PROPER FIXTURE TRIMS TO SUIT CEILING TYPE.
8. ALL SUSPENDED FIXTURES TO BE HUNG FROM STRUCTURE. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL ADDITIONAL SUPPORTS STEMS, THREADED ROD, STEEL CHANNELS AND RELATED EQUIPMENT TO PROPERLY SUPPORT SUSPENDED FIXTURES.
9. ALL LIGHT FIXTURES TO BE INSTALLED IN SUSPENDED CEILINGS SHALL BE HUNG FROM STRUCTURE WITH APPROPRIATE SUSPENSION SYSTEM AND FIXTURE LOCK CLIPS TO CEILING GRID PER NEC ART. 416.
10. PRIOR TO ORDERING ANY FIXTURE CONTRACTOR SHALL VERIFY COLOR AND FINISH OF ALL LIGHT FIXTURES SPECIFIED COLOR BY ARCHITECT OR CUSTOM COLOR WITH ARCHITECT.
11. ALL FLUORESCENT LAMPS TO HAVE A MINIMUM CRI OF 85. ALL T8 LAMPS TO BE HIGH PERFORMANCE TYPE. ALL FLUORESCENT LAMPS TO HAVE A 5 YEAR MINIMUM WARRANTY.
12. ALL BALLAST TO HAVE A MINIMUM 3 YEAR WARRANTY. ALL T8 FLUORESCENT BALLAST TO BE RATED HIGH PERFORMANCE AND SHALL HAVE A MINIMUM BALLAST FACTOR RATING OF 0.87.
13. FOR EXACT LOCATIONS OF LIGHT FIXTURES REFER TO ARCHITECTURAL REFLECTED CEILING PLANS.
14. ALL LIGHT FIXTURES PROVIDED WITH EMERGENCY BATTERY BALLAST/DRIVERS SHALL HAVE EMERGENCY BATTERY BALLAST/DRIVER WIRED AHEAD OF ALL SWITCHES.
15. ALL EMERGENCY BATTERY LIGHTING UNITS TO BE WIRED AHEAD OF ALL SWITCHES.
16. WHERE INDICATED ON LIGHTING PLANS PROVIDE FIXTURE WITH EMBEDDED OCCUPANCY SENSOR AND DAYLIGHT HARVESTING PHOTOCELL SIMILAR TO SENSOR SWITCH #nES PDT 7 - nPP16

REV.	DATE	DESCRIPTION	SHEET NO.
		REVISIONS	

FILENAME:

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

DESIGNER/DRAFTER: CJE

CHECKED BY: RB

SCALE: NOT TO SCALE

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ARCHITECT: WENDEL

APPROVED BY: BPM

ENGINEERS: ReSTL DESIGNERS, CLOUGH HARBOUR ASSOC., AI ENGINEERS, WENDEL

DATE: 06/11/2014

DESIGNED BY:
CLOUGH HARBOUR & ASSOCIATES
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STATE OF CONNECTICUT — BRIAN P. MACKENZIE — No. 21640 — LICENSED PROFESSIONAL ENGINEER

PROJECT TITLE:
WATERBURY BUS MAINTENANCE FACILITY REPLACEMENT

ADDRESS:
FROST BRIDGE ROAD
WATERTOWN, CONNECTICUT 06787

DRAWING TITLE:
ELECTRICAL LIGHTING FIXTURE SCHEDULE

PROJECT NO. 431-0006

DRAWING NO. E-501

SHEET NO. 13.055

MAINTENANCE EQUIPMENT LIST

ROOM	QTY	ID#	DESCRIPTION	208V/1P OR 208V/3P OR 120V/1P	480V/1P OR 480V/3P OR 277V/1P	AMPS	KVA	RECEPTACLE	DISCONNECT (FUSED WITH FUSE SIZE OR NON FUSED)	DISCONNECT SWITCH RATING	CIRCUIT BREAKER	DEDICATED CIRCUIT	WIRE SIZE	
		1725(A)	AUTOMATED CABINET , MATERIAL STORAGE (VERTICAL LIFT REMSTART SHUTTLE XP-700)		480V/3P	14.20		-	30A NON-FUSED		20A/3P	YES	3/4"C, (3)#10, (1)#10G	-
		1725(B)	DEDICATED COMPUTER	120V/1P		4.00		NEMA 5-20R	-		20A/1P	YES	3/4"C, (2)#12, (1)#12G	-
		2080	8" BUFFER/GRINDER- WITH INTEGRAL DUCT COLLECTION SYSTEM (CINCINNATI TOOL 602-134 BUFFER GRINDER)		480V/3P	1.60		-	30A FUSED (XXA FUSES)		15A/3P	YES	3/4"C, (3)#12, (1)#12G	3/4HP RATED MOTOR W/ INTEGRAL TOGGLE SWITCH
		2130	BATTERY CHARGER WITH/ PLUG AND CORD	120V/1P		12.50		NEMA 5-20R	-		20A/1P	YES	3/4"C, (2)#10, (1)#10G	-
		2210	LASER DRILL PRESS 18"	120V/1P		13.80		NEMA 5-20R	-		20A/1P	YES	3/4"C, (2)#10, (1)#10G	INTEGRAL PUSH-BUTTON, 3/4HP
		2270	960-SE PATROIT ABRASIVE BLASTING CABINET	120V/1P		7.00		NEMA 5-20R	-		20A/1P	YES	3/4"C, (2)#12, (1)#12G	AIR OPERATED - POWER FOR OPTIONAL LIGHTS
		2450	COATS H.I.T. 5000 TRUCK TIRE CHANGER	208V/1P		16.90		-	30A FUSED (20A FUSES)		25A/2P	YES	3/4"C, (2)#10, (1)#10G	HARDWIRED, LOCATE SAFETY SWITCH AT UNIT
		2535	H80-14MD7.5 ELECTRIC HYDRAULIC PRESS		480V/3P	11.00		-	30A FUSED (15A FUSES)		20A/3P	YES	3/4"C, (3)#12, (1)#12G	7-1/2HP, LOCATE SAFETY SWITCH AT UNIT, OPERATING MEANS NOT KNOWN
		2640	REFRIGERANT RECLAMATION SYSTEM	120V/1P		15.00		NEMA 5-20R	-		20A/1P	YES	3/4"C, (2)#10, (1)#10G	(4) ASSEMBLIES, 1HP COMPRESSOR, PLUG AND CORD UNIT
		2674	PORTABLE BRAKE LATHE	208V/1P		9.00		NEMA L6-20R	-		20A/2P	YES	3/4"C, (2)#12, (1)#12G	1.5HP, PLUG AND CORD UNIT
		2675	BUS BRAKE LATHE - 53-DS TRANSFERMATIC BRAKE DURM LATHE		480V/3P	4.80			30A FUSED (XXA FUSES)		15A/3P	YES	3/4"C, (3)#12, (1)#12G	INTEGRAL PUSH-BUTTON, 3HP MOTOR
		2680	9" X 20" BELT DRIVEN LATHE	120V/1P		13.80		NEMA 5-20R	-		20A/1P	YES	3/4"C, (2)#10, (1)#10G	INTEGRAL CONTROLS, 3/4HP
		2685	PARATRANSIT DRUM & DISC BRAKE LATHE	120V/1P		12.50		NEMA 5-20R	-		15A/1P	YES	3/4"C, (2)#10, (1)#10G	1HP
		2690	58-BW PORTABLE/CONVERTIBLE BANDSAW	120V/1P		7.20		NEMA 5-20R	-		20A/1P	YES	3/4"C, (2)#12, (1)#12G	INTEGRAL CONTROLS, 1/2HP
		2713	KM14, 14" ABRASIVE MITRE SAW	120/1		15.00		NEMA 5-20R		20.00		YES	3/4"C, (2)#10, (1)#10G	
		2900	MILLER 252 MIG ARCH WELDER	208V/1P		48.00		NEMA 6-50R	-		50A/2P	YES	1"C, (2)#6, (1)#10G	(2) ASSEMBLIES, INTEGRAL CONTROLS, 208V, 1PHASE, 48A
		2901(A)	MIG WELDER A (EXISTING SUPPLIED BY OWNER) - NEED INFO	208V/1P		76.00			100A NON-FUSED		100A/2P	YES	1-1/2"C, (2)#2, (1)#8G	
		2901(B)	MIG WELDER B (EXISTING SUPPLIED BY OWNER) - NEED INFO	208V/1P		44.00		NEMA 6-50R			50A/2P	YES	1"C, (2)#6, (1)#10G	
		2901©	MIG WELDER C (EXISTING SUPPLIED BY OWNER) - NEED INFO	208V/1P		48.00		NEMA 6-50R			50A/2P	YES	1"C, (2)#6, (1)#10G	
		2925	MILLER 875/875 AIR PLASMA CUTTER	208V/1P		47.00		NEMA 6-50R	-		50A/2P	YES	1"C, (2)#6, (1)#10G	INTEGRAL CONTROLS, COORDINATE EXACT RECEPTACLE CONFIG. WITH MANUFACTURER SUPPLIED PLUG
		2935	MILLER SYNCROWAVE TIG WELDER 250DX COMPLETE		480V/1P	48.00			60A NON-FUSED		60A/2P	YES	1"C, (2)#6, (1)#10G	INTEGRAL CONTROLS, UNIT DOES NOT COME WITH PLUG AND CORD, ELECTRICAL CONTRACTOR TO PROVIDE SOOW 6/3 CORD AND MELTRIC DSN60 PLUG & RECEPTACLE SYSTEM
		3304(A)	EXHAUST HOSE REEL 865 - ELECTRIC DRIVE UNIT	120V/1P		3.00			$M		20A/1P	YES	3/4"C, (2)#12, (1)#12G	(17) ASSEMBLIES, REMOTE CONTROL
		3304(B)	EXHAUST HOSE REEL 865 - 1.5HP FAN	208V/3P					30A FUSED (XXA FUSES)			YES		1.5HP FAN , HARDWIRED CONNECTION
		3357	WALK-BEHIND SCRUBBER 5700XP	120V/1P		12.50		NEMA 5-20R			20A/1P	YES	3/4"C, (2)#10, (1)#10G	BATTERY OPERATED (REC FOR CHARGER/SNOW BLOWER)
		3560	GENESIS G-3000 PARTS CLEANER			31.00		-	60A NON-FUSED	NEMA 4X - STAINLESS STEEL	50A/3P	YES	1"C, (3)#6, (1)#10G	INTEGRAL CONTROLS, 5HP (CHANGED TO 480V) 18KW HEAT
S106	4	3624	DYNABRADE 61300 VACUUM SYSTEM	120V/1P		10.80		NEMA 5-20R			20A/1P	YES	3/4"C, (2)#12, (1)#12G	(4) ASSEMBLIES, 120V, 1300W
		3720	HOTSY HOT-WATER PRESSURE WASHER 5735SS		480V/3P	27.00		-	60A NON-FUSED	NEMA 4X - STAINLESS STEEL	50A/3P	YES	1"C, (3)#6, (1)#10G	INTEGRAL CONTROLS, 20HP (CHANGED TO 480V), GFCI PROTECTION
		3722	HOTSY COLD-WATER PRESSURE WASHER 1700 SERIES	208V/3P		16.00		NEMA L15-30R			30A/3P	YES	3/4"C, (3)#10, (1)#10G	6HP (CUSTOM ORDERED WITH NEMA L15-30P)
		3785	DYNA-BRUTE FB SMALL PARTS WASHER	120V/1P		1.00		NEMA 5-20R			20A/1P	YES	3/4"C, (2)#12, (1)#12G	(5) ASSEMBLIES, 1.0A SUMBERSIBLE PUMP
S106	1	3901(A)	MAIN CONTROL PANEL BRUSH WASH		480V/3P	30.00			30A NON-FUSED	NEMA 4X - STAINLESS STEEL	30A/3P	YES	3/4"C, (3)#10, (1)#10G	BRUSH WASH SYSTEM (LANE 1)
	1	3901(B)	PUMP CONTROL PANEL		480V/3P	60.00			60A NON-FUSED	NEMA 4X - STAINLESS STEEL	60A/3P	YES	1-1/2"C, (3)#2, (1)#8G	BRUSH WASH SYSTEM (LANE 1)
	1	3901(C)	OZONE GENERATOR	120V/1P		15.00			30A NON-FUSED	NEMA 4X - STAINLESS STEEL	20A/1P	YES	3/4"C, (2)#12, (1)#12G	BRUSH WASH SYSTEM (LANE 1)
	1	3902(A)	MAIN CONTROL PANEL BRUSH WASH		480V/3P	20.00			30A NON-FUSED	NEMA 4X - STAINLESS STEEL	20A/3P	YES	3/4"C, (3)#10, (1)#10G	BRUSH WASH 545 (LANE 2)
	1	3902(B)	PUMP CONTROL PANEL		480V/3P	150.00			200A NON-FUSED	NEMA 4X - STAINLESS STEEL	150A/3P	YES	1-1/2"C, (3)#1/0, (1)#6G	BRUSH WASH 545 (LANE 2)
	1	3902(C)	OZONE GENERATOR	120V/1P		15.00			30A NON-FUSED	NEMA 4X - STAINLESS STEEL	15A/1P	YES	3/4"C, (2)#12, (1)#12G	BRUSH WASH 545 (LANE 3)
S106	1	3936	ROSS WATER RECYCLING SYSTEM		480V/3P	40.00			60A NON-FUSED	NEMA 4X - STAINLESS STEEL	40A/3P	YES	3/4"C, (3)#8, (1)#10G	REFER TO ROSS WATER RECLAMATION SYSTEM DRAWINGS FOR COMPLETE ELECTRICAL WIRING DIAGRAM DOWNSTREM OF CONTROL PANEL
		4912	COATS TRUCK WHEEL BALANCER 6401	208V/3P		12.50		NEMA L15-20R			20A/3P	YES	3/4"C, (3)#10, (1)#10G	APPROVED RECEPTACLE BY MANUFACTURER TO BE PROVIDED BY ELECTRICAL CONTRACTOR : HUBBELL 2420 OR BRYANT 71520
		4913	COATS TRUCK WHEEL BALANCER 1000	208V/3P		12.50		NEMA L15-20R			20A/3P	YES	3/4"C, (3)#10, (1)#10G	
	3	5362	EC2008 1-TON CHAIN HOIST	208V/3P		2.00	0.50	30A MON-FUSED			20A/3P	YES	3/4"C, (3)#12, (1)#12G	1/2HP, 280V
		5600	MACH-4 MOBILE COLUMN LIFT	120V/1P		12.00		NEMA 5-20R			20A/1P	YES	3/4"C, (2)#10, (1)#10G	(4) ASSEMBLIES, CHARGER CIRCUIT
		5601	MACH-4 MOBILE COLUMN LIFT	120V/1P		12.00		NEMA 5-20R			20A/1P	YES	3/4"C, (2)#10, (1)#10G	(4) ASSEMBLIES, CHARGER CIRCUIT
	5	5650	LIFT AXLE ADJUSTABLE, 2 POST		480V/3P	7.60			30A FUSED		20A/3P	YES	3/4"C, (3)#10, (1)#10G	(5) ASSEMBLIES, 5HP
	5	5651	LIFT	120V/1P		12.00			$M		20A/1P	YES	3/4"C, (2)#10, (1)#10G	(5) ASSEMBLIES
	1	5703	LIFT DRIVE ON PARALLELOGRAM		480V/3P	27.00			60A NON-FUSED		50A/3P	YES	1"C, (3)#6, (1)#10G	
	1	5703W	LIFT DRIVE ON PARALLELOGRAM WET	120V/1P		5.00			$M		15A/1P	YES	3/4"C, (2)#12, (1)#12G	
	2	5704	LIFT DRIVE ON PARATRANSIT		480V/3P	27.00			60A FUSED		50A/3P	YES	1"C, (3)#6, (1)#10G	20HP
	2	5704W	LIFT DRIVE ON PARATRANSIT WET	120V/1P		12.00			$M		20A/1P	YES	3/4"C, (2)#10, (1)#10G	
	1	5705	ALIGNMENT MACHINE	120V/1P		5.00		NEMA 5-20R	$M		20A/1P	YES	3/4"C, (2)#12, (1)#12G	
	1	5706	ALIGNMENT CONTROLLER	120V/1P		5.00		NEMA 5-20R			20A/1P	YES	3/4"C, (2)#12, (1)#12G	
		6108C	EXPRESS PAINT BOOTH CONTROLLER		480V/3P						150A/3P	YES	1-1/2"C, (3)#1/0, (1)#6G	3HP, (3) LIGHTS, EXHAUST FAN
		6670	MIDWEST MIXING PAINT SHAKER MODEL 6	120V/1P		7.20		NEMA 5-20R			20A/1P	YES	3/4"C, (2)#12, (1)#12G	1/3HP
S106	3	7820	DATA COLLECTION FACE BOX	120V/1P		12.50		NEMA 5-20R			20A/1P	YES	3/4"C, (2)#12, (1)#12G	(3) ASSEMBLIES, INFARRED DATA PROBE
		8121	TIRE CAROSEL T452000-0944-12 32" TIRES	208/3		6.00	15ACB		30A NON-FUSED		15A/3P	YES	1"C, (3)#6, (1)#10G	(2) 1.5HP
		8122	TIRE CAROSEL HT54193-0663-12 44" TIRES	208/3		7.80			30A NON-FUSED		15A/3P	YES	3/4"C, (3)#10, (1)#10G	(2) 2HP
S106	2	8701	REEL BANK	120V/1P		12.50		NEMA 5-20R			20A/1P	YES	3/4"C, (2)#10, (1)#10G	(2) ASSEMBLIES
		8702	REEL BANK	120V/1P		12.50		NEMA 5-20R			20A/1P	YES	3/4"C, (2)#10, (1)#10G	(12) ASSEMBLIES
S106	2	8703	REEL BANK	120V/1P		12.50		NEMA 5-20R			20A/1P	YES	3/4"C, (2)#10, (1)#10G	(6) ASSEMBLIES
		8710	REEL BANK	120V/1P		12.50		NEMA 5-20R			20A/1P	YES	3/4"C, (2)#10, (1)#10G	(7) ASSEMBLIES
		8720	REEL BANK	120V/1P		12.50		NEMA 5-20R			20A/1P	YES	3/4"C, (2)#10, (1)#10G	(8) ASSEMBLIES
		8740	REEL BANK	120V/1P		12.50		NEMA 5-20R			20A/1P	YES	3/4"C, (2)#10, (1)#10G	(4) ASSEMBLIES
S106	2	8750	REEL BANK	120V/1P		12.50		NEMA 5-20R			20A/1P	YES	3/4"C, (2)#10, (1)#10G	(7) ASSEMBLIES
		8948	OIL EVACUATION KIT			0.00								AIR POWERED
		8949	COOLANT EVACUATION KIT			0.00								AIR POWERED
		9350	MOBILE ELECTROSTATIC FILTER EMK	120V/1P		16.00		NEMA 5-20R			40A/1P	YES	3/4"C, (2)#10, (1)#12G	1HP @ 115V
M118		C1A	SHOP COMPRESSOR		480V/3P	40.00			60A NON-FUSED		60A/3P	YES	1-1/2"C, (3)#4, (1)#10G	30HP
M118		C1B	SHOP COMPRESSOR		480V/3P	40.00			60A NON-FUSED		60A/3P	YES	1-1/2"C, (3)#4, (1)#10G	30HP
M118		CR2	BREATHING AIR		480V/3P	14.00			30A NON-FUSED		30A/3P	YES	1"C, (3)#10, (1)#10G	10HP
M118		C2	PAINT BOOTH		480V/3P	40.00			60A NON-FUSED		60A/3P	YES	1-1/2"C, (3)#4, (1)#10G	30HP
M118		C3	BREATHING AIR PURIFIER		120V/1P	12.00					20A/1P	YES	1"C, (2)#10, (1)#10G	
			KONE ECOSPACE 3500 LB FRONT DOOR ELEVATOR		480V/3P	12.00			DISCONNECT SWITCH		20A/3P	YES	3/4"C, (3)#10, (1)#10G	
									WITH 20A SHUNT-TRIP CB					
			KONE ECOSPACE 3500 LB ELEVATOR WITH		480V/3P	12.00			DISCONNECT SWITCH		20A/3P	YES	3/4"C, (3)#12, (1)#12G	
									WITH 20A SHUNT-TRIP CB					

REV.	DATE	DESCRIPTION	SHEET NO.
		REVISIONS	

FILENAME:

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

DESIGNER/DRAFTER: CJE

CHECKED BY: RB

SCALE: NOT TO SCALE

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ARCHITECT: WENDEL

APPROVED BY: BPM

ENGINEERS: ReSTL DESIGNERS, CLOUGH HARBOUR ASSOC., AI ENGINEERS, WENDEL

DATE: 06/11/2014

DESIGNED BY:
CLOUGH HARBOUR & ASSOCIATES
2139 SILAS DEANE HIGHWAY
SUITE 212
ROCKY HILL, CT
06067-2336

STATE OF CONNECTICUT
BRIAN P. McKENNA
No. 21640
LICENSED
PROFESSIONAL ENGINEER

PROJECT TITLE:
WATERBURY BUS MAINTENANCE FACILITY REPLACEMENT

ADDRESS:
FROST BRIDGE ROAD
WATERTOWN, CONNECTICUT 06787

DRAWING TITLE:
ELECTRICAL EQUIPMENT SCHEDULE

PROJECT NO. **431-0006**

DRAWING NO. **E-502**

SHEET NO. **13.056**

PLUMBING SCHEDULE

Room	Qty	ID#	480V/1P or 480V/3P or 277V/1P	208V/1P or 208V/3P or 120V/1P	Amps	kVA	HP	Circuit Breaker	Dedicated Circuit	WIRE SIZE
GND	1	SP-1 Submersible Water Pump		120/1	9.80	1.18	0.50	20A/1P	Yes	3/4"C, (2)#12, (1)#12G
GND	1	SP-2 Submersible Water Pump		120/1	9.80	1.18	0.50	20A/1P	Yes	3/4"C, (2)#12, (1)#12G
GND	1	LIFT STATION 1	480/3		7.60		5.00	20/3	Yes	3/4"C, (3)#10, (1)#10G
GDN	1	LIFT STATION 2	480/3		7.60		5.00	20/3	Yes	3/4"C, (3)#10, (1)#10G
GND	1	LIFT STATION 3	480/3		7.60		5.00	20/3	Yes	3/4"C, (3)#10, (1)#10G
GND	1	AC-3	480/3		7.60		5.00	20/3	Yes	3/4"C, (3)#12, (1)#12G
GND	1	AC-4	480/3		7.60		5.00	20/3	Yes	3/4"C, (3)#12, (1)#12G
GND	1	HEAT TRACE PANEL 1	480/3		78.00			150/3	Yes	2"C, (4)#1/0, (1)#6G
GND	1	HEAT TRACE PANEL 2	480/3		72.00			150/3	Yes	2"C, (4)#1/0, (1)#6G
1st fl.	1	EWH-3 Electric Water Heater	480/3		24.00	20.00		30/3	Yes	3/4"C, (4)#10,(1)#10G
1st fl.	1	EWH-3 Electric Water Heater	480/3		24.00	20.00		30/3	Yes	3/4"C, (4)#10,(1)#10G
1st fl.	1	EWH-1 Electric Water Heater		208/1	40.00	8.30		50/2	Yes	1"C, (3)#6, (1)#10G
1st fl.	1	EWH-4 Electric Water Heater		208/1	32.00	4.90		30A	Yes	3/4"C, (3)#10, (1)#10G
1st fl.	1	EWH-2 Electric Water Heater		208/1	7.10	34.00		50/2	Yes	1"C, (3)#6, (1)#10G
1st fl.	1	EWH-2 Electric Water Heater		208/1	7.10	34.00		50/2	Yes	1"C, (3)#6, (1)#10G
1st fl.	1	EWH-7 Electric Water Heater	480/3		96.00	79.00		125/3	Yes	1-1/2"C, (4)#1, (1)#6G
1st fl.	1	EWH-6 Electric Water Heater	480/3		29.00	24.00		40/3	Yes	1"C, (4)#8, (1)#10G
1st fl.	1	EWH-6 Electric Water Heater	480/3		29.00	24.00		40/3	Yes	1"C, (4)#8, (1)#10G
1st fl.	1	EWH-1 Electric Water Heater		208/1	40.00	8.30		50/2	Yes	1"C, (3)#6, (1)#10G
1st fl.	1	EWH-2 Electric Water Heater		208/1	7.10	34.00		50/2	Yes	1"C, (3)#6, (1)#10G
1st fl.	1	EWH-2 Electric Water Heater		208/1	7.10	34.00		50/2	Yes	1"C, (3)#6, (1)#10G
1st fl.	1	EWH-3 Electric Water Heater	480/3		24.00	20.00		30/3	Yes	3/4"C, (4)#10,(1)#10G
1st fl.	1	EWH-3 Electric Water Heater	480/3		24.00	20.00		30/3	Yes	3/4"C, (4)#10,(1)#10G
1st fl.	1	EWH-8 Electric Water Heater		120/1	12.00	1.40		20/1	Yes	3/4"C, (2)#12, (1)#12G
1st fl.	1	EWH-8 Electric Water Heater		120/1	12.00	1.40		20/1	Yes	3/4"C, (2)#12, (1)#12G
1st fl.	1	EWH-7 Electric Water Heater	480/3		98.00	79.00		125A/3P	Yes	2"C, (3)#1, (1)#6G
1st fl.	1	EWH-4 Electric Water Heater		208/1	32.00	4.90		30A	Yes	3/4"C, (3)#10, (1)#10G
1st fl.	1	EWH-7 Electric Water Heater	480/3		98.00	79.00		125A/3P	Yes	2"C, (3)#1, (1)#6G
1st fl.	1	EWH-7 Electric Water Heater	480/3		98.00	79.00		125A/3P	Yes	2"C, (3)#1, (1)#6G
1st fl.	1	AC-1	480/3		7.60		5.00	20/3	Yes	3/4"C, (3)#10, (1)#10G
1st fl.	1	AC-2	480/3		7.60		5.00	20/3	Yes	3/4"C, (3)#10, (1)#10G
2nd fl.	1	EWH-1 Electric Water Heater		208/1	40.00	8.30		50A/2P	Yes	1"C, (3)#6, (1)#10G
2nd fl.	1	EWH-2 Electric Water Heater		208/1	7.10	34.00		50/2	Yes	1"C, (3)#6, (1)#10G
2nd fl.	1	EWH-2 Electric Water Heater		208/1	7.10	34.00		50/2	Yes	1"C, (3)#6, (1)#10G
2nd fl.	1	EWH-3 Electric Water Heater	480/3		24.00	20.00		30/3	Yes	3/4"C, (4)#10,(1)#10G
2nd fl.	1	EWH-3 Electric Water Heater	480/3		24.00	20.00		30/3	Yes	3/4"C, (4)#10,(1)#10G
2nd fl.	1	EWH-4 Electric Water Heater		208/1	32.00	4.90		30A	Yes	3/4"C, (3)#10, (1)#10G
2nd fl.	1	EWH-6 Electric Water Heater	480/3		29.00	24.00		40/3	Yes	1"C, (4)#8, (1)#10G

FUEL DISPENSING SYSTEM

ROOM	QTY	ID#	DESCRIPTION	208V/1P OR 208V/3P OR 120V/1P	480V/1P OR 480V/3P OR 277V/1P	AMPS	KVA	CIRCUIT BREAKER	DEDICATED CIRCUIT	WIRE SIZE	REMARKS
S110	1		SUBMERSIBLE PUMP SMART CONTROLLER FOR DIESEL PUMP #1	208/1		11.00	1.5 HP	20A/2P	YES	3/4"C, (2)#12, (1)#12G	PROVIDE EMERGENCY SHUT-OFF SWITCH; PROVIDE SHUNT TRIP CIRCUIT BREAKER;
S110	1	RELAY	120V CIRCUIT FOR CONTROLS	120V/1				20A/1P	YES	3/4"C, (2)#12, (1)#12G	
M107	1		SUBMERSIBLE PUMP SMART CONTROLLER FOR DIESEL PUMP #2	208/1		11.00	1.5 HP	20A/2P	YES	3/4"C, (2)#12, (1)#12G	PROVIDE EMERGENCY SHUT-OFF SWITCH; PROVIDE SHUNT TRIP CIRCUIT BREAKER;
M107	1	RELAY	120V CIRCUIT FOR CONTROLS	120V/1				20A/1P	YES	3/4"C, (2)#12, (1)#12G	
S110	1		SUBMERSIBLE PUMP SMART CONTROLLER FOR GASOLINE PUMP #3	208/1		4.00	1/3 HP	20A/2P	YES	3/4"C, (2)#12, (1)#12G	PROVIDE EMERGENCY SHUT-OFF SWITCH; PROVIDE SHUNT TRIP CIRCUIT BREAKER;
S110	1	RELAY	120V CIRCUIT FOR CONTROLS	120V/1				20A/1P	YES	3/4"C, (2)#12, (1)#12G	
S111	3		DIESEL DISPENSER	120/1				20A/1P	YES	3/4"C, (2)#10, (1)#10G	
S111	2		DIESEL FUEL METER	120/1				20A/1P	YES	3/4"C, (2)#10, (1)#10G	
EXT	2		GASOLINE DISPENSER	120/1				20A/1P	YES	1"C, (2)#10, (1)#10G	EXTERIOR AT GAS CANOPY
S110	1		VEEDER ROOT CONTROL PANEL	120/1				20A/1P	YES	3/4"C, (2)#12, (1)#12G	
S110	1		OVERFILL ALARM	120/1				20A/1P	YES	3/4"C, (2)#12, (1)#12G	
S110	1		ACKNOWLEDGEMENT SWITCH	120/1				20A/1P	YES	3/4"C, (2)#12, (1)#12G	
EXT	2		VEEDER ROOT ALARMS	120/1				20A/1P	YES	2"C, (2)#8, (1)#8G	EXTERIOR AT DIESEL TANKS
S111	2		DIESEL FUEL MANAGEMENT CONTROLLER REMOTE ISLAND HEAD (RIH)	120/1				20A/1P	YES	3/4"C, (2)#12, (1)#12G	POWER FOR RIH ELECTRONICS
S111	2		DIESEL FUEL MANAGEMENT CONTROLLER REMOTE ISLAND HEAD (RIH)	120/1				20A/1P	YES	3/4"C, (2)#12, (1)#12G	POWER FOR RIH SOLENOID VALVES
EXT	1		GASOLINE FUEL MANAGEMENT CONTROLLER REMOTE ISLAND HEAD (RIH)	120/1		1.00		20A/1P	YES	1"C, (2)#8, (1)#8G	POWER FOR RIH ELECTRONICS AT EXTERIOR GAS CANOPY
S110	1		FIRE PROTECTION CONTROLLER	120V/1		1.00		20A/1P	YES	3/4"C, (2)#12, (1)#12G	
EXT	1		VEEDER ROOT ALARMS	120/1		1.00		20A/1P	YES	2"C, (2)#10, (1)#10G	EXTERIOR AT GAS CANOPY

AC'S AND ACCU UNITS

AREA	ID#	DESCRIPTION	480V/1P OR 480V/3P OR 277V/1P	208V/1P OR 208V/3P OR 120V/1P	AMPS	KVA	HP	DISCONNECT (FUSED WITH FUSE SIZE OR NON FUSED)	CIRCUIT BREAKER	DEDICATED CIRCUIT	WIRE SIZE	REMARKS
1F	AC-1			208/1	0.48	0.10		MANUAL MOTOR STARTER FRACTIONAL HORSEPOWER	15A/2P	YES	3/4"C, (2)#12, (1)#12G	
1D	AC-2			208/1	0.48	0.10		MANUAL MOTOR STARTER FRACTIONAL HORSEPOWER	15A/2P	YES	3/4"C, (2)#12, (1)#12G	
1D	AC-3			208/1	0.48	0.10		MANUAL MOTOR STARTER FRACTIONAL HORSEPOWER	15A/2P	YES	3/4"C, (2)#12, (1)#12G	
2G	AC-4			208/1		0.10		MANUAL MOTOR STARTER FRACTIONAL HORSEPOWER	15A/2P	YES	3/4"C, (2)#12, (1)#12G	
2G	AC-5			208/1	0.48	0.10		MANUAL MOTOR STARTER FRACTIONAL HORSEPOWER	15A/2P	YES	3/4"C, (2)#12, (1)#12G	
1E	AC-6			208/1	0.48	0.10		MANUAL MOTOR STARTER FRACTIONAL HORSEPOWER	15A/2P	YES	3/4"C, (2)#12, (1)#12G	
1E	AC-7			208/1	0.48	0.10		MANUAL MOTOR STARTER FRACTIONAL HORSEPOWER	15A/2P	YES	3/4"C, (2)#12, (1)#12G	
1D	AC-8			208/1	0.48	0.10		MANUAL MOTOR STARTER FRACTIONAL HORSEPOWER	15A/2P	YES	3/4"C, (2)#12, (1)#12G	
1D	AC-9			208/1	0.48	0.10		MANUAL MOTOR STARTER FRACTIONAL HORSEPOWER	15A/2P	YES	3/4"C, (2)#12, (1)#12G	
1B	AC-10			208/1	0.55	0.12		MANUAL MOTOR STARTER FRACTIONAL HORSEPOWER	15A/2P	YES	3/4"C, (2)#12, (1)#12G	
1B	AC-11			208/1	0.48	0.10		MANUAL MOTOR STARTER FRACTIONAL HORSEPOWER	15A/2P	YES	3/4"C, (2)#12, (1)#12G	
1D	AC-12			208/1	0.48	0.10		MANUAL MOTOR STARTER FRACTIONAL HORSEPOWER	15A/2P	YES	3/4"C, (2)#12, (1)#12G	
1E	AC-13			208/1	0.48	0.10		MANUAL MOTOR STARTER FRACTIONAL HORSEPOWER	15A/2P	YES	3/4"C, (2)#12, (1)#12G	
1E	AC-14			208/1	0.48	0.10		MANUAL MOTOR STARTER FRACTIONAL HORSEPOWER	15A/2P	YES	3/4"C, (2)#12, (1)#12G	
GUARD BOOTH	AC-15			208/1	0.48	0.10		MANUAL MOTOR STARTER FRACTIONAL HORSEPOWER	15A/2P	YES	3/4"C, (2)#12, (1)#12G	
ROOF	ACCU-1			208/1	16.80	3.50		DISCONNECT (1) N.O HOLDING CONTACT (1)N.O./N.C. AUXILIARY CONTACT	25A/2P	YES	3/4"C, (2)#10, (1)#10G	
ROOF	ACCU-2			208/1	16.80	3.50		DISCONNECT (1) N.O HOLDING CONTACT (1)N.O./N.C. AUXILIARY CONTACT	25A/2P	YES	3/4"C, (2)#10, (1)#10G	
ROOF	ACCU-3			208/1	16.80	3.50		DISCONNECT (1) N.O HOLDING CONTACT (1)N.O./N.C. AUXILIARY CONTACT	25A/2P	YES	3/4"C, (2)#10, (1)#10G	
ROOF	ACCU-4			208/1	16.80	3.50		DISCONNECT (1) N.O HOLDING CONTACT (1)N.O./N.C. AUXILIARY CONTACT	25A/2P	YES	3/4"C, (2)#10, (1)#10G	
ROOF	ACCU-5			208/1	16.80	3.50		DISCONNECT (1) N.O HOLDING CONTACT (1)N.O./N.C. AUXILIARY CONTACT	25A/2P	YES	3/4"C, (2)#10, (1)#10G	
ROOF	ACCU-6			208/1	16.80	3.50		DISCONNECT (1) N.O HOLDING CONTACT (1)N.O./N.C. AUXILIARY CONTACT	25A/2P	YES	3/4"C, (2)#10, (1)#10G	
ROOF	ACCU-7			208/1	16.80	3.50		DISCONNECT (1) N.O HOLDING CONTACT (1)N.O./N.C. AUXILIARY CONTACT	25A/2P	YES	3/4"C, (2)#10, (1)#10G	
ROOF	ACCU-8			208/1	16.80	3.50		DISCONNECT (1) N.O HOLDING CONTACT (1)N.O./N.C. AUXILIARY CONTACT	25A/2P	YES	3/4"C, (2)#10, (1)#10G	
ROOF	ACCU-9			208/1	16.80	3.50		DISCONNECT (1) N.O HOLDING CONTACT (1)N.O./N.C. AUXILIARY CONTACT	25A/2P	YES	3/4"C, (2)#10, (1)#10G	
ROOF	ACCU-10			208/1	23.80	5.00		DISCONNECT (1) N.O HOLDING CONTACT (1)N.O./N.C. AUXILIARY CONTACT	40A/2P	YES	3/4"C, (2)#12, (1)#12G	
ROOF	ACCU-11			208/1	16.80	3.50		DISCONNECT (1) N.O HOLDING CONTACT (1)N.O./N.C. AUXILIARY CONTACT	25A/2P	YES	3/4"C, (2)#10, (1)#10G	
ROOF	ACCU-12			208/1	16.80	3.50		DISCONNECT (1) N.O HOLDING CONTACT (1)N.O./N.C. AUXILIARY CONTACT	25A/2P	YES	3/4"C, (2)#10, (1)#10G	
ROOF	ACCU-13			208/1	16.80	3.50		DISCONNECT (1) N.O HOLDING CONTACT (1)N.O./N.C. AUXILIARY CONTACT	25A/2P	YES	3/4"C, (2)#10, (1)#10G	
ROOF	ACCU-14			208/1	16.80	3.50		DISCONNECT (1) N.O HOLDING CONTACT (1)N.O./N.C. AUXILIARY CONTACT	25A/2P	YES	3/4"C, (2)#10, (1)#10G	
GUARD BOOTH	ACCU-15			208/1	19.00	3.60		DISCONNECT (1) N.O HOLDING CONTACT (1)N.O./N.C. AUXILIARY CONTACT	30A/2P	YES	3/4"C, (2)#10, (1)#10G	
ROOF	ACCU-16			208/1	26.00	5.40		DISCONNECT (1) N.O HOLDING CONTACT (1)N.O./N.C. AUXILIARY CONTACT	45A/2P	YES	3/4"C, (2)#6, (1)#10G	
ROOF	ACHP-1			208/1	17.00	3.60		DISCONNECT (1) N.O HOLDING CONTACT (1)N.O./N.C. AUXILIARY CONTACT	30A/2P	YES	3/4"C, (2)#10, (1)#10G	
ROOF	ACHP-2			208/1	17.00	3.60		DISCONNECT (1) N.O HOLDING CONTACT (1)N.O./N.C. AUXILIARY CONTACT	30A/2P	YES	3/4"C, (2)#10, (1)#10G	
ROOF	ACHP-3			208/1	17.00	3.60		DISCONNECT (1) N.O HOLDING CONTACT (1)N.O./N.C. AUXILIARY CONTACT	30A/2P	YES	3/4"C, (2)#10, (1)#10G	

REV.	DATE	DESCRIPTION	SHEET NO.
		REVISIONS	

FILENAME:

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

DESIGNER/DRAFTER: CJE

CHECKED BY: RB

SCALE: NOT TO SCALE

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ARCHITECT: WENDEL

ENGINEERS: ReSTL DESIGNERS, CLOUGH HARBOUR ASSOC., AI ENGINEERS, WENDEL

APPROVED BY: BPM

DATE: 06/11/2014

DESIGNED BY:
CLOUGH HARBOUR & ASSOCIATES
2139 SILAS DEANE HIGHWAY
SUITE 212
ROCKY HILL, CT
06067-2336

STATE OF CONNECTICUT
BRIAN P. McKENNA
No. 21640
LICENSED
PROFESSIONAL ENGINEER

PROJECT TITLE:
WATERBURY BUS MAINTENANCE FACILITY REPLACEMENT

ADDRESS:
FROST BRIDGE ROAD
WATERTOWN, CONNECTICUT 06787

DRAWING TITLE:
ELECTRICAL EQUIPMENT SCHEDULE

PROJECT NO. **431-0006**

DRAWING NO. **E-503**

SHEET NO. **13.057**

BOILER AND BOILER PUMPS

AREA	ID#	480V/1P OR 480V/3P OR 277V/1P	AMPS	KVA	HP	DISCONNECT (FUSED WITH FUSE SIZE OR NON FUSED)	CIRCUIT BREAKER	DEDICATED CIRCUIT	WIRE SIZE
1E	BOILER B-1	480/3	12.00	10.00		COMBINATION MOTOR STARTER DISCONNECT (1) N.O HOLDING CONTACT (1)N.O./N.C. AUXILIARY CONTACT	20A/3P	YES	3/4"C, (3)#12, (1)#12G
1E	BOILER B-2	480/3	12.00	10.00		COMBINATION MOTOR STARTER DISCONNECT (1) N.O HOLDING CONTACT (1)N.O./N.C. AUXILIARY CONTACT	20A/3P	YES	3/4"C, (3)#12, (1)#12G
1E	BOILER B-3	480/3	12.00	10.00		COMBINATION MOTOR STARTER DISCONNECT (1) N.O HOLDING CONTACT (1)N.O./N.C. AUXILIARY CONTACT	20A/3P	YES	3/4"C, (3)#12, (1)#12G
1E	BOILER B-4	480/3	12.00	10.00		COMBINATION MOTOR STARTER DISCONNECT (1) N.O HOLDING CONTACT (1)N.O./N.C. AUXILIARY CONTACT	20A/3P	YES	3/4"C, (3)#12, (1)#12G
1E	BOILER PUMP BP-1	480/3	4.80	4.00	3.00	COMBINATION MOTOR STARTER DISCONNECT (1) N.O HOLDING CONTACT (1)N.O./N.C. AUXILIARY CONTACT	15A/3P	YES	3/4"C, (3)#12, (1)#12G
1E	BOILER PUMP BP-2	480/3	4.80	4.00	3.00	COMBINATION MOTOR STARTER DISCONNECT (1) N.O HOLDING CONTACT (1)N.O./N.C. AUXILIARY CONTACT	15A/3P	YES	3/4"C, (3)#12, (1)#12G
1E	BOILER PUMP BP-3	480/3	4.80	4.00	3.00	COMBINATION MOTOR STARTER DISCONNECT (1) N.O HOLDING CONTACT (1)N.O./N.C. AUXILIARY CONTACT	15A/3P	YES	3/4"C, (3)#12, (1)#12G
1E	BOILER PUMP BP-4	480/3	4.80	4.00	3.00	COMBINATION MOTOR STARTER DISCONNECT (1) N.O HOLDING CONTACT (1)N.O./N.C. AUXILIARY CONTACT	15A/3P	YES	3/4"C, (3)#12, (1)#12G
1E	MAIN PUMP P-1	480/3	34.00	28.30	30.00	VFD	80A/3P	YES	1-1/4"C, (3)#4, (1)#8G
1E	MAIN PUMP P-2	480/3	34.00	28.30	30.00	VFD	80A/3P	YES	1-1/4"C, (3)#4, (1)#8G

FC'S AND HP UNITS

AREA	ID#	480V/1P OR 480V/3P OR 277V/1P	AMPS	KVA	HP	DISCONNECT (FUSED WITH FUSE SIZE OR NON FUSED)	CIRCUIT BREAKER	DEDICATED CIRCUIT	WIRE SIZE
GND	FC-1	480/3	2.10	1300VA	1.00	COMBINATION MOTOR STARTER DISCONNECT (1) N.O HOLDING CONTACT (1)N.O./N.C. AUXILIARY CONTACT	15A/3P	YES	3/4"C, (3)#12, (1)#12G
1B	HPC-1	208/1	0.48	100VA		MANUAL STARTER FRACTIONAL HP (1)N.O./N.C. CONTACTS	30A/2P	YES	3/4"C, (2)#10, (1)#10G
1C	HPC-2	208/1	0.48	100VA		MANUAL STARTER FRACTIONAL HP (1)N.O./N.C. CONTACTS	30A/2P	YES	3/4"C, (2)#10, (1)#10G
1E	HPC-3	208/1	0.48	100VA		MANUAL STARTER FRACTIONAL HP (1)N.O./N.C. CONTACTS	30A/2P	YES	3/4"C, (2)#10, (1)#10G
1F	HPC-4	208/1	0.48	100VA		MANUAL STARTER FRACTIONAL HP (1)N.O./N.C. CONTACTS	30A/2P	YES	3/4"C, (2)#10, (1)#10G
GUARD BOOTH	HPC-5	208/1	0.48	100VA		MANUAL STARTER FRACTIONAL HP (1)N.O./N.C. CONTACTS	30A/2P	YES	3/4"C, (2)#10, (1)#10G

OVERHEAD DOOR HEATER

AREA	ID#	480V/1P OR 480V/3P OR 277V/1P	AMPS	KVA	HP	DISCONNECT (FUSED WITH FUSE SIZE OR NON FUSED)	CIRCUIT BREAKER	DEDICATED CIRCUIT	WIRE SIZE
1A	ODH-1	480/3	3.00	2.50	1.50	COMBINATION MOTOR STARTER DISCONNECT (1) N.O HOLDING CONTACT (1)N.O./N.C. AUXILIARY CONTACT	15A/3P	YES	3/4"C, (3)#12, (1)#12G
1A	ODH-2	480/3	3.00	2.50	1.50	COMBINATION MOTOR STARTER DISCONNECT (1) N.O HOLDING CONTACT (1)N.O./N.C. AUXILIARY CONTACT	15A/3P	YES	3/4"C, (3)#12, (1)#12G
1C	ODH-3	480/3	3.00	2.50	1.50	COMBINATION MOTOR STARTER DISCONNECT (1) N.O HOLDING CONTACT (1)N.O./N.C. AUXILIARY CONTACT	15A/3P	YES	3/4"C, (3)#12, (1)#12G
1C	ODH-4	480/3	3.00	2.50	1.50	COMBINATION MOTOR STARTER DISCONNECT (1) N.O HOLDING CONTACT (1)N.O./N.C. AUXILIARY CONTACT	15A/3P	YES	3/4"C, (3)#12, (1)#12G
1F	ODH-5	480/3	3.00	2.50	1.50	COMBINATION MOTOR STARTER DISCONNECT (1) N.O HOLDING CONTACT (1)N.O./N.C. AUXILIARY CONTACT	15A/3P	YES	3/4"C, (3)#12, (1)#12G
1F	ODH-6	480/3	3.00	2.50	1.50	COMBINATION MOTOR STARTER DISCONNECT (1) N.O HOLDING CONTACT (1)N.O./N.C. AUXILIARY CONTACT	15A/3P	YES	3/4"C, (3)#12, (1)#12G
1F	ODH-7	480/3	3.00	2.50	1.50	COMBINATION MOTOR STARTER DISCONNECT (1) N.O HOLDING CONTACT (1)N.O./N.C. AUXILIARY CONTACT	15A/3P	YES	3/4"C, (3)#12, (1)#12G
1F	ODH-8	480/3	3.00	1.00	0.75	COMBINATION MOTOR STARTER DISCONNECT (1) N.O HOLDING CONTACT (1)N.O./N.C. AUXILIARY CONTACT	15A/3P	YES	3/4"C, (3)#12, (1)#12G

CUH'S AND EF UNITS

AREA	ID#	480V/1P OR 480V/3P OR 277V/1P	208V/1P OR 208V/3P OR 120V/1P	AMPS	KVA	HP	DISCONNECT (FUSED WITH FUSE SIZE OR NON FUSED)	CIRCUIT BREAKER	DEDICATED CIRCUIT	WIRE SIZE
1A	CUH-1		120/1	2.90	0.25	0.07	MANUAL MOTOR STARTER FRACTIONAL HORSEPOWER (1)N.O./N.C. HOLDING CONTACT	15A/1P	YES	3/4"C, (2)#12, (1)#12G
1B	CUH-2		120/1	2.90	0.25	0.07	MANUAL MOTOR STARTER FRACTIONAL HORSEPOWER (1)N.O./N.C. HOLDING CONTACT	15A/1P	YES	3/4"C, (2)#12, (1)#12G
1C	CUH-3		120/1	2.90	0.25	0.07	MANUAL MOTOR STARTER FRACTIONAL HORSEPOWER (1)N.O./N.C. HOLDING CONTACT	15A/1P	YES	3/4"C, (2)#12, (1)#12G
1E	CUH-4		120/1	2.90	0.25	0.07	MANUAL MOTOR STARTER FRACTIONAL HORSEPOWER (1)N.O./N.C. HOLDING CONTACT	15A/1P	YES	3/4"C, (2)#12, (1)#12G
GND	CUH-5		120/1	2.90	0.25	0.07	MANUAL MOTOR STARTER FRACTIONAL HORSEPOWER (1)N.O./N.C. HOLDING CONTACT	15A/1P	YES	3/4"C, (2)#12, (1)#12G
GND	CUH-6		120/1	2.90	0.25	0.07	MANUAL MOTOR STARTER FRACTIONAL HORSEPOWER (1)N.O./N.C. HOLDING CONTACT	15A/1P	YES	3/4"C, (2)#12, (1)#12G
GND	CUH-7		120/1	2.90	0.25	0.07	MANUAL MOTOR STARTER FRACTIONAL HORSEPOWER (1)N.O./N.C. HOLDING CONTACT	15A/1P	YES	3/4"C, (2)#8, (1)#10G
2G	CUH-8		120/1	2.90	0.25	0.07	MANUAL MOTOR STARTER FRACTIONAL HORSEPOWER (1)N.O./N.C. HOLDING CONTACT	15A/1P	YES	3/4"C, (2)#12, (1)#12G
STAIR "R" GND	CUH-9		120/1	2.90	0.25	0.07	MANUAL MOTOR STARTER FRACTIONAL HORSEPOWER (1)N.O./N.C. HOLDING CONTACT	15A/1P	YES	3/4"C, (2)#12, (1)#12G
GND	EF-1	480/3			0.83	0.50	COMBINATION MOTOR STARTER DISCONNECT (1) N.O HOLDING CONTACT (1)N.O./N.C. AUXILIARY CONTACT	15A/3P	YES	3/4"C, (3)#12, (1)#12G
ROOF	EF-2		120/1	5.80	0.70	0.25	MANUAL MOTOR STARTER FRACTIONAL HORSEPOWER (1)N.O./N.C. HOLDING CONTACT	15A/1P	YES	3/4"C, (2)#12, (1)#12G
ROOF	EF-3		120/1	5.80	0.70	0.25	MANUAL MOTOR STARTER FRACTIONAL HORSEPOWER (1)N.O./N.C. HOLDING CONTACT	15A/1P	YES	3/4"C, (2)#12, (1)#12G
ROOF	EF-4		120/1	5.80	0.70	0.25	MANUAL MOTOR STARTER FRACTIONAL HORSEPOWER (1)N.O./N.C. HOLDING CONTACT	15A/1P	YES	3/4"C, (2)#12, (1)#12G
ROOF	EF-5		120/1	5.80	0.70	0.25	MANUAL MOTOR STARTER FRACTIONAL HORSEPOWER (1)N.O./N.C. HOLDING CONTACT	15A/1P	YES	3/4"C, (2)#12, (1)#12G
ROOF	EF-6		120/1	5.80	0.70	0.25	MANUAL MOTOR STARTER FRACTIONAL HORSEPOWER (1)N.O./N.C. HOLDING CONTACT	15A/1P	YES	3/4"C, (2)#12, (1)#12G
ROOF	EF-7		120/1	5.80	0.70	0.25	MANUAL MOTOR STARTER FRACTIONAL HORSEPOWER (1)N.O./N.C. HOLDING CONTACT	15A/1P	YES	3/4"C, (2)#12, (1)#12G
ROOF	EF-8		120/1	5.80	0.70	0.25	MANUAL MOTOR STARTER FRACTIONAL HORSEPOWER (1)N.O./N.C. HOLDING CONTACT	15A/1P	YES	3/4"C, (2)#12, (1)#12G
ROOF	EF-9		120/1	5.80	0.70	0.25	MANUAL MOTOR STARTER FRACTIONAL HORSEPOWER (1)N.O./N.C. HOLDING CONTACT	15A/1P	YES	3/4"C, (2)#12, (1)#12G
ROOF	EF-10		120/1	5.80	0.70	0.25	MANUAL MOTOR STARTER FRACTIONAL HORSEPOWER (1)N.O./N.C. HOLDING CONTACT	15A/1P	YES	3/4"C, (2)#12, (1)#12G
ROOF	EF-11		120/1	5.80	0.70	0.25	MANUAL MOTOR STARTER FRACTIONAL HORSEPOWER (1)N.O./N.C. HOLDING CONTACT	15A/1P	YES	3/4"C, (2)#12, (1)#12G
ROOF	EF-12		120/1	5.80	0.70	0.25	MANUAL MOTOR STARTER FRACTIONAL HORSEPOWER (1)N.O./N.C. HOLDING CONTACT	15A/1P	YES	3/4"C, (2)#12, (1)#12G
ROOF	EF-13		120/1	5.80	0.70	0.25	MANUAL MOTOR STARTER FRACTIONAL HORSEPOWER (1)N.O./N.C. HOLDING CONTACT	15A/1P	YES	3/4"C, (2)#12, (1)#12G
ROOF	EF-14		120/1	5.80	0.70	0.25	MANUAL MOTOR STARTER FRACTIONAL HORSEPOWER (1)N.O./N.C. HOLDING CONTACT	15A/1P	YES	3/4"C, (2)#12, (1)#12G
ROOF	EF-15		120/1	5.80	0.70	0.25	MANUAL MOTOR STARTER FRACTIONAL HORSEPOWER (1)N.O./N.C. HOLDING CONTACT	15A/1P	YES	3/4"C, (2)#12, (1)#12G
GUARD BOOTH ROOF	EF-16		120/1	5.80	0.70	0.25	MANUAL MOTOR STARTER FRACTIONAL HORSEPOWER (1)N.O./N.C. HOLDING CONTACT	15A/1P	YES	3/4"C, (2)#12, (1)#12G

RZ'S AND UV'S

AREA	ID#	480V/1P OR 480V/3P OR 277V/1P	208V/1P OR 208V/3P OR 120V/1P	AMPS	KVA	HP	DISCONNECT (FUSED WITH FUSE SIZE OR NON FUSED)	CIRCUIT BREAKER	DEDICATED CIRCUIT	WIRE SIZE	REMARKS
1F	MANIFOLD PUMP RZ-1		120/1		0.10	0.04		20A/1P	YES	3/4"C, (2)#12, (1)#12G	SINGLE POINT CONNECTION
1F	MANIFOLD PUMP RZ-2		120/1		0.10	0.04		20A/1P	YES	3/4"C, (2)#12, (1)#12G	SINGLE POINT CONNECTION
1F	MANIFOLD PUMP RZ-3		120/1		0.10	0.04		20A/1P	YES	3/4"C, (2)#12, (1)#12G	SINGLE POINT CONNECTION
1F	MANIFOLD PUMP RZ-4		120/1		0.10	0.04		20A/1P	YES	3/4"C, (2)#12, (1)#12G	SINGLE POINT CONNECTION
1F	MANIFOLD PUMP RZ-5		120/1		0.10	0.04		20A/1P	YES	3/4"C, (2)#12, (1)#12G	SINGLE POINT CONNECTION
1F	MANIFOLD PUMP RZ-6		120/1		0.10	0.04		20A/1P	YES	3/4"C, (2)#12, (1)#12G	SINGLE POINT CONNECTION
1F	MANIFOLD PUMP RZ-7		120/1		0.10	0.04		20A/1P	YES	3/4"C, (2)#12, (1)#12G	SINGLE POINT CONNECTION
1F	MANIFOLD PUMP RZ-8		120/1		0.10	0.04		20A/1P	YES	3/4"C, (2)#12, (1)#12G	SINGLE POINT CONNECTION
1F	MANIFOLD PUMP RZ-9		120/1		0.10	0.04		20A/1P	YES	3/4"C, (2)#12, (1)#12G	SINGLE POINT CONNECTION
1F	MANIFOLD PUMP RZ-10		120/1		0.10	0.04		20A/1P	YES	3/4"C, (2)#12, (1)#12G	SINGLE POINT CONNECTION
1F	MANIFOLD PUMP RZ-11		120/1		0.10	0.04		20A/1P	YES	3/4"C, (2)#12, (1)#12G	SINGLE POINT CONNECTION
1F	MANIFOLD PUMP RZ-12		120/1		0.10	0.04		20A/1P	YES	3/4"C, (2)#12, (1)#12G	SINGLE POINT CONNECTION
1E	GLYCOL FILL PUMP		120/1				NEMA 5-20R	15A/1P	YES	3/4"C, (2)#12, (1)#12G	MOUNT RECEPTACLE ON THE WALL
GND	UV-1	480/3		2.10	1300VA	1.00	COMBINATION MOTOR STARTER DISCONNECT (1) N.O HOLDING CONTACT (1)N.O./N.C. AUXILIARY CONTACT	15A/3P	YES	3/4"C, (3)#12, (1)#12G	
GND	UV-2	480/3		2.10	1300VA	1.00	COMBINATION MOTOR STARTER DISCONNECT (1) N.O HOLDING CONTACT (1)N.O./N.C. AUXILIARY CONTACT	15A/3P	YES	3/4"C, (3)#12, (1)#12G	

REV.	DATE	DESCRIPTION	SHEET NO.
		REVISIONS	

FILENAME:

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DESIGNER/DRAFTER: CJE

CHECKED BY: RB

SCALE: NOT TO SCALE

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ARCHITECT: WENDEL

APPROVED BY: BPM

ENGINEERS: ReSTL DESIGNERS, CLOUGH HARBOUR ASSOC., AI ENGINEERS, WENDEL

DATE: 06/11/2014

DESIGNED BY:
CLOUGH HARBOUR & ASSOCIATES
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SUITE 212
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06067-2336

STATE OF CONNECTICUT
BRIAN P. McKENNA
No. 21640
LICENSED
PROFESSIONAL ENGINEER

PROJECT TITLE:
WATERBURY BUS MAINTENANCE FACILITY REPLACEMENT

ADDRESS:
FROST BRIDGE ROAD
WATERTOWN, CONNECTICUT 06787

DRAWING TITLE:
ELECTRICAL EQUIPMENT SCHEDULE

PROJECT NO. 431-0006

DRAWING NO. E-504

SHEET NO. 13.058

UNIT HEATERS

AREA	ID#	208V/1P OR 208V/3P OR 120V/1P	AMPS	KVA	HP	DISCONNECT (FUSED WITH FUSE SIZE OR NON FUSED)	CIRCUIT BREAKER	DEDICATED CIRCUIT	WIRE SIZE
GND	UH-1	120/1	0.17	0.03	0.05	MANUAL MOTOR STARTER FRACTIONAL HORSEPOWER (1)N.O./N.C. HOLDING CONTACT	15A/1P	YES	3/4"C, (2)#12, (1)#12G
GND	UH-2	120/1	0.17	0.03	0.05	MANUAL MOTOR STARTER FRACTIONAL HORSEPOWER (1)N.O./N.C. HOLDING CONTACT	15A/1P	YES	3/4"C, (2)#12, (1)#12G
1E	UH-3	120/1	7.20	0.86	0.33	MANUAL MOTOR STARTER FRACTIONAL HORSEPOWER (1)N.O./N.C. HOLDING CONTACT	15A/1P	YES	3/4"C, (2)#12, (1)#12G
1E	UH-4	120/1	7.20	0.86	0.33	MANUAL MOTOR STARTER FRACTIONAL HORSEPOWER (1)N.O./N.C. HOLDING CONTACT	15A/1P	YES	3/4"C, (2)#12, (1)#12G
1E	UH-5	120/1	2.09	0.25	0.05	MANUAL MOTOR STARTER FRACTIONAL HORSEPOWER (1)N.O./N.C. HOLDING CONTACT	15A/1P	YES	3/4"C, (2)#12, (1)#12G
1E	UH-6	120/1	2.09	0.25	0.05	MANUAL MOTOR STARTER FRACTIONAL HORSEPOWER (1)N.O./N.C. HOLDING CONTACT	15A/1P	YES	3/4"C, (2)#12, (1)#12G
1E	UH-7	120/1	2.09	0.25	0.05	MANUAL MOTOR STARTER FRACTIONAL HORSEPOWER (1)N.O./N.C. HOLDING CONTACT	15A/1P	YES	3/4"C, (2)#12, (1)#12G
1F	UH-8	120/1	0.17	0.03	0.05	MANUAL MOTOR STARTER FRACTIONAL HORSEPOWER (1)N.O./N.C. HOLDING CONTACT	15A/1P	YES	3/4"C, (2)#12, (1)#12G
1F	UH-9	120/1	2.09	0.25	0.05	MANUAL MOTOR STARTER FRACTIONAL HORSEPOWER (1)N.O./N.C. HOLDING CONTACT	15A/1P	YES	3/4"C, (2)#12, (1)#12G
1F	UH-10	120/1	7.20	0.86	0.33	MANUAL MOTOR STARTER FRACTIONAL HORSEPOWER (1)N.O./N.C. HOLDING CONTACT	15A/1P	YES	3/4"C, (2)#12, (1)#12G
1F	UH-11	120/1	7.20	0.86	0.33	MANUAL MOTOR STARTER FRACTIONAL HORSEPOWER (1)N.O./N.C. HOLDING CONTACT	15A/1P	YES	3/4"C, (2)#12, (1)#12G
1F	UH-12	120/1	0.17	0.03	0.05	MANUAL MOTOR STARTER FRACTIONAL HORSEPOWER (1)N.O./N.C. HOLDING CONTACT	15A/1P	YES	3/4"C, (2)#12, (1)#12G
1E	UH-13	120/1	0.17	0.03	0.05	MANUAL MOTOR STARTER FRACTIONAL HORSEPOWER (1)N.O./N.C. HOLDING CONTACT	15A/1P	YES	3/4"C, (2)#12, (1)#12G
1E	UH-14	120/1	0.17	0.03	0.05	MANUAL MOTOR STARTER FRACTIONAL HORSEPOWER (1)N.O./N.C. HOLDING CONTACT	15A/1P	YES	3/4"C, (2)#12, (1)#12G
GND	UH-15	120/1	0.17	0.03	0.05	MANUAL MOTOR STARTER FRACTIONAL HORSEPOWER (1)N.O./N.C. HOLDING CONTACT	15A/1P	YES	3/4"C, (2)#12, (1)#12G
1E	UH-16	120/1	0.17	0.03	0.05	MANUAL MOTOR STARTER FRACTIONAL HORSEPOWER (1)N.O./N.C. HOLDING CONTACT	15A/1P	YES	3/4"C, (2)#12, (1)#12G
1E	UH-17	120/1	0.17	0.03	0.05	MANUAL MOTOR STARTER FRACTIONAL HORSEPOWER (1)N.O./N.C. HOLDING CONTACT	15A/1P	YES	3/4"C, (2)#12, (1)#12G
GND	UH-18	120/1	0.17	0.03	0.05	MANUAL MOTOR STARTER FRACTIONAL HORSEPOWER (1)N.O./N.C. HOLDING CONTACT	15A/1P	YES	3/4"C, (2)#12, (1)#12G

VAV'S

ID#	208V/1P or 208V/3P or 120V/1P	kVA	Circuit Breaker	Dedicated Circuit	WIRE SIZE
VAV-11-1	120/1	200VA	20A/1P	NO	3/4"C, (2)#12, (1)#12G
VAV-11-2	120/1	200VA		NO	3/4"C, (2)#12, (1)#12G
VAV-11-3	120/1	200VA		NO	3/4"C, (2)#12, (1)#12G
VAV-11-4	120/1	200VA		NO	3/4"C, (2)#12, (1)#12G
VAV-11-5	120/1	200VA		NO	3/4"C, (2)#12, (1)#12G
VAV-11-6	120/1	200VA		NO	3/4"C, (2)#12, (1)#12G
VAV-12-1	120/1	200VA		NO	3/4"C, (2)#12, (1)#12G
VAV-12-2	120/1	200VA		NO	3/4"C, (2)#12, (1)#12G
VAV-12-3	120/1	200VA		NO	3/4"C, (2)#12, (1)#12G
VAV-12-4	120/1	200VA		NO	3/4"C, (2)#12, (1)#12G
VAV-12-5	120/1	200VA		NO	3/4"C, (2)#12, (1)#12G
VAV-12-6	120/1	200VA		NO	3/4"C, (2)#12, (1)#12G
VAV-12-7	120/1	200VA		NO	3/4"C, (2)#12, (1)#12G
VAV-12-8	120/1	200VA		NO	3/4"C, (2)#12, (1)#12G
VAV-12-9	120/1	200VA		NO	3/4"C, (2)#12, (1)#12G
VAV-12-10	120/1	200VA		NO	3/4"C, (2)#12, (1)#12G
VAV-12-11	120/1	200VA		NO	3/4"C, (2)#12, (1)#12G
VAV-12-12	120/1	200VA		NO	3/4"C, (2)#12, (1)#12G
VAV-12-13	120/1	200VA		NO	3/4"C, (2)#12, (1)#12G
VAV-12-14	120/1	200VA		NO	3/4"C, (2)#12, (1)#12G
VAV-12-15	120/1	200VA		NO	3/4"C, (2)#12, (1)#12G
VAV-12-16	120/1	200VA		NO	3/4"C, (2)#12, (1)#12G
VAV-12-17	120/1	200VA		NO	3/4"C, (2)#12, (1)#12G
VAV-12-18	120/1	200VA		NO	3/4"C, (2)#12, (1)#12G
VAV-12-19	120/1	200VA		NO	3/4"C, (2)#12, (1)#12G
VAV-12-20	120/1	200VA		NO	3/4"C, (2)#12, (1)#12G
VAV-12-21	120/1	200VA		NO	3/4"C, (2)#12, (1)#12G
VAV-12-22	120/1	200VA		NO	3/4"C, (2)#12, (1)#12G
VAV-12-23	120/1	200VA		NO	3/4"C, (2)#12, (1)#12G
VAV-13-1	120/1	200VA		NO	3/4"C, (2)#12, (1)#12G
VAV-13-2	120/1	200VA		NO	3/4"C, (2)#12, (1)#12G
VAV-13-3	120/1	200VA		NO	3/4"C, (2)#12, (1)#12G
VAV-13-4	120/1	200VA		NO	3/4"C, (2)#12, (1)#12G
VAV-13-5	120/1	200VA		NO	3/4"C, (2)#12, (1)#12G
VAV-13-6	120/1	200VA		NO	3/4"C, (2)#12, (1)#12G
VAV-13-7	120/1	200VA		NO	3/4"C, (2)#12, (1)#12G
VAV-13-8	120/1	200VA		NO	3/4"C, (2)#12, (1)#12G
VAV-13-9	120/1	200VA		NO	3/4"C, (2)#12, (1)#12G
VAV-13-10	120/1	200VA		NO	3/4"C, (2)#12, (1)#12G
VAV-13-11	120/1	200VA		NO	3/4"C, (2)#12, (1)#12G
VAV-13-12	120/1	200VA		NO	3/4"C, (2)#12, (1)#12G
VAV-13-13	120/1	200VA		NO	3/4"C, (2)#12, (1)#12G
VAV-13-14	120/1	200VA		NO	3/4"C, (2)#12, (1)#12G
VAV-13-15	120/1	200VA		NO	3/4"C, (2)#12, (1)#12G
VAV-13-16	120/1	200VA		NO	3/4"C, (2)#12, (1)#12G
VAV-13-17	120/1	200VA		NO	3/4"C, (2)#12, (1)#12G
VAV-13-18	120/1	200VA		NO	3/4"C, (2)#12, (1)#12G

RTU SCHEDULE

AREA	ID#	480V/1P OR 480V/3P OR 277V/1P	208V/1P OR 208V/3P OR 120V/1P	AMPS	KVA	DISCONNECT (FUSED WITH FUSE SIZE OR NON FUSED)	CIRCUIT BREAKER	DEDICATED CIRCUIT	WIRE SIZE
ROOF	RTU-1	480/3		80.00	62.28	FURNISHED WITH UNIT	100A/3P	YES	1-1/2"C, (3)#2, (1)#6G
	SERVICE RECEPT.		120/1				20A/1P	YES	3/4"C, (2)#10, (1)#10G
ROOF	RTU-2	480/3		80.00	62.28	FURNISHED WITH UNIT	100A/3P	YES	1-1/2"C, (3)#2, (1)#6G
	SERVICE RECEPT.		120/1				20A/1P	YES	3/4"C, (2)#10, (1)#10G
ROOF	RTU-3	480V/3		80.00	62.28	FURNISHED WITH UNIT	100A/3P	YES	1-1/2"C, (3)#2, (1)#6G
	SERVICE RECEPT.		120/1				20A/1P	YES	3/4"C, (2)#10, (1)#10G
ROOF	RTU-4	480/3		80.00	62.28	FURNISHED WITH UNIT	100A/3P	YES	1-1/2"C, (3)#2, (1)#6G
	SERVICE RECEPT.		120/1				20A/1P	YES	3/4"C, (2)#10, (1)#10G
ROOF	RTU-5	480/3		80.00	62.28	FURNISHED WITH UNIT	100A/3P	YES	1-1/2"C, (3)#2, (1)#6G
	SERVICE RECEPT.		120/1				20A/1P	YES	3/4"C, (2)#10, (1)#10G
ROOF	RTU-6	480/3		80.00	62.28	FURNISHED WITH UNIT	100A/3P	YES	1-1/2"C, (3)#2, (1)#6G
	SERVICE RECEPT.		120/1				20A/1P	YES	3/4"C, (2)#10, (1)#10G
ROOF	RTU-7	480/3		53.00	58.12	FURNISHED WITH UNIT	100A/3P	YES	1-1/2"C, (3)#1, (1)#6G
	SERVICE RECEPT.		120/1				20A/1P	YES	3/4"C, (2)#10, (1)#10G
ROOF	RTU-8	480/3		80.00	62.28	FURNISHED WITH UNIT	125A/3P	YES	1-1/2"C, (3)#1/0, (1)#6G
	SERVICE RECEPT.		120/1				20A/1P	YES	3/4"C, (2)#10, (1)#10G
ROOF	RTU-9	480/3		28.00	33.20	FURNISHED WITH UNIT	70A/3P	YES	1"C, (3)#4, (1)#8G
	SERVICE OUTLET		120/1				20A/1P	YES	3/4"C, (2)#10, (1)#10G
ROOF	RTU-10	480/3		10.00	7.50	FURNISHED WITH UNIT	20A/3P	YES	3/4"C, (3)#12, (1)#12G
	SERVICE OUTLET		120/1				20A/1P	YES	3/4"C, (2)#10, (1)#10G
ROOF	RTU-11	480/3		40.00	30.80	FURNISHED WITH UNIT	50A/3P	YES	1"C, (3)#6, (1)#10G
ROOF	RTU-12	480/3		75.00	59.80	FURNISHED WITH UNIT	80A/3P	YES	1-1/2"C, (3)#2, (1)#6G
ROOF	RTU-13	480/3		75.00	59.80	FURNISHED WITH UNIT	80A/3P	YES	1-1/2"C, (3)#2, (1)#6G
ROOF	RTU-14	480/3		18.00	13.30	FURNISHED WITH UNIT	25A/3P	YES	3/4"C, (3)#10, (1)#10G
ROOF	RTU-15	480/3		18.00	13.30	FURNISHED WITH UNIT	25A/3P	YES	3/4"C, (3)#10, (1)#10G

ARCHITECTURAL EQUIPMENT SCHEDULE

QTY	DESCRIPTION	208V/1P OR 208V/3P OR 120V/1P	AMPS	KVA	DISCONNECT (FUSED WITH FUSE SIZE OR NON FUSED)	CIRCUIT BREAKER	DEDICATED CIRCUIT	WIRE SIZE	
	OVERHEAD DOORS								
24	STORMTITE AP DOOR SYSTEM, 3/4 HP MOTOR	208/3	3.70	1.40	30A NON-FUSED	15A/3P	YES	3/4"C, (3)#12, (1)#12G	-
	RHX OVERHEAD DOOR, 3/4 HP MOTOR	208/3	3.70	1.40	30A NON-FUSED	15A/3P	YES	3/4"C, (3)#12, (1)#12G	
8	CLOPAY 900 SERIES COMMERCIAL DOOR, 1 HP MOTOR	208/3	4.80	1.80	30A NON-FUSED	15A/3P	YES	3/4"C, (3)#12, (1)#12G	
22	ECO-TEKS WINDOW OPERATOR, 230VAC/24VDC POWER SUPPLY	208/1	0.80	0.18	MOTOR RATED TOGGLE SWITCH	15A/2P	YES	3/4"C, (2)#12, (1)#12G	
8	INSOTROL WINDOW SHADES, MAX.5 MOTORS 1A EACH	120/1	5.00	0.60	DPDT SWITCH OR MOTOR RELAYS	20A/1P	YES	3/4"C, (2)#12, (1)#12G	GROUP CONTROL RELAYS SHALL BE USED FOR MORE THAN TWO SHADES ON A SINGLE SWITCH
	HAND DRYER	120/1	12.50	1.50		20A/1P	YES	3/4"C, (2)#12, (1)#12G	HARD WIRED

REV.	DATE	DESCRIPTION	SHEET NO.
		REVISIONS	

FILENAME:

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DESIGNER/DRAFTER: CJE

CHECKED BY: RB

SCALE: NOT TO SCALE

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ARCHITECT: WENDEL

APPROVED BY: BPM

ENGINEERS: ReSTL DESIGNERS, CLOUGH HARBOUR ASSOC., AI ENGINEERS, WENDEL

DATE: 06/11/2014

DESIGNED BY:
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2139 SILAS DEANE HIGHWAY
SUITE 212
ROCKY HILL, CT
06067-2336

STATE OF CONNECTICUT
BRIAN P. McCONNELL
No. 21640
LICENSED
PROFESSIONAL ENGINEER

PROJECT TITLE:
WATERBURY BUS MAINTENANCE FACILITY REPLACEMENT

ADDRESS:
FROST BRIDGE ROAD
WATERTOWN, CONNECTICUT 06787

DRAWING TITLE:
ELECTRICAL EQUIPMENT SCHEDULE

PROJECT NO. 431-0006

DRAWING NO. E-505

SHEET NO. 13.059

CCTV CAMERA STATION SCHEDULE

CAMERA STATION	INTERIOR/ EXTERIOR	FLOOR	FIXED/ PTZ	CABLE TYPE/CONDUIT TYPE AND QUANTITY	COMM ROOM	DETAIL CALLOUT	POE EXTENDER
502	EXTERIOR	16' AFG	FIXED	3/4" RGS CONDUIT WITH (1) CAT 6 AND 16/2 SHIELDED CABLE.	GUARD BOOTH	6/E711	
503	EXTERIOR	16' AFG	FIXED	3/4" RGS CONDUIT WITH (1) CAT 6 AND 16/2 SHIELDED CABLE.	GUARD BOOTH	5/E711	
504	EXTERIOR	16' AFG	FIXED	3/4" RGS CONDUIT WITH (1) CAT 6 AND 16/2 SHIELDED CABLE.	GUARD BOOTH	6/E711	
505	EXTERIOR	16' AFG	PTZ	3/4" RGS CONDUIT WITH (1) CAT 6 AND 16/2 SHIELDED CABLE.	A102b	4/E711	
506	EXTERIOR	16' AFG	FIXED	3/4" RGS CONDUIT WITH (1) CAT 6 AND 16/2 SHIELDED CABLE.	A102b	5/E711	
507	EXTERIOR	16' AFG	FIXED	3/4" RGS CONDUIT WITH (1) CAT 6 AND 16/2 SHIELDED CABLE.	A102b	4/E711	
508	EXTERIOR	16' AFG	FIXED	3/4" RGS CONDUIT WITH (1) CAT 6 AND 16/2 SHIELDED CABLE.	M112C	4/E711	
509	EXTERIOR	16' AFG	PTZ	3/4" RGS CONDUIT WITH (1) CAT 6 AND 16/2 SHIELDED CABLE.	M112C	4/E711	
510	EXTERIOR	16' AFG	FIXED	3/4" RGS CONDUIT WITH (1) CAT 6 AND 16/2 SHIELDED CABLE.	S100	5/E711	YES
511	EXTERIOR	16' AFG	PTZ	3/4" RGS CONDUIT WITH (1) CAT 6 AND 16/2 SHIELDED CABLE.	S100	4/E711	YES
512	EXTERIOR	16' AFG	FIXED	3/4" RGS CONDUIT WITH (1) CAT 6 AND 16/2 SHIELDED CABLE.	A102b	5/E711	
513	EXTERIOR	16' AFG	FIXED	3/4" RGS CONDUIT WITH (1) CAT 6 AND 16/2 SHIELDED CABLE.	GUARD BOOTH	6/E711	
001	INTERIOR	GROUND	FIXED	3/4" RGS CONDUIT WITH (1) CAT 6.	A102b	1/E711	
002	INTERIOR	GROUND	FIXED	3/4" RGS CONDUIT WITH (1) CAT 6.	A102b	1/E711	
003	INTERIOR	GROUND	FIXED	3/4" RGS CONDUIT WITH (1) CAT 6.	A102b	1/E711	
004	INTERIOR	GROUND	FIXED	3/4" RGS CONDUIT WITH (1) CAT 6.	S100	1/E711	
005	INTERIOR	GROUND	FIXED	3/4" RGS CONDUIT WITH (1) CAT 6.	S100	1/E711	
006	INTERIOR	GROUND	FIXED	3/4" RGS CONDUIT WITH (1) CAT 6.	S100	1/E711	
007	INTERIOR	GROUND	FIXED	3/4" RGS CONDUIT WITH (1) CAT 6.	S100	1/E711	
008	INTERIOR	GROUND	FIXED	3/4" RGS CONDUIT WITH (1) CAT 6.	S100	1/E711	
009	INTERIOR	GROUND	FIXED	3/4" RGS CONDUIT WITH (1) CAT 6.	S100	1/E711	
010	INTERIOR	GROUND	FIXED	3/4" RGS CONDUIT WITH (1) CAT 6.	S100	1/E711	YES
011	INTERIOR	GROUND	FIXED	3/4" RGS CONDUIT WITH (1) CAT 6.	S100	1/E711	YES
012	INTERIOR	GROUND	FIXED	3/4" RGS CONDUIT WITH (1) CAT 6.	A102b	2/E711	
013	INTERIOR	GROUND	FIXED	3/4" RGS CONDUIT WITH (1) CAT 6 TO TRAVEL CABLE (TRAVEL CABLE N/C; PROVIDED BY OTHERS)	A102b	2/E711	YES
014	INTERIOR	GROUND	FIXED	3/4" RGS CONDUIT WITH (1) CAT 6.	M112C	2/E711	
015	INTERIOR	GROUND	FIXED	3/4" RGS CONDUIT WITH (1) CAT 6 TO TRAVEL CABLE (TRAVEL CABLE N/C; PROVIDED BY OTHERS)	M112C	2/E711	YES
101	INTERIOR	FIRST	FIXED	3/4" RGS CONDUIT WITH (1) CAT 6.	A102b	1/E711	
102	INTERIOR	FIRST	FIXED	3/4" RGS CONDUIT WITH (1) CAT 6.	A102b	1/E711	
103	INTERIOR	FIRST	FIXED	3/4" RGS CONDUIT WITH (1) CAT 6.	A102b	1/E711	
104	INTERIOR	FIRST	FIXED	3/4" RGS CONDUIT WITH (1) CAT 6.	A102b	1/E711	
106	INTERIOR	FIRST	FIXED	3/4" RGS CONDUIT WITH (1) CAT 6.	S100	1/E711	
107	EXERIOR	FIRST	FIXED	3/4" RGS CONDUIT WITH (1) CAT 6 AND 16/2 SHIELDED CABLE.	S100	1/E711	
108	EXTERIOR	FIRST	FIXED	3/4" RGS CONDUIT WITH (1) CAT 6 AND 16/2 SHIELDED CABLE.	S100	1/E711	
109	INTERIOR	FIRST	FIXED	3/4" RGS CONDUIT WITH (1) CAT 6.	S100	1/E711	
110	INTERIOR	FIRST	FIXED	3/4" RGS CONDUIT WITH (1) CAT 6.	S100	1/E711	
111	INTERIOR	FIRST	FIXED	3/4" RGS CONDUIT WITH (1) CAT 6.	S100	1/E711	
112	INTERIOR	FIRST	FIXED	3/4" RGS CONDUIT WITH (1) CAT 6.	S100	1/E711	
113	EXTERIOR	FIRST	FIXED	3/4" RGS CONDUIT WITH (1) CAT 6 AND 16/2 SHIELDED CABLE.	S100	1/E711	
114	EXTERIOR	FIRST	FIXED	3/4" RGS CONDUIT WITH (1) CAT 6 AND 16/2 SHIELDED CABLE.	S100	1/E711	
115	INTERIOR	FIRST	FIXED	3/4" RGS CONDUIT WITH (1) CAT 6.	S100	2/E711	
116	INTERIOR	FIRST	FIXED	3/4" RGS CONDUIT WITH (1) CAT 6.	S100	1/E711	
117	INTERIOR	FIRST	FIXED	3/4" RGS CONDUIT WITH (1) CAT 6.	S100	1/E711	
118	INTERIOR	FIRST	FIXED	3/4" RGS CONDUIT WITH (1) CAT 6.	S100	1/E711	
119	INTERIOR	FIRST	FIXED	3/4" RGS CONDUIT WITH (1) CAT 6.	S100	1/E711	
120	INTERIOR	FIRST	FIXED	3/4" RGS CONDUIT WITH (1) CAT 6.	A102b	2/E711	
121	INTERIOR	FIRST	FIXED	3/4" RGS CONDUIT WITH (1) CAT 6.	A102b	2/E711	
122	INTERIOR	FIRST	FIXED	3/4" RGS CONDUIT WITH (1) CAT 6.	A110a	2/E711	
123	INTERIOR	FIRST	FIXED	3/4" RGS CONDUIT WITH (1) CAT 6.	A110a	2/E711	
124	INTERIOR	FIRST	FIXED	3/4" RGS CONDUIT WITH (1) CAT 6.	A110a	2/E711	
125	INTERIOR	FIRST	FIXED	3/4" RGS CONDUIT WITH (1) CAT 6.	A110a	2/E711	
126	INTERIOR	FIRST	FIXED	3/4" RGS CONDUIT WITH (1) CAT 6.	M112C	1/E711	
127	INTERIOR	FIRST	FIXED	3/4" RGS CONDUIT WITH (1) CAT 6.	M112C	1/E711	
128	INTERIOR	FIRST	FIXED	3/4" RGS CONDUIT WITH (1) CAT 6.	M112C	3/E711	
129	INTERIOR	FIRST	FIXED	3/4" RGS CONDUIT WITH (1) CAT 6.	M112C	3/E711	
130	INTERIOR	FIRST	FIXED	3/4" RGS CONDUIT WITH (1) CAT 6.	M112C	3/E711	
131	INTERIOR	FIRST	FIXED	3/4" RGS CONDUIT WITH (1) CAT 6.	M112C	3/E711	
132	INTERIOR	FIRST	FIXED	3/4" RGS CONDUIT WITH (1) CAT 6.	M112C	3/E711	YES
133	EXTERIOR	FIRST	FIXED	3/4" RGS CONDUIT WITH (1) CAT 6 AND 16/2 SHIELDED CABLE.	S100	1/E711	
134	EXTERIOR	FIRST	FIXED	3/4" RGS CONDUIT WITH (1) CAT 6 AND 16/2 SHIELDED CABLE.	S100	1/E711	

REV.	DATE	DESCRIPTION	SHEET NO.
		REVISIONS	

FILENAME:

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DESIGNER/DRAFTER: CJE

CHECKED BY: RB

SCALE: NOT TO SCALE

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ARCHITECT: WENDEL

ENGINEERS: ReSTL DESIGNERS, CLOUGH HARBOUR ASSOC., AI ENGINEERS, WENDEL

APPROVED BY: BPM

DATE: 06/11/2014

DESIGNED BY:
CLOUGH HARBOUR & ASSOCIATES
2139 SILAS DEANE HIGHWAY
SUITE 212
ROCKY HILL, CT
06067-2336

STATE OF CONNECTICUT
BRIAN P. MCCARTHY
No. 21640
LICENSED
PROFESSIONAL ENGINEER

PROJECT TITLE:
WATERBURY BUS MAINTENANCE FACILITY REPLACEMENT

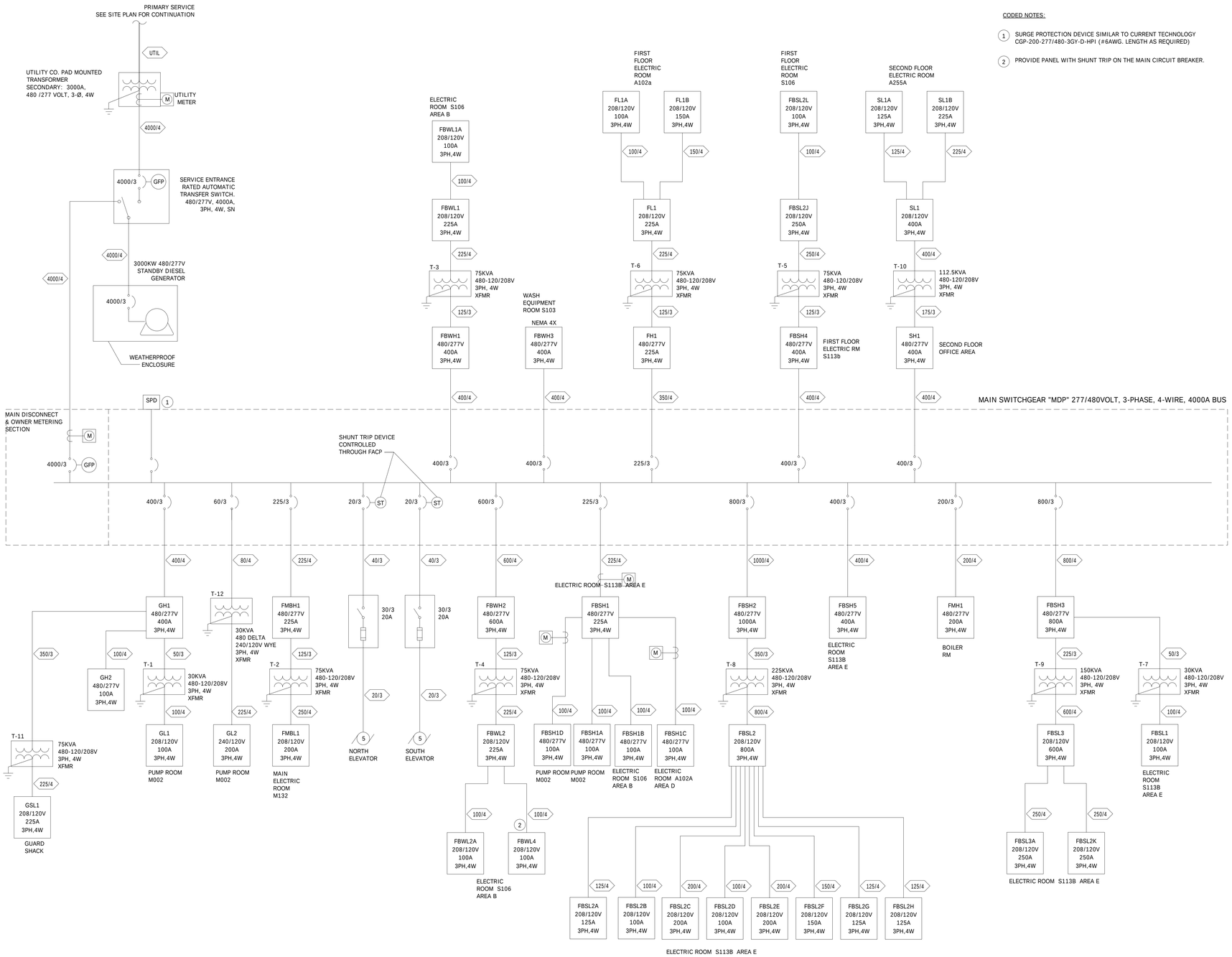
ADDRESS:
FROST BRIDGE ROAD
WATERTOWN, CONNECTICUT 06787

DRAWING TITLE:
ELECTRICAL CCTV CAMERA STATION SCHEDULE

PROJECT NO. 431-0006

DRAWING NO. E-506

SHEET NO. 13.060



CODED NOTES:

1. SURGE PROTECTION DEVICE SIMILAR TO CURRENT TECHNOLOGY CGP-200-277/480-3GY-D-HPI (#6AWG. LENGTH AS REQUIRED)
2. PROVIDE PANEL WITH SHUNT TRIP ON THE MAIN CIRCUIT BREAKER.

FEEDER/BRANCH CIRCUIT SCHEDULE (600V AND BELOW)

WIRE DESIGNATION (AMP/#WIRES)	CONDUIT SIZE	WIRE SIZE (AWG IF NOT OTHERWISE NOTED)	NEUTRAL WIRE SIZE	GROUND WIRE SIZE	REMARKS
20/2	3/4"	(2)#12	-	(1)#12	NOTE 1
30/2	3/4"	(2)#10	-	(1)#10	NOTE 1
40/2	3/4"	(2)#8	-	(1)#10	NOTE 1
60/2	3/4"	(2)#6	-	(1)#10	NOTE 1
20/3	3/4"	(3)#12	-	(1)#12	
20/4	3/4"	(3)#12	(1)#12	(1)#12	
30/3	3/4"	(3)#10	-	(1)#10	
30/4	3/4"	(3)#10	(1)#10	(1)#10	
40/3	1"	(3)#8	-	(1)#10	
40/4	1"	(3)#8	(1)#8	(1)#10	
50/3	1"	(3)#6	-	(1)#10	
50/4	1"	(3)#6	(1)#6	(1)#10	
60/3	1-1/2"	(3)#4	-	(1)#10	
60/4	1-1/2"	(3)#4	(1)#4	(1)#10	
70/3	1-1/2"	(3)#4	-	(1)#8	
70/4	1-1/2"	(3)#4	(1)#4	(1)#8	
80/3	1-1/2"	(3)#2	-	(1)#8	
80/4	1-1/2"	(3)#2	(1)#2	(1)#8	
100/3	1-1/2"	(3)#3	-	(1)#8	
100/4	1-1/2"	(3)#3	(1)#3	(1)#8	
125/3	1-1/2"	(3)#1	-	(1)#6	
125/4	1-1/2"	(3)#1	(1)#1	(1)#6	
150/3	1-1/2"	(3)#1/0	-	(1)#6	
150/4	2"	(3)#1/0	(1)#1/0	(1)#6	
175/3	2"	(3)#2/0	-	(1)#6	
175/4	2"	(3)#2/0	(1)#2/0	(1)#6	
200/3	2"	(3)#3/0	-	(1)#6	
200/4	2-1/2"	(3)#3/0	(1)#3/0	(1)#6	
225/3	2-1/2"	(3)#4/0	-	(1)#4	
225/4	2-1/2"	(3)#4/0	(1)#4/0	(1)#4	
250/3	2-1/2"	(3)#250 KCMIL	-	(1)#4	
250/4	3"	(3)#250 KCMIL	(1)#250 KCMIL	(1)#4	
300/3	3"	(3)#350 KCMIL		(1)#3	
300/4	3"	(3)#350 KCMIL	(1)#350 KCMIL	(1)#3	
350/3	4"	(3)#500 KCMIL		(1)#3	
350/4	4"	(3)#500 KCMIL	(1)#500 KCMIL	(1)#3	
400/3	4"	(3)#500 KCMIL		(1)#3	
400/4	4"	(3)#500 KCMIL	(1)#500 KCMIL	(1)#3	
600/3	2-3"	2-SETS OF (3)#350 KCMIL		(1)#3	
600/4	2-3"	2-SETS OF (3)#350 KCMIL	(2)#350 KCMIL	(1)#3	
800/3	2-4"	2-SETS OF (3)#500 KCMIL		(1)#1/0	
800/4	2-4"	2-SETS OF (3)#500 KCMIL	(2)#500 KCMIL	(1)#1/0	
1000/3	3-4"	3-SETS OF (3)#500 KCMIL		(1)#3/0	
1000/4	3-4"	3-SETS OF (3)#500 KCMIL	(3)#500 KCMIL	(1)#3/0	
1200/3	3-4"	3-SETS OF (3)#600 KCMIL		(1)#2/0	
1200/4	3-4"	3-SETS OF (3)#600 KCMIL	(3)#600 KCMIL	(1)#2/0	
4000/3	10-4"	4-SETS OF (3)#600 KCMIL		(1)#250 KCMIL	PROVIDE(2) ADDITIONAL SPARE 4" CONDUIT FOR SERVICE ENTRANCE FEEDERS
4000/4	10-4"	10-SETS OF (3)#600 KCMIL	(10)#600 KCMIL	(10)#250 KCMIL	PROVIDE(2) ADDITIONAL SPARE 4" CONDUIT FOR SERVICE ENTRANCE FEEDERS
SPECIAL FEEDERS					
UTIL	2-4"				W/ PULL CORD

GENERAL NOTES

1. FOR ALL FEEDERS WITH MULTIPLE CONDUITS. PROVIDE THE INDICATED PHASE, NEUTRAL AND GROUND WIRES IN EACH CONDUIT.
2. FOR ALL SPARE CONDUITS PROVIDE PULL WIRE.
3. NOT ALL FEEDERS ARE NECESSARILY USED. REFER TO ONE LINE DIAGRAM, MOTOR AND EQUIPMENT SCHEDULE, PLANS FOR ACTUAL FEEDERS REQUIRED.
4. IF NOT OTHERWISE NOTED USE 3/4" CONDUIT WITH (2)#12, (1)#12 G. FOR 2-WIRE FEEDER/BRANCH CIRCUIT AND 3/4" CONDUIT WITH (3)#12, (1)#12 G. FOR 3-WIRE FEEDER/BRANCH CIRCUIT.

NOTES

1. FEEDER SHOWN CONSISTS OF TWO PHASE WIRES. THE SAME DESIGNATION IS ALSO APPLICABLE FOR FEEDER WITH ONE PHASE WIRE AND A NEUTRAL WIRE.
2. FOR ALL FEEDERS UPSIZED DUE TO VOLTAGE DROP PROVIDE TERMINAL BLOCKS OR OTHER APPROVED MEANS TO TERMINATE WIRES.
3. DO NOT PROVIDE GROUNDING WIRE WITH SERVICE CONDUCTORS.

REV.	DATE	DESCRIPTION	SHEET NO.
		REVISIONS	

FILENAME:

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DESIGNER/DRAFTER: CJE

CHECKED BY: RB

SCALE:

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ARCHITECT: WENDEL

ENGINEERS: ReSTL DESIGNERS, CLOUGH HARBOUR ASSOC., AI ENGINEERS, WENDEL

APPROVED BY: BPM

DATE: 06/11/2014

DESIGNED BY:
CLOUGH HARBOUR & ASSOCIATES
2139 SILAS DEANE HIGHWAY
SUITE 212
ROCKY HILL, CT
06067-2336

PROJECT TITLE:
WATERBURY BUS MAINTENANCE FACILITY REPLACEMENT

ADDRESS:
FROST BRIDGE ROAD
WATERTOWN, CONNECTICUT 06787

DRAWING TITLE:
ELECTRICAL ONE-LINE DIAGRAM

PROJECT NO. 431-0006

DRAWING NO. E-601

SHEET NO. 13.061

LOCATION: ELECTRICAL CLOSET A102a
MOUNTING: Surface
SOURCE: MDP

PANEL ID
FH1

VOLTS, PHASE, WIRE: 480/277 Wye/3/4Wire
MAINS: 225A MCB
SHORT CIRCUIT RATING: 42K

CKT	LOAD DESCRIPTION	CB/ AMPS	P	A		B		C		P	CB/ AMPS	LOAD DESCRIPTION	CKT
1	EWH-1 A109	50 A	1	10000 VA	0 VA					1	20 A	Spare	2
3	EWH-3 A103	50 A	1			10000 VA	0 VA			1	20 A	Spare	4
5	EWH-3 A104	50 A	1					10000 VA	0 VA	1	20 A	Spare	6
7	EWH-1 Dispatch	50 A	1	10000 VA	6600 VA								8
9	Space	--	--			0 VA	6600 VA			3	30 A	EWH-5 RM A103 Disconnect	10
11								15941 VA	6600 VA				12
13	T-6 75Kva RM A102a	125 A	3	13430 VA	6600 VA								14
15						17710 VA	6600 VA			3	30 A	EWH-5 RM A104 Shower Disconnect	16
17								10530 VA	6600 VA				18
19	EWH-6 RM A118 Disconnect	50 A	3	10530 VA	0 VA					1	20 A	Spare	20
21						10530 VA	0 VA			1	20 A	Spare	22
23	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	24
25	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	26
27	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	28
29	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	30
31	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	32
33	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	34
35	Space	--	--					0 VA	0 VA	--	--	Space	36
37	Space	--	--	0 VA	0 VA					--	--	Space	38
39	Space	--	--			0 VA	0 VA			--	--	Space	40
41	Space	--	--					0 VA	0 VA	--	--	Space	42
		TOTAL...		57160 VA		51440 VA		49671 VA					
		TOTAL...		207 A		187 A		179 A					

NOTES:

LOCATION: ELECTRICAL CLOSET A102a
MOUNTING: Surface
SOURCE: FL1

PANEL ID
FL1B

VOLTS, PHASE, WIRE: 120/208 Wye/3/4Wire
MAINS: 150A MLO
SHORT CIRCUIT RATING: 22K

CKT	LOAD DESCRIPTION	CB/ AMPS	P	A		B		C		P	CB/ AMPS	LOAD DESCRIPTION	CKT
1	Sink Power RM A103	20 A	1	200 VA	720 VA					1	20 A	Receptacle RM A110	2
3	Recp. Exterior Court Yard	20 A	1			360 VA	720 VA			1	20 A	Receptacle RM A110A	4
5	Recp. Radio Rm A110a	20 A	1					720 VA	60 VA	2	15 A	AC-12 RM A110A	6
7	AC-2	15 A	2	50 VA	60 VA								8
9						50 VA	50 VA			2	15 A	AC-3	10
11	Elevator Controls	20 A	2					100 VA	50 VA				12
13				100 VA	180 VA					1	20 A	Recp. AC-9	14
15	Recp. RM A110a	20 A	1			180 VA	180 VA			1	20 A	Receptacle Dedicated TV RM A201	16
17	Recp. RM A110a	20 A	1					180 VA	180 VA	1	20 A	Recp. AC-2	18
19	Receptacle	20 A	1	180 VA	200 VA					1	20 A	Sink Power RM A104	20
21	Toilet Power RM A103	20 A	1			200 VA	540 VA			1	20 A	Receptacle RM A112	22
23	Toilet Power RM A104	20 A	1					200 VA	540 VA	1	20 A	Receptacle RM A112	24
25	Receptacle	20 A	1	540 VA	180 VA					1	20 A	Recp. AC-8	26
27	Spare	20 A	1			0 VA	180 VA			1	20 A	Recp. RM 110a	28
29	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	30
31	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	32
33	Spare	20 A	1			0 VA	0 VA			--	--	Space	34
35	Spare	20 A	1					0 VA	0 VA	--	--	Space	36
37	Spare	20 A	1	0 VA	600 VA					1	20 A	Data Racp Comm Closet A102b	38
39	Spare	20 A	1			0 VA	2200 VA			1	20 A	Data Rack Comm Closet A102b	40
41	Spare	20 A	1					0 VA	2200 VA	1	20 A	Data Rack Comm Closet A102b	42
		TOTAL...		3010 VA		4660 VA		4230 VA					
		TOTAL...		25 A		40 A		37 A					

NOTES:

LOCATION: ELECTRICAL A225
MOUNTING: Surface
SOURCE: SL1

PANEL ID
SL1A

VOLTS, PHASE, WIRE: 120/208 Wye/3/4Wire
MAINS: 250A MLO
SHORT CIRCUIT RATING: 22K

CKT	LOAD DESCRIPTION	CB/ AMPS	P	A		B		C		P	CB/ AMPS	LOAD DESCRIPTION	CKT
1	RM A202 East Window Shades	20 A	1	3 VA	700 VA					1	15 A	EF-13	2
3	RM A202 West Window Shades	20 A	1			3 VA	580 VA			1	20 A	Receptacle RM A219	4
5	EF-12	15 A	1					700 VA	360 VA	1	20 A	Receptacle Dedicated TV RM A219	6
7	Power Faucets RM A222a	20 A	1	200 VA	360 VA					1	20 A	Receptacle RM A213 Comm Closet	8
9	VAV'S Second Flr	20 A	1			700 VA	760 VA			1	20 A	Receptacle RM A214	10
11	Hand Dryer RM A222b	20 A	1					1500 VA	2 VA	1	20 A	RM A202 West Window Shades	12
13	Hand Dryer RM A221b	20 A	1	1500 VA	2 VA					1	20 A	RM A202 East Window Shades	14
15	Receptacle RM A214	20 A	1			760 VA	900 VA			1	20 A	Receptacle RM A217,A218	16
17	Sink Power RM A221B	20 A	1					200 VA	540 VA	1	20 A	Receptacle RM A219	18
19	Power Toilets RM S222B	20 A	1	200 VA	360 VA					1	20 A	Receptacle RM A213 Comm Closet	20
21	Receptacle RM A217,A218	20 A	1			1080 VA	2 VA			1	20 A	RM A202 South Window Shades	22
23	Receptacle RM A225,A226	20 A	1					720 VA	800 VA	1	20 A	VAV'S Second Flr	24
25	Receptacle RM A216,A215	20 A	1	720 VA	800 VA					1	20 A	Receptacle RM A214	26
27	Power Toilets TM A221B	20 A	1			200 VA	360 VA			1	20 A	Receptacle RM A213 Comm Closet	28
29	ACCU-6	25 A	2					2500 VA	0 VA	--	--	Space	30
31				2500 VA	0 VA					--	--	Space	32
33	Receptacle RM A224	20 A	1			720 VA	800 VA			1	20 A	VAV'S RM A205-A212	34
35	Space	--	--					0 VA	0 VA	--	--	Space	36
37	Recp. RM A213 Comm Closet	20 A	1	360 VA	0 VA					--	--	Space	38
39	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	40
41	Space	--	--					0 VA	0 VA	1	20 A	Spare	42
		TOTAL...		7705 VA		6865 VA		7322 VA					
		TOTAL...		65 A		57 A		62 A					

NOTES:

LOCATION: ELECTRICAL CLOSET A102a
MOUNTING: Surface
SOURCE: T-6

PANEL ID
FL1

VOLTS, PHASE, WIRE: 120/208 Wye/3/4Wire
MAINS: 250A MCB
SHORT CIRCUIT RATING: 22K

CKT	LOAD DESCRIPTION	CB/ AMPS	P	A		B		C		P	CB/ AMPS	LOAD DESCRIPTION	CKT
1	Receptacle Dedicated TV RM A115	20 A	1	360 VA	360 VA					1	20 A	Receptacle RM A110	2
3	Receptacle RM A115 Dedicated Clng Mnt	20 A	1			180 VA	180 VA			1	20 A	Receptacle Dedicated TV RM A115	4
5	Power	20 A	1					720 VA	540 VA	1	20 A	Receptacle RM A110	6
7	Receptacle RM A112 Dedicated Floor Mnt	20 A	1	400 VA	540 VA					1	20 A	Receptacle RM A110	8
9	Receptacle RM A115 Dedicated Floor Mnt	20 A	1			400 VA	400 VA			1	20 A	Receptacle RM A112 Dedicated Floor Mnt	10
11	Receptacle RM A111	20 A	1					900 VA	900 VA	1	20 A	Receptacle RM A114	12
13	Receptacle RM A110 U/C FRIDGE	20 A	1	180 VA	180 VA					1	20 A	Receptacle Dedicated TV RM A115	14
15	Receptacle RM A113	20 A	1			720 VA	180 VA			1	20 A	Recp. RM A102b Comm Closet	16
17	Receptacle Bus Storage RM S113	20 A	1					1260 VA	540 VA	1	20 A	Receptacle RM A116	18
19				7561 VA	400 VA					1	20 A	Receptacle RM A115 Dedicated Floor Mnt	20
21	FL1A	100 A	3			6240 VA	180 VA			1	20 A	Recp. Dedicated for UPS	22
23								7780 VA	3010 VA				24
25	Receptacle RM A112 Dedicated Floor Mnt	20 A	1	400 VA	4660 VA					3	150 A	FL1B	26
27	Recp. A115a	20 A	1			720 VA	4230 VA						28
29	Recp. Lobby TV	20 A	1					360 VA	180 VA	1	20 A	Receptacle RM A110 Microwave	30
31	Receptacle RM A101	20 A	1	900 VA	0 VA					1	20 A	Spare	32
33	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	34
35	Receptacle RM A115 Dedicated Floor Mnt	20 A	1					400 VA	400 VA	1	20 A	Receptacle RM A115 Dedicated Floor Mnt	36
37	Spare	20 A	1	0 VA	0 VA					--	--	Space	38
39	Spare	20 A	1			0 VA	0 VA			--	--	Space	40
41	Receptacle RM A115	20 A	1					720 VA	0 VA	--	--	Space	42
		TOTAL...		15941 VA		13430 VA		17710 VA					
		TOTAL...		136 A		112 A		151 A					

NOTES:

LOCATION: ELECTRICAL A225
MOUNTING: Surface
SOURCE: MDP

PANEL ID
SH1

VOLTS, PHASE, WIRE: 480/277 Wye/3/4Wire
MAINS: 400A MCB
SHORT CIRCUIT RATING: 42K

CKT	LOAD DESCRIPTION	CB/ AMPS	P	A		B		C		P	CB/ AMPS	LOAD DESCRIPTION	CKT
1	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	2
3	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	4
5	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	6
7	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	8
9	EWH-2 A222a	40 A	1			8000 VA	16135 VA						10
11	EWH-1 A212	50 A	1					10000 VA	18985 VA	3	125 A	T-10	12
13	EWH-2 A221a	40 A	1	8000 VA	17413 VA								14
15						4982 VA	4982 VA						16
17	RTU-14	25 A	3					4982 VA	4982 VA	3	25 A	RTU-15	18
19				4982 VA	4982 VA								20
21						6667 VA	6667 VA						22
23	EWH-5 RM A221B	30 A	3					6667 VA	6667 VA	3	30 A	EWH-5 RM A222B	24
25				6667 VA	6667 VA								26
27						10530 VA	10530 VA						28
29	EWH-6 A220	50 A	3					10530 VA	10530 VA	3	50 A	EWH-6 RM A226	30
31				10530 VA	10530 VA								32
33	Spare	20 A	1			0 VA	0 VA			--	--	Space	34
35	Spare	20 A	1					0 VA	0 VA	--	--	Space	36
37	Spare	20 A	1	0 VA	0 VA					--	--	Space	38
39	Spare	20 A	1			0 VA	0 VA			--	--	Space	40
41	Spare	20 A	1					0 VA	0 VA	--	--	Space	42
		TOTAL...		69771 VA		68494 VA		73344 VA					
		TOTAL...		253 A		247 A		265 A					

NOTES:

LOCATION: ELECTRICAL A225
MOUNTING: Surface
SOURCE: SL1

PANEL ID
SL1B

VOLTS, PHASE, WIRE: 120/208 Wye/3/4Wire
MAINS: 225A MLO
SHORT CIRCUIT RATING: 22K

CKT	LOAD DESCRIPTION	CB/ AMPS	P	A		B		C		P	CB/ AMPS	LOAD DESCRIPTION	CKT
1	EF-13 Receptacle	20 A	1	180 VA	250 VA					1	15 A	CUH-8 RM STAIR D	2
3	RTU-14 Receptacle	20 A	1			180 VA	360 VA			1	20 A	Recp. A216, A215	4
5	Space	--	--					0 VA	0 VA	--	--	Space	6
7	AC-4 RM A225	15 A	2	50 VA	60 VA					2	15 A	AC-5 RM A213	8
9						50 VA	60 VA						10
11	ACCU-5	25 A	2					2500 VA	180 VA	1	20 A	Receptacle AC-5 RM A213	12
13				2500 VA	180 VA					1	20 A	Receptacle AC-4 RM A225	14
15	ACCU-4	25 A	2			2500 VA	0 VA			1	20 A	Spare	16
17								2500 VA	0 VA	1	20 A	Spare	18
19	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	20
21	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	22
23	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	24
25	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	26
27	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	28
29	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	30
31	Space	--	--	0 VA	0 VA					--	--	Space	32
33	Space	--	--			0 VA	0 VA			--	--	Space	34
35	Space	--	--					0 VA	0 VA	--	--	Space	36
37	Space	--	--	0 VA	0 VA					--	--	Space	38
39	Space	--	--			0 VA	0 VA			--	--	Space	40
41	Space	--	--					0 VA	0 VA	--	--	Space	42
		TOTAL...		3220 VA		3150 VA		5180 VA					
		TOTAL...		27 A		26 A		43 A					

NOTES:

LOCATION: ELECTRICAL CLOSET A102a
MOUNTING: Surface
SOURCE: FL1

PANEL ID
FL1A

VOLTS, PHASE, WIRE: 120/208 Wye/3/4Wire
MAINS: 100A MLO
SHORT CIRCUIT RATING: 22K

CKT	LOAD DESCRIPTION	CB/ AMPS	P	A		B		C		P	CB/ AMPS	LOAD DESCRIPTION	CKT
1	Receptacle RM A108	20 A	1	1080 VA	360 VA					1	20 A	Receptacle Dedicated TV RM A108	2
3	Receptacle RM A108	20 A	1			540 VA	360 VA			1	20 A	Receptacle Dedicated TV RM A109	4
5	Receptacle RM A109	20 A	1					540 VA	1000 VA	1	20 A	Receptacle RM A109 Microwave	6
7	Receptacle RM A109 Fridge	20 A	1	600 VA	500 VA					1	20 A	Receptacle RM A109 Vending	8
9	Receptacle RM A109 Vending	20 A	1			500 VA	360 VA			1	20 A	Receptacle RM A109	10
11	Receptacle RM A106	20 A	1					540 VA	720 VA	1	20 A	Receptacle RM A117-Corridor	12
13	Receptacle RM A105	20 A	1	720 VA	360 VA					1	20 A	Receptacle Dedicated TV RM A105	14
15	Receptacle Dedicated TV RM A105	20 A	1			360 VA	360 VA			1	20 A	Receptacle Dedicated TV RM A105	16
17	Receptacle Dedicated TV RM A105	20 A	1					360 VA	360 VA	1	20 A	Receptacle Dedicated TV RM A105	18
19	Receptacle Dedicated TV RM A105	20 A	1	360 VA	1260 VA					1	20 A	Receptacle RM A103,A104,A118	20
21	Receptacle RM A102	20 A	1			900 VA	360 VA			1	20 A	Receptacle Comm Closet A102b	22
23	Receptacle CommCloset A102b	20 A	1					360 VA	360 VA	1	20 A	Receptacle A102b	24
25	Receptacle RM A102C	20 A	1	720 VA	540 VA					1	20 A	Receptacle RM A102C	26
27	Receptacle RM A102C	20 A	1			540 VA	900 VA			1	20 A	Receptacle RM A117, A106A,B1	28
29	Hand Dryer A104	20 A	1					1500 VA	1500 VA	1	20 A	Hand Dryer A103	30
31	CUH-1 RM S113A	15 A	1	250 VA	800 VA					1	20 A	VAV'S First Flr Office	32
33	VAV'S First Flr Office	20 A	1			600 VA	400 VA			1	20 A	VAV'S First Flr Office Corr.	34
35	Space	--	--					0 VA	540 VA	1	20 A	Receptacle RM A112	36
37	AC-9 RM A102C	15 A	2	60 VA	0 VA					--	--	Space	38
39						60 VA	0 VA			--	--	Space	40
41	Space	--	--					0 VA	0 VA	--	--	Space	42
		TOTAL...		7610 VA		6240 VA		7780 VA					
		TOTAL...		65 A		52 A		67 A					

NOTES:

LOCATION: ELECTRICAL A225
MOUNTING: Surface
SOURCE: T-10

PANEL ID
SL1

VOLTS, PHASE, WIRE: 120/208 Wye/3/4Wire
MAINS: 400A MCB
SHORT CIRCUIT RATING: 22K

CKT	LOAD DESCRIPTION	CB/ AMPS	P	A		B		C		P	CB/ AMPS	LOAD DESCRIPTION	CKT
1	Receptacle A204, A205	20 A	1	720 VA	360 VA					1	20 A	Receptacle RM A202	2
3	Receptacle RM A202A,A203	20 A	1			720 VA	540 VA			1	20 A	Receptacle RM A202A, A227	4
5	Receptacle RM 202 Dedicated Floor Mnt	20 A	1					800 VA	1080 VA	1	20 A	Receptacle RM A209,A210,A211	6
7	Receptacle RM A203,A204,A205	20 A	1	1080 VA	360 VA					1	20 A	Receptacle Dedicated TV RM A202	8
9	Receptacle RM A206,A207,A08	20 A	1			1080 VA	180 VA			1	20 A	Receptacle RM A202 Dedicated Clng Mnt	10
11	Receptacle RM A212 EWC	20 A	1					180 VA	720 VA	1	20 A	Receptacle RM A210,A211	12
13	Receptacle RM A206,A207	20 A	1	720 VA	7705 VA								14
15	Receptacle RM A208, A209	20 A	1			720 VA	6865 VA			3	125 A	SL1A	16
17	Receptacle RM A212 Microwave	20 A	1					1000 VA	7322 VA				18
19	Receptacle RM A212	20 A	1	360 VA	600 VA					1	20 A	Receptacle RM 212 Fridge Dedicated	20
21	Receptacle RM A212	20 A	1			540 VA	360 VA			1	20 A	Receptacle Dedicated TV RM A212	22
23	Receptacle RM A227	20 A	1					1620 VA	800 VA	1	20 A	Receptacle RM A220 Floor Mntd	24
25	Receptacle RM A220	20 A	1	360 VA	360 VA					1	20 A	Receptacle	26
27	Receptacle RM A220 Microwave	20 A	1			1000 VA	1260 VA			1	20 A	Receptacle RM A221A, A221B	28
29	Receptacle RM A223	20 A	1					360 VA	360 VA	1	20 A	Receptacle RM A223	30
31	Receptacle RM A223	20 A	1	180 VA	180 VA					1	20 A	Receptacle RM A223	32
33	Receptacle RM A223	20 A	1			360 VA	180 VA			1	20 A	Receptacle RM A223	34
35	Spare	20 A	1					0 VA	3174 VA				36
37	Spare	20 A	1	0 VA	3150 VA					3	225 A	SL1B	38
39	Space	--	--			0 VA	5180 VA						40
41	Space	--	--					0 VA	0 VA	--	--	Space	42
		TOTAL...		16135 VA		18985 VA		17416 VA					
		TOTAL...		134 A		160 A		147 A					

NOTES:

LOCATION: MECH. ROOM M130
MOUNTING: Surface
SOURCE: MDP

PANEL ID
FMH1

VOLTS, PHASE, WIRE: 480/277 Wye/3/4Wire
MAINS: 200A MCB
SHORT CIRCUIT RATING: 42K

CKT	LOAD DESCRIPTION	CB/ AMPS	P	A		B		C		P	CB/ AMPS	LOAD DESCRIPTION	CKT
1				1330 VA	1330 VA								2
3	BP-1 BOILER RM	15 A	3			1330 VA	1330 VA			3	15 A	BP-2 BOILER RM	4
5								1330 VA	1330 VA				6
7	Space	--	--	0 VA	0 VA					--	--	Space	8
9						1330 VA	0 VA			--	--	Space	10
11	BP-3 BOILER RM	15 A	3					1330 VA	1330 VA				12
13				1330 VA	1330 VA					3	15 A	BP-4 BOILER RM	14
15						3335 VA	1330 VA						16
17	B-1 BOILER RM	20 A	3					3335 VA	3335 VA	3	20 A	B-2 BOILER RM	18
19				3335 VA	3335 VA								20
21						3335 VA	3335 VA						22
23	B-3 BOILER RM	20 A	3					3335 VA	3335 VA	3	20 A	B-4 BOILER RM	24
25				3335 VA	3335 VA								26
27						11100 VA	3335 VA						28
29	P-1 BOILER RM	80 A	3					11100 VA	11100 VA	3	80 A	P-2 BOILER RM	30
31				11100 VA	11100 VA								32
33	Spare	20 A	1			0 VA	11100 VA						34
35	Spare	20 A	1					0 VA	0 VA	--	--	Space	36
37	Spare	20 A	1	0 VA	0 VA					--	--	Space	38
39	Spare	20 A	1			0 VA	0 VA			--	--	Space	40
41	Spare	20 A	1					0 VA	0 VA	--	--	Space	42
		TOTAL...		40860 VA		40860 VA		40860 VA					
		TOTAL...		148 A		148 A		148 A					

NOTES:

REV.	DATE	DESCRIPTION	SHEET NO.
		REVISIONS	

FILENAME:

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

DESIGNER/DRAFTER: CJE
CHECKED BY: RB
SCALE:

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ARCHITECT: WENDEL
APPROVED BY: BPM
ENGINEERS: ReSTL DESIGNERS, CLOUGH HARBOUR ASSOC., AI ENGINEERS, WENDEL
DATE: 06/11/2014

DESIGNED BY:
CLOUGH HARBOUR & ASSOCIATES
2139 SILAS DEANE HIGHWAY
SUITE 212
ROCKY HILL, CT
06067-2336

STATE OF CONNECTICUT · BRIAN P. McKENNA · No. 21640 · LICENSED PROFESSIONAL ENGINEER

PROJECT TITLE:
WATERBURY BUS MAINTENANCE FACILITY REPLACEMENT

ADDRESS:
FROST BRIDGE ROAD
WATERTOWN, CONNECTICUT 06787

DRAWING TITLE:
ELECTRICAL PANELBOARD SCHEDULES

PROJECT NO. 431-0006
DRAWING NO. E-602
SHEET NO. 13.062

LOCATION: PUMP ROOM M002
MOUNTING: Surface
SOURCE: MDP

PANEL ID
GH1

VOLTS, PHASE, WIRE: 480/277 Wye/3/4Wire
MAINS: 400A MCB
SHORT CIRCUIT RATING: 42K

CKT	LOAD DESCRIPTION	CB/ AMPS	P	A		B		C		P	CB/ AMPS	LOAD DESCRIPTION	CKT
1				7542 VA	0 VA					1	20 A	Spare	2
3	T-1 30Kva Rm M002	50 A	3			7422 VA	0 VA			1	20 A	Spare	4
5								5302 VA	0 VA	1	20 A	Spare	6
7	Spare	20 A	1	0 VA	0 VA					1	0 A	Spare	8
9	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	10
11	Spare	20 A	1					0 VA	1800 VA				12
13				1800 VA	1800 VA					3	15 A	Lift Station Ground Floor	14
15	Lift Station Ground Floor	15 A	3			1800 VA	1800 VA						16
17								1800 VA	2400 VA				18
19				21600 VA	2400 VA					3	20 A	AC-4 RM M002	20
21	Heat Trace Panel 1	150 A	3			21600 VA	2400 VA						22
23								21600 VA	19950 VA				24
25				600 VA	19950 VA					3	150 A	Heat Trace Panel 2	26
27	AC-3 RM M002	20 A	3			600 VA	19950 VA						28
29								600 VA	1800 VA				30
31				830 VA	1800 VA					3	15 A	Lift Station Ground FLoor	32
33	EF-1 RM M002	15 A	3			830 VA	1800 VA						34
35								830 VA	2088 VA				36
37				7597 VA	2088 VA					3	100 A	GH2	38
39	T-11	125 A	3			9622 VA	2088 VA						40
41								8692 VA	0 VA	--	--	Space	42
		TOTAL...		68007 VA		69912 VA		66862 VA					
		TOTAL...		246 A		253 A		241 A					

NOTES:

LOCATION: STORAGE G3
MOUNTING: Surface
SOURCE: T-11

PANEL ID
GSL1

VOLTS, PHASE, WIRE: 120/208 Wye/3/4Wire
MAINS: 100A MCB
SHORT CIRCUIT RATING: 22K

CKT	LOAD DESCRIPTION	CB/ AMPS	P	A		B		C		P	CB/ AMPS	LOAD DESCRIPTION	CKT
1	Recp. Sink G2	20 A	1	180 VA	540 VA					1	20 A	Recp. Gaurd Booth	2
3	Recp. Guard Booth	20 A	1			360 VA	360 VA			1	20 A	Recp. Guard Booth	4
5	Recp. Guard Booth	20 A	1					540 VA	800 VA	1	20 A	Camera Power Supply Storage G3	6
7	Ltg. Guard Booth	20 A	1	167 VA	800 VA					1	20 A	Quad Recp. Storage G3	8
9	EH-1	15 A	2			1802 VA	1700 VA			1	15 A	EF-16	10
11								1802 VA	3000 VA	2	20 A	EWH-8	12
13	Recp. Dedicated Security	20 A	1	180 VA	3000 VA								14
15	EH-2	25 A	2			400 VA	2500 VA			2	20 A	ACHP-5	16
17								0 VA	2500 VA				18
19	ACCU-15	25 A	2	2500 VA	180 VA					1	20 A	Receptacle HPC-5	20
21						2500 VA	0 VA			--	--	Space	22
23	AC-15	15 A	2					50 VA	0 VA	1	20 A	Spare	24
25				50 VA	0 VA					1	20 A	Spare	26
27	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	28
29	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	30
31	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	32
33	Space	--	--			0 VA	0 VA			--	--	Space	34
35	Space	--	--					0 VA	0 VA	--	--	Space	36
37	Space	--	--	0 VA	0 VA					--	--	Space	38
39	Space	--	--			0 VA	0 VA			--	--	Space	40
41	Space	--	--					0 VA	0 VA	--	--	Space	42
		TOTAL...		7597 VA		9622 VA		8692 VA					
		TOTAL...		63 A		82 A		74 A					

NOTES:

LOCATION: ELEC. ROOM M132
MOUNTING: Surface
SOURCE: MDP

PANEL ID
FMBH1

VOLTS, PHASE, WIRE: 480/277 Wye/3/4Wire
MAINS: 225A MCB
SHORT CIRCUIT RATING: 42K

CKT	LOAD DESCRIPTION	CB/ AMPS	P	A		B		C		P	CB/ AMPS	LOAD DESCRIPTION	CKT
1				9722 VA	0 VA					1	20 A	Spare	2
3	T-2 75kVA RM M132	125 A	3			9242 VA	0 VA			1	20 A	Spare	4
5								5502 VA	835 VA				6
7				835 VA	835 VA					3	15 A	ODH-5	8
9	ODH-6	15 A	3			835 VA	835 VA						10
11								835 VA	835 VA				12
13				26333 VA	835 VA					3	15 A	ODH-7 RM M107	14
15	EWH-7 MNT HIGH	125 A	3			26333 VA	835 VA						16
17								26333 VA	1670 VA				18
19	EWH-4 M110	20 A	1	4100 VA	1670 VA					3	15 A	ODH-8 RM M106	20
21	Spare	20 A	1			0 VA	1670 VA						22
23	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	24
25	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	26
27	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	28
29	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	30
31	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	32
33	Space	--	--			0 VA	0 VA			--	--	Space	34
35	Space	--	--					0 VA	0 VA	--	--	Space	36
37	Space	--	--	0 VA	0 VA					--	--	Space	38
39	Space	--	--			0 VA	0 VA			--	--	Space	40
41	Space	--	--					0 VA	0 VA	--	--	Space	42
		TOTAL...		44330 VA		39750 VA		36010 VA					
		TOTAL...		162 A		146 A		130 A					

NOTES:

LOCATION: PUMP ROOM M002
MOUNTING: Surface
SOURCE: GH1

PANEL ID
GH2

VOLTS, PHASE, WIRE: 480/277 Wye/3/4Wire
MAINS: 100A MLO
SHORT CIRCUIT RATING: 42K

CKT	LOAD DESCRIPTION	CB/ AMPS	P	A		B		C		P	CB/ AMPS	LOAD DESCRIPTION	CKT
1	Space	--	--	0 VA	585 VA								2
3						585 VA	585 VA			3	20 A	FC-1	4
5	UV-1 RM M004	20 A	3					585 VA	585 VA				6
7				585 VA	585 VA								8
9						333 VA	585 VA			3	20 A	UV-2 RM M006	10
11	Grinder Pump Site	20 A	3					333 VA	585 VA				12
13				333 VA	0 VA					1	20 A	Spare	14
15	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	16
17	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	18
19	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	20
21	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	22
23	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	24
25	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	26
27	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	28
29	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	30
31	Spare	20 A	1	0 VA	0 VA					--	--	Space	32
33	Space	--	--			0 VA	0 VA			--	--	Space	34
35	Space	--	--					0 VA	0 VA	--	--	Space	36
37	Space	--	--	0 VA	0 VA					--	--	Space	38
39	Space	--	--			0 VA	0 VA			--	--	Space	40
41	Space	--	--					0 VA	0 VA	--	--	Space	42
		TOTAL...		2088 VA		2088 VA		2088 VA					
		TOTAL...		8 A		8 A		8 A					

NOTES:

LOCATION: ELEC. ROOM M132
MOUNTING: Surface
SOURCE: T-2

PANEL ID
FMBL1

VOLTS, PHASE, WIRE: 120/208 Wye/3/4Wire
MAINS: 200A MCB
SHORT CIRCUIT RATING: 22K

CKT	LOAD DESCRIPTION	CB/ AMPS	P	A		B		C		P	CB/ AMPS	LOAD DESCRIPTION	CKT
1	Generator	20 A	1	1200 VA	1080 VA					1	20 A	Receptacle M132,M106, EXTERIOR	2
3	Generator	20 A	1			1500 VA	1260 VA			1	20 A	Receptacle RM M107, EXTERIOR	4
5	Generator	20 A	1					1000 VA	1080 VA	1	20 A	Receptacle	6
7	Receptacle RM M104	20 A	1	1080 VA	360 VA					1	20 A	Receptacle RM M112 Overcounter	8
9	Receptacle RM M112	20 A	1			1080 VA	900 VA			1	20 A	Receptacle RM M115, M112	10
11	Receptacle RM M115	20 A	1					900 VA	900 VA	1	20 A	Receptacle RM M114C,M110	12
13	Receptacle RM M116, M117	20 A	1	720 VA	720 VA					1	20 A	Receptacle RM M104-GFCI	14
15	UH-12 RM M132	15 A	1			20 VA	720 VA			1	20 A	Receptacle RM M104	16
17	Space	--	--					0 VA	180 VA	1	20 A	ACCU-1 Receptacle	18
19				601 VA	601 VA								20
21	O/H Door RM M107	15 A	3			601 VA	601 VA			3	15 A	O/H Door RM M106	22
23								601 VA	601 VA				24
25	ACCU-1	25 A	2	2500 VA	860 VA					1	15 A	UH-11	26
27						2500 VA	60 VA			2	15 A	AC-1 RM M132	28
29	Receptacle AC-1 RM M132	20 A	1					180 VA	60 VA				30
31	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	32
33	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	34
35	Space	--	--					0 VA	0 VA	--	--	Space	36
37	Space	--	--	0 VA	0 VA					--	--	Space	38
39	Space	--	--			0 VA	0 VA			--	--	Space	40
41	Space	--	--					0 VA	0 VA	--	--	Space	42
		TOTAL...		9722 VA		9242 VA		5502 VA					
		TOTAL...		86 A		82 A		46 A					

LOCATION: PUMP ROOM M002
MOUNTING: Surface
SOURCE: T-1

PANEL ID
GL1

VOLTS, PHASE, WIRE: 120/208 Wye/3/4Wire
MAINS: 100A MCB
SHORT CIRCUIT RATING: 22K

CKT	LOAD DESCRIPTION	CB/ AMPS	P	A		B		C		P	CB/ AMPS	LOAD DESCRIPTION	CKT
1	Receptacle Elevator Pit Stair D	20 A	1	180 VA	180 VA					1	20 A	Receptacle Elevator Pit Stair A	2
3	Receptacle M006	20 A	1			900 VA	1260 VA			1	20 A	Recp. Employee Parking Rm M001-GFCI	4
5	Receptacle-M002 Pump RM-GFCI	20 A	1					900 VA	1260 VA	1	20 A	Receptacle-Vestibule M003	6
7	Recp. Employee Parking Rm M001-GFCI	20 A	1	1440 VA	1260 VA					1	20 A	Recp. Employee Parking Rm M001-GFCI	8
9	Receptacle-m004 Bike Storage	20 A	1			1080 VA	250 VA			1	15 A	UH-1 RM M002	10
11	Receptacle-MOO2 Pump RM-GFCI	20 A	1					1080 VA	1250 VA	1	15 A	UH-2 RM M002	12
13	CUH-5 Stair A	15 A	1	1209 VA	250 VA					1	15 A	CUH-6 STAIR D	14
15	SP-1 RM M002	20 A	1			1156 VA	1156 VA			1	20 A	SP-2 RM M002	16
17	Recp. Pit Light	20 A	1					180 VA	180 VA	1	20 A	Recp. Elevator Pit Light	18
19	UH-14 RM M002	15 A	1	250 VA	400 VA					1	20 A	Exterior Bell	20
21	Recp. Ground Flr Recp.-GFCI	20 A	1			720 VA	720 VA			1	20 A	Recp. GRound Flr Recp.-GFCI	22
23	CUH-7 Stair G	20 A	1					250 VA	250 VA	1	15 A	UH-15 RM M002	24
25	Visitor Vehicle Barrier Gate	20 A	1	1176 VA	1250 VA					1	20 A	UH-18	26
27	Recp. FC-1-Bike Storage	20 A	1			180 VA	0 VA			1	20 A	Spare	28
29	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	30
31	Space	--	--	0 VA	0 VA					--	--	Space	32
33	Space	--	--			0 VA	0 VA			--	--	Space	34
35	Space	--	--					0 VA	0 VA	--	--	Space	36
37	Space	--	--	0 VA	0 VA					--	--	Space	38
39	Space	--	--			0 VA	0 VA			--	--	Space	40
41	Space	--	--					0 VA	0 VA	--	--	Space	42
		TOTAL...		7595 VA		7422 VA		5350 VA					
		TOTAL...		66 A		65 A		45 A					

LOCATION: PUMP ROOM M002
MOUNTING: Surface
SOURCE: T-12

PANEL ID
GL2

VOLTS, PHASE, WIRE: 240/120 W/3/4Wire
MAINS: 200A MCB
SHORT CIRCUIT RATING: 42K

CKT	LOAD DESCRIPTION	CB/ AMPS	P	A		B		C		P	CB/ AMPS	LOAD DESCRIPTION	CKT
1	Electric Car Charger 1A	40 A	2	4 VA	4 VA					2	40 A	Electric Car Charger 1B	2
3						4 VA	4 VA						4
5	Electric Car Charger 2A	40 A	2					4 VA	4 VA	2	40 A	Electric Car Charger 2B	6
7				4 VA	4 VA								8
9	Space	--	--			0 VA	0 VA			--	--	Space	10
11	Space	--	--					0 VA	0 VA	--	--	Space	12
13	Space	--	--	0 VA	0 VA					--	--	Space	14
15	Space	--	--			0 VA	0 VA			--	--	Space	16
17	Space	--	--					0 VA	0 VA	--	--	Space	18
19	Space	--	--	0 VA	0 VA					--	--	Space	20
21	Space	--	--			0 VA	0 VA			--	--	Space	22
23	Space	--	--					0 VA	0 VA	--	--	Space	24
25	Space	--	--	0 VA	0 VA					--	--	Space	26
27	Space	--	--			0 VA	0 VA			--	--	Space	28
29	Space	--	--					0 VA	0 VA	--	--	Space	30
		TOTAL...		14 VA		7 VA		7 VA					
		TOTAL...		0 A		0 A		0 A					

NOTES:

REV.	DATE	DESCRIPTION	SHEET NO.
		REVISIONS	

FILENAME:

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

DESIGNER/DRAFTER: CJE
CHECKED BY: RB
SCALE:

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ARCHITECT: WENDEL
APPROVED BY: BPM
ENGINEERS: ReSTL DESIGNERS, CLOUGH HARBOUR ASSOC., AI ENGINEERS, WENDEL
DATE: 06/11/2014

DESIGNED BY:
CLOUGH HARBOUR & ASSOCIATES
2139 SILAS DEANE HIGHWAY
SUITE 212
ROCKY HILL, CT
06067-2336

STATE OF CONNECTICUT — BRUCE P. MUNROE — No. 21640 — LICENSED PROFESSIONAL ENGINEER

PROJECT TITLE:
WATERBURY BUS MAINTENANCE FACILITY REPLACEMENT

ADDRESS: FROST BRIDGE ROAD WATERTOWN, CONNECTICUT 06787

DRAWING TITLE:
ELECTRICAL PANELBOARD SCHEDULES

PROJECT NO. 431-0006
DRAWING NO. E-603
SHEET NO. 13.063

LOCATION: ELECTRICAL S113b
MOUNTING: Surface
SOURCE: MDP

PANEL ID
FBSH1

VOLTS, PHASE, WIRE: 480/277 Wye/3/4Wire
MAINS: 225A MCB
SHORT CIRCUIT RATING: 42K

CKT	LOAD DESCRIPTION	CB/ AMPS	P	A		B		C		P	CB/ AMPS	LOAD DESCRIPTION	CKT
1	Ltg. STAIR D	20 A	1	639 VA	1560 VA					1	20 A	Ltg RMM118,M117,M116,M115	2
3	Ltg Exterior underside of 2nd flr	20 A	1			278 VA	1118 VA			1	20 A	Ltg 2ND FLR	4
5	Ltg RM M103	20 A	1					1026 VA	2601 VA	1	20 A	Ltg RM M114c	6
7	Ltg RM S113	20 A	1	2640 VA	3160 VA					1	20 A	Ltg RM...	8
9	Ltg RM S113	20 A	1			2880 VA	3840 VA			1	20 A	Ltg RM M104 Bay 4,5,6,7	10
11	Ltg RM M112,M110,M109,M113,M114,M112c	20 A	1					2827 VA	3366 VA	1	20 A	Ltg RM S113	12
13	Ltg RM M105	20 A	1	1283 VA	3840 VA					1	20 A	Ltg RM S113	14
15	Ltg RM M104 Bays 1,2,3	20 A	1			3840 VA	4080 VA			1	20 A	Ltg RM M104 Bay 9,10,11,12	16
17	Ltg RM S113	20 A	1					3910 VA	1080 VA	1	20 A	Ltg RM M107, M132	18
19	Ltg RM M122,M121	20 A	1	4160 VA	6815 VA								20
21						3660 VA	3600 VA			3	100 A	FBSH1A	22
23	FBSH1B	100 A	3					8088 VA	6443 VA				24
25				7903 VA	0 VA					1	20 A	Ltg. First Flr South Exit Signs	26
27	Ltg	20 A	1			3296 VA	1594 VA			1	20 A	Ltg	28
29	BRIDGE LIGHTING	20 A	1					268 VA	1269 VA	1	20 A	Ltg A221A-A226,A213	30
31	Ltg. 1st Flr North Exit Signs	20 A	1	500 VA	480 VA					1	20 A	Ltg. Courtyard Hardrail	32
33						3852 VA	480 VA			1	20 A	Ltg. Courtyard Handrail	34
35	FBSH1C	100 A	3					2136 VA	2966 VA				36
37				0 VA	2794 VA					3	100 A	FBSH1D	38
39	Spare	20 A	1			0 VA	2932 VA						40
41	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	42
		TOTAL...		35774 VA		35450 VA		35980 VA					
		TOTAL...		129 A		128 A		130 A					

NOTES:

LOCATION: ELECTRICAL S113b
MOUNTING: Surface
SOURCE: MDP

PANEL ID
FBSH4

VOLTS, PHASE, WIRE: 480/277 Wye/3/4Wire
MAINS: 400A MCB
SHORT CIRCUIT RATING: 42K

CKT	LOAD DESCRIPTION	CB/ AMPS	P	A		B		C		P	CB/ AMPS	LOAD DESCRIPTION	CKT
1				8591 VA	1800 VA								2
3	Unit Shop Disconnect Parts Cleaner	50 A	3			8591 VA	1800 VA			3	20 A	AC-2	4
5								8591 VA	1800 VA				6
7				445 VA	450 VA								8
9	Unit Shop Disconnect Hydrolic Press	15 A	3			445 VA	450 VA			3	15 A	Unit Shop Disconnect Buffer/Grinder	10
11								445 VA	450 VA				12
13				1330 VA	3935 VA								14
15	Unit Shop Disconnect Portable Brake Lathe	25 A	3			1330 VA	3935 VA			3	20 A	Parts Shop Disconnect Automated Cabinet	16
17								1330 VA	3935 VA				18
19				2106 VA	2106 VA								20
21	Bay 3 Rotary Controller Disconnect	20 A	3			2106 VA	2106 VA			3	20 A	Bay 5 Rotary Lift Disconnect	22
23								2106 VA	2106 VA				24
25				2106 VA	2106 VA								26
27	Bay 6 Rotary Disconnect	20 A	3			2106 VA	2106 VA			3	20 A	Bay 8 Pit Rack	28
29								2106 VA	2106 VA				30
31				7485 VA	2106 VA								32
33	Bay 8 Rotary Lift Disconnect	50 A	3			7485 VA	2106 VA			3	20 A	Bay 7 Lift Controller	34
35								7485 VA	2106 VA				36
37	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	38
39	Spare	20 A	1			0 VA	0 VA			--	--	Space	40
41	Spare	20 A	1					0 VA	0 VA	--	--	Space	42
		TOTAL...		34566 VA		34566 VA		34566 VA					
		TOTAL...		125 A		125 A		125 A					

NOTES:

LOCATION: ELECTRICAL S113b
MOUNTING: Surface
SOURCE: FBSL2

PANEL ID
FBSL2A

VOLTS, PHASE, WIRE: 120/208 Wye/3/4Wire
MAINS: 125A MLO
SHORT CIRCUIT RATING: 22K

CKT	LOAD DESCRIPTION	CB/ AMPS	P	A		B		C		P	CB/ AMPS	LOAD DESCRIPTION	CKT
1				601 VA	360 VA					1	20 A	Recp. RM M122c	2
3	O/H Doors RM M116	15 A	3			601 VA	1800 VA			1	20 A	RM S105 Power Faucet	4
5								601 VA	1800 VA	1	20 A	Other	6
7	EXTERIOR BELL	20 A	1	200 VA	1200 VA					1	20 A	FACP	8
9	AC-13 RM S113B	15 A	2			60 VA	0 VA			--	--	Space	10
11								60 VA	0 VA	--	--	Space	12
13				603 VA	603 VA								14
15	O/H Door Bay 2	15 A	3			603 VA	603 VA			3	15 A	O/H Door Bay 5	16
17								603 VA	603 VA				18
19				603 VA	602 VA								20
21	O/H Door Bay 6	15 A	3			603 VA	602 VA			3	15 A	O/H Door Bay 8	22
23								603 VA	602 VA				24
25				603 VA	603 VA								26
27	O/H Door Bay 10	15 A	3			603 VA	603 VA			3	15 A	O/H Door Bay 12	28
29								603 VA	603 VA				30
31				600 VA	601 VA								32
33	O/H Door RM M115	15 A	3			600 VA	601 VA			3	15 A	O/H Door RM 116	34
35								600 VA	601 VA				36
37	Spare	20 A	1	0 VA	603 VA								38
39	Spare	20 A	1			0 VA	603 VA			3	15 A	O/H Door Bay 3	40
41	Space	--	--					0 VA	603 VA				42
		TOTAL...		7779 VA		7879 VA		7879 VA					
		TOTAL...		65 A		66 A		66 A					

NOTES:

LOCATION: ELECTRICAL S113b
MOUNTING: Surface
SOURCE: MDP

PANEL ID
FBSH2

VOLTS, PHASE, WIRE: 480/277 Wye/3/4Wire
MAINS: 1000A MCB
SHORT CIRCUIT RATING: 42K

CKT	LOAD DESCRIPTION	CB/ AMPS	P	A		B		C		P	CB/ AMPS	LOAD DESCRIPTION	CKT
1				62565 VA	2768 VA								2
3	T-8 225kVA RM S113b	350 A	3			68935 VA	2768 VA			3	20 A	RTU-10	4
5								68269 VA	2768 VA				6
7				2540 VA	11070 VA								8
9	MAU-1	20 A	3			2540 VA	11070 VA			3	70 A	RTU-9	10
11								2540 VA	11070 VA				12
13				11072 VA	20760 VA								14
15	RTU-11	50 A	3			11072 VA	20760 VA			3	125 A	RTU-8	16
17								11072 VA	20760 VA				18
19				20757 VA	20757 VA								20
21	RTU-2	100 A	3			20757 VA	20757 VA			3	100 A	RTU-5	22
23								20757 VA	20757 VA				24
25				19950 VA	0 VA					1	20 A	Spare	26
27	RTU-12	80 A	3			19950 VA	0 VA			1	20 A	Spare	28
29								19950 VA	0 VA	1	20 A	Spare	30
31	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	32
33	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	34
35	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	36
37	Spare	20 A	1	0 VA	0 VA					--	--	Space	38
39	Spare	20 A	1			0 VA	0 VA			--	--	Space	40
41	Spare	20 A	1					0 VA	0 VA	--	--	Space	42
		TOTAL...		172239 VA		178609 VA		177943 VA					
		TOTAL...		622 A		648 A		646 A					

NOTES:

LOCATION: ELECTRICAL S113b
MOUNTING: Surface
SOURCE: T-7

PANEL ID
FBSL1

VOLTS, PHASE, WIRE: 120/208 Wye/3/4Wire
MAINS: 100A MCB
SHORT CIRCUIT RATING: 22K

CKT	LOAD DESCRIPTION	CB/ AMPS	P	A		B		C		P	CB/ AMPS	LOAD DESCRIPTION	CKT
1	Receptacle RM M131 Dedicated Clng Mnt	20 A	1	180 VA	360 VA					1	20 A	Recp. RM M104	2
3	Receptacle Dedicated TV	20 A	1			180 VA	400 VA			1	20 A	Receptacle RM131 Dedicated Floor Mnt	4
5	Receptacle RM M103	20 A	1					900 VA	1080 VA	1	20 A	Receptacle RM M130,M129	6
7	Receptacle RM M127,M126,M125,M124	20 A	1	1260 VA									8
9	Receptacle RM M114C, Exterior	20 A	1			1260 VA	900 VA			1	20 A	Receptacle RM M114	10
11	Receptacle RM M122	20 A	1					540 VA	720 VA	1	20 A	Receptacle RM M104-GFCI	12
13	Receptacle RM 131	20 A	1	540 VA	540 VA					1	20 A	Bay 5,6,7 Recp. Column Computer-GFCI	14
15	Receptacle RM M119-GFCI	20 A	1			540 VA	720 VA			1	20 A	Receptacle RM M123	16
17	Receptacle RM 104-GFCI	20 A	1					540 VA	900 VA	1	20 A	Receptacle RM M121-GFCI	18
19	Receptacle RM M118-GFCI	20 A	1	900 VA	400 VA					1	20 A	Receptacle RM M131 Dedicated Flr Mnt	20
21	Receptacle RM M130-GFCI	20 A	1			900 VA	360 VA			1	20 A	Receptacle RM 131	22
23	Receptacle	20 A	1					540 VA	1440 VA	1	20 A	Receptacle RM 114A,M128,M127,M129A	24
25	Receptacle Dedicated TV	20 A	1	180 VA	180 VA					1	20 A	Receptacle Fridge	26
27	Receptacle Counter	20 A	1			180 VA	180 VA			1	20 A	Recptacle-Microwave	28
29	Receptacle RM M122	20 A	1					720 VA	1080 VA	1	20 A	Receptacle RM M102, M114B	30
31	Receptacle RM C1,S113C,S113B,	20 A	1	900 VA	720 VA					1	20 A	Receptacle RM S113C	32
33	Receptacle RM S113B	20 A	1			540 VA	720 VA			1	20 A	Recp.	34
35	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	36
37	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	38
39	Space	--	--			0 VA	0 VA			--	--	Space	40
41	Space	--	--					0 VA	0 VA	--	--	Space	42
		TOTAL...		6520 VA		6880 VA		8460 VA					
		TOTAL...		54 A		58 A		71 A					

NOTES:

LOCATION: ELECTRICAL S113b
MOUNTING: Surface
SOURCE: FBSL2

PANEL ID
FBSL2B

VOLTS, PHASE, WIRE: 120/208 Wye/3/4Wire
MAINS: 100A MLO
SHORT CIRCUIT RATING: 22K

CKT	LOAD DESCRIPTION	CB/ AMPS	P	A		B		C		P	CB/ AMPS	LOAD DESCRIPTION	CKT
1				601 VA	255 VA								
3	O/H Door RM M105	15 A	3			601 VA	250 VA			2	15 A	Clerstory Window Operators	2
5								601 VA	255 VA				4
7	Clerstory Window Operators	15 A	2	253 VA	250 VA					2	15 A	Clerstory Window Operators	6
9						250 VA	255 VA						8
11	Clerstory Window Operators	15 A	2					508 VA	250 VA	2	15 A	Clerstory Window Operators	10
13				500 VA	254 VA								12
15	Clerstory Window Operators	15 A	2			253 VA	250 VA			2	15 A	Clerstory Window Operators	14
17								250 VA	253 VA				16
19	Clerstory Window Operators	15 A	2	255 VA	250 VA					2	15 A	Clerstory Window Operators	18
21						250 VA	255 VA						20
23	Clerstory Window Operators	15 A	2					255 VA	250 VA	2	15 A	Clerstory Window Operators	22
25				250 VA	254 VA								24
27	Clerstory Window Operators	15 A	2			253 VA	250 VA			2	15 A	Clerstory Window Operators	26
29								250 VA	254 VA				28
31	Space	--	--	0 VA	250 VA					2	15 A	Clerstory Window Operators	30
33	Space	--	--			0 VA	2450 VA						32
35	Space	--	--					0 VA	2450 VA	2	30 A	Elevator Controls Area E	34
37	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	36
39	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	38
41	Space	--	--					0 VA	0 VA	--	--	Space	40
		TOTAL...		3372 VA		5317 VA		5576 VA					42
		TOTAL...		28 A		47 A		49 A					

NOTES:

LOCATION: ELECTRICAL S113b
MOUNTING: Surface
SOURCE: MDP

PANEL ID
FBSH3

VOLTS, PHASE, WIRE: 480/277 Wye/3/4Wire
MAINS: 800A MCB
SHORT CIRCUIT RATING: 42K

CKT	LOAD DESCRIPTION	CB/ AMPS	P	A		B		C		P	CB/ AMPS	LOAD DESCRIPTION	CKT
1	Ltg. Plt 9	20 A	1	1258 VA	62410 VA								2
3						6520 VA	66758 VA			3	225 A	T-9 150kVA RM S113B	4
5	T-7 RM S113b	50 A	3					6880 VA	68208 VA				6
7				8460 VA	835 VA								8
9						835 VA	835 VA			3	15 A	OHD-1	10
11	OHD-2	15 A	3					835 VA	835 VA				12
13				835 VA	6667 VA								14
15						6667 VA	6667 VA			3	30 A	EWH-5 RM M128	16
17	EWH-3 RM M129	30 A	3					6667 VA	6667 VA				18
19				6667 VA	20757 VA								20
21						26333 VA	20757 VA			3	100 A	RTU-3	22
23	EWH-7 BY RM M114	125 A	3					26333 VA	20757 VA				24
25				26333 VA	26333 VA								26
27						19950 VA	26333 VA			3	125 A	EWH-7 RM M112	28
29	RTU-13	80 A	3					19950 VA	26333 VA				30
31				19950 VA	10530 VA								32
33						10530 VA	10530 VA			3	50 A	EWH-6 M129a	34
35	EWH-6 M126	60 A	3					10530 VA	10530 VA				36
37				10530 VA	10000 VA					1	50 A	EWH-1 M101	38
39	EWH-2 M129	40 A	1			8000 VA	8000 VA			1	40 A	EWH-2 M128	40
41	Spare	20 A	1					0 VA	0 VA	--	--	Space	42
		TOTAL...		211565 VA		218715 VA		204525 VA					
		TOTAL...		768 A		794 A		738 A					

NOTES:

LOCATION: ELECTRICAL S113b
MOUNTING: Surface
SOURCE: T-8

PANEL ID
FBSL2

VOLTS, PHASE, WIRE: 120/208 Wye/3/4Wire
MAINS: 800A MCB
SHORT CIRCUIT RATING: 22K

CKT	LOAD DESCRIPTION	CB/ AMPS	P	A		B		C		P	CB/ AMPS	LOAD DESCRIPTION	CKT
1				3372 VA	601 VA								2
3	FBSL2B	100 A	3			5317 VA	601 VA			3	15 A	O/H Door Bay 11	4
5								5576 VA	601 VA				6
7				601 VA	603 VA								8
9	O/H Door Bus Storage	15 A	3			601 VA	603 VA			3	15 A	O/H Door Bay 1	10
11								601 VA	603 VA				12
13				603 VA	601 VA								14
15	O/H Door Bay 4	15 A	3			603 VA	601 VA			3	15 A	O/H Door Rm M103	16
17								603 VA	601 VA				18
19				603 VA	12685 VA								20
21	O/H Door Bat 7	15 A	3			603 VA	12865 VA			3	150 A	FBSL2F	22
23								603 VA	9675 VA				24
25				603 VA	5775 VA								26
27	O/H Door Bay 9	15 A	3			603 VA	10375 VA			3	125 A	FBSL2G	28
29								603 VA	8625 VA				30
31				7779 VA	4612 VA								32
33	FBSL2A	125 A	3			7879 VA	5160 VA			3	200 A	FBSL2C	34
35								7879 VA	4680 VA				36
37				2145 VA	14400 VA								38
39	FBSL2D	100 A	3			3070 VA	10440 VA			3	200 A	FBSL2E	40
41								3785 VA	13960 VA				42
43				7225 VA	180 VA					1	20 A	RTU-13 Receptacle	44
45	FBSL2H	125 A	3			9435 VA	180 VA			1	20 A	MAU-1 Receptacle	46
47								9875 VA	0 VA				48
49	Recp. RTU-11	20 A	1	180 VA	0 VA					3	15 A	O/H Door Bus Storage	50
51	Spare	20 A	1			0 VA	0 VA						52
53	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	54
55	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	56
57	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	58
59	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	60
61	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	62
63	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	64
65	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	66
67	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	68
69	Spare	20 A	1			0 VA	0 VA			--	--	Space	70
71	Space	--	--					0 VA	0 VA	--	--	Space	72
73	Space	--	--	0 VA	0 VA					--	--	Space	74
75	Space	--	--			0 VA	0 VA			--	--	Space	76
77	Space	--	--					0 VA	0 VA	--	--	Space	78
79	Space	--	--	0 VA	0 VA					--	--	Space	80
		TOTAL...		62567 VA		68935 VA		68269 VA					
		TOTAL...		521 A		582 A		576 A					

NOTES:

LOCATION: ELECTRICAL S113b
MOUNTING: Surface
SOURCE: FBSL2

PANEL ID
FBSL2C

VOLTS, PHASE, WIRE: 120/208 Wye/3/4Wire
MAINS: 200A MLO
SHORT CIRCUIT RATING: 22K

CKT	LOAD DESCRIPTION	CB/ AMPS	P	A		B		C		P	CB/ AMPS	LOAD DESCRIPTION	CKT
1	UH-13 RM S113B	15 A	1	20 VA	180 VA					1	20 A	Recep. Dedicated Fork Lift	2
3	Power to Toilets RM M128	20 A	1			400 VA	1250 VA			1	15 A	UH-6 RM M121	4
5	UH-8 RM M118	15 A	1					20 VA	700 VA	1	15 A	EF-15	6
7	CUH-4 Stair D	15 A	1	250 VA	1200 VA					1	20 A	TCP PANEL BOILER RM	8
9	Hand Dryer RM M129	20 A	1			1500 VA	200 VA			1	15 A	Recp. RTU-10	10
11	Power to Faucets RM M110	20 A	1					2450 VA	0 VA	--	--	Space	12
13	Hand Dryer M128	20 A	1	1500 VA	200 VA					1	20 A	Recp.	14
15	Power to Toilets RM M128	20 A	1			200 VA	250 VA			1	15 A	UH-7 RM M117	16
17	Recp. RTU-9	20 A	1					200 VA	200 VA	1	20 A	Power to Faucets RM M128	18
19	Power to Toilets RM M110	20 A	1	200 VA	250 VA					1	15 A	UH-5 RM M123	20
21	UH-3 BOILER RM	20 A	1			860 VA	500 VA			1	20 A	RTU-10 HEAT TRACE	22
23	UH-9 RM M116	15 A	1					250 VA	860 VA	1	15 A	UH-4 BOILER RM	24
25	UH-10	15 A	1	860 VA	0 VA					1	20 A	Spare	26
27	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	28
29	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	30
31	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	32
33	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	34
35	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	36
37	Space	--	--	0 VA	0 VA					--	--	Space	38
39	Space	--	--			0 VA	0 VA			--	--	Space	40
41	Space	--	--					0 VA	0 VA	--	--	Space	42
		TOTAL...		4660 VA		5160 VA		4680 VA					
		TOTAL...		39 A		43 A		39 A					

NOTES:

REV.	DATE	DESCRIPTION	SHEET NO.
		REVISIONS	

FILENAME:

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

DESIGNER/DRAFTER: CJE
CHECKED BY: RB
SCALE:

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ARCHITECT: WENDEL
APPROVED BY: BPM
ENGINEERS: ReSTL DESIGNERS, CLOUGH HARBOUR ASSOC., AI ENGINEERS, WENDEL
DATE: 06/11/2014

DESIGNED BY:
CLOUGH HARBOUR & ASSOCIATES
2139 SILAS DEANE HIGHWAY
SUITE 212
ROCKY HILL, CT
06067-2336

STATE OF CONNECTICUT — BRIAN P. MCKENNA — No. 21640 — LICENSED PROFESSIONAL ENGINEER

PROJECT TITLE:
WATERBURY BUS MAINTENANCE FACILITY REPLACEMENT

ADDRESS:
FROST BRIDGE ROAD
WATERTOWN, CONNECTICUT 06787

DRAWING TITLE:
ELECTRICAL PANELBOARD SCHEDULES

PROJECT NO. 431-0006
DRAWING NO. E-604
SHEET NO. 13.064

LOCATION: ELECTRICAL S113b
MOUNTING: Surface
SOURCE: FBSL2

PANEL ID
FBSL2D

VOLTS, PHASE, WIRE: 120/208 Wye/3/4Wire
MAINS: 200A MLO
SHORT CIRCUIT RATING: 22K

CKT	LOAD DESCRIPTION	CB/ AMPS	P	A		B		C		P	CB/ AMPS	LOAD DESCRIPTION	CKT
1	Recp. Pit 8	20 A	1	180 VA	360 VA					1	20 A	Recp. Pit 8	2
3	Recep. PIT 8	20 A	1			180 VA	180 VA			1	20 A	Recp. Pit 8	4
5	Recp. Pit 9	20 A	1					720 VA	540 VA	1	20 A	Recp. Pit 9	6
7	Recp. RM M130 Dedicated	20 A	1	180 VA	50 VA					2	15 A	AC-6 RM C1	8
9	Recp. Pit 9	20 A	1			540 VA	50 VA						10
11	Recp. Pit 9	20 A	1					720 VA	100 VA	1	20 A	RZ-4	12
13	RZ-5	20 A	1	100 VA	100 VA					1	20 A	RZ-6	14
15	AC-7 RM M112C	15 A	2			60 VA	100 VA			1	20 A	RZ-7	16
17								60 VA	100 VA	1	20 A	RZ-8	18
19	RZ-9	20 A	1	100 VA	100 VA					1	20 A	RZ-1 PIT 8	20
21	RZ-3 PIT 9	20 A	1			100 VA	100 VA			1	20 A	RZ-11	22
23	Bay 7,8,9 Recp. Column Computer-GFCI	20 A	1					720 VA	100 VA	1	20 A	RX-2 PIT 9	24
25	RZ-10	20 A	1	100 VA	0 VA					1	20 A	Spare	26
27	RB-6 Pit 9	20 A	1			500 VA	0 VA			1	20 A	Spare	28
29	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	30
31	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	32
33	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	34
35	RZ-11	20 A	1					100 VA	625 VA	2	20 A	HP-3 RM M114	36
37	UH-16 RM M114c	15 A	1	250 VA	625 VA								38
39	Receptacle RM M109	20 A	1			900 VA	360 VA			1	20 A	Recp. RM M112C	40
41	Space	--	--					0 VA	0 VA	--	--	Space	42
		TOTAL...		2145 VA		3070 VA		3785 VA					
		TOTAL...		18 A		27 A		33 A					

NOTES:

LOCATION: ELECTRICAL S106
MOUNTING: Surface
SOURCE: MDP

PANEL ID
FBWH2

VOLTS, PHASE, WIRE: 480/277 Wye/3/4Wire
MAINS: 600A MCB
SHORT CIRCUIT RATING: 42K

CKT	LOAD DESCRIPTION	CB/ AMPS	P	A		B		C		P	CB/ AMPS	LOAD DESCRIPTION	CKT
1				14792 VA	1800 VA								2
3	T-4 75 kVA RM S106	125 A	3			14737 VA	1800 VA			3	20 A	AC-1 Bus Wash	4
5								15614 VA	1800 VA				6
7				10530 VA	14670 VA								8
9	EWH-6 RM S104	50 A	3			10530 VA	14670 VA			3	100 A	RTU-7	10
11								10530 VA	14670 VA				12
13				20757 VA	20757 VA								14
15	RTU-4	100 A	3			20757 VA	20757 VA			3	100 A	RTU-6	16
17								20757 VA	20757 VA				18
19	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	20
21	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	22
23	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	24
25	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	26
27	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	28
29	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	30
31	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	32
33	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	34
35	Space	--	--					0 VA	0 VA	--	--	Space	36
37	Space	--	--	0 VA	0 VA					--	--	Space	38
39	Space	--	--			0 VA	0 VA			--	--	Space	40
41	Space	--	--					0 VA	0 VA	--	--	Space	42
		TOTAL...		83306 VA		83251 VA		84128 VA					
		TOTAL...		301 A		301 A		304 A					

NOTES:

LOCATION: ELECTRICAL S106
MOUNTING: Surface
SOURCE: T-3

PANEL ID
FBWL1

VOLTS, PHASE, WIRE: 120/208 Wye/3/4Wire
MAINS: 225A MCB
SHORT CIRCUIT RATING: 22K

CKT	LOAD DESCRIPTION	CB/ AMPS	P	A		B		C		P	CB/ AMPS	LOAD DESCRIPTION	CKT
1	Receptacle	20 A	1	900 VA	1260 VA					1	20 A	Receptacle Bus Wash RM S111 & S112	2
3	Receptacle RM S101	20 A	1			720 VA	720 VA			1	20 A	Receptacle RM S106, S114,S105	4
5	Receptacle RMS107	20 A	1					720 VA	1080 VA	1	20 A	Receptacle Bus Storage RM S113-GFCI	6
7	Receptacle Bus Storage RM S113	20 A	1	1260 VA	7755 VA					3	100 A	FBWL1A	8
9	Receptacle Bus Storage RM S113	20 A	1			1260 VA	8514 VA						10
11	Receptacle RM S103	20 A	1					1260 VA	2367 VA				12
13				540 VA						1	20 A	Receptacle RM S102	14
15	Receptacle Bus Storage RM S113	20 A	1			1260 VA	540 VA			1	20 A	Receptacle Bus Storage RM S113	16
17	Receptacle	20 A	1					720 VA	720 VA	1	20 A	Receptacle RM S019	18
19	Receptacle RM S108	20 A	1	720 VA	540 VA					1	20 A	Receptacle RM S108	20
21	Receptacle RM S108	20 A	1			720 VA	601 VA						22
23	O/H Door RM S103	20 A	3					600 VA	601 VA	3	15 A	O/H Door Bus Wash	24
25				600 VA	601 VA								26
27						600 VA	1202 VA						28
29	O/H Door Bus Wash	15 A	3					601 VA	1202 VA	3	15 A	O/H Door Bus Wash	30
31				601 VA	1202 VA								32
33						601 VA	0 VA			1	20 A	Spare	34
35	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	36
37	Spare	20 A	1	0 VA	0 VA					--	--	Space	38
39	Space	--	--			0 VA	0 VA			--	--	Space	40
41	Space	--	--					0 VA	0 VA	--	--	Space	42
		TOTAL...		15979 VA		16738 VA		9871 VA					
		TOTAL...		141 A		147 A		82 A					

NOTES:

LOCATION: ELECTRICAL S113b
MOUNTING: Surface
SOURCE: T-9

PANEL ID
FBSL3

VOLTS, PHASE, WIRE: 120/208 Wye/3/4Wire
MAINS: 600A MCB
SHORT CIRCUIT RATING: 22K

CKT	LOAD DESCRIPTION	CB/ AMPS	P	A		B		C		P	CB/ AMPS	LOAD DESCRIPTION	CKT
1	EF-14	15 A	1	6 VA	200 VA					1	20 A	Recp. RTU-3	2
3	EF-10 Receptacle	20 A	1			180 VA	180 VA			1	20 A	ACCU-3 Receptacle	4
5	EF-16 Receptacle	20 A	1					180 VA	180 VA	1	20 A	ACCU-7 Receptacle	6
7	AC-8 RM B1	15 A	2	60 VA	60 VA					2	15 A	RM s113B AC-14	8
9						60 VA	60 VA						10
11	ACCU-12	25 A	2					2500 VA	21265 VA	3	100 A	FBSL2K	12
13				2500 VA	22357 VA								14
15	FBSL3A	250 A	3			29749 VA	19229 VA						16
17								26783 VA	200 VA	1	20 A	Recp. RTU-8	18
19				19567 VA	180 VA					1	20 A	ACCU-8 Receptacle	20
21	Recp. RTU-5	20 A	1			200 VA	0 VA			--	--	Space	22
23	Spare	20 A	1					0 VA	0 VA	--	--	Space	24
25	Spare	20 A	1	0 VA	180 VA					1	20 A	ACCU-18 Receptacle	26
27	EF-8	15 A	1			700 VA	700 VA			1	15 A	EF-5	28
29	EF-9	15 A	1					700 VA	700 VA	1	15 A	EF-6	30
31	Recp. RTU-4	20 A	1	200 VA	700 VA					1	15 A	EF-7	32
33	EF-3	15 A	1			700 VA	2500 VA			2	25 A	ACCU-8	34
35	EF-3	15 A	1					700 VA	2500 VA				36
37	EF-4	15 A	1	700 VA	700 VA					1	15 A	EF-10	38
39	ACCU-2	25 A	2			2500 VA							40
41								2500 VA	2500 VA				42
43	ACCU-7	25 A	2	2500 VA	2500 VA					2	30 A	ACCU-9	44
45						2500 VA	0 VA			--	--	Space	46
47	Space	--	--					0 VA	2500 VA	2	24 A	ACCU-3	48
49	ACCU-19	30 A	2	2500 VA	2500 VA								50
51						2500 VA	2500 VA			2	25 A	ACCU-15	52
53	Space	--	--					0 VA	2500 VA				54
55	ACCU-13	25 A	2	2500 VA	0 VA					1	20 A	Spare	56
57						2500 VA	0 VA			1	20 A	Spare	58
59	ACCU-18	25 A	2					2500 VA	0 VA	1	20 A	Spare	60
61				2500 VA	0 VA					1	20 A	Spare	62
63	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	64
65	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	66
67	Space	--	--	0 VA	0 VA					--	--	Space	68
69	Space	--	--			0 VA	0 VA			--	--	Space	70
71	Space	--	--					0 VA	0 VA	--	--	Space	72
73	Space	--	--	0 VA	0 VA					--	--	Space	74
75	Space	--	--			0 VA	0 VA			--	--	Space	76
77	Space	--	--					0 VA	0 VA	--	--	Space	78
79	Space	--	--	0 VA	0 VA					--	--	Space	80
		TOTAL...		62410 VA		66758 VA		68208 VA					
		TOTAL...		520 A		562 A		574 A					

NOTES:

LOCATION: WASH EQUIPMENT ROOM S103
MOUNTING: Surface
SOURCE: MDP

PANEL ID
FBWH3

VOLTS, PHASE, WIRE: 480/277 Wye/3/4Wire
MAINS: 400A MCB
SHORT CIRCUIT RATING: 42K

CKT	LOAD DESCRIPTION	CB/ AMPS	P	A		B		C		P	CB/ AMPS	LOAD DESCRIPTION	CKT
1				6100 VA	20800 VA								2
3	RM S103 WCP 1 LANE 1	30 A	3			6100 VA	20800 VA			3	60 A	RM S103 PCP 1 LANE 1	4
5								6100 VA	20800 VA				6
7				6100 VA	20800 VA								8
9	RM S103 WCP 2 LANE 2	20 A	3			6100 VA	20800 VA			3	150 A	RM S103 PCP 2 LANE 2	10
11								6100 VA	20800 VA				12
13	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	14
15	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	16
17	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	18
19	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	20
21	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	22
23	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	24
25	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	26
27	Space	--	--			0 VA	0 VA			1	20 A	Spare	28
29	Space	--	--					0 VA	0 VA	--	--	Space	30
31	Space	--	--	0 VA	0 VA					--	--	Space	32
33	Space	--	--			0 VA	0 VA			--	--	Space	34
35	Space	--	--					0 VA	0 VA	--	--	Space	36
37	Space	--	--	0 VA	0 VA					--	--	Space	38
39	Space	--	--			0 VA	0 VA			--	--	Space	40
41	Space	--	--					0 VA	0 VA	--	--	Space	42
		TOTAL...		53800 VA		53800 VA		53800 VA					
		TOTAL...		194 A		194 A		194 A					

NOTES:PANEL SHALL HAVE NEMA 4X ENCLOSURE

LOCATION: ELECTRICAL S106
MOUNTING: Surface
SOURCE: FBWL1

PANEL ID
FBWL1A

VOLTS, PHASE, WIRE: 120/208 Wye/3/4Wire
MAINS: 100A MLO
SHORT CIRCUIT RATING: 22K

CKT	LOAD DESCRIPTION	CB/ AMPS	P	A		B		C		P	CB/ AMPS	LOAD DESCRIPTION	CKT
1	CUH-3 Stair G	15 A	1	250 VA	601 VA								2
3	AC-10 RM S106	15 A	2			60 VA	601 VA			3	15 A	O/H Door Bus Storage	4
5								60 VA	601 VA				6
7				601 VA	60 VA					2	15 A	AC-11 RM S100	8
9	O/H DOOR Bus Storage	15 A	3			601 VA	60 VA						10
11								601 VA	250 VA	1	15 A	CUH-2 Stair R	12
13	Bus Storage Vacuum System	20 A	1	1296 VA	1296 VA					1	20 A	Bus Storage Vacuum System	14
15	Bus Storage Vacuum System	20 A	1			1296 VA	1296 VA			1	20 A	Bus Storage Vacuum System	16
17	RM S111 RB-7	20 A	1					200 VA	200 VA	1	20 A	RM S111 RB-2	18
19	RM S111 RB-9	20 A	1	200 VA	200 VA					1	20 A	RM S111 RB-1	20
21	RM S111 RB-1	20 A	1			200 VA	200 VA			1	20 A	RM S111 RB-2	22
23	RM S111 RB-9	20 A	1					200 VA	200 VA	1	20 A	RM S111 RB-7	24
25	RM S103 WASH EQUIP. OZ	20 A	1	1650 VA	1650 VA					1	20 A	RM S103 WASH EQUIP. OZ	26
27	HP-1 RM S107	20 A	2			4150 VA	50 VA			2	20 A	HP-2 RM S108	28
29								50 VA	50 VA				30
31	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	32
33	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	34
35	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	36
37	Space	--	--	0 VA	0 VA					--	--	Space	38
39	Space	--	--			0 VA	0 VA			--	--	Space	40
41	Space	--	--					0 VA	0 VA	--	--	Space	42
		TOTAL...		7804 VA		8514 VA		2412 VA					
		TOTAL...		72 A		78 A		20 A					

NOTES:

LOCATION: ELECTRICAL S106
MOUNTING: Surface
SOURCE: MDP

PANEL ID
FBWH1

VOLTS, PHASE, WIRE: 480/277 Wye/3/4Wire
MAINS: 400A MCB
SHORT CIRCUIT RATING: 42K

CKT	LOAD DESCRIPTION	CB/ AMPS	P	A		B		C		P	CB/ AMPS	LOAD DESCRIPTION	CKT
1	EWH-4 S105	20 A	1	4100 VA	0 VA					1	20 A	Spare	2
3	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	4
5	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	6
7	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	8
9	Spare	20 A	1			0 VA	15979 VA						10
11								835 VA	16738 VA	3	125 A	T-3 75kVA RM S106	12
13	ODH-3	15 A	3	835 VA	9867 VA								14
15						835 VA	835 VA						16
17								20757 VA	835 VA	3	15 A	ODH-4	18
19	RTU-1	100 A	3	20757 VA	835 VA								20
21						20757 VA	26333 VA						22
23	Spare	20 A	1					0 VA	26333 VA	3	125 A	EWH-7 in Bus Wash	24
25	Spare	20 A	1	0 VA	26333 VA								26
27	Spare	20 A	1			0 VA	0 VA			--	--	Space	28
29	Spare	20 A	1					0 VA	0 VA	--	--	Space	30
31	Spare	20 A	1	0 VA	0 VA					--	--	Space	32
33	Spare	20 A	1			0 VA	0 VA			--	--	Space	34
35	Space	--	--					0 VA	0 VA	--	--	Space	36
37	Space	--	--	0 VA	0 VA					--	--	Space	38
39	Space	--	--			0 VA	0 VA			--	--	Space	40
41	Space	--	--					0 VA	0 VA	--	--	Space	42
		TOTAL...		62727 VA		64739 VA		65498 VA					
		TOTAL...		226 A		235 A		238 A					

NOTES:

LOCATION: ELECTRICAL S106
MOUNTING: Surface
SOURCE: T-4

PANEL ID
FBWL2

VOLTS, PHASE, WIRE: 120/208 Wye/3/4Wire
MAINS: 225A MCB
SHORT CIRCUIT RATING: 22K

CKT	LOAD DESCRIPTION	CB/ AMPS	P	A		B		C		P	CB/ AMPS	LOAD DESCRIPTION	CKT
1				720 VA	601 VA								2
3	FBWL2A	100 A	3			540 VA	601 VA			3	15 A	O/H Door S109	4
5								540 VA	601 VA				6
7	Recp. RM S100	20 A	1	360 VA	200 VA					1	20 A	Recp. RTU-2	8
9	ACCU-10	40 A	2			2500 VA	200 VA			1	20 A	Recp. RTU-1	10
11								2500 VA	700 VA	1	15 A	EF-11 Roof	12
13	ACCU-17	30 A	2	2500 VA	2500 VA					2	30 A	ACCU-16	14
15						2500 VA	2500 VA						16
17	ACCU-11	25 A	2					2500 VA	180 VA	1	20 A	Recp. RTU-7	18
19				2500 VA	200 VA					1	20 A	Recp. RTU-6	20
21						601 VA	400 VA			1	20 A	EXTERIOR BELL	22
23	O/H Door RM S102	15 A	3					601 VA	200 VA	1	20 A	EXTERIOR BELL	24
25				601 VA	250 VA								26
27	Fire Protection Controller	20 A	1			800 VA	250 VA			2	20 A	RM S105 TOILETS	28
29								7432 VA	360 VA	1	20 A	Receptacle S100 COMM RM	30
31	FBWL4	100 A	3	4000 VA	360 VA					1	20 A	Recp. RM S100 Comm Closet	32
33						3844 VA	1 VA			1	20 A	RTU-7 Heat Trace	34
35	Spare	20 A	1					0 VA	0 VA	1	0 A	Spare	36
37	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	38
39	Space	--	--			0 VA	0 VA			--	--	Space	40
41	Space	--	--					0 VA	0 VA	--	--	Space	42
		TOTAL...		14792 VA		14737 VA		15614 VA					
		TOTAL...		123 A		123 A		130 A					

NOTES:

REV.	DATE	DESCRIPTION	SHEET NO.
		REVISIONS	

FILENAME:

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

DESIGNER/DRAFTER: CJE
CHECKED BY: RB
SCALE:

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ARCHITECT: WENDEL
APPROVED BY: BPM
ENGINEERS: ReSTL DESIGNERS, CLOUGH HARBOUR ASSOC., AI ENGINEERS, WENDEL
DATE: 06/11/2014

DESIGNED BY:
CLOUGH HARBOUR & ASSOCIATES
2139 SILAS DEANE HIGHWAY
SUITE 212
ROCKY HILL, CT
06067-2336

STATE OF CONNECTICUT · BRIAN P. McKENNA · No. 21640 · LICENSED PROFESSIONAL ENGINEER

PROJECT TITLE:
WATERBURY BUS MAINTENANCE FACILITY REPLACEMENT

ADDRESS: FROST BRIDGE ROAD WATERTOWN, CONNECTICUT 06787

DRAWING TITLE:
ELECTRICAL PANELBOARD SCHEDULES

PROJECT NO. 431-0006
DRAWING NO. E-605
SHEET NO. 13.065

LOCATION: ELECTRICAL S106
MOUNTING: Surface
SOURCE: FBWL2

PANEL ID
FBWL2A

VOLTS, PHASE, WIRE: 120/208 Wye/3/4Wire
MAINS: 100A MLO
SHORT CIRCUIT RATING: 22K

CKT	LOAD DESCRIPTION	CB/ AMPS	P	A		B		C		P	CB/ AMPS	LOAD DESCRIPTION	CKT
1	ACCU-10 Receptacle	20 A	1	180 VA	180 VA					1	20 A	ACCU-11 Receptacle	2
3	ACCU-17 Receptacle	20 A	1			180 VA	360 VA			1	20 A	Recp. RM S100 Comm Closet	4
5	Recp. RM S100 Comm Closet	20 A	1					360 VA	180 VA	1	20 A	Recp. AC-11 rm S100	6
7	ACCU-16 Receptacle	20 A	1	180 VA	180 VA					1	20 A	Recp. AC-10 RM S106	8
9							0 VA			1	20 A	Spare	10
11									0 VA	1	20 A	Spare	12
13	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	14
15	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	16
17	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	18
19	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	20
21	Space	--	--			0 VA	0 VA			--	--	Space	22
23	Space	--	--					0 VA	0 VA	--	--	Space	24
25	Space	--	--	0 VA	0 VA					--	--	Space	26
27	Space	--	--			0 VA	0 VA			--	--	Space	28
29	Space	--	--					0 VA	0 VA	--	--	Space	30
31	Space	--	--	0 VA	0 VA					--	--	Space	32
33	Space	--	--			0 VA	0 VA			--	--	Space	34
35	Space	--	--					0 VA	0 VA	--	--	Space	36
37	Space	--	--	0 VA	0 VA					--	--	Space	38
39	Space	--	--			0 VA	0 VA			--	--	Space	40
41	Space	--	--					0 VA	0 VA	--	--	Space	42
		TOTAL...		720 VA		540 VA		540 VA					
		TOTAL...		6 A		5 A		5 A					

NOTES:

LOCATION: ELECTRICAL S106
MOUNTING: Surface
SOURCE: FBWL2

PANEL ID
FBWL4

VOLTS, PHASE, WIRE: 120/208 Wye/3/4Wire
MAINS: 100A MLO
SHORT CIRCUIT RATING: 22K

CKT	LOAD DESCRIPTION	CB/ AMPS	P	A		B		C		P	CB/ AMPS	LOAD DESCRIPTION	CKT
1	Diesel Fuel Meter Lane 2	20 A	1	500 VA	500 VA					1	20 A	RIH Fueling Lane 2	2
3	RIH Service lane	20 A	1			500 VA	1000 VA			1	20 A	Diesel Fuel Dispenser Lane 2	4
5	Diesel Fuel Meter Lane 1	20 A	1					500 VA	200 VA	1	20 A	RIH Lane 1	6
7	RIH Service Lane	20 A	1	500 VA	1000 VA					1	20 A	8072 Service Lane	8
9	Diesel Fuel Dispenser Lane 1	20 A	1			1000 VA	500 VA			1	20 A	Other	10
11	Diesel Fuel Pump Control Box	20 A	2					1144 VA	500 VA	1	20 A	RM S110 Relay for Solenoid	12
13				1144 VA	500 VA					2	20 A	Gasoline Sub. Pump RM S110	14
15	Relay at Gasoline Pumps	20 A	1			500 VA	0 VA						16
17	Veeder Rt ALarm RM S110	20 A	1					250 VA	250 VA	1	20 A	Veeder RT Acknowledgement RM S110	18
19	Submersible Pump Controller	20 A	1	1144 VA	1144 VA					1	20 A	Relay Diesel Tank #2 RM M107	20
21	Space	--	--			0 VA	500 VA			1	20 A	Exterior Veeder RT Panel at Tanks	22
23	Gas Canopy RIH	20 A	1					500 VA	500 VA	1	20 A	Gas Canopy Dispensing	24
25	Gas Canopy Dispensing	20 A	1	500 VA	500 VA					1	20 A	Gas Canopy Veeder RT Panel	26
27	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	28
29	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	30
31	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	32
33	Spare	20 A	1			0 VA	0 VA			--	--	Space	34
35	Spare	20 A	1					0 VA	0 VA	--	--	Space	36
37	Space	--	--	0 VA	0 VA					--	--	Space	38
39	Space	--	--			0 VA	0 VA			--	--	Space	40
41	Space	--	--					0 VA	0 VA	--	--	Space	42
		TOTAL...		7432 VA		4000 VA		3844 VA					
		TOTAL...		62 A		34 A		32 A					

NOTES:

LOCATION: ELECTRICAL S113b
MOUNTING: Surface
SOURCE: FBSL2

PANEL ID
FBSL2G

VOLTS, PHASE, WIRE: 120/208 Wye/3/4Wire
MAINS: 125A MLO
SHORT CIRCUIT RATING: 22K

CKT	LOAD DESCRIPTION	CB/ AMPS	P	A		B		C		P	CB/ AMPS	LOAD DESCRIPTION	CKT
1	Bay 4 5-20R Column	20 A	1	150 VA	200 VA					1	20 A	Bay 4 RB-3	2
3	Bay 4 RB-4	20 A	1			200 VA	625 VA						4
5	Bay 4 Quad Recp. Column-GFCI	20 A	1					800 VA	625 VA	3	15 A	Bay 4 Hose reel Disconnect	6
7	Bay 4 Hose Reel	20 A	1	360 VA	625 VA								8
9	Bay 5 5-20R Recp.	20 A	1			1500 VA	4160 VA			2	50 A	Bay 5 6-50R recp.	10
11	bAY 5 RB-5	20 A	1					200 VA	4160 VA				12
13	Bay 5 Rotary Lift	20 A	1	1440 VA	240 VA								14
15	Bay 5 RB-6	20 A	1			200 VA	240 VA			3	20 A	Bay 5 Hoist Disconnect	16
17	Bay 5 RB-7	20 A	1					200 VA	240 VA				18
19	Bay 5 Quad Recp. Column-GFCI	20 A	1	800 VA	150 VA					1	20 A	Bay 5 5-20R Column	20
21	Bay 5 Hose Reel	20 A	1			360 VA	625 VA						22
23	Bay 6 RB-3	20 A	1					200 VA	625 VA	3	15 A	Bay 5 Hose Reel Disconnect	24
25	Bay 6 RB-3	20 A	1	200 VA	625 VA								26
27	Bay 6 Rotary Controller	20 A	1			1440 VA	200 VA			1	20 A	Bay 6 RB-4	28
29	Bay 6 Quad. Column-GFCI	20 A	1					800 VA	150 VA	1	20 A	Bay 6 5-20R Column	30
31	Bay 6 Hose Reel	20 A	1	360 VA	625 VA								32
33	Bay 7 RB-5	20 A	1			200 VA	625 VA			3	15 A	Bay 6 Hose Reel Disconnect	34
35	Spare	20 A	1					0 VA	625 VA				36
37	Spare	20 A	1	0 VA	0 VA					--	--	Space	38
39	Spare	20 A	1			0 VA	0 VA			--	--	Space	40
41	Space	--	--					0 VA	0 VA	--	--	Space	42
		TOTAL...		5775 VA		10375 VA		8625 VA					
		TOTAL...		48 A		90 A		76 A					

NOTES:

LOCATION: ELECTRICAL S113b
MOUNTING: Surface
SOURCE: FBSL3

PANEL ID
FBSL3A

VOLTS, PHASE, WIRE: 120/208 Wye/3/4Wire
MAINS: 250A MLO
SHORT CIRCUIT RATING: 22K

CKT	LOAD DESCRIPTION	CB/ AMPS	P	A		B		C		P	CB/ AMPS	LOAD DESCRIPTION	CKT
1	Unit Shop Disconnect-Welder	100 A	2	7904 VA	4888 VA					2	50 A	Unit Shop 6-50R Recp.	2
3						7904 VA	4888 VA						4
5	Recp. Band Saw	20 A	1					1044 VA	1836 VA	1	20 A	Recp. Drill Press	6
7	Unit Shop 6-20R Recp.	20 A	2	940 VA	1800 VA					1	20 A	Unit Shop 5-20R Recp.	8
9						940 VA	200 VA			1	20 A	RB-4 Unit Shop	10
11	RB-4 Unit Shop	20 A	1					120 VA	200 VA	1	20 A	RB-4 Unit Shop	12
13	Recp. Unit Shop 2680	20 A	1	180 VA	940 VA					2	20 A	Unit Shop 6-20R Recp	14
15	Unit Shop 5-20R Recp.	20 A	1			1800 VA	940 VA						16
17	Unit Shop 6-50R Recp	50 A	2					4888 VA	4888 VA	2	50 A	Unit Shop 6-50R Recp.	18
19				4888 VA	4888 VA								20
21	Unit Shop 5-20R Recp.	20 A	1			1800 VA	4800 VA			2	50 A	Unit Shop 6-50R Recp.	22
23	VAV'S RM M114b, M114a, M131, M129, M128	20 A	1					600 VA	4800 VA				24
25				601 VA	200 VA					1	20 A	RB-4 Unit Shop	26
27	O/H Door M112	15 A	3			601 VA	50 VA			2	20 A	HP-4 RM M109	28
29								601 VA	50 VA				30
31	UH-17 RM S113c	15 A	1	20 VA	2500 VA					2	25 A	ACCU-14	32
33	Recp. RM M112c Comm Closet	20 A	1			360 VA	2500 VA						34
35	ACCU-14 Receptacle	20 A	1					180 VA	360 VA	1	20 A	RecP. Exterior courtyard	36
37	Spare	20 A	1	0 VA	0 VA					--	--	Space	38
39	Spare	20 A	1			0 VA	0 VA			--	--	Space	40
41	Spare	20 A	1					0 VA	0 VA	--	--	Space	42
		TOTAL...		29749 VA		26783 VA		19567 VA					
		TOTAL...		257 A		232 A		163 A					

NOTES:

LOCATION: ELECTRICAL S113b
MOUNTING: Surface
SOURCE: FBSL2

PANEL ID
FBSL2E

VOLTS, PHASE, WIRE: 120/208 Wye/3/4Wire
MAINS: 200A MLO
SHORT CIRCUIT RATING: 22K

CKT	LOAD DESCRIPTION	CB/ AMPS	P	A		B		C		P	CB/ AMPS	LOAD DESCRIPTION	CKT
1				1440 VA	200 VA					1	20 A	RB-4 Tire Shop	2
3	Disconnect Tire Carosel Tire Shop	15 A	3			1440 VA	200 VA			1	20 A	RB-4 tire Shop	4
5								1440 VA	1500 VA				6
7				1500 VA	1500 VA					3	20 A	L15-20R Wheel Balancer Tire Shop	8
9	L15-20R Wheel Balancer Tire Shop	20 A	3			1500 VA	1500 VA						10
11								1500 VA	240 VA				12
13				240 VA	240 VA					3	20 A	Disconnect Hoist Tire Shop	14
15	Disconnect Hoist Tire Shop	20 A	3			240 VA	240 VA						16
17								240 VA	240 VA				18
19	Disconnect Tire Changer Tire Shop	25 A	2	1760 VA	240 VA					3	20 A	Disconnect Hoist Tire Shop	20
21						1760 VA	240 VA						22
23	Space	--	--					0 VA	200 VA	1	20 A	RB-4 Tire Shop	24
25				1440 VA	180 VA					1	20 A	Recp. Parts Shop	26
27	Disconnect Tire Carosel Tire Shop	15 A	3			1440 VA	180 VA			1	20 A	Recp. 2130 Battery RM	28
29								1440 VA	4160 VA	2	50 A	Bay 1 6-50R Recp.	30
31	Bay 2 5-20R Recp.	20 A	1	1500 VA	4160 VA								32
33	Bay 1 RB-5 5-20R	20 A	1			200 VA	1500 VA			1	20 A	Bay 1 5-20R Recp.	34
35	Bay 1 5-20R Recp.	20 A	1					1500 VA	1500 VA	1	20 A	Bay 1 5-20R Recp.	36
37	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	38
39	Space	--	--			0 VA	0 VA			1	0 A	Spare	40
41	Space	--	--					0 VA	0 VA	--	--	Space	42
		TOTAL...		14400 VA		10440 VA		13960 VA					
		TOTAL...		125 A		87 A		121 A					

NOTES:

LOCATION: ELECTRICAL S113b
MOUNTING: Surface
SOURCE: FBSL2

PANEL ID
FBSL2H

VOLTS, PHASE, WIRE: 120/208 Wye/3/4Wire
MAINS: 125A MLO
SHORT CIRCUIT RATING: 22K

CKT	LOAD DESCRIPTION	CB/ AMPS	P	A		B		C		P	CB/ AMPS	LOAD DESCRIPTION	CKT
1	Bay 8 5-20R Column	20 A	1	150 VA	200 VA					1	20 A	Bay 10 RB-6	2
3	Bay 8,9 6-50R Recp.	50 A	2			4160 VA	200 VA			1	20 A	Bay 9 RB-7	4
5								4160 VA	200 VA	1	20 A	Power	6
7	Bay 7 RB-6	20 A	1	200 VA	360 VA					1	20 A	Bay 7 Hose Reel	8
9	Bay 8 RB-4	20 A	1			200 VA	200 VA			1	20 A	Bay 8 RB-3	10
11	Bay 9 RB-5	20 A	1					200 VA	200 VA	1	20 A	Bay 8 RB-3	12
13	Bay 9 Hose Reel	20 A	1	360 VA	800 VA					1	20 A	Bay 10 Quad. Column-GFCI	14
15	Bay 8 Quad. Column-GFCI	20 A	1			800 VA	1440 VA			1	20 A	Pit 8	16
17	Bay 9 Quad. Column	20 A	1					800 VA	1440 VA	1	20 A	Bay 8 Rotary Disconnect	18
19	Bay 10 Lift Controller	20 A	1	1440 VA	1440 VA					1	20 A	Bay 7 Rotary Lift Controller	20
21	Bay 10 Hose Reel	20 A	1			360 VA	200 VA			1	20 A	Bay 9 RB-6	22
23	Bay 7 Quad. Column	20 A	1					800 VA	200 VA	1	20 A	Bay 7 RB-7	24
25	Bay 8 RB-3	20 A	1	200 VA	200 VA					1	20 A	Bay 10 RB-5	26
27						625 VA	0 VA			--	--	Space	28
29	Bay 10 Hose Reel Disconnect	15 A	3					625 VA	0 VA	--	--	Space	30
31				625 VA	0 VA					--	--	Space	32
33	Space	--	--			0 VA	625 VA						34
35	Space	--	--					0 VA	625 VA	3	15 A	Bay 9 Hose Reel Disconnect	36
37				625 VA	625 VA								38
39	Bay 7 Hose Reel Disconnect	15 A	3			625 VA	0 VA			1	20 A	Spare	40
41								625 VA	0 VA	1	20 A	Spare	42
		TOTAL...		7225 VA		9435 VA		9875 VA					
		TOTAL...		60 A		81 A		85 A					

NOTES:

LOCATION: ELECTRICAL S113b
MOUNTING: Surface
SOURCE: MDP

PANEL ID
FBSH5

VOLTS, PHASE, WIRE: 480/277 Wye/3/4Wire
MAINS: 400A MCB
SHORT CIRCUIT RATING: 42K

CKT	LOAD DESCRIPTION	CB/ AMPS	P	A		B		C		P	CB/ AMPS	LOAD DESCRIPTION	CKT
1				2106 VA	33250 VA								2
3	Bay 10 Lift Controller	20 A	3			2106 VA	33250 VA			3	150 A	RM. M121 PAINT BOOTH	4
5								2106 VA	33250 VA				6
7	Rn119 Syncrowave Tig Welder Disconnect	60 A	2	11520 VA	7333 VA								8
9						11520 VA	7333 VA			3	40 A	RM M118 ATLAS COPCO GA 30VSDFF	10
11	Space	--	--					0 VA	7333 VA				12
13				7333 VA	7333 VA								14
15	RM M118 ATLAS COPCO GA 30VSDFF	40 A	3			7333 VA	7333 VA			3	40 A	RM M118 ATLAS COPCO GA 15VSDFF	16
17								7333 VA	7333 VA				18
19				3880 VA	7485 VA								20
21	RM M118 DISCONNECT C-R2	30 A	3			3880 VA	7485 VA			3	50 A	RM M103 Lift	22
23								3880 VA	7485 VA				24
25				2106 VA	497 VA								26
27	Truck Rack	20 A	3			2106 VA	497 VA			3	15 A	EF-17	28
29								2106 VA	497 VA				30
31	Spare	20 A	1	0 VA	0 VA					--	--	Space	32
33	Spare	20 A	1			0 VA	0 VA			--	--	Space	34
35	Spare	20 A	1					0 VA	0 VA	--	--	Space	36
37	Spare	20 A	1	0 VA	0 VA					--	--	Space	38
39	Spare	20 A	1			0 VA	0 VA			--	--	Space	40
41	Spare	20 A	1					0 VA	0 VA	--	--	Space	42
		TOTAL...		82843 VA		82843 VA		71323 VA					
		TOTAL...		305 A		305 A		257 A					

NOTES:

LOCATION: ELECTRICAL S113b
MOUNTING: Surface
SOURCE: FBSL2

PANEL ID
FBSL2F

VOLTS, PHASE, WIRE: 120/208 Wye/3/4Wire
MAINS: 150A MLO
SHORT CIRCUIT RATING: 22K

CKT	LOAD DESCRIPTION	CB/ AMPS	P	A		B		C		P	CB/ AMPS	LOAD DESCRIPTION	CKT
1	RB-6 Bay 1 5-20R Recp.	20 A	1	200 VA	1500 VA					1	20 A	Bay 1 5-20R Recp.	2
3	Bay 1 5-20R Recp.	20 A	1			1500 VA	2400 VA						4
5	Bay 1 5-20R Recp.	20 A	1					1500 VA	2400 VA	3	30 A	Bay 1 Hoist	6
7	BR-7 Bay-1 5-20R Recp.	20 A	1	200 VA	2400 VA								8
9						625 VA	360 VA			1	20 A	Bay 1 Hose Reel	10
11	Bay 1 Hose Reel Disconnect	15 A	3					625 VA	200 VA	1	20 A	RB-3 BAY 2	12
13				625 VA	200 VA					1	20 A	RB-4 Bay 2	14
15	RB-3 Bay 2	20 A	1			200 VA	150 VA			1	20 A	Recp. Column 5-20R-Parts Washer	16
17	Bay 2 Quad Recp.-GFCI	20 A	1					800 VA	625 VA				18
19	Bay 2 Hose Reel	20 A	1	360 VA	625 VA					3	15 A	Bay 2 Hose reel Disconnect	20
21	Bay 1,2,3 Recp. Column, Computer-GFCI	20 A	1			360 VA	625 VA						22
23	Bay 3 Quad Recp.-GFCI	20 A	1					800 VA	200 VA	1	20 A	RB-7 Bay 3	24
25	Recp. 5-20R Column	20 A	1	150 VA	625 VA								26
27	Bay 3 Hose reel	20 A	1			360 VA	625 VA			3	15 A	Bay 3 Hose Reel Disconnect	28
29	Bay 3 RB-6	20 A	1					200 VA	625 VA				30
31	Bay 3 RB-5	20 A	1	200 VA	4160 VA								32
33	Bay 2,3 5-20R Recp.	20 A	1			1500 VA	4160 VA			2	50 A	Bay 2,3 6-50R Recp.	34
35	Bay 3,4 5-20R Recp.	20 A	1					1500 VA	200 VA	1	20 A	Bay 4 RB-3	36
37	Bay 3 Rotary Lift Controller	20 A	1	1440 VA	0 VA					1	20 A	Spare	38
39	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	40
41	Spare	20 A	1					0 VA	0 VA	--	--	Space	42
		TOTAL...		12685 VA		12865 VA		9675 VA					
		TOTAL...		110 A		111 A		81 A					

NOTES:

LOCATION: ELECTRICAL S113b
MOUNTING: Surface
SOURCE: T-5

PANEL ID
FBSL2J

VOLTS, PHASE, WIRE: 120/208 Wye/3/4Wire
MAINS: 250A MCB
SHORT CIRCUIT RATING: 22K

CKT	LOAD DESCRIPTION	CB/ AMPS	P	A		B		C		P	CB/ AMPS	LOAD DESCRIPTION	CKT
1	Bay 10 RB-7	20 A	1	200 VA	360 VA					1	20 A	Bay 10 Hose Reel	2
3						625 VA	200 VA			1	20 A	Bay 10 RB-6	4
5	Bay 10 Hose Reel Disconnect	15 A	3					625 VA	1500 VA	1	20 A	Bay 10 5-20R Wall	6
7				625 VA	1500 VA					1	20 A	Bay 10 5-20R wall	8
9	Bay 10 RB-5	20 A	1			200 VA	1921 VA						10
11	Power	20 A	1					200 VA	1921 VA	3	30 A	Bay 12 L15-30R	12
13	Bay 11 5-20R wall	20 A	1	1500 VA	1921 VA								14
15	Bay 11 5-20R wall	20 A	1			1500 VA	1500 VA			1	20 A	bay 11 5-20R wall	16
17	Bay 11 RB-4	20 A	1					200 VA	4160 VA	2	50 A	Bay 11 6-50R wall	18
19	Bay 11 5-20R wall	20 A	1	1500 VA	4160 VA								20
21	Bay 11 RB-5	20 A	1			200 VA	200 VA			1	20 A	Bay 12 RB-8	22
23	Bay 12 RB-6	20 A	1					200 VA	200 VA	1	20 A	Bay 12 RB-7	24
25	Bay 11 Hose Reel	20 A	1	360 VA	625 VA								26
27	Bay 12 Hose Reel	20 A	1			360 VA	625 VA			3	15 A	Bay 11 Hose Reel Disconnect	28
29								625 VA	625 VA				30
31	Bay 12 Hose Reel Disconnect	15 A	3	625 VA	200 VA					1	20 A	Bay 12 RB-3	32
33						625 VA	200 VA			1	20 A	Bay 12 RB-4	34
35	Bay 12 RB-5	20 A	1					200 VA	0 VA	1	20 A	Spare	36
37				2200 VA	0 VA					1	20 A	Spare	38
39	FBSL2L	100 A	3			1000 VA	0 VA			1	20 A	Spare	40
41								500 VA	0 VA	--	--	Space	42
		TOTAL...		15776 VA		9156 VA		10956 VA					
		TOTAL...		134 A		76 A		94 A					

NOTES:

REV.	DATE	DESCRIPTION	SHEET NO.
		REVISIONS	

FILENAME:

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

DESIGNER/DRAFTER: CJE
CHECKED BY: RB
SCALE:

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ARCHITECT: WENDEL
ENGINEERS: ReSTL DESIGNERS, CLOUGH HARBOUR ASSOC., AI ENGINEERS, WENDEL
APPROVED BY: BPM
DATE: 06/11/2014

DESIGNED BY:
CLOUGH HARBOUR & ASSOCIATES
2139 SILAS DEANE HIGHWAY
SUITE 212
ROCKY HILL, CT
06067-2336

STATE OF CONNECTICUT
BRIAN P. McKENNA
No. 21640
LICENSED
PROFESSIONAL ENGINEER

PROJECT TITLE:
WATERBURY BUS MAINTENANCE FACILITY REPLACEMENT

ADDRESS: FROST BRIDGE ROAD WATERTOWN, CONNECTICUT 06787

DRAWING TITLE:
ELECTRICAL PANELBOARD SCHEDULES

PROJECT NO. 431-0006
DRAWING NO. E-606
SHEET NO. 13.066

LOCATION: ELECTRICAL S113b
MOUNTING: Surface
SOURCE: FBSL3

PANEL ID
FBSL2K

VOLTS, PHASE, WIRE: 120/208 Wye/3/4Wire
MAINS: 250A MCB
SHORT CIRCUIT RATING: 22K

CKT	LOAD DESCRIPTION	CB/ AMPS	P	A		B		C		P	CB/ AMPS	LOAD DESCRIPTION	CKT
1	Bay 12 5-20R	20 A	1	1500 VA	1500 VA					1	20 A	Bay 12 5-20R	2
3	Bay 12 5-20R	20 A	1			1500 VA	1500 VA			1	20 A	Bay 12 5-20R	4
5	Bay 12 5-20R	20 A	1					1500 VA	4160 VA	2	50 A	RM M107 Recp. 6-50R	6
7	RM M121 RB-4	20 A	1	200 VA	4160 VA								8
9	RM M121 Paint Shaker	20 A	1			864 VA	4888 VA			2	50 A	RM M119 Plasma Cutter	10
11	RM M119 Electrostatic Filter 5-20R	20 A	1					1920 VA	4888 VA				12
13	RM M119 MIG Arch Welder 6-50R	50 A	2	4992 VA	4992 VA					2	50 A	RM M119 Miller 252 MIG Arch Welder	14
15						4992 VA	4992 VA						16
17	RM M107 RB-4	20 A	1					200 VA	200 VA	1	20 A	RM M107 RB-4	18
19	RM M115 Veeder RT Control Panel	20 A	1	500 VA	250 VA					1	20 A	RM M115 Over Fill Alarm	20
21	Space	--	--			0 VA	200 VA			1	20 A	Bay 9 Pit RB-6	22
23								1921 VA	1500 VA	1	20 A	RM M103 Lift Controller	24
25	RM M013 Pressure Washer	30 A	3	1921 VA	250 VA					1	20 A	RM M115 Alarm Acknowledgement switch	26
27						1921 VA	500 VA			1	20 A	RIH	28
29	RIH	20 A	1					500 VA	500 VA	1	20 A	RIH	30
31	RIH BAY2,3	20 A	1	500 VA	500 VA					1	20 A	RIH	32
33	RIH	20 A	1			500 VA	500 VA			1	20 A	RIH	34
35	RIH	20 A	1					500 VA	1440 VA	1	20 A	Truck Rack	36
37	Space	--	--	0 VA	0 VA					--	--	Space	38
39	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	40
41	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	42
		TOTAL...		21265 VA		22357 VA		19229 VA					
		TOTAL...		180 A		189 A		160 A					

NOTES:

LOCATION: ELECTRICAL S113b
MOUNTING: Surface
SOURCE: FBSL2J

PANEL ID
FBSL2L

VOLTS, PHASE, WIRE: 120/208 Wye/3/4Wire
MAINS: 100A MLO
SHORT CIRCUIT RATING: 22K

CKT	LOAD DESCRIPTION	CB/ AMPS	P	A		B		C		P	CB/ AMPS	LOAD DESCRIPTION	CKT
1	RIH Bay 9,10	20 A	1	500 VA	500 VA					1	20 A	RIH Bay 9,10	2
3	RIH Bay 9,10	20 A	1			500 VA	500 VA			1	20 A	RIH Bay 9,10	4
5	RIH Bay 11,12	20 A	1					0 VA	500 VA	1	20 A	RIH Bay 11,12	6
7	C-3 RM M118	20 A	1	1200 VA	0 VA					1	20 A	Spare	8
9	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	10
11	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	12
13	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	14
15	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	16
17	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	18
19	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	20
21	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	22
23	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	24
25	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	26
27	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	28
29	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	30
31	Space	--	--	0 VA	0 VA					--	--	Space	32
33	Space	--	--			0 VA	0 VA			--	--	Space	34
35	Space	--	--					0 VA	0 VA	--	--	Space	36
37	Space	--	--	0 VA	0 VA					--	--	Space	38
39	Space	--	--			0 VA	0 VA			--	--	Space	40
41	Space	--	--					0 VA	0 VA	--	--	Space	42
		TOTAL...		2200 VA		1000 VA		500 VA					
		TOTAL...		19 A		9 A		4 A					

NOTES:

LOCATION: PUMP ROOM M002
MOUNTING: Surface
SOURCE: FBSH1

PANEL ID
FBSH1A

VOLTS, PHASE, WIRE: 480/277 Wye/3/4Wire
MAINS: 100A MLO
SHORT CIRCUIT RATING: 42K

CKT	LOAD DESCRIPTION	CB/ AMPS	P	A		B		C		P	CB/ AMPS	LOAD DESCRIPTION	CKT
1	Ltg. Ground Floor Exit Signs	20 A	1	200 VA	0 VA					1	20 A	Spare	2
3	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	4
5	Ltg RM M006 Ground Flr Vestibule	20 A	1					403 VA	0 VA	1	20 A	Spare	6
7	Spare	20 A	1	0 VA	3120 VA					1	20 A	Ltg RM M001 Car Parking Area	8
9	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	10
11	Spare	20 A	1					0 VA	2240 VA	1	20 A	Ltg RM M001 Car Parking Area	12
13	Ltg RM M002, M004	20 A	1	3495 VA	0 VA					1	20 A	Spare	14
15	Ltg RM M001 Car Parking Area	20 A	1			3600 VA	0 VA			1	20 A	Spare	16
17	Ltg RM M001 Car Parking Area	20 A	1					3800 VA	0 VA	1	20 A	Spare	18
19	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	20
21	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	22
23	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	24
25	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	26
27	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	28
29	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	30
31	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	32
33	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	34
35	Spare	20 A	1					0 VA	0 VA	--	--	Space	36
37	Space	--	--	0 VA	0 VA					--	--	Space	38
39	Space	--	--			0 VA	0 VA			--	--	Space	40
41	Space	--	--					0 VA	0 VA	--	--	Space	42
		TOTAL...		6815 VA		3600 VA		6443 VA					
		TOTAL...		26 A		13 A		25 A					

NOTES:

LOCATION: ELECTRICAL S106
MOUNTING: Surface
SOURCE: FBSH1

PANEL ID
FBSH1B

VOLTS, PHASE, WIRE: 480/277 Wye/3/4Wire
MAINS: 100A MLO
SHORT CIRCUIT RATING: 42K

CKT	LOAD DESCRIPTION	CB/ AMPS	P	A		B		C		P	CB/ AMPS	LOAD DESCRIPTION	CKT
1	Ltg Stair G	20 A	1	140 VA	3520 VA					1	20 A	Ltg RM S113 Bus Parking	2
3	Ltg	20 A	1			2894 VA	3876 VA			1	20 A	Ltg RM S112	4
5	Ltg RM S111 Bus Wash	20 A	1					2973 VA	210 VA	1	20 A	Ltg Stair G	6
7	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	8
9	Ltg. S108,S109, S110	20 A	1			1535 VA	0 VA			1	20 A	Spare	10
11	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	12
13	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	14
15	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	16
17	Spare	20 A	1					0 VA	4720 VA	1	20 A	Ltg RM S113	18
19	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	20
21	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	22
23	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	24
25	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	26
27	Space	--	--			0 VA	0 VA			--	--	Space	28
29	Space	--	--					0 VA	0 VA	--	--	Space	30
31	Space	--	--	0 VA	0 VA					--	--	Space	32
33	Space	--	--			0 VA	0 VA			--	--	Space	34
35	Space	--	--					0 VA	0 VA	--	--	Space	36
37	Space	--	--	0 VA	0 VA					--	--	Space	38
39	Space	--	--			0 VA	0 VA			--	--	Space	40
41	Space	--	--					0 VA	0 VA	--	--	Space	42
		TOTAL...		3660 VA		8304 VA		7903 VA					
		TOTAL...		13 A		32 A		31 A					

NOTES:

LOCATION: ELECTRICAL CLOSET A102a
MOUNTING: Surface
SOURCE: FBSH1

PANEL ID
FBSH1C

VOLTS, PHASE, WIRE: 480/277 Wye/3/4Wire
MAINS: 100A MLO
SHORT CIRCUIT RATING: 42K

CKT	LOAD DESCRIPTION	CB/ AMPS	P	A		B		C		P	CB/ AMPS	LOAD DESCRIPTION	CKT
1	LTG. A110-115A, ELEV. MACHINE RM	20 A	1	2156 VA	2272 VA					1	20 A	Ltg RM A101-A109	2
3	Ltg. rm A117, A106, A201, Lobby	20 A	1			1007 VA	1129 VA			1	20 A	Ltg RM M003, Stair A	4
5	Space	--	--					0 VA	0 VA	--	--	Space	6
7	Space	--	--	0 VA	0 VA					--	--	Space	8
9	Space	--	--			0 VA	0 VA			--	--	Space	10
11	Space	--	--					0 VA	0 VA	--	--	Space	12
13	Space	--	--	0 VA	0 VA					1	20 A	Spare	14
15	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	16
17	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	18
19	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	20
21	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	22
23	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	24
		TOTAL...		4428 VA		2136 VA		0 VA					
		TOTAL...		17 A		9 A		0 A					

NOTES:

LOCATION: PUMP ROOM M002
MOUNTING: Surface
SOURCE: FBSH1

PANEL ID
FBSH1D

VOLTS, PHASE, WIRE: 480/277 Wye/3/4Wire
MAINS: 100A MLO
SHORT CIRCUIT RATING: 42K

CKT	LOAD DESCRIPTION	CB/ AMPS	P	A		B		C		P	CB/ AMPS	LOAD DESCRIPTION	CKT
1	Site Lighting	20 A	1	966 VA	1000 VA					1	20 A	Court Yard Lighting	2
3	Exterior Light North and East Walls	20 A	1			1000 VA	1794 VA			1	20 A	Site Lighting	4
5	Exterior Lights on South and West Walls	20 A	1					1000 VA	1932 VA	1	20 A	Site Lighting	6
7	Courtyard Lighting Panel	20 A	1	1000 VA	0 VA					1	20 A	Spare	8
9	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	10
11	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	12
13	Spare	20 A	1	0 VA	0 VA					--	--	Space	14
15	Space	--	--			0 VA	0 VA			--	--	Space	16
17	Space	--	--					0 VA	0 VA	--	--	Space	18
19	Space	--	--	0 VA	0 VA					--	--	Space	20
21	Space	--	--			0 VA	0 VA			--	--	Space	22
23	Space	--	--					0 VA	0 VA	--	--	Space	24
		TOTAL...		2966 VA		2794 VA		2932 VA					
		TOTAL...		11 A		10 A		11 A					

NOTES:

REV.	DATE	DESCRIPTION	SHEET NO.
		REVISIONS	

FILENAME:

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DESIGNER/DRAFTER: CJE
CHECKED BY: RB
SCALE:

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ARCHITECT: WENDEL
APPROVED BY: BPM
ENGINEERS: ReSTL DESIGNERS, CLOUGH HARBOUR ASSOC., AI ENGINEERS, WENDEL
DATE: 06/11/2014

DESIGNED BY:
CLOUGH HARBOUR & ASSOCIATES
2139 SILAS DEANE HIGHWAY
SUITE 212
ROCKY HILL, CT
06067-2336

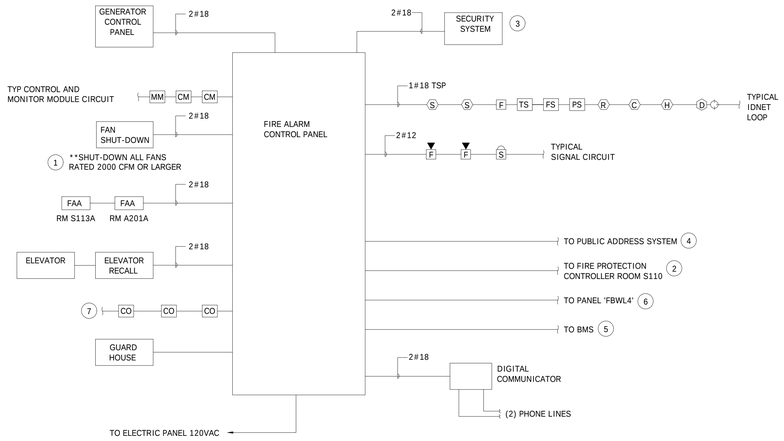
STATE OF CONNECTICUT
BRIAN P. MCCLOSKEY
No. 21640
LICENSED
PROFESSIONAL ENGINEER

PROJECT TITLE:
WATERBURY BUS MAINTENANCE FACILITY REPLACEMENT

ADDRESS: FROST BRIDGE ROAD WATERTOWN, CONNECTICUT 06787

DRAWING TITLE:
ELECTRICAL PANELBOARD SCHEDULES

PROJECT NO. 431-0006
DRAWING NO. E-607
SHEET NO. 13.067



GENERAL NOTES:

A. REFER TO CONTRACT DOCUMENTS FOR QUANTITIES, LOCATIONS AND TYPES OF DEVICES REQUIRED.

B. PROVIDE NUMBER OF CIRCUITS AND LOOPS REQUIRED FOR OPERATING QUANTITY OF DEVICES INDICATED.

C. PROVIDE DUCT SMOKE DETECTORS IN THE SUPPLY AND RETURN SIDE OF ALL MECHANICAL UNITS RATED 2000cfm AND LARGER.

D. PROVIDE 4 CONTROL MODULES AND 1 MONITOR MODULE FOR ELEVATOR RECALL.
- CM: PRIMARY FLOOR RECALL
- CM: ALTERNATE FLOOR RECALL
- CM: SIGNAL FOR FLASHING JEWEL IN CAR
- CM: SHUNT TRIP OPERATION
- MM: MONITOR CONTROL POWER TO SHUNT TRIP BREAKER

E. MAXIMUM NUMBER OF AUDIO/VISUAL APPLIANCES SHALL NOT EXCEED MANUFACTURERS RECOMMENDATIONS.

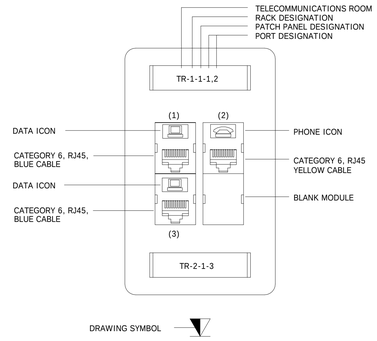
CODED NOTES

1. PROVIDE FAN SHUT DOWN OF ALL AIR HANDLING UNITS UPON FIRE ALARM ACTIVATION.
2. INTERFACE WITH FIRE PROTECTION SYSTEM. FACP TO ALARM UPON ACTIVATION OF FIRE PROTECTION SYSTEM AT GAS CANOPY.
3. INTERFACE WITH SECURITY SYSTEM TO UNLOCK ACCESS CONTROLLED DOORS UPON ACTIVATION OF THE FIRE ALARM SYSTEM.
4. INTERFACE WITH PUBLIC ADDRESS SYSTEM.
5. INTERFACE WITH BUILDING MANAGEMENT SYSTEM.
6. CONNECT TO SHUNT TRIP BREAKER AT PANEL 'FBWL4' IN ROOM S106. PANEL TO BE SHUT DOWN FOR DEACTIVATION OF POWER TO ALL FUEL DISPENSING EQUIPMENT UPON ACTIVATION OF FIRE ALARM SYSTEM.
7. ALERT OPERATION:
IF THE CO CONCENTRATION RISES ABOVE THE ALERT LEVEL SETTING, THE DETECTOR'S ALERT FRONT PANEL LAMP WILL FLASH. AFTER A FIXED DELAY PERIOD OF 3 MINUTES, IF THE CO CONCENTRATION HAS CONTINUOUSLY REMAINED ABOVE THE ALERT LEVEL SETTING THE ALERT RELAY CONTACTS WILL CLOSE THE ALERT LAMP WILL ILLUMINATE STEADILY. THIS CONTACT CLOSURE CAN BE USED TO ACTUATE EXHAUST FANS AND CLEAR THE AREA OF THE CO GAS. ONCE THE CO CONCENTRATION DROPS BELOW THE ALERT LEVEL SETTING, THE DELAY PERIOD AGAIN AND THE ALERT LAMP WILL FLASH. IF THE CO CONCENTRATION REMAINS BELOW THE ALERT LEVEL SETTING CONTINUOUSLY TO THE END OF THE DELAY PERIOD, THE RELAY CONTACTS WILL OPEN, TURNING THE FANS OFF: THE ALERT LAMP WILL EXTINGUISH AND THE DETECTOR IS NOW BACK TO THE NORMAL OPERATION MODE.

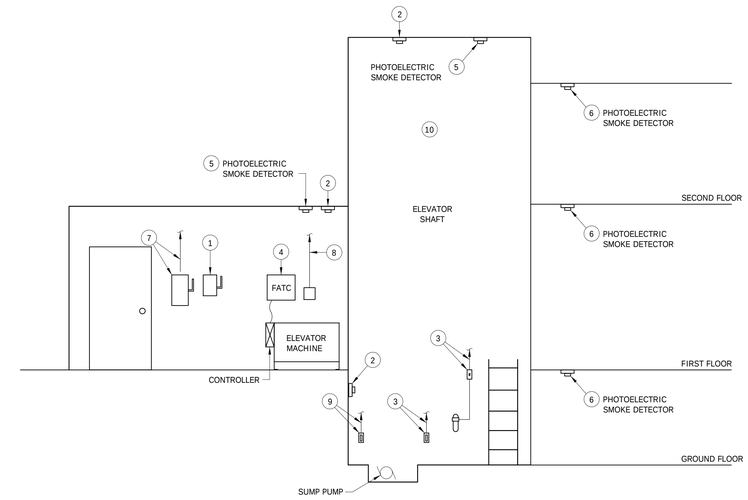
THE CO CONCENTRATION AT WHICH THE UNIT WILL ENTER THE ALERT OPERATION MODE CAN BE SET FOR ONE OF TWO LEVELS. THE DETECTOR IS SHIPPED AT A DEFAULT LEVEL OF 35 PPM. BY OPENING THE FRONT HOUSING COVER AND MOVING A WIRE JUMPER ONE POSITION ON TERMINAL T3, THE ALERT LEVEL CAN BE REDUCED TO 25 PPM.

ALARM MODE OPERATION:
IF THE CO CONCENTRATION REMAINS ABOVE 100 PPM FOR LONGER THAN 15 MINUTES, THE ALARM FRONT PANEL LAMP WILL LIGHT, A SECOND SET OF RELAY CONTACTS WILL CLOSE AND AN INTERNAL BUZZER WILL SOUND. THIS SECOND SET OF CONTACTS WILL ACTUATE THE FIRE ALARM SYSTEM, TO EVACUATE THE BLDG. ONCE THE CO CONCENTRATION DROPS BELOW 100PPM, THE INTERNAL ALARM WILL RESET, THE ALARM LAMP WILL EXTINGUISH AND THE ALARM RELAY CONTACTS WILL OPEN. THE PUSH BUTTON SWITCH LABELED TEST/ALM. OFF/MAN. FAN.

1 FIRE ALARM RISER DIAGRAM
NOT TO SCALE



2 DATA/PHONE PLATE DETAIL
NOT TO SCALE



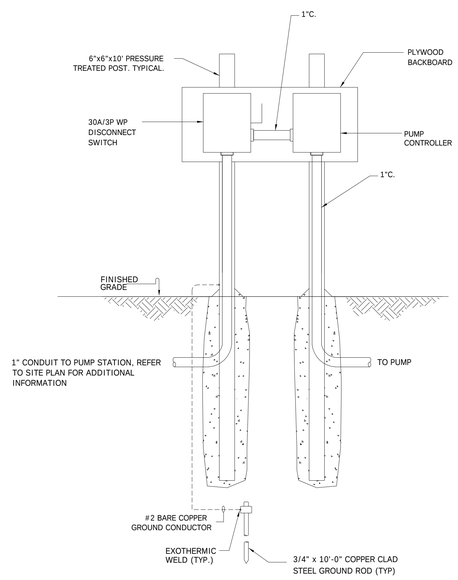
GENERAL NOTES

A. COORDINATE ALL FINAL WIRING CONNECTIONS AND EQUIPMENT INTERFACE WITH ELEVATOR INSTALLER. (TYPICAL FOR EACH ELEVATOR)

B. PROVIDE EQUIPMENT LABELING AS INDICATED ON PLAN DRAWINGS AND AS REQUIRED BY SECTION 26000.

CODED NOTES

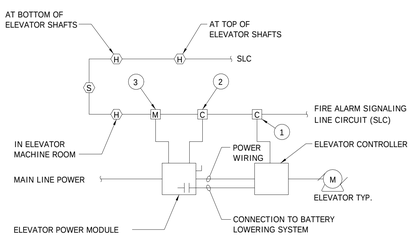
1. PROVIDE 30A/2P FUSED DISCONNECT SWITCH WITH SOLID NEUTRAL TO SUPPLY TWO (2) 120V, 20A CIRCUITS TO ELEVATOR CAR. ONE CIRCUIT SHALL SUPPLY ELEVATOR CAR LIGHTING, RECEPTACLE AND VENTILATION. ONE CIRCUIT SHALL SUPPLY AIR-CONDITIONING AND HEATING UNIT WHEN NECESSARY. PROVIDE (2)#12, (1)#12G IN 3/4"C FOR EACH CIRCUIT. SOURCE PANEL SHALL BE AS SHOWN ON DRAWINGS.
2. HEAT DETECTOR IN ELEVATOR MACHINE ROOM, PIT AND SHAFT TO INITIATE POWER SHUT-DOWN. LOCATE ADJACENT TO SPRINKLER HEAD.
3. PROVIDE ELEVATOR PIT 120V, 20A BRANCH CIRCUIT, (2)#12, (1)#12G IN 3/4"C. CIRCUIT SHALL SUPPLY LIGHTING FIXTURE AND GFI DUPLEX RECEPTACLE. LIGHTING SHALL NOT BE CONNECTED TO THE LOAD SIDE OF THE GFI INTERRUPTER. PROVIDE RECEPTACLE AND LIGHTING FIXTURE. SEE LUMINAIRE SCHEDULE FOR FIXTURE TYPE. SEE E-SERIES DWGS FOR CIRCUIT.
4. FIRE ALARM ADDRESSABLE ELEVATOR CAPTURE MODULE FOR ELEVATOR RECALL OPERATIONS COORDINATE CONNECTION WITH ELEVATOR INSTALLER.
5. SMOKE DETECTOR IN MACHINE ROOM AND TOP OF SHAFT SHALL INITIATE SYSTEM ALARM AND SHALL BE ANNUNCIATED ON FIRE ALARM SYSTEM.
6. ELEVATOR LOBBY AREA SMOKE DETECTOR INITIATING EMERGENCY RECALL OPERATION AND SYSTEM ALARM. SMOKE DETECTOR SHALL HAVE ADDITIONAL RELAYS TO INITIATE FIRE SHUTTER WHERE APPLICABLE.
7. PROVIDE 30A/3P FUSED DISCONNECT SWITCH WITH 20A DUAL ELEMENT TIME DELAY FUSES.
8. WALL BOX AND 3/4"C. w/CAT 5e TO DATA/SERVER ROOM LOCATION FOR ELEVATOR TELEPHONE.
9. PROVIDE 120V, 20A BRANCH CIRCUIT (2)#12&#12G IN 3/4" CONDUIT FROM PANELTO 20A RECEPTACLE IN ELEVATOR PIT FOR SUMP PUMP AS SHOWN ON DRAWINGS.
10. PROVIDE CCTV CAMERA AND TRAVEL CABLE. SEE SYSTEMS PLANS FOR ADDITIONAL INFORMATION.



NOTES

1. SEE SITE PLAN FOR CONDUIT ROUTING. DWG E-002
2. ALL EXPOSED EQUIPMENT SHALL BE GROUNDED.

5 STANCHION DETAIL
NOT TO SCALE



CODED NOTES

1. CONTROL MODULE TO SEND SIGNAL TO ELEVATOR CONTROLLER TO DISCONNECT BATTERY LOWERING SYSTEM UPON ACTIVATION OF HEAT DETECTORS AND INITIATION OF SHUNT TRIPPING OF POWER MODULE.
2. CONTROLS SHUNT TRIPPING OF POWER MODULE IN THE EVENT OF HEAT DETECTOR ACTIVATION IN THE ELEVATOR SHAFT OR MACHINE ROOM.
3. MONITOR MODULE TO MONITOR VOLTAGE TO SHUNT TRIP IS PRESENT.

3 ELEVATOR POWER SHUTDOWN DIAGRAM
NOT TO SCALE

6 TYPICAL ELEVATOR ELECTRICAL INSTALLATION DETAIL
NOT TO SCALE

REV.	DATE	DESCRIPTION	SHEET NO.
		REVISIONS	

FILENAME:

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DESIGNER/DRAFTER: CJE

CHECKED BY: RB

SCALE: NOT TO SCALE

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ARCHITECT: WENDEL

ENGINEERS: ReSTL DESIGNERS, CLOUGH HARBOUR ASSOC., AI ENGINEERS, WENDEL

APPROVED BY: BPM

DATE: 06/11/2014

DESIGNED BY:
CLOUGH HARBOUR & ASSOCIATES
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SUITE 212
ROCKY HILL, CT 06067-2336

STATE OF CONNECTICUT
BRIAN P. McKENNA
No. 21640
LICENSED
PROFESSIONAL ENGINEER

PROJECT TITLE:
WATERBURY BUS MAINTENANCE FACILITY REPLACEMENT

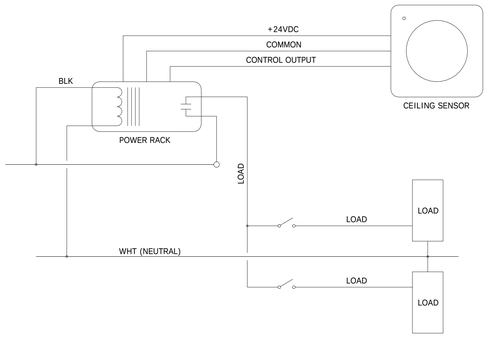
ADDRESS:
FROST BRIDGE ROAD
WATERTOWN, CONNECTICUT 06787

DRAWING TITLE:
ELECTRICAL DETAILS

PROJECT NO. 431-0006

DRAWING NO. E-701

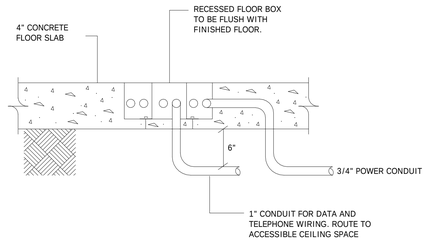
SHEET NO. 13.068



NOTES

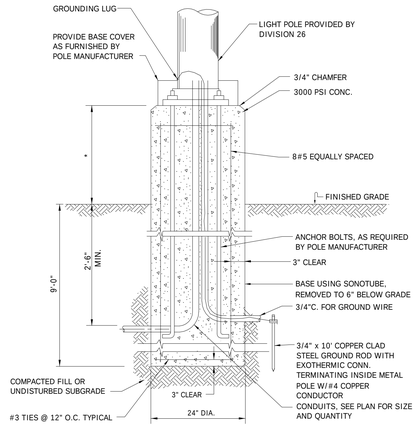
1. (2) 3-WAY SWITCHES CAN BE USED IN PLACE OF EACH SPST SWITCH IF AREA UTILIZES 3-WAY SWITCHING AND MULTI-LEVEL LIGHTING CONTROL.

3 TYPICAL OCCUPANCY SENSOR/MULTI-LEVEL SWITCH DETAIL
NOT TO SCALE



NOTE:
1. CONDUIT BOTTOM ENRTY TO BOX MAY BE USED AS WELL AS SIDES.

6 FLOOR BOX
NOT TO SCALE



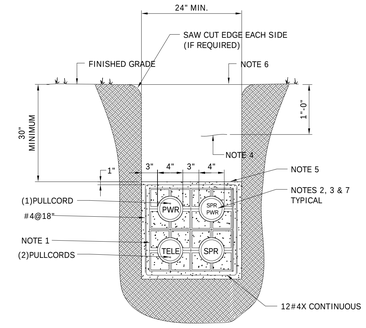
ELEVATION

* 30" IN PAVEMENT AND 3" IN GRASS

NOTE

1. BOLT LAYOUT AND MOUNTING PROCEDURE AS PER MANUFACTURER SPECIFICATIONS.

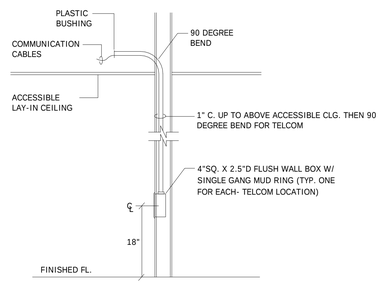
9 SITE LIGHTPOLE BASE
NOT TO SCALE



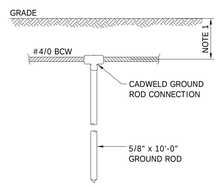
DUCT NOTES

1. PROVIDE BASE SPACERS AND INTERMEDIATE SPACERS AT 5'-0" ON CENTER.
2. PROVIDE WIRING IN CONDUITS AS INDICATED ON PLANS AND/OR ON FEEDER SCHEDULE AND PROVIDE PULL WIRE IN CONDUITS AS NOTED AND IN EACH SPARE CONDUIT.
3. MINIMUM 48" RADIUS FOR CONDUIT BENDS.
4. PROVIDE RED 6" WIDE CONDUCTIVE MARKING TAPE LABELED: 'DANGER- BURIED HIGH VOLTAGE CABLE', AND BLUE MARKING TAPE LABELED: 'COMMUNICATION CONDUITS' (INSTALL ABOVE THE ENTIRE LENGTH OF THE DUCTBANK).
5. UNDER PAVED AREAS ENCASE CONDUITS WITH 3" COVER, ALL SIDES 4000 PSI CONCRETE. THE SLOPE OF DUCTBANK SHALL BE LIMITED TO 5% MAXIMUM. SAND ENVELOPE MAY BE USE IN LIEU OF CONCRETE UNDER NON-PAVED AREAS. DUCTBANK SHALL BE SLOPED TOWARDS MANHOLE FOR DRAINAGE.
6. REPLACE EXISTING SURFACE CONDITIONS IN KIND TO INCLUDE, BUT NOT LIMITED TO: CONCRETE, CRUSHED STONE, SELECT GRAVEL, ASPHALT, TOPSOIL, GRASS, ETC. REPLACE SELECT BACKFILL IN 6" LIFTS, COMPACT EACH PLACEMENT.
7. CONDUIT SIZE AND QUANTITY AS INDICATED ON PLAN(S), SCHEDULES SND/OR ON DIAGRAMS.

11 DUCTBANK DETAIL
NOT TO SCALE



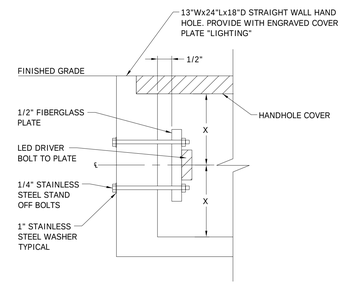
2 TELCOM OUTLET & CONDUIT DETAIL
NOT TO SCALE



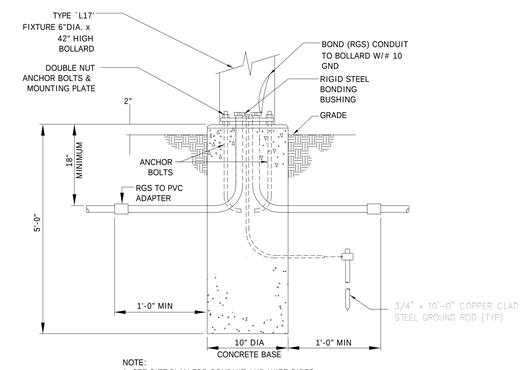
NOTE

1. 30" OR 6" BELOW FROST LINE.

5 GROUND ROD DETAIL
NOT TO SCALE

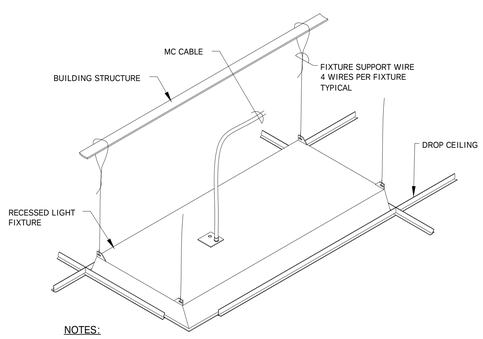


8 HANDRAIL LIGHTING DRIVER INSTALLATION DETAIL
NOT TO SCALE



NOTE:
1. SEE SITE PLAN FOR CONDUIT AND WIRE SIZES.

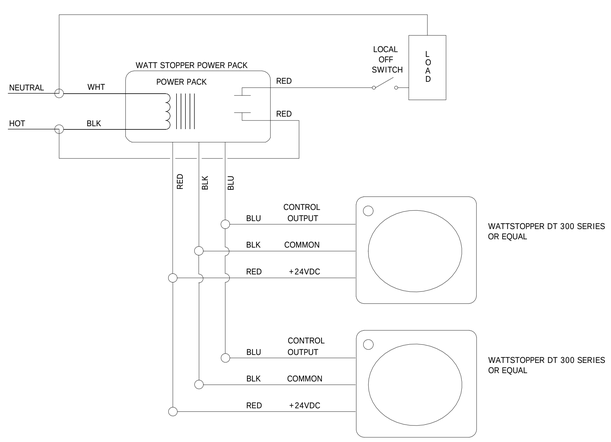
10 BOLLARD BASE DETAIL
NOT TO SCALE



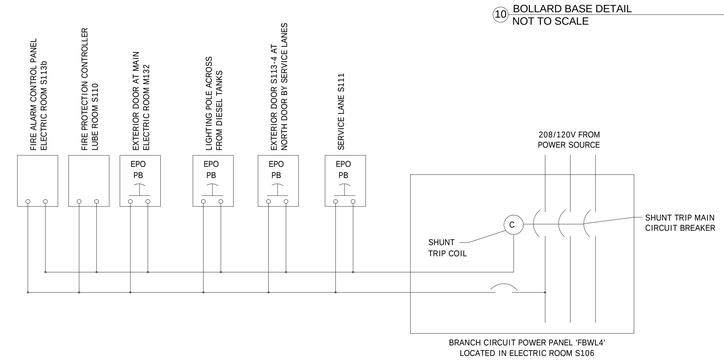
NOTES:

1. NO MC CABLE SHALL BE LAYING ON SUSPENDED CEILING.

1 FIXTURE SUPPORT
NOT TO SCALE



4 LIGHTING CONTROL WITH MULTI-MOTION SENSORS
NOT TO SCALE



NOTES:

1. DEPRESSING ANY PB "DROPS-OUT" MAIN BREAKER
2. PROVIDE LABEL AT PANEL TO READ "IN CASE OF EMERGENCY POWER OFF ACTIVATION SHUT OFF ALL EQUIPMENT BEFORE RESETTING MAIN BREAKER"
3. EMERGENCY SHUTOFF DEVICES WILL BE CLEARLY LABELED "FUEL DISPENSING SYSTEM EMERGENCY SHUTOFF."
4. FUEL DISPENSING SYSTEM TO BE SHUT DOWN PER NFPA 30A CHAPTER 6. SYSTEM MUST MEET ALL REQUIREMENTS OF NFPA.
5. FUEL DISPENSING TO SHUT DOWN UPON BUILDING FIRE ALARM ACTIVATION AND GASOLINE DISPENSING AREA FIRE SUPPRESSION SYSTEM ACTIVATION/ALARM.

7 EMERGENCY POWER-OFF WIRING DIAGRAM
NOT TO SCALE

REV.	DATE	DESCRIPTION	SHEET NO.
		REVISIONS	

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DESIGNER/DRAFTER: CJE
CHECKED BY: RB
SCALE: NOT TO SCALE

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ARCHITECT: WENDEL
APPROVED BY: BPM
ENGINEERS: ReSTL DESIGNERS, CLOUGH HARBOUR ASSOC., AI ENGINEERS, WENDEL
DATE: 06/11/2014

DESIGNED BY:
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SUITE 212
ROCKY HILL, CT 06067-2336

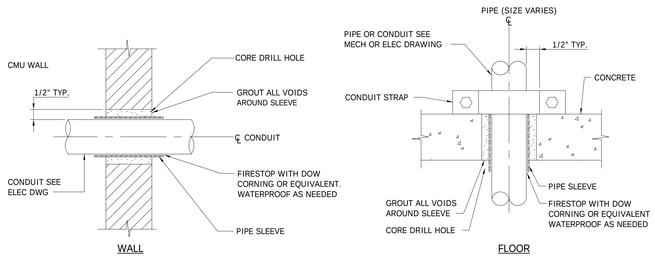
STATE OF CONNECTICUT
BRIAN P. MORAN
No. 21640
LICENSED
PROFESSIONAL ENGINEER

PROJECT TITLE:
WATERBURY BUS MAINTENANCE FACILITY REPLACEMENT

ADDRESS:
FROST BRIDGE ROAD
WATERTOWN, CONNECTICUT 06787

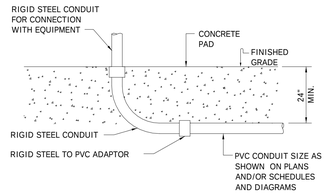
DRAWING TITLE:
ELECTRICAL DETAILS

PROJECT NO. 431-0006
DRAWING NO. E-702
SHEET NO. 13.069

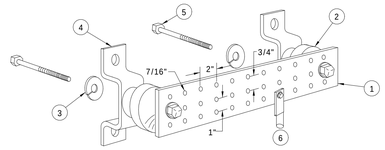


NOTE: ANCHOR PIPE AS REQUIRED TO PREVENT MOVEMENT THRU PENETRATION.

1 CONDUIT PENETRATIONS
NOT TO SCALE



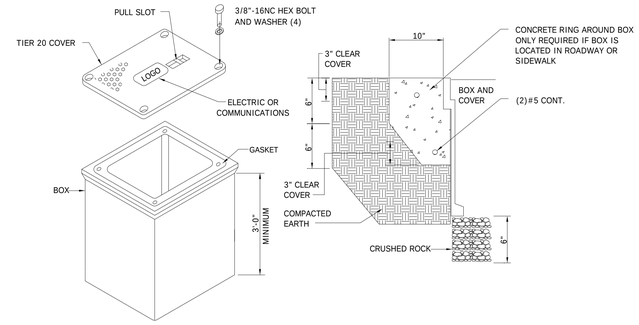
2 UNDERGROUND/UNDERFLOOR CONDUIT STUB-UP
NOT TO SCALE



CODED NOTES

1. COPPER GROUND BAR, 1/4"X 4"X 20", NEWTON INSTRUMENT CO. CAT. NO. B-6142. HOLE CENTERS TO MATCH NEMA DOUBLE LUG CONFIGURATION.
2. INSULATORS, NEWTON INSTRUMENT CAT. NO. 3061-4
3. 5/8" LOCKWASHERS, NEWTON INSTRUMENT CO. CAT. NO. 3015-8
4. WALL MOUNTING BRACKET, NEWTON INSTRUMENT CO. CAT NO. A-6056
5. 5/8-11 X 1" H.H.C.S.BOLTS, NEWTON INSTRUMENT CO. CAT NO. 3012-1
6. #6CU GROUND CONDUCTOR W/ COMPRESSION LUG FITTING. ROUTE IN 1"C BACK TO NEAREST PANELBOARD AND TERMINATE ON GROUND BUS.

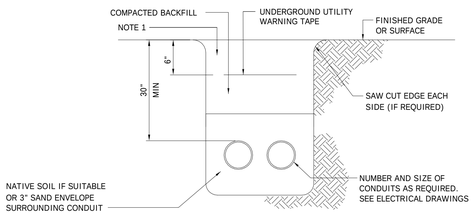
3 GROUND BAR
NOT TO SCALE



NOTES

1. SIZE HANDHOLE AT EACH LOCATION PER NEC. MINIMUM SIZE SHALL BE 36"x36"x36".
2. ALL SPARE CONDUITS SHALL BE PROVIDED WITH A PULL ROPE.
3. REPLACE EXISTING SURFACE CONDITIONS IN KIND TO INCLUDE, BUT NOT LIMITED TO: CONCRETE, CRUSHED STONE, SELECT GRAVEL, ASPHALT CONCRETE, TOPSOIL AND GRASS.
4. COVER AND BOX SHALL BE DESIGNED TO SUPPORT H20 WHEEL LOADS.

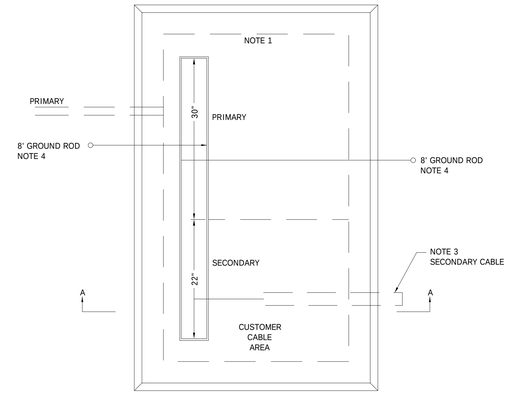
4 HAND HOLE - DETAIL
NOT TO SCALE

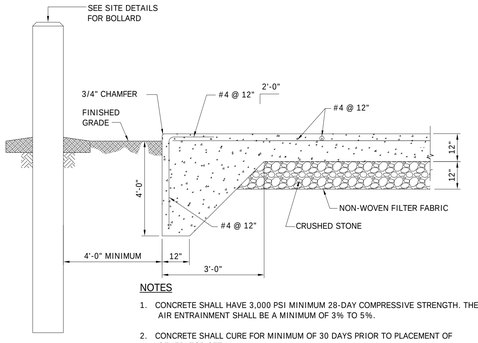


NOTE:

1. REPLACE EXISTING SURFACE CONDITIONS IN KIND TO INCLUDE, BUT NOT LIMITED TO: CONCRETE, CRUSHED STONE, SELECT GRAVEL, ASPHALT, TOPSOIL AND GRASS.

5 CONDUIT TRENCH DETAIL
NOT TO SCALE

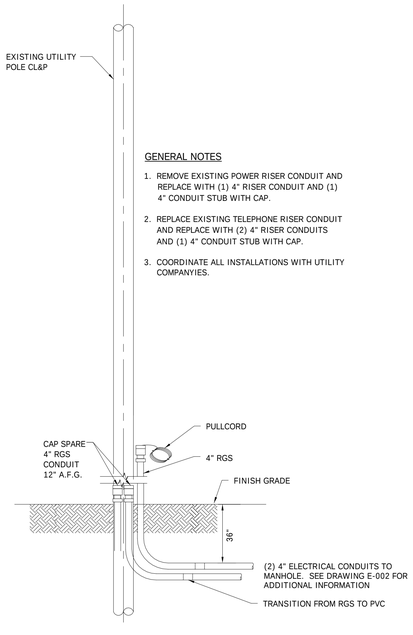




NOTES

1. CONCRETE SHALL HAVE 3,000 PSI MINIMUM 28-DAY COMPRESSIVE STRENGTH. THE AIR ENTRAINMENT SHALL BE A MINIMUM OF 3% TO 5%.
2. CONCRETE SHALL CURE FOR MINIMUM OF 30 DAYS PRIOR TO PLACEMENT OF GENERATOR SET.
3. CONCRETE PAD TO EXTEND 1'-0" BEYOND GENERATOR ON ALL SIDES. COORDINATE EXACT LOCATION WITH GENERATOR.
4. PROVIDE PIPE BOLLARDS AROUND GENERATOR WITH SPACING NOT TO EXCEED 6'-0" ON CENTER.

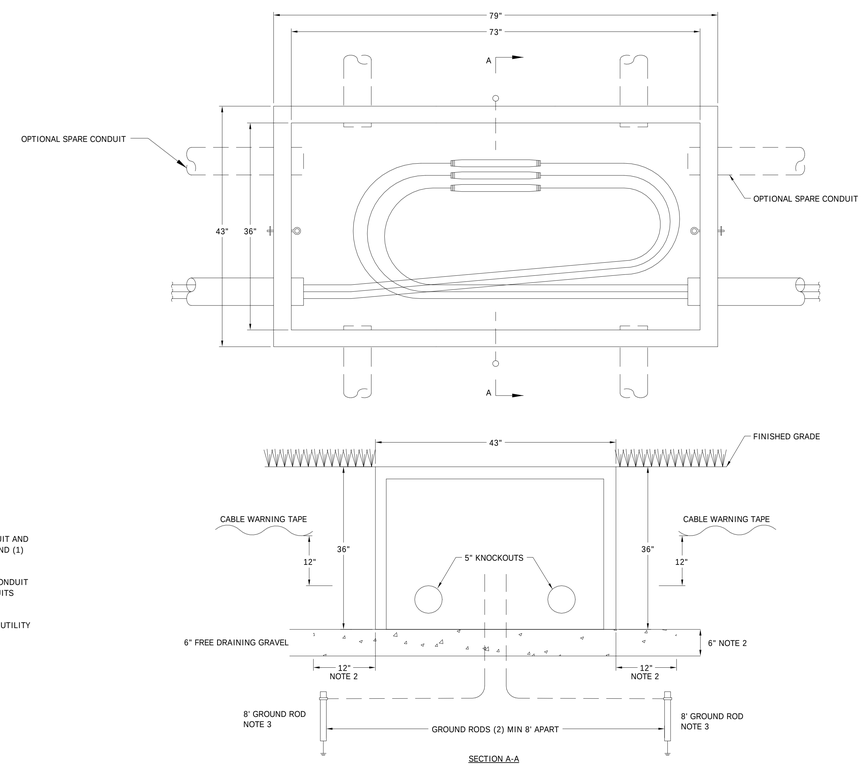
6 GENERATOR CONCRETE PAD - DETAIL
NOT TO SCALE



GENERAL NOTES

1. REMOVE EXISTING POWER RISER CONDUIT AND REPLACE WITH (1) 4" RISER CONDUIT AND (1) 4" CONDUIT STUB WITH CAP.
2. REPLACE EXISTING TELEPHONE RISER CONDUIT AND REPLACE WITH (2) 4" RISER CONDUITS AND (1) 4" CONDUIT STUB WITH CAP.
3. COORDINATE ALL INSTALLATIONS WITH UTILITY COMPANYIES.

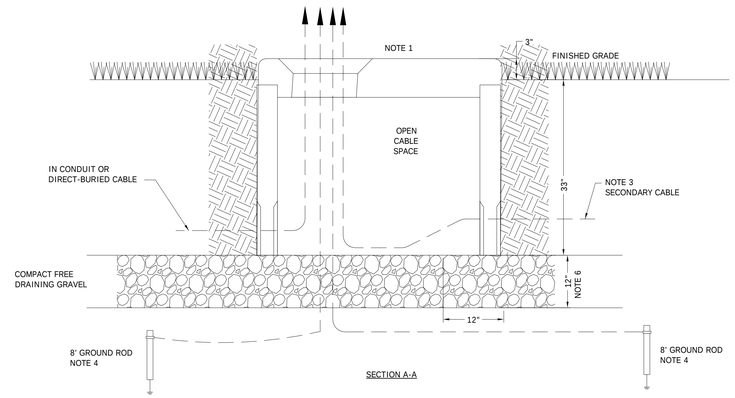
7 RISER POLE DETAIL
NOT TO SCALE



NOTES:

1. INSTALL POLYMER CONCRETE VAULT. VAULT IS RATED FOR OCCASIONAL VEHICULAR TRAFFIC, HOWEVER, DO NOT INSTALL IN ROADWAY APPLICATIONS. VAULT SHALL BE USED TO SPLICE ONE THREE-PHASS CABLE, MAXIMUM #4/0 AL.
2. THE EXCAVATION SHALL BE CARRIED TO A MINIMUM DEPTH OF 6" BELOW THE BOTTOM AND 12" BEYOND THE EDGE.
3. INSTALL (2) 8' GALVANIZED STEEL GROUND RODS ADJACENT TO THE VAULT AND GROUND PER DTR 78.151. PROVIDE #6 COPPER BOND FOR COMMUNICATIONS COMPANIES.
4. SELECT SPLICES FROM DTR 33.501-502.
5. INSTALL WARNING TAPE 12" ABOVE TOP OF CONDUIT.
6. INSTALL SCHEDULE 40 PVC CONDUIT, MINIMUM 4" DIAMETER. INSTALL CONDUIT PLUGS IN SPARE CONDUITS.

9 DIRECT BURIED SPLICE VAULT
NOT TO SCALE



NOTES:

1. 500-2500kVA-INSTALL 76"X70"X36" PAD AS PER SPC P-013 AND P-014.
2. PRIMARY CABLE
   a. INSTALL DIRECT BURIED CABLES A MINIMUM OF 30" BELOW GRADE.
   b. INSTALL CABLES IN CONDUIT A MINIMUM OF 24" BELOW GRADE.
   c. LOOP CABLES IN CONDUIT PIT BEFORE MAKING CONNECTIONS.
3. SECONDARY CABLE-LEAVE ENOUGH CABLE TO EXTEND 6' ABOVE PAD FOR FUTURE RECONNECTING TO TRANSFORMER WITH HIGHER SECONDARY TERMINALS. CUSTOMER CABLE(S) SHALL ENTER THROUGH THE REAR KNOCKOUT AND SHALL BE CONFINED TO THE AREA DEFINED AS THE "CUSTOMER CABLE AREA".
4. GALVANIZED STEEL GROUND RODS-INSTALL IN TRENCH AND CONNECT #2 COPPER CONDUCTORS FROM RODS THROUGH PAD OPENING AND EXTEND 5' ABOVE PAD. MINIMUM SEPARATION OF GROUND RODS IS 8'.
5. THE FOLLOWING DTR/DSEM'S SHOULD ALSO BE USED:
   a.DTR 17.083 -THREE PHASE TRANSFORMER CONNECTIONS.
   b.DTR 33.217 -600 VOLT CONNECTOR GUIDE-FOR NEMA PADS-THREE PHASE PAD MOUNTED TRANSFORMER
   c.DTR 42.061 -LOCATION AND MECHANICAL PROTECTION REQUIREMENTS.
   d.DTR 44.221 -FAULT INDICATOR GUIDE-SOLID DIELECTRIC CABLES
   e.DTR 56.509 -PRIMARY-SECONDARY AND TRANSFORMER GROUNDING
   f.DSEM SECTION 14.21 -LOADING LIMITS-THREE PHASE TRANSFORMERS
   g.DSEM SECTION 07.30-CONVENTIONAL UG LOOPS
   h.DTR 56.221 -JACKETED PRIMARY CABLE-GROUNDING
6. THE EXCAVATION FOR THE PAD SHALL BE CARRIED TO A DEPTH OF 12" BELOW THE BOTTOM OF THE PAD. THE BOTTOM LAYER OF BACKFILL SHALL BE COMPACTED, CLEAN GRAVEL, FREE OF FOREIGN MATTER AND CONSTRUCTION DEBRIS, EXTENDING 12" BEYOND THE CIRCUMFERENCE OF THE STRUCTURE, AND ACCORDANCE WITH CONNECTICUT DOT SPEC M02.06 GRADING "A", OR MASSACHUSETTS DPW SPEC M1.03 TYPE b. THE REMAINING BACKFILL SHALL NOT CONTAIN ASHES, CINDERS, SHELLS, FROZEN MATERIAL, LOOSE DEBRIS, AND STONES LARGER THAN 2" IN MAXIMUM DIMENSION. IT SHALL BE PLACED IN 6" LAYERS AND COMPACTED WITH MECHANICAL TAMPERS TO NOT LESS THAN 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE STAND COMPACTION TESTS, AASHTO T180 OR ASTM D698.

8 UTILITY TRANSFORMER PAD DETAIL
NOT TO SCALE

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CHECKED BY: RB

SCALE: NOT TO SCALE

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ARCHITECT: WENDEL

APPROVED BY: BPM

ENGINEERS: ReSTL DESIGNERS, CLOUGH HARBOUR ASSOC., AI ENGINEERS, WENDEL

DATE: 06/11/2014

DESIGNED BY:
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SUITE 212
ROCKY HILL, CT
06067-2336

STATE OF CONNECTICUT
BRIAN P. MCKENNA
No. 21640
LICENSED PROFESSIONAL ENGINEER

PROJECT TITLE:
WATERBURY BUS MAINTENANCE FACILITY REPLACEMENT

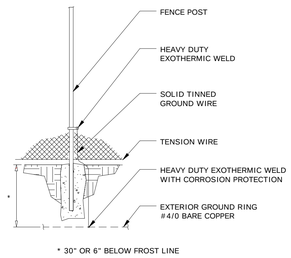
ADDRESS:
FROST BRIDGE ROAD
WATERTOWN, CONNECTICUT 06787

DRAWING TITLE:
ELECTRICAL DETAILS

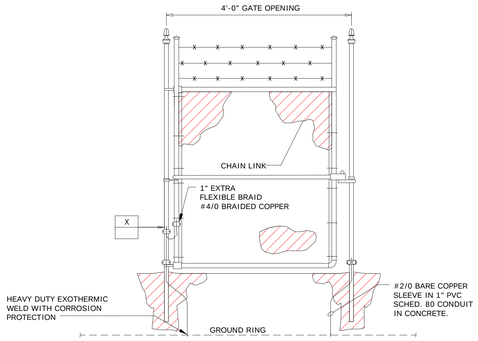
PROJECT NO. 431-0006

DRAWING NO. E-703

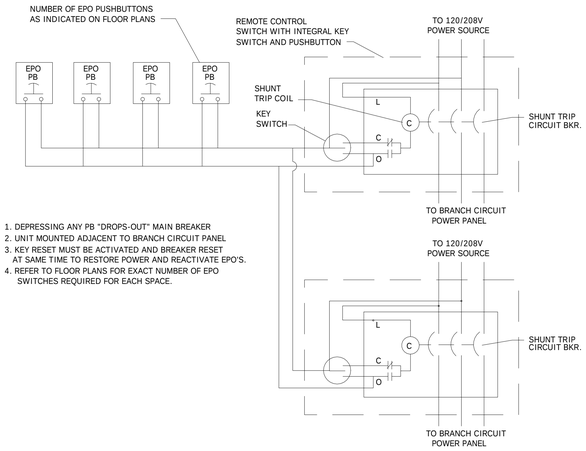
SHEET NO. 13.070



1 FENCE GROUNDING
NOT TO SCALE

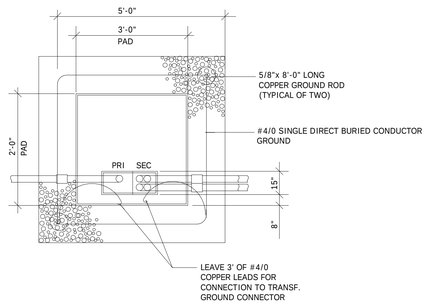


2 GATE GROUNDING
NOT TO SCALE



1. DEPRESSING ANY PB "DROPS-OUT" MAIN BREAKER
2. UNIT MOUNTED ADJACENT TO BRANCH CIRCUIT PANEL
3. KEY RESET MUST BE ACTIVATED AND BREAKER RESET AT SAME TIME TO RESTORE POWER AND REACTIVATE EPO'S.
4. REFER TO FLOOR PLANS FOR EXACT NUMBER OF EPO SWITCHES REQUIRED FOR EACH SPACE.

3 SINGLE CKT EPO
NOT TO SCALE



GENERAL NOTES

1. REFER TO SITE PLAN FOR ACTUAL DIRECTION OF CONDUITS.
2. USE RIGID GALVANIZED STEEL (RGS) CONDUIT ELBOWS & RISERS.

CONCRETE

1. CONCRETE 3500 PSI AT 28 DAYS.
2. REINFORCING TO BE WELDED WIRE FABRIC -ASTM A-185 (OR DEFORMED BARS A-165, GRADE 40 12" EACH WAY) W/(2)#4 BARS ALL AROUND PERIMETER.
3. PAD TO BE 6" THICK WITH TOP SURFACE TROWEL FINISHED.
4. 3/4" CHAMFER STRIP ALL EXPOSED EDGES, INCLUDING OPENING.

4 TYPICAL TRANSFORMER PAD DETAIL
NOT TO SCALE

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SCALE: NOT TO SCALE

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ARCHITECT: WENDEL

ENGINEERS: ReSTL DESIGNERS, CLOUGH HARBOUR ASSOC., AI ENGINEERS, WENDEL

APPROVED BY: BPM

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DESIGNED BY:

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06067-2336

STATE OF CONNECTICUT
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ADDRESS: FROST BRIDGE ROAD
WATERTOWN, CONNECTICUT 06787

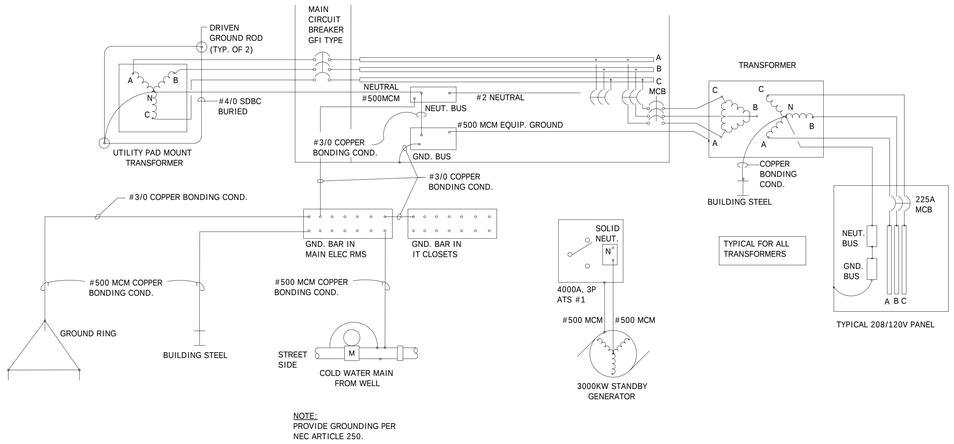
DRAWING TITLE:

ELECTRICAL DETAILS

PROJECT NO. 431-0006

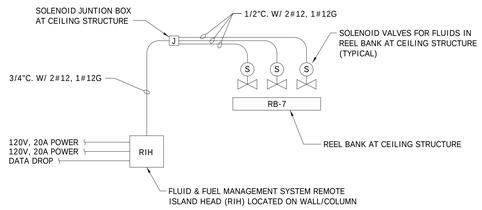
DRAWING NO. E-704

SHEET NO. 13.071



NOTE:
PROVIDE GROUNDING PER NEC ARTICLE 250.

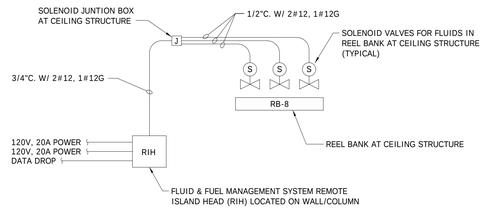
1 SERVICE GROUNDING DETAIL
NOT TO SCALE



GENERAL NOTES

1. REFER TO PROCESS AND EQUIPMENT DRAWINGS FOR FURTHER DETAILS AND CLARIFICATIONS. COORDINATE EXACT LOCATIONS AND POWER REQUIREMENTS WITH SYSTEM DEVICES BEING PROVIDED.

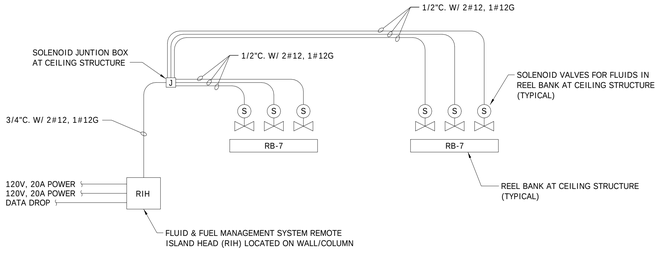
2 FLUID & FUEL MANAGEMENT MAINTENANCE BAY POWER DETAIL 1
NOT TO SCALE



GENERAL NOTES

1. REFER TO PROCESS AND EQUIPMENT DRAWINGS FOR FURTHER DETAILS AND CLARIFICATIONS. COORDINATE EXACT LOCATIONS AND POWER REQUIREMENTS WITH SYSTEM DEVICES BEING PROVIDED.

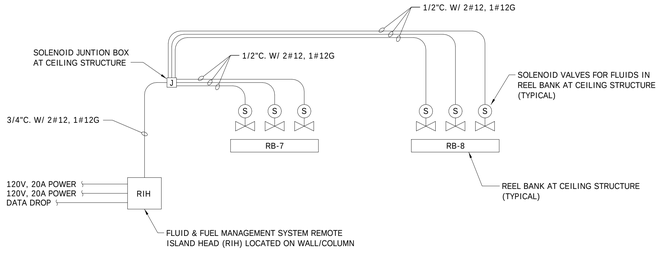
3 FLUID & FUEL MANAGEMENT MAINTENANCE BAY POWER DETAIL 2
NOT TO SCALE



GENERAL NOTES

1. REFER TO PROCESS AND EQUIPMENT DRAWINGS FOR FURTHER DETAILS AND CLARIFICATIONS. COORDINATE EXACT LOCATIONS AND POWER REQUIREMENTS WITH SYSTEM DEVICES BEING PROVIDED.

4 FLUID & FUEL MANAGEMENT MAINTENANCE BAY POWER DETAIL 3
NOT TO SCALE



GENERAL NOTES

1. REFER TO PROCESS AND EQUIPMENT DRAWINGS FOR FURTHER DETAILS AND CLARIFICATIONS. COORDINATE EXACT LOCATIONS AND POWER REQUIREMENTS WITH SYSTEM DEVICES BEING PROVIDED.

5 FLUID & FUEL MANAGEMENT MAINTENANCE BAY POWER DETAIL 4
NOT TO SCALE

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SCALE: NOT TO SCALE

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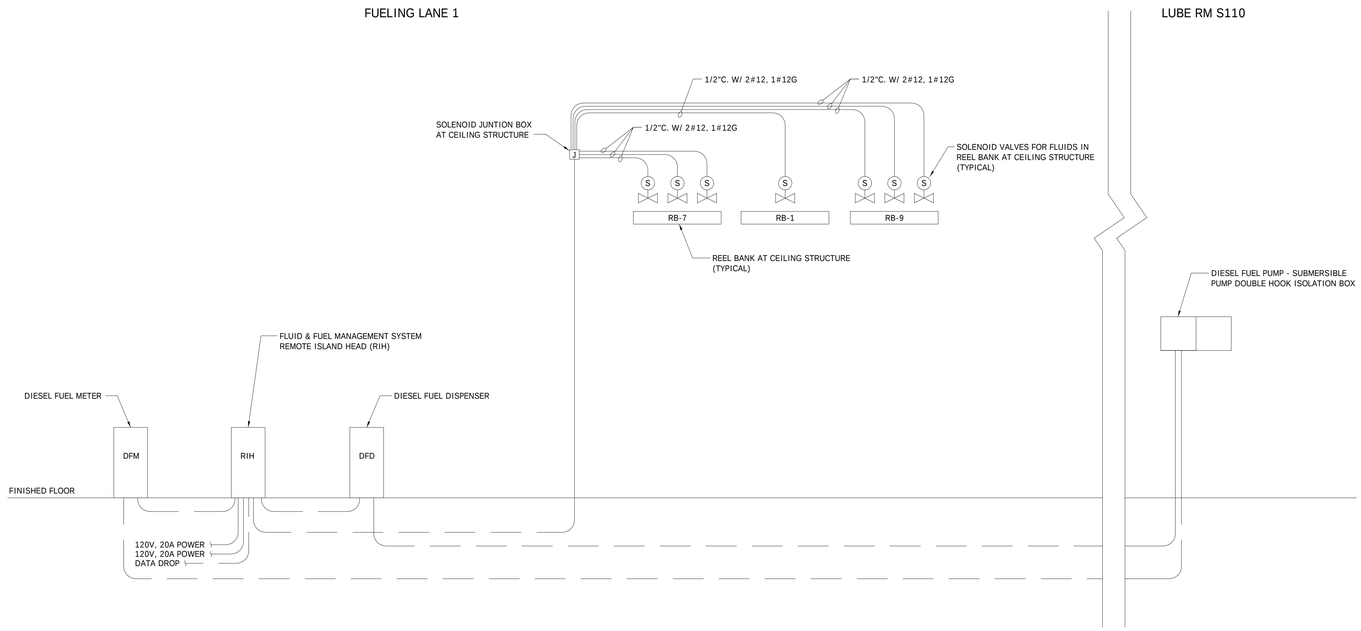
WATERTOWN, CONNECTICUT 06787

DRAWING TITLE:
ELECTRICAL DETAILS

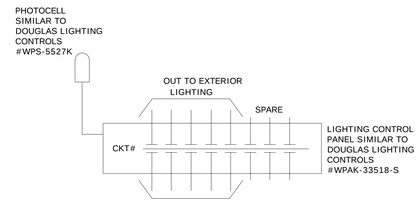
PROJECT NO. 431-0006
DRAWING NO. E-705
SHEET NO. 13.072



GENERAL NOTES

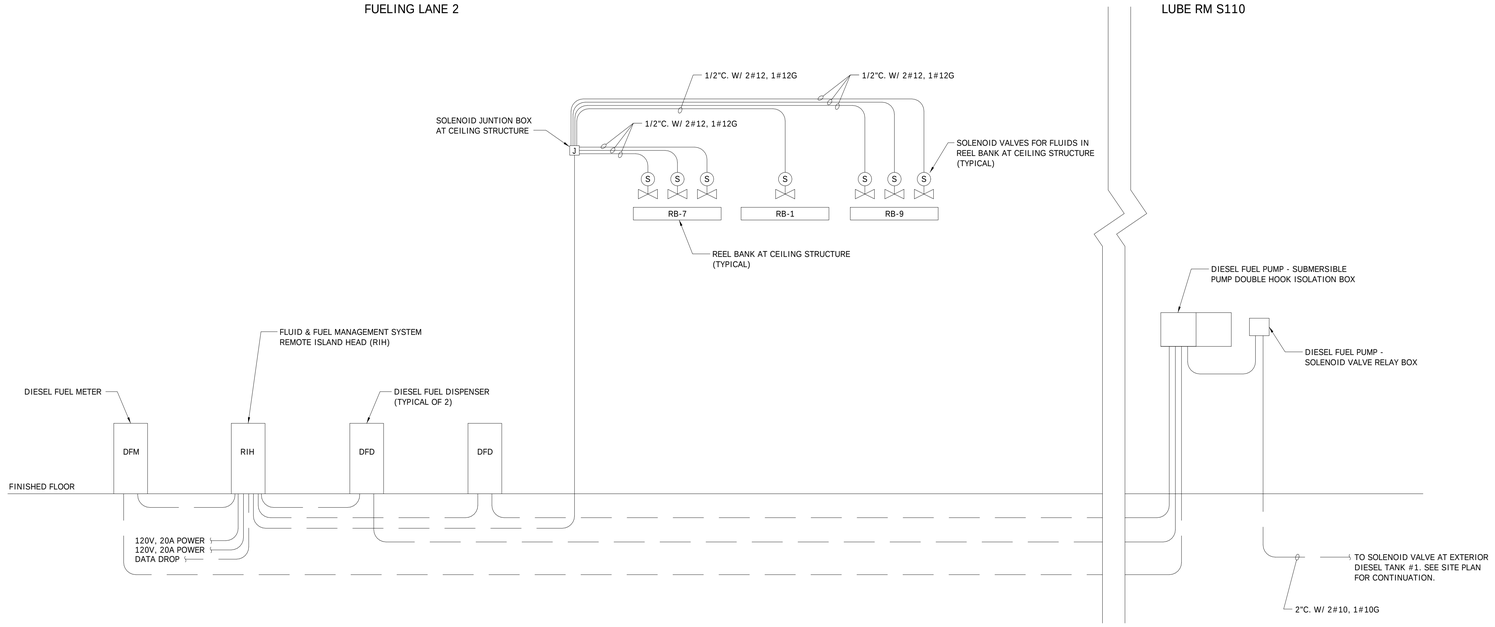
1. REFER TO PROCESS AND EQUIPMENT DRAWINGS FOR FURTHER DETAILS AND CLARIFICATIONS. COORDINATE EXACT LOCATIONS AND POWER REQUIREMENTS WITH SYSTEM DEVICES BEING PROVIDED.
2. IF NOT OTHERWISE NOTED USE 3/4"C. WITH 2#12, 1#12G FOR POWER CONNECTIONS.

2 FLUID & FUEL MANAGEMENT POWER FUEL LANE 1
NOT TO SCALE



NOTE:
ADDITIONAL ACCEPTABLE LIGHTING CONTROL PANEL MANUFACTURES: WATT STOPPER AND LC&D

1 EXTERIOR LIGHTING CONTROLS
NOT TO SCALE



GENERAL NOTES

1. REFER TO PROCESS AND EQUIPMENT DRAWINGS FOR FURTHER DETAILS AND CLARIFICATIONS. COORDINATE EXACT LOCATIONS AND POWER REQUIREMENTS WITH SYSTEM DEVICES BEING PROVIDED.
2. IF NOT OTHERWISE NOTED USE 3/4"C. WITH 2#12, 1#12G FOR POWER CONNECTIONS.

3 FLUID & FUEL MANAGEMENT POWER FUEL LANE 2
NOT TO SCALE

REV.	DATE	DESCRIPTION	SHEET NO.
		REVISIONS	

FILENAME:

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DESIGNER/DRAFTER: CJE

CHECKED BY: RB

SCALE: NOT TO SCALE

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ARCHITECT: WENDEL

ENGINEERS: ReSTL DESIGNERS, CLOUGH HARBOUR ASSOC., AI ENGINEERS, WENDEL

APPROVED BY: BPM

DATE: 06/11/2014

DESIGNED BY:
CLOUGH HARBOUR & ASSOCIATES
2139 SILAS DEANE HIGHWAY
SUITE 212
ROCKY HILL, CT
06067-2336

STATE OF CONNECTICUT
BRIAN P. McKENNA
No. 21640
LICENSED
PROFESSIONAL ENGINEER

PROJECT TITLE:
WATERBURY BUS MAINTENANCE FACILITY REPLACEMENT

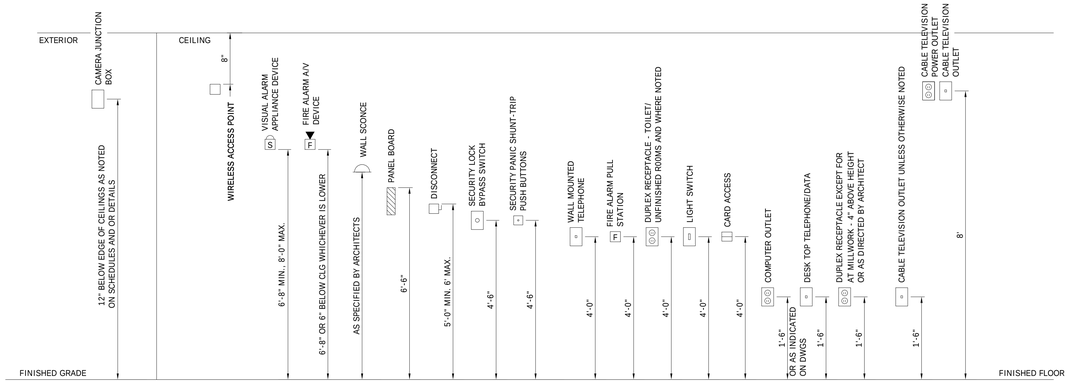
ADDRESS:
FROST BRIDGE ROAD
WATERTOWN, CONNECTICUT 06787

DRAWING TITLE:
ELECTRICAL DETAILS

PROJECT NO. 431-0006

DRAWING NO. E-706

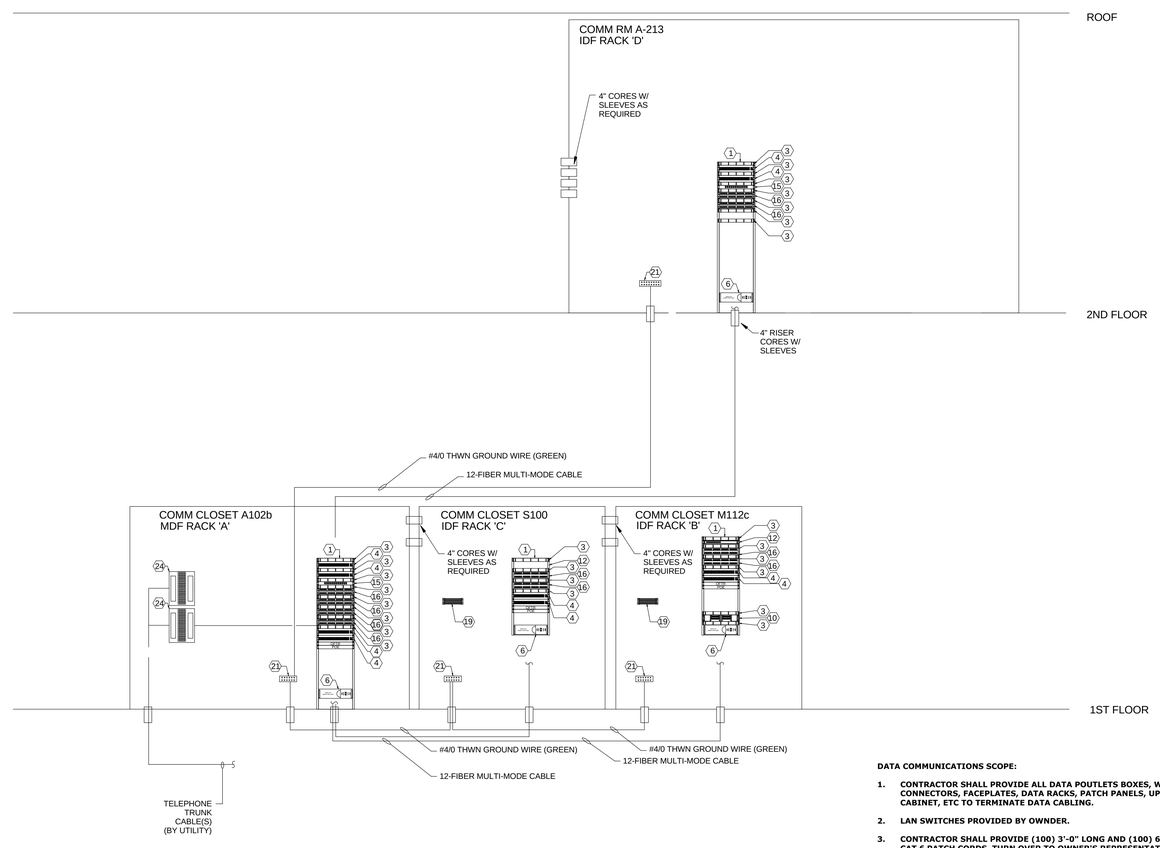
SHEET NO. 13.073



MOUNTING ELEVATIONS NOTES:

1. COORDINATE MOUNTING HEIGHTS WITH ARCHITECTURAL PLANS, ELEVATIONS AND CASEWORK DETAILS.
2. IN LOCATIONS WHERE DEVICES ARE MOUNTED AT THE SAME HEIGHT, DEVICES SHALL BE PROPERLY "GAUGED" WHEN FEASIBLE AND SHALL HAVE A SINGLE COVER PLATE.
3. IN LOCATIONS WHERE DIFFERENT DEVICES ARE MOUNTED AT DIFFERENT HEIGHTS WITHIN FOUR FEET OF ONE ANOTHER, DEVICES SHALL BE MOUNTED SUCH THAT THEY HAVE A COMMON CENTERLINE. IF THERE ARE THREE OR MORE DEVICES, THE CONTRACTOR SHALL REQUEST A DETAIL FROM THE ARCHITECT.
4. THE MOUNTING HEIGHT 1'-6" FOR OUTLETS IS NOT APPLICABLE IN CASES WHERE FIN TUBE RADIATORS ARE TO BE INSTALLED IN THE PROJECT. COORDINATE MOUNTING HEIGHT WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN.
5. ELEVATIONS SHOWN ARE TYPICAL, EXCEPTIONS ARE NOTED ON PLANS.

1 TYPICAL DEVICE MOUNTING ELEVATIONS
NOT TO SCALE



DATA COMMUNICATIONS SCOPE:

1. **CONTRACTOR SHALL PROVIDE ALL DATA POUTLETS BOXES, WIRING, CONNECTORS, FACEPLATES, DATA RACKS, PATCH PANELS, UPS, FIBER CABINET, ETC TO TERMINATE DATA CABLING.**
2. **LAN SWITCHES PROVIDED BY OWNDER.**
3. **CONTRACTOR SHALL PROVIDE (100) 3'-0" LONG AND (100) 6'-0" LONG CAT 6 PATCH CORDS, TURN OVER TO OWNER'S REPRESENTATIVE.**

#	COMPONENT DETAIL	COMPONENT DESCRIPTION	RMU
1		19 x 84"H DATA RELAY RACK (DOUBLE SIDED) W/ 80.5"H x 6"W x 9.8"D VERTICAL CABLE MANAGEMENT CAGE CPI PN: 13902-703	42 (MIN) PER SIDE
2		19 x 44"H x 25"D WALL MOUNT - SWING OPEN DATA RELAY RACK W/ MINIMUM OF 7 EACH 2" VERTICAL CABLE MANAGEMENT RINGS ON THE FRONT SIDE OF EACH RAIL COOPER PN: SB708194425FB OR EQUAL) MOUNT RACK 6" A.F.F., UON.	41 (MIN) PER SIDE
3		CABLE MANAGEMENT PANEL (1.7"H x 3.5"D) 19" RACK MOUNT	1 (MAX)
4		48-PORT LAN SWITCH PROVIDED BY OTHERS 19" RACK MOUNT	2 (MAX)
5		24-PORT LAN SWITCH PROVIDED BY OTHERS 19" RACK MOUNT	2 (MAX)
6		TRIPPLITE SAMRTPRO 3000 UPS 2250 WATTS, 9-PLUG OUTPUT, POWERALERT SOFTWARE MNGMNT 19" RACK MOUNT	2 (MAX)
8		MULTIMODE BACKBONE 96-PORT FIBER CABINET 19" RACK MOUNT W/ LC TYPE CONNECTOR COMPONENTS	4 (MAX)
10		MULTIMODE BACKBONE 24-PORT FIBER CABINET 19" RACK MOUNT W/ LC TYPE CONNECTOR COMPONENTS	2 (MAX)
12		MULTIMODE BACKBONE 12-PORT FIBER CABINET 19" RACK MOUNT W/ LC TYPE CONNECTOR COMPONENTS	1 (MAX)
15		4-PAIR WLAN AP CABLES (ONLY) 12-PORT CAT-6 UTP PATCH PANEL 19" RACK MOUNT	2 (MAX)
16		4-PAIR HORIZONTAL DISTRIBUTION 48-PORT CAT-6 UTP PATCH PANEL 19" RACK MOUNT	2 (MAX)
17		MULTI-PAIR COPPER BACKBONE 96-PORT TELCO TYPE PATCH PANEL 19" RACK MOUNT	4 (MAX)
18		MULTI-PAIR COPPER BACKBONE 24-PORT TELCO TYPE PATCH PANEL 19" RACK MOUNT	2 (MAX)
19		110 -100 TERMINAL CONNECTOR BLOCK W/ STANDOFFS AND C5 TYPE CONNECTORS INSERTS. MOUNT BLOCK 66" A.F.F. UON.	N/A
20		COAXIAL CATV BACKBONE -COIL MAX. 24" DIAMETER COIL / MIN 20' SLACK - SECURE TO BACKBOARD TERMINATION BY OTHERS. MOUNT COIL 48" A.F.F., UON.	
21		GB - GROUND BAR, SEE DETAIL 3 ON DRAWING E703	N/A
24		100 PAIR LIGHTNING PROTECTION BUILDING ENTRANCE TERMINAL 110 IN/110 OUT W/ 25 4BLEW LIGHTNING PROTECTION MODULES MOUNT TOP OF PANEL 72" A.F.F., UON.	N/A

2 TELECOMMUNICATIONS RISER DIAGRAM
NOT TO SCALE

REV.	DATE	DESCRIPTION	SHEET NO.
		REVISIONS	

FILENAME:

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DESIGNER/DRAFTER: CJE
CHECKED BY: RB
SCALE: As indicated

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ARCHITECT: WENDEL
APPROVED BY: BPM
ENGINEERS: ReSTL DESIGNERS, CLOUGH HARBOUR ASSOC., AI ENGINEERS, WENDEL
DATE: 06/11/2014

DESIGNED BY:
CLOUGH HARBOUR & ASSOCIATES
2139 SILAS DEANE HIGHWAY
SUITE 212
ROCKY HILL, CT
06067-2336

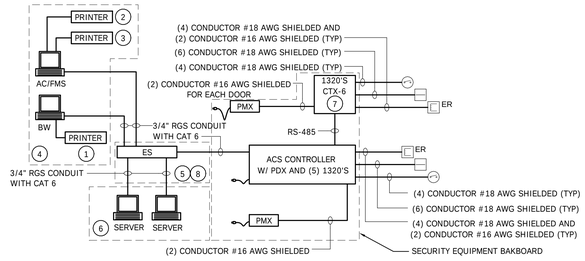
STATE OF CONNECTICUT BRIAN P. McKENNA No. 21640 LICENSED PROFESSIONAL ENGINEER

PROJECT TITLE:
WATERBURY BUS MAINTENANCE FACILITY REPLACEMENT

ADDRESS:
FROST BRIDGE ROAD
WATERTOWN, CONNECTICUT 06787

DRAWING TITLE:
ELECTRICAL DETAILS

PROJECT NO. **431-0006**
DRAWING NO. **E-707**
SHEET NO. **13.074**



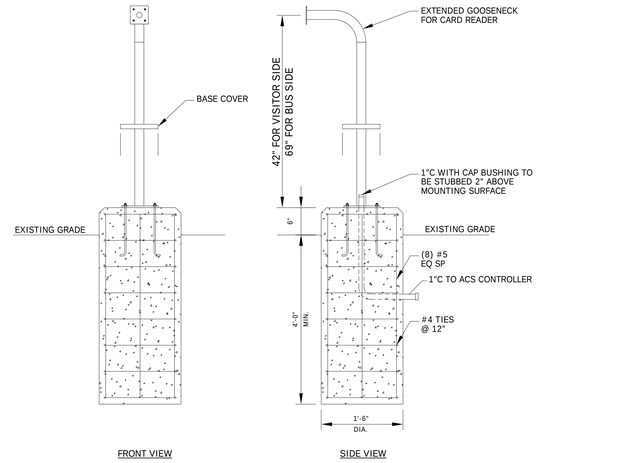
GENERAL NOTES

1. REFER TO SECURITY DOOR DETAIL FOR ADDITIONAL INFORMATION.

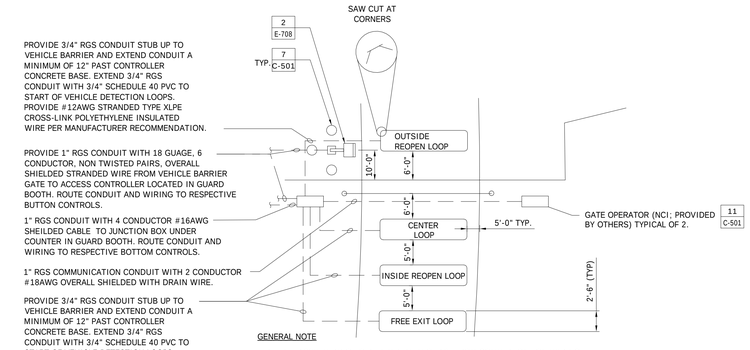
CODED NOTES

1. PROVIDE BADGE PRINTER.
2. PROVIDE TRANSACTION PRINTER.
3. PROVIDE ALARM PRINTER.
4. LOCATED IN DISPATCH A110.
5. PROVIDE ES SEPARATE FROM CCTV SYSTEM LOCATED IN EACH COMM ROOM, GUARD BOOTH AND IN RADIO RM A110a. UTILIZE SPARE FIBER PROVIDED FOR CCTV SYSTEM TO INTERCONNECT COMM ROOMS AND RADIO ROOM.
6. LOCATED IN RADIO RM SECURITY EQUIPMENT RACK.
7. PROVIDE CTX-6 IF NUMBER OF CARD READERS IN COMM RM EXCEEDS 10.
8. ES LOCATED IN GUARD BOOTH TO BE LOCATED UNDER COUNTER IN EQUIPMENT RACK (MIDDLE ATLANTIC DLBX OR APPROVED EQUAL).

1 ACCESS CONTROL RISER DIAGRAM
NOT TO SCALE



2 POST MOUNTED CARD READER
NOT TO SCALE



GENERAL NOTE

1. ALL 120V WIRING TO BE A MINIMUM OF 12" FROM COMMUNICATION WIRING.

SEQUENCE OF OPERATION OF ENTRANCE VEHICLE BARRIER GATE

A. GATE BARRIER SYSTEM FUNCTIONS REMAIN OPEN WITH FOLLOWING SEQUENCE OF OPERATION:

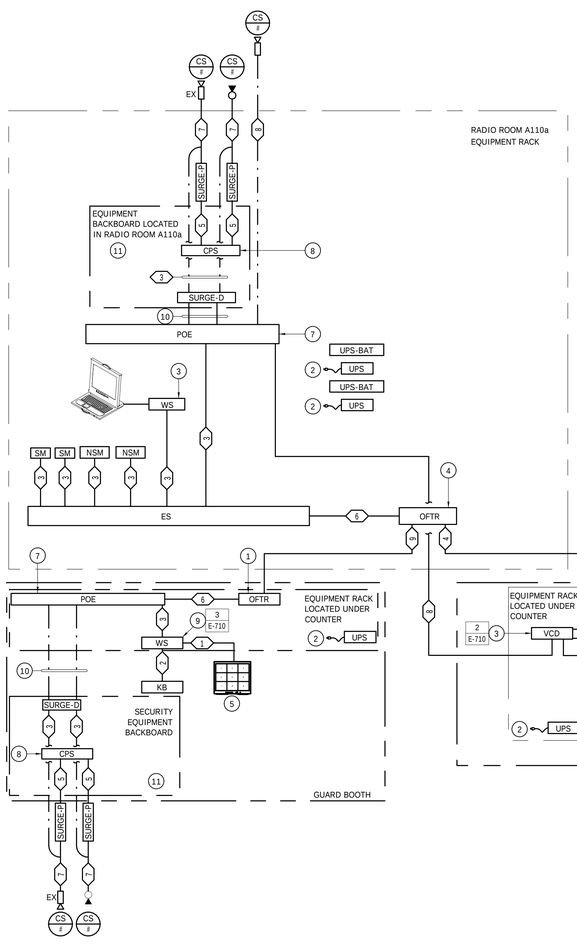
I. ENTRANCE TO PARKING LOT:

a. THE APPROACHING VEHICLE AT THE ENTRACE SHALL ACTIVATE GATE BARRIER CONTROL SYSTEM BY USE OF CARD READER.
b. EMBEDDED LOOPS SHALL PROVIDE SIGNAL TO CLOSE BARRIER AFTER VEHICLE CLEARS THE PATH.
c. VEHICLE BARRIER TO HAVE TO HAVE SECONDARY OPEN, STOP AND CLOSE CONTROLS FROM GUARD BOOTH.

II. EXIT FROM PARKING LOT:

a. THE APPROACHING VEHICLE AT THE EXIT SHALL ACTIVATE GATE BARRIER SYSTEM TO OPEN.
b. EMBEDDED LOOPS SHALL PROVIDE SIGNAL TO CLOSE BARRIER AFTER VEHICLE
c. VEHICLE BARRIER TO HAVE TO HAVE SECONDARY OPEN, STOP AND CLOSE CONTROLS FROM GUARD BOOTH.

4 ENTRANCE VEHICLE BARRIER GATE LANE DETAIL
NOT TO SCALE



3 CCTV RISER DIAGRAM
NOT TO SCALE

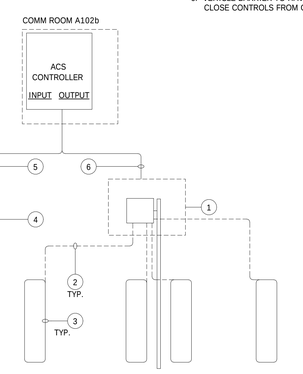
CCTV CABLE SCHEDULE	
1	DVI CABLE.
2	USB CABLE.
3	CAT 6 CABLE.
4	PROVIDE 1" C. W/ 12 STRAND SINGLE-MODE FIBER OPTICS CABLE (SF0).
5	(2) CONDUCTOR #16 AWG STRANDED.
6	FIBER JUMPER CABLE (JFO).
7	PROVIDE 3/4" C. W/ CAT 6 CABLE AND (2) CONDUCTOR #16 AWG STRANDED.
8	PROVIDE 3/4" C. W/ CAT 6 CABLE.
9	PROVIDE 2" C. W/ 12 STRAND SINGLE-MODE FIBER OPTICS CABLE (SFO).

GENERAL NOTE

1. PATCH AND FIREPROOF ALL CONDUIT PENETRATIONS.

CODED NOTES

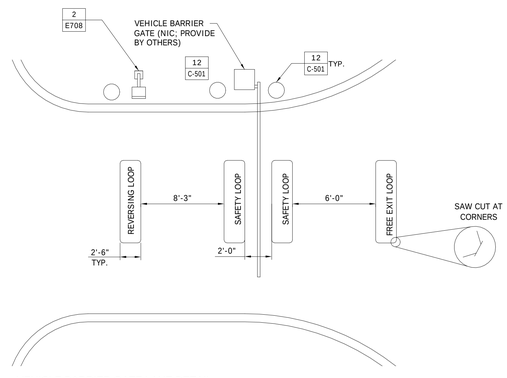
1. PROVIDE 12 PORT FIBER PATCH PANEL LOCATED IN IDF RACK.
2. EQUIPMENT TO BE POWERED FROM QUAD RECEPTACLE.
3. WORKSTATION SHALL INCLUDE SOFTWARE TO CONTROL ENTIRE SECURITY SYSTEM.
4. PROVIDE 48 PORT FIBER PATCH PANEL.
5. PROVIDE 32" MONITOR FOR CCTV VIEWING.
6. TYPICAL OF (3) COMM ROOM. PROVIDE EQUIPMENT WITHIN COMMUNICATION EQUIPMENT RACKS.
7. PROVIDE (1) POE FOR EVERY (20) CAMERAS TERMINATING IN IDF EQUIPMENT RACK LOCATED IN COMM ROOM.
8. PROVIDE (1) POWER SUPPLY (PS) FOR EVERY (4) PTZ'S OR EXTERIOR FIXED CAMERAS TERMINATING IN EQUIPMENT RACK LOCATED IN COMM ROOM.
9. WORKSTATION SHALL INCLUDE SOFTWARE TO CONTROL ENTIRE SECURITY SYSTEM. VIEWING RIGHTS ONLY, CANNOT RECORD VIDEO.
10. PROVIDE WIRING IN CONDUIT FROM SECURITY EQUIPMENT BACKBOARD TO EQUIPMENT RACK.
11. PROVIDE 12"x12"x6" CONTINUOUS HINGED LOCKABLE ENCLOSURE FOR SURGE PROTECTION.



CODED NOTES

1. VEHICLE BARRIER GATE (NIC; PROVIDED BY OTHERS).
2. PROVIDE 3/4" RGS CONDUIT STUB UP TO VEHICLE BARRIER AND EXTEND CONDUIT A MINIMUM OF 12" PAST CONTROLLER CONCRETE BASE. EXTEND 3/4" RGS CONDUIT WITH 3/4" SCHEDULE 40 PVC TO START OF VEHICLE DETECTION LOOPS. PROVIDE #12AWG STRANDED TYPE XLPE CROSS-LINK POLYETHYLENE INSULATED WIRE.
3. VEHICLE DETECTION LOOPS; SAW CUT LOOP PER EQUIPMENT MANUFACTURERS REQUIREMENTS.
4. HID TYPE LONG RANGE CARD READER PROVIDED BY ELECTRICAL CONTRACTOR.
5. PROVIDE 1" RGS CONDUIT WITH 18 GAUGE, 6 CONDUCTOR, NON TWISTED PAIRS, OVERALL SHIELDED STRANDED WIRE FROM IDENTIFICATION READER TO ACS CONTROLLER LOCATED IN COMM. ROOM A102b.
6. PROVIDE 3/4" RGS CONDUIT WITH 18 GAUGE, 6 CONDUCTOR, NON TWISTED PAIRS, OVERALL SHIELDED STRANDED WIRE FROM VEHICLE BARRIER GATE TO ACS CONTROLLER LOCATED IN COMM. ROOM A102b.

5 VEHICLE BARRIER GATE ONE-LINE DIAGRAM
NOT TO SCALE



SEQUENCE OF OPERATION OF VEHICLE BARRIER GATE

A. GATE BARRIER SYSTEM FUNCTIONS REMAIN OPEN WITH FOLLOWING SEQUENCE OF OPERATION:

I. ENTRANCE TO PARKING LOT:

a. THE APPROACHING VEHICLE AT THE ENTRACE SHALL ACTIVATE GATE BARRIER CONTROL SYSTEM BY USE OF CARD READER.
b. EMBEDDED LOOPS SHALL PROVIDE SIGNAL TO CLOSE BARRIER AFTER VEHICLE CLEARS THE PATH.

II. EXIT FROM PARKING LOT:

a. THE APPROACHING VEHICLE AT THE EXIT SHALL ACTIVATE GATE BARRIER SYSTEM TO OPEN.
b. EMBEDDED LOOPS SHALL PROVIDE SIGNAL TO CLOSE BARRIER AFTER VEHICLE

6 VEHICLE BARRIER GATE LANE DETAIL
NOT TO SCALE

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DESIGNER/DRAFTER: CJE
CHECKED BY: RB
SCALE: NOT TO SCALE

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ARCHITECT: WENDEL
APPROVED BY: BPM
ENGINEERS: ReSTL DESIGNERS, CLOUGH HARBOUR ASSOC., AI ENGINEERS, WENDEL
DATE: 06/11/2014

DESIGNED BY:
CLOUGH HARBOUR & ASSOCIATES
2139 SILAS DEANE HIGHWAY
SUITE 212
ROCKY HILL, CT 06067-2336

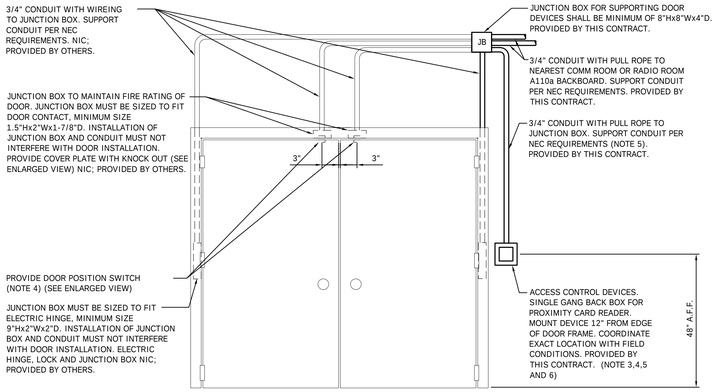
STATE OF CONNECTICUT · BRIAN P. McKENNA · No. 21640 · LICENSED PROFESSIONAL ENGINEER

PROJECT TITLE: WATERBURY BUS MAINTENANCE FACILITY REPLACEMENT

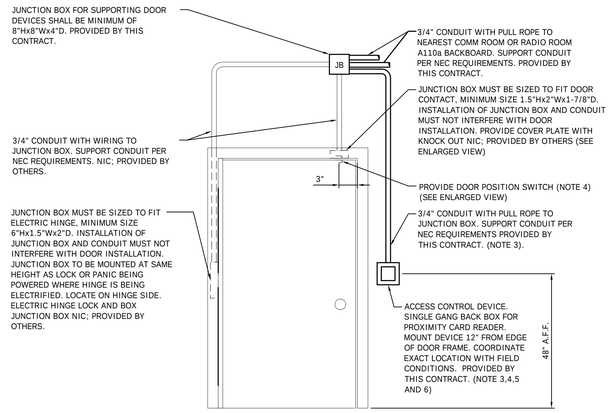
ADDRESS: FROST BRIDGE ROAD WATERTOWN, CONNECTICUT 06787

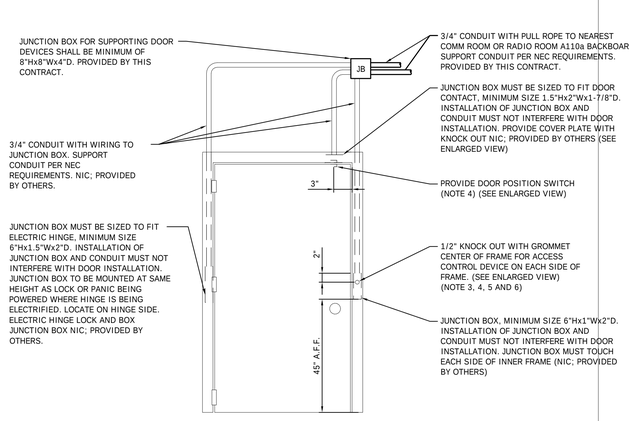
DRAWING TITLE: ELECTRICAL DETAILS

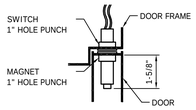
PROJECT NO. 431-0006
DRAWING NO. E-708
SHEET NO. 13.075



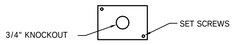
1 SECURITY DOOR DETAILS
NOT TO SCALE



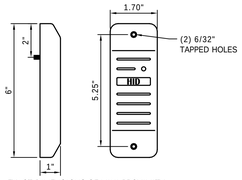




DOOR POSITION SWITCH



COVER PLATE WITH KNOCK OUT



EXACT DIMENSIONS OF MINI PROXIMITY MULLION MOUNT TO BE COORDINATED WITH SECURITY CONTRACTOR.

MINI PROXIMITY MULLION MOUNT

GENERAL NOTES

1. THE DOOR AND FRAME MANUFACTURER REMAINS RESPONSIBLE TO PROVIDE ANY COVER PLATES OR BOXES FOR THE HARDWARE ITEMS WHILE MAINTAINING THE FIRE RATINGS.
2. ALL DOORS TO BE VERIFIED WITH MANUFACTURES INSTALLATION REQUIREMENTS.
3. VERIFY DEVICES AT EACH DOOR LOCATION WITH FLOOR PLANS AND ACCESS CONTROL RISER DIAGRAMS.
4. VERIFY SIDE OF DOOR DEVICES TO BE LOCATED ON WITH DOOR OPERATION, SECURITY CONTACT DRAWINGS AND ARCHITECTURAL DRAWINGS.
5. GC AND ELECTRICAL CONTRACTOR TO COORDINATE EXACT MOUNTING REQUIREMENTS FOR EACH CARD READER PROXIMITY.
6. ALL DOOR HARDWARE, DOORS, KNOCKOUTS AND TAPPED HOLES PROVIDED BY OTHERS UNLESS INDICATED OTHERWISE.

REV.	DATE	DESCRIPTION	SHEET NO.
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DESIGNER/DRAFTER: CJE

CHECKED BY: RB

SCALE: NOT TO SCALE

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ARCHITECT: WENDEL

ENGINEERS: ReSTL DESIGNERS, CLOUGH HARBOUR ASSOC., AI ENGINEERS, WENDEL

APPROVED BY: BPM

DATE: 06/11/2014

DESIGNED BY:
CLOUGH HARBOUR & ASSOCIATES
2139 SILAS DEANE HIGHWAY
SUITE 212
ROCKY HILL, CT
06067-2336

STATE OF CONNECTICUT
BRIAN P. McKENNA
No. 21640
LICENSED
PROFESSIONAL ENGINEER

PROJECT TITLE:
WATERBURY BUS MAINTENANCE FACILITY REPLACEMENT

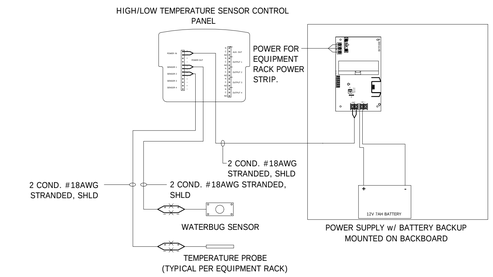
ADDRESS:
FROST BRIDGE ROAD
WATERTOWN, CONNECTICUT 06787

DRAWING TITLE:
ELECTRICAL DETAILS

PROJECT NO. 431-0006

DRAWING NO. E-709

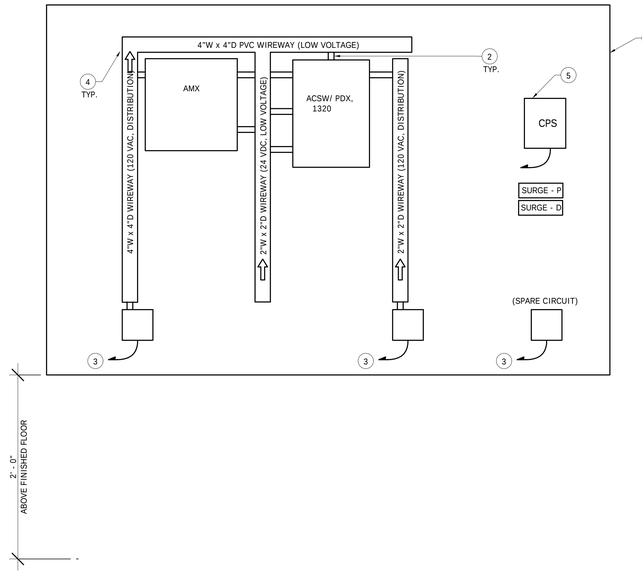
SHEET NO. 13.076



NOTE:
1. REFER TO SECURITY EQUIPMENT LAYOUT FOR TEMPERATURE SENSOR LOCATION AND QUANTITY OF TEMPERATURE PROBE AND WATER SENSOR.

4 WINLAND TEMPERATURE AND MOISTURE WIRING
NOT TO SCALE

POWER REQUIREMENTS				
	PMX	20A/1P	MICRO-CONTROLLER PS	20A/1P
	SPARE	20A/1P	CAMERA POWER SUPPLY	20A/1P



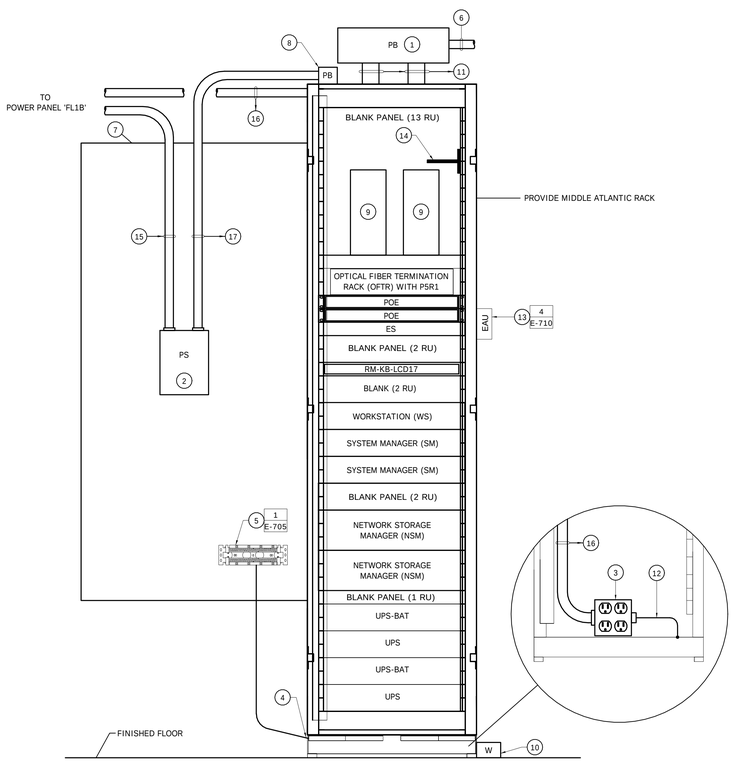
5 SECURITY BACKBOARD DETAIL
NOT TO SCALE

GENERAL NOTES

1. TYPICAL LAYOUT QUANTITY OF DEVICES MAY VERY BETWEEN COMM ROOMS.

CODED NOTES

1. PLYWOOD BACKBOARD.
2. PROVIDE MINIMUM 1 1/4" CONDUIT NIPPLE FROM WIREWAY TO EACH EQUIPMENT ENCLOSURE FOR ROUTING OF SECURITY SYSTEM WIRING.
3. 20A, 120V BRANCH CIRCUIT FROM NEAREST POWER PANEL WITH SPARE CIRCUITS.
4. PROVIDE WIREWAY SIZED PER NEC TO INSTALL SECURITY SYSTEMS WIRING. MINIMUM SIZE SHALL BE 2"x3." PROVIDE LABEL ON EACH COVER TO INDICATE EXACT SECURITY SYSTEM TYPE WIRING.
5. CAMERA STATION POWER SUPPLY. PROVIDE 3/4"C. W/(2)#12,1#12G. FROM NEAREST POWER PANEL WITH SPARE CIRCUITS.



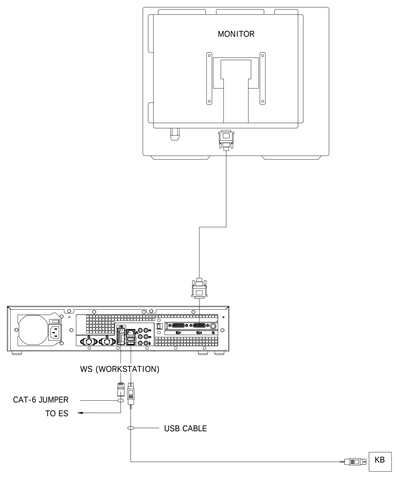
1 PANEL AND RACK LAYOUT
NOT TO SCALE

GENERAL NOTES

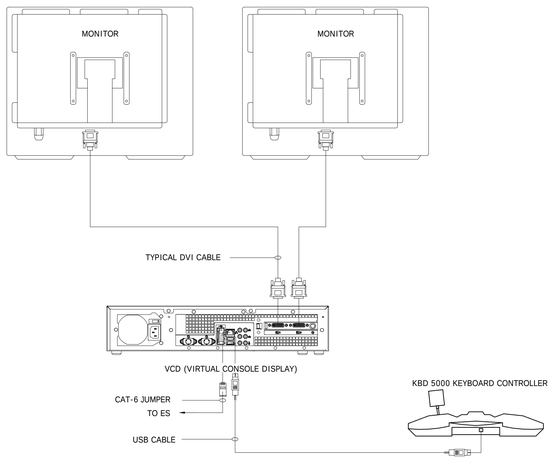
1. PATCH AND FIREPROOF ALL CONDUIT PENETRATIONS.
2. TYPICAL EQUIPMENT RACK LAYOUT. REFER TO SECURITY RISER DIAGRAM FOR EXACT QUANTITIES.
3. PROVIDE TAMPER PROOF SCREWS FOR ALL PULL BOXES, WIREWAYS, ETC. LOCATED IN SECURITY EQUIPMENT ROOM. TORX W/PIN REJECT.

CODED NOTES

1. PROVIDE 6"x6"x24" PULL BOX.
2. PROVIDE POWER SUPPLY.
3. PROVIDE (2) DUPLEX RECEPTACLE IN DOUBLE GANG BOX. INSTALL DUPLEX RECEPTACLE IN SECURITY EQUIPMENT RACK. COORDINATE EXACT LOCATION WITH EQUIPMENT LAYOUT.
4. PROVIDE 3/4" C. W/ (1)#6 GREEN INSULATED COPPER WIRE TO EQUIPMENT GROUND CONNECTION AT SECURITY EQUIPMENT RACK.
5. PROVIDE GROUND BAR.
6. PROVIDE CONDUIT AND CAMERA STATION WIRING HOME RUN BACK TO SECURITY EQUIPMENT RACK FOR EACH CAMERA STATION. REFER TO FLOOR PLANS AND 'CCTV CAMERA STATION SCHEDULE' FOR SIZE AND QUANTITY OF CONDUIT AND CAMERA STATION WIRING.
7. SECURITY EQUIPMENT BACKBOARD.
8. PROVIDE 4"X4" PULL BOX FOR DEDICATED CIRCUIT TO SECURITY EQUIPMENT RACKS.
9. PROVIDE SHELF TO SUPPORT ACCESS CONTROL SERVERS.
10. PROVIDE WATER BUG.
11. PROVIDE (2) 3" CONDUITS AND CAMERA STATION WIRING FROM PULL BOX TO SECURITY EQUIPMENT RACK.
12. PROVIDE #6 GREEN INSULATED COPPER BONDING JUMPER.
13. PROVIDE ENVIRONMENTAL ALARM UNIT.
14. PROVIDE TEMPERATURE PROBE.
15. PROVIDE 3/4" C. W/ (2)#12 & (1)#12G. FOR POWER TO CAMERA POWER SUPPLY.
16. PROVIDE (2) 120V, 20A DEDICATED CIRCUITS. PROVIDE 3/4" C. W/ (4)#12 & (2)#12G. FOR POWER TO EACH DUPLEX RECEPTACLE.
17. PROVIDE CONDUIT FOR WIRING HOME RUN TO BACK TO CAMERA POWER SUPPLY FOR EACH EXTERIOR CAMERA AND PTZ. REFER TO CCTV CAMERA STATION SCHEDULE FOR ADDITIONAL INFORMATION.



3 WORK STATION WIRING
NOT TO SCALE



2 DISPATCH RM VIDEO MONITOR AND KEYBOARD CONTROL WIRING
NOT TO SCALE

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DESIGNER/DRAFTER: CJE
CHECKED BY: RB
SCALE: NOT TO SCALE

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ARCHITECT: WENDEL
APPROVED BY: BPM
ENGINEERS: ReSTL DESIGNERS, CLOUGH HARBOUR ASSOC., AI ENGINEERS, WENDEL
DATE: 06/11/2014

DESIGNED BY:
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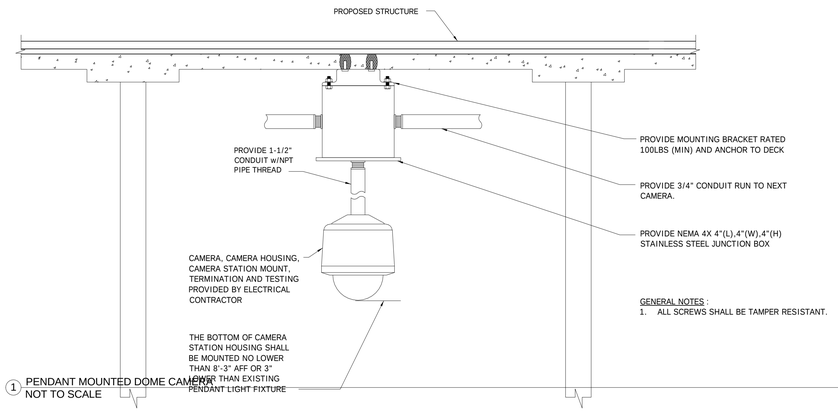
ROCKY HILL, CT
06067-2336

PROJECT TITLE:
WATERBURY BUS MAINTENANCE FACILITY REPLACEMENT

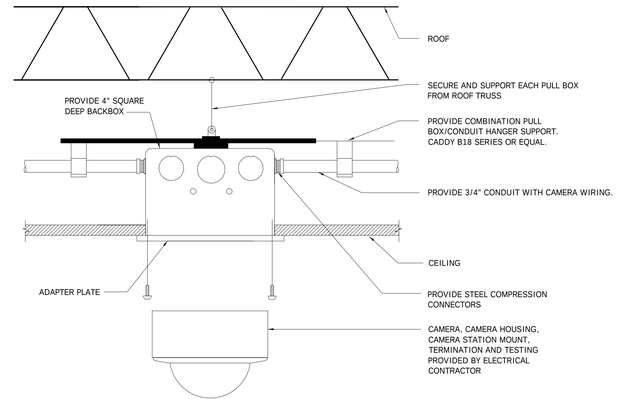
ADDRESS:
FROST BRIDGE ROAD
WATERTOWN, CONNECTICUT 06787

DRAWING TITLE:
ELECTRICAL DETAILS

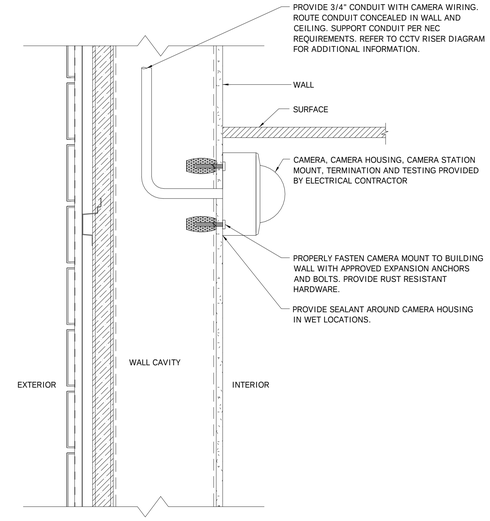
PROJECT NO. 431-0006
DRAWING NO. E-710
SHEET NO. 13.077



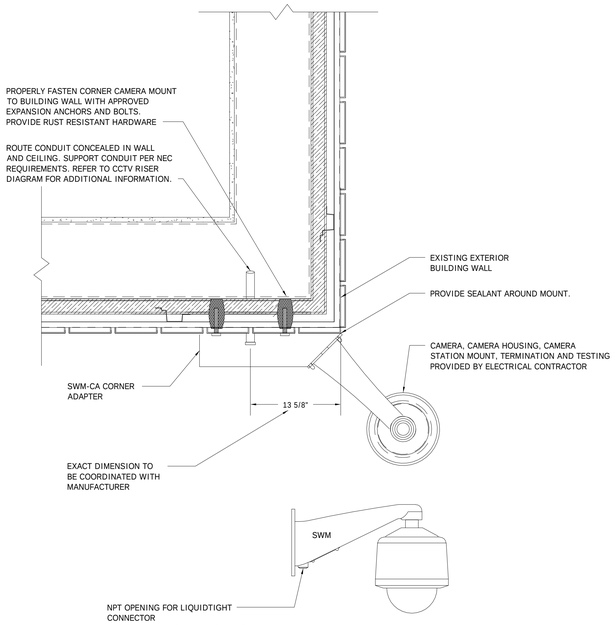
1 PENDANT MOUNTED DOME CAMERA
NOT TO SCALE



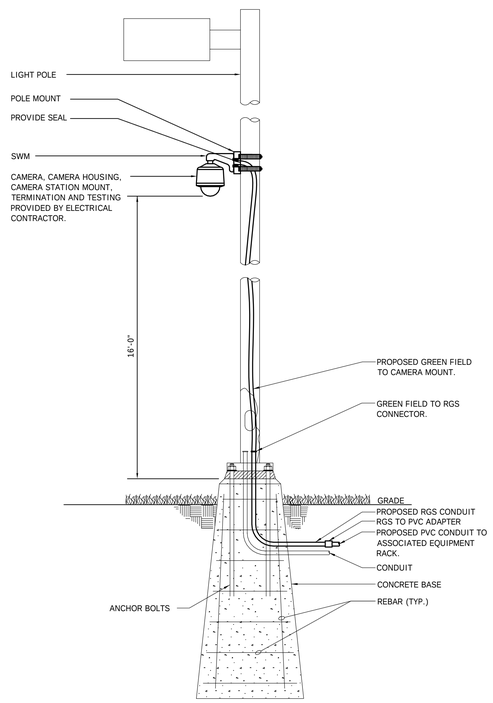
2 INTERIOR SUSPENDED CEILING DOME CAMERA
NOT TO SCALE



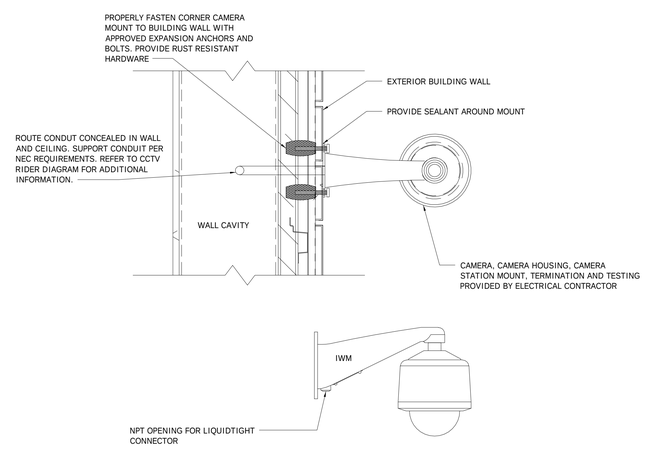
3 SURFACE WALL MOUNTED MINI-DOME CAMERA STATION
NOT TO SCALE



4 CORNER MOUNT DOME CAMERA
NOT TO SCALE



5 LIGHT POLE MOUNT DOME CAMERA
NOT TO SCALE



6 EXTERIOR MOUNTED CAMERA
NOT TO SCALE

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DESIGNER/DRAFTER: CJE

CHECKED BY: RB

SCALE: NOT TO SCALE

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ARCHITECT: WENDEL

ENGINEERS: ReSTL DESIGNERS, CLOUGH HARBOUR ASSOC., AI ENGINEERS, WENDEL

APPROVED BY: BPM

DATE: 06/11/2014

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LICENSED
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PROJECT TITLE:
WATERBURY BUS MAINTENANCE FACILITY REPLACEMENT

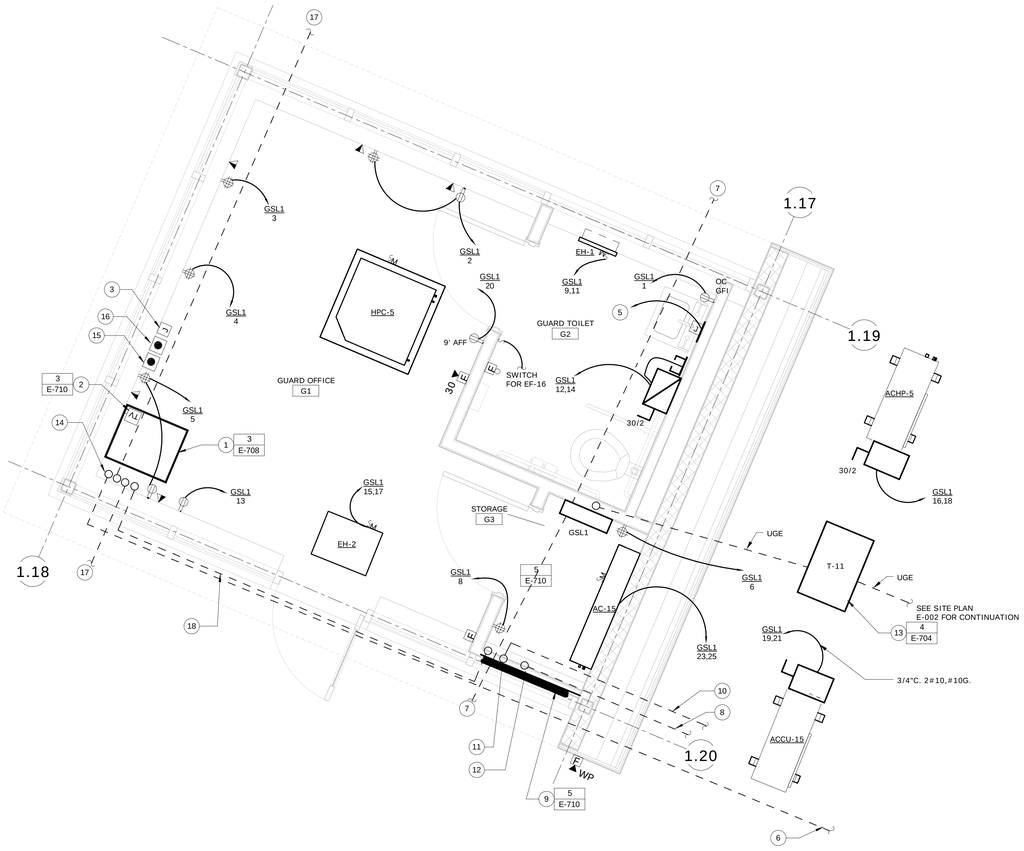
ADDRESS:
FROST BRIDGE ROAD
WATERTOWN, CONNECTICUT 06787

DRAWING TITLE:
ELECTRICAL DETAILS

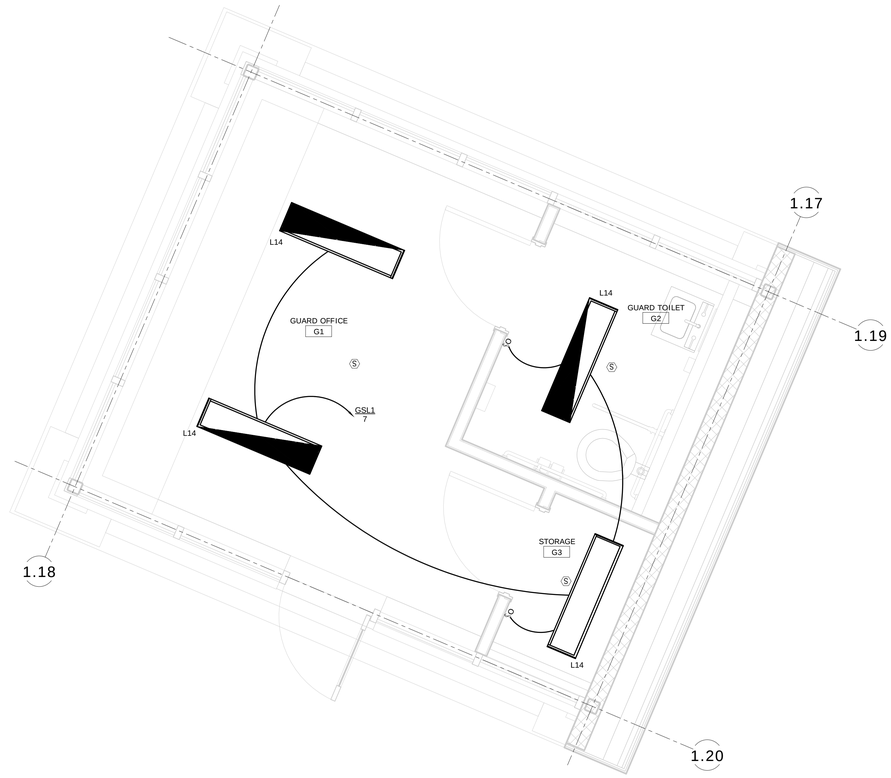
PROJECT NO. 431-0006

DRAWING NO. E-711

SHEET NO. 13.078



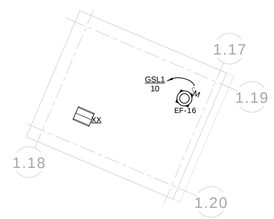
1 ELECTRICAL GUARD BOOTH POWER AND SYSTEMS PLAN
1/2" = 1'-0"



2 ELECTRICAL GUARD BOOTH FIRST FLOOR LIGHTING PLAN
1/2" = 1'-0"

CODED NOTES

1. PROVIDE EQUIPMENT RACK (MIDDLE ATLANTIC DLBX OR APPROVED EQUAL)WITH FAN KIT AND MOUNTED UNDER CABINET. INSTALL WS, UPS AND POE IN EQUIPMENT RACK. UPS MUST NOT BE DEEPER THAN 20".
2. PROVIDE (1) 32" MONITOR POWERED FROM UPS LOCATED IN DLBX.
3. PROVIDE RECESSED 10"X6" JUNCTION BOX WITH COVER, UNDER COUNTER, FOR CONDUITS TO VEHICLE BARRIER GATE.
5. PROVIDE 120V, 20A CIRCUIT TO PANEL GSL1 FOR ELECTRONIC PROXIMITY LAVATORY FAUCELTS AND WALL HUNG WATER CLOSETS.
6. 2" CONDUIT WITH 12-STRAND SINGLE MODE FIBER CABLE. SEE SITE PLAN DWG E-002 FOR CONTINUATION.
7. CONDUIT FROM PANEL GSL1 TO GATE CONTROLLER SEE SITE PLAN E-002 FOR ADDITIONAL INFORMATION.
8. 2" CONDUIT WITH 6-PAIR COPPER 16GA AQG & (1) 4-PAIR FIBER CABLE FROM MDF IN BUS FACILITY TO FIBER INTERCONENCT PANEL & 110 PUNCH DOWN BLOCKS ON PLYWOOD BACKBOARD.
9. PROVIDE 3/4" X 3' WIDE X 6' TALL PLYWOOD WITH 2 COATS OF BLACK PAINT.
10. 1-1/4"C. (3) PAIR OF #14 TWISTED SHEILDED CABLES FROM FACP TO NACT PANEL IN STORAGE ROOM.
11. STUB-UP CONDUIT INTO FIRE ALARM PANEL.
12. STUB-UP CONDUIT 2'-0" AFF.
13. PROVIDE 75kVA, 480V DELTA PRIMARY, 208/120V, 3-PHASE TRANSFORMER WITH WEATHER RATED ENCLOSURE. SEE ELECTRICAL SITE PLAN AND CIVIL SITE PLAN FOR ADDITIONAL INFORMATION.
14. STUB-UP CONDUIT INTO 6"X6"X6" JUNCTION BOX. PROVIDE 2" FLEX CONDUIT FROM JUNCTION BOX TO SECURITY BOX.
15. PROVIDE 3 BUTTON CONTROL SWITCH BOX LABELED OPEN, STOP AND CLOSE. ALL THESE SWITCHES MUST BE NORMALLY OPEN AND CAN SHARE THE SAME COMMON GROUND. LABEL CONTROL BOX FOR VISITOR GATE.
16. PROVIDE 3 BUTTON CONTROL SWITCH BOX LABELED OPEN, STOP AND CLOSE. ALL THESE SWITCHES MUST BE NORMALLY OPEN AND CAN SHARE THE SAME COMMON GROUND. LABEL CONTROL BOX FOR BUS GATE.
17. PROVIDE CONDUIT AND WIRING FOR SITE LIGHT POLE MOUNTED CAMERA.
18. PROVIDE 1" CONDUIT FROM EQUIPMENT RACK TO PLYWOOD BACKBOARD.



3 ELECTRICAL ROOF POWER PLAN - GUARD BOOTH
1/8" = 1'-0"

GRAPHIC SCALE (FEET)
1/2" = 1'-0"
0' 5' 10'

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SCALE: As indicated

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DRAWING TITLE:
ELECTRICAL GUARD BOOTH PLAN

PROJECT NO. 431-0006
DRAWING NO. EG-101
SHEET NO. 13.079