

DALE | BAILEY

CARVERMEDE SCHOOL



Carver Elementary Emergency Remodel

900 44th Av, Meridian, MS 39307

DPA PN:

Construction Documents

JACKSON,

Superintendent

Board of Education

Board President Board Vice-President Secretary **Board Member**

Mrs. Sally Gray Mrs. Beverly Pennington Mr. Ron Turner Ms. Gwendolyn Hardaway

Team

Owner

Architect Mechanical Electrical Structural

Meridian Public School District

Dale Bailey, an association GSK, Mechanical The Power Source Structural Design Group

22034.04

Mar 5, 2023

Dr. Amy Carter



General Project Notes

Energy Code Requirements

- 1. IBC 2018 Energy Code is the mandatory energy code
- 2. All mechanical and electrical building system installed
- should meet all requirements of the energy code. 3. Main roof insulation to achieve minimum R-value of 38
- 4. polyisocyanurate insulation board with joints staggered
- 5. Continuous air barrier to be provided at building envelope per IBC 2018 Energy Code. Air barrier joints and seams to be sealed and all joints and material transitions. Joints to be securely installed as to not dislodge, loosen or otherwise impair its ability to resist positive and negative pressure from wind or mechanical units.

Thermal Envelope Requirements

1. Roofs = R-38 ci (insulation entirely above deck)

- 1. Do not scale drawings. If dimensions are in question, the contractor shall be responsible for obtaining clarification from the architect before continuing with
- 2. Contractors shall verify, on the site, all dimensions and equipment locations, and notify architect promptly in writing of any discrepancies
- 3. Contractors shall be responsible to determine the on site conditions and perform all necessary work to
- 4. Contractors shall maintain safe methods of egress for occupied buildings and in site area during construction 5. All casework dimensions shall be field verified before
- unit fabrication or installation 6. Dimensions, notes, finishes, and fixtures shown on
- typical floor plans shall apply to similar, symmetrical, or opposite hand plans, sections, or details
- representative for similar conditions throughout, U.N.O. Details are usually keyed and noted "Typ." only one time when they first occur
- 8. Partitions are dimensioned from finish face U.N.O. Dimensions to masonry are to actual finish face U.N.O.
- 9. Owner to have right of refusal for all materials, furniture, fixtures and good within the limits of the construction

Code Requirements

1. Applicable Codes and Standards :

A. IBC - International Building Code (2018 edition) B. IMC - International Mechanical Code (2018 edition) C. IPC - International Plumbing Code (2018 edition) D. IEC - International Electrical Code (2018 edition) E. IFC - International Fire Code (2018 edition) F. ADA 2010- Americans with Disabilities Act

Drawing Index

| G-000 | General Sheet | | | | | | | | | |
|--------|--|--|--|--|--|--|--|--|--|--|
| G-001 | Index & General Project Information | | | | | | | | | |
| S-001a | Structural Notes and Drawing Index | | | | | | | | | |
| S-101a | Foundation Plan & Details | | | | | | | | | |
| AD101 | Demolition Floor Plan | | | | | | | | | |
| A-101a | Composite Floor Plan | | | | | | | | | |
| A-141 | RCP Part 1 | | | | | | | | | |
| A-301a | Building Sections | | | | | | | | | |
| P-001 | Level 1 Overall Plumbing Plan & Specificaitons | | | | | | | | | |
| PD100 | Level 1 Enlarged Plumbing Demolition Plan | | | | | | | | | |
| P-100 | Level 1 Enlarged Plumbing New Work | | | | | | | | | |
| P-200 | Level 1 Plumbing Schedules & Details | | | | | | | | | |
| M-001 | Level 1 Overall HVAC Plan & Specificaitons | | | | | | | | | |
| M-100 | Level 1 Enlarged HVAC Plan | | | | | | | | | |
| M-200 | HVAC Schedules & Details | | | | | | | | | |
| E-000 | Electrical Legend / Fixture Schedule | | | | | | | | | |
| E-001 | Electrical Details | | | | | | | | | |
| E-002 | Electrical Specifications | | | | | | | | | |
| E-003 | Electrical Specifications | | | | | | | | | |
| E-100 | Renovation Plan | | | | | | | | | |
| ED100 | Demolition Plan | | | | | | | | | |
| RA101 | Presentation Sheet | | | | | | | | | |



Architects

One Jackson Place 250 188 East Capitol Street Jackson, MS 39201 p 601.352.5411

201 Park Court Suite B Ridgeland, MS 39157 p 601.790.9432

161 Lameuse St. Suite 201 Biloxi, MS 39530 p 228.374.1409

dalebaileyplans.com





2. Submittals

STRUCTURAL NOTES

DESIGN CRITERIA

1. Building Code: 2018 International Building Code and ASCE 7-16 (except Chapter 14)

1.1. Building Risk Category: III

Design Loads

General Areas

2.1. Uniform Floor Live Loads (reduced per Building Code, UNO)

GENERAL

1. Reference to standards or specifications of technical societies, organizations, or associations means the standard or specification referenced by the governing Building Code shown on the Drawings, unless specifically noted otherwise.

100 psf

2. Material, workmanship, and design shall conform to the referenced Building Code. 3. For dimensions not shown in the Structural Drawings, see the Architectural Drawings.

4. Contractor responsibilities include, but are not limited to, the following:

- 4.1 Coordinate the Structural Documents with the Architectural, Mechanical, Electrical, Plumbing, and Civil Documents. Architect/Structural Engineer shall be notified of any discrepancy or omission prior to installation of associated work.
- 4.2 Coordinate Structural Documents with Architectural and MPE Documents for location and quantity of miscellaneous framing for items such as roof drains, suspended or supported mechanical units, etc. Refer to Architectural and MPE Documents for additional miscellaneous structural elements that may not appear in the Structural Documents.
- 4.3 The structure is stable only in its completed form. Temporary supports required for stability during all intermediate stages of construction shall be designed, furnished, and installed by the Contractor.
- 4.4 Contractor has sole responsibility for jobsite safety and complying with all health and safety precautions as required by any regulatory agency. In performing construction observation visits to the jobsite, the Structural Engineer will have no control over, nor responsibility for, the Contractor's means, methods, sequences, techniques, or Procedures in performing the work.
- 4.5 Contractor is responsible for locating concrete reinforcement prior to installation of postinstalled anchors, through bolts, or other post-installed items in concrete. Existing reinforcement including post-tensioning tendons shall not be cut or otherwise damaged while installing post-installed anchors.
- 4.6 Contractor shall visit the project site prior to placing a bid to perform any structural repair work in order to observe the existing conditions of the structure.

SUBMITTALS

1. Shop Drawings and Submittals

- 1.1 Reproduction of Structural Drawings for shop drawings is not permitted.
- 1.2 Electronic drawing files will not be provided to the Contractor.
- 1.3 arrangement and sizes of members and the Contractor's interpretation of the design loads, if applicable, and Construction Document details. Such review shall not relieve the Contractor of the full responsibility to comply with the Construction Documents.
- 2.1 The Structural Quality Assurance Plan and Specifications identify the required submittals. Prior to (or with) the first submittal, Contractor shall submit a list of all required submittals for Engineer's review.

REINFORCEMENT

- 1. Reinforcing Bars: ASTM A615, Grade 60
- 1.1 Reinforcing bars are not to be welded.
- 2. Reinforcement Splices
- writing by Structural Engineer. 2.2 Splice Lengths (UNO)
- Concrete Reinforcement: Class B Tension Lap

CAST-IN-PLACE CONCRETE

1. Concrete Properties

1.1 Normal Weight Structural Concrete

Slabs-on-Ground

Note: All concrete shall be assigned the Exposure Classes F0, S0, W0, and C0. (see ACI 318). Minimum properties required due to Exposure Class shall govern if more restrictive than the properties given in the Table above.

3,500 psi

- Structural Drawings. Obtain written consent for additional joints.
- 3. Pipes or ducts shall not exceed one-third the slab or wall thickness unless specifically detailed. See mechanical and electrical drawings for location of sleeves, accessories, etc. on-ground within the granular subbase.
- determined by the Structural Engineer.
- 6. Curing
- information.

DOWEL ADHESIVE

- approved by engineer of record.
- performance values of the design basis product.
- 2.1 Dowel Adhesive
- 2.1.1 Reinforcing bars conforming to ASTM A615, Grade 60. 2.1.2 Adhesive conforming to Simpson AT-XP (IAPMO-UES ER-263), Simpson SET-XP

 - Embedment = 12 times anchor diameter, UNO.
- the commencement of anchor installation.

THE STRUCTURAL NOTES DEFINE GENERAL DESIGN AND MATERIAL REQUIREMENTS AND ARE INTENDED TO SUPPLEMENT, BUT NOT REPLACE, THE PROJECT SPECIFICATIONS

2.1 Reinforcement marked "Continuous" can be spliced at locations determined by Contractor. All other reinforcement shall be spliced only at locations shown or noted, unless approved in

28-Day, f'c w/cm Ratio Entrained Air (min.) (max.) -----

0.48 None Required

2. Construction Joint Locations: No horizontal construction joints are permitted except as shown on the

3.1 Conduit shall not be placed within the slab-on-ground. Conduit shall be installed below the slab-

4. Special Finishes: Refer to Architectural Drawings for molds, grooves, ornaments, clips or grounds required to be encased in concrete and for location of floor finishes and slab depressions. 5. Defect Repair: Honey-combing, spalls, cracks, etc. shall be repaired. Extent of defective area to be

6.1 Begin curing procedures immediately following commencement of the finishing operation. 6.2 Concrete shall be moist cured in accordance with ACI 308. See Specification for additional

1. Post-installed anchors shall only be installed where indicated on the structural drawings, unless

2. The below products are the design basis for this project. Product diameter and embedment shall be as shown in the details. Install products IN ACCORDANCE WITH MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS (MPII). Refer to the project building code and/or evaluation report for special inspections and proof load requirements. Substitution requests for products other than those listed below may be submitted by the contractor to the Engineer-of-Record (EOR) for review. Substitutions will only be considered for products having a research report recognizing the product for the appropriate application under the project building code. Substitution requests shall include calculations that demonstrate the substituted product is capable of achieving the equivalent

(ICC-ES ESR-2508), DeWalt/Powers Pure110+ (ICC-ES ESR-3298), DeWalt AC200+ Adhesive (ICC-ES ESR-4027), Hilti HIT-HY 200 SAFE Set Fast Cure Adhesive (ICC-ES ESR-3187), Hilti HIT-RE 500 V3 Safe Set Adhesive (ICC-ES ESR-3814). Minimum

3. Contractor shall arrange for an Adhesive manufacturer's representative to provide onsite installation training for all of their adhesive products specified. The structural Engineer of record must receive documented confirmation that all of the contractor's personnel who install anchors are trained prior to





Consulting Structural Engineers 220 Great Circle Road, Suite 106 Nashville, Tennessee 37228 *р*. 615.255.5537 www.sdg-structure.com SDG Project No. 2023-072.00



Architects

One Jackson Place 250 188 East Capitol Street Jackson, MS 39201 p 601.352.5411

201 Park Court Suite B Ridgeland, MS 39157 p 601.790.9432

161 Lameuse St. Suite 201 Biloxi, MS 39530 p 228.374.1409

dalebaileyplans.com



 \mathbf{O} SS S 0 Μ \mathbf{O} t S 0 \mathbf{O} S J J \mathbf{O} \geq

dia -Φ Š Φ ť 4 4 00 Ō . . entary Ele er

σ

22034.04

S.T.

Date

May 5, 2023

W.G./T.S.

Project No

Date

Drawn

Checked

Revision

9307

 \mathbf{m}

MS









Consulting Structural Engineers 220 Great Circle Road, Suite 106 Nashville, Tennessee 37228 *p*. 615.255.5537 www.sdg-structure.com SDG Project No. 2023-072.00 © 2023





General Demolition Notes

- Contract.
- site.
- identified to remain.
- information as noted
- remain.

DALE BAILEY 1. Dashed lines indicate extent of demolition. 2. Where removal of walls are indicated, remove wall entirely from slab to roof deck unless noted otherwise. 3. Where floor transitions from new floor to existing floor, a AN ASSOCIATION floor transition strip is to be provided. A knock-down frame is to be provided in place of the existing frame where the opening is a part of corridor. Architects 4. Remove all existing flooring, ceiling tile, rubber base, etc.. where shown to be replaced by new materials in the finish One Jackson Place 250 schedule. RE: Floors plans, RCP, and Finish Schedule 188 East Capitol Street 5. Owner has right of refusal for all demo work. If not retained, Jackson, MS 39201 GC to be responsible for disposal. In either case, GC is p 601.352.5411 responsible for the demolition work as indicated. 6. Verify all existing conditions. Notify architect of any 201 Park Court Suite B discrepancies between the existing conditions and these Ridgeland, MS 39157 documents. The Contractor is to consider the additional p 601.790.9432 work required by any discrepancies to be included in this 161 Lameuse St. Suite 201 7. Burying or Burning of materials will not be permitted on Biloxi, MS 39530 p 228.374.1409 8. Repair any damage caused to building construction dalebaileyplans.com 9. Refer to other discipline drawings for additional demolition 10. Schedule with the Owner any demolition that involves exposing to the weather the interior portions of building to remain. This work is to be performed during good, dry weather or temporary waterproof barrier walls shall be constructed at all occurrences where the demolition JACKSON, O exposes weather to the interior of portions of buildings to 11. Existing loose school property to be the responsibility of the school district, removal of property by owner to be coordinated between the contractor and school district. 12. Where areas are removed or altered, patch, repair, & paint to match adjacent surface material and finish. 13. Where entire portions of the school are to be removed, temporary and enclosed corridors are to be provided to allow students to traverse the campus as needed throughout construction. This may involve building multiple corridors or one at a time that needs to be moved to maintain a safe and enclosed space for students. Remodel 14. Contractor shall be responsible to move shelving and furniture in library for new flooring installation. Return shelving and furniture to original locations after new flooring is installed. rgenc 39307 MS JO leridian, Ш Σ Av Elementar 44th 006 Ð Car Specific Notes 02 41 19 002 Dashed lines indicated extent of demoed work 02 41 19 019 Remove door panels and jambs; dipose off site Construction Documents 22034.04 Project No Mar 5, 2023 Date PPu RBI Checked Revision Date # AD101

Demolition Floor Plan



| | ZX | | Door | | ZX | | | | | Frame | | | | | | |
|--------|---------|------|---------|---------|--------------|----|-----|-----------------|----|-------|-----------|--------|---------------|----------|-------|-----|
| Mark | | Size | | | Mati | - | | Mati | - | | Deta | il | - Fire Rating | Location | Notes | |
| Mark - | Dr W | PR | Tot W | Ht | Mati | EI | GIZ | Mati | EI | GIZ | Head Jamb | o Sill | — (IVIIII) | | | # |
| N01 | 2' - 6" | | 2' - 6" | 7' - 0" | HM (painted) | | | Steel (painted) | | | | | 0 | | | N01 |
| N02 | 2' - 6" | | 2' - 6" | 7' - 0" | HM (painted) | | | Steel (painted) | | | | | 0 | | | N02 |
| N03 | 2' - 6" | | 2' - 6" | 7' - 0" | HM (painted) | | | Steel (painted) | | | | | 0 | | | N03 |
| N04 | 2' - 6" | | 2' - 6" | 7' - 0" | HM (painted) | | | Steel (painted) | | | | | 0 | | | N04 |
| N05 | 2' - 6" | | 2' - 6" | 7' - 0" | HM (painted) | | | Steel (painted) | | | | | 0 | | | N05 |
| N06 | 2' - 6" | | 2' - 6" | 7' - 0" | HM (painted) | | | Steel (painted) | | | | | 0 | | | N06 |
| N07 | 2' - 6" | | 2' - 6" | 7' - 0" | HM (painted) | | | Steel (painted) | | | | | 0 | | | N07 |
| N09 | 3' - 0" | | 3' - 0" | 7' - 0" | HM (painted) | | | Steel (painted) | | | | | 0 | | | N09 |
| N10 | 3' - 0" | | 3' - 0" | 7' - 0" | HM (painted) | | | Steel (painted) | | | | | 0 | | | N10 |
| N11 | 3' - 0" | | 3' - 0" | 7' - 0" | HM (painted) | | | Steel (painted) | | | | | 0 | · | | N11 |
| N12 | 3' - 0" | | 3' - 0" | 7' - 0" | HM (painted) | | | Steel (painted) | | | | | 0 | | | N12 |

| | | | | Finishes | 0 | | |
|------|----------|-------|--------|---------------|---------------------|-----------|---|
| Num | | Floor | Base | Wall | Ceiling | Johnments | |
| | | | | | | | |
| N11 | Class | VCT | Rubber | CMU (painted) | ACT | | 1 |
| N101 | Toilet | Tile | Tile | Tile | ACT | | Ν |
| N102 | Toilet | Tile | Tile | Tile | ACT | | Ν |
| N103 | Toilet | Tile | Tile | Tile | ACT | | Ν |
| N104 | Toilet | Tile | Tile | Tile | ACT | | Ν |
| N105 | Toilet | Tile | Tile | Tile | ACT | | Ν |
| N106 | Toilet | Tile | Tile | Tile | ACT | | Ν |
| N107 | Toilet | Tile | Tile | Tile | ACT | | Ν |
| N110 | Class | VCT | Rubber | CMU (painted) | ACT | | Ν |
| N112 | Bathroom | Tile | Tile | Tile | ACT (vinyl covered) | | Ν |
| N113 | Storage | VCT | Rubber | CMU (painted) | ACT | | N |
| N114 | Storage | VCT | Rubber | CMU (painted) | ACT | | Ν |
| | | ÷ | | | | | |

General Notes

- 1. New walls shall be 8" CMU Block to underside of floor/roof deck (notch around structure). Seal Block to Existing with Mastic.
- Excepting grab bars & changing table, include all toilet accesories (1 of each) for each new toilet room as specified in Section 102800.
- Paint newly installed exposed plumbing pipes at exterior to match adjacent materials.

Specific Notes

| 07 62 00 004 | Install prefinished metal trin new wall and window mulli opening so that new toilet r enclosed. |
|--------------------|--|
| 08 87 00 001 | Provide privacy film at all w rooms. |
| 10 28 13 003 | Install new ADA/AMD Grab |
| 10 28 13.19 001 | Install adjustable, fold away that is fully resistant to regu |
| 10 28 13.19 002 | Install standard 3 piece gra shower. |







Architects

One Jackson Place 250 188 East Capitol Street Jackson, MS 39201 p 601.352.5411

201 Park Court Suite B Ridgeland, MS 39157 p 601.790.9432

161 Lameuse St. Suite 201 Biloxi, MS 39530 p 228.374.1409

dalebaileyplans.com











Architects

One Jackson Place 250 188 East Capitol Street Jackson, MS 39201 p 601.352.5411

201 Park Court Suite B Ridgeland, MS 39157 p 601.790.9432

161 Lameuse St. Suite 201 Biloxi, MS 39530 p 228.374.1409

dalebaileyplans.com





| 1. | |
|-----|---|
| | PROVIDE ALL PLUMBING PIPING, FIXTURES, TRIM, AND ACCESSORIES AS REQUIRED FOR A COMPLETE AN FUNCTIONAL PLUMBING SYSTEM. VERIFY WITH ARCHITECT AND DRAWINGS, WHICH PLUMBING INSTALLATIONS ARE DESIGNATED FOR ADA ACCESSIBILITY. ALL SUCH FIXTURE INSTALLATIONS SHALL INCLUDE ALL INSTALLATION ACCESSORIES, MOUNTING/LIP HEIGHT, CONTROL OFFSET, SIZE AND ACCESSIBILITY AS REQUIRED BY LATEST EDITION OF AMERICANS WITH DISABILITIES ACT (ADA) AND LOCA GOVERNING AUTHORITIES. |
| 2. | ALL PIPING SHALL BE CONCEALED INSIDE WALLS AND PIPE CHASES OR ABOVE CEILINGS, EXCEPT AS OTHERWISE NOTED AND AT APPROPRIATE EQUIPMENT FINAL CONNECTIONS. HOLD ALL PIPING ABOVE CEILINGS AS HIGH AS POSSIBLE AND COORDINATE WITH OTHER CRAFTS. |
| 3. | COORDINATE ALL WORK WITH ARCHITECTURAL, STRUCTURAL, MECHANICAL, AND ELECTRICAL TRADES. PIPE ROUTING SHOWN IS DIAGRAMMATIC. PROVIDE ALL OFFSETS, ETC., TO AVOID INTERFERENCES WIT STRUCTURAL MEMBERS, EQUIPMENT, PIPING, DUCTWORK, LIGHTS, CONDUIT, ETC. |
| 4. | VERIFY/COORDINATE PIPE SIZES AND CONNECTIONS WITH "PLUMBING FIXTURE ROUGH-IN SCHEDULE" F WASTE, VENT AND WATER PIPING ROUGH-IN SIZES NOT CLEARLY SHOWN ON PLANS OR IN RISER DIAGRAMS, ETC. CONTACT PROFESSIONAL SHOULD QUESTIONS OR CONFLICTS ARISE. PROVIDE ROUG IN, FINAL CONNECTIONS AND INSTALLATION APPURTENANCES AS RECOMMENDED BY APPLIANCE AND/O EQUIPMENT MANUFACTURER FOR DISHWASHERS, ICE MAKERS, AND MACHINES, WASHERS, DRYERS, ET VERIFY LOCATION ON ARCHITECTURAL DRAWINGS AND CONNECTION REQUIREMENTS FROM APPROVED BROCHURES OF THE EQUIPMENT AND/OR APPLIANCES MANUFACTURER. |
| 5. | COORDINATE SLOPE OF ALL DRAINAGE AND VENT PIPING BELOW GRADE AT INVERT ELEVATIONS INDICATED. CONSISTENTLY SLOPE ALL OTHER PIPING, NOT INDICATED, AS REQUIRED BY PLUMBING COI APPLICABLE TO THIS PROJECT BUT IN NO CASE LESS THAN 1%. |
| 6. | ALL VERTICAL RISERS TO FLOOR DRAINS SHALL BE MAXIMUM 24" LONG. |
| 7. | ALL ABOVE GRADE VENT PIPING ROUTING SHALL BE COORDINATED WITH OTHER CRAFTS AND STRUCTURAL/ARCHITECTURAL DRAWINGS. CONSISTENTLY SLOPE ALL PIPING, NOT INDICATED WITH ELEVATIONS, AS REQUIRED BY PLUMBING CODE APPLICABLE TO THIS PROJECT BUT IN NO CASE LESS |
| 8. | ALL CLEANOUTS IN SANITARY PIPING SHALL BE FULL PIPE SIZE UP TO 4" AND SHALL BE 4" SIZE ON 6" AND LARGER PIPING. |
| 9. | COORDINATE UNDERGROUND PIPING WITH GRADE BEAMS AND WALL FOOTINGS. SLEEVE ALL GRADE BEAMS UTILIZING SLEEVES A MINIMUM 2 SIZES LARGER THAN DRAINAGE PIPING SIZE. SOME SLEEVES M NOT BE SHOWN, BUT SLEEVES AT ALL GRADE BEAM HORIZONTAL AND VERTICAL PIPING PENETRATIONS ARE REQUIRED. |
| 10. | PROVIDE NEAT PIPE SLEEVES AT ALL SANITARY PIPING EXTERIOR WALL PENETRATIONS. FILL VOID IN ANNULAR SPACE WITH NEAT ELASTOMERIC SEALANT. BELOW GRADE SLEEVES INTO HABITABLE SPACE SHALL INCLUDE WATER-TIGHT SLEEVES AS "LINK SEAL". |
| 11. | PROVIDE DI-ELECTRIC BUSHINGS IN ALL PIPE SYSTEMS WHERE UNLIKE METALS ARE CONNECTED, I.E., COPPER TO STEEL. PROVIDE STEEL SLEEVES IN ALL FLOORS, WALLS, ROOF DECK, ETC., FOR PIPE PENETRATIONS. SLEEVES SHALL BE OF SUFFICIENT DIAMETER TO ACCOMMODATE PIPE AND INSULATIO WHERE APPROPRIATE. COORDINATE ALL FLOOR PENETRATIONS WITH STRUCTURAL DRAWINGS. SET SLEEVES IN FLOORS AND WALL AND ATTACHMENTS FOR HANGERS AS CONSTRUCTION PROGRESSES. / PENETRATIONS MUST BE SEALED AND HELD AS TIGHT TO WALLS AS POSSIBLE. |
| 12. | PROVIDE 12" X 12" LOCKING PIANO HINGED ACCESS PANELS FOR SHOCK ABSORBERS, TRAP PRIMERS, A ALL VALVES LOCATED ABOVE NON-ACCESSIBLE CEILINGS AND INSIDE PIPE CHASES. EXACT LOCATION MUST BE COORDINATED WITH ARCHITECTURAL DRAWINGS AND APPROVED BY ARCHITECT PRIOR TO INSTALLATION |
| 13. | PIPE ALL DRIPS, DRAINS, RELIEFS, ETC. TO THE NEAREST FLOOR DRAIN UNLESS OTHERWISE INDICATED |
| 14. | DO NOT RUN PLUMBING PIPING THROUGH OR OVER ELECTRICAL CLOSETS OR WITHIN 3'-0" OF ELECTRIC |
| 15. | DISINFECT ALL NEW POTABLE WATER PIPING SYSTEMS WITH DOCUMENTATION PER SPECIFICATIONS AN |
| 16. | PRIOR TO SUBMITTING A BID, VISIT THE SITE OF THE PROPOSED CONSTRUCTION & BECOME THOROUGH ACQUAINTED WITH EXISTING CONDITIONS TO BE ENCOUNTERED ETC. NO ADDITIONAL COMPENSATION SHALL BE ALLOWED FOR CONDITIONS WHICH WERE NOT KNOWN OR APPRECIATED WHEN SUBMITTING BID IF THE CONDITION WAS OBVIOUS AND COULD HAVE BEEN DISCOVERED. THE INTENT IS FOR ALL UTILITIES, WHETHER ACTIVE OR ABANDONED, ROUTED BELOW GRADE IN THE AREA ENCOMPASSED BY NEW CONSTRUCTION, TO BE DISCONNECTED, REMOVED & RELOCATED (IF ACTIVE) TO PRESERVE EXIST LOAD OR CAPACITY. THE LOCATION OF ALL UTILITIES, NEW OR EXISTING, SHALL BE DULY IDENTIFIED AS SIZE, MATERIAL, AND FUNCTION OF PIPE, ETC. ON AS-BUILT DRAWINGS. |
| 17. | WHEN ENCOUNTERED IN WORK AREA, WHETHER OR NOT INDICATED, CAP OR PLUG OR OTHERWISE DISCONTINUE EXISTING INACTIVE SEWER, GAS, WATER, ELECTRIC, OR OTHER UTILITY SERVICE, STRUCTURES; OF WHICH, ACTION SHOULD BE TAKEN. IF REMOVAL IS REQUIRED, REQUEST INSTRUCTIC FROM ARCHITECT/PROFESSIONAL. |
| 18. | WHEN ENCOUNTERED IN WORK AREA, WHETHER OR NOT INDICATED, PROTECT EXISTING ACTIVE SEWEI WATER, GAS, ELECTRIC, OTHER UTILITY SERVICES, STRUCTURES; WHERE REQUIRED FOR PROPER EXECUTION OF WORK, RELOCATE THEM AS DIRECTED. IF EXISTING ACTIVE SERVICE ARE NOT INDICATE CONTACT PROFESSIONAL FOR INSTRUCTIONS. |
| 19. | PROVIDE WATER HAMMER ARRESTORS ON ALL PLUMBING FIXTURES. INSTALL PER MANUFACTURER'S RECOMMENDATIONS. |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |

SPECIFICATIONS - PLUMBING SUBMITTALS: REFER TO ARCHITECTURAL SPECIFICATIONS FOR SUBMITTAL PROCEDURES. PROVIDE SUBMITTALS FOR THE FOLLOWING: A. PLUMBING FIXTURES AND TRIM B. WATER HEATERS AND ACCESSORIES C. PIPE, VALVES AND FITTINGS

- CLOSE-OUT DOCUMENTS: REFER TO ARCHITECTURAL SPECIFICATIONS FOR CLOSE-OUT PROCEDURES. PROVIDE CLOSE-OUT DOCUMENTATION FOR THE FOLLOWING:
- A. TAB REPORT B. AS BUILT-DRAWINGS
- C. O&M MANUALS OF PLUMBING FIXTURES, ETC.
- **OWNER OPERATING & MAINTENANCE MANUALS AND INSTRUCTIONS:** A. IT IS THE CONTRACTOR'S RESPONSIBILITY TO SETUP AND TRAIN THE OWNER'S PERSONNEL IN THE PROPER OPERATION AND MAINTENANCE OF ALL MECHANICAL EQUIPMENT PROVIDED AND/OR INSTALLED WITH THIS PROJECT. THE SAFE OPERATION OF ALL PLUMBING AND SYSTEMS SHALL BE ADEQUATELY CONVEYED TO PERTINENT OWNER PERSONNEL, ALONG WITH INSTRUCTIONS ON WHAT IS OWNER'S RESPONSIBILITY, AND WHOM TO CONTACT FOR STANDARD ONE (1) YEAR WARRANTY, AND AFTERWARDS FOR EXTENDED WARRANTIES. SAME INFORMATION SHALL BE INCLUDED IN O&M MANUALS.
- B. SUBMIT TWO(2) COMPLETE SETS OF HARDBOUND BROCHURES, INDEXED, AND LABELED FOR EACH PIECE OF EQUIPMENT. THE MANUALS SHALL BE TRANSMITTED TO THE OWNER AT THE COMPLETION OF THE PROJECT.
- C. INCLUDE IN THESE BROCHURES WRITTEN SUBMITTAL DATA, MANUFACTURER'S OPERATING AND MAINTENANCE PROCEDURES AND RECOMMENDATIONS, SPARE PARTS LISTS AND SUPPLIERS AND ANY INTERLOCKING CONTROL OR WIRING DIAGRAMS FOR ALL EQUIPMENT. THE INFORMATION LISTED HEREIN IS TO BE BOUND IN THE FOLLOWING ORDER: COVER TO LIST PROJECT NAME, LOCATION, AND DATE COMPLETED.
- 1. FIRST SHEET TO LIST ARCHITECT, ENGINEER, CONTRACTOR AND SUBCONTRACTORS WITH ADDRESSES -FOR EACH. 2. SECOND SHEET TO LIST TYPE OF EQUIPMENT WITH SEQUENTIAL NUMBER, THE MANUFACTURER, MAKE, MODEL, AND SERIAL NUMBER OF THE ACTUAL EQUIPMENT NAMEPLATE DATA RATED HORSEPOWER, FULL LOAD RATED AMPS, VOLTAGE AND PHASE. INCLUDE PERTINENT CONTACT INFORMATION ON
- STANDARD ONE YEAR WARRANTY AND EXTENDED WARRANTY WORK. 3. NEXT, ACTUAL COPY OF APPROVED SUBMITTAL DATA INCLUDING ALL MANUFACTURER'S PUBLISHED INFORMATION ON CAPACITIES, CAPACITY CURVES OR TABLES, ACCESSORY AND CONTROL ITEM LISTS, AND OTHER PERTINENT INFORMATION AS REQUESTED BY ENGINEER. CROSS REFERENCE ALL EQUIPMENT TO CONTRACT DOCUMENTS.

AS-BUILT DRAWINGS (PROJECT RECORD DOCUMENTS: A. MAINTAIN AT JOB SITE A SET OF CONTRACT RECORD DOCUMENTS KEPT CURRENT BY INDICATING THEREON

- ALL CHANGES, SUBSTITUTIONS, ETC., BETWEEN WORK AS SPECIFIED AND AS INSTALLED, IN RED INK. B. AT THE COMPLETION OF THE PROJECT, FURNISH THE OWNER TWO(2) SETS OF BLUELINES SHOWING
- INSTALLED LOCATION, SIZE, ETC., OF ALL WORK AND MATERIAL AS TAKEN FROM RECORD DOCUMENTS. ALL AS-BUILT (ON RECORD) DRAWINGS SHALL BE LABELED "AS-BUILT DRAWINGS", DATED AND CERTIFIED AS ACCURATE BY MECHANICAL CONTRACTOR WITH HIS SIGNATURE, ON FRONT PAGE OF ALL DRAWING BLUELINE SETS AND SPECIFICATIONS. **PLUMBING IDENTIFICATION:**
- A. NEW OR EXISTING POTABLE WATER AND GAS PIPING THROUGHOUT SPACE SHALL BE NEWLY IDENTIFIED WITH MANUFACTURED SELF ADHESIVE LABELING, WITH ANSI APPROVED COLORED BACKGROUND. LETTERING SHALL BE MINIMUM 1/2" TALL ON PIPING 1" SIZE AND SMALLER, AND 1" TALL ON LARGER PIPING. PROVIDE LABELING THROUGHOUT ON MINIMUM 10' CENTERS. PROVIDE LABELING AFTER FINAL PAINTING OF UTILITIES HAS BEEN APPROVED BY ARCHITECT. LABELING SHALL BE AS SETON OR BRADLEY.
- VALVES: A. <u>VALVES FOR DOMESTIC WATER APPLICATIONS</u> (ALL VALVES SHALL BE NSF 61 COMPLIANT AND CONTAIN LESS THAN 0.25% LEAD (PB) BY WEIGHT)
- B. BALL VALVES 1. VALVES 2" AND SMALLER SHALL BE TWO-PIECE BRASS OR STAINLESS-STEEL CONSTRUCTION, 1-1/4" EXTENDED NECK, CHROME PLATED BALL WITH FULL PORT, P.T.F.E. SEALS AND SEATS. HEAVY DUTY STEEL HANDLE WITH VINYL GRIP, QUARTER TURN OPERATION. VALVES SHALL BE SUITABLE FOR WORKING PRESSURE OF 200 PSIG AND MAXIMUM 250DEG F.
- 2. VALVES 2-1/2" AND LARGER SHALL BE SAME AS ABOVE EXCEPT THAT TWO OR THREE-PIECE BRASS OR STAINLESS-STEEL CONSTRUCTION MAY BE UTILIZED.
- **GENERAL PLUMBING DEMOLITION NOTES:** WHERE PLUMBING FIXTURES ARE NOTED HEREIN TO BE DEMOLISHED, ALSO REMOVE ALL ASSOCIATED PIPING, ACCESSORIES, TRIM, HANGERS, ETC. UNLESS NOTED OTHERWISE.
- WHERE PLUMBING FIXTURES ARE NOTED HEREIN TO BE REPLACED, EXISTING ASSOCIATED PIPING, ACCESSORIES, ETC. SHALL REMAIN.
- . WHERE DIRECTED TO CAP SERVICES AS NOTED HEREIN, CAP ALL PIPING ASSOCIATED WITH DEMOLISHED FIXTURE IN WALL, ABOVE CEILING OR BELOW FLOOR AS REQUIRED FOR FINISHED APPEARANCE. DISCONNECT AND REMOVE ALL PIPING NOT UTILIZED IN NEW SCOPE OF WORK.
- . PATCH AND REPAIR ALL AREAS AFFECTED TO MATCH ADJACENT OR AS DIRECTED/APPROVED BY ARCHITECT, THIS SHALL INCLUDE, BUT IS NOT LIMITED TO, WALL REPAIR, CONCRETE REPAIR, PAINTING, ETC. COORDINATE FINISHES WITH ARCHITECTURAL DRAWINGS.
- ALL REMOVED PLUMBING EQUIPMENT AND FIXTURES SHALL BE OFFERED TO OWNER. THOSE NOT ACCEPTED BY OWNER SHALL BE DISPOSED OF OFF SITE PER LOCAL CODES AND ORDINANCES. ALL OTHER DEMOLISHED MECHANICALLY RELATED MATERIALS SHALL BE DISPOSED OF SIMILARLY.
- PIPING LOCATED IN WALLS TO REMAIN, OR BELOW SLAB/FLOOR, THAT DOES NOT CONFLICT WITH NEW WORK, MAY REMAIN AND BE CAPPED FOR CONCEALMENT AND DISCONNECTED FROM ACTIVE SERVICE, ETC.
- PROVIDE ANY TEMPORARY CONNECTIONS REQUIRED TO MAINTAIN PLUMBING SERVICES TO NEW AND EXISTING FIXTURES AND INSTALLATIONS BEING UTILIZED OUTSIDE THE AREA BEING RENOVATED.

- **GENERAL PLUMBING RENOVATION NOTES:** . REFER TO ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHT OF ALL FIXTURES AND DESIGNATION OF ADA COMPLIANT FIXTURES. VERIFY/COORDINATE EXISTING ROUGH-IN LOCATIONS AND MODIFY ACCORDINGLY TO MATCH NEW MOUNTING HEIGHTS AND ADA COMPLIANCE.
- CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL NEW AND EXISTING PLUMBING UTILITIES WITHIN THE SCOPE OF WORK. THE USE OF EXISTING DRAWINGS WHERE AVAILABLE AND SCHOOL MAINTENANCE PERSONNEL SHOULD BE UTILIZED IN LOCATING PIPING INSIDE THE BUILDING WHERE CONNECTIONS TO EXISTING ARE REQUIRED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO RESEARCH LOCATION OF EXISTING UTILITIES AND EXISTING CONDITIONS.
- IN ALL AREAS OF RENOVATION, UNLESS OTHERWISE INDICATED, EXISTING PLUMBING SERVICES SHALL BE MODIFIED AND EXTENDED IN CHASES, WALLS, BELOW SLAB/FLOOR AND/OR ABOVE CEILING AS REQUIRED TO CONNECT TO NEW PLUMBING FIXTURES AND/OR RECONNECT EXISTING PLUMBING FIXTURES WHERE INDICATED.
- UNLESS OTHERWISE INDICATED, IN MULTI-FIXTURE PLUMBING BATTERIES, OPEN WALL, CONNECT TO AND MODIFY EXISTING NEARBY DOMESTIC WATER PIPING AND PROVIDE NEW FULL-SIZE WATER SERVICE PIPING HEADER IN CHASE OR ABOVE CEILING, ETC. WITH BRANCH PIPING CONNECTIONS TO INDIVIDUAL FIXTURES AS INDICATED ON PLUMBING FIXTURE ROUGH-IN SCHEDULE. PROVIDE NEW WATER HAMMER ARRESTORS FOR EACH GROUP OF FIXTURES. PATCH AND REPAIR ALL AREAS AFFECTED AS DIRECTED/APPROVED BY ARCHITECT.

DEMO

NEW WORK (P100)

- OPEN WALLS AND MODIFY EXISTING WATER PIPING WHERE REQUIRED FOR NEW ADA COMPLIANT FLUSH VALVE INSTALLATION. PATCH AND REPAIR ALL AREAS AFFECTED AS DIRECTED/APPROVED BY ARCHITECT.
- UNLESS OTHERWISE INDICATED, ALL NEW WALL MOUNTED FIXTURE (LAVATORIES, URINALS, DRINKING FOUNTAINS, ETC.) SHALL BE PROVIDED WITH NEW FLOOR MOUNTED FIXTURE CARRIERS. OPEN WALLS AS REQUIRED TO INSTALL SAME AND PATCH AND REPAIR ALL AREAS AFFECTED AS DIRECTED/APPROVED BY ARCHITECT.
- UNLESS OTHERWISE INDICATED, CONNECT TO EXISTING PLUMBING VENT THROUGH ROOF, REUTILIZING EXISTING ROOF PENETRATION. FIELD VERIFY LOCATION AND PROVIDE NEW FLASHING, COLLAR, ETC. AS REQUIRED.



Level 1 - Overall Plumbing Plan

| e ecifications ion Plan ork | An Assoc Archited One Jackson F 188 East Capit Jackson, MS p 601.352. 201 Park Cour Ridgeland, MS p 601.790. 161 Lameuse St Biloxi, MS 3 p 228.374. dalebaileypla | LE S LATION tation tati |
|---|---|---|
| | Carver Elementary Emergency Remodel | Carver Elementary: 900 44th Ave, Meridian, MS 39307 |
| | 100% Construe Docum Project No Date M Drawn Checked Revision # | % ction ents 22034.04 ay 05, 2023 MG JK/KS Date |
| GSSK MECHANICAL Consulting Engineering | POC |)1 |

P: 601.605.2930 F: 844.493.3111 Level 1 Overall Plumbing Plan & Specifications GSK#:110-110

www.gskmech.com



DALE BAILEY AN ASSOCIATION Architects One Jackson Place 250 188 East Capitol Street Jackson, MS 39201 p 601.352.5411 201 Park Court Suite B Ridgeland, MS 39157 p 601.790.9432 161 Lameuse St. Suite 201 Biloxi, MS 39530 p 228.374.1409 dalebaileyplans.com lode 39307 Ð S \mathbf{r} leridiar Σ 4th Ш 4 006 arver Elementary: Jer Eler Cal 100% Construction Documents 22034.04 May 05, 2023 MG Project No JK/KS Date Checked Revision # _____ GSK PD100

MECHANICAL Consulting Engineering 201 Park Court - Suite A | Ridgeland, MS 39157 P: 601.605.2930 F: 844.493.3111 www.gskmech.com GSK#:110-110

Level 1 Enlarged Plumbing Demolition Plan





| DOMESTIC WATER HEATER SCHEDULE | |
|--------------------------------|--|
|--------------------------------|--|

| | 3110 | VVAIER | TEATER SU | | ULL | | | | |
|-------|------|-----------------------|-----------------------------------|-------------|-------------|--------------|-----------------------|-----------------------|-------------|
| MARK | FUEL | STORAGE CAP., GAL. | RECOVERY G.P.H. AT 100 ⁰F RISE | MAX. GPM | INPUT KW | INPUT MBH | ELECTRICAL SERVICE | BASIS OF DESIGN | FEATURES/AC |
| WH-01 | ELEC | 30 | 24 | - | 6.0 | - | 208V.,3ph | AO SMITH MODEL DEN-30 | 1, 2 |
| WH-02 | ELEC | - | - | - | 3.0 | - | 120V.,1ph | EEMAX MODEL SPEX3012T | 1 |
| WH-03 | ELEC | - | - | - | 3.0 | - | 120V.,1ph | EEMAX MODEL SPEX3012T | 1 |
| WH-04 | ELEC | - | - | - | 3.0 | - | 120V.,1ph | EEMAX MODEL SPEX3012T | 1 |
| WH-05 | ELEC | - | - | - | 3.0 | - | 120V.,1ph | EEMAX MODEL SPEX3012T | 1 |
| WH-06 | ELEC | - | - | - | 3.0 | - | 120V.,1ph | EEMAX MODEL SPEX3012T | 1 |
| WH-07 | ELEC | - | - | - | 3.0 | - | 120V.,1ph | EEMAX MODEL SPEX3012T | 1 |
| WH-08 | ELEC | - | - | - | 3.0 | - | 120V.,1ph | EEMAX MODEL SPEX3012T | 1 |
| WH-09 | ELEC | - | - | - | 3.0 | - | 120V.,1ph | EEMAX MODEL SPEX3012T | 1 |
| | | | | | | | | | |

FEATURES/ACCESSORIES:

. PROVIDE PIPING, VALVES AND ACCESSORIES PER DETAILS. 2. PROVIDE HEAVY DUTY WALL MOUNTING KIT WITH TOP MOUNTED AT ± 2" BELOW CEILING.

LIFT STATION PUMP SCHEDULE

| | • • • • • • | | | | | | | | | | | | | |
|--|-------------|--------|-------|----------------------------------|--|--|-----------------------------------|--------------------------------|-----------------------|---------|------------|-----------|-------|-----------------|
| | LOCATION | [1] | | NDOUD | | [2] | ELECTRICAL DATA | | | E | | | | |
| MARK | | SYSTEM | FLUID | GPM | PUMP HEAD FT. FLUID | TEMP., ⁰F | SP. GR. | (FEET) | % EFF. | TYPE | NOM. HP | SERVICE | RPM | PUMP |
| LSP-01 | SEE PLANS | Α | WATER | 40 | 20 | 60-200 | 1 | 10 | - | Α | 1.5 | 208V,.3ph | 1750 | WEIL MODEL 2554 |
| | | | | | | | | | | | | | | |
| [1] SYSTEM A. SANITARY SEWER LIFT STATION | | | | [2] TY A. D 1. 2. 3. | 'PE UPLEX SUBME FIBERGLASS NEMA 4X WE SEE DETAIL | ERSIBLE PUMP B EATHERPF FOR OTH | SEWAG ASIN ROOF C ER ACC | E PUMP \ ONTROL CESSORIE | WITH TH PANEL S | ie foll | OWING | ACCESSOF | RIES: | |

| SSORIES | |
|---------|--|
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |

| PLUM | BING F | IXTURE SCHEDULE | | | | | | | | | |
|------|----------|---|---------|---------|--------------|-------|----------|--------------------------------|--|---|---------------|
| MARK | ADA | DESCRIPTION | | ROUGH | H-IN REQUIRE | MENTS | | FIXTURE | FAUCET | DESCRIPTION | FLOOR MTND. |
| | REQ'D | DESCRIPTION | WASTE | VENT | 120 °F HW | CW | TEMPERED | MAKE AND MODEL | MAKE AND MODEL | DESCRIPTION | CARRIER REQ'D |
| WC-1 | SEE ARCH | WATER CLOSET - FLOOR MOUNTED FLUSH VALVE (HARDWIRED SENSOR) - PRIMARY | 4'' | 2''-4'' | - | 1" | - | KOHLER K-96064 / K-4686 (SEAT) | SLOAN ROYAL MODEL 111 SFSM-1.6-HW | 1.6 GPF, WITH TRUE MECHANICAL OVERRIDE FLUSH BUTTON, HARDWIRE KIT AND TRANSFORMER | NO |
| WC-2 | SEE ARCH | WATER CLOSET - FLOOR MOUNTED FLUSH VALVE (HARDWIRED SENSOR) | 4'' | 2''-4'' | - | 1" | - | KOHLER K-96054 | SLOAN ROYAL MODEL 111 SFSM-1.6-HW | 1.6 GPF, WITH TRUE MECHANICAL OVERRIDE FLUSH BUTTON, HARDWIRE KIT AND TRANSFORMER | NO |
| L-1 | SEE ARCH | LAVATORY - WALL MOUNTED TYPE (HARDWIRED SENSOR) | 2'' | 2'' | 1/2'' | 1/2'' | 1/2'' | KOHLER K-2007 | SLOAN MODELSF-2450 (HARDWIRED) | 0.5 GPM VANDAL RESISTANT LAMINAR FLOW OUTLET WITH THERMOSTATIC MIXING VALVE (ASSE 1017). PROVIDE HARDWIRED WITH TRANSFORMER. | YES |
| L-2 | SEE ARCH | LAVATORY - WALL MOUNTED TYPE (HARDWIRED SENSOR) | 2'' | 2'' | 1/2'' | 1/2'' | 1/2'' | KOHLER K-2007 | SLOAN MODELSF-2450 (HARDWIRED) | 0.5 GPM VANDAL RESISTANT LAMINAR FLOW OUTLET WITH THERMOSTATIC MIXING VALVE (ASSE 1017). PROVIDE HARDWIRED WITH TRANSFORMER. | YES |
| LF-1 | YES | LAVATORY FAUCET (HARDWIRED SENSOR) | - | - | 1/2'' | 1/2'' | 1/2'' | - | SLOAN MODELSF-2450 (HARDWIRED) | 0.5 GPM VANDAL RESISTANT LAMINAR FLOW OUTLET WITH THERMOSTATIC MIXING VALVE (ASSE 1017). PROVIDE HARDWIRED WITH TRANSFORMER. PROVIDE STAINLESS STEEL CAPS OVER UNUSED HOLES. | - |
| SH-1 | YES | SHOWER FITTINGS AND DRAIN | 2'' | 2'' | 1/2'' | 1/2'' | - | ZURN Z-415B | ZURN Z7000-I2 ZURN Z7101-SS-LH-HW-DV-2P-HW-MT | PRESSURE BALANCING VALVE, METAL HANDLE AND COVER, DIVERTER VALVE, 2 EACH INSTITUTIONAL SHOWER HEAD (ONE AT 48"AFF FOR ADA) | NO |
| TP-1 | NO | TRAP PRIMER - CONNECT TO FLUSH VALVE ASSEMBLY | - | - | - | 1/2'' | - | ZURN Z-6000 TPO | - | | NO |
| TG-1 | NO | TRAP GUARD | - | - | - | - | - | PROSET | - | | NO |
| FD-1 | NO | FLOOR DRAIN - GENERAL DRAINAGE IN TOILET AREAS | 3'' | 2'' | - | - | - | ZURN MODEL Z415-7B | - | | NO |
| FD-2 | NO | FLOOR DRAIN - AREA MECHANICAL ROOM DRAINAGE | 4'' | 2'' | - | - | - | ZURN MODEL Z541 | - | | NO |
| FFCO | NO | FINISHED FLOOR CLEANOUT | 2"-4" | - | - | - | - | ZURN MODEL Z1400 | - | | NO |
| FGCO | NO | FINISHED GRADE CLEANOUT (PAVING) | 2''-4'' | - | - | - | - | ZURN MODEL Z1406 (PAVING) | - | | NO |
| FGCO | NO | FINISHED GRADE CLEANOUT (NO PAVING) | 2''-4'' | - | - | - | - | ZURN MODEL 1449 (NO PAVING) | - | | NO |
| wco | NO | WALL CLEANOUT | 2''-4'' | - | - | - | - | ZURN MODEL Z1446 | - | | NO |
| ADB | NO | AUXILIARY DRAIN BOX | 2'' | - | - | - | - | GUY GRAY MODEL FRAD12 | | | NO |
| | | | | | | | | | | | |

MISCELLANEOUS PLUMBING FIXTURE TRIM

STOPS AND SUPPLIES

- 1. STOPS FOR LAVATORIES, SINKS, TANK TYPE WATER CLOSETS, ETC. SHALL BE CHROME PLATED BRASS ANGLE QUARTER TURN BALL VALVE COMPRESSION TYPE AS "CONVERTABLE" BY
- MCGUIRE. 2. SUPPLIES SHALL BE STAINLESS STEEL BRAIDED/REINFORCED TYPE.

FIXTURE TRIM 1. DRAIN AND WASTE ASSEMBLIES BELOW LAVATORIES AND SINKS SHALL BE MINIMUM 17 GAUGE CHROME PLATED BRASS AND TRAPS SHALL INCLUDE CLEANOUT PLUGS. SINK BASKET/STRAINERS SHALL BE OF STAINLESS STEEL CONSTRUCTION.

ESCUTCHEONS 1. PROVIDE CHROME-PLATED ESCUTCHEONS ON ALL WATER AND DRAIN PIPING WALL, FLOOR AND CEILING PENETRATIONS. HEAVY DUTY TYPE WITH SET SCREWS SHALL BE UTILIZED IN EXPOSED APPLICATIONS UNDER WALL MOUNTED LAVATORIES AND SINKS. EXPOSED PIPING APPLICATIONS ON TANK TYPE WATER CLOSET STOPS AND ON EXPOSED PIPING TO FLUSH VALVES, ETC. LIGHT DUTY SLIP-ON TYPE MAY BE UTILIZED IN CONCEALED (WITHIN CABINET) INSTALLATIONS.

HANDICAPPED SERVICES

- 1. PROVIDE WHERE REQUIRED AND/OR INDICATED FIXTURES THAT COMPLY WITH THE LATEST VERSION OF AMERICAN WITH DISABILITIES ACT (ADA). 2. PROVIDE NEAT PRE-PACKAGED MOLDED INSULATION PROTECTION
- ON AN EXPOSED DRAIN AND WATER SUPPLY PIPING BELOW SINKS AND LAVATORIES EQUAL TO TRUEBRO MODEL #105.

SOLVENT WELD

SOLVENT WELD

PLUMBING PIPING AND JOINING REQUIREMENTS BASIS OF DESIGN SERVICE MATERIAL DOMESTIC WATER ABOVE SLAB ON GRADE TYPE 'L' COPPER CONTROL PANEL TYPE 'L' COPPER EQUIPMENT AND UTILITY DRAINS WEIL MODEL 8151 SANITARY WASTE AND VENT ABOVE SLAB ON GRADE SCH. 40 PVC (SOLID CORE) WITH DWV FITTINGS SOLVENT WELD SANITARY WASTE AND VENT PIPING BELOW SLAB ON GRADE SCH. 40 PVC (SOLID CORE) WITH DWV FITTINGS SANITARY WASTE AND VENT PIPING BELOW GRADE (OUTSIDE) SCH. 40 PVC (SOLID CORE) WITH DWV FITTINGS COMPARABLE PRODUCTS: BELL AND GOSSETT, PACO, TACO PUMPED WASTE OUTDOORS SCH. 40 PVC PRESSURE RATED

CARRIERS: 1. PROVIDE APPROPRIATE CARRIERS FOR ALL WALL MOUNTED WATER CLOSETS, URINALS, LAVATORIES, ELECTRIC DRINKING FOUNTAINS AND SINKS AND AS INDICATED HEREIN. ALL CARRIERS SHALL BE

CONCEALED FLOOR MOUNTED TYPE UNLESS OTHERWISE APPROVED BY PROFESSIONAL.

| JOINING | TESTS REQUIRED | PIPING INSULATION A |
|------------------------------------|---------------------------------|-------------------------|
| LEAD FREE SOLDER OR PRESS FITTINGS | PER INTERNATIONAL PLUMBING CODE | 1" THICK MOLDED FIBERGL |
| LEAD FREE SOLDER | NONE | NONE |
| SOLVENT WELD (GLUE) | PER INTERNATIONAL PLUMBING CODE | NONE |
| SOLVENT WELD (GLUE) | PER INTERNATIONAL PLUMBING CODE | NONE |
| SOLVENT WELD (GLUE) | PER INTERNATIONAL PLUMBING CODE | NONE |
| SOLVENT WELD (GLUE) | PER INTERNATIONAL PLUMBING CODE | NONE |
| | | |
| | | |

Architects

One Jackson Place 250 188 East Capitol Street Jackson, MS 39201 p 601.352.5411

201 Park Court Suite B Ridgeland, MS 39157 p 601.790.9432

161 Lameuse St. Suite 201 Biloxi, MS 39530 p 228.374.1409

dalebaileyplans.com

 \mathbf{O} σ Ш

930 Ő () \geq eridian, $\overline{}$ \leq Φ

ith 4 4 Ο 90 Elementary:

Ve ar

100% Construction Documents 22034.04 Project No May 05, 2023 Date MG Drawn

Date Revision

Checked

JK/KS

SPECIFICATIONS - HVAC

SUBMITTALS: REFER TO ARCHITECTURAL SPECIFICATIONS FOR SUBMITTAL PROCEDURES. PROVIDE SUBMITTALS FOR THE FOLLOWING: A. EXHAUST FANS, ACCESSORIES, AND CONTROLS

<u>CLOSE-OUT DOCUMENTS:</u> REFER TO ARCHITECTURAL SPECIFICATIONS FOR CLOSE-OUT PROCEDURES. PROVIDE CLOSE-OUT DOCUMENTATION FOR THE FOLLOWING:

A. TAB REPORT **B. AS BUILT-DRAWINGS**

C. O&M MANUALS OF HVAC EQUIPMENT, CONTROLS, ETC. NEW AND AS-BUILT DRAWINGS.

- OWNER OPERATING & MAINTENANCE MANUALS AND INSTRUCTIONS: A. IT IS THE CONTRACTOR'S RESPONSIBILITY TO SETUP AND TRAIN THE OWNER'S PERSONNEL IN THE PROPER OPERATION AND MAINTENANCE OF ALL MECHANICAL EQUIPMENT PROVIDED AND/OR INSTALLED WITH THIS PROJECT. THE SAFE OPERATION OF ALL PLUMBING AND SYSTEMS SHALL BE ADEQUATELY CONVEYED TO PERTINENT OWNER PERSONNEL, ALONG WITH INSTRUCTIONS ON WHAT IS OWNER'S RESPONSIBILITY, AND WHOM TO CONTACT FOR STANDARD ONE (1) YEAR WARRANTY, AND AFTERWARDS FOR EXTENDED WARRANTIES. SAME INFORMATION SHALL BE INCLUDED IN O&M MANUALS
- B. SUBMIT TWO(2) COMPLETE SETS OF HARDBOUND BROCHURES, INDEXED, AND LABELED FOR EACH PIECE OF EQUIPMENT. THE MANUALS SHALL BE TRANSMITTED TO THE OWNER AT THE COMPLETION OF THE PROJECT.
- C. INCLUDE IN THESE BROCHURES WRITTEN SUBMITTAL DATA, MANUFACTURER'S OPERATING AND MAINTENANCE PROCEDURES AND RECOMMENDATIONS, SPARE PARTS LISTS AND SUPPLIERS AND ANY INTERLOCKING CONTROL OR WIRING DIAGRAMS FOR ALL EQUIPMENT. THE INFORMATION LISTED HEREIN IS TO BE BOUND IN THE FOLLOWING ORDER: COVER TO LIST PROJECT NAME, LOCATION, AND DATE COMPLETED.
- 1. FIRST SHEET TO LIST ARCHITECT, ENGINEER, CONTRACTOR AND SUBCONTRACTORS WITH ADDRESSES FOR EACH. 2. SECOND SHEET TO LIST TYPE OF EQUIPMENT WITH SEQUENTIAL NUMBER, THE MANUFACTURER, MAKE, MODEL, AND SERIAL NUMBER OF THE ACTUAL EQUIPMENT NAMEPLATE DATA RATED HORSEPOWER, FULL LOAD RATED AMPS, VOLTAGE AND PHASE. INCLUDE PERTINENT CONTACT INFORMATION ON
- STANDARD ONE YEAR WARRANTY AND EXTENDED WARRANTY WORK. 3. NEXT, ACTUAL COPY OF APPROVED SUBMITTAL DATA INCLUDING ALL MANUFACTURER'S PUBLISHED INFORMATION ON CAPACITIES, CAPACITY CURVES OR TABLES, ACCESSORY AND CONTROL ITEM LISTS, AND OTHER PERTINENT INFORMATION AS REQUESTED BY ENGINEER. CROSS REFERENCE ALL EQUIPMENT TO CONTRACT DOCUMENTS.

AS-BUILT DRAWINGS (PROJECT RECORD DOCUMENTS: A. MAINTAIN AT JOB SITE A SET OF CONTRACT RECORD DOCUMENTS KEPT CURRENT BY INDICATING THEREON

ALL CHANGES, SUBSTITUTIONS, ETC., BETWEEN WORK AS SPECIFIED AND AS INSTALLED, IN RED INK. B. AT THE COMPLETION OF THE PROJECT, FURNISH THE OWNER TWO(2) SETS OF BLUELINES SHOWING INSTALLED LOCATION, SIZE, ETC., OF ALL WORK AND MATERIAL AS TAKEN FROM RECORD DOCUMENTS. ALL AS-BUILT (ON RECORD) DRAWINGS SHALL BE LABELED "AS-BUILT DRAWINGS", DATED AND CERTIFIED AS ACCURATE BY MECHANICAL CONTRACTOR WITH HIS SIGNATURE, ON FRONT PAGE OF ALL DRAWING BLUELINE SETS AND SPECIFICATIONS.

MECHANICAL IDENTIFICATION: A. HVAC EQUIPMENT SENSOR/CONTROLLERS SHALL BE NEWLY IDENTIFIED WITH NEAT PHENOLIC LABELS, COLOR(S) BY ARCHITECT. IDENTIFY SYSTEM SERVED.

- HVAC EQUIPMENT AND CONTROLS: A. HVAC EQUIPMENT AND CONTROLS SHALL BE CONTRACTOR PROVIDED AND INSTALLED.
- B. ALL CONTROL WIRING SHALL BE RUN WITHIN APPROVED RACEWAY AS FOLLOWS: METALLIC RIGID RACEWAY REQUIRED INDOORS IN CONCEALED SPACES WITHIN WALLS AND ABOVE HARD CEILINGS; LIQUIDTITE WEATHERPROOF FLEXIBLE CONNECT TO EQUIPMENT REQUIRED OUTDOORS. EXISTING CONTROL WIRING MAY BE UTILIZED IF FOUND IN GOOD CONDITION; OTHERWISE, NEW CONTROL WIRING SHALL BE PLENUM RATED. SHEATHING REQUIRED ON ALL CONTROL WIRING RAN OUTSIDE RACEWAY. PROVIDE TWO (2) SPARE CONDUCTORS ON ALL INSTALLATIONS. WIRING MAY BE ROUTED OUTSIDE RACEWAY ONLY WHERE CONCEALED ABOVE AN ACCESSIBLE CEILING.

TESTING, ADJUSTING AND BALANCING (TAB)

SYSTEMS DURING EACH WORKING DAY OF TAB.

- A. ALL TAB SHALL BE PERFORMED BY A QUALIFIED TAB VENDOR WHO IS A CERTIFIED MEMBER OF AABC, NEBB, OR AS APPROVED BY ENGINEER-OF-RECORD.
- B. COORDINATE TAB PROCEDURES WITH ANY PHASED CONSTRUCTION REQUIREMENTS FOR THE PROJECT SO HAT USABLE INCREMENTS OF FINISHED WORK MAY BE ACCEPTED FOR BENEFICIAL OCCUPANCY.
- C. CONDUCT FINAL TAB AFTER SYSTEM MODIFICATIONS HAVE BEEN COMPLETED AND SYSTEM IS IN FULL WORKING ORDER. PUT ALL HVAC SYSTEMS INTO FULL OPERATION AND CONTINUE OPERATION OF THE
- AIR BALANCE: A. BALANCE SYSTEMS TO DESIGN RATINGS. ADJUST FAN SPEEDS TO AND/OR DUCT BRANCH DAMPERS, PROVIDE DESIGN FLOWS, INCLUDING SYSTEM DIVERSITIES, AT ACTUAL SYSTEM PRESSURES. BELT DRIVES, INCLUDING SHEAVES, BELTS, ETC. SHALL BE ADJUSTED AND/OR REPLACED AS REQUIRED TO SAFELY OBTAIN SPECIFIED PERFORMANCE. SUPPLY AIR FOR HEATING AND COOLING FUNCTIONS SHALL BE WITHIN ±5% OF SPECIFIED AIRFLOW.

TAB AND REPORT DATA REQUIRED: PROFESSIONAL APPROVED INDEPENDENT TAB AGENCY SHALL FURNISH ALL LABOR AND MATERIALS TO BALANCE THE FOLLOWING NEW AND/OR MODIFIED EQUIPMENT AND SYSTEMS: THE FOLLOWING MINIMUM INFORMATION SHALL BE PROVIDED.

- B. <u>FANS:</u> 1. CFM -2. VOLTAGE -
- 3. F.L.A. -4. EXTERNAL STATIC PRESSURE -
- C. BALANCE ALL E.A. AIR DISTRIBUTION DEVICES TO WITHIN 10% OF SPECIFIED C.F.M., YET MAIN AREA PRESSURIZATION AND DIFFERENTIALS, AND PROPORTION TO ORIGINAL CFM, IN ALL AREAS.
- D. MARK ALL FLOW C.F.M., ETC. ON AN 1/8" PER FOOT SCALE SET OF WORKING DRAWINGS AND SUBMIT TO PROFESSIONAL WITH TAB REPORT PRIOR TO COMPLETION OF WORK.
- E. SUBMIT THE TEST AND BALANCE REPORT AS INDICATED ABOVE, ALONG WITH THE WORKING DRAWING TO PROFESSIONAL FOR APPROVAL PRIOR TO COMPLETION AND SUBSTANTIAL COMPLETION INSPECTION TO JOB
- F. VERIFY THAT WATER HEATER TEMPERATURE SETPOINT IS ±145°F.
- G. VERIFY THAT TEMPERATURES AT LAVATORY AND SERVICE SINK IS NO GREATER THAN ±115°F. ADJUST MIXING VALVE AS REQUIRED TO ACHIEVE SAME. H. <u>CERTIFICATION:</u> TEST FUNCTION OF OPERATION OF ALL HVAC AND DOMESTIC WATER CONTROLS AND
- SYSTEMS. CHECK ALL SAFETY AND OPERATING CONTROLS FOR PROPER OPERATION AND SEQUENCE AND REPORT ANY DEFICIENCIES. TAB AGENCY SHALL PROVIDE THE FOLLOWING WRITTEN CERTIFICATION WITHIN THE FINAL TAB REPORT:

"THE TESTING, ADJUSTING AND BALANCING (TAB) AGENCY CERTIFIES THAT THE HVAC AIR AND PLUMBING WATER SYSTEMS AND CONTROLS HAVE HAD A FULL RANGE OF TESTS AND CHECKS CARRIED OUT BY THE TAB AGENCY, TO DETERMINE IF ALL COMPONENTS, SUB-SYSTEMS, SYSTEMS AND INTERFACES BETWEEN SYSTEMS OPERATE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. THIS INCLUDES ALL MODES AND SEQUENCES OF CONTROL OPERATION, INTERLOCKS AND CONDITIONAL AND SPECIFIED CONTROL RESPONSES TO ABNORMAL, SAFETY AND EMERGENCY CONDITIONS."

GENERAL HVAC NOTES:

- 1. THESE DRAWINGS ARE SCHEMATIC IN NATURE AND ARE NOT INTENDED TO SHOW ALL POSSIBLE CONDITIONS. IT IS INTENDED THAT THE SPECIFIED HVAC SYSTEM BE PROVIDED COMPLETE WITH ALL NECESSARY EQUIPMENT, APPURTENANCES, AND CONTROLS AND COMPLETELY COORDINATED WITH ALL OTHER CRAFTS AND DISCIPLINES. ALL PARAMETERS GIVEN IN THESE DOCUMENTS SHALL BE IN STRICT CONFORMANCE. ANY ADDITIONAL MATERIALS AND/OR LABOR REQUIRED TO CONFORM WITH ALL APPLICABLE CODES, STANDARDS, AND THESE CONTRACT DOCUMENTS, SHALL BE PROVIDED COMPLETE AND WITHOUT ADDITIONAL COST TO THE CONTRACT.
- 2. THE LOCATION OF ALL AIR DISTRIBUTION DEVICES TO BE COORDINATED WITH THE ARCHITECTURAL REFLECTED CEILING PLANS. COORDINATE LOCATION OF DUCTWORK IN ALL AREAS TO MATCH CEILING GRID/LIGHT FIXTURES WHILE MAXIMIZING CEILING HEIGHT SCHEDULED ON ARCHITECTURAL PLANS.
- 3. WALL CAPS TO BE OF ALUMINUM CONSTRUCTION AND HAVE FACTORY COLORED FINISH. THE COLOR TO BE SELECTED BY THE ARCHITECT.
- 4. IT IS ESSENTIAL THAT ALL EXTERIOR WALL DEVICES (FANS, CAPS, BRICK VENTS, ETC.) BE INSTALLED SYMMETRICALLY AND PER ARCHITECT'S PLANS. VERIFY INSTALLATION REQUIREMENTS WITH ARCHITECT IN ALL CASES.
- 5. DUCTWORK AND OTHER MECHANICAL OPENINGS THROUGH MASONRY WALLS SHALL BE REINFORCED/SUPPORTED AS DETAILED ON STRUCTURAL DRAWINGS. COORDINATE THE LOCATIONS AND SIZES OF THESE PENETRATIONS MAKING ALLOWANCES FOR INSULATION, FIRE DAMPERS, PIPING SLEEVES,
- 6. PORTIONS OF DUCTWORK VISIBLE THROUGH GRILLES AND REGISTERS IN FINISHED AREAS SHALL BE PAINTED FLAT BLACK.
- 7. VERIFY AVAILABLE SPACE ABOVE CEILINGS AND STRUCTURAL RESTRICTIONS PRIOR TO CONSTRUCTING DUCTWORK OR INSTALLING CONCEALED EQUIPMENT. DUCTWORK SIZE MAY BE ALTERED TO CONFORM TO THESE REQUIREMENTS PROVIDING SIMILAR AIR DELIVERY CHARACTERISTICS AS DEFINED AND APPROVED BY PROFESSIONAL. ALL SUPPLY AND RETURN AIR DUCTS THAT ARE SHOWN TO BE ROUTED CONCEALED ABOVE CEILINGS SHALL BE ROUTED TO AVOID THE BUILDING STRUCTURE AND COORDINATED WITH THE LIGHT FIXTURES, CONDUIT PIPING, ETC. VERIFY AVAILABLE SPACE AND COORDINATE THE SIZE AND ROUTING OF ALL DUCTWORK. IT IS INTENDED THAT DUCTWORK HAVE THE "RIGHT-OF-WAY" ABOVE MOST OTHER CRAFTS AND INSTALLATIONS.
- 8. SEE NOTES, SCHEDULES AND INSTALLATION DETAILS ON DRAWINGS FOR SPECIFICATIONS GOVERNING DUCTWORK SEALANT, DUCTWORK INSTALLATION, SUPPORTS, TAPS, FITTINGS, THE RESTRICTED USE OF FLEXIBLE DUCTWORK AND DUCTWORK LEAK/PRESSURE TESTING.
- 9. TEST AND BALANCE ALL NEW AIR DISTRIBUTION SYSTEM (AND DEVICES) TO AIR QUANTITIES SHOWN ADJACENT TO EACH DEVICE, WITHIN SPECIFIED TOLERANCES. TESTING SHALL BE PERFORMED BY AN AABC OR NEBB ACCREDITED COMPANY. 10. DUCT SIZES INDICATED ARE ACTUAL INSIDE NET DIMENSIONS.
- 11. PRIOR TO SUBMITTING A BID, VISIT THE SITE OF THE PROPOSED CONSTRUCTION & BECOME THOROUGHLY ACQUAINTED WITH EXISTING CONDITIONS TO BE ENCOUNTERED ETC. NO ADDITIONAL COMPENSATION SHALL BE ALLOWED FOR CONDITIONS WHICH WERE NOT KNOWN OR APPRECIATED WHEN SUBMITTING A BID IF THE CONDITION WAS OBVIOUS AND COULD HAVE BEEN DISCOVERED.
- 12. COORDINATE HVAC EQUIPMENT AND DUCTWORK INSTALLATIONS AND CONNECTIONS IN MECHANICAL SPACES TO PROVIDE SUITABLE, NEAT INSTALLATION THAT MAXIMIZES HEADROOM AND ACCESS TO EQUIPMENT, CONNECTIONS, ETC.
- 13. ROUTING OF ALL DUCTWORK, CONTROL CONDUIT, ETC. TO BE COORDINATED WITH LIGHTING FIXTURE LAYOUT IN EXPOSED STRUCTURE AREAS.
- 14. ALL DUCTWORK, INSULATION, AND HANGERS EXPOSED THROUGHOUT FACILITY TO BE PRIMED AND PAINTED

| MARK | DESCRIPTION | |
|-------------------|--|---|
| | TYPICAL RECTANGULAR TO BOUND DUCT TRANSITION | |
| | TYPICAL DUCTWORK INCREASER/REDUCER | |
| | TYPICAL ROUND DUCT BELLMOUTH TAKEOFF ADAPTER WITH VOLUME DAMPER | |
| | TYPICAL ROUND DUCT BELLMOUTH TAKEOFF ADAPTER | |
| | TYPICAL RECTANGULAR TO RECTANGULAR TAKEOFF ADAPTER WITH VOLUME DAMPER AND EXTRACTOR | |
| | TYPICAL ADJUSTABLE LOCKING QUADRANT VOLUME DAMPER | |
| ŧ Ţ, | MOTORIZED DAMPER | |
| S/A R/A E/A | WHEN PRINTED IN COLOR, SUPPLY DUCTWORK INDICATED BY BLUE COLOR, RETURN/TRANSFER DUCTWORK INDICATED BY RED COLOR AND EXHAUST DUCTWORK INDICATED BY GREEN COLOR. WHEN PRINTED IN GRAYSCALE, ALL DUCTWORK APPEARS THE SAME AND INDICATION OF DUCTWORK TYPE IS DETERMINED BY EQUIPMENT/GRILLES SERVED (SEE OTHER LEGENDS FOR MORE INFORMATION). | |
| ► 24"x14" ► | RECTANGULAR DUCT WITH SIZE LISTED. THE "x" DENOTES RECTANGULAR DUCT. (THE FIRST NUMBER INDICATES DUCT WIDTH PARALLEL TO VIEW WHILE THE SECOND NUMBER INDICATES DEPTH PERPENDICULAR TO VIEW). SEE PLANS AND SPECIFICATIONS FOR DUCT CONSTRUCTION REQUIREMENTS. | |
| - 18"ø - | ROUND DUCT WITH SIZE LISTED. THE "Ø" DENOTES ROUND DUCT. SEE PLANS AND SPECIFICATIONS FOR DUCT CONSTRUCTION REQUIREMENTS. | |
| S/A | SUPPLY AIR | İ |
| R/A | | |

CODE REVIEW

Level 1 - Overall HVAC Plan

GSK#:110-110

Level 1 Overall HVAC Plan & Specifications

Project No22034.04DateMay 05, 2023DrawnMGCheckedJK/KSRevision#Date

| N |
|-----|
| EF |
| |
| [1] |
| Α. |
| [2] |
| Α. |
| |
| |

FAN SCHEDULE

| | | OLL | | | | | | | | | | | |
|-----|---------|----------|-----------|---------|----------|-------|------|---------|-------|-----------|--------|-------------------------|------------------|
| | | CONTROL | OPERATING | S.P. | ррм | MAX. | M | OTOR DA | ТА | ELEC. | | | |
| AKK | 1166[1] | SEQ. [2] | CFM | in W.G. | K.F.IVI. | SONES | H.P. | B.H.P. | WATTS | SERVICE | DRIVE | BASIS OF DESIGN | FEATURES/ACCESS |
| 01 | Α | A | 150 | 0.375 | 1,050 | 3.5 | - | - | 128 | 120V.,1ph | DIRECT | GREENHECK MODEL SP-B150 | 1, 2, 3, 4, 5, 6 |
| 02 | Α | A | 75 | 0.375 | 950 | 2.5 | - | - | 80 | 120V.,1ph | DIRECT | GREENHECK MODEL SP-B110 | 1, 2, 3, 4, 5, 6 |
| 03 | Α | A | 75 | 0.375 | 950 | 2.5 | - | - | 80 | 120V.,1ph | DIRECT | GREENHECK MODEL SP-B110 | 1, 2, 3, 4, 5, 6 |
| 04 | Α | A | 75 | 0.375 | 950 | 2.5 | - | - | 80 | 120V.,1ph | DIRECT | GREENHECK MODEL SP-B110 | 1, 2, 3, 4, 5, 6 |
| 05 | Α | A | 75 | 0.375 | 950 | 2.5 | - | - | 80 | 120V.,1ph | DIRECT | GREENHECK MODEL SP-B110 | 1, 2, 3, 4, 5, 6 |
| 06 | Α | A | 75 | 0.375 | 950 | 2.5 | - | - | 80 | 120V.,1ph | DIRECT | GREENHECK MODEL SP-B110 | 1, 2, 3, 4, 5, 6 |
| 07 | Α | A | 75 | 0.375 | 950 | 2.5 | - | - | 80 | 120V.,1ph | DIRECT | GREENHECK MODEL SP-B110 | 1, 2, 3, 4, 5, 6 |
| 08 | Α | A | 75 | 0.375 | 950 | 2.5 | - | - | 80 | 120V.,1ph | DIRECT | GREENHECK MODEL SP-B110 | 1, 2, 3, 4, 5, 6 |
| 09 | Α | A | 75 | 0.375 | 950 | 2.5 | - | - | 80 | 120V.,1ph | DIRECT | GREENHECK MODEL SP-B110 | 1, 2, 3, 4, 5, 6 |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |

1] TYPE - SEE DETAILS FOR MORE INFORMATION:

CEILING CABINET TYPE

] CONTROL SEQUENCE:

EXHAUST FAN SHALL BE INTERLOCKED WITH LIGHT SWITCH IN SAME ROOM AS FAN.

COMPARABLE PRODUCTS: GREENHECK, COOK, PENN-BARRY

[3] FEATURES/ACCESSORIES:

PROVIDE THE FOLLOWING MANUFACTURER'S ACCESSORIES

1. UL AND AMCA RATING 2. FACTORY MOUNTED & WIRED DISCONNECT

3. BACKDRAFT DAMPER 4. FACTORY MOUNTED & WIRED SOLID STATE SPEED CONTROLLER

5. ALUMINUM GRILLE 6. MANUFACTURER'S SIDEWALL MOUNTED DISCHARGE CAP

DUCTWORK CONSTRUCTION AND INSULATION SCHEDULE

| | | PRESSURE CLASS | | THICKNESS | S - DENSITY |
|--------------------------|---------------|----------------|---------------------|-----------|-------------|
| DOCTWORK FORCTION | DOCTWORK TIPE | (IN. W.G.) | INSULATION MATERIAL | DUCTWRAP | LINER |
| LOW PRESSURE EXHAUST AIR | ROUND OR OVAL | 2 (NEG.) | - | - | - |
| | | | | | |

NOTES:

A. ELBOWS SHALL BE EITHER MITERED WITH TURNING VANES OR RADIUS TYPE (1-1/2R - LONG RADIUS) AS INDICATED ON THE DRAWINGS.

B. ALL DUCTWORK JOINTS AND LONGITUDINAL SEAMS SHALL BE SEALED AIRTIGHT.

1. SEALANT: ELASTOMERIC COMPOUND, GUN OR BRUSH GRADE, MAXIMUM 25 FLAME SPREAD AND 50 SMOKE DEVELOPED (DRY STATE) COMPOUNDED SPECIFICALLY FOR SEALING DUCTWORK. USE PRODUCTS AS RECOMMENDED BY THE MANUFACTURER FOR LOW, MEDIUM OR HIGH-PRESSURE METAL DUCT SYSTEMS. 2. TAPE/GASKETS IN FLANGED JOINTS SUCH AS TDC OR TDF: SOFT BUTYL RUBBER/ELASTOMERIC COMPOSITION EQUAL TO STICKY TAPE MANUFACTURED BY DUCTMATE.

Architects

One Jackson Place 250 188 East Capitol Street Jackson, MS 39201 p 601.352.5411

201 Park Court Suite B Ridgeland, MS 39157 p 601.790.9432

161 Lameuse St. Suite 201 Biloxi, MS 39530 p 228.374.1409

dalebaileyplans.com

Φ emode $\mathbf{\Gamma}$ C Φ \mathbf{O} \mathbf{O} 5 Ш g +Û Φ Ш Φ

39307 MS eridian, Š 2 Φ Å 4th 4 006 . .

mentary Ele

()

arv

May 05, 2023 Date MG Drawn JK/KS Checked Date Revision #

| | ELECTRICAL LEGEND | | ттот | | | | <u>чтттчт тт</u> тт |
|--|--|--|--|--|--|----------------------|------------------------------|
| GENERAL NOTES | SWITCHES | CONDUIT AND WIRING | | IIING FIX. | rur. | E SC | HEDULE. |
| ALL EQUIPMENT AND DEVICES ARE TO BE FLUSH MOUNTED UNLESS OTHERWISE NOTED. DEVICES NOTED AS "GFI" SHALL BE GROUND FAULT CIRCUIT INTERRUPTING DEVICES. DEVICES NOTED AS "WP" SHALL BE WEATHERDROOF WHILE IN LISE | \$ SINGLE-POLE, SINGLE-THROW SWITCH. MOUNT CENTERLINE OF BOX AT 45"A.F.F. UNLESS NOTED OTHERWISE. 2P_✿ DOUBLE-POLE, SINGLE-THROW, 30 AMP SWITCH. MOUNT | CONDUCTORS IN CONDUIT CONCEALED WITHIN WALL OR CEILING. TIC MARKS INDICATE NUMBER OF CONDUCTORS. THE EQUIPMENT GROUNDING CONDUCTOR IS NOT SHOWN, BUT SHALL BE PROVIDED. SIZE THE EQUIPMENT | TYPE MANUFACTURER A LITHONIA | PART NUMBER | LAMPS | MOUNTING RECESSED | REMARKS |
| 3. DEVICES NOTED AS WP SHALL BE WEATHERPROOF WHILE-IN-USE. 4. DEVICES NOTED AS "DL" SHALL BE RATED FOR DAMP LOCATION. 5. DEVICES NOTED AS "NL" SHALL BE NIGHT LIGHTS. PROVIDE UNSWITCHED POWER TO FIXTURE. 6. DEVICES NOTED AS "WG" SHALL BE PROVIDED AND INSTALLED WITH A WIRE CLIARD | [*] CENTERLINE OF BOX AT 45"A.F.F. UNLESS NOTED OTHERWISE. ³ [*] THREE-WAY SWITCH. MOUNT CENTERLINE OF BOX AT 45"A.F.F. UNLESS NOTED OTHERWISE. | THE ABSENCE OF TIC MARKS SIGNIFIES THAT TWO CONDUCTORS PLUS AN EQUIPMENT GROUNDING CONDUCTOR SHOULD BE PROVIDED. FOR EXAMPLE, THE MARKINGS TO THE LEFT SIGNIFY THAT THREE CONDUCTORS PLUS AN | AE LITHONIA B LITHONIA | MVOLI CPX-2X2-AL07-80CRI-SWW7-SWL MVOLT-E10WLCP CLX-L48-4000LM-SEF-FDL MVOLT-6710-40K-80CRI-WH | 4,557 LUMENS LED, 33W 4,557 LUMENS LED, 35W 4 100 LUMENS | RECESSED SURFACE | WITH EMERGENCY BATTERY PACK. |
| 7. DEVICES NOTED AS "TR" SHALL BE TAMPER RESISTANT. 8. PROVIDE UNSWITCHED POWER TO EMERGENCY BATTERY PACKS. 9. "W/E" INDICATES DEVICE/DISCONNECT PROVIDED WITH THE EQUIPMENT BY OTHERS. | ⁴ ⁴ ⁴ ⁴ ⁴ ⁴ ⁵ ⁴ ⁴ ⁵ ⁴ ⁵ ⁴ ⁵ ⁴ ⁵ ⁶ ⁶ ⁶ ⁶ ⁶ ⁶ ⁷ ⁶ ⁶ ⁷ ⁸ ⁹ ⁷ ⁹ ⁸ ⁹ ⁹ ⁹ ⁹ ⁹ ¹⁰ <l< td=""><td>THE TEXT INSIDE THE ARC INDICATES THE AWG SIZE OF THE CONDUCTORS THAT SHALL BE RUN IN THE CONDUIT. THE ABSENCE OF TEXT SIGNIFIES THAT THE CONDUCTORS SHOULD BE #12 AWG.</td><td></td><td></td><td></td><td>1</td><td></td></l<> | THE TEXT INSIDE THE ARC INDICATES THE AWG SIZE OF THE CONDUCTORS THAT SHALL BE RUN IN THE CONDUIT. THE ABSENCE OF TEXT SIGNIFIES THAT THE CONDUCTORS SHOULD BE #12 AWG. | | | | 1 | |
| LUMINAIRES (See Light Fixture Schedule) NOTE: THE NUMBER INSIDE THE CIRCLE IS THE CIRCUIT NUMBER. THE LETTER BESIDE THE SYMBOL IS THE FIXTURE TYPE DESCRIBED IN THE LIGHT FIXTURE SCHEDULE. | M AUTOMATIC WALL SWITCH. SENSORSWITCH #WSXA-PDT OR APPROVED EQUAL. MOUNT CENTERLINE OF BOX AT 45" A.F.F. UNLESS NOTED OTHERWISE. | CIRCUITRY RUN IN STRAIGHT LINE SEGMENTS SIGNIFIES EXPOSED SURFACE-MOUNTED RACEWAY (SEE SPECIFICATIONS). | | | | | |
| ? 2'X2' RECESSED FIXTURE. | * HORSEPOWER RATED SWITCH WITH THERMAL OVERLOADS (MANUAL MOTOR STARTER). PASSIVE INFRARED AND ULTRASONIC DUAL TECHNOLOGY | CONDUCTORS IN CONDUIT CONCEALED BELOW GRADE OR FLOOR. TIC MARKS INDICATE NUMBER OF CONDUCTORS. THE EQUIPMENT GROUNDING CONDUCTOR IS NOT SHOWN, BUT SHALL BE PROVIDED. SIZE THE FOURPMENT | | | | | |
| 2'X2' RECESSED EMERGENCY FIXTURE. | OCCUPANCY SENSOR WITH A 12' RADIAL COVERAGE. CEILING MOUNTED. SENSORSWITCH #CM-PDT-9 OR APPROVED EQUAL. | GROUNDING CONDUCTOR AND THE CONDUIT PER THE NEC. THE ABSENCE OF TIC MARKS SIGNIFIES THAT TWO CONDUCTORS PLUS AN EQUIPMENT GROUNDING CONDUCTOR SHOULD BE PROVIDED. THE MARKINGS TO THE LEFT | | | | | |
| ? SURFACE MOUNTED OR SUSPENDED FIXTURE. | MD2 OCCUPANCY SENSOR WITH A 28' RADIAL COVERAGE. CEILING MOUNTED. SENSORSWITCH #CM-PDT-10 OR APPROVED EQUAL. | SIGNIFY THAT THREE CONDUCTORS PLUS AN EQUIPMENT GROUNDING CONDUCTOR SHOULD BE PROVIDED. | | | | | |
| PENDANI MOUNI FIXIURE. | POWER PACK MOUNTED ABOVE CEILING. SENSORSWITCH #PP20 OR APPROVED EQUAL. | LA-1 HOMERUN TO PANELBOARD. ARC DENOTES CONCEALED CIRCUITRY. TEXT DENOTES PANELBOARD NAME WITH CIRCUIT NUMBER. DEVICES HAVING CIRCUIT NUMBERS LOCATED BESIDE THEM MAY NOT SHOW THE CIRCUIT | | | | | |
| MISCELLANEOUS | RECEPTACLES | NUMBERS AT THE HOMERUN ARROWS. | | | | | |
| C CONTACTOR. | \oplus ? DUPLEX RECEPTACLE, NEMA 5–20R, MOUNTED 18" A.F.F. TO CENTERLINE OF BOX UNLESS NOTED OTHERWISE. | PARTIAL HOMERUN TO PANELBOARD. COMBINE ALL PARTIAL HOMERUNS THAT ARE ON THE SAME CIRCUIT IN A JUNCTION BOX PRIOR TO ENTERING THE PANELBOARD. | | | | | |
| PE PHOTOCELL. Image: | POUBLE DUPLEX RECEPTACLE, NEMA 5-20R, ONE COVER PLATE, MOUNTED 18" A.F.F. TO CENTERLINE OF BOX UNLESS NOTED OTHERWISE. | LOW VOLTAGE CONDUCTORS USED FOR MOTION DETECTOR CIRCUITRY. SEE MANUFACTURER'S RECOMMENDATIONS FOR CONDUCTOR REQUIREMENTS. | | | | | |
| \bigcirc wall mounted junction box. \sim flexible connection to equipment. | DOUBLE DUPLEX RECEPTACLE, NEMA 5-20R, ONE COVER PLATE, COUNTED WITH BOTTOM OF BOX 2" ABOVE COUNTER BACKSPLASH. WHERE THERE IS NO BACKSPLASH MOUNT 6" ABOVE COUNTER. WHERE RECEPTACLE IS SHOWN IN AN AREA WITH NO COUNTER MOUNT 45"A FE TO CENTERLINE OF BOX | VOLTAGE DROP CHART FOR 20A, 1Ø CIRCUITS | | | | | |
| GEAR | DUPLEX RECEPTACLE, NEMA 5-20R, MOUNTED WITH BOTTOM OF ⊕ ? BOX 2" ABOVE COUNTER BACKSPLASH. WHERE THERE IS NO BACKSLPASH MOUNT 6" ABOVE COUNTER. WHERE RECEPTACLE | VoltageCircuit LengthConductor Size (AWG) | | | | | |
| ?/?/?FUSED DISCONNECT SWITCH.TEXT INDICATES AMPACITY/NUMBERF-?OF POLES/ENCLOSURE TYPE; F-(RATING OF FUSES). | IS SHOWN IN AN AREA WITH NO COUNTER, MOUNT 45"A.F.F. TO CENTERLINE OF BOX. | 120 < 50 #12 | | | | | |
| ?/?/? NON-FUSED DISCONNECT SWITCH. TEXT INDICATES ☐ AMPACITY/NUMBER OF POLES/ENCLOSURE TYPE. | FROM GFCI BREAKER. MOUNTED IN ACCORDANCE WITH PF MANUFACTURER'S ROUGH-IN REQUIREMENTS. VERIFY CONNECTION TYPE PRIOR TO BID. RECEPTACLE SHALL BE MOUNTED, | 120 > 30 #10 120 > 90' #8 | | | | | |
| PANELBOARD. | CONCEALED BEHIND THE SHROUD OF THE DRINKING FOUNTAIN. | 120 > 140' #6 | | | | | |
| COMMUNICATIONS | | 277 < 130' #12 | | | | | |
| ☐ DATA OUTLET MOUNTED 18" A.F.F. TO CENTERLINE OF BOX UNLESS NOTED OTHERWISE. | | 277 > 130' #10 277 > 200' #8 | | | | | |
| | | 277 > 330' #6 | | | | | |
| | | VOLTAGE DROP CHART NOTES: 1) CIRCUIT SIZES INDICATED ON THE DRAWINGS ARE MINIMUM REQUIREMENTS. REFER TO THIS CHART FOR UPSIZING CONDUCTORS AS NEEDED. | | | | | |
| | | 2) DO NOT CONNECT CONDUCTORS LARGER THAN #10 DIRECTLY TO A RECEPTACLE OR A SWITCH. PROVIDE A JUNCTION BOX TO DOWNSIZE THE CONDUCTOR TO #12 AT THE DEVICE. | | | | | |
| | | 3) FOR CIRCUITS LONGER THAN THOSE LISTED ABOVE, CONSULT WITH THE ENGINEER FOR CONDUCTOR SIZES. | | | | | |

| ELECTRICAL GENERAL AND WORK IN EXISTING FACILITIES | ELI |
|--|------------------------------|
| ART 1 - GENERAL .1 GENERAL | 3.8 A. |
| . All work shall conform to the latest editions of the National Electrical Code (NEC) [National Fire Protection Association (NFPA) 70], the Standard Electrical Safety in the Workplace (NFPA 70E), the Life-Safety Code (NFPA 101), the International Building Code, the Americans with Disabilities | ard debri conci |
| All work shall be performed in strict compliance with NFPA 70E. Submission of bid shall stand as an agreement by the Contractor to indemnifind hold harmless the Engineer and Owner from all liability related to damage and/or injury to personnel and equipment during the installation of the | y B. adeq |
| roject. The contract documents are schematic in nature and are intended to convey the intent of the electrical work to be performed on this project. | C. |
| rovide all material, labor, equipment, etc., necessary to provide complete and operable electrical systems. The General Conditions, Supplementary Conditions, General Requirements, Information to Bidders, and all other parts of this set of Contract locuments are berefy adopted and are applicable to the Division 26, 27, and 28 Contractor. | 3.9 A. |
| .2 SCOPE OF WORK | labels B. |
| Visit site prior to bid. Devise a plan for installation of complete and operable electrical systems meeting the requirements and intent of the ontract Documents. Submission of Bid stands as evidence that the Contractor accepts the Contract Documents as sufficient and complete for the rork to be performed. Notify the engineer at least two weeks prior to bid of any discrepancies between the Contract Documents and actual field onditions. No change orders will be granted due to existing conditions that could have been observed during a site visit. | I-Line ampa C. |
| Electrical switchgear and panelboard layouts are based on sizes of Square D equipment. Equipment manufactured by General Electric, Siemens, and Cutler Hammer are equally acceptable. However, the Electrical Contractor is responsible for selecting and furnishing gear that will fit i | n E. |
| the spaces provided and shall be responsible for arranging the gear to meet the required code clearances. Regardless of the manufacturer, the lectrical Contractor shall provide a drawn-to-scale electrical layout with the equipment brochures for all rooms in which panelboards, motor control enters, switchboards, or switchgear are placed. The drawings shall include the work of all other trades including mechanical system piping, ductwork | conta selec |
| prinkler piping, etc. No conduits shall be installed until layouts have been approved. Locate junction boxes, pull boxes, disconnects, and other equipment requiring access in such a manner that they are accessible at the end of onstruction. Notify the Architect where it is impossible to plan conduit routing or equipment placement in such a manner, and provide the pecessan | F. conta circui |
| ccess panels in the ceiling or wall as required. The access panel type and style shall be subject to the Architect's approval. Employ a painter to rovide the appropriate coatings as directed by the Architect. | 3.10 Maint |
| . Relocate, or recircuit, all electrical equipment, conduit, and circuitry conflicting with or obstructing work on this project. Where the electrical ystems are owned by other entities, pay them to relocate, or recircuit, their facilities. | the E contr |
| e granted for utility company connection fees. | vill A. |
| Provide all necessary equipment, raceway, circuitry, fittings, lugs, terminations, labor, etc. and connect to all equipment and appliances requiring lectrical connections furnished herein, by the Owner, or by other Contractors. Prior to ordering electrical equipment and roughing in for equipment urnished by the Owner or other Contractors, verify all connection types, connection locations, connection heights, voltages, number of phases, onductor sizes, disconnecting means, breaker sizes, etc. Furnish the proper electrical equipment for the equipment actually being supplied. | ng B. requi rods C. |
| .3 WORK IN EXISTING FACILITIES All work shall be scheduled and coordinated through the General Contractor with the Owner - Browide personant secto for all work during that | phas 500,0 |
| ormal and premium work hours in bid. Provide continuous uninterrupted power to all existing facilities to remain during the entire construction process. Any required power outages | E. Com |
| iust be scheduled and approved by the Owner in writing at least three days prior to the outage. | 3.12 |
| Prior to beginning work, survey existing electrical systems. Document, in writing, signed by the Owner any portions of existing systems that a ot operating properly before construction begins. Any electrical systems found inoperable at the end of the construction process that has not been socumented shall be repaired at the end of construction. | re Com so the Cover |
| . Remove electrical equipment in areas being demolished and electrical equipment feeding other equipment being demolished. Remove aceways and circuitry back to the panel of origination. Where raceways are installed in inaccessible areas, remove conductors back to the panel of | |
| rigination. Where circuits are not being completely demolished, remove conductors back to a junction box or other connection point outside of the movated area and recircuit existing electrical equipment that is to remain as required. Where necessary, completely refeed existing electrical quipment that is to remain. It is the intent of this specification that all existing equipment to remain be left completely operable at the end of the onstruction process. | |
| Survey existing panel board circuitry and provide new typewritten directories giving complete as-built circuitry information for all pane lboards ffected by the construction on this project. | |
| he Amperes Interrupting Current (AIC) Rating shall equal the AIC rating of the existing equipment. A breaker with a lower AIC rating may be used in the contractor provides calculations showing that the breaker rating is sufficient to handle the available fault current. Submit these calculations for pproval prior to ordering the breaker. An AIC rating on an existing breaker in the panelboard or switchboard does not demonstrate sufficient proof the the available fault current is less than that breaker's AIC rating. | nat |
| SUBMITTALS AND SHOP DRAWINGS Within 30 days after award of Contract and prior to beginning work, provide six bound copies of manufacturers' cut sheets containing informat oncerning each article of electrical equipment to be furnished on this project. These cut sheets shall contain sufficient information to prove compliar <i>i</i>th the contract documents. Information addressing the requirements of the contract documents shall be highlighted. Each bound set shall bear the target of the Electrical Contractor as well as the Contractor. | ion nce ne |
| . Within 30 days after award of Contract and prior to beginning work, provide six sets of full size shop drawings showing exact equipment ocations with all equipment drawn to scale. Show all raceways with their junction boxes and pull boxes. Show all connection types, locations, and eights to equipment. Provide mounting and support details for all raceways and equipment. Coordinate with all other trades to ensure that there are o conflicts between systems. Each set of shop drawings shall bear the stamp of the Electrical Contractor, the General Contractor, and all Project sub-Contractors. Failure to submit these Shop Drawings will render the Electrical Contractor responsible for resolving all conflicts between trades at | e |
| is own expense. Submittals and Shop Drawings are reviewed to determine quality of materials. Approval of submittals and shop drawings does not relieve the | |
| ontractor of meeting the requirements and intent of the Contract Documents. Outlet, light fixture, and device locations are shown in their approximate locations on the drawings. Coordinate with Architectural drawings to nal locations. Mount all electrical outlets shown at counters such that the bottom of the box is two inches above the backsplash or six inches above | get |
| ounter with no backsplash. The Owner reserves the right to relocate outlets, light fixtures, and devices a distance not to exceed twenty feet prior to ne installation of outlet boxes. | |
| ART 2 - PRODUCTS .1 All electrical equipment and materials shall be new. All equipment and materials shall be stored on the job site in weatherproof enclosures. | |
| In addition, comply completely with all numbers of the application in which it is used and shall be labeled as evidence of its UL listing. | |
| .3 Each circuit breaker supplying a multiwire branch circuit shall be installed with a manufacturer supplied handle tie to simultaneously disconnec Il ungrounded conductors. Each multi-wire branch circuit shall comply with NEC article 210.4. | st |
| .4 Products shall be selected to maintain or improve the aesthetics of the facility. Gain approval of the Architect or Engineer prior to ordering or istalling any electrical equipment or raceway. | |
| ART 3 - EXECUTION .1 WORKMANSHIP | |
| Il work shall be performed with an emphasis on neatness. The Engineer, Architect, and Owner retain the right to reject work that is, in their judgments and statisfactory. | nt, |
| .2 EXPERIENCE | |
| ontractors based on their inability to submit evidence of their experience, or based on experience with the Contractor on previous projects. | |
| Ibtain and pay for all permits required for work. | |
| Fireproof all penetrations through firewalls with a fireproofing compound listed to maintain the rating of the wall through which the raceway asses. | |
| . The fire-stopping caulk shall be a one-part, intumescent, latex elastomer. The caulk shall be capable of expanding a minimum of 3 times at 000°F. The material shall be thixotropic and be applicable to overhead, vertical and horizontal fire-stops. The caulk shall be listed by independent te gencies such as UL or FM and be tested to, and pass the criteria of, ASTM E 814 Fire Test, tested under positive pressure. It shall comply with the equirements of the NEC (NFPA-70), BOCA, ICBO, SBCCI and NFPA Code 101. Fire-stopping caulk shall be paintable, but shall be non-hardening. | st |
| The fireproofing materials shall be installed by individuals certified to perform such work. Submit evidence of personnel certifications with lectrical equipment brochures. | |
| . Where cable trays are shown crossing firewalls, terminate the cable tray on each side of the wall and run the conductors through conduits istalled in the wall. Fireproof around the conductors after installation. | |
| Provide mineral wool packing and all other materials recommended by the manufacturer for a complete installation. 5 FLASHING | |
| rovide all necessary equipment and flash all root penetrations in such a manner to ensure that all penetrations are completely sealed and all roof varianties remain in effect. Where there are no roof warranties, the Electrical Contractor shall guarantee the electrical penetrations against leaking period of one year from project completion. Employ a professional roofing contractor to perform all flashing. | for |
| Keep energized equipment covered during all phases of construction. Use enclosures, doors, covers, etc., to ensure that neither personnel no nachinery contact live electrical equipment. | pr |
| Replace electrical equipment that is damaged during construction. DAMAGED FACILITIES | |
| | 1 |

SPECIFICATIONS

connections

SECTION 26-05-11 . GENERAL AND WORK IN EXISTING FACILITIES (CONT.) BACKFILL

manner as to minimize erosion of the soil. Backfill trenches around conduits with fine sand that is free of rocks, clods, and n of 4" over conduits. Backfill the rest of the trench in six inch increments, wetted, and tamped. Final compaction shall be a the adjacent earth. Resurface the grade with the same material as that excavated from the grade whether it be paving, work shall be comparable to the quality of the original site prior to excavation.

astic labeled marker tape 12" below grade over all electrical conduits buried underground. Tapes for power circuits shall aution: Buried Electrical Line Below." Labels on tapes for telephone, data, cable television, and other facilities shall e over which they are buried.

wire in each buried conduit run labeled accordingly on each end.

ds, panel boards, motor starters, disconnects, and motor control centers furnished under Division 26, 27, and 28 and other th engraved rigid plastic nameplates having letters at least 1⁄4 inch high. Nameplates shall be bolted to the enclosure. All tage, number of phases, the AIC rating, and the panelboard and circuit number from which the device is fed. n Switchboards, Motor Control Centers, Square D

ards shall be labeled with plastic nameplates (as described in Part A) providing the name of the load served and the oles of the breaker.

, NF and similar panel boards shall have typewritten circuit directories.

at all junction boxes, pull boxes, and terminations with typewritten adhesive markers indicating the panel board or uit number of the conductor. Labels shall be Brady Datatab or approved equal.

xes and pull boxes with stenciled painted letters containing the name of the panel board and circuit numbers of the circuits k paint for normal circuits, red paint for emergency circuits, and orange paint for fire alarm circuits. The Contractor may ion boxes and pull boxes for auxiliary systems.

the most likely direction of access and view every 50' and on both ends of each bend with stenciled painted letters panel board and circuit numbers of the circuits contained within. Use black paint for normal circuits, red paint for emergency or fire alarm circuits. The Contractor may select other colors for conduits for auxiliary systems.

gs during construction for as-built markings. Mark these drawings in red to indicate field changes. Provide these drawings to the construction process. Where required under the General Conditions, Special Conditions, or other portions of this omputer drawn as-built drawings to the Engineer at the end of construction.

pay testing agencies as required, for compliance with the requirements of all regulatory agencies.

ower service ground using a Biddle Three-Terminal Ground Resistance Tester, or approved equal. Grounds shall meet the or of Specification 26 05 26, whichever is more stringent. Test grounds only when the earth is dry. Provide additional ground eve the required results.

equipment connections, test all service, feeder, and branch circuit conductors for continuity, phase-to-phase faults, and ng a Megger BM100 or approved equal test instrument generating 500 Vdc. Insulation resistance shall be a minimum of / conductor and ground and 1,000,000 Ohms between any two conductors.

as required in their respective specifications.

I copies of all test results to the Engineer at the end of the construction process. No Recommendation of Substantial until all testing reports have been submitted.

n guarantee to repair, or replace, all faulty equipment and systems for a period of one year from date of Substantial ne-year period, a representative of the Contractor shall be on the site actively working on the repairs within 24 hours of . During this period of time, the Owner shall not be charged for any repair work or expenses related with the repair can prove that the Owner has damaged the equipment or system.

SECTION 26-05-33 SECTION 26-05-20 LOW-VOLTAGE POWER CONDUCTORS AND CABLES PART 1 - GENERAL PART 1 - GENERAL 1.1 Provide all circuitry, terminations, splices, connectors, lugs, and other equipment necessary for connection of all equipment requiring electrical 1.1 GENERAL A. All electrical systems circuitry shall be contained in raceways unless expressly listed in the specification for that system. B. Outlet Boxes and Junction Boxes A. Provide all circuitry, terminations, splices, connectors, lugs, and other equipment necessary for connection of metal clad cable where used on B. Metal Clad (MC) Cable may only be used where new electrical devices are being installed in existing hollow walls. All other circuitry shall be in conduit per Specification 26 05 33. all necessary hardware including, but not limited to, additional structural support, support brackets, screws, bolts, fixture studs, etc. C. Provide a junction box in the accessible ceiling above the location of the new outlet. Provide a hole in the wall above the accessible ceiling. At the proper outlet height, cut out a hole in the wall for the use of an after-construction box. Run MC Cable down the wall to the junction box in the crawlspace, and connect it to the after-construction box before installing the box in the wall. stamped steel covers for all junction boxes manufactured to fit the particular box on which it is used. D. Each MC cable shall be furnished with a green insulated copper ground wire that is not shown by tic marks on the drawings. 4. Outlet boxes used in concrete and masonry walls and ceilings shall be of the concrete type manufactured for such applications. the boxes shall be made watertight. 2.1 CONDUCTORS 6. Wall outlet boxes shall be 4" x 4" x 2 1/8", or larger as required, with plaster rings provided for final flush installation. Plaster rings shall have single-gang openings unless the equipment mounted inside requires two-gang installation. A. All electrical conductors shall be soft-drawn annealed copper having 98% conductivity and an insulation rating of 600V. Floor boxes in slabs on grade shall be deep rectangular, cast iron, fully adjustable boxes with brass rings. Covers shall be made of brass and B. Conductors shall be UL listed for installation in the raceway in which they are to be installed. C. Conductors shall be rated 90 degrees C for use in residential, commercial, industrial, and institutional facilities, and shall be listed as 105 degrees C appliance wire. Conductors shall be listed under UL 83, UL 1063, and UL 758. If XLP or EPR insulation is used, conductors shall be listed under UL Single-Gang Boxes: Hubbell B2436 Single-Gang Cover Plates: Hubbell S3825 Double-Gang Boxes: Hubbell B4233 D. Conductors used for branch circuits, feeders, auxiliary systems, and controls run in dry locations shall have PVC insulation and a Nylon outer Double-Gang Cover Plates: Two Hubbell S3825 Cover Plates Triple-Gang Boxes: Hubbell B4333 Triple-Gang Cover Plates: Three Hubbell S3825 Cover Plates E. Conductors used for branch circuits, feeders, auxiliary systems, and controls run in wet locations shall have XLP or EPR insulation and be type 8. In slabs above grade, use cast iron, semi-adjustable shallow boxes as follows, or approved equal: Conductors used for operating room isolation panels and associated branch circuits shall be copper stranded conductor having a cross-linked a. Single-Gang Boxes: Hubbell B2414 polyethylene insulation or equivalent with a dielectric constant of 3.5 or less. Wire-pulling compounds that increase the dielectric constant shall not be Two-Gang Boxes: Hubbell B4214 used on the secondary conductors of isolation panels. The isolated circuit conductors shall be identified as follows: c. Three-Gang Boxes: Hubbell B4314 Receptacles installed in floor boxes shall be as described in Specification 26 09 23, Switches and Receptacles. Data, Telephone, or cover plate. For 125 volt, 15 & 20 ampere receptacles: The orange conductor shall be connected to the terminal on the receptacle that is identified in 10. In existing above grade, use poke thru boxes as follows, or equal: a. Hubbell System One H. Sizes #10 and #12 shall be solid conductors except where used for controls. All controls conductors shall be stranded. 11. Size all boxes per the requirements of the latest NEC Use minimum #14 AWG conductors for controls and auxiliary circuits. Use larger conductors as required to compensate for voltage drops 1.2 SCOPE OF WORK A. Raceways J. Conductors shall be furnished in the colors described below unless local ordinances require different colors. Conductors #8 and smaller shall be furnished with colored insulation: conductors larger than #8 shall be taped with the appropriately colored tape for a length of at least 2" at each Provide all raceways, fittings, couplings, anchors, supports, hangers, etc. for complete raceway systems. panelboard, junction box, pull box, load, or other exposed location. Ground conductors shall be taped green for their entire exposed length. 2. Use Schedule 40 polyvinyl chloride (PVC) conduit for circuits run underground and in slabs on grade level. Provide PVC-coated galvanized rigid 480Y/277V, PHASE, 4 WIRE 3. Use Galvanized Rigid Steel (GRS) conduit for all applications where circuits are run above ground exposed to the weather. BROWN ORANGE 4. Use Intermediate Metal Conduit (IMC) for all branch circuits, feeders, and auxiliary circuits requiring conduit 1 ¼" nominal trade size or larger in dry locations. YELLOW GRAY Use Electrical Metallic Tubing (EMT) for all branch circuits and feeders less than 1 ¼" nominal trade size in dry locations and in slabs above grade level. GREEN SILLEIT SILLEIT PART 2 - PRODUCTS A. Shall be UL listed as type MC. It shall meet the requirements of UL 1569. It shall also be constructed in accordance with NEC 334 C. 2.1 Products for Raceways C. MC cable shall have an interlocked armor made of aluminum alloy or galvanized steel. comply with NEMA TC-3 and UL 514b. D. All electrical conductors shall be soft-drawn annealed copper having 98% conductivity and an insulation rating of 600V. E. Conductors shall have PVC insulation and a Nylon outer jacket. They shall be THHN/THWN or XHHW-2. G. Conductors shall be furnished in the colors described below unless local ordinances require different colors. Conductors #8 and smaller shall be approved equal. furnished with colored insulation; conductors larger than #8 shall be taped with the appropriately colored tape for a length of at least 2" at each panelboard, junction box, pull box, load, or other exposed location. Ground conductors shall be taped green for their entire exposed length. safety standards of UL 6, and shall be manufactured to ANSI C80.1. Threads shall be hot galvanized after cutting. D. IMC conduits, fittings, couplings, adapters, and accessories shall be UL listed. They shall be hot-galvanized steel. Fittings, couplings, adapters, 480Y/277V, PHASE, 4 WIRE galvanized after cutting. The inside of the conduit shall be finished with a corrosion-resistant coating. BROWN E. EMT conduits, fittings, couplings, adapters, and accessories shall be UL listed. They shall be hot galvanized steel and shall be produced in ORANGE accordance with UL 797 and ANSI C80.3. The inside shall be finished with a corrosion-resistant lubricating coating. YELLOW F. Conduit fittings used with EMT conduits may be set screw indenter type or compression type. All metallic fittings for IMC and Rigid conduit shall WHITE be compression type fittings. GREEN G. Flexible metallic conduit shall be constructed of galvanized steel and shall be UL listed as compliant with UL 1 and UL 1479. H. Liquidtight flexible conduit shall be constructed of galvanized steel and shall be coated with a PVC jacket to resist liquids, dirt, grease, and oils. A. Install conductors carefully using a minimum of two tradesmen - one feeding the conductors into the conduit, and the other pulling the conductors with UL 360. 2.2 Acceptable Manufacturers for Outlet Boxes and Junction Boxes. B. Join stranded conductors with appropriate mechanical or compression lugs. Wire nuts may be used for solid conductors only. A. Outlet boxes and junction boxes shall be manufactured by Raco, Steel City, Crouse Hinds, or Appleton. C. Splices shall only be made in approved enclosures. Splices shall not be pulled inside conduits. PART 3 - EXECUTION D. Provide cable supports and strain relief connectors as required by the NEC. 3.1 Conduit Execution E. Furnish junction boxes, pull boxes, handholes, manholes, etc. as required to ensure that the maximum number of bends allowed by the NEC are not exceeded and to ensure that the cables are not damaged during installation. A. Conduits run underground shall be buried no less than 24" deep. Services and primary conduits feeding transformers shall be buried no less than 48" deep. 3.2 METAL CLAD CABLE EXECUTION B. Do not install conduits in or below ground floor slabs, except for service conduits, site lighting, and where specifically indicated on the A. Install MC Cable per the requirements of NEC 334 B. drawings. B. Join stranded conductors with appropriate mechanical or compression lugs. Wire nuts may be used for solid conductors only. C. Do not install conduits within 6" of the deck where a screw down type roof system is utilized. C. Provide cable supports as required by the NEC. D. PVC-coated conduits may be field-bent provided that manufacturer-approved tools are used. Individuals installing PVC-coated conduits shall be trained for installation by factory-certified trainers. Provide evidence of training with equipment brochures. D. Furnish junction boxes, pull boxes, handholes, manholes, etc. as required to ensure that the maximum number of bends allowed by the NEC are not exceeded and to ensure that the cables are not damaged during installation. Do not enclose junction boxes in areas that will be inaccessible at the supported plus an additional 250 pounds at midspan. F. All conduits shall be grouped and run parallel to each other and to building walls. END OF SECTION G. All conduits shall be assembled according to the manufacturer's instructions. H. Conduits run underground shall be assembled to be watertight. **SECTION 26-05-26 GROUNDING AND BONDING** conductors. Conduits that are obviously damaged and field bends that are obviously out of round shall be replaced.

1.2 METAL CLAD CABLE.

this project.

PART 2 - PRODUCTS

44 and NEMA WC7.

jacket. They shall be THHN/THWN or XHHW-2.

XHHW-2.

Isolated Circuit #1 - Orange Isolated Circuit #2 - Brown

accordance with NEC 200.10(B) for connection to the grounded circuit conductor.

G. Conductors used for services shall be type SE for aerial services or type USE-2 for underground services.

exceeding 3% of the system voltage.

| - | - | | |
|---------|-----------------|-----------------|-----|
| SYSTEM | 208Y/120V, | 120/240V, | |
| VOLTAGE | 3 PHASE, 4 WIRE | 3 PHASE, 4 WIRE | 3 F |
| PHASE A | BLACK | BLACK | |
| PHASE B | RED | ORANGE | |
| PHASE C | BLUE | BLUE | |
| NEUTRAL | WHITE | WHITE | |
| GROUND | GREEN | GREEN | |

2.1 Metal Clad Cable

B. Fittings shall be manufactured and UL listed for the application in which they are used.

F. Sizes #10 and #12 shall be solid conductors. Other conductors shall be stranded.

| SYSTEM | 208Y/120V, | 120/240V, | |
|---------|-----------------|-----------------|-----|
| VOLTAGE | 3 PHASE, 4 WIRE | 3 PHASE, 4 WIRE | 3 F |
| PHASE A | BLACK | BLACK | |
| PHASE B | RED | ORANGE | |
| PHASE C | BLUE | BLUE | |
| NEUTRAL | WHITE | WHITE | |
| GROUND | GREEN | GREEN | |

PART 3 - EXECUTION

3.1 CONDUCTORS

into the conduit.

end of construction. E. MC Cable shall be run complete between junction boxes or outlet boxes. Splices are not allowed.

PART 1 - GENERAL Provide final connections to equipment with flexible metallic conduit. In wet or damp locations, use liquidtight flexible conduit. Flexible conduit 1.1 GENERAL shall not exceed 72". Ground all equipment, systems, structures, etc., per the latest edition of the National Electrical Code (NEC). Terminate conduits entering boxes with a locknut inside the box and a locknut outside the box. Provide protective bushings on all conduit threads. Use watertight hubs where conduit terminations are exposed to moisture. PART 2 - PRODUCTS M. Use grounding bushings on all feeder conduits, all underground conduits, and where required by the National Electrical Code. 2.1 Use mechanical bolted connections in dry locations that are accessible. N. Conduits shall be run no closer than 12" to hot water pipes. 2.2 Use exothermic welds in wet locations and locations that will be inaccessible at the end of construction. O. Where conduits are run through the ceiling and are required to make connections to equipment within the room that is not located near a wall, 2.3 Ground rods shall be UL listed 3/4" x 10' copper-clad steel ground rods with a minimum copper cladding thickness of 10 mils. support the conduit from the structural ceiling and provide a flange bolted to the floor. Install a tee conduit fitting in the vertical run of conduit, and make the connection to the equipment with a piece of flexible conduit extending from the tee conduit fitting to the equipment. PART 3 - EXECUTION Provide expansion fittings where conduits cross building expansion joints. Provide grounding jumpers between the conduits. 3.1 Ground rods shall be installed with their tops no less than 6" below grade. Provide EMT conduit sleeves where conduits pass through walls, floors, or footings sized a minimum of two nominal trade sizes larger than the 3.2 Bond ground connections to metal raceways at each end of the conduit run. Provide grounding bushings where required by the NEC. Where conduit that must pass through the sleeve. cable trays are used, bond the ground conductor to each section and fitting of the tray. R. Equip all empty conduits with a pullwire or string capable of withstanding 200 pounds of pulling tension. 3.3 Provide all circuits with an equipment grounding conductor sized per the NEC, or as shown on the drawings. Circuitry shown on drawings does not include the required equipment grounding conductor. Where multiple circuits are run with a common neutral, only one equipment grounding conductor is needed. The equipment grounding conductor shall be furnished with green insulation for conductors #8 AWG and smaller; where larger than #8, the equipment grounding conductor shall be taped green for its entire exposed length. 3.4 The grounding electrode conductor(s) shall be bare or shall be colored green for its entire exposed length. 3.5 Individual ground conductors shall be installed in PVC conduit sized per the NEC. 3.6 Provide receptacles, luminaires, and other devices with a green conductor that bonds the receptacle grounding screw or pigtail, the outlet box grounding screw, and the equipment grounding conductor together. 3.7 In health care facilities, where two or more different panel boards serve the same patient-care area, an 8 AWG insulated continuous copper conductor shall bond these different panel boards together.

3.8 Telephone, cable television, and other auxiliary systems shall be bonded to the electrical building service ground using a conductor no smaller than #6 AWG.

END OF SECTION

RACEWAYS OUTLET BOXES AND JUNCTION BOXES

Furnish and install all outlet boxes and junction boxes in accordance with this specification and the requirements of the NEC.

Provide outlet boxes for all switches, receptacles, luminaires, telephone jacks, cable jacks, and other devices furnished in this Contract. Provide

Outlet boxes and junction boxes in dry locations shall be galvanized stamped steel boxes sized per the latest edition of the National Electrical Code (NEC), but no less than 4" x 4" x 2 1/8" deep. The thickness of the steel shall be in compliance with the requirements of the NEC. Provide

5. Outlet boxes and junction boxes in wet locations shall be of cast metal construction with gasketed waterproof covers. All conduit connections to

shall provide flip top access to the power or data jacks inside. Screw-on covers are not acceptable unless a flip-top cover is unavailable for the device installed in the floor box. Provide the box sized as required for the number of devices shown installed. Boxes shall be as follows, or approved equal:

Combination Data and Telephone Outlets shall consist of Category 5 rated RJ45 jacks mounted in a Hubbell DJOI strap for use under a S3825 flip top

steel elbows and PVC-coated galvanized rigid steel conduit for all vertical runs extending to a point at least 6" above grade. Galvanized Rigid steel conduit coated with two complete coats of asphaltum or bituminous paint may be used in lieu of PVC-coated galvanized rigid steel conduit.

A. PVC conduits, fittings, couplings, adapters, and accessories shall be UL listed and approved for use with 90 degree Celsius conductors. The UL label shall be affixed to each ten foot length of conduit and each fitting. Conduits shall comply with NEMA Specification TC-2 and UL 651. Fittings shall

B. PVC-coated conduits, fittings, couplings, adapters, and accessories shall be UL listed with PVC as the primary corrosion protection. They shall be hot dipped galvanized rigid steel conduit with threads electro-galvanized after cutting. The conduit shall meet UL 6. The fittings shall meet UL 514B. The PVC coating shall be uniformly applied to the interior and exterior of all conduit and fittings. The coating shall be nominally 2 mils thick. The PVC coating shall extend one pipe diameter or two inches, whichever is less, at every male fitting except unions to fit over the joining female connection. Couplings shall contain a series of longitudinal ribs, 40 mils in thickness, to protect the coating from damage by tools during installation. PVC-coated conduits shall be ETL Verified PVC-001. Fittings shall be manufactured to the same standard. PVC-coated conduit shall be Robroy Plastibond or

GRS conduits, fittings, couplings, adapters, and accessories shall be UL listed. They shall be hot-dipped galvanized steel. They shall meet the

and accessories shall be the same as those for GRS conduit described above. IMC shall meet UL 1242 and ANSI C80.6. Threads shall be hot

All fittings shall be designed, constructed, and installed to maintain the integrity of the liquidtight connections. Liquidtight flexible conduit shall comply

Support and install all conduits per the latest edition of the National Electrical Code. Support groups of conduits with electrical strut supported by threaded rods anchored to the building structure. Supports shall be designed to hold no less than twice the weight of the conduit and conductors to be

Cap all conduits during installation. Pull a mandrel sized for that conduit and a cleaning brush through each conduit before installation of any

| <text> 1 1.000000000000000000000000000000000000</text> | RACEWAYS OUTLET BOXES AND JUNCTION BOXES (CONT.) | DISC |
|---|---|---|
| A not not any state material control and any state does and produced and participation of the transmission of transmissio | 3.2 Execution for Outlet Boxes and Junction Boxes. | PART 1 - |
| <text><text><text><text><text></text></text></text></text></text> | An devices shall be much mounted unless specific written permission is obtained from the Engineer for a particular device in a particular location. Install outlet boxes in walls, and provide plaster rings such that wall finish contractor's finish is flush against the edge of the plaster ring. Workmanship will not be accepted where the hole in the wall shows behind the cover plate, or the wall finish is uneven or unpainted at the edge of the cover plate. | 2.1 GE |
| <text> And the set of the decision of the set of</text> | C. Use round or square ceiling outlet boxes as required for the device being installed. The ceiling shall be finished flush against the box; the fixture shall completely cover the box and mount tight against the ceiling. Coordinate the requirements of the fixture prior to installing the box. | A. Dis NEMA Sta preceden |
| The structure of starting of structure of start which and the start which and the start which are structure of start wh | Provide junction boxes, pull boxes, and conduit fittings where required by the NEC to limit the number of bends in the raceway, and where required to prevent damage to conductors due to long runs. Junction boxes and pull boxes installed in the ground outside shall be Quazite Composolite or approved equal. Mount the boxes over 24" of washed gravel fill. If splices are to be made inside the boxes, the boxes shall be of the type furnished with a bottom, and all conduit connections shall | B. Fu C. Cir tripping el |
| <form> Process Spectra process and process</form> | be watertight. In addition, all conductor splices shall be made watertight using an appropriate splice kit as manufactured by 3M, or an approved equal. | on the ha reside in a refrigerati D. Cir |
| SWITCHES AND RECEPTACLES SWITCHES AND RECEPTACLES Image: Comparison of the second | SECTION 26-09-23 | mechanic E. Cir conductor does not |
| And A Jourse A. Proof address on excession is an excession is at the specific trans or the address on excession is a model of the first problem. A MARTINE AND AND AND AND AND AND AND AND AND AND | | F. Cir (Corner-G |
| Not 2 - 2002PD/S1 Provide Signame Signam | Furnish and install all switches and receptacles in accordance with this specification and the requirements of the NEC. | breaker's breaker is |
| J. ADDETING I MARINE CALLINES J. P. B. B. SANDER AND AND AND AND AND AND AND AND AND AND | PART 2 - PRODUCTS | G. Dis they are f |
| Provide and a second second and a second rank second | 2.1 ACCEPTABLE MANUFACTURERS Switches and receptacles shall be manufactured by Hubbell, Cooper Wiring Devices, Leviton, or Pass & Seymour. | H. Bu I. Sw |
| A data and an equivalence of the specificator game. Two what have accepted and explosible in the specificator specificator of the /li> | 2.2 GENERAL | J. En they are s |
| A control of the interpret of each of the interpret of the in | A. Switches and receptacles shall be specification grade. They shall have ampacity and voltage ratings suitable for the application in which they are used. | 2.2 AC |
| B. Protect handbord befores need experiments for the decision of angle control and share the rest of the JSNP. Periments in the share the interference equition of the decision of angle control and share the rest of the JSNP. Periments in the share the interference equition of the decision /li> | B. Consult architect or engineer for device colors prior to ordering devices. | Disconne |
| and the experiment of the second process of the secon | C. Provide brushed stainless steel cover plates for all devices. A single cover plate shall cover all devices in one box. | PART 3 - 3.1 Ins |
| | shall be equipped with a grounding screw. Switches shall be Hubbell CSB series or approved equal. | necessary |
| Pi Construction of the | E. Duplex NEMA 5-20R receptacles shall be Hubbell HBL 5362A or approved equal. F. Duplex GFI NEMA 5-20R receptacles shall be Hubbell HBL GF5362A or approved equal. | 3.2 Dis 3.3 Inc |
| A (1975; "Gar 20) argues negleke shalled in halfing units half in a finite sample-standard of yarity at these finite sample-standard of yarity at these finites and be lond as the weather resistant tyre. A (1975) and 20 argues negleke shalled in the lating units half in a finite sample-standard of yarity at these finites and the sample standard of yarity at these finites and the sample standard of yarity at these finites and the sample standard of yarity at these finites and the sample standard of yarity at these finites and the sample standard of yarity at these finites and the sample standard of yarity at these finites and the sample standard of yarity at these finites and the sample standard of yarity at these finites and the sample standard of yarity at these finites and the sample standard of yarity at these finites and the sample standard of yarity at the sample standard of yarity | G. Weatherproof while-in-use cover plates shall be Teddico #34017-7 or approved equal. | END OF S |
| 1. A 16 and 20 sprener. IC2 and 2004 non-loading spectrately invokes the late at the section three states into the section based of the late access, pain has a the state in the late access and states and states in the late access and sta | constructed of heavy duty die cast metal. H. All 125V, 15 and 20 ampere receptacles installed in dwelling units shall be of the tamper-resistant type. | |
| 1. Derivation trained in the Content, but not latest active, what he or of the name statistical of output we passes interes interes. 2. Particular content of output we passes in the specifical value in the content interes intere | I. All 15 and 20 ampere, 125 and 250V non-locking receptacles installed in wet or damp locations shall be listed as the weather-resistant type. | |
| Part 1 - EECUTON 11 - Iska musk all access unkess spachts written partenesses is ablanded from the legistenes for a particular stances in a particular tacket. 12 - Iska musk all access unkess spachts written partenesses is ablanded from the legisteness for a particular stances. 13 - Iska musk all access unkess spachts written partenesses is ablanded from the legisteness for a particular stances. 14 - Iska musk all access unkess spachts written partenesses ablands to musk the tackets. 15 - Iska musk all access the legisteness of the cost, or a space of a particular stances. 16 - The particular stances ablanded is a particular stances ablanded for any particular stances. 17 - Iban and musk all access the space of a bland tacket and any particular stances. 18 - The particular stances ablanded is a particular stances. 19 - The Databate cost backets were ablanded to de particular stances. 10 - The Databate cost backets were ablanded to de particular stances. 11 - The Databate cost backets were ablanded to de particular stances. 12 - The Databate cost backets were ablanded to de particular stances. 13 - Databate cost backets were ablanded to de particular stances. 14 - Databate cost backets were ablanded to de particular stances. 15 - Databate cost backets were ablanded to de particular stances. 16 - Databate cost backets were ablanded to de particular stances. 17 - Databate cost backets were ablanded to de particular stances. 18 - Databate cost backets were ablanded to de particular stances. 19 - Databate cost backets were ablanded to de particular stances. 19 - Databate cost backets were ablanded to de particular stances. 19 - Databate cost backets were ablanded to de particular stances. 19 - Databate cost backets were ablanded to de particular stances. 19 - Databate cost backets the particular stances | J. Devices furnished in this Contract, but not listed above, shall be of the same standard of quality as those items listed. | |
| 11. Flar hand all decess after spacefic approximation is notioned mem is highered for a particular backetor is an advanced memory spacefic approximation is a spacefic of the spacefic approximation in the descent and spacefic approximation approximation is a spacefic of the spacefic approximation in the descent and spacefic approximation approximation is a spacefic of the spacefic approximation in the descent approximation approximation in the descent approximation approximation in the descent approximation in the descent approximation approxima | PART 3 - EXECUTION | PART 1 - 0 |
| Part and account which be guarded as the during sector large during durin | 3.1 Flush mount all devices unless specific written permission is obtained from the Engineer for a particular device in a particular location. | Provide all system. |
| De Conserve de la company haven et holor tobecter as above en la segueda forter au transmission de la company haven et holor tobecter as above en la segueda forter au transmission de la company haven et holor tobecter as above en la segueda forter au transmission de la company haven et holor tobecter as above en la segueda forter au transmission de la company haven et holor tobecter as above en la segueda forter au transmission de la company haven et holor tobecter as above en la segueda forter au transmission de la company haven et holor tobecter as above en la segueda forter au transmission de la company haven et holor tobecter as above en la segueda forter au transmission de la company haven et al babe requirer de la transmission de la company haven et al babe requirer de la transmission de la company haven et al babe requirer de la transmission de la company haven et al babe requirer de la transmission de la company haven et al babe requirer de la transmission de la company haven et al babe requirer de la transmission de la company. The company haven et al la company haven et al company. The company haven et al company | Install all devices vertically unless the drawings specifically state that the particular device should be mounted horizontally. Install receptacles with the ground slot up. | PART 2 - F |
| SECTION 26-09-24 COULD SECTION 26-09-24 COUL | END OF SECTION | 2.1 LUMIN |
| Part - ACCURATE SECURATION CONTRACTIONS Part - A Contract and a conclusion system of Motion Discotors as shown on the dressings and a specifical hours. The dressings are provided to be abaciant minimum compares the regulated Acada system compares the availability of the value of the discotor minimum compares the regulated Acada system compares the availability of the value of the discotor minimum compares the regulated and the discotor minimum compares the regulated bility of the discotor discotory of the discotor minimum compares the regulated bility of the discotory discotory of the discotory discotory of the discotory /li> | SECTION 26-09-24 | A. Lui inte ava |
| the general scope of the work, and show the absolute informum components equivales. A cluster state of the matching of a contradict or the contradict or the matching of a contradict or the contradict or the matching of a contradict or the contradict or the matching of a contradict or the contradict or the matching of a contradict or the contradict or the matching of a contradict or the contradict or the matching of a contradict or the contradict or the matching of a contradict or the contradict or the matching of a contradict or the contradict or | PART 1 - GENERAL 1.1 Furnish and install a complete system of Motion Detectors as shown on the drawings and as specified herein. The drawings are provided to show | the fixt the 2.2 LED |
| performance. 1.9 Provide all gover packs, handbare, software, devices, circuity, and other camponents, material, and labor required to install, configure, and test there within 6 working of a constraint. 2.3 BAT 1.3 Provide all gover packs, handbare, software, devices, circuity, and other camponents, material, and labor required to install, configure, and test there of design for the satisfaction of the Architect. We can be associated as a set of an and activates descripting to chan be provided (adjusted to the satisfaction of the required to the satisfaction of the required of the satisfaction of the manufacture's data these sets and not be expenses. 2.4 Summa for the satisfaction of the required to the satisfaction of the required to the satisfaction of the required to the satisfaction of the satisfacti | the general scope of the work, and show the absolute minimum components required. Actual system components, quantities, and locations shall be determined by the motion detector vendor and provided to the Contractor with the installation shop drawings. 1.2 The Contractor and Sales Representatives are advised to take notice of specified component characteristics when attempting to select and propose substitutions. It is highly unlikely that substitutions on a one-for-one component basis will produce results that provide constraints and propose | A. LEI B. Lur C. Fiy |
| 13 Provide upfore the subdiction discourse, subviding updates, characterized properties option to be subdiction of the subdiction | performance. | 2.3 BATT |
| Stoom is as each of manufacturer's out wheels describing completely all equipment, and as sets of shop drawings showing all circuity industing the interminat-charmal connections. The winding diagrams on these drawings are based on our hest interpretation of the manufacturer's data that was available of the med drawing. The winding diagrams on these drawings are based on our hest interpretation of the manufacturer's data that was available of the med drawing. The winding diagrams on these drawings are based and our hest interpretation and comparison. The control weighting is available of the interpretation of the manufacturer's data that was available of the med drawing. So the provide detailed and provide detailed detailed and provide detailed and provide detailed and pr | 1.3 Provide all power packs, hardware, software, devices, circuitry, and other components, material, and labor required to install, configure, and test the entire system to the satisfaction of the Architect, Owner, and Engineer. | 2.0 D/(TH |
| 15. The viring diagrams on these drawings are based on cur best interpretation of the manufacture's data that was available at the time of design: however, they shall not be used for system installation and configuration. The controls equipment varies is expended to be throughly however, they shall not be used for system installation manufactures, is provided. A statistical of the equipment that is being proposed, and shall provide detailed shap drawings tailored for each circuit and generic to use for complete installation of the circuitly without reterring to data sheets and in chap drawings tailor be installing electrica to use for complete installation of the circuitly without reterring to data sheets and in completely described. A statistical to the circuitly without reterring to data sheets and in the hand be ultrasonic, celling-mounted units with a 360 degree, 2.4 Areas up to S00 square feet. Motion Detectors used in areas up to 500 square feet shall be ultrasonic, celling-mounted units with a 360 degree, 2.4 Areas up to 200 Square Feet. Motion Detectors used in areas up to 1000 square feet shall be ultrasonic, celling-mounted units with a 360 degree, 2.5 Square feet. Motion Detectors used in areas up to 2000 square feet shall be ultrasonic, celling-mounted units with a 360 degree, 2.6 Square foot coverage. They shall be Watt Stopper W-2000A crapproved equal. 2.7 Areas up to S00 square feet. Motion Detectors used in areas up to 2000 square feet shall be ultrasonic, celling-mounted units with a 360 degree, 2.6 Square foot coverage. They shall be with Stopper W-2000A crapproved equal. 2.6 Circuity: Provide control coverage areas overing and there are no dead zones in the rooms where persons may stand and not be detected. 3.2 All ret 3.4 LED fi 3.4 LED fi 3.4 Work shall be done by qualified nystem techniciane. 3.3 Wing, including control wing, shall be in Roseways meeting Specification 26 05 33. 3.4 Work shall be done by qualified nystem techniciane. 3.5 Upon completion of job, test en | 1.4 Submit six sets of manufacturer's cut sheets describing completely all equipment, and six sets of shop drawings showing all circuitry including terminal-to-terminal connections. | out |
| PART 2 - PRODUCTS 1.1 Haliway Motion Detectors: Motion Detectors used in the haliways shall be ultrasonic, ceiling-mounted units with a coverage of 10° x 50°. They shall be Watt Stopper W-2000H or approved equal. 2.2 Areas up to 500 Square Feet: Motion Detectors used in areas up to 500 square feet shall be ultrasonic, ceiling-mounted units with a 360 degree, 3.2 Areas up to 1000 Square Feet: Motion Detectors used in areas up to 1000 square feet shall be ultrasonic, ceiling-mounted units with a 360 degree, 3.4 Areas up to 2000 Square Feet: Motion Detectors used in areas up to 1000 square feet shall be ultrasonic, ceiling-mounted units with a 360 degree, 3.4 Areas up to 2000 Square Feet: Motion Detectors used in areas up to 1000 square feet shall be ultrasonic, ceiling-mounted units with a 360 degree, 3.4 Areas up to 2000 Square Feet: Motion Detectors used in areas up to 1000 square feet shall be ultrasonic, ceiling-mounted units with a 360 degree, 3.4 Areas up to 2000 Square Feet: Motion Detectors used in areas up to 1000 square feet shall be ultrasonic, ceiling-mounted units with a 360 degree, 3.5 Power Packs: Power packs shall be of the same manufacturer as the motion detectors. Each shall be capable of controlling a 20 ampere circuit, 3.3 Comp at the related for operation at the voltage of the system on which they will be used. 3.4 (Entroper VF-2004 control circuity as required by the manufacture for optimum system operation, but no less than the following: Control cables 3.4 (Entroper VF-2004 control wining, shall be in Roseways meeting Spacification 28 05 33. 3.4 (Wrink shall be done by qualified system technicians. 3.3 Withing, including control wining, shall be in Roseways meeting Spacification 28 05 33. 3.4 (Upon completion of the totower for labor, material or expenses. 3.5 Upon completion of the totower for tabler, material or expenses. 3.6 Upon completion of the totower tore to the Architect for delivery to the Owner and Architect at least one week in advance of the training session. Provide 4. 1 Pr | 1.5 The wiring diagrams on these drawings are based on our best interpretation of the manufacturer's data that was available at the time of design; however, they shall not be used for system installation and configuration. The controls equipment vendor is expected to be thoroughly knowledgeable of the equipment that is being proposed, and shall provide detailed shop drawings tailored for each circuit and lighting zone on the project. General manufacturer's data sheets shall not be acceptable. The shop drawings shall be suitable for the installing electrician to use for complete installation of the circuitry without referring to data sheets or installation manuals for connection of lighting control equipment. These requirements shall be followed whether the specified equipment, or products of other manufacturers, is provided. | swi The soli 2.4 SUPP |
| 1. Hallway Molion Defectors: Molion Defectors used in the hallways shall be ultrasonic, ceiling-mounted units with a coverage of 10° x 90°. They shall B. Pitt 2.2. Areas up to 500 Square Feet: Molion Detectors used in areas up to 500 square feet shall be ultrasonic, ceiling-mounted units with a 360 degree, 1000 square feet: Molion Detectors used in areas up to 2000 square feet shall be ultrasonic, ceiling-mounted units with a 360 degree, 1000 square feet: Molion Detectors used in areas up to 2000 square feet shall be ultrasonic, ceiling-mounted units with a 360 degree, 1000 square feet: Molion Detectors used in areas up to 2000 square feet shall be ultrasonic, ceiling-mounted units with a 360 degree, 1000 square feet: Molion Detectors used in areas up to 2000 square feet shall be ultrasonic, ceiling-mounted units with a 360 degree, 1000 square feet: Molion Detectors used in areas up to 2000 square feet shall be ultrasonic, ceiling-mounted units with a 360 degree, 1000 square feet shall be ultrasonic detectors. Each shall be capable of controlling a 20 ampere devicut. 3.1 Rear 2.5 Power Packs: Power packs shall be with subper W-1000A or approved equal. 3.2 All reas up to 2000 square feet shall be up the same manufacturer as the motion detectors. Each shall be capable of controlling a 20 ampere dirout. 3.2 All reas up to 2000 square feet shall be up the same manufacturer as the motion detectors. 3.2 All reas up to 200 square feet shall be with a sole degree. 3.2 All reas up to 2000 square feet shall be up the same manufacturer as the motion detectors. 3.2 All reas up to 200 square feet shall be applied to a spece and the same manufacturer as the motion detectors. 3.2 All reas up to 200 square feet shall be up the same manufacturer aspeceed equal. 3.2 All reas up to 200 square feet sh | PART 2 - PRODUCTS | A. Pro or I |
| 2.2 Areas up to 500 Square Feet: Motion Detectors used in areas up to 500 square feet shall be ultrasonic, ceiling-mounted units with a 360 degree, 1000 square feet: Motion Detectors used in areas up to 1000 square feet shall be ultrasonic, ceiling-mounted units with a 360 degree, 1000 square feet. Motion Detectors used in areas up to 1000 square feet shall be ultrasonic, ceiling-mounted units with a 360 degree, 1000 square feet. Motion Detectors used in areas up to 1000 square feet shall be ultrasonic, ceiling-mounted units with a 360 degree, 24 Areas up to 2000 square feet. Motion Detectors used in areas up to 2000 square feet shall be ultrasonic, ceiling-mounted units with a 360 degree, 24 Areas up to 2000 square feet. Motion Detectors used in areas up to 2000 square feet shall be ultrasonic, ceiling-mounted units with a 360 degree, 24 Areas up to 2000 square feet. Motion Detectors used in areas up to 2000 square feet shall be ultrasonic, ceiling-mounted units with a 360 degree, 32 Areas up to 2000 square feet. Motion Detectors used in areas up to 2000 square feet shall be ultrasonic, ceiling-mounted units with a 360 degree, 32 Areas up to 2000 square feet. Motion Detectors used in areas up to 2000 square feet shall be ultrasonic, ceiling-mounted units with a 360 degree, 33 Reace area free fraid for operation at the voltage of the system on which they will be used. 2.5 Power Packs. Power packs shall be of the same manufacturer for optimum system operation. but no less than the following: Control cables shall be 3-conductor #22 AWG copper with an overall jacket. Adjust conductor sizes as required to overcome unacceptable voltage drup. 2.4 LED I 3.1 Motion detectors shall be provided so that their coverage areas overlap and there are no dead zones in the rooms where persons may stand and not be detected. 3.2 All work shall be done by qualified system technicians. 3.3 Wring, including control wing, shall be in Raceways meeting Specification 26 05 33. <l< td=""><td>2.1 Hallway Motion Detectors: Motion Detectors used in the hallways shall be ultrasonic, ceiling-mounted units with a coverage of 10' x 90'. They shall be Watt Stopper W-2000H or approved equal</td><td>fixti B. Pro</td></l<> | 2.1 Hallway Motion Detectors: Motion Detectors used in the hallways shall be ultrasonic, ceiling-mounted units with a coverage of 10' x 90'. They shall be Watt Stopper W-2000H or approved equal | fixti B. Pro |
| but square foot coverage. They shall be Watt Stopper W-500A or approved equal. D. Pro 2.3 Areas up to 1000 square Feet: Motion Detectors used in areas up to 1000 square feet shall be ultrasonic, ceiling-mounted units with a 360 degree, 1000 square feet they shall be Watt Stopper W-1000A or approved equal. 1.1 Race, 1.1 | 2.2 Areas up to 500 Square Feet: Motion Detectors used in areas up to 500 square feet shall be ultrasonic, ceiling-mounted units with a 360 degree, | C. Suț |
| 1000 square foot coverage. They shall be Watt Stopper W-1000A or approved equal. 3.1 Race. 2.4 Areas up to 2000 Square Feet: Motion Detectors used in areas up to 2000 square feet shall be ultrasonic, celling-mounted units with a 360 degree, 2000 square foot coverage. They shall be Watt Stopper W-2000A or approved equal. 3.1 Race. 2.6 Circuity: Provide control circuitry as required by the manufacturer as the motion detectors. Each shall be capable of controlling a 20 ampere circuit. 3.2 All red 2.6 Circuity: Provide control circuitry as required by the manufacturer for optimum system operation, but no less than the following: Control cables shall be 3-conductor #22 AWG copper with an overall jacket. Adjust conductor sizes as required to overcome unacceptable voltage drop. 3.4 LED f 2.8 Circuity: Provide control circuitry as required by the manufacturer for optimum system operation, but no less than the following: Control cables shall be 3-conductor #22 AWG copper with an overall jacket. Adjust conductor sizes as required to overcome unacceptable voltage drop. 3.4 LED f 3.1 Motion detectors shall be provided so that their coverage areas overlap and there are no dead zones in the rooms where persons may stand and not be detected. 3.3 Wining, including control wiring, shall be in Raceways meeting Specification 26 05 33. 3.4 Guarantee workmanship and material for a persens. 3.5 Upon completion of job, test entire system. After testing submit a certificate to the Architect stating verification of the following: 4.1 Provide the following: PART 4 - CLOSE-OUT DOCUMENTS 4.1 Provide the following documents to the | 500 square toot coverage. They shall be Watt Stopper W-500A or approved equal. 2.3 Areas up to 1000 Square Feet: Motion Detectors used in areas up to 1000 square feet shall be ultrasonic. ceiling-mounted units with a 360 degree | D. Pro PART 3 - E |
| a. The product of coverage. They shall be Watt Stopper W2000 A coverage equal. 2.200 square foot coverage. They shall be Watt Stopper W2000 A coverage equal. 2.2 For provide control circuitry as required by the manufacturer as the motion detectors. Each shall be capable of controlling a 20 ampere circuit. 3.2 All rec. 3.2 Comparison of the system on which they will be used. 3.2 Comparison of the system on which they will be used. 3.3 Comparison of the system on which they will be used. 3.4 LED for standard or operation at the voltage of the system on which they will be used. 3.4 LED for standard or operation at the voltage of the system on which they will be used. 3.4 LED for standard or operation at the voltage of the system on which they will be used. 3.4 LED for standard or operation at the voltage of the system technicians. 3.3 Miring, including control wiring, shall be in Raceways meeting Specification 28 05 33. 3.4 Guarantee workmanship and material for a period of one year after final acceptance. During the warranty period, repair or replace faulty equipment at no cost to the Owner for labor, material, or expenses. 3.5 Upon completion of job, test entire system. After testing submit a certificate to the Architect stating verification of the following: PART 4 - CLOSE-OUT DOCUMENTS 4.1 Provide the following documents to the Architect for delivery to the Owner at the time of substantial completion: A. Written Guarantee B. Two sets of data prepared by the manufacturer for each item of electrical equipment completely describing each piece of equipment. The data shall include parts lists, a description of operation, shop drawings, wiring diagrams, maintenance procedures, and other literature required for operation and maintenance of equipment. A. Written Guarantee B. Two sets of data prepared by the manufacturer for each item of elec | 1000 square foot coverage. They shall be Watt Stopper W-1000A or approved equal. | 3.1 Racew lumina |
| 2.5 Power Packs: Power packs shall be of the same manufacturer as the motion detectors. Each shall be capable of controlling a 20 ampere circuit. They shall be rated for operation at the voltage of the system on which they will be used. 2.6 Circuity: Provide control circuitry as required by the manufacturer for optimum system operation, but no less than the following: Control cables shall be 3-conductor #22 AWG copper with an overall jacket. Adjust conductor sizes as required to overcome unacceptable voltage drop. 2.1 Power Secks: Power packs shall be provided so that their coverage areas overlap and there are no dead zones in the rooms where persons may stand and not be detected. 3.1 Motion detectors shall be provided so that their coverage areas overlap and there are no dead zones in the rooms where persons may stand and not be detected. 3.2 All work shall be done by qualified system technicians. 3.3 Wiring, including control wiring, shall be in Raceways meeting Specification 26 05 33. 3.4 Guarantee workmanship and material for a period of one year after final acceptance. During the warranty period, repair or replace faulty equipment at no cost to the Owner for labor, material, or expenses. 3.5 Upon completion of job, test entire system. After testing submit a certificate to the Architect stating verification of the following: PART 4 - CLOSE-OUT DOCUMENTS 4.1 Provide the following documents to the Architect for delivery to the Owner at the time of substantial completion: A. Written Guarantee B. Two sets of data prepared by the manufacturer for each item of electrical equipment completely describing each piece of equipment. The data shall include parts lists, a description of operation, shop drawings, wiring diagrams, maintenance procedures, and other literature required for operation and maintenance of equipment. 4.2 Instruct the Owner on system operational procedures. Notify the Owner and Arch | 2000 square foot coverage. They shall be Watt Stopper W-2000A or approved equal. | Six fee |
| 2.6 Circuitry: Provide control circuitry as required by the manufacturer for optimum system operation, but no less than the following: Control cables 3.4 LED f 3.4 LED f 2.6 Circuitry: Provide control circuitry as required by the manufacturer for optimum system operation, but no less than the following: Control cables 4.2 AWG copper with an overall jacket. Adjust conductor sizes as required to overcome unacceptable voltage drop. PART 3 - EXECUTION 3.1 Motion detectors shall be provided so that their coverage areas overlap and there are no dead zones in the rooms where persons may stand and not be detected. 3.2 All work shall be done by qualified system technicians. 3.3 Wring, including control wiring, shall be in Raceways meeting Specification 26 05 33. 3.4 Guarantee workmanship and material for a period of one year after final acceptance. During the warranty period, repair or replace faulty equipment at no cost to the Owner for labor, material, or expenses. 3.5 Upon completion of job, test entire system. After testing submit a certificate to the Architect stating verification of the following: PART 4 - CLOSE-OUT DOCUMENTS 4.1 Provide the following documents to the Architect for delivery to the Owner at the time of substantial completion. A. Written Guarantee B. Two sets of data prepared by the manufacturer for each item of electrical equipment completely describing each piece of equipment. The data shall include parts lists, a description of operation, shop drawings, wiring diagrams, maintenance procedures, and other literature required for operation and maintenance of equipment. 4.2 Instruct the Owner on system operational procedures. Notify the Owner and Architect at least one week in advance of the training session. Provide written step-by-step instructional material. 4.3 Notify the General Contractor that you are to present during the Pre-final Inspection. During that inspa | 2.5 Power Packs: Power packs shall be of the same manufacturer as the motion detectors. Each shall be capable of controlling a 20 ampere circuit. They shall be rated for operation at the voltage of the system on which they will be used. | 3.3 Comp |
| PART 3 - EXECUTION 3.1 Motion detectors shall be provided so that their coverage areas overlap and there are no dead zones in the rooms where persons may stand and not be detected. 3.2 All work shall be done by qualified system technicians. 3.3 Wring, including control wiring, shall be in Raceways meeting Specification 26 05 33. 3.4 Guarantee workmanship and material for a period of one year after final acceptance. During the warranty period, repair or replace faulty equipment at no cost to the Owner for labor, material, or expenses. 3.5 Upon completion of job, test entire system. After testing submit a certificate to the Architect stating verification of the following: PART 4 - CLOSE-OUT DOCUMENTS 4.1 Provide the following documents to the Architect for delivery to the Owner at the time of substantial completion: A. Written Guarantee B. Two sets of data prepared by the manufacturer for each item of electrical equipment completely describing each piece of equipment. The data shall include parts lists, a description of operation, shop drawings, wiring diagrams, maintenance procedures, and other literature required for operation and maintenance of equipment. 4.2 Instruct the Owner on system operational procedures. Notify the Owner and Architect at least one week in advance of the training session. Provide written step-by-step instructional material. 4.3 Notify the General Contractor that you are to present during the Pre-final Inspection. During that inspection, demonstrate all system functionality and capabilities; remove cover plates and panels covers as required to show the quality of the installation. The Owner, Architect, | 2.6 Circuitry: Provide control circuitry as required by the manufacturer for optimum system operation, but no less than the following: Control cables shall be 3-conductor #22 AWG copper with an overall jacket. Adjust conductor sizes as required to overcome unacceptable voltage drop. | 3.4 LED fi END OF S |
| not be detected. 3.2 All work shall be done by qualified system technicians. 3.3 Wiring, including control wiring, shall be in Raceways meeting Specification 26 05 33. 3.4 Guarantee workmanship and material for a period of one year after final acceptance. During the warranty period, repair or replace faulty equipment at no cost to the Owner for labor, material, or expenses. 3.5 Upon completion of job, test entire system. After testing submit a certificate to the Architect stating verification of the following: PART 4 - CLOSE-OUT DOCUMENTS 4.1 Provide the following documents to the Architect for delivery to the Owner at the time of substantial completion: A. Written Guarantee B. Two sets of data prepared by the manufacturer for each item of electrical equipment completely describing each piece of equipment. The data shall include parts lists, a description of operation, shop drawings, wiring diagrams, maintenance procedures, and other literature required for operation and maintenance of equipment. 4.2 Instruct the Owner on system operational procedures. Notify the Owner and Architect at least one week in advance of the training session. Provide written step-by-step instructional material. 4.3 Notify the General Contractor that you are to present during the Pre-final Inspection. During that inspection, demonstrate all system functionality and capabilities; remove cover plates and panels covers as required to show the quality of the installation. The Owner, Architect, and Engineer reserve the right to reject unsuitable workmanship or performance. END OF SECTION | PART 3 - EXECUTION 3.1 Motion detectors shall be provided so that their coverage areas overlap and there are no dead zones in the rooms where persons may stand and | |
| 3.3 Wiring, including control wiring, shall be in Raceways meeting Specification 26 05 33. 3.4 Guarantee workmanship and material for a period of one year after final acceptance. During the warranty period, repair or replace faulty equipment at no cost to the Owner for labor, material, or expenses. 3.5 Upon completion of job, test entire system. After testing submit a certificate to the Architect stating verification of the following: PART 4 - CLOSE-OUT DOCUMENTS 4.1 Provide the following documents to the Architect for delivery to the Owner at the time of substantial completion: A. Written Guarantee B. Two sets of data prepared by the manufacturer for each item of electrical equipment completely describing each piece of equipment. The data shall include parts lists, a description of operation, shop drawings, wiring diagrams, maintenance procedures, and other literature required for operation and maintenance of equipment. 4.2 Instruct the Owner on system operational procedures. Notify the Owner and Architect at least one week in advance of the training session. Provide written step-by-step instructional material. 4.3 Notify the General Contractor that you are to present during the Pre-final Inspection. During that inspection, demonstrate all system functionality and capabilities; remove cover plates and panels covers as required to show the quality of the installation. The Owner, Architect, and Engineer reserve the right to reject unsultable workmanship or performance. | not be detected. | |
| 3.4 Guarantee workmanship and material for a period of one year after final acceptance. During the warranty period, repair or replace faulty equipment at no cost to the Owner for labor, material, or expenses. 3.5 Upon completion of job, test entire system. After testing submit a certificate to the Architect stating verification of the following: PART 4 - CLOSE-OUT DOCUMENTS 4.1 Provide the following documents to the Architect for delivery to the Owner at the time of substantial completion: A. Written Guarantee B. Two sets of data prepared by the manufacturer for each item of electrical equipment completely describing each piece of equipment. The data shall include parts lists, a description of operation, shop drawings, wiring diagrams, maintenance procedures, and other literature required for operation and maintenance of equipment. 4.2 Instruct the Owner on system operational procedures. Notify the Owner and Architect at least one week in advance of the training session. Provide written step-by-step instructional material. 4.3 Notify the General Contractor that you are to present during the Pre-final Inspection. During that inspection, demonstrate all system functionality and capabilities; remove cover plates and panels covers as required to show the quality of the installation. The Owner, Architect, and Engineer reserve the right to reject unsuitable workmanship or performance. | 3.3 Wiring, including control wiring, shall be in Raceways meeting Specification 26 05 33. | |
| 3.5 Upon completion of job, test entire system. After testing submit a certificate to the Architect stating verification of the following: PART 4 - CLOSE-OUT DOCUMENTS 4.1 Provide the following documents to the Architect for delivery to the Owner at the time of substantial completion: A. Written Guarantee B. Two sets of data prepared by the manufacturer for each item of electrical equipment completely describing each piece of equipment. The data shall include parts lists, a description of operation, shop drawings, wiring diagrams, maintenance procedures, and other literature required for operation and maintenance of equipment. 4.2 Instruct the Owner on system operational procedures. Notify the Owner and Architect at least one week in advance of the training session. Provide written step-by-step instructional material. 4.3 Notify the General Contractor that you are to present during the Pre-final Inspection. During that inspection, demonstrate all system functionality and capabilities; remove cover plates and panels covers as required to show the quality of the installation. The Owner, Architect, and Engineer reserve the right to reject unsuitable workmanship or performance. END OF SECTION | 3.4 Guarantee workmanship and material for a period of one year after final acceptance. During the warranty period, repair or replace faulty equipment at no cost to the Owner for labor, material, or expenses. | |
| PART 4 - CLOSE-OUT DOCUMENTS 4.1 Provide the following documents to the Architect for delivery to the Owner at the time of substantial completion: A. Written Guarantee B. Two sets of data prepared by the manufacturer for each item of electrical equipment completely describing each piece of equipment. The data shall include parts lists, a description of operation, shop drawings, wiring diagrams, maintenance procedures, and other literature required for operation and maintenance of equipment. 4.2 Instruct the Owner on system operational procedures. Notify the Owner and Architect at least one week in advance of the training session. Provide written step-by-step instructional material. 4.3 Notify the General Contractor that you are to present during the Pre-final Inspection. During that inspection, demonstrate all system functionality and capabilities; remove cover plates and panels covers as required to show the quality of the installation. The Owner, Architect, and Engineer reserve the right to reject unsuitable workmanship or performance. END OF SECTION | 3.5 Upon completion of job, test entire system. After testing submit a certificate to the Architect stating verification of the following: | |
| 4.1 Provide the following documents to the Architect for delivery to the Owner at the time of substantial completion: A. Written Guarantee B. Two sets of data prepared by the manufacturer for each item of electrical equipment completely describing each piece of equipment. The data shall include parts lists, a description of operation, shop drawings, wiring diagrams, maintenance procedures, and other literature required for operation and maintenance of equipment. 4.2 Instruct the Owner on system operational procedures. Notify the Owner and Architect at least one week in advance of the training session. Provide written step-by-step instructional material. 4.3 Notify the General Contractor that you are to present during the Pre-final Inspection. During that inspection, demonstrate all system functionality and capabilities; remove cover plates and panels covers as required to show the quality of the installation. The Owner, Architect, and Engineer reserve the right to reject unsuitable workmanship or performance. END OF SECTION | PART 4 - CLOSE-OUT DOCUMENTS | |
| A. Written Guarantee B. Two sets of data prepared by the manufacturer for each item of electrical equipment completely describing each piece of equipment. The data shall include parts lists, a description of operation, shop drawings, wiring diagrams, maintenance procedures, and other literature required for operation and maintenance of equipment. 4.2 Instruct the Owner on system operational procedures. Notify the Owner and Architect at least one week in advance of the training session. Provide written step-by-step instructional material. 4.3 Notify the General Contractor that you are to present during the Pre-final Inspection. During that inspection, demonstrate all system functionality and capabilities; remove cover plates and panels covers as required to show the quality of the installation. The Owner, Architect, and Engineer reserve the right to reject unsuitable workmanship or performance. END OF SECTION | 4.1 Provide the following documents to the Architect for delivery to the Owner at the time of substantial completion: | |
| 4.2 Instruct the Owner on system operational procedures. Notify the Owner and Architect at least one week in advance of the training session. Provide written step-by-step instructional material. 4.3 Notify the General Contractor that you are to present during the Pre-final Inspection. During that inspection, demonstrate all system functionality and capabilities; remove cover plates and panels covers as required to show the quality of the installation. The Owner, Architect, and Engineer reserve the right to reject unsuitable workmanship or performance. END OF SECTION | A. Written Guarantee | |
| 4.3 Notify the General Contractor that you are to present during the Pre-final Inspection. During that inspection, demonstrate all system functionality and capabilities; remove cover plates and panels covers as required to show the quality of the installation. The Owner, Architect, and Engineer reserve the right to reject unsuitable workmanship or performance. END OF SECTION | B. Two sets of data prepared by the manufacturer for each item of electrical equipment completely describing each piece of equipment. The data shall include parts lists, a description of operation, shop drawings, wiring diagrams, maintenance procedures, and other literature required for operation and maintenance of equipment. | |
| END OF SECTION | B. Two sets of data prepared by the manufacturer for each item of electrical equipment completely describing each piece of equipment. The data shall include parts lists, a description of operation, shop drawings, wiring diagrams, maintenance procedures, and other literature required for operation and maintenance of equipment. 4.2 Instruct the Owner on system operational procedures. Notify the Owner and Architect at least one week in advance of the training session. Provide written step-by-step instructional material. | |
| | B. Two sets of data prepared by the manufacturer for each item of electrical equipment completely describing each piece of equipment. The data shall include parts lists, a description of operation, shop drawings, wiring diagrams, maintenance procedures, and other literature required for operation and maintenance of equipment. 4.2 Instruct the Owner on system operational procedures. Notify the Owner and Architect at least one week in advance of the training session. Provide written step-by-step instructional material. 4.3 Notify the General Contractor that you are to present during the Pre-final Inspection. During that inspection, demonstrate all system functionality and capabilities; remove cover plates and panels covers as required to show the quality of the installation. The Owner, Architect, and Engineer reserve the right to reject unsuitable workmanship or performance. | |

| | SPEC | IFICATIONS |
|--|---|---|
| SECTION 26-05-33 RACEWAYS OUTLET BOXES AND JUNCTION BOXES (CONT.) | SECTION 26-28-00 DISCONNECTS AND SEPARATELY-MOUNTED CIRCUIT BREAKERS | SECTION 27-30-00 TELEPHONE AND DATA SYSTEMS |
| 3.2 Execution for Outlet Boxes and Junction Boxes. | PART 1 - GENERAL | PART 1 - GENERAL |
| A. All devices shall be flush mounted unless specific written permission is obtained from the Engineer for a particular device in a particular location. | Furnish and install all disconnects and separately mounted circuit breakers as shown on the drawings, specified herein, and required by the NEC. | 1.1 Provide complete telephone and data systems in accordance with this specification and the contract drawings. All systems shall be furnished and installed to meet or exceed EIA/TIA Category 6 Standards. |
| B. Install outlet boxes in walls, and provide plaster rings such that wall finish contractor's finish is flush against the edge of the plaster ring. Workmanship will not be accepted where the hole in the wall shows behind the cover plate, or the wall finish is uneven or unpainted at the edge of the | PART 2 - PRODUCTS | 1.2 All new wiring on this project shall conform to the EIA TIA 568A T568A scheme. |
| cover plate. | 2.1 GENERAL | 1.3 Prior to ordering equipment, provide six sets of manufacturer's cut sheets to the Architect or Engineer for the equipment to be installed. Also |
| c. Use round or square celling outlet boxes as required for the device being installed. The celling shall be finished flush against the box; the fixture shall completely cover the box and mount tight against the celling. Coordinate the requirements of the fixture prior to installing the box. | NEMA Standard KS1. Provide fuses sized to appropriately protect the load served. Equipment manufacturer's recommendations shall take precedence over the Contract Drawings. | receiving submittals and shop drawings that have been reviewed and approved by the Engineer. |
| D. Provide junction boxes, pull boxes, and conduit fittings where required by the NEC to limit the number of bends in the raceway, and where required to prevent damage to conductors due to long runs. | B. Fuses shall be dual element, time-delay, Class J fuses. They shall be Bussman Low-Peak or approved equal. | 1.4 Contractors furnishing and installing telephone and data system components shall be regularly involved in furnishing and installing systems of the type specified. They shall have installed five systems similar in size and scope within the past six months. The Telephone and Data System Contractor |
| E. Junction boxes and pull boxes installed in the ground outside shall be Quazite Composolite or approved equal. Mount the boxes over 24" of | C. Circuit breakers shall be thermal magnetic, molded-case with quick-make, quick-break contact action. They shall have thermal and magnetic tripping of all poles. Circuit breaker ampere ratings shall be stamped | shall pull the cable as well as install all jacks and make all other system terminations. |
| washed gravel fill. If splices are to be made inside the boxes, the boxes shall be of the type furnished with a bottom, and all conduit connections shall be watertight. In addition, all conductor splices shall be made watertight using an appropriate splice kit as manufactured by 3M, or an approved equal. | on the handle. Interrupting ratings of the circuit breakers shall be equivalent to the specified AIC rating of the panelboard. Breakers handles shall reside in a position between "ON" and "OFF" after a trip condition. Breakers shall be rated HACR when used for heating, air-conditioning, and | PART 2 - PRODUCTS |
| END OF SECTION | refrigeration; HID when used with High Intensity Discharge fixtures; and shall be rated SWD when used for switching duty. | 2.1 Outlet Boxes: Provide outlet boxes in accordance with Specification 26 05 33. |
| | D. Circuit breaker sizes for motor loads are based on Square D recommendations for use of their breakers at the motor horsepowers listed on the mechanical drawings. If equipment is used other than Square D, adjust breaker sizes per the manufacturer's recommendations. | Plaster Rings: Plaster rings shall be furnished to provide single-gang openings in outlet boxes unless otherwise noted. Raceways: Provide raceways in accordance with Specification 26.05.33 |
| SECTION 26-09-23 | E. Circuit breakers with slash ratings, such as 120/240V or 480Y/277V, shall be used in solidly grounded systems where the nominal voltage of any conductor to ground does not exceed the lower of the two values of the breaker's voltage rating and the nominal voltage between any two conductors | 2.5 Receively. From the number of Jacks indicated on the drawings. Outlet jacks shall be 8-position, 8-conductor, |
| SWITCHES AND RECEPTACLES | does not exceed the higher value of the circuit breaker's voltage rating. | RJ-45 jacks that are multivendor supportive accepting most phone and data plugs. Jacks shall have gold-plated (50 microinches minimum) contacts with 110 connections on the back. The jacks shall snap in the straps. The straps shall be colored to match the switches and receptacle color selected |
| PART 1 - GENERAL | F. Circuit breakers with straight voltage ratings, such as 240V or 480V, shall be used in systems other than solidly grounded systems (Corner-Grounded Delta, Ungrounded, Impedance Grounded, etc.) where the nominal voltage between any two conductors does not exceed the circuit breaker's voltage rating. A two pole circuit breaker shall not be used to protect a three phase. Corner Grounded Delta system unless the circuit | by the Architect. The straps shall be covered by a stainless steel wallplate identical to those of the receptacles and switches. Telephone outlet jacks shall be yellow; data jacks shall be blue. |
| Furnish and install all switches and receptacles in accordance with this specification and the requirements of the NEC. | breaker is marked 10-30. | 2.5 Fiber Optic Cabling: Cable shall be a 12 strand 62.5/125 micron multimode. Bandwidth shall be 200MHz @ 850nm. |
| PART 2 - PRODUCTS | G. Disconnect and individually-mounted circuit breaker ampere interrupting current (AIC) ratings shall equal the rating of the panelboard from which they are fed unless otherwise noted. | 2.6 Cable: All cable shall be Category 6 rated and shall conform to or exceed the EIA/TIA 578 Commercial Building Wiring Standard, Horizontal Cable Section and the EIA/TIA Technical Systems Bulletin 36 for Unshielded Twisted Pair Cables. Other standards supported shall include IEEE 802.3, |
| 2.1 ACCEPTABLE MANUFACTURERS | H. Buses shall be constructed of 98% conductivity copper or equivalently rated aluminum. | Ibase5, 10BASE-T; IEEE 802.5, 4 Mbps, 16 Mbps (328 ft/100m), 104 Workstations, proposed ANSI X3T9.5 TP-PMD requirements for UTP at 100 Mbps, and 155 MB ATM. Cabling shall be UL listed. Telephone cables shall be yellow; data cables shall be blue. All Cable shall be plenum rated. |
| Switches and receptacles shall be manufactured by Hubbell, Cooper Wiring Devices, Leviton, or Pass & Seymour. | I. Switches shall be horsepower rated where used to serve motors. | 2.7 Telephone and Data Backboard (TDBB): Wall mount a ³ / ₄ " x 4' x 4' sheet of plywood, primed and painted with two coats of fire retardant paint of the color and finish selected by the Architect. Provide a ¹ / ₄ " x 4" x 17.75" copper ground block (Erico Eritech TMGB-A18L23PT or approved equal) on |
| 2.2 GENERAL | J. Enclosures shall be NEMA 1 when they are to be mounted indoors, NEMA 3R when they are to be mounted outdoors, and NEMA 4X where they are subject to washdown. Provide special enclosures where shown on the Contract Drawings. | the wall, bond a #6 AWG copper conductor to the ground block with a two hole compression lug and run the #6 AWG ground wire to the electrical power system ground. Bond the #6 AWG ground wire to the power system electrode using an exothermic weld. |
| A. Switches and receptacles shall be specification grade. They shall have ampacity and voltage ratings suitable for the application in which they are used. | 2.2 ACCEPTABLE MANUFACTURERS | 2.8 Punchdown Blocks: Telephone cables shall terminate at the Telephone & Data Backboard on Punchdown Blocks. Telephone Cabling shall be |
| B. Consult architect or engineer for device colors prior to ordering devices. | Disconnects and separately-mounted circuit breakers shall be manufactured by Siemens, Square D, General Electric, or Cutler Hammer. | additional outlets. |
| C. Provide brushed stainless steel cover plates for all devices. A single cover plate shall cover all devices in one box. | PART 3 - EXECUTION | 2.9 Patch Panels: Data Cables shall terminate at the Telephone & Data Backboard in patch panels. Provide a patch panel (or panels) at each TDBB to accommodate all cabling plus 15% spare capacity. Provide crossconnecting cables as required to interconnect the patch panels providing the |
| D. Light switches shall be 20 Ampere, 120-277V back-wired and side-wired toggle switches. They shall be rated up to 2 HP at 240V. Each switch shall be equipped with a grounding screw. Switches shall be Hubbell CSB series or approved equal. | 3.1 Install disconnects and individually-mounted circuit breakers in complete compliance with all manufacturers' installation instructions. Where necessary, provide structural supports and bracing for installation. | Owner a single connection point for a connection to a server. |
| E. Duplex NEMA 5-20R receptacles shall be Hubbell HBL 5362A or approved equal. | 3.2 Disconnects are to be surface-mounted. | 2.10 Racks: Provide a 19" rack for mounting of the patch panels. The rack shall be mounted on the TDBB. |
| F. Duplex GFI NEMA 5-20R receptacles shall be Hubbell HBL GF5362A or approved equal. | 3.3 Individually-mounted circuit breakers are to be flush-mounted unless otherwise shown. | PART 3 - EXECUTION |
| G. Weatherproof while-in-use cover plates shall be Teddico #34017-7 or approved equal. Cover plates shall be single gang, lockable, and constructed of heavy duty die cast metal. | END OF SECTION | 3.1 Provide a 1" conduit extending from each outlet box to a point above the nearest accessible ceiling. Terminate the conduit with a protective bushing. |
| H. All 125V, 15 and 20 ampere receptacles installed in dwelling units shall be of the tamper-resistant type. | | 3.2 Route conductors from the outlet box, above the lay-in ceilings, and to the telephone and data backboard. Group, tie-wrap, and support the conductors from the structural ceiling above the lay-in ceiling. Provide conduit for sleeves where cables pass through areas with hard ceilings |
| I. All 15 and 20 ampere, 125 and 250V non-locking receptacles installed in wet or damp locations shall be listed as the weather-resistant type. | | 3.3 Provide a minimum of two data cables to each data outlet or combination telephone/data outlet. Provide one cable to each telephone outlet. |
| J. Devices furnished in this Contract, but not listed above, shall be of the same standard of quality as those items listed. | | 3.4 Mount plywood backboard securely to wall framing members. The bottom of the backboard shall be 6" above the finished floor. |
| PART 3 - EXECUTION | SECTION 265100 - LIGHTING | 3.5 Provide a #6 copper ground wire in 1" PVC conduit from the Telephone and Data Backboard to the Building Power System Ground. |
| 3.1 Flush mount all devices unless specific written permission is obtained from the Engineer for a particular device in a particular location. | Provide all lighting fixtures (luminaires), lamps, end caps, connectors, fittings, structural support members, supports, brackets, etc., for a complete and operable lighting | 3.6 Service Conduits: Provide two 4" PVC conduits with long radius elbows from the Telephone and Data Backboard to a pint 5' outside of the building. These conduits shall be for future use by the Owner. Conduits bends shall contain radii that are no less than 10 times the conduit diameter. |
| 3.2 Install all devices vertically unless the drawings specifically state that the particular device should be mounted horizontally. | system. | Furnish conduits with pullstrings. Stub conduits below grade to prohibit the entrance, of dirt, water, and gases. Service conduits shall be buried 24" to 36" |
| 3.3 Install receptacles with the ground slot up. | 2.1 LUMINAIRES | below grade. Mark the end of the conduits by placing a vertical stick of conduit from the end of the conduit vertically to a point at least 12" above grade. Provide physical protection as well as warning tape attached to stakes around the marker. |
| END OF SECTION | A. Luminaires are shown in the Luminaire Schedule on the drawings to establish a standard of quality. Manufacturer's names and model numbers shall not be interpreted as a proprietary specification. Notify the engineer at least two weeks prior to bid if an equivalent for a fixture listed in the schedule is not readily. | 3.7 Fiber Optic: Terminate all fiber optic strands at the rack in a fiber optic termination box. |
| SECTION 26-09-24 | available, | 3.8 Equip all spare conduits with a pullwire or string capable of withstanding 200 pounds of pulling tension. |
| OCCUPANCY SENSORS | B. Prior to submitting electrical equipment brochures for review and approval, coordinate with the General Contractor and verify that the fixtures are appropriate for the ceiling types in which they are shown to be installed. Also verify that ballast voltage on the submittals is appropriate for the electrical system on which the fixtures are to be installed (regardless of voltage listed in the part number in the Fixture Schedule). Submit with equipment brochures a certificate stating that | 3.9 Uniquely identify and label all cables at each end using EIA/TIA Standards. Provide engraved or professionally stenciled label markings on the faceplate beside each jack. |
| PART 1 - GENERAL | these items of coordination have been completed. | 3.10 Test each cable for opens, shorts, correct pairs, crossed wiring, and proper termination using a CT200 tester from Atcom Services, Inc. or approved equal. Replace any cable that is unable to pass the tests. Provide a written log of the test results of each cable to the Engineer at the |
| 1.1 Furnish and install a complete system of Motion Detectors as shown on the drawings and as specified herein. The drawings are provided to show the general scope of the work, and show the absolute minimum components required. Actual system components, quantities, and locations shall | 2.2 LED | nrefinal inspection. Demonstrate testing of any cables selected by the Engineer |
| be determined by the motion detector vendor and provided to the Contractor with the installation shop drawings. | A I ED fixtures shall be I M20 and I M20 tested. Color temperature shall be as exception on the drawings | |
| | A. LED fixtures shall be LM79 and LM80 tested. Color temperature shall be as specified on the drawings.B. Lumen outputs listed on the drawings are minimum requirements. | END OF SECTION |
| 1.2 The Contractor and Sales Representatives are advised to take notice of specified component characteristics when attempting to select and propose substitutions. It is highly unlikely that substitutions on a one-for-one component basis will produce results that provide acceptable system | A. LED fixtures shall be LM79 and LM80 tested. Color temperature shall be as specified on the drawings. B. Lumen outputs listed on the drawings are minimum requirements. C. Fixtures shall have a minimum 80CRI. | END OF SECTION |
| 1.2 The Contractor and Sales Representatives are advised to take notice of specified component characteristics when attempting to select and propose substitutions. It is highly unlikely that substitutions on a one-for-one component basis will produce results that provide acceptable system performance. 1.3 Provide all power packs, bardware, software, devices, circuitry, and other components, material, and labor required to install, and there are a software install, and there are a software install. | A. LED fixtures shall be LM79 and LM80 tested. Color temperature shall be as specified on the drawings. B. Lumen outputs listed on the drawings are minimum requirements. C. Fixtures shall have a minimum 80CRI. 2.3 BATTERIES | END OF SECTION |
| 1.2 The Contractor and Sales Representatives are advised to take notice of specified component characteristics when attempting to select and propose substitutions. It is highly unlikely that substitutions on a one-for-one component basis will produce results that provide acceptable system performance. 1.3 Provide all power packs, hardware, software, devices, circuitry, and other components, material, and labor required to install, configure, and test the entire system to the satisfaction of the Architect, Owner, and Engineer. | A. LED fixtures shall be LM79 and LM80 tested. Color temperature shall be as specified on the drawings. B. Lumen outputs listed on the drawings are minimum requirements. C. Fixtures shall have a minimum 80CRI. 2.3 BATTERIES | END OF SECTION |
| The Contractor and Sales Representatives are advised to take notice of specified component characteristics when attempting to select and propose substitutions. It is highly unlikely that substitutions on a one-for-one component basis will produce results that provide acceptable system performance. Provide all power packs, hardware, software, devices, circuitry, and other components, material, and labor required to install, configure, and test the entire system to the satisfaction of the Architect, Owner, and Engineer. Submit six sets of manufacturer's cut sheets describing completely all equipment, and six sets of shop drawings showing all circuitry including terminal-to-terminal connections. | A. LED fixtures shall be LM79 and LM80 tested. Color temperature shall be as specified on the drawings. B. Lumen outputs listed on the drawings are minimum requirements. C. Fixtures shall have a minimum 80CRI. 2.3 BATTERIES A. Emergency Batteries: Emergency batteries in fixtures shall consist of an automatic power failure device, a test switch, and a pilot light that is visible from outside of the fixture. They shall contain a fully automatic solid state charger in a self-contained power pack. The fixture shall be factory wired in a manner that will allow the emergency lamps to be switched while still maintaining charging power to the battery. Wiring Diagrams shall be furnished with the fixture showing | END OF SECTION |
| The Contractor and Sales Representatives are advised to take notice of specified component characteristics when attempting to select and propose substitutions. It is highly unlikely that substitutions on a one-for-one component basis will produce results that provide acceptable system performance. Provide all power packs, hardware, software, devices, circuitry, and other components, material, and labor required to install, configure, and test the entire system to the satisfaction of the Architect, Owner, and Engineer. Submit six sets of manufacturer's cut sheets describing completely all equipment, and six sets of shop drawings showing all circuitry including terminal-to-terminal connections. The wiring diagrams on these drawings are based on our best interpretation of the manufacturer's data that was available at the time of design; how over they shall not be used for quarter installation and completely and completely and the manufacturer's data that was available at the time of design; | A. LED fixtures shall be LM79 and LM80 tested. Color temperature shall be as specified on the drawings. B. Lumen outputs listed on the drawings are minimum requirements. C. Fixtures shall have a minimum 80CRI. 2.3 BATTERIES A. Emergency Batteries: Emergency batteries in fixtures shall consist of an automatic power failure device, a test switch, and a pilot light that is visible from outside of the fixture. They shall contain a fully automatic solid state charger in a self-contained power pack. The fixture shall be factory wired in a manner that will allow the emergency lamps to be switched while still maintaining charging power to the battery. Wiring Diagrams shall be furnished with the fixture showing switching connections. The battery shall be of the sealed electrolyte type with the capacity to provide power to the lamps provided for a minimum of 90 minutes. | END OF SECTION |
| The Contractor and Sales Representatives are advised to take notice of specified component characteristics when attempting to select and propose substitutions. It is highly unlikely that substitutions on a one-for-one component basis will produce results that provide acceptable system performance. Provide all power packs, hardware, software, devices, circuitry, and other components, material, and labor required to install, configure, and test the entire system to the satisfaction of the Architect, Owner, and Engineer. Submit six sets of manufacturer's cut sheets describing completely all equipment, and six sets of shop drawings showing all circuitry including terminal-to-terminal connections. The wiring diagrams on these drawings are based on our best interpretation of the manufacturer's data that was available at the time of design; however, they shall not be used for system installation and configuration. The controls equipment vendor is expected to be thoroughly knowledgeable of the equipment that is being proposed, and shall provide detailed shop drawings tailored for each circuit and lighting zone on the project. General manufacturer's data sheets shall not be accentable. The shon drawings shall be suitable for the installing electricion to use for | A. LED fixtures shall be LM79 and LM80 tested. Color temperature shall be as specified on the drawings. B. Lumen outputs listed on the drawings are minimum requirements. C. Fixtures shall have a minimum 80CRI. 2.3 BATTERIES A. Emergency Batteries: Emergency batteries in fixtures shall consist of an automatic power failure device, a test switch, and a pilot light that is visible from outside of the fixture. They shall contain a fully automatic solid state charger in a self-contained power pack. The fixture shall be factory wired in a manner that will allow the emergency lamps to be switched while still maintaining charging power to the battery. Wiring Diagrams shall be furnished with the fixture showing switching connections. The battery shall be of the sealed electrolyte type with the capacity to provide power to the lamps provided for a minimum of 90 minutes. The battery shall be able to operate unattended with no maintenance for a period of no less than five years. Emergency batteries shall be fully compatible with solid state ballasts. Battery packs shall be mounted inside the fixture unless remotely mounted ballasts are shown on the drawings. | END OF SECTION |
| The Contractor and Sales Representatives are advised to take notice of specified component characteristics when attempting to select and propose substitutions. It is highly unlikely that substitutions on a one-for-one component basis will produce results that provide acceptable system performance. Provide all power packs, hardware, software, devices, circuitry, and other components, material, and labor required to install, configure, and test the entire system to the satisfaction of the Architect, Owner, and Engineer. Submit six sets of manufacturer's cut sheets describing completely all equipment, and six sets of shop drawings showing all circuitry including terminal-to-terminal connections. The wiring diagrams on these drawings are based on our best interpretation of the manufacturer's data that was available at the time of design; however, they shall not be used for system installation and configuration. The controls equipment vendor is expected to be thoroughly knowledgeable of the equipment that is being proposed, and shall provide detailed shop drawings tailored for each circuit and lighting zone on the project. General manufacturer's data sheets shall not be acceptable. The shop drawings shall be suitable for the installing electrician to use for complete installation of the circuitry without referring to data sheets or installation manuals for connection of lighting control equipment. These requirements shall be followed whether the specified equipment, or products of other manufacturers, is provided. | A. LED fixtures shall be LM79 and LM80 tested. Color temperature shall be as specified on the drawings. B. Lumen outputs listed on the drawings are minimum requirements. C. Fixtures shall have a minimum 80CRI. 2.3 BATTERIES A. Emergency Batteries: Emergency batteries in fixtures shall consist of an automatic power failure device, a test switch, and a pilot light that is visible from outside of the fixture. They shall contain a fully automatic solid state charger in a self-contained power pack. The fixture shall be factory wired in a manner that will allow the emergency lamps to be switched while still maintaining charging power to the battery. Wiring Diagrams shall be furnished with the fixture showing switching connections. The battery shall be of the sealed electrolyte type with the capacity to provide power to the lamps provided for a minimum of 90 minutes. The battery shall be able to operate unattended with no maintenance for a period of no less than five years. Emergency batteries shall be fully compatible with solid state ballasts. Battery packs shall be mounted inside the fixture unless remotely mounted ballasts are shown on the drawings. 2.4 SUPPORTS | END OF SECTION |
| 1.2 The Contractor and Sales Representatives are advised to take notice of specified component characteristics when attempting to select and propose substitutions. It is highly unlikely that substitutions on a one-for-one component basis will produce results that provide acceptable system performance. 1.3 Provide all power packs, hardware, software, devices, circuitry, and other components, material, and labor required to install, configure, and test the entire system to the satisfaction of the Architect, Owner, and Engineer. 1.4 Submit six sets of manufacturer's cut sheets describing completely all equipment, and six sets of shop drawings showing all circuitry including terminal-to-terminal connections. 1.5 The wiring diagrams on these drawings are based on our best interpretation of the manufacturer's data that was available at the time of design; however, they shall not be used for system installation and configuration. The controls equipment vendor is expected to be thoroughly knowledgeable of the equipment that is being proposed, and shall provide detailed shop drawings shall be suitable for the installing electrician to use for complete installation of the circuitry without referring to data sheets or installation manuals for connection of lighting control equipment. These requirements shall be followed whether the specified equipment, or products of other manufacturers, is provided. | A. LED fixtures shall be LM79 and LM80 tested. Color temperature shall be as specified on the drawings. B. Lumen outputs listed on the drawings are minimum requirements. C. Fixtures shall have a minimum 80CRI. 2.3 BATTERIES A. Emergency Batteries: Emergency batteries in fixtures shall consist of an automatic power failure device, a test switch, and a pilot light that is visible from outside of the fixture. They shall contain a fully automatic solid state charger in a self-contained power pack. The fixture shall be factory wired in a manner that will allow the emergency lamps to be switched while still maintaining charging power to the battery. Wring Diagrams shall be furnished with the fixture showing switching connections. The battery shall be of the sealed electrolyte type with the capacity to provide power to the lamps provided for a minimum of 90 minutes. The battery shall be able to operate unattended with no maintenance for a period of no less than five years. Emergency batteries shall be fully compatible with solid state ballasts. Battery packs shall be mounted inside the fixture unless remotely mounted ballasts are shown on the drawings. 2.4 SUPPORTS A. Provide all structural members necessary to support fixtures in locations shown on the contract drawings. Submit mounting and support details to the Architect or Engineer for approval with the project shop drawings. Notify the General Contractor prior to hid of any structural work that will be required to support the tweet the support to his of any structural work that will be required to support fixtures in locations shown on the contract drawings. Submit mounting and support details to the Architect or Engineer for approval with the project shop drawings. Notify the General Contractor prior to hid of any structural work that will be required to support the support the support the support fixtures in locations shown on the contract drawings. | END OF SECTION |
| The Contractor and Sales Representatives are advised to take notice of specified component characteristics when attempting to select and propose substitutions. It is highly unlikely that substitutions on a one-for-one component basis will produce results that provide acceptable system performance. Provide all power packs, hardware, software, devices, circuitry, and other components, material, and labor required to install, configure, and test the entire system to the satisfaction of the Architect, Owner, and Engineer. Submit six sets of manufacturer's cut sheets describing completely all equipment, and six sets of shop drawings showing all circuitry including terminal-to-terminal connections. The wiring diagrams on these drawings are based on our best interpretation of the manufacturer's data that was available at the time of design; however, they shall not be used for system installation and configuration. The controls equipment vendor is expected to be thoroughly knowledgeable of the equipment that is being proposed, and shall provide detailed shop drawings tailored for each circuit and lighting zone on the project. General manufacturer's data sheets shall not be acceptable. The shop drawings shall be suitable for the installing electrician to use for complete installation of the circuitry without referring to data sheets or installation manuals for connection of lighting control equipment. These requirements shall be followed whether the specified equipment, or products of other manufacturers, is provided. | A. LED fixtures shall be LM79 and LM80 tested. Color temperature shall be as specified on the drawings. B. Lumen outputs listed on the drawings are minimum requirements. C. Fixtures shall have a minimum 80CRI. 2.3 BATTERIES A. Emergency Batteries: Emergency batteries in fixtures shall consist of an automatic power failure device, a test switch, and a pilot light that is visible from outside of the fixture. They shall contain a fully automatic solid state charger in a self-contained power pack. The fixture shall be factory wired in a manner that will allow the emergency lamps to be switched while still maintaining charging power to the battery. Wiring Diagrams shall be furnished with the fixture showing switching connections. The battery shall be of the sealed electrolyte type with the capacity to provide power to the lamps provided for a minimum of 90 minutes. The battery shall be able to operate unattended with no maintenance for a period of no less than five years. Emergency batteries shall be fully compatible with solid state ballasts. Battery packs shall be mounted inside the fixture unless remotely mounted ballasts are shown on the drawings. 2.4 SUPPORTS A. Provide all structural members necessary to support fixtures in locations shown on the contract drawings. Submit mounting and support details to the Architect or Engineer for approval with the project shop drawings. Notify the General Contractor prior to bid of any structural work that will be required to support the fixtures. | END OF SECTION |
| The Contractor and Sales Representatives are advised to take notice of specified component characteristics when attempting to select and propose substitutions. It is highly unlikely that substitutions on a one-for-one component basis will produce results that provide acceptable system performance. Provide all power packs, hardware, software, devices, circuitry, and other components, material, and labor required to install, configure, and test the entire system to the satisfaction of the Architect, Owner, and Engineer. Submit six sets of manufacturer's cut sheets describing completely all equipment, and six sets of shop drawings showing all circuitry including terminal-to-terminal connections. The wiring diagrams on these drawings are based on our best interpretation of the manufacturer's data that was available at the time of design; however, they shall not be used for system installation and configuration. The controls equipment vendor is expected to be thoroughly knowledgeable of the equipment that is being proposed, and shall provide detailed shop drawings tailored for each circuit and lighting zone on the project. General manufacturer's data sheets shall not be acceptable. The shop drawings shall be suitable for the installing electrician to use for complete installation of the circuitry without referring to data sheets or installation manuals for connection of lighting control equipment. These requirements shall be followed whether the specified equipment, or products of other manufacturers, is provided. | A. LED fixtures shall be LM79 and LM80 tested. Color temperature shall be as specified on the drawings. B. Lumen outputs listed on the drawings are minimum requirements. C. Fixtures shall have a minimum 80CRI. 2.3 BATTERIES A. Emergency Batteries: Emergency batteries in fixtures shall consist of an automatic power failure device, a test switch, and a pilot light that is visible from outside of the fixture. They shall contain a fully automatic solid state charger in a self-contained power pack. The fixture shall be factory wired in a manner that will allow the emergency lamps to be switched while still maintaining charging power to the battery. Wiring Diagrams shall be furnished with the fixture showing switching connections. The battery shall be of the sealed electrolyte type with the capacity to provide power to the lamps provided for a minimum of 90 minutes. The battery shall be able to operate unattended with no maintenance for a period of no less than five years. Emergency batteries shall be fully compatible with solid state ballasts. Battery packs shall be mounted inside the fixture unless remotely mounted ballasts are shown on the drawings. 2.4 SUPPORTS A. Provide all structural members necessary to support fixtures in locations shown on the contract drawings. Submit mounting and support details to the Architect or Engineer for approval with the project shop drawings. Notify the General Contractor prior to bid of any structural work that will be required to support the fixtures. B. Provide hangers, cords, stems, etc., where required. Coordinate with the Architect or Engineer for proper stem lengths prior to ordering fixtures. | END OF SECTION |
| The Contractor and Sales Representatives are advised to take notice of specified component characteristics when attempting to select and propose substitutions. It is highly unlikely that substitutions on a one-for-one component basis will produce results that provide acceptable system performance. Provide all power packs, hardware, software, devices, circuitry, and other components, material, and labor required to install, configure, and test the entire system to the satisfaction of the Architect, Owner, and Engineer. Submit six sets of manufacturer's cut sheets describing completely all equipment, and six sets of shop drawings showing all circuitry including terminal-to-terminal connections. The wiring diagrams on these drawings are based on our best interpretation of the manufacturer's data that was available at the time of design; however, they shall not be used for system installation and configuration. The controls equipment vendor is expected to be thoroughly knowledgeable of the equipment that is being proposed, and shall provide detailed shop drawings tailored for each circuit and lighting zone on the project. General manufacturer's data sheets shall not be acceptable. The shop drawings shall be suitable for the installing electrician to use for complete installation of the circuitry without referring to data sheets or installation manuals for connection of lighting control equipment. These requirements shall be followed whether the specified equipment, or products of other manufacturers, is provided. PART 2 - PRODUCTS Areas up to 500 Square Feet: Motion Detectors used in the hallways shall be ultrasonic, ceiling-mounted units with a 360 degree, 500 square foot coverage. They shall be Watt Stopper W-500A or approved equal. | A. LED fixtures shall be LM79 and LM80 tested. Color temperature shall be as specified on the drawings. B. Lumen outputs listed on the drawings are minimum requirements. C. Fixtures shall have a minimum 80CRI. 2.3 BATTERIES A. Emergency Batteries: Emergency batteries in fixtures shall consist of an automatic power failure device, a test switch, and a pilot light that is visible from outside of the fixture. They shall contain a fully automatic solid state charger in a self-contained power pack. The fixture shall be factory wired in a manner that will allow the emergency lamps to be switched while still maintaining charging power to the battery. Wiring Diagrams shall be furnished with the fixture showing switching connections. The battery shall be of the sealed electrolyte type with the capacity to provide power to the lamps provided for a minimum of 90 minutes. The battery shall be able to operate unattended with no maintenance for a period of no less than five years. Emergency batteries shall be fully compatible with solid state ballasts. Battery packs shall be mounted inside the fixture unless remotely mounted ballasts are shown on the drawings. 2.4 SUPPORTS A. Provide all structural members necessary to support fixtures in locations shown on the contract drawings. Submit mounting and support details to the Architect or Engineer for approval with the project shop drawings. Notify the General Contractor prior to bid of any structural work that will be required to support the fixtures. B. Provide hangers, cords, stems, etc., where required. Coordinate with the Architect or Engineer for proper stem lengths prior to ordering fixtures. C. Support the celling grid at all four corners of recessed light fixtures. D. Provide clips for fixtures installed in lay-in cellings. Clips shall be equal to Erico Caddy clips # 515 or #515A. | END OF SECTION |
| The Contractor and Sales Representatives are advised to take notice of specified component characteristics when attempting to select and propose substitutions. It is highly unlikely that substitutions on a one-for-one component basis will produce results that provide acceptable system performance. Provide all power packs, hardware, software, devices, circuitry, and other components, material, and labor required to install, configure, and test the entire system to the satisfaction of the Architect, Owner, and Engineer. Submit six sets of manufacturer's cut sheets describing completely all equipment, and six sets of shop drawings showing all circuitry including terminal-to-terminal connections. The wiring diagrams on these drawings are based on our best interpretation of the manufacturer's data that was available at the time of design; however, they shall not be used for system installation and configuration. The controls equipment vendor is expected to be thoroughly knowledgeable of the equipment that is being proposed, and shall provide detailed shop drawings tailored for each circuit and lighting zone on the project. General manufacturer's data sheets shall not be acceptable. The shop drawings shall be suitable for the installing electrician to use for complete installation of the circuitry without referring to data sheets or installation manuals for connection of lighting control equipment. These requirements shall be followed whether the specified equipment, or products of other manufacturers, is provided. PART 2 - PRODUCTS Hallway Motion Detectors: Motion Detectors used in areas up to 500 square feet shall be ultrasonic, ceiling-mounted units with a 360 degree, 500 square foot coverage. They shall be Watt Stopper W-500A or approved equal. Areas up to 1000 Square Feet: Motion Detectors used in areas up to 1000 square feet shall be ultrasonic, ceiling-mounted units with a 360 degree, the date of the trade of the trade o | A. LED fixtures shall be LM79 and LM80 tested. Color temperature shall be as specified on the drawings. B. Lumen outputs listed on the drawings are minimum requirements. C. Fixtures shall have a minimum 80CRI. 2.3 BATTERIES A. Emergency Batteries: Emergency batteries in fixtures shall consist of an automatic power failure device, a test switch, and a pilot light that is visible from outside of the fixture. They shall contain a fully automatic solid state charger in a self-contained power pack. The fixture shall be factory wired in a manner that will allow the emergency lamps to be switched while still maintaining charging power to the battery. Wiring Diagrams shall be furnished with the fixture showing switching connections. The battery shall be of the sealed electrolyte type with the capacity to provide power to the lamps provided for a minimum of 90 minutes. The battery shall be able to operate unattended with no maintenance for a period of no less than five years. Emergency batteries shall be fully compatible with solid state ballasts. Battery packs shall be mounted inside the fixture unless remotely mounted ballasts are shown on the drawings. 2.4 SUPPORTS A. Provide all structural members necessary to support fixtures in locations shown on the contract drawings. Submit mounting and support details to the Architect or Engineer for approval with the project shop drawings. Notify the General Contractor prior to bid of any structural work that will be required to support the fixtures. B. Provide hangers, cords, stems, etc., where required. Coordinate with the Architect or Engineer for proper stem lengths prior to ordering fixtures. C. Support the ceiling grid at all four corners of recessed light fixtures. D. Provide clips for fixtures installed in lay-in ceilings. Clips shall be equal to Erico Caddy clips # 515 or #515A. PART 3 - EXECUTION | END OF SECTION |
| 1.2 The Contractor and Sales Representatives are advised to take notice of specified component characteristics when attempting to select and propose substitutions. It is highly unlikely that substitutions on a one-for-one component basis will produce results that provide acceptable system performance. 1.3 Provide all power packs, hardware, software, devices, circuitry, and other components, material, and labor required to install, configure, and test the entire system to the satisfaction of the Architect, Owner, and Engineer. 1.4 Submit six sets of manufacturer's cut sheets describing completely all equipment, and six sets of shop drawings showing all circuitry including terminal-to-terminal connections. 1.5 The wiring diagrams on these drawings are based on our best interpretation of the manufacturer's data that was available at the time of design; however, they shall not be used for system installation and configuration. The controls equipment vendor is expected to be thoroughly knowledgeable of the equipment that is being proposed, and shall provide detailed shop drawings tailored for each circuit and lighting zone on the project. General manufacturer's data sheets shall not be acceptable. The shop drawings shall be suitable for the installing control equipment. These requirements shall be followed whether the specified equipment, or products of other manufacturers, is provided. PART 2 - PRODUCTS 2.1 Alalway Motion Detectors: Motion Detectors used in the hallways shall be ultrasonic, ceiling-mounted units with a 360 degree, 500 square foot coverage. They shall be Watt Stopper W-500A or approved equal. 2.3 Areas up to 500 Square Feet: Motion Detectors used in areas up to 500 square feet shall be ultrasonic, ceiling-mounted units with a 360 degree, 1000 square foot coverage. They shall be Watt Stopper W-1000A or approved equal. 2.4 Areas up to 2000 Square Feet: Motion Detectors used in areas up to 2000 square feet shall be ultrasonic, ceil | A. LED fixtures shall be LM79 and LM80 tested. Color temperature shall be as specified on the drawings. B. Lumen outputs listed on the drawings are minimum requirements. C. Fixtures shall have a minimum 80CRI. 2.3 BATTERIES A. Emergency Batteries: Emergency batteries in fixtures shall consist of an automatic power failure device, a test switch, and a pilot light that is visible from outputs die of the fixture. They shall contain a fully automatic solid state charger in a self-contained power pack. The fixture shall be factory wired in a manner that will allow the emergency lamps to be switched while still maintaining charging power to the battery. Wiring Diagrams shall be furnished with the fixture showing switching connections. The battery shall be of the sealed electrolyte type with the capacity to provide power to the lamps provided for a minimum of 90 minutes. The battery shall be able to operate unattended with no maintenance for a period of no less than five years. Emergency batteries shall be fully compatible with solid state ballasts. Battery packs shall be mounted inside the fixture unless remotely mounted ballasts are shown on the drawings. 2.4 SUPPORTS A. Provide all structural members necessary to support fixtures in locations shown on the contract drawings. Submit mounting and support details to the Architect or fugureer for approval with the project shop drawings. Notify the General Contractor prior to bid of any structural work that will be required to support the fixtures. B. Provide hangers, cords, stems, etc., where required. Coordinate with the Architect or Engineer for proper stem lengths prior to ordering fixtures. C. Support the ceiling grid at all four corners of recessed light fixtures. D. Provide clips for fixtures installed in lay-in ceilings. Clips shall be equal to Erico Caddy clips # 515 or #515A. PART 3 - EXECUTION 3.1 Raceways for lighting systems in accessible ceilings shal | END OF SECTION |
| The Contractor and Sales Representatives are advised to take notice of specified component characteristics when attempting to select and propose substitutions. It is highly unlikely that substitutions on a one-for-one component basis will produce results that provide acceptable system performance. Provide all power packs, hardware, software, devices, circuitry, and other components, material, and labor required to install, configure, and test the entire system to the satisfaction of the Architect, Owner, and Engineer. Submit six sets of manufacturer's cut sheets describing completely all equipment, and six sets of shop drawings showing all circuitry including terminal-to-terminal connections. The wiring diagrams on these drawings are based on our best interpretation of the manufacturer's data that was available at the time of design; however, they shall not be used for system installation and configuration. The controls equipment vendor is expected to be thoroughly knowledgeable of the equipment that is being proposed, and shall provide detailed shop drawings shallor for each circuit and lighting zone on the project. General manufacturer's data sheets shall not be acceptable. The shop drawings shall be suitable for the installing electrican to use for complete installation of the circuitry without referring to data sheets or installation manuals for connection of lighting control equipment. These requirements shall be followed whether the specified equipment, or products of other manufacturers, is provided. PART 2 - PRODUCTS Hallway Motion Detectors: Motion Detectors used in the hallways shall be ultrasonic, ceiling-mounted units with a 360 degree, 500 square foot coverage. They shall be Watt Stopper W-500A or approved equal. Areas up to 1000 Square Feet: Motion Detectors used in areas up to 500 square feet shall be ultrasonic, ceiling-mounted units with a 360 degree, 1000 square foot coverage. They shall be Watt Stopper | A. LED fixtures shall be LM79 and LM80 tested. Color temperature shall be as specified on the drawings. B. Lumen outputs listed on the drawings are minimum requirements. C. Fixtures shall have a minimum 80CRI. 2.3 BATTERIES A. Emergency Batteries: Emergency batteries in fixtures shall consist of an automatic power failure device, a test switch, and a pilot light that is visible from outside of the fixture. They shall contain a fully automatic solid state charger in a self-contained power pack. The fixture shall be factory wired in a manner that will allow the emergency lamps to be switched while still maintaining charging power to the battery. Wring Diagrams shall be furnished with the fixture shalle be the sealed electrolyte type with the capacity to provide power to the lamps provided for a minimum of 90 minutes. The battery shall be of the sealed electrolyte type with the capacity to provide power to the lamps provided for a minimum of 90 minutes. The battery shall be able to operate unattended with no maintenance for a period of no less than five years. Emergency batteries shall be fully compatible with solid state balasts. Battery packs shall be mounted inside the fixture unless remotely mounted balasts are shown on the drawings. 2.4 SUPPORTS A. Provide all structural members necessary to support fixtures in locations shown on the contract drawings. Submit mounting and support details to the Architect or Engineer for approval with the project shop drawings. Notify the General Contractor prior to bid of any structural work that will be required to support the fixtures. B. Provide hangers, cords, stems, etc., where required. Coordinate with the Architect or Engineer for proper stem lengths prior to ordering fixtures. C. Support the ceiling grid at all four corners of recessed light fixtures. D. Provide clips for fixtures installed in lay-in ceilings. Clips shall be equal to Erico Caddy clips # 515 or #515A.<td>END OF SECTION</td> | END OF SECTION |
| 1.2 The Contractor and Sales Representatives are advised to take notice of specified component characteristics when attempting to select and propose substitutions. It is highly unlikely that substitutions on a one-for-one component basis will produce results that provide acceptable system performance. 1.3 Provide all power packs, hardware, software, devices, circuitry, and other components, material, and labor required to install, configure, and test the entire system to the satisfaction of the Architect, Owner, and Engineer. 1.4 Submit six sets of manufacturer's cut sheets describing completely all equipment, and six sets of shop drawings showing all circuitry including terminal-to-terminal connections. 1.5 The wiring diagrams on these drawings are based on our best interpretation of the manufacturer's data that was available at the time of design; however, they shall not be used for system instaliation and configuration. The controls equipment than dilighting zone on the project. General manufacturer's data sheets shall provide detailed shop drawings shall be suitable for the installing electrician to use for complete installation of the circuitry without referring to data sheets or installation manuals for connection of lighting control equipment. These requirements shall be followed whether the specified equipment, or products of other manufacturers, is provided. PART 2 - PRODUCTS 2.1 Hallway Motion Detectors: Motion Detectors used in areas up to 500 square feet shall be ultrasonic, ceiling-mounted units with a 360 degree, 500 square foct coverage. They shall be Watt Stopper W-500A or approved equal. 2.3 Areas up to 500 Square Feet: Motion Detectors used in areas up to 500 square feet shall be ultrasonic, ceiling-mounted units with a 360 degree, 1000 square foct coverage. They shall be Watt Stopper W-2000A or approved equal. 2.4 Areas up to 2000 Square Feet: Motion Detectors used in areas up to 1000 square feet shall be ultrasonic, ceil | A. LED fxtures shall be LM79 and LM80 tested. Color temperature shall be as specified on the drawings. B. Lurnen outputs listed on the drawings are minimum requirements. C. Fixtures shall have a minimum 80CRI. 2.3 BATTERIES A. Emergency Batteries: Emergency batteries in fixtures shall consist of an automatic power failure device, a test switch, and a pilot light that is visible from outside of the fixture. They shall contain a fully automatic solid state charger in a self-contained power pack. The fixture shall be factory wired in a manner that will allow the emergency langs to be switched while still maintaining charging power to the battery. Wiring Diagrams shall be furnished with the fixture shall be switched while still maintaining charging power to the battery. They shall compatible with solid state ballasts. The battery shall be operate unattended with no maintenance for a period of no less than five years. Emergency batteries shall be fully compatible with solid state ballasts. Battery packs shall be mounted inside the fixture unless remotely mounted ballasts are shown on the drawings. 2.4 SUPPORTS A. Provide all structural members necessary to support fixtures in locations shown on the contract drawings. Submit mounting and support details to the Architect or Engineer for approval with the project shop drawings. Notify the General Contractor prior to bid of any structural work that will be required to support fixtures. B. Provide hangers, cords, stems, etc., where required. Coordinate with the Architect or Engineer for proper stem lengths prior to ordering fixtures. C. Support the ceiling grid at all four corners of recessed light fixtures. D. Provide clips for fixtures installed in lay-in ceilings. Clips shall be equal to Erico Caddy clips #515 or #515A. PART 3 - EXECUTION 3.1 Raceways for lighting systems in accessible ceilings shall be run to junction boxes mounted in locations that do not inte | END OF SECTION |
| 1.2 The Contractor and Sales Representatives are advised to take notice of specified component characteristics when attempting to select and propose substitutions. It is highly unlikely that substitutions on a one-for-one component basis will produce results that provide acceptable system performance. 1.3 Provide all power packs, hardware, software, devices, circuitry, and other components, material, and labor required to install, configure, and test the entire system to the satisfaction of the Architect, Owner, and Engineer. 1.4 Submit six sets of manufacturer's cut sheets describing completely all equipment, and six sets of shop drawings showing all circuitry including terminal-to-terminal connections. 1.5 The wiring diagrams on these drawings are based on our best interpretation of the manufacturer's data that was available at the time of design; however, they shall not be used for system installation and configuration. The controls equipment vendor is expected to be thoroughly knowledgeable of the equipment that is being proposed, and shall provide detailed shop drawings tailored for each circuit and lighting zone on the project. General manufacturer's data sheets shall not be acceptable. The shop drawings shall be suitable for the installing electrician to use for complete installation of the circuitry without referring to data sheets or installation manuals for connection of lighting control equipment. These requirements shall be followed whether the specified equipment, or products of other manufacturers, is provided. PART 2 - PRODUCTS 2.1 Hallway Motion Detectors: Motion Detectors used in areas up to 500 square feet shall be ultrasonic, ceiling-mounted units with a 360 degree, 500 square foot coverage. They shall be Watt Stopper W-500A or approved equal. 2.3 Areas up to 1000 Square Feet: Motion Detectors used in areas up to 2000 square feet shall be ultrasonic, ceiling-mounted units with a 360 degree, 500 square foot coverage. They shall be | A. LED fxtures shall be LM79 and LM80 tested. Color temperature shall be as specified on the drawings. B. Lumen outputs listed on the drawings are minimum requirements. C. Fixtures shall have a minimum 80CRI. 2.3 BATTERIES A. Emergency Batteries: Emergency batteries in fixtures shall consist of an automatic power failure device, a tast switch, and a pilot light that is visible from outside of the fixture. They shall contain a fully automatic solid state charger in a self-contained power pack. The fixture shall be furstory wired in a manner that will allow the emergency lamps to be switched while still maintaining draining power to the battery. Wing Diagrams shall be furstory wired in a manner that solid state balance to the battery. Wing Diagrams shall be furstore with the fixture showing switching connections. The battery shall be of the sealed electrolyte type with the capacity to provide power to the lamps provided for a minimum of 90 minutes. The battery shall be able to operate unattended with no maintenance for a period of no less than five years. Emergency batteries shall be fully compatible with solid state balasts. Battery packs shall be mounted inside the fixture unless remotely mounted balasts are shown on the drawings. 2.4 SUPPORTS A. Provide all structural members necessary to support fixtures in locations shown on the contract drawings. Submit mounting and support details to the Architect or Engineer for approval with the project shop drawings. Notify the General Contractor prior to bid of any structural work that will be required to support fixtures. B. Provide hangers, cords, stems, etc., where required. Coordinate with the Architect or Engineer for approval with the project shop drawings. Notify the General Contractor prior to bid of any structural work that will be required to support fixtures. C. Support the celling grid at all four corners of recessed light fixtures. D. Provide hangers, cords, stems, et | END OF SECTION |
| 1.2 The Contractor and Sales Representatives are advised to take notice of specified component characteristics when attempting to select and propose substitutions. It is highly unlikely that substitutions on a one-for-one component basis will produce results that provide acceptable system performance. 1.3 Provide all power packs, hardware, software, devices, circuitry, and other components, material, and labor required to install, configure, and test the entire system to the satisfaction of the Architect, Owner, and Engineer. 1.4 Submit six sets of manufacturer's cut sheets describing completely all equipment, and six sets of shop drawings showing all circuitry including terminal-to-terminal connections. 1.5 The wiring diagrams on these drawings are based on our best interpretation of the manufacturer's data that was available at the time of design; however, they shall not be used for system installation and configuration. The controls equipment vendor is expected to be thoroughly knowledgeable of the equipment that is being proposed, and shall provide detailed shop drawings tailored for each circuit and lighting zone on the project. General manufacturer's data sheets shall not be acceptable. The shop drawings shall be suitable for the installing electricain to use for complete installation of the circuitry without referring to data sheets or installation manuals for connection of lighting control equipment. These requirements shall be followed whether the specified equipment, or products of other manufacturers, is provided. PART 2 - PRODUCTS 2.1 Hallway Motion Detectors: Motion Detectors used in areas up to 500 square feet shall be ultrasonic, ceiling-mounted units with a 360 degree, 500 square foot coverage. They shall be Watt Stopper W-500A or approved equal. 2.2 Areas up to 1000 Square Feet: Motion Detectors used in areas up to 500 square feet shall be ultrasonic, ceiling-mounted units with a 360 degree, 1000 square foot coverage. They shall be | A. LED fixtures shall be LM79 and LM80 tested. Color temperature shall be as specified on the drawings. B. Lumen outputs listed on the drawings are minimum requirements. C. Fixtures shall have a minimum 80CRI. 2.3 BATTERIES A. Emergency Batteries: Emergency batteries in fixtures shall consist of an automatic power failure device, a test switch, and a pilot light that is visible from outside of the fixture. They shall contain a fully automatic solid state charger in a self-contained power pack. The fixture shall be factory wired in a manner that will allow the emergency lamps to be switched while still maintaining charging power to the battery. Wiring Diagrams shall be further between youring Diagrams shall be further between youring power to the lamps provided for a minimum 090 minutes. The battery shall be to operate unattended with no maintenance for a period of no less than five years. Emergency batteries shall be fully compatible with solid state ballasts. Battery packs shall be mounted inside the fixture unless remotely mounted ballasts are shown on the drawings. 2.4 SUPPORTS A. Provide all structural members necessary to support fixtures in locations shown on the contract drawings. Submit mounting and support details to the Architect or Engineer for approval with the project shop drawings. Notify the General Contractor prior to bid of any structural work that will be required to support the futures. B. Provide hangers, cords, stems, etc., where required. Coordinate with the Architect or Engineer for proper stem lengths prior to ordering fixtures. C. Support the ceiling grid at all four corners of recessed light fixtures. D. Provide lips for fixtures installed in lay-in ceilings. Clips shall be run to junction boxes mounted in locations that do not interfere with the ceiling installation, the luminante installation, or other building systems. Provide final connections to futures using conductors in flexible conduit. F | END OF SECTION |
| The Contractor and Sales Representatives are advised to take notice of specified component characteristics when attempting to select and propose substitutions. It is highly unlikely that substitutions on a one-for-one component basis will produce results that provide acceptable system performance. Provide all power packs, hardware, software, devices, circuitry, and other components, material, and labor required to install, configure, and test the entire system to the satisfaction of the Architect, Owner, and Engineer. Submit six sets of manufacturer's cut sheets describing completely all equipment, and six sets of shop drawings showing all circuitry including terminal-to-terminal connections. The wining diagrams on these drawings are based on our best interpretation of the manufacturer's data that was available at the time of design; however, they shall not be used for system installation and configuration. The controls equipment vendor is expected to be thoroughly knowledgeable of the equipment that is being proposed, and shall provide dataled shop drawings tailored for each circuit and lighting zone on the project. General manufacturer's data these shall not be acceptable. The shop drawings shall be suitable for the installing electricina to use for complete installation of the circuitry without referring to data sheets or installation manuals for connection of lighting control equipment. These requirements shall be followed whether the specified equipment, or products of other manufacturers, is provided. PART 2 - PRODUCTS Hallway Motion Detectors: Motion Detectors used in areas up to 500 square feet shall be ultrasonic, ceiling-mounted units with a 360 degree, 500 square foot coverage. They shall be Watt Stopper W-500A or approved equal. Areas up to 500 Square Feet: Motion Detectors used in areas up to 2000 square feet shall be ultrasonic, ceiling-mounted units with a 360 degree, 2000 square foot coverage. They shall b | A. LED fixtures shall be LM79 and LM80 tested. Color temperature shall be as specified on the drawings. B. Lumen outputs listed on the drawings are minimum requirements. C. Fixtures shall have a minimum 80CRI. 2.3 BATTERIES A. Emergency Batteries: Emergency batteries in fixtures shall consist of an automatic power failure device, a test switch, and a pilot light that is visible from outside of the fixture. They shall contain a fully automatic solid state charger in a self-contained power pack. The fixture shall be factory wired in a manner that will allow the emergency lamps to be switched with the stift maintaining charging power to the battery. Wing Diagrams shall be furnished with the fixture showing switching connections. The battery shall be of the sealed electrolyte type with the capacity to provide power to the tamps provided for a minimum d10 minutes. The battery shall be able to operate unattended with no maintenance for a period of no less than five years. Emergency batteries shall be fully compatible with solid state balasts. Battery packs shall be mounted inside the fixture unless remotely mounted balasts are shown on the drawings. 2.4 SUPPORTS A. Provide all structural members necessary to support fixtures in locations shown on the contract drawings. Submit mounting and support details to the Architect balasts. B. Provide hangers, cords, stems, etc., where required. Coordinate with the Architect or Engineer for proper stem lengths prior to ordering fixtures. C. Support the ceiling grid at all four corners of recessed light fixtures. D. Provide hopting systems in accessible ceilings shall be run to junction boxes mounted in locations that do not interfere with the ceiling installation, the lumination instructions. 3.2 All recessed fixtures shall be mounted with their trims flug against the ceiling. 3.3 Comply completely with all manufactures' installation instructions. 3.4 LED fixture | END OF SECTION |
| 1.2 The Contractor and Sales Representatives are advised to take notice of specified component characteristics when attempting to select and propose substitutions. It is highly unlikely that substitutions on a one-for-one component basis will produce results that provide acceptable system performance. 1.3 Provide all power packs, hardware, software, devices, circuitry, and other components, material, and labor required to install, configure, and test the entire system to the satisfaction of the Architect, Owner, and Engineer. 1.4 Submit six sets of manufacturer's cut sheets describing completely all equipment, and six sets of shop drawings showing all circuitry including terminal-to-terminal connections. 1.5 The wiring diagrams on these drawings are based on our best interpretation of the manufacturer's data that was available at the time of design; however, they shall not be used for system installation and configuration. The controls equipment varidor is expected to be thoroughly knowledgeable of the equipment that is being proposed, and shall provide detailed shop drawings tailored for each circuit without referring to data sheets on installation manufacturer's data sheet on or beard provide data sheets on installation. The controls equipment the specified equipment, or products of other manufacturers, is provided. PART 2 - PRODUCTS 2.1 Hallway Motion Detectors: Motion Detectors used in the hallways shall be ultrasonic, ceiling-mounted units with a coverage of 10' x 90'. They shall be Watt Stopper W-2000H or approved equal. 2.3 Areas up to 1000 Square Feet: Motion Detectors used in areas up to 500 square feet shall be ultrasonic, ceiling-mounted units with a 360 degree, 2000 square foot cowrage. They shall be Watt Stopper W-2000A or approved equal. 2.4 Areas up to 2000 Square Feet: Motion Detectors used in areas up to 2000 square feet shall be ultrasonic, ceiling-mounted units with a 360 degree, 2000 squar | A. LED fotures shall be LM79 and LM80 tested. Color temperature shall be as specified on the drawings. B. Lumen outputs listed on the drawings are minimum requirements. C. Fictures shall have a minimum 80CRI. 2.3 BATTERIES A. Emergency Batteries: Emergency batteries in fictures shall consist of an automatic power failure device, a test switch, and a pilot light that is visible from outside of the ficture. They shall contain a fully automatic solid state charger in a self-contained power pack. The ficture shall be factory wired in a manner that will allow the emergency lamps to be switched while still maintaining drarging power to the battery. Wring Diagrams shall be fully compatible with the ficture shall be able to operate unattended with no maintenance for a period of no less than five years. Emergency batteries shall be fully compatible with solid state ballasts. Battery packs shall be mounted inside the ficture unless remotely mounted ballasts are shown on the drawings. 2.4 SUPPORTS A. Provide all structural members necessary to support fictures in locations shown on the contract drawings. Submit mounting and support details to the Architect or Engineer for proper stem lengths prior to ordering fictures. C. Support the ceiling grid at all four corners of recessed light fictures. D. Provide all structural works in accessible ceilings. Clips shall be cruto biox to fixtures using conductors in flexible conduit whips shall not exceed the fully compatible with the structures. 2.4 ALP COUNDN 3.1 Raceways for lighting systems in accessible ceilings shall be run to junction boxes mounted in locations that do not interfere with the ceiling installation, the furning installed in lay-in ceilings. Provide final connections to fixtures using conductors in flexible conduit whips shall not exceed six feet in length. 3.2 All recessed fixtures shall be mounted with their trims fluah against the ceiling. 3.3 C | END OF SECTION |
| 1.2 The Contractor and Sales Representatives are advised to take notice of specified component characteristics when attempting to select and propose substitutions. It is highly unlikely that substitutions on a one-for-one component basis will produce results that provide acceptable system performance. 1.3 Provide all power packs, hardware, devices, circuitry, and other components, material, and labor required to install, configure, and test the entire system to the satisfaction of the Architect, Owner, and Engineer. 1.4 Submit six sets of manufacturer's cut sheets describing completely all equipment, and six sets of shop drawings showing all circuitry including terminal-to-terminal connections. 1.5 The wiring diagrams on these drawings are based on our best interpretation of the manufacturer's data that was available at the time of design; however, they shall not be used for system installation and configuration. The controls equipment vendor is expected to be thoroughly knowledgeable of the equipment that is being proposed, and shall provide dealied shop drawings tailored for each circuit and lighting zone on the project. General manufacturer's data sheets shall not be acceptable. The shop drawings shall be subtable for the installing electrician to use for complete installation of the installation for anound static provide. PART 2 - PRODUCTS 2.1 Hallway Molion Detectors: Molion Detectors used in the hallways shall be ultrasonic, ceiling-mounted units with a coverage of 10' x 90'. They shall be Watt Stopper W-2000H or approved equal. 2.3 Areas up to 500 Square Feet: Molion Detectors used in areas up to 500 square feet shall be ultrasonic, ceiling-mounted units with a 360 degree, 2000 square foot coverage. They shall be Watt Stopper W-2000A or approved equal. 2.4 Areas up to 2000 Square Feet: Molion Detectors used in areas up to 2000 square feet shall be ultrasonic, ceiling-mounted units with a 360 degree, 2000 square foot coverage. They sh | A. LED fotures shall be LM79 and LM80 tested. Color temperature shall be as specified on the drawings. B. Lumen culputs listed on the drawings are minimum requirements. C. Firtures shall have a minimum 80CRI. 2.3 BATTERIES A. Emergency Batteries: Emergency batteries in fatures shall consist of an automatic power failure device, a test switch, and a pilot light that is visible from outside of the foture. They shall contain a fully automatic solid state charger in a self-contained power pack. The foture shall be factory wired in a manner that will allow the emergency imputs to be switched with a sill maintaining charging power to the state the future shall be factory wired in a manner that will allow the emergency imputs to be switched with a sill maintaining charging power to the state builts. The foture shall be fully compatible with solid state builts. Battery packs shall be of the sealed electrolyte type with the capacity to provide power to the tables. Battery shall be difty compatible with solid state builts. Battery packs shall be mounted miside the foture unless remotely mounted builts are shown on the drawings. 2.4 SUPPORTS A. Provide all structural members necessary to support fatures in locations shown on the contract drawings. Submit mounting and support delails to the Architect or Engineer for approval with the project shop drawings. Notify the General Contractor prior to bid of any structural work that will be required to support the futures. B. Provide hangers, cords, stems, etc., where required. Coordinate with the Architect or Engineer for proper stem lengths prior to ordering fotures. C. Support the ceiling grid at all four corners of recessed light fatures. D. Provide hangers, or other building systems. Provide final connections to fotures using conductors in flexible conduit. Flexible conduit whips shall not exceed as feet in length. 3.2 All recessed futures shall be mounted with their tirms flus | END OF SECTION |
| 1.2 The Contractor and Sales Representatives are advised to take notice of specified component characteristics when attempting to select and propose substitutions. It is highly unlikely that substitutions on a one-for-one component basis will produce results that provide acceptable system substitutions. It is highly unlikely that substitutions on a one-for-one component basis will produce results that provide acceptable system entities extend to the satisfaction of the Architect, Owner, and Engineer. 1.3 Provide all power packs, hardware, software, devices, circuitry, and other components, material, and labor required to install, configure, and test the entire system to the satisfaction of the Architect, Owner, and Engineer. 1.4 Submit six sets of manufacturer's cut sheets describing completely all equipment, and six sets of shop drawings showing all circuitry including terminal-to-terminal connections. 1.5 The wiring diagrams on these drawings are based on our best interpretation. The controls equipment was available at the time of design; howwerd geable of the equipment that is being proposed, and shall provide detailed shop drawings shall be autable for the installing electrican to use for complete installation of the circuitry without referring to data sheets or installation manuals for connection of lighting control equipment. These requirements shall be followed whether the specified equipment, or products of other manufacturers, is provided. 2.4 Areas up to 1000 Square Feet: Motion Detectors used in areas up to 500 square feet shall be ultrasonic, ceiling-mounted units with a 360 degree, 1000 square foot coverage. They shall be Watt Stopper W-2000A or approved equal. 2.4 Areas up to 1000 Square Feet: Motion Detectors used in areas up to 500 square feet shall be ultrasonic, ceiling-mounted units with a 360 degree, 1000 square foot coverage. They shall be Watt Stopper W-2000A or approved equal. 2.4 Areas up to 1000 S | A. LED futures shall be LM79 and LM80 tested. Color temperature shall be as specified on the drawings. B. Lumen outputs listed on the drawings are minimum requirements. C. Futures shall have a minimum BOCRI. 2.3 BATTERIES A. Emergency Batteries: Emergency batteries in futures shall consist of an automatic power failure device, a test switch, and a pilot light that is visible from outside of the future. They shall contain a fully automatic solid state charger in a self-contained power pack. The future shall be factory wind in a manner that will allow the emergency imps to be switched will be till mainling charging power to the battery. Winng Diagrams shall be furbures howing on which the maintendor dwill be dim dimining charging power to the battery. Winng Diagrams shall be furbures howing on which the emergency imps to be switched will be till mainling charging power to the battery. Winng Diagrams shall be furbures howing on switching connections. The battery shall be of the sealed electrolyte type with the capacity to provide power to the lamps provided for a minimum of 90 minutes. The battery packs shall be mounted indice the future invess remotely mounted balants are shown on the drawings. 2.4 SUPPORTS A. Provide all structural members necessary to support futures in locations shown on the contract drawings. Submit mounting futures. C. Support the ceiling grid at all four corners of recessed light futures. D. Provide hangers, cords, stems, etc., where required. Coordinate with the Architect or Engineer for proper stem lengths prior to ordering futures. Support the ceiling grid at all four corners of recessed light futures. D. Provide hangers, for lighting systems in accessible ceilings shall be routed on to futures in floable conduit. Flexible conduit whips shall not exceed site feat length. 3.2 All recessed futures shall be mounted with their trims flush against the ceiling. 3.3 Comply comple | END OF SECTION |
| 12. The Contractor and Sales Representatives are advised to take notice of specified component characteristics when attempting to select and propose substitutions. It is highly unlikely that substitutions on a one-for-one component basis will produce results that provide acceptable system performance. 13. Provide all power packs, hardware, software, devices, circuitry, and other components, material, and labor required to install, configure, and test the entire system to the satisfaction of the Architect, Owner, and Engineer. 14. Submit six sets of manufacturer's cut sheets describing completely all equipment, and six sets of shop drawings showing all circuitry including terminal-to-terminal connections. The controls equipment werdor is expected to be thoroughly knowledgeable of the equipment that is being proposed, and shall provide dealled shop drawings tailored for each circuit and lighting zone on the project. Ceneral manufacturer's data sheets shall not be acceptable. The shop drawings tailored for each circuit and lighting zone on the project. Ceneral manufacturer's data sheets shall not be acceptable. The shop drawings tailored for each circuit and lighting zone on the project. Ceneral manufacturer's data sheets shall not be acceptable. The shop drawings tailored for each circuit and lighting zone on the project. Ceneral manufacturer's data sheets shall not be acceptable. The shop drawing shall be subtable for the installing identification to use for orgenetal whether the specified equipment, or products of other manufacturers, is provided. 2.1 PraDUCTS 2.1 Halway Motion Detectors: Wotion Detectors used in the hallways shall be ultrasonic, celling-mounted units with a 360 degree, 500 square foet coverage. They shall be Watt Stopper W-2000A or approved equal. 2.3 Areas up to 1000 Square Feet. Motion Detectors used in areas up to 1000 square feet shall be ultrasonic, ceiling-mounted units with a 360 degree, 1000 square foot cover | A LED fotures shall be LM79 and LM80 tested. Color temperature shall be as specified on the drawings. B. Lumen outputs listed on the drawings are minimum requirements. C. Flotures shall have a minimum 80CR0. 2.3 BATTERIES A Emergency Batteries: Emergency batteries in futures shall consist of an automatic power failure device, a test switch, and a pilot light that is visible from outputs of the memagone (yings to be switched) within a stimuling charging power to be battery. When Bulgs are shall be futures about the test of the battery charge about the memagone (yings to be switched) within a stimuling charging power to be battery. When Bulgs are shall be future a noning switching connections. The battery shall be of the operate nutartended with no autiments for a period or not be battery. When Bulgs are shall be future and with a stimuling charging power to be battery. When Bulgs are shown on the original state batter is the shall be future and the future of the swall of the swall be or one shall be more than a structural work that will be required to a minimum. If 00 minutes. 2.4 SUPPORTS A. Provide all structural members necessary to support futures in locations shown on the contract drawings. Submit mounting and support details to the Architect or Engineer for approval work that will be required to aupport the futures. B. Provide hangers, cords, stems, etc., where required. Coordinate with the Architect or Engineer for proper stem lengths prior to ordering futures. C. Support the celling grid at all four comers of recessed light futures. D. Provide clips for futures installed in lay-in cellings. Clips shall be num to junction boxes mounted in locations that do not interfere with the celling installation, the furnise installation, or other building systems. Provve final connections to futures in flexible conduit. Flexible conduit. The soble conduit whips shall not exceed as frefer installation, or other building systems. | END OF SECTION |
| The Contractor and Sales Representatives are advised to take noise of specified component characteristics when attempting to select and propose substitutions. It is highly unlikely that substitutions on a one-for-one component basis will produce results that provide acceptable system performance. Provide all power packs, hardware, software, devices, circuity, and other components, material, and labor required to install, configure, and test the entire system to the satisfaction of the Architect Qower, and Engineer. Submit six sets of manufacturer's cut sheets describing completely all equipment, and six sets of shop drawings showing all circuitry including terminal-to-terminal connections. The wiring diagrams on these drawings are based on our best interpretation of the manufacturer's data thete substitution to be used for system installation and configuration. The controls equipment variar is available at the time of design: however, two shall be build be added for system installation manufacturer's data thete shall no to acceptable. The stop drawings shalling electrican to use for complete instalation manufacturer's data sheets and results for drawings talioned for acceptable as the throughly knowledgable of the equipment that is being proposed, and shall provide defaultion manufacturers, is provided. PART 2 - PRODUCTS 11 Hallway Molion Detectors: Molion Detectors used in the hallways shall be ultrasonic, ceiling-mounted units with a 360 degree, 500 square foet two ends. 22 Areas up to 500 Square Feet: Molion Detectors used in areas up to 500 square feet shall be ultrasonic, ceiling-mounted units with a 360 degree, 1000 square foot coverage. They shall be Wit Stopper W-1000A or approved equal. 23 Areas up to 2000 Square Feet: Molion Detectors used in areas up to 2000 square feet shall be ultrasonic, ceiling-mounted units with a 360 degree, 1000 square foot coverage. They shall be Wit Stopper W-1000A or appr | A. LED fotures shall be LM/9 and LM80 tested. Color temperature shall be as specified on the drawings. B. Lumen outputs listed on the drawings are minimum requirements. C. Fixtures shall have a minimum 60CRI. 2.3 BATTERIES A. Emergency Batteries. Energency batteries in fotures shall consist of an automatic power failure device, a test awtch, and a pilot light that is visible from outputs of the morphone's primes to be avide-with all state charger in a self-contained power pack. The foture shall be factory wire in a samer that will all allow the omraphone's primes to be avided will be saling charger power to be battery. "Ming Bagrams shall be futures allows and will be avided will be avided will be available of the solute diverse in the battery builts will allow allowing charger power to be battery." Ming Bagrams shall be future allows allowing avideling connections. The battery shall be able to power to interments of the secold of the soluted will be on instance that a priority shall be able to power to interman." Of 50 minutes. The battery shall be able to power to intermance for a period in one share in the priority shall be able to power to intermance for a period in one share in the prior. The forewase shall be fully compatible with solid state balaxis. Bottery packs ablat be mounted inside the fixture winters encossary to support fixtures in totalons shown on the contract drawings. Summ mounting and support details to the Architect of fatures. C. Buyport the celling grid at all four comers of recessed light fatures. D. Provide hangers, cords, stems, etc., where required. Coordinate will the facures fator #515 or #515A. PART3 - EXECUTION 3.1 Receivage for fatures inabaled in lay-in cellings. Clips shall be equal to Erico Caddy clips # 515 or #515A. PART3 - EXECUTION 3.2 All recessed fatures shall be mounted with their thins flush against the celling. 3.2 All recessed fatures shall be mounted with thei | END OF SECTION |
| The Contractor and Sales Representatives are advised to take notice of specified component characteristics when attempting to select and propose substitutions. It is highly unlikely that substitutions on a one-for-one component basis will produce results that provide acceptable system performance. Provide all power packs, hardware, software, devices, circuity, and other components, material, and labor required to install, configure, and test the entire system to the satisfaction of the Architect, Owner, and Engineer. Submit six sets of manufacturer's cut sheets describing completely all equipment, and six sets of shop drawings showing all circuitry including terminal-to-terminal connections. The wiring diagrams on these drawings are based on our best interpretation of the manufacturer's data that was available at the time of design; however, they shall not be used for system installation and configuration. The controls equipment vendor is expected to be throughly knowledgeable of the equipment that is being proposed, and shall provide detailed shop drawings takined for connection of lighting zone on the control without thering to data short. The stallation of the circuitry whole the use for expected to be throughly throwledgeable of the equipment that specified equipment, or products of other manufacturer's, is provided. PART 2 - PRODUCTS Hallway Motion Detectors: Motion Detectors used in the hallways shall be ultrasonic, ceiling-mounted units with a 360 degree, 500 square feet. Motion Detectors used in areas up to 500 square feet shall be ultrasonic, ceiling-mounted units with a 360 degree, 100 square foot coverage. They shall be Watt Stopper W-1000A or approved equal. Areas up to 500 Square Feet: Motion Detectors used in areas up to 500 square feet shall be ultrasonic, ceiling-mounted units with a 360 degree, 1000 square foot coverage. They shall be Watt Stopper W-2000A or approved equal. Areas up to 500 Sq | A. LED fouries shall be LM79 and LM80 tested. Color temperature shall be as specified on the drawings. B. Lumen outputs liade on the drawings are minimum requirements. C. Fotures shall have a minimum 80CRI. 2.3 BATTERIES A. Envirgency Batteries: Envergency batteries in fotures shall consist of an automatic power failure device, a test switch, and a plot light that is visible form an index of the forum: Through automate soil automate soil automate soil automate power part. The future shall be factory week in a manumer that will allow the energency lamps to be witched while still amartaining changing power to the battery. Wing Diagrams shall be future shall be factory week in a manumer that will allow the energency lamps to be witched while still amartaining changing power to the battery. Wing Diagrams shall be future shall be factory week in a manumer that will allow the energency lamps to be witched while still amartaining changing power to the battery. Wing Diagrams shall be future shall be factory week in a manumer that will allow the energency lamps to be witched while still amartaining changing power to the battery. Wing Diagrams shall be future shall be factory week in a manumer that will allow the energency lamps to be witched while still amartaining changing power to the battery. Wing Diagrams shall be future compared to a shall be mounted inside the factory that the sale of the hart provide that an automate sould with the factory that the sale of the hart provide that an automate. 2.4 SUPPORTS A. Provide hangers, cords, stems, e.c., where required. Coordinate with the Architect or Engineer for proper stem lengths prior to ordering fatures. C. Support the ceiling grid at all four comers of recessed light fatures. D. Provide hangers, cords, stems, e.c., where required. Coordinate with the Architect or Engineer for proper stem lengths prior to ordering fatures. D. Provide hangers, ords, stems in accessible collings sh | END OF SECTION |
| The Contractor and Sales Representatives are advised to lake notice of specified component tharacteristics when attempting to select and propose substitutions. It is highly unlikely that substitutions on a one-for-one component basis will produce results that provide acceptable system performance. Provide all power packs, hardware, software, devices, circuity, and other components, material, and labor required to install, configure, and test the entire system to the satisfaction of the Architect, Owner, and Engineer. Showing at sets of manufacturer's cut sheets describing completely all equipment, and six sets of shop drawings showing all circuitry including largmans on these drawings are based on our best interpretation of the manufacturer's data that was available at the time of design: however, they shall not be used for system installation and configuration. The controls equipment vendor is expected to be throughly howold-geable of the equipment that is being proposed, and shall provide datalia bed provident stallator of the carbitration of the architect's data sheets shall not be acceptable. The shop drawings shall be suitable of the installing electrician by the properiod of the architect of manufacturer's data sheets shall not be acceptable. The shop drawings shall be suitable of the installing electrician to use for complete installation of the architectors used in the hallways shall be ultrasonic, ceiling-mounted units with a 360 degree. A reas up to 500 Square Feet. Motion Detectors used in areas up to 500 square feet shall be litrasonic, ceiling-mounted units with a 360 degree. 2000 square feet. Motion Detectors used in areas up to 2000 square feet shall be ultrasonic, ceiling-mounted units with a 360 degree. 2000 square feet. Motion Detectors used in areas up to 2000 square feet shall be ultrasonic, ceiling-mounted units with a 360 degree. 2000 square feet. Motion Detectors used in areas up to 2000 square feet shall be ultrasonic, ceiling-mounted u | A. LED focures shall be LM79 and LM80 tested. Color temperature shall be as specified on the drawings. B. Lumen outputs lated on the drawings are minimum requirements. C. Focures shall have a minimum 80CRI. 2.3 BATTERIES A. Endergonery Batteries: Envergency tableties in fictures shall consist of an automatic power failure device, a test switch, and a piot light that is visible from will allow the emergency tangency batteries with all contains of the power to the battery. Winty Diagrams shall be furnished with the skills from maintening changing power to the battery. Winty Diagrams shall be furnished with the skills from the same device, by the provide power to the battery. Winty Diagrams shall be furnished with the skills from maintening the automatic solid state balls to be provide for a maintening of the maintening of the provide power to the battery. Winty Diagrams shall be travels have a horing successary to support ballet the faulty compatible with escillate the same alternity by the Winth escalate theorem to the drawings. 2.4 SUPPORTS A. Provide hangers, cords, stems, etc., where required. Coordinate with the Architect or Engineer for proper stem lengths prior to ordering fistures. C. Support the ceiling grid at all four comess of racessed light faures. D. Provide hangers, cords, stems, etc., where required. Coordinate with the Architect or Engineer for proper stem lengths prior to ordering fistures. C. Support the ceiling grid at all four comess of racessed light faures. D. Provide hangers for propers in incoessible collings. Olips shall be required to balance and the conducts in floaters in blacks in the colling. A. Provide hangers order building systems in accessed light faures. A. Provide proper bighting systems in accessed light faures. A. Provide hangers order building systems. Provide find commercients to faures using conductors in floate conduit. Floate conduit, whes shall | END OF SECTION |
| Pic Contractor and Sales Representatives are advised to take notice of specified component characteristics when attempting to select and propose substitutions. It is highly unikely that substitutions on a one-for-one components material, and labor required to install, configure, and test the entire system to the satisfaction of the Architect, Owner, and Engineer. Aroude all power packs, hardware, software, devices, circuity, and other components, material, and labor required to install, configure, and test the entire system into the satisfaction of the Architect, Owner, and Engineer. The wring diagrams on these drawings are based on our best interpretation of the manufacturer's data that was available at the time of design: however, they shall not be used for system installation and configuration. The controls equipment vendor is expected to be througing hybrowedegalable of the equipment that is being proposed, and shall provide datal both pravings faultable of the installing of the circuity without retering to data shared to install adia of the installing of the circuity without retering to data shared to installation and configuration. The controls equipment vendor is expected to be througing hybrowedegalable. The shop drawings shall be suitable for the installing of the circuity without retering to data shared to installation of the architects. Areas up to 500 Square Faet: Motion Detectors used in the hallways shall be ultrasonic, ceiling-mounted units with a 300 degree, 2000 square foot coverage. They shall be Watt Stopper W-5000 or approved equal. Areas up to 2000 Square Faet: Motion Detectors used in areas up to 2000 square faet shall be ultrasonic, ceiling-mounted units with a 300 degree, 2000 square foot coverage. They shall be Watt Stopper W-2000 or approved equal. Areas up to 2000 Square Faet: Motion Detectors used in areas up to 2000 square faet shall be ultrasonic, ceiling-mounted units with a 300 degree, 2000 square fact | A. LED fourse shall be LM79 and LM80 tested. Color temperature shall be as specified on the drawings. B. Lumon outputs listed on the drawings are minimum requirements. C. Fibures shall have a minimum SOCRI. 23 BATTERIES A. Energypery Batteries: Emergency batteries in fotures shall consist of an automatic power failure device, a test extch, and a pict light that is visible from outputs of the future. They hall contain a tuly automatic solid attac charger in a self-contained power pairs. The foture shall be future the future into a future context of a period of no less than five years. Envirgency batteries shall be future onestite with so the balance. Statest yeaks shall be mounted indic the future into the set of the provide pare to the balance. Statest yeaks shall be future onestated into the years into the device into the future into the set of the provide pare to the balance. Statest yeaks shall be indiv compatible with no charactery mounted balance are shown on the drawings. 24 SUPPORTS A. Provide all attructural members necessary to support futures in locations shown on the contract drawings. Submit nounting and support details to the Architect or Engineer for papers. The future into the colling futures. C. Support the deling grant all four content of receased light futures. D. Provide all attructural work the integrite. When the colling institutes in the colling institute in the colling institute in the colling institute in the colling institutes. Provide the deling or the requires instituted in tay-in cellings. Coordinate with the archite conduct with part and exceed light futures. D. Provide the torus instituted in tay-in cellings. Class sh | END OF SECTION |
| 2. The Contractor and Sales Representatives are advised to take notice of specified component characteristics when attempting to select and propose substitutions. It is highly unlikely that substitutions on a one-for-one component basis will produce results that provide acceptable system performance. 3. Provide all power packs, hardware, devices, clicuitry, and other components, material, and labor required to install, configure, and test the entre system rimal connections of the advitect. Contra, and Engineer. 4. Strumt six sets of manufacturer's cut sheets describing completely all equipment, and six sets of shop drawings showing all circuitry including diaminal-based of the advitect. Contra, and Engineer and configuration. The controls equipment vorted is aspected to be theroughly knowledgeable of the advitect. Contra, and Engineer and configuration. The controls equipment vorted is aspected to be theroughly knowledgeable of the equipment that is being proceed, and shall provide deableat above devisions shallon for each circuit and lighting zone on the provide dealloat above devisions that being proceed, and shall provide dealloat above devisions that being proceed, and shall provide dealloat above devisions that being proceed, and shall provide dealloat above devisions that being proceed and and provide dealloat above devisions. The control of lighting control equipment. The control of the provide dealloat the second perception of the second perception o | A. LED follows shall be LMT9 and LMS0 feated. Code immersature shall be as specified on the drawings. B. Lumen adjusts lated on the drawings are minimum requirements. C. Febures shall have a minimum SOCF. Z.J BATTENES A. Energency Batteries: Emergency batteries in fotures shall consist of an automatic power failure device. a test switch, and a pilot light that is visible from outside of the future. They allocation at situ automatic solid state of an automatic power failure device. The foture shall be futory viroid in a manner that will allow the emergency lengts to be available with no state chargor in a self-contaned power pack. The foture shall be futory viroid in a manner that will be the emergency lengt to be available with no state chargor in a self-contaned power pack. The foture shall be futory origin at an anner that will be the emergency lengt to be available to the emergency mounded balants are an anner the solid docatively lengt to the subdiced view of the cost of no less than five years. Emergency batteries shall be futory compatible with exist of state to pack and and the provide power to he battery. Without the future shall be futory compatible with a container or Engineer for approval with the project shop dowings. Nully the General Contract drawings. Submit mounting and support dotains to be prohiber for the future single prior to ordering futures. C. Support the colling grift all due corners of receased light fortures. D. Provide langtes, fortide, statem, state, where required. Coordinate with the Architect or Engineer for proper stem lengthe prior to ordering futures. D. Provide lings for futures installed in lay-in callings. Clips shall be equal to Erice Caddy clips #515 or #515A. P.PMT 3 - EEEUTION 3.1 Ameseased forture shall be mounded with their threa future ensures to futures unsuing c | END OF SECTION |

DEMOLITION NOTES

- 1. THE ELECTRICAL DEMOLITION DRAWINGS ARE DIAGRAMMATIC IN NATURE AND ARE PROVIDED TO CONVEY THE GENERAL SCOPE OF WORK. ALL EXISTING DEVICES SHALL BE FIELD VERIFIED PRIOR TO BEGINNING WORK OR SUBMITTING PRICES. REROUTE CIRCUITRY OR REFEED EXISTING EQUIPMENT TO REMAIN AS REQUIRED TO FACILITATE THE COMPLETION OF ALL WORK ON THIS PROJECT. 2. THE OWNER SHALL BE GIVEN THE FIRST RIGHT OF REFUSAL
- FOR ALL EQUIPMENT BEING DEMOLISHED (FIXTURES, GEAR, DISCONNECTS, MOTOR STARTERS, ETC.). THE CONTRACTOR SHALL STORE EQUIPMENT THAT THE OWNER ELECTS TO KEEP AT THE LOCATION ON THE SITE TO BE DESIGNATED BY THE OWNER. ALL OTHER EQUIPMENT SHALL BE DEMOLISHED AND PROPERLY DISPOSED OF BY THE CONTRACTOR.
- 3. ALL EXISTING CIRCUITS IN THE RENOVATED AREAS SHALL BE TRACED BY THE ELECTRICAL CONTRACTOR AND MARKED ACCORDINGLY BEFORE BEGINNING WORK. ALL UNUSED BREAKERS SHALL BE LABELED AS SPARE AND TURNED OFF. 4. PROVIDE NEW TYPED CIRCUIT DIRECTORIES FOR ALL PANELS
- FEEDING DEVICES IN RENOVATED AREAS. INCLUDE ALL CIRCUITS CONTAINED IN THESE PANELS ON THE DIRECTORIES.

DEMOLITION LEGEND

- EXISTING DEVICE TO BE RELOCATED. RECONNECT TO EXISTING CIRCUITRY. SEE RENOVATION PLAN RL FOR NEW LOCATION.
- EXISTING DEVICE TO BE DEMOLISHED IN ITS ENTIRETY. IF THE DEVICE IS ON A DEDICATED Х CIRCUIT, THE CIRCUITRY SHALL BE DEMOLISHED BACK TO THE PANEL AND THE BREAKER LABELED AS "SPARE".
- EXISTING DEVICE TO REMAIN. EXISTING CIRCUITRY TO REMAIN UNLESS SHOWN WITH NEW ON POWER OR LIGHTING PLANS. ETR

