LIGHTING

- 2x4 FLUORESCENT FIXTURE
- Ab — ASSOCIATED CONTROL DEVICE
- FIXTURE TYPE (SEE LIGHT FIXTURE SCHEDULE)
- 1x4 FLUORESCENT FIXTURE
- 2x2 FLUORESCENT FIXTURE
- FIXTURE WIRED TO UNSWITCHED NORMAL CIRCUIT
- FIXTURE WIRED TO UNSWITCHED EMERGENCY CIRCUIT
- FIXTURE WIRED TO SWITCHED EMERGENCY CIRCUIT
- DOWN LIGHT
- FLUORESCENT STRIP
- WALL MOUNTED FIXTURES
- FLOOD LIGHT
- EXIT SIGN, CEILING MOUNTED ARROW INDICATES EGRESS DIRECTION SHADING INDICATES SIGN FACE
- EXIT SIGN, WALL MOUNTED SHADING INDICATES SIGN FACE
- TD — DUAL HEAD EMERGENCY LIGHT BATTERY PACK TD – TIME DELAY RESET
- REMOTE EMERGENCY LIGHTING HEAD
- WP — WALL PACK
- S_3 — 3–WAY TOGGLE SWITCH
- S_a — SINGLE POLE TOGGLE SWITCH INDICATES CONTROLLED FIXTURE
- S_4 — 4–WAY TOGGLE SWITCH
- S_{II} — DUAL LEVEL SWITCHING
- S_D — DIMMER SWITCH. INCANDESCENT OR FLUORESCENT AS REQUIRED.
- S_{OS} — OCCUPANCY SENSOR SWITCH
- UNSWITCHED CONTINUATION OF BRANCH CIRCUIT
- HOME RUN
- X — OCCUPANCY SENSOR a. INDICATES CONTROLLED FIXTURE INDICATES AIMING DIRECTION
- PB — MOMENTARY PUSH BUTTON SWITHCH FOR LIGHTING CONTROL SYSTEM

COMMUNICATION & DATA SYSTEMS

- DATA SYSTEM BACK BOX AND COVERPLATE. PROVIDE 1" EMT STUBBED TO ABOVE CEILING SPACE. W–INDICATES WALL MOUNTED AT 48" AFF
- INT — WALL MOUNTED VIDEO INTERCOM BACK BOX. PROVIDE 3/4" EMT STUBBED TO ABOVE CEILING SPACE.

POWER

- (4) 30A — NON–FUSED SAFETY SWITCH AMPERE RATING; NEMA ENCLOSURE RATING
- F 60AS 40AF (4) — FUSED SAFETY SWITCH. TOP NUMBER INDICATES SWITCH AMPERE RATING. LOWER NUMBER INDICATES FUSE RATING; NEMA ENCLOSURE
- 1 (4) — MAGNETIC MOTOR STARTER. FVNR UNLESS INDICATED OTHERWISE; NEMA ENCLOSURE RATING; NEMA SIZE (TYPICAL)
- CB 20/1 — COMBINATION CIRCUIT BREAKER/MAGNETIC MOTOR STARTER FIRST NUMBER INDICATES CIRCUIT BREAKER AMPERE RATING SECOND NUMBER INDICATES NEMA STARTER SIZE
- F 60/40/1 — COMBINATION FUSED DISCONNECT/MAGNETIC MOTOR STARTER NUMBERS INDICATE DISCONNECT AMPERE RATING/FUSE RATING/NEMA STARTER SIZE
- 30/1 — NON–FUSED DISCONNECT/MAGNETIC MOTOR STARTER FIRST NUMBER INDICATES CIRCUIT BREAKER AMPERE RATING SECOND NUMBER INDICATES NEMA STARTER SIZE
- M OL — MANUAL MOTOR STARTER. TOGGLE OPERATED, 1,2 OR 3 POLE AS REQUIRED. OVERLOAD PROTECTION
- M — MANUAL MOTOR SWITCH, TOGGLE OPERATED, SINGLE PHASE. 1 OR 2 POLE AS REQUIRED (NO OVERLOAD PROTECTION)
- CB 100A — ENCLOSED CIRCUIT BREAKER AMPERE RATING
- 5 — ELECTRIC MOTOR, NUMBER INDICATES HORSEPOWER RATING
- VAV — VARIABLE AIR VOLUME CONTROL ACTUATORS
- J — JUNCTION BOX
- T — TRANSFORMER
- P — POWER POLE
- CONDUIT TURNING UP
- CONDUIT TURNING DOWN
- EY CONDUIT SEAL
- E — DUPLEX RECEPTACLE, NEMA 5–20R. INSTALLED ON EMERGENCY CIRCUIT (TYPICAL)
- GFI DUPLEX RECEPTACLE, NEMA 5–20R
- SINGLE RECEPTACLE, NEMA 5–20R
- DOUBLE DUPLEX (QUADRUPLEX) RECEPTACLE, NEMA 5–20R
- POWER RECEPTACLE, 480 VOLT NEMA CONFIGURATION AS NOTED.
- POWER RECEPTACLE, 240 VOLT NEMA CONFIGURATION AS NOTED.
- PANELBOARD, NORMAL POWER
- PANELBOARD, EMERGENCY POWER
- EMO — EMERGENCY HVAC SHUTOFF
- PP — AUTOMATIC DOOR PUSH PLATE

GROUNDING

- GROUND ROD
- EXOTHERMIC WELD CONNECTION
- BOLTED CONNECTION
- —G— BARE COPPER CONDUCTOR RUN EXPOSED
- ----G---- BARE COPPER CONDUCTOR EMBEDDED IN CONCRETE OR BURIED

LINE TYPES

- EXISTING
- NEW
- DEMOLITION

FIRE ALARM

- FACP — FIRE ALARM CONTROL PANEL
- FAA — FIRE ALARM ANNUNCIATOR BACK BOX PROVIDE 3/4" EMT STUBBED TO ABOVE CEILING SPACE.
- F — FIRE ALARM MANUAL PULL STATION BACK BOX PROVIDE 3/4" EMT STUBBED TO ABOVE CEILING SPACE.
- F — FIRE ALARM AUDIBLE/VISIBLE NOTIFICATION BACK BOX PROVIDE 3/4" EMT STUBBED TO ABOVE CEILING SPACE.
- F — FIRE ALARM VISIBLE ONLY NOTIFICATION BACK BOX PROVIDE 3/4" EMT STUBBED TO ABOVE CEILING SPACE.
- D — DUCT SMOKE DETECTOR JUNCTION BOX
- RTI — DUCT SMOKE DETECTOR REMOTE TEST INDICATOR BACK BOX
- K — KNOX BOX

SECURITY SYSTEMS

- CR — CARD READER BACK BOX. PROVIDE 3/4" EMT STUBBED TO ABOVE CEILING SPACE.

ONE LINE DIAGRAM

- MOLDED CASE CIRCUIT BREAKER
- ST — ST – SHUNT TRIP; GF – GROUND FAULT; EO – ELECTRICALLY OPERATED
- DISCONNECT, ISOLATION OR SAFETY SWITCH
- FUSED CUTOUT
- FUSED LOAD BREAK SWITCH
- 1 — MAGNETIC MOTOR STARTER. NUMERAL INDICATES NEMA SIZE; FVNR UNLESS OTHERWISE NOTED. FVR – FULL VOLTAGE REVERSING; RVAT – REDUCING VOLTAGE AUTO TRANSFORMER; 2S – TWO SPEED
- VFD — VARIABLE FREQUENCY DRIVE
- OA — POWER TRANSFORMER; OA – LIQUID TYPE SELF COOLED; AA – DRY TYPE SELF COOLED; FA – FAN COOLED; CONNECTION
- 3 600/5 — CURRENT TRANSFORMER; RATIO; NUMBER REQUIRED
- 5 — MOTOR, NUMBER INDICATES HORSEPOWER
- GENERATOR
- A F L ATS — ATS – AUTOMATIC TRANSFER SWITCH; MTS – MANUAL TRANSFER SWITCH
- A — METER; KWH – KILOWATT HOUR
- TVSS — TRANSIENT VOLTAGE SURGE SUPPRESSOR
- FUSE
- GROUND

ABBREVIATIONS

A,AMP	AMPERE	LA	LIGHTNING ARRESTER
AFF	ABOVE FINISHED FLOOR	LTG	LIGHTING
AFG	ABOVE FINISHED GRADE	MC	METAL CLAD
AHJ	AUTHORITY HAVING JURISDICTION	MCB	MAIN CIRCUIT BREAKER
AIC	AMPERE INTERRUPTING CAPACITY	MFR	MANUFACTURER
AWG	AMERICAN WIRE GAUGE	MI	MINERAL INSULATED
BFG	BELOW FINISHED GRADE	MLO	MAIN LUG ONLY
BOS	BOTTOM OF STEEL	MTD	MOUNTED
BMS	BUILDING MANAGEMENT SYSTEM	MV	MEDIUM VOLTAGE
C	CONDUIT, CONDUCTOR	NC	NORMALLY CLOSED
CATV	CABLE TELEVISION	NEC	NATIONAL ELECTRICAL CODE
CB	CIRCUIT BREAKER	NEG	NEGATIVE
CCTV	CLOSED CIRCUIT TELEVISION	NEUT	NEUTRAL
CPT	CONTROL POWER TRANSFORMER	NIC	NOT IN CONTRACT
CT	CURRENT TRANSFORMER	NO	NORMALLY OPEN
CU	COPPER	NTS	NOT TO SCALE
DACT	DIGITAL ALARM COMMUNICATOR TRANSMITTER	PF	POWER FACTOR
		PH	PHASE
DB	DIRECT BURIED	PVC	POLYVINYL CHLORIDE
DISC	DISCONNECT	RGS	RIGID GALVANIZED STEEL CONDUIT
DN	DOWN	RSC	RIGID STEEL CONDUIT
EMT	ELECTRICAL METALLIC TUBING	RTD	RESISTANCE TEMPERATURE DETECTOR
EWC	ELECTRIC WATER COOLER		
FAA	FIRE ALARM ANNUNCIATOR	SN	SOLID NEUTRAL
FACP	FIRE ALARM CONTROL PANEL	STP	SHIELDED TWISTED PAIR
FBO	FURNISHED BY OTHERS	STT	SHIELDED TWISTED TRIPLET
FU	FUSE	SWBD	SWITCHBOARD
FWE	FURNISHED WITH EQUIPMENT	SWGR	SWITCHGEAR
GEN	GENERATOR	TOS	TOP OF STEEL
GFCI	GROUND FAULT CIRCUIT BREAKER	TRANSF	TRANSFORMER
GND	GROUND	TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSER
HP	HORSEPOWER		
HTR	HEATER	V	VOLT
IG	ISOLATED GROUND	VA	VOLT–AMPERE
IMC	INTERMEDIATE METAL CONDUIT	VAR	VOLT–AMPERE REACTIVE
K	KILO	WM	WATT METER
KCMIL	THOUSAND CIRCULAR MILS	WP	WEATHER PROOF
KV	KILOVOLT	XFMR	TRANSFORMER
KVA	KILOVOLT–AMPERE	XP	EXPLOSION PROOF
KVAR	KILOVOLT–AMPERE REACTIVE		
KW	KILOWATT		
KWH	KILOWATT–HOUR		

GENERAL NOTES:

1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH NFPA–70, NATIONAL ELECTRICAL CODE (NEC).
2. ALL MOTOR SAFETY SWITCHES, DISCONNECTS AND MOTOR STARTERS ARE PROVIDED BY DIVISION 260000 UNLESS NOTED AS FURNISHED WITH EQUIPMENT (FWE).
3. UNLESS OTHERWISE NOTED CONVENIENCE RECEPTACLES SHALL BE MOUNTED 18–INCHES AFF, LIGHTING TOGGLE SWITCHES 48–INCHES AFF, DATA SYSTEM OUTLETS 18–INCHES AFF, FIRE ALARM NOTIFICATION DEVICES 86–INCHES AFF OR 6–INCHES BELOW CEILING, WHICHEVER IS LOWER, AND FIRE ALARM MANUAL PULL STATIONS 48–INCHES TO TOP OF DEVICE.
4. ALL PENETRATIONS THROUGH FLOORS, RATED WALLS AND PARTITIONS SHALL BE SEALED WITH UL APPROVED FIRE SEALANT MATERIAL TO MAINTAIN THE RATING OF SEPARATION.
5. ALL ENCLOSURES, CONDUIT BODIES AND THEIR COVERS CONTAINING FIRE ALARM SYSTEM CONDUCTORS SHALL BE PAINTED RED.
6. AN EQUIPMENT GROUNDING CONDUCTOR SHALL BE INSTALLED WITH EVERY FEEDER AND BRANCH CIRCUIT.
7. UNLESS OTHERWISE NOTED WIRING SHALL BE 2#12 AWG CONDUCTORS AND #12 GND. HOME RUNS FED FROM 20A–1P CIRCUITS IN EXCESS OF 100 FEET SHALL BE #10 AWG.
8. FLEXIBLE CONNECTIONS TO MOTORS SHALL BE LIQUID TIGHT FLEXIBLE METAL CONDUIT, UNLESS OTHERWISE NOTED.
9. LIGHTING TOGGLE SWITCHES SHALL BE COMMERCIAL SPECIFICATION GRADE 277 VOLT, SIDE WIRED AND PROVIDED WITH GROUNDING SCREW. LEVITON, PASS AND SEYMOUR OR APPROVED EQUAL. COORDINATE COLOR WITH ARCHITECT.
10. CONVENIENCE RECEPTACLES SHALL BE COMMERCIAL SPECIFICATION GRADE GROUNDING TYPE NEMA 5–20R, SIDE WIRED. LEVITON, PASS AND SEYMOUR OR APPROVED EQUAL. COORDINATE COLOR WITH ARCHITECT.
11. PROVIDE WALL PLATES FOR ALL WIRING DEVICES, NYLON SMOOTH TYPE IN FINISHED AREAS AND GALVANIZED IN UNFINISHED AREAS.
12. ALL WIRING SHALL BE 600V, COPPER WITH THHN/THWN INSULATION. SERVICE ENTRANCE CONDUCTORS SHALL HAVE XHHW INSULATION.
13. LL BEAN TO PROVIDE ALL SECURITY AND FIRE ALARM DEVICES AND LOW VOLTAGE WIRING (0–24V). ELECTRICAL CONTRACTOR TO PROVIDE POWER CONNECTIONS (120–480V) TO SECURITY POWER SUPPLIES AND FIRE ALARM CONTROL PANEL AS SHOWN ON THE DRAWINGS. ELECTRICAL CONTRACTOR TO PROVIDE BACKBOXES AT SECURITY AND FIRE ALARM DEVICE LOCATIONS FOR DEVICE MOUNTING AND STUB 3/4" CONDUIT TO ABOVE CEILING PER SPECIFICATIONS. ELECTRICAL CONTRACTOR TO COORDINATE WITH LL BEAN ON DEVICE MOUNTING REQUIREMENTS.

GENERAL NOTE

1. ALL GENERAL NOTES, SYMBOL LISTS, AND DETAILS ARE TO BE CONSIDERED AS APPLICABLE TO ALL ELECTRICAL DRAWINGS FOR THIS PROJECT. SYMBOLS AND ABBREVIATIONS SHOWN ON THIS SHEET ARE FOR REFERENCE ONLY AND DO NOT INDICATE THEIR INCORPORATION IN THE DESIGN.

REV.	DESCRIPTION	DATE
2	CONFORMED SET	4–21–15
1	ISSUED FOR ADDENDUM 2	3–18–15
0	ISSUED FOR CONSTRUCTION	3–3–15

CONFORMED SET
4–21–15

CURRENT ISSUE STATUS:

PROJECT NORTH

STATE OF MAINE — WILLIAM R. BEAM — LICENSED PROFESSIONAL ENGINEER — 4/21/15

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ELECTRICAL LEGEND AND GENERAL NOTES

SHEET TITLE:

SCALE:	1/8"=1'–0"	DATE:	3–3–15
PROJECT MANAGER:	JLH	GRAPHIC SCALE:	0" 1"
JOB CAP/DRAWN:	RBB		
A/E OF RECORD:	WRH	SHEET No.	
SMRT CAD FILE:	E–001–14199	E–001	
PROJECT No.	14199–00		

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