PROJECT DESCRIPTION:

1,228 SQUARE FOOT MEDICAL CLINIC. PROJECT DOES NOT CONTAIN AMBULATORY

APPLICABLE CODES:

2018 IEBC 2018 IECC 2018 IMC 2018 IPC

2018 IFGC NEC 2020 CITY OF STEAMBOAT CDC

ICC/ANSI A117.1 (2009) ADAAG 2010

GENERAL NOTES

1. ALL WORK SHALL COMPLY WITH CURRENT FEDERAL, STATE, AND LOCAL BUILDING CODES AND REGULATIONS, TRADE STANDARDS, AND MANUFACTURER'S INSTRUCTIONS REFERENCED IN THE CONTRACT DOCUMENTS.

2. NOTIFY ARCHITECT/DESIGNER OF ANY CONFLICTS BETWEEN SITE CONDITIONS AND DRAWINGS BEFORE PROCEEDING WITH CORRECTIVE MEASURES.

3. THE CONTRACTOR SHALL VERIFY AND PROTECT ALL SERVICE LINES AND EXISTING SITE AREA FROM DETERIORATION OR DAMAGE.

4. ALL DRAWINGS SHALL BE FULLY COORDINATED BY CONTRACTOR TO VERIFY ALL DIMENSIONS, DEPRESSED SLABS, SLOPES, DRAINS, OUTLETS, RECESSES, REGLETS, BOLT SETTINGS, SLEEVES, ETC...

NOT USED

6. NOT USED

7. DETAILS AND SECTIONS ON THE DRAWINGS ARE SHOWN AT SPECIFIC LOCATIONS. DETAILS NOTED "TYPICAL" OR "TYP" IMPLY ALL CONDITIONS TREATED SIMILARLY; MODIFICATIONS TO BE MADE BY CONTRACTOR TO ACCOMMODATE MINOR VARIATION.

8. DIMENSIONS:

A. ALL DIMENSIONS TO EXISTING ELEMENTS ARE TO FINISHED FACE OF WALL U.N.O. ALL DIMENSIONS TO NEW ELEMENTS ARE TO FACE OF STUD, U.N.O. B. DRAWINGS ARE NOT TO BE SCALED; VERIFY ANY MISSING OR CONFLICTING WRITTEN DIMENSIONS WITH THE ARCHITECT/DESIGNER PRIOR TO CONSTRUCTION. C. NOTIFY ARCHITECT OF CONDITIONS WHERE CLEAR OR CRITICAL DIMENSIONS ARE DESIGNATED BUT CANNOT BE MET OR WHERE CORRIDOR/AISLE WIDTH CANNOT MEET THE MINIMUM REQUIREMENTS (3'-8" U.N.O.) D. MAINTAIN FINISH FLOOR BASE ELEVATION THROUGHOUT THE CONTRACT AREA SUCH

THAT ALL DIMENSIONS INDICATED AS ABOVE FINISH FLOOR ARE AT THE SAME

10. CONTRACTORS SHALL MAINTAIN THE PREMISES CLEAN AND FREE OF ALL TRASH, DEBRIS AND SHALL PROTECT ALL ADJACENT WORK FROM DAMAGE, SOILING, PAINT OVERSPRAY, ETC. ALL FIXTURES, EQUIPMENT, GLAZING, FLOORS, ETC. SHALL BE LEFT CLEAN AND READY FOR OCCUPANCY UPON COMPLETION OF PROJECT.

11. ALL MANUFACTURER'S PRINTED WARNINGS FOR HANDLING OF PRODUCTS MUST BE STRICTLY OBSERVED.

12. PROVIDE TRANSITIONS STRIPS AT ALL LOCATIONS WHERE CARPET AND TILE/SHEET FLOORING MEET. VERIFY COLOR WITH ARCHITECT PRIOR TO INSTALLATION. ALL FLOORING TRANSITIONS AT DOOR OPENINGS TO OCCUR UNDERNEATH DOOR, U.N.O.

13. FLOOR FINISHES AND WALL BASE TO CONTINUE UNDER COUNTER TOPS, ANY MILLWORK OPENINGS, AND HC KITCHEN SINK CABINETS.

14. ALL DOORS TO BE A MINIMUM OF 4" FROM NEAREST PERPENDICULAR PARTITION, U.N.O.

15. TEMPERED GLASS TO BE USED IN ALL LOCATIONS AS REQUIRED BY CODE.

16. REVIEW LAYOUTS FOR PARTITIONS IN FIELD WITH THE OWNER AND ARCHITECT/DESIGNER PRIOR TO START OF

17. PATCH AND REPAIR ALL FIRE PROOFING AT BUILDING STRUCTURE, WHERE MISSING OR DAMAGED, TO MAINTAIN REQUIRED FIRE RATING. SEE CODE SUMMARY NARRATIVE.

18. PROVIDE FIRE EXTINGUISHERS (WITH CABINETS) IN QUANTITIES AND LOCATIONS ON DWGS (MIN 1/6000 SQ-FT & 75' MAX TRAVEL DISTANCE). REVIEW FINAL LOCATIONS WITH THE ARCHITECT/DESIGNER PRIOR TO START OF CONSTRUCTION. PARTITION DEPTH AT FIRE EXTINGUISHER CABINET LOCATIONS TO ACCOMMODATE FULL

19. ALIGN CENTERLINES OF ALL FIRE EXTINGUISHER CABINETS AND MEP/FP DEVICES ON WALLS IN THE SAME

20. COORDINATE BLOCKING REQUIREMENTS AND LOCATIONS WITH ELEVATIONS AND DETAILS. ALL BLOCKING TO BE FIRE TREATED.

21. ALL COLUMN ENCLOSURES TO BE PATCHED AND PAINTED U.N.O. ALL PARTITIONS ABUTTING COLUMNS TO ALIGN WITH THE FACE OF THE COLUMN, U.N.O.

22. ALL PARTITIONS, COLUMN ENCLOSURES, FURRED WALLS, ETC. EXTENDING THROUGH THE CEILING MUST BE FULLY CAPPED WITH GWB (OR STUD TRACK) WHEN GWB DOES NOT EXTEND TO DECK ABOVE - CONCEALED AREAS WITHIN WALLS CANNOT BE OPEN TO PLENUM AREAS.

23. PATCH, PRIME AND PAINT WALLS TO REMAIN WHERE WALL RECEPTACLES, FACE PLATES, ETC. ARE REMOVED.

24. ARCHITECTURAL DRAWINGS ARE FOR DESIGN AND CONSTRUCTION INTENT ONLY. CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTING PER CODE AND PER MANUFACTURER'S RECOMMENDATIONS.

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CONCEALMENT OF RECESSED CABINETS, U.N.O.



COVER SHEET

YAMPA VALLEY MEDICAL CENTER MOUNTAIN CLINIC

2305 MOUNT WERNER CIRCLE SUITE P.027 STEAMBOAT SPRINGS, COLORADO

VICINITY MAP PROJECT SITE WALTON CREEK ROAD

PROJECT TEAM

OWNER:

UC HEALTH YAMPA VALLEY MEDICAL CENTER 1024 CENTRAL PARK DRIVE STEAMBOAT SPRINGS, CO 80487 (970)-870-1172

RYAN LARSON RYAN.LARSON@UCHEALTH.ORG

ARCHITECT:

ERIC SMITH ASSOCIATES, P.C. 1919 7th STREET BOULDER, CO 80302 (303) 442-5458 JULIANNA POCHON JULIANNA@ESAPC.COM

MP ENGINEER:

INDOOR ENVIRONMENTS 8506 ROGERS LOOP ARVADA, CO. 80007 PH: (720) 703-0152 STEVE ALSCHULER STEVE@INDOORENVIRONMENTSUSA.COM

ELEC. ENGINEER:

INDOOR ENVIRONMENTS 8506 ROGERS LOOP ARVADA, CO. 80007 PH: (720) 703-0152 STEVE ALSCHULER STEVE@INDOORENVIRONMENTSUSA.COM

SHEET INDEX

GENERAL

AG002 CODE REVIEW AG003 PROJECT DETAILS **SPECIFICATIONS** AG005 **SPECIFICATIONS SPECIFICATIONS SPECIFICATIONS** AG008 **SPECIFICATIONS SPECIFICATIONS**

ARCHITECTURAL

CONSTRUCTION PLAN REFLECTED CEILING- FINISH PLANS INTERIOR ELEVATIONS

SPECIFICATIONS, GENERAL NOTES AND LEGENDS

MECHANICAL PLAN MECHANICAL ISOMETRIC VIEW MECHANICAL DETAILS M6.1 MECHANICAL SCHEDULE

PLUMBING SPECIFICATION PLUMBING FLOOR PLAN PLUMBING ISOMETRIC VIEW PLUMBING DETAILS PLUMBING LEGEND AND SCHEDULE

ABBREVIATIONS, SYMBOLS & NOTES ELECTRICAL LIGHTING PLAN **ELECTRICAL POWER PLAN ELECTRICAL SCHEDULES & DETAILS** ELECTRICAL 1 LINE DIAGRAM **ELECTRICAL SPECIFICATIONS**

GENERAL LEGEND

Room name - ROOM NAME — ROOM NUMBER

DIMENSION LINE

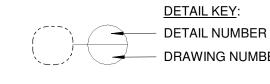


DRINKING FOUNTAIN

FIRE EXTINGUISHER W/ SEMI-RECESSED CABINET. TO PROTRUDE NO MORE THAN 4"



DOOR NUMBER

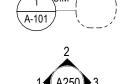


- DRAWING NUMBER

DETAIL KEY:



ENLARGED PLAN KEY



INTERIOR ELEVATION KEY



EXTERIOR ELEVATION KEY



REVISION KEY

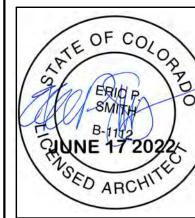


ASSEMBLY OR PARTITION TYPE

KEYNOTE INDICATOR



SPECIALITY EQUIPMENT



NOTICE: DUTY OF COOPERATION Release of these plans contemplates further

architect. Design and construction are complex performed their services with due care and diligence these plans shall be reported immediately to the shall relieve the architect from responsibility for the consent of the architect are unauthorized and shall

consequences arriving out of such changes Smith Associates, P.C. as instruments of service shall remain property of Eric Smith Associates, P.C. and shall not be copied, changed or disclosed in any

written consent of Eric Smith Associates, P. Eric Smith Associates, P.C

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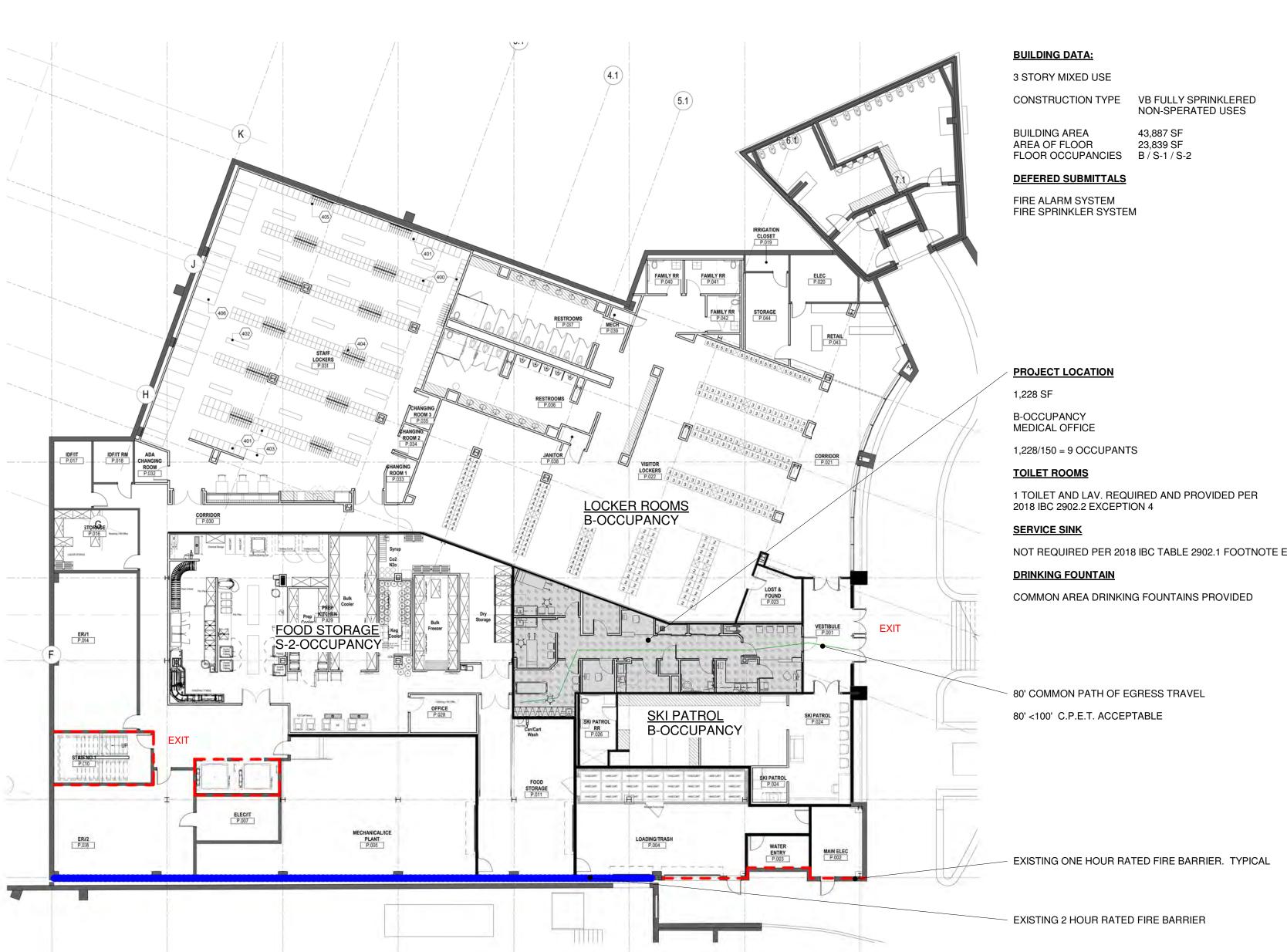
ount Werl Suite P.02 It Springs Mou Su Soat



Job Number: | 220|6 6/17/22 Drawn By: Checked By: Checker **Project Phase**

CONSTRUCTION

Sheet Title | PROJECT COVER SHEET



NOT REQUIRED PER 2018 IBC TABLE 2902.1 FOOTNOTE E

Job Number: 22016 **Drawn By:** Checked By: Checker

NOTICE: DUTY OF COOPERATION

Release of these plans contemplates further cooperation among the owner, his contractor and the architect. Design and construction are complex.

Although the architect and his consultants have performed their services with due care and diligence, they cannot guarantee perfection. Communication is imperfect and every contingency cannot be anticipated. Any ambiguity or discrepancy discovered by the use of these plans shall be reported immediately to the architect. Failure to notify the architect compounds misunderstanding and increases construction costs. A

architect. Failure to notity the architect compounds misunderstanding and increases construction costs. A failure to cooperate by a simple notice to the architect shall relieve the architect from responsibility for the consequences. Changes made from the plans without consent of the architect are unauthorized and shall relieve the architect of responsibility for all consequences arriving out of such changes.

All design, documents and data prepared by Eric

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Eric Smith Associates, P.C.

REVISIONS Description

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rner 127

2305 Mount Wern Suite P.02 Steamboat Springs

Colorado

Clinic

ain

Mounta

Project Phase CONSTRUCTION

Sheet Title CODE REVIEW

Sheet Number

1 LOWER LEVEL CODE REVIEW
AG002 1/16" = 1'-0"

PARTITION TYPE NOTES:

PARTITION TYPE NOTES ARE INDICATED ON THE FLOOR PLANS

ALL PARTITIONS SHALL EXTEND TO THE UNDERSIDE OF STRUCTURE UNLESS NOTED OTHERWISE

CONSTRUCTION OF FIRE RATED PARTITIONS, INCLUDING TAPING AND FINISHING OF GYPSUM BOARD FOR FULL HEIGHT TO STRUCTURE ABOVE, SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S DIRECTION TO ACHIEVE THE RATING INDICATED.

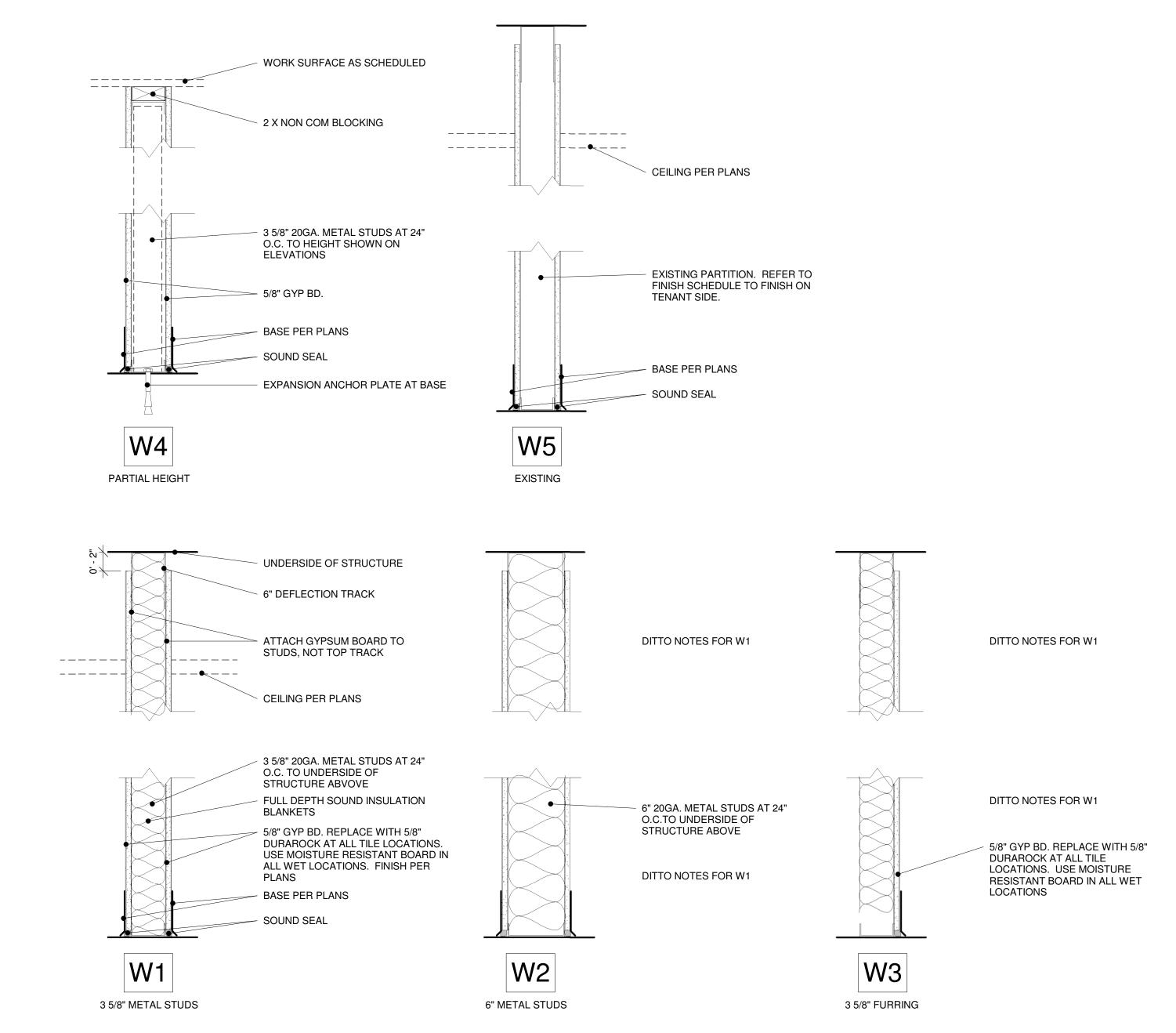
SOUND ISOLATION PARTITIONS SHALL BE SEALED AIRTIGHT FOR FULL HEIGHT TO PREVENT PASSAGE OF AIRBORNE SOUND. TAPE AND FINISH ALL GYPSUM BOARD JOINTS AND FASTENERS TO MIN. LEVLE 4 FINISH. SEAL AT PERIMETER OF ALL PENETRATIONS.

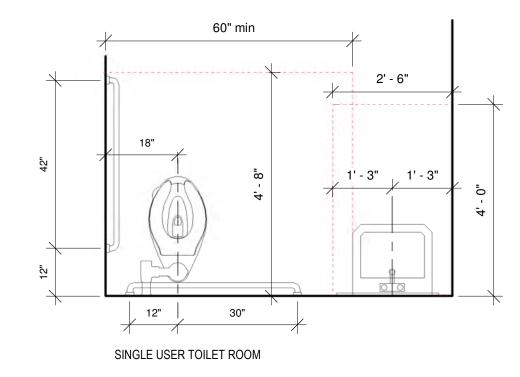
PROVIDE 1/2" FIRE-RETARDANT TREATED WOOD BLOCKING OR METAL STRAPPING FOR PARTITION MOUNTED EQUIPMENT AND CASEWORK.

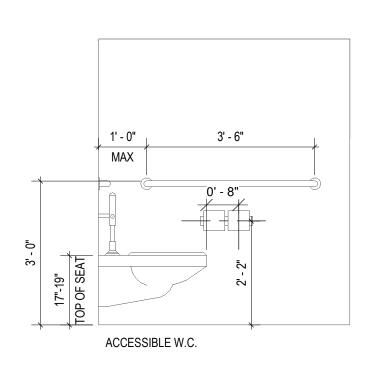
REFER TO FINISH SCHEDULE FOR ALL PARTITION FINISH DESIGNATIONS.

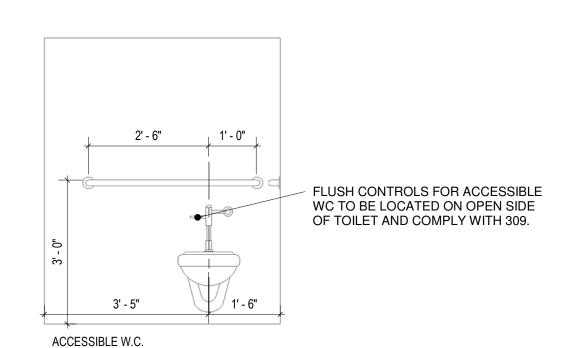
PROVIDE SLIP JOINT CONNECTIONS AT THE TOP OF ALL PARTITIONS WHICH INTERSECT THE STRUTURE/FLOOR ABOVE. PROVIDE FIRE SAFING AT ALL SLIP JOINT CONNECTIONS IN FIRE RATED PARTITIONS.

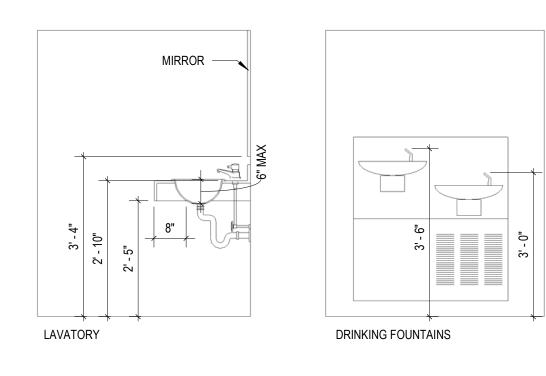
PROVIDE CONTROL JOINTS IN GYPSUM BOARD WHERE INDICATED OR WHERE THE PARTITION EXCEEDS 30'-0"

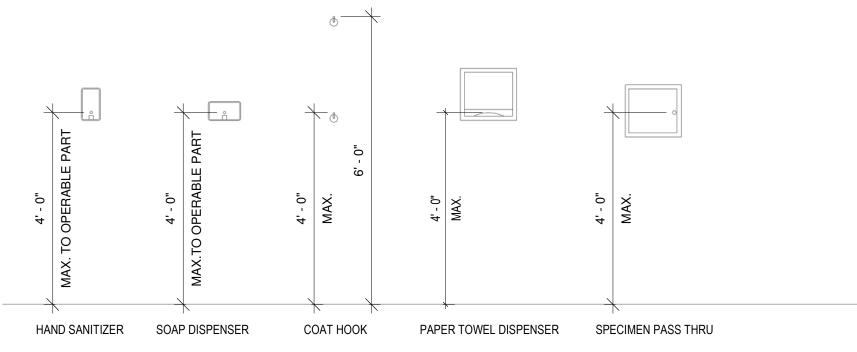




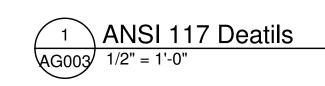








WALL MOUNTED ACCESSORIES





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consequences arriving out of such changes.

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6/17/22 Drawn By: Checked By: Checker

Project Phase CONSTRUCTION

Sheet Title PROJECT DETAILS

DIV 00 – BIDDING AND PROCUREMENT REQUIREMENTS

GENERAL CONDITIONS:

- 1. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specifications Sections, apply to this Document.
- 2. The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all; performance by the Contractor shall be required only to the extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the indicated results.
- 3. Execution of the Contract by the Contractor is a representation that the Contractor has visited the site, become generally familiar with local conditions under which the Work is to be performed and correlated personal observations with requirements of the Contract Documents.

SUPPLEMENTARY CONDITIONS:

- 1. Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for labor, materials, equipment, tools, construction equipment and machinery, transportation, and other facilities and services necessary for proper execution and completion of the Work, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work.
- Unless otherwise provided in the Contract Documents, the Contractor shall secure and pay for the building permit as well
 as for other permits, fees, licenses, and inspections by government agencies necessary for proper execution and
 completion of the Work that are customarily secured after execution of the Contract and legally required at the time
 negotiations are concluded.
- 3. The Contractor shall comply with and give notices required by applicable laws, statues, ordinances, codes, rules and regulations, and lawful orders of public authorities applicable to performance of the Work.
- 4. If the Contractor performs Work knowing it to be contrary to applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, the Contractor shall assume appropriate responsibility for such Work and
- 5. If the Contractor encounters conditions at the site that are concealed, or are unusual, and differ materially from those indicated in the Contract Documents or from those ordinarily found to exist, the Contractor shall promptly provide notice to the Owner and the Architect before conditions are disturbed.

DIVISION 01- GENERAL REQUIREMENTS

shall bear the costs attributable to correction.

SECTION 01100 - SUMMARY

- 1. WORK BY OWNER: Coordinate the Work of this Contract with work performed by Owner.
- 2. WORK UNDER SEPARATE CONTRACTS: Coordinate the Work of this Contract with work performed under separate contracts. Work may include, but is not limited to:
- A. Hazardous Materials Abatement.
- B. IT/Audio-Video/Security.
- 3. OWNER-FURNISHED PRODUCTS: Owner will furnish products indicated. The Work includes receiving, unloading,
- handling, storing, protecting, and installing Owner-furnished products and making building service connections.
- 4. ACCESS TO SITE:
- A. General: Contractor shall have limited use of Project site for construction operations as indicated on Drawings and as indicated by requirements of this Section. Limit use of Project site to work in areas indicated. Do not disturb portions of
- Project site beyond areas in which the Work is indicated.

 B. Condition of Existing Building: Maintain portions of existing building affected by construction operations in a
- weathertight condition throughout construction period. Repair damage caused by construction operations.
 C. Partial Owner Occupancy: Owner will occupy the premises during entire construction period, except for areas under construction. Cooperate with Owner during construction operations to minimize conflicts and facilitate Owner usage. Perform the Work so as not to interfere with Owner's operations. Maintain existing exits unless otherwise indicated.
- D. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities. Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from Owner and authorities having jurisdiction.
- E. Provide not less than 48 hours' notice to Owner of activities that will affect Owner's operations.F. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted
- under the following conditions:
- Notify Owner not less than 48 hours in advance of proposed utility interruptions.
 Obtain Owner's written permission before proceeding with utility interruptions.

SECTION 012500 - SUBSTITUTION PROCEDURES

- SUBSTITUTIONS FOR CAUSE: Submit requests for substitution immediately on discovery of need for change, but no later than 15 days prior to time required for preparation and review of related submittals.
- SUBSTITUIONS FOR CONVENIENCE: Architect will consider requests for substitution if received within 15 working days
 after Notice to Proceed. Requests received after that time may be considered or rejected at discretion of architect.

SECTION 012600 – CONTRACT MODIFICATION PROCEDURES

- 1. MINOR CHANGES IN THE WORK: Architect will issue supplemental instructions authorizing minor changes in the Work, not involving adjustment to the Contract Sum or the Contract Time.
- PROPOSAL REQUESTS: Provide a detailed description of any proposed changes in the Work that may require adjustment to the Contract Sum or the Contract Time. Proposal Requests are not instructions or authorizations either to stop work in progress or to execute the proposed change.
- CHANGE ORDERS: On Owner's approval of a Proposal Request, a Change Order for signatures of Owner and Contractor will be issued on AIA G701 or other form acceptable to the Architect.

SECTION 013100 - PROJECT MANAGEMENT AND COORDINATION

- 1. GENERAL COORDINATION PROCEDURES:
- A. Coordinate construction operations to ensure efficient and orderly installation of each part of the Work. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
- B. Prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.
- 2. REQUESTS FOR INTERPRETATION (RFI): Immediately on discovery of the need for interpretation of the Contract Documents, prepare and submit an RFI in form acceptable to the Architect. Allow five (5) working days for Architect's response for each RFI.
- 3. PROJECT MEETINGS: Schedule and conduct meetings and conferences at Project site. Notify Owner and Architect of scheduled meeting dates and times. Prepare the meeting agenda and distribute to all invited attendees. Record significant discussions and agreements achieved and distribute the meeting minutes to all attendees, including Owner and Architect, within three (3) days of the meeting.

SECTION 013200 - CONSTRUCTION PROGRESS DOCUMENTATION

- CONTRACTOR'S CPM CONSTRUCTION SCHEDULE: Submit a comprehensive construction schedule listing all
 activities required to complete the Work, identifying probable critical paths.
- A. Indicate estimated time duration, sequence requirements, and relationship of each activity in relation to other activities. Reflect estimated time frames for the following, including but not limited to; preparation and processing of submittals, mobilization and demobilization, purchase of materials, delivery, fabrication, utility interruptions, installation, testing.

SECTION 013300 - SUBMITTAL PROCEDURES

1. SUBMITTAL SCHEDULE: Submit a schedule of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, ordering, manufacturing, fabrication, and delivery when establishing dates. Include additional time required for making corrections or revisions to submittals noted by Architect, and additional time for handling and reviewing submittals required by these corrections.

2. COORDINATION:

- A. Coordinate preparation and processing of submittals with performance of construction activities.
 B. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination. The Architect reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
- 3. PROCESSING TIME: Allow time for submittal review, including time for resubmittals, as follows> Time for review shall commence on Architect's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.
- A. Initial Review: Allow 15 calendar days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Architect will advise Contractor when a submittal being processed must be delayed for coordination.
- B. Intermediate Review: If intermediate submittal is necessary, process it in same manner as initial submittal.C. Resubmittal Review: Allow 10 working days for review of each submittal.
- 4. ELECTRONIC SUBMITTALS: Transfer submittals electronically using the Architect's NEWFORMA project information management software with the transmittal typed directly into the NEWFORMA software, or as a PDF attachment. At the Architect's discretion, email or other electronic transfer method may be permitted.
- A. Assemble complete submittal package into a single PDF file incorporating submittal requirements of a single
- Specification Section. At the Architect's discretion, multiple PDFs in a submittal package may be permitted.

 B. Name file with the specification Section number, including a revision identifier (e.g. 042000 Unit Masonry-01).

 Resubmittals shall include an alphabetic suffix (e.g. 042000 Unit Masonry-01-A)
- C. Provide Contractor's review and approval markings on each submittal. Submittals without markings will be returned without review

5. SUBMTTAL PROCEDURES:

- A. Product Data: Mark submittal to show which products and options are applicable.
- B. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Fully illustrate requirements in the Contract Documents, including identification of products, schedules, compliance with specified standards, notation of coordination requirements, notation of dimensions established by field measurement, relationship and attachment to adjoining construction clearly indicated, seal and signature of professional engineer if specified.

C. Samples: Submit samples for review of kind, color, pattern, and texture for a check of these characteristics with other

- elements and for a comparison of these characteristics between submittal and actual component as delivered ans installed.
- Samples for Initial Selection: Submit one (1) set of manufacturer's color charts or sample chains showing the full range of colors, textures, and patterns available.
- Samples for Verification: Submit full-size units or samples of size indicated, prepared from same material to be used for the Work, cured and finished in manner specified, and physically identical with material or product proposed for use, and that show full range of color and texture variations expected.
 - a. Submit two (2) sets of samples. Architect will retain one Sample, and remainder will be returned.b. Retain returned samples in a secure location during construction for on-site reference and turn over all samples to the Owner at Project completion as a project record sample.

SECTION 014000 – QUALITY REQUIREMENTS

- QUALITY CONTROL: Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.
- A. Owner Responsibilities: Where quality-control services are indicated as Owner's responsibility, Owner will engage a qualified testing agency to perform these services.
- B. Contractor Responsibilities: Tests and inspections not explicitly assigned to Owner are Contractor's responsibility. Perform additional quality-control activities required to verify that the Work complies with requirements, whether specified or not.

SECTION 015000 - TEMPORARY FACILITIES AND CONTROLS

1. USE CHARGES: Use charges for temporary facilities shall be included in the Contract Sum unless otherwise indicated. Allow other entities to use temporary services and facilities without cost, including, but not limited to, Owner's construction forces, Architect, occupants of Project, testing agencies, and authorities having Jurisdiction.

2. INFORMATIONAL SUBMITTALS:

- A. Site Plan: Show temporary facilities, utility hookups, staging areas, and parking areas for construction personnel.
 B. Fire-Safety Program: Show compliance with requirements of NFPA 241 and authorities having jurisdiction. Indicate Contractor personnel responsible for management of fire-prevention program.
- C. Moisture-Protection Plan: Describe procedures and controls for protecting materials and construction from water absorption and damage.
- D. Dust- and HVAC-Control Plan: Submit narrative that indicates dust- and HVAC- control measures proposed for use, proposed locations, and proposed time frame for their operation. Include locations of dust-control partitions, HVAC system isolation diagram, waste handling procedures, and other dust-control measures.

3. QUALITY ASSURANCE:

- A. Electric Service: Comply with NECA, NEMA, and UL standards and regulations for temporary electric service. Install service to comply with NFPA 70.
 B. Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use.
- 4. TEMPORARY FACILITIES:
- A. Storage and Fabrication Sheds: Provide sheds sized, furnished, and equipped to accommodate materials and equipment for construction operations.
- 1. Store combustible materials apart from building.

Obtain required certifications and permits.

5. EQUIPMENT

- A. Fire Extinguishers: Portable, UL rated; with class and extinguishing agent as required by locations and classes of fire
- B. Permanent HVAC System: IF Owner authorizes use of permanent HVAC system for temporary use during
- construction, provide filter with Merv of 3 at each return-air grille in system and remove at end of construction.

 C. Air-Filtration Units: When required by Owner, provide primary and secondary HEPA-filter-equipped portable units with
- Air-Filtration Units: When required by Owner, provide primary and secondary HEPA-filter-equipped portable un four-stage filtration. Provide single switch for emergency shutoff. Configure to run continuously.

6. SECURITY AND PROTECTION

- A. Protection of Existing Facilities: Protect existing vegetation, equipment, structures, utilities, and other improvements at Project site and on adjacent properties, except those indicated to be removed or altered. Repair damage to existing facilities.
- B. Security Enclosure and Lockup: Install temporary enclosure around partially completed areas of construction. Provide lockable entrances to prevent unauthorized entrance, vandalism, theft, and similar violations of security. Lock entrances at end of each work day.
- C. Barricades, Warning Signs, and Lights: Comply with requirements of authorities having jurisdiction for erecting structurally adequate barricades, including warning signs and lighting.
- D. Temporary Egress: Maintain temporary egress from existing occupied facilities as indicated and as required by authorities having jurisdiction.
 E. Temporary Enclosures: Provide temporary enclosures for protection of construction, in progress and completed, from
- exposure, foul weather, other construction operations, and similar activities. Provide temporary weathertight enclosure for building exterior.

 F. Temporary Partitions: Provide floor-to-ceiling dustproof partitions to limit dust and dirt migration and to separate areas
- occupied by Owner and tenants from fumes and noise.

 G. Temporary Fire Protection: Install and maintain temporary fire-protection facilities of types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 241; manage fire-prevention program.

SECTION 017300 - EXECUTION

- 1. QUALITY ASSURANCE:
- A. Cutting and Patching: Comply with requirements for and limitations on cutting and patching of construction elements.
- Structural Elements: When cutting and patching structural elements, notify Architect of locations and details of cutting and await directions from Architect before proceeding. Shore, brace, and support structural elements during cutting and patching. Do not cut and patch structural elements in a manner that could change their loadcarrying capacity or increase deflection.

- 2. Operational Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety. Operational elements include the following:
- Fire separation assemblies, air or smoke barriers, fire-suppression systems, mechanical systems piping and ducts, control systems, communication systems, fire-detection and -alarm systems, conveying systems, electrical wiring systems.
- b. Other Construction Elements: Do not cut and patch other construction elements or components in a manner that could change their load-carrying capacity, that results in reducing their capacity to perform as intended, or that results in increased maintenance or decreased operational life or safety. Other construction elements include but are not limited to the following: water, moisture, or vapor barriers, membranes and flashings, Piping, ductwork, vessels, and equipment, noise- and vibration-control elements and systems.
- 3. Visual Elements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch exposed construction in a manner that would, in Architect's opinion, reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.
- 2. EXAMINATION AND ACCEPTANCE OF CONDITIONS: Before proceeding with each component of the Work, examine substrates, areas, and conditions, with Installer or Applicator present, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.
- A. Examine mechanical and electrical rough-in to verify actual locations of connection before equipment and fixture
- B. Examine walls, floors, and roofs for suitable conditions where products and systems are to be installed.C. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.

3. PREPARATION:

- A. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to
- B. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.
 C. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents caused by differing field conditions outside the control of Contractor, submit a request for interpretation (RFI) to Architect.

4. CONSTRUCTION LAYOUT:

- A. Verification: Before proceeding to lay out the Work, verify layout information shown on Drawings. IF discrepancies are
- discovered, notify Architect promptly.

 B. Building Lines and Levels: Locate and lay out control lines and levels, including those required for mechanical and
- electrical work.
 C. Use of Indelible Paints and Ink:
- 1. Use of indelible paint and ink for layout indicators on exposed concrete surfaces is prohibited. Use only removable marking products, if any, on exposed concrete surfaces.

5. INSTALLATION:

- A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.
- Make vertical work plumb and make horizontal work level.
 Where space is limited, install components to maximize space available for maintenance and ease of removal for
- Conceal pipes, ducts, and wiring in finished areas unless otherwise indicated.
- 4. Maintain minimum headroom clearance of 96 inches in occupied spaces and 90 in unoccupied spaces.
- B. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.C. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.
- D. Templates: Obtain and distribute to the parties involved templates for work specified to be factory prepared and field installed. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing products to comply with indicated requirements.
- E. Attachment: Provide blocking and attachment plates and anchors and fasteners of adequate size and number to securely anchor each component in place, accurately located and aligned with other portions of the Work. Where size and type of attachments are not indicated, verify size and type required for load conditions.
- F. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections together to form hairline joints.
 G. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous.
- 6. CUTTING AND PATCHING
- A. General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.
- Cut in-place construction to provide for installation of other components or performance of other construction and subsequently patch as required to restore surfaces to their original condition.
- B. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during installation or cutting and patching operations, by methods and with materials so as not to void existing warranties.
 C. Temporary Support: Provide temporary support of work to be cut.
- D. Protection: Protect in-place construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.
 E. Existing Utility Services and Mechanical/Electrical Systems: Where existing services/systems are required to be removed, relocated, or abandoned, bypass such services/systems before cutting to minimize interruption to occupied
- areas.
 F. Cutting: Cut in-place construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction. If possible, review proposed procedures with original Installer; comply with original Installer's written recommendations.
- In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut
 holes and slots neatly to minimum size required, and with minimum disturbance of adjacent surfaces. Temporarily
- cover openings when not in use.

 2. Mechanical and Electrical Services: Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or pluç and seal remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after cutting.
- G. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other work. Patch with durable seams that are as invisible as practicable. Provide materials and comply with installation requirements specified in other Sections, where applicable.
- 1. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will minimize evidence of patching and refinishing.
- Clean piping, conduit, and similar features before applying paint or other finishing materials.
 Restore damaged pipe covering to its original condition.
- 4. Floors and Walls: Where walls or partitions that are removed extend one finished area into another, patch and repair floor and wall surfaces in the new space. Provide an even surface of uniform finish, color, texture, and appearance. Remove in-place floor and wall coverings and replace with new materials, if necessary, to achieve uniform color and appearance.
- a. Where patching occurs in a painted surface, prepare substrate and apply primer and intermediate paint coats appropriate for substrate over the patch, and apply final paint coat over entire unbroken surface containing the patch. Provide additional coats until patch blends with adjacent surfaces.
- 5. Ceilings: Patch, repair, or rehang in-place ceilings as necessary to provide an even-plane surface of uniform

H. Cleaning: Clean areas and spaces where cutting and patching are performed. Femove paint, mortar, oils, putty, and

- appearance.Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weathertight condition and ensures thermal and moisture integrity of building enclosure.
- similar materials from adjacent finished surfaces.

 7. PROGRESS CLEANING: Clean Project site and work areas daily, including common areas. Enforce requirements strictly. Dispose of materials lawfully. Comply with requirements in NFPA 241 for removal of combustible waste materials and

SECTION 0170700 – CLOSEOUT PROCEDURES

FINAL CLEANING

- A. General: Perform final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and
- ordinances and Federal and local environmental and antipollution regulations.

 B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with
- manufacturer's written instructions.
 C. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a designated portion of Project:
 - 1. Curean payed areas bream clean Demoya natrochemical chills, stains, and other fareign deposits
 - Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
 Remove tools, construction equipment, machinery, and surplus material from Project site.
 Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substance. Avoid disturbing natural weathering of outgring authorized professional projects are fleeting surfaces.
 - foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
 - 4. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
- 5. Sweep concrete floors broom clean in unoccupied spaces.6. Vacuum carpet and similar soft surfaces, removing debris and excess nap; clean according to manufacturer's
- Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other noticeable, vision-obscuring materials. Polish mirrors and glass, taking care not to scratch surfaces.
- Remove labels that are not permanent.
 Wipe surfaces of mechanical and electrical equipment, and similar equipment. Remove excess lubrication, paint
- and mortar droppings, and other foreign substances.

 10. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.

 11. Replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and
- 12. Clean light fixtures, lamps, globes, and reflectors to function with full efficiency.13. Leave Project clean and ready for occupancy.

DIVISION 02 – EXISTING CONDITIONS

SECTION 024119 – SELECTIVE DEMOLITION

recommendations if visible soil or stains remain.

- PRE-DEMOLITION CONFERENCE: Conduct conference at Project Site. Inspect and discuss condition of construction to be selectively demolished. Review areas where existing construction is to remain and requires protection.
- 2. EXAMINATION:
- A. Review record documents of existing construction provided by Owner. Owner does not guarantee that existing
- conditions are same as those indicated in record documents.

 B. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition
- C. When unanticipated mechanical, electrical, or structural elements that conflict with intended function or design are encountered, investigate and measure the nature and extent of conflict. Promptly submit a written report to Architect.
- 4. EXISTING UTILITIES AND MECHANICAL/ELECTRICAL SYSTEMS: Maintain services/systems indicated to remain and protect them against damage.
- 5. DEMOLITION: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:

3. SURVEY OF EXISTING CONDITIONS: Record existing conditions by use of preconstruction photographs.

- A. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction.B. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
- C. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain portable fire-suppression devices during flame-cutting operations.
 D. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective

demolition. When permitted by Architect, items may be removed to a suitable, protected storage location during

selective demolition and cleaned and reinstalled in their original locations after selective demolition operations are

HAZARDOUS MATERIALS: It is not expected that hazardous materials will be encountered. If encountered, hazardous

DIVISION 03-CONCRETE

SECTION 033000 - CAST-IN-PLACE CONCRETE

materials will be removed by Owner under a separate contract.

- GENERAL: Include cast-in-place concrete, formwork, reinforcement, concrete materials, mixture design, placement procedures, and finishes.
- A. The scope of work shall include all labor, materials, equipment, and services required for concrete work indicated on the drawings, or as may otherwise be required to complete the project
- B. The latest ACI standards (American Concrete Institute) and building code requirements shall govern all concrete work.
 C. The contractor is responsible for correction of concrete work which does not conform to the specification requirements, including strength, tolerances, configuration, and finishes

2. PRODUCTS:

- A. ACI PUBLICATIONS: Comply with ACI 301 and ACI 117 unless modified by requirements in the Contract Documents.

 B. CONCRETE MIXTURES: Provide concrete mixtures in accordance with requirements listed on the structural
- drawings, but not less than as follows if not otherwise indicated:

 1. Minimum Compressive Strength: 4000 psi.
- Maximum W/C Ratio: 0.45.
 REINFORCING STEEL: All reinforcing steel shall be in accordance with requirements listed on the structural
- D. INTERIOR SLABS ON GRADE: Where interior concrete slabs-on-grade are removed and replaced, include installation of the following:
- Sheet Vapor Retarder: ASTM E 174, Class A, minimum 15 mils thickness except with maximum water-vapor permeance of 0.01 perms. Seal to any existing vapor retarder or perimeter foundation with manufacturer's recommended adhesive or pressure-sensitive tape. Seal all seams and penetrations.

2. Reinforcing bars: ASTM A 615/A 615M, Grade 60, drilled and grouted into the existing slab at 24 inches o.c. along

the entire perimeter of the patch, penetrating the existing slab not less than 6 inches and extending into the patch area.
Welded Wire Fabric: Also provide 6 inch x 6 inch W2.9 x W2.9 WWF for areas in excess of ten (10) square feet.

DIVISION 05 - META

DIVISION 05 - METALS

- SECTION 055000 METAL FABRICATIONS

 1. SUMMARY: Provide metal fabrications indicated on the Drawings, which may include, but is not limited to the following:
- Steel framing and supports for countertops.
- B. Steel tube reinforcement for low partitions.C. Steel framing and supports for mechanical and electrical equipment.
- D. Steel framing and supports for applications where framing and supports are not specified in other sections.E. All other miscellaneous angles, channels, tubes and plates as indicated or required.
- A. Reference Standards:

2. SUBMITTALS

REFERENCES

- AWS D1.1 Structural Welding Steel.
- A. Submit shop Drawings for all metal fabrications.
- 3. QUALITY CONTROL
- A. Welder shall be currently qualified according to AWS D1.14. DELIVERY, STORAGE AND HANDLING
- A. General:
 - 1. Store metals above ground on platforms, skids, or other supports. Protect steel from corrosion.

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NOTICE: DUTY OF COOPERATION Release of these plans contemplates further

cooperation among the owner, his contractor and the architect. Design and construction are complex. Although the architect and his consultants have performed their services with due care and diligence, they cannot guarantee perfection. Communication is imperfect and every contingency cannot be anticipated. Any ambiguity or discrepancy discovered by the use of these plans shall be reported immediately to the architect. Failure to notify the architect compounds misunderstanding and increases construction costs. A failure to cooperate by a simple notice to the architect shall relieve the architect from responsibility for the consequences. Changes made from the plans without

relieve the architect or responsibility for all consequences arriving out of such changes.

All design, documents and data prepared by Eric Smith Associates, P.C. as instruments of service shall remain property of Eric Smith Associates, P.C. and shall not be copied. changed or disclosed in any

consent of the architect are unauthorized and shall

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<u>REVISIONS</u>

. Description Date

uchealth

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22016

6/17/22

Drawn By: Author
Checked By: Checker

Project Phase
CONSTRUCTION

Job Number:

Sheet Title
SPECIFICATIONS

AG004

B. Materials to be installed by others:

1. Deliver anchor bolts and other anchorage devices which are embedded in cast-in-place concrete or masonry construction to project site in time to be installed before start of cast-in-place concrete operations. 2. Provide setting drawings, templates, and directions to installation of anchor bolts and other devices.

5. MATERIALS

- A. Steel Shapes, Bars and Plates: ASTM A36-84a.
- B. Steel Pipe and Tubing: ASTM A53-84a, A501-84 or A500-84, minimum wall thickness 11 gage. C. Shop Paint: all items to receive red metal primer painted.
- 6. FABRICATION
- A. General:
- 1. Fabricate in accordance with details and accepted shop drawings.
- 2. Provide miscellaneous items of metal work indicated or as necessary to complete work.
- 3. Materials: stock of types and sizes indicated. 4. Make cuts clean and sharp with wire edges ground smooth. Provide straight, rigid, and tight work, free from
- 5. Close exposed ends of steel pipe or tubing with welded caps.
- B. Welding: AWS D1.1. Miter and cope intersections and weld all around. Remove splatter, grind exposed welds to blend
- and contour surfaces to match those adjacent. C. Shop Painting: After fabrication, clean off loose scale, rust, weld slag or flux deposit, oil grease, dirt, or other foreign
- material and shop coat fabricated items with shop paint. D. Substitutions: where exact sizes and weights called for are not available, secure Architect's acceptance of suitable sizes prior to proceeding.

EXECUTION:

- A. Weld or bolt items securely in place or otherwise fasten as indicated on the drawings or accepted shop drawings.
- Include items indicated, scheduled or listed in Article 1.1 or as otherwise indicated on the Drawings. B. Grind smooth all field welds and touch up with primer compatible with topcat.

DIVISION 06-WOOD, PLASTICS, COMPOSITES

SECTION 061053 - MISCELLANEOUS ROUGH CARPENTRY

- 1. For blocking items of dimension lumber size, provide Standard Stud, or No. 3 grade lumber with 19 percent maximum moisture content of any species.
- 2. Set carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Fit carpentry to other construction; scribe and cope as needed for accurate fit. Locate nailers, blocking, and similar supports to comply with requirements for attaching other construction.
- 3. Securely attach carpentry work to substrate by anchoring and fastening as indicated, complying with Table 2304.9.1 "Fastening Schedule" in ICC's International Building Code.

SECTION 062023 - INTERIOR FINISH CARPENTRY

1. GENERAL

- A. The "Quality Standards" of the Architectural Woodwork Institute shall apply and by reference are hereby made a part of this specification. Any reference to Premium, Custom, or Economy in this specification shall be as defined in the latest edition of the AWI "Quality Standards."
- B. Woodwork manufacturer must have a reputation for doing satisfactory work on time and shall have successfully
- C. Submit shop drawings on all items of architectural woodwork to the Architect for review prior to commencing fabrication. Submit manufacturer's descriptive literature of specialty items not manufactured by the architectural woodworker, or as requested by the architect.
- D. The woodwork manufacturer is responsible for details and dimensions not controlled by job conditions and shall show on his shop drawings all required field measurements beyond his control. The general contractor and the woodwork manufacturer shall cooperate to establish and maintain these field dimensions.
- E. The woodwork manufacturer and the contractor shall be jointly responsible to make certain that woodwork is not delivered until the project and storage areas are sufficiently finished so that woodwork will not be damaged by ongoing
- F. Details for all cabinetry, woodwork, and open shelving shall be in strict accordance with AWI Quality Standards for Flush Overlay Construction, Custom Grade. Exposed surfaces will be finished with high pressure laminates according to the drawings; semi-exposed surfaces finished in accord with custom grade standards and shall be white or grev nelamine, at minimum. Where not specifically identified on the Architect's drawings, the woodworker may furnish his
- standard heavy-duty hardware, subject to the acceptance of the architect. G. All laminate tops shall be finished with high pressure laminate according to the drawings, in accordance with AWI standards for Custom Grade construction.
- H. Backboard for phone boards shall be 3/4" AC grade plywood. Phone boards shall be fire resistive treated or shall be painted using fire resistive paint as approved by local codes. Back boards of white or grey melamine over 3/4" fire treated particle board may be used in lieu of plywood.

2. PRODUCTS

- A. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated on Drawings, or
- B. Materials:
 - Solid Polymer Components
 - a. AST. Nonporous, filled polymer, not coated, laminated or if composite construction with through body colors neeting ANSI Z124.3 or ANSI A124.6. Having minimum physical and performance properties specified. b. Superficial damage to a depth of 0.010 inch (.25 mm) shall be repairable by sanding and/or polishing.
 - 2. Thickness: ½ inch.
 - 3. Edge Treatment: As indicated on the Drawings.
 - 4. Backsplash: Applied. Sidesplash: Applied.
 - Accessories.
 - a. Joint adhesive, manufacturer's standard one- or two-part adhesive kit to create inconspicuous, nonporous
 - b. Sealant: Manufacturer's standard mildew-resistant, FDA-compliant, HSF 51-compliant (food zone any type),
 - UL-listed silicone sealant in colors matching components. c. Sink/Lavatory Mounting Hardware: Manufacturer's standard bowl, clips, panel insert and fasteners for
 - attachment of under mount sinks/lavatories.
 - d. Conductive Tape: Manufacturer's standard aluminum foil tape, with required thickness, for use with cutouts
 - near heat sources.
 - e. Insulating Felt Tape: Manufacturer's standard for use with conductive tape in insulating solid surface material
 - from adjacent heat source.

Fabrication:

- a. Fabricate components to greatest extent practical to sizes and shapes indicated, in accordance with approved shop drawings and manufacturer's printed instructions and technical bulletins.
- b. Form joints between components using manufacturer's standard joint adhesive without conspicuous joints. c. Reinforce with strip of solid polymer material, 2" wide.
- d. Provide factory cutouts for plumbing fittings and bath accessories as indicated on the drawings.
- e. Rout and finish component edges with clean, sharp returns.
- 1) Rout cutouts, radii and contours to template. Smooth edges.
- f. Repair or reject defective and inaccurate work.

EXECUTION

A. Examination:

- 1. Examine substrates and conditions, with fabricator present for compliance with requirements for installation tolerances and other conditions affecting performance of work.
- 2. Proceed with installation only after unsatisfactory conditions have been corrected.

B. Installation:

- 1. Install components plumb, level and rigid, scribed to adjacent finishes, in accordance with approved shop drawings and product data.
- a. Provide product in the largest pieces available.
- b. Form fie4ld joints using manufacturer's recommended adhesive, with joints inconspicuous in finished work.
- Exposed joints/seams shall not be allowed. 3. Reinforce field joints with solid surface strips extending a minimum of 1 inch on either side of the seam with the
- strip being the same thickness as the top. 4. Cut and finish component edges with clean, sharp returns.
- Rout radii and contours to template.
- Anchor securely to base cabinets or other supports. 7. Align adjacent countertops and form seams to comply with manufacturer's written recommendations using
- adhesive in color to match countertop.
- 8. Carefully dress joints smooth, remove surface scratches and clean entire surface. 9. Install countertops with no more than 1/8-inch sag, bow or other variation from a straight line.
- C. Coved Backsplashes and Applied Side Splashes:
- Install applied side splashes using manufacturer's standard color-matched silicone sealant. 2. Adhere applied side splashes to countertops using manufacturer's standard color-matched silicone sealant.

D. Repair:

- 1. Repair or replace damaged work which cannot be repaired to Architect's satisfaction.
- E. Cleaning and Protection:
- Keep components clean during installation. 2. Remove adhesives, sealants, and other stains.

SECTION 064116 - PLASTIC-LAMINATE-FACED ARCHITECTURAL CABINETS

GENERAL

- A. Submit shop drawings and samples.
- PRODUCTS
- A. Quality Standard: Comply with AWI "Architectural Woodwork Standards" for fabrication and installation.
- B. Grade: Custom. C. Materials
 - 1. Hardboard: AHA A135.4
- 2. Medium Density Fiberboard: ANSI A208.2.
- 3. Particleboard: ANSI A208.1, Grade M-2 4. Softwood Plywood: PS 1.
- 5. Hardwood Plywood and Face Veneers: HPVA HP-1
- 6. High-Pressure Decorative Laminate: NEMA LD 3.
- D. Cabinet Hardware and Accessories:
- 1. Hinges: Blum fully concealed clip hinges or similar.
- 2. Pulls: Hafele 117.31.436 or similar. Drawer Guides – KV 1284 Series or similar. 4. Exposed Hardware Finish: Satin chrome, BHMA 626 or BHMA 652d.
- E. Plastic Laminate-Clad Cabinets:
- 1. Door and Drawer Front Style: Flush overlay. 2. Laminate: Horizontal surfaces provide Grade HGS, vertical surfaces provide Grade VGS.
- F. Countertops: Quartz Agglomerate; solid sheets of quarts aggregates bound together with a matrix of filled plastic resin, 2 cm with laminated edge.

G. Installation:

- 1. Install woodwork level, plumb, true, and straight. Shim as required with concealed shims. Install to a tolerance c 1/8 inch in 96 inches for level and plumb.
- 2. Scribe and cut woodwork to fit adjoining work, seal cut surfaces, and repair finish at cuts.

DIVISION 07 - THERMAL AND MOISTURE PROTECTION

SECTION 072000 - THERMAL INSULATION

- GENERAL
- A. Work includes all labor, material, and equipment necessary to install rigid insulation at exterior foundation, blanket as thermal insulation as indicated on the drawings.

2. PRODUCTS

- A. Fiberglass Blanket & Sound Attenuation Insulation:
- 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following, or approved
- a. Owens-Corning b. Manville Corporation
- c. CertainTeed Corporation
- 2. Thickness and R-value as indicated. 3. Width as required to fit framing
- 4. Foil or Kraft faced with flame spread rating of 25 or less in accordance with ASTM E-84-84

EXECUTION

- A. Blanket or Batt Insulation
- 1. Install insulation according to manufacturer's recommendations and in full conformity with best practice. Fit tight adjoining work and adjoining insulation so that a completely tight enclosure free from open joints, holes, cracks,
- and voids is achieved. 2. Attach insulation in place in a manner ensuring stability and to eliminate sagging. Secure flanges to framing for

SECTION 078413 – PENETRATION FIRESTOPPING

GENERAL

- A. Work includes all labor, material, and equipment necessary to install fire-safing material at the following locations:
- 1. To seal all small openings in walls at pipe sleeves, blockouts, ducts, or similar openings.
- 2. To seal tops of drywall partitions as indicated. Elsewhere as indicated on the drawings.
- B. Fire stop systems shall be UL tested and approved for one-hour fire separation.

PRODUCTS

A. USG Thermafiber Safing Insulation. Size as required for fire rating conditions. Provide safing clips where indicated o required.

EXECUTION

A. Compress and install in areas indicated to sea areas completely, leaving no voids

SECTION 079200 - JOINT SEALANTS

GENERAL

- A. Work includes all labor, material, and equipment necessary to install all caulking and sealants indicated on the Drawings, specified herein, and not specified under other sections. In general, seal all openings indicated on Drawings and at other locations requiring sealant to seal visually and against infiltration from air and water, including but not limited to the following:
- Expansion joints in concrete sidewalks
- 2. Expansion joints and control joints in exposed interior concrete floor slabs
- 3. Flashing reglet and retainers Exterior wall joints
- Masonry control joints 6. Isolation joints, between structure and other elements
- . Joints at penetrations of walls, decks, and floors by piping and other service and equipment 8. Joints between items of equipment and other construction
- 9. Joints between door and window frames and adjacent materials, exterior and interior
- 10. Bedding for door thresholds
- 11. Open joints between dissimilar materials as required to close and conceal jointing of the work
- 12. Construction and expansion joints, joints between dissimilar materials; joints around windows, door frames, louvers and other penetrations and openings in the exterior wall; interior walls as detailed or specified.
- Other joints as indicated.
- A. Size joint backing material for minimum 30% compression when installed in joint. Material shall be round rod or semi-

3. SEALANT MATERIAL

A. Acceptable materials:

2. JOINT BACKING MATERIAL

- 1. Interior and under thresholds: latex acrylic, ASTM C834-76 (1981) 2. Exterior: two component polyurethane, FS TT-S-00227E, Type II, Class A, non-sag
- 3. Primer: as recommended by sealant manufacturer 4. Sealant at concrete sidewalks and interior floor slabs: Two component self-leveling polyurethane, FS TT-S-
- 00227E, Type I, Class A pourable type. Sealant at lavatories: silicone tub seal
- 6. Colors: as selected by Architect from standard colors.

4. INSTALLATION

- A. Clean surfaces in accordance with manufacturer's recommendations. B. If required, prime surfaces which are to be sealed with manufacturer's recommended or standard primer, after surfaces have been prepared as specified. Before use, check primers for discoloration and dirt pick-up on adjacent
- surfaces. If staining occurs, after exposure, take adequate measures to prevent primer from being applied over face of adjacent porous materials by masking or other suitable measures.
- C. Provide backing of type as specified, recommended or required to provide for allowable depth of sealant. D. Install bond breaker tape where indicated or as required by manufacturer's recommendations to ensure that sealants will deform properly.
- E. Apply sealants in continuous beads without open joints, voids or air pockets, using ratchet hand gun or mechanical
- F. Install sealants to depths as indicated or, as recommended by sealant manufacturer but within the following general
- 1. For normal moving joints sealed with elastomeric sealants but not subject to traffic, fill joints to depth equal to 50% of joint width, but not more than 1/2" deep or less than 1/4" deep. 2. For joints sealed with non-elastomeric sealants and caulking compounds, fill joints to depth in range of 75% to
- G. Curing: cure sealants and caulking compounds in compliance with manufacturer's instructions and recommendations, to obtain high early bond strength internal cohesive strength, and surface durability. Advise General Contractor of

procedures required for protection of sealants during construction period, so that they will be without deterioration or

- Submit product data and samples.
- 6. Compatibility: Provide joint sealants, joint fillers, and other related materials that are compatible with one another and with joint substrates under service and application conditions.
- 7. Elastomeric Sealant: Comply with ASTM C 920.

SECTION 081113 - HOLLOW METAL DOORS AND FRAMES

damage (other than normal weathering) at time of acceptance.

8. Acrylic Sealant: One-part, non-sag, solvent-release-curing acrylic terpolymer sealant complying with AAMA 808.3 or FS TT-S-00230, or both, with capability, when tested per ASTM C 719, to withstand plus or minus 12.5 percent change in joint width existing at time of application without failing.

DIVISION 08 - OPENINGS

- GENERAL
- A. Work includes all labor, material, and equipment necessary to furnish and install the following:
- 1. Doors: Seamless, hollow or composite construction standard steel doors for interior and exterior locations. 2. Frames: Pressed steel frames for doors, transoms, sidelights, mullions, interior glazed openings, and other interior
- and exterior openings of welded unit type. 3. Assemblies: Provide standard steel doors and frame assemblies as required for the following:
- a. labeled and fire rated. b. thermal rated (insulated).
- c. sound rated (acoustical).
- 2. PRODUCTS A. Manufacturers: Subject to compliance with requirements, provide standard steel doors and frames by one of the
 - following, or approved substitution.
 - 1. Amweld Building Products, Inc. Ceco Corp.

gauge, R-4

- 3. Curries Company Fenestra Corp.
- 5. Premier Products, Inc. (formerly Dittco) 6. Republic Builders Products
 - 1. Doors indicated on the schedule or drawings shall to be steel shall be hollow metal, flush, swing type doors constructed from 16-gauge steel, welded and ground smooth. Provide thermal insulation in all exterior

c. Exterior Frames: Hot Dipped Galvanized – 14 gauge.

doors. Doors to be mortised and reinforced to receive hardware. a. Interior Doors: Cold Rolled Steel, ASTM A366, 16 gauge b. Exterior Doors: Hot Dipped Galvanized Steel having an A60 zinc coating conforming to ASTM A526, 14-

C. Frames

B. Doors

- 1. Provide metal frames for doors, sidelights, borrowed lights, and other openings, of types and styles shown on the drawings and schedules with conceal fastenings, unless otherwise indicated. Fabricate frames of minimum 16gauge cold rolled steel. Form exterior frames from 14-gauge galvanized steel.
- a. Fully welded. b. Interior Frames: Cold Rolled Steel – 16 gauge up to 3'-6" wide, 14 gauge for wider.

2. Except for weatherstripped frames, drill stops to receive 3 silencers on strike jambs of single-door frames and 2 silencers on heads of double-door frames.

D. Fabrication

- 1. Fabricate steel door and frame units to be rigid, neat in appearance and free from defects, warp or buckle. Comply with ANSI/SDI-100 requirements. Internal Construction shall be manufacturer's standard honeycomb, polyurethane, polystyrene, unitized steel grid, vertical steel stiffeners, or rigid mineral fiber core with internal sound
- deadener on inside face sheets where appropriate in accordance with SDI standards. 2. Fabricate exposed faces of doors and panels, including stiles and rails of non-flush units, from only cold-rolled steel. Comply with SDI 117 "Manufacturing Tolerances for Standard Steel Doors and Frames."

- 3. Fabricate frames, concealed stiffeners, reinforcement, edge channels, louvers, and moldings from either cold-
- rolled or hot-rolled steel. 4. Fabricate exterior doors, panels, and frames from galvanized sheet steel in accordance with SDI-112. Close top and bottom edges of exterior doors as integral part of door construction or by addition of minimum 14-gauge steel
- 5. At exterior locations, and elsewhere as shown or scheduled, provide doors fabricated as thermal insulating door and frame assemblies as tested in accordance with ASTM C236 or ASTM C976 on fully operable door
- 6. Prepare doors and frames to receive mortised and concealed hardware in accordance with final Door Hardware
- Schedule and templates provided by hardware supplier. Comply with applicable requirements of ANSI A115 Series Specifications for door and frame preparation for hardware. 7. Locate hardware as indicated on the final shop drawings or, if not indicated, in accordance with "Recommended
- Locations for Builder's Hardware on Standard Steel Doors and Frames" published by Door and Hardware Institute.

EXECUTION

A. Frames

- 1. Set steel frames accurately in accordance with details and straight and free of twist with head level and jambs plumb. Rigidly anchor to walls and partitions and securely brace until surrounding work is completed. Provide deflection clearances at frame heads where indicated.
- 2. Wherever possible leave spreader bars in place until frames are securely anchored.

B. Doors:

binding with all hardware functioning properly. See Section 08700 for hardware.

1. Apply hardware in conformance with hardware manufacturer's templates and instruction. Hang doors to be free of

SECTION 081113.01 - KNOCK-DOWN (KD) TYPE STEEL FRAMES

GENERAL

- A. Work includes all labor, material, and equipment necessary to furnish and install the following:
- 1. Knocked down, site assembled pre-finished steel door frames. 2. Knocked down site assembled sidelight, borrowed light, transom and follbound access door frames. Pocket trim jambs and casings (pocket frame and hardware not included).

B. Submittals:

- 1. Product Data: indicate frame material, gage, configuration and finishes. 2. Shop Drawings: Indicate frame elevations, details of frame anchorage, reinforcement required, rough opening
- requirements, location of hardware embosses and finishes. Detail each floor of the building separately. 3. Samples: Submit three (3) standard frame samples, illustrating factory finished frame colors. 4. Manufacturer's Installation Instructions: Provide installation instructions for all products under this Section.
- warranted for a period of one year from the date of building occupancy.
- 1. Provide material free from defects in material and according to project specifications for pre-engineered opening

2. Accept frames on site in manufacturer's box packaging with identification labels intact. Inspect for damage.

5. Manufacturer's Certificate of Warranty: Provide manufacturer's standard warranty certificate stating material is

D. Delivery, Storage and Handling: 1. Transport, handle, store, and protect products in a dry area off the ground.

3. Do not open individual boxes until installation is to begin.

Marlite.

C. Quality Assurance:

- PRODUCTS
- A. Performance Requirements: 1. Fire Rated Frame Construction: Conform to ASTM E 152, NFPA 252, UL 10B and 10C.
- B. Manufacturers: Subject to compliance with requirements, provide products by one of the following, or approved
- Slimfold Manufacturing Co, Inc.; Rediframe.

2. Installed Frame Assembly: Conform to NFPA 80.

- Timely, KD frame. Legacy.
- Provide all interior frames for the project from a single manufacturer. D. Frames:
- 1. Frame material: Cold rolled steel, for interior frames in normal atmospheric exposures. 2. Frame Material: Electro-galvanized steel for all frames used in the following locations:
- a. Exterior Locations. b. Public and private restrooms.

4. Fire rated frames and office entry frames to be CK Series with kerf formed into frame profile with factory installed.

- 3. Frame Throat Openings: As shown on plan detail and/or as required to suit finished wall thickness.
- 5. Frame Profile unequal rabbet profile standard with manufacturer. a. "S" Series, 20-gauge thick, interior office spaces.

pre-mitered smoke/sound control gasket

- b. "C" Series, 18-gauge thick, other areas, non-standard jamb depths. c. "CK" Series, 18-gauge thick with kerf for door seal/gasket d. "E" Series, 20-gauge thick, #430 bright polished stainless steel, #304 brushed stainless steel.
- 6. Side Light Frames:

1. Provide reinforcement shipped loose to project site for hardware application.

- b. Verify glass dimensions for fire rated sidelights and borrowed lights.
- Casings:
- a. Provide steel or aluminum casings formed to be applied to heat treated clips on frame face after frame is anchored to wall.

b. Standard Steel, TA-8 with 1/4 inch reveal, on steel/stainless steel frames. Fit factory assembled unit with corner

- adjustment clips. c. Aluminum with reveal – TA-23 with ½ inch reveal with manufacturer's standard TA-24 corner alignment clips. d. Aluminum no Reveal – TA-28 full 1-3/4-inch face profile with manufacturer's standard TA-24 corner alignment
- a. TA-10: Regular arm closers, casing mounted coordinators. b. TA-12: Parallel arm closers, rim exit device strikes, other stop mounted surface hardware. c. TA-47: CK frame parallel arm closers, rim exit device strikes, other stop mounted surface hardware. d. TA-25: Double-acting spring hinges, continuous hinges, other surface mounted hardware on door rabbet or
- e. Provide hinge reinforcement (TA-11) or 14 gage steel pierced to create depth of thread for hinge screws equal to or exceeding 7 gage steel.

hardware finish.

b. Color: As specified on hardware schedule.

cased opening frame.

E. Frame Reinforcement and Accessories:

- Weatherstrip/Smoke Gasket: TA-46 90-minute rated gasket for kerfed frames. All pieces factory mitered to assure perfect corner alignment.
- scheduled to receive stop mounted gasket or weatherstrip. 4. Glass Stops: TA-14 removable rolled steel, shape butted ends. Pre-punch and countersink for flat-head tek 5. Adjustable Strikes: Emboss frames for TA-1 strike for cylindrical lock. Provide TA-1 strike in finish compatible with

3. Silencers: TA-5 vinyl, 2 per frame, clear stick-on type. Silencers not required on kerfed frames or frames



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performed their services with due care and diligence hey cannot guarantee perfection. Communication is mperfect and every contingency cannot be anticipated. these plans shall be reported immediately to the architect. Failure to notify the architect compounds nisunderstanding and increases construction costs. A illure to cooperate by a simple notice to the architect shall relieve the architect from responsibility for the

consent of the architect are unauthorized and shall

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Eric Smith Associates, P.C

Description

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Date:

SPECIFICATIONS

Sheet Number

Job Number: 22016 6/17/22 Auth*o*r Drawn By: Checked By: Checker **Project Phase** CONSTRUCTION **Sheet Title**

REVISIONS

F. Fabrication:

1. Openings for single swing, pair, borrowed light and sidelight frames to be precut, notched and fabricated at the manufacturer's facility. For fire rated and exterior openings, provide kerf as stop for installation of smoke gasket or 2. Provide minimum 14 gage hinge reinforcement plate tapped for machine screws applied with hinges. Hinge plate

to be mechanically attached to hinge emboss on frame.

application or removal of casing. Attachment clips may not be of same material as frame. 4. Provide notches, taps and/or stops for positive alignment of frame parts at all corners.

5. Mullions to be notched as required to provide tight joints. Provide manufacturer's standard mullion brackets for positive connection of frame and mullion parts. 7. Provide manufacturer's standard steel glass stop pre-cut to exact length. Fire rated glazed openings to have hold

3. Casing Clips: Fabricate frames with factory applied, heat treated slips to ensure no deflection in the clip upon

for installation screw within 2 inches of each end of stop piece. 8. Provide insert channel full width of borrowed lights installed on finish floor. Provide full width head channel for

9. Provide adequate structural support (by others) for ceiling insert channel for ceiling height frames. 10. Transom bars to be fixed type with compatible profiles to jamb and head.

11. Attach approved mylar label to each fire-rated frame indicating fire rating details. 12. Factory install TA-46 smoke gasket on all pre-finished, CK Series frames. Install with factory mitered corners to

ensure adequate seal and pleasing appearance. G. Finishing:

1. Frame Units: Prefinished with factory applied impact resistant, polyester baked enamel finish or optional electrostatic applied water-based paint system.

2. Frames for high humidity areas to be electro-galvanized prior to pre-finishing. See Section 2.B for locations. Casing Finishes:

 a. Steel: Prefinished with factory applied impact resistant, polyester baked enamel finish. b. Aluminum: Clear or color anodized, or two-coat fluoropolymer where indicated on Drawings.

EXECUTION

A. Examination:

1. Verify acceptability of existing conditions before starting work.

4. Colors: See finish schedule on the Drawings.

2. Verify that opening sizes and wall thicknesses are within specified tolerances. Verify that all finished walls are in plane to ensure proper door alignment.

B. Installation:

1. Install frames in accordance with manufacturer's requirements.

2. Anchor frames with screws located at every casing slip or every 11 inches as shown on manufacturer's instructions. Field verify quantity and location of fasteners prior to installing casing.

3. Install pre-finished frames near end of the project after wall painting and wall coverings are applied. 4. Install frames using qualified installers familiar with installation of pre-finished drywall frames.

5. Coordinate installation of glass and glazing in glazed units.

 Coordinate installation of frames with installation of hardware specified in Section 08700. 7. Touch-up blemishes on finished frames with factory prepared touch-up paint.

SECTION 081416 - FLUSH WOOD DOORS

GENERAL

A. Work includes all labor, material, and equipment necessary to furnish and install flush wood doors as indicated on the

B. Obtain doors from a single manufacturer. Comply with the following standards:

1. NWWDA Quality Standard: I.S.1 "Industry Standard for Wood Flush Doors" of National Wood Window and Door

2. AWI Quality Standards, including Section 1300 "Architectural Flush Doors" for grade of door, core construction,

finish, and other requirements exceeding those of NWWDA quality standard. 3. NWWDA "Care and Finishing of Wood Doors"

C. All wood doors shall be warranted for the life of the original installation to include reasonable cost of rehanging and refinishing. Doors which are replaced by door warranty during one-year building guarantee shall be rehung by the contractor. After one-year building guarantee has expired, replacement doors shall be furnished and installed as provided by the manufacturer's standard door warranty. Warranty shall cover warping (bow, cup or twist) photographing of construction below face veneers, and tolerance limitations of NWWDA.

2. PRODUCTS

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

 Weverhaeuser 2. Eggers Industries Architectural Door Division

Algoma Hardwood, Inc.

B. Door Types:

1. 1-3/4" thick, sizes as indicated on the schedule.

2. All doors shall be solid core, AWI Construction type PC-5 of PC-7 particleboard. Where specifically identified on the drawings, hollow core doors complying with AWI Construction Type: IHC Institutional Hollow Core will be

3. AWI Quality Grade: Custom 4. Undercutting: preserve full bottom rail.

5. Glass Stops: non-fire rated wood glass stops to match door veneer where indicated on the Drawings.

C. Veneers and Edge Strips:

1. Face veneers shall be of figure & species indicated on the drawings on both sides. Provide 3/4" vertical edge strips of matching hardwood.

D. Prefit and pre-machine doors at factory.

1. Take accurate field measurements of hardware mortised in metal frames to verify dimensions and alignment before proceeding with factory machining.

2. Machine doors for hardware requiring cutting of doors.

3. Comply with accepted hardware schedules and door frame shop drawings and with hardware templates to ensure proper fit of doors and hardware.

4. Tolerances: comply with NWWDA tolerance requirements for prefitting.

E. Finishing: All wood doors shall be field finished to match natural or stained finish samples prepared by the contractor in accord with the requirements of Division 9 of this specification.

EXECUTION

A. Conditioning: condition doors to average humidity in installation area prior to hanging.

B. Prefitting: Prefit doors to frames and machine for hardware to whatever extent not previously worked at the factory as

required for proper fit and uniform clearance at each type. C. Fit to width by planing and fit to height. In no case shall doors be cut down to opening sizes smaller than those for which they are manufactured. Comply with requirements of NWWDA I.S.1-85 except where otherwise indicated. After sizing doors, fit for hardware as scheduled. Before installation of hardware, brush apply an exterior seal coat to job site cut surfaces. Use sealer recommended by door manufacturer.

D. Poly wrap shall remain on doors after installation until removal for finishing is directed by the contractor. E. At completion of job, adjust doors and hardware as required and leave in proper operating condition. Rehang or

replace doors which do not swing or operate freely.

SECTION 083113 - ACCESS DOORS

1. GENERAL

A. All labor material and equipment necessary to furnish and install all access doors into pipe and utility spaces.

2. MATERIALS

A. Located in Masonry, Tile, Gypsum Drywall:

 Milcor Style M 2. MM Systems Boico Style C 3. Karp Model DSC-211

4. JL Industries Model TM Williams Brothers WB-GP 6. Approved substitution.

B. Fire Rated Access:

. Milcor Fire Rated Access Door MM Systems Boico Fire rated access door, Series F

3. Karp Model KRP-150 FR 4. JL Industries Model FD 5. Williams Brothers WB-FR

Approved substitution.

C. Description:

1. Sizes as indicated on the drawings or as required to properly service mechanical or electrical equipment.

2. Locking devices shall be key operated cam locks. 3. Finish: prime for painted finish under Section 09900

3. INSTALLATION

A. Mechanical or Electrical Access doors required for access to mechanical or electrical equipment shall be provided

under Division 23 or Division 26 and installed by the trade responsible for the material in which the door is located. B. General Access Doors: access doors indicated on the drawings or as may otherwise be required for general access to be furnished and installed by trade responsible for material in which the door is located.

SECTION 087100 - DOOR HARDWARE

GENERAL

1.01 SUMMARY

A. Section includes:

1. Mechanical and electrified door hardware 2. Electronic access control system components

B. Section excludes:

2. Cabinets (casework), including locks in cabinets Signage

Toilet accessories

Overhead doors

C. Related Sections:

1. Division 01 Section "Alternates" for alternates affecting this section. Division 06 Section "Rough Carpentry"

3. Division 06 Section "Finish Carpentry"

4. Division 07 Section "Joint Sealants" for sealant requirements applicable to threshold installation specified in this section.

5. Division 08 Sections:

a. "Metal Doors and Frames"

b. "Flush Wood Doors" "Stile and Rail Wood Doors"

"Interior Aluminum Doors and Frames" e. "Aluminum-Framed Entrances and Storefronts"

"Stainless Steel Doors and Frames" "Special Function Doors"

h. "Entrances"

1.02 REFERENCES

A. DHI - Door and Hardware Institute

Sequence and Format for the Hardware Schedule

2. Recommended Locations for Builders Hardware 3. Keying Systems and Nomenclature 4. Installation Guide for Doors and Hardware

B. NFPA - National Fire Protection Association

1. NFPA 70 - National Electric Code

2. NFPA 80 – 2016 Edition – Standard for Fire Doors and Other Opening Protectives

3. NFPA 101 – Life Safety Code

4. NFPA 105 - Smoke and Draft Control Door Assemblies 5. NFPA 252 – Fire Tests of Door Assemblies

C. ANSI - American National Standards Institute

1. ANSI A117.1 - 2017 Edition - Accessible and Usable Buildings and Facilities

2. ANSI/BHMA A156.1 - A156.29, and ANSI/BHMA A156.31 - Standards for Hardware and Specialties

3. ANSI/BHMA A156.28 - Recommended Practices for Keying Systems 4. ANSI/WDMA I.S. 1A - Interior Architectural Wood Flush Doors

5. ANSI/SDI A250.8 - Standard Steel Doors and Frames

1.03 SUBMITTALS

A. General:

1. Submit in accordance with Conditions of Contract and Division 01 Submittal Procedures.

B. Action Submittals:

1. Product Data: Submit technical product data for each item of door hardware, installation instructions, maintenance of operating parts and finish, and other information necessary to show compliance with

2. Door Hardware Schedule:

a. Submit concurrent with submissions of Product Data, Samples, and Shop Drawings. Coordinate submission of door hardware schedule with scheduling requirements of other work to facilitate fabrica of other work critical in Project construction schedule.

b. Submit under direct supervision of a Door Hardware Institute (DHI) certified Architectural Hardware Consultant (AHC) or Door Hardware Consultant (DHC) with hardware sets in vertical format as illustra-

by Sequence of Format for the Hardware Schedule published by DHI. c. Indicate complete designations of each item required for each opening, include:

1) Door Index: door number, heading number, and Architect's hardware set number. Quantity, type, style, function, size, and finish of each hardware item.

3) Name and manufacturer of each item. 4) Fastenings and other pertinent information.

Location of each hardware set cross-referenced to indications on Drawings. Explanation of all abbreviations, symbols, and codes contained in schedule.

Mounting locations for hardware. B) Door and frame sizes and materials.

 Degree of door swing and handing. 10) Operational Description of openings with electrified hardware covering egress, ingress (access), fire/smoke alarm connections.

Key Schedule:

a. After Keying Conference, provide keying schedule that includes levels of keying, explanations of key system's function, key symbols used, and door numbers controlled.

b. Use ANSI/BHMA A156.28 "Recommended Practices for Keying Systems" as guideline for nomenclat definitions, and approach for selecting optimal keying system.

Provide 3 copies of keying schedule for review prepared and detailed in accordance with referenced publication. Include schematic keying diagram and index each key to unique door designations. d. Index keying schedule by door number, keyset, hardware heading number, cross keying instructions, special key stamping instructions.

expansion. Forward bitting list, key cuts and key system schematic directly to Owner, by means as Prepare key schedule by or under supervision of supplier, detailing Owner's final keying instructions t

e. Provide one complete bitting list of key cuts and one key system schematic illustrating system usage

C. Informational Submittals:

Provide Qualification Data for Supplier, Installer and Architectural Hardware Consultant. 2. Provide Product Data:

a. Certify that door hardware approved for use on types and sizes of labeled fire-rated doors complies v isted fire-rated door assemblies

D. Closeout Submittals:

b. Include warranties for specified door hardware.

1. Operations and Maintenance Data: Provide in accordance with Division 01 and include:

a. Complete information on care, maintenance, and adjustment; data on repair and replacement parts, a information on preservation of finishes.

 Catalog pages for each product. c. Final approved hardware schedule edited to reflect conditions as installed.

d. Final keying schedule e. Copy of warranties including appropriate reference numbers for manufacturers to identify project.

E. Inspection and Testing:

1. Submit written reports to the Owner and Authority Having Jurisdiction (AHJ) of the results of functional te and inspection for:

f. As-installed wiring diagrams for each opening connected to power, both low voltage and 110 volts.

a. Fire door assemblies, in compliance with NFPA 80.

b. Required egress door assemblies, in compliance with NFPA 101.

1.04 QUALITY ASSURANCE

A. Qualifications and Responsibilities:

1. Supplier: Recognized architectural hardware supplier with a minimum of 5 years documented experience supplying both mechanical and electromechanical door hardware similar in quantity, type, and quality to tha indicated for this Project. Supplier to be recognized as a factory direct distributor by the manufacturer of the primary materials with a warehousing facility in the Project's vicinity. Supplier to have on staff, a certified Architectural Hardware Consultant (AHC) or Door Hardware Consultant (DHC) available to Owner, Architec and Contractor, at reasonable times during the Work for consultation.

2. Installer: Qualified tradesperson skilled in the application of commercial grade hardware with experience installing door hardware similar in quantity, type, and quality as indicated for this Project. 3. Architectural Hardware Consultant: Person who is experienced in providing consulting services for door

meets these requirements:

a. For door hardware: DHI certified AHC or DHC.

b. Can provide installation and technical data to Architect and other related subcontractors. c. Can inspect and verify components are in working order upon completion of installation. d. Capable of producing wiring diagram and coordinating installation of electrified hardware with Architect

hardware installations that are comparable in material, design, and extent to that indicated for this Project a

4. Single Source Responsibility: Obtain each type of door hardware from single manufacturer.

B. Certifications:

1. Accessibility Requirements:

and electrical engineers.

a. Comply with governing accessibility regulations cited in "REFERENCES" article 087100, 1.02.D3 herein for door hardware on doors in an accessible route. This project must comply with all Federal Americans with Disability Act regulations and all Local Accessibility Regulations.

C. Pre-Installation Meetings

 Keying Conference a. Incorporate keying conference decisions into final keying schedule after reviewing door hardware keyin

1) Function of building, flow of traffic, purpose of each area, degree of security required, and plans for

future expansion. 2) Preliminary key system schematic diagram.

3) Requirements for key control system. 4) Requirements for access control.

5) Address for delivery of keys. D. DELIVERY, STORAGE, AND HANDLING

E. Inventory door hardware on receipt and provide secure lock-up for hardware delivered to Project site. Promptly replace products damaged during shipping. F. Tag each item or package separately with identification coordinated with final door hardware schedule, and include installation instructions, templates, and necessary fasteners with each item or package. Deliver each

article of hardware in manufacturer's original packaging. G. Maintain manufacturer-recommended environmental conditions throughout storage and installation periods. H. Provide secure lock-up for door hardware delivered to Project. Control handling and installation of hardware iter

so that completion of Work will not be delayed by hardware losses both before and after installation. I. Handle hardware in manner to avoid damage, marring, or scratching. Correct, replace or repair products damage during Work. Protect products against malfunction due to paint, solvent, cleanser, or any chemical agent.

J. Deliver keys to manufacturer of key control system for subsequent delivery to Owner.

1.05 COORDINATION

A. Coordinate layout and installation of floor-recessed door hardware with floor construction. Cast anchoring inserts

B. Installation Templates: Distribute for doors, frames, and other work specified to be factory or shop prepared. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing door hardware to comply with indicated requirements.

C. Security: Coordinate installation of door hardware, keying, and access control with Owner's security consultant. D. Electrical System Roughing-In: Coordinate layout and installation of electrified door hardware with connections to

power supplies and building safety and security systems.

1.06 WARRANTY

A. Manufacturer's standard form in which manufacturer agrees to repair or replace components of door hardware that fail in materials or workmanship within published warranty period.

1. Warranty does not cover damage or faulty operation due to improper installation, improper use or abuse. 2. Warranty Period: Beginning from date of Substantial Completion, for durations indicated in manufacturer's

a. Mechanical Warranty

published listings.

 Locks a) Schlage ND Series: 10 years Exit Devices

4) Automatic Operators

a) LCN: 2 years

a) Von Duprin: 3 years Closers a) LCN 4000 Series: 30 years

1.07 MAINTENANCE

A. Furnish complete set of special tools required for maintenance and adjustment of hardware, including changing of

B. Turn over unused materials to Owner for maintenance purposes.

2. PRODUCTS

2.01 MANUFACTURERS

A. The Owner requires use of certain products for their unique characteristics and project suitability to ensure continuity of existing and future performance and maintenance standards. After investigating available product offerings, the Awarding Authority has elected to prepare proprietary specifications. These products are specified with the notation: "No Substitute."

1. Where "No Substitute" is noted, submittals and substitution requests for other products will not be considered. B. Approval of manufacturers and/or products other than those listed as "Scheduled Manufacturer" or "Acceptable

products providing all functions and features and meeting all requirements of scheduled manufacturer's product.

Manufacturers" in the individual article for the product category shall be in accordance with QUALITY ASSURANCE article, herein. C. Approval of products from manufacturers indicated in "Acceptable Manufacturers" is contingent upon those

D. Where specified hardware is not adaptable to finished shape or size of members requiring hardware, furnish

suitable types having same operation and quality as type specified, subject to Architect's approval.

A. Fabrication

2.02 MATERIALS

1. Provide door hardware manufactured to comply with published templates generally prepared for machine, wood, and sheet metal screws. provide screws according to manufacturer's recognized installation standards for application intended.

2. Finish exposed screws to match hardware finish, or, if exposed in surfaces of other work, to match finish of this other work including prepared for paint surfaces to receive painted finish. 3. Provide concealed fasteners wherever possible for hardware units exposed when door is closed. Coordinate with "Metal Doors and Frames", "Flush Wood Doors", "Stile and Rail Wood Doors" to ensure proper

reinforcements. Advise the Architect where visible fasteners, such as thru bolts, are required.

B. Provide screws, bolts, expansion shields, drop plates and other devices necessary for hardware installation. 1. Where fasteners are exposed to view: Finish to match adjacent door hardware material.

2.03 CYLINDRICAL LOCKS - GRADE 1

A. Manufacturers and Products:

1. Scheduled Manufacturer and Product:

2. Acceptable Manufacturers and Products:

a. Schlage ND series

a. No Substitute

B. Requirements:

1. Provide cylindrical locks conforming to ANSI/BHMA A156.2 Series 4000, Grade 1, and UL Listed for 3-hour

2. Cylinders: Refer to "KEYING" article, herein. 3. Provide locks with standard 2-3/4 inches (70 mm) backset, unless noted otherwise, with 1/2-inch latch throw.

Provide proper latch throw for UL listing at pairs. 4. Provide locksets with separate anti-rotation thru-bolts, and no exposed screws. 5. Provide independently operating levers with two external return spring cassettes mounted under roses to

Provide standard ASA strikes unless extended lip strikes are necessary to protect trim. Provide electrified options as scheduled in the hardware sets. 8. Lever Trim: Solid cast levers without plastic inserts and wrought roses on both sides.

a. Lever Design: Rhodes

2.04 CYLINDERS A. Manufacturers:

prevent lever sag.

1. Scheduled Manufacturer and Product:

2. Acceptable Manufacturers and Products:

a. No Substitute

a. Match Existing

1. Provide cylinders/cores to match Owner's existing key system, compliant with ANSI/BHMA A156.5; latest revision; cylinder face finished to match lockset, manufacturer's series as indicated. Refer to "KEYING"

2.05 KEYING

B. Requirements:

A. Scheduled System:

article, herein.

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operation among the owner, his contractor and the architect. Design and construction are complex. erformed their services with due care and diligence. hey cannot guarantee perfection. Communication is mperfect and every contingency cannot be anticipated. these plans shall be reported immediately to the architect. Failure to notify the architect compounds understanding and increases construction costs. A shall relieve the architect from responsibility for the onsequences. Changes made from the plans without consent of the architect are unauthorized and shall

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consequences arriving out of such changes.

Eric Smith Associates, P.C. REVISIONS

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6/17/22

Author

Checked By: Checker **Project Phase** CONSTRUCTION

Drawn By:

Sheet Title SPECIFICATIONS

B. Requirements:

Construction Keying:

- a. Replaceable Construction Cores. 1) Provide temporary construction cores replaceable by permanent cores, furnished in accordance
 - the following requirements.
 - a) 3 construction control keys
- b) 12 construction change (day) keys. 2) Owner or Owner's Representative will replace temporary construction cores with permanent cor

Permanent Keying:

- a. Provide permanent cylinders/cores keyed by the manufacturer according to the following key system Master Keying system as directed by the Owner.
- b. Forward bitting list and keys separately from cylinders, by means as directed by Owner. Failure to co with forwarding requirements will be cause for replacement of cylinders/cores involved at no addition
- cost to Owner. c. Provide keys with the following features:
- 1) Material: Nickel silver; minimum thickness of .107-inch (2.3mm)
- 2) Patent Protection: Keys and blanks protected by one or more utility patent(s). 3) Geographically Exclusive: Where High Security or Security cylinders/cores are indicated, provid nationwide, geographically exclusive key system complying with the following restrictions.

- d. Identification: 1) Mark permanent cylinders/cores and keys with applicable blind code for identification. Do not pre-
- blind code marks with actual key cuts. 2) Identification stamping provisions must be approved by the Architect and Owner.
- 3) Stamp cylinders/cores and keys with Owner's unique key system facility code as established by manufacturer; key symbol and embossed or stamped with "DO NOT DUPLICATE" along with the "PATENTED" or patent number to enforce the patent protection.
- 4) Failure to comply with stamping requirements will be cause for replacement of keys involved at additional cost to Owner.
- 5) Forward permanent cylinders/cores to Owner, separately from keys, by means as directed by O
- e. Quantity: Furnish in the following quantities
- 1) Change (Day) Keys: 3 per cylinder/core.
- 2) Permanent Control Keys: 3. 3) Master Keys: 6.

2.06 DOOR CLOSERS

- A. Manufacturers and Products:
- Scheduled Manufacturer and Product:
- a. LCN 4010/4110/4020 series
- Acceptable Manufacturers and Products:
- a. No Substitute

2.07 OVERHEAD STOPS AND OVERHEAD STOP/HOLDERS

A. Manufacturers:

Scheduled Manufacturers:

- a. Glynn-Johnson
- 2. Acceptable Manufacturers:
- a. Rixson b. Sargent

B. Requirements:

- 1. Provide overhead stop at any door where conditions do not allow for a wall stop or floor stop presents trip;
- 2. Provide friction type at doors without closer and positive type at doors with closer.

2.08 DOOR STOPS AND HOLDERS

A. Manufacturers:

- 1. Scheduled Manufacturer:
- a. Ives
- 2. Acceptable Manufacturers:
- a. Trimco
- b. Burns c. Rockwood

B. Provide door stops at each door leaf:

- 1. Provide wall stops wherever possible. Provide concave type where lockset has a push button of thumbturr
- 2. Where a wall stop cannot be used, provide universal floor stops. 3. Where wall or floor stop cannot be used, provide overhead stop.
- 4. Provide roller bumper where doors open into each other and overhead stop cannot be used.

2.09 THRESHOLDS, SEALS, DOOR SWEEPS, AUTOMATIC DOOR BOTTOMS, AND GASKETING

A. Manufacturers:

- Scheduled Manufacturer:
- Zero International
- 2. Acceptable Manufacturers:
- a. National Guard
- b. Reese c. Legacy

d. Pemko

B. Requirements:

- 1. Provide thresholds, weather-stripping, and gasketing systems as specified and per architectural details. M finish of other items.
- 2. Smoke- and Draft-Control Door Assemblies: Where smoke- and draft-control door assemblies are required provide door hardware that meets requirements of assemblies tested according to UL 1784 and installed in compliance with NFPA 105.
- 3. Provide door sweeps, seals, astragals, and auto door bottoms only of type where resilient or flexible seal s is easily replaceable and readily available.
- 4. Size thresholds 1/2 inch (13 mm) high by 5 inches (127 mm) wide by door width unless otherwise specifier the hardware sets or detailed in the drawings.

2.10 SILENCERS

A. Manufacturers:

1. Scheduled Manufacturer:

a. Ives

- 2. Acceptable Manufacturers:
- a. Burns b. Rockwood

c. Trimco

- B. Requirements:
- Provide "push-in" type silencers for hollow metal or wood frames.
- Provide one silencer per 30 inches (762 mm) of height on each single frame, and two for each pair frame. Omit where gasketing is specified.

2.11 FINISHES

- A. FINISH: BHMA 626/652 (US26D); EXCEPT:
- Hinges at Exterior Doors: BHMA 630 (US32D)
- Aluminum Geared Continuous Hinges: BHMA 628 (US28) Push Plates, Pulls, and Push Bars: BHMA 630 (US32D)
- Protection Plates: BHMA 630 (US32D)
- Overhead Stops and Holders: BHMA 630 (US32D) 6. Door Closers: Powder Coat to Match
- Wall Stops: BHMA 630 (US32D) Latch Protectors: BHMA 630 (US32D)
- 9. Weatherstripping: Clear Anodized Aluminum 10. Thresholds: Mill Finish Aluminum

3. EXECUTION

3.01 PREPARATION

3.02 INSTALLATION

Lock Cylinders:

- A. Mount door hardware units at heights to comply with the following, unless otherwise indicated or required to comply with governing regulations.
- 1. Standard Steel Doors and Frames: ANSI/SDI A250.8.
- 2. Custom Steel Doors and Frames: HMMA 831. 3. Interior Architectural Wood Flush Doors: ANSI/WDMA I.S. 1A
- 4. Installation Guide for Doors and Hardware: DHI TDH-007-20
- B. Install door hardware in accordance with NFPA 80, NFPA 101 and provide post-install inspection, testing as specified in section 1.03.E unless otherwise required to comply with governing regulations.
- C. Install each hardware item in compliance with manufacturer's instructions and recommendations, using only fasteners provided by manufacturer. D. Do not install surface mounted items until finishes have been completed on substrate. Protect all installed
- hardware during painting. E. Set units level, plumb and true to line and location. Adjust and reinforce attachment substrate as necessary fc
- proper installation and operation. F. Drill and countersink units that are not factory prepared for anchorage fasteners. Space fasteners and anchor according to industry standards.
- G. Install operating parts so they move freely and smoothly without binding, sticking, or excessive clearance. H. Hinges: Install types and in quantities indicated in door hardware schedule but not fewer than quantity
- recommended by manufacturer for application indicated.
 - 1. Install construction cores to secure building and areas during construction period.
 - 2. Replace construction cores with permanent cores as indicated in keying section. 3. Furnish permanent cores to Owner for installation.
 - J. Key Control System: Tag keys and place them on markers and hooks in key control system cabinet, as determined by final keying schedule. K. Door Closers: Mount closers on room side of corridor doors, inside of exterior doors, and stair side of stairway

doors from corridors. Mount closers so they are not visible in corridors, lobbies and other public spaces unless

- approved by Architect. .. Closer/Holders: Mount closer/holders on room side of corridor doors, inside of exterior doors, and stair side of
- M. Thresholds: Set thresholds in full bed of sealant complying with requirements specified in Division 07 Section "Joint Sealants."
- N. Stops: Provide floor stops for doors unless wall or other type stops are indicated in door hardware schedule. Do
- not mount floor stops where they may impede traffic or present tripping hazard. O. Perimeter Gasketing: Apply to head and jamb, forming seal between door and frame.
- P. Meeting Stile Gasketing: Fasten to meeting stiles, forming seal when doors are closed.

3.03 ADJUSTING

- A. Initial Adjustment: Adjust and check each operating item of door hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate as intended. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with referenced accessibility requirements.
- 1. Spring Hinges: Adjust to achieve positive latching when door can close freely from an open position of 30
- 2. Electric Strikes: Adjust horizontal and vertical alignment of keeper to properly engage lock bolt. 3. Door Closers: Adjust sweep period to comply with accessibility requirements and requirements of authorities
- having jurisdiction. B. Occupancy Adjustment: Approximately three to six months after date of Substantial Completion, examine and

readjust each item of door hardware, including adjusting operating forces, as necessary to ensure function of doors and door hardware.

3.04 DOOR HARDWARE SCHEDULE

- A. The intent of the hardware specification is to specify the hardware for interior and exterior doors, and to establish a type, continuity, and standard of quality. However, it is the door hardware supplier's responsibility to thoroughly review existing conditions, schedules, specifications, drawings, and other Contract Documents to verify the
- suitability of the hardware specified B. Discrepancies, conflicting hardware, and missing items are to be brought to the attention of the architect with corrections made prior to the bidding process. Omitted items not included in a hardware set should be scheduled
- with the appropriate additional hardware required for proper application. C. Hardware items are referenced in the following hardware schedule. Refer to the above specifications for special
- features, options, cylinders/keying, and other requirements. D. Hardware Sets:

74400 X-43155 Version 1 Hardware Group No. 01

EA

GASKETING

r use on	Door #(s):		
11	112	113	

ovide	e each SC	GL door(s) with the following:			
TY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
	SET	INTERIOR HINGE	5BB1 (QTY, SIZE, WEIGHT, NRP AS REQ)	652	IVE
	EA	PASSAGE SET	ND10S RHO	626	SCH
	EA	WALL STOP	WS406/407CCV	630	IVE

188SBK PSA

BK

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Hardware Group No. 02 For use on Door #(s):

114

Provide QTY	e each So	GL door(s) with the following: DESCRIPTION	CATALOG NUMBER		FINISH	MFR
1	SET	INTERIOR HINGE	5BB1 (QTY, SIZE, WEIGHT, NRP AS REQ)		652	IVE
1	EA	PASSAGE SET	ND10S RHO	E	626	SCH
1	EA	SURFACE CLOSER	4111 EDA		689	LCN
1	EA	WALL STOP	WS406/407CCV	8	630	IVE
1	EA	GASKETING	188SBK PSA		BK	ZER
Hardwa	are Grou	p No. 03				
or use	e on Doo	r #(s):				
Provide QTY	e each So	GL door(s) with the following: DESCRIPTION	CATALOG NUMBER		FINISH	MFR
1	SET	INTERIOR HINGE	5BB1 (QTY, SIZE, WEIGHT, NRP AS REQ)		652	IVE
1	EA	PRIVACY LOCK	ND40S RHO		626	SCH
1	EA	WALL STOP	WS406/407CCV	S	630	IVE
1	EA	GASKETING	188SBK PSA	g .	ВК	ZER
Hardwa	are Grou	o No. 04				
or use	e on Doo	r #(s):				
Provide	e each So	GL door(s) with the following:				
QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
1	SET	INTERIOR HINGE	5BB1 (QTY, SIZE, WEIGHT, NRP AS REQ)		652	IVE
1	EA	ENTRANCE LOCK	ND53JD RHO	當	626	SCH
1	EA	FSIC CORE AS DIRECTED BY OWNER	23-030	1	626	SCH
1	EA	FSIC CORE	23-030 ICX	3	ORG	SCH
1	EA	WALL STOP	WS406/407CCV	5	630	IVE
3	EA	SILENCER	SR64	S	GRY	IVE
Hardwa	are Grou	o No. 05				
or use	e on Doo	r #(s):				
	e each So	GL door(s) with the following:	0.474.00.48.44050		enuou	MED
QTY	OFT	DESCRIPTION	CATALOG NUMBER		FINISH	MFR
1	SET	INTERIOR HINGE	5BB1 (QTY, SIZE, WEIGHT, NRP AS REQ)		652	IVE
1	EA	CLASSROOM LOCK	ND70JD RHO	重	626	SCH
1	EA	FSIC CORE AS DIRECTED BY OWNER	23-030	畫	626	SCH
1	EA	FSIC CORE	23-030 ICX		ORG	SCH
1	EA	SURFACE CLOSER	4111 SCUSH		689	LCN
_		011 511055	0004		0011	

SR64

Hardware Group No. 06 For use on Door #(s):

SILENCER

EA

Provide each SGL door(s) with the following:

SILENCER

VIG	cacii oc	at door(s) with the following.			
ΓΥ		DESCRIPTION	CATALOG NUMBER		F
	SET	INTERIOR HINGE	5BB1 (QTY, SIZE, WEIGHT, NRP AS REQ)		6!
	EA	STOREROOM LOCK	ND80JD RHO		62
	EA	FSIC CORE AS DIRECTED BY OWNER	23-030	<u> </u>	6:
	EA	FSIC CORE	23-030 ICX	=1	ORG
	EA	WALL STOP	WS406/407CCV	當	630

Hardware Group No. 07

For use on Door #(s):

Provid	e each So	GL door(s) with the following:					
QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR	
1	SET	INTERIOR HINGE	5BB1 (QTY, SIZE, WEIGHT, NRP AS REQ)		652	IVE	
1	EA	STOREROOM LOCK	ND80JD RHO	當	626	SCH	
1	EA	FSIC CORE AS DIRECTED BY OWNER	23-030		626	SCH	
1	EA	FSIC CORE	23-030 ICX		ORG	SCH	
1	EA	OH STOP	90S		630	GLY	
3	EA	SILENCER	SR64		GRY	IVE	
Hardw	are Grou	p No. 08					
For use	e on Doo	r #(s):					
Provide	e each S	GL door(s) with the following:					
QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR	
1	SET	INTERIOR HINGE	5BB1 (QTY, SIZE, WEIGHT, NRP AS REQ)		652	IVE	
1	EA	MECHANICAL KEYPAD LOCK	CIPHER LOCK MATCH				
1	EA	FSIC CORE AS DIRECTED BY OWNER	23-030		626	SCH	
1	EA	FSIC CORE	23-030 ICX		ORG	SCH	

Hardware Group No. E-05 For use

GRY

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GRY

EA

EA

WALL STOP

GASKETING

FILLER PLATE(S)

		•				
For use	e on Doo	r #(s):				
	e each So	GL door(s) with the following:			E-1 7040 J	
QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
1	SET	INTERIOR HINGE	5BB1 (QTY, SIZE, WEIGHT, NRP AS REQ)		652	IVE
1	EA	CLASSROOM LOCK	ND70JD RHO	5	626	SCH
1	EA	FSIC CORE AS DIRECTED BY OWNER	23-030		626	SCH
1	EA	FSIC CORE	23-030 ICX	重	ORG	SCH
1	EA	SURFACE CLOSER	4111 SCUSH		689	LCN
3	EA	SILENCER	SR64	重	GRY	IVE

WS406/407CCV

188SBK PSA

AT EXISTING DOORS AND FRAMES, GENERAL CONTRACTOR AND HARDWARE SUPPLIER TO FIELD VERIFY EXISTING HARDWARE CONDITIONS TO BE REUSED AND ENSURE THE COMPATIBILITY OF NEW HARDWARE WITH EXISTING PREPS PRIOR TO ORDER OF NEW MATERIALS. GENERAL CONTRACTOR TO PROVIDE NECESSARY FILLERS, REINFORCEMENTS AND FASTENERS, COMPATIBLE WITH EXISTING MATERIALS AS REQUIRED FOR MOUNTING NEW OPENING HARDWARE AND TO COVER EXISTING FRAME PREPARATIONS. Hardware Group No. SL

AS REQ

For use on Door #(s):

Provide	e each S	L door(s) with the following:			
QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFF
1	SET	BIPASS HARDWARE	200SD (SIZE AS REQ)		JOH
DETER	RMINE H	IARDWARE COMPTABILITY W	/ITH DOOR MANUFACTURER		

END OF SECTION

DIVISION 09 - FINISHES

SECTION 092900 – GYPSUM BOARD GENERAL

- A. Work includes all labor, material, and equipment necessary to completion of the following:
- Metal stud and gypsum board partitions
- 2. Structural metal studs and gypsum board as indicated 3. Acoustical batt insulation and sealants 4. Accessories and finishing
- 5. All miscellaneous drywall framing not provided under Section 09262 Gypsum Wallboard Ceilings 6. All other work normally related to the above or specified under this section. B. Comply with manufacturer's specifications and GA Documents GA-216-85 "Recommended Specifications for
- Application and Finishing of Gypsum Board." C. Environmental Requirements
- 1. Establish and maintain environmental conditions for application and finishing gypsum board to comply with ASTM C 840 and with gypsum board manufacturer's recommendations.

D. Minimum Room Temperature

- 1. For non-adhesive attachment of gypsum board to framing, maintain not less than 40 deg. F (4 deg C). For adhesive attachment and finishing of gypsum board maintain not less than 50 degrees F (10 deg C) for 48 hours prior to application and continuously thereafter until drying is complete. 2. Provide adequate ventilation to carry off excess moisture. Avoid drafts during dry, hot weather to prevent materials
- from drying to rapidly.
- PRODUCTS A. Manufacturers Subject to compliance with requirements, provide products by one of the following, or approved
 - substitution.
- American Gypsum. 2. Georgia-Pacific Building Products.
- 3. National Gypsum Company. Pabco Gypsum. 5. Temple-Inland Building Products by Georgia-Pacific.

6. United States Gypsum Company (USG).

- B. Metal Drywall Studs
- hollow metal frames; use 20 gauge studs in all partitions extending to the underside of structure. C. Stud Runners

1. Metal runner, gauge and size to match studs. Provide long leg runners for slip joint at structure above where

1. 25-gauge drywall studs; use sizes specifically called for on the drawings. Use 20-gauge studs on both sides of

indicated.

D. Runner Channels 1. 1-1/2", 16-gauge cold rolled channels.

Hat shaped metal furring channels

- E. Furring Channels

F. Drywall and related materials.

1. Gypsum Wallboard: ASTM C 36, in thickness indicated, with manufacturer's standard edges. Type X where required for fire-resistance-rated assemblies. Provide faceboard length to allow for vertical installation without

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NOTICE: DUTY OF COOPERATION

Release of these plans contemplates further cooperation among the owner, his contractor and the architect Design and construction are complex Although the architect and his consultants have performed their services with due care and diligence they cannot guarantee perfection. Communication is imperfect and every contingency cannot be anticipated. Any ambiguity or discrepancy discovered by the use of these plans shall be reported immediately to the architect. Failure to notify the architect compounds misunderstanding and increases construction costs. A failure to cooperate by a simple notice to the architect shall relieve the architect from responsibility for the consequences. Changes made from the plans without consent of the architect are unauthorized and shall

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consequences arriving out of such changes.

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Job Number: | 22016 6/17/22 Date: Drawn By: Author Checked By: Checker **Project Phase**

CONSTRUCTION **Sheet Title**

SPECIFICATIONS

G. Gypsum Board Fasteners: ASTM C 1002. H. Accessories:

- 1. Accessories for Interior Installation: Cornerbead, edge trim, and control joints complying with ASTM C 1047,
- formed from steel sheet zinc coated by hot-dip process or rolled zinc. 2. Acoustical Sealant for Exposed and Concealed Joints: Non-sag, paintable, non-staining latex sealant complying
- with ASTM C 834. 3. Sound- Attenuation Blankets: Unfaced mineral-fiber-blanket insulation complying ASTM C 665 for Type I.

3. INSTALLATION

- A. Align partitions accurately according to partition layout. Anchor runner channels to concrete slabs with concrete stub nails or power-driven anchors at 24" o.c. Anchor runner channels to ceiling grid where applicable with stove bolts. Install headers where required to receive runners where studs extend above ceiling system.
- B. Position study vertically in runners spacing all study 24" o.c. unless otherwise indicated. Anchor all study located adjacent to openings or partition intersections and corners to runners with metal lock fastener or with 1/2" Type "S" pan head screws. Locate studs no more than 2" from frame jambs, abutting partitions and corners. Anchor studs to frame anchor clips by bolt or screw attachment. Install headers over openings as recommended by the stud manufacturer.
- Provide two studs at hollow metal door jambs.
- C. Provide diagonal bracing at head of all studs that terminate above the ceiling level. Bracing shall consist of 1-1/2" cold rolled channel at 4'- 0" maximum o.c. bent to V shape and extending at 45 deg. from partition head to structure above.
- D. Provide all necessary framing, and furring for special framing at recesses, wall mounted casework, shelving, equipment, specialty items, etc. Frame around columns as indicated.
- E. Provide all necessary framing and suspensions for offsets, verticals, recesses, and all other gypsum drywall surfaces not provided under Section 09252 Gypsum Drywall Ceilings.
- F. Install furring channels over back-up material. Position channels vertically at 16" o.c. using power activated fasteners or stub hails at 24" o.c. along alternating flanges. Shim channels level as required.
- G. Place insulation in partitions tight within spaces around cut openings, behind and around electrical and mechanical items, within partitions and tight to items passing through partitions.
- 1. Provide one-inch wide clearance around ductwork and pack with fiberglass ready for caulking.
- H. Apply and finish gypsum board in accordance with GA 216.
- I. Apply gypsum wallboard panels vertically with all abutting ends and edges occurring over stud flanges or furring. Joints on opposite sides of partitions shall not occur over the same stud. Stagger joints between layers of two-layer
- J. Apply board to stude of furring with Type "S" drywall screws spaced 12" o.c. in the field of the board and 8" o.c. staggered along vertical abutting edges. Use type S-12 screws for attaching to structural studs.
- K. Install multiple layer drywall where indicated with metal corner bead applied as recommended by manufacturer at exposed outside corners
- L. Apply metal trim and corner bead as recommended by the manufacturer and wherever gypsum board abuts other
- M. Finish all joints, trim, and fastener dimples as recommended by USG Perf-A-Tape joint system and sand smooth. Acceptable Tolerances: gypsum board surface plane within 1/8" in 10'.
- N. Clip prefinished drywall panels to studs where indicated.
- Press firmly in place. Tightly butt ends of blankets leaving no voids.
- P. Gypsum Board Ceilings

O. Sound Attenuation blankets:

- 1. Erect steel framing in accordance with ASTM C574.
- 2. Install wire hangers hung from structure and spaced not over 4'- 0" in the direction of the 1-1/2" main runner channels to within 6" of the ends of the main runners or interruptions of ceiling continuity.
- 3. Place main runners not over 4'- 0" o.c., positioned and leveled with hangers saddle-tied along runners. Space furring channels at 24" o.c. at right angles to runner channels and secure with furring channel.
- 4. At light troffers or other openings, reinforce grillage with 3/4" cold rolled channels wired atop and parallel to main
- 5. Erect grillage as recommended by the manufacturer. Provide all necessary framing and suspensions for offsets,
- verticals, and decorative recesses, etc. Use drywall studs where indicated or required. See Section 09261 for
- 6. Apply gypsum board of maximum practical length with long dimensions at right angles to furring channels and fasten with drywall screws spaced 12" o.c. in the field of the board and 8" o.c. along abutting edges. All end or edge joints shall occur over furring channels with end joints staggered. Properly support gypsum board around all cutouts and openings
- Apply metal trim as recommended by the manufacturer and wherever gypsum drywall abuts other materials. 8. Finish all exposed joints, trim, and fastener dimples as recommended by the manufacturer of tape-joint system
- 4. GYPSUM BOARD FINISH: In accordance with GA-241; level 4 finish, unless otherwise indicated; Level 1 finish for concealed areas, unless a higher level of finish is required for fire-resistance-rated assemblies

SECTION 093013 - CERAMIC TILING

and sand smooth.

GENERAL

- A. Comply with the Tile Council of America Standards for installation.
- B. Submittals
- 1. Submit product data for setting and grouting materials as specified under Section 01300 Submittals. 2. Submit tile samples for verification of specified color selection.

PRODUCTS

- A. Basis-of-Design: Subject to compliance with requirements, provide products indicated on Drawings or approved substitution. Product types may include, but are not limited to the following:
- 1. Porcelain Floor Tile: Unglazed, rectified.
- 2. Porcelain Wall Tile: Unglazed, rectified. Ceramic Wall Tile: Glazed, rectified.
- 4. Large and Heavy Tiles (LHT): Tiles with at least one side greater than 15 inches and/or weighing over 5 lbs per
- 5. Quarry Tile: Unglazed square-edged quarry tile.
- B. Slip resistance: Dynamic coefficient of friction not less than 0.42 per the DCOF AcuTest contained in ANSI A137.1-
- 2012. Section 9. C. Grout: ANSI A118.7 High-performance tile grout, and ANSI A118.3 water-cleanable epoxy grout. Locations: At toilet
- and shower tile, and in areas needing high performance cleanable grout. Provide grout-release at epoxy grout D. Mortar: ANSI A118.4 Modified dry-set mortar at typical tile, and ANSI A118.15 Improved modified dry-set mortar at
- large/heavy tile (LHT), and at glass tile.
- E. Waterproofing and crack isolation: ANSI A118.10 fluid-applied membrane; Liquid-latex rubber or elastomeric polymer. Basis-of-Design: CBP, Laticrete, Mapei products.
- F. Metal Edge Strips: angle, radius, or L-shaped, height to match tile and setting-bed thickness, exposed-edge material. Basis-of-Design: Schluter.
- G. Provide bullnose ceramic tile pieces at all outside corners or exposed edges.

EXECUTION

- A. Before proceeding, the tile contractor shall examine surfaces to receive tile, setting beds, or accessories for defects or conditions adversely affecting quality and execution of the installation. Work shall not proceed until unsatisfactory conditions are corrected. Remove all curing compounds and other contaminates from concrete floors before proceeding. Report unsatisfactory conditions to General Contractor in writing with copy to Architect. Verify locations of all expansion and control joints in substrate for compliance with Article 3.4.
- B. Where required, Tile Contractor shall apply plaster leveling coat over block or concrete walls and floors before proceeding. Leveling coat shall include a binding agent.
- C. Clean concrete base slab to receive thin-set tile to remove dust, dirt and loose material. Remove curing compounds and sealers and test for absorption using water or acid methods. D. Ceramic Tile Walls and Base:
- 1. Installation over block: apply a troweled plaster leveling coat over block as required to obtain a level surface. Install wall tile using thin set method. Install, grout, clean, protect and cure in conformance with TCA Handbook
- Method W202 and ANSI A108.5 using latex Portland cement mortar. 2. Installation over Gypsum Board: install wall tile using the thin-set method. Install, grout, clean, protect, and cure in conformance with TCA Handbook Method W243 and ANSI A108.5 using latex Portland cement mortar.
- E. Comply with all requirements of TCA Handbook Method EJ171 for Expansion and control joints. F. Clean all floor and wall tile according to tile manufacturer's recommendations.

SECTION 095113 - ACOUSTICAL PANEL CEILINGS

GENERAL

- A. Design Criteria:
- 1. The lay-in panels shall have a minimum noise reduction coefficient (NRC) rating of 0.55.
- 2. The completed suspended acoustical grid ceiling system shall have a sound transmission class rating of not less
- 3. Fire rating is not required. Panels shall have a Class 25 Flame Spread rating and be rated non-combustible.

B. References:

- 1. Install acoustical materials in accordance with the requirements listed for job conditions in the current Acoustical
- Materials Association Bulletin 2. Comply with ASTM C635-86 - Metal Suspension Systems for Acoustical Tile and Lay-in Panel Ceilings and ASTM C636-86 - Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-in Panels.
- C. Do not install acoustical ceilings until dust generating activities are completed, wet work has dried, and overhead mechanical work is completed
- D. Maintain minimum of 60 deg F during and after installation of acoustical ceilings.

2. PRODUCTS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following, or approved
- 1. Armstrong World Industries, Inc.
- 2. CertainTeed Corporation. United States Gypsum Company (USG).

INSTALLATION

- A. Install suspension systems in accordance with ASTM C636 and manufacturers recommendations.
- 1. Install metal edge molding wherever the suspended grid abuts walls, columns and other vertical surfaces.
- 2. Frame around openings as required. 3. Suspend grid with hanger wires from structure above. Install hanger wires at all four corners of lay-in light fixtures and as required to provide maximum deflection of 1/360 of span and level within 1/8" in 12 feet.
- B. Exposed Grid Suspension System:
- 1. Install main T-runner on 48" centers.
- 2. To complete a 24" x 48" grid, install 48" cross T-splines 24" o.c. at right angles to main T-runners. 3. Lock T-spline intersecting moldings in place. All main T-runners and cross T-splines shall be straight in alignment
- 4. Avoid use of less than half width units at borders. 5. Install metal edge molding finished to match the T-splines at all intersections with dissimilar vertical surfaces. End
- joints for edge moldings shall occur only at T-Runners of Cross T-splines and shall have riveted connections. 6. Set edge moldings in thin bed of latex acrylic sealant to completely seal joint between edge molding and wall. Where wall irregularities occur, shim edge molding to a straight line.

C. Reflected Ceiling Plans:

- 1. Attention is directed to the reflected ceiling plans on the drawings which shall be followed in the layout of the grid. Any deviation from this drawing must be approved by the Architect.
- D. Install Lay-in panels in accordance with the manufacturer's instructions. Where required, cut units to fit. Install lay-in
- panels flush to grid. E. Where panels run continuous over tops of drywall partitions or where located in rest rooms or vestibule, provide
- permanent hold-down clips so panels fit tight to tops of partitions.
- F. On completion, all lay-in panels shall be free from defects, clean, and lying flat in the metal grid. Remove and replace dirty, defaced, scarred, or otherwise defective panels. Touch-up of scarred panels is not acceptable.

SECTION 096513 – RESILIENT BASE AND ACCESSORIES

Submit product data and samples.

- 2. Provide thermoplastic resilient rubber wall base and accessories, including floor transitions.
- 3. Apply resilient rubber wall base to walls in minimum 8 feet lengths, and at columns, pilasters, casework, and other permanent fixtures in rooms or areas where base is required. Form wall base corners from straight pieces. Install redu strips at edges of flooring at dissimilar materials and exposed concrete floors.

SECTION 096516 - RESILIENT SHEET FLOORING

1. GENERAL

- A. Section includes: Resilient sheet flooring.
- 1. Refer to finish material schedule on Drawings for selection.
- B. Performance Requirements: Provide flooring which has been manufactured, fabricated and installed to performan criteria certified by manufacturer without defects, damage, or failure.
- C. Submittals:
- 1. General: Submit listed submittals in accordance with "Conditions of the Contract" and Division 1 submittal
- Product data: Submit product data, including manufacturer's spec-data product sheet, for specified projects. 3. Shop Drawings: Submit shop drawings showing layout, profiles, and product components, including anchorag
- accessories, finish colors, patterns and textures. Samples: Submit selection and verification samples for finishes, colors, and textures.
- Quality assurance submittals: Submit the following:
- a. Test reports: Certified test reports showing compliance with specified performance characteristics and physical properties.
- b. Certificates: Product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria, and physical requirements. c. Manufacturer's Instructions: Manufacturer's installation instructions.
- 6. Manufacturer's Field Reports: Manufacturer's field reports specified herein.

D. Closeout Submittals: Submit the following:

- 1. Operation and Maintenance Data: Operation and maintenance data for installed products in accordance with Division 1 Closeout Submittals (Maintenance Data and Operation Data) section. Include methods for maintain installed products, and precautions against cleaning materials and methods detrimental to finishes and
- 2. Warranty: Warranty documents specified herein.

E. Quality Assurance:

- 1. Installer Qualifications: Installer experienced in performing work of this Section who has specialized in installa
- of work similar to that required for this project. 2. Certificate: Submit certificate indicating qualification.
- F. Mock-Ups: Install at project site a job mock-up using acceptable products and manufacturer approved installation methods. Obtain Owner's and Architect's acceptance of finish color, texture and pattern, and workmanship standa

1. Mock-Up Size; One (1) exam room. 2. Maintenance: Maintain mock-up during construction for workmanship comparison; remove and legally dispose

mock-up when no longer required, 3. Incorporation: Mock-up may be incorporated into final construction upon Owner's approval.

G. Delivery, Storage and Handling:

- 1. Ordering: Comply with manufacturer's ordering instructions and lead time requirements to avoid construction 2. Delivery: Deliver materials in manufacturer's original, unopened, undamaged containers with identification lab
- 3. Storage and Protection: Store materials protected from exposure to harmful weather conditions and at temperature and humidity conditions recommended by manufacturer.

- a. Material should be stored in areas that are fully enclosed, weathertight with the permanent HVAC system set at a uniform temperature of at least 68 degrees F (20 degrees C) for 48 hours prior to, during and after installation
- 4. Environmental Requirements/Conditions: In accordance with manufacturer's recommendations, areas to receive flooring should be clean, fully enclosed and weathertight with the permanent HVAC system operational and set at a minimum of 68 F (20 C) for a minimum of 7 days prior to, during, and 7 days after the installation. The flooring material should be conditioned in the same manner for at least 48 hours prior to the installation. Maximum temperature should not exceed 100 Degrees F after installation. Areas to receive flooring shall be adequately lighted to allow for proper inspection of the substrate, installation and seaming of the flooring, and for final
- 5. Temperature Requirements: Maintain air temperature in spaces where products will be installed for the period before, during, and after installation as recommended by manufacturer.
- a. Temperature Conditions: 68 degrees F (20 degrees C) for 7 days prior to, during and after installation.
- 6. Existing conditions: [Specify existing conditions affecting product use and installation.] 7. Field Measurements: Verify actual measurements/opening by field measurements before fabrication; show recorded measurements on shop drawings. Coordinate field measurements and fabrication schedule with

H. Sequencing and Scheduling:

construction progress to avoid construction delays.

- 1. Finishing operations: Install tile flooring after finishing operations, including painting and ceiling operations, have
- 2. Concrete Curing: Do not install tile flooring over concrete substrates until substrates have cured and are dry to bond with adhesive as determined by resilient flooring manufacturer's recommended bond, moisture test, and pH

Warranty:

1. Manufacturer's Warranty: Submit, for Owner's acceptance, manufacturer's standard warranty document executed by authorized company official. Manufacturer's warranty is in addition to, and not a limitation of, other rights owner may have under contract.

J. Maintenance:

- 1. Extra materials: Deliver to Owner extra materials from same production run as products installed. Package products with protective covering and identify with descriptive labels.
- a. Quantity: Furnish quantity of flooring units equal to 5% of amount installed. b. Delivery, Storage and Protection: Comply with Owner's requirements for delivery, storage and protection of extra materials.

PRODUCTS

A. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated on drawings, or approved substitution.

EXECUTION

- A. Compliance: Comply with manufacturer's product data, including product technical bulletins, product catalog nstallation instruction, and product carton instructions for installation.
- 1. Site Verification of Conditions: Verify substrate conditions (which have been previously installed under other
- Sections) are acceptable for product installation in accordance with manufacturer's instructions. 2. Material Inspection: In accordance with manufacturer's installation requirements, visually inspect materials prior to
- installation. Material with visual defects shall not be installed and shall not be considered as a legitimate claim. 3. Adjacent Surfaces Protection: Protect adjacent work areas and finish surfaces from damage during product installation

B. Surface Preparation:

- 1. General: Prepare floor substrate in accordance with manufacturer's instruction.
- 2. Floor Substrate: Prepare floor substrate to be smooth, rigid, flat, level, permanently dry, clean and free of foreign materials such as dust, paint, grease, oils, solvent, curing and hardening compounds, sealers, asphalt and old adhesive residue.
- 3. Concrete Floor Substrate: Concrete floor substrate shall have a minimum compressive strength of 3,500 psi. Refer to Division 3 Concrete Sections for patching and repairing crack materials, and leveling compounds with Portland cement-based compounds. Do not use or install flooring over gypsum-based leveling or patching
- a. Reference Standard: Comply with ASTM F 710 practice for preparing concrete floors and other monolithic floors to receive resilient flooring.

C. Concrete Moisture Testing:

- 1. Conduct moisture tests on all concrete floors regardless of the age, grade level or the presence of existing flooring. Conduct calcium chloride tests in accordance with ASTM F 1869. Measure the internal relative humidity of the concrete slab in accordance with ASTM F 2170. One test of each type should be conducted for every 1,000 sq. ft. of flooring. For projects less than 3,000 sq. ft., a minimum of three tests of each type should be conducted. The tests should be conducted around the perimeter of the room, at columns, and where moisture may be
- 2. Concrete moisture vapor emissions must not exceed 5.0 lbs. per 1,000 sq. ft. in 24 hrs. Concrete internal relative humidity must not exceed 75%. A diagram of the area showing the location and results of each test should be submitted to the Architect, General Contractor or end user. If any test result exceeds these limitations, the installation must not proceed until the problem has been corrected.

D. Concrete pH Test:

1. Perform pH tests on concrete floors regardless of the age or grade level. If the pH is greater than 10, it must be neutralized prior to beginning the installation.

E. Installation:

- 1. Adhesive Flooring Installation: Cut required length of flooring from roll, allowing enough material to extent up the wall 4 to 6 inches at either end. Layout and position sheet flooring so that any seams will fall at least 6 inches from underlayment joints or saw cuts in concrete substrate. Scribe and cut flooring material to shape of vertical surfaces, including walls and partitions. Apply adhesive and lay sheet flooring into wet adhesive and roll with a
- 100-pound roller. Install sheet flooring square with room axis. 2. Adhesive, Seamless Flooring Installation: Rout out seams and heat weld together with complementary colored heat welding rod of complementary composition in accordance with resilient flooring manufacturer's
- 3. Adhesive Flooring and Flash Coved Base Installation: Extend flooring up the wall in a flash-coved method to a height of 4 inches or 6 inches, as indicated.
- 4. Adhesive Material Installation: Use trowel as recommended by flooring manufacturer for specific adhesive. Spread at a rate of approximately 150 sq. ft./gal. (3.7 M2) as recommended by flooring manufacturer. Installation Techniques:
- a. Where demountable partitions and other items are indicated for installation on top of finished flooring, install flooring before these items are installed. b. Scribe, cut, fit flooring to butt tightly to vertical surfaces, permanent fixtures and built-in furniture, including
- pipes, outlets, edgings, thresholds, nosings, and cabinets. Extend flooring into toe spaces, door reveals, closets, and similar openings.
- d. Install flooring on covers for telephone and electrical ducts, and similar items occurring within finish floor areas. Maintain overall continuity of color and pattern with pieces of flooring installed on these covers. e. Do not install resilient flooring over expansion joints. Use expansion joint covers manufactured for use with
- resilient flooring. Refer to other specification Sections for expansion joint covers. Adhere resilient flooring to substrate without producing open cracks, voids, raising and puckering at joints,

telegraphing of adhesive spreader marks, of other surface imperfections in completed installation.

g. Use adhesive applied to substrate in compliance with flooring manufacturer's recommendations, including

those for trowel notching, adhesive mixing, and adhesive open and working times.

6. Roll resistant flooring as required by resilient flooring manufacturer.

- F. Finish Flooring Patterns: As selected by Architect.
- 1. Manufacturer's Field Services: Upon Owner's request and with at least 72 hours' notice, provide manufacturer's field service consisting of product use recommendations and periodic site visit for inspection of product installation in accordance with manufacturer's instructions.

2. Site Visits (Four (4): 30 days, 60 days, 6 months, 12 months after substantial completion.

H. Cleaning:

- 1. Cleaning: Remove temporary coverings and protection of adjacent work areas. Repair or replace damaged installed products. Clean installed products in accordance with manufacturer's instructions prior to Owner's acceptance. Remove construction debris from project site and legally dispose of debris.
- a. Remove visible adhesive and other surface blemishes using cleaning methods recommended by tile floor
 - manufacturer. b. Sweep and vacuum floor after installation.
- c. Do not wash floor until after time period recommended by flooring manufacturer. d. Damp mop flooring to remove black marks and soil.

Protection:

1. Protection: Protect installed product and finish surfaces from damage during construction. Remove and legally dispose of protective coverings at time of Substantial Completion.

J. Initial Maintenance Procedures:

- 1. General: Include in contract sub amount cost for initial maintenance procedures and execute procedures after
- flooring installation as recommended by flooring manufacturer. 2. Initial maintenance "Starter Kit" supplied by manufacturer. Initial maintenance to be conducted by flooring contractor.

SECTION 096519 - RESILIENT TILE FLOORING

1. GENERAL

- A. Work includes all labor, material, and equipment necessary for completion of the following:
- 1. Luxury Vinyl Tile (LVT): ASTM F 1700, solid/monolithic vinyl tile, Class II for surface decorated, and Class III for

printed film, Type A for smooth surfaces and Type B for embossed surfaces. 2. Vinyl Composition Tile Flooring (VCT): ASTM F 1700, solid/monolithic vinyl tile, Class II for surface decorated, an Class III for printed film, Type A for smooth surfaces and Type B for embossed surfaces.

B. Samples:

C. Environmental Conditions:

Submit to the Architect a full set of samples of the brand of floor tile, sheet vinyl treads, and base to be used. Samples are to be complete and up to date. Colors will not be selected until samples are received.

1. Maintain temperature in space to receive tile at minimum of 70 deg. F for not less than 24 hours before and 48

hours after installation. Following 48-hour period maintain minimum temperature of 55 deg. F until completion of

2. All surfaces to receive resilient flooring finishes shall be dry, clean, and smooth. D. Protection:

1. Protect finished work from damage by subsequent construction.

straight, tight, and flush. Tightly cement to floor.

joint or center of a tile on the center line of the area in each direction.

PRODUCTS

3. INSTALLATION

- A. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated on drawings, or approved substitution
- B. Product shall meet the requirements of Federal Specification SS-T-312B (1), Type IV, Comp. 1 and ASTM F 1066 (Class 2 - through pattern). Through grained tile patterns shall have uniform disbursement of color and texture throughout the thickness of the tile.
- C. Install tile in strict accordance with manufacturer's written instructions with conventional full-spread adhesive as recommended by the manufacturer for the specific application
- A. Tile Flooring: 1. Install in accordance with the recommendations and specifications of the tile manufacturer. Make all tile joints
- 2. Work out patterns for each floor area and cuts against all walls so cuts on opposite sides of the area are or same width. Install patterned tile in direction indicated on Drawings. 3. In order to eliminate small cuts against walls, lay out each area to determine whether pattern should start with a
- 4. Complete installation in strict accordance with the recommendations and specifications of the manufacturer of the material used.
- B. Upon completion, remove all loose, cracked, chipped, stained, or otherwise defective tile, or base and replace in a satisfactory manner.

C. Clean all surfaces using only cleaners approved by the manufacturer. Remove all mastic cement from adjoining worl

E. Protect the flooring as recommended by the manufacturer against damage from rolling loads, other trades, and the

with particular care not to damage such work. D. Dry mop and buff all tile. Perform initial maintenance on the completed installation as recommended by the flooring

placement of furniture and fixtures.

SECTION -096813 - TILE CARPETING

PRODUCTS

approved substitution. INSTALLATION

A. Comply with manufacturer's recommendations for seam locations and direction of carpet; maintain uniformity of carp

C. Lay carpet on floors with the run of the pile in the same direction of anticipated traffic. Do not change run of pile in an

direction and lay of pile. At doorways, center seams under door in closed position; do not place seams perpendicular to door frame, in direction of traffic through doorway. Do not bridge building expansion joints with continuous carpet B. Vacuum clean substrate. Spread adhesive in quantity recommended by manufacturer to ensure proper adhesion over full area of installation. Apply only enough adhesive to permit proper adhesion of carpet before initial set.

A. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated on drawings, or

- one room or from one room to the next where continuous through a wall opening. D. Extend carpet under removable flanges and furnishings and into alcoves and closets of each space. Provide cutouts where required, and bind cut edges where not concealed by protective edge guards or overlapping flanges. E. Install carpet edge guard where edge of carpet in exposed; anchor guards to substrate.
- walls and other vertical surfaces. Fit carpet snugly to walls or other vertical surfaces leaving no gaps. G. Install carpet by trimming edges, butting cuts with seaming cement, and taping and/or sewing seams to provide sufficient strength of stretching and continued stresses during life of carpet. H. Entire carpet installation is to be laid tight and flat to subfloor well fastened at edges and is to present a uniform

pleasing appearance. Ensure monolithic color, pattern and texture match within any one area. Stretch carpet to

provide smooth, ripple-free, taut, trim edges; secure to floor. Use power stretcher where carpet length is greater tha

F. Install carpet with pattern parallel to walls and borders, cut and fit carpet neatly around projections through floor and

I. Do not place heavy objects such as furniture on carpeted surfaces for a minimum of 24 hours or until adhesive is se Take adequate care to protect all adjacent work from damage or marring as a result of the work of this section K. Remove adhesive from carpet surface with manufacturer's recommended cleaning agent. Clean the carpet of all spo

L. Remove and dispose of debris and unusable scraps. Vacuum with commercial machine with face-beater element.

Remove soil. Replace carpet where soil cannot be removed. Remove protruding yarn.

M. Cut all loose threads with a sharp scissors. N. Remove all rubbish, wrapping paper, selvages, etc., from the job site. Leave all excess pieces of usable carpet with the Owner for future use. O. Provide final protection and maintain conditions, in a manner acceptable to manufacturer and installer, to ensure carpet is not damaged or deteriorated at time of Substantial Completion. Cover with non-staining paper or

polyethylene. Leave cover in place until final inspection.

with a spot remover as recommended by the manufacturer.

SECTION 099123 – INTERIOR PAINTING GENERAL

A. Work includes all labor, material, and equipment necessary to furnish and apply paints and coatings not included other sections of the specifications. See Finish Schedules for surfaces to remain unfinished. All other interior surfaces with the exception of factory finished surfaces and surfaces obviously no requiring finish (glass, flooring, stonework stainless steel, aluminum) shall be painted or finished as specified. B. Color Schedule:

SMITH QUNE 17 202/2 SED ARCHI

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ooperation among the owner, his contractor and the

architect. Design and construction are complex. Although the architect and his consultants have performed their services with due care and diligence they cannot guarantee perfection. Communication is imperfect and every contingency cannot be anticipated Any ambiguity or discrepancy discovered by the use of these plans shall be reported immediately to the architect. Failure to notify the architect compounds nisunderstanding and increases construction costs. A failure to cooperate by a simple notice to the architect shall relieve the architect from responsibility for the consequences. Changes made from the plans without

consequences arriving out of such changes. All design, documents and data prepared by Eric Smith Associates, P.C. as instruments of service shall remain property of Eric Smith Associates, P.C. and shall not be copied, changed or disclosed in any

consent of the architect are unauthorized and shall

Eric Smith Associates, P.C.

<u>REVISIONS</u>

Description

written consent of Eric Smith Associates, P.C.

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Steamboa

Job Number: 22016 6/17/22 Author Drawn By: Checked By: Checker **Project Phase**

CONSTRUCTION **Sheet Title**

SPECIFICATIONS

Sheet Number

G. Field Quality Assurance:

- 1. Color Schedule is provided on the Finish Material Schedule on the Drawings. Where use of other manufacturer's materials is permitted by the Schedule, colors must match those selected and samples will be required by the
- C. Paint and Stain Samples:
- 1. Provide two (2) 12" x 12" brush out samples of each color on the schedule on the actual materials to be painted or stained to the Architect for approval prior to commencing painting or staining work.

PRODUCTS

- A. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated on drawings, or approved substitution from one of the following:
- Benjamin Moore.
- PPG. Sherwin Williams.
- B. Interior Paint Schedule:
- 1. Gypsum Board: Eggshell, Acrylic Enamel: 2 coats over primer. 2. Ferrous Metal: Semi-Gloss, Acrylic Enamel: 2 coats over primer.

3. INSTALLATION

- A. Painting Contractor shall examine surfaces scheduled to receive paint and finishes for conditions that will adversely affect execution, permanence, or quality of work and which cannot be put into an acceptable condition through normal preparatory work. The contractor shall not proceed with surface preparation or coating application until conditions are
- suitable. Report unsatisfactory conditions in writing to the General Contractor with copy to the Architect. B. Beginning of application means acceptance of existing surfaces.
- C. Existing Surfaces:
- 1. If the surfaces are not in proper shape for painting, repair, rebuild, or refinish before proceeding with the work. Be responsible for any poor work caused by improper surfaces. The application of the first coat does not relieve the responsibility for the base. Do not apply coast on either damp or wet surfaces and in no case until the preceding coat is dry and hard.
- D. Application: Spread all materials evenly without runs or sagging of material and thoroughly brush out. Sand work
- E. Wood Doors: finish the upper and lower edges of wood doors the same as the face. Do this work after doors have been fitted and are ready for final hanging.
- F. Finish coat shall be in color selected. Tint primers to match finish coat. G. All paint or enamel is to be rolled on, using a fine nap roller so a nearly flat or orange-peel texture is obtained; if
- sprayed, surface shall be back-rolled. H. At the completion of work, remove all surplus materials, staging, rubbish; clean off all paint, varnish, and stains from
- floors, glass, walls, hardware; and leave the premises in clean condition. I. Extra paint: At the completion of paintings, deliver to the Owner one full, unopened gallon of each paint color and type used along with the color formula for each type, along with all remaining unused stock remaining from painting

DIVISION 10 – SPECIALTIES

SECTION 101423 - PANEL SIGNAGE

- GENERAL
- A. Work includes all labor, material, and equipment necessary to furnish and install interior graphic and directional signage at locations identified on the drawings.
- B. Signage supplied shall comply with the requirements of ICC/ANSI A117.1, 2003 Edition.

PRODUCTS

- A. Interior signage shall be acrylic plaques with room names, universal symbols, and shall have 1/32" raised graphics and grade II braille panels permanently bonded to 1/2" acrylic back plates.
- B. Signage shall be manufacturer's standard dimensions for text and characters required and shall be fabricated with radius corners. Colors will be selected by the Architect from manufacturer's standard offering.
- C. Signs will be installed with manufacturer's standard mechanical fastening system. D. Refer to Door Hardware Schedule on the drawings for signage locations.

operations. High performance and elastomeric coatings are not included.

- Accessible Braille Location Text Symbol Panel
- INSTALLATION
- A. Install on door to each room listed in accordance with manufacturer's written instructions.

SECTION 102600 - WALL AND DOOR PROTECTION

- GENERAL
- A. Work includes all labor, material, and equipment necessary to furnish and install wall and door protection indicated on Drawings, including:
- 1. Corner guards.
- 2. Impact resistant wall covering.
- Handrails. 4. Door protection (products other than those specified as Door Hardware).
- 1. Product data, including construction details, material descriptions, impact strength, fire-test response
- characteristics, dimensions, components, profiles, and finishes for each type of wall/door protection.
- 2. Shop Drawings: Show locations and extent. Include sections, details, and attachments to other work. 3. Samples: For each type of exposed finish required, including examples of joinery, corners, caps, and field splices.

PRODUCTS:

A. Basis-of-Design: Subject to compliance with requirements provide products indicated on Drawings, or approved

SECTION 104413 – FIRE PROTECTION CABINETS

GENERAL

- A. Work includes all labor, material, and equipment and services necessary for furnishing and installing fire extinguisher
- cabinets at locations directed by the Architect and the Fire Department AHJ. B. Obtain fire extinguisher cabinets from a single source and from a single manufacturer.

2. PRODUCTS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following, or approved
- J.L. Industries.
- Larsen's Manufacturing Company.
- B. Cabinet Types:
- 1. Recessed: exposed flat trim, one-piece combination trim and perimeter door frame overlapping surrounding wall surface. Basis-of-Design: Larsen's FS 2409-R2.
- 2. Semi-Recessed: One-piece combination trim and perimeter door frame overlapping surrounding wall return at outer edge (backbend). Basis-of-Design: Larsens FS 2409-6R.
- 3. Surface-Mounted: Cabinet box fully exposed and mounted directly on wall with no trim. Basis-of-Design: Larsens

SECTION 104416 - FIRE EXTINGUISHERS

GENERAL

- A. Work includes all labor, material, and equipment and services necessary for furnishing and installing bracket mounted
- fire extinguishers at locations directed by the Architect and the Fire Department AHJ. B. Obtain fire extinguishers and brackets from a single source and from a single manufacturer.
- C. Fire extinguishers shall be UL listed and bear the UL "Listing Mark" for type, rating, and classification of extinguisher.
- PRODUCTS
- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following, or approved

J.L. Industries.

- Larsen's Manufacturing Company.
- B. Fire Extinguisher types: 1. Portable, hand-carried, multipurpose dry-chemical type:
 - a. UL rated 2-A:10-B-C, 5lb., nominal capacity, in enameled steel container. b. UL-rated 4-A:80-B:C, 10 lb., nominal capacity, in enameled steel container.
- 2. Portable, hand-carried, wet-chemical type K, UL-rated 2-A:1-B:CLK, 1.6 gal. (6-L) nominal capacity, with

INSTALLATION

- A. Install at heights complying with applicable regulations of governing authorities.
- B. Securely fasten mounting brackets and fire extinguishers to structure, square and plumb, to comply with manufacturer's instructions.
- C. Locate as directed by the Architect and/or the Denver Fire Department. D. Leave fire extinguishers fully charged after installation.

SECTION 102800 - TOILET, BATH, AND LAUNDRY ACCESSORIES

potassium acetate in stainless-steel container.

- GENERAL
- A. Work includes all labor, material and equipment necessary for furnishing and installing accessories in toilet rooms and janitor's closets.
- MANUFACTURERS
- A. Basis-of-Design Products: Subject to compliance with requirements, provide products indicated on Drawings or
- American Specialties, Inc.

approved substitution by one of the following:

- Bobrick Washroom Equipment, Inc. Bradley Corp.
- B. Furnish concealed mounting devices and fasteners as recommended by manufacturer.
- C. Furnish exposed mounting devices and fasteners finished to match the accessories

INSTALLATION

- A. Fasten all accessories rigidly and securely to walls or toilet partitions using methods and materials recommended by
- manufacturer. B. Use concealed fastenings wherever possible.
- C. Provide anchors, bolts and other anchorages, and attach accessories securely to walls and partitions in locations as shown or directed.

<u>DIVISION 11 – EQUIPMENT</u>

SECTION 113100 - RESIDENTIAL APPLIANCES

1. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated on drawings, or approved

DIVISION 12 – FURNISHINGS

SECTION 122200 - CURTAINS AND DRAPES

1. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated on drawings, or approved

SECTION 123623.13 - PLASTIC-LAMINATE-CLAD COUNTERTOPS

1. Description: Plastic laminate over wood fiber particleboard: ANSI A208.1, Grade M-2.

SECTION 123661.16 - SOLID SURFACING COUNTERTOPS

- 1. Description: Homogenous-filled plastic resin with laminated edge, countertops.
- 2. Basis of Design: Corian.



NOTICE: DUTY OF COOPERATION Release of these plans contemplates further

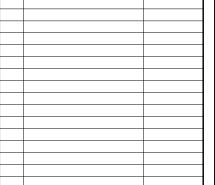
cooperation among the owner, his contractor and the architect. Design and construction are complex. Although the architect and his consultants have performed their services with due care and diligence they cannot guarantee perfection. Communication is imperfect and every contingency cannot be anticipated. Any ambiguity or discrepancy discovered by the use of these plans shall be reported immediately to the architect. Failure to notify the architect compounds misunderstanding and increases construction costs. A failure to cooperate by a simple notice to the architect shall relieve the architect from responsibility for the consequences. Changes made from the plans without consent of the architect are unauthorized and shall consequences arriving out of such changes.

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Eric Smith Associates, P.C.

<u>REVISIONS</u>

Description



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Job Number: | 22016 6/17/22 Date: Drawn By: Author Checked By: Checker

Project Phase CONSTRUCTION

Sheet Title SPECIFICATIONS

						D	oor Schedule			
Door				Door				Fran	ne	
Number	Туре	Width	Height	Thickness	Material	Finish	Hardware	Material	Finish	Comments
400	EVIOT	01 011	71 401	01 4 0/411			F 05			EVICTING
100	EXIST.	3' - 0"	7' - 10"	0' - 1 3/4"			E-05			EXISTING
101	3	3' - 0"	8' - 0"	0' - 1 3/4"	WD		05	HM	P5	CLASSROOM FUNCTION LOCKSET
102	1	3' - 0"	8' - 0"					HM	P5	CASED OPENING
103	2	6' - 0"	8' - 0"	0' - 2"	WD		SL	GYP. BD. WRAP	P1	G.C. TO PROVIDE LAMINATE TRIM TO CONCEAL TOP TRACK OF DOOR
104	1	3' - 0"	8' - 0"	0' - 1 3/4"	WD		03	НМ	P5	PRIVACY FUNCTION LOCKSET
105	2	6' - 0"	8' - 0"	0' - 2"	WD		SL	GYP. BD. WRAP	P1	G.C. TO PROVIDE LAMINATE TRIM TO CONCEAL TOP TRACK OF DOOR
106	1	3' - 0"	8' - 0"	0' - 1 3/4"	WD		06	НМ	P5	STORAGE FUNCTION LOCKSET
108	3	3' - 0"	8' - 0"	0' - 1 3/4"	WD		08	НМ	P5	CYPHER LOCK
109	1	3' - 0"	8' - 0"	0' - 1 3/4"	WD		07	НМ	P5	CYPHER LOCK
110	1	3' - 0"	8' - 0"	0' - 1 3/4"	WD		04	НМ	P5	CLASSROOM FUNCTION LOCKSET
111	1	3' - 0"	8' - 0"	0' - 1 3/4"	WD		01	HM	P5	PASSAGE FUNCTION LOCKSET
112	1	3' - 0"	8' - 0"	0' - 1 3/4"	WD		01	HM	P5	PASSAGE FUNCTION LOCKSET
113	1	3' - 0"	8' - 0"	0' - 1 3/4"	WD		01	HM	P5	PASSAGE FUNCTION LOCKSET
114	4	3' - 0"	8' - 0"	0' - 1 3/4"	WD		02	HM	P5	PASSAGE FUNCTION LOCKSET

DOOR NOTES:

- 1. SUPPLY AND INSTALL DOOR STOPS, SILENCERS, AND 3 HINGES AT NEW SWINGING DOORS.
- 2. PROVIDE LOCKSET AS NOTED IN SCHEDULE. 3. PROVIDE CLOSER ONLY WHERE NOTED IN SCHEDULE.
- 4. ALL DOOR FRAMES TO BE WELDED. K.D. FRAMES ARE NOT ACCEPTABLE.

PLAN NOTES:

GENERAL NOTES:

PROVIDE BLOCKING AT ALL WALL MOUNTED ACCESORITES, HARDWARE AND WALL HUNG CABINETRY.

VERIFY AND COORDINATE ALL REQUIREMENTS FOR OWNER FURNISHED ITEMS PRIOR TO PERFORMING ANY WORK THAT INVOLVES THOSE ITEMS.

PROVIDE PAINTED ACCESS PANELS IN WALLS AND CEILINGS AT CONCEALED ITEMS SUCH AS VALVES, CONTROLS, SWITCHES OR ANY ITEMS THAT REQUIRE ACCESS. G.C.

TO DETERMINE ACCESS PANLE LOCATIONS WITH ARCHITECT PRIOR TO INSTALLATION.

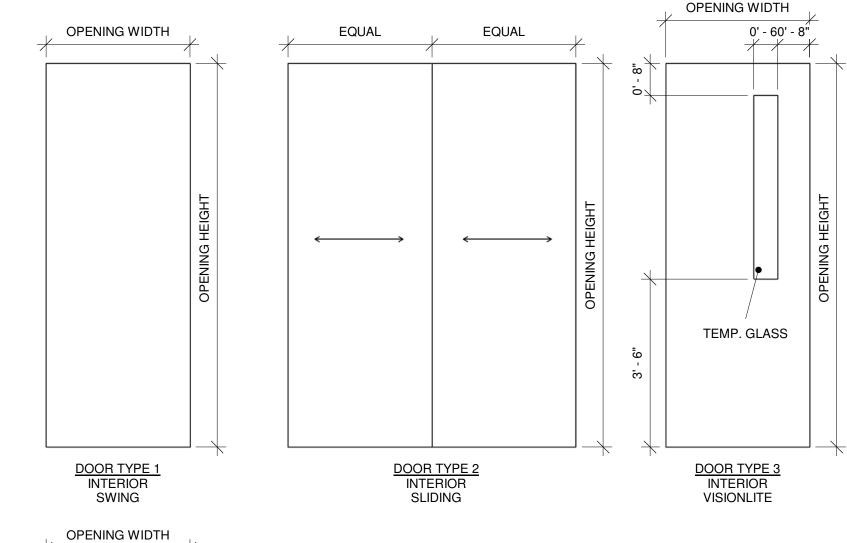
REFER TO SHEET AG003 FOR PARTIONS TYPE INFORMATION

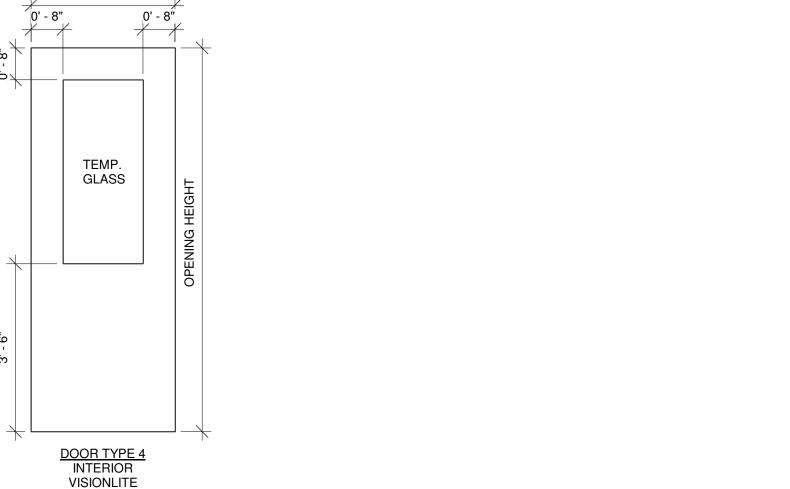
U.N.O. SET DOOR FRAME 2" FROM FINISHED FACE OF INTERSECTING WALL.

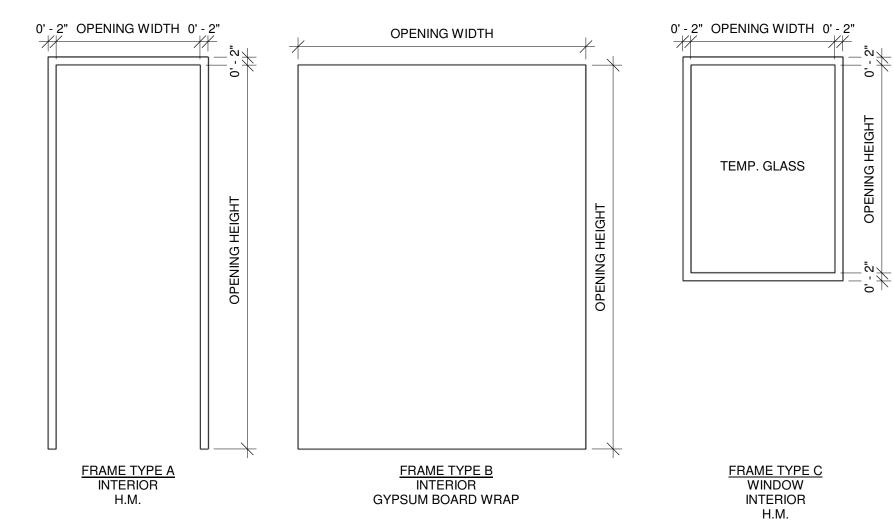
PLAN NOTES:

A. G.C. TO SUPPLY AND INSTALL 4 X 8 SHEET FIRE REDARDANT PLYWOOD. PAINT WHITE LEAVING AT LEAST ONE LABEL EXPOSED. SET BOTTOM OF SHEET AT TOP

- B. FURNITURE SUPPLIED AND INSTALLED BY OWNER.
- C. G.C. TO SUPPLY AND INSTALL (6) 12" DEEP PLASTIC LAMINATE SHLEVES ON HEAVY DUTY STANDARDS AND BRACKETS
- D. LIMITED NURSE CALL SYSTEM. G.C. TO COORDINATE WITH USERS
- E. FLOOR SINK
- F. SEMI-RECESSED ELECTRICAL PANEL
- G. CUT OPENING IN EXISTING PARTITION FOR NEW WINDOW. SUPPLY AND INSTALL TEMPERED GLASS IN ALUMINUM STOREFRONT TO MATCH BUILDING STANDARD.
- H. TRANSFORMER. RE: ELECTRICAL



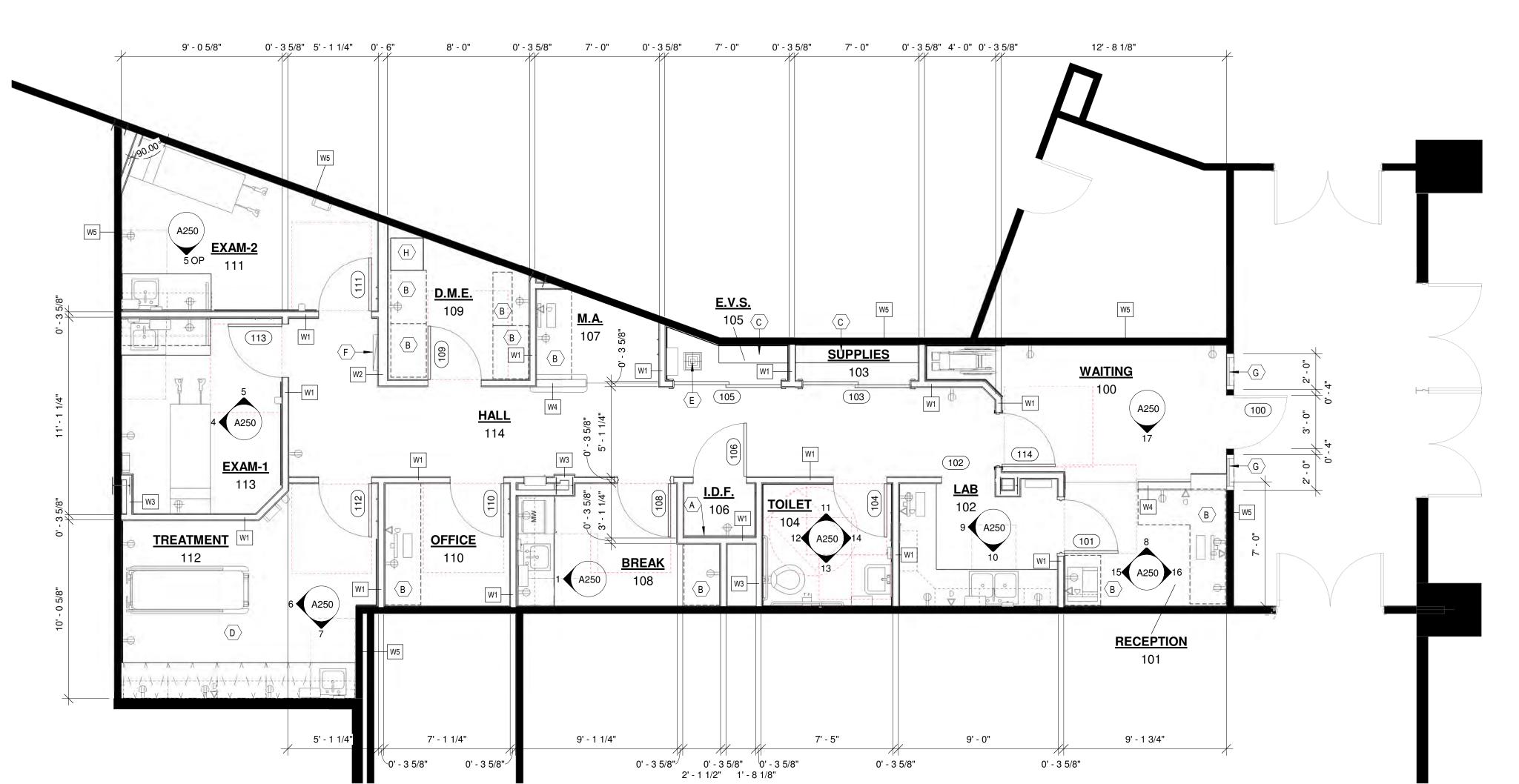




2 DOOR/WINDOW AND FRAME TYPES A111 1/2" = 1'-0"







SEE FINISH PLAN FOR ACCESSORIES AND EQUIPMENT INFORMAITON

CONSTRUCTION PLAN 1/4" = 1'-0"

NOTICE: DUTY OF COOPERATION

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architect. Design and construction are complex. Although the architect and his consultants have performed their services with due care and diligence,

they cannot guarantee perfection. Communication is imperfect and every contingency cannot be anticipated. Any ambiguity or discrepancy discovered by the use of

these plans shall be reported immediately to the architect. Failure to notify the architect compounds misunderstanding and increases construction costs. A failure to cooperate by a simple notice to the architect

shall relieve the architect from responsibility for the

consequences. Changes made from the plans without consent of the architect are unauthorized and shall relieve the architect of responsibility for all consequences arriving out of such changes.

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and shall not be copied, changed or disclosed in any form whatsoever without first obtaining the express written consent of Eric Smith Associates, P.C.

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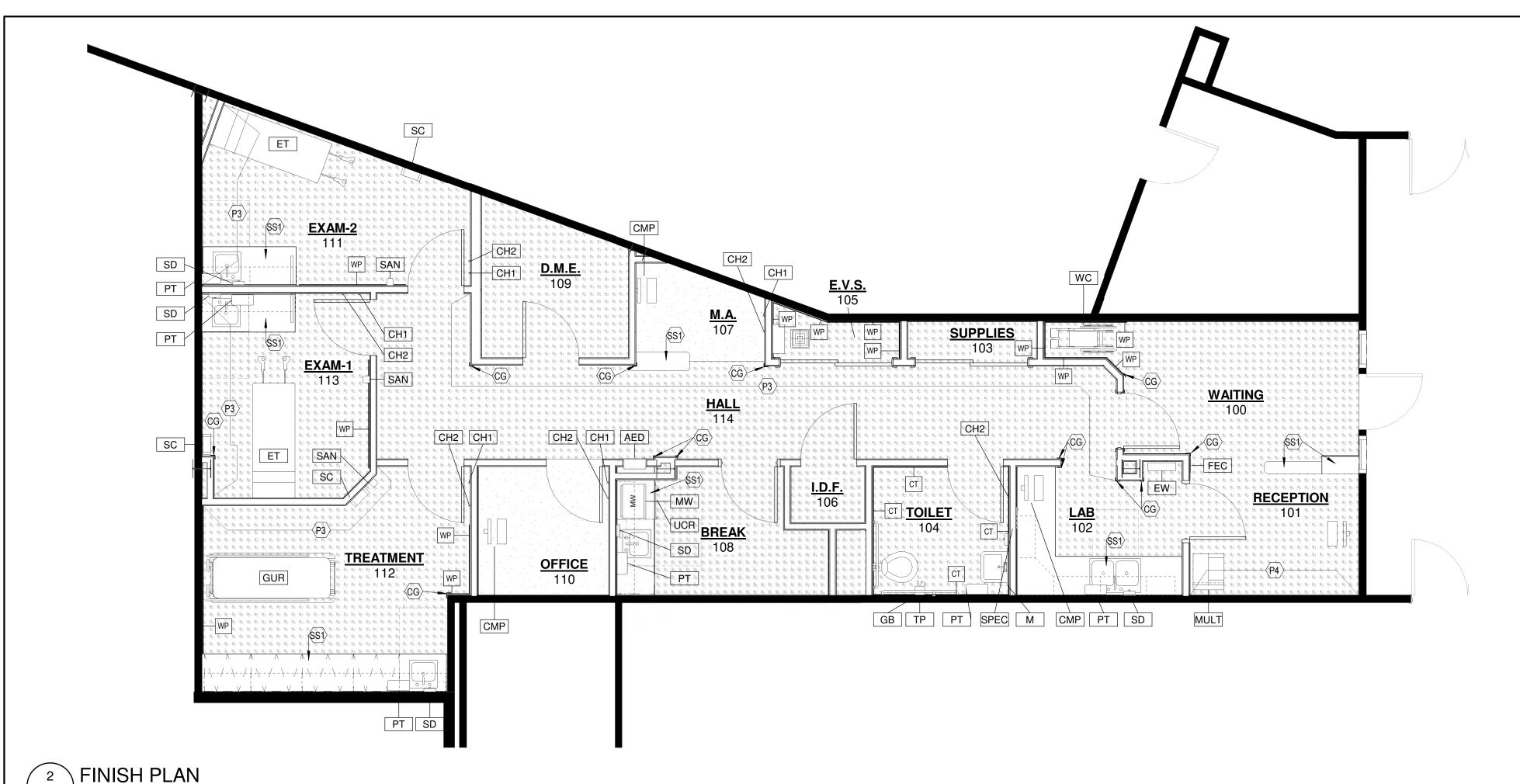
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Description

Job Number: 22016 6/17/22 Drawn By: Checked By: Checker

Project Phase CONSTRUCTION **Sheet Title**

CONSTRUCTION PLAN



A192 1/4" = 1'-0"



FLOOR:

- LVT LUXURY VINYL TILE: SHAW CONTRACT "GRAIN" 0502V DIRECT GLUE, PARCHMENT 06411 7" X 48"
- CP CARPET TILE: MANNINGTON "SOCIAL" IINKED 14199 24" X 24"

- RCB RUBBER COVE BASE: JOHNSONITE 4" COVE PEBBLE 32, ROLLED GOODS, JOB FORMED CORNERS
- PTB COVED PORCELAIN TILE: STONE SOURCE "Q-STONE" GREY 6" X 12" COVE BASE TILE

WALLS:

- P1 MAIN PAINT COLOR: SHERWIN WILLIAMS SW0050, CLASSIC LIGHT, EGGSHELL
- P2 EPOXY PAINT: SHERWIN WILLIAMS SW0050, CLASSIC LIGHT, EPOXY
- P3 ACCENT PAINT
- P4 ACCENT PAINT
- P5 PAINT DOOR FRAME: SHERWIN WILLIAMS SW7045 INTELLECTUAL GREY, SEMIGLOSS ENAMEL
- WP INPRO WALL PANELS
- PT PORCELAIN TILE: DAL TILE VOLUME 1.0, REVERB ASH VL74

CEILING:

- ACT SUSPENDED CEILING TILE IN PREFINISHED GRID
- GYP GYPSUM BOARD CEILING/SOFFIT: SHERWIN WILLIAMS SW7004 SNOWBOUND EGGSHELL

PLASTIC LAMINATE:

- PL1 NOT USED
- PL2 CABINETS: FORMICA WALNUT RIFTWOOD 9283

SOLID SURFACE:

SS1 COUNTERS: CORIAN LINEN, SATIN FINISH

CORNER GUARDS:

CG INPRO

FINISH PLAN GENERAL

ALL FLOOR MATERIAL TO BE BUTT JOINED AT TRANSITIONS ON CENTER OF DOOR WHERE APPLICABLE, UNLESS NOTED

PROVIDE EDGE PROTECTION AND TRANSITION PROFILES WHERE FLOOR MATERIAL CAHNGES AND/OR STOPS

PAINT ALL EXPOSED PIPES, AIR GRILLES, ETC. TO MATCH ADJACENT WALL COLOR.

ALL FLOORING MATERIAL TO CONTINUE UNDERCASEWORK TO TOE KICK OR TO WALL IF OPEN.

RCP GENERAL NOTES:

ALL CEILING ELEVATIONS DINENSIONED FROM FINISHED

CENTER DEVICES, SPRINKLER HEADS, ETC. IN CENTER

PROVIDE CONTINUOUS SOUND BATT INSULATION ABOVE THE TOILET ROOM.

FIRE SPRINKLER CONTRACTOR TO REFERENCE ALL DRAWINGS AND SPECIFICATIONS FOR DETERMINING COVERAGE AND HEAD LAYOUT.

FLOOR FINISH LEGEND



LUXURY VINYL TILE

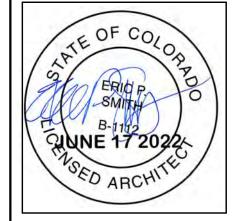


CARPET TILE

				Room Sch	iedule	
Room Number	Room Name	Floor Finish	Base Finish	Wall Finish	Ceiling Finish	Comments
100	WAITING	SV	RCB	P1/WP	ACT/GYP	ENPRO WALL PROTECTION WHERE NOTED
101	RECEPTION	CPT	RCB	P1	ACT/GYP	
102	LAB	SV	RCB	P1	ACT	
103	SUPPLIES	SV	RCB	P1	ACT	
104	TOILET	SV	CT	CT/P2	GYP	
105	E.V.S.	SV	RCB	P1/WP	ACT	ENPRO WALL PROTECTION WHERE NOTED
106	I.D.F.	SDT	RCB	P1	ACT	
107	M.A.	CPT	RCB	P1	ACT	
108	BREAK	SV	RCB	P1	ACT	
109	D.M.E.	SV	RCB	P1	ACT	
110	OFFICE	CPT	RCB	P1	ACT	
111	EXAM-2	SV	RCB	P1/WP	ACT	ENPRO WALL PROTECTION WHERE NOTED
112	TREATMENT	SV	RCB	P1/WP	ACT	ENPRO WALL PROTECTION WHERE NOTED
113	EXAM-1	SV	RCB	P1/WP	ACT	ENPRO WALL PROTECTION WHERE NOTED
114	HALL	SV	RCB	P1/WP	ACT	

Accessories Schedule					
Type Mark	Description	Manufacturer	Comments		
AED	Recessed Wall Mounted AED	Activar Construction Products Group			
CH1	Coat Hook		O.F.C.I.		
CH2	Coat Hook Accessible		O.F.C.I.		
CMP	Desk top computer.		O.F.O.I.		
DISP	Chemical Dispenser	Quattro Select	O.F.C.I.		
ET	Ritter 203 Treatment Table	Midmark	O.F.O.I.		
EW	Wall Mounted Eye wash		O.F.C.I.		
FEC	Fire Extinguisher Cabinet		C.F.C.I.		
GB	Grab Bars		C.F.C.I.		
GUR	Strecher	Hill-Rom Co.	O.F.O.I.		
М	Mirror	Bradley Corporation	C.F.C.I.		
MULT	Desk top copier.		O.F.O.I.		
MW	Microwave		O.F.O.I.		
PT	Paper Towel Dispenser	GP PRO Georgia-Pacific LLC	O.F.C.I.		
SAN	Hand Sanitizer		O.F.C.I.		
SC	Sharps Container		O.F.C.I.		
SD	Surface Mounted Soap Dispenser	Bobrick Washroom Equipment, Inc.	O.F.C.I.		
SPEC	Pass-through specimen cabinet	Bobrick Washroom Equipment, Inc.	C.F.C.I.		
TP	Toilet Paper Holder		O.F.C.I.		
UCR	Under Counter Refrigerator		O.F.O.I.		
WC	Folding patient wheelchair.		O.F.O.I.		





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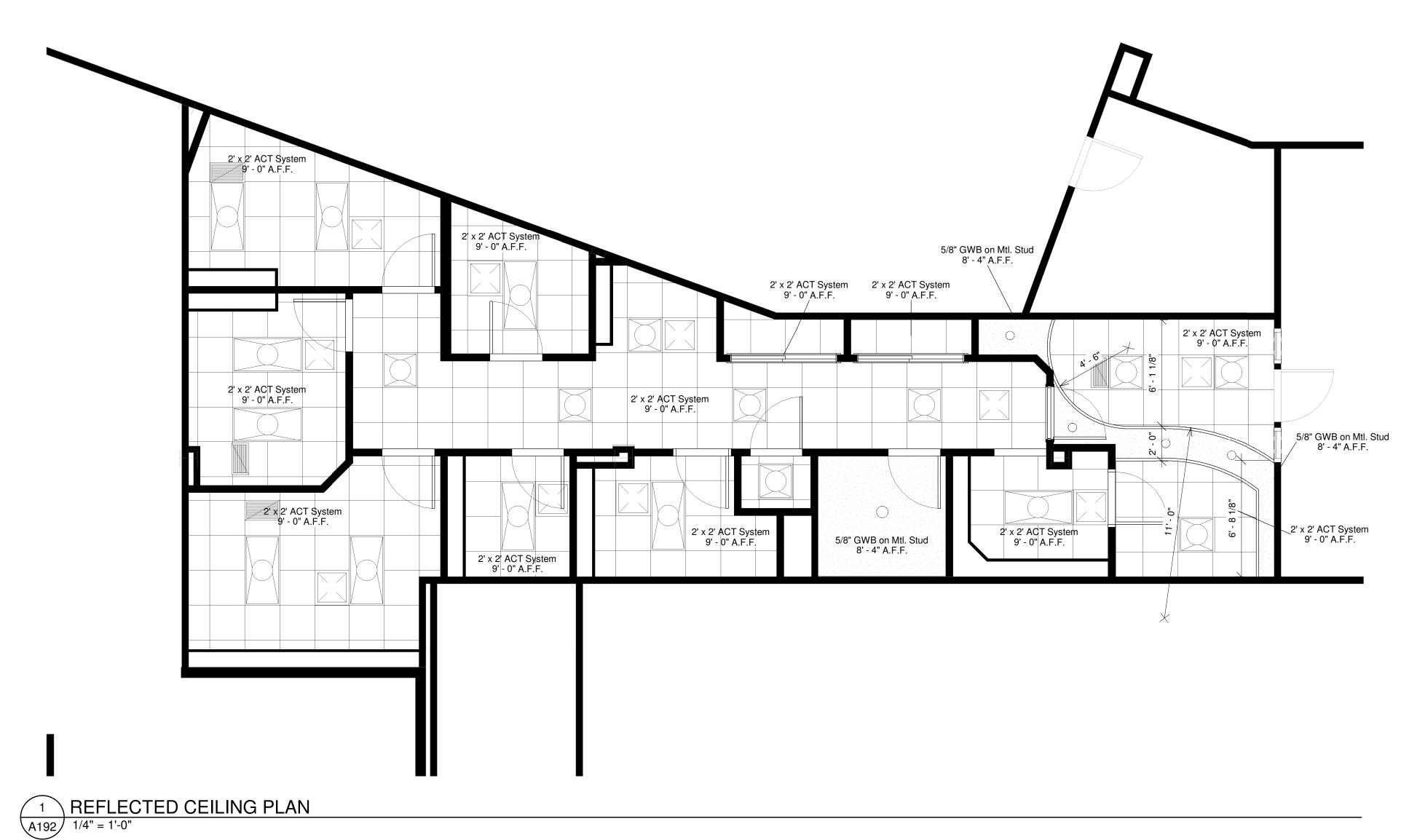
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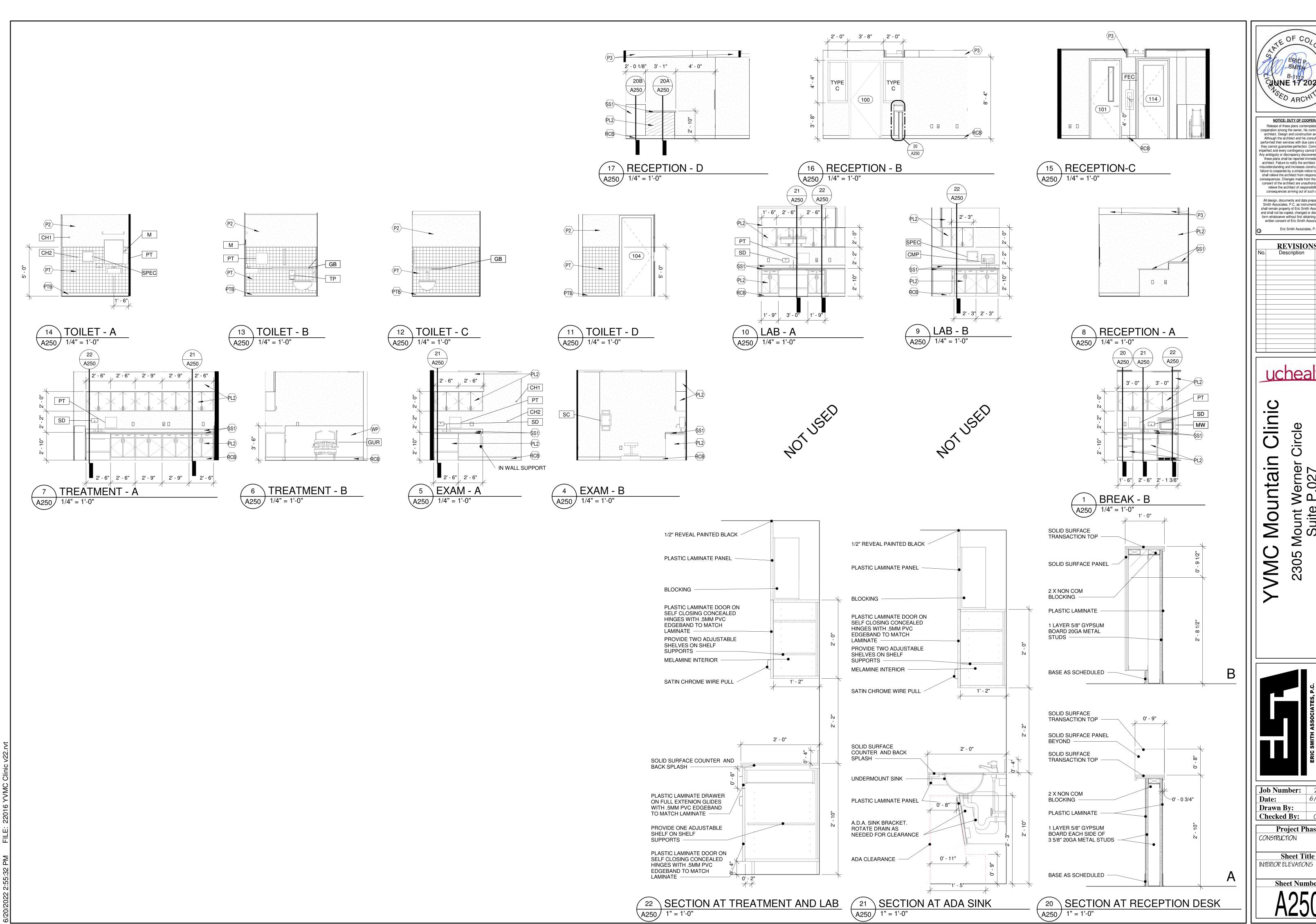
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Project Phase CONSTRUCTION

Sheet Title REFLECTED CEILING-FINISH

PLANS **Sheet Number**





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Job Number: 22016 6/17/22

Checked By: Checker **Project Phase**

Sheet Title

HVAC SPECIFICATIONS

- 1.1 GENERAL INTENT
- A. THE INTENTION OF THE CONTRACT DOCUMENTS IS TO INCLUDE ALL LABOR AND MATERIALS. AND EQUIPMENT, NECESSARY, OR REASONABLY INFERABLE AS BEING NECESSARY, FOR FURNISHING INSTALLATION AND TESTING, COMPLETE AND READY FOR SAFE OPERATION OF SYSTEM DESCRIBED
- SUBMISSION OF A PROPOSAL SHALL BE CONSTRUED AS EVIDENCE THAT THE CONTRACTOR HAS MADE A THOROUGH EXAMINATION OF THE SITE. AND ALL EXISTING CONDITIONS AND LIMITATIONS WHICH AFFECT THIS WORK LATER CLAIMS SHALL NOT BE MADE FOR LABOR, EQUIPMENT OR MATERIALS REQUIRED BECAUSE OF DIFFICULTIES ENCOUNTERED, WHICH COULD HAVE BEEN FORESEEN DURING SUCH AN FYAMINATION.
- THE DRAWINGS INDICATE DIAGRAMMATICALLY THE EXTENT, GENERAL CHARACTER, AND LOCATION OF THE WORK TO BE PERFORMED. WHERE MINOR ADJUSTMENTS OF THE WORK ARE NECESSARY FOR PURPOSES OF FABRICATION OR INSTALLATION OF ITEMS, THE CONTRACTOR SHALL MAKE SUCH ADJUSTMENTS WITH NO ADDED COMPENSATION. WHERE SUCH ADJUSTMENTS AFFECT FUNCTIONAL OR AESTHETIC DESIGN OF THE WORK. THEY SHALL FIRST BE SUBMITTED TO THE ARCHITECT FOR REVIEW AND APPROVAL.
- D. SITE UTILITIES: THE MECHANICAL DOCUMENTS INDICATE CONNECTION LOCATION OF VARIOUS BUILDING SERVICE, COORDINATE WORK WITH THE SITE UTILITIES CONTRACTOR TO ENSURE PROPER INVER' ELEVATION, PIPE SLOPE GRADIENT PIPE SIZE AND SEPARATION WITHIN TRENCH WORK. NOTIFY
- ARCHITECT OR ENGINEER OF ANY DISCREPANCY BETWEEN DRAWINGS AND FIELD CONDITIONS
 E. COMPLY WITH ALL LOCAL AND STATE CODES REGARDING SEISMIC SUPPORT AND ISOLATION. NOT ALL SEISMIC REQUIREMENTS ARE SHOWN ON THESE DRAWINGS. CONTRACTOR SHALL MEET THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION SEISMIC SUPPORT/ISOLATION OF HIS WORK.

I.2 GENERAL COORDINATION

- A. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF A SATISFACTORY COMPLETE, AND FULLY OPERATIONAL PIECE OF WORK IN ACCORDANCE WITH TRUE INTENT OF THE DRAWINGS AND
- B. CONTRACTOR SHALL CONSULT ALL DRAWING FOR THE PROJECT TO DETERMINE THAT THE WORK AND **FOUIPMENT WILL FIT AS PLANNED**
- THE LOCATION OF PIPING, DUCTS, EQUIPMENT, ETC., SHALL BE CHECKED TO ENSURE CLEARANCE FROM OPENINGS, STRUCTURAL MEMBER, CABINETS, LIGHTS, OUTLETS AND EQUIPMENT HAVING FIXED LOCATIONS. THIS SHALL BE ACCOMPLISHED PRIOR TO FABRICATION OF PIPE OR DUCTS.
- D. IF, AT ANY TIME, AND IN ANY CASE, CHANGES IN LOCATION OF PIPING, DUCTS, EQUIPMENT, ETC BÉCOMES NECESSARY DUE TO EXÍSTING OBSTACLES OR INSTALLATION OF OTHER TRADES SHOWN ON ANY OF THE PROJECT DRAWINGS AND SUCH CONFLICT COULD HAVE BEEN AVOIDED BY PROPER COORDINATION BETWEEN TRADES OR PROPER PRE-PLANNING OF WORK, SUCH REQUIRED CHANCES SHALL BE MADE BY THE CONTRACTOR AT NO EXTRA COST. THESE CHANCES ARE TO BE RECORDED ON THE RECORD DRAWINGS
- THIS CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL INCIDENTAL ELECTRICAL INTERCONNECTIONS. CONTROL WIRING ETC., WHICH ARE NECESSARY FOR SYSTEM COMPLETION AND WHICH ARE NOT SPECIFICALLY SHOWN OR OTHERWISE INDICATED ON THE ELECTRICAL DRAWINGS OR SPECIFIED IN
- F. ALL ELECTRICAL WORK INCIDENTAL TO OR ACCOMPLISHED UNDER THIS DIVISION SHALL COMPLY WITH ALL REQUIREMENTS OF DIVISION 26.
- G. PLANS ARE DIAGRAMMATIC IN NATURE. CONTRACTOR IS RESPONSIBLE FOR REFERRING TO THE DESIGN DOCUMENTS FOR ALL OTHER DISCIPLINES FOR PROJECT CONSTRUCTION AND OTHER DETAILS WHICH AFFECT THE MECHANICAL INSTALLATION. CONTRACTOR SHALL CONFER WITH ALL OTHER TRADES FOR FINISH ADJACENT TO ITS WORK AND ARRANGE TO HAVE VISIBLE PORTIONS OF THIS WORK (SUCH AS ACCESS DOORS, VALVES, SPRINKLER HEADS, ESCUTCHEONS, ETC.) MERGE WITH THE FINISH IN A MANNER SATISFACTORY TO THE ARCHITEC
- H. CONTRACTOR SHALL IDENTIFY ALL SERVICEABLE ITEMS (VALVES, DAMPERS, COILS, ETC.) SO THAT THE CEILING SUBCONTRACTOR MAY KNOW WHERE TO INSTALL ACCESS-TYPE PANELS SHOULD A LIFT-UP TYPE CEILING NOT BE INSTALLED. THIS CONTRACTOR SHALL PROVIDE ACCESS PANELS FOR HIS WORK UNLESS SPECIFICALLY NOTED ON THE DRAWINGS. ARCHITECT SHALL APPROVE LOCATIONS OF ACCESS PANELS PRIOR TO INSTALL ATION CEILING HEIGHTS: ARCHITECTURAL DRAWINGS SHALL BE CHECKED FOR CEILING HEIGHTS, WALLS, AND CABINETS THAT ARE INTENDED TO CONCEAL WORK OF THIS SECTION. WHERE CONFLICTS OCCUR, THE ARCHITECT SHALL BE NOTIFIED PRIOR TO INSTALLATION OF THE WORK. LOCATION OF EXPOSED WORK
- SUCH AS LIGHTS, DIFFUSERS, SPEAKERS, SPRINKLER HEADS TAKE PRECEDENCE OVER CONCEALED J. CONTRACTOR SHALL EXERCISE CARE TO MINIMIZE ANY DISTURBANCE TO ADJACENT AREAS OF THE BUILDING WHICH ARE TO REMAIN IN OPERATION. ISOLATE WORK AREAS BY TEMPORARY PARTITIONS,
- TARPS, ETC., TO KEEP DUST AND DIRT IN THE CONSTRUCTION AREA. K. PROVED ALL NECESSARY FLASHING, SEALING, ETC., TO MAINTAIN THE WATERPROOF INTEGRITY OF THE BUILDING AS REQUIRED BY THE INSTALLATION OR REMOVAL OF ITEMS AS REQUIRED BY THIS SCOPE OF
- L. INSTALL ALL WORK OF THIS SCOPE TO BE READILY ACCESSIBLE FOR OPERATION, MAINTENANCE, AND REPAIR. MINOR DEVIATIONS FROM THE DRAWINGS MAY BE MADE TO ACCOMPLISH THIS, BUT CHANGES INVOLVING OTHER TRADES MAY NOT BE MADE WITHOUT PRIOR APPROVAL.
- M. ALL PENETRATIONS MADE THROUGH RATED ASSEMBLIES TO ACCOMMODATE WORK OF THIS SECTION, MUST BE SEALED TO MAINTAIN THE RATING OF SUCH ASSEMBLY BY A U.L. RECOGNIZED SEALING
- N. PROVIDE ALL CUTTING AND PATCHING REQUIRED FOR INSTALLATION OF THIS WORK. COORDINATE ALL BLOCKING, SUPPORT, ETC., NECESSARY FOR THE INSTALLATION OF THIS WORK WITH THE GENERAL

1.3 CODES, STANDARDS, PERMITS, AND FEES

A. ALL APPLICABLE CODE LAWS AND REGULATIONS GOVERNING OR RELATING TO ANY PORTION OF THIS WORK ARE HEREBY INCORPORATED INTO AND MADE A PART OF THESE SPECIFICATIONS. THEIR PROVISIONS SHALL BE CARRIED OUT BY THE CONTRACTOR WHO SHALL INFORM THE ARCHITECT IN WRITING PRIOR TO SUBMITTING A BID, OF ANY WORK OR MATERIALS WHICH VIOLATE ANY OF THE ENFORCED LAWS, CODES, OR REGULATION. IF THE CONTRACTOR PERFORMS ANY WORK CONTRARY O SUCH LAWS. ORDINANCES. RULES AND REGULATIONS HE SHALL ASSUME FULL RESPONSIBILITY. AND SHALL BEAR ALL COSTS ASSOCIATED WITH BRINGING WORK INTO COMPLIANCE.

3. WHERE DRAWING OR SPECIFICATIONS CALL FOR MATERIAL OR CONSTRUCTION OF A BETTER QUALITY

- OR HIGHER CAPACITY THAN REQUIRED BY THE ABOVE-MENTIONED CODES AND STANDARDS, THE PROVISIONS OF THE DRAWINGS OR SPECIFICATIONS SHALL TAKE PRECEDENCE OVER THE REQUIREMENTS OF THE CODES AND STANDARDS.

 C. THE RESPECTIVE SUB-CONTRACTOR, AT HIS EXPENSE, SHALL OBTAIN ALL PERMITS AND FEES
- REQUIRED FOR THIS SCOPE OF WORK ON THIS PROJECT. THE SUB-CONTRACTORS SHALL ALSO SCHEDULE ALL REQUIRED INSPECTIONS AND OBTAIN CERTIFICATES FOR HIS WORK, AT HIS EXPENSE.
- D. THE FOLLOWING SPECIFIC STANDARDS SHALL BE CONSIDERED AS MINIMUM REQUIREMENTS FOR WORK OF THIS SECTION: 1. DUCTWORK: ALL DUCTWORK SHALL BE FABRICATED AND INSTALLED PER THE PUBLISHED
- OF THE AMERICAN SOCIETY OF HEATING, REFRIGERATION, AND AIR CONDITIONING ENGINEERS (ASHRAE) AND THE SHEET METAL AND AIR CONDITIONING NATIONAL ASSOCIATION (SMACNA), AND MEET THE REQUIREMENTS OF NEPA 90 AND NEPA 91

2 FILTERS: ALL FILTER MEDIA SHALL BE UL CLASS 2. 1.4 SUBMITTALS AND SUBSTITUTIONS

MULTIPLE AND VARIED SUBMITTALS WILL BE REJECTED.

- A. SUBMITTAL MATERIALS SHALL BE COMPLETE IN EVERY RESPECT AND SHALL CLEARLY INDICATE EQUIPMENT FEATURES, DIMENSIONS, WEIGHTS, PERFORMANCE CHARACTERISTICS, AND CAPACITIES. CAPACITY AND PERFORMANCE CALCULATIONS SHALL BE ADJUSTED TO INDICATE ACTUAL EQUIPMENT PERFORMANCE AT THE PROJECT ELEVATION. LITERATURE OR DRAWINGS THAT DESCRIBE MORE THAN ONE MODEL OR SIZE OF EQUIPMENT SHALL BE MARKED WITH ARROWS OR OTHERWISE CLEARLY INSCRIBED TO IDENTIFY THE ACTUAL EQUIPMENT THAT WILL BE FURNISHED. ALL OPTIONS AND SPECIAL PARTS OF FEATURE SHALL ALSO BE CLEARLY IDENTIFIED. ALL SUBMITTED MATERIALS MUST BE CLEAR, COMPLETE AND LEGIBLE. ALL SUBMITTALS OF THIS SCOPE MUST BE SUBMITTED AT ONE TIME;
- B. SUBMITTALS FOR ALL EQUIPMENT SHALL BE ROUTED THROUGH AND REVIEWED BY THE CONTRACTOR THE CONTRACTOR SHALL CHECK ALL SUBMITTALS FOR ADEQUATE IDENTIFICATION, CORRECTNESS, AND COMPLIANCE WITH CONTRACT DRAWINGS AND SPECIFICATIONS AND APPLY A STAMP OF APPROVAL. FOR SUBMITTALS THAT ARE REQUIRED TO BE REVIEWED BY THE ENGINEER, A DIGITAL COPY SHALL BE
- AND APPROVAL BY THE CONTRACTOR. THESE SHALL BE RETURNED AND SHALL BE REVISED AND RESUBMITTED UNTIL ACCEPTED BY THE ENGINEER. PROVIDE PRODUCT DATA FOR EACH PIECE OF EQUIPMENT/COMPONENT LISTED BELOW:
- AIR MOVING EQUIPMENT GRILLES, REGISTERS, AND DIFFUSERS.
- EXHAUST HOODS 4. WHERE SEISMIC SUPPORT IS REQUIRED BY CODES, PROVIDE SHOP DRAWINGS AND SUPPORTING CALCULATIONS IN ACCORDANCE WITH THE ASCE 7 CHAPTER 13. CALCULATIONS AND SHOP DRAWINGS SHALL BE SIGNED AND SEALED BY A LICENSED ENGINEER IN THE STATE IN WHICH THE PROJECT SITE
- C. APPROVED MANUFACTURERS, WHICH MAY SUBMIT EQUAL PRODUCT TO THOSE SPECIFIED, ARE LISTED IN THE EQUIPMENT SCHEDULES. ANY SUBMITTAL FOR CONSIDERATION AS AN EQUAL TO THAT SCHEDULED MUST CONTAIN ALL INFORMATION REQUIRED TO EVALUATE THIS CLAIM. MANUFACTURERS NOT LISTED AS EQUAL MUST SUBMIT IN WRITING FOR REVIEW FIVE DAYS PRIOR TO BID CLOSING. CONTRACTOR IS RESPONSIBLE TO ASSURE ANY SUBSTITUTED ITEM MEETS ALL PHYSICAL AND PERFORMANCE REQUIREMENTS AS INTENDED IN THE DESIGN DOCUMENTS.
- D. APPROVAL SUBMITTALS BY THE ENGINEER SHALL NOT RELIEVE THE CONTRACTOR FROM RESPONSIBILITY FOR DEVIATIONS FROM DRAWINGS OR SPECIFICATIONS, NOR SHALL IT RELIEVE HIM FROM RESPONSIBILITY FOR ERRORS IN
- SHOP DRAWINGS OR OTHER SUBMITTAL LITERATURE. E. CONTRACTOR HAS SOLE RESPONSIBILITY TO COORDINATE ANY SUBSTITUTIONS WITH ALL OTHER DISCIPLINES. EQUIPMENT OF GREATER POWER. DIMENSIONS, CAPACITIES, AND RATINGS MAY BE FURNISHED PROVIDED SUCH PROPOSED EQUIPMENT IS APPROVED IN WRITING AND CONNECTING MECHANICAL AND ELECTRICAL SERVICES, CIRCUIT BREAKERS, CONDUIT, MOTORS, BASES, AND EQUIPMENT SPACES ARE INCREASED. NO ADDITIONAL COSTS WILL BE ACCEPTED FOR THESE INCREASED. NO ADDITIONAL COSTS WILL BE ACCEPTED FOR THESE INCREASES. IF LARGER EQUIPMENT IS PROVIDED. IF MINIMUM ENERGY RATINGS OR EFFICIENCIES OF THE EQUIPMENT ARE SPECIFIED. THE EQUIPMENT MUST MEET THE DESIGN REQUIREMENTS AND COMMISSIONING REQUIREMENTS. DESIGN OF ELECTRICAL REQUIREMENTS IS BASED ON MECHANICAL EQUIPMENT SPECIFIED. MECHANICAL SHALL COORDINATE WITH ELECTRICAL CONTRACTOR IF EQUIPMENT PURCHASED IS DIFFERENT FROM THAT SPECIFIED STILL MEETS DESIGN INTENT. INCLUDING BUT NOT LIMITED TO OVERCURRENT PROTECTION. LOCAL DISCONNECTION MEANS, WIRE SIZING, AND DESIGN COSTS.

1.5 DELIVERY, STORAGE AND HANDLING

- A. DELIVER PRODUCTS TO THE PROJECT PROPERLY IDENTIFIED WITH NAMES, MODEL NUMBERS, TYPES,
- GRADES, COMPLIANCE LABELS, AND OTHER INFORMATION NEEDED FOR IDENTIFICATION. B. ALL MECHANICAL EQUIPMENT AND MATERIAL ITEMS SHALL BE PROTECTED FROM WEATHER AND VANDALISM PRIOR TO ACTUAL INSTALLATION. FAN WHEELS, PUMPS AND OTHER ROTATING MACHINERY SHALL BE PERIODICALLY ROTATED DURING STORAGE. ANY FACTORY PAINTED EQUIPMENT SCRATCHED OR MARRED DURING SHIPMENT OR CONSTRUCTION SHALL BE RESTORED TO ORIGINAL. "NEW" CONDITION THIS INCLUDES COMPLETE REPAINTING OF THE EQUIPMENT IF NECESSARY TO PROVIDE EXACT PAINT
- C. CONTRACTOR IS RESPONSIBLE FOR RECEIVING AND OFFLOADING EQUIPMENT OF HIS SCOPE. IMMEDIATELY UPON RECEIPT, CONTRACTOR SHALL INSPECT ALL EQUIPMENT AND MATERIAL FOR SHIPPING DAMAGE AND REPLACE ANY DEFECTIVE ITEMS AT NO INCREASE TO CONTRACT AMOUNT.

1.6 SEQUENCING AND SCHEDULING

- A. COORDINATE MECHANICAL EQUIPMENT INSTALLATION WITH OTHER BUILDING COMPONENTS PRIOR TO
- ORDERING OR FABRICATION OF ADJOINING WORK. B. COORDINATE THE INSTALLATION OF REQUIRED SUPPORTING DEVICES AND SET SLEEVES IN POURED-IN-PLACE CONCRETE AND OTHER STRUCTURAL COMPONENTS AS THEY ARE CONSTRUCTED. ARRANGE FOR CHASES, SLOTS, AND OPENINGS IN BUILDING STRUCTURE DURING PROGRESS OF CONSTRUCTION TO ALLOW FOR MECHANICAL INSTALLATIONS.
- C. SEQUENCE, COORDINATE AND INTEGRATE INSTALLATIONS OF MECHANICAL MATERIALS AND EQUIPMENT FOR EFFICIENT FLOW OF WORK. COORDINATE INSTALLATION OF LARGE EQUIPMENT REQUIRING POSITIONING PRIOR TO CLOSING IN THE BUILDING.
- D. COORDINATION CONNECTION OF MECHANICAL SYSTEMS WITH EXTERIOR UNDERGROUND AND OVERHEAD UTILITIES AND SERVICES. COMPLY WITH REQUIREMENTS OF GOVERNING REGULATIONS, FRANCHISED SERVICE COMPANIES, AND CONTROLLING AGENCIES. COORDINATE CONNECTION OF ELECTRICAL SERVICES
- E. PROVIDE IDENTIFICATION OF ALL EQUIPMENT. COORDINATE INSTALLATION OF IDENTIFYING DEVICES AFTER COMPLETING COVERING AND PAINTING WHERE DEVICES ARE APPLIED TO SURFACES. INSTALL IDENTIFYING DEVICES PRIOR TO INSTALLING ACOUSTICAL CEILINGS AND SIMILAR CONCEALMENT.

1.7 PROJECT CLOSE-OUT

- A. CONTRACTOR SHALL FURNISH A WRITTEN GUARANTEE TO REPLACE OR REPAIR ANY DEFECTS IN WORKMAN SHIP OR EQUIPMENT, WHICH DEVELOP WITHIN ONE YEAR FROM ACCEPTANCE BY THE
- B. CONTRACTOR SHALL MAINTAIN A REDLINE SET OF CONSTRUCTION DRAWINGS SHOWING DEVIATION BETWEEN THE DRAWINGS AND INSTALLED CONDITIONS. THESE SHALL BE PROVIDED OVER TO THE OWNER AT ACCEPTANCE OF THE WORK
- C. PROVIDE THREE (3) COMPLETE SETS OF OPERATION AND MAINTENANCE MANUALS. THESE ARE TO INCLUDE ALL EQUIPMENT CUT-SHEETS, MANUFACTURER RECOMMEND MAINTENANCE PROCEDURES, MANUFACTURERS WARRANTEE INFORMATION, AND CONTRACTORS WARRANTEE LETTER AND CONTACT
- D. PROVIDE THREE (3) REVIEWED BALANCE REPORTS OF WATER AND AIR SYSTEMS AS APPLICABLE. E. CONTRACTOR SHALL INSTRUCT THE OWNER ON THE OPERATION AND MAINTENANCE OF ALL SYSTEMS PROVIDE UNDER THIS CONTRACT.

2.1 GENERAL

A. DUCT DIMENSIONS SHOWN ON PLANS ARE NET FREE AREA.

B. ROUND ELBOWS MUST HAVE A CENTERLINE RADIUS OF NO LESS THAN 1.5 TIMES THE DIAMETER OF THE ELBOW. SQUARE ELBOWS SHALL HAVE TURNING VANES. C. ALL DUCTWORK EXPOSED TO VIEW SHALL BE ROUND OR OVAL SPIRAL.

2.2 DUCTWORK MATERIALS

- A. COMPLY WITH SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS--METAL AND FLEXIBLE" FOR ACCEPTABLE MATERIALS, MATERIAL THICKNESS, AND DUCT CONSTRUCTIONS METHODS, UNLESS OTHERWISE INDICATED. SHEET METAL MATERIALS SHALL BE FREE OF PITTING, SEAM MARKS, ROLLER MARKS, STAINS, DISCOLORATIONS, AND OTHER IMPERFECTIONS, UNLESS STATED OTHERWISE, ALL DUCTWORK TO BE 26 GAUGE MINIMUM.
- B. GALVANIZED SHEET STEEL: LOCK-FORMING QUALITY; COMPLYING WITH ASTM A 653/A 653M AND HAVING G90 (Z275) COATING DESIGNATION; DUCTS SHALL HAVE MILL-PHOSPHATIZED FINISH FOR SURFACES EXPOSED TO VIEW.

2.3 INSULATION AND LINER

- 1. FIRE- HAZARD CLASSIFICATION: MAXIMUM FLAME-SPREAD INDEX OF 25 AND SMOKE-DEVELOPED INDEX OF 50 WHEN TESTED ACCORDING TO ASTM E 84.
- INSULATION SCHEDULE: a. OUTSIDE THE BUILDING THERMAL ENVELOPE
- 1) INSULATE ALL SUPPLY AND RETURN DUCTS TO R-8 b. INSIDE THE BUILDING THERMAL ENVELOPE
- INSULATE SUPPLY AIR DUCTS TO R-6. INSULATE RETURN AIR DUCTS TO R-6.
- 3) INSULATE OUTSIDE AIR DUCTS TO R-8 WITH CLOSED CELL INSULATION TO PREVENT CONDENSATION
- B. DUCT INSULATION: MINERAL OR GLASS FIBERS BONDED WITH A THERMOSETTING RESIN. COMPLY WITH ASTM C 553, TYPE II AND ASTM C 1290, TYPE III WITH FACTORY-APPLIED FSK JACKET.
- C. FIBROUS-GLASS LINER: COMPLY WITH NFPA 90A OR NFPA 90B AND WITH NAIMA AH124. MATERIALS: ASTM C 1071; SURFACES EXPOSED TO AIRSTREAM SHALL BE COATED TO PREVENT
 - EROSION OF GLASS FIBERS. a. THICKNESS: 1" LINER ADHESIVE: COMPLY WITH NFPA 90A OR NFPA 90B AND WITH ASTM C 916.
- MECHANICAL FASTENERS: GALVANIZED STEEL SUITABLE FOR ADHESIVE ATTACHMENT. MECHANICAL ATTACHMENT, OR WELDING ATTACHMENT TO DUCT WITHOUT DAMAGING LINER WHEN APPLIED AS RECOMMENDED BY MANUFACTURER AND WITHOUT CAUSING LEAKAGE IN DUCT. D. FIRE-RATED INSULATION SYSTEM: HIGH-TEMPERATURE, FLEXIBLE, BLANKET INSULATION WITH FSK
- JACKET THAT IS UL TESTED AND CERTIFIED TO PROVIDE REQUIRED FIRE RATING.
- E. REFRIGERANT PIPING INSULATION FLEXIBLE ELASTOMERIC, MIN. 1" THICK R-6. PROTECT EXPOSED INSULATION WITH ALUMINUM JACKET.
- F. SEALANT: DUCTS, AIR HANDLERS AND FILTER BOXES SHALL BE SEALED WITH AN APPROVED SEALANT. COMPLY WITH R403.3.2 OF THE IECC. SEALANT SHALL BE HERCULES MTS100 OR EQUAL.

2.4 DUCT ACCESSORIES

- A. STANDARD VOLUME DAMPERS: SINGLE OR OPPOSED-BLADE DESIGN, STANDARD LEAKAGE RATING, AND SUITABLE FOR HORIZONTAL OR VERTICAL APPLICATIONS. SHAFTS TO BE FULL LENGTH, GALVANIZED STEEL, WITH ZINC-PLATED, DIE-CAST CORE WITH DIAL AND HANDLE MADE OF 3/32-INCH-THICK ZINC-PLATED STEEL, AND A 3/4-INCH HEXAGON LOCKING NUT. INCLUDE CENTER HOLE TO SUIT DAMPER OPERATING-ROD SIZE. INCLUDING ELEVATED PLATFORM FOR INSULATED DUCT MOUNTING.
- B. FLEXIBLE CONNECTORS: FLAME-RETARDANT OR NONCOMBUSTIBLE FABRICS, COATINGS, AND ADHESIVES COMPLYING WITH UL 181, CLASS 1. PROVIDE HEAVY METAL EDGE BANDS, SEALED TO PREVENT INDOOR SYSTEM, FLEXIBLE CONNECTOR FABRIC: GLASS FABRIC DOUBLE COATED WITH NEOPRENE.
- OUTDOOR SYSTEM, FLEXIBLE CONNECTOR FABRIC: GLASS FABRIC DOUBLE COATED WITH WEATHERPROOF, SYNTHETIC RUBBER RESISTANT TO UV RAYS AND OZONE C. FLEXIBLE DUCTS: UL 181, CLASS 1, UL 181, CLASS 1, BLACK POLYMER FILM SUPPOSED BY
- HELICALLY WOUND, SPRING-STEEL WIRE; 1-1/2" FABROUS-GLASS INSULATION; POLYETHYLENE VAPOR BARRIER FILM. FLEX DUCT SHALL BE EQUAL TO CETAINTEED "CERTAFLEX" G25.

2.5 ACCESS DOORS AND PANELS

- A. DUCT MOUNTED ACCESS DOORS: DOUBLE WALL, DUCT MOUNTING AND RECTANGULAR; FABRICATED OF GALVANIZED SHEET METAL WITH INSULATION FILL AND THICKNESS AS INDICATED FOR DUCT PRESSURE
- 1. FRAME: GALVANIZED SHEET STEEL, WITH BEND-OVER TABS AND FOAM GASKETS. 2. PROVIDE NUMBER OF HINGES AND LOCKS AS FOLLOWS:
- a. LESS THAN 12 INCHES SQUARE: SECURE WITH TWO SASH LOCKS
- b. UP TO 18 INCHES SQUARE: TWO HINGES AND TWO SASH LOCKS. C. UP TO 24 BY 48 INCHES: THERE HINGES AND TWO COMPRESSION LATCHES.

2.6 EQUIPMENT CURBS AND SUPPORT

- A. ROOF MOUNTED EQUIPMENT: PROVIDE FACTORY CURB TO MATCH EQUIPMENT PROVIDED. CURB TO MATCH ROOF SLOPE, TYPE, AND INSULATION DEPTHS FOR PROPER EQUIPMENT MOUNTING (ACCOUNT
- FOR APPLICABLE ACCESSORIES SUCH AS ECONOMIZERS AND ERVS) B. GROUND/FLOOR MOUNTED EQUIPMENT: PROVIDE CONCRETE HOUSE-KEEPING PAD AT LEAST 4" THICK AND AT LEAST 6" LARGER THAN THE EQUIPMENT BEING SUPPORTED

- 3.1 Examination A. VERIFY FINAL LOCATIONS FOR ROUGH-INS WITH FIELD MEASUREMENTS AND WITH THE REQUIREMENTS
- OF THE ACTUAL EQUIPMENT TO BE CONNECTED. B. LOCATION OF EQUIPMENT AND DEVICES, AS SHOWN ON THE DRAWINGS, ARE APPROXIMATE UNLESS
- DIMENSIONED; DO NOT SCALE DRAWINGS. EXACT LOCATIONS OF SUCH ITEMS SHALL BE DETERMINED BY THE ARCHITECT'S REPRESENTATIVE AND/OR DETERMINED FROM SPECIAL DETAIL AND DRAWINGS. VERIFY THE PHYSICAL DIMENSIONS OF EACH ITEM OF MECHANICAL EQUIPMENT TO FIT THE AVAILABLE SPACE AND PROMPTLY NOTIFY THE ARCHITECT PRIOR TO ROUGHING-IN IF CONFLICTS APPEAR. COORDINATION OF DIVISION 15 EQUIPMENT AND SYSTEMS TO THE AVAILABLE WIRING, EQUIPMENT, DUCTWORK, PIPING, ETC. SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE INSTALLATION SHALL BE CONCEALED WITHIN BUILDING CONSTRUCTION, OR EXPOSED IN MECHANICAL ROOMS, UNLESS
- A. PROVIDE ALL VALVES, DAMPERS AND CONTROL DEVICES REQUIRED TO COMPLETE BALANCING OF SYSTEMS AS DESCRIBED IN THESE DOCUMENTS OR AS NORMALLY ASSOCIATED WITH THE SYSTEMS TO BE INSTALLED WHETHER SPECIFICALLY CALLED FOR ON THE DRAWINGS, DETAILS OR SPECIFICATIONS OR NOT. IT SHALL BE UNDERSTOOD, UNLESS SPECIFICALLY STATED OTHERWISE, THAT ALL SYSTEMS
- INSTALLED SHALL COMPLY WITH INDUSTRY RECOGNIZED STANDARDS AND FÉATURES. COORDINATE MECHANICAL SYSTEMS, EQUIPMENT, AND MATERIALS INSTALLATION WITH OTHER BUILDING COMPONENTS. SEQUENCE. COORDINATE. AND INTÉGRATE INSTALLATIONS OF MECHANICAL MATERIALS AND EQUIPMENT FOR EFFICIENT FLOW OF THE WORK, GIVE PARTICULAR ATTENTION TO LARGE EQUIPMENT REQUIRING POSITIONING PRIOR TO CLOSING IN THE BUILDING. GIVE RIGHT-OF-WAY PRIORITY TO SYSTEMS REQUIRED TO BE INSTALLED AT A SPECIFIED SLOPE
- . WHERE MOUNTING HEIGHTS ARE NOT DETAILED OR DIMENSIONED, INSTALL SYSTEMS, MATERIALS, AND EQUIPMENT TO PROVIDE THE MAXIMUM HEADROOM POSSIBLE. . INSTALL SYSTEMS, MATERIALS, AND EQUIPMENT LEVEL AND PLUMB, PARALLEL AND PERPENDICULAR TO
- OTHER BUILDING SYSTEMS AND COMPONENTS, WHERE INSTALLED EXPOSED IN FINISHED SPACES. INSTALL MECHANICAL EQUIPMENT TO FACILITATE SERVICING, MAINTENANCE, AND REPAIR OR REPLACEMENT OF EQUIPMENT COMPONENTS. AS MUCH AS PRACTICAL. CONNECT EQUIPMENT FOR EASE OF DISCONNECTING, WITH MINIMUM OF INTERFERENCE WITH OTHER INSTALLATIONS. EXTEND GREASE
- G. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPERLY PROTECTING ANY PENETRATION OF A FIRE RATED ASSEMBLY. FIRE SEAL, CAULKING, AND APPURTENANCES SHALL BE ULLISTED FOR THE ASSEMBLY RATING IT IS APPLIED TO AND SHALL BE INSTALLED PER THE MANUFACTURERS WRITTEN INSTRUCTIONS. ALL SUCH MATERIALS SHALL MEET STATE, LOCAL, AND AUTHORITIES CODES AND
- STANDARDS H. PENETRATIONS ARE PROHIBITED IN ANY STRUCTURAL MEMBERS (EXCEPT WHERE NOTED IN DRAWING) WITHOUT THE WRITTEN CONSENT OF THE ARCHITECT. OBTAIN APPROVAL FOR OTHER FRAMED OPENINGS WHICH MAY BE REQUIRED IN ADDITION TO THOSE SHOWN ON DRAWINGS. PAY ALL COSTS FOR ADDITIONAL CUTTING OF HOLES AS THE RESULT OF INCORRECT LOCATION OF SLEEVES OR FURNISHING INCORRECT INFORMATION AS TO THE REQUIREMENTS OF FRAMED OPENINGS. FIRE-RATED ASSEMBLY PENETRATIONS
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPERLY PROTECTING ANY PENETRATION OF A FIRE RATED ASSEMBLY. FIRE SEAL, CAULKING, AND APPURTENANCES SHALL BE ULLISTED FOR THE ASSEMBLY RATING IT IS APPLIED TO AND SHALL BE INSTALLED PER THE MANUFACTURERS WRITTEN INSTRUCTIONS. ALL SUCH MATERIALS SHALL MEET STATE, LOCAL, AND AUTHORITIES CODES AND STANDARDS. REFER TO ARCHITECTURAL DRAWINGS FOR ALL FIRE RATED ASSEMBLY LOCATIONS AND RATINGS.
- THE CONTRACTOR SHALL PROVIDE PROPER MECHANICAL SEISMIC RESTRAINTS FOR ALL INSTALLED ITEMS INCLUDING. BUT NOT LIMITED TO, DUCTS, PIPING, EQUIPMENTS AND ACCESSORIES. THE CONTRACTOR SHALL PROVIDE SEISMIC RESTRAINTS AS LISTED BY THE CODES USED BY THE AHJ

3.3 DUCT INSTALLATION

FITTINGS TO AN ACCESSIBLE LOCATION.

- A. CONSTRUCT AND INSTALL DUCTS ACCORDING TO SMACNA'S "HVAC DUCT CONSTRUCTION
- STANDARDS--METAL AND FLEXIBLE." B. INSTALL DUCTS WITH FEWEST POSSIBLE JOINTS. INSTALL FABRICATED FITTINGS FOR CHANGES IN
- DIRECTIONS, SIZE, AND SHAPE AND FOR CONNECTIONS. C. COORDINATE LAYOUT WITH SUSPENDED CEILING, FIRE- AND SMOKE-CONTROL DAMPERS, LIGHTING
- LAYOUTS, AND SIMILAR FINISHED WORK.
- D. SEAL ALL JOINTS WITH UNITED DUCT SEALANT. APPLY SEALANT TO MALE END CONNECTORS BEFORE INSERTION, AND AFTERWARD TO COVER ENTIRE JOINT AND SHEET METAL SCREWS. E. NON-FIRE-RATED PARTITION PENETRATION: WHERE DUCTS PASS THROUGH INTERIOR PARTITIONS AND EXTERIOR WALLS AND ARE EXPOSED TO VIEW, CONCEAL SPACES BETWEEN CONSTRUCTION OPENINGS.
- AND DUCTS OR DUCT INSULATION WITH SHEET METAL FLANGES OF SAME METAL THICKNESS AS DUCTS. OVERLAP OPENINGS ON 4 SIDES BY AT LEAST 1-1/2 INCHES. F. PAINT INTERIORS OF METAL DUCTS, THAT DO NOT HAVE DUCT LINER, FOR 24 INCHES UPSTREAM OF REGISTERS AND GRILLS. APPLY ONE OF FLAT, BLACK, LATEX FINISH COAT OVER A COMPATIBLE
- GALVANIZED-STEEL PRIMER. G. PROVIDE BALANCING DAMPERS AT POINT ON SUPPLY, RETURN, AND EXHAUST SYSTEM WHERE BRANCHES LEAD FROM LARGER DUCTS AS REQUIRED FOR AIR BALANCING. INSTALL AT A MINIMUM OF
- TWO DUCT WIDTHS FROM BRANCH TAKEOFF. H. INSTALL FLEXIBLE CONNECTORS IMMEDIATELY ADJACENT TO EQUIPMENT IN DUCTS ASSOCIATED WITH FANS AND MOTORIZED EQUIPMENT SUPPORTED BY VIBRATION ISOLATORS. I. CONNECT DIFFUSERS GRILLS TO LOW PRESSURE DUCTS WITH MAXIMUM 72-INCH LENGTH OF
- FLEXIBLE DUCT CLAMPED OR STRAPPED IN PLACE. CONNECT FLEXIBLE DUCTS TO METAL DUCTS WITH J. INSTALL BACKDRAFT DAMPERS ON EXHAUST FANS OR EXHAUST DUCTS NEAREST TO OUTSIDE AND WHERE INDICATED.

3.4 HANGING AND SUPPORTING

- A. SUPPORT HORIZONTAL DUCTS WITHIN 24 INCHES OF EACH ELBOW AND WITHIN 48 INCHES OF EACH
- S. SUPPORT VERTICAL DUCTS AT MAXIMUM INTERVALS OF 16 FEET AND AT EACH FLOOR.

CONFORM TO SMACNA, ANSI/ASME B31, NFPA, MSS SP-58, 69, 89.

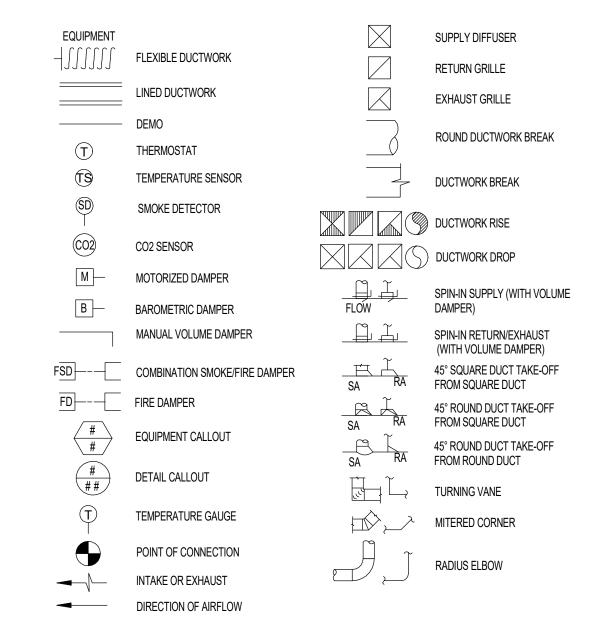
SUPPORT ALL DUCTWORK, PIPING, AND EQUIPMENT AS REQUIRED BY THE LOCAL CODES MANUFACTURES RECOMMENDATIONS, AND STANDARD INDUSTRY PRACTICE D. USE MATERIALS COMPATIBLE WITH ITEMS BEING SUPPORTED TO AVOID ELECTROLYTIC ACTION, AND

GENERAL HVAC NOTES G1 THE INTENTION OF THE CONTRACT DOCUMENTS IS TO INCLUDE ALL LABOR AND MATERIALS, AND EQUIPMENT, NECESSARY, OR REASONABLY INFERABLE AS BEING NECESSARY, FOR FURNISHING. INSTALLATION AND TESTING, COMPLETE AND READY FOR SAFE OPERATION OF THE SYSTEMS G2 THE MECHANICAL CONTRACTOR IS RESPONSIBLE FOR T-STATS, ALL LOW VOLTAGE WIRING AND

REQUIRED CONDUIT

- G3 ALL OUTSIDE AIR DUCTS TO BE EXTERNALLY INSULATED. G4 ALL SUPPLY DUCTS AND RETURN DUCTS TO BE INSULATED AND INTERNALLY LINED AS SHOWN ON DRAWING AND SPECIFICATIONS.
- G5 DUCTWORK LAYOUT IS PARTIALLY DIAGRAMMATIC, OFFSETS AND ADJUSTMENTS MAY BE REQUIRED TO COORDINATE WITH LIGHTS, DUCTS, PLUMBING AND STRUCTURE.
- G6 CONTRACTOR SHALL IDENTIFY ALL SERVICEABLE ITEMS (VALVES, DAMPERS, COILS, ETC.) SO THAT THE CEILING SUBCONTRACTOR MAY KNOW WHERE TO INSTALL ACCESS-TYPE PANELS SHOULD A LIFT-UP TYPE CEILING NOT BE INSTALLED. ARCHITECT SHALL APPROVE LOCATIONS OF ACCESS PANELS PRIOR TO INSTALLATION.
- G7 ALL PENETRATIONS MADE THROUGH RATED ASSEMBLIES TO ACCOMMODATE WORK OF THIS SECTION. MUST BE SEALED TO MAINTAIN THE RATING OF SUCH ASSEMBLY BY A U.L RECOGNIZED SEALING
- G8 CONTRACTOR HAS SOLE RESPONSIBILITY TO COORDINATE ANY SUBSTITUTIONS WITH ALL OTHER DISCIPLINES, EQUIPMENT OF GREATER POWER, DIMENSION, CAPACITIES, AND RATINGS MAY BE FURNISHED PROVIDED SUCH PROPOSED EQUIPMENT HAS BEEN SUBMITTED FOR REVIEW, IN WRITING AND CONNECTING MECHANICAL AND ELECTRICAL SERVICES, CIRCUIT BREAKERS, CONDUIT, MOTORS BASES, AND EQUIPMENT SPACES ARE ADJUSTED APPROPRIÁTELY, NO ADDITIONÁL COSTS WILL BE APPROVED FOR THESE INCREASES. IF LARGER EQUIPMENT IS PROPOSED. IF MINIMUM ENERGY RATINGS OR EFFICIENCIES OF THE EQUIPMENT ARE SPECIFIED, THE EQUIPMENT MUST MEET THE DESIGN REQUIREMENTS AND COMMISSIONING REQUIREMENTS. CONTRACTOR IS SOLELY RESPONSIBL FOR SUBSTITUTED EQUIPMENT MEETING THE INTENT OF THE ORIGINAL DESIGNED EQUIPMENT IN ALL

MECHANICAL LEGEND



ABBREVIATIONS & DESCRIPTIONS

```
CAP FOR FUTURE
       CUBIC FEET PER MINUTE
CFM
        ENERGY EFFICIENCY RATIO
         EXTERNAL STATIC PRESSURI
        ENTERING WATER TEMPERATURE
       FLOOR CLEANOUT
       HORSEPOWER
       INTERNATIONAL ENERGY
        CONSERVATION CODE
MCA
      MINIMUM CIRCUIT AMPS
MOCP
       MAXIMUM OVERCURRENT PROTECTION
OSA
       OUTSIDE AIR
       PHASE
       RFTURN AIR
       ROOFTOP UNIT
       SUPPLY AIR
SFFR
       SEASONAL ENERGY EFFICIENCY RATIO
VTR
       VENT THROUGH ROOF
       VOLTS
       WET BULB
WB
```

- M3.1 MECHANICAL ISOMECTRIC VIEW M5.1 - MECHANICAL DETAILS

M6.1 - MECHANICAL SCHEDULE

HVAC HEATING, VENTILATING, AIR CONDITIONING

M0.1 - MECHANICAL SPECIFICATIONS M1.1 - MECHANICAL FLOOR PLAN

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INDOOR ENVIRONMENTS A LIMITED LIABILITY COMPAN - (2) (2) -

1920 13th STREET, SUITE B1 BOULDER, CO80302 720 742-1587

NOTICE: DUTY OF COOPERATION Release of these plans contemplates further cooperation among the owner, his contractor and the architect. Design and construction are complex Although the architect and his consultants have performed their services with due care and diligence they cannot guarantee perfection. Communication is imperfect and every contingency cannot be anticipated. Any ambiguity or discrepancy discovered by the use of these plans shall be reported immediately to the architect. Failure to notify the architect compounds misunderstanding and increases construction costs. A failure to cooperate by a simple notice to the architect shall relieve the architect from responsibility for the consequences. Changes made from the plans without consent of the architect are unauthorized and shall relieve the architect of responsibility for all consequences arriving out of such changes

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No.	REVISION Description	Date		

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Job Number: 6/20/22 Date: **Drawn By:** RM Checked By: DM **Project Phase**

Project Status **Sheet Title** SPECIFICATIONS, GENERAL NOTES & LEGEND

GENERAL NOTES:

A. REFER TO SHEET M0.1 FOR GENERAL NOTES, SPECIFICATIONS AND LEGEND.

B. REFER TO SHEET M5.1 FOR MECHANICAL DETAILS.

C. REFER TO SHEET M6.1 FOR MECHANICAL SCHEDULE.

D. DUCTWORK SHOULD BE RIGID METAL WHERE POSSIBLE

E. EQUIPMENT EXISTING TO REMAIN. RELOCATE TEMPERATURE SENSOR TO LOCATION INDICATED.

F. EQUIPMENT EXISTING TO REMAIN.

KEYED NOTES:

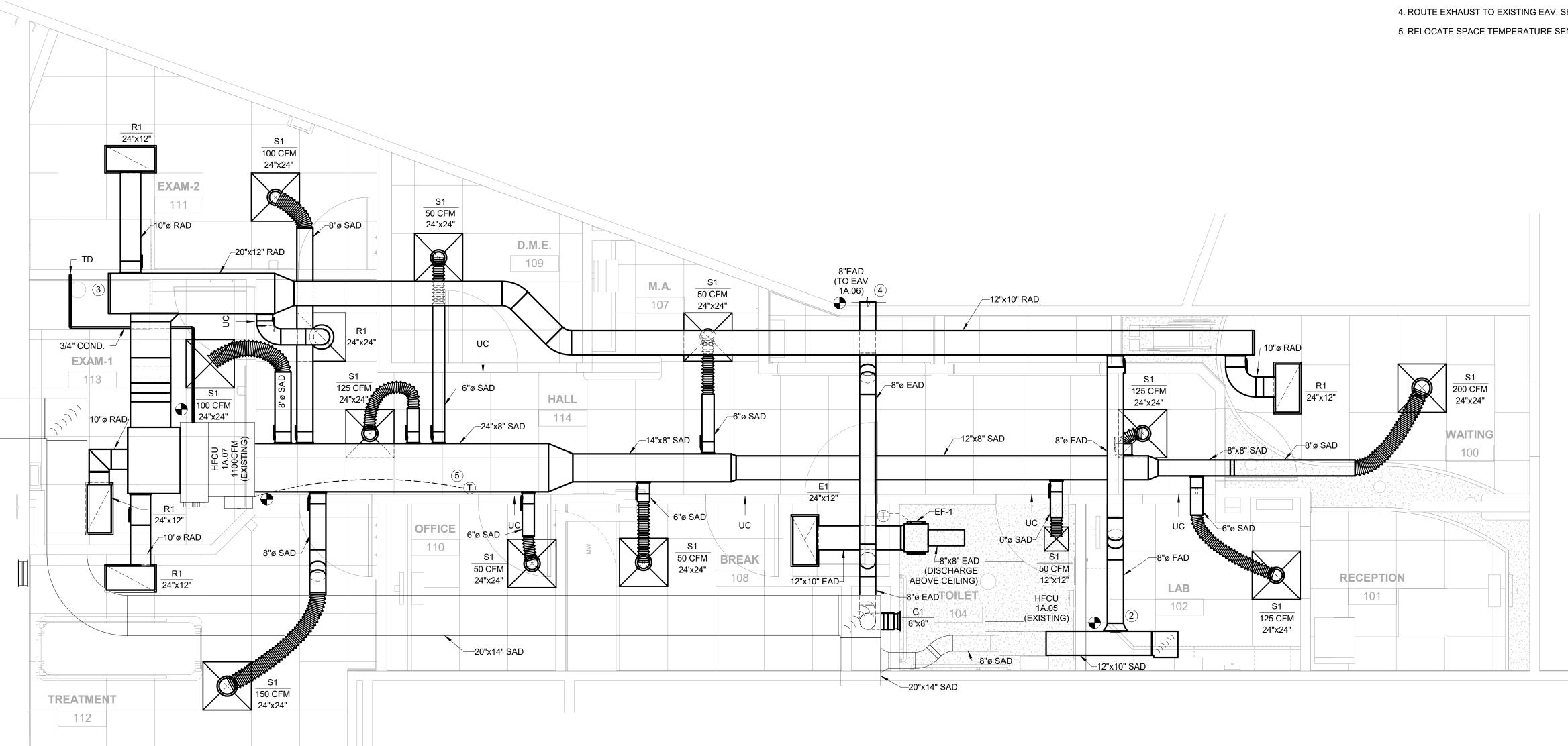
1. TRANSITION FROM EXISTING FAN COIL UNIT TO NEW DUCTWORK. OBSERVE NOMINAL DIMENSIONS.

2. ROUTE EXISTING 200 CFM OSA FROM VAV BOX TO RETURN OF FAN COIL.

3. REROUTE HFCU CONDENSATION TO APPROVED DRAIN.

4. ROUTE EXHAUST TO EXISTING EAV. SET EAV TO EXHAUST AN ADDITIONAL 80 CFM.

5. RELOCATE SPACE TEMPERATURE SENSOR TO THIS LOCATION.



1 MECHANICAL FLOOR PLAN 3/8" = 1'-0"



			LITOIDE AID VEN	ITH ATION OALO	U ATIONO					
	OUTSIDE AIR VENTILATION CALCULATIONS									
ZONE	OCCUPANT CLASSIFICATION	ZONE AREA (FT ²)	OCCUPANT DENSITY #/1000 FT ²	PEOPLE OSA FLOW RATE CFM/PERSON	AREA OSA RATE (CFM/FT ²)	OCCUPANT DENCITY	PEOPLE OSA FLOW RATE (CFM)	AREA OSA FLOW (CFM)	REQUIRED OSA	
TREATMENT/EXAM ROOMS	OFFICE SPACE	865	10	5	0.06	8.65	43.25	51.9	95	
RECEPTION	RECEPTION AREAS	165	30	5	0.06	4.95	24.75	9.9	35	
BREAK ROOM	GENERAL/BREAK ROOMS	70	50	5	0.12	3.5	17.5	8.4	26	

TABLE 403.3.1.1 IMC 2018 TOTAL OSA REQUIRED 156

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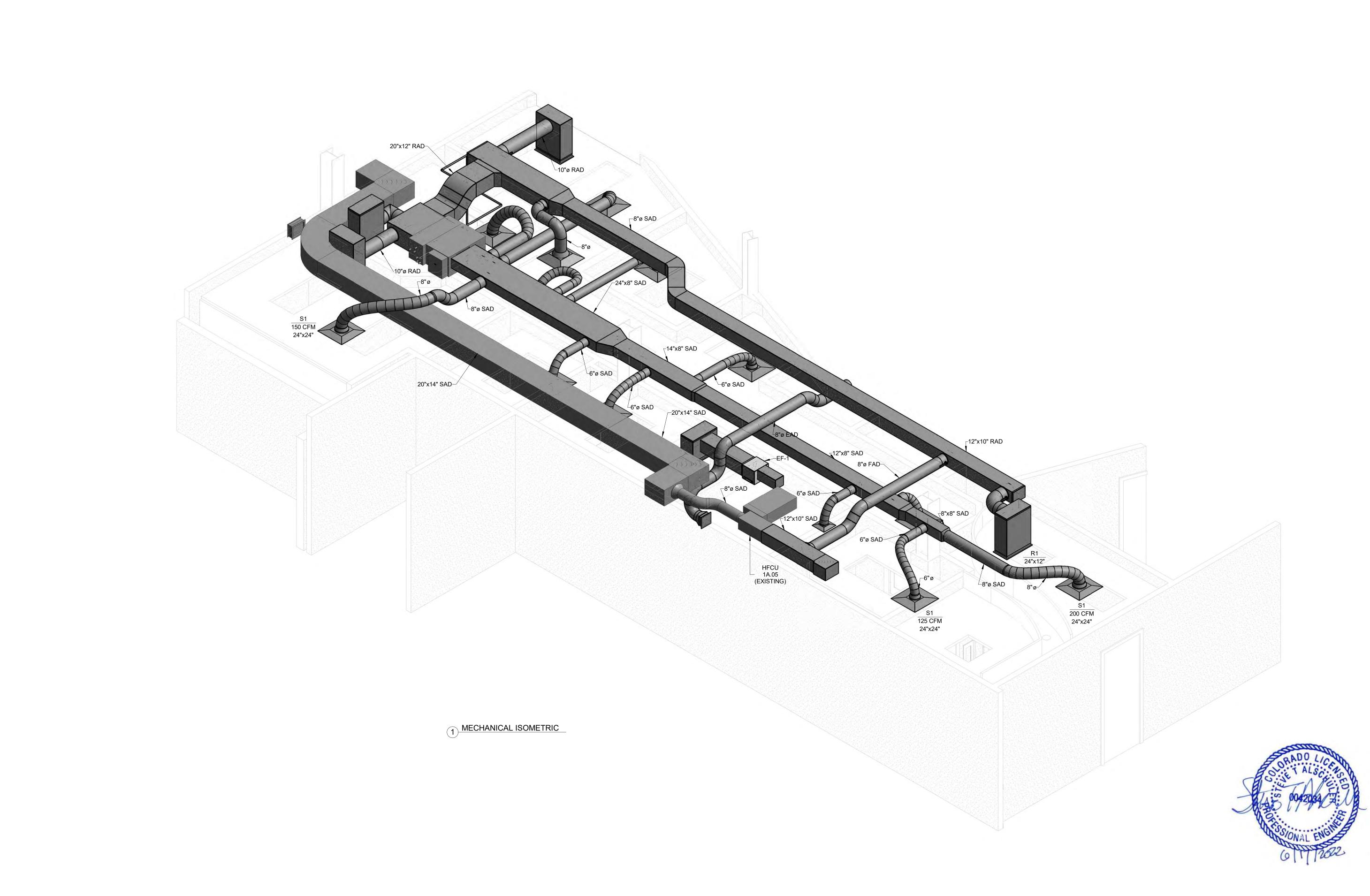
uchealth

ERNER 2.027 JGS, CC 2305 MOUNTER WE SUITE P. STEAMBOAT SPRING



Job Number:	-
Date:	6/20/
Drawn By:	RM
Checked By:	DM

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Project Pl	hase
Project Status	
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MACHANICAL PLAN	
Sheet Nun	nber



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No.	REVISION Description	Date
INO.	Description	Date

2305 MOUNTER WERNER SUITE P.027 STEAMBOAT SPRINGS, CC

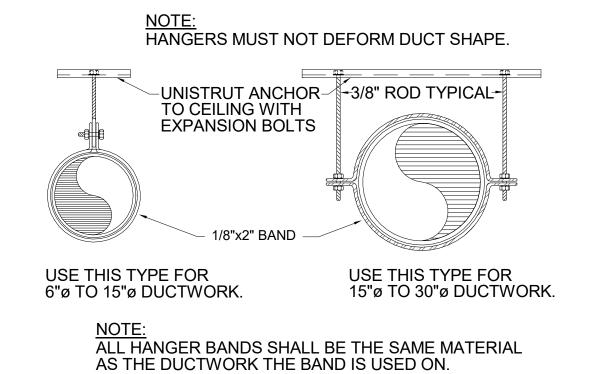
Job Number:
Date:
Drawn By:
Checked By: 6/20/22

Project Phase
Project Status

Sheet Title
MECHANICAL ISOMETRIC VIEW

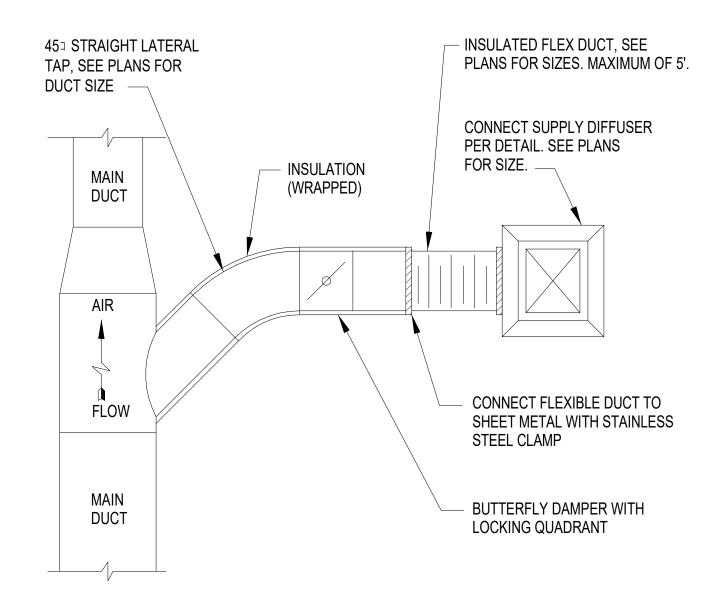
Sheet Number M3.

TYPICAL VOLUME DAMPER, DIFFUSER, GRILL, REGISTER AND/OR FLEX DUCT CONN. DETAIL

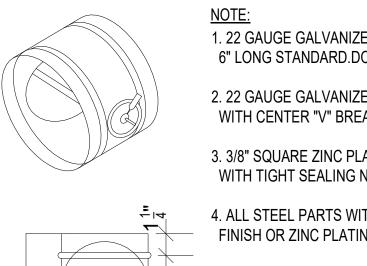


TO VCD TYPICAL

CIRCULAR DUCT SUPPORT DETAIL



ROUND DUCT TAKEOFF DETAIL



1. 22 GAUGE GALVANIZED STEEL FRAME, 6" LONG STANDARD.DOUBLE BEADED FOR STRENGTH.

2. 22 GAUGE GALVANIZED STEEL BLADE WITH CENTER "V" BREAK FOR ADDED STRENGTH.

3. 3/8" SQUARE ZINC PLATED STEEL BLADE SHAFTS WITH TIGHT SEALING NYLON BUSHINGS.

4. ALL STEEL PARTS WITH GALVANIZED FINISH OR ZINC PLATING.

5. MAXIMUM OPERATING TEMPERATURE IS 250° F.

6. MANUAL LOCKING QUADRANT SUPPLIED FACTORY MOUNTED TO DAMPER SLEEVE.

7. MAXIMUM DIAMETER 24", MINIMUM DIAMETER 4".

8. DAMPERS ARE SUPPLIED APPROXIMATELY 🖞 UNDER NOMINAL DIAMETER.







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REVISIONS Description

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2305 MOUNTER WE SUITE P. STEAMBOAT SPRING



Job Number: 6/20/22 Date: Drawn By: Checked By: DM

Project Phase Project Status

Sheet Title MECHANCIAL DETAILS

> **Sheet Number** M5.

EXISTING HORIZONTAL FAN COIL SCHEDULE (HYDRONIC)

CODE	MANUFACTURER/		FA	۸N		COOLING COIL				HEATING COIL				ELECTRICAL												
(HFCU)	MODEL NO.	AREA SERVED	SUPPLY CFM	ESP (IN.)	EA7	Γ (°F) WB	TOTAL MBH	SENS MBH	MAX LAT(°F)	GPM	ROW	WPD (FT)	EAT (°F)	MBH	MIN LAT(°F)	GPM	ROW	WPD (FT)	HP	VOLT	PH	FLA	DISCON.	FEEDER	FUSE	NOTES
1A.07	ENGINEERED COMFORT/D35FHZW-16	UCHEALTH	1100	0.3	75	62	25.7	19.7	55	5.4	5	2.7	65	19.6	85	2.2	1	2.5	1/4	120	1	7.2	\$.T.O	(2#12, #12G) 3/4"C	-	А

GENERAL NOTES:

- 1. CHILLED WATER: EWT = 44°F , LWT = 54°F , 30% PROPYLENE GLYCOL.
- 2. HEATING WATER: EWT = 150°F, LWT = 130°F, 30% PROPYLENE GLYCOL.
- 3. PROVIDE 2" MERV 8 THRPW AWAY FILTERS.
- 4. SCHEDULED FAN VALUES (CFM, SP AND HP) ARE ACTUAL AT ALTITUDE. MOTOR HP HAS BEEN ADJUSTED FROM SEA LEVEL CONDITIONS FOR
- OPERATION AT JOB SITE ELEVATION. JOB SITE ELEVATION = 6700 FT.
- 5. PROVIDE PREMIUM EFFICIENCY MOTORS FOR MOTORS 1 HP AND OVER PER MENA STANDARD MG1-2003, TABLES 12-12 AND 12-13.
- 6. PROVIDE CONDENSATE PUMP POWERED FROM EQUIPMENT. PUMP SHALL BE PROVIDED WITH VOLTAGE MATCHING FAN COIL UNIT. IF TRANSFORMER IS PROVIDED FOR CONDENSATE PUMP OPERATION, PROVIDE LINE ITEM COST. GRAVITY DRAINAGE ACCEPTABLE WHERE POSSIBLE.
- 7. DESIGN OUTSIDE AIR CONDITIONS:

COOLING: 88F dB/56.2F wB

HEATING: -10F dB

NOTES:

A. EQUIPMENT EXISTING AND WILL REMAIN.

	EXISTING VAV BOX SCHEDULE										
CODE	AREA SERVED	MANUFACTURER/	DESIG AIRFLOW	N CFM DESIGN	CAPACI	TY (CFM)	MAX. NC @	INLET SIZE	OUTLET	NOTES	
(VAV)	, inchit delived	MODEL NO.	(CFM)	(CFM)	MAX.	MIN.	DESIGN MAX.		SIZE		
1A.05	UC HEALTH + SKI PATROL	TITUS DESV 8	605	320	900	145	_	8	12 x 10	А	

GENERAL NOTES:

- 1. MOUNT WITH 5 STRAIGHT DUCT DIAMETERS UPSTREAM OF THE BOX.
- 2. MAXIMUM OUTLET S.P. = 0.75".
- 3. MAXIMUM NC LEVELS ARE RADIATED SOUND DATA AND BASED ON THE MAXIMUM BOX CFM LISTED AND AT A PRESSURE DROP ACROSS THE BOX OF 2.0".
- 4. JOBSITE ELEVATION = 6700 FT.

NOTES:

EQUIPMENT EXISTING AND WILL REMAIN.

	AIR DISTRIBUTION DEVICE SCHEDULE											
MARK	DESCRIPTION	MOUNTING	MANUFACTURER AND MODEL#	SIZE	MATERIAL	FINISH	NOTES					
S1	CEILING DIFFUSER	SURFACE MOUNT	METALAIRE 5750	SEE PLANS	ALUMINUM	COORDINATE WITH ARCHITECT	1 & 2					
R1	RETURN GRILLE	SURFACE MOUNT	METALAIRE CC45	SEE PLANS	ALUMINUM	COORDINATE WITH ARCHITECT	1 & 2					
E1	EXHAUST GRILLE	SURFACE MOUNT	METALAIRE CC45	SEE PLANS	ALUMINUM	COORDINATE WITH ARCHITECT	1 & 2					
G1	RETURN GRILLE	SURFACE MOUNT	METALAIRE 4000	8"x8"	ALUMINUM	COORDINATE WITH ARCHITECT	2					

NOTES:

- 1. PROVIDE APPROPRIATE MOUNTING FRAME WITH CEILING TYPE.
- 2. PROVIDE BALANCING DAMPER FOR EACH DIFFUSER AND GRILLE.

EXHAUST FAN SCHEDULE														
SYMBOL BRAND MODEL		TYPE	TYPE SERVICE CF	CFM	E.S.P. (I.N.	FAN (RPM)	ELECTRICAL				WATTS	WEIGHT	NOTES	
						W.C.)	(IXI IVI)	VOLTS	PHASE	HZ	AMPS		(LBS)	
EF-1	GREENHECK	CSP-A200-QD	INLINE CABINET FAN	EMC ROOM	80	0.25	1182	120	1	60	0.43	16.4	23	1

NOTES:

- 1. PROVIDE WITH COOLING ONLY THERMOSTAT. SET TO 75 DEGREES.
- 2. FURNISH FANS WITH BACKDRAFT DAMPERS.
- 3. FURNISH ALL FANS WITH THERMAL OVERLOAD PROTECTION AND FACTORY INSTALLED DISCONNECT.



INDOOR ENVIRONMENTS
USA
A LIMITED LIABILITY COMPANY

1920 13th STREET, SUITE B1 BOULDER, CO80302

NOTICE: DUTY OF COOPERATION

Release of these plans contemplates further cooperation among the owner, his contractor and the architect. Design and construction are complex. Although the architect and his consultants have performed their services with due care and diligence, they cannot guarantee perfection. Communication is imperfect and every contingency cannot be anticipated. Any ambiguity or discrepancy discovered by the use of these plans shall be reported immediately to the architect. Failure to notify the architect compounds misunderstanding and increases construction costs. A failure to cooperate by a simple notice to the architect shall relieve the architect from responsibility for the consequences. Changes made from the plans without consent of the architect are unauthorized and shall relieve the architect of responsibility for all

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Eric Smith Associates, P.C.

No.	Description	Date
	•	

uchealth

305 MOUNTER WERNER CIRCLE'
SUITE P.027

 Job Number:

 Date:
 6/20/22

 Drawn By:
 RM

 Checked By:
 DM

Project Phase
Project Status

Sheet Title
MECHANCIAL SCHEDULE

PLUMBING SPECIFICATIONS

B. BELOW GRADE DOMESTIC WATER PIPING SHALL BE ANY OF THE FOLLOWING:

PE FILM OF 0.008-INCH (0.20-MM) MINIMUM THICKNESS.

C. ABOVE GRADE SANITARY WASTE & VENT SHALL BE ANY OF THE FOLLOWING:

2. SOLID WALL ABS PIPE PER ASTM D 2661, SCHEDULE 40, ABS SOCKET

3. SOLID WALL PVC PIPE PER ASTM D2665, SCHEDULE 40 DRAIN, WASTE &

VENT, PVC SOCKET FITTINGS, AND SOLVENT CEMENTED JOINTS.

2. SOLID WALL ABS PIPE PER ASTM D 2661, SCHEDULE 40, ABS SOCKET

3. SOLID WALL PVC PIPE AS PER ASTM D 2665, SCHEDULE 40 DRAIN, WASTE

HEAVY-DUTY SHIELDED, STAINLESS-STEEL COUPLINGS; AND

2. SOLID WALL ABS PIPE PER ASTM D 2661, SCHEDULE 40, ABS SOCKET FITTINGS, AND SOLVENT-CEMENTED JOINTS.
3. SOLID WALL PVC PIPE PER ASTM D2665, SCHEDULE 40 DRAIN, WASTE

BLACK. WALL THICKNESS OF WROUGHT-STEEL PIPE SHALL COMPLY WITH

STANDARD PATTERN, WITH THREADED ENDS ACCORDING TO ASME B1.20.1

BRASS-TO-IRON SEAT GROUND JOINT, AND THREADED ENDS ACCORDING

2. NPS 1 AND SMALLER MAY BE CORRUGATED STAINLESS STEEL TUBING SYSTEMS.

2) FITTINGS: COPPER ALLOY WITH ENDS MADE TO FIT CORRUGATED TUBING.

4) MANIFOLDS: MALLEABLE IRON OR STEEL WITH PROTECTIVE COATING, INCLUDE

b. ACCEPTABLE MANUFACTURERS: OMEGAFLEX, INC., TITLEFLEX XORP., TRU-FLEX

 SOLID WALL PVC PIPE PER ASTM D 2665, SCHEDULE 40 DRAIN, WASTE AND VENT, PVC SOCKET FITTINGS, AND SOLVENT-CEMENTED JOINTS.
 HARD COPPER TUBE CONFORMING TO ASTM B-88, TYPE M WATER TUBE,

1. ACCEPTABLE MANUFACTURERS: WATTS, APOLLO, RED & WHITE, NIBCO,

3. WATER HAMMER ARRESTERS (SIOUX CHIEF, PPP, SMITH): METAL BELLOWS OR

COPPER TUBE WITH PISTON PER ASSE 1010 OR PDI-WH 201. PROVIDE

1. COMBINATION FITTING OF COPPER ALLOY AND FERROUS MATERIALS WITH

3. DIELECTRIC COUPLINGS: GALVANIZED STEEL COUPLING WITH INERT AND

NON-CORROSIVE, THERMOPLASTIC LINING; THREADED ENDS; AND 300-PSIG

2. DIELECTRIC UNIONS: FACTORY-FABRICATED, UNION ASSEMBLY, FOR

A. SOLDERED JOINTS: USE ASTM B813, WATER-FLUSHABLE,;EAD-FREE FLUX;

B. BRAZING FILLER METALS: AWS A5.8, BCUP SERIES, COPPER-PHOSPORUS

C. EXTRUDED-TEE CONNECTIONS: FORM TEE IN COPPER TUBE ACCORDING

3. PVC PIPING:ASTM D 2564. INCLUDE PRIMER ACCORDING TOASTM F656.

ASTM B32, LEAD-FREE-AALOY SOLDER; AND ASTM B 828 PROCEDURE,

ALLOYS FOR GENERAL DUTY BRAZING, UNLESS OTHERWISE INDICATED;

TO ASTM F 2014, USE TOOL DESIGNED FOR COPPER TUBE: DRILL PILOT

HOLE, FORM COLLAR FOR OUTLET. DIMPLE TUBE TO FORM SEATING STOP,

A. ALL INSULATION SHALL MEET FLAME/SMOKE SPREAD RATING OF 50 ACCORDING TO ASTM

MATERIALS. COMPLY WITH ASTM C 534, TYPE I FOR TUBULAR MATERIALS AND

2. GLASS-FIBER, PIPE INSULATION: GLASS FIBERS BONDED WITH A THERMOSETTING

RESIN. SEMI RIGID BOARD MATERIAL WITH FACTORY-APPLIED ASJ JACKET

a. PROVIDE ALUMINUM JACKET TO COMPLY WITH ASTM B 209. ALLOY 3003.

a. NPS 1-1/2 AND SMALLER. INSULATION SHALL BE ONE OF THE FOLLOWING:

a. DRAIN BODIES AND HORIZONTAL PIPING. INSULATION SHALL BE ONE OF THE

D. ACCEPTABLE MANUFACTURERS: ARMSTRONG, CERTAINEED, OWENS-CORNING, JOHNS

b. NPS 2 AND LARGER: INSULATION SHALL BE ONE OF THE FOLLOWING:

1) GLASS-FIBER PIPE INSULATION, TYPE I: 1/2 INCHES THICK.

2) 4" BATT INSULATION MAY BE USED FOR DRAIN BODIES.

E. PIPE INSULATION R VALUES SHALL MEET OR EXCEED IECC R403.5.3.

COMPLYING WITH ASTM C 1393, TYPE II OR TYPE IIIA CATEGORY 2, OR WITH

PROPERTIES SIMILAR TO ASTM C 612, TYPE IB, NOMINAL DENSITY IS 2.5 LB/CU.

FT. OR MORE. THERMAL CONDUCTIVITY (K-VALUE) AT 100DEG F IS 0.29 BTU X

3005, 3105 OR 5005, TEMPER H-14, ON ALL EXTERIOR PIPING WITH INSULATION.

1. FLEXIBLE ELASTOMERIC: CLOSED-CELL, SPONGE- OR EXPANDED-RUBBER

AND AWS 5.8. BAG1.SILVER ALLOY FOR REFRIGERANT PIPING.UNLESS

250-PSIG MINIMUM WORKING PRESSURE AT 180 DEG F.

THREADED, SOLDER-JOINT, PLAIN, OR WELD-NECK END CONNECTIONS

DRAWN AND TEMPER; COPPER PRESSURE FITTINGS PER ASME B16.18; AND

THREADED CONNECTIONS ACCORDING TO ASME B1.20.1 FOR PIPE INLET AND

INCLUDE ENDS WITH THREADS ACCORDING TO ASME B1.20.01. IF CONNECTION TO THREADED PIPE OR FITTINGS IS REQUIRED.

3) STRIKER PLATES: STEEL, DESIGNED TO PROTECT TUBING FROM

a. DESCRIPTION: COMPLY WITH AGA LC 1 AND INCLUDE THE FOLLOWING:1) TUBING: CORRUGATED STAINLESS STEEL WITH PLASTIC JACKET OR COATING.

AND VENT, PVC SOCKET FITTINGS, AND SOLVENT CEMENTED JOINTS.

1. PVC SOIL PIPE AND FITTINGS: STANDARD AND HEAVY-DUTY

4. CELLULAR-CORE ABS PIPE PER ASTM F 628. SCHEDULE 40.

5. CELLULAR-CORE PVC PIPE PER ASTM F 891, SCHEDULE 40.

1 PVC SOIL PIPE AND FITTINGS PER CISPL 301: HEAVY DUTY

4. CELLULAR-CORE ABS PIPE PER ASTM F 628. SCHEDULE 40.

5. CELLULAR-CORE PVC PIPE PER ASTM F 891, SCHEDULE 40.

4 CELLULAR-CORE ABS PIPE PER ASTM F 628 SCHEDULE 40

5. CELLULAR-CORE PVC PIPE PER ASTM F 891, SCHEDULE 40

1. ALL SIZES: STEEL PIPE PER ASTM A53/A 53M: TYPE E OR S; GRADE B;

a. MALLEABLE-IRON THREADED FITTINGS: ASME B16.3. CLASS 150

c. UNIONS: ASMEB16.39, CLASS 150, MALLEABLE IRON WITH

e. STEEL FLANGES AND FLANGED FITTINGS: ASME B16.5.

METAL HOSE CORP., WARD INDUSTRIES, INC.

G. INDIRECT WASTE PIPING SHALL BE ANY OF THE FOLLOWING:

ALLOY SN95 SOLDER WITH WATER SOLUBLE FLUX.

a. BALL VALVE(FULL PORT THRU 3") - WATTS FBVS-1 SERIES

d. JOINT COMPOUND AND TAPE: SUITABLE FOR NATURAL GAS.

b. STEEL WELDING FITTINGS: ASME B16.9, WROUGHT STEEL OR ASME

FITTINGS, AND SOLVENT-CEMENTED JOINTS.

E. STORM DRAINAGE PIPING SHALL BE ANY OF THE FOLLOWING:

HUBLESS-COUPLING JOINTS.

F. FUEL GAS PIPING SHALL BE ANY OF THE FOLLOWING:

B16.11, FORGED STEEL.

TO ASME B1.20.1

PENETRATIONS.

H. VALVES AND PLUMBING SPECIALITIES:

MILWAUKEE. ARMSTRONG.

c. GAS(THRU 1") - WATTS GBV SERIES

h. BUTTERFLY (3" AND LARGER) -

ACCESS PANELS AS REQUIRED.

THAT MATCH PIPING SYSTEM MATERIALS.

MINIMUM WORKING PRESSURE AT 225 DEG F.

2.2 PIPE JOINT CONSTRUCTION

UNLESS OTHERWISE INDICATED.

2 CPVC PIPING: ASTM F493

2.3 PIPE INSULATION

C. INSULATION SCHEDULE:

B. INSULATION TYPES:

AND BRAZE BRANCH TUBE INTO COLLAR

E. PVC TO ABS PIPING TRANSITION: ASTM D 3138.

TYPE II FOR SHEET MATERIALS.

IN./H X SQ. FT. X DEG F OR LESS.

PROVIDE 3-MIL VAPOR BARRIER.

3. DOMESTIC RE-CIRCULATED HOT WATER:

4. STORM DRAINAGE PIPING:

1. DOMESTIC COLD WATER:
a. ALL SIZES. INSULATION SHALL BE ONE OF THE FOLLOWING:

a. ALL SIZES. INSULATION SHALL BE ONE OF THE FOLLOWING:

1) FLEXIBLE ELASTOMERIC, MIN. 1" THICK R-6.

D. SOLVENT CEMENTS FOR JOINING PLASTIC PIPING:

d. GLOBE (THRU 2") - WATTS GLV SERIES

e. CHECK (THRU 3") - WATTS WCV-2 SERIES

f. STRAINER (THRU 2") - WATTS S777SI SERIES

a. BALANCE (THRU 3") - WATTS CSM-61-M1 SERIES

1. PVC SOIL PIPE AND FITTINGS PER CISPI 301

D. BELOW GRADE SANITARY WASTE AND VENT SHALL BE ANY OF THE FOLLOWING:

FITTINGS AND SOLVENT CEMENTED JOINTS

PRESSURE FITTINGS AND SOLDERED JOINTS.

160 PSI PRESSURE CLASS SDR FOUAL TO 9

SERVICE ENTRY PIPING.

TIGHTENING CLAMPS.

1. SOFT COPPER TUBE. TYPE K OR L CONFORMING TO ASTM B-88: COPPER

2. WRAP BURIED METALLIC PIPE PER ASTM A 674 OR AWWA C105, HDPE, CROSS

3. HDPE (HIGH DENSITY POLYETHYLENE) PLASTIC PIPE AND FITTING FOR WATER

a PIPE CONFORMING TO ASTM D 2239. ASTM D 2737, AWWA C901, MINIMUM

b. FITTINGS CONFORMING TO ASTM D 2609, METAL INSERT FITTING AND TWO

STAINLESS STEEL CLAMPS; FOR OVER 1-1/2 INCH, SPECIAL, HEAVY DUTY

SHIELDED, STAINLESS STEEL COUPLINGS; AND AND HUBLESS COUPLING

SHIELDED, STAINLESS STEEL COUPLINGS; AND HUBLESS-COUPLING JOINTS.

LAMINATED PE FILM OF 0.004 INCH (0.10-MM) OR LLDPE, CROSS LAMINATED

PART 1 - GENERAL 1.1 GENERAL INTENT

- A. THE INTENTION OF THE CONTRACT DOCUMENTS IS TO INCLUDE ALL LABOR AND MATERIALS, AND EQUIPMENT,
 NECESSARY, OR REASONABLY INFERABLE AS BEING NECESSARY, FOR FURNISHING, INSTALLATION AND TESTING,
 COMPLETE AND READY FOR SAFE OPERATION OF THE SYSTEMS DESCRIBED HEREIN.
 B. SUBMISSION OF A PROPOSAL SHALL BE CONSTRUED AS EVIDENCE THAT THE CONTRACTOR HAS MADE A
 THOROUGH EXAMINATION OF THE SITE, AND ALL EXISTING CONDITION AND LIMITATIONS WHICH AFFECT THIS
- WORK. LATER CLAIMS SHALL NOT BE MADE FOR LABOR, EQUIPMENT OR MATERIALS REQUIRED BECAUSE OF DIFFICULTIES ENCOUNTERED, WHICH COULD HAVE BEEN FORESEEN DURING SUCH AN EXAMINATION.

 C. THE DRAWINGS INDICATE DIAGRAMMATICALLY THE EXTENT, GENERAL CHARACTER, AND LOCATION OF THE WORK TO BE PERFORMED. WHERE MINOR ADJUSTMENT OF THE WORK ARE NECESSARY FOR PURPOSES OF FABRICATION OR INSTALLATION OF ITEMS, THE CONTRACTOR SHALL MAKE SUCH ADJUSTMENT WITH NO ADDED COMPENSATION. WHERE SUCH ADJUSTMENTS AFFECT FUNCTIONAL OR AESTHETIC DESIGN OF THE WORK, THEY SHALL FIRST BE SUBMITTED TO THE ARCHITECT FOR REVIEW AND APPROVAL.
- D. SITE UTILITIES: THE MECHANICAL DOCUMENTS INDICATE CONNECTION LOCATION OF VARIOUS BUILDING SERVICES.COORDINATE WORK WITH THE SITE UTILITIES CONTRACTOR TO ENSURE PROPER INVERT ELEVATION, PIPE SLOPE GRADIENT, PIPE SIZE AND SEPARATION WITHIN TRENCH WORK. NOTIFY ARCHITECT OR ENGINEER OF ANY DISCREPANCY BETWEEN DRAWINGS AND FIELD CONDITIONS.
- PIPE SLOPE GRADIENT, PIPE SIZE AND SEPARATION WITHIN TRENCH WORK. NOTIFY ARCHITECT OR ENGINEER OF ANY DISCREPANCY BETWEEN DRAWINGS AND FIELD CONDITIONS.

 E. COMPLY WITH ALL LOCAL AND STATE CODES REGARDING SEISMIC SUPPORT AND ISOLATION. NOT ALL SEISMIC REQUIREMENTS ARE SHOWN ON THESE DRAWING. CONTRACTOR SHALL MEET THE REQUIREMENTS OF THE

1.2 GENERAL COORDINATION

- A. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF A SATISFACTORY, COMPLETE, FULLY OPERATIONAL PIECE OF WORK IN ACCORDANCE WITH TRUE INTENT OF THE DRAWINGS AND SPECIFICATIONS.
- B. CONTRACTOR SHALL CONSULT ALL DRAWINGS FOR THE PROJECT TO DETERMINE THAT THE WORK AND EQUIPMENT WILL FIT AS PLANNED.

AUTHORITY HAVING JURISDICTION FOR SEISMIC SUPPORT/ISOLATION OF HIS WORK.

- C. THE LOCATION OF PIPING, DUCTS, EQUIPMENTS, ETC, SHALL BE CHECKED TO EN CLEARANCE FROM OPENINGS, STRUCTURAL MEMBERS, CABINETS, LIGHTS, OUTLETS AND EQUIPMENT HAVING FIXED LOCATIONS.THIS SHALL BE ACCOMPLISHED PRIOR TO FABRICATION OF PIPE OR DUCTS.
- D. IF, AT ANY TIME, AND IN ANY CASE, CHANGES IN LOCATION OF PIPING, DUCTS, EQUIPMENT, ETC., BECOMES NECESSARY DUE TO EXISTING OBSTACLES OR INSTALLATION OF OTHER TRADES SHOWN ON ANY OF THE PROJECT DRAWINGS AND SUCH CONFLICT COULD HAVE BEEN AVOIDED BY PROPER COORDINATION BETWEEN TRADES OR PROPER PRE-PLANNING OF WORK, SUCH REQUIRED CHANGES SHALL BE MADE BY THE CONTRACTOR AT NO EXTRA COST. THESE CHANGES ARE TO BE RECORDED ON THE RECORD DRAWINGS.
- E. THIS CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL INCIDENTAL ELECTRICAL INTERCONNECTIONS, CONTROL WIRING, ETC., WHICH ARE NECESSARY FOR SYSTEM COMPLETION AND WHICH ARE NOT SPECIFICALLY SHOWN OR OTHERWISE INDICATE ON THE ELECTRICAL DRAWINGS OR SPECIFIED IN DIVISION 26.

 F. ALL ELECTRICAL WORK INCIDENTAL TO OR ACCOMPLISHED UNDER THIS DIVISION SHALL COMPLY WITH ALL
- REQUIREMENTS OF DIVISION 26.

 G. PLANS ARE DIAGRAMMATIC IN NATURE. CONTRACTOR IS RESPONSIBLE FOR REFERRING TO THE DIVISION DOCUMENTS FOR ALL OTHER DISCIPLINES FOR PROJECT CONSTRUCTION AND OTHER DETAILS WHICH AFFECT THE MECHANICAL INSTALLATION. CONTRACTOR SHALL CONFER WITH ALL OTHER TRADES FOR FINISHING
- THE MECHANICAL INSTALLATION. CONTRACTOR SHALL CONFER WITH ALL OTHER TRADES FOR FINISHING
 ADJACENT TO ITS WORK AND ARRANGE TO HAVE VISIBLE PORTIONS OF THIS WORK (SUCH AS ACCESS DOORS,
 VALVES, SPRINKLER HEADS, ESCUTCHEONS, ETC.) MERGE WITH THE FINISH IN A MANNER SATISFACTORY TO
 THE ARCHITECT.
 H. CONTRACTOR SHALL IDENTIFY ALL SERVICEABLE ITEMS (VALVES, CLEANOUTS, COILS, ETC.) SO THAT THE
 CEILING SUBCONTRACTOR MAY KNOW WHERE TO INSTALL ACCESS-TYPE PANELS SHOULD A LIFT-UP TYPE
- CEILING NOT BE INSTALLED. THIS CONTRACTOR SHALL PROVIDE ACCESS PANELS FOR HIS WORK UNLESS SPECIFICALLY NOTED ON THE DRAWINGS. ARCHITECT SHALL APPROVE LOCATIONS OF ACCESS PANELS PRIOR TO INSTALLATION.

 I. CEILING HEIGHTS: ARCHITECTURAL DRAWINGS SHALL BE CHECKED FOR CEILING HEIGHTS, WALLS, AND CABINETS THAT ARE INTENDED TO CONCEAL WORK OF THIS SECTION. WHERE CONFLICTS OCCUR, THE ARCHITECT SHALL BE NOTIFIED PRIOR TO INSTALL OF THE WORK. LOCATION OF EXPOSED WORK SUCH AS PIPING, VALVES,
- BE NOTIFIED PRIOR TO INSTALL OF THE WORK. LOCATION OF EXPOSED WORK SUCH AS PIPING, VALVES, SPEAKERS, SPRINKLER HEADS TAKE PRECEDENCE OVER CONCEALED WORK.

 J. CONTRACTOR SHALL EXERCISE CARE TO MINIMIZE ANY DISTURBANCE TO ADJACENT AREA OF THE BUILDING WHICH ARE TO REMAIN IN OPERATION. ISOLATE WORK AREAS BY TEMPORARY PARTITIONS, TARPS, ETC., TO
- KEEP DUST AND DIRT IN THE CONSTRUCTION AREA.

 K. PROVIDE ALL NECESSARY FLASHING, SEALING, ETC., TO MAINTAIN THE WATERPROOF INTEGRITY OF THE BUILDING AS REQUIRED BY THE INSTALLATION OR REMOVAL OF ITEMS AS REQUIRED BY THIS SCOPE OF WORK.

 INSTALLATION OF THIS SCOPE TO BE PERALLY ACCESSIBLE FOR DEPARTMENT AND REPAIR.
- L. INSTALL ALL WORK OF THIS SCOPE TO BE READILY ACCESSIBLE FOR OPERATION, MAINTENANCE, AND REPAIR. MINOR DEVIATION FROM THE DRAWING MAY BE MADE TO ACCOMPLISH THIS, BUT CHANGES INVOLVING OTHER TRADES MAY NOT BE MADE WITHOUT PRIOR APPROVAL.
 M. ALL PENETRATIONS MADE THROUGH RATED ASSEMBLIES TO ACCOMMODATE WORK OF THIS SECTION, MUST BE
- SEALED TO MAINTAIN THE RATING OF SUCH ASSEMBLY BY A U.L. RECOGNIZED SEALING METHOD.

 N. PROVIDE ALL CUTTING AND PATCHING REQUIRED FOR INSTALLATION OF THIS WORK. COORDINATE ALL BLOCKING, SUPPORT, ETC., NECESSARY FOR THE INSTALLATION OF THIS WORK WITH THE GENERAL CONTRACTOR.

1.3 CODES, STANDARDS, PERMITS, AND FEES

A. ALL APPLICABLE CODES LAWS AND REGULATIONS GOVERNING OR RELATING TO ANY PORTION OF THIS WORK ARE HEREBY INCORPORATED INTO AND MADE A PART OF THESE SPECIFICATIONS. THEIR PROVISIONS SHALL BE CARRIED OUT BY THE CONTRACTOR, WHO SHALL INFORM THE ARCHITECT IN WRITING PRIOR TO SUBMITTING A BID, OF ANY WORK OR MATERIALS WHICH VIOLATE ANY OF THE ENFORCED LAW, ORDINANCES, RULES AND REGULATIONS, HE SHALL ASSUME FULL RESPONSIBILITY, AND SHALL BEAR ALL COSTS ASSOCIATED WITH BRINGING WORK INTO COMPLIANCE.

B. WHERE DRAWINGS AND SPECIFICATIONS CALL FOR MATERIAL OR CONSTRUCTION OF A BETTER QUALITY OR HIGHER CAPACITY THEN REQUIRED BY THE ABOVE-MENTIONED CODES AND STANDARDS, THE PROVISIONS OF THE

DRAWINGS OR SPECIFICATIONS SHALL TAKE PRECEDENCE OVER THE REQUIREMENTS OF THE CODES AND STANDARDS.
C. THE RESPECTIVE SUB-CONTRACTOR, AT HIS EXPENSE, SHALL OBTAIN ALL PERMITS AND FEES REQUIRED FOR

THIS SCOPE OF WORK ON THIS PROJECT. THE SUB-CONTRACTORS SHALL ALSO SCHEDULE ALL REQUIRED INSPECTION AND OBTAIN CERTIFICATES FOR HIS WORK, AT HIS EXPENSE. 1.4 SUBMITTALS AND SUBSTITUTIONS

A. SUBMITTAL MATERIALS SHALL BE COMPLETE IN EVERY RESPECT AND SHALL CLEARLY INDICATE EQUIPMENT FEATURES, DIMENSIONS, WEIGHTS, PERFORMANCE CHARACTERISTICS, AND CAPACITIES. CAPACITY AND PERFORMANCE CALCULATION SHALL BE ADJUSTED TO INDICATE ACTUAL EQUIPMENT PERFORMANCE AT THE PROJECT ELEVATION. LITERATURE OR DRAWINGS THAT DESCRIBE MORE THAN ONE MODEL OR SIZE OF EQUIPMENT SHALL BE MARKED WITH ARROWS OR OTHERWISE CLEARLY INSCRIBED TO IDENTIFY THE ACTUAL EQUIPMENT THAT WILL BE FURNISHED. ALL OPTIONS AND SPECIAL PARTS OF FEATURES SHALL ALSO BE CLEARLY IDENTIFY. ALL SUBMITTED MATERIALS MUST BE CLEAR, COMPLETE, AND LEGIBLE. ALL SUBMITTALS OF THIS SCOPE MUST BE SUBMITTED AT ONE TIME:

B. SUBMITTALS FOR ALL EQUIPMENT SHALL BE ROUTED THROUGH AND REVIEWED BY THE CONTRACTOR. THE CONTRACTOR SHALL CHECK ALL SUBMITTALS FOR ADEQUATE IDENTIFICATION, CORRECTNESS, AND COMPLIANCE WITH CONTRACT DRAWINGS AND SPECIFICATIONS AND APPLY A STAMP OF APPROVAL. FOR SUBMITTALS THAT ARE REQUIRED TO BE REVIEWED BY THE ENGINEER, A DIGITAL COPY SHALL BE FORWARDED FOR REVIEW AFTER REVIEW AND APPROVAL BY THE CONTRACTOR. THESE SHALL BE RETURNED AND SHALL BE REVISED AND RESUBMITTED UNTIL ACCEPTED BY THE ENGINEER. PROVIDE PRODUCT DATA FOR EACH PIECE OF EQUIPMENT/COMPONENT LISTED

FLOOR AND ROOF DRAINS, FLOOR SINKS, CLEANOUTS. ALL PLUMBING FIXTURES AND ACCESSORIES.

3. PUMPS. 4. WATER HEATERS.

5. VALVES AND PIPE ACCESSORIES.6. PIPE INSULATION AND LOCATIONS.

C. APPROVED MANUFACTURERS, WHICH MAY SUBMIT EQUAL PRODUCT TO THOSE SPECIFIED, ARE LISTED IN THE EQUIPMENT SCHEDULES. ANY SUBMITTAL FOR CONSIDERATION AS AN EQUAL TO THAT SCHEDULED MUST CONTAIN ALL INFORMATION REQUIRED TO EVALUATE THIS CLAIM. MANUFACTURERS NOT LISTED AS EQUAL MUST SUBMIT IN WRITING FOR REVIEW FIVE DAYS PRIOR TO BID CLOSING. CONTRACTOR IS RESPONSIBLE TO ASSURE ANY SUBMITTED ITEM MEETS ALL PHYSICAL AND PERFORMANCE REQUIREMENTS AS INTENDED IN THE DESIGN DOCUMENTS.

D. APPROVAL OF SUBMITTALS BY THE FIGUREFS SHALL NOT RELIEVE THE CONTRACTOR FROM RESPONSIBILITY FOR

D. APPROVAL OF SUBMITTALS BY THE ENGINEER SHALL NOT RELIEVE THE CONTRACTOR FROM RESPONSIBILITY FOR ERRORS IN SHOP DRAWINGS OR OTHER SUBMITTAL LITERATURE.

E. CONTRACTOR HAS THE SOLE RESPONSIBILITY TO COORDINATE ANY SUBSTITUTIONS WITH ALL OTHER DISCIPLINES. EQUIPMENT OF GREATER POWER, DIMENSIONS, CAPACITIES, AND RATINGS MAY BE FURNISHED PROVIDED SUCH PROPOSED EQUIPMENT IS APPROVED IN WRITING AND CONNECTING MECHANICAL AND ELECTRICAL SERVICES, CIRCUIT BREAKERS, CONDUITS, MOTORS, BASES, AND EQUIPMENT SPACES ARE INCREASED. NO ADDITIONAL COSTS WILL BE ACCEPTED FOR THESE INCREASES, IF LARGER EQUIPMENT IS PROVIDED. IF MINIMUM ENERGY RATINGS OR EFFICIENCIES OF THE EQUIPMENT ARE SPECIFIED, THE EQUIPMENT MUST MEET THE DESIGN REQUIREMENTS AND COMMISSIONING PEOU IDEMENTS.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. DELIVER PRODUCTS TO THE PROJECT PROPERLY IDENTIFIED WITH NAMES, MODEL NUMBERS, TYPES, GRADES, COMPLIANCE LABELS, AND OTHER INFORMATION NEEDED FOR IDENTIFICATION.
 B. ALL MECHANICAL EQUIPMENT AND MATERIAL ITEMS SHALL BE PROTECTED FROM WEATHER AND VANDALISM PRIOR TO ACTUAL INSTALLATION. FAN WHEELS, PUMPS AND OTHER ROTATING MACHINERY SHALL BE PERIODICALLY ROTATED DURING STORAGE. ANY FACTORY PAINTED EQUIPMENT SCRATCHED OR MARRED DURING
- REPAINTING OF THE EQUIPMENT IF NECESSARY TO PROVIDE EXACT PAINT MATCH.

 C. CONTRACTOR IS RESPONSIBLE FOR RECEIVING AND OFFLOADING EQUIPMENT OF HIS SCOPE. IMMEDIATELY UPON RECEIPT, CONTRACTOR SHALL INSPECT ALL EQUIPMENT AND MATERIAL FOR SHIPPING DAMAGE AND REPLACE ANY DEFECTIVE ITEMS AT NO INCREASE TO CONTRACT AMOUNT.

SHIPMENT OR CONSTRUCTION SHALL BE RESTORED TO ORIGINAL, "NEW" CONDITION. THIS INCLUDES COMPLETE

1.6 SEQUENCING AND SCHEDULING

- COORDINATE PLUMBING EQUIPMENT INSTALLATION WITH OTHER BUILDING COMPONENTS PRIOR TO ORDERING OR FABRICATION OF ADJOINING WORK.

 COORDINATE THE INSTALLATION OF REQUIRED SUPPORTING DEVICES AND SET SLEEVES IN POURED-IN-PLACE CONCRETE AND OTHER STRUCTURAL COMPONENTS AS THEY ARE CONSTRUCTED. ARRANGE FOR CHASES, SLOTS, AND OPENINGS IN BUILDING STRUCTURE DURING PROGRESS OF CONSTRUCTION TO ALLOW FOR
- MECHANICAL INSTALLATIONS.

 C. SEQUENCE, COORDINATE, AND INTEGRATE INSTALLATIONS OF MECHANICAL MATERIALS AND EQUIPMENT FOR EFFICIENT FLOW OF THE WORK. COORDINATE INSTALLATION OF LARGE EQUIPMENT REQUIRING POSITIONING
- PRIOR TO CLOSING IN THE BUILDING.

 D. COORDINATE CONNECTION OF MECHANICAL SYSTEMS WITH EXTERIOR UNDERGROUND AND OVERHEAD UTILITIES AND SERVICES, COMPLY WITH REQUIREMENTS OF GOVERNING REGULATIONS, FRANCHISED SERVICE COMPANIES.
- AND CONTROLLING AGENCIES. COORDINATE CONNECTION OF ELECTRICAL SERVICES.

 E. PROVIDE IDENTIFICATION OF ALL EQUIPMENT. COORDINATE INSTALLATION OF IDENTIFYING DEVICES AFTER COMPLETING COVERAGE AND PAINTING WHERE DEVICES ARE APPLIED TO SURFACES. INSTALL IDENTIFYING DEVICES PRIOR TO INSTALLING ACOUSTICAL CEILINGS AND SIMILAR CONCEALMENT.

1.7 PROJECT CLOSE-OUT

- A. CONTRACTOR SHALL FURNISH A WRITTEN GUARANTEE TO REPLACE OR REPAIR ANY DEFECTS IN WORKMANSHIP OR EQUIPMENT, WHICH DEVELOP WITHIN ONE YEAR FROM ACCEPTANCE BY THE OWNER. CONTRACTOR MUST ASSUME RESPONSIBILITY FOR ALL EXPENSES INCURRED TO REPAIR OR REPLACE HIS WORK AS WELL AS WORK OF OTHER TRADES THAT MAY BE AFFECTED BY THIS REPLACEMENT.
- B. CONTRACTOR SHALL MAINTAIN A REDLINED SET OF CONSTRUCTION DRAWINGS SHOWING DEVIATIONS BETWEEN THE DRAWINGS AND INSTALLED CONDITIONS. THESE SHALL BE TURNED OVER TO THE OWNER AT ACCEPTANCE OF THE WORK
- C. PROVIDE THREE (3) COMPLETE SETS OF OPERATION AND MAINTENANCE MANUALS. THESE ARE TO INCLUDE ALL EQUIPMENT CUT SHEETS, MANUFACTURERS WARRANTY INFORMATION, AND CONTRACTORS WARRANTY LETTER AND
- D. PROVIDE THREE (3) REVIEWED BALANCE REPORTS OF WATER AND AIR SYSTEMS AS APPLICABLE.

2.1 GENERAL PIPE MATERIALS AND FITTINGS

- A. ABOVE GRADE DOMESTIC WATER PIPING SHALL BE ANY OF THE FOLLOWING:
 1. ALL SIZES: HARD COPPER TUBE CONFORMING TO ASTM B-88. TYPE-L:
- ALL SIZES: HARD COPPER TUBE CONFORMING TO ASTM B-88, TYPE-L: COPPER PRESSURE FITTINGS PER ASME B16.18; AND ALLOY SN95 SOLDER WITH WATER SOLUBLE FLUX.
- NPS 1 AND SMALLER: PEX PER ASTM F877, SDR 9 TUBING, DISTRIBUTION MANIFOLD, INSERT FITTINGS, AND CRIMPED JOINTS.

PLUMBING LEGEND

PIPING SYMBOLS

SYMBOL	ABBREVIATION	DESCRIPTION
<u> </u>	AV	ACID VENT
AW	AW	ACID WASTE
CA	CA	COMPRESSED AIR
CD	CD	CONDENSATE DRAIN
DCW	DCW	DOMESTIC COLD WATER
⊢	DHW	DOMESTIC HOT WATER
— — — DHWR — —	DHWR	DOMESTIC HOT WATER RETURN
⊢ — — — DHW 140°F — —	DHW 140°F	140° DOMESTIC HOT WATER
— — — DHWR 140°F—	DHWR 140°F	140° DOMESTIC HOT WATER RETURN
	ROS	REVERSE OSMOSIS SUPPLY
⊢ ROR — ⊢	ROR	REVERSE OSMOSIS RETURN
⊢ — — MU — —	MU	MAKE-UP WATER
⊢ NPW — ⊢	NPW	NON-POTABLE WATER
— — V — —	V	VENT
——————————————————————————————————————	V DIS	DEIONIZED WATER SUPPLY
⊢ DIR — □	DIR	DEIONIZED WATER RETURN
⊢ SAN — □	SAN	SANITARY SEWER
	GW	GREASE WASTE
— — — — GVV — —	GV	GREASE VENT
⊢ RD	RD	STORM/ROOF DRAIN
⊢ ORD — □	ORD	OVERFLOW ROOF DRAIN
⊢————————————————————————————————————	LPG	LIQUIFIED PETROLEUM GAS
<u> </u>	G	NATURAL GAS-LOW PRESSURE
⊢ NGM — □	NGM	NATURAL GAS-MEDIUM PRESSURE
⊢ NGH — □	NGH	NATURAL GAS-HIGH PRESSURE
⊢ — IRR — □	IRR	IRRIGATION
⊢————————————————————————————————————	SCW	SOFT COLD WATER
⊢————————————————————————————————————	SHW	SOFT HOT WATER
──	TWR	TEMPERED WATER RETURN (TEMP °F
⊢	TW	TEMPERED WATER (TEMP °F)
	PD	PUMPED DISCHARGE LINE
⊢—— ICW ——	ICW	INDUSTRIAL COLD WATER
⊢—— — — IHW ——	IHW	INDUSTRIAL HOT WATER
⊢—— — — IHWR ——	IHWR	INDUSTRIAL HOT WATER RETURN
	INW	INDUSTRIAL WASTE
——— IA ———	IA	INSTRUMENT COMPRESSED AIR
	IW	INDIRECT WASTE
⊢——— LA ——	LA	LAB COMPRESSED AIR

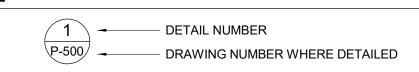
VALVE SYMBOLS

SYMBOL	DESCRIPTION
	GATE VALVE
S	GLOBE VALVE
+	SOLENOID VALVE
	OS&Y VALVE
	BUTTERFLY VALVE
OR HOH OR -T-	BALL VALVE
OR	CHECK VALVE
$ \qquad \qquad \square \bigcirc \square \square$	PLUG VALVE
	BALANCING VALVE/CIRCUIT SETTER MEASURING DEVICE
	WATER PRESSURE REDUCING VALVE
	2-WAY CONTROL VALVE
	3-WAY MODULATING CONTROL VALVE
	FUEL GAS PRESSURE REGULATOR
	PRESSURE RELIEF VALVE
<u> </u>	TEMPERATURE AND PRESSURE RELIEF VALVE
	DRAIN VALVE
	VALVE IN VERTICAL
	FLOW SWITCH
	DIAPHRAGM (PROCESS SYSTEMS)
	REDUCED PRESSURE BACKFLOW PREVENTER (RPBP)

SECTION SYMBOL



DETAIL SYMBOL



FIXTURE & EQUIPMENT SYMBOL

∠LETTER REFER TO EQUIPMENT TYPE



SYMBOL INDICATES FIXTURE/EQUIPMENT IDENTIFIED IN EQUIPMENT SCHEDULE

SCHEMATIC SYMBOLS

SYMBOL	DESCRIPTION	SYMBOL	DE	SCRIPTION
\(\sigma x x\)	KEYED NOTE			
_	POINT OF CONNECTION TO EXISTING	F	→ THERMON	METER
×××××	→ EXISTING PIPE TO BE REMOVED	<u>₩</u>	→ PRESSUR	RE GAUGE AND GAUGE COCK
<u> </u>	→ NEW PIPING	<u> </u>	— AQUASTA	AT.
	EXISTING PIPING TO REMAIN		── WATER H	AMMER ARRESTOR
T	→ NEW PIPE CONNECTION TO EXISTING PIPING			
				JG (PRESS/TEMP)
)	SLOPE OF PIPE		→ PENETRA	TION
	─ DIRECTION OF FLOW─ DROP IN PIPE	Δ		
0+	☐ RISE IN PIPE ☐ RISE IN PIPE		— MAV	MANUAL AIR VENT (MAV)
+\$+	TOP CONNECTION, 45° OR 90° TOP CONNECTION, 45° OR 90°	<u> </u>	AAV	AUTOMATIC AIR VENT (AAV)
151	→ BOTTOM CONNECTION, 45° OR 90°	⊕ -c+	→ FS/FD/AD	FLOOR SINK , FLOOR DRAIN , AREA DRAIN
T	CAPPED OUTLET	©+	→ FCO/COTG	FLOOR CLEANOUT/CLEANOUT TO GRADE
	→ SIDE CONNECTION	——————————————————————————————————————	→ DCOTG	TWO WAY OR DOUBLE CLEANOUT TO GRAI
			→ RD/OD/DD	ROOF DRAIN/OVERFLOW DRAIN/DECK DRA
	— UNION			
	─ FLANGED UNION		— ТР	TRAP PRIMER WITH ACCESS PANEL
	→ ORIFICE UNION			
\rightarrow	REDUCER OR INCREASER		→ VTR	VENT THROUGH ROOF
	── ECCENTRIC REDUCER	<u></u>	VIII	VENT TIMESSITTES
<u> </u>	─ PIPE GUIDE	· Y	AG	AIR GAP FITTING
772	FLEXIBLE CONNECTION	0	(WH) (HB)	WALL HYDRANT, HOSE BIBB
T	── UNIVERSAL TEMPERATURE-PRESSURE FITTING (PETE'S PLUG)── STRAINER WITH BLOWDOWN VALVE & F			

ABBREVIATIONS

GENERAL PLUMBING NOTES

(RE:ALL PLUMBING SHEETS) G1 COORDINATE LOCATION OF VENTS THROUGH ROOF TO MAINTAIN 10' CLEARANCE FROM OUTSIDE AIR INTAKES

G2 SITE UTILITIES: THE MECHANICAL DOCUMENTS INDICATE CONNECTION LOCATION OF VARIOUS BUILDING SERVICES.COORDINATE WORK WITH THE SITE UTILITIES CONTRACTOR TO ENSURE PROPER INVERT ELEVATION, PIPE SLOPE GRADIENT. PIPE SIZE AND SEPARATION WITHIN TRENCH WORK, NOTIFY ARCHITECT OR ENGINEERING OF ANY DISCREPANCY BETWEEN DRAWINGS AND FIELD CONDITIONS. G3 CONTRACTOR SHALL IDENTIFY ALL SERVICEABLE ITEMS (VALVES, CLEANOUTS, COILS ETC.) SO THAT THE CEILING SUBCONTRACTOR MAY KNOW WHERE TO INSTALL ACCESS-TYPE PANELS SHOULD A LIFT-UP TYPE CEILING NOT B INSTALLED. THIS CONTRACTOR SHALL PROVIDE ACCESS PANELS FOR HIS WORK UNLESS SPECIFICALLY NOTED ON THE DRAWINGS. ARCHITECT SHALL APPROVE LOCATIONS OF ACCESS PANELS PRIOR TO INSTALLATION. G4 PROVIDE ALL NECESSARY FLASHING, SEALING, ETC. TO MAINTAIN THE WATERPROOF INTEGRITY OF THE BUILDING AS REQUIRED BY THE INSTALLATION OR REMOVAL OF ITEMS AS REQUIRED BY THIS SCOPE OF WORK. G5 ALL PENETRATIONS MADE THROUGH RATED ASSEMBLIES TO ACCOMMODATE WORK OF THIS SECTION MUST BE SEALED TO MAINTAIN THE RATING OF SUCH ASSEMBLY BY A U.L RECOGNIZED SEALING METHOD. G6 PROVIDE ALL CUTTING AND PATCHING REQUIRED FOR INSTALLATION OF THIS WORK. COORDINATE ALL BLOCKING, SUPPORT, ETC. NECESSARY FOR THE INSTALLATION OF THIS WORK WITH THE GENERAL CONTRACTOR. G7 THE RESPECTIVE SUB-CONTRACTOR, AT HIS EXPENSE, SHALL OBTAIN ALL PERMITS AND FEES REQUIRED FOR THIS SCOPE OF WORK ON THIS PROJECT. THE SUB-CONTRACTORS SHALL ALSO SCHEDULE ALL REQUIRED

INSPECTIONS AND OBTAIN CERTIFICATES FOR HIS WORK, AT HIS EXPENSE.

G8 CONTRACTOR HAS SOLE RESPONSIBILITY TO COORDINATE ANY SUBSTITUTIONS WITH ALL OTHER DISCIPLINES.
EQUIPMENT OF GREATER POWER, DIMENSIONS, CAPACITIES, AND RATINGS MAY BE FURNISHED PROVIDED SUCH PROPOSED EQUIPMENT HAS BEEN SUBMITTED FOR REVIEW, IN WRITING AND CONNECTING MECHANICAL AND ELECTRICAL SERVICES, CIRCUIT BREAKERS, CONDUIT, MOTORS, BASES, AND EQUIPMENT SPACES ARE ADJUSTED APPROPRIATELY. NO ADDITIONAL COSTS WILL BE APPROVED FOR THESE INCREASES, IF LARGER EQUIPMENT ARE SPECIFIED MUST MEET THE DESIGN REQUIREMENTS AND COMMISSIONING REQUIREMENTS. CONTRACTOR IS SOLELY RESPONSIBLE FOR SUBSTITUTED EQUIPMENT MEETING THE INTENT OF THE ORIGINAL DESIGNED EQUIPMENT MEETING

G9 PROVIDE A COMMISSIONING PLAN DEVELOPED BY A REGISTERED DESIGN PROFESSIONAL OR APPROVED AGENCY AS/WHERE REQUIRED BY THE LOCAL AUTHORITY HAVING JURISDICTION.

SHEET INDEX

P1.0 - PLUMBING SPECIFICATIONS
P1.1 - FLOOR PLAN - PLUMBING
P3.1 - ISOMETRIC VIEW - PLUMBING
P5.1 - PLUMBING DETAILS
P6.1 - PLUMBING LEGEND & SCHEDULE





Job Number:
Date: 06/20/22
Drawn By: A5
Checked By: F

Sheet Title
PLUMBING SPECIFICATION

P1 ()

ENVIRONMENTS
USA

A LIMITED LIABILITY COMPANY

(a) (b) (c)

1920 13th STREET, SUITE B1
BOULDER, CO80302
720 742-1587

INDOOR

NOTICE: DUTY OF COOPERATION

Release of these plans contemplates further cooperation among the owner, his contractor and the architect. Design and construction are complex. Although the architect and his consultants have performed their services with due care and diligence, they cannot guarantee perfection. Communication is imperfect and every contingency cannot be anticipated. Any ambiguity or discrepancy discovered by the use of these plans shall be reported immediately to the architect. Failure to notify the architect compounds misunderstanding and increases construction costs. A failure to cooperate by a simple notice to the architect shall relieve the architect from responsibility for the consequences. Changes made from the plans without consent of the architect are unauthorized and shall relieve the architect of responsibility for all consequences arriving out of such changes.

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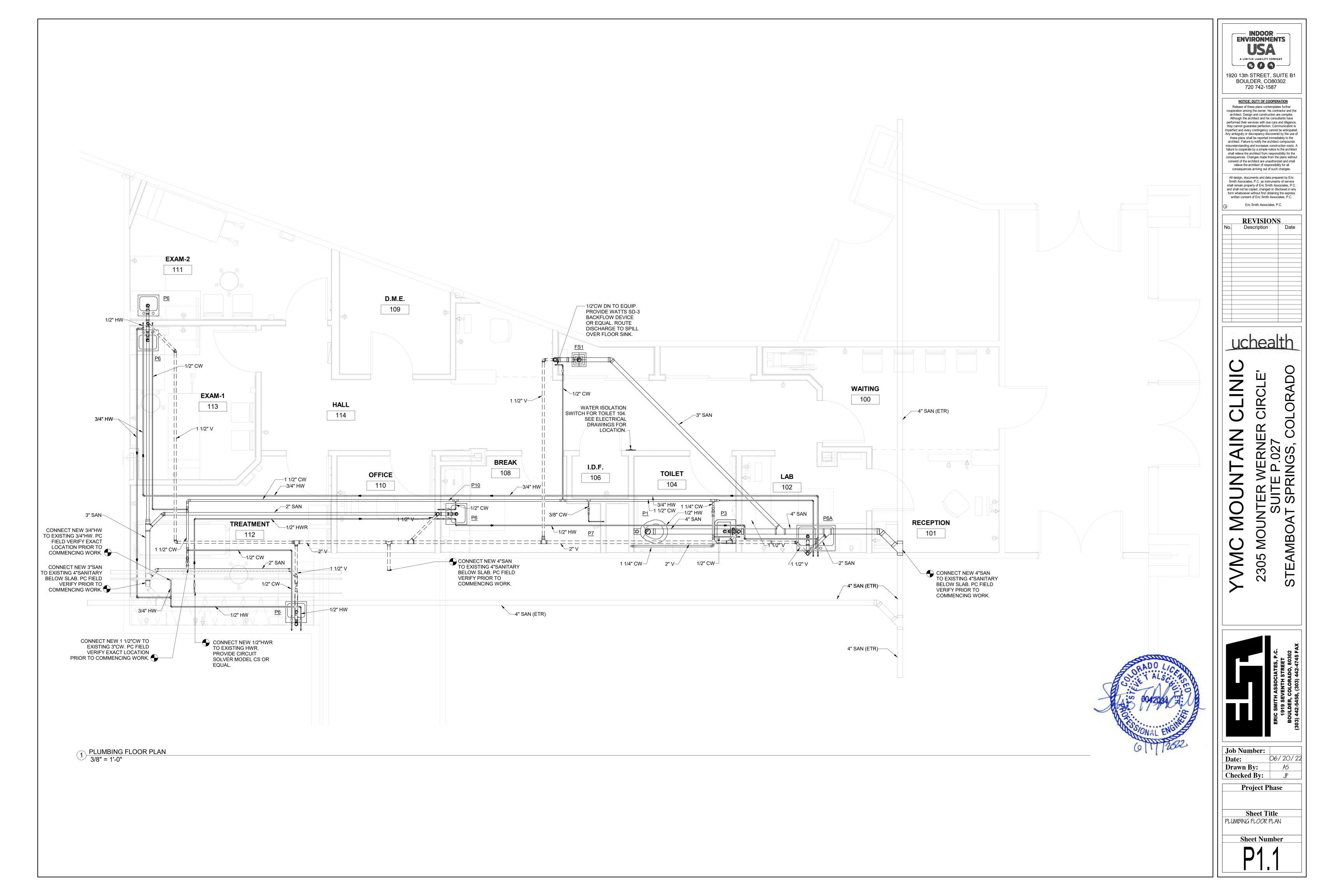
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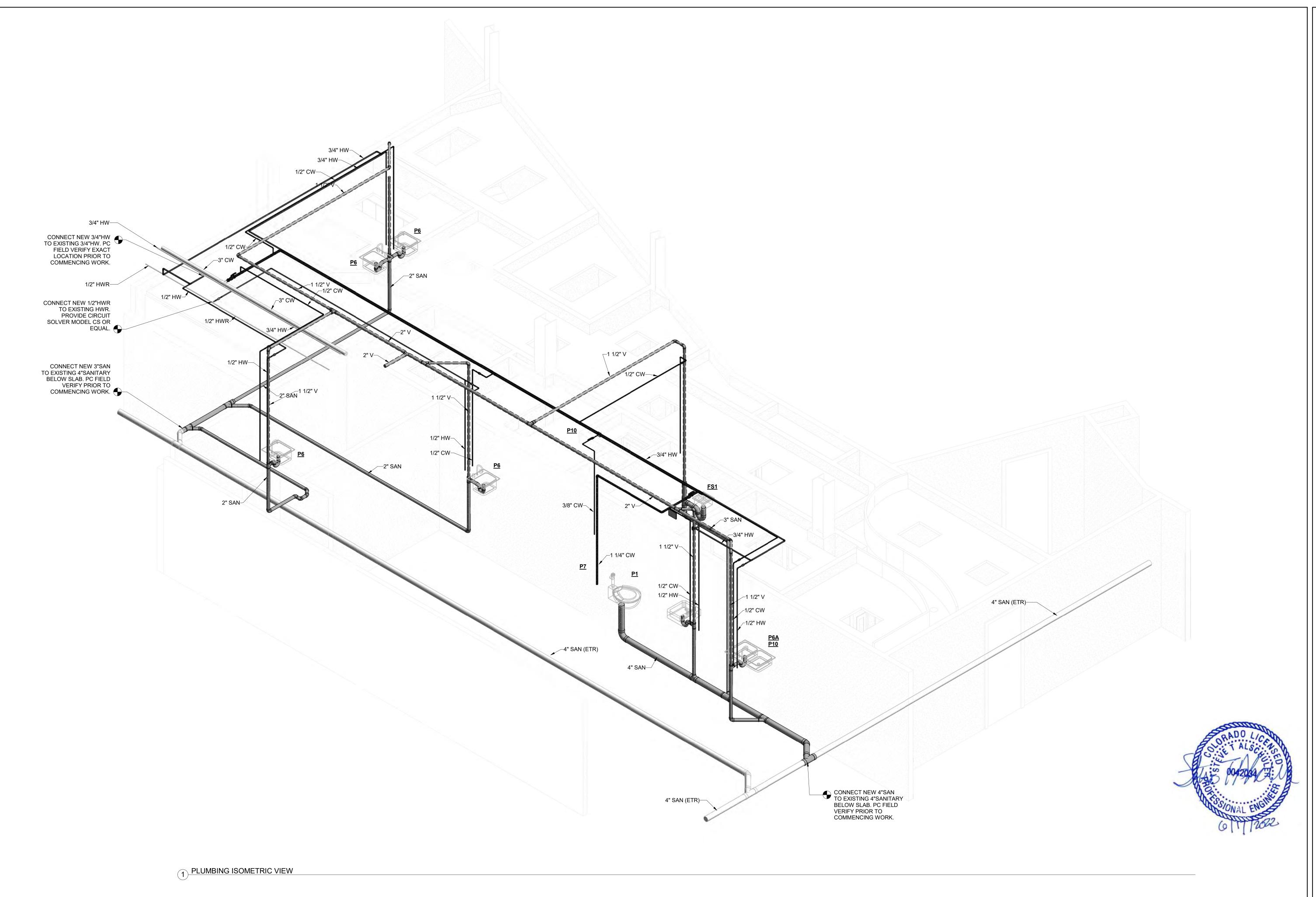
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1C MOUNTER WERNER CIRCLE'
SUITE P.027
MBOAT SPRINGS, COLORADO

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INDOOR — ENVIRONMENTS USA A LIMITED LIABILITY COMPANY ---

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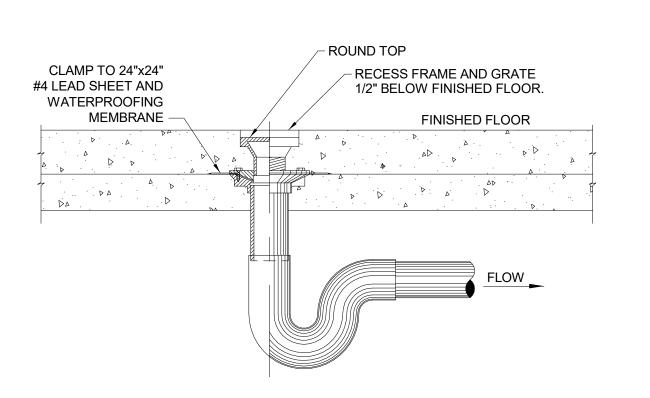
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VERNER P.027 INGS, CO 2305 MOUNTER WE SUITE P. STEAMBOAT SPRING

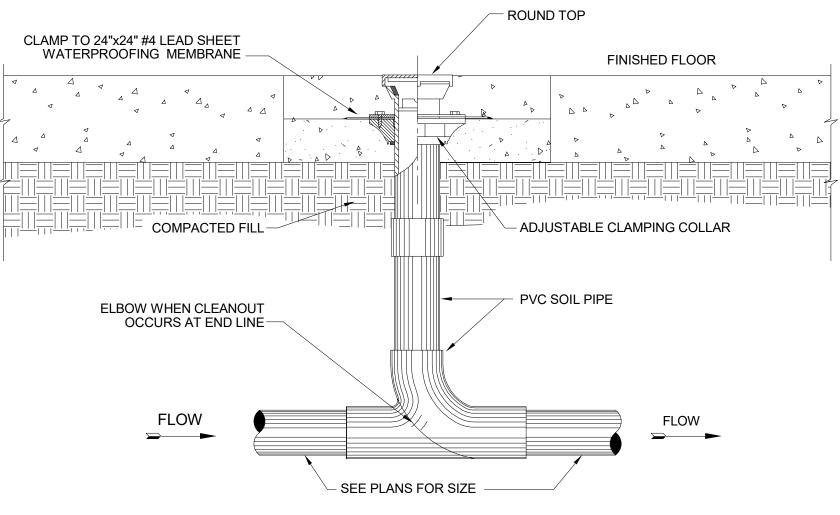
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Project Phase

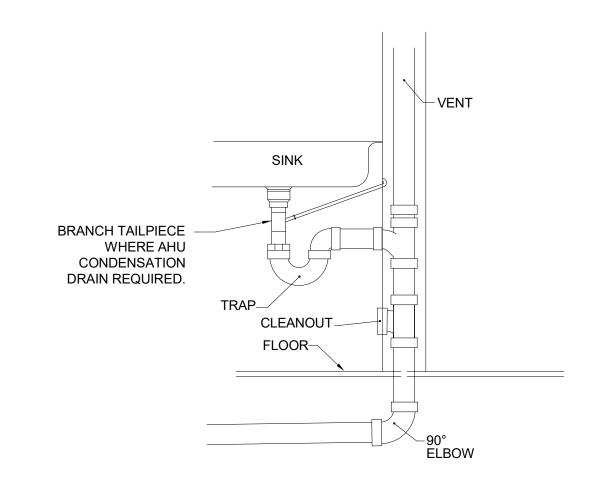
Sheet Title PLUMBING ISOMETRIC VIEW



1 FLOOR DRAIN DETAIL NOT TO SCALE









ORAD(

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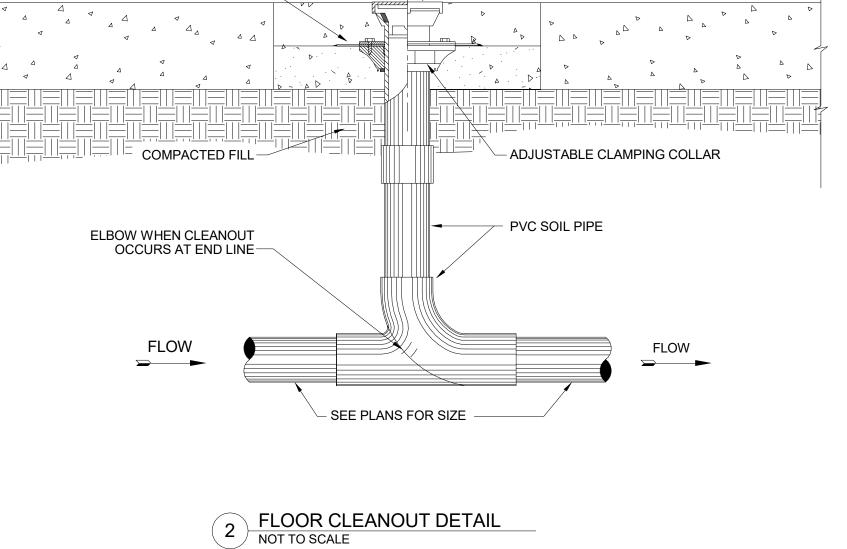
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Job Number:
Date:
Drawn By:
Checked By: 06/20/22

Project Phase

Sheet Title
PLUMBING DETAILS



		PLUN	MBING FIXTURE SCHEDULE				
DESIGNATION	MANUFACTURER	MODEL#	FIXTURE DESCRIPTION	CO	NNECTION	SCHEDU	ILE
DESIGNATION	WANUFACIURER	WIODEL #	FIXTURE DESCRIPTION	WASTE	VENT	CW	HW
<u>P1</u>	KOHLER	ULTRA K-96053	17" HIGH VITREOUS CHINA WATER CLOSET W/ ELONGATED BOWL (ADA) FLUSH VALVE - KOHLER K-76321-CP SEAT - (NO LID) - CHURCH MODEL 9500-SSC LOW WATER CONSUMPTION (1.6 GALLONS PER FLUSH) LOCATE FLUSH CONTROL ON WIDE SIDE OF STALL	3"	2"	1"	
<u>P3</u>	KOHLER	CHESAPEAKE K-1728-0	VITREOUS CHINA WALL-HUNG LAVATORY (ADA) FAUCET - CHICAGO 8595-317E2805 TRAP - 1 1/4" CAST BRASS WITH C.O. PLUG SUPPLY - 3/8" ANGLE-TYPE WITH STOPS PROVIDE OFFSET TAILPIECE INSULATE TRAP OUTLET & HW SUPPLY TO MEET A.D.A.	2"	1 1/4"	1/2"	1/2"
<u>P6</u>	ELKAY	ELUHAD121245	SINGLE-COMPARTMENT, STAINLESS STEEL SINK (ADA) FAUCET - CHICAGO 8595-317E2805 CUP STRAINER - ELKAY LK-35 SUPPLY - 3/8" ANGLE-TYPE WITH STOPS TRAP - 1 1/2" CAST BRASS WITH C.O. PLUG	2"	1 1/2"	1/2"	1/2"
<u>P6A</u>	ELKAY	ULHAD2133	DOUBLE-COMPARTMENT, STAINLESS STEEL SINK (ADA) FAUCET - CHICAGO 786-GN8AFCABCP CUP STRAINERS - (2) ELKAY LK-35 SUPPLY - 3/8" ANGLE-TYPE WITH STOPS TRAP - 1 1/2" CAST BRASS WITH C.O. PLUG	2"	1 1/2"	1/2"	1/2"
<u>FS1</u>	ZURN	Z-1750	STAINLESS STEEL FLOOR SINK, 12"X12"X6", PROVIDE FULL SIZE SS GRATE SEE FLOOR PLANS FOR DRAIN SIZES.	-			
SA	ZURN	Z-1700 SERIES	WATER HAMMER ARRESTOR. SIZE PER P.D.I. WH-201 VERIFY THAT COMPONENT IS ACCESIBLE.				



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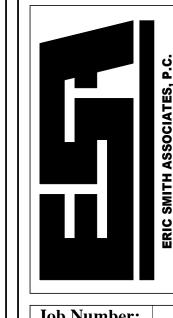
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No.	Description	Date
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COLORAD 2305 MOUNTER WERNER SUITE P.027 STEAMBOAT SPRINGS, CC





Job Number:
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Drawn By:
Checked By: 06/20/22

Project Phase

Sheet Title
PLUMBING LEGEND &
SCHEDULE

				FLECT	DICAL CYMDOL I FOEND			
			НТ	<u> </u>	RICAL SYMBOL LEGEND	НТ		
	SYMBOL	DESCRIPTION	AFF	SYMBOL	DESCRIPTION	AFF	SYMBOL	DESCRIPTION
48"	\$	SWITCH SINGLE/TWO POLE		(2)	SMOKE DETECTOR CEILING MOUNTED	AS NOTED	HO^AO^A	SURFACE OR WALL MOUNTED LIGHT (TYPE DENOTED)
48"	\$ ³	SWITCH 3-WAY		RB S	SMOKE DETECTOR CEILING MOUNTED RELAY BASE	AS NOTED	□ ^A	WALL MOUNTED EXTERIOR LIGHT (TYPE DENOTED)
48"	\$ ⁴	SWITCH 4-WAY		SC ▷③ CO	SMOKE/CARBON MONOXIDE DETECTOR CEILING MOUNTED SELF CONTAINED		A	2X4 LIGHT FIXTURE RECESSED OR SURFACE MOUNTED AS SCHEDULED
48"	\$ ^K	SWITCH KEYED	72"***	FA ANNUN	FIRE ALARM ANNUNCIATOR		A	2X2 LIGHT FIXTURE RECESSED OR SURFACE MOUNTED AS SCHEDULED
48"	os \$	SWITCH OCCUPANCY SENSOR	48"***	F	FIRE ALARM MANUAL PULL STATION		⊢ A	STRIP LIGHT (TYPE DENOTED)
48"	SP \$	SWITCH SPEED CONTROL	84"**	\bar{\bar{\bar{\bar{\bar{\bar{\bar{	FIRE ALARM HORN STROBE		• • A	SUSPENDED OR PENDANT LIGHT FIXTURE (TYPE DENOTED)
48"	\$ ^M	SWITCH HORSEPOWER RATED		•	HEAT DETECTOR	96"	T1 T2 ∇ ∇ TR1	TRACK & TRACK LIGHTS (TYPE DENOTED)
48"	Ş [™]	SWITCH TIMER		СО	CARBON MONOXIDE DETECTOR	96"	EM	EMERGENCY BATTERY LIGHT (TYPE DENOTED)
48"	\$ ^D	SWITCH DIMMER		Ŷ <u>₽</u> Ŷ	FIRE ALARM BELL & STROBE	96"	EMX	COMBINED BATTERY EMERGENCY & EXIT LIGHT (TYPE DENOTED)
48"	PL \$	SWITCH WITH PILOT		\Diamond	FIRE FLAME DETECTOR	12"*	EX EX	EXIT LIGHT (TYPE DENOTED)
48"	[000H	SWITCH PUSH BUTTON	84"**	1 1 1	NURSE CALL WALL MOUNT		$\left(\begin{array}{c} \end{array} \right)$	KEYED NOTE (SEE SCHEDULE)
18"	φ	RECEPTACLE SIMPLEX		₩4	NURSE CALL CEILING MOUNT			
18"	φ	RECEPTACLE DUPLEX	AS NOTED		CAMERA			
18"	P	RECEPTACLE DUPLEX GFCI	AS NOTED	(10)	CAMERA PAN/TILT DRIVE			
18"	φ	RECEPTACLE ABOVE COUNTER	48"***	CR	CARD READER			RECEPTACLE DUPLEX EXISTING
18"	₩	RECEPTACLE 240/208V	84"		DOOR BUZZER			
18"	#	RECEPTACLE FOURPLEX	84"		DOOR CHIME			
18"	*	RECEPTACLE FOURPLEX GFCI	144"	MD	MOTION DETECTOR			
18"	Φ	RECEPTACLE DUPLEX HALF SWITCHED			DISCONNECT			
18"	P	RECEPTACLE DUPLEX SWITCHED			DISCONNECT FUSED			
18"	₽	RECEPTACLE ISOLATED GROUND			MAG MOTOR STARTER OR CONTACTOR			
18"		RECEPTACLE DUPLEX FLOOR MOUNTED			COMBINATION MOTOR STARTER NON-FUSED			
AS NOTED	⊕~□	RECEPTACLE ON DROP CORD			COMBINATION MOTOR STARTER FUSED			
	1	RECEPTACLE DUPLEX EXISTING			VARIABLE FREQUENCY DRIVE			
	#	RECEPTACLE FOURPLEX EXISTING		M-1	MOTOR (SEE SCHEDULE)			
	1	DATA/TELEPHONE PLAIN				-		

ALL DISTANCES ARE TO CENTER OF DEVICE OR EQUIPMENT UNLESS OTHERWISE NOTED. DEVICES INDICATED AT 48" MAY NOT BE INSTALLED WITH ANY OPERABLE PART HIGHER THAN 48". DEVICES MAY BE INSTALLED IN CONCRETE MASONRY UNITS WITH THE TOP OF THE DEVICE AT 48".

* DISTANCE ABOVE TOP OF DOOR FRAME

CONST

CONTR

CONT

CONSTRUCTION

CONTINUOUS

CONTRACTOR

CONVECTOR

CONTINUATION OR

CIRCULATING PUMP

GC

GEN

GND

GFI

GENERAL CONTRACTOR

GROUND FAULT CIRCUIT

GROUND FAULT PROTECTOR

GENERATOR

GROUND

INTERRUPTER

**** DISTANCE BELOW CEILING

** DISTANCE TO TOP OF EQUIPMENT OR DEVICE

***** DISTANCE TO BOTTOM OF DEVICE

STD STANDARD SURF SURFACE MOUNTED

SWBD SWITCHBOARD

SYM SYMMETRICAL

SW SWITCH

SYS SYSTEM

*** DISTANCE TO HIGHEST OPERABLE PART OF EQUIPMENT

ELECTRICAL SYMBOL NOTES

THE LIGHTING FIXTURE TYPE IS INDICATED BY AN UPPER CASE LETTER. THE CIRCUIT DESIGNATION IS INDICATED BY A NUMBER.

THE SWITCH DESIGNATION IS INDICATED BY A LOWER CASE LETTER.

EXAMPLE 1: LIGHTING FIXTURE TYPE "A" IS CONNECTED TO CIRCUIT 12 AND CONTROLLED BY SWITCH "b".

TEXAMPLE 2: THE FIXTURE TYPE SHOWN AS A NUMERATOR INDICATES ALL LIGHTING FIXTURES IN THE ROOM OR SPACE ARE THE SAME TYPE. THE CIRCUIT NUMBER AND SWITCH DESIGNATION SHOWN AS A DENOMINATOR INDICATES ALL LIGHTING FIXTURES IN THE ROOM OR SPACE ARE CONNECTED TO THE SAME CIRCUIT, CONTROLLED BY THE SAME SWITCHES, CENTER/OUTBOARD MULTILEVEL SWITCHING.

EXIT LIGHTS. STEM INDICATES WALL MOUNTING. NO STEM INDICATES CEILING MOUNTING. SHADED AREA INDICATES ILLUMINATED FACE(S). ARROW INDICATES DIRECTIONAL ARROW ON ILLUMINATED FACE(S). THE CIRCUIT DESIGNATION IS INDICATED BY A NUMBER. EXAMPLE: THE WALL MOUNTED EXIT LIGHT TYPE "E" WITH SINGLE FACE AND DIRECTIONAL ARROW IS CONNECTED TO CIRCUIT 14.

DEVICES. THE CIRCUIT DESIGNATION IS INDICATED BY A NUMBER. THE SWITCH DESIGNATION IS INDICATED BY A LOWER CASE LETTER. EXAMPLE: SPLIT DUPLEX RECEPTACLE IS CONNECTED TO CIRCUIT 16 AND ONE RECEPTACLE OUTLET IS CONTROLLED BY SWITCH "c".

D600 THE CONTROL DEVICE DESIGNATION IS INDICATED BY A LOWER CASE LETTER. EXAMPLE: SINGLE POLE SWITCH "d" TO CONTROL LIGHTING FIXTURES INDICATED BY "d".

WALL BOX DIMMER WITH SIZE AS INDICATED AT DEVICE. EXAMPLE: 600 WATT WALL BOX DIMMER TO CONTROL LIGHTING FIXTURES INDICATED BY "e". SEE SPECIFICATIONS FOR WATTAGE IF NOT INDICATED.

SPECIAL CONNECTIONS. THE EQUIPMENT IS INDICATED BY A NUMBER IN A CIRCLE. SEE THE MOTOR AND EQUIPMENT SCHEDULE FOR THE LOAD DESCRIPTION AND TYPE OF CONNECTION. THE CIRCUIT DESIGNATION IS INDICATED BY A NUMBER(S) ADJACENT TO THE SYMBOL. EXAMPLE: EQUIPMENT NO. 1; 3 PHASE CONNECTION TO CIRCUITS 1, 3, 5.

MOTOR CONNECTIONS. THE MOTOR IS INDICATED BY A NUMBER WITHIN OR CHARACTERS ADJACENT TO THE MOTOR SYMBOL. SEE THE MOTOR AND EQUIPMENT SCHEDULE FOR THE MOTOR DESCRIPTION AND ELECTRICAL REQUIREMENTS. THE CIRCUIT DESIGNATION IS INDICATED BY A NUMBER(S) ADJACENT TO THE SYMBOL. EXAMPLE: MOTOR SF-1; 3 PHASE CONNECTION TO CIRCUITS 2, 4, 6.

ELECTRIC HEATER CONNECTIONS. THE HEATER TYPE IS INDICATED BY A NUMBER FOLLOWING THE UPPER CASE LETTER "H". SEE THE HEATER SCHEDULE FOR ELECTRICAL REQUIREMENTS. THE CIRCUIT DESIGNATION IS INDICATED BY A NUMBER(S) ADJACENT TO THE HEATER. EXAMPLE: ELECTRIC BASEBOARD HEATER TYPE "H1" CONNECTED TO CIRCUITS 7. 9.

TRANSFORMERS. THE TRANSFORMER TYPE IS INDICATED BY A NUMBER FOLLOWING THE UPPER CASE LETTER "T". SEE THE TRANSFORMER SCHEDULE OR THE SINGLE LINE DIAGRAM FOR THE TRANSFORMER DESCRIPTION AND REQUIREMENTS. EXAMPLE: TRANSFORMER TYPE "T1".

LPN-102 PANELBOARDS. PANELBOARD DOORS MAY BE SHOWN TO INDICATE OPENING SIDE OF RECESSED PANELBOARDS. SEE PANELBOARD IDENTIFICATION FOR DESIGNATION

SPECIAL NOTE. SEE THE SPECIAL NOTES ON THAT SHEET FOR THE NOTE NUMBER INDICATED IN THE HEXAGON.

CONDUIT SHOWN WITHOUT SLASH MARKS SHALL CONTAIN 2 # 12 CONDUCTORS IN 3/4" CONDUIT UNLESS SPECIFIC EQUIPMENT REQUIRES A DIFFERENT SIZE.

CONDUIT SHOWN WITH SLASH MARKS SHALL CONTAIN 1 # 12 CONDUCTOR PER SLASH MARK IN 3/4" CONDUIT UNLESS A CONDUCTOR AND CONDUIT SIZE IS SHOWN ADJACENT TO THE SLASH MARKS. SLASH MARK INDICATORS ARE: SHORT STRAIGHT=PHASE CONDUCTOR, LONG STRAIGHT=NEUTRAL CONDUCTOR, SHORT BENT ENDED=SWITCH LEGS, LONG STRAIGHT WITH A DOT-GROUND CONDUCTOR, CHEVRON-CATEGORY 6, HALF CHEVRON=CATEGORY 3, TWIST=SHIELDED TWISTED PAIR, CONCENTRIC CIRCLE AND DOT=COAX CABLE.

HOME RUN TO BRANCH CIRCUIT PANELBOARD. THE PANELBOARD DESIGNATION IS SHOWN ADJACENT TO THE HOME RUN ARROW AS A NUMERATOR AND THE CIRCUIT DESIGNATION IS SHOWN AS THE DENOMINATOR. CIRCUIT BREAKER SIZES (AMPS/NUMBER OF POLES) ARE SHOWN IN THE PANELBOARD SCHEDULE WITH THE CORRESPONDING PANELBOARD AND CIRCUIT DESIGNATION. EXAMPLE: HOME RUN TO PANELBOARD LPN-102; CIRCUITS 1, 3, 5.

SYMBOL NOTATIONS: UPPER CASE LETTERS ADJACENT TO SYMBOLS INDICATE A UNIT TYPE. SEE APPROPRIATE SCHEDULE OR SPECIFICATIONS.

		El	ECTRICAL	AE	BREVIATI	ONS	S LIST		
1P	1 POLE (2P, 3P, 4P, ETC.)	CRT	CATHODE-RAY TUBE	GRS	GALVANIZED RIGID STEEL	N.C.	NORMALLY CLOSED	TEL (DA	TELEPHONE
		CT	CURRENT TRANSFORMER	GYP BI	(CONDUIT) D GYPSUM BOARD	NEC NEMA	NATIONAL ELECTRICAL CODE NATIONAL ELECTRICAL	TERM	ATA TELEPHONE/DATA TERMINAL
A	AMPERE	CTR	CENTER	OII DE	o on componito	TTENII T	MANUFACTURER'S	TL	TWIST LOCK
AC	ABOVE COUNTER OR AIR	CU	COPPER	HOA	HANDS-OFF-AUTOMATIC		ASSOCIATION	TR	TAMPER RESISTANT
	CONDITIONER			110017	SWITCH	NFDS	NON-FUSED SAFETY	-	THERMOSTAT
ACLG	ABOVE CEILING	DCP	DOMESTIC WATER	HORIZ HP	HORIZONTAL HORSEPOWER	NIC	DISCONNECT SWITCH NOT IN CONTRACT	TTC	TELEPHONE TERMINAL CABINET
ADO	AUTOMATIC DOOR OPENER		CIRCULATING PUMP	HPF	HIGH POWER FACTOR	NL NL	NIGHT LIGHT	TV	TELEVISION
AF	AMP FRAME	DEPT	DEPARTMENT	HT	HEIGHT	N.O.	NORMALLY OPEN	TVTC	TELEVISION TERMINAL
AFF	ABOVE FINISHED FLOOR	DET	DETAIL	HTG	HEATING	NPF	NORMAL POWER FACTOR		CABINET
AFG	ABOVE FINISHED GRADE	DIA	DIAMETER	HTR	HEATER	NTS	NOT TO SCALE	TYP	TYPICAL
AFI	ARC FAULT CIRCUIT	DISC	DISCONNECT	HV HVAC	HIGH VOLTAGE HEATING, VENTILATING AND	ОН	OVERHEAD	ш	UNDER COUNTER
	INTERRUPTER	DIST	DISTRIBUTION	пуас	AIR CONDITIONING	OH OL	OVERLOADS	UC UE	UNDERGROUND ELECTRICAL
AHU	AIR HANDLING UNIT	DN	DOWN	HWP	HYDRONIC WATER PUMP	OL	OVEREGADO	UG	UNDERGROUND
AL	ALUMINUM	DPR	DAMPER			PA	PUBLIC ADDRESS	ÜH	UNIT HEATER
ALT	ALTERNATE	DS	SAFETY DISCONNECT SWITCH	IC	INTERRUPTING CAPACITY	PB	PULL BOX OR PUSHBUTTON	UT	UNDERGROUND TELEPHONE
AMP	AMPERE	DT	DOUBLE THROW	IG	ISOLATED GROUND	PE	PNEUMATIC ELECTRIC	UTIL	UTILITY
AMPL	AMPLIFIER	DWG	DRAWING	IMC	INTERMEDIATE METAL CONDUIT INCANDESCENT	PED PF	PEDESTAL POWER FACTOR	UV	UNIT VENTILATOR OR ULTRAVIOLET
ANNUN	ANNUNCIATOR			IR	INFRARED	PH	PHASE		OLIKAVIOLEI
APPROX	APPROXIMATELY	EC	ELECTRICAL CONTRACTOR	I/W	INTERLOCK WITH	PIV	POST INDICATING VALVE	V	VOLT
AQ-STAT	AQUASTAT	ELEC	ELECTRIC, ELECTRICAL			PNL	PANEL	VA	VOLT-AMPERES
ARCH	ARCHITECT, ARCHITECTURAL	ELEV	ELEVATOR	J-BOX	JUNCTION BOX	PP	POWER POLE	VDT	VIDEO DISPLAY TERMINAL
AS	AMP SWITCH	EM	EMERGENCY	10.7	KII OVOLT	PR	PAIR	VERT	VERTICAL
ΑT	AMP TRIP	EMS	ENERGY MANAGEMENT SYSTEM	KV KVA	KILOVOLT KILOVOLT-AMPERE	PRI PROJ	PRIMARY PROJECTION	VFD VOL	VARIABLE FREQUENCY DRIVE VOLUME
ATS	AUTOMATIC TRANSFER SWITCH	EMT	ELECTRICAL METALLIC TUBING	KVAR	KILOVOLT-AMPERE REACTIVE	PRV	POWER ROOF VENTILATOR	VOL	VOLOME
AUTO	AUTOMATIC	EP	ELECTRIC PNEUMATIC	KW	KILOWATT	PT	POTENTIAL TRANSFORMER	W	WATT
AUX	AUXILIARY	EQUIP	EQUIPMENT	KWH	KILOWATT HOUR	PVC	POLYVINYL CHLORIDE	W/	WITH
AV	AUDIO VISUAL	EWC	ELECTRIC WATER COOLER				(CONDUIT)	WG	WIRE GUARD
AWG	AMERICAN WIRE GAUGE	EXIST	EXISTING	LOC LT	LOCATE OR LOCATION	PWR	POWER	WH	WATER HEATER
,	7 WILL (107 W V V V L 27 10 0 L	EXH	EXHAUST	LTG	LIGHT LIGHTING	QUAN	QUANTITY	W/O WP	WITHOUT WEATHERPROOF
BATT	BATTERY	EXP	EXPLOSION PROOF	LTNG	LIGHTNING	QUAIN	QUARTITI	**1	WEATHER ROOF
BD	BOARD	L/II	2/11 20010111 11001	LV	LOW VOLTAGE	RCPT	RECEPTACLE	XFMR	TRANSFORMER
BLDG	BUILDING	FA	FIRE ALARM			REQD	REQUIRED	XFR	TRANSFER
BMS	BUILDING MANAGEMENT	FABP	FIRE ALARM BOOSTER POWER	MAX	MAXIMUM	RM	ROOM		
DIVIO	SYSTEM	TADI	SUPPLY PANEL	MAG.S M/C	MAGNETIC STARTER MOMENTARY CONTACT	RSC RTU	RIGID STEEL CONDUIT ROOF TOP UNIT		
	OTOTEW	FACP	FIRE ALARM CONTROL PANEL	MC	MECHANICAL CONTRACTOR	KIU	ROOF FOR DIVIT		
С	CONDUIT	FCU	FAN COIL UNIT	MCB	MAIN CIRCUIT BREAKER	SC	SURFACE CONDUIT		
CAB	CABINET	FIXT	FIXTURE	MCC	MOTOR CONTROL CENTER	SEC	SECONDARY		
CAT	CATALOG	FLR	FLOOR	MDC	MAIN DISTRIBUTION CENTER	SHT	SHEET		ANGLE Z
CATV	CATALOG CABLE TELEVISION	FLUOR	FLUORESCENT	MDP	MAIN DISTRIBUTION PANEL	SIM	SIMILAR SOLID NEUTRAL		11
CB	CIRCUIT BREAKER	FLOOR	FUSE	MFR MFS	MANUFACTURER MAIN FUSED DISCONNECT	S/N SPEC	SPECIFICATION		DELTA FEET Δ
CCTV	CLOSED CIRCUIT TELEVISION	FUDS	FUSED SAFETY DISCONNECT	IVII O	SWITCH	SPKR	SPEAKER		NCHES
		FUDS		MH	MANHOLE	SP	SPARE		NUMBER
CKT	CIRCUIT		SWITCH	MIC	MICROPHONE	SR	SURFACE RACEWAY		PHASE
CLG	CEILING	0.4	CALICE	MIN	MINIMUM	SS	STAINLESS STEEL		CENTER LINE
COMB	COMBINATION	GA	GAUGE	MISC	MISCELLANEOUS MAIN LUGS ONLY	SSW	SELECTOR SWITCH	P F	PLATE L
CMPR	COMPRESSOR	GAL	GALLON	MLO MMS	MAIN LUGS ONLY MANUAL MOTOR STARTER	S/S STA	STOP/START PUSHBUTTONS STATION		
CONN	CONNECTION	GALV	GALVANIZED	MOA	MULTIOUTLET ASSEMBLY	STD	STANDARD		

MSBD MAIN SWITCHBOARD

MTR MOTOR, MOTORIZED

MT.C EMPTY CONDUIT

MT MOUNT

MSP MOTOR STARTER PANELBOARD

MTS MANUAL TRANSFER SWITCH

SPECIFIC CODE NOTES

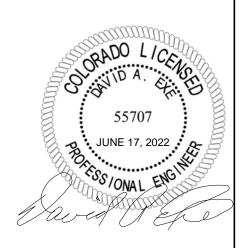
FIRE PROTECTION REQUIREMENTS

- A. PENETRATIONS IN WALLS REQUIRING PROTECTED OPENINGS MUST BE FIRESTOPPED WITH AN APPROVED MATERIAL.
- 1. CONDUITS MAY PENETRATE WALLS OR PARTITIONS, PROVIDED THEY ARE FIRE-STOPPED.
- 2. OPENINGS FOR STEEL ELECTRICAL BOXES NOT EXCEEDING 16 SQUARE INCHES ARE PERMITTED PROVIDED OPENINGS DO NOT AGGREGATE MORE THAN 100 SQUARE INCHES FOR ANY 100 SQUARE FEET OF WALL OR PARTITION.
- 3. OUTLET BOXES ON OPPOSITE SIDES OF WALLS OR PARTITIONS MUST BE SEPARATED BY A HORIZONTAL DISTANCE OF 24 INCHES.
- B. LIGHT FIXTURES AND OTHER APPARATUS SUPPORTED BY THE ACOUSTICAL CEILING GRID MUST MEET THE REQUIREMENTS OF NEC SECTION 410.16, MEANS OF SUPPORT.
- C. RECESSED LIGHTING FIXTURES INSTALLED IN FIRE RATED CEILING ASSEMBLIES SHALL BE FIRE RATED FIXTURES BEARING THE UL FIRE RATED LABEL. FIXTURES SHALL BE INSTALLED IN ACCORDANCE WITH THE UL FIRE RESISTANCE DIRECTORY, AND SHALL INCLUDE A FIRE RATED ENCLOSURE INSTALLED OVER THE FIXTURE THAT MEETS THE REQUIREMENTS OF THE UL FIRE RESISTANCE DIRECTORY.

GENERAL ELECTRICAL NOTES

- ALL RECEPTACLES SHALL BE TAMPER RESISTANT TYPE RECEPTACLES. FIRE ALARM SYSTEM TO BE DESIGN-BUILD BY THE ELECTRICAL CONTRACTOR.
- THE ELECTRICAL CONTRACTOR SHALL REMOVE ALL EXISTING ELECTRICAL DEVICES AS REQUIRED FOR REMODELING. NO ATTEMPT HAS BEEN MADE TO VERIFY ELECTRICAL DEVICES THAT HAVE TO BE REMOVED, ELECTRICAL CONTRACTOR TO FIELD VERIFY ALL EXISTING CONDITIONS/ELECTRICAL ITEMS TO BE REMOVED.

ELECTRICAL DRAWING INDEX										
Sheet Number	Sheet Name									
E-0.00	ABBREVIATIONS, SYMBOLS & NOTES									
E-2.01	ELECTRICAL LIGHTING PLAN									
E-3.01	ELECTRICAL POWER PLAN									
E-4.01	ELECTRICAL SCHEDULES & DETAILS									
E-4.02	ELECTRICAL 1-LINE DIAGRAM									
E-5.01	ELECTRICAL SPECIFICATIONS									





NOTICE: DUTY OF COOPERATION Release of these plans contemplates further cooperation among the owner, his contractor and the Although the architect and his consultants have performed their services with due care and diligence, they cannot guarantee perfection. Communication is Any ambiguity or discrepancy discovered by the use of architect. Failure to notify the architect compounds failure to cooperate by a simple notice to the architect shall relieve the architect from responsibility for the consequences. Changes made from the plans without consent of the architect are unauthorized and shall relieve the architect of responsibility for all consequences arriving out of such changes.

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REVISIONS									
No.	Description	Date							

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CIRC ERI .02 PRI MOUNTER V SUITE STEAMBOAT Ō ⊠ 305 S

2



60531 Job Number: JUNE 17, 2022 Drawn By: DAE Checked By: DAE

Project Phase CONSTRUCTION DOCUMENTS

Sheet Title ABBREVIATIONS, SYMBOLS & NOTES

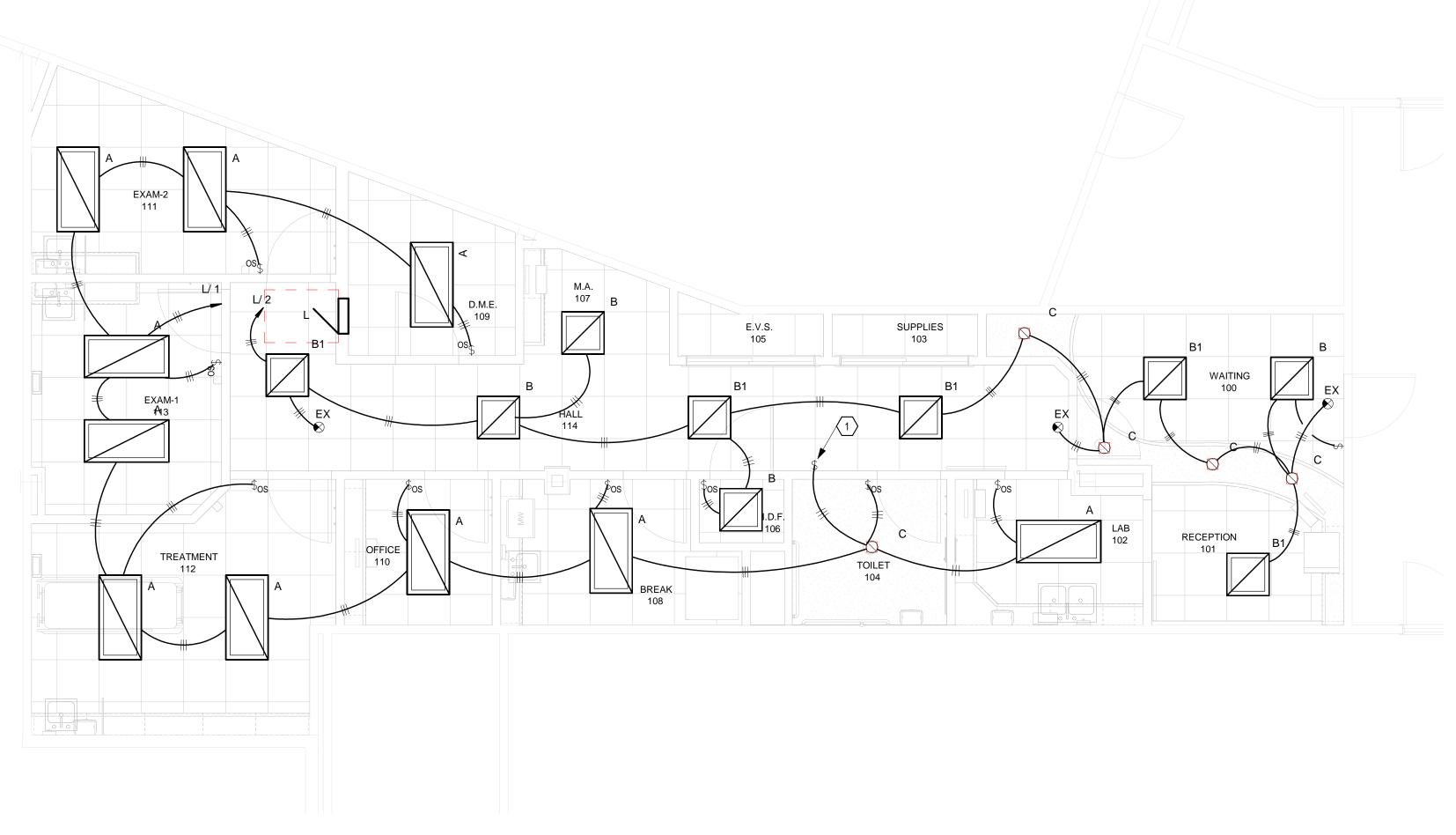
	LIGHTING FIXTURE SCHEDULE										
ID	MANUFACTURER	CATALOG NUMBER	DESCRIPTION	LAMP	Voltage Nominal	Apparent Load	COMMENTS	QTY			
Α	LITHONIA	2TL4-40L-FW-A19-GZ10-LP835	2X4 RECESSED LED FLUSH ALUMINUM DOOR. MATCH CEILING TRIM.	LED	120 V	44 VA		10			
В	LITHONIA	2TL4-40L-FW-A19-GZ10-LP835	2X2 RECESSED LED FLUSH ALUMINUM DOOR. MATCH CEILING TRIM.	LED	120 V	31 VA	<varies></varies>	4			
B1	LITHONIA	2TL4-40L-FW-A19-GZ10-LP835	2X2 RECESSED LED FLUSH ALUMINUM DOOR. MATCH CEILING TRIM.	LED	120 V	31 VA	<varies></varies>	5			
С	GOTHAM	EV04-35/20-AR-WD-LD-MVOLT-GZ10	6" RECESSED CAN, I.C. RATED, AIR TIGHT	LED	120 V	11 VA		5			
EX	COMPASS	CELS	EDGELIT EXIT SIGN. CONFIGURATIONS PER DRAWINGS. FINISH BY ARCHITECT.	LED	120 V	2 VA		3			

ELECTRICAL KEYED NOTES

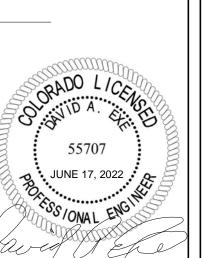
CONNECT SWITCH TO SOLENOID SHUTOFF VALVES ON WATER LINES ABOVE BATHROOM. CIRCUIT FROM LIGHT CIRCUIT. COORDINATE LOCATION OF SWITCH AND VALVES WITH OWNER'S REPRESENTATIVE AND PLUMBING CONTRACTOR.

Interior Lighting Compliance Certificate 2012 IECC Energy Code YVMC Mountain Clinic Project Title; Project Type: New Construction Construction Site Designer/Contractor: 2305 Mounter Werner Circlic, Ste Steamboat Springs, CO Additional Efficiency Package(s) Credits: 1.0 Required 0.0 Proposed Allowed Interior Lighting Power Floor Area Allowed Watts Area Category Allowed (ft2) Watts / It2 (B X C) I-Exam/Office (Health care clinic) fetal Allowed Watts = Proposed Interior Lighting Power C Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast Lamps/ # of Fixture (C X D) Fixture Fixtures Watt. 1-Exam/Office (Health care clinic). LED 1; LED Linear 33W; LED 2: LED Linear 33W 279 LED 3: LED PAR 11W: Total Proposed Watts = terior Lighting PASSES: Design 37% better than code Interior Lighting Compliance Statement Compliance Statement: The proposed interior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed interior lighting systems have been designed to meet the 2012 IECC requirements in COMcheck Version 4.1.5.3 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Project Title	YVMC Mountain Clinic	Report date	06/20	/22
Data filename	O:/projects/60500 Indoor Environments USA/60531 UC Health Clinic Steamboat/Lighting/605	31 Page	1 of	7



1 ELECTRICAL REFLECTED CEILING PLAN E-2.01 1/4" = 1'-0"





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REVISIONS Description

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CIRCLE WERNER C E P.0217 F SPRINGS, (MOUNTA 2305 MOUNTER V SUITE I STEAMBOAT § VMC

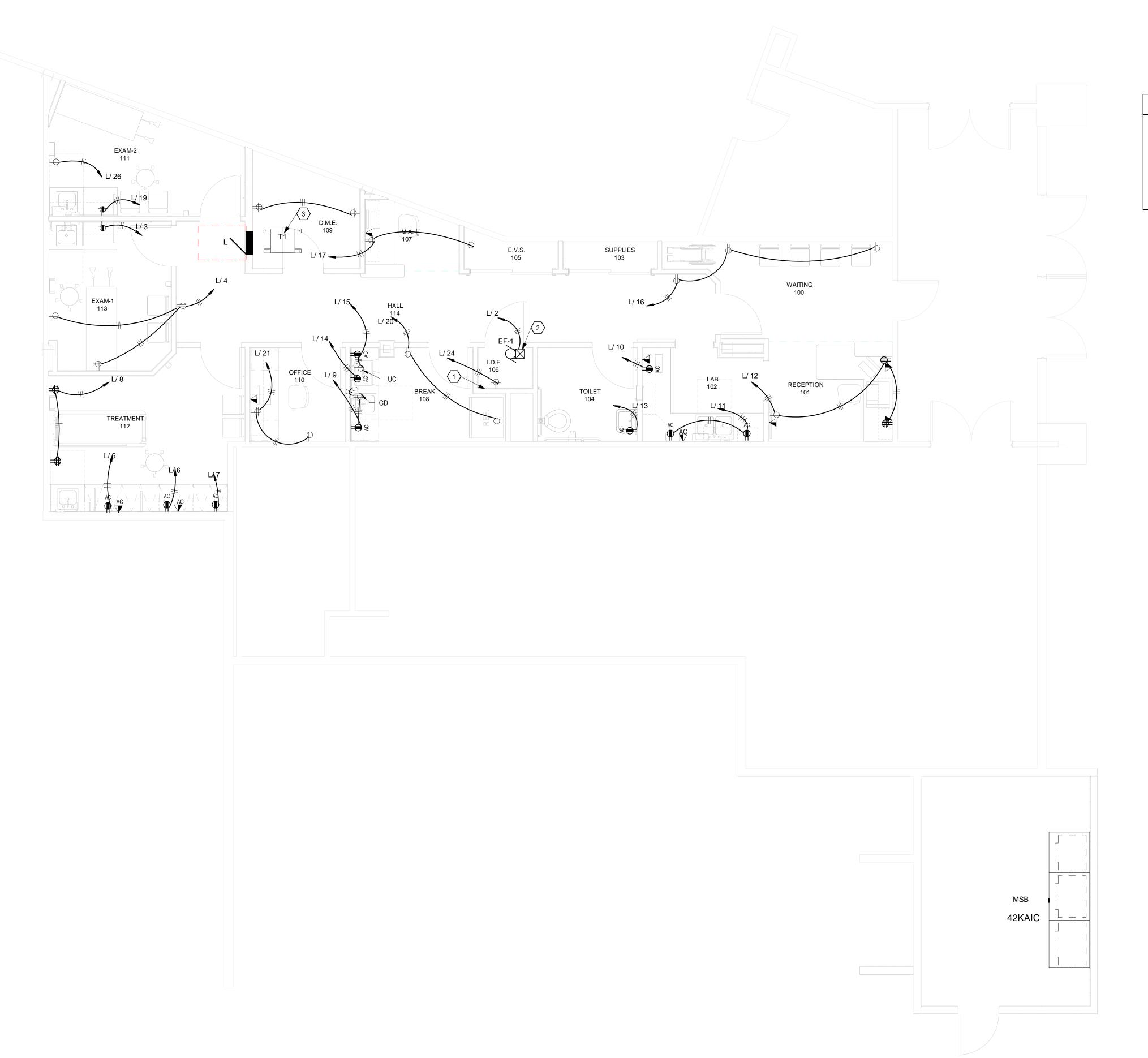


Job Number: 60531 JUNE 17, 2022 Date: **Drawn By:** DAE Checked By: DAE

Project Phase CONSTRUCTION DOCUMENTS

Sheet Title ELECTRICAL LIGHTING PLAN

	ELECTRICAL/MECHANICAL EQUIPMENT SCHEDULE											
ID	MANUFACTURER	CATALOG NUMBER	DESCRIPTION	VOLTAGE	PANEL	CURRENT	CIRCUIT	# POLES	CIRCUIT PROTECTION	CONDUIT & WIRE	DISCONNECT	COMMENTS
EF-1	GREENHECK	CSP-A200-QD	EXHAUST FAN	120 V	L	1 A	2	1	20 A	#12	30 A	





- PROVIDE 4'X4'X3/4" PLYWOOD ON BACK WALL AT CEILING. CIRCUIT WITH LIGHTS. CIRCUIT TO LINE VOLTAGE THERMOSTAT PROVIDED BY MECHANICAL. COORDINATE
- WITH MECHANICAL FOR LOCATION. CIRCUIT TRANSFORMER TO MSB LOCATED IN ELECTRICAL ROOM. TRANSFORMER TO BE MOUNTED FROM CEILING STRUCTURE IN CEILING CAVITY ABOVE RM 109. PROVIDE ACCESS.



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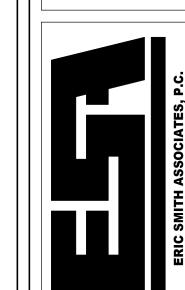
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CIRCLE $\frac{0}{2}$ 2305 MOUNTER WERNER C SUITE P.0217 STEAMBOAT SPRINGS,

MOUNTA

VMC



Job Number: 60531

Date: JUNE 17, 2022

Drawn By: DAE

Checked By: DAE

Project Phase
CONSTRUCTION DOCUMENTS

Sheet Title
ELECTRICAL POWER PLAN

					TRANSFORMER	SCHEDULE						
XFMR	LOCATION	PROVIDED BY	KVA RATING	PRIMARY CONDUCTORS	PRIMARY VOLTAGE	SECONDARY CONDUCTORS	SECONDARY VOLTAGE	TOTAL LOAD	ENCLOSURE	MOUNTING	FED FROM	WEIGHT
T1	D.M.E. 109	ELECTRICAL CONTRACTOR	30KVA	#6	480 V/3-0 VA	#3	120/208V/WYE	9156 VA	Type 1	Ceiling Bracket	MSB	335 LB

	Location: HALL 114 Supply From: T1 Mounting: Recessed Enclosure: Type 1				1	Volts: Phases: Wires:		Wye				A.I.C. Rating: 10KAIC Mains Type: MCB Mains Rating: 100 A MCB Rating: 100 A		
Notes:														
CKT	Circuit Description	Trip	Poles		4		В	(Poles	Trip	Circuit De	escription	CK
1	ME-Lighting LAB 102	20 A	1	451 VA	431 VA					1	20 A	ME-Lighting HALL 114		2
3	Receptacle EXAM-1 113	20 A	1			360 VA	720 VA	400111	400) (1	1		Receptacle EXAM-1 113	110	4
5	Receptacle TREATMENT 112	20 A	1	40034	700 177			180 VA	180 VA	1	20 A	Receptacle TREATMENT		6
7	Receptacle TREATMENT 112	20 A	1	180 VA	720 VA	000:::	100:::			1	20 A	Receptacle TREATMENT	112	8
9	Receptacle BREAK 108	20 A	1			360 VA	180 VA	000111	000) (4	1	20 A	Receptacle LAB 102	404	10
11	Receptacle LAB 102	20 A	1	400344	4001/4			360 VA	900 VA	1		Receptacle RECEPTION	101	12
13	Receptacle TOILET 104	20 A	1	180 VA	180 VA	0001/4	400.1/4			1		Receptacle BREAK 108		14
15	Receptacle BREAK 108	20 A	1			360 VA	180 VA	= 40) (4	= 00.1/4	1	20 A	Receptacle HALL 114		16
17	Receptacle M.A. 107	20 A	1	000 \ / 4	000 1/4			540 VA	720 VA	1	20 A	Receptacle M.A. 107		18
19	Receptacle EXAM-2 111	20 A	1	360 VA	360 VA	540.1/4				1	20 A	Receptacle BREAK 108		20
21	Receptacle OFFICE 110	20 A	1			540 VA			000 \ / 4	4	00.4	D 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -		22
23	0	00.4		0.1/4	000 1/4				360 VA	1		Receptacle IDF 106		24
25	Spare	20 A	1	0 VA	360 VA	0.1/4	0.1/4			1	20 A	Receptacle EXAM-2 111		26
27	Spare	20 A	1			0 VA	0 VA	0.1/4	0.1/4	1	20 A	Spare		28
29	Spare	20 A	1	0.1/4	0.1/4			0 VA	0 VA	1	20 A	Spare		30
31	Spare	20 A	1	0 VA	0 VA	0.1/4	0.1/4			1	20 A	Spare		32
33	Spare	20 A	1			0 VA	0 VA	0.1/4	0.1/4	1	20 A	Spare		34
35	Spare	20 A	1	0.1/4	0.1/4			0 VA	0 VA	1	20 A	Spare		36
37	Spare	20 A	•	0 VA	0 VA	0.1/4	0.1/4			•		Spare		38
39	Spare	20 A	1			0 VA	0 VA	0.144	0.1/4	1	20 A	Spare		40
41	Spare	20 A	1	004	7) ()	070	0.1/4	0 VA	0 VA	1	20 A	Spare		42
			I Load: Amps:		7 VA ′ A		0 VA 3 A		O VA B A					
Legend	d: Classification		-			nand Fa						Daniel	Tatala	
Other	massiiiGatiOii	Con	nected I	_oau	Deli	0.00%	CLUI	ESUIT	o VA	iiaiiu		Panel	ıvıaıs	
Recept	acle		8280 VA			100.00%	, 0		8280 VA			Total Conn. Load:	9156 VA	
Lighting		<u> </u>	61 VA	•		100.00%			61 VA			Total Est. Demand:		
MTR	3		120 VA			125.00%			150 VA			Total Conn.:		
ME-Lig	hting		719 VA			125.00%			899 VA			Total Est. Demand:		
Notes:														



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REVISIONS Date

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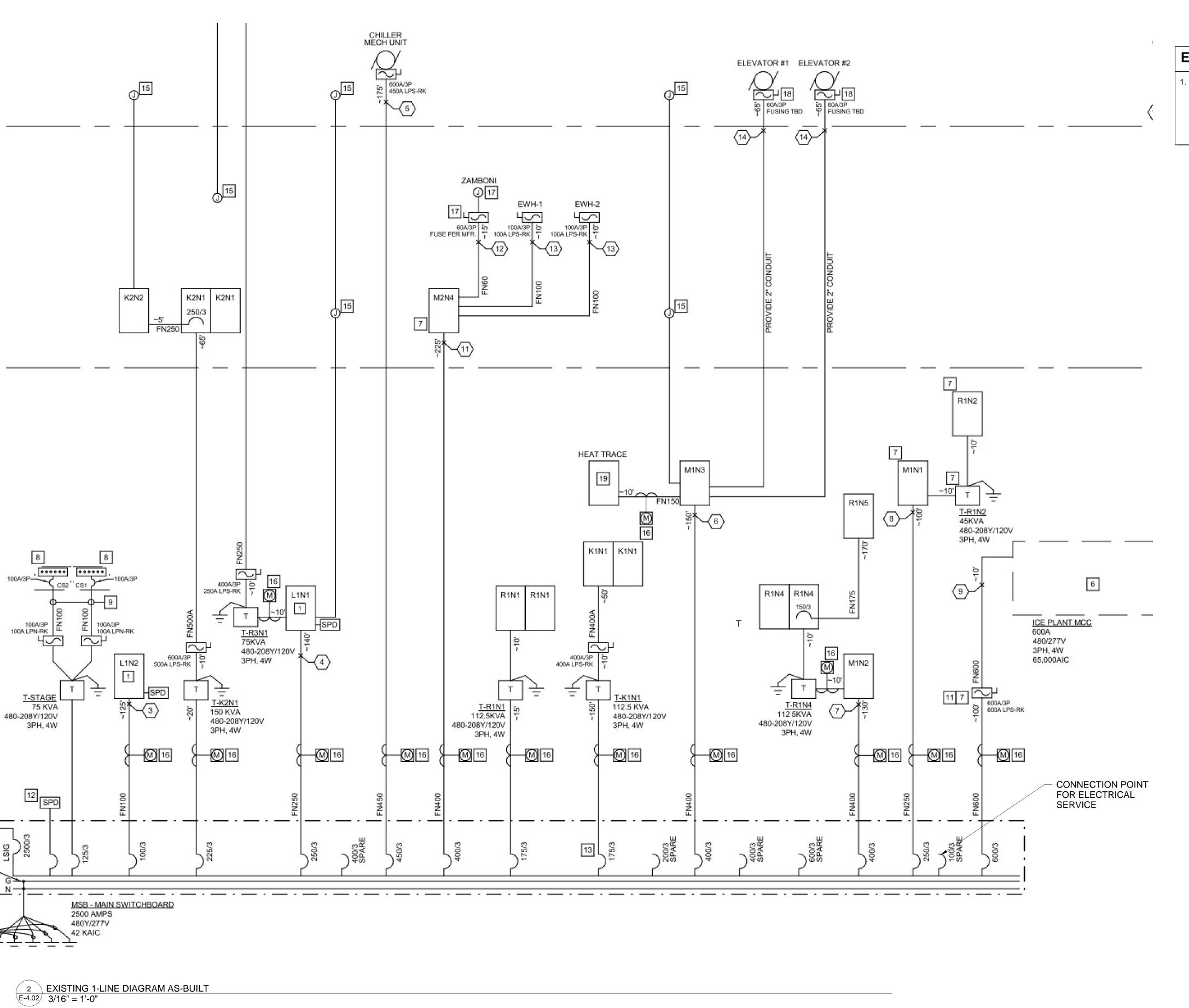
2305 MOUNTER WERNER CIRCLE SUITE P.0217 STEAMBOAT SPRINGS, CO YVMC MOUNTA



Job Number: 6053|
Date: JUNE 17, 2022
Drawn By: DAE
Checked By: DAE

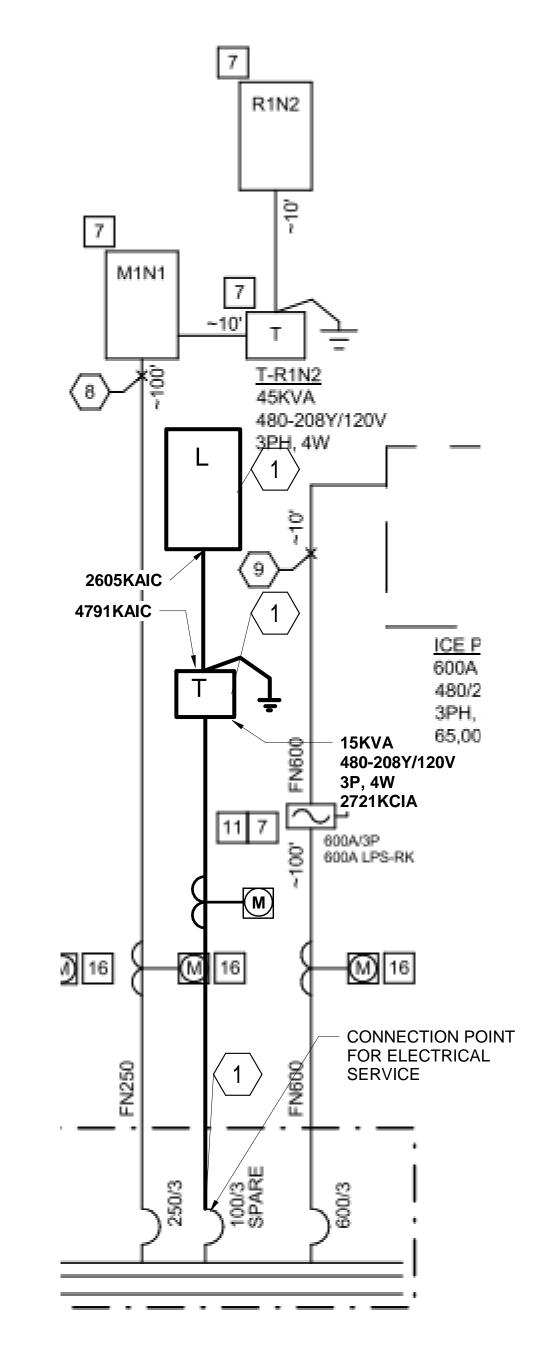
Project Phase
CONSTRUCTION DOCUMENTS

Sheet Title
ELECTRICAL SCHEDULES &
DETAILS

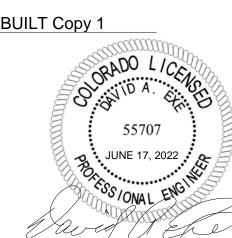




CONTRACTOR TO PROVIDE 45A/3P BREAKER IN MSB IN OPEN SPACE OR REPLACE EXISTING 100A BREAKER. CIRCUIT TO T1 WITH 1"C,(4) #6THHN CU + #10 CU GND. PROVIDE E-GAUGE PRO SERIES METERING FOR PANEL FEEDER. METERING POINT CAN SHARE A COMMON METER PROVIDED ALL LOAD IS MONITORED ON EACH PANEL. CIRCUIT TRANSFORMER "T" TO PANEL "L" WITH 1 1/2"C,(4)#3 THHN CU + #8 CU GND



1 EXISTING 1-LINE DIAGRAM AS-BUILT Copy 1 1/4" = 1'-0"



uchealth CIRCLE WERNER E P.0217 F SPRINGS MOUNTA 2305 MOUNTER V SUITE F STEAMBOAT § VMC

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INDOOR ENVIRONMENTS

USA

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NOTICE: DUTY OF COOPERATION

Release of these plans contemplates further cooperation among the owner, his contractor and the architect. Design and construction are complex.
Although the architect and his consultants have

performed their services with due care and diligence, they cannot guarantee perfection. Communication is

imperfect and every contingency cannot be anticipated.

Any ambiguity or discrepancy discovered by the use of

these plans shall be reported immediately to the architect. Failure to notify the architect compounds

misunderstanding and increases construction costs. A failure to cooperate by a simple notice to the architect

shall relieve the architect from responsibility for the consequences. Changes made from the plans without consent of the architect are unauthorized and shall relieve the architect of responsibility for all consequences arriving out of such changes. All design, documents and data prepared by Eric Smith Associates, P.C. as instruments of service shall remain property of Eric Smith Associates, P.C. and shall not be copied, changed or disclosed in any form whatsoever without first obtaining the express written consent of Eric Smith Associates, P.C. Eric Smith Associates, P.C.

REVISIONS

Description

Job Number: 6053 JUNE 17, 2022 Auth*o*r **Drawn By:** Checked By: Checker

Project Phase CONSTRUCTION DOCUMENTS

Sheet Title ELECTRICAL I-LINE DIAGRAM

ELECTRICAL SPECIFICATION

GENERAL REQUIRMENTS

BASIC MATERIALS AND METHODS

. GENERAL:

- . BEFORE SUBMITTING A PROPOSAL FOR THE WORK FOR THESE SPECIFICATIONS AND DRAWINGS. EACH BIDDER SHALL EXAMINE THE SITE AND FAMILIARIZE THEMSELVES WITH ALL CONDITIONS INCLUDING BUT NOT LIMITED TO UTILITY SERVICE, LOCATIONS, MATERIALS, AND DEMOLITION THAT AFFECT THE WORK AND COST THEREOF. NO EXTRA COMPENSATION WILL BE ALLOWED BECAUSE OF A MISUNDERSTANDING AS TO THE AMOUNT OF WORK INVOLVED OR LACK OF KNOWLEDGE OF EXISTING CONDITIONS.
- B. UNDER THIS DIVISION OF THE SPECIFICATIONS, THE CONTRACTOR SHALL FURNISH AND INSTALL THE ELECTRICAL SYSTEM FOR THIS PROJECT, ALL IN ACCORDANCE WITH THESE SPECIFICATIONS AND THE CORRESPONDING DRAWINGS. THE OMISSION OF EXPRESS REFERENCE TO ANY PARTS NECESSARY FOR, OR REASONABLY INCIDENTAL TO, THE COMPLETE INSTALLATION SHALL NOT BE CONSTRUED AS RELEASING THE CONTRACTOR FROM RESPONSIBILITY FOR FURNISHING SUCH PARTS.
- 2. DRAWINGS AND SPECIFICATIONS:
- . THESE SPECIFICATIONS AND THE CORRESPONDING DRAWINGS FORM A SET OF PLANS FOR THE ELECTRICAL WORK OF THIS PROJECT AND NEITHER SHALL BE COMPLETE WITHOUT THE OTHER. WHERE AN ITEM IS MENTIONED IN ONE AND NOT THE OTHER, IT SHALL BE CONSIDERED AS BINDING IN THE CONTRACT AS THOUGH MENTIONED IN BOTH.
- . THE DRAWINGS ACCOMPANYING THE SPECIFICATIONS ARE DIAGRAMMATIC AND ARE INTENDED TO INDICATE THE APPROXIMATE AND RELATIVE LOCATIONS OF SERVICES AND EQUIPMENT. THE DRAWINGS SHALL NOT BE SCALED. VERIFY BUILDING DIMENSIONS WITH DIMENSIONS ON THE ARCHITECTURAL DRAWINGS. INSTALL ALL SYSTEMS AND INDIVIDUAL EQUIPMENT ACCORDING TO THE MANUFACTURER'S INSTALLATION RECOMMENDATIONS.
- IN SPECIFYING MATERIALS AND/OR METHODS, THE INTENT IS TO INDICATE THE MINIMUM STANDARD OF QUALITY ACCEPTABLE TO THE OWNER. IN ALL CASES THE MINIMUM STANDARDS OF THE EXISTING FEDERAL, STATE AND LOCAL CODES AND LOCAL REGULATION SHALL PREVAIL.
-). THE TERM "CIRCUIT" AS USED IN THESE SPECIFICATIONS SHALL BE UNDERSTOOD TO INCLUDE ALL DEVICES AS WELL AS THE INTERCONNECTING CONDUCTORS NECESSARY TO PROVIDE A COMPLETE ELECTRICAL CIRCUIT FROM SOURCE TO LOAD HAVING THE REQUIRED CONTROL FUNCTION.

APPROVAL OF MATERIAL

- . WHERE ONE MANUFACTURER, MODEL OR BRAND NAME IS SPECIFIED ALONE, NO SUBSTITUTION WILL BE ALLOWED, UNLESS SPECIFICALLY STATED. WHERE MORE THAN ONE MANUFACTURER. MODEL OR BRAND NAME IS SPECIFIED FOR THE SAME ITEM. THE CONTRACTOR MAY CHOOSE BETWEEN THEM, WHEN ONE OR MORE MANUFACTURERS. MODELS OR BRAND NAMES ARE MENTIONED AND FOLLOWED BY THE PHRASE (OR APPROVED EQUAL), IT SHALL BE UNDERSTOOD THAT THE NAMES MENTIONED ARE TO SET A STANDARD, AND ANOTHER MANUFACTURER, MODEL OR BRAND NAME MAY BE USED IF FULLY EQUAL OR SUPERIOR.
- B. SHOULD EQUIPMENT FURNISHED BE DIFFERENT FROM THE MODEL NUMBERS IN THE SPECIFICATIONS, SCHEDULES OR DRAWINGS, THE CONTRACTOR INITIATING SUCH CHANGE SHALL BE RESPONSIBLE FOR ALL EXTRA COSTS.
- ACCEPTANCE OF SUBSTITUTIONS SHALL IN NO WAY RELIEVE THE SUBCONTRACTOR FROM THE RESPONSIBILITY FOR ANY DEFICIENCY WHICH MAY EXIST IN THE SUBSTITUTE PRODUCT OR FROM PERFORMING THE WORK IN ACCORDANCE WITH REQUIREMENTS OF THE CONTRACT DOCUMENTS. IF THE ACCEPTED SUBSTITUTION REQUIRES CHANGES OR MODIFICATIONS TO THE WORK OF ANY OTHER TRADES, SUCH CHANGES SHALL BE CONSIDERED PART OF THE SUBSTITUTION AND SHALL BE COORDINATED AND PERFORMED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
- 4. PERMITS, FEES, LICENSES AND SERVICES:
- A. ALL PERMITS, LICENSES, FEES AND SERVICE CHARGES REQUIRED IN CONNECTION WITH THE WORK OF THIS DIVISION SHALL BE SECURED AND PAID FOR BY THIS CONTRACTOR.
- 3. UTILITY COMPANY CHARGES ASSOCIATED WITH PROVIDING PERMANENT SERVICE TO BE PAID BY THIS CONTRACTOR. PROVIDE SEPARATE LINE ITEM PRICING FOR UTILITY CHARGES/FEES. THE ELECTRICAL CONTRACTOR SHALL INCLUDE PRICING AS PART OF THE ELECTRICAL SCOPE/BID. IF NO CHARGES, INDICATE AS SUCH. IF UTILITY CHARGES ARE NOT AVAILABLE AT TIME OF BID INDICATE AS SUCH.
- . SCHEDULE AND COORDINATE ALL WORK WITH GOVERNMENT AGENCIES AND UTILITY COMPANIES. ARRANGE FOR ALL INSPECTIONS AND FURNISH CERTIFICATION OF FINAL INSPECTION AND ANY OTHER APPROVALS AS REQUIRED BY ENFORCEMENT AUTHORITIES.
-). INSTALL EQUIPMENT ACCORDING TO UTILITY COMPANY'S WRITTEN REQUIREMENTS. PROVIDE GROUNDING AND EMPTY CONDUITS AS REQUIRED BY THE UTILITY COMPANY.

5. MAINTENANCE AND OPERATING INSTRUCTIONS:

.. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTRUCTING THE OWNER'S DESIGNATED PERSONNEL IN THE MAINTENANCE OF ALL EQUIPMENT AND SPECIAL SYSTEMS INSTALLED AS A PART OF THIS PROJECT. AT THE TIME THAT INSTRUCTIONS ARE BEING GIVEN. THE CONTRACTOR SHALL PRESENT THE OWNERS DESIGNATED PERSONNEL WITH (2) TWO COMPLETE MANUFACTURER'S OPERATING AND MAINTENANCE MANUALS.

S. COORDINATION:

- . CORRELATE WORK WITH THAT OF OTHER CONTRACTORS. ORGANIZE WORK SO THAT IT WILL NOT INTERFERE WITH OR DELAY THE WORK OF OTHER CONTRACTORS.
- . FIELD VERIFY SCALED DIMENSIONS OF PLANS SINCE ACTUAL LOCATIONS, DISTANCES AND LEVELS WILL BE GOVERNED BY ACTUAL FIELD CONDITIONS.
- THE CONTRACTOR SHALL VERIFY EXACT LOCATION, SIZE AND EXTENT OF ALL EXISTING UTILITIES, OBSTRUCTIONS AND/OR OTHER CONDITIONS WHICH MAY AFFECT THE PROPOSED WORK UNDER THE PROJECT. THE CONTRACTOR SHALL TAKE EVERY PRECAUTION TO PREVENT DAMAGE TO EXISTING WORK AND SHALL REPAIR ANY DAMAGE AS A RESULT OF THIS WORK.
- COORDINATE ELECTRICAL SERVICE CONNECTIONS TO COMPONENTS FURNISHED BY UTILITY COMPANIES. COORDINATE INSTALLATION AND CONNECTION OF EXTERIOR UNDERGROUND AND OVERHEAD UTILITIES AND SERVICES, INCLUDING PROVISION FOR ELECTRICITY-METERING COMPONENTS. COMPLY WITH REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION AND OF UTILITY COMPANY PROVIDING ELECTRICAL POWER AND OTHER SERVICES.
- THE CONTRACTOR SHALL VERIFY EXACT LOCATION. SIZE AND EXTENT OF ALL EXISTING UTILITIES, OBSTRUCTIONS AND/OR OTHER CONDITIONS WHICH MAY AFFECT THE PROPOSED WORK UNDER THE PROJECT. THE CONTRACTOR SHALL TAKE EVERY PRECAUTION TO PREVENT DAMAGE TO EXISTING WORK AND SHALL REPAIR ANY DAMAGE AS A RESULT OF THIS WORK.
- THE CONTRACTOR SHALL VERIFY ALL DOOR SWINGS IN THE FIELD AND MOUNT SWITCHES ON LATCH SIDE OF DOORS OR AS APPROVED BY THE ENGINEER.

7. FIRESTOPPING:

- A. APPLY FIRESTOPPING TO CABLE AND RACEWAY PENETRATIONS OF FIRE-RATED FLOOR AND WALL ASSEMBLIES TO ACHIEVE FIRE-RESISTANCE RATING OF THE ASSEMBLY.
- 8. ELECTRICAL REQUIREMENTS:
- A. ELECTRICAL CHARACTERISTICS, SUCH AS VOLTAGE AND PHASE, SHALL BE AS GIVEN IN THE CONTRACT DOCUMENTS. WHERE THIS INFORMATION IS NOT GIVEN, THE CONTRACTOR SHALL CONTACT THE ENGINEER PRIOR TO BIDDING. NO EXTRA COMPENSATION WILL BE ALLOWED BECAUSE OF FAILURE TO CONTACT THE ENGINEER TO OBTAIN ELECTRICAL CHARACTERISTICS NOT GIVEN.
- B. IF A CONFLICT OF VOLTAGE/PHASE BETWEEN DISTRIBUTION EQUIPMENT/PANELS IS GIVEN IN THE CONTRACT DOCUMENTS. THE CONTRACTORS AND OR SUPPLIER SHALL CONTRACT THE ENGINEER PRIOR TO BIDDING (EXAMPLE: A SINGLE PHASE BREAKER FEEDING A THREE PHASE PANEL). NO EXTRA COMPENSATION WILL BE ALLOWED BECAUSE OF FAILURE TO CONTACT THE ENGINEER TO OBTAIN ELECTRICAL CHARACTERISTICS IN CONFLICT.
- C. DISCONNECTS, MAGNETIC MOTOR STARTER AND/OR OVERLOAD PROTECTION AND CONTROLS SHALL BE FURNISHED, INSTALLED AND WIRED BY THIS CONTRACTOR UNLESS OTHERWISE NOTED. ALL MOTOR STARTERS SHALL BE EQUIPPED WITH OVERLOAD PROTECTION. MECHANICAL CONTRACTOR SHALL FURNISH ALL SINGLE-PHASE MOTORS WITH BUILT-IN OVERLOAD PROTECTION. THIS CONTRACTOR SHALL WIRE ALL MECHANICAL EQUIPMENT WHICH IS NOT FACTORY WIRED (POWER AND CONTROL WIRING). UNLESS OTHERWISE NOTED.

9. EQUIPMENT CONNECTIONS:

- A. VERIFY CONNECTION REQUIREMENTS BEFORE INSTALLATION FOR ALL EQUIPMENT FURNISHED AND INSTALLED BY OTHERS. ACTUAL EQUIPMENT FURNISHED MAY DIFFER AND SHALL BE VERIFIED FROM EQUIPMENT SHOP DRAWINGS OR OTHER PROPER INFORMATION TO ASSURE CORRECT ELECTRICAL PROVISIONS.
- B. NO ADDITIONAL COSTS TO THE OWNER SHALL BE INCURRED FOR MODIFICATIONS TO ADJUST EQUIPMENT PROVISIONS INSTALLED INCORRECTLY DUE TO INATTENTION TO READILY AVAILABLE SHOP DRAWINGS OR OTHER EQUIPMENT INFORMATION.

10. CUTTING AND PATCHING:

- A. CUT. CHANNEL. CHASE. AND DRILL FLOORS. WALLS. PARTITIONS. CEILINGS. AND OTHER SURFACES REQUIRED TO PERMIT ELECTRICAL INSTALLATIONS. PERFORM CUTTING BY SKILLED MECHANICS OF TRADES INVOLVED.
- B. REPAIR AND REFINISH DISTURBED FINISH MATERIALS AND OTHER SURFACES TO MATCH ADJACENT UNDISTURBED SURFACES. INSTALL NEW FIREPROOFING WHERE EXISTING FIRESTOPPING HAS BEEN DISTURBED. REPAIR AND REFINISH MATERIALS AND OTHER SURFACES BY SKILLED MECHANICS OF TRADES INVOLVED.

11. CLEANING AND PROTECTION:

- A. ON COMPLETION OF INSTALLATION, INCLUDING OUTLETS, FITTINGS, AND DEVICES, INSPECT EXPOSED FINISH. REMOVE BURRS, DIRT, PAINT SPOTS, AND CONSTRUCTION DEBRIS.
- B. PROTECT EQUIPMENT AND INSTALLATIONS AND MAINTAIN CONDITIONS TO ENSURE THAT COATINGS, FINISHES, AND CABINETS ARE WITHOUT DAMAGE OR DETERIORATION AT TIME OF SUBSTANTIAL COMPLETION.

12. RELATED WORK:

A. CONCRETE FOUNDATION AND PITS: THE ELECTRICAL CONTRACTOR SHALL PROVIDE SUITABLE CONCRETE FOUNDATIONS. PADS, PITS, AND NECESSARY ANCHOR BOLTS, TIE PLATES, ETC. FOR HIS SYSTEMS UNLESS OTHERWISE NOTED OR SPECIFIED.

13. GUARANTEE

A. THE ELECTRICAL CONTRACTOR SHALL GUARANTEE ALL MATERIALS, WORKMANSHIP AND THE SUCCESSFUL OPERATION OF ALL APPARATUS FURNISHED AND INSTALLED FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF THE FINAL ACCEPTANCE.

14. EXISTING SYSTEMS

- A. THIS CONTRACTOR SHALL MAKE ALL CHANGES TO THE EXISTING SYSTEMS AS REQUIRED TO COMPLETE THE INSTALLATION. THIS CONTRACTOR SHALL RELOCATE, REPLACE OR REMOVE EXISTING ELECTRICAL SYSTEM COMPONENTS AS REQUIRED.
- B. WHERE CLOSE OBSERVATION OF THE SITE INDICATES THE NECESSITY OF MODIFYING THE EXISTING ELECTRICAL INSTALLATIONS TO FACILITATE THE WORK OF OTHER CONTRACTORS. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING THESE MODIFICATIONS.
- C. WHERE EXISTING COMPONENTS ARE TO BE REMOVED. THEY SHALL REMAIN THE PROPERTY OF THE OWNER, AND SHALL BE STORED AT THE JOB SITE AS DIRECTED BY THE OWNERS REPRESENTATIVE. ALL EXISTING CONDUCTORS WHICH ARE ABANDONED SHALL BE REMOVED TO THE NEAREST ACCESSIBLE BOX. WHERE REMOVAL IS NOT PRACTICAL. ABANDONED CONDUCTORS SHALL BE DISCONNECTED AT BOTH ENDS, WITHIN JUNCTION BOXES, AND TAPED AND IDENTIFIED WITH SUITABLE NAME TAGS.
- D. THIS CONTRACTOR SHALL PERFORM ALL CUTTING, PATCHING AND REFINISHING REQUIRED AS A RESULT OF ELECTRICAL WORK DONE IN AREAS NOT OTHERWISE REMODELED.
- E. IT MAY BE FOUND NECESSARY TO INTERRUPT SERVICES TO EXISTING BUILDING OR PORTIONS THEREOF DURING THE PROGRESS OF THIS WORK. WHEN SUCH INTERRUPTIONS ARE LIKELY TO OCCUR, MAKE PREVIOUS ARRANGEMENTS WITH THE OWNER AS TO THE MOST CONVENIENT TIME FOR SUCH INTERRUPTIONS. TEMPORARY SERVICE CONNECTIONS SHALL BE PROVIDED WHERE THE OWNER CANNOT PERMIT SERVICE INTERRUPTIONS. THE EXISTING OR TEMPORARY SERVICES SHALL BE MAINTAINED IN OPERATION UNTIL SUCH TIME THAT THE NEW SERVICES HAVE BEEN INSTALLED AND ARE READY FOR PERMANENT OPERATION.

15. DEMOLITION WORK IN EXISTING BUILDING

- A. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR DEMOLITION AS REQUIRED. NO ADDITIONAL COMPENSATION SHALL BE GRANTED FOR MISINTERPRETATION OR OVERSIGHT ON BEHALF OF THE CONTRACTOR.
- B. ALL FIXTURES AND ELECTRICAL DEVICES REMOVED DURING THE COURSE OF CONSTRUCTION SHALL REMAIN THE PROPERTY OF THE OWNER AND THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
- C. DUST, NOISE, VIBRATION AND TRAFFIC SHALL BE CONTROLLED TO A PRE-AGREED MINIMUM.
- D. DEVICES, BOXES, CONDUIT AND EQUIPMENT WHICH HAVE SUFFERED PARTIAL REMOVAL OR ABANDONMENT SHALL BE COVERED, CAPPED OR MODIFIED SO AS TO CONFORM WITH ALL CODES AND SHALL PRESENT NO HAZARD FOR THE PRESENT OR THE FUTURE.
- E. WHERE THIS PROJECT WILL CONSIST OF ALTERATION WORK WITHIN, AND CONSTRUCTION OF BUILDING ADDITIONS TO AN OPERATING FACILITY. DEMOLITION WORK SHALL BE COORDINATED AND CONDUCTED IN A MANNER THAT WILL NOT INTERFERE WITH NORMAL OPERATION OF THE BUILDING. ALL WORK SHALL BE PLANNED IN ADVANCE WITH THE OWNER AND ARCHITECT.
- F. MATERIALS AND EQUIPMENT NOTED TO BE REUSED SHALL BE EXAMINED AND REPAIRED AS REQUIRED SO THAT MATERIALS AND EQUIPMENT WILL BE PRESENTABLE AND IN GOOD WORKING CONDITION.
- G. IT MAY BE FOUND NECESSARY TO INTERRUPT SERVICE TO EXISTING BUILDING OR PORTIONS THEREOF DURING THE PROGRESS OF THIS WORK. WHEN SUCH INTERRUPTIONS ARE LIKELY TO OCCUR. MAKE PREVIOUS ARRANGEMENTS WITH THE OWNER AS TO THE MOST CONVENIENT TIMES FOR SUCH INTERRUPTIONS. TEMPORARY SERVICE CONNECTIONS SHALL BE PROVIDED WHERE THE OWNER CANNOT PERMIT SERVICE INTERRUPTIONS. THE EXISTING OR TEMPORARY SERVICES SHALL BE MAINTAINED IN OPERATION UNTIL SUCH TIME THAT THE NEW SERVICES HAVE BEEN INSTALLED AND ARE READY FOR PERMANENT OPERATION.

1. CONDUCTORS AND CABLES:

- A. PROVIDE COPPER CONDUCTORS EXCEPT WHERE ALUMINUM CONDUCTORS ARE SPECIFICALLY INDICATED OR PERMITTED FOR SUBSTITUTION, ALUMINUM CONDUCTORS MAY BE SUBSTITUTED FOR CONDUCTORS #6 AND LARGER, CONDUCTOR SIZES INDICATED ARE BASED ON COPPER UNLESS SPECIFICALLY INDICATED AS ALUMINUM. WHERE ALUMINUM CONDUCTORS ARE SUBSTITUTED FOR COPPER, COMPLY WITH THE FOLLOWING:
- 1) SIZE ALUMINUM CONDUCTORS TO PROVIDE, COMPARABLE TO COPPER SIZES INDICATED, EQUIVALENT OR GREATER AMPACITY AND EQUIVALENT OR LESS VOLTAGE DROP.
- 2) INCREASE SIZE OF RACEWAYS, BOXES, WIRING GUTTERS, ENCLOSURES, ETC. AS REQUIRED TO ACCOMMODATE ALUMINUM CONDUCTORS.
- 3) PROVIDE ALUMINUM EQUIPMENT GROUND CONDUCTOR SIZED ACCORDING TO NFPA 70. ALUMINUM CONDUCTORS.
- B. CONDUCTORS AND CABLES INSTALLED EXPOSED IN SPACES USED FOR ENVIRONMENTAL AIR SHALL BE PLENUM RATED, LISTED AND LABELED AS SUITABLE FOR USE IN RETURN AIR PLENUMS.
- C. UNLESS SPECIFICALLY INDICATED TO BE EXCLUDED, PROVIDE ALL REQUIRED CONDUIT, BOXES, WIRING, CONNECTORS, ETC. AS REQUIRED FOR A COMPLETE OPERATING SYSTEM.
- D. UNLESS DIMENSIONED, CIRCUIT ROUTING INDICATED IS DIAGRAMMATIC. WHEN CIRCUIT DESTINATION IS INDICATED WITHOUT SPECIFIC ROUTING, DETERMINE EXACT ROUTING REQUIRED.
- E. NONMETALLIC-SHEATHED CABLE MAY BE SUBSTITUTED FOR WIRE IN CONDUIT IF ALLOWED BY CODE. INSTALL NONMETALLIC-SHEATHED CABLE (TYPE NM-B) IN ACCORDANCE WITH NECA 121.
- F. MC CABLE MAY BE SUBSTITUTED FOR WIRE IN CONDUIT IF ALLOWED BY CODE. INSTALL METAL-CLAD CABLE (TYPE MC) IN ACCORDANCE WITH NECA 120.
- G. UNLESS SPECIFICALLY INDICATED TO BE EXCLUDED, PROVIDE FINAL CONNECTIONS TO ALL EQUIPMENT AND DEVICES, INCLUDING THOSE FURNISHED BY OTHERS, AS REQUIRED FOR A COMPLETE OPERATING SYSTEM.

2. GROUNDING AND BONDING:

- A. PROVIDE ALL REQUIRED COMPONENTS. CONDUCTORS. CONNECTORS. CONDUIT. BOXES. FITTINGS. SUPPORTS. ACCESSORIES, ETC. AS NECESSARY FOR A COMPLETE GROUNDING AND BONDING SYSTEM. WHERE CONDUCTOR SIZE IS NOT INDICATED, SIZE TO COMPLY WITH NFPA 70.
- B. PROVIDE CONNECTION TO GROUNDING ELECTRODES FROM THE FOLLOWING METHODS BELOW TO FORM A GROUNDING ELECTRODE SYSTEM.
- 1) METAL UNDERGROUND WATER PIPES: PROVIDE CONNECTION TO UNDERGROUND METAL DOMESTIC WATER SERVICE PIPE(S) THAT ARE IN DIRECT CONTACT WITH EARTH FOR A LEAST 10 FEET AT AN ACCESSIBLE LOCATION NOT MORE THAN 5 FEET FROM THE POINT OF ENTRANCE TO THE BUILDING.
- 2) CONCRETE-ENCASED ELECTRODE: PROVIDE CONNECTION TO CONCRETE-ENCASED ELECTRODE CONSISTING OF NOT LESS THAN 20 FEET OF EITHER STEEL REINFORCING BARS OR BARE COPPER CONDUCTOR NOT SMALLER THAN 4 AWG EMBEDDED WITHIN CONCRETE FOUNDATION OR FOOTING THAT IS IN DIRECT CONTACT WITH EARTH IN ACCORDANCE WITH NEPA 70.
- 3) GROUND ROD ELECTRODE(S): PROVIDE THREE ELECTRODES IN AN EQUILATERAL TRIANGLE CONFIGURATION NOT LESS THAN 10 FEET FROM EACH OTHER.
- C. PROVIDE 1/4"x4"x12" GROUND BAR, SEPARATE FROM SERVICE EQUIPMENT ENCLOSURE, FOR COMMON CONNECTION POINT OF GROUND ELECTRODE SYSTEM BONDING JUMPERS AS PERMITTED IN NFPA 70.
- D. FOR EACH SERVICE DISCONNECT, PROVIDE GROUNDING ELECTRODE CONDUCTOR TO CONNECT NEUTRAL (GROUNDED) SERVICE CONDUCTOR TO THE GROUNDING ELECTRODE SYSTEM. PROVIDE A MAIN BONDING JUMPER TO CONNECT THE NEUTRAL (GROUNDED) BUS TO THE EQUIPMENT GROUND BUS WHERE NOT FACTORY-INSTALLED.
- E. PROVIDE BONDING FOR EQUIPMENT GROUNDING CONDUCTORS, EQUIPMENT GROUND BUSSES, METALLIC EQUIPMENT ENCLOSURES, METALLIC RACEWAYS AND BOXES, AND OTHER NORMALLY NON-CURRENT CONDUCTIVE MATERIALS LIKELY TO BECOME ENERGIZED.
- F. PROVIDE INSULATED GREEN GROUNDING CONDUCTOR IN EACH FEEDER AND BRANCH CIRCUIT RACEWAY. DO NOT USE RACEWAYS AS SOLE EQUIPMENT GROUNDING CONDUCTOR. WHERE CIRCUIT SIZE ARE INCREASED FOR VOLTAGE DROP, INCREASE SIZE OF EQUIPMENT GROUNDING CONDUCTOR PROPORTIONALLY IN ACCORDANCE WITH NFPA 70.
- G. COMMUNICATIONS SYSTEMS GROUNDING AND BONDING: PROVIDE SIZE 6 AWG BONDING JUMPER IN RACEWAY FROM INTERSYSTEM BONDING TERMINATION TO EACH COMMUNICATIONS ROOM OR BACKBOARD AND PROVIDE GROUND BAR FOR TERMINATION.
- H. MAKE GROUNDING AND BONDING CONNECTIONS USING THE FOLLOWING METHODS BELOW:
- 1) EXOTHERMIC WELDS; MAKE CONNECTIONS USING MOLDS AND WELD MATERIALS SUITABLE FOR THE INSTALLATION.
- MECHANICAL CONNECTORS: SECURE CONNECTIONS ACCORDING TO MANUFACTURER'S TORQUE SETTINGS. 3) COMPRESSION CONNECTORS: SECURE CONNECTIONS USING MANUFACTURER'S TOOLS AND DIES.

3. LIGHTING AND POWER PANELBOARDS:

- A. NEMA PB1 AS SCHEDULED. 20" WIDE SECTION. 225 AMP BUS (100A BUS PERMITTED IF LESS THAN 30 BRANCH POLES). PROVIDE A GROUND BUS FOR ISOLATED GROUND CIRCUITS. BUS MATERIAL ALUMINUM OR COPPER INSTALL PER NEMA PB1.1 BALANCE PHASE CURRENTS TO 10% MAXIMUM VARIATION. PROVIDE TYPEWRITTEN BRANCH CIRCUIT DIRECTORY. LOCKABLE DOORS, KEYED ALIKE UNLESS NOTED OTHERWISE. SURFACE MOUNTED OR FLUSH MOUNTED ENCLOSURES AS INDICATED.
- B. CIRCUIT BREAKERS: NEMA AB1 AS SCHEDULED, PLUG-IN OR BOLT-ON. MULTIPLE POLE BREAKERS SHALL HAVE A COMMON TRIP HANDLE. PROVIDE CIRCUIT BREAKERS WITH INTERRUPTING CAPACITY NOT LESS THAN THE AVAILABLE FAULT CURRENT AT THE INSTALLED LOCATION AS INDICATED ON THE DRAWINGS.
- C. LOAD CENTERS: CIRCUIT BREAKER TYPE, THERMAL MAGNETIC PLUG-IN, FLUSH MOUNTED ENCLOSURE UNLESS OTHERWISE INDICATED.

4. WIRING DEVICES:

- A. ALL WIRING DEVICES INSTALLED SHALL BE "SPECIFICATION GRADE" AND MANUFACTURED BY ARROW HART, LEVITON, HUBBEL OR EQUAL.
- B. LOCAL SWITCHES SHALL BE TOGGLE TYPE, AC, RATED 20A, 125V, QUIET TYPE WITH SILENT OPERATING MECHANISM, TOTALLY ENCLOSED IN A MOLDED COMPOSITION BASE. ALL RECEPTACLES SHALL BE GROUNDING TYPE. UNLESS OTHERWISE INDICATED, LOCAL SWITCHES AND DIMMERS SHALL BE INSTALLED 48 INCHES ABOVE FINISHED FLOOR, RECEPTACLES SHALL BE INSTALLED 18 INCHES ABOVE FINISHED FLOOR OR 6 INCHES ABOVE COUNTER.
- C. NEUTRAL CONDUCTORS SHALL NOT BE SHARED ON BRANCH CIRCUITS UTILIZING WALL DIMMERS.
- D. GFI DUPLEX RECEPTACLES: NEMA 5-20R CONFIGURATION AND RATING, SELF CONTAINED GROUND FAULT CURRENT INTERRUPTING DUPLEX RECEPTACLE, LISTED AND LABELED AS TAMPER RESISTANT TYPE AND AS WEATHER RESISTANT TYPE COMPLYING WITH UL 498 SUPPLEMENT SE SUITABLE FOR INSTALLATION IN DAMP OR WET LOCATIONS, GRAY COLOR. PROVIDE WITH WEATHERPROOF BOX AND COVER WHERE INDICATED.

- E. TAMPER RESISTANT CONVENIENCE RECEPTACLES: COMMERCIAL SPECIFICATION GRADE, 20A, 125V, NEMA 5-20R, LISTED AND LABELED AS TAMPER RESISTANT TYPE.
- F. WALL DEVICE AND PLATE COLOR BY ARCHITECT
- 5. LIGHTING FIXTURES:
- A. SEE LIGHTING FIXTURE SCHEDULE ON THE ELECTRICAL DRAWINGS FOR TYPE AND DESCRIPTION OF LUMINARIES.
- B. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROCUREMENT. UNLOADING, STORAGE AND PROTECTION OF LIGHTING FIXTURES. PROVIDE ALL NECESSARY LABOR AND MATERIALS FOR A COMPLETE OPERATING SYSTEM.
- C. UPON INTERRUPTION OF NORMAL POWER SOURCE, SOLID-STATE CONTROL WILL AUTOMATICALLY SWITCH TO BATTERY POWER WITH CONNECTED LED LAMPS FOR MINIMUM 90 MINUTES OF RATED EMERGENCY ILLUMINATION. AND AUTOMATICALLY RECHARGES BATTERY UPON RESTORATION OF NORMAL POWER SOURCE, UNLESS OTHERWISE INDICATED. CONNECT UNIT TO UN-SWITCHED POWER FROM SAME CIRCUIT FEEDING NORMAL LIGHTING IN SAME ROOM OR AREA. BYPASS LOCAL SWITCHES, CONTACTOR, OR OTHER LIGHTING CONTROLS.
- D. EXIT SIGNS SHALL BE INTERNALLY ILLUMINATED WITH LED'S, SINGLE OR DOUBLE FACE AS INDICATED ON THE DRAWING, DIRECTIONAL ARROWS AS INDICATED OR REQUIRED FOR THE INSTALLED LOCATION. UNLESS OTHERWISE INDICATED, CONNECT UNIT TO UN-SWITCHED POWER FROM SAME CIRCUIT FEEDING NORMAL LIGHTING IN SAME ROOM OR AREA. BYPASS LOCAL SWITCHES, CONTACTOR, OR OTHER LIGHTING CONTROLS.
- E. LEAVE PROTECTIVE FILM IN PLACE ON FIXTURES UNTIL FINAL CLEAN-UP.

6. LIGHTING CONTROL DEVICES:

- A. PROVIDE FACTORY-ASSEMBLED COMMERCIAL SPECIFICATION GRADE OCCUPANCY SENSOR FOR INDOOR USE CAPABLE OF SENSING BOTH MAJOR AND MINOR MOTIONS, ACCORDING TO PUBLISHED COVERAGE AREAS, FOR AUTOMATIC LIGHTING CONTROL. PASSIVE INFRARED OR PASSIVE INFRARED/ULTRASONIC SENSOR TECHNOLOGY.
- B. UNLESS OTHERWISE INDICATED, OCCUPANCY SENSORS SHALL BE MANUAL ON/AUTO OFF. WALL SWITCH OCCUPANCY SENSOR SHALL BE DESIGNED FOR INSTALLATION IN A STANDARD WALL BOX WITH A FIELD OF VIEW OF 180 DEGREES, INTEGRATED MANUAL CONTROL CAPABILITY.
- C. WHERE INDICATED, INSTALL SEPARATE COMPATIBLE WALL SWITCHES FOR MANUAL CONTROL INTERFACE WITH DIRECTIONAL OR CEILING MOUNTED OCCUPANCY SENSORS.
- 7. STRUCTURED CABLING FOR VOICE AND DATA:
- A. PROVIDE A COMPLETE PERMANENT SYSTEM OF PATHWAYS FOR VOICE/DATA AND COMMUNICATIONS, INCLUDING CONDUITS AND PULL WIRE, SUPPORT STRUCTURES, ENCLOSURES, CABINETS, AND BACK BOXES.
- B. COORDINATE REQUIREMENTS FOR SERVICE ENTRANCE AND ENTRANCE FACILITIES WITH COMMUNICATIONS SERVICE PROVIDER.

8. FIRE DETECTION AND ALARM:

- A. FIRE ALARM SYSTEM SHALL BE DESIGN BUILD BY THE ELECTRICAL CONTRACTOR. PRICING SHALL BE INCLUDED IN THE BID.
- B. THE SYSTEM SHALL BE ADDRESSABLE BY APPROVED MANUFACTURERS AS FOLLOWS:
- 2) EDWARDS
- 3) NOTIFIER
- 4) PRYROTRONICS
- 5) FARADAY 6) FIKE
- 7) GAMEWELL FCI 8) SILENT KNIGHT

9. ENCLOSED SAFETY SWITCHES:

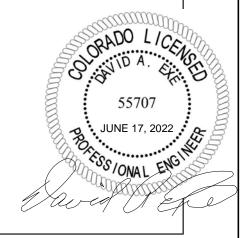
- A. QUICK-MAKE, QUICK-BREAK, FUSIBLE OR NON-FUSIBLE, ENCLOSED SAFETY SWITCH LISTED AND LABELED AS COMPLYING WITH UL 98; GENERAL DUTY; RATINGS, AND CONFIGURATION AS INDICATED ON THE DRAWINGS. PROVIDE SAFETY INTERLOCK TO PREVENT OPENING THE COVER WITH THE SWITCH IN THE "ON" POSITION WITH CAPABILITY OF OVERRIDING INTERLOCK FOR TESTING PURPOSES. PROVIDE EXTERNALLY OPERABLE HANDLE WITH MEANS FOR LOCKING IN THE "OFF" POSITION, CAPABLE OF ACCEPTING TWO PADLOCKS.
- B. PROVIDE FUSES FOR FUSIBLE SWITCHES AS INDICATED OR AS REQUIRED BY THE EQUIPMENT MANUFACTURER'S RECOMMENDATION.

10. FUSES:

- A. UNLESS SPECIFICALLY INDICATED TO BE EXCLUDED. PROVIDE FUSES FOR ALL FUSIBLE EQUIPMENT AS REQUIRED FOR A COMPLETE OPERATING SYSTEM. PROVIDE FUSES OF THE SAME TYPE, RATING, AND MANUFACTURER WITH THE SAME SWITCH.
- 1) FUSIBLE SWITCHES LARGER THAN 600 AMPS: CLASS L, TIME-DELAY. 2) FUSIBLE SWITCHES UP TO 600 AMPS: CLASS RK1, TIME-DELAY.

11. IDENTIFICATION OF ELECTRICAL SYSTEMS:

- A. PROVIDE IDENTIFICATION NAMEPLATE TO IDENTIFY EACH PIECE OF ELECTRICAL DISTRIBUTION AND CONTROL EQUIPMENT. USE SELF-ADHESIVE LAMINATED PLASTIC LABELS; UV, CHEMICAL, WATER, HEAT, AND ABRASIVE RESISTANT. USE FACTORY PRE-PRINTED OR MACHINE-PRINTED TEXT. DON NOT USE HANDWRITTEN TEXT UNLESS OTHERWISE INDICATED.
- B. ARC-FLASH HAZARD WARNING: ELECTRICAL EQUIPMENT THAT IS LIKELY TO REQUIRE SERVICING OR MAINTENANCE WHILE ENERGIZED SHALL BE PROVIDED WITH A WARNING SIGN LOCATED CLEARLY VISIBLE TO QUALIFIED PERSONS BEFORE SERVICING OR MAINTENANCE OF THE EQUIPMENT. USE FACTORY PRE-PRINTED OR MACHINE-PRINTED SELF-ADHESIVE POLYESTER OR SELF-ADHESIVE VINYL LABELS PRODUCED USING MATERIALS RECOGNIZED TO UL 96.



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NOTICE: DUTY OF COOPERATION Release of these plans contemplates further cooperation among the owner, his contractor and the architect. Design and construction are complex. Although the architect and his consultants have performed their services with due care and diligence, they cannot guarantee perfection. Communication is imperfect and every contingency cannot be anticipated Any ambiguity or discrepancy discovered by the use of these plans shall be reported immediately to the architect. Failure to notify the architect compounds misunderstanding and increases construction costs. A failure to cooperate by a simple notice to the architect shall relieve the architect from responsibility for the consequences. Changes made from the plans without consent of the architect are unauthorized and shall relieve the architect of responsibility for all

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consequences arriving out of such changes.

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Project Phase CONSTRUCTION DOCUMENTS

Sheet Title ELECTRICAL SPECIFICATIONS