GENERAL NOTES - SITE ELECTRICAL

1. THE COMPLETE INSTALLATION SHALL CONFORM WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL LAWS, CODES AND ORDINANCES, INCLUDED BUT NOT LIMITED TO APPROVED EDITIONS OF THE FOLLOWING: NATIONAL ELECTRICAL SAFETY CODE (ANSIC2): NATIONAL ELECTRICAL CODE (NFPA 70): OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA) AND ALL AMENDMENTS THERETO. NOTHING CONTAINED IN THE DRAWINGS AND SPECIFICATIONS SHALL BE CONSTRUED TO CONFLICT WITH THESE LAWS, CODES, AND ORDINANCES, AND THEY ARE THEREBY INCLUDED IN THESE SPECIFICATIONS. OBTAIN PERMITS AND REQUEST INSPECTIONS FROM ALL AUTHORITIES HAVING JURISDICTION. COMPLY WITH ALL CMP, FAIRPOINT COMMUNICATIONS, CABLE TELEVISION PROVIDER REGULATIONS AND STANDARDS

2. THE FOLLOWING ELECTRICAL WORK SHALL BE PERFORMED UNDER THIS CONTRACT: UNDERGROUND CONDUIT, FITTINGS, AND ALL DEVICES; PROVISION OF HAND HOLES, NEW LIGHTING FIXTURES, POLES WITH ALL ACCESSORIES INCLUDING ANCHOR BOLTS AND POLE BASES; PROVISION OF UNDERGROUND CONDUIT AND WIRE TO SERVE NEW LIGHTING EQUIPMENT AND RECEPTACLES; PROVISION OF SERVICE EQUIPMENT. INCLUDING OUTDOOR CABINETS, INGROUND SPLICE BOXES, GROUNDING, METER ENCLOSURES, AND WEATHERPROOF RECEPTACLES.

3. CMP (ELECTRICAL UTILITY) SHALL PROVIDE ALL ASSOCIATED OVERHEAD AND UNDERGROUND PRIMARY WIRING, PRIMARY TERMINATIONS, TRANSFORMERS, AND CONNECTIONS TO EXISTING OVERHEAD LINES. CONTRACTOR SHALL PROVIDE UNDERGROUND CONDUIT.

4. PROVIDE UNDERGROUND ELECTRICAL WARNING TAPE: 6" WIDE PLASTIC TAPE, COLORED RED WITH SUITABLE LEGEND DESCRIBING BURIED ELECTRICAL LINES FOR ALL UNDERGROUND CONDUITS. LOCATE 6 INCHES BELOW FINISHED GRADE.

5. REFER TO CIVIL DRAWINGS FOR EXCAVATION AND BACKFILL OF ALL UNDERGROUND WORK.

6. EXISTING UTILITY LOCATIONS ARE APPROXIMATE AND SHALL BE FIELD VERIFIED. CONTRACTORS SHALL CONTACT DIG SAFE BEFORE BEGINNING ANY EXCAVATIONS.

7. FINAL LOCATION OF NEW UTILITIES MAY VARY FROM PLANS PENDING UTILITY COMPANY FIELD COORDINATION.

8. SEE DRAWING E1.2 FOR ADDITIONAL SITE DETAILS.

9. THE LOCAL TELEPHONE SERVICE PROVIDER AND THE CABLE TV COMPANY SHALL PROVIDE AND INSTALL ALL THE SITE UTILITY SERVICE CABLE TO NEW ELECTRICAL ROOM BACKBOARD IN THE CONDUITS PROVIDED BY THE CONTRACTOR AS PART OF THE SITE WORK.

10. UNDERGROUND CONDUIT SHALL BE SCHED 40 PVC. ABOVE GRADE CONDUIT SHALL BE RGS. ALL CONDUIT SWEEPS SHALL BE RGS LONG SWEEPS.

12. PROVIDE EXPANSION FITTINGS FOR ALL UNDERGROUND CONDUIT CONNECTED TO FIXED ABOVE GROUND STRUCTURES.

13. GENERATOR PAD GROUNDING: PROVIDE (2) 3/4" x 8'LONG GROUND RODS AT OPPOSITE CORNERS OF GENERATOR PAD. PROVIDE 3/0 COPPER GROUND LOOP 30" BELOW GRADE AROUND PAD. RUN GROUND CABLE TO MAIN SWITCH GEAR. VERIFY GROUNDING REQUIREMENTS WITH GENERATOR MANUFACTURER PRIOR TO INSTALLING THE GENERATOR.

14. PRODIVE A LISTED INTERSYSTEM BONDING TERMIONAL AT THE SERVICE ENTRANCE. INSTALL IN ACCORDANCE WITH NFPA 70,250.94

15. REFER TO ONE-LINE DIAGRAM FOR ADDITIONAL INFORMATION.

ELEVATOR NOTES

1. CONNECT ALL REQUIRED SMOKE DETECTORS FOR ELEVATOR RECALL. VERIFY REQUIREMENTS WITH ELEVATOR VENDOR AND LOCAL FIRE DEPARTMENT FOR ELEVATOR SMOKE DETECTORS AND INSTALL IN ACCORDANCE WITH NFPA 72.

2. PROVIDE ELEVATOR POWER SHUTDOWN VIA HEAT DETECTORS IN ELEVATOR SHAFT, PIT, AND MACHINE ROOM. HEAT DETECTORS ADJACENT TO SPRINKLER HEADS SHALL ALARM BEFORE SPRINKLER HEAD ACTIVATION BASED ON RATE OF TEMPERATURE RISE FOR THE SPRINKLER HEAD. HEAT DETECTORS SHALL BE INSTALLED WITHIN TWO FEET OF THE SPRINKLER HEAD. PROVIDE A CONNECTION TO A SHUNT-TRIP CIRCUIT BREAKER FOR ELEVATOR POWER SHUTDOWN. THE FIRE ALARM SYSTEM SHALL MONITOR SHUNT TRIP CONTROL POWER. COORDINATE WORK WITH THE LOCAL AUTHORITY HAVING JURISDICTION (AHJ).

3. PROVIDE A CONNECTION FROM THE ELEVATOR TAMPER SWITCH TO THE FIRE ALARM CONTROL PANEL (FACP).

4. COMPLY WITH REQUIREMENTS ASME A17.1 AND NFPA 72.

5. AUTOMATIC TRANSFER SWITCHES (ATS) MONITORING: PROVIDE 2*14AWG+1*14GND IN 1/2"C, FROM ELEVATOR CONTROL PANEL TO ATS DRY

6. CONFIRM ELEVATOR HORSEPOWER WITH ELEVATOR MANUFACTURER PRIOR TO INSTALLATION. DESIGN BASED ON 150 HP.

GENERAL NOTES

1. NOT ALL SYMBOLS INDICATED IN THE LEGEND APPEAR ON THE DRAWINGS. COORDINATE WORK ACCORDINGLY. COMPLY WITH SPECIFICATIONS AND NOTES BELOW AS APPLICABLE.

2. ALL RECEPTACLES SHALL BE INSTALLED 18" AFF TO CENTERLINE OF BOX UNLESS NOTED OTHERWISE.

3. PROVIDE PANELBOARDS AS MANUFACTURED BY SQUARE D, GENERAL ELECTRIC, SIEMENS, CUTLER HAMMER OR APPROVED EQUAL.

4. ALL WIRING SHALL BE COPPER UNLESS DESIGNATED AS "AL". UNLESS OTHERWISE NOTED ALL WIRING SHALL BE 2*12 AWG. AND 1*12 EQUIPMENT GROUNDING CONDUCTOR. HOMERUNS FED FROM A 20A-1P, 120V CIRCUIT IN EXCESS OF 70' SHALL

5. CONNECT BATTERY BACKED EMERGENCY AND EXIT LIGHTING TO NEAREST LIGHTING CIRCUIT AHEAD OF ANY SWITCHING. CONNECT REMOTE HEADS WITH *10 AWG. COPPER CONDUCTORS. AC EXIT FIXTURES SHALL BE CONNECTED TO NEAREST EMERGENCY CIRCUIT OR AS INDICATED.

6. TEST ALL EMERGENCY LIGHTING UNITS FOR PROPER OPERATION OF LAMPS AND BATTERIES.

7. SEE MECHANICAL PLAN FOR HVAC UNITS, PUMPS AND FANS CONTROLLED BY THERMOSTATS (PROVIDED BY ATC CONTRACTOR).

8. FUSES AND OVERLOAD UNITS FOR MOTORS SHALL BE SIZED BASED ON ACTUAL MOTOR NAMEPLATE DATA AND IN ACCORDANCE WITH NEC. CIRCUIT BREAKERS FOR MOTORS ARE SUPPLIED AT MAX VALUE PER NEC (2.5 x FLA.). SIZE IN THE FIELD IN ACCORDANCE WITH MFGR. RECOMMENDATION.

9. ALL WORK SHALL COMPLY WITH NFPA70, NFPA72, NFPA101 & ALL FEDERAL, STATE & LOCAL REGULATIONS.

10. ALL PENETRATIONS THROUGH FLOORS, RATED WALLS AND PARTITIONS SHALL BE SEALED WITH UL APPROVED FIRE SEALANT MATERIAL TO MAINTAIN FIRE RATING FOR THE SEPARATION.

11. ALL ENCLOSURES, CONDUIT BODIES AND THEIR COVERS CONTAINING FIRE ALARM SYSTEM CONDUCTORS SHALL BE PAINTED RED.

12. AN EQUIPMENT GROUNDING CONDUCTOR SHALL BE INSTALLED WITH ALL FEEDERS AND BRANCH CIRCUITS. SIZE IN ACCORDANCE WITH NFPA 70 ARTICLE 250.

13. PROVIDE TWO BALLASTS FOR EACH FIXTURE INDICATED AS REQUIRING DUAL LEVEL SWITCHING. ONE BALLAST TO CONTROL OUTER LAMPS AND THE SECOND BALLAST TO CONTROL INNER LAMP(S).

14. COORDINATE INSTALLATION OF VOICE/DATA OUTLETS WITH OWNER, MIS OR COMMUNICATIONS CONTRACTOR.

15. LOCATE DISCONNECTS AT EQUIPMENT AS REQUIRED BY MANUFACTURER. LOCATIONS ON DRAWINGS ARE APPROXIMATE.

16. OPERATE ALL FLUORESCENT AND METAL HALIDE LAMPS FROM INITIAL INSTALLATION FOR 100 HOURS AT FULL OUTPUT (NO DIMMING) TO SEASON LAMPS AND STABILIZE LAMP COLOR.

17. PROVIDE RISER OR PLENUM RATED CABLES ABOVE SUSPENDED CEILINGS.

18. THE CONTRACTOR SHALL SET ALL ELECTRONIC BREAKERS TO SPECIFIED TRIP SETTINGS BEFORE ENERGIZING EQUIPMENT.

19.PROVIDE EXPANSION FITTINGS FOR ALL UNDERGROUND RACEWAYS ENTERING ENCLOSURES ATTACHED TO FIXED STRUCTURES.

20. OUTDOOR RECEPTACLE COVERS SHALL COMPLY WITH NFPA 70 - ARTICLE

21. ALL CONDUCTOR INSULATION FOR BUILDING WIRE SHALL BE THWN/THHN UNLESS

22. PROVIDE LABEL ON SERVICE EQUIPMENT INDICATING AVAILABLE SHORT CIRCUIT CURRENT ADD TO MASTER AND DATE OBTAIN VALUES FROM ENGINEER.

23. PROVIDE ARC FAULT LABLES PER NFPA 70-ARTICLE 110.24

24. BUILDING REQUIRES TWO SERVICE ENTRANCES, PROVIDE SIGNS PER NFPA

25. PROVIDE LABELING AT SERVICE EQUIPMENT INDICATING THE LOCATION OF EMERGENCY/STANDBY GENERATORS.

ABBREVIATIONS

LP LIGHTING PANELBOARD AC ALTERNATING CURRENT, ABOVE COUNTER LTG LIGHTING AMERICANS WITH DISABILITIES ACT LONG TIME, SHORT TIME, INSTANTANEOUS, GROUND FAULT AMP FRAME CIRCUIT BREAKER TRIP FUNCTIONS AS INDICATED ARC FAULT CIRCUIT INTERRUPTER MOTOR CONTROL CENTER AFF ABOVE FINISHED FLOOR MOLDED CASE CIRCUIT BREAKER ABOVE FINISHED GRADE MAIN CIRCUIT BREAKER AMPERES INTERRUPTING CAPACITY MAIN DISTRUBITION PANEL ALUMINUM MANHOLE AMP TRIP MAIN LUGS ONLY AUTOMATIC TEMPERATURE CONTROL MTS MANUAL TRANSFER SWITCH ATS AUTOMATIC TRANSFER SWITCH NORMALLY CLOSED OF NURSE CALL AMERICAN WIRE GAUGE NATIONAL ELECTRICAL CODE BLDG BUILDING NATIONAL FIRE PROTECTION ASSOCIATION CONDUIT NIGHT LIGHT CB CIRCUIT BREAKER NORMALLY OPEN CAST IRON NUMBER CIRCUIT OVERLOAD CENTERLINE POLE CENTRAL MAINE POWER (ELECTRIC UTILITY) PUBLIC ADDRESS CONCRETE MASONRY UNIT PUSH BUTTON CT CURRENT TRANSFORMER POWER FACTOR CONC CONCRETE CARBON STEEL PANEL COPPER TELE-POWER POLE - POLE AND CIRCUIT NUMBER AS INDICATED CABINET UNIT HEATER PUBLIC SERVICE OF NEW HAMPSHIRE (ELECTRIC UTILITY) DAMP LOCATION POTENTIAL TRANSFORMER ELECTRICAL CONTRACTOR POLYVINYL CHLORIDE ELECTRICAL EQUIPMENT TO BE RELOCATED EXHAUST FAN EXISTING REMAINS IN PLACE ELECTRICAL EQUIPMENT TO REMAIN EXISTING RELOCATE RIGID STEEL CONDUIT EXISTING REMOVE RTU ROOF TOP UNIT ELECTRIC UNIT HEATER ELECTRICAL EQUIPMENT TO REMOVE ELECTRICAL WATER COOLER REDUCED VOLTAGE, NON-REVESING FIRE ALARM CONTROL PANEL SMART BOARD FAPS FIRE ALARM PULL STATION SUPPLY FAN SLD SINGLE LINE DIAGRAM FIBER REINFORCED PLASTIC MANUAL MOTOR STARTER SWITCH WITH THERMAL OVERLOAD FULL VOLTAGE, NON-REVERSING DEVICE, MOUNTED AT UNIT FWU FURNISHED WITH UNIT SOLID STATE DIRECT CURRENT SWBD-1 SWITCHBOARD NUMBER AS DESIGNATED GROUND FAULT INTERRUPTER TIME CLOCK GROUND TS TRANSFER SWITCH HIGH INTENSITY DISCHARGE TOP AND BOTTOM HAND-OFF-AUTOMATIC TYP TYPICAL **HORSEPOWER** UNDERGROUND HIGH PRESSURE SODIUM VOLT HERTZ HΖ VOLT-AMPERE INSULATED CASE CIRCUIT BREAKER ICB JUNCTION BOX VARIABLE FREQUENCY DRIVE VFD THOUSAND AMP INTERRUPTING CAPACITY WITH THOUSAND CIRCULAR MIL KCMIL WEATHERPROOF WP THOUSAND VOLTS KVA THOUSAND VOLT-AMPS EXPLOSION PROOF THOUSAND WATTS (KILOWATT) THREE PHASE LIGHTING CONTACTORS FOUR WIRE LATERAL CONTROL PIT THREE WIRE LED LIGHT EMITTING DIODE

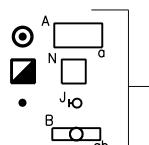
SYMBOL LEGEND

POWER PANEL 120/208, 3PHS, 4WIRE

ELECTRIC MOTOR DRIVEN EQUIPMENT, HP SHOWN DISCONNECT SWITCH - 250 VOLT SIZE & NO. POLES AS NOTED.

MANUAL MOTOR STARTER SWITCH WITH THERMAL OVERLOAD

DEVICE, MOUNTED AT UNIT Q JUNCTION BOX - "H" DENOTES RANGE HOOD, "DW" DENOTES DISHWASHER, "DS" DENOTES DISPOSAL.



EQP **◀**◀

LIGHTING FIXTURES- CAPITAL LETTERS DENOTE TYPE AS PER LIGHTING FIXTURE SCHEDULE. LOWER CASE LETTERS INDICATE SWITCH CONTROL- "ab" INDICATES INBOARD LAMPS CONTROLLED BY SWITCH "b"-OUTBOARD CONTROLLED BY SWITCH "a" PARTIAL FILL OR FULL FILL INDICATES ON GENERATOR



● EXIT LIGHT FIXTURE-UNSWITCHED

RACEWAY & WIRING OR MC CABLE RUN CONCEALED IN WALLS/CEILINGS. RACEWAY & WIRING RUN EXPOSED

RACEWAY & WIRING RUN CONCEALED UNDER FLOOR HOME RUN TO PANEL- ARROWS INDICATE QUANTITY OF CIRCUITS- NUMERALS DENOTE CIRCUIT NUMBERS

BRANCH CIŖÇUIT WIRING SHALL CONSIST OF 2*12, 1*12G, 1/2"C UNLESS OTHERWISE NOTED. · ASTÉRISK INDICATES *10 AWG FOR ALL CIRCUITS CONTAINED IN HOMERUN. DOUBLE ASTERISK INDICATES 2, *8 &1, *10, $\frac{3}{4}$ "C

VARIABLE FREQUENCY DRIVE - PROVIDED BY M.C., INSTALLED AND WIRED BY E.C.

COMBINATION CIRCUIT BREAKER & MAGNETIC MOTOR STARTER - NEMA SIZE 1 W/4 AUX. CONTACTS AND HAND-OFF-AUTO SWITCH W/RED POWER ON PILOT LIGHT.

SINGLE POLE SWITCH,120 VOLT,20 AMP,SPEC GRADE, GROUNDING TYPE, MOUNT 48" AFF, 3=3-WAY,4=4-WAY,P=PILOT,WP=WEATHERPROOF,D=DIMMER,R=RECEPTACLE (TOP SWITCHED) LOWER CASE LETTER INDICATES FIXTURE OR CONTROLLED LOAD.
PILOT LIGHT SWITCHES SHALL BE PROVIDED W/ ENGRAVED NAMEPLATE IDENTIFYING USE.

GAS BURNER EMERGENCY SWITCH - RED WITH RED PLATE SURFACE MOUNT 72" AFF. BRYANT *SY865GEM (PLATE). PROVIDE ONE FOR EACH GAS APPLIANCE.

DUPLEX RECEPTACLE- 20A, 125V SPEC GRADE GROUNDING TYPE AND MATCHING IVORY PLATE - MOUNT 24" AFF. "R" DENOTES REFRIGERATOR

→ SAME AS ABOVE EXCEPT OUTLET CONTROLLED FROM EXTERNAL SWITCH

DOUBLE DUPLEX RECEPTACLE- 20A, 125V SPEC GRADE GROUNDING TYPE AND

MATCHING IVORY PLATE - MOUNT 24" AFF.

GF DUPLEX RECEPTACLE- GROUND FAULT OUTLET 20A, 125V-WITH MATCHING IVORY PLATE FURNISHED W/ OUTLET. FLUSH MOUNTED 45" AFF EXCEPT AS NOTED.

■ DRYER OUTLET - FLUSH MOUNT 18"AFF 30A, 250 VOLT GROUNDING TYPE

LC LIGHTING CONTACTOR

HM MAGNETIC DOOR HOLDER

DUCT MOUNTED SMOKE DETECTOR & TEST STATION

135 (H) FIRE ALARM HEAT DETECTOR, FIXED TEMPERATURE 135°F -120 VOLTS FIRE ALARM HEAT DETECTOR, FIXED TEMPERATURE 200°F

SMOKE DETECTOR, PHOTOELECTRIC TYPE- SYSTEM CONNECTED

SB SMOKE DETECTOR W/ SOUNDER BASE, PHOTOELECTRIC TYPE- SYSTEM CONNECTED

FACE FIRE ALARM CONTROL PANEL SURFACE MOUNT 78" AFF TO TOP

FIRE ALARM REMOTE ANNUNCIATOR - LCD DISPLAY

F FIRE ALARM PULL STATION MOUNT 48"AFF

15 FIX FIRE ALARM AUDIO/VISUAL, MOUNT AT 6'-8", "MH" DENOTES MINIHORN NUMERALS DENOTE CANDELA RATINGS

15 FIRE ALARM VISUAL STROBE ONLY

NUMERALS DENOTE CANDELA RATINGS

DOOR CONTACT, DIGITAL ALARM COMMUNICATOR TRANSMITTER

KP KEY PAD - SEE SPEC.

NH EMERGENCY CALL DOME LIGHT CEILING MOUNTED

N EMERGENCY CALL PULL STATION

□ DOOR ACCESS CONTROL

TV OUTLET LOCATION - CABLE AND JACKS BY E.C. EACH LOCATION TO HAVE SEPARATE HOMERUN OF RG6 BACK TO TBB.

TELEPHONE/DATA DUAL JACK LOCATION MOUNT 18"AFF - TWO CAT 5E CABLES BACK TO TRB

TELEPHONE JACK LOCATION MOUNT 18"AFF - ONE CAT 5E CABLE BACK TO TBB.

CTV CABLE TV JUNCTION BOX "CTV" - SIZE AS REQUIRED BY CABLE TV CO.

PADDLE SWITCH FOR AUTOMATIC DOOR OPENER SUPPLIED BY GC WIRED BY EC TEL. BACKBOARD "TBB" - 4'-0"X 6'-0"X3/4" THICK, PAINT BLACK - LOCATE TO CLEAR MECHANICAL EQUIPMENT.

WP DENOTES WEATHERPROOF CONSTRUCTION

FWU DENOTES FURNISHED WITH UNIT

■ SECURITY CAMERA, SEE SPEC.

V VOLUME CONTROL - SEE SPEC.

S CEILING SPEAKER

MOTION SENSOR (WATTSTOPPER OR EQUAL) MS) CORRIDORS: WT-2255 SENSOR & B120E-P POWER PACK OTHER COMMON SPACES: WT-605 SENSOR & B120E-P POWER PACK

WALL MOUNTED SWITCH MOTION SENSOR. MOUNT AT 48" AFF UNLESS OTHER WISE NOTED



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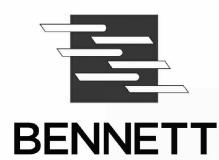
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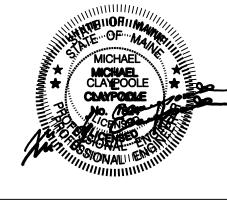
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433 FORE STREET, PORTLAND, ME

C5S Project No. 12013







ISSUED FOR CONSTRUCTION

03-01-2013

Drawing Title

Project Status

FIRE ALARM SYSTEM SEE SPEC

LEGEND, DETAILS AND NOTES

Drawing Number

E40.6