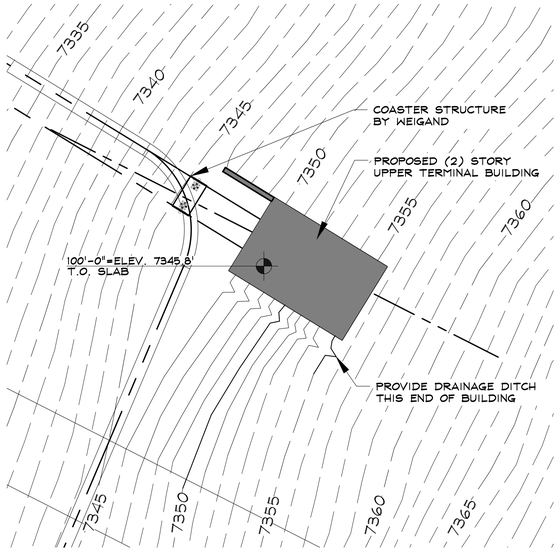
# APPROVED

ATMOS ENERGY CORPORATION
2# Systems will not be allowed unless proof of an appliance requiring a MINUMUM of over 7" W.C. is provided to Atmos Energy Corporation personnel for review.
Meter location must be approved by an Atmos Energy Corporation employee during a mandatory site visit to be scheduled after foundation is in place.
Meters will not be allowed under a shedding roofline or where overhanging snow is a danger to the meter set.




No water and sewer plumbing fixtures proposed. Based on this no PIF required. Approved by Mt Werner Water 8-12-16.

PJ1735-5
Fire Prevention
In: 8/17/2016
Out: 08/17/2016

## GENERAL PROJECT INFORMATION

APPLICABLE CODES:
2009 INTERNATIONAL BUILDING CODE
2009 INTERNATIONAL PLUMBING CODE
2009 INTERNATIONAL MECHANICAL CODE
2009 INTERNATIONAL ENERGY CONSERVATION CODE
2009 FUEL GAS CODE
2011 NATIONAL ELECTRIC CODE
INTERNATIONAL CODE COUNCIL ELECTRIC CODE
2009 CITY OF S.S. COMMUNITY DEVELOPMENT CODE

ZONING: OR - OPEN SPACE & RECREATION

SETBACKS:
FRONT: 25'-0" PRIMARY, 25'-0" ACCESSORY
SIDE: 25'-0" PRIMARY, 15'-0" ACCESSORY
REAR: 20'-0" PRIMARY, 15'-0" ACCESSORY

LOT SIZE:
WIDTH: 25'-0" MIN, NO MAX
DEPTH: NO MIN
MINIMUM AREA: 2,500 SQ. FT.

LOT COVERAGE: NO MAXIMUM

F.A.R.: NO MAXIMUM

## LEGAL DESCRIPTION

SE4SE4, TRS IN NE4SE4, SW4SE4, SE4SW4 SEC. 22-6-84, NE4NE4, TRS IN NW4NE4 SECT. 27-6-84

**RCRBD**

**RECORD SET**

## CODE STUDY

ZONING: OR - OPEN SPACE & RECREATION

CONSTRUCTION TYPE: V-B

OCCUPANCY CLASSIFICATION: GROUP B

NO. STORIES: (2)

SIZE OF BUILDING: 351.5 SQ. FT.

OCCUPANCY LOAD: 4 PEOPLE (351.5 SQ. FT./100)

SIZE OF LOT: 197.0 ACRES

BLDG. HEIGHT: APH: 17'-0", 22'-0" ALLOWED
OH: 24'-0" MAX, 34'-0" ALLOWED

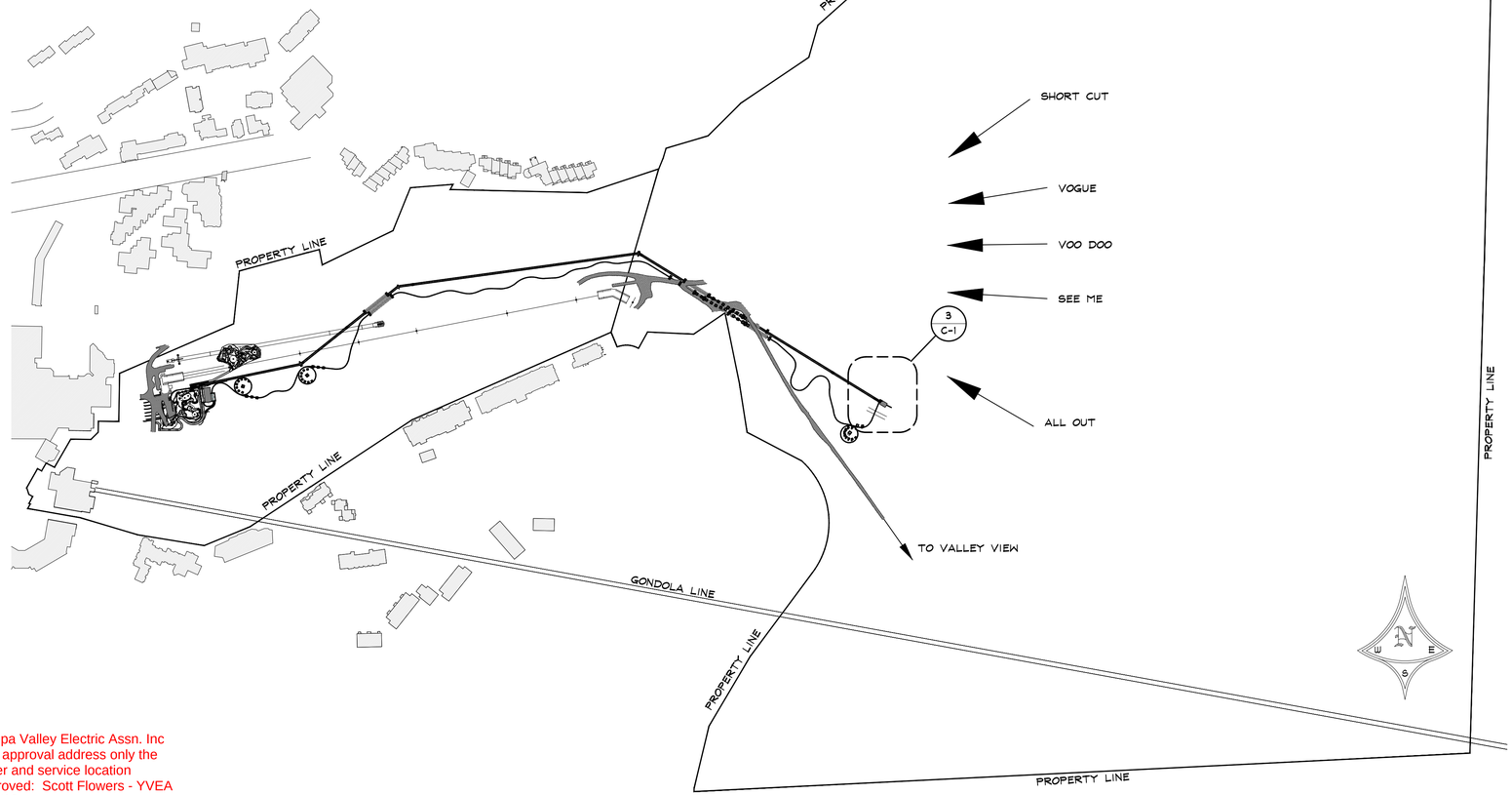
## SHEET SCHEDULE

| SHEET | CONTENTS |
|---|---|
| C-1 | OVERALL SITE PLAN & VICINITY MAP |
| | |
| A-1 | FLOOR PLANS & ARCH. NOTES |
| A-2 | BUILDING ELEVATIONS |
| A-3 | BUILDING SECTION |
| | |
| S-1 | FOUNDATION PLAN, SECTIONS & STRUC. NOTES |
| S-2 | FRAMING PLANS & SECTIONS |

## 3 ENHANCED SITE PLAN @ UPPER TERMINAL BUILDING

NOT A CERTIFIED PLAT-BASED ON SURVEY BY LANDMARK CONSULTANTS, INC. DATED: 06.16.2016
DASHED CONTOUR LINES REPRESENT EXISTING ELEVATIONS
SOLID CONTOUR LINES REPRESENT PROPOSED ELEVATIONS
CONTOUR LINES ARE IN 1'-0" INCREMENTS

SCALE: 1" = 10'-0"

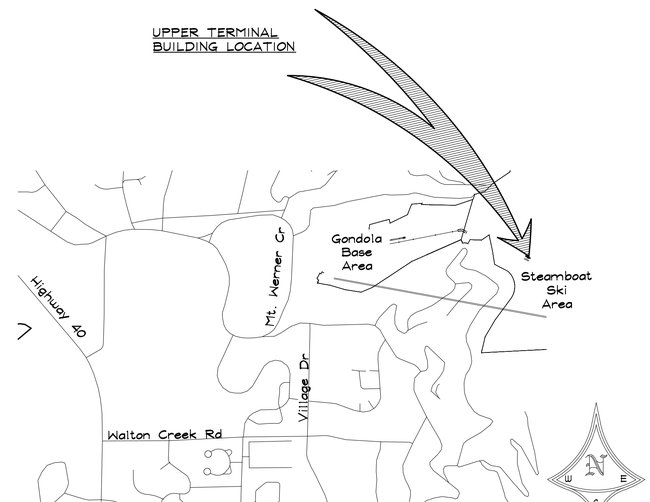



Yampa Valley Electric Assn. Inc
This approval address only the meter and service location
Approved: Scott Flowers - YVEA
8/23/16
Feeding from existing meter

## 2 SITE PLAN

NOT A CERTIFIED PLAT-BASED ON SURVEY BY LANDMARK CONSULTANTS, INC. DATED: 06.16.2016

SCALE: 1" = 240'-0"




## 1 VICINITY MAP

1" = 1000'


Steamboat Engineering & Architectural Design, Inc.
2740 Acre Lane Suite E Steamboat Springs, CO 80487
Phone: 970 . 871 . 9101 Fax: 970 . 871 . 9089
E-mail: Steve@seadinc.com


# ALPINE COASTER UPPER BUILDING

2305 MT. WERNER CIRCLE
STEAMBOAT SPRINGS, COLORADO

A NEW BUILDING FOR:
SSRC - STEAMBOAT SKI & RESORT CORP.

ISSUE DATES
PRGRESS
07 . 06 . 16
PERMIT
08 . 03 . 16

DRAWN BY:
SJM/JEM
PROJECT # 16020

OVERALL SITE PLAN & VICINITY MAP

C-1

SHEET 1 of 6

Z:\2016\16020_SSRC Alpine Coaster\Drawings\Civil\16020_Site_UB.dwg, C-1, 8/3/2016 12:09:36 PM

# ARCHITECTURAL NOTES

All work must comply with state and local codes, based on the Routt County Zoning Regulations, the 2009 International Building Code, the 2009 International Residential Code, the International Plumbing Code, the International Mechanical Code, the Energy Conservation Code and the International Electric code. The contractor shall comply with all laws, ordinances, rules and regulations of any public authority bearing on the performance of the work, including O.S.H.A.

Location of the utilities (electrical, telephone, cable TV, gas, water, sewer) shall be verified before construction begins.

All on site construction safety and construction means and methods are the responsibility of the contractor. There is no implication of the construction safety requirements or building methods contained in these drawings.

All interior and exterior dimensions are to face of stud or face of concrete, U.N.O.

Do not scale drawings.

Actual site conditions may require that some of the components of the work should be done differently than shown on these drawings. All dimensions and conditions to be verified by the contractor prior to construction. Verify changes with the designer and engineer.

These drawings represent a simplified builder's set of plans. Additional detailing may be required of the engineer during construction.

If any discrepancies are found in these drawings notify engineer and/or designer immediately.

Any variation which requires a physical change from these plans must be brought to the attention of the designer and engineer in order to maintain the design intent of the project.

All work connected with this project by any trade involved shall be of the highest quality attainable in accordance with the professional practice of the trade.

Open sides of stairways, landings, ramps, balconies and porches which are more than 30" above grade shall be protected by a guardrail. All guardrails must be 36" above finished floor and shall allow no more than a 4" diameter sphere to pass through any portion of the railing per 2009 IRC R312.

Habitable spaces within duelling units shall have natural light provided by exterior openings equal to 8% of the floor area. Natural ventilation shall be provided by means of operable exterior openings equal to 4% of the floor area.

The water closet stool shall be located in a clear space of not less than 30" in width. The clear space in front of the water closet stool shall be not less than 21".

All exterior walls are nominal 2x6 stud construction, U.N.O. All interior walls are nominal 2x4 stud construction, U.N.O.

The surface of exterior stairs shall be slip resistant.

Provide Grace 'ice and water shield', or equivalent product, from the edge of roof overhangs to the ridge.

Walls and ceilings of enclosed usable space under stairs requires 1/2" gypsum wallboard. The door to access such spaces need not be rated.

Provide smoke detection per 2009 IRC section R314.

## COMMERCIAL ENERGY CODE STANDARDS

Re: 2009 International Energy Conservation Code Table 502.2(1)

BUILDING ENVELOPE REQUIREMENTS - OPAQUE BUILDINGS

| Climate Zone 7 | Roofs | | | Walls Above Grade | | | | Walls Below Grade | Floors | | Slab-on-Grade Floors | | Opaque Doors | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Insulation entirely above deck | Metal buildings (w/ r-5 thermal blocks)[a] | Attic & other | Mass | Metal Building[b] | Metal Framed | Wood Framed & Other | Below grade wall[e] | Mass | Joists/ Framing | Unheated Slabs | Heated Slabs | Swinging | Roll up or Sliding |
| Group R | R-25ci | R-19 + R-10 | R-38 | R-15.2ci | R-19 + R-5.6ci | R-13 + R-7.5ci | R-13 + R-7.5ci | R-10ci | R-16.7ci | R-30 | R-15 for 24in. below | R-20 for 48in. below | U-0.50 | U-0.50 |
| All other | R-25ci | R-13 + R-19 | R-38 | R-15.2ci | R-13 + R-5.6ci | R-13 + R-7.5ci | R-13 + R-7.5ci | R-7.5ci | R-15ci | R-30 | R-15 for 24in. below | R-20 for 24in. below | U-0.50 | U-0.50 |

| | |
|---|---|
| a | Thermal blocks are a minimum R-5 of rigid insulation, which extends 1 inch beyond the width of the purlin on each side, perpendicular to the purlin. |
| b | Assembly descriptions can be found in Table 502.2(2) |
| c | R-5.7 ci may be substituted with concrete block walls complying with ASTM C 90, ungrouted or partially grouted at 32 inches or less on center vertically and 48 inches or less on center horizontally, with ungrouted cores filled with material having a maximum thermal conductivity of 0.44 Btu-in./h-f$^2$F. |
| d | When heated slabs are placed below grade, below grade walls must meet the exterior insulation requirements for perimeter insulation according to the heated slab-on-grade construction. |
| e | Insulation is not required for mass walls in Climate Zone 3A located below the "Warm-Humid" line, and in Zone 3B. |

## ⚠ DOOR & HARDWARE SCHEDULE

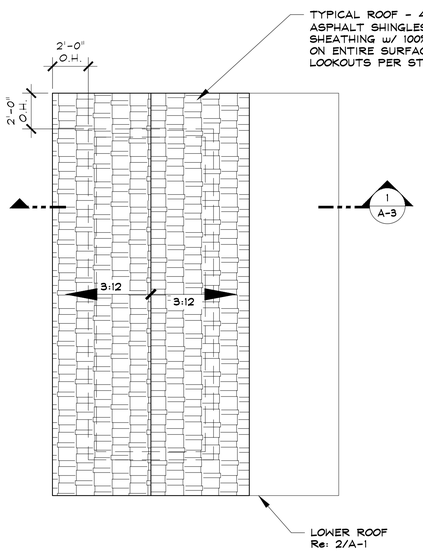
| NO. | LOCATION | ROUGH OPENING | | DOOR SIZE | JAMB THICK. | FIRE RATING | FRAME | DOOR HAND | REMARKS |
|---|---|---|---|---|---|---|---|---|---|
| | | WIDTH | HEIGHT | | | | | | |
| 1 | CONTROL ROOM | 3'-2" | 6'-10" | 3068 | 6 9/16" | N/A | STAIN GRADE WOOD | LEFT | EXT. w/ CLAD FRAME |
| | | | | | | | | | |

NOTE: VERIFY ALL ROUGH OPENINGS

## (#) WINDOW SCHEDULE

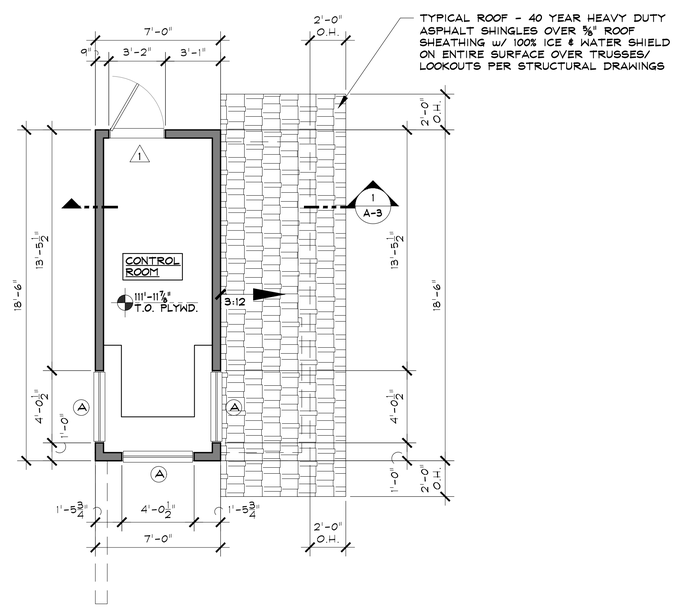
| NO. | MANUFACTURER | QTY. | UNIT DIMENSION | | ROUGH OPENING | | FUNCTION | DIRECTION (HAND) | BOTTOM OF HEADER | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | WIDTH | HEIGHT | WIDTH | HEIGHT | | | | |
| A | T.B.D. | 3 | 4'-0" | 3'-0" | 4'-0½" | 3'-0½" | SLIDER | N/A | 6'-10" ABV. FLYWD. | |
| | | | | | | | | | | |

NOTE: VERIFY ALL ROUGH OPENINGS




3 UPPER ROOF PLAN

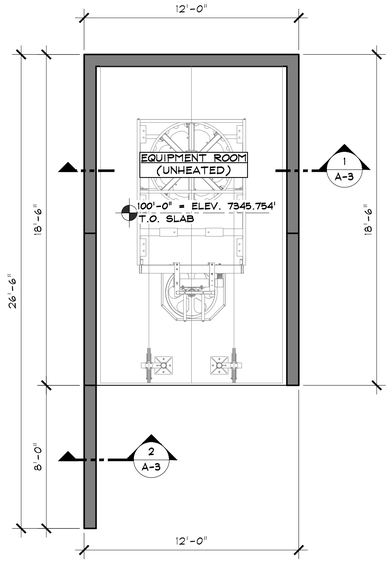
SCALE: ¼" = 1'-0"




2 MAIN LEVEL FLOOR / LOWER ROOF PLAN

129.5 SQ. FT. CONTROL ROOM

SCALE: ¼" = 1'-0"




1 LOWER LEVEL FLOOR PLAN

222 SQ. FT. UNHEATED EQUIPMENT ROOM

SCALE: ¼" = 1'-0"

Revised 08/12/2016 11:34:08 PLAN


Steamboat Engineering & Architectural Design, Inc.
2740 Acre Lane Suite E Steamboat Springs, CO 80487
Phone: 970 . 871 . 9101 Fax: 970 . 871 . 9089
E-mail: Steve@seadinc.com


ALPINE COASTER UPPER BUILDING

2305 MT. WERNER CIRCLE
STEAMBOAT SPRINGS, COLORADO

A NEW BUILDING FOR:
SSRC - STEAMBOAT SKI & RESORT CORP.

ISSUE DATES
PRGRESS
07 . 06 . 16
PERMIT
08 . 03 . 16

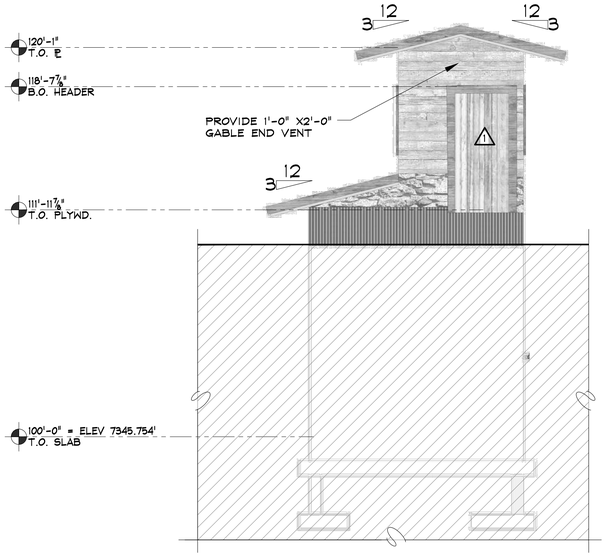
DRAWN BY:
SJM/JEM
PROJECT # 16020

UPPER BUILDING FLOOR PLANS

A-1

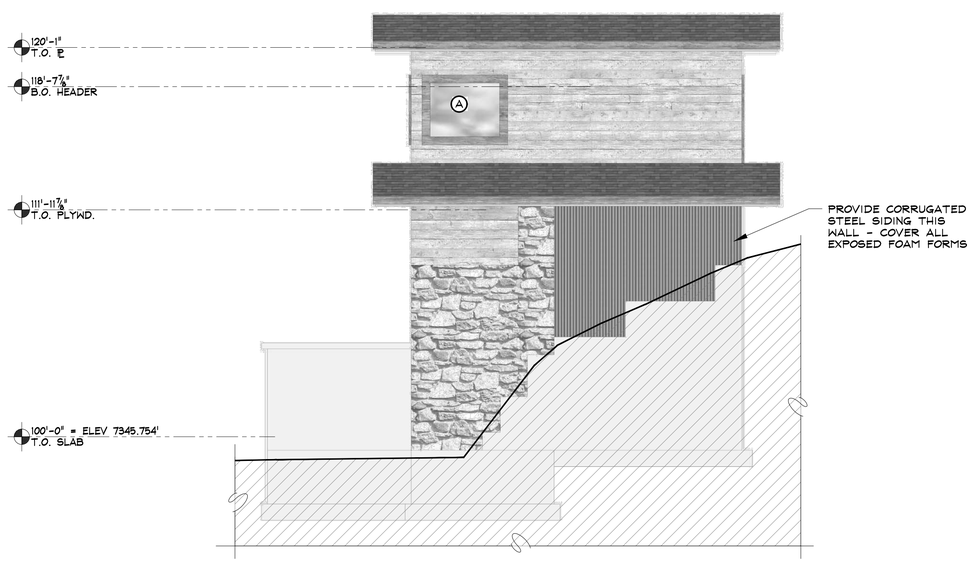
SHEET 2 of 6

RCRBD
RECORD SET



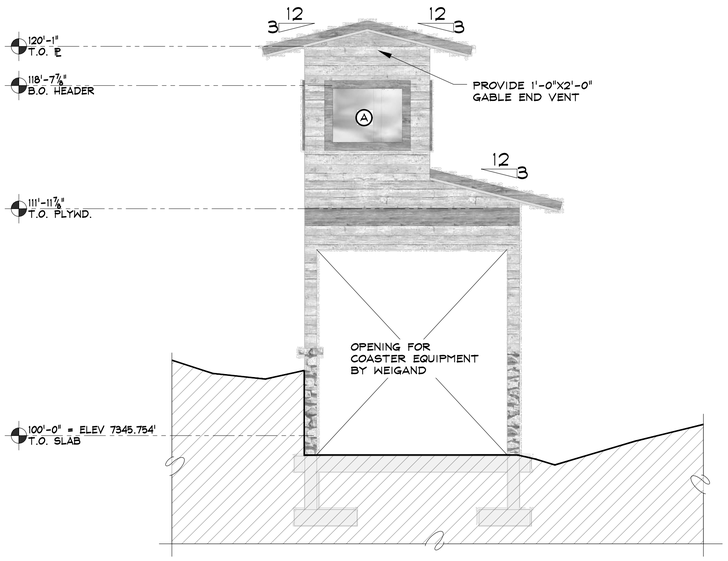

## 4 EAST ELEVATION

SCALE: ¼" = 1'-0"



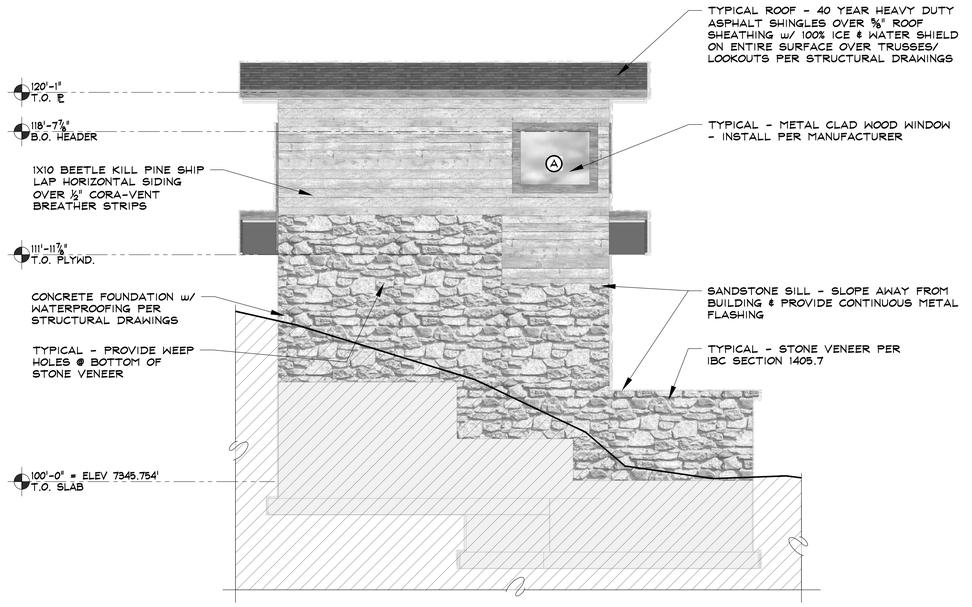

## 3 SOUTH ELEVATION

SCALE: ¼" = 1'-0"




## 2 WEST ELEVATION

SCALE: ¼" = 1'-0"




## 1 NORTH ELEVATION

NOTES THIS ELEVATION TYPICAL
FINAL DOOR & WINDOW SCHEDULE PER OWNER/CONTRACTOR

SCALE: ¼" = 1'-0"


Steamboat Engineering & Architectural Design, Inc.
2740 Acre Lane Suite E Steamboat Springs, CO 80487
Phone: 970 . 871 . 9101 Fax: 970 . 871 . 9089
E-mail: Steve@seadinc.com


# ALPINE COASTER UPPER BUILDING

2305 MT. WERNER CIRCLE
STEAMBOAT SPRINGS, COLORADO

A NEW BUILDING FOR:
SSRC - STEAMBOAT SKI & RESORT CORP.

ISSUE DATES
PRGRESS
07 . 06 . 16
PERMIT
08 . 03 . 16

DRAWN BY:
SJM/JEM
PROJECT # 16020

BUILDING
ELEVATIONS

A-2

SHEET 3 of 6

## THERMAL ENVELOPE NOTES

THE BUILDING ENVELOPE SHALL BE DURABLY SEALED TO LIMIT INFILTRATION. THE SEALING METHODS BETWEEN DISSIMILAR MATERIALS SHALL ALLOW FOR DIFFERENTIAL EXPANSION AND CONTRACTION. THE FOLLOWING SHALL BE CAULKED, GASKETED, WEATHER-STRIPPED, OR OTHERWISE SEALED WITH A BARRIER MATERIAL, SUITABLE FILM, OR SOLID MATERIAL:

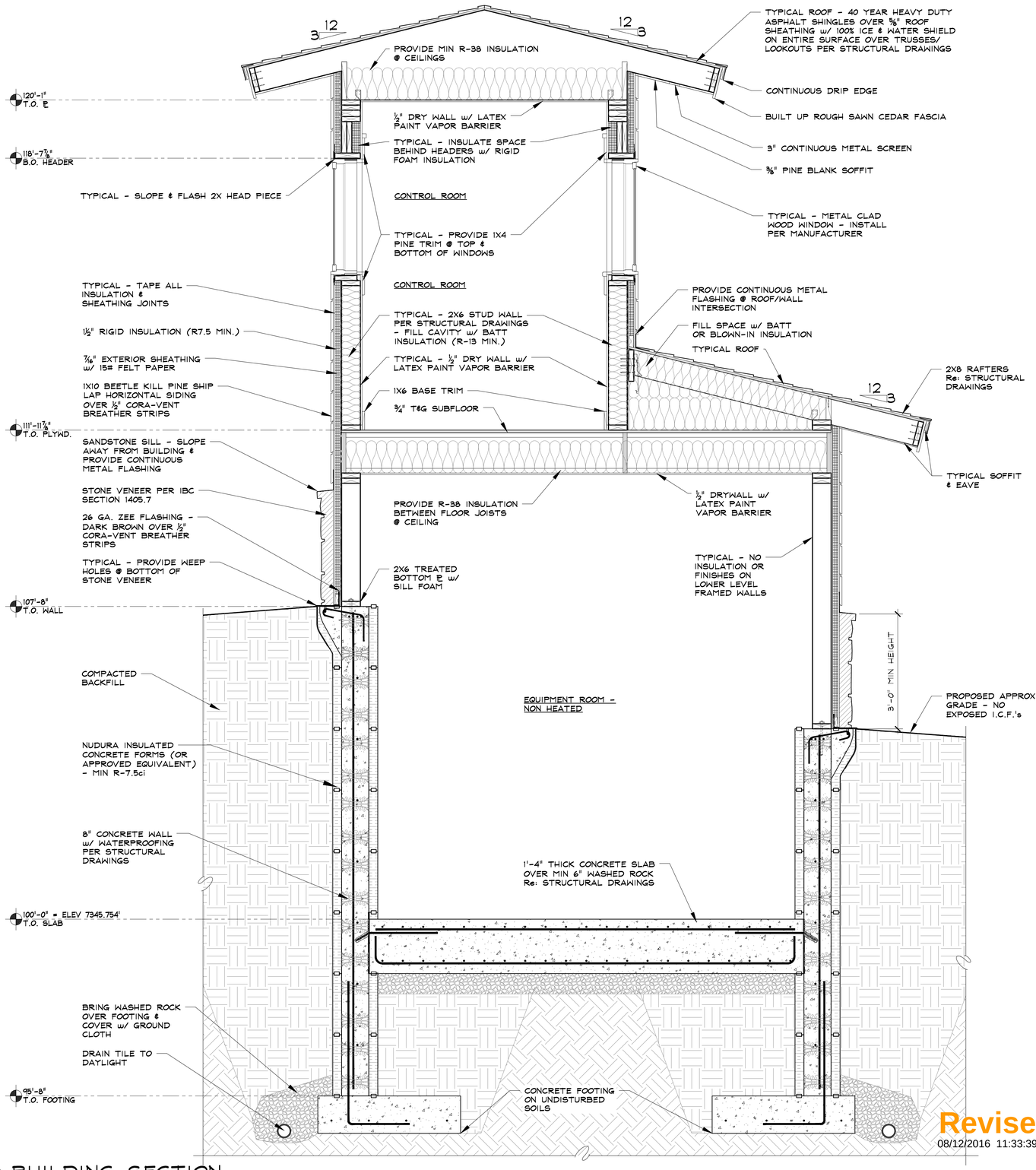
1. ALL JOINTS, SEAMS, AND PENETRATIONS
2. SITE-BUILT WINDOWS, DOORS, & SKYLIGHTS
3. OPENINGS BETWEEN WINDOW & DOOR ASSEMBLIES
4. UTILITY PENETRATIONS
5. DROPPED CEILINGS & CHASES ADJACENT TO THE THERMAL ENVELOPE
6. KNEE WALLS
7. WALLS & CEILING SEPARATING A GARAGE FROM CONDITIONED SPACES
8. BEHIND TUBS & SHOWERS OF EXTERIOR WALLS
9. BEHIND FIREPLACE INSERTS
10. ANY OTHER SOURCE OF INFILTRATION

WINDOWS, SKYLIGHTS, & SLIDING DOORS SHALL HAVE AN AIR INFILTRATION RATE OF NO MORE THAN 0.3 cfm PER SQUARE FOOT. SWINGING DOORS SHALL HAVE AN AIR INFILTRATION RATE OF NO MORE THAN 0.5 cfm PER SQUARE FOOT.

RECESSED LUMINARIES INSTALLED IN THE BUILDING THERMAL ENVELOPE SHALL BE SEALED TO LIMIT AIR LEAKAGE BETWEEN CONDITIONED & UNCONDITIONED SPACES BY BEING:

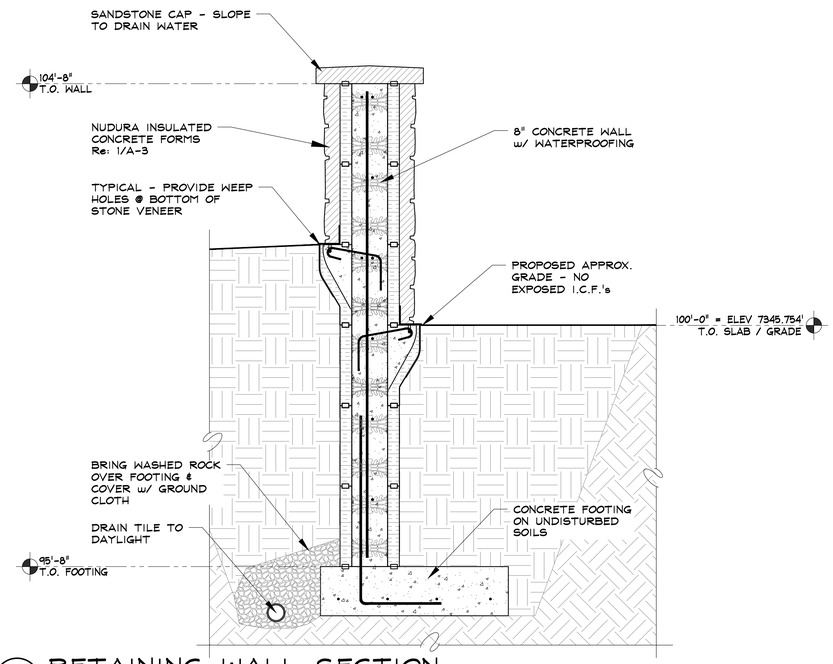
IC RATED & LABELED WITH ENCLOSURES THAT ARE SEALED OR GASKETED TO PREVENT AIR LEAKAGE TO THE CEILING CAVITY OR UNCONDITIONED SPACE

ABOVE GRADE FRAME WALLS, FLOORS, & CEILINGS NOT VENTILATED TO ALLOW MOISTURE TO ESCAPE SHALL BE PROTECTED WITH LATEX PAINT OR 6 MIL. POLY OVERLAPPED & TAPERED AT ALL JOINTS. THE VAPOR RETARDER SHALL BE INSTALLED ON THE WARM-IN-WINTER SIDE OF THE THERMAL ENVELOPE.




1 BUILDING SECTION

SCALE: 3/4" = 1'-0"




2 RETAINING WALL SECTION

SCALE: 3/4" = 1'-0"


Steamboat Engineering & Architectural Design, Inc.
2740 Acre Lane Suite E Steamboat Springs, CO 80487
Phone: 970 . 871 . 9101 Fax: 970 . 871 . 9089
E-mail: Steve@seadinc.com


# ALPINE COASTER UPPER BUILDING

2305 MT. WERNER CIRCLE
STEAMBOAT SPRINGS, COLORADO

A NEW BUILDING FOR:
SSRC - STEAMBOAT SKI & RESORT CORP.

ISSUE DATES
PRGRESS
07 . 06 . 16
PERMIT
08 . 03 . 16

DRAWN BY:
SJM/JEM
PROJECT # 16020

BUILDING SECTION

A-3

SHEET 4 of 6

Revised
08/12/2016 11:33:39 AM

Z:\2016\16020_SSRC Alpine Coaster\Drawings\Arch\Upper Building\16020_ArchSheets_UB.dwg, A-3, 8/3/2016 12:50:43 PM

# STRUCTURAL NOTES

Design Live Loads:
A. Roofs 110 psf
B. Floors 40 psf
C. Wind 120 mph, Exposure B, ASCE 7-10
D. Seismic Design Category B, Soil Type D, 2009 IBC

Foundation Criteria:
A. Design of continuous and individual footings is based on a maximum allowable soil bearing pressure of 2,500 psf dead load plus full live load placed on the natural undisturbed soils below frost depth. This is an assumed value based on local knowledge and previous projects in the area.

Reinforced Concrete:
A. Structural concrete shall be Type 1, and have a minimum 28 day strength of 3,000 psi, Exterior concrete slabs shall be Type 1 and have a minimum 28 day strength of 4,000 psi w/ min 6% entrained air for durability.
B. Reinforcing bars shall conform to ASTM spec. A615-79 and shall be Grade 60.
C. All concrete work shall conform to the requirements of ACI318 and 301, latest edition.
D. At splices, lap bars a minimum of 34 diameters. At corners and intersections, make horizontal continuous or provide matching corner bars. Around openings in walls and slabs, provide (2) #5 bars extending a minimum of 2 feet beyond the edge of the opening.
E. Concrete cover shall conform to ACI 318-08, 7.7. Unless a greater cover is required, concrete cast against earth shall have 3in. min. cover, concrete exposed to earth or weather shall have 1½in. min. cover for No. 5 bars & smaller & 2in. min. cover for No. 6 bars & greater. Concrete not exposed to weather shall have ¾" min. cover for No. 11 bars & smaller.

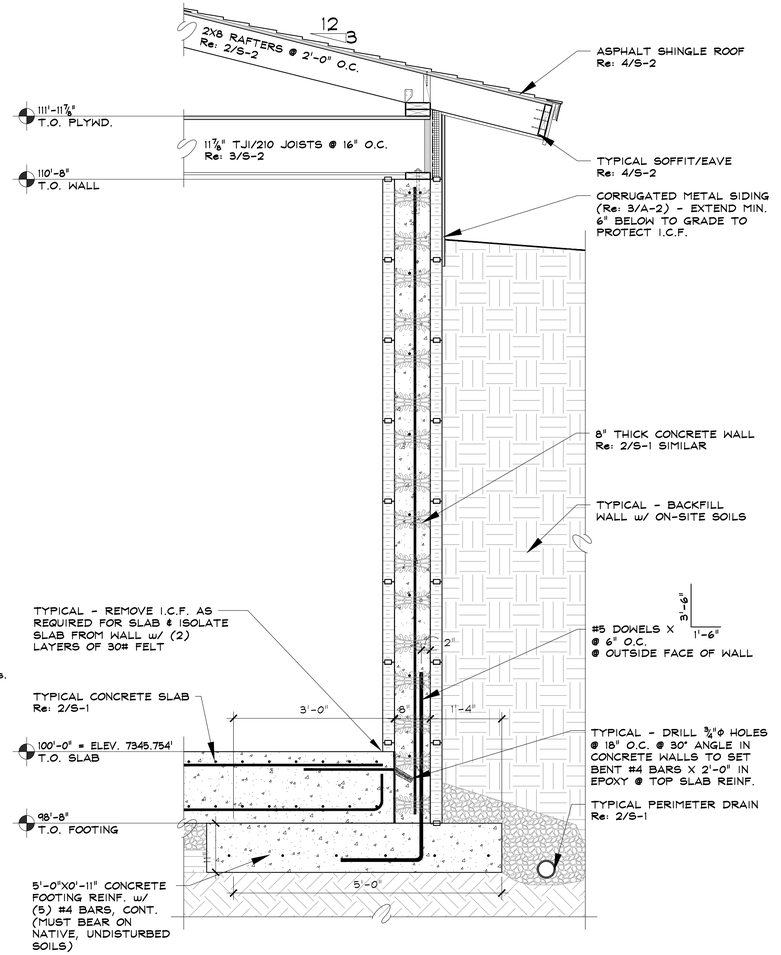
Structural Steel:
A. All bolts, including anchor bolts, shall conform to ASTM spec. A307.
B. Structural steel rolled shapes, including plates and angles, shall be ASTM A36.
C. Expansion bolts called for on the drawings shall be Simpson "Wedg-All", "Strong-Bolt 2" or approved wedge type anchors with the following minimum embedments: 3/4" diameter bolts - 3⅜", 5/8" diameter bolts - 2⅜", 1/2" diameter bolts - 2¼".
D. All epoxy shall be Simpson "Set-XP" and shall be installed per the "Anchoring and Fastening Systems For Concrete and Masonry" Simpson catalog #C-SAS-2012 by qualified personnel.
E. Field welded connections must be inspected by the Engineer Of Record of approved 3rd party.
F. Fillet welds indicated on the plans shall be of E70xx electrodes and shall be the minimum size specified in the AISC Manual of Steel Construction, Table J2.4.

Structural Wood Framing:
A. Unless noted otherwise, all 2" lumber shall be Douglas Fir S4S No. 2 and better. All solid timber beams and posts shall be DF-L No. 1 or better.
B. Unless noted otherwise, minimum nailing shall be provided as specified in Table No. 2304.9.1, "Fastening Schedule", of the 2009 IBC or Table No. R602.3(1), "Fastener Schedule For Structural Members", of the 2009 IRC.
C. Wall and floor sheathing shall be APA rated with exterior glue and graded in accordance with APA standards. Panel identification and thickness shall be as noted on the drawings.
D. Where light gauge framing anchors are shown or required, they shall be Simpson "Strong Tie" (or equal approved by ICBO). They shall be installed with the number and type of fasteners recommended by the manufacturer to develop the rated capacity.
E. Laminated Veneer Lumber shall be of such stress grade to provide an allowable bending stress of 2,600 psi, allowable shear stress parallel to the glue line of 285 psi and a modulus of elasticity of 1,900,000 psi.
F. Glue laminated timber shall be stress grade marked 24F-V4 for simple spans & 24F-V8 for multiple spans.
G. Roof trusses shall be designed by a Colorado Registered Professional Engineer to support the full live load and dead loads of the roof, ceiling, and any other superimposed loads. Calculations and shop drawings, including member sizes, lumber species, and grade and substantiating data for connector capacities and truss bearing, shall be submitted to the Architect or Engineer for review and approval prior to fabrication.
H. Floor joists shall be plant fabricated I series with LVL or solid wood flanges and plywood or OSB webs, and shall carry CBO approval for a complete section. Joists shall be designed to carry full live and dead loads of the roof(s), floor(s), and any superimposed loads.
I. Roof overframing shall be 2x6 rafters @ 24" O.C. w/ 2x6 studs @ 24" O.C. to stack over rafters or purlins below.

Backfilling:
A. Do not backfill against basement or retaining walls until supporting slabs and floor framing are in place and securely anchored.

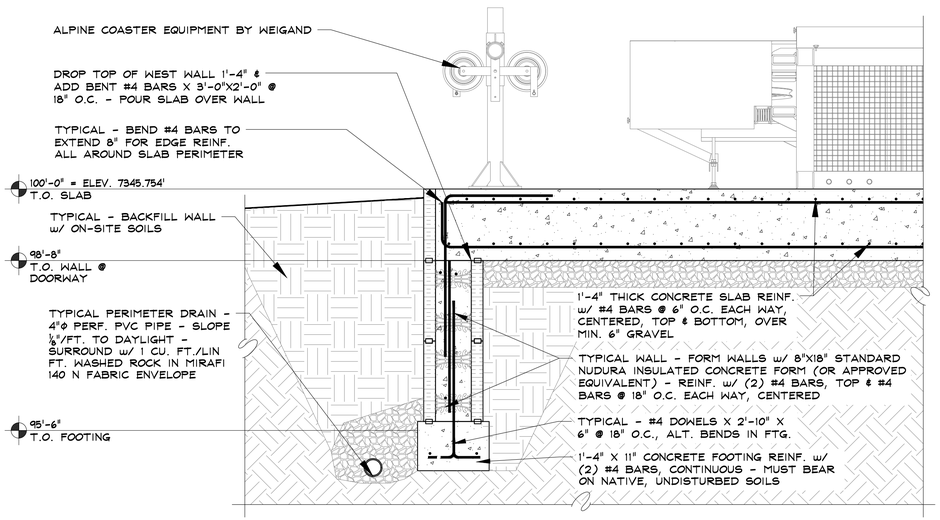
## STRUCTURE LEGEND

- □ = COLUMN BELOW
- ▣ = COLUMN ABOVE
- ■ = COLUMN CONTINUOUS THIS LEVEL
- BEARING ARRON
- = RAFTER
- = JOIST
- = BEAM
- = RIM
- = LEDGER
- = TYPICAL HEADER
- = CLOSURE WALL
- ⌋ = HANGER
- ⌟ = CLIP




## 4 FOUNDATION SECTION

SCALE: ¾" = 1'-0"

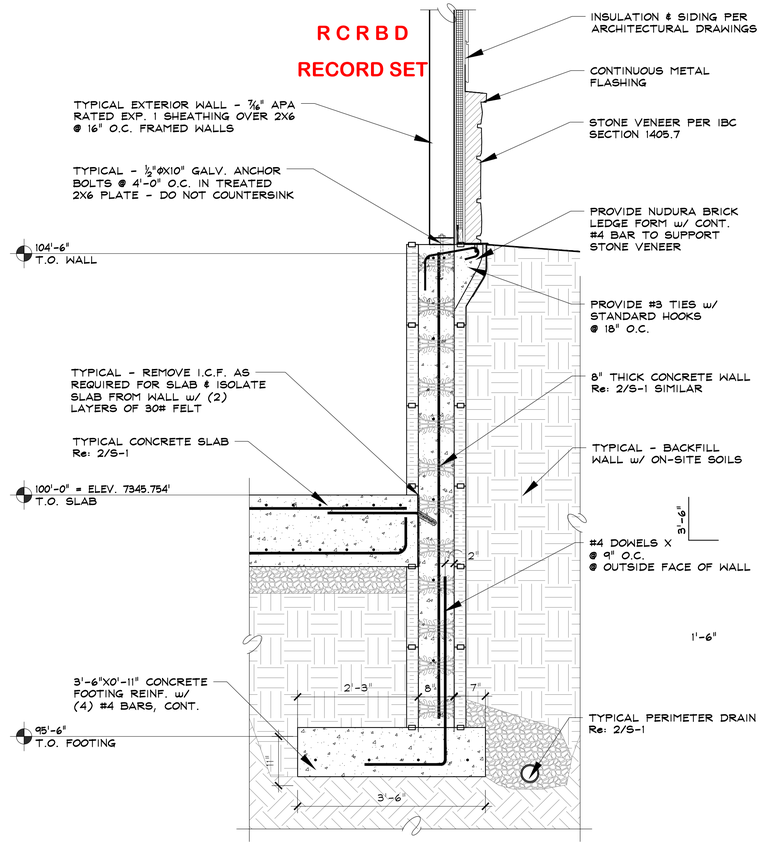



## 2 FOUNDATION SECTION @ DOORWAY

SCALE: ¾" = 1'-0"

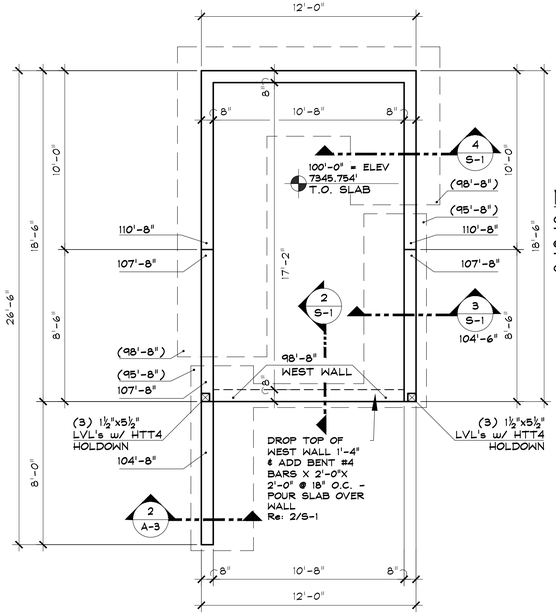
RCRBD

RECORD SET




## 3 FOUNDATION SECTION

SCALE: ¾" = 1'-0"




NOTE:

CONCRETE SLAB SHALL BE 1'-4" THICK SLAB REINF. w/ #4 BARS @ 6" O.C. EACH WAY, CENTERED, TOP & BOTTOM, OVER MIN. 6" GRAVEL

## 1 FOUNDATION PLAN

SCALE: ¼" = 1'-0"

TYPICAL - ELEVATION @ TOP OF CONCRETE WALL INDICATED THUS: ELEV.
TYPICAL - ELEVATION @ TOP OF CONCRETE FOOTING INDICATED THUS: (ELEV.)
TYPICAL - COLUMNS THAT BEGIN THIS LEVEL ARE INDICATED ON PLAN


Steamboat Engineering & Architectural Design, Inc.
2740 Acre Lane Suite E Steamboat Springs, CO 80487
Phone: 970. 871. 9101 Fax: 970. 871. 9089
E-mail: Steve@seadinc.com


ALPINE COASTER UPPER BUILDING

2305 MT. WERNER CIRCLE
STEAMBOAT SPRINGS, COLORADO

A NEW BUILDING FOR:
SSRC - STEAMBOAT SKI & RESORT CORP.

ISSUE DATES
PRGRESS
07 . 06 . 16
PERMIT
08 . 03 . 16

DRAWN BY:
SJM/JEM
PROJECT # 16020

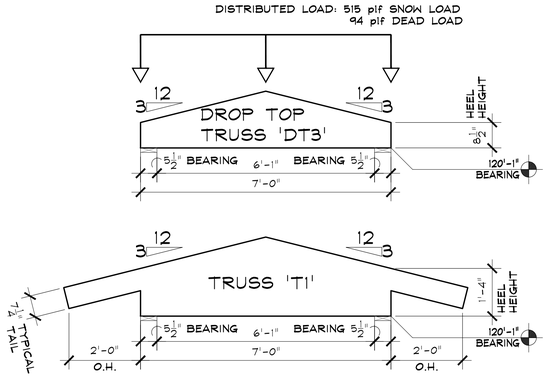
FOUNDATION
PLAN & NOTES

S-1

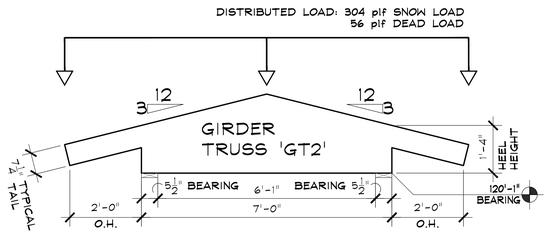
SHEET 5 of 6

RCRBD

RECORD SET

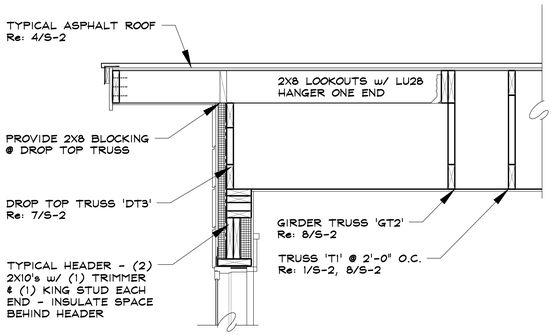



NOTE:
REQUIRES 2X8 TOP CHORD FOR LOOKOUT FRAMING



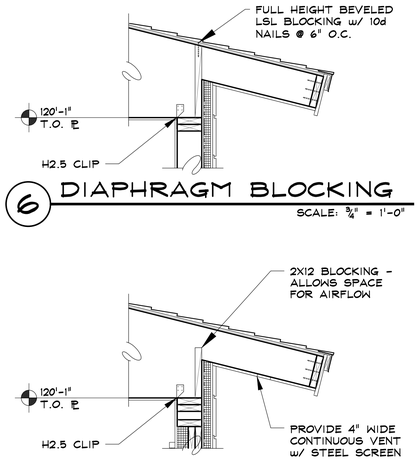

## 8 MANUFACTURED TRUSS SCHEMATICS

SCALE: 1/2" = 1'-0"




## 7 SECTION THROUGH LOOKOUT

SCALE: 3/4" = 1'-0"



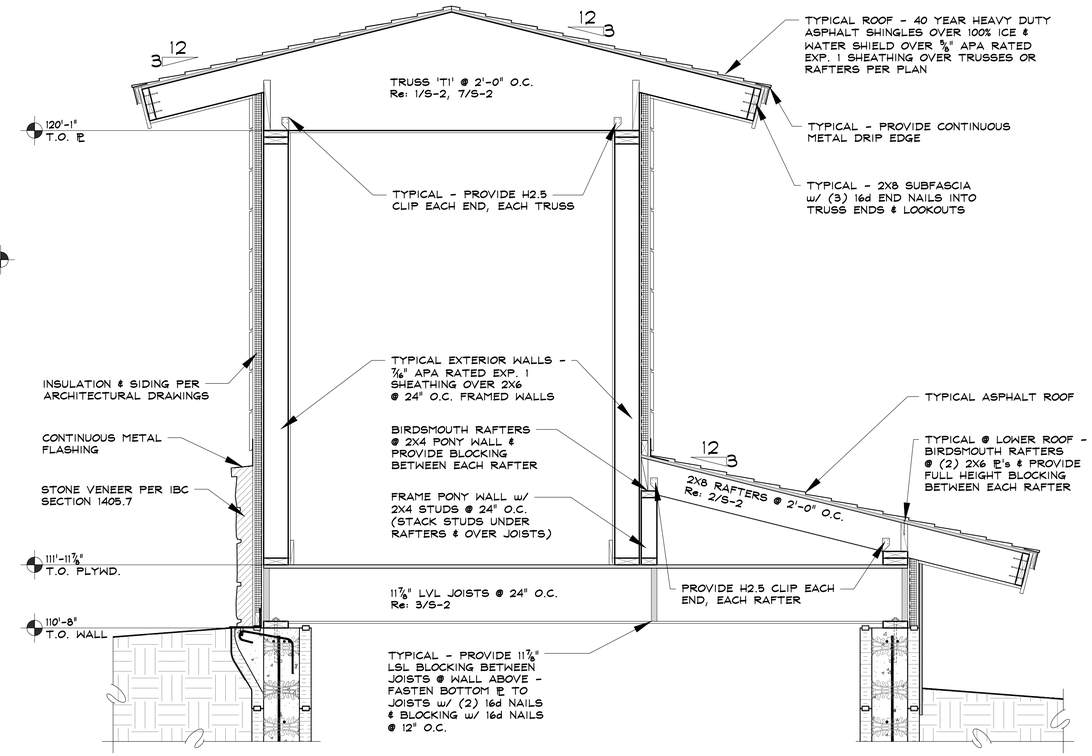

## 6 DIAPHRAGM BLOCKING

SCALE: 3/4" = 1'-0"




## 5 TYP. TRUSS SECTION

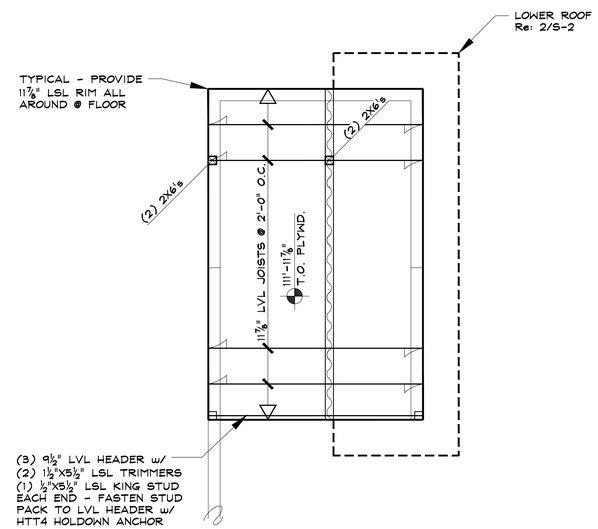
SCALE: 3/4" = 1'-0"




## 4 BUILDING SECTION w/ DIAPHRAGM NAILING

SCALE: 3/4" = 1'-0"

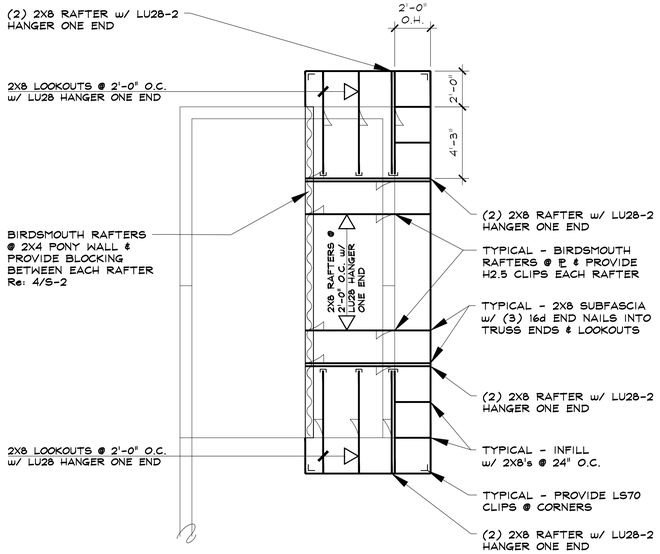
COLUMN LEGEND
□ = COLUMN BELOW
⊠ = COLUMN ABOVE
■ = COLUMN CONTINUOUS THIS LEVEL




## 3 MAIN FLOOR FRAMING PLAN

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

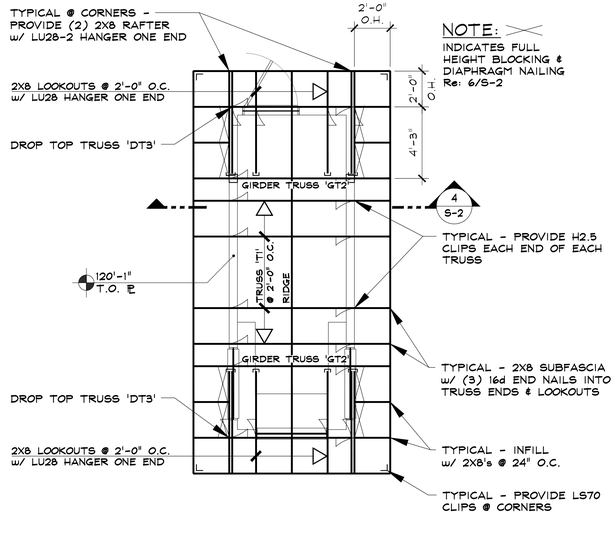
TYPICAL - 3/4" APA RATED EXPOSURE 1 T&G STURD-I-FLOOR SHEATHING
TYPICAL HEADER THIS PLAN - (2) 2X10's, w/ (1) TRIMMER & (1) KING STUD EA. END, U.N.O.
TYPICAL- ELEVATION @ TOP OF BEAM INDICATED THUS: (ELEV.)
TYPICAL - COLUMNS THAT BEGIN THIS LEVEL ARE INDICATED ON PLAN




## 2 LOWER ROOF FRAMING PLAN

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

TYPICAL - 5/8" APA RATED EXPOSURE 1 40/20 SHEATHING
TYPICAL - ELEVATION @ TOP OF BEAMS INDICATED THUS: (ELEV.)
TYPICAL HEADER THIS PLAN - (2) 2X10's, w/ (1) TRIMMER & (1) KING STUD EA. END, U.N.O.




## 1 UPPER ROOF FRAMING PLAN

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

TYPICAL - 5/8" APA RATED EXPOSURE 1 40/20 SHEATHING
TYPICAL - ELEVATION @ TOP OF BEAMS INDICATED THUS: (ELEV.)
TYPICAL HEADER THIS PLAN - (2) 2X10's, w/ (1) TRIMMER & (1) KING STUD EA. END, U.N.O.
Re: 8/S-2 FOR MANUFACTURED TRUSS SCHEMATICS


SEA
Steamboat Engineering & Architectural Design, Inc.
2740 Acre Lane Suite 'E' Steamboat Springs, CO 80487
Phone: 970. 871. 9101 Fax: 970. 871. 9089
E-mail: Steve@seadinc.com


# ALPINE COASTER UPPER BUILDING

2305 MT. WERNER CIRCLE
STEAMBOAT SPRINGS, COLORADO

A NEW BUILDING FOR:
SSRC - STEAMBOAT SKI & RESORT CORP.

ISSUE DATES
PRGRESS
07 . 06 . 16
PERMIT
08 . 03 . 16

DRAWN BY:
SJM/JEM
PROJECT # 16020

FRAMING PLANS

S-2

SHEET 6 of 6

# ARCHITECTURAL NOTES

All work must comply with state and local codes, based on the Routt County Zoning Regulations, the 2009 International Building Code, the 2009 International Residential Code, the International Plumbing Code, the International Mechanical Code, the Energy Conservation Code and the International Electric code. The contractor shall comply with all laws, ordinances, rules and regulations of any public authority bearing on the performance of the work, including O.S.H.A.

Location of the utilities (electrical, telephone, cable TV, gas, water, sewer) shall be verified before construction begins.

All on site construction safety and construction means and methods are the responsibility of the contractor. There is no implication of the construction safety requirements or building methods contained in these drawings.

All interior and exterior dimensions are to face of stud or face of concrete, U.N.O.

Do not scale drawings.

Actual site conditions may require that some of the components of the work should be done differently than shown on these drawings. All dimensions and conditions to be verified by the contractor prior to construction. Verify changes with the designer and engineer.

These drawings represent a simplified builder's set of plans. Additional detailing may be required of the engineer during construction.

If any discrepancies are found in these drawings notify engineer and/or designer immediately.

Any variation which requires a physical change from these plans must be brought to the attention of the designer and engineer in order to maintain the design intent of the project.

All work connected with this project by any trade involved shall be of the highest quality attainable in accordance with the professional practice of the trade.

Open sides of stairways, landings, ramps, balconies and porches which are more than 30" above grade shall be protected by a guardrail. All guardrails must be 36" above finished floor and shall allow no more than a 4" diameter sphere to pass through any portion of the railing per 2009 IRC R312.

Habitable spaces within duelling units shall have natural light provided by exterior openings equal to 8% of the floor area. Natural ventilation shall be provided by means of operable exterior openings equal to 4% of the floor area.

The water closet stool shall be located in a clear space of not less than 30" in width. The clear space in front of the water closet stool shall be not less than 21".

All exterior walls are nominal 2x6 stud construction, U.N.O. All interior walls are nominal 2x4 stud construction, U.N.O.

The surface of exterior stairs shall be slip resistant.

Provide Grace 'ice and water shield', or equivalent product, from the edge of roof overhangs to the ridge.

Walls and ceilings of enclosed usable space under stairs requires 1/2" gypsum wallboard. The door to access such spaces need not be rated.

Provide smoke detection per 2009 IRC section R314.

# COMMERCIAL ENERGY CODE STANDARDS

Re: 2009 International Energy Conservation Code Table 502.2(1)

BUILDING ENVELOPE REQUIREMENTS - OPAQUE BUILDINGS

| Climate Zone 7 | Roofs | | | Walls Above Grade | | | | Walls Below Grade | Floors | | Slab-on-Grade Floors | | Opaque Doors | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Insulation entirely above deck | Metal buildings (w/ r-5 thermal blocks)[a] | Attic & other | Mass | Metal Building[b] | Metal Framed | Wood Framed & Other | Below grade wall[c] | Mass | Joists/ Framing | Unheated Slabs | Heated Slabs | Swinging | Roll up or Sliding |
| Group R | R-25ci | R-19 + R-10 | R-38 | R-15.2ci | R-19 + R-5.6ci | R-13 + R-7.5ci | R-13 + R-7.5ci | R-10ci | R-16.7ci | R-30 | R-15 for 24in. below | R-20 for 48in. below | U-0.50 | U-0.50 |
| All other | R-25ci | R-13 + R-19 | R-38 | R-15.2ci | R-13 + R-5.6ci | R-13 + R-7.5ci | R-13 + R-7.5ci | R-7.5ci | R-15ci | R-30 | R-15 for 24in. below | R-20 for 24in. below | U-0.50 | U-0.50 |

| | |
|---|---|
| a | Thermal blocks are a minimum R-5 of rigid insulation, which extends 1 inch beyond the width of the purlin on each side, perpendicular to the purlin. |
| b | Assembly descriptions can be found in Table 502.2(2) |
| c | R-5.7 ci may be substituted with concrete block walls complying with ASTM C 90, ungrouted or partially grouted at 32 inches or less on center vertically and 48 inches or less on center horizontally, with ungrouted cores filled with material having a maximum thermal conductivity of 0.44 Btu-in./h-f°F. |
| d | When heated slabs are placed below grade, below grade walls must meet the exterior insulation requirements for perimeter insulation according to the heated slab-on-grade construction. |
| e | Insulation is not required for mass walls in Climate Zone 3A located below the "Warm-Humid" line, and in Zone 3B. |

## ⚠ DOOR & HARDWARE SCHEDULE

| NO. | LOCATION | ROUGH OPENING | | DOOR SIZE | JAMB THICK. | FIRE RATING | FRAME | DOOR HAND | REMARKS |
|---|---|---|---|---|---|---|---|---|---|
| | | WIDTH | HEIGHT | | | | | | |
| 1 | CONTROL ROOM | 3'-2" | 6'-10" | 3068 | 6 9/16" | N/A | STAIN GRADE WOOD | LEFT | EXT. w/ CLAD FRAME |
| | | | | | | | | | |

NOTE: VERIFY ALL ROUGH OPENINGS

## ⓦ WINDOW SCHEDULE

| NO. | MANUFACTURER | QTY. | UNIT DIMENSION | | ROUGH OPENING | | FUNCTION | DIRECTION (HAND) | BOTTOM OF HEADER | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | WIDTH | HEIGHT | WIDTH | HEIGHT | | | | |
| A | T.B.D. | 3 | 4'-0" | 3'-0" | 4'-0½" | 3'-0½" | SLIDER | N/A | 6'-10" ABV. PLYWD. | |
| | | | | | | | | | | |

NOTE: VERIFY ALL ROUGH OPENINGS ⚠

**GA FILE NO. WP 8126** | **PROPRIETARY*** | **1 HOUR FIRE**

**GYPSUM PANEL PRODUCTS, FOAM PLASTIC BOARDS, WOOD STUDS, EXTERIOR CLADDING**

EXTERIOR SIDE: **Base** layer 5/8" proprietary type X gypsum sheathing or glass mat gypsum substrate applied parallel or at right angles to 2 x 4 wood studs 16" o.c. with 6d cement-coated or common nails or 1-7/8" Type W drywall screws 7" o.c. **Second** layer maximum 1-1/2" proprietary faced polyisocyanurate foam plastic sheathing applied parallel to studs with 3" galvanized roofing nails 8" o.c. at perimeter and 12" o.c. at intermediate studs. **Face** layer exterior siding, fiber-cement siding, masonry veneer, stucco, or exterior insulation and finish system (EIFS).

INTERIOR SIDE: 5/8" proprietary type X gypsum wallboard applied at right angles to studs with 6d cement-coated or common nails or 1-7/8" Type W drywall screws 7" o.c. Unfaced 3-1/2" glass fiber, 0.72 pcf, friction fit in stud space. **(LOAD-BEARING)**

Thickness: Varies
Approx. Weight: 6 psf
Fire Test: UL R2637, 94NK19449, 6-28-96; UL R14196, 11NK04002, 3-3-11; UL Design U354

**PROPRIETARY GYPSUM PANEL PRODUCTS**

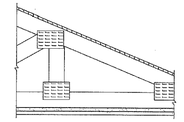
American Gypsum Company LLC ..... 5/8" FireBloc® Type X Gypsum Board; 5/8" M-Glass® Type X Exterior Gypsum Sheathing
CertainTeed Gypsum Inc. ..... 5/8" GlasRoc® Sheathing Type X Gypsum Panels; 5/8" CertainTeed® Type X Gypsum Board
Continental Building Products ..... 5/8" Weather Defense® Platinum Sheathing; 5/8" Firecheck® Type X
Georgia-Pacific Gypsum LLC ..... 5/8" DensArmor Plus® Fireguard® Interior Panel; 5/8" DensGlass® Fireguard® Sheathing
National Gypsum Company ..... 5/8" Gold Bond® Brand FIRE-SHIELD® Gypsum Sheathing; 5/8" Gold Bond® Brand FIRE-SHIELD® Gypsum Board
PABCO Gypsum ..... 5/8" FLAME CURB® Type X; 5/8" PABCO GLASS® Sheathing Type X

**ROOF-CEILING SYSTEMS**

**GA FILE NO. RC 2602** | **GENERIC** | **1 HOUR FIRE**

**WOOD TRUSSES, GYPSUM WALLBOARD**

**Base** layer 5/8" type X gypsum wallboard applied at right angles to wood roof trusses 24" o.c. with 1-1/4" Type W or S drywall screws 24" o.c. **Face** layer 5/8" type X gypsum wallboard or gypsum veneer base applied at right angles to trusses with 1-7/8" Type W or S drywall screws 12" o.c. at joints and intermediate trusses and 1-1/2" Type G drywall screws 12" o.c. placed 2" back on either side of end joints. Joints offset 24" from base layer joints. Wood trusses supporting 1/2" wood structural panels applied at right angles to trusses with 8d nails. Appropriate roof covering. **Ceiling provides one-hour fire-resistance protection for trusses.**



Approx. Ceiling Weight: 5 psf
Fire Test: FM FC 172, 2-25-72; ITS, 8-6-98

**GA FILE NO. FC 5529** | **GENERIC** | **1 HOUR FIRE**

**WOOD JOISTS, GYPSUM WALLBOARD**

**Base** layer 5/8" type X gypsum wallboard applied at right angles to 2 x 10 wood joists 24" o.c. with 1-1/4" Type W or S drywall screws 24" o.c. **Face** layer 5/8" type X gypsum wallboard or gypsum veneer base applied at right angles to joists with 1-7/8" Type W or S drywall screws 12" o.c. at joints and intermediate joists and 1-1/2" Type G drywall screws 12" o.c. placed 2" back on either side of end joints. Joints offset 24" from base layer joints. Wood joists supporting 1/2" plywood with exterior glue applied at right angles to joists with 8d nails. **Ceiling provides one-hour fire-resistance protection for framing, including trusses.**

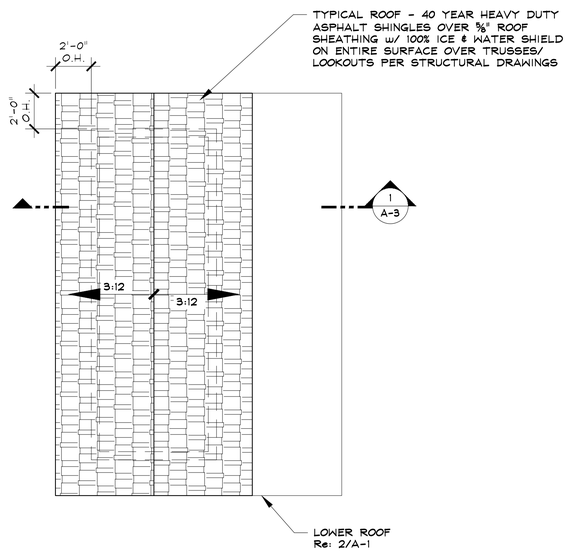
Approx. Ceiling Weight: 5 psf
Fire Test: FM FC 172, 2-25-72; ITS, 8-6-98

## NOTE:

ALL EXTERIOR WALLS SHALL BE 1hr. FIRE RATED PER GA FILE NO. WP8126

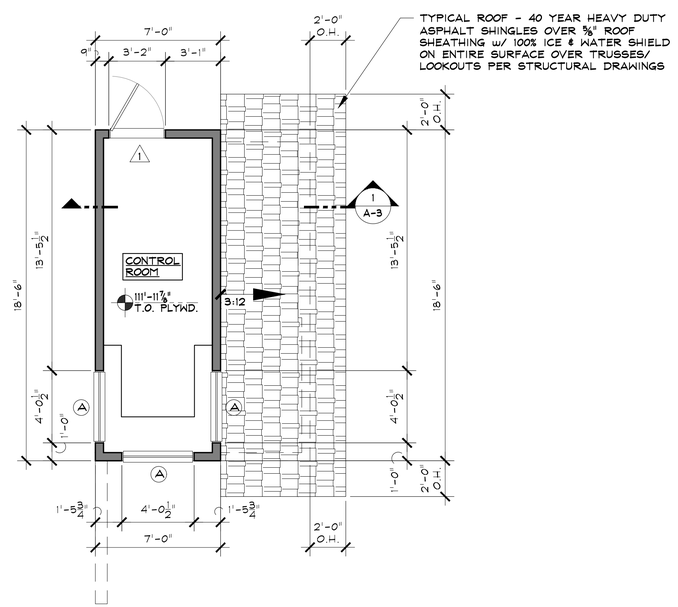
ROOF/CEILING SHALL BE 1 hr. FIRE RATED PER GA FILE NO. RC2602

FLOOR/CEILING SHALL BE 1hr. FIRE RATED PER GA FILE NO. FC5529 (LVL JOISTS CAN BE SUBSTITUTED FOR DIMENSIONAL LUMBER PER TJI BULLETIN #1500, FIRE RATED ASSEMBLIES, PAGE 14)




## 3 UPPER ROOF PLAN

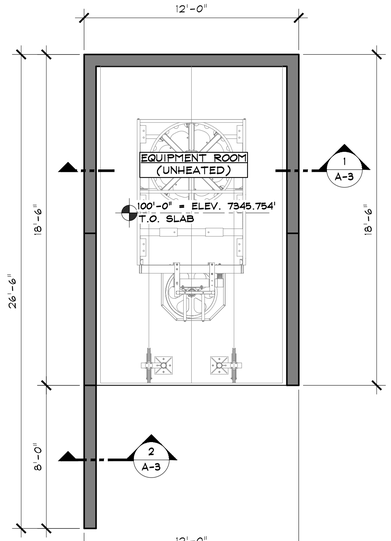
SCALE: ¼" = 1'-0"




## 2 MAIN LEVEL FLOOR / LOWER ROOF PLAN

129.5 SQ. FT. CONTROL ROOM

SCALE: ¼" = 1'-0"




## 1 LOWER LEVEL FLOOR PLAN

222 SQ. FT. UNHEATED EQUIPMENT ROOM

SCALE: ¼" = 1'-0"

PLAN


Steamboat Engineering & Architectural Design, Inc.
2740 Acre Lane Suite E Steamboat Springs, CO 80487
Phone: 970 . 871 . 9101 Fax: 970 . 871 . 9089
E-mail: Steve@seadinc.com


RCRBD
RECORD SET

ALPINE COASTER UPPER BUILDING

2305 MT. WERNER CIRCLE
STEAMBOAT SPRINGS, COLORADO

A NEW BUILDING FOR:
SSRC - STEAMBOAT SKI & RESORT CORP.

ISSUE DATES
PRGRESS
07 . 06 . 16
PERMIT
08 . 03 . 16
⚠ 08 . 11 . 16

DRAWN BY:
SJM/JEM
PROJECT # 16020

UPPER BUILDING FLOOR PLANS

A-1

SHEET 2 of 6

Z:\2016\16020_SSRC Alpine Coaster\Drawings\Arch\Upper Building\16020_ArchSheets_UB.dwg, A-1, 8/11/2016 1:52:43 PM

# THERMAL ENVELOPE NOTES

THE BUILDING ENVELOPE SHALL BE DURABLY SEALED TO LIMIT INFILTRATION. THE SEALING METHODS BETWEEN DISSIMILAR MATERIALS SHALL ALLOW FOR DIFFERENTIAL EXPANSION AND CONTRACTION. THE FOLLOWING SHALL BE CAULKED, GASKETED, WEATHER-STRIPPED, OR OTHERWISE SEALED WITH A BARRIER MATERIAL, SUITABLE FILM, OR SOLID MATERIAL:

1. ALL JOINTS, SEAMS, AND PENETRATIONS
2. SITE-BUILT WINDOWS, DOORS, & SKYLIGHTS
3. OPENINGS BETWEEN WINDOW & DOOR ASSEMBLIES
4. UTILITY PENETRATIONS
5. DROPPED CEILINGS & CHASES ADJACENT TO THE THERMAL ENVELOPE
6. KNEE WALLS
7. WALLS & CEILING SEPARATING A GARAGE FROM CONDITIONED SPACES
8. BEHIND TUBS & SHOWERS OF EXTERIOR WALLS
9. BEHIND FIREPLACE INSERTS
10. ANY OTHER SOURCE OF INFILTRATION

WINDOWS, SKYLIGHTS, & SLIDING DOORS SHALL HAVE AN AIR INFILTRATION RATE OF NO MORE THAN 0.3 cfm PER SQUARE FOOT. SWINGING DOORS SHALL HAVE AN AIR INFILTRATION RATE OF NO MORE THAN 0.5 cfm PER SQUARE FOOT.

RECESSED LUMINARIES INSTALLED IN THE BUILDING THERMAL ENVELOPE SHALL BE SEALED TO LIMIT AIR LEAKAGE BETWEEN CONDITIONED & UNCONDITIONED SPACES BY BEING:

IC RATED & LABELED WITH ENCLOSURES THAT ARE SEALED OR GASKETED TO PREVENT AIR LEAKAGE TO THE CEILING CAVITY OR UNCONDITIONED SPACE

ABOVE GRADE FRAME WALLS, FLOORS, & CEILINGS NOT VENTILATED TO ALLOW MOISTURE TO ESCAPE SHALL BE PROTECTED WITH LATEX PAINT OR 6 MIL. POLY OVERLAPPED & TAPERED AT ALL JOINTS. THE VAPOR RETARDER SHALL BE INSTALLED ON THE WARM-IN-WINTER SIDE OF THE THERMAL ENVELOPE.

## NOTE:

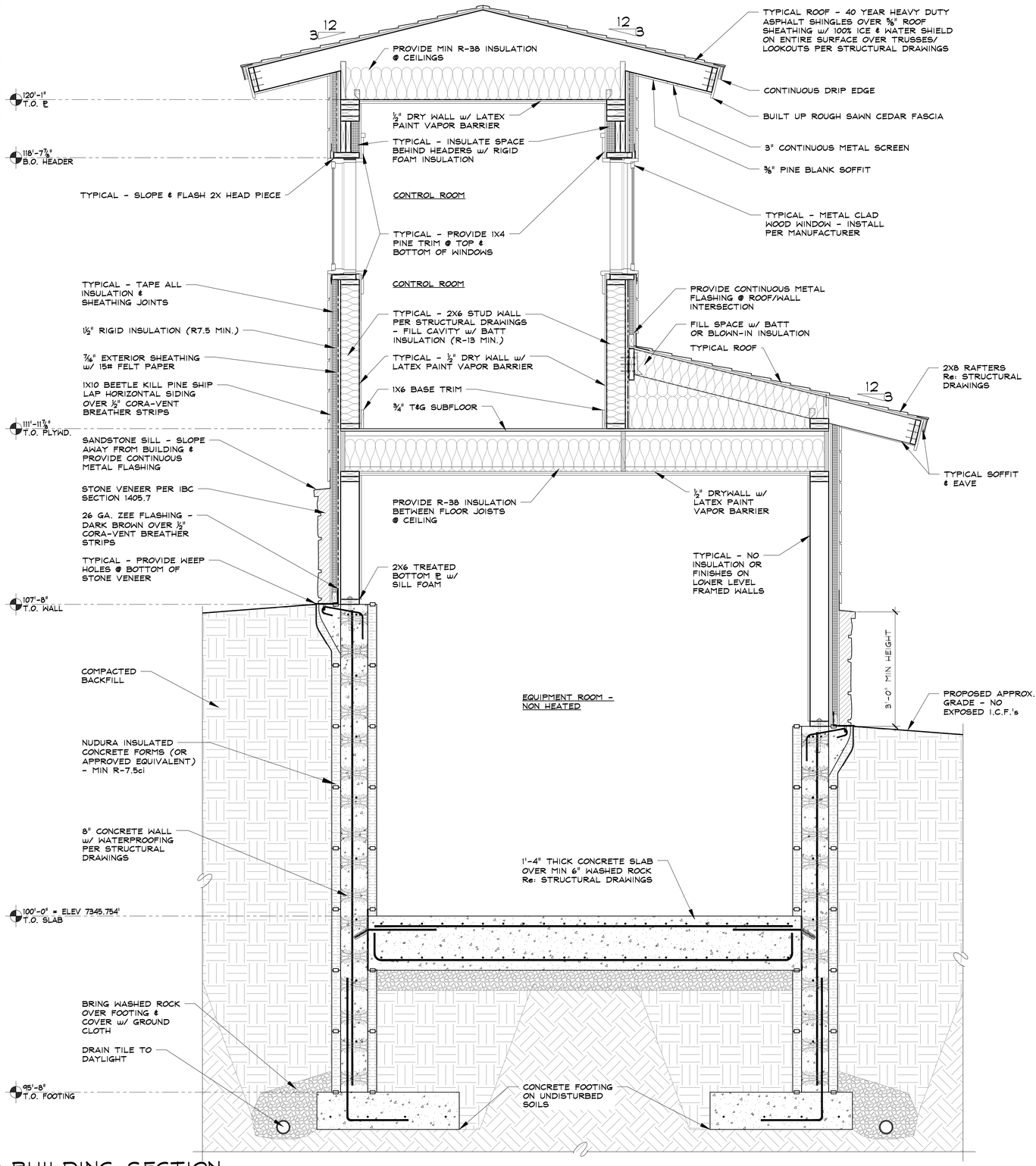
ALL EXTERIOR WALLS SHALL BE 1hr. FIRE RATED PER GA FILE NO. WP8126
Re: SHEET A-1

ROOF/CEILING SHALL BE 1 hr. FIRE RATED PER GA FILE NO. RC2602
Re: SHEET A-1

FLOOR/CEILING SHALL BE 1hr. FIRE RATED PER GA FILE NO. FC5529
Re: SHEET A-1
(LVL JOISTS CAN BE SUBSTITUTED FOR DIMENSIONAL LUMBER PER TJI BULLETIN #1500, FIRE RATED ASSEMBLIES, PAGE 14)

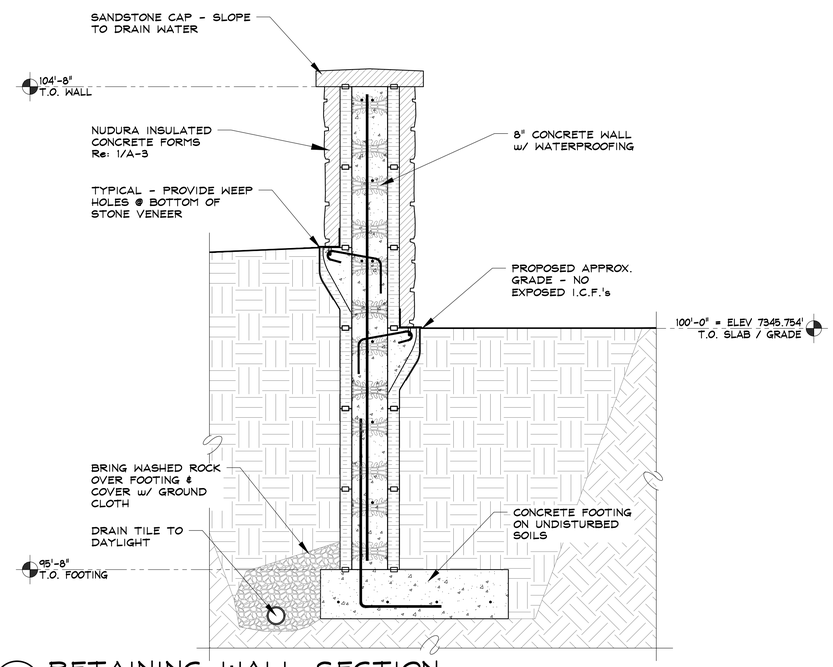
**RCRBD**

**RECORD SET**




1 BUILDING SECTION

SCALE: ¾" = 1'-0"




2 RETAINING WALL SECTION

SCALE: ¾" = 1'-0"


Steamboat Engineering & Architectural Design, Inc.
2740 Acre Lane Suite E Steamboat Springs, CO 80487
Phone: 970 . 871 . 9101 Fax: 970 . 871 . 9089
E-mail: Steve@seadinc.com


# ALPINE COASTER UPPER BUILDING

2305 MT. WERNER CIRCLE
STEAMBOAT SPRINGS, COLORADO

A NEW BUILDING FOR:
SSRC - STEAMBOAT SKI & RESORT CORP.

ISSUE DATES

PRGRESS
07 . 06 . 16

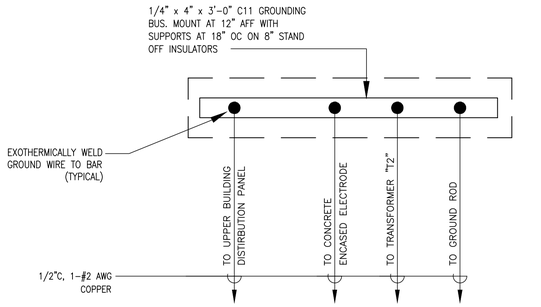
PERMIT
08 . 03 . 16
⚠ 08 . 11 . 16

DRAWN BY:
SJM/JEM
PROJECT # 16020

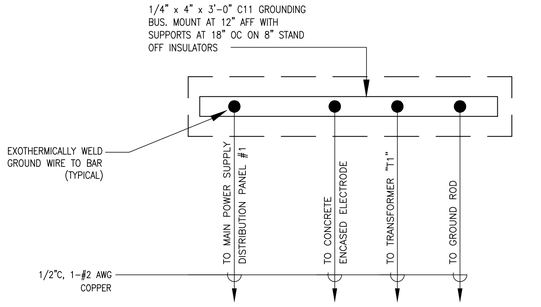
BUILDING SECTION

A-3

SHEET 4 of 6




4 GROUND BAR WIRING DETAIL – TOP
NTS




2 GROUND BAR WIRING DETAIL – BASE
NTS

## SHEET LIST



| 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 | |
| $S_T$ | 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 | |
| J | JUNCTION BOX | |
| | SURFACE MOUNTED PANELBOARD OR TERMINAL CABINET | |

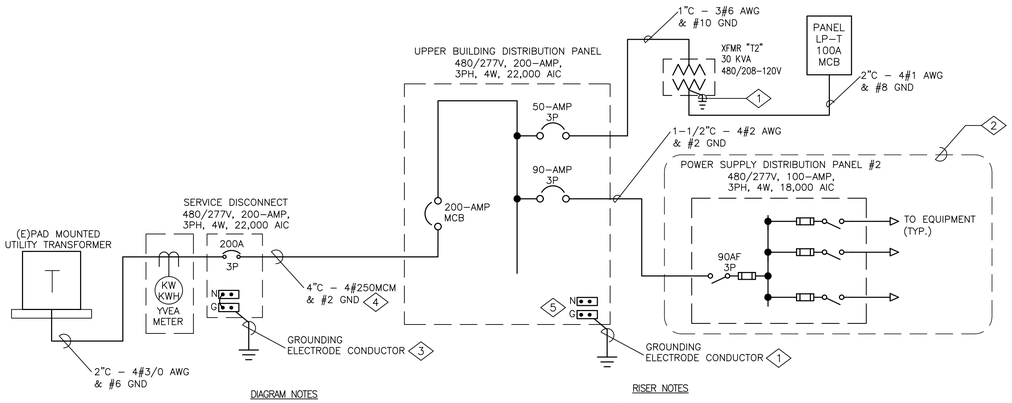



DIAGRAM NOTES

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

RISER NOTES

1. SEE DETAIL #4 ON THIS SHEET FOR GROUNDING DETAILS OF NEW COASTER EQUIPMENT.
2. 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.
3. BOND NEUTRAL TO GROUND BUS AND THEN TO A GROUND BAR. PROVIDE GROUND ROD AT 3/4" X 8' (COPPER CLAD STEEL).
4. FEEDER UP-SIZED FOR VOLTAGE DROP.
5. DO NOT BOND NEUTRAL TO GROUND BAR AT SERVICE ENTRANCE TO UPPER TERMINAL BUILDING.

3 SINGLE LINE DIAGRAM – MID-STATION OF CHRISTIE EXPRESS

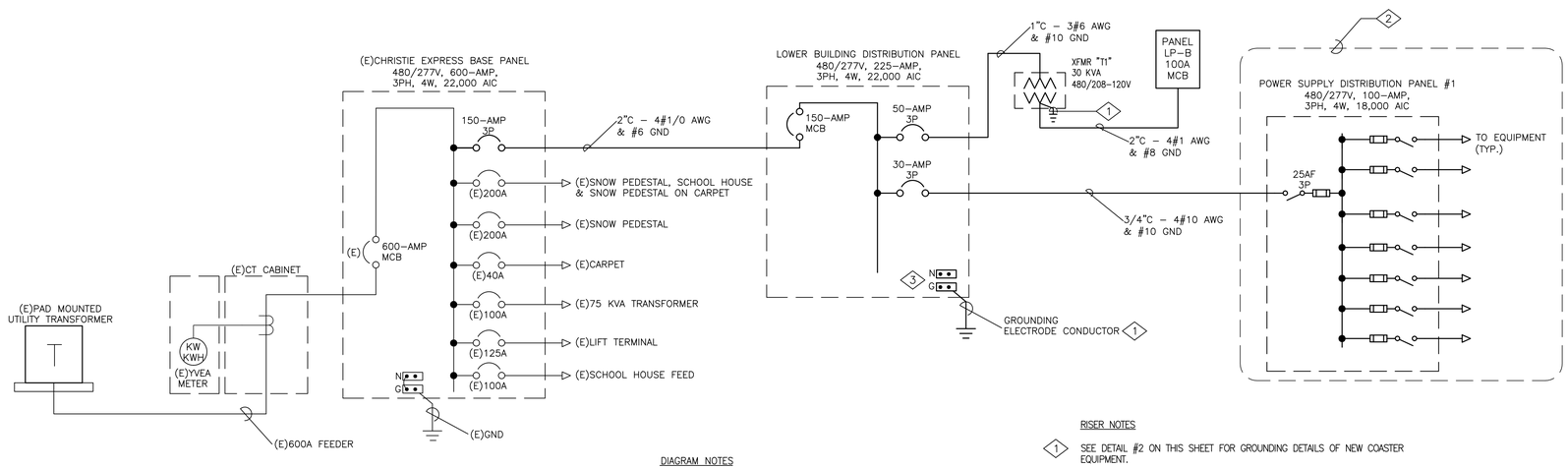



DIAGRAM NOTES

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

RISER NOTES

1. SEE DETAIL #2 ON THIS SHEET FOR GROUNDING DETAILS OF NEW COASTER EQUIPMENT.
2. 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.
3. DO NOT BOND NEUTRAL TO GROUND BAR AT SERVICE ENTRANCE TO LOWER TERMINAL BUILDING.

1 SINGLE LINE DIAGRAM – BASE OF CHRISTIE EXPRESS

## 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.

| | 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 |
| GFI | 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 |
| $D | DIMMER SWITCH |
| $OS | 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 |
|---|---|---|
| A ▭ ø 22 | FIXTURE DESIGNATION<br>UPPER CASE LETTER INDICATES FIXTURE TYPE.<br>LOWER CASE LETTER INDICATES SWITCH LEG.<br>NUMBER INDICATES CIRCUIT NUMBER (WHERE SHOWN). | |
| $ ø | LETTER INDICATES FIXTURES CONTROL (WHERE SHOWN) | |
| 22 | 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

**RCRBD**
**RECORD SET**
**ELECTRICAL**


WILDER ENGINEERING LLC
Andrew Wilder PE
1170 Blue Sage Drive
Steamboat Springs, CO 80487
P: 970-819-7848
E: andy@wilder-eng.com


COLORADO LICENSED ANDREW CHARLES WILDER 49009 PROFESSIONAL ENGINEER

| 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

| TYPE | SYMBOL | DESCRIPTION | MANUFACTURER | ALTERNATE MANUFACTURER |
|---|---|---|---|---|
| F1 | | SURFACE LED FIXTURE | LITHONIA ZL1F-348-3000LM-MDD-MVOLT-35K-80CRI-WH | APPROVED EQUAL |
| F2 | | LED FLOODLIGHT | LITHONIA DSXF2-LED-4-A530/30K-MVOLT-THK-DMG-UBV-DDBXD | APPROVED EQUAL |
| F3 | | INDUSTRIAL LED STRIPLIGHT | LITHONIA XWMLED | APPROVED EQUAL |
| F4 | | LED FLOODLIGHT | LITHONIA OLBF-8-305-DDB | APPROVED EQUAL |
| X1 | | EXIT SIGN WITH BATTERY BACKUP EGRESS LIGHTING | LITHONIA - COMBO EXIT SIGN LHQM-S-W-X-G-N | APPROVED EQUAL |

SCHEDULE NOTES

1. ALL LAMPS SHALL BE PROVIDED BY THE CONTRACTOR.
2. CONTRACTOR TO SUBMIT FIXTURE TYPES TO OWNER AND ENGINEER PRIOR TO PURCHASE AND INSTALLATION.

3 LIGHTING FIXTURE SCHEDULE
NTS

**PANEL LP-T**

MOUNTING SURFACE | 10,000 A.I.C. SYM
208/120 VOLTS | 3 PHASE | 4 WIRE | MAIN 100 A | BUS 100 A

| VOLT AMPS ØA | ØB | ØC | DESCRIPTION | REC | LTG | POLE | BKR | CIR | | CIR | BKR | POLE | LTG | REC | DESCRIPTION | VOLT AMPS ØA | ØB | ØC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 348 | | | LIGHTING | | | 1 | 20 | 1 | A | 2 | 30 | 2 | | | EUH-1 | 1000 | | |
| | 720 | | OPERATOR ROOM | 4 | | 1 | 20 | 3 | B | 4 | - | - | | | - | | 1000 | |
| | | 1000 | APPLIANCE | | | 1 | 20 | 5 | C | 6 | 20 | 1 | | | SPARE | | | |
| 1000 | | | APPLIANCE | | | 1 | 30 | 7 | A | 8 | 20 | 1 | | | SPARE | | | |
| | 540 | | RECEPTS | 3 | | 1 | 20 | 9 | B | 10 | 20 | 1 | | | SPARE | | | |
| | | 360 | RECEPTS | 2 | | 1 | 20 | 11 | C | 12 | | | | | SPACE | | | |
| 360 | | | RECEPTS | 2 | | 1 | 20 | 13 | A | 14 | | | | | SPACE | | | |
| | | | SPARE | | | 1 | 20 | 15 | B | 16 | | | | | SPACE | | | |
| | | | SPARE | | | 1 | 20 | 17 | C | 18 | | | | | SPACE | | | |
| | | | SPARE | | | 1 | 20 | 19 | A | 20 | | | | | SPACE | | | |
| | | | SPACE | | | | | 21 | B | 22 | | | | | SPACE | | | |
| | | | SPACE | | | | | 23 | C | 24 | | | | | SPACE | | | |
| | | | SPACE | | | | | 25 | A | 26 | | | | | SPACE | | | |
| | | | SPACE | | | | | 27 | B | 28 | | | | | SPACE | | | |
| | | | SPACE | | | | | 29 | C | 30 | | | | | SPACE | | | |
| | | | SPACE | | | | | 31 | A | 32 | | | | | SPACE | | | |
| | | | SPACE | | | | | 33 | B | 34 | | | | | SPACE | | | |
| | | | SPACE | | | | | 35 | C | 36 | | | | | SPACE | | | |
| | | | SPACE | | | | | 37 | A | 38 | | | | | SPACE | | | |
| | | | SPACE | | | | | 39 | B | 40 | | | | | SPACE | | | |
| | | | SPACE | | | | | 41 | C | 42 | | | | | SPACE | | | |
| 1708 | 1260 | 1360 | VA/LINE | | | | | | | | | | | | | 1000 | 1000 | |

ØA= 2708 ØB= 2260 ØC= 1360

| CONTINUOUS LOADS | NON-CONTINUOUS LOADS | | | | | |
|---|---|---|---|---|---|---|
| 348 x1.25= 435 | UP TO 10 kVA 1980 | x1.00= 1980 | OTHER 4000 | x1.00 4000 |
| | RECEPTACLES | | | |
| | REMAINDER | x0.50= | | |

TOTAL DESIGN kVA= 6 TOTAL DESIGN AMPS= 18

1 PANEL SCHEDULES – TOP
NTS

**MAIN SERVICE LOAD SUMMARY - UPPER BUILDING**

| Load | kVA Cont | Rec | Other | Total | A |
|---|---|---|---|---|---|
| PANEL LP-T | .3 | 2.0 | 4.0 | 6.4 | 8 |
| PANEL POWER SUPPLY 2 | | | 46.0 | 60.8 | 73 |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| SubTotal | .3 | 2.0 | 50.0 | 52.4 | kVA |
| 25% of Largest Motor | | | | 14.8 | kVA |
| **Total** | | | | **67.2** | **kVA** |
| | | | **80.8** | **Amps at** | **480 V** |
| **25% Growth/Spare** | | | **101.0** | **Amps at** | **480 V** |

**PANEL LP-B**

MOUNTING SURFACE | 10,000 A.I.C. SYM
208/120 VOLTS | 3 PHASE | 4 WIRE | MAIN 100 A | BUS 100 A

| VOLT AMPS ØA | ØB | ØC | DESCRIPTION | REC | LTG | POLE | BKR | CIR | | CIR | BKR | POLE | LTG | REC | DESCRIPTION | VOLT AMPS ØA | ØB | ØC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 540 | | | LOFT RECEPTS | 3 | | 1 | 20 | 1 | A | 2 | 15 | 3 | | | MINI GOLF PUMP | 830 | | |
| | 720 | | OPERATOR ROOM | 4 | | 1 | 20 | 3 | B | 4 | - | - | | | - | | 830 | |
| | | 833 | LIGHTING | | | 1 | 20 | 5 | C | 6 | - | - | | | - | | | 830 |
| 1000 | | | OPERATOR APP | | | 1 | 30 | 7 | A | 8 | 20 | 3 | | | MINI GOLF PUMP | 1320 | | |
| | 1000 | | OPERATOR APP | | | 1 | 20 | 9 | B | 10 | - | - | | | - | | 1320 | |
| | | 720 | RECEPTS | 4 | | 1 | 20 | 11 | C | 12 | - | - | | | - | | | 1320 |
| 540 | | | RECEPTS | 3 | | 1 | 20 | 13 | A | 14 | 15 | 1 | | | BOILERS | 540 | | |
| | 1000 | | WORKBENCH | | | 1 | 20 | 15 | B | 16 | 15 | 1 | | | PUMP-1 | | 528 | |
| | | 1000 | WORKBENCH | | | 1 | 20 | 17 | C | 18 | 15 | 1 | | | PUMP-2 | | | 528 |
| 1000 | | | WORKBENCH | | | 1 | 20 | 19 | A | 20 | 15 | 1 | | | PUMP-3 | 528 | | |
| | 540 | | RECEPTS | 3 | | 1 | 20 | 21 | B | 22 | 20 | 1 | | | PUMP-4 | | 1176 | |
| | | 1000 | FUTURE SITE LTG | | | 1 | 20 | 23 | C | 24 | 20 | 1 | | | PUMP-5 | | | 1176 |
| | | | SPARE | | | 1 | 20 | 25 | A | 26 | 20 | 1 | | | PUMP-6 | 1176 | | |
| | | | SPARE | | | 1 | 20 | 27 | B | 28 | 20 | 1 | | | PUMP-7 | | 1176 | |
| | | | SPARE | | | 1 | 20 | 29 | C | 30 | 20 | 1 | | | SPARE | | | |
| | | | SPACE | | | | | 31 | A | 32 | 20 | 1 | | | SPARE | | | |
| | | | SPACE | | | | | 33 | B | 34 | 20 | 1 | | | SPARE | | | |
| | | | SPACE | | | | | 35 | C | 36 | | | | | SPACE | | | |
| | | | SPACE | | | | | 37 | A | 38 | | | | | SPACE | | | |
| | | | SPACE | | | | | 39 | B | 40 | | | | | SPACE | | | |
| | | | SPACE | | | | | 41 | C | 42 | | | | | SPACE | | | |
| 3080 | 3260 | 3553 | VA/LINE | | | | | | | | | | | | | 4394 | 5030 | 3854 |

ØA= 7474 ØB= 8290 ØC= 7407

| CONTINUOUS LOADS | NON-CONTINUOUS LOADS | | | | | |
|---|---|---|---|---|---|---|
| 1833 x1.25= 2291 | UP TO 10 kVA 3060 | x1.00= 3060 | OTHER 18278 | x1.00 18278 |
| | RECEPTACLES | | | |
| | REMAINDER | x0.50= | | |

TOTAL DESIGN kVA= 24 TOTAL DESIGN AMPS= 66

2 PANEL SCHEDULES – BASE
NTS

**(E)MAIN SERVICE LOAD SUMMARY - CHRISTIE EXPRESS**

| Load | kVA Cont | Rec | Other | Total | A |
|---|---|---|---|---|---|
| PANEL LP-B | 1.8 | 3.1 | 18.3 | 23.6 | 28 |
| PANEL POWER SUPPLY 1 | | | 9.0 | 9.8 | 12 |
| | | | | | |
| (E)CARPET | | | 16.6 | 16.6 | 20 |
| (E)75 KVA TRANSFORMER | | | 50.0 | 50.0 | 60 |
| (E)LIFT TERMINAL | | | 20.8 | 20.8 | 25 |
| (E)SCHOOL HOUSE FEED | | | 50.0 | 50.0 | 60 |
| (E)SNOW PEDESTAL | | | 100.0 | 100.0 | 120 |
| (E)SNOW PEDESTAL | | | 100.0 | 100.0 | 120 |
| SubTotal | 1.8 | 3.1 | 364.7 | 370.0 | kVA |
| 25% of Largest Motor | | | | 0.8 | kVA |
| **Total** | | | | **370.8** | **kVA** |
| | | | **446.1** | **Amps at** | **480 V** |

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
Andrew Wilder PE
1170 Blue Sage Drive
Steamboat Springs, CO 80487
P: 970-819-7848
E: andy@wilder-eng.com

COLORADO LICENSED ANDREW CHARLES WILDER 49009 PROFESSIONAL ENGINEER

| Issue | By Date & Issue Description | By |
|---|---|---|
| – | PERMIT SET – 8.29.16 | AW |

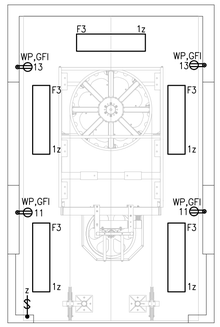
Scale:
24x36 NTS
Description: PANEL SCHEDULES
Project Name: ALPINE COASTER
Project Number: 201658
Sheet No.
E1.1

BUILDINGS SHEET NOTES

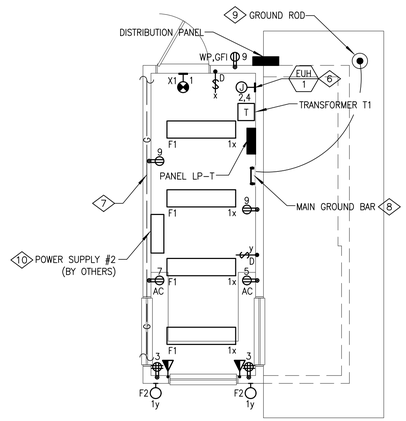
1. PROVIDE LABELS AT SWITCHES FOR LIGHTING AREAS CONTROLLED.
2. STUB OUT POWER FOR FUTURE PATHWAY LIGHTING. VERIFY AND COORDINATE WITH SSRC DURING CONSTRUCTION.
3. STUB OUT POWER FOR MINI-GOLF WATER PUMPS. VERIFY AND COORDINATE WITH SSRC DURING CONSTRUCTION.
4. PUMPS SHOWN IN THIS LOCATION FOR CIRCUITING 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

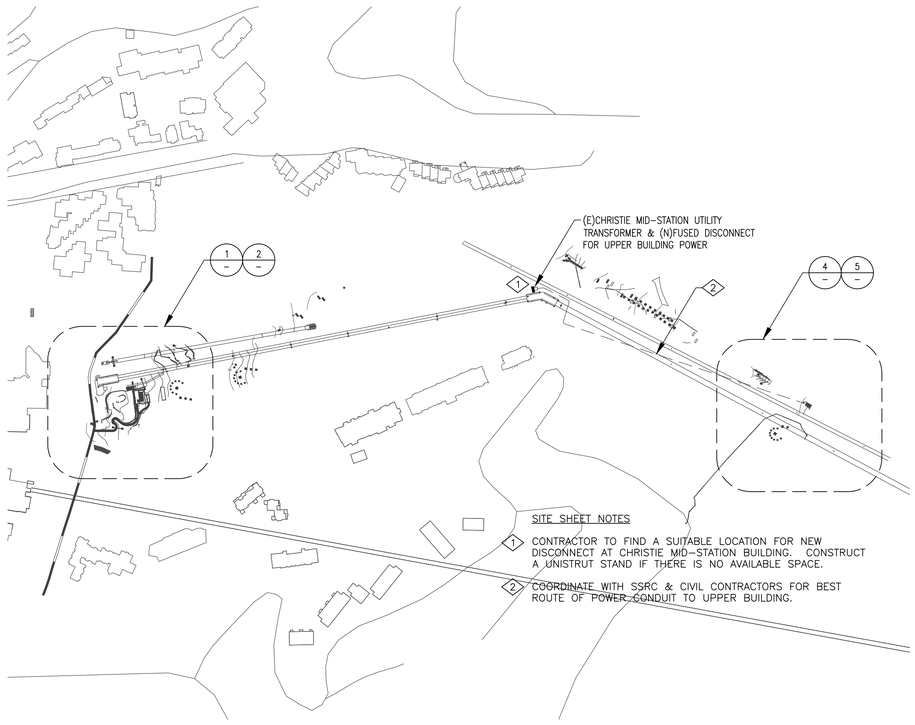
1. ALL WORK SHOWN IS NEW UNLESS OTHERWISE NOTED.
2. ALL EQUIPMENT SHOWN IN THE LOWER BUILDING IS CONNECTED TO PANEL 'LP-B', UON.
3. ALL EQUIPMENT SHOWN IN THE UPPER BUILDING IS CONNECTED TO PANEL 'LP-T', UON.
4. PROVIDE TYPEWRITTEN DIRECTORIES REFLECTING ALL NEW WORK PERFORMED IN THIS PROJECT.
5. ALL 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.



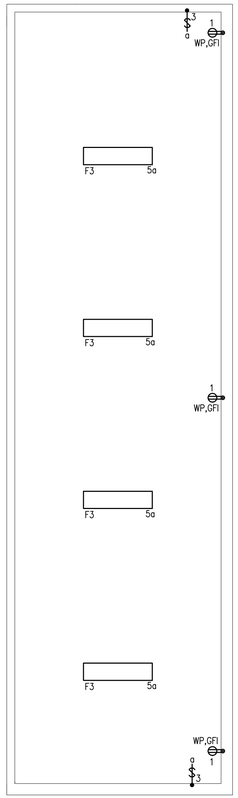

5 UPPER BUILDING MACHINE LEVEL PLAN
1/4"=1'-0"



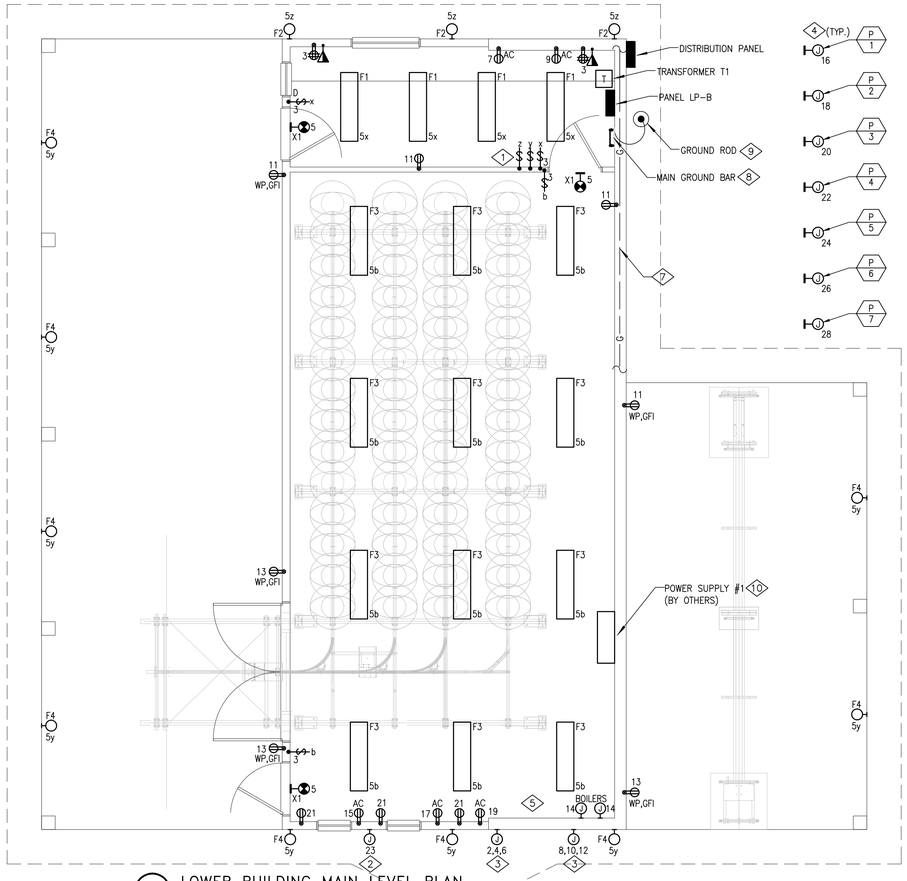

4 UPPER BUILDING MAIN LEVEL PLAN
1/4"=1'-0"




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
Steamboat Springs, CO

RCRBD
RECORD SET
ELECTRICAL


WILDER ENGINEERING LLC
Andrew Wilder PE
1170 Blue Sage Drive
Steamboat Springs, CO 80487
P: 970-819-7848
E: andy@wilder-eng.com


COLORADO LICENSED
ANDREW CHARLES WILDER
49009
PROFESSIONAL ENGINEER

| 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 and 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 minimum24 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

WILDER ENGINEERING LLC
Andrew Wilder PE
1170 Blue Sage Drive
Steamboat Springs, CO 80487
P: 970-819-7848
E: andy@wilder-eng.com

COLORADO LICENSED
ANDREW CHARLES WILDER
49009
PROFESSIONAL ENGINEER

| 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