





DIVISION 02 - EXISTING CONDITIONS

MAINTENANCE OF EXISTING CONDITIONS:

DO NOT DISTURB THE SITE BEYOND LIMITS OF NECESSARY ACTIVITY FOR EXECUTION OF THE CONTRACT DOCUMENTS.

HAZARDOUS MATERIALS FOUND DURING CONSTRUCTION:

IF THE CONTRACTOR BECOMES AWARE OF THE PRESENCE OF HAZARDOUS MATERIALS IN ANY FORM AT THE PROJECT SITE INCLUDING, BUT NOT LIMITED TO, ASBESTOS, ASBESTOS CONTAINING MATERIALS, POLYCHLORINATED BIPHENYL (PCB), LEAD BASED PAINTS OR OTHER TOXIC SUBSTANCES HE/SHE SHALL, PRIOR TO COMMENCEMENT OF ANY PORTION OF THE WORK, PROVIDE NOTICE TO THE OWNER OF THE PRESENCE, LOCATION AND CONDITION OF ANY KNOWN OR SUSPECTED MATERIALS THAT ARE DISCOVERED. SUCH NOTICE SHALL BE IN WRITING AND SHALL BE SUBMITTED NO MORE THAN TWENTY-FOUR (24) HOURS AFTER SUCH MATERIALS ARE DISCOVERED.

IN THE EVENT OF SUCH DISCOVERY, THE CONTRACTOR SHALL NOT PROCEED WITH THE WORK UNTIL HE/SHE HAS RECEIVED WRITTEN AUTHORIZATION FROM THE OWNER. IF THE CONTRACTOR PROCEEDS WITH THE WORK WITHOUT SAID AUTHORIZATION, HE/SHE DOES SO AT HIS/HER OWN RISK.

IN THE EVENT SUCH MATERIALS ARE IDENTIFIED OR ENCOUNTERED DURING THE COURSE OF THE PROJECT, THE OWNER, AT ITS EXPENSE, SHALL TAKE ALL REASONABLE ACTIONS OR PROPERLY AND SAFELY DEAL WITH SUCH MATERIALS.

THE CONTRACTOR AND SUBCONTRACTORS MUST COMPLY WITH ALL APPLICABLE ENVIRONMENTAL FEDERAL, STATE, LOCAL, HEALTH AND SAFETY LAWS AND REGULATIONS.

DIVISION 03 - CONCRETE

03 53 00 CONCRETE TOPPING:

BASIS OF DESIGN: QUICKCRETE SELF-LEVELING FLOOR RESURFACER #1249-50 FAST SETTING SELF-LEVELING FLOOR RESURFACER #1249-51

INSTALL SELF-LEVELING RESURFACER(S) AS REQUIRED AT ALL FLOORS IN THE PROJECT THAT ARE NOT SUFFICIENTLY LEVEL FOR FLOORING FINISH INSTALLATION. VERIFY WITH FLOORING FINISH MANUFACTURERS' ON THE SUBSTRATE LEVELING REQUIRED FOR EACH FINISH.

INSTALL PER MANUFACTURER'S REQUIREMENTS.

DIVISION 06 - WOOD, PLASTICS AND COMPOSITES

06 10 00 ROUGH CARPENTRY:

Location: Provide blocking/backing for all doors, windows, louvers, countertops, shelves, cabinets, railings, TVs, toilet room accessories (grab bars, toilet paper holder, etc.) etc. as required for proper installation.

Provide treated lumber at areas on contact with concrete and subject to decay. Fasteners to be hot dipped galvanized steel, stainless steel, silicon bronze or copper. Set plates true and level to provide full bearing. Metal shim and mortar for leveling and foam gasket sill sealer.

For adhesives and glues used at Project site, including printed statement of VOC content.

For composite-wood products, documentation indicating that product contains no urea formaldehyde.

06 46 00 WOOD TRIM:

LOCATIONS - DOOR CASING, WINDOW CASING AND SILL, CORNER PROTECTION TRIM, CASEWORK TRIM, INTERIOR MISC TRIM.

QUALITY STANDARD - AWI SECTION 300.

ROUT OR GROOVE BACKS OF FLAT TRIM MEMBERS, KERF BACKS OF OTHER WIDE FLAT MEMBERS, EXCEPT FOR MEMBERS WITH ENDS EXPOSED IN FINISHED WORK.

PROVIDE ANGLED, MITERED CORNER SECTIONS AT ALL OUTSIDE CORNERS. MINIMIZE JOINTS.

Door Casing, Window Casing & Corner Protection Trim: 3" X 3/4" THICK INTERIOR DOOR TRIM Stained Trim - Clear Alder Painted Trim - Poplar

EXTERIOR DOOR TRIM TO MATCH EXISTING. PAINT.

Verify all trim types, locations and finishes with existing trim located in the retail space.

DIVISION 07 - THERMAL AND MOISTURE PROTECTION

07 21 00 THERMAL INSULATION:

PROVIDE INSULATING MATERIALS AS NOTED BELOW AND IN THE DRAWINGS. SEE FLOOR AND WALL TYPE DRAWINGS FOR EXACT LOCATIONS AND AMOUNTS OF INSULATION.

FIBERGLASS

Basis of Design - "UNFACED CertainTeed Fiber Glass Building Insulation". No kraft facing allowed on insulation. Thermal barrier to be faced and friction fit into studs. Flame spread index of 25 or less and a smoke development index of not more than 50 when tested in accordance with ASTM E 84 or UL 723.

VENTS AND PLUMBING

Provide R-19 batt wrap around all exhaust vent duct lines of dryer or any other ducts that penetrate the exterior wall or that extend in and through the attic or floor systems. Verify with MEP drawings.

Provide preformed foam insulation wrap around all plumbing lines that penetrate or set within 36" of exterior walls or in attic spaces. Verify all plumbing and HVAC insulation with Mechanical and Plumbing drawings and Specs.

SILL SEALER

Provide sill sealer at top of concrete slabs, entire length. Manufacturer: Dow "Weathermate" or approved equal.

Expandable foamed-in-place insulation at all window/door and vent shim spaces and at any other voids and or gaps in exterior walls using care to avoid bowing frames from overfilling.

Provide manufacturers warranty on all insulation products.

ARCHITECT OR OWNER TO INSPECT ALL INSULATION PRIOR TO CONCEALMENT.

07 60 00 FLASHING AND SHEET METAL

SHEET METAL FLASHING AND TRIM

Summary: Roof flashing, drip edge, fascia, metal cap flashing, counter flashing, base flashing, roof to wall connections, over door, window and louver heads, at wall penetrations, miscellaneous sheet metal accessories, etc.

Basis of Design: Prefinished Metal Pac-Clad flashing and trim by Petersen Aluminum or approved equal.

Provide all exposed flashing and trim pieces (drip edges, fascias, flashing, etc.) with Pac-Clad Petersen Aluminum galvanized steel finish with Pac-Clad Kynar 500 top finish and polyester wash coat bottom finish in 22-GA steel.

Pac-Clad flashing and trim in Kynar 500 custom colors to be selected by Owner/Architect from standard colors.

Sheet Metal Flashing and Trim Materials: Zinc-coated steel: commercial quality with 0.20 percent copper, G90 hot-dip galvanized, mill phosphatized field painted, 20-GA, except as noted otherwise.

Plastic Sheet Flashing and Self-Adhering Sheet Flashing: Manufacturers to include Fortifiber Building Products or Protecto Wrap Company or approved equal.

20 mil. FLEX- FLEXIBLE FLASHING.

Manufactures to include Fortifiber Building Products or Protecto Wrap Company or approved equal.

Install all flashing and sheet metal in strict accordance with SMACNA requirements, manufacturer's recommendations and in accordance with requirements of adjacent materials and systems.

DIVISION 07 - THERMAL AND MOISTURE PROTECTION (CONT)

07 80 00 FIRE AND SMOKE PROTECTION

FIREPROOFING:

THERE IS NO NEW FIREPROOFING REQUIRED FOR THIS PROJECT. THIS SECTION IS INCLUDED IN CASE ANY REPAIRS TO EXISTING FIREPROOFING ARE REQUIRED. NOTIFY ARCHITECT IF AREAS OF FIREPROOFING REPAIR ARE DISCOVERED IN THE COURSE OF CONSTRUCTION. SEE CODE REVIEW INFORMATION ON LEVEL OF FIRE PROTECTION THAT MAY BE REQUIRED.

CONCEALED SPRAYED-ON FIREPROOFING MATERIALS

General: For concealed applications of sprayed-on fire proofing provided manufacturer's standard products complying with the requirements indicated in this article for material composition and physical properties representative of installed product.

Material Composition: Cementitious fireproofing consisting of factory-mixed, dry formulation of gypsum or Portland cement binders and lightweight mineral or synthetic aggregates mixed with water at Project site to form a slurry or mortar for conveyance and application.

Products:

Basis of Design: W.R. GRACE & CO - CONN. - Monokote Type MK (@ beams) Type Z (@columns).

THE FIREPROOFING MATERIALS LISTED ARE PER THE UNDERWRITERS LABORATORIES, INC. SEE THE FIRE RATED ASSEMBLIES IN THE DOCUMENTS AND THE UL DESIGN PUBLISHED DIRECTORY FOR THE COMPLETE ASSEMBLIES AND REQUIREMENTS.

PROVIDE product certificates from fireproofing manufacturers that each sprayed-on fireproofing product indicated for Project complies with specified requirements including those for fire-test-response characteristics and compatibility with adhesives, primers, and other surface coatings on substrates indicated to receive fireproofing.

AUXILIARY FIREPROOFING MATERIALS

General: Provide auxiliary fireproofing materials that are compatible with sprayed-on fireproofing products and substrates and are approved by UL or another testing and inspecting agency acceptable to authorities having jurisdiction for use in the fire-resistive designs indicated.

07 84 13 PENETRATION FIRESTOPPING:

Contractor to submit UL fire assemblies for review for scope of penetrations as listed below.

THIS SECTION INCLUDES FIRESTOPPING AT THE FOLLOWING SYSTEMS:

- THROUGH EXISTING 1-HR RATED FLOORS.
- THROUGH EXISTING 1-HR RATED WALLS.

THIS SECTION INCLUDES FIRESTOPPING FOR THE FOLLOWING PENETRATIONS:

- Both empty openings and openings containing cables, pipes, ducts, conduits and other penetrating items.
- Sealant joints in fire-resistance-rated construction.

Basis of Design: Hilti or 3M firestop systems and 3M firesafe products or approved equal.

FIRESTOP SYSTEM INSTALLATION MUST MEET REQUIREMENTS OF ASTM E 814, UL 1479 OR UL 2079 TESTED ASSEMBLIES THAT PROVIDE A FIRE RATING EQUAL TO THAT OF THE CONSTRUCTION BEING PENETRATED.

SUBMITTALS:

PRODUCT DATA - MANUFACTURER'S SPECIFICATIONS AND TECHNICAL DATA FOR EACH MATERIAL INCLUDING THE COMPOSITION AND LIMITATIONS, DOCUMENTATION OF QUALIFIED FIRESTOP SYSTEMS TO BE USED AND MANUFACTURER'S INSTALLATION INSTRUCTIONS. ALL FIRE STOP PENETRATIONS THAT ARE PROPOSED BY THE CONTRACTOR PER FIELD VERIFICATION ARE TO PROVIDE A UL LISTED ASSEMBLY DETAIL THAT APPLIES TO THE PROPOSED LOCATION REQUIREMENTS.

CERTIFICATION BY FIRESTOPPING MFR THAT PRODUCTS SUPPLIED COMPLY WITH LOCAL REGULATIONS FOR USE OF LOW VOLATILE ORGANIC COMPOUNDS (VOCs) AND ARE NONTOXIC TO BUILDING OCCUPANTS.

INSTALLER QUALIFICATIONS - ENGAGE A EXPERIENCED INSTALLER WHO HAS COMPLETED FIRESTOPPING THAT IS SIMILAR IN MATERIAL, DESIGN AND EXTENT TO THAT INDICATED FOR PROJECT AND HAS PERFORMED SUCCESSFULLY.

MATERIALS:

PROVIDE FIRESTOPPING COMPOSED OF COMPONENTS THAT ARE COMPATIBLE WITH EACH OTHER, THE SUBSTRATES FORMING OPENINGS, AND THE ITEMS, IF ANY, PENETRATING THE FIRESTOPPING UNDER CONDITIONS OF SERVICE AND APPLICATION, AS DEMONSTRATED BY THE FIRESTOPPING MANUFACTURER BASED ON TESTING AND FIELD EXPERIENCE.

Products:

Compatibility: Provide firestopping composed of components that are compatible with each other, the substrates forming openings, and the items, if any, penetrating the firestopping under conditions of service and application, as demonstrated by firestopping manufacturer based on testing and field experience.

Accessories: Provide components for each firestopping system that are needed to install fill materials. Use only components specified by the firestopping manufacturer and approved by the qualified testing and inspecting agency for the designated fire-resistance-rated systems.

Applications: Provide firestopping systems composed of materials specified in this Section that comply with system performance and other requirements.

FILL MATERIALS FOR THROUGH-PENETRATION FIRESTOP SYSTEMS

Ceramic-Fiber Sealant: Single-component formulation of ceramic fibers and inorganic binders.

Endothermic, Latex Sealant: Single-component, endothermic, latex formulation.

Intumescent, Latex Sealant: Single-component, intumescent, latex formulation.

Intumescent Putty: Nonhardening, dielectric, water-resistant putty containing no solvents, inorganic fibers or silicone compounds.

Intumescent Wrap Strips: Single-component, elastomeric sheet with aluminum foil on one side.

Job-Mixed Vinyl Compound: Prepackaged vinyl-based powder product for mixing with water a Project site to produce a paintable compound, passing ASTM E 136, with flame-spread and smoke-developed ratings of zero per ASTM E 84.

Silicone Sealant: Moisture-curing, single-component, silicone-based, neutral-curing elastomeric sealant of grade indicated below:

Grade: Pourable (self-leveling) formulation for openings in floors and other horizontal surfaces and nonsag formulation for openings in vertical and other surfaces requiring a nonslumping/gunnable sealant, unless indicated firestop system limits use to nonsag grade for both opening conditions.

Available Products: Subject to compliance with requirements, products that may be incorporated in the Work include, but are not limited to, the following:

Ceramic-Fiber Sealant: Metacaulk 525, The RectorSeal Corporation.

Endothermic, Latex Sealant: Fyre-Shield, Tremco, Inc.

Intumescent Latex Sealant:

Metacaulk 950, The RectorSeal Corporation. FS611A Intumescent Firestop Sealant, Hilti Construction Chemicals, Inc.

Intumescent Putty:

Pensil 500 Intumescent Putty, General Electric Company. Flame-Safe FSP1000 Putty, International Protective Coatings Corporation.

Intumescent Wrap Strips:

CS2420 Intumescent Wrap, Hilti Construction Chemicals, Inc.

Job-Mixed Vinyl Compound:

USG Firecode Compound, United States Gypsum Company. FS635 Trowelable Firestop Compound, Hilti Construction Chemical, Inc

Silicone Sealants:

Pensil 100 Firestop Sealant, General Electric Company CS240 Firestop Sealant, Hilti Construction Chemicals, Inc. Metacaulk 835, The RectorSeal Corporation.

Metacaulk 880, The RectorSeal Corporation.

Fyre-Sil, Tremco, Inc.

INSTALL FIRESTOP MATERIALS IN ACCORDANCE WITH UL FIRE RESISTANCE DIRECTORY. COMPLY WITH MANUFACTURER INSTRUCTIONS FOR INSTALLATION FOR ALL FIRESTOPPING MATERIALS.

DIVISION 07 - THERMAL AND MOISTURE PROTECTION (CONT)

07 90 00 JOINT PROTECTION:

PROVIDE THE FOLLOWING SEALANT TYPES WHERE INDICATED ON THE DRAWINGS AND AT OTHER TYPICAL LOCATION, INCLUDING BUT NOT LIMITED TO:
- EXTERIOR JOINTS IN VERTICAL SURFACES INCLUDING PERIMETER JOINTS AND AROUND DISSIMILAR MATERIALS.
- INTERIOR JOINTS IN HORIZONTAL TRAFFIC SURFACES INCLUDING PERIMETER JOINTS OF OPENINGS, CONTROL AND EXPANSION JOINTS, PERIMETER JOINTS B/W INTERIOR WALLS SURFACES AND FRAMES OF INTERIOR DOORS, PERIMETER JOINTS OF HARDWARE, INTERIOR TRIM LOCATIONS, ETC.
- AT ALL DISSIMILAR MATERIAL INTERSECTIONS.

MATERIALS: PROVIDE JOINT SEALERS, JOINT FILLERS AND OTHER RELATED MATERIALS THAT ARE COMPATIBLE WITH ONE ANOTHER AND WITH JOINT SUBSTRATES UNDER CONDITIONS OF SERVICE AND APPLICATION, AS DEMONSTRATED BY SEALANT MANUFACTURER BASED ON TESTING AND FIELD EXPERIENCE.

EXTERIOR AND INTERIOR:

- DAP 50 YEAR "ALEX ULTRA 230 PREMIUM INDOOR/OUTDOOR SEALANT WITH MICROPBAN ANTIMICROBIAL PRODUCT PROTECTION" OR APPROVED EQUAL.

LATEX JOINT SEALANT - INTERIOR TINTED/COLORED CAULK: - SPECTRUM MFG. CORP. "SPECTRUM 2000", TEC "ACCUCOLOR" OR APPROVED EQUAL. SILICONIZED ACRYLIC LATEX CAULK.

JOINT SEALANT BACKING:

- POLYETHYLENE FOAM COMPRESSIVE ROD STOCK. PROVIDE BACKER ROD AT ALL JOINTS AS REQUIRED.

FINISH: COLORS TO MATCH ADJACENT MATERIALS. SUBMIT COLOR SAMPLES FOR FINAL SELECTION.

PROVIDE APPROPRIATE TYPE OF SEALANT FOR GIVEN APPLICATION. INSTALL PER MANUFACTURER REQUIREMENTS.

DIVISION 08 - OPENINGS

08 14 00 WOOD DOORS:

EXTENT AND LOCATION OF EACH TYPE OF WOOD DOOR IS INDICATED ON DRAWINGS AND IN SCHEDULE.

TYPES OF DOORS INCLUDE THE FOLLOWING:

- INTERIOR NON-RATED WOOD DOORS.

SUBMITTALS:

- PRODUCT DATA: DOOR MANUFACTURER'S TECHNICAL DATA FOR EACH TYPE OF DOOR, INCLUDING DETAILS OF CORE AND EDGE CONSTRUCTION, TRIM FOR OPENINGS AND FACTORY FINISHING SPECIFICATIONS.

- SHOP DRAWINGS: SUBMIT SHOP DRAWINGS INDICATING LOCATION AND SIZE OF EACH DOOR, ELEVATION OF EACH KIND OF DOOR, HAND OF EACH COMPONENT, DETAILS OF CONSTRUCTION, LOCATION AND EXTENT OF HARDWARE BLOCKING, FIRE RATINGS, REQUIREMENTS FOR FACTORY FINISHING AND OTHER PERTINENT DATA.

FOR FACTORY PRE-MACHINED DOORS, INDICATE DIMENSIONS AND LOCATIONS OF CUTOUTS FOR LOCKSETS AND OTHER CUTOUTS ADJACENT TO LIGHT OPENINGS. COORDINATE WITH HARDWARE TYPES TO ASSURE THAT WARRANTY IS NOT VOIDED AND THAT ALL HARDWARE WILL MOUNT PROPERLY.

BASIS OF DESIGN FOR FLUSH DOORS:

VT INDUSTRIES, INC OR APPROVED EQUAL
1000 INDUSTRIAL PARK
PO BOX 490
HOLSTEIN, IOWA 51025
www.vtindustries.com
800-827-1615

NON RATED WOOD INTERIOR DOOR (FLUSH)

TYPE - HERITAGE VT DOORS

THICKNESS - 1 3/4"

CONSTRUCTION - 5-PLY FLUSH BONDED DOORS (FSC CERTIFIED)

WOOD SPECIES:

- WHITE MAPLE WOOD VENEER ALPINE AL18

(VERIFY WOOD TYPE WITH OWNER)

- STAIN TO MATCH EXISTING WOOD DOORS IN RETAIL SPACE.

(VERIFY FINAL FINISH WITH OWNER)

- MILL OPTION PAINTABLE SURFACE. FACTORY PRIMED.

MACHINING - FACTORY MACHINE FOR SELECTED HARDWARE.

STANDARDS - ASTM E-152, NFPA 80, NFPA 252, UL10B (neutral pressure), UL10C (positive pressure).

INTERIOR DOORS, COMPOSITE WOOD MATERIALS, ADHESIVES, ETC TO CONTAIN NO ADDED UREA-FORMALDEHYDE RESINS.

INSTALL ALL DOORS PER MANUFACTURER'S REQUIREMENTS AND NFPA 80. TEST FOR PROPER OPERATION AND ADJUST UNTIL SATISFACTORY. TOUCH-UP, REPAIR OR REPLACE DAMAGED PRODUCTS BEFORE SUBSTANTIAL COMPLETION.

WARRANTY: FACTORY FINISHED DOORS TO PROVIDE WARRANTY IN EFFECT OF THE LIFE OF THE INSTALLATION FOR INTERIOR AND INTERIOR FIRE DOORS.

08 31 00 ACCESS DOORS AND PANELS

Basis of Design - The Williams Brothers Corporation of America (www.wbdoors.com)

WB-FR 800 Series Standard Insulated Metal Fire Rated Access Door: 2-hour rated and 1-hour rated for existing rated walls where needed. Size as appropriate. Keep size as small as possible. Paint all doors to match adjacent surface.

WB-DW 400 Series for Drywall Access Door: Non-Rated wall and ceiling Assembly: size as appropriate. Keep size as small as possible. Paint all doors to match adjacent surface.

Accessories, connectors, and related materials shall be as per manufacturer's instructions and building code requirements. Install per manufacturers recommendations.

08 40 00 ENTRANCE STOREFRONTS

Basis of Design Manufacturer: Kawneer: 350T Insulpour Thermal Entrance in Tribaf VG 451T Center, 2'x 4 1/2" Frame System System Dimensions: 2' x 4 1/2"

Glass and Glazing:

Center, 1", INSULATED, Low - E 366-189 dual pane glass. INTERIOR AND EXTERIOR GLASS PANELS TO BE 1/8" CLEAR GLASS. Verify tinting color and surface coating with Owner. COORDINATE GLASS FINISH WITH ADJACENT DOOR AND WINDOW GLAZING. (Entrance doors per 2018 IECC: U= 0.77, (Can be lower as a lower value is better))

Storefront: Thermal Barrier: Kawneer IsoLock Thermal Break.

Factory Finishing: Kawneer Permandic, Architectural Class 1 Color Anodic Coating (Color Dark Bronze)

Refer to drawings for sizes and configurations. Contractor to provide rough opening per manufacturer's approved shop drawings.

Hardware options and finish to be determined by Architect / Owner.

Provide tempered glass as required by code, and all jamb extensions, nailing fins, drip caps, etc. Install units as recommended by manufacturer, and adjust for proper operation.

Submittals:

Shop Drawings: Include plans, elevations, sections, details, hardware, and attachments to other work, operational clearances and installation details.

Samples for Initial Selection: For units with factory-applied color finishes including samples of hardware and accessories involving color selection.

Samples for Verification: For aluminum-framed storefront system and components required.

Glazing: provide product information and samples for glazing.

Clean windows and glazing at completion of project and return to project one month after occupancy and adjust hardware for proper operation and function.

Warranty:

Provide manufacturer's standard warranty (Two (2) years from Date of Substantial Completion.

DIVISION 08 - OPENINGS (CONT)

08 70 00 DOOR HARDWARE:

General

WORK INCLUDED:

The work in this section shall include furnishing of all items of finish hardware as hereinafter specified or obviously necessary to complete the building, except those items, which are specifically excluded from this section of the specification.

RELATED WORK SPECIFIED ELSEWHERE:

Wood Doors: Section 08 14 00

REFERENCES:

- A. ANSINFPA 80 - Fire Doors and Windows
B. AWI - Architectural Woodwork Institute
C. BHMA - Builders' Hardware Manufacturers Association
D. DHI - Door and Hardware Institute
E. NAAMM - National Association of Architectural Metal Manufacturers
F. NFPA 101 - Life Safety Code
G. ANSI/BHMA A156.17

DESCRIPTION OF WORK:

Furnish material to complete hardware work indicated, as specified herein, or as may be required by actual conditions at building.

Include all necessary screws, bolts, expansion shield, other devices, if necessary as required for proper hardware application. The hardware supplier shall assume all responsibility for correct quantities.

All hardware shall meet the requirements of Federal, State, and Local codes and laws having jurisdiction over this project, notwithstanding any real or apparent conflict therewith in these specifications.

Fire-Rated Openings

Provide hardware for fire-rated openings in compliance with NFPA 80 and NFPA Standards No. 101. This requirement takes precedence over other requirements for such hardware. Provide hardware that has been tested and listed by UL for the types and sizes of doors required and complies with the requirements of the door and door frame labels.

Tru-Style Fire Rated doors with Category A requirement met do not require smoke gasketing around the door frame. If something other than Tru-Style is used, verify if smoke gasketing is required.

Fasteners

Hardware as furnished shall conform to published template generally prepared for machine screw installation. Furnish each item complete with all screws required for installation. Typically, all exposed screw installation.

Insofar as practical, furnish concealed type fasteners for hardware that is exposed. Screws shall be furnished with Phillips flat head, finished to match adjacent hardware.

Door closures and exit devices to be installed on wood or composite fire doors shall be attached with closed head through bolts (sex bolts).

SUBMITTALS

Prior to ordering hardware, prepare and submit for review hardware schedule covering all items required for entire job. Schedule to identify manufacturer of each item and shall give type numbers and finish symbols; including catalog cuts for each item. No horizontal schedule will be accepted. Review of the hardware schedule shall not relieve contractor from furnishing all necessary hardware specified in this section.

Furnish suitable templates, together with finish hardware schedule to contractor, for distribution to necessary trades.

Furnish three sets of operating and maintenance manuals for all hardware.

Submit samples as requested of any items of hardware to be furnished for the project for final review. Architect-Engineer is sole judge of equality.

Submit keying schedule as directed by Owner or Architect/Engineer.

General Contractor to Submit copy of final approved hardware schedule to Building Department.

PRODUCTS

Interior Doors - Passage, Privacy & Storeroom Sets by Corbin Russwin, Stanley, Schlage, Sargent or equal. To be approved by Owner. Finish - Satin Nickel Level Style - provide samples. Final Selection by Owner.

QUALITY ASSURANCE

Hardware furnished in connection with doors and frames requiring fire rated labels shall be approved for such use and have such labels as required.

Hardware shall meet the requirements of all applicable labeling authorities and shall complement the NFPA 80 and NFPA 101 requirements of Division 8.

Items not specifically listed, but incidental to or required for completion of project, shall be provided and shall conform in class, quality, and type as required for particular use or as specified in like and similar locations. All fastenings, templates, and all accessory items scheduled and/or required to complete project shall be provided.

SUPPLIER:

A. Manufacturers: Companies specializing in manufacturing door hardware with minimum ten years experience.

B. Hardware Supplier: Company specializing in supplying commercial door hardware who has maintained an office and has been furnishing hardware in

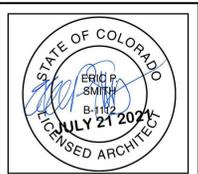






WALL TYPES LEGEND	
	W-1 1HR - 6" METAL STUD WITH 5/8" TYPE-X GYP BOTH SIDES. RUN GYP BD TO METAL DECK ABOVE. FIRE CAULK AT FLOOR, WALLS AND METAL DECK ABOVE. ALL PENETRATIONS THROUGH THE WALL TO BE 1-HR FIRE PROTECTED. PROVIDE SOUND BATT INSULATION IN WALL. GA FILE NO WP 1072
	W-2 6" METAL STUD WITH TILE BACKER BOARD ON RESTROOM SIDE OF WALL. PROVIDE 5/8" TYPE-X GYP BD ON NON-RESTROOM SIDE OF WALL. WALL BOARDS TO GO TO 6" ABOVE CEILING. PROVIDE SOUND BATT INSULATION IN WALL.
	W-3 3 5/8" METAL STUD WITH TILE BACKER BOARD ON RESTROOM SIDE OF WALL. PROVIDE 5/8" TYPE-X GYP BD ON NON-RESTROOM SIDE OF WALL. WALL BOARDS TO GO TO 6" ABOVE CEILING. PROVIDE SOUND BATT INSULATION IN WALL.
	W-4 3 5/8" METAL STUD WITH 5/8" TYPE-X GYP BD ON ONE SIDE TO GO TO 6" ABOVE CEILING. PROVIDE TILE BACKER BOARD ON THIS WALL TYPE IN THE BATHROOM BEHIND THE TILE.
	W-5 1 5/8" METAL STUD WITH 5/8" TYPE-X GYP BD ON ONE SIDE TO GO TO 6" ABOVE CEILING. PROVIDE TILE BACKER BOARD ON THIS WALL TYPE IN THE BATHROOM BEHIND THE TILE.

KEY NOTES	
1	EXISTING ELECTRICAL PANEL TO BE RELOCATED TO THIS LOCATION. ELECTRICAL PANEL AND NEW WALL IT IS TO BE MOUNTED TO ARE SET SO THAT PANEL MOVES A MINIMAL AMOUNT AND CONNECTIONS TO ELECTRICAL PANEL CAN REMAIN AND BE RE-CONNECTED.
2	EXISTING ELECTRICAL TRANSFORMER AND PANEL TO REMAIN.
3	EXISTING PLUMBING CHASE AND STRUCTURAL ENCLOSURE TO REMAIN.
4	PROVIDE NEW 3'-0" X 7'-0" FULL LITE, EXTERIOR STOREFRONT DOOR. FRAME TO BE 2" DARK BRONZE. HARDWARE: PULL HANDLE ON OUTSIDE, PUSH BAR ON INSIDE, CONTINUOUS HINGE, THRESHOLD, WEATHERSTRIP, ELECTRIC OPEN/CLOSER AND PUSH BUTTON OPERATOR FROM BOTH INSIDE AND OUTSIDE. VERIFY KEYING WITH OWNER. BASIS OF DESIGN - KAWNEER 350 MEDIUM STYLE STOREFRONT ENTRY DOOR.
5	PROVIDE NEW 3'-0" X 7'-0" FLUSH WOOD DOOR IN WOOD FRAME. HARDWARE: PRIVACY LOCKSET, LEVER HANDSET, (3) 4" HINGES, WEATHERSTRIP AROUND DOOR FRAME (FOR SOUND), DOOR STOP ON THE ADJACENT WALL. PAINT DOOR TO MATCH ADJACENT FINISHES.
6	PROVIDE NEW 3'-0" X 7'-0" FLUSH WOOD DOOR IN WOOD FRAME. HARDWARE: OFFICE LOCKSET, LEVER HANDSET, (3) 4" HINGES, WEATHERSTRIP AROUND DOOR FRAME (FOR SOUND), DOOR STOP ON THE ADJACENT WALL. PAINT DOOR TO MATCH ADJACENT FINISHES.
7	RELOCATED LIGHT FIXTURE (TYPICAL OF 2)
8	ADJUST EXISTING POWER, HVAC, AND FIRE SPRINKLER AND FIRE ALARM SYSTEMS TO ACCOMMODATE NEW SPACE LAYOUT. PROVIDE NEW LIGHTING AND NEW HVAC SYSTEM AS REQUIRED. SEE MECHANICAL AND ELECTRICAL DRAWING.



**NOTICE: DUTY OF COOPERATION**  
 Release of these plans contemplates further cooperation among the owner, the contractor and the architect. Design and construction are complex. Although the architect and his consultants have performed their services with due care and diligence, they cannot guarantee perfection. Communication is important and every contingency cannot be anticipated. Any ambiguity or discrepancy discovered by the use of these plans shall be reported immediately to the architect. Failure to notify the architect compounds misunderstanding and increases construction costs. A failure to cooperate by a simple notice to the architect shall release the architect from responsibility for the consequences. Changes made from the plans without consent of the architect are unauthorized and shall release the architect of responsibility for all consequences arising out of such changes.  
 All design, documents and data prepared by Eric Smith Associates, P.C. as instruments of service shall remain property of Eric Smith Associates, P.C. and shall not be copied, changed or disclosed in any form whatsoever without first obtaining the express written consent of Eric Smith Associates, P.C.  
 Eric Smith Associates, P.C.

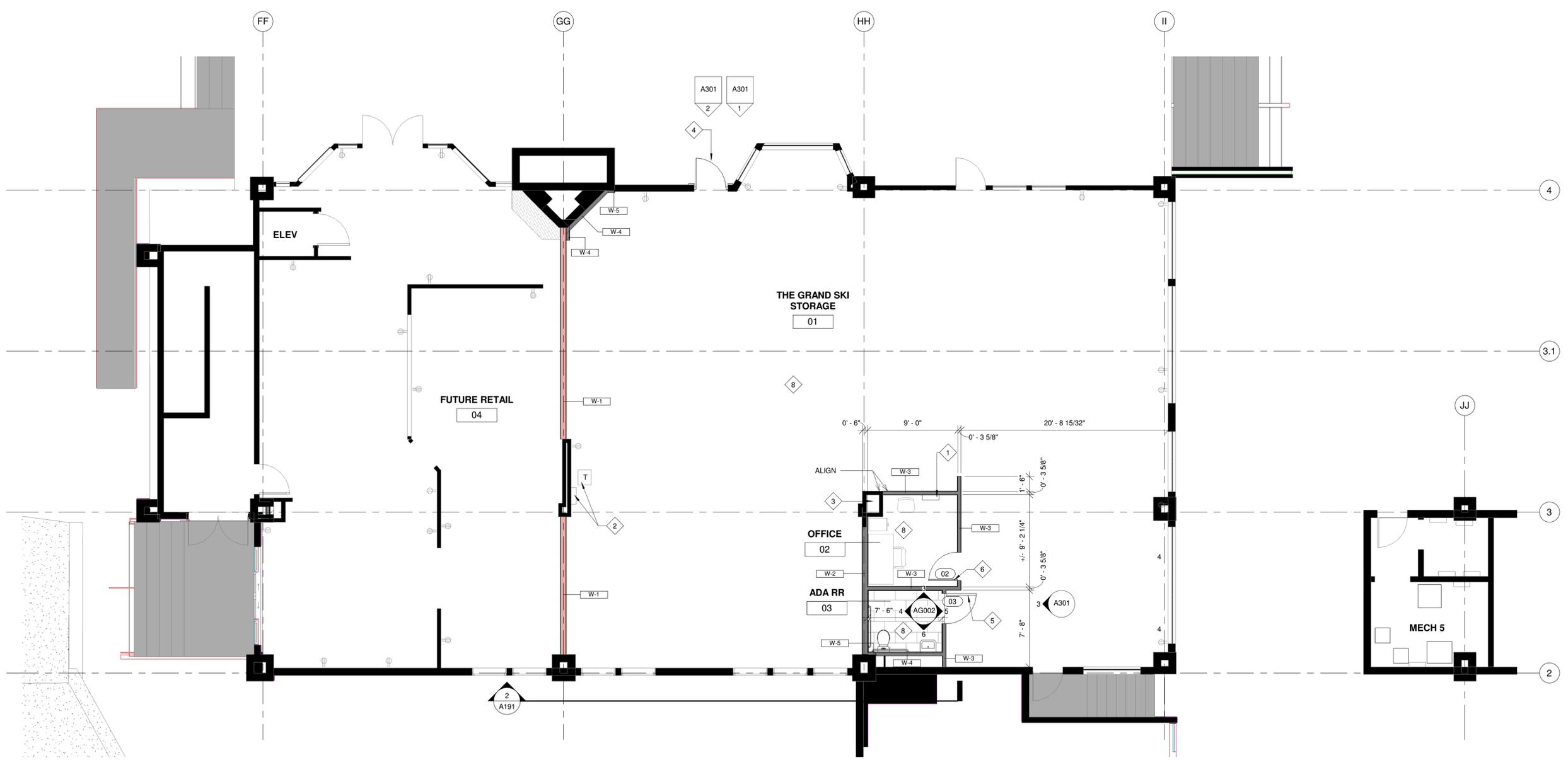
REVISIONS		
No.	Description	Date

**GRAND SKI STOR REMODEL**  
**STEAMBOAT SPRINGS, CO**



Job Number: 20054.05  
 Date: 7/21/21  
 Drawn By: Author  
 Checked By: Checker

Project Phase	CONSTRUCTION DOCUMENTS
Sheet Title	FIRST LEVEL - PROPOSED
Sheet Number	A101



1 FIRST LEVEL-PROPOSED  
 A101 3/16" = 1'-0"

BID / PERMIT SET 7/21/2021





































Electrical Specification

SECTION 16100 - GENERAL PROVISIONS

PART 1 - GENERAL

- 1.1 CONDITIONS
A. All work under this Section shall be governed by project general conditions, along with all supplements and amendments thereto, as published by Owner.
1.2 CODES AND REGULATIONS:
A. Comply with all applicable state and local codes, regulations and ordinances, and the latest applicable requirements of the National Electrical Code (NEC) of the NFPA, as interpreted by the local inspection authority that shall have final jurisdiction (AHJ).
B. Comply also with all OSHA requirements and directives.
1.3 EXAMINATION OF PREMISES:
A. Examine the premises prior to bidding and become fully familiar with existing conditions.
1.4 PERMITS:
A. Secure and pay for all permits, fees, taxes, licenses and inspections in connection with the electrical work.
1.5 DRAWINGS AND SPECIFICATIONS:
A. Drawings are diagrammatic and indicate general arrangement of electrical work. Locations are approximate and shall be subject to minor modifications as directed by Engineer.
B. Contractor shall be responsible for exact fitting of all materials, equipment, etc., in building. All dimensions shall be verified on the job.
C. Refer to Architectural, Structural, and Mechanical Drawings and Specifications, as part of this set, and be responsible for all information contained therein as affects the electrical work.
D. Instructions such as "provide..." shall mean "Contractor shall be responsible for the furnishing and installing of new... complete in every respect."

PART 2 - PRODUCTS

- 2.1 STANDARDS:
A. All material shall be new and shall be listed by Underwriters Laboratories Incorporated (UL listed) for the purpose intended and shall bear the UL label. Damaged or defective materials shall be replaced. All materials shall comply with the latest NEMA standards.
PART 3 - EXECUTION
3.1 SHOP DRAWINGS:
A. Furnish electronic (pdf) set of Shop Drawings to Engineer for the following:
1. Control Equipment.
2. Distribution Equipment.
3. Light Fixtures.
B. All materials and equipment shall be approved prior to beginning work.
C. Receipt within 30 days after award of contract.
D. Shop Drawings, including:
1. Catalog data specifically for equipment to be used.
2. See shop drawing requirements in General Provisions.
E. Electrical Contractor shall provide shop drawing approval stamps on all equipment supplied by them prior to Engineer's shop drawing approval. The Electrical Contractor to check for conformance with the design of the project and compliance with the information given in the contract documents. Contractor is responsible for dimensions which shall be confirmed and correlated at the job site; fabrication process and techniques of construction.

3.2 RECORD DRAWINGS:

- A. Maintain a complete set of Electrical Drawings at the job site with all changes in the work marked thereon in a contrasting color.
B. Electrical Contractor shall provide General Contractor at completion of project a complete set of as-built drawings showing all changes in work marked there on including all system wiring diagrams.
3.3 COORDINATION:
A. Order the progress of the work so as to conform to the progress of other trades. Coordinate all electrical installations and rough-ins as required.
3.4 WORKMANSHIP:
A. Provide a competent foreman on the job at all times. All work shall be accomplished in a manner which is neat, workmanlike, of first quality, and compatible with good commercial practices and standards. Provide competent workmen who are skilled as electricians.
3.5 INSTALLATION:
A. Install all equipment and materials in accordance with information as indicated on Drawings and in full accord with Manufacturer's recommendations.
3.6 CUTTING AND PATCHING:
A. Provide all cutting, channelling, chasing, drilling, etc., operations as may be required for electrical work. In general, all such operations shall be held to a minimum.
B. All patching and painting shall be done by Contractor.
3.7 CONSTRUCTION POWER AND LIGHTING:
A. Provide construction power and lighting for construction as required. Energy costs will be paid by Owner. All temporary facilities shall be properly grounded, shall comply with NEC and OSHA requirements, and shall have ground fault protection.
3.8 SECONDARY SERVICE:
A. Power for distribution within the building is available from the secondary side of a padmount transformer supplied by the Local Power Company. The existing service is 3 phase, 4 wire, 277/480 volt, 60 Hertz alternating current for normal power and lighting requirements. General arrangement of the service equipment is shown on Drawings. Equipment shall be as specified herein.

3.9 REMODEL WORK:

- A. Electrical Contractor shall remove all wiring devices, light fixtures, etc., which are indicated to be removed. In general, symbols which are dashed indicate existing devices which are to remain. Symbols which are dashed and are crosshatched indicate existing devices which are to be removed. Devices which are to be removed may require reworking conduit and wiring in order to maintain service to other devices. If removed devices are on walls or ceilings which are to remain, blank coverplates are to be installed on outlet boxes.
B. Where remodeling interferes with circuits in areas which are otherwise undisturbed, circuits shall be reworked as required.
C. Existing devices and intercircuits which are shown are indicated only for informational purposes. Electrical Contractor shall visit the site and shall verify conditions as they exist and shall remove, relocate and/or rework any electrical equipment or circuits affected (whether indicated or not) due to removal or reworking of existing walls, ceilings, etc. Electrical Contractor shall familiarize himself with all work to be done by other trades by studying Architectural, Structural, Mechanical and Plumbing Drawings.
D. Coordinate routing of all conduits with Mechanical and Plumbing Contractors in order to avoid conflicts with ducts, pipes, etc.
E. Lighting fixtures removed and reused shall be cleaned and reconditioned by Contractor prior to reinstallation. Provide new lamps, lens, ballasts, etc., as required to restore fixtures to operational condition.
F. All equipment, fixtures, devices, etc., which are removed shall be delivered to Owner for disposition. All items which are removed and not wanted by Owner and which are not reused shall become the property of Electrical Contractor and shall be removed from site.
G. The cost of cutting and patching necessary for the installation or removal of electrical work shall be included in the Electrical Contract. Coordinate with General Contractor.
H. Electrical Contractor shall remove and replace lighting fixtures; rework, relocate and replace conduit and wiring and do other work required by the installation of new ductwork, piping, etc., above existing ceiling. Coordinate with other Contractors and verify the extent of the work.

3.10 GUARANTEE:

- A. Guarantee all materials, labor, workmanship and successful operation of all equipment installed under this contract for a period of one year from date of final acceptance. Repair or replace, at no expense to Owner, all defects which may arise during this time due to inferior or defective materials, equipment, or workmanship.

3.11 SUBSTITUTIONS:

- A. The intent of Specifications is to establish quality standards of materials and equipment installed. Specific items are identified by Manufacturer, trade name or catalog designation. Should Contractor propose to furnish materials and equipment other than those specified as permitted by "or approved equal" clauses, he shall submit a written request, at least five calendar days prior to bidding date, for any or all substitutions. Request shall be accompanied with complete descriptive and technical data and all other information deemed necessary by Engineer for evaluation. Substitutions submitted for approval shall list items as specified with the alternate substitution.
B. Where substitutions alter the design, conduit, wiring or space requirements indicated on Drawings, Contractor shall include items of cost for the revised design and construction.
C. Substitutions sent by fax machine will not be acceptable and will not be reviewed.
3.12 OUTAGES:
A. Coordinate all electrical service outages with Owner and General Contractor. Plan all work so that duration of outage is kept to an absolute minimum. Provide temporary wiring as necessary and as required in order to maintain continuous service for Owner's operation where outage must be accomplished during a time when power is deemed necessary by Owner, or when outage is to be of an extended duration, maximum 6 hours. All outage time and scheduling of same shall be approved by Owner and shall conform to Owner's schedules.

3.13 DELIVERY AND STORAGE OF MATERIALS:

- A. Make provisions for delivery and safe storage of all materials and make the required arrangements with other Contractors on the job for the introduction into the building of equipment too large to pass through finished openings.
B. Where materials are indicated to be furnished by others to Contractor for installation, these materials shall be checked and their delivery properly receipted. Assume full responsibility for the storage and safe keeping of said materials from time of delivery until final acceptance.

3.14 AVAILABLE TO OWNER:

- A. Electrical Contractor shall be available to Owner for additional look up to lights, equipment, etc., on time and material.
END OF SECTION 16100

SECTION 16100 - BASIC MATERIALS AND METHODS

PART 1 - GENERAL

- 1.1 STANDARDS:
A. All materials shall be new, shall be UL listed for the purpose intended, and shall bear the UL label. Damaged or defective materials shall be replaced. All materials shall comply with latest NEMA standards.
1.2 BALANCING:
A. The complete system shall be load balanced to within 10 15 percent per phase.
1.3 PHASE ROTATION
A. Electrical Contractor shall assure and be responsible for proper phase rotation of all motors, compressors, and other three phase equipment prior to energizing equipment.

PART 2 - PRODUCTS

- 2.1 SAFETY SWITCHES:
A. Provide fusible and non-fusible heavy duty type disconnect switches where shown and required. Switches shall be horsepower rated, quick make, and quick-break, by same manufacturer as panelboards.
2.4 FUSES
A. Provide sizes, classes and types of fuses as indicated for all fused safety switches. All fuses 0 600 amps shall have the Class "R" rejection feature. Verify actual load current of all motors prior to ordering fuses and provide fuses of sizes as recommended by Manufacturer. Generally, motor fuses shall be the dual element type and shall be set at 110 percent of full load amps, or 125 percent where required for heavy duty usage or high ambient temperatures. Fuses shall be the power voltage rating to match circuit characteristics in which installed. Fuses indicated on Drawings are those of Bussmann Co., equal by Gould Shawmut or Littell Fuse.
2.5 SPARE FUSES
A. Provide three spare fuses of each size and type installed.
2.6 NAMEPLATES
A. Provide 1 x 3 inch laminated plastic nameplates (1/4 inch high white letters; black background for normal power equipment, red background for emergency power equipment) for all switches, panelboards, controllers, etc., in main distribution switchboards and sub-distribution panelboards. Nameplates shall be permanently attached to equipment with two screws. Provide blank nameplates for all spares.
B. Multiple Gang Light Switches: Provide engraved coverplates 1/8 inch lettering black filled on all switch plates two and more ganged. Lettering shall indicate area served.
C. Light switches/receptacles (all). Provide panel and circuit Kroy labels on front of coverplate and label with marker on inside panel cover and circuit also.
D. Label all mechanical equipment, safety switches, and starters, etc., with raised letter type. Nameplates and labels shall indicate the general areas and type of electrical load served by each circuit.
E. Neatly label all Junction box coverplates as to their function. Use a permanent ink pen. Labeling shall be lights, receptacles, etc. Labeling shall be done on J boxes that are above accessible ceiling and in storage rooms and maintenance areas, etc. Do not label J boxes in public view.
2.7 NONMETALLIC SHEATHED CABLE NOT ALLOWED ON THIS PROJECT:
2.8 CONDUCTORS:
A. Provide a complete system of conductors for all raceway systems. All conductors shall be rated 600V, and shall be of a manufacturer subscribing to applicable IPECA and NEMA standards and practices. Conductors shall be of sizes and types as indicated, and as required by NEC for specific uses. Where quantities of conductors in a raceway system are not specifically indicated, provide number as required to maintain function, control and number of circuits as indicated. All conductors shall be UL listed and approved, and shall conform to the following:
1. Minimum wire size shall be #12 AWG copper except for control or signal circuits which may be #14 AWG copper.
2. Unless otherwise indicated, all wiring for branch circuits shall be copper #12 AWG in 1/2" conduit, protected by 20 ampere circuit breakers. See Voltage Drop.
3. Voltage Drop: If distance from panel to outlet is 75 feet or greater (for 120V circuits), #10 shall be installed from circuit breaker to every device in circuit.
4. Wire sizes #10 AWG copper and smaller shall be solid; #8 AWG copper and larger shall be stranded.
5. The following insulation standards shall apply:
a. All feeder conductors shall be type THWN, XHHW or RHW.
b. Other conductors shall be per NEC THHN/THWN copper unless noted otherwise, Article 310.
c. Type THHN/THWN copper for exterior runs in conduit.
6. Motor wiring for power shall be stranded.
B. Aluminum conductors shall not be used on this project.
C. The use of AC (Armored Cable), or flexible conduit shall not be used for branch circuits or feeders.

2.9 CONDUITS:

- A. Conduits shall be provided for all wiring runs as shown and specified. All sizes shall be per NEC. Use GRC where required by code, utility company, for mechanical protection and as shown. Type IMC may be used in lieu of GRC where permitted. Use EMT for all other runs. Provide approved couplings and connectors for all connections. Final connections to motors and other vibrating or rotating equipment shall be made in flexible conduit.
B. Heavywall, type II, rigid, Schedule 40 PVC:
1. For all wiring runs in or under the floor slab which is in contact with the ground.
2. For all wiring runs buried underground, unless otherwise indicated.
3. Do not use Schedule 40 or 80 PVC above ground. Conduit sizes 1" and smaller use schedule 80 PVC elbows and conduit sizes 1 1/4" and larger use GRC or cast coated elbows to max. 6' above grade then change to EMT conduit. Note: Provide expansion joints in accordance with Manufacturer's recommendations.
C. Use approved type couplings and connectors in all conduit runs and make all joints tight. Provide insulated bushings for all terminations in pipe size 1 1/4" and larger. Provide all steel set screw couplings and connectors for all other conduits. Provide expansion fitting and bonding conductors for all runs which cross building expansion joints. Provide waterproof steel compression gland couplings and connections for all runs in wet locations such as exposed to weather, buried in slabs, etc.

2.10 SUPPORTS AND HANGERS:

- A. Provide supports and hangers as necessary and as required to insure a good and substantial installation. Support raceways, fixtures, cabinets, boxes, etc., on approved types of trapeze hangers or wall brackets as manufactured by Unistrut or acceptable equal. Provide steel hanger rods securely fastened to or through the building structure for all trapezes, etc. Do not suspend from mechanical piping or ductwork. Perforated plumber's straps or wire will not be permitted.
B. Obtain General Contractor's approval for the use of powder powered fasteners and use only in locations as he may direct.

2.11 OUTLETS:

- A. Outlets shall be galvanized steel or zinc pressed steel outlet boxes for all locations except where otherwise indicated or where cast metal boxes are required by NEC. Boxes are to be 4" square or octagonal, 2 1/8" depth minimum. Provide plaster or tile rings for all flush outlets installed where wood, drywall tile plaster, etc., types of finishes are applied. All outlets for exterior application shall be cast, weatherproof type, with gasket and case coverplate. Tile boxes of extra depth may be used for interior, dry applications where masonry brick or brick walls constitute the finished wall surface. In any event, provide outlet boxes of proper type and design for the particular fixture or device to be installed. Boxes shall be as manufactured by Steel City or acceptable equal.
B. Surface mounted boxes shall be cast aluminum weatherproof, with grounding terminal, threaded hubs, and shall be similar and equal to Bell Box.
C. Pull Boxes: Provide pull boxes in raceway runs as required by NEC and job conditions. Install in accessible locations.
D. Surface Raceway: Surface raceway boxes same manufacturer as surface raceway.

2.12 LIGHTING EQUIPMENT

- A. General: Provide all lighting equipment and lamps as shown on Drawings and as called for in these Specifications. Provide all such equipment fully complete and prewired. Install all equipment in a secure and substantial manner, and in full accord with Manufacturer's recommendations. Provide all such miscellaneous installation equipment such as support, hangers, yokes, flanges, etc., as is necessary. Provide 1-1/2 inch spacer, finished, factory approved type, between tops of fluorescent fixtures and combustible ceiling materials as required by code. Provide for aiming of all adjustable lighting fixtures as directed by General Contractor; exterior fixtures shall be adjusted at night.
B. Fixtures (Luminaires): All fixtures exposed to weather or cold temperatures shall be weatherproof and suitable for efficient operation at temperatures and conditions concerned. All fixtures shall bear UL label for its particular application, or as indicated. Install surface or pendant mounted luminaires true and straight. Provide plaster frames or similar type devices compatible with ceiling construction for all recessed fixtures.
C. Electronic Drivers:
1. Electronic drivers shall be provided with 0-10V dimming capability or as shown on plans.
2. Driver shall bear the CBM, UL, and ETL labels certifying the driver complies with these specifications and standards.

2.13 DEVICES AND PLATES:

- A. Receptacles: Provide the following flush receptacle devices where indicated and required. Verify color with General Contractor prior to installation. All devices to be Specification Grade with screw type terminals. Provide as shown or acceptable equal.
1. Devices:
a. 20A-3W, grd, duplex dedicated outlet Leviton 5263-White
b. W.P. lift lid, duplex TayMac 503 S1G, A4
For GFI TayMac S2G44
c. Ground Fault 20 amp Leviton-6899-White
2. Switches
a. 20A switches Leviton -1221-White
b. 3-way switches Leviton 1223-White
3. Coverplates
a. Finished and unfinished areas are to provide .040 smooth nylon White finished coverplates.
b. Stainless steel in Kitchen area.

PART 3 - EXECUTION

- 3.1 SAFETY SWITCHES
A. All exterior mounted disconnects 12 feet and less above finished grade shall have padlocks; master laminated type minimum 3/16 inch shafts, master keyed, to lock disconnect doors.
3.2 CONDUCTORS:
A. Conductors shall be continuous from outlet to outlet or J-box. Splices shall be held to a minimum. Where necessary, splice in readily accessible pull box, J-box, or outlet box. The joint insulation value shall equal that of the conductor. Splices and connections shall be made in an approved manner.
B. Install wiring in the raceway systems only after the conduit run has been completed and after such time as conduits have been thoroughly cleaned and dried.
C. Enclose underground/interior conductors in conduit schedule 40 PVC. All secondary and exterior branch circuit conductors to be buried a minimum of 30 inches below finished grade. Provide 2 inches of sand fill above and below conductors and install electrical marker tape 6 inches above all runs.
D. Wire and cable No. 6 and smaller shall be factory color coded. Where factory color is not available, or where on short runs factory color coding is not practical, mark conductors on each end and in J-boxes or pull boxes with 1" band of colored pressure sensitive plastic tape or by the use of brilliant waterproof lacquer properly applied. Colors for each phase and the neutral shall be consistent throughout the system.
1. The following color code prevails for all service, feeder and branch circuits:
Neutral White for 120V
Ground Green for 120/208V, Green w/ Yellow stripe for 277/480V
Phase A Black for 120/208V, Brown for 277/480V
Phase B Red for 120/208V, Orange for 277/480V
Phase C Blue for 120/208V, Yellow for 277/480V

- E. Wire and cable shall be the proper size to fit under lug landings in accordance with UL listing. Where larger wire and cable is used for voltage drop, etc., and will not fit under UL lug listings, Electrical Contractor shall provide proper wire and cable size under lugs and either pigtail to larger wire and cable or use power tap blocks. Provide insulation value equal to the wire and cable being used.
F. High Compression Termination: Provide high compression terminations for connecting smaller conductors to larger for voltage drop issues as shown on drawings. H-type compression tap connectors shall be for copper combinations, sized for correct conductor installation using 15 ton and 12 ton head tools per manufacturer UL listed. Manufacturer Thomas and Betts. Compression taps series 63100 with high compression tool. Provide shop drawings. Provide interlocking insulating hard covers and secure with tape sealant per manufacturer, UL listed. Manufacturer Thomas and Betts Series HTXC00 (H-Tap Insulating Hard Covers), and HST25 Series. Provide shop drawings.
G. Terminations Exterior
1. Terminations shall be silicone filled safety connectors. Connector body shall consist of color-coded shell of non-hygroscopic material, with ribs or wings for easy grip and vibration-absorbing retention fingers. Inside shall be a non-setting, non-conductive, fire-retardant silicone sealant that eliminates the possibility of corrosion and flashover. The connector shall have a plated, conical, square-wire spring to draw in conductors securely as torque is applied.
2. Connectors shall be King Technology's Model King-1, 2, 3, 4, 5, 6, and/or 9 wire connectors for pressure-type locations or accepted equal.

3.5 CONDUCTOR NEUTRAL APPLICATIONS

- A. Neutrals: Copper, same size as phase conductor, derating neutrals not allowed.
B. Provide separate Neutral conductors for each 15 or 20 amp (120 or 277V) single pole breaker.
1. All circuits using common raceway or provide fire handles on branch circuit breaker per NEC.

3.6 CONDUITS:

- A. Slab on grade: Conduits shall not be located in slab but 6" below, thus cutting of slab will not damage conductors and conduit.
B. All conduits shall be installed concealed in finished areas. Exposed conduits will be permitted only at surface cabinets, in mechanical equipment rooms, and as otherwise permitted by General Contractor.
C. Route all conduits either parallel or perpendicular to walls and structural members, always avoiding proximity to sources of heat such as flues, hot water lines, etc. Runs which are buried below the floor slab or underground may be run direct (angular) to fullest practical extent. Locate raceways so as not to endanger the strength of any structural members. All runs pertinent to the building structural system shall be installed only when and in manner as approved by General Contractor. Actual conduit runs are not necessarily indicated, but are to be installed in the most feasible manner compatible with building construction and work of other crafts. Outlets shown connected together must be wired on the same circuit.
D. All bends to be made by the use of approved bending tool. Cut all conduits square and ream all cuts to remove burrs. Exercise all necessary precautions during the construction period to prevent entry or accumulation of moisture, dust, concrete, and all foreign matter into the raceway system. Clean and dry all raceways prior to pulling conductors.
E. Secure all raceway systems in building structure in a rigid and secure manner using approved type fasteners such as "Caddy Clips" or similar type of other manufacturer. The use of wire, plumber's straps, etc., will not be permitted. Locations and spacing of fasteners shall be as required by NEC.
F. Conduit hangers, clamps, light fixtures, supports, nails, etc., shall be fastened to joists or beams only. Do not support from bottom of roof decking or mechanical ductwork.
G. Notching of wood studs (where used) for conduit routing shall not be allowed. Drill center of studs if hole gets closer than 1" to face of studs. Provide 3/16" steel protective plates.
H. All roof penetrations done by Electrical Contractor must conform to General Contractor's standard criteria and shall be subject to his authorized Roofing Contractor. General Contractor shall pay all such costs directly to Roofing Contractor upon demand.
I. Conduits penetrating through fire-rated walls and floor slabs shall be sealed against the spread of fire and products of combustion with smoke-rating of the floor and wall through which conduits pass. See Drawings for additional requirements.

3.7 WIRING ABOVE SUSPENDED CEILINGS

- A. Approved Class II wiring systems such as controls, telephone, intercom, TV, etc., may be routed without conduit on bridged rings, (3 feet on center and neatly trained) where above suspended accessible ceiling systems unless otherwise indicated. Where wiring runs occur in inaccessible construction such as underfloor, in walls, above gypsum board ceilings, etc., provide all necessary outlets and conduits stubbed into nearest accessible suspended ceiling space. Wiring in all exposed areas shall be routed in conduit such as, exposed ceiling, surface mounted on walls and etc. All conduit stubs shall be tagged. Where suspended ceiling plenums are used for transportation of environmental air and where required by local inspection authority, all Class II wiring runs shall be enclosed in an approved raceway system or approved return plenum cable on bridged ring system. This shall include all systems such as telephone, data, etc., even though this Contractor is not providing the cables or conductors. Refer to Article 300-22 of NEC.
B. Where suspended ceiling plenums are used for transportation of environmental air and where required by local inspection authority, all Class II wiring runs shall be enclosed in an approved raceway system or Teflon cable approved for return air plenum application. This shall include all systems such as telephone, etc., even though this Contractor is not providing cables or conductors. Refer to Article 300-22 of NEC.

3.8 OUTLETS:

- A. Install all outlets in a secure and substantial manner and locate so as to be compatible with space, construction and equipment requirements, and with the work of other trades. Verify final outlet locations with General Contractor prior to installation. Install all outlets plumb and in accessible locations. Flush outlets are to be installed with front of box or ring flush with finished surface. All outlets are to be installed flush unless used in conjunction with exposed conduit system or unless otherwise indicated. If outlets are not installed plumb, flush, or in approved locations, relocate or reset and refinish at no additional cost to Owner.
B. Lighting outlets: Install flush wall or ceiling outlets to accommodate type of fixture to be installed. Provide 3/8" no-bolt fixture stud in all outlets where required by weight of fixture.
C. Mount all weatherproof (WP) outlets vertically.
D. J-boxes shall not be stacked atop or use of multiple extension rings on each other to form single J-boxes. Single J-boxes shall be used of proper size per NEC.

3.9 LIGHTING EQUIPMENT

- A. Recessed fixtures shall be connected from a box above the ceiling with flexible conduit. The supply conductors to recessed fixtures shall be in accordance with Manufacturer's label or as specified, whichever is more stringent. Cut openings in ceilings for outlets or recessed fixtures so that fixture or trim completely covers the openings when installed.
B. Recessed fixtures in suspended T bar grid ceilings: Overall dimensions of fixtures to be recessed with grid ceiling must be such that they will fit without distortion to the T bars. No field modification of fixtures will be allowed. Install fixtures only after such time as all adjacent T bars have been installed and supported from the superstructure at each corner of the fixture. Provide bar hangers supported from and secured to adjacent T bars to support incandescent fixtures. Fixtures must not be supported from ceiling panels. Fixture must be securely fastened, however, to ceiling framing member as required by NEC 410-16.

3.10 COVERPLATES

- A. Install oversized or "mistake plates" for any outlet where standard sized plate will not cover rough in opening. Provide ganged plates for combination devices and multiple device installation as required. Install plates with holes sized to accommodate cable to be installed for all telephone and computer outlets.
B. Provide blank coverplate for all unused outlet boxes, i.e. voice, data, and power outlets at time of final observation.

3.11 FIRE PENETRATIONS

- A. Provide fire rated stops to maintain fire ratings of walls, ceilings and floors.
B. Conduits may penetrate the walls, ceilings, floors or partitions provided fire stopping is provided per current International Building Code.

END OF SECTION 16100

SECTION 16400 - ELECTRICAL SYSTEMS

PART 1 - GENERAL

- 1.1 Furnish and install a complete electrical system as shown on Drawings and Specifications.
PART 2 - PRODUCTS
2.1 EMERGENCY LIGHTING SYSTEM:
A. Provide battery powered emergency standby lighting system as indicated.
2.2 GROUNDING SYSTEM:
A. Ground the entire electrical distribution system, including all raceways, outlets, fixtures, equipment, etc., in full accord with NEC.
B. Provide separate grounding conductor in all raceways.
C. Provide separate grounding jumper from the grounding screw of all receptacle devices to the metallic box in which mounted. Jumper may attach to box with a separate grounding screw or clip device. Jumpers may be eliminated if approved self-grounding devices are used.
D. Provide separate bonding conductor, bare copper, for runs of flexible conduit where required by NEC.
E. Provide separate grounding conductor in all runs to exterior lighting standards, such as post lights, signs, etc.
F. All conductors used for grounding and bonding purposes shall be copper, insulated green, no exceptions.
END OF SECTION 16400

SECTION 16900 - ELECTRICAL COMPLETION

PART 1 - GENERAL

- 1.1 GENERAL:
A. The entire electrical system shall be left in first-class workable operating condition and all work shall be complete.
PART 2 - PRODUCTS
2.1 DIRECTORY CARDS:
A. Provide labels and neatly typed directory cards for all new and existing panelboards and loadcenters. Directory cards shall indicate the general area and type of electrical load served by each circuit.

PART 3 - EXECUTION

- 3.1 CLEAN UP:
A. Remove all materials, scrap, etc., relative to the electrical installation and leave the premises in a clean, orderly condition. Any costs to Owner for clean-up of the site will be charged against Contractor.
B. Clean all electrical equipment and materials of all foreign matter. Clean all light fixtures using only methods and materials as recommended by Manufacturer.
3.2 ACCEPTANCE DEMONSTRATION:
A. Upon completion of the work, at a time to be designated by General Contractor, contractor shall demonstrate to Owner the operation of the entire electrical installation, including any and all special systems provided under this contract.
3.3 TEMPORARY WIRING:
A. Remove all temporary wiring, outlets, etc., complete.
3.4 DRAWINGS:
A. Deliver Record Drawings to Owner.
END OF SECTION 16900



NOTICE: DUTY OF COOPERATION
Release of these plans constitutes further cooperation among the owner, the contractor and the architect. Design and construction are complete. Although the architect and his consultants have performed their services with due care and diligence, they cannot guarantee perfection. Construction is imperfect and every contingency cannot be anticipated. Any ambiguity or discrepancy discovered by the use of these plans shall be reported immediately to the architect. Failure to notify the architect compounds misunderstanding and increases construction costs. A failure to cooperate by a simple notice to the architect shall relieve the architect from responsibility for the consequences. Changes made from the plans without consent of the architect are unauthorized and shall relieve the architect of responsibility for all consequences arising out of such changes.
All design, documents and data prepared by Eric Smith Associates, P.C., as instruments of service shall remain property of Eric Smith Associates, P.C. and shall not be copied, changed or disclosed in any form whatsoever without first obtaining the express written consent of Eric Smith Associates, P.C.
Eric Smith Associates, P.C.

REVISIONS

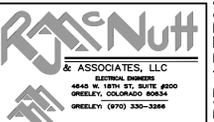
Table with 3 columns: No., Description, Date. Multiple empty rows for revisions.

GRAND SKI STOR REMODEL STEAMBOAT SPRINGS, CO. Logo and project name.

ERIC SMITH ASSOCIATES, P.C. 1618 SEVENTH STREET, BOULDER, COLORADO 80302 (303) 442-5486, (303) 442-7748 FAX

Job Number: 20094.09
Date: 7/21/2021
Drawn By: CAD
Checked By: WMC

Project Phase: CONSTRUCTION DOCUMENTS
Sheet Title: ELECTRICAL SPECIFICATIONS
Sheet Number: E600



BID / PERMIT SET 7/21/2021