

260501	Basic Electrical Materials and Methods
260519	Conductors and Cables
262726	Wiring Devices
265100	Interior Lighting Fixtures
265102	Emergency Lighting

SECTION      TITLE

ELECTRICAL SPECIFICATIONS:

SUMMIT COUNTY - DOES LIGHTING  
SBM PROJECT NO. 12176

EXHIBIT A

13-082

13-082

PART 1 - GENERAL

- 1.1. RELATED DOCUMENTS
  - A. Division 26 Basic Electrical Requirements and Basic Electrical Materials and Methods section apply to work specified in this section.

- 1.2. DESCRIPTION OF WORK
  - A. Extent of electrical related work required by this section is indicated on drawings and/or specified in other Division-26 sections.
  - B. Furnish and install fire stopping for sealing around electrical penetrations through fire or smoke barriers, and floors.
  - C. This Contractor shall perform all selective Division 26 related and indicated demolition including: Nondestructive removal of materials and equipment for re-use or salvage as indicated. All equipment removed shall be offered to the Owner for his retention. If the Owner elects to retain equipment, it shall be turned over to the Owner at the site. If not, the equipment shall be removed from the premises by this Contractor.

- 1.3. SUMMARY
  - A. This section includes a limited scope of general construction materials and methods pertaining to Division 26 applications of the following items:

Definitions  
 Discrepancies  
 Codes and Permits  
 Interferences  
 Delivery, Storage and Handling  
 Rough-ins  
 Electrical installations  
 Cutting and patching  
 Fire stopping  
 Selective demolition and alterations

- 1.4. PROJECT CONDITIONS
  - A. Conditions Affecting Demolition: The following project conditions apply:
    - 1. The ceiling materials and some floor materials have been identified as containing asbestos. See the asbestos abatement report and remediation plan.
    - 2. Protect adjacent materials to remain. Install and maintain dust and noise barriers to keep dirt, dust, and noise from being transmitted to adjacent areas. Remove barriers to keep barriers after demolition operations are complete.

3.

Locate, identify, and protect electrical services passing through demolition area and serving other areas outside the demolition limits. Maintain services to areas outside demolition limits. When services must be interrupted, install temporary services for affected areas.

1.5. DEFINITIONS

A. To achieve brevity in Specification and on Drawings, certain words and phrases not contributing to clarity have been omitted. Unless mentioned specifically as work to be done by Other Trades, all requirements contained in the Specifications and shown on the Drawings shall be performed by the Principal Contractor for this Division of the Contract. The following definitions shall apply:

- 1. Where the word "provide" is used in connection with a system, equipment, or item, it shall be construed to mean the furnishing and installing of the system, equipment, or item.
- 2. Where the phrase "as directed" is used it shall be construed to mean as directed by the Architect or his authorized representative.

1.6. DISCREPANCIES

A. The design drawings, as submitted, are diagrammatic and are not intended to show exact location of equipment, electrical devices, etc. unless dimensions are given. Drawings are not to be scaled.

1. Equipment shall be installed along the general arrangement indicated on the drawings, and in accordance with the manufacturer's instructions.

- a. Provide at least the minimum manufacturer's recommended and code required clearance around the equipment for normal maintenance.
- b. Locate and arrange equipment in relationship to other system components to assure that the equipment will be operating under the best possible conditions to meet the scheduled performance requirements.

2. Raceways are to be installed along the general plans shown on the drawings keeping in mind the constraints of the available space and the need to coordinate with the work of other trades. Additional bends, pull and splice boxes shall be provided as necessary to meet space constraints and to facilitate the work of other trades.

1.7. CODES AND PERMITS

A. All equipment, materials, and installation shall comply with the National Fire Protection Association's "National Fire Codes" and "National Electrical Code". Equipment shall bear the "UL" label as required by these codes.

B. Install work in full accordance with rules and regulations of State, County and City authorities having jurisdiction over premises. This shall include safety requirements of Ohio State Department of Industrial Relations. Do not construe this as relieving Contractor from

compliance with any requirements of specifications which are in excess of Code requirements and not in conflict therewith.

1.8. INTERFERENCES

A. Before installing any work, this Contractor shall see that it does not interfere with clearance required for finish on beams, columns, pilasters, walls or other structural or architectural members, as shown on Architectural Drawings. If any work is so installed and it later develops that Architectural design cannot be followed, Contractor shall, at his own expense, make such changes in his work as the Architect may direct to permit completion of Architectural work in accordance with plans and specifications.

B. Install additional conduit, pullboxes, spliceboxes, etc. where required to obtain maximum headroom or to avoid conflict with other work without additional cost to the Owner. Where mounting heights are not detailed or dimensioned, install electrical conduit and overhead equipment to provide the maximum headroom possible.

C. Report any interferences between work under this division and that of any other Contractors to the Architect as soon as they are discovered. The Architect will determine which equipment shall be relocated, regardless of which was first installed, and his decision shall be final.

1.9. DELIVERY, STORAGE, AND HANDLING

A. The Contractor shall make provisions for the delivery and safe storage of his materials and equipment in coordination with the work of others. Materials and equipment shall be delivered at such stages of the work as will expedite the work as a whole and shall be marked and stored in such a way as to be easily checked and inspected. The arrival and placing of large equipment items shall be scheduled early enough to permit entry and setting when there is no restriction or problem due to size and weight.

1.10. SEQUENCE AND SCHEDULING

A. Notify the Engineer at least 5 working days prior to commencing demolition operations.

PART 2 - PRODUCTS

2.1. FIRE STOPPING MATERIALS

A. Fire stopping materials shall be intumescent safety barriers designed to block the spread of fire and smoke through penetrations created by electrical installations in fire rated walls and floors. Materials shall be flame, toxic fume and water resistant and shall have a minimum 3 hour fire rating. Fire rating shall be defined by tests conducted by ASTM, UL or other testing and inspection agencies acceptable to authorities having jurisdiction.

1. Materials:

a. Firestop Mortar:

STI SpecSeal Mortar

- Tremco TREMstop-M  
3M Fire Barrier Mortar
- h. Intumescent Firestop Sealants and Caulks  
SpecSeal SSP Putty  
Tremco TREMstop-WBM  
3M Fire Barrier CP-25 WB
- c. Silicone Firestop Sealants Caulks  
STI SpecSeal Pensil 100 & 300  
Tremco Fyre Sil Sealant  
3M Fire Barrier 2000 & 2003
- d. Firestop Putty:  
STI SpecSeal Firestop Putty Bars & Pads  
Tremco TREMstop FP Flowable Putty  
3M Fire Barrier Firestop Putty
- e. Firestop Collars:  
STI SpecSeal Firestop Collars  
Tremco TREMstop D Combustible Pipe Device  
3M Fire Barrier Pipe Device
- f. Wrap Strip:  
STI Spec Seal Wrap Strip  
Tremco TREMstop-WS  
3M Fire Barrier WS-195 Wrap Strip

B. Sleeves shall be Schedule 40, galvanized steel with plain end. Sleeves shall be no more than two sizes larger than single penetrating conduit. For multiple cable or conduit penetrations, make sleeve as small as possible to allow for penetrating items and firestopping material.

PART 3 - EXECUTION

3.1. EXAMINATION

A. Examine area and conditions under which basic electric materials are to be installed or methods are to be performed and notify Engineer in writing of conditions detrimental to proper completion of the work. Do not proceed with the work until unsatisfactory conditions have been corrected in a manner acceptable to Engineer.

3.2. ELECTRICAL INSTALLATIONS

A. General: Sequence, coordinate, and integrate the various elements of electrical systems, materials, and equipment. Comply with the following requirements:

1. Coordinate electrical systems, equipment, and materials installation with other building components.
2. Verify all dimensions by field measurements.
3. Where mounting heights are not detailed or dimensioned, install systems, materials, and equipment to provide the maximum headroom possible.
4. Install systems, materials, and equipment to conform with approved submittal data, including coordination drawings, to greatest extent possible. Conform to arrangements indicated by the Contract Documents, recognizing that portions of the work are shown

- 5. Install systems, materials, and equipment level and plumb, parallel, and perpendicular to other building systems and components.
- 6. All wiring other than within an item of equipment, to be in raceways unless shown otherwise on Drawings or covered otherwise in these Specifications.
- 7. Raceways, boxes, cables, conductors, etc., installed in plenum spaces and similar areas shall be supported from the building structure and shall be installed symmetrical with the axis of the space (do not cross room at an angle).

3.3. CUTTING AND PATCHING

A. General: Perform cutting and patching as indicated.

1. Perform cutting, fitting, and patching of electrical equipment and materials required to:

- a. Demolition of electrical items required to be removed from structure to remain.
- b. Uncover work to provide for installation of ill-timed work.
- c. Remove and replace defective work.
- d. Remove and replace work not conforming to requirements of the Contract Documents.
- e. Install equipment and materials in existing structures.
- f. Upon written instructions from the Architect, uncover and restore work to provide for Architect observation of concealed work.

- 2. Cut, remove, and legally dispose of electrical equipment, components, and materials, including but not limited to electrical items to be removed and items made obsolete by the new work.
- 3. Protect the structure, furnishings, finishes, and adjacent materials not to be removed.
- 4. Provide and maintain temporary partitions or dust barriers adequate to prevent the spread of dust and dirt to adjacent areas.
- 5. Protection of Installed Work: During cutting and patching operations, protect adjacent installations.
- 6. Patch new and/or existing finished surfaces and building components using new materials matching existing materials and using workmen skilled in respective trade.
- 7. Where existing construction such as floors, walls, ceilings, etc., must be cut to relocate, remove or add raceways and/or equipment, such construction to be restored to original condition to satisfaction of Architect, by this Contractor using workmen skilled in respective trade.
- 8. General penetrations through walls, floors, slab, etc. will be patched with materials to match the surrounding surface (i.e. vinyl concrete patch for concrete surfaces, joint and patching compound for dry wall surfaces, etc.). If the penetrated surface is a fire or smoke barrier, refer to "Installation of Fire Stopping Materials" in this section.

3.4. INSTALLATION OF FIRE-STOPPING MATERIAL

A. General:

1. All fire and smoke rated walls and floors penetrated by electrical raceways, exposed conductors, etc. shall be properly sleeved and fire sealed. See Division 7 "Firestopping"; All firestop system types shall be by same manufacturer to fullest extent possible.
2. All fire stopping will be installed in accordance to the U.L. rated system designed for the application.
3. Insulation types specified in other sections shall not be installed in lieu of firestopping material specified herein.
4. GROUT, Mortar, or Gypsum products shall not be installed in lieu of firestopping material specified here.

B. Penetrations - Provide Firestopping:

1. Where penetrations including conduit, cable, wire, or other elements which pass through one or both outer surfaces of a fire rated floor or wall.
2. Except for floor on grade, where a penetration occurs through a structural floor or roof and a space would otherwise remain open between the surfaces of the penetration and the edge of the adjoining structural floor or roof.
3. Where a penetration occurs through fire-rated walls, or partitions of hollow-type construction, provide fire stopping to completely fill spaces around the penetration, on each side of the wall or partition.
4. These requirements for penetrations shall apply whether or not sleeves have been provided, and whether or not penetrations are to be equipped with escutcheons or other trim. If penetrations are sleeved, fire stop annular space, if any, between sleeve and wall opening.

- C. Provide fire stopping to fill miscellaneous voids and blank openings in fire-rated construction where conduit, cable, wire or equipment has been removed.

3.5. SELECTIVE DEMOLITION AND ALTERATION OF EXISTING ELECTRICAL SYSTEMS

A. Demolition Definitions:

1. Under demolition notes, several words and phrases are used. These shall be interpreted to mean as follows:

- a. Abandon: Disconnect designated equipment and remove respective conductors back to source, such as a panelboard, distribution panel, switchgear, etc. Alter respective legend accordingly.
- b. Disconnect: Disconnect designated equipment and remove respective branch circuit wiring and affected exposed electrical equipment, such as boxes, raceways, control, etc.

- 1.) Remove conductors back to source such as panelboard, etc. Alter respective legend accordingly.
- 2.) Remove exposed raceway. When in unfinished areas such as mechanical equipment rooms, remove back to source. When in finished spaces, remove only that raceway which is exposed.
- 3.) Where raceway is above an existing suspended, accessible ceiling and that ceiling grid is being reused or replaced, remove the

exposed raceway in the affected area. Concealed homeruns are to remain and may be reused at Contractor's option.

- c. Disconnect and Reconnect: Disconnect designated items, remove and store same where necessary, and then reinstall item and reconnect to existing branch circuit and control.
- d. Remove Branch Circuit and/or Feeder: Remove conductor and respective raceway, fittings, boxes, etc.

B. Where existing accessible ceiling grid panels and grid support members are removed to permit the installation of new conduit, boxes, etc., it shall be the responsibility of this Contractor to reinstall the panels and grid support system to the satisfaction of the Architect. Damaged items shall be replaced at no cost to the Owner.

C. Remove all existing affected electrical equipment, devices, fixtures, boxes, etc. which are not incorporated into or are not necessary for the operation of new and/or existing electrical systems, making sure that no remaining fixtures, devices, or appliances are left without service.

D. Make sure that no remaining fixtures, devices, etc. within the renovated area or adjacent areas are left without service.

1. Services and/or power outages and cutovers to be coordinated Engineer and Owner and done at Owner's convenience.
  2. Modify existing "systems" as required to accommodate added equipment.
  3. Remove abandoned accessible surface-mounted boxes and raceway. Abandoned accessible surface raceway shall be removed complete back to source.
  4. Where an abandoned raceway penetrates floor, slab, wall, etc. raceway shall be cut below the surface. Seal the opening and restore respective surface to match surrounding surface as directed.
  5. Where an abandoned raceway is not accessible, the raceway shall remain. Any accessible portions penetrating out of wall, floor, slab, etc. shall be cut off below the surface. Seal the opening and restore the respective surface to match the surrounding surface as directed.
  6. Where an existing distribution center is altered, provide a new, accurate, typed legend.
  7. Where work cannot be executed during normal working hours, this Contractor shall include in the Base Bid all necessary overtime pay to execute this contractors contract.
- E. Dispose of all lamps and ballasts property. Any ballast found to have PCB material in it shall be disposed of per all EPA and DOT regulations.
- F. All electrical equipment removed and not scheduled for reuse shall be turned over to the Owner at the construction site for salvage. All items deemed not salvageable by the Owner shall become the property of this Contractor and shall be removed from the site within 72 hours.

END OF SECTION 260501



SECTION 260519 - CONDUCTORS AND CABLES

PART 1 - GENERAL

- 1.1. RELATED DOCUMENTS
- A. Division-26 Basic Electrical Requirements, Basic Electrical Materials and Methods, and Electrical Identification sections apply to work specified in this section.
- 1.2. SUMMARY
- A. Extent of electrical wire and cable work is indicated by drawings and schedules.
- B. Types of electrical wire, cable, and connectors specified in this section include the following:  
 Copper conductors.  
 Fixture wires.  
 Wirenut connectors.
- C. Applications of electrical wire, cable, and connectors required for project are as follows:  
 For lighting circuits.
- 1.3. QUALITY ASSURANCE
- A. Manufacturers: Firms regularly engaged in manufacture of electrical wire and cable products of types, sizes, and ratings required, whose products have been in satisfactory use in similar service for not less than 3 years.
- B. Installer's Qualifications: Firm with at least 3 years of successful installation experience with projects utilizing electrical wiring and cabling work similar to that required for this project.
- C. Codes and Standards:
1. NEC Compliance: Comply with NEC requirements as applicable to construction, installation and color coding of electrical wires and cables.
  2. UL Compliance: Comply with requirements of all applicable UL standards.
  3. UL Compliance: Provide wiring/cabling and connector products which are UL-listed and labeled.
- 1.4. DELIVERY, STORAGE, AND HANDLING
- A. Deliver wire and cable properly packaged in factory-fabricated type containers, or wound on NEMA-specified type wire and cable reels.
- B. Store wire and cable in clean dry space in original containers. Protect products from weather, damaging fumes, construction debris and traffic.

C. Handle wire and cable carefully to avoid abrading, puncturing and tearing wire and cable insulation and sheathing. Ensure that dielectric resistance integrity of wires/cables is maintained.

PART 2 - PRODUCTS

2.1. ACCEPTABLE MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, provide products of one of the following (for each type of wire, cable, and connector):

1. Wire and Cable:
  - Anixter, Inc.
  - American Insulated Wire Corp.
  - Brand-Rex Cable Systems
  - Carol Cable Co., Inc.
  - Southwire Co.
  - Triange Wire & Cable, Inc.
2. Connectors:
  - Adalet, Inc.
  - Apleton Electric Co
  - Bumdy Corp.
  - Crouse Hinds, Div. of Copper Industries
  - Hubbell, Inc., Wiring Devices Div.
  - IlSCO
  - Kearney.
  - 3M Electrical Products Div.
  - O-Z/Gedney.
  - Thomas & Betts Corp.

2.2. WIRES, CABLES, AND CONNECTORS

A. General: Provide electrical wires, cables, and connectors of manufacturer's standard materials as indicated by published product information; designed and constructed as recommended by manufacturer, for a complete installation, and for application indicated. Unless noted otherwise on drawings or in these specifications, all conductors to be copper with conductivity not less than 98% at 20 deg C.

B. Building Wires: Provide factory-fabricated wires of sizes, ampacity ratings #12 AWG minimum size unless shown otherwise on Drawings. Where not indicated on Contract Documents, provide proper wire selection as determined by Installer to comply with project's installation requirements, NEC and NEMA standards. Select from the following UL types, those wires with construction features which fulfill project requirements:

1. Type THHN/THWN: For dry and wet locations; maximum operating temperature 75 deg C (167 deg F) for wet locations and 90 deg C (194 deg F) for dry locations.
2. Type THHN: For dry locations; max operating temperature 90 deg C (194 deg F).

C. Connectors:

1. General: Provide UL-type factory-fabricated, metal connectors of sizes, ampacity ratings, materials, types and classes for applications and for services indicated. Where not indicated, provide proper selection as determined by installer to comply with project's installation requirements, NEC and NEMA standards.

PART 3 - EXECUTION

3.1. EXAMINATION

- A. Examine areas and conditions under which products are to be installed, and substrate which will support wires and cables. Notify Engineer in writing of conditions detrimental to proper completion of the work. Do not proceed with work until unsatisfactory conditions have been corrected in manner acceptable to Engineer.

3.2. INSTALLATION OF WIRES AND CABLES

- A. General: Install electrical cables, wires and wiring connectors in compliance with applicable requirements of NEC, NEMA, UL, and NECA's "Standard of Installation", and in accordance with recognized industry practices.

1. Coordinate wire/cable installation work including electrical raceway and equipment installation work, as necessary to properly interface installation of wires/cables and other work.
2. Pull conductors simultaneously where more than one is being installed in same raceway.
3. Use pulling means including, fish tape, cable, rope and basket weave wire/cable grips which will not damage cables or raceway.
4. Keep conductor splices to minimum and accessible.
5. Install splices and tapes which possess equivalent and/or better mechanical strength and insulation ratings than conductors being spliced.
6. Use splice and tap connectors which are compatible with conductor material.
7. Tighten electrical connectors and terminals, including screws and bolts, in accordance with manufacturer's published torque tightening values. Where manufacturer's torquing requirements are not indicated, tighten connectors and terminals to comply with tightening torques specified in UL Std 486A and B.
8. Conductors to be color-coded for phase identification, as follows:

208Y/120 Volts	480Y/277 Volts
Phase	Phase
A B C	A B C
Black Red Blue White Green	Brown Orange Yellow
Neutral Ground Isolated Ground	Green with Yellow Stripe

White with Black Stripe  
Neutral

9. Nominal 20 amp branch circuit home runs to panelboards and/or control equipment longer than 100 feet to be not less than #10 AWG and sized to allow for voltage drop.
10. Conductors of #12 AWG size and larger to be stranded.
11. Conductors installed in locations subject to greater or less than normal ambient temperature to have insulation suitable and approved for such locations.
12. Where home runs serving fluorescent fixtures are combined, the neutral shall be considered a current carrying conductor.

3.3. FIELD QUALITY CONTROL

- A. Prior to energization of circuitry, check installed wires and cables with megohm meter to determine insulation resistance levels to ensure requirements are fulfilled.
- B. Prior to energization, test wires and cables for electrical continuity and for short-circuits.
- C. Subsequent to wire and cable hook-ups, energize circuitry and demonstrate functioning in accordance with requirements. Where necessary, correct malfunctioning units, and then retest to demonstrate compliance.

END OF SECTION 260519

SECTION 262726 - WIRING DEVICES

PART 1 - GENERAL

1.1. RELATED DOCUMENTS

- A. Division-26 Basic Electrical Requirements and Basic Electrical Materials and Methods sections apply to work specified in this section.

1.2. SUMMARY

- A. This section includes the following:
  - Occupancy Sensors

1.3. SUBMITTALS

- A. Product data for each type of product specified.
- B. Samples of those products indicated for sample submission in Architect's comments on product data submittal. Include color and finish samples of device plates and other items per Architect's request.

1.4. QUALITY ASSURANCE

- A. Regulatory Requirements: Comply with provisions of the following codes.
  - 1. NFPA 70 "National Electrical Code".
  - 2. UL and NEMA Compliance: Provide wiring devices which are listed and labeled by UL and comply with applicable UL and NEMA standards.

1.5. SEQUENCE AND SCHEDULING

- A. Schedule installation of finish plates after the surface upon which they are installed has received final finish.

PART 2 - PRODUCTS

2.1. MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

Watt Stopper - (Occupancy sensors)  
System Sensor (Occupancy sensors)

2.2. WIRING DEVICES  
WIRING DEVICES

A. General: Provide wiring devices, in types, characteristics, grades, colors, and electrical ratings for applications shown on Drawings which are UL listed and which comply with all applicable UL and NEMA standards. Color and/or finish of wiring devices to be ivory unless otherwise noted or directed by Architect.

1. Wall mounted type occupancy sensors shall be infrared technology or dual technology (ultra sonic and infrared) UL listed as noted on plans and schedules and have the following features:

- a. Switching Capacity:
  - 1.) Fluorescent and Incandescent
  - 2.) 1000 Watts (120 Volts)
  - 3.) 1/6 HP
- b. Voltage:
  - 1.) 120 and 277 Volts
  - 2.) Watt Stopper #DT-205 (Dual Technology)
  - 3.) Watt Stopper #WS-250 (Infrared)
- c. Time Adjustment - 10 seconds to 15 minutes
- d. Sensitivity Adjustment - Sensitivity can be reduced by approximately 30%.
- e. Switchable Ambient Light Adjustment - Sensor will not allow lights to turn on if ambient light level exceeds 50 footcandles. This feature shall be capable of being overridden.
- f. Integral off-auto switch.
- g. Wall mounted type occupancy sensors shall be mounted over flush 4" square box with single gang plaster ring.

2.3. WIRING DEVICE ACCESSORIES

A. Wall Plates: Single and combination, of types, sizes, and with ganging and cutouts as required by diagrammatic layout shown on drawings or as required by Architect. Provide plates which mate and match with wiring devices to which attached. Provide metal screws for securing plates to devices with screw heads colored to match finish of plates. Provide wall plates color to match wiring devices except as otherwise indicated or required by code. Provide plates possessing the following additional construction features:

- 1. Material and Finish: Steel plate, galvanized.(Mechanical/Electrical Rooms)
- 2. Material and Finish: Nylon, smooth. (Finished Spaces) Confirm color with Architect.

PART 3 - EXECUTION

3.1. EXAMINATION

A. Examine areas and conditions under which wiring devices are to be installed. Notify Engineer in writing of conditions detrimental to proper completion of the work. Do not proceed with work until unsatisfactory conditions have been corrected in manner acceptable to Engineer.

3.2. INSTALLATION OF WIRING DEVICES AND ACCESSORIES

- A. Install wiring devices and accessories in accordance with manufacturer's written instructions, applicable requirements of NEC, and in accordance with recognized industry practices to fulfill project requirements.
  - B. Coordinate with other work, including painting, electrical boxes and wiring installations, as necessary to interface installation of wiring devices with other work.
  - C. Install wiring devices only in electrical boxes which are clean; free from excess building materials, dirt, and debris.
  - D. Install wiring devices after wiring work is completed.
  - E. Install wallplates after painting work is completed.
  - F. Tighten connectors and terminals, including screws and bolts, in accordance with equipment manufacturer's published torque tightening values for wiring devices. Where manufacturer's torquing requirements are not indicated, tighten connectors and terminals to comply with tightening torques specified in UL Stds 486A. Use properly scaled torque indicating hand tool.
  - G. Verify location of floor boxes and above counter receptacles with Architect and Owner prior to rough-in.
  - H. Grounding type receptacles shall be installed with the grounding prong opening in the up position. Horizontally mounted grounding type receptacles shall be installed with the neutral prong opening in the up position.
  - I. When making connections to wiring devices with #10 or smaller stranded wire, the frayed end shall be taped or enclosed by a piece of the conductor insulation.
- 3.3. PROTECTION
- A. Protect installed components from damage. Replace damaged items prior to final acceptance.
- 3.4. FIELD QUALITY CONTROL
- A. Testing: Prior to energizing circuitry, test wiring for electrical continuity, and for short-circuits. Ensure proper polarity of connections is maintained. Subsequent to energizing, test wiring devices and demonstrate compliance with requirements, operating each operable device at least six times.
  - B. Test ground fault interrupter operation with both local and remote fault simulations in accordance with manufacturer recommendations.
- 3.5. CLEANING
- A. General: Clean devices, device outlet boxes, and enclosures. Replace stained or painted wall plates or devices.

END OF SECTION 262726

SECTION 265100 - INTERIOR LIGHTING FIXTURES

PART 1 - GENERAL

- 1.1. RELATED DOCUMENTS
  - A. Division-26 Basic Electrical Requirements and Basic Electrical Materials and Methods sections apply to work specified in this section.

1.2. SUMMARY

- A. Extent, location, and details of interior lighting fixture work are indicated on drawings and in schedules.

- B. Types of interior lighting fixtures in this section include the following:

Fluorescent

1.3. SUBMITTALS

- A. Product Data: Submit manufacturer's product data and installation instructions on each type interior building lighting fixture and component. Components include, but are not limited to lamp and ballast information.

- B. Submit fixture shop drawings in booklet form with separate sheet for each fixture, assembled in "luminaires type" alphabetical or numerical order, with proposed fixture and accessories clearly indicated on each sheet. All fixture shop drawings required must be submitted at one time. Failure to submit all fixture shop drawings at once is cause for rejection of entire submittal.

- C. Separate ballast cut sheets for each type of ballast provided shall be submitted with lighting fixture booklets. Shop drawings shall clearly indicate which ballast type is provided with each fixture. Refer to Division 26 Section Emergency Lighting for fluorescent emergency ballast requirements.

- D. Separate lamp cut sheets for each type of lamp provided shall be submitted with lighting fixture booklets. Shop drawings clearly indicate which lamp type is provided with each fixture.

1.4. QUALITY ASSURANCE

- A. Manufacturer's Qualifications: Firms regularly engaged in manufacture of interior lighting fixtures of sizes, types and ratings required, whose products have been in satisfactory use in similar service for not less than 3 years.

- B. Installer's Qualifications: Firms with at least 3 years of successful installation experience on projects with interior lighting fixture work similar to that required for this project.

- C. Codes and Standards:



1. Electrical Code Compliance: Comply with applicable local code requirements of the authority having jurisdiction and NEC Articles 220, 410, and 510 as applicable to installation, and construction of interior building lighting fixtures.
2. UL Compliance: Comply with UL standards, including UL 486A and B, pertaining to interior lighting fixtures. Provide interior lighting fixtures and components which are UL-listed and labeled.
3. CBM Labels: Provide fluorescent lamp ballasts which comply with Certified Ballast Manufacturers Association standards and carry the CBM label.

1.5. DELIVERY, STORAGE, AND HANDLING

- A. Deliver interior lighting fixtures in factory-fabricated containers or wrappings, which properly protect fixtures from damage.
- B. Store interior lighting fixtures in original packaging. Store inside well-ventilated area protected from weather, moisture, soiling, extreme temperatures, humidity, laid flat and blocked off ground.
- C. Handle interior lighting fixtures carefully to prevent damage, breaking, and scoring of finishes. Do not install damaged units or components; replace with new.

1.6. SEQUENCING AND SCHEDULING

- A. Coordinate with other work including wires/cables, electrical boxes and fittings, and raceways, to properly interface installation of interior lighting fixtures with other work.
- B. Sequence interior lighting installation with other work to minimize possibility of damage and soiling during remainder of construction.

PART 2 - PRODUCTS

2.1. MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products as shown on fixture schedule (for each type of interior lighting fixture).

2.2. FIXTURES

- A. General: Provide lighting fixtures, of sizes, types and ratings indicated on Drawings; complete with, but not limited to, housings, energy-efficient lamps, lamp holders, reflectors, energy-efficient ballasts, and wiring. Ship fixtures factory-assembled, with those components required for a complete installation. Design fixtures with concealed hinges and catches, with metal parts grounded as common unit, and so constructed as to dampen ballast generated noise.
- B. Wiring: Provide electrical wiring within fixture suitable for connecting to branch circuit wiring as follows:  
NEC Type AF for 120 volt, minimum No. 18 AWG.

C. Fluorescent Lamp Electronic Ballasts: Provide electronic fluorescent lamp ballasts unless shown otherwise on Drawings, with the following characteristics:

1. Fluorescent fixture ballasts to be CBM-ETL approved, UL labeled, "P" Type I outdoor rated.
  2. Operate at frequencies higher than 25 KHz with less than 2% lamp flicker.
  3. Contain no PCB material.
  4. Comply with requirements of UL Class P for thermal protection.
  5. Contain an "A" sound rating for quiet operation.
  6. Maintain the minimum ballast efficacy factors as established by the National Appliance Act 100-357.
  7. Restrict total harmonic distortions of the input current as generated by the ballast to a maximum of 10%.
  8. Operate in minimum ambient temperature of 0 deg F.
  9. Comply with requirements of IEEE 587 Category A for surge or transient voltage protection.
  10. Comply with requirements of FCC Part 18, Subpart J, pertaining to suppress radio frequency interference (RFI) and electromagnetic interference (EMI).
  11. Tolerate line voltage variations of 5% above or 7% below nameplate rating.
  12. Contain a three year warranty from date of manufacturing against defects in material and workmanship. This warranty shall include a ten dollar (\$10.00) per ballast replacement labor allowance.
  13. Specific ballasts shall be designed to operate with specific lamps. Multi-duty ballasts are not acceptable.
  14. Achieve a minimum power factor of 98%.
  15. Ballast case temperatures shall not exceed 25 deg C rise over 40 deg C ambient.
  16. Ballasts shall be instant start type (parallel lamp operation) and maintain a lamp current crest factor of less than 1.7.
  17. Fluorescent fixture electronic ballasts to be CBM-ETL approved, UL labeled.
- D. Lamps:
1. General:
    - a. Manufacturer: Osram or equivalent as manufactured by Advance, Universal, or General Electric unless noted otherwise on Drawings.
    - b. Ballasts for a particular category of fixture (i.e. "A" units) to be of same manufacturer and style.
    - c. Ballasts to be manufactured within 6 months of fixture installation.
2. Fluorescent Lamps:
- a. This contractor shall provide lamps for each fixture type as shown on fixture schedule.
  - b. Color of lamps shall be as shown on fixture schedule.
  - c. Lamps shall be as manufactured by Osram Sylvania (OSI). Equivalent lamps as manufactured by General Electric (GE) and Phillips Lighting Company are acceptable.

a. Linear Fluorescent Lamps:

- 1.) T8 fluorescent lamps shall be Ocron (OSI) or equivalent as manufactured by GE or Phillips with a minimum 20,000 hour rated life.

E. Interior Lighting Fixture Types:

1. General: Various fixture types required are indicated on fixture schedule. Fixtures must comply with minimum requirements as stated herein. Review architectural drawings and specifications to verify ceiling types, modules, suspension systems appropriate to installation.

PART 3 - EXECUTION

3.1. EXAMINATION

- A. Examine areas and conditions under which lighting fixtures are to be installed, and substrate for supporting lighting fixtures. Notify Engineer in writing of conditions detrimental to proper completion of the work. Do not proceed with work until unsatisfactory conditions have been corrected in manner acceptable to Engineer.

3.2. INSTALLATION OF INTERIOR LIGHTING FIXTURES

- A. All fixtures to be supported securely from building structure and/or walls and the responsibility for mounting same shall be that of this Contractor.

1. Where surface mounted fixtures are mounted from "lay-in" type ceilings, the fixtures shall be supported independent of respective lay-in panel channel support system and fastened to the building structural system.
2. Wall mounted fluorescent fixtures to have additional 1/4" toggle bolt (or equivalent) support at each end of module.
3. Where lay-in type fluorescent fixtures (2'x4', 2'x2', or 1'x4') are installed in inverted tee grid ceiling systems, each fixture shall be secured to the tee bar with hold down clips. In addition, one (1) galvanized safety wire shall be installed from each corner of the fixture (total of four (4) corners) to the building structure. Fixture safety wires shall be independent of and in addition to the ceiling grid support wires. Gauge of fixture safety wire shall be same as ceiling grid support wire.
4. Where lighting fixtures are installed below ductwork, this Contractor shall provide additional horizontal support independent of the ductwork and secure same from the building structure.
5. Where retrofit kits are installed, this contractor shall provide for securing the fixture in a manner as if it was a new fixture (i.e. safety wire installation).

- B. It shall be the responsibility of this Contractor to coordinate with other affected trades the installation of all fixtures and to furnish and install plaster frames and other hanging devices where required for each type of ceiling within building. See Architectural Drawings for Room Finish Schedule.

- C. Instruct Owner in setting, operation and maintenance of any lighting control equipment such as time clocks, relays, dimmers, pushbuttons, etc.
- D. Where two levels of illumination are called for on Drawings, by use of asterisk (\*) in a given room or area, the following effect is desired:
  - 1. Multi-Level Illumination: Fixtures in room or space are double switched such that the outside lamps of each fixture are controlled separately from the inside lamp(s) of each fixture OR stepped dimming ballasts are provided in each fixture to provide multiple levels of illumination. Refer to fixture schedule for specific ballast and control requirements.
- E. Provide separate grounding conductor in flexible metal conduit between outlet box and lighting fixture and ground respective lighting fixture with same.
- F. Mounting, support and connection of lighting fixtures furnished by Owner or Other Divisions to be the responsibility of this Contractor unless noted otherwise on the Drawings.

3.3. FIELD QUALITY CONTROL

- A. At Date of Substantial Completion, replace lamps in interior lighting fixtures which are observed to be noticeably dimmed after Contractor's use and testing, as judged by Architect
- B. Furnish stock or replacement lamps amounting to 15%, but not less than four (4) lamps in each case, of each type and size lamp used in each type fixture. Furnish stock or replacement ballasts amounting to 5%, but not less than one (1), of each type ballast used in each type fixture. Deliver replacement stock as directed to Owner's storage space.

3.4. ADJUSTING AND CLEANING

- A. Clean interior lighting fixtures of dirt and construction debris upon completion of installation. Clean fingerprints and smudges from lenses.
- B. Protect installed fixtures from damage during remainder of construction period.
- C. Protective plastic bags shall remain on fixtures with parabolic type lenses until final building cleaning is complete. If protective bags are removed prior to final building cleaning and lenses become dirty, dusty, etc., this Contractor shall clean lenses and restore to original condition as directed by the Engineer.
- D. Where existing fixtures are removed under demolition phase of project and reinstalled, this Contractor shall clean fixture housing, reflector and lens and relamp with new lamps to match those previously installed except with color rendering comparable to new fixture/lamps being installed or as directed by Engineer.

3.5. DEMONSTRATION

- A. Upon completion of installation of interior lighting fixtures, and after building circuitry has been energized, apply electrical energy to demonstrate capability and compliance with

END OF SECTION 265100

requirements. Where possible, correct malfunctioning units at site, then retest to demonstrate compliance; otherwise, remove and replace with new units, and proceed with retesting.

SECTION 265102 - EMERGENCY LIGHTING

PART 1 - GENERAL

- 1.1. RELATED DOCUMENTS
- A. Division-26 Basic Electrical Requirements and Basic Electrical Materials and Methods sections apply to work specified in this section.

1.2. DESCRIPTION OF WORK

- A. Extent of emergency lighting work is indicated by drawings and schedules.
- B. Types of emergency lighting fixtures in this section include the following:  
 Unitized battery powered fixtures  
 Exit fixtures

1.3. QUALITY ASSURANCE

- A. Manufacturer's Qualifications: Firms regularly engaged in manufacture of emergency lighting fixtures of types and ratings required, whose products have been in satisfactory use in similar service for not less than 3 years.
- B. Installer's Qualifications: Firm with at least 3 years of successful installation experience on projects with emergency lighting work similar to that required for project.
- C. Codes and Standards:
1. NEC Compliance: Comply with NEC as applicable to installation and construction of emergency lighting.
  2. NEMA Compliance: Comply with applicable requirements of NEMA Std Pub No.'s 1B 4, 1B 5, and FA 1 pertaining to emergency lighting.
  3. UL Compliance: Provide emergency lighting fixtures which are UL-listed and labeled.
  4. NFPA Compliance: Comply with applicable requirements of NFPA 101, "Life Safety Code".

1.4. SUBMITTALS

- A. Product Data: Submit manufacturer's technical product data on emergency lighting fixtures.
- B. Shop Drawings: Submit fixture shop drawings in booklet form with separate sheet for each fixture, assembled in luminare "type" alphabetical, or numerical order, with proposed fixture and accessories clearly indicated on each sheet.
- C. Maintenance Data: Submit maintenance data and parts list for each emergency lighting fixture and accessory; including "trouble-shooting" maintenance guide. Include this data, product data, and shop drawings in maintenance manual; in accordance with requirements of Division 1.

- 1.5. DELIVERY, STORAGE, AND HANDLING
- A. Handle lighting fixtures carefully to prevent damage, breaking, and scoring. Do not install damaged fixtures or components; replace with new.
  - B. Store lighting fixtures in clean dry place. Protect from weather, dirt, fumes, water, construction debris, and physical damage.

PART 2 - PRODUCTS

- 2.1. ACCEPTABLE MANUFACTURERS
- A. Manufacturers: Subject to compliance with requirements, provide unitized battery powered fixtures and exit signs as shown on fixture schedule (for each type of emergency lighting fixture).

PART 3 - EXECUTION

- 3.1. EXAMINATION
- A. Examine areas and conditions under which lighting fixtures are to be installed, and substrate which will support lighting fixtures. Notify Engineer in writing of conditions detrimental to proper completion of the work. Do not proceed with work until unsatisfactory conditions have been corrected in manner acceptable to Engineer.

3.2. INSTALLATION OF EMERGENCY LIGHTING FIXTURES

- A. Install emergency lighting fixtures at locations and heights indicated or directed in accordance with fixture manufacturer's written instructions, applicable requirements of NEC, NECA's "Standard of Installation", NEMA standards, and with recognized industry practices to ensure that lighting fixtures fulfill requirements.
- B. Coordinate with other electrical work as appropriate to properly interface installation of emergency lighting fixtures with other work.

3.3. ADJUSTING AND CLEANING

- A. Clean emergency lighting fixtures of dirt and debris upon completion of installation.
- B. Protect installed fixtures from damage during remainder of construction period.

3.4. GROUNDING

- A. Provide equipment grounding connections for emergency lighting fixtures as indicated. Tighten connections to comply with tightening torques specified in UL Std 486A to assure permanent and effective grounds.

3.5. FIELD QUALITY CONTROL

- A. Upon completion of installation of emergency lighting fixtures, and after building circuitry has been energized with normal power source, apply electrical energy to demonstrate capability and compliance with requirements. Test emergency lighting to demonstrate operation under emergency conditions. Where possible, correct malfunctioning units at site, then retest to demonstrate compliance; otherwise, remove and replace with new units, and proceed with retesting.

END OF SECTION 265102



11/15/15

SUMMIT COUNTY D.O.E.S. LIGHT FIXTURE SCHEDULE

FIGURE DESIGNATION	CATALOG NUMBER	FIGURE DESCRIPTION	MOUNTING	LAMPS
A		LAMP BALLAST AND HARDWARE REPLACEMENT. PROVIDE ONE GE #GE322MAXX-LULTRA BALLAST FOR 2-LAMP FIXTURES AND GE #GE332MAXX-LULTRA FOR 3-LAMP FIXTURES	RETROFIT	AS REQUIRED
B	LB-328T8-MVOLT-ADOPR-LB41	LITHONIA, LOW PROFILE WRAPAROUND, 15.38"W x 48"L x 3"D, SURFACE STYLE WITH WHITE ENAMEL END PLATES AND ACRYLIC PRISMATIC DIFFUSER, THREE (3) 28W T8 LAMPS WITH AN MVOLT ADVANCE OPTANUM PROGRAM START BALLAST.	SURFACE	3-F028841/2PSS
C	CB-1-28T8-MVOLT-ADOPR-LB41	LITHONIA, CORRIDOR WRAPAROUND FIXTURE 7"W x 4-1/2"H x 48"L, HOUSING FORMED FROM COLD ROLLED STEEL WITH BAKED WHITE ENAMEL FINISH AND ACRYLIC PRISMATIC DIFFUSER, ONE (1) 28W T8 LAMP WITH ONE (1) MVOLT ADVANCE OPTANUM PROGRAM START BALLAST.	SURFACE	1-F028841/2PSS
D	AGRKA-128T8-CVXX-MVOLT-GBH-LP841	METAL OPTICS, GENERAL PURPOSE STRIP CONVERSION KIT WITH CHANNEL COVER, ONE (1) 28W T8 LAMP PROFILE ONE (1) MULTIVOLT 120/277V HIGH BALLAST FACTOR BALLAST WITH LESS THAN 20% THD AND 4100 DEG. KELVIN LAMPS, VERIFY WIDTH REQUIREMENT IN FIELD PRIOR TO ORDERING.	RETROFIT	INCLUDED
E	2LB-228T8-MVOLT-ADOPR-LB41	SAME AS FIGURE "A", CONTINUOUS LENGTH AS SHOWN ON PLANS.	SURFACE	2-F028841/2PSS PER SECTION
F	ELM2-LED	LITHONIA, LED LAMP HEAD EMERGENCY LIGHT WITH THERMOPLASTIC, IMPACT-RESISTANT, SCRATCH-RESISTANT, AND CORROSION PROOF HOUSING, DUAL VOLTAGE INPUT WITH NI-CAD BATTERY CAPABLE OF MINIMUM 90 MINUTES OF ILLUMINATION.	SURFACE	INTEGRAL
G	2MRT-228T8-MVOLT-BHP-SSR	LITHONIA, UNIVERSAL 2' X 4' TROFFER CONVERSION KIT WITH SPREAD BEAM PHOTOMETRIC REFLECTOR, TWO (2) 28W T8 LAMPS, 120/277V HIGH BALLAST FACTOR BALLAST WITH LESS THAN 20% THD AND 4100 DEG. KELVIN LAMPS.	RETROFIT	INCLUDED
H	RKT-24-328T8-L-EL-LP841	COLUMBIA, UNIVERSAL 2' X 4' TROFFER CONVERSION KIT WITH SPREAD BEAM PHOTOMETRIC REFLECTOR, THREE (3) 28W T8 LAMPS, 120/277V HIGH BALLAST FACTOR BALLAST WITH LESS THAN 20% THD AND 4100 DEG. KELVIN LAMPS.	RETROFIT	INCLUDED
J	LHQMS-W-3-R-N	LITHONIA, QUANTUM LED EXHAUST COMBO, REPLACEABLE CHEVRON DIRECTIONAL INDICATOR KNOCKOUTS, TWO (2) SIDE MOUNT LAMP HEADS, LONG LIFE LEDS AND A SEALED MAINTENANCE FREE LEAD-CALCIUM BATTERY.	SURFACE	INTEGRAL
K	LOMS-W-3-R-120277-ELN	LITHONIA, QUANTUM LED EXT. SIGN, REPLACEABLE CHEVRON DIRECTIONAL INDICATOR KNOCKOUTS, LONG LIFE LEDS AND A SEALED MAINTENANCE FREE LEAD-CALCIUM BATTERY.	SURFACE	INTEGRAL
L		LAMP BALLAST AND HARDWARE REPLACEMENT. PROVIDE ONE GE #GE288MAXX-HON UNIVERSAL VOLTAGE BALLAST IN ALL 8' SECTIONS (GOOD FOR ONE OR TWO LAMPS), AND ONE GE #GE132MAXX-LULTRA FOR SINGLE LAMP 4' SECTION, AND ONE GE #GE322MAXX-LULTRA FOR TWO LAMP 4' SECTIONS.	RETROFIT	AS REQUIRED

M	WP-12818-MMOLT-GEB10IS	LITHONIA GENERAL PURPOSE WALL BRACKET FIXTURE 7 3/8"D x 3 1/4" H x 48 1/2" L. LINEAR FLUORESCENT FIXTURE WITH (2) 28W T8 LAMPS. ONE (1) MULTIVOLTAGE BALLAST WITH LESS THAN 10% THD AND 4100 DEGREE KELVIN LAMPS	SURFACE	2-F028/841XPSS
N		GE SEL-F-BALLASTED SCREW-BASE CFL	RETRCHFT	1-FL E29HLX2/ML827
P	AF-228-MMOLT-GEB10IS PAF-WGAFPV	LITHONIA HEAVY DUTY TURRET INDUSTRIAL. 13-3/8" H x 5-5/8" W x 9-13/16" D. 2-LAMP 20% UPLIGHT. BAKED WHITE ENAMEL FINISH WITH WIRE GUARD AND ONE (1) MULTIVOLT ELECTRONIC BALLAST WITH LESS THAN 10% THD.	ELECTRICAL, MECHANICAL ROOMS	2-F028/841XPSS
NC		*NC INDICATES NO CHANGE. THE FIXTURE IS NOT BEING CHANGED		

OCCUPANCY SENSORS		REMARKS
DESIGNATION	DESCRIPTION	
NC	NO CHANGE IN CONTROL	
WALL OCC - IR	WATT STOPPER WS-200 OR ENGINEER APPROVED EQUAL. 180 DEGREES COVERAGE WITH A MAXIMUM OF 900 SQUARE FEET. BUILT-IN LIGHT LEVEL SENSOR WITH DUAL 120/277V OPERATION AND COMPATIBLE WITH ALL ELECTRONIC BALLASTS.	REPLACE EXISTING SWITCH
WALL OCC - IR (DUAL)	WATT STOPPER PW-200 OR ENGINEER APPROVED EQUAL. 180 DEGREES COVERAGE WITH A MAXIMUM OF 900 SQUARE FEET. BUILT-IN LIGHT LEVEL SENSOR WITH DUAL 120/277V OPERATION AND COMPATIBLE WITH ALL ELECTRONIC BALLASTS.	CONFIGURED AS BAL-LEVEL SWITCHING
WALL OCC - IR (3WAY)	WATT STOPPER WS-200 OR ENGINEER APPROVED EQUAL. 180 DEGREES COVERAGE WITH A MAXIMUM OF 900 SQUARE FEET. BUILT-IN LIGHT LEVEL SENSOR WITH DUAL 120/277V OPERATION AND COMPATIBLE WITH ALL ELECTRONIC BALLASTS.	CONFIGURED FOR THREE WAY SWITCHING

TYPE	ENGINEER APPROVED EQUAL
A	COOPER COLUMBIA
B	COOPER COLUMBIA
C	COOPER COLUMBIA
D	COOPER COLUMBIA INDUSTRIAL LIGHTING PRODUCTS
G	COOPER COLUMBIA INDUSTRIAL LIGHTING PRODUCTS
H	COOPER COLUMBIA INDUSTRIAL LIGHTING PRODUCTS
I	COOPER COLUMBIA
J	COOPER COLUMBIA
K	COOPER COLUMBIA
L	FOCAL POINT ZUMTobel
OCCUPANCY SENSORS	HUBBELL BUILDING SYSTEMS, LLC&D

**SPECIAL NOTES AND CONDITIONS**

1. CONTRACTOR TO VERIFY ALL BALLAST VOLTAGE REQUIREMENTS PRIOR TO ORDERING.
2. LAMPS MUST BE RECYCLABLE
3. IF BALLAST FAILS BEFORE THE MANUFACTURER'S WARRANTY EXPIRES, CONTRACTOR WILL PAY \$100/BALLAST, IF THE OWNER REPLACES THE BALLAST.
4. CONTRACTOR SHALL PROVIDE ALL POWER PACKS AND ACCESSORIES REQUIRED FOR FULL OCCUPANCY INSTALLATION, WHERE MULTIPLE OCCUPANCY SENSORS ARE INSTALLED IN THE SAME ROOM, CONNECT SENSOR THROUGH POWER PACK TO FUNCTION TOGETHER
5. CONTRACTOR SHALL REMOVE THE EXISTING FIXTURES NOT REQUIRED TO BE USED AND RE-CENTER THE FIXTURES TO BE RETROFIT. **EXAMPLE -** EXISTING CONDITIONS HAVE 12 FIXTURES IN THE ROOM. SCOPE OF WORK CALLS FOR 9, CONTRACTOR SHALL REMOVE 3 FIXTURES AND RE-CENTER THE 9 REMAINING FIXTURES.
6. CONTRACTOR SHALL REMOVE THE EXISTING FIXTURES AND RE-CENTER THE NEW FIXTURES TO BE PROVIDED. THE SPACE REQUIRES AN INCREASE IN THE NUMBER OF FIXTURES, THEREFORE, THE EC SHALL INCLUDE THE COST OF CONDUIT AND WIRING TO EXTEND NEW BRANCH CIRCUITS FROM THE EXISTING CIRCUIT IN THEIR BID PRICE
7. FOR THE NEW CEILING OCCUPANCY SENSOR - INSTALL AHEAD OF ALL LOCAL SWITCHING SO SWITCHES CAN STILL BE USED FOR LIGHTING CONTROL.

**SUMMIT COUNTY D.O.E.S. LIGHTING UPGRADES**

ROOM NUMBER	ROOM NAME	EXISTING							REPLACEMENT		
		FIXTURE DESCRIPTION	FIXTURE QTY	LAMPS / FIXTURE	LAMP TYPE	CONTROLS	REMARKS	FIXTURE TYPE	CONTROLS	REMARKS	
001	STAIR	8' LINEAR BAFFLE	2	2	T12	3-WAY WALL SW AT EACH END	ASBESTOS CEILING (NOTE 1), 1-16" RUN	L	NC	BALLAST LAMP REPLACEMENT ONLY	
001	STAIR	12" SQUARE RECESSED	2	1	INC	N/A	ASBESTOS CEILING (NOTE 1)	N	NC	-	
001	STAIR	2 HEAD EM LIGHT	1	1	INC	N/A	ASBESTOS CEILING (NOTE 1)	F	NC	REINSTALL AT SAME LOCATION	
001	STAIR	EXIT SIGN	1	1	LED	N/A	ASBESTOS CEILING (NOTE 1)	K	NC	-	
002	LUNCH ROOM	8' LINEAR BAFFLE	2	2	T12	OCC WALL SW	ASBESTOS CEILING (NOTE 1), 2-RUNS OF 40" OCC SENSORS LEFT/RIGHT SIDES	L	NC	BALLAST LAMP REPLACEMENT ONLY	
002	LUNCH ROOM	2 HEAD EM LIGHT	1	1	INC	N/A	-	F	NC	REINSTALL AT SAME LOCATION	
003	STORAGE	A19 INCANDESCENT	1	1	INC	WALL SW	-	SCREW-IN	WALL-OCC-IR	-	
004	SUPPLIES	8' LINEAR BAFFLE	3	2	T12	WALL SW	ASBESTOS CEILING (NOTE 1), 2-RUNS OF 16", 1-RUN OF 8"	L	WALL-OCC-IR	BALLAST LAMP REPLACEMENT ONLY	
005	STORAGE	4' LINEAR BAFFLE	3	2	T12	DIMMER	3 RUNS OF 30"	L	WALL-OCC-IR	BALLAST LAMP REPLACEMENT ONLY	
006	SAFETY STORAGE	ACRYLIC WRAP AROUND	8	4	T12	WALL SW	ASBESTOS CEILING (NOTE 1)	A	WALL-OCC-IR	-	
007	ADMIN RECORDS STORAGE	8' LINEAR BAFFLE	3	2	T12	WALL SW	ASBESTOS CEILING (NOTE 1), 3-RUNS OF 16"	L	WALL-OCC-IR	BALLAST LAMP REPLACEMENT ONLY	
008	WOMENS	8' LINEAR BAFFLE	2	2	T12	WALL SW	1-12" RUN, 1-8" RUN	L	NC	BALLAST LAMP REPLACEMENT ONLY	
008	WOMENS	2 HEAD EM LIGHT	1	1	INC	N/A	ASBESTOS CEILING (NOTE 1)	F	N/A	REINSTALL AT SAME LOCATION	
009	JANITOR	A19 INCANDESCENT	1	1	INC	PULL CHAIN WALL SW AT END	ASBESTOS CEILING (NOTE 1)	N	NC	-	
009B	CORRIDOR	SURFACE MOUNT	1	2	T12	WALL SW AT END	-	A	NC	-	
009B	CORRIDOR	A19 INCANDESCENT	1	1	INC	N/A	-	N	NC	-	
009B	CORRIDOR	2 HEAD EM LIGHT	1	1	INC	N/A	-	F	NC	-	
009C	CORRIDOR / OPEN AREA	EXIT SIGN	1	1	INC	N/A	-	J	NC	-	
009C	CORRIDOR / OPEN AREA	EXIT SIGN	2	1	INC	N/A	-	K	N/A	-	

**SUMMIT COUNTY D.O.E.S. LIGHTING UPGRADES**

ROOM NUMBER	ROOM NAME	EXISTING						REPLACEMENT			
		FIXTURE DESCRIPTION	FIXTURE QTY	LAMPS/FIXTURE	LAMP TYPE	CONTROLS	REMARKS	FIXTURE TYPE	CONTROLS	REMARKS	
009C	CORRIDOR / OPEN AREA	2X4 ACRYLIC LAYIN	17	4	T12	MULTIPLE SINGLE POLE SWITCHES	-	H	NC	-	
009C	CORRIDOR / OPEN AREA	2-HEAD ENLIGHT	1	1	NC	N/A	-	F	NC	-	
010	MENS LOCKER	8 LINEAR BAFFLE	1	2	T12	WALL SW	1-16' RUN	L	NC	BALLAST LAMP REPLACEMENT ONLY	
010	MENS TOILET	8 LINEAR BAFFLE	2	2	T12	WALL SW	2-16' RUNS	L	NC	BALLAST LAMP REPLACEMENT ONLY	
010	MENS	2 HEAD ENLIGHT	1	1	INC	N/A	-	F	NC	REINSTALL AT SAME LOCATION	
011	CORRIDOR	8 LINEAR BAFFLE	1	1	T12	WALL SW	ASBESTOS CEILING (NOTE 1), CONTROL WITH CORRIDOR 22, 1-16' RUN	L	NC	BALLAST LAMP REPLACEMENT ONLY	
011	CORRIDOR	2 HEAD ENLIGHT	1	1	INC	N/A	-	F	NC	REINSTALL AT SAME LOCATION	
013	OFFICE	8 LINEAR BAFFLE	2	2	T12	WALL SW	1-16' RUN	L	WALL-OCC-IR 3 WAY	BALLAST LAMP REPLACEMENT ONLY	
014	STORAGE	ACRYLIC WRAP AROUND	5	4	T8	WALL SW	ASBESTOS CEILING (NOTE 1)	A	WALL-OCC-IR	BALLAST LAMP REPLACEMENT ONLY	
014C	CORRIDOR	SURFACE MOUNT	2	1	T12	WALL SW	ASBESTOS CEILING (NOTE 1) 1-24" AND 1-16' RUN	L	NC	BALLAST LAMP REPLACEMENT ONLY	
015	FILE ROOM	ACRYLIC WRAP AROUND	2	2	T12	WALL SW	ASBESTOS CEILING (NOTE 1)	A	WALL-OCC-IR	BALLAST LAMP REPLACEMENT ONLY	
016	ELECTRIC	A19 INCANDESCENT	1	1	INC	WALL SW	-	P	NC	-	
017	MECHANICAL	A19 INCANDESCENT	1	1	INC	WALL SW	-	P	NC	-	
019	MECHANICAL	OPEN INDUSTRIAL	5	2	T8	WALL SW	-	NC	NC	-	
019D	ELEV LOBBY	2X4 ACRYLIC LAYIN	1	4	T12	N/A	-	H	NC	-	
019C	CORRIDOR OUTSIDE ELEVATOR LOBBY	8 LINEAR BAFFLE	1	1	T12	SW	1-8' RUN	L	NC	BALLAST LAMP REPLACEMENT ONLY	
019C	CORRIDOR	EXIT SIGN	1	1	LED	N/A	-	J	NC	-	
022	WATER METER REPAIR	2X4 ACRYLIC LAYIN	2	4	T12	WALL SW	-	H	WALL-OCC-IR	-	
022A	CORRIDOR	2X4 ACRYLIC LAYIN	6	4	T12	3-WAY WALL SW AT EACH END	-	G	NC	-	
022A	CORRIDOR	EXIT SIGN	1	1	LED	N/A	-	K	NC	-	
022A	CORRIDOR	2 HEAD ENLIGHT	1	1	INC	N/A	-	F	NC	-	

**SUMMIT COUNTY D.O.E.S. LIGHTING UPGRADES**

ROOM NUMBER	ROOM NAME	EXISTING							REPLACEMENT		
		FIGURE DESCRIPTION	FIGURE QTY	LAMPS/ FIGURE	LAMP TYPE	CONTROLS	REMARKS	FIGURE TYPE	CONTROLS	REMARKS	
022B	CORRIDOR	8' LINEAR BAFFLE	7	1	T12	3-WAY WALL SW. AT EACH END	ASBESTOS CEILING (NOTE 1) 1-56' R/N	L	NC	BALLAST/LAMP REPLACEMENT ONLY	
022B	CORRIDOR	2 HEAD ENLIGHT	1	1	INC	N/A	-	-	REMOVE FIXTURE AND WIRING COVER OPENING WITH BLANK PLATE		
022B	CORRIDOR	EXIT SIGN	2	1	INC	N/A	-	NC	-		
022C	CORRIDOR	8' LINEAR BAFFLE	1	1	T12	3-WAY WALL SW. AT EACH END	1-16' RUN	C	NC	1-16' RUN	
022C	CORRIDOR	EXIT SIGN	1	1	INC	N/A	-	J	NC	-	
023	METER READERS	2X4 ACRYLIC LAYIN	21	4	T12	MULTIPLE SWITCHES	-	H	NC	-	
024	OFFICE	2X4 ACRYLIC LAYIN	2	4	T12	WALL SW.	-	H	WALL-OCC-IR	-	
025	STORAGE	2X4 ACRYLIC LAYIN	2	3	T12	WALL-OCC-IR	-	G	NC	-	
026	MECHANICAL	ACRYLIC WRAP/ROUND	1	2	T12	WALL SW.	-	A	NC	BALLAST/LAMP REPLACEMENT ONLY	
029	OFFICE	2X4 ACRYLIC LAYIN	4	4	T12	WALL SW.	-	H	WALL-OCC-IR	-	
030	OPEN STORAGE	2X4 ACRYLIC LAYIN	13	4	T12	WALL SW.	-	G	NC	-	
032	OPEN STORAGE	2X4 ACRYLIC LAYIN	15	4	T12	MULTIPLE	-	H	NC	-	
032A	ELEV. MACHINE ROOM	OPEN INDUSTRIAL	1	2	T8	WALL SW.	-	NC	NC	-	
033	OPEN STORAGE	2X4 ACRYLIC LAYIN	29	4	T12	MULTIPLE	ONE DAMAGED REFLECTOR	G	NC	-	
033B	OPEN STORAGE	2X4 ACRYLIC LAYIN	8	4	T12	WALL SW.	-	G	NC	-	
034	OFFICE	2X4 ACRYLIC LAYIN	4	4	T12	WALL SW.	-	H	WALL-OCC-IR	-	
036	ENG. RECORD STORAGE	2X4 ACRYLIC LAYIN	17	4	T12	WALL SW	2 LAMPS OUT IN EACH. 2 FIXTURES OUT	G	NC	-	
036B	OFFICE	2X4 ACRYLIC LAYIN	3	4	T12	WALL SW.	-	H	WALL-OCC-IR	-	
038	RECORDS STORAGE	2X4 ACRYLIC LAYIN	30	4	T12	MULTIPLE	ASBESTOS CEILING (NOTE 1)	G	NC	-	

**SUMMIT COUNTY D.O.E.S. LIGHTING UPGRADES**

ROOM NUMBER	ROOM NAME	FIXTURE DESCRIPTION	FIXTURE QTY	LAMPS / FIXTURE	EXISTING			REPLACEMENT		
					LAMP TYPE	CONTROLS	REMARKS	FIXTURE TYPE	CONTROLS	REMARKS
038	RECORDS STORAGE	2X4 ACRYLIC LAYIN	5	4	T12	MULTIPLE		H	NC	
039	MECHANICAL	F STRIP	1	1	T12	WALL SW.	-	D	NC	
039B	SERVER ROOM	STRFACE MOUNT	3	2	T12	WALL SW	3-40' RUNS	L	NC	BALLAST LAMP REPLACEMENT ONLY
046	STAIRS	ACRYLIC WRAPAROUND	2	2	T12	N/A	-	A	NC	BALLAST LAMP REPLACEMENT ONLY
101	OPEN OFFICE AREA	8 LINEAR BAFFLE	11	2	T12	MULTIPLE	5-80', 1-64', 1-60', 2-12', AND 2-8' RUNS	L	NC	5-80', 1-64', 1-60', 2-12' AND 2-8' RUNS
101	OPEN OFFICE	2 HEAD ENLIGHT	1	1	INC	N/A	-	F	NC	REINSTALL AT SAME LOCATION
101	OPEN OFFICE AREA	EXIT SIGN	1	1	INC	N/A	-	K	NC	REINSTALL AT SAME LOCATION
102	CORRIDOR	ACRYLIC WRAPAROUND	3	4	T12	WALL SW	-	A	NC	
102	CORRIDOR	2 HEAD ENLIGHT	1	1	INC	N/A	-	-	-	REMOVE FIXTURE AND WIRING COVER OPENING WITH BLANK PLATE
102	CORRIDOR	EXIT SIGN	1	1	INC	N/A	-	J	NC	REINSTALL AT SAME LOCATION
103	ENTRY / STAIRS	12" SQUARE RECESSED	4	1	INC	3-WAY	-	N	NC	
103	ENTRY / STAIRS	ACRYLIC WRAPAROUND	1	2	T12	WALL SW	-	A	NC	
104	MENS RESTROOM	2X4 ACRYLIC LAYIN	2	2	T8	WALL SW	-	NC	-	
104	MENS RESTROOM	DOWNLIGHT	1	2	CFL	WALL SW	-	NC	-	
104	MENS RESTROOM	WALL MOUNT	1	1	T12	WALL SW	-	M	NC	
104	MENS RESTROOM	2 HEAD ENLIGHT	1	1	INC	N/A	-	F	NC	REINSTALL AT SAME LOCATION
105	WOMEN'S RESTROOM	2X4 ACRYLIC LAYIN	4	2	T8	WALL SW	-	NC	-	
105	WOMEN'S RESTROOM	DOWNLIGHT	2	2	CFL	WALL SW	-	NC	-	
105	WOMEN'S RESTROOM	WALL MOUNT	1	1	T12	WALL SW	-	M	NC	
105	WOMEN'S RESTROOM	2 HEAD ENLIGHT	1	1	INC	N/A	-	F	NC	REINSTALL AT SAME LOCATION



**SUMMIT COUNTY D.O.E.S. LIGHTING UPGRADES**

ROOM NUMBER	ROOM NAME	FIXTURE DESCRIPTION	FIXTURE QTY	LAMPS/ FIXTURE	EXISTING			REPLACEMENT		
					LAMP TYPE	CONTROLS	REMARKS	FIXTURE TYPE	CONTROLS	REMARKS
106	OPEN OFFICE AREA	8' LINEAR BAFFLE	11	2	T12	MULTIPLE	ASBESTOS CEILING (NOTE 1) 2-76", 1-68", 3-64", 2-48", 2-12", AND 1-4" RUNS	L	NC	BALLAST LAMP REPLACEMENT ONLY
106	OPEN OFFICE AREA	EXIT EM LIGHT	2	1	INC	N/A	-	J	NC	-
112	ELEV LOBBY	2X4 ACRYLIC LAYIN	1	4	T12	N/A	-	G	NC	-
115	OFFICE	8' LINEAR BAFFLE	3	2	T12	WALL SW	ASBESTOS CEILING 3-12 RUNS	L	WALL-OCC-IR	3-12 RUNS
117	MAIL OPERNER AND SAFE	ACRYLIC WRAPAROUND	2	2	T12	WALL SW	-	A	WALL-OCC-IR	-
117B	MECHANICAL	OPEN INDUSTRIAL	2	1	T12	WALL SW	-	D	NC	-
117C	CORRIDOR	8' LINEAR BAFFLE	2	1	T12	WALL SW	ASBESTOS CEILING (NOTE 1) 1-20" AND 1-8" RUN	L	NC	BALLAST LAMP REPLACEMENT ONLY
117C	CORRIDOR	EXIT SIGN	1	1	INC	N/A	-	J	NC	REINSTALL AT SAME LOCATION
118	CORRIDOR	2X4 ACRYLIC LAYIN	6	4	T12	N/A	-	G	NC	-
118	CORRIDOR	EXIT SIGN	1	1	INC	N/A	-	K	NC	REINSTALL AT SAME LOCATION
118	CORRIDOR	2 HEAD EM LIGHT	1	1	INC	N/A	-	F	NC	REINSTALL AT SAME LOCATION
118B	MECHANICAL	OPEN INDUSTRIAL	3	2	T8	WALL SW	-	NC	-	-
119	OFFICE	2X4 ACRYLIC LAYIN	4	4	T12	WALL SW	-	H	WALL-OCC-IR	-
119A	STORAGE	2X4 ACRYLIC LAYIN	1	4	T12	WALL SW	-	H	NC	-
121	BILLING OFFICE	8' LINEAR BAFFLE	2	2	T12	WALL SW (NORTH)	ASBESTOS CEILING (NOTE 1) 2-12" RUNS	L	WALL-OCC-IR	LAMP/BALLAST REPLACEMENT ONLY
121	BILLING OFFICE	8' LINEAR BAFFLE	2	2	T12	WALL SW (SOUTH)	2-12" RUNS	L	WALL-OCC-IR	LAMP/BALLAST REPLACEMENT ONLY
121B	STAIRS	OPEN INDUSTRIAL	1	2	T12	N/A	-	A	NC	-
121B	STAIRS	EXIT SIGN	1	1	INC	N/A	-	K	NC	REINSTALL AT SAME LOCATION
121B	STAIRS	2-HEAD EM LIGHT	1	1	INC	N/A	-	F	NC	REINSTALL AT SAME LOCATION
122	CORRIDOR	2X4 ACRYLIC LAYIN	4	4	T8	WALL SW (3WAY)	-	G	NC	-
122	CORRIDOR	2 HEAD EM LIGHT	1	1	INC	N/A	-	F	NC	REINSTALL AT SAME LOCATION

**SUMMIT COUNTY D.O.E.S. LIGHTING UPGRADES**

ROOM NUMBER	ROOM NAME	FIXTURE DESCRIPTION	FIXTURE QTY	EXISTING				REPLACEMENT			
				LAMPS/ FIXTURE	LAMP TYPE	CONTROLS	REMARKS	FIXTURE TYPE	CONTROLS	REMARKS	
123	OPERATIONS	2X4 ACRYLIC LAYIN	4	4	T12	WALL SW (SWAY)	-	H	WALL-OCC-IR (SWAY)	-	
124	WAITING ROOM	2X4 ACRYLIC LAYIN	2	4	T12	WALL-OCC-IR	-	G	NC	-	
128	OFFICE	2X4 ACRYLIC LAYIN	4	4	T12	WALL SW	-	H	WALL-OCC-IR	-	
128A	OFFICE	2X4 ACRYLIC LAYIN	2	4	T12	WALL SW	-	H	WALL-OCC-IR	-	
130	OFFICE	2X4 ACRYLIC LAYIN	4	4	T12	2-WALL SW	-	H	WALL-OCC-IR (DI AL)	-	
131	OFFICE	2X4 ACRYLIC LAYIN	3	4	T12	WALL SW	-	H	NC	-	
131A	OFFICE	2X4 ACRYLIC LAYIN	2	4	T12	WALL SW	SWITCH FROM 131	H	NC	-	
131B	OFFICE	2X4 ACRYLIC LAYIN	1	4	T12	WALL SW	SWITCH FROM 131	H	NC	-	
131C	OFFICE	2X4 ACRYLIC LAYIN	1	4	T12	WALL SW	SWITCH FROM 131	H	NC	-	
132	CLOSET	2X4 ACRYLIC LAYIN	1	4	T12	WALL SW	-	G	WALL-OCC-IR	-	
133	RESTROOM	2X4 ACRYLIC LAYIN	1	4	T12	WALL SW	-	G	WALL-OCC-IR	-	
135	OFFICE	ACRYLIC WR/2'AROUND	3	2	T12	WALL SW	3-12' RUNS	A	WALL-OCC-IR	3-12' RUNS	
136	OFFICE	8' LINEAR BAFFLE	4	2	T12	WALL SW	3-16', AND 1-8' RUN	L	WALL-OCC-IR	LAMP/BALLAST REPLACEMENT ONLY	
137	OFFICE	2X4 ACRYLIC LAYIN	12	4	T12	WALL SW	-	H	WALL OCC-IR	-	
141A	OFFICE	2X4 ACRYLIC LAYIN	4	4	T12	WALL SW	-	H	WALL-OCC-IR (SWAY)	-	
141B	OFFICE	2X4 ACRYLIC LAYIN	4	4	T12	WALL SW	-	H	WALL-OCC-IR	-	
142	OFFICE	2X4 ACRYLIC LAYIN	4	4	T12	WALL SW	-	H	WALL-OCC-IR	-	
143	PHYSICAL PLANT OFFICE	2X4 ACRYLIC LAYIN	20	4	T12	MULTIPLE	SWITCHED IN HALF	H	NC	-	
143	PHYSICAL PLANT OFFICE	2-HEAD EMLIGHT	1	1	INC	N/A	-	F	NC	REINSTALL AT SAME LOCATION	
143	PHYSICAL PLANT OFFICE	EXIT SIGN	1	1	INC	N/A	-	J	NC	-	

**SUMMIT COUNTY D.O.E.S. LIGHTING UPGRADES**

ROOM NUMBER	ROOM NAME	EXISTING						REPLACEMENT		
		FIXTURE DESCRIPTION	FIXTURE QTY	LAMPS/ FIXTURE	LAMP TYPE	CONTROLS	REMARKS	FIXTURE TYPE	CONTROLS	REMARKS
145	OFFICE	2X4 ACRYLIC LAVIN	4	4	T12	WALL SW	-	H	WALL-OCC-IR	-
147	MECHANICAL	OPEN INDUSTRIAL	2	1	T12	WALL SW	-	D	NC	-
147A	OFFICE	2X4 ACRYLIC LAVIN	2	4	T12	WALL SW	-	H	WALL-OCC-IR	-
149	STORAGE	2X4 ACRYLIC LAVIN	1	4	T12	WALL-OCC-IR	-	G	WALL-OCC-IR	-
150	WOMEN'S RESTROOM	2X4 ACRYLIC LAVIN	2	4	T12	WALL-OCC-IR	-	G	NC	-
151	MEN'S RESTROOM	2X4 ACRYLIC LAVIN	2	4	T12	WALL-OCC-IR	-	G	NC	-
153	OPERATIONS OPEN OFFICE AREA	2X4 ACRYLIC LAVIN	20	4	T12	WALL SW (SWAY)	-	H	NC	-
153	OPERATIONS OPEN AREA	EXIT SIGN	1	1	INC	N/A	-	K	NC	REINSTALL AT SAME LOCATION
153	OPERATIONS OPEN AREA	2- HEAD ENLIGHT	1	1	INC	N/A	-	F	NC	REINSTALL AT SAME LOCATION
200	STAIRS	SURFACE MOUNT	2	1	T12	WALL SW	1-16' RUN	L	NC	LAMP/BALAST REPLACEMENT ONLY
200	STAIRS	12" SQUARE RECESSED	1	1	INC	WALL SW	-	NC	NC	-
202	OFFICE	8' LINEAR BAFFLE	3	2	T12	WALL SW	ASBESTOS CEILING (NOTE 1) 3-12' RUNS	L	WALL-OCC-IR	LAMP/BALAST REPLACEMENT ONLY
203	OFFICE	2X4 ACRYLIC LAVIN	9	4	T8	WALL SW	-	H	WALL-OCC-IR	-
204	OFFICE	2X4 ACRYLIC LAVIN	6	4	T8	WALL SW	-	H	WALL-OCC-IR	-
205	OFFICE	2X4 ACRYLIC LAVIN	6	4	T8	WALL SW	-	H	WALL-OCC-IR	-
206	OFFICE	2X4 ACRYLIC LAVIN	6	4	T8	WALL SW	-	H	WALL-OCC-IR	-
207	BREAK ROOM	2X4 ACRYLIC LAVIN	2	4	T12	WALL SW	-	H	WALL-OCC-IR	-
207A	OFFICE	2X4 ACRYLIC LAVIN	2	4	T12	WALL SW	-	H	WALL-OCC-IR	-
208	OFFICE	2X4 ACRYLIC LAVIN	4	4	T12	WALL SW	-	H	WALL-OCC-IR	-
208B	MECH	OPEN INDUSTRIAL	3	2	T8	WALL SW	ASBESTOS CEILING (NOTE 1)	NC	-	-
211	ADJAIN OPEN OFFICE	8' LINEAR BAFFLE	8	2	T12	WALL SW	ASBESTOS CEILING (NOTE 1) 2-96' 2-68', 1-12' AND 2-8' RUNS	L	NC	LAMP/BALAST REPLACEMENT ONLY
211	ADJAIN OPEN OFFICE	2 HEAD EN LIGHT	1	1	INC	N/A	-	-	-	REMOVE FIXTURE AND WIRING COVER OPENING WITH BLANK PLATE
211	ADJAIN OPEN OFFICE	EXIT SIGN	2	1	INC	N/A	-	J	NC	REINSTALL AT THE SAME LOCATION

**SUMMIT COUNTY D.O.E.S. LIGHTING UPGRADES**

ROOM NUMBER	ROOM NAME	EXISTING						REPLACEMENT		
		FIXTURE DESCRIPTION	FIXTURE QTY	LAMPS/ FIXTURE	LAMP TYPE	CONTROLS	REMARKS	FIXTURE TYPE	CONTROLS	REMARKS
212	MEN'S RESTROOM	OPEN INDUSTRIAL	6	2	T8	WALL SW	-	A	NC	-
212	WOMEN'S RESTROOM	2-HEAD ENLIGHT	1	1	INC	N/A	-	F	NC	REINSTALL AT THE SAME LOCATION
213	WOMEN'S RESTROOM	OPEN INDUSTRIAL	6	2	T8	WALL SW	-	A	NC	-
213	WOMEN'S RESTROOM	2-HEAD ENLIGHT	1	1	INC	N/A	-	F	NC	REINSTALL AT THE SAME LOCATION
214	MAIL ROOM	2X4 ACRYLIC LAYIN	2	4	T12	WALL SW	-	H	WALL-OCC-IR	-
215	SERVER ROOM	2X4 ACRYLIC LAYIN	3	4	T8	WALL SW	-	NC	NC	-
217	OFFICE	ACRYLIC WRAP AROUND	2	2	T12	WALL-OCC-IR	-	B	WALL-OCC-IR	-
218	CORRIDOR	2X4 ACRYLIC LAYIN	1	4	T12	N/A	-	G	NC	-
218	CORRIDOR	EXIT SIGN	1	2	LED	N/A	-	J	NC	-
219	CORRIDOR	2X4 ACRYLIC LAYIN	2	4	T12	WALL SW	-	G	NC	-
224	STORAGE	2X4 ACRYLIC LAYIN	2	4	T12	WALL SW	-	G	WALL-OCC-IR	-
226	OPEN OFFICE AREA	8' LINEAR BAFFLE	5	2	T12	MULTIPLE	ASBESTOS CEILING (NOTE 1) 4-96' AND 1-80 RUN	L	NC	LAMP/BALLAST REPLACEMENT ONLY
226	OPEN OFFICE AREA	2 HEAD ENLIGHT	2	1	INC	N/A	-	J	NC	REINSTALL AT THE SAME LOCATION
227	OFFICE	2X4 ACRYLIC LAYIN	6	4	T12	WALL SW	-	H	WALL-OCC-IR	-
228	OFFICE	2X4 ACRYLIC LAYIN	4	4	T8	WALL SW	-	H	WALL-OCC-IR	-
229	OFFICE	2X4 ACRYLIC LAYIN	4	4	T8	WALL SW	-	H	WALL-OCC-IR	-
230	OFFICE	2X4 ACRYLIC LAYIN	6	4	T8	WALL SW	-	H	WALL-OCC-IR	-
231	CLOSET	OPEN INDUSTRIAL	1	2	T8	WALL SW	-	NC	-	-
232	OPEN OFFICE	2X4 ACRYLIC LAYIN	35	4	T12	MULTIPLE	-	H	NC	-
232	OPEN OFFICE	EXIT SIGN	2	1	INC	N/A	-	K	NC	REINSTALL AT THE SAME LOCATION
232	OPEN OFFICE	2-HEAD ENLIGHT	1	1	INC	N/A	-	F	NC	REINSTALL AT THE SAME LOCATION

**SUMMIT COUNTY D.O.E.S. LIGHTING UPGRADES**

ROOM NUMBER	ROOM NAME	EXISTING						REPLACEMENT		
		FIXTURE DESCRIPTION	FIXTURE QTY	LAMPS / FIXTURE	LAMP TYPE	CONTROLS	REMARKS	FIXTURE TYPE	CONTROLS	REMARKS
233	CORRIDOR	2X4 ACRYLIC LAYIN	2	4	T12	WALL SW	-	G	NC	-
234	CORRIDOR	2X4 ACRYLIC LAYIN	4	4	T12	N/A	-	G	NC	-
234	CORRIDOR	2-HEAD ENLIGHTG	1	1	INC	N/A	-	F	NC	REINSTALL AT THE SAME LOCATION
234	CORRIDOR	EXIT SIGN	2	1	INC	N/A	-	J	NC	-
234	CORRIDOR	EXIT SIGN	1	1	INC	N/A	-	K	NC	-
237	MECH	OPEN INDUSTRIAL	2	1	T12	WALL SW	-	D	NC	-
240	ELEV LOBBY	2X4 ACRYLIC LAYIN	1	4	T8	WALL SW	-	G	NC	-
243	AIRLOCK	2X4 ACRYLIC LAYIN	1	4	T12	N/A	-	G	NC	-
243	AIRLOCK	EXIT SIGN	1	1	INC	N/A	-	J	NC	-
244	CONF. ROOM	2X4 ACRYLIC LAYIN	19	4	T12	MULTIPLE	-	H	NC	-
244	CONF. ROOM	2-HEAD ENLIGHT	1	1	INC	N/A	-	F	NC	REINSTALL AT THE SAME LOCATION
248	MECH	OPEN INDUSTRIAL	2	1	T12	WALL SW	-	D	NC	-
249	STAIRS	ACRYLIC WRAP/AROUND	2	2	T12	N/A	-	A	NC	LAMP/BALLAST REPLACEMENT ONLY
249	STAIRS	EXIT SIGN	1	1	INC	N/A	-	K	NC	REINSTALL AT THE SAME LOCATION
249	STAIRS	2-HEAD ENLIGHT	1	1	INC	N/A	-	F	NC	REINSTALL AT THE SAME LOCATION
250	OPEN OFFICE	2X4 ACRYLIC LAYIN	29	4	T12	WALL SW	-	H	NC	-
250	OPEN OFFICE	2-HEAD ENLIGHT	1	1	INC	N/A	-	F	NC	REINSTALL AT THE SAME LOCATION
250	OPEN OFFICE	EXIT SIGN	1	1	INC	N/A	-	J	NC	-
251	JANITORS CLOSET	A19 INCANDESCENT	1	1	INC	WALL SW	-	SCREW-IN	NC	-

NOTES:  
 1. THE EXISTING CEILING HAS BEEN TESTED POSITIVE FOR ASBESTOS CONTENT. SEE ASBESTOS ABATEMENT PLAN FOR ADDITIONAL DETAILS.





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**SUMMIT COUNTY  
 D.O.E.S. LIGHTING UPGRADE**

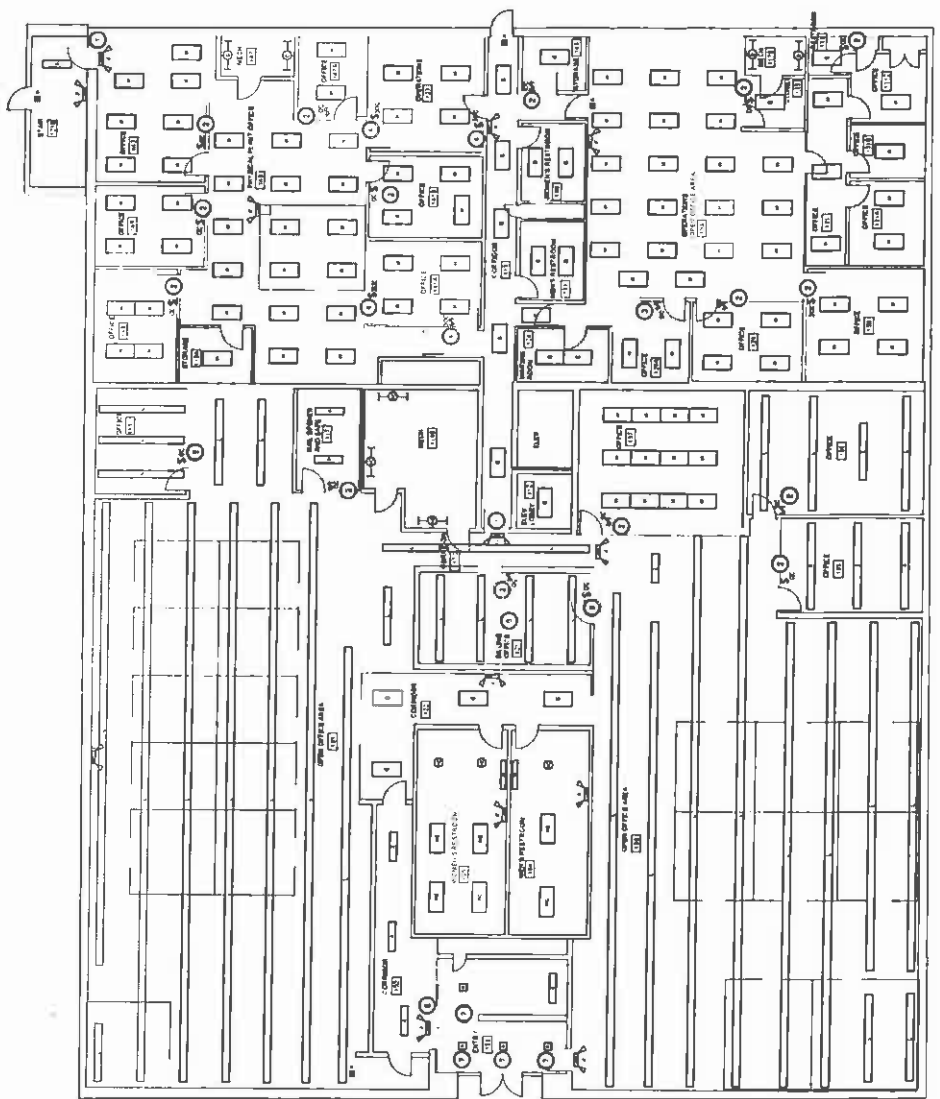
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TURNING VISIONS  
 INTO REALITY

**E-2**

**PLAN NOTES**

1. VERIFY ALL EXISTING LIGHT FIXTURES AND SCHEDULES WITH THE ARCHITECT.
2. REPLACE EXISTING LIGHT FIXTURES WITH THE ARCHITECT'S SCHEDULE.
3. VERIFY ALL EXISTING LIGHT FIXTURES AND SCHEDULES WITH THE ARCHITECT.
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**FIRST FLOOR PLAN - LIGHTING**



