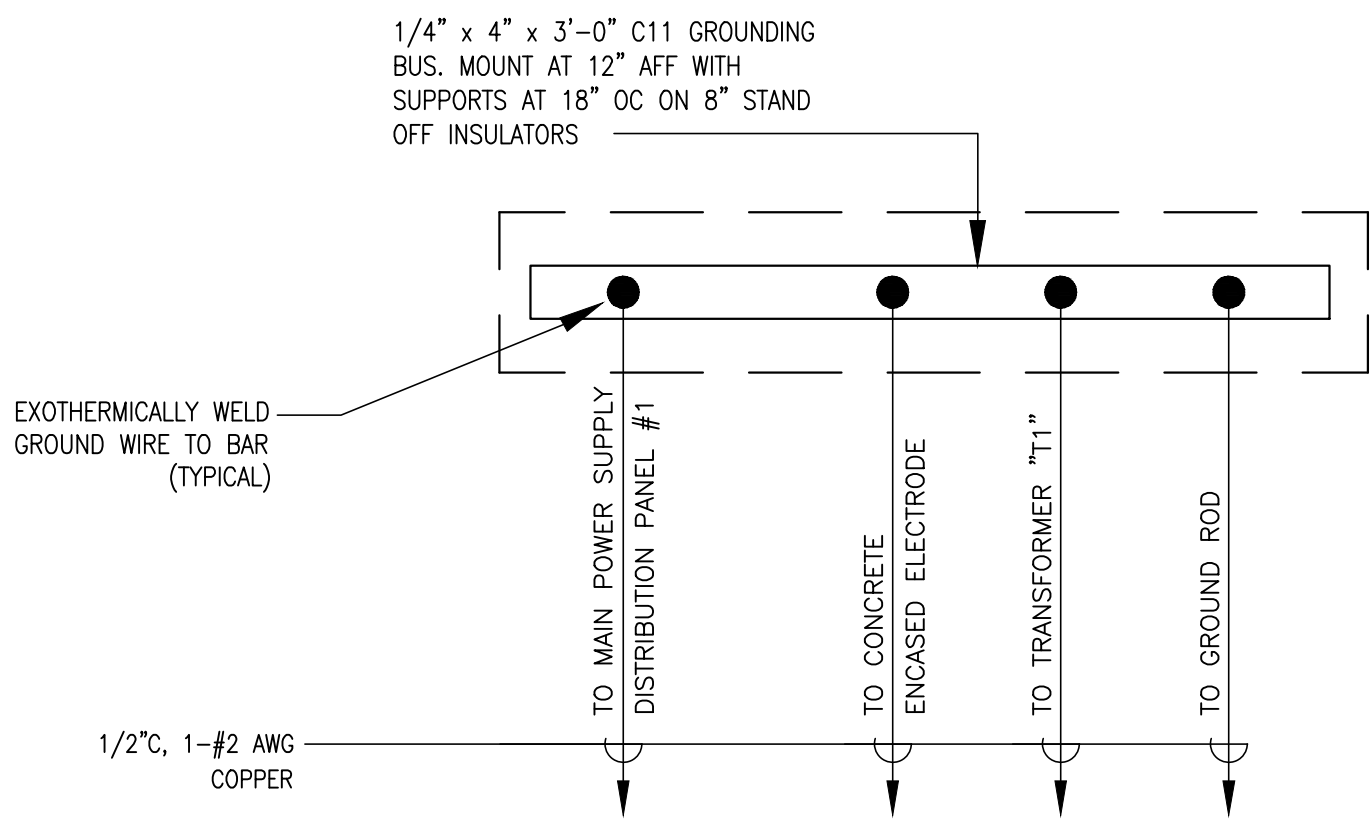


4 GROUND BAR WIRING DETAIL - TOP  
NTS



2 GROUND BAR WIRING DETAIL - BASE  
NTS

SHEET LIST	
E1.0	SYMBOL LIST, SCHEDULES AND SINGLE LINE DIAGRAM
E1.1	PANEL SCHEDULES
E2.0	ELECTRICAL FLOOR PLANS
E3.0	SPECIFICATIONS

SYMBOLS	POWER SYMBOLS	NOTES
	MOTOR OUTLET	
	FUSED DISCONNECT SWITCH SWITCH XX/XX/XX = AMP SWITCH/POLES/AMP FUSE	
	HEAVY DUTY NON-FUSED DISCONNECT SWITCH SWITCH XX/XX = AMP SWITCH/POLES	
	COMBINATION MOTOR STARTER	
	MANUAL MOTOR STARTER WITH THERMAL OVERLOAD	
	STATIONARY - CIRCUIT BREAKER; RATING AS SHOWN ON PLANS	
	SWITCH AND FUSE; RATING AS SHOWN ON PLANS	
	SWITCH AND FUSE; RATING AS SHOWN ON PLANS	
	JUNCTION BOX	
	SURFACE MOUNTED PANELBOARD OR TERMINAL CABINET	

GENERAL NOTES	
1.	ALL WORK SHOWN IS NEW, UNLESS NOTED OTHERWISE.
2.	ALL WORK TO BE IN ACCORDANCE WITH NATIONAL ELECTRIC CODE, 2014 EDITION.
3.	SEAL ALL CONDUIT PENETRATIONS OF FLOORS AND FIRE RATED ASSEMBLIES TO MAINTAIN FIRE RATING.
4.	PROVIDE NEW TYPEWRITTEN DIRECTORIES REFLECTING WORK PERFORMED FOR ALL NEW PANELBOARDS IN THIS PROJECT.
5.	PLANS ARE PREPARED WITH REQUIRED BRANCH CIRCUITS INDICATED BY CIRCUIT NUMBERS. PROVIDE AND INSTALL ALL CONDUITS, CONDUCTORS, BOXES, MISCELLANEOUS FITTINGS, ETC. FOR A COMPLETE AND OPERABLE SYSTEM (HOMERUN SHOWN). BRANCH CIRCUIT INSTALLATION SHALL COMPLY WITH SPECIFICATIONS AND N.E.C.
6.	ALL NEUTRAL CONDUCTORS ON POWER BRANCH CIRCUITING ROUNDHOUSES TO BE #10 AWG UNLESS NOTED OTHERWISE.

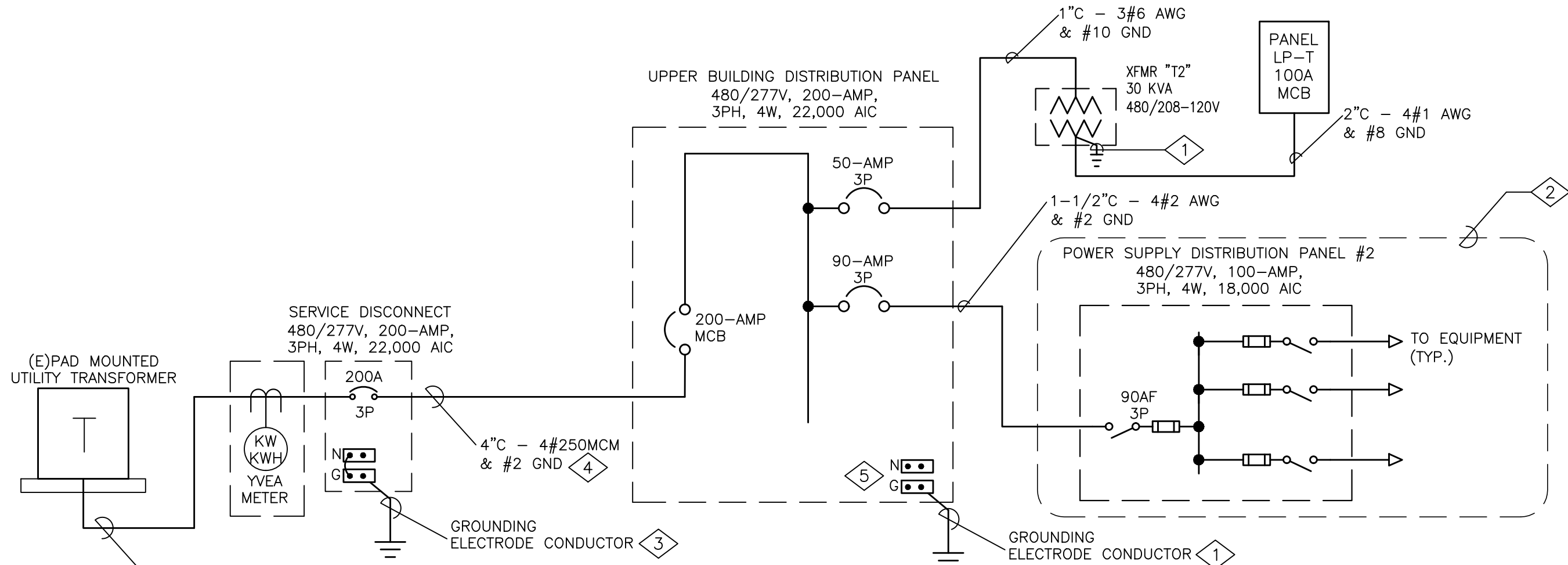


DIAGRAM NOTES

- ALL WORK SHOWN IS NEW UNLESS OTHERWISE NOTED.
- BRING ANY DISCOVERED CODE VIOLATIONS TO THE OWNER'S ATTENTION.
- ALL WIRING SHOWN IS SIZED FOR COPPER CONDUCTORS, UON.

RISER NOTES

- SEE DETAIL #4 ON THIS SHEET FOR GROUNDING DETAILS OF NEW COASTER EQUIPMENT.
- POWER SUPPLY DISTRIBUTION BOARD #2 TO BE SUPPLIED BY COASTER VENDOR. VERIFY MAIN FUSE PROTECTION ON SITE MATCHES WHAT IS SHOWN ON DRAWINGS. NOTIFY DESIGN TEAM IF THERE IS A DIFFERENCE.
- BOND NEUTRAL TO GROUND BUS AND THEN TO A GROUND BAR. PROVIDE GROUND ROD AT 3/4" X 8' (COPPER CLAD STEEL).
- FEEDER UP-SIZED FOR VOLTAGE DROP.
- DO NOT BOND NEUTRAL TO GROUND BAR AT SERVICE ENTRANCE TO UPPER TERMINAL BUILDING.

3 SINGLE LINE DIAGRAM - MID-STATION OF CHRISTIE EXPRESS

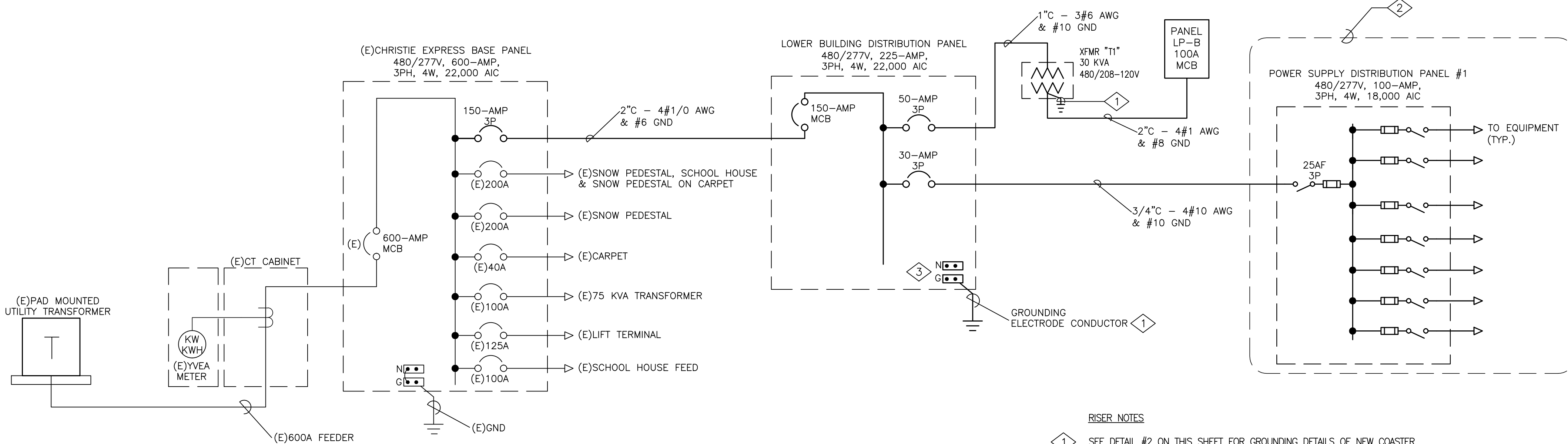


DIAGRAM NOTES

- ALL WORK SHOWN IS NEW UNLESS OTHERWISE NOTED.
- BRING ANY DISCOVERED CODE VIOLATIONS TO THE OWNER'S ATTENTION.
- ALL WIRING SHOWN IS SIZED FOR COPPER CONDUCTORS, UON.

RISER NOTES

- SEE DETAIL #2 ON THIS SHEET FOR GROUNDING DETAILS OF NEW COASTER EQUIPMENT.
- POWER SUPPLY DISTRIBUTION BOARD #1 TO BE SUPPLIED BY COASTER VENDOR. VERIFY MAIN FUSE PROTECTION ON SITE MATCHES WHAT IS SHOWN ON DRAWINGS. NOTIFY DESIGN TEAM IF THERE IS A DIFFERENCE.
- DO NOT BOND NEUTRAL TO GROUND BAR AT SERVICE ENTRANCE TO LOWER TERMINAL BUILDING.

1 SINGLE LINE DIAGRAM - BASE OF CHRISTIE EXPRESS

ABBREVIATIONS		NOTES
A, AMP	AMPERE	
AIC	AMPERE INTERRUPTING CAPACITY	
AF	FRAME RATING IN AMPERES	
AS	SWITCH RATING IN AMPERES	
AT	TRIP RATING IN AMPERES	
AWG	AMERICAN WIRE GAUGE	
C	CONDUIT	
CKT	CIRCUIT	
(E)	EXISTING TO REMAIN	
EC	EMPTY CONDUIT	
ELEC	ELECTRICAL	
EMT	ELECTRO METALLIC TUBING	
FA	FIRE ALARM	
G, GND	GROUND	
HP	HORSEPOWER	
MECH	MECHANICAL	
MCB	MAIN CIRCUIT BREAKER	
(N)	NEW EQUIPMENT OR DEVICE	
NEC	NATIONAL ELECTRIC CODE	
NEMA	NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION	
NO	NORMALLY OPEN	
NTS	NOT TO SCALE	
Ø, PH	PHASE	
PNL	PANEL	
PVC	POLYVINYL CHLORIDE CONDUIT	
PWR	POWER	
RSC	RIGID STEEL CONDUIT	
(R)	RELOCATED EQUIPMENT	
TEL	TELEPHONE	
TYP	TYPICAL	
UON	UNLESS OTHERWISE NOTED	
V	VOLT	
VA	VOLT AMPERES	
W	WATT	
(X)	EXISTING TO BE DEMOLISHED	

SYMBOLS	WIRING DEVICE SYMBOLS
	20A, 125V, DUPLEX RECEPTACLE OUTLET +18" UNLESS NOTED OTHERWISE
	SURFACE 20A, 125V, DUPLEX RECEPTACLE OUTLET +18" UNLESS NOTED OTHERWISE
	20A, 125V, DOUBLE DUPLEX RECEPTACLE OUTLET +18" UNLESS NOTED OTHERWISE
	SURFACE 20A, 125V, DOUBLE DUPLEX RECEPTACLE OUTLET +18" UNO
	SPECIAL PURPOSE RECEPTACLE OUTLET, +18" UNLESS NOTED OTHERWISE, NEMA CONFIGURATION AS NOTED ON PLANS
	SURFACE SPECIAL PURPOSE RECEPTACLE OUTLET, +18" UNLESS NOTED OTHERWISE, NEMA CONFIGURATION AS NOTED ON PLANS
	20A, 125V, DEDICATED DUPLEX RECEPTACLE OUTLET +18" UON
	DUPLEX OUTLET WITH GROUND FAULT INTERRUPTER
	CEILING MOUNTED 20A, 125V, DUPLEX RECEPTACLE OUTLET
	CEILING MOUNTED 20A, 125V, DOUBLE DUPLEX RECEPTACLE OUTLET
	SPST WALL SWITCH, LETTERS INDICATE THE NUMBER OF SWITCHES AND OUTLETS THEY CONTROL
	DIMMER SWITCH
	OCCUPANCY LIGHT CONTROL SWITCH; WALL MOUNTED

SYMBOLS	TELECOMMUNICATION
	COMBINATION (1) PORT TELEPHONE AND (1) PORT DATA OUTLET, +18" UNLESS NOTED OTHERWISE.

SYMBOLS	DESIGNATION SYMBOLS	NOTES
	FIXTURE DESIGNATION UPPER CASE LETTER INDICATES FIXTURE TYPE. LOWER CASE LETTER INDICATES SWITCH LEG NUMBER INDICATES CIRCUIT NUMBER (WHERE SHOWN).	
	LETTER INDICATES FIXTURES CONTROL (WHERE SHOWN)	
	NUMBER INDICATES CIRCUIT NUMBER (WHERE SHOWN)	

SSRC ALPINE COASTER

2305 Mt. Werner Circle  
Steamboat Springs, CO

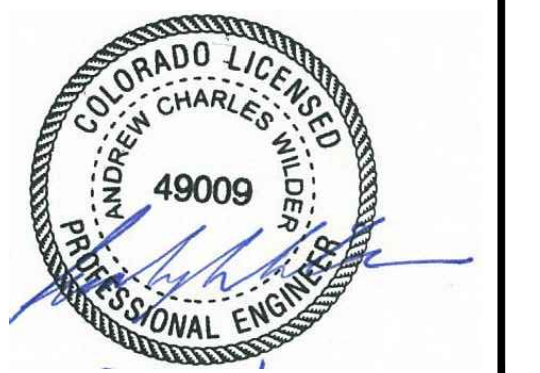
STEAMBOAT SKI & RESORT CORP

2305 Mt. Werner Circle  
Steamboat Springs, CO

R C R B D  
RECORD SET  
ELECTRICAL



WILDER ENGINEERING LLC  
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Issue	By	Date & Issue Description	By
-	PERMIT SET	- 8.29.16	AW

Scale: 24x36 NTS	Description: LEGEND, SINGLE LINE DIAGS
Project Name: ALPINE COASTER	Project Number: 201658
Sheet No.	E1.0





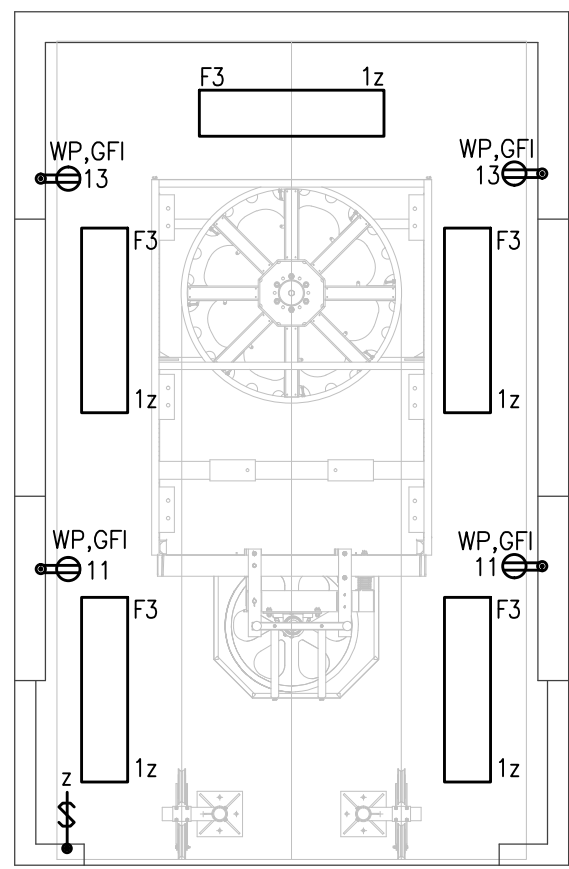


BUILDINGS SHEET NOTES

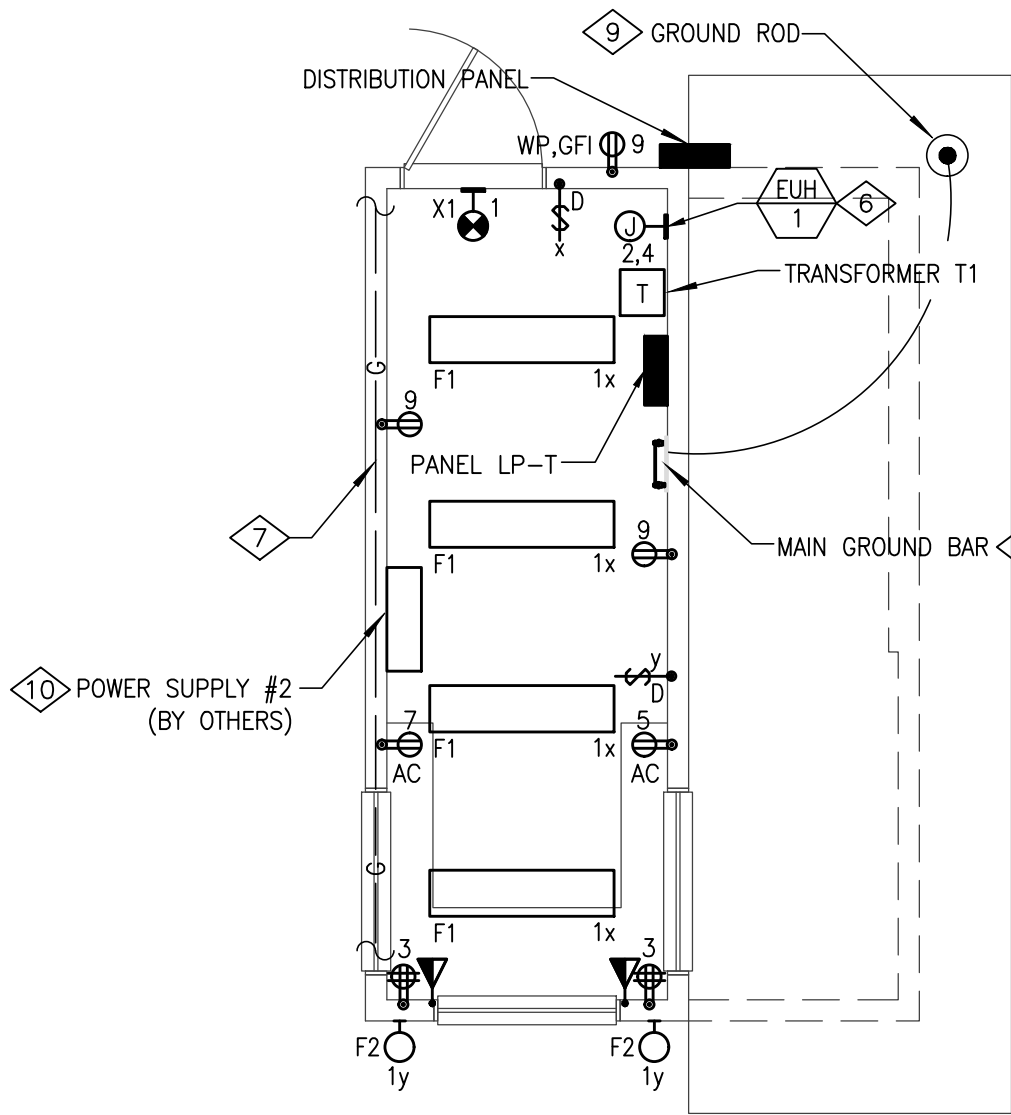
- 1 PROVIDE LABELS AT SWITCHES FOR LIGHTING AREAS CONTROLLED.
- 2 STUB OUT POWER FOR FUTURE PATHWAY LIGHTING. VERIFY AND COORDINATE WITH SSRC DURING CONSTRUCTION.
- 3 STUB OUT POWER FOR MINI-GOLF WATER PUMPS. VERIFY AND COORDINATE WITH SSRC DURING CONSTRUCTION.
- 4 PUMPS SHOWN IN THIS LOCATION FOR CIRCUITING REQUIREMENTS. SEE NOTE 5 ON FLOOR PLAN FOR LOCATION OF PUMPS.
- 5 LOCATION OF PUMPS, SEE MECHANICAL DRAWINGS FOR MORE INFORMATION.
- 6 PROVIDE MECHANICAL UNIT WITH 1/2" C - 2#10 AWG & #10 GND.
- 7 PROVIDE AT LEAST 20 FEET OF BARE COPPER EMBEDDED IN CONCRETE. ELECTRODE TO BE COVERED WITH A MINIMUM OF 2" OF CONCRETE. CONNECT ONE END TO MAIN GROUND BUS BAR.
- 8 GROUND BAR, REFER TO SHEET E1.0 FOR MORE DETAIL.
- 9 PROVIDE A 3/4" DIAMETER X 10' LONG COPPER CLAD STEEL GROUND ROD.
- 10 VERIFY FINAL LOCATION OF COASTER EQUIPMENT WITH MANUFACTURER IN THE FIELD.

BUILDINGS GENERAL NOTES

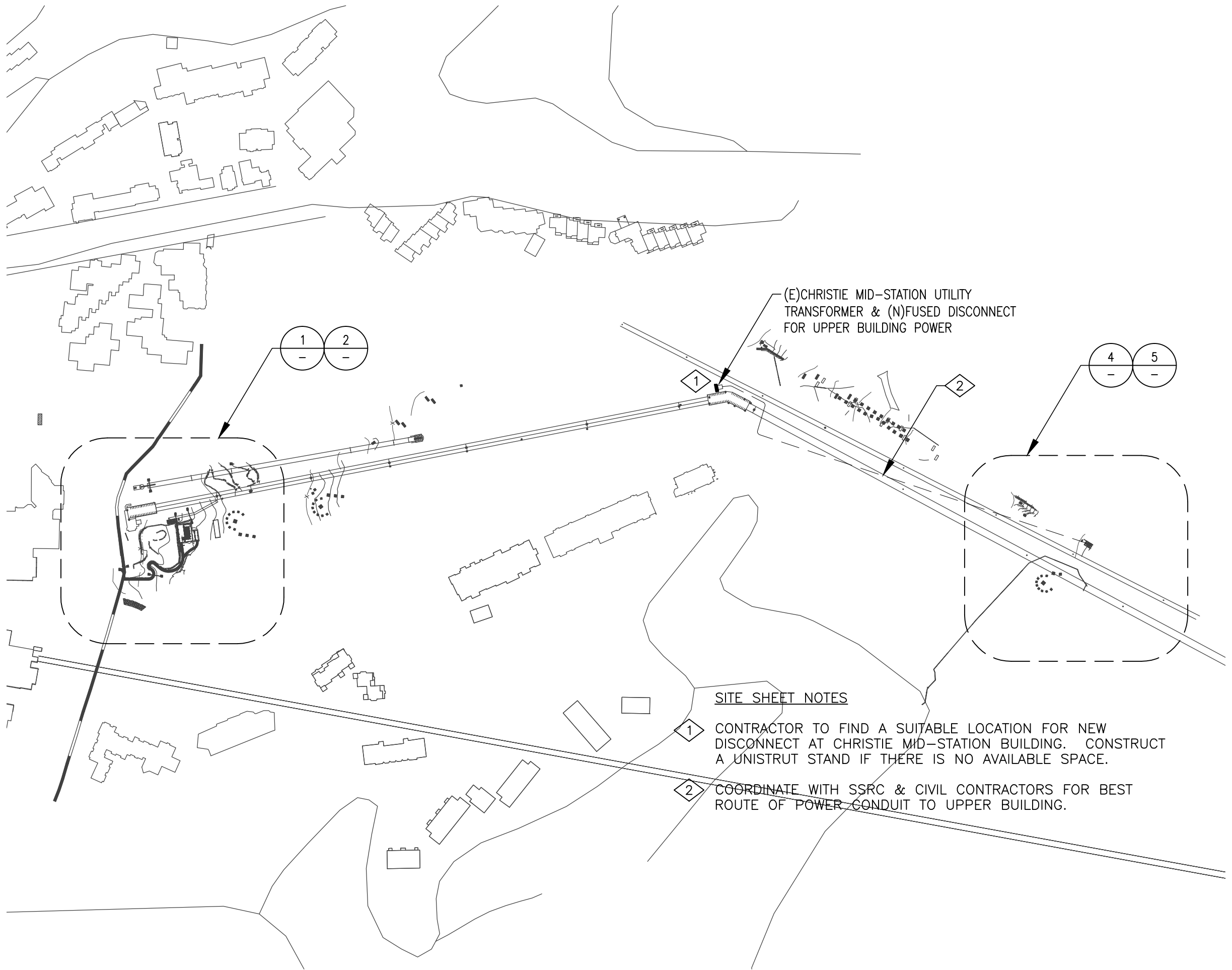
1. ALL WORK SHOWN IS NEW UNLESS OTHERWISE NOTED.
2. ALL EQUIPMENT SHOWN IN THE LOWER BUILDING IS CONNECTED TO PANEL 'LP-B', UON.
3. ALL EQUIPMENT SHOWN IN THE UPPER BUILDING IS CONNECTED TO PANEL 'LP-T', UON.
4. PROVIDE TYPEWRITTEN DIRECTORIES REFLECTING ALL NEW WORK PERFORMED IN THIS PROJECT.
5. ALL WIRE SHALL BE #12 AWG MIN., 90 DEG. °C IN 1/2" C - 2#12 AWG & #12 GND, UNLESS OTHERWISE NOTED.
6. VERIFY LOCATIONS OF ALL ELECTRICAL EQUIPMENT WITH ARCHITECTURAL DRAWINGS AND EXISTING CONDITIONS IN THE FIELD.
7. BRING ANY DISCOVERED CODE VIOLATIONS TO THE OWNER'S ATTENTION.
8. CONFIRM LOCATIONS OF ALL LIGHT SWITCHES WITH THE ARCHITECT AND TENANT PRIOR TO INSTALLATION.
9. FIRE ALARM CONTRACTOR SHALL VERIFY AND COORDINATE ALL NEW EXISTING DEVICES.



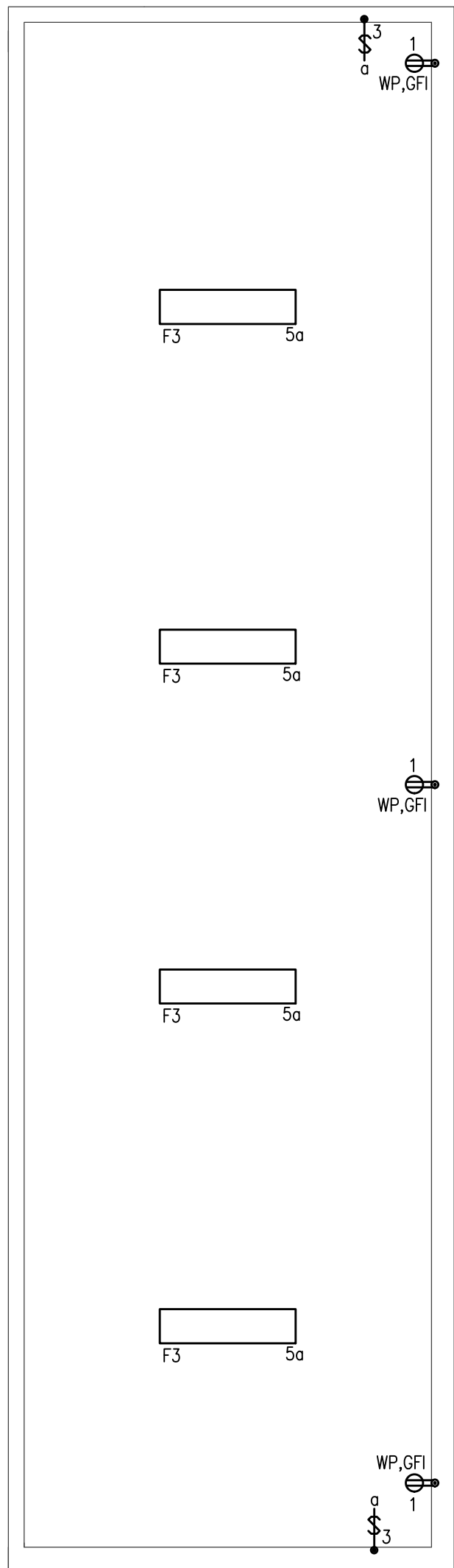
5 UPPER BUILDING MACHINE LEVEL PLAN  
1/4"=1'-0"



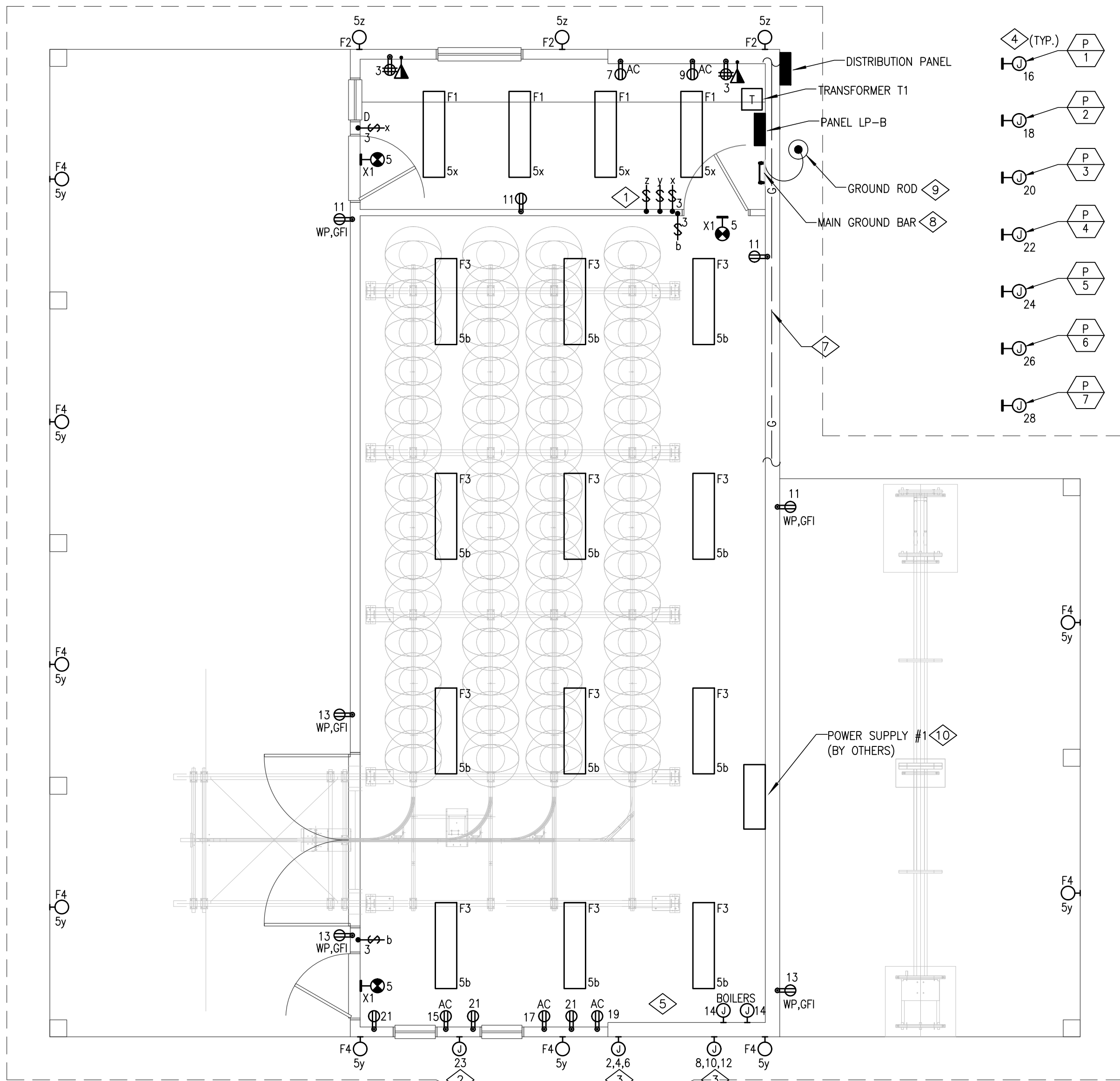
4 UPPER BUILDING MAIN LEVEL PLAN  
1/4"=1'-0"



3 SITE PLAN  
1"=240'-0"



2 LOWER BUILDING LOFT LEVEL PLAN  
1/4"=1'-0"



1 LOWER BUILDING MAIN LEVEL PLAN  
1/4"=1'-0"

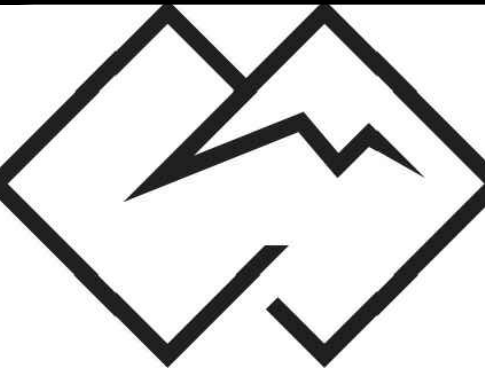
SSRC ALPINE COASTER

2305 Mt. Werner Circle  
Steamboat Springs, CO

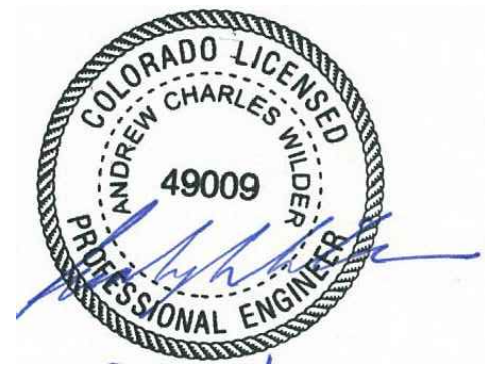
STEAMBOAT SKI & RESORT CORP

2305 Mt. Werner Circle  
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R C R B D  
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Issue	By	Date & Issue Description	By
-	PERMIT SET	- 8.29.16	AW

Scale: 24x36 SEE DWG
Description: ELECTRICAL FLOOR PLANS
Project Name: ALPINE COASTER
Project Number: 201658

Sheet No.

E2.0



SECTION 16010 - BASIC ELECTRICAL REQUIREMENTS

1) PART 1 GENERAL

a) POWER AND CONTROL WIRING

- i) Provide power system conduit and wiring to mechanical equipment. Controls system conduit and wiring for mechanical systems is included under Division 15. "Power" wiring includes line voltage wiring from distribution apparatus to disconnecting means provided or installed under this section, and from such disconnecting means to motors, and to terminal boxes of 'package' equipment. "Controls" wiring includes wiring, regardless of voltage, which provides start-stop control for mechanical equipment and/or which is used to monitor functions of mechanical systems. Where line voltage wiring is extended from a local disconnecting means to relays, thermostats, by-pass timers, starter coils or the like, or from mechanical control panels or motor control centers to control devices, such extensions are considered "control" wiring.

b) MOUNTING HEIGHTS

- i) Mounting heights and locations: verify the exact location of equipment with architect prior to installation. Wall mounted devices requiring operational access shall be mounted a minimum of 15 inches above finished floor to bottom of device and a maximum of 48 inches above finished floor to top of device. Visual alarms shall be mounted not less than 80 inches to the bottom or 96 inches to the top of the device.

c) REGULATORY REQUIREMENTS

- i) Conform to:

(1) NFPA-70 - National Electric Code.

- ii) Comply with the current applicable codes, ordinances, and regulations of the authority or authorities having jurisdiction, the Owner's insurance underwriter, and applicable base building standards.

- iii) When conflict exists between two or more governing codes, comply with the stricter requirement.

- iv) Obtain permits, and request inspections from authority having jurisdiction.

d) PROJECT/SITE CONDITIONS

- i) Install Work in locations shown on Drawings, unless prevented by Project conditions. Coordinate installation of work in available space with work furnished under other Divisions.

2) PRODUCTS

- a) Where manufacturer's model or series numbers are specified or shown, these indicate generally acceptable types required. Furnish products which comply with all requirements, as specified or shown.

- b) When more than one unit of the same class of equipment is required, provide units produced by a single manufacturer.

3) TESTS

- a) Furnish test equipment, facilities, and technical personnel required to perform field tests.

- b) At completion of job, check voltage at several points of utilization on the system. Energize all loads installed.

4) CLEANING

- a) Clean all fixtures and equipment at the completion of the project. Wipe clean exposed lighting fixture reflectors and trim pieces with a non-abrasive cloth just prior to occupancy.

5) RECORD DRAWINGS

- a) Upon completion of the Work, deliver to Architect and up-to-date set of "as-built" record drawings on a reproducible medium including AutoCAD.

6) DEMOLITION

- a) Remove, relocate, and reroute existing electrical equipment to facilitate new construction or remodeling work.

- b) Examine the site to observe and note existing conditions prior to submitting a bid.

- c) Schedule demolition in advance. Schedule work to avoid disruption of normal operations.

- d) Reconnect circuits serving equipment required to remain in service to other panelboards, motor control centers, or other appropriate distribution equipment. Provide additional panelboards, motor control centers, or other appropriate distribution equipment where there is insufficient available capacity in remaining existing equipment for reconnection.

- e) Remove existing conduit and wire back to panelboard, motor control center, or other distribution source.

- f) Where a circuit is interrupted by removal of a device or fixture from that circuit, provide additional conduit and wire to restore service to the remaining devices and fixtures on that circuit.

- g) Electrical equipment to be removed that is in good working order shall be carefully removed and offered to the Owner. Items rejected by the Owner shall be removed from the project site and properly disposed of.

SECTION 16100 - BASIC MATERIALS AND METHODS

1) PART 1 GENERAL

a) REFERENCES

- i) All equipment and installations shall meet or exceed minimum requirements of ADA, ANSI, ASTM, IEEE, IES, NEC, NEMA, NETA, NFPA, OSHA, SMACNA, UL, and the State Fire Marshal. Equipment shall be certified for use in the State of the project and shall meet the State energy code. Provide products and materials that are new, clean, free of defects, and free of damage and corrosion.

b) PERFORMANCE REQUIREMENTS

- i) Provide support system for equipment and conduit, including wiring, with a minimum safety factor of 4. For empty conduits, include weight of 4 type XHHW wires of maximum permissible size.

c) QUALITY ASSURANCE

- i) All equipment and installations shall meet or exceed minimum requirements of ADA, ANSI, ASTM, IEEE, IES, NEC, NEMA, NETA, NFPA, OSHA, SMACNA, UL, and the State Fire Marshal. Equipment shall be certified for use in the State of the project and shall meet the State energy code. Provide products and materials that are new, clean, free of defects, and free of damage and corrosion.

2) PART 2 PRODUCTS

a) CONDUIT

i) General

- (1) Exposed Dry and Damp Locations:  
(a) Use electrical metallic tubing.
- (2) Concealed Locations:  
(a) Furred, Ceiling Spaces and Stud Walls: Use electrical metallic tubing.  
(b) Connections to Lighting Fixtures in Accessible Ceilings: Use flexible conduit.
- (3) Equipment Connections:  
(a) Connections to Liquid-Handling Equipment in Dry Locations: Use liquid-tight flexible conduit.
- (4) Equipment for Dry Systems in Dry Locations: Use flexible conduit.

ii) Electrical Metallic Tubing:

- (1) Continuous, seamless steel tubing, galvanized or sherardized on exterior, coated on interior with smooth hard finish of lacquer, varnish or enamel, with steel, set screw or compression type fittings. Provide concrete type fittings where required.
- (2) Use for general purpose feeders and branch circuits.

iii) Flexible Steel Conduit:

- (1) Single strip, continuous, flexible interlocked double-wrapped steel, hot dip galvanized inside and out forming smooth internal wiring channel, with steel, compression type fittings.
- (2) Use in dry locations only, connections to lighting fixtures in suspended ceilings, connections to equipment installed above suspended ceilings, transformer connections, busway plug in units, and connections to equipment where vibration isolation is required, maximum length of 6 feet.

iv) Liquid Tight Flexible Steel Conduit:

- (1) Same as flexible steel conduit except with tough, inert, watertight plastic outer jacket. Fittings shall be cast malleable iron body and gland nut, cadmium plated with one-piece brass grounding bushings threaded to interior of conduit. Spiral molded vinyl sealing ring between gland nut and bushing and nylon insulated throat.
- (2) Use same as flexible steel conduit in damp or wet locations and at motor connections.

b) BUILDING WIRE AND CABLE

- i) Provide wire with a minimum insulating rating of 600 volts, except for wire used in low voltage (below 50 volts) control or signal systems. The use of teflon (multi-conductor) for low tension systems may be permitted for fire alarm, signal and communication systems (voice and data) as approved on shop drawings by engineers and where permitted by local codes and union practice.

ii) Conductors

- (1) Electrical grade, annealed copper, and fabricated in accordance with ASTM standards. Minimum size number 12 AWG for branch circuits; number 14 AWG for control wiring.
- (2) Unless otherwise specified, all wires numbers 10 and smaller shall be solid.
- (3) All wires number 8 and larger shall be stranded in accordance with ASTM Class B stranding designations.
- (4) Control wires shall be stranded in accordance with ASTM Class B stranding designations.
- (5) Cables for low tension systems shall be multi-conductor, 16 gauge, color coded and insulated in armored cable assembly, with number of conductors as required.
- (6) All 600 volt wire and cables unless otherwise specified shall be single conductor suitable for use in wet and dry locations.

iii) Connectors

- (1) Make connections, splices, taps and joints with solderless devices, mechanically and electrically secure. Protect exposed wires and connecting devices with electrical tape or insulation to provide insulation values not less than on conductor.

iv) Cables (No. 8 and Larger):

- (1) Use set screw or compression type connectors, taps and splices specifically designed for the particular connection. Insulate splice either by taping or by use of "bakelite" covers designed to fit around splice.

v) Branch Circuit Wires (Number 10 and Smaller): Use any of the following types of terminals and connecting devices:

- (1) Hand Applied: Coiled, tapered, spring wound devices with a conducting corrosion-resistant coating over the spring steel and a plastic cover and skirt providing full insulation for splice and wired ends. Screw connector on by hand.
- (2) Tool Applied: Steel cap, with conduction and corrosion resistant metallic plating, open at both ends, fitted around the twisted ends of the wire and compressed or crimped by means of a special die designed for the purpose. Specifically fitted plastic or rubber insulating cover wrap over each connector.

c) BOXES

- i) Pressed steel, galvanized or cadmium-plated, 4 inches minimum octagonal or square with galvanized cover or extension ring as required.

- ii) Back-to-back outlets in the same wall, or "through-wall" type boxes are not permitted. Provide 12 inch minimum spacing for outlets shown on opposite sides of a common wall. Provide acoustical potting compound on all outlet boxes.

d) WIRING DEVICES

- i) Switches and Receptacles: Arrow Hart, Hubbell, Leviton, Pass & Seymour, or Slater.

- ii) Wall Dimmers: Lutron.

- iii) Occupancy Sensors: Mytech, Novitas, or Watt Stopper.

iv) Floor Boxes and Fittings:

- (1) Poke through type: Wiremold Legrand.
- (2) Recessed flush floor box type: Steel City or Wiremold Legrand.

v) Plugstrip: Wiremold.

- vi) Device and cover plate colors shall be as selected by Architect.

e) SUPPORTS

- i) Support raceways on accepted types of wall brackets, specialty steel clips, or hangers, ceiling trapeze hangers, or malleable iron straps. Plumber's perforated straps are not permitted. Acceptable manufacturers' brackets or hangers are Kindorf, Elcan, Binkley, Multi-Frame, Power-Strut, or Unistrut. Do not suspend raceways or equipment from other raceways, steam, water, or other piping or ductwork, except as otherwise permitted. Provide independent and secure support methods.

f) PANELBOARDS

- i) Acceptable Manufacturers: Cutler-Hammer/Westinghouse, General Electric, Siemens, or Square D/Groupe Schneider.

- ii) AIC Rating: Branch panelboards and overcurrent protection devices shall have a minimum short circuit rating of 10,000 RMS symmetrical amperes minimum interrupting capacity (120/208V) or 14,000 RMS symmetrical amperes minimum interrupting capacity (277/480V).

- iii) AIC Rating: Distribution panelboards and overcurrent protection devices shall have a minimum short circuit rating of 42,000 RMS symmetrical amperes minimum interrupting capacity (120/208V) or 200,000 RMS symmetrical amperes minimum interrupting capacity (277/480V).

- iv) Enclosures: Corrosion resistant galvanized (zinc finished) sheet steel. Fronts shall be cold rolled steel, finish coated with ANSI 61 grey enamel over a rust inhibitor. Panel locks shall be keyed alike.

- v) Doors: One piece bolt on front with a lockable hinged door over the overcurrent protection devices.

- vi) Bus Bars: Silver plated aluminum or copper. Neutral bus shall be full size. Neutral bus shall be 200% rated when supplied from a double neutral feeder. Provide an equipment ground bus in each panelboard. In addition to the equipment ground bus, provide an isolated ground bus when supplied from a feeder which includes an isolated grounding conductor.

- vii) Overcurrent Protection Devices: Molded case circuit breakers for branch panelboards and 120/208V rated distribution panels, and fusible switch units for 277/480V rated distribution panels.

g) MOTOR STARTERS

- i) Acceptable Manufacturers: Eaton/Cutler-Hammer, General Electric, Siemens, or Square D/Groupe Schneider.

ii) Manual Motor Starters

- iii) Fractional Horsepower Manual Starter: General-purpose, Class A, manually operated, full-voltage controller for fractional horsepower induction motors, with thermal overload unit, and toggle operator.

- iv) Voltage, Rating and Thermal Element: As required by motor controller.

- v) Enclosure: NEMA ICS 6; Type 1.

h) PULL LINE

- i) 1/8 inch diameter braided yellow polypropylene.

3) PART 3 EXECUTION

a) INSTALLATION

i) Conduit

- (1) Install conduit in accordance with NECA "Standard of Installation".
- (2) Do not combine individual homeruns into common conduit.
- (3) Do not support conduit with wire or perforated pipe straps. Remove wire used for temporary supports.
- (4) Arrange conduit to maintain headroom and present neat appearance.
- (5) Use conduit hubs to fasten conduit to cast boxes.
- (6) Provide insulated equipment ground conductor in flexible conduit.
- (7) Install conduit to preserve fire resistance rating of partitions and other elements.
- (8) Do not attach conduit to ceiling support wires.

ii) Building Wire and Cable

- (1) Use conductor not smaller than 12 AWG for power and lighting circuits.
- (2) Neatly train and lace wiring inside boxes, equipment, and panelboards.
- (3) Make splices, taps, and terminations to carry full ampacity of conductors with no perceptible temperature rise.
- (4) Use hardened and tempered steel, tin-plated or stainless steel Belleville washer with slightly larger tin-plated mild steel flat washer for aluminum lugs.
- (5) Use insulated spring wire connectors with plastic caps for copper conductor splices and taps, 8 AWG and smaller.

iii) Boxes

- (1) Install electrical boxes as shown on Drawings, and as required for splices, taps, wire pulling, equipment connections and compliance with regulatory requirements.
- (2) Install electrical boxes to maintain headroom and to present neat mechanical appearance.
- (3) Install boxes to preserve fire resistance rating of partitions and other elements; arrange boxes to meet regulatory requirements.
- (4) Align adjacent wall-mounted outlet boxes for switches, thermostats, and similar devices to each other.
- (5) Do not use through-walls boxes or install flush mounting boxes back-to-back in walls; provide minimum 6 inch separation. Provide minimum 24 inches separation in acoustic rated walls.
- (6) Use stamped steel bridges in bar hanger assemblies to fasten flush mounting outlet box between studs.
- (7) Use adjustable steel channel fasteners for hung ceiling outlet box.
- (8) Do not fasten boxes to ceiling support wires.
- (9) Support steel metal boxes independently of conduit.
- (10) Use gang box where more than one device is mounted together, including floor boxes. Do not use sectional box.
- (11) Plaster Rings: Use for all concealed work; depth of rings as required to reach finished surfaces.
- (12) Coordinate trimming of openings for outlet boxes in partitions to achieve neat, closely-fitting openings.
- (13) Install knockout closure in unused box opening.

iv) Wiring Devices

- (1) Install devices plumb, level, and rigidly in place.
- (2) Install switches 2 inches to 8 inches from trim on the strike side.
- (3) Install decorative plates on switch, receptacle, and blank outlets in finished areas. Use multi-gang plates for multiple devices.
- (4) Connect wiring devices by wrapping conductor around screw terminal.

v) Supporting Devices

- (1) Fasten hanger rods, conduit clamps, and outlet and junction boxes to building structure using expansion anchors, beam clamps, steel ramset fasteners.
- (2) Use toggle bolts or hollow wall fasteners in plaster or gypsum board partitions and walls; sheet metal screws or spring steel bar retainer clips in sheet metal studs.
- (3) Do not fasten supports to piping, ductwork, mechanical equipment, or conduit.
- (4) Do not use powder-actuated anchors without specific permission.
- (5) Do not drill structural steel members without specific permission.
- (6) Fabricate supports from structural steel or steel channel, rigidly welded or bolted to present a neat appearance. Use hexagon head bolts with spring lock washers under nuts.

vi) Electrical Identification

- (1) Provide wire markers on each conductor in panelboard gutters, pull boxes, and at load connection. Identify with branch circuit for power and lighting circuits, and with control wire number as indicated on equipment manufacturer's shop drawings for control wiring. If more than one neutral conductor is present, mark each with related circuit numbers.
- (2) Color code all secondary branch circuit and feeder conductors as follows:  
(a) Four Wire, Three Phase, Grounded Wye System: For 120/208 volt systems, use one black, one red, one blue, one white (neutral). For 277/480 volt systems, use one brown, one orange, one yellow and one gray (neutral).
- (3) Use wire with insulation of required color. For sizes of wire, which may not be available in specified colors use self-adhesive wrap around, markers of solid colors to color code conductors.
- (4) Color code conductors at accessible locations.
- (5) Pull Rope Marking: Affix label identifying termination point at each end of pull rope.

vii) Disconnect Switches

- (1) Install disconnect switches shown mounted on walls at 4'-6" to centerline of switch.
- (2) Install disconnect switches shown on or adjacent to equipment on field fabricated galvanized steel frames.

viii) Panelboards

- (1) Provide filler plates for unused spaces in panelboards.
- (2) Provide typed circuit directory in plastic holder for each branch circuit panelboard.

ix) Motor Starters

- (1) Install motor control equipment in accordance with manufacturer's instructions.
- (2) Select and install heater elements in motor starters to match installed motor characteristics.

- x) Pull Line: Provide in each empty conduit except sleeves and nipples; leave 8 inches of slack at each outlet.

- xi) Firestopping: Provide firestopping around all pipes, conduits, sleeves, etc., which pass through rated walls, partitions and floors.

END OF SECTION

SSRC ALPINE COASTER

2305 Mt. Werner Circle  
Steamboat Springs, CO

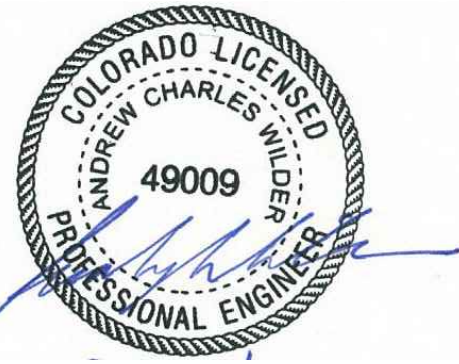
STEAMBOAT SKI & RESORT CORP

2305 Mt. Werner Circle  
Steamboat Springs, CO

R C R B D  
RECORD SET  
ELECTRICAL



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Issue	By	Date	Issue Description	By
—	PERMIT	SET	— 8.29.16	AW

Scale:

24x36 NTS

Description: SPECIFICATIONS

Project Name: ALPINE COASTER

Project Number: 201658

Sheet No.

E3.0