



PROJECT AND SITE SAFETY

Project Name: FROB Building Renovations
Project Number: 2013-0222-1851

PART 1 – GENERAL

1.1 SAFETY PROGRAM

A. General:

1. The safety of bidders, the CONTRACTOR, their work forces in total, the Using Agency's Personnel, and the public is a major concern of the Contracting Officer. To ensure Project wide safety the CONTRACTOR shall carefully adhere to the following requirements.

B. The CONTRACTOR shall:

1. Abide by all applicable safety practices and requirements, irrespective of their origins.
2. Designate a safety officer and attend safety related meetings as periodically required by the Contracting Officer.
3. CONTRACTOR shall employ a safety program to insure that CONTRACTOR's personnel and all personnel of the Subcontractors, Suppliers, Installers and material men are trained and kept abreast of current safety requirements. Maintain program throughout construction period until Final Completion.

1.2 SAFETY STANDARDS

- A. Those safety related standards promulgated by safety or code enforcement agencies, such as but not limited to AK-DEC, OSHA, Building Officials and Fire Marshal's Office representatives.
- B. Safety guidelines and policies established under the CONTRACTOR's own safety program.
- C. Safety requirements required by the Contract Documents.
 1. Restrict entry of persons and vehicles into Project site and Work areas, as appropriate.

1.3 MINIMUM SAFETY REQUIREMENTS

- A. CONTRACTOR and CONTRACTOR's workforce shall continuously monitor the Work site to ensure safe Work practices affecting workers, Using Agency personnel and the public are followed.
- B. CONTRACTOR shall ensure that barriers (barricades) of sufficient height and strength (42" minimum) are in place at all drop off areas, openings or other locations where the height of the drop off is 30" or more and such drop off would be open to the public in the absence of such barriers. Such barriers shall not be climbable by children nor readily moved. Barriers must be continuous in all drop off zones such that an individual cannot inadvertently walk around the barrier to the drop off area.
- C. In areas where dangerous or hazardous conditions exist and people other than the CONTRACTOR's workforce must travel through or adjacent to such areas, barriers shall be constructed to readily preclude access into these areas by unauthorized individuals. Such barriers shall not restrict require widths of fire exits or corridors (per ADA requirements) unless specifically authorized in writing by the Contracting Officer. Contracting Officer may require alternate means of egress should such barriers impede traffic flows from the facility.
- D. Contractor shall not leave and unprotected openings, energized electrical devices, exposed electrical wiring or similar hazards during any times that the CONTRACTOR's workforce is absent. "Hot" circuits and similar devices shall be protected at the end of each work day, during breaks or absences (when workforce is not present) and at any time when there is an absence of workers in the immediate area of such circuits.
- E. CONTRACTOR shall ensure that all floors are free of trip hazards and slip hazards. Routinely patrol areas adjacent to public traffic areas to ensure that such hazards do not develop. Remove any debris which could cause a trip hazard and mop (dry) any areas of standing water. Wipe up any spilled oils or lubricants.
- F. CONTRACTOR shall ensure that no harmful airborne or waterborne chemicals are released into the facility. Should such a release occur, CONTRACTOR shall immediately notify the Contracting Officer and take the necessary actions to remedy the release. Should the release require evacuation of the facility, CONTRACTOR shall monitor the situation and advise the Contracting Officer as to when the space may be ready for occupancy. The decision to re-occupy the facility shall be the exclusive right of the Contracting Officer.
- G. CONTRACTOR shall coordinate the use of all operations involving open flames with the Contracting Officer and obtain Approval prior to commencing the Work.
- H. Should the Contracting Officer observe (or should the Using Agency bring to his attention) any deficiencies in the above requirements, or in other areas of safety not specifically described above the Contracting Officer shall issue a Stop Work notice until such time that the safety

conditions are adequately remedied. Time lost due to Stop Work notices shall not be a basis of delay claims by the CONTRACTOR.

- I. CONTRACTOR shall quarantine all areas with appropriate barriers and signs to ensure that no one from the public can walk under areas where the CONTRACTOR will be working on staging above entry/exit to the building, pathways to cars in the parking garages and any other like area.

PART 2 - PRODUCTS
(Not Used)

PART 3 - EXECUTION
(Not Used)

END OF SECTION



SECURITY

Project Name: FROB Building Renovations
Project Number: 2013-0222-1851

PART 1 – GENERAL

1.1 SECURITY PROGRAM

A. The CONTRACTOR shall:

1. Protect Work, existing premises, and Using Agency's operations from theft, vandalism, and unauthorized entry.
2. Initiate program in coordination with Using Agency's existing security program at initialization of Project mobilization.
3. Maintain program throughout construction period until Final Completion.

1.2 ENTRY CONTROL

A. The CONTRACTOR shall:

1. Restrict entry of persons and vehicles into Project site, as appropriate.
2. Allow entry only to authorized persons with proper identification.
3. Maintain log of visitors/inspectors and make log available to Contracting Officer on request.

1.3 PERSONNEL IDENTIFICATION

A. It is likely that during the life of the Project the Using Agency will initialize some form of personal security measures. If this occurs, at the discretion of the Contracting Officer the CONTRACTOR shall:

1. Require each person authorized to enter premises to possess and visibly display an identification card.
2. Maintain a list of authorized persons and assigned card number. Submit copy to Contracting Officer on request. Individuals not visibly displaying an identification card can be denied access to the Project.

3. Require return of cards from all individuals when they are no longer involved with Work at the Project site.
- B. Identification card shall be provided by the Using Agency and include: personal photograph; name, title and employer, and assigned number.

1.4 SECURITY SERVICE

- A. The CONTRACTOR shall:
 1. Using Agency employs uniformed guard service to provide surveillance of facility during all non-working hours.
 2. CONTRACTOR shall cooperate fully with Using Agency to ensure Acceptable security.

1.5 RESTRICTIONS

- A. The CONTRACTOR shall not allow cameras on Project site or photographs taken except by written Approval of Contracting Officer.
- B. All personnel employed on the Project site by the CONTRACTOR, Subcontractors, Suppliers, installers and other entities engaged in Work shall strictly adhere to the security, safety, and other program requirements as Directed by the Contracting Officer.

PART 2 – PRODUCTS

[Not Used]

PART 3 – EXECUTION

[Not Used]

END OF SECTION



QUALITY CONTROL

Project Name: FROB Building Renovations
Project Number: 2013-0222-1851

PART 1 – GENERAL

1.01 REQUIREMENTS INCLUDED

- A. General Quality Control.
- B. Workmanship.
- C. Manufacturer's Instructions.
- D. Manufacturer's Certificates.
- E. Mockups.
- F. Manufacturers' Field Services.
- G. Testing Laboratory Services.
- H. Departmental Inspection Services.

1.02 RELATED REQUIREMENTS

- A. Document 007200 - General Conditions: Inspection and testing required by governing authorities.
- B. Section 011000 – Summary of Work: Work Plans and Access to Facility, Individual Work Areas, Tests required for inspection of the existing roof deck and structural members.
- C. Section 014219 Reference Standards: Applicability of Reference Standards.
- D. Section 013219 Submittals: Shop Drawings, Product Data, and Samples

1.03 QUALITY CONTROL, GENERAL

- A. Maintain quality control over Suppliers, manufacturers, products, services, site conditions, and workmanship, to produce Work of specified quality.

1.04 WORKMANSHIP

- A. Comply with industry standards except when more restrictive tolerances or specified requirements indicate more rigid standards or more precise workmanship.
- B. Perform Work by persons qualified to produce workmanship of specified quality.
- C. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, and racking.

1.05 MANUFACTURERS' INSTRUCTIONS

- A. Comply with instructions in full detail, including each step in sequence. Should instructions conflict with Contract Documents, request clarification from DEPARTMENT before proceeding.

1.06 MANUFACTURERS' CERTIFICATES

- A. When required by individual Specifications section, submit manufacturer's certificate, in duplicate, that products meet or exceed specified requirements.

1.07 MOCKUPS

- A. When required by individual Specifications section, erect complete, full-scale mockup of assembly at site, perform required tests, and remove mockup at completion, when approved by DEPARTMENT.

1.08 MANUFACTURERS' FIELD SERVICES

- A. When required by manufacturer or when specified in respective Specification sections, require manufacturer to provide qualified personnel to observe field conditions, conditions of surfaces and installation, quality of workmanship, start-up of equipment, test, adjust and balance of equipment as applicable, and to make appropriate recommendations.
- B. Require manufacturer's representative to submit written report to DEPARTMENT listing observations and recommendations.

1.09 TESTING LABORATORY SERVICES

- A. CONTRACTOR shall employ and pay for services of an independent testing laboratory to perform inspections, tests, and other services required by individual Specification sections.

- B. Services will be performed in accordance with requirements of governing authorities and with specified standards.
- C. Reports will be submitted to DEPARTMENT in triplicate giving observations and results of tests, indicating compliance or non-compliance with specified standards and with Contract Documents.
- D. CONTRACTOR shall cooperate with testing laboratory personnel; furnish tools, samples of materials, design mix, equipment, storage and assistance as requested.
 - 1. Notify DEPARTMENT and testing laboratory 72 hours prior to expected time for operations requiring testing services.
 - 2. Make arrangements with testing laboratory and pay for additional samples and tests for CONTRACTOR's convenience.

1.10 DEPARTMENTAL INSPECTION SERVICES

A. REQUEST AND PAYMENT

- 1. CONTRACTOR shall request and when applicable pay for services provided by the DEPARTMENT to perform specified inspection and testing.
- 2. Inspection by the DEPARTMENT or its agents shall in no way relieve CONTRACTOR of obligation to perform Work in accordance with requirements of Contract Documents.

B. QUALITY ASSURANCE

- 1. Comply with requirements of all referenced standards.
- 2. DEPARTMENT shall retain a registered Engineer or Architect on staff to provide review services in those areas of their immediate expertise.
- 3. Engineers or Architects will be registered in State in which Project is located.
- 4. Testing equipment shall be calibrated at reasonable intervals with devices of an accuracy traceable to either NBS Standards or accepted values of natural physical constants.

C. DEPARTMENT RESPONSIBILITIES

- 1. Review schedules and request for inspections as submitted by CONTRACTOR for timeliness and conformance.

2. Provide qualified personnel at site after due notice; cooperate with CONTRACTOR in performance of services.
3. Perform specified inspection, inventorying, and testing of products in accordance with specified standards.
4. Ascertain compliance of materials and equipment with requirements of Contract Documents.
5. Promptly notify CONTRACTOR of observed irregularities or non-conformance of Work or products.
6. Perform additional inspections and re-tests required by the Contract Documents.
7. When applicable provide to the CONTRACTOR a written description of DEPARTMENT's costs attributed to the inspection.

D. DEPARTMENT REPORTS

1. After each inspection and/or test, promptly submit one copy of inspection report to CONTRACTOR. Include: Date issued, Project title and DEPARTMENT Project number, name of inspector(s), date and time of inspection, identification of product and Specifications section, location in the Project, type of inspection or test, results of inspection or tests, and conformance with Contract Documents. When requested in writing by CONTRACTOR, provide interpretation of results.

E. LIMITS ON AUTHORITY RESULTING FROM INSPECTIONS

1. DEPARTMENT may not release, revoke, alter, or enlarge on requirements of Contract Documents through the issuance of an inspection report.
2. DEPARTMENT may not approve or accept any portion of the Work through the issuance of an inspection report.
3. DEPARTMENT may not assume any duties of CONTRACTOR through the issuance of an inspection report.
4. DEPARTMENT has no authority to stop Work through the issuance of an inspection report.

F. CONTRACTOR RESPONSIBILITIES

1. Cooperate with DEPARTMENT personnel, and provide access to Work and when appropriate to manufacturer's facilities.
2. Provide incidental labor and facilities to provide access to Work to be inspected, to obtain and furnish incidental supplies at the site or at source of products to be inspected, to facilitate tests and inspections, and for storage and curing of test samples when appropriate.
3. Notify DEPARTMENT as stated above in Contractor Submittals for operations requiring inspection, special inspection and testing services.
4. Pay costs of DEPARTMENT furnished services for all re-inspections as required by Contract Documents.

PART 2 – PRODUCTS
(Not Used)

PART 3 – EXECUTION
(Not Used)

END OF SECTION



REFERENCE STANDARDS AND DEFINITIONS

Project Name: FROB Building Renovations

Project Number: 2013-0222-1851

PART 1 – GENERAL

1.1 GENERAL

- A. **TITLES OF SECTIONS AND PARAGRAPHS:** Captions accompanying specification sections and paragraphs are for convenience of reference only, and do not form a part of the Contract Specifications.
- B. **APPLICABLE PUBLICATIONS:** Whenever in these Specifications references are made to published specifications, codes, standards, or other requirements, it shall be understood that wherever no date is specified, only the latest specifications, standards, or requirements of the respective issuing agencies which have been published as of the date that the Work is advertised for bids, shall apply; except to the extent that said standards or requirements may be in conflict with applicable laws, ordinances, or governing codes. No requirements set forth herein or shown on the Drawings shall be waived because of any provision of, or omission from, said standards or requirements.
- C. **SPECIALISTS, ASSIGNMENTS:** In certain instances, specification text requires (or implies) that specific Work is to be assigned to specialists or expert entities, who must be engaged for the performance of that Work. Such assignments shall be recognized as special requirements over which the CONTRACTOR has no choice or option. These requirements shall not be interpreted so as to conflict with the enforcement of building codes and similar regulations governing the Work; also they are not intended to interfere with local union jurisdiction settlements and similar conventions. Such assignments are intended to establish which party or entity involved in a specific unit of work is recognized as "expert" for the indicated construction processes or operations. Nevertheless, the final responsibility for fulfillment of the entire set of Contract requirements remains with the CONTRACTOR.

1.2 SPECIFICATION FORMAT

- A. These Specifications are organized into Divisions and Sections based on the Construction Specifications Institute's (CSI) 48-Division format.

- B. Language used in Specifications is the abbreviated type. Implied words and meanings shall be interpreted as appropriate. Singular words will be interpreted as plural and plural words interpreted as singular where applicable and the context so indicates.
- C. Imperative language is used generally. Requirements expressed in the imperative mood are to be performed by the CONTRACTOR. At certain locations in the text subjective language is used to describe responsibilities that must be fulfilled indirectly by the CONTRACTOR, or by others when so noted. The words "shall be" shall be included by inference wherever a colon (:) is used within a sentence or phrase.

1.3 ABBREVIATIONS AND NAMES

- A. Where such acronyms or abbreviations are used in the Specifications or other Contract Documents, they mean the recognized name of the trade association, standards-generating organization, authority having jurisdiction, or other entity applicable to the context of the text provision.

1.4 PERMITS, LICENSES, AND CERTIFICATES

- A. Upon request by the Contracting Officer, the CONTRACTOR shall submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, and similar documents, correspondence, and records established in conjunction with compliance with standards and regulations bearing on performance of the Work.

1.5 REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

- A. Without limiting the generality of other requirements of the Specifications, all Work specified herein shall conform to or exceed the requirements of applicable codes and the applicable requirements of the following documents.
- B. References herein to "Building Code" or "Uniform Building Code" shall mean the International Building Code of the International Conference of Building Officials (ICBO).
- C. Similarly, references to "Mechanical Code" or "Uniform Mechanical Code," "Plumbing Code" or "Uniform Plumbing Code," "Fire Code" or "Uniform Fire Code," shall mean Uniform Mechanical Code, Uniform Plumbing Code and Uniform Fire Code of the International Conference of the Building Officials (ICBO). "Electric Code" or "National Electric Code (NEC)" shall mean the National Electric Code of the National Fire Protection Association (NFPA). The latest edition of the codes as approved by the Municipal Code and used by the local agency as of the date that the Work is advertised for bids, as adopted by the agency having jurisdiction, shall apply to the Work herein, including all addenda, modifications, amendments, or other lawful changes thereto.

- D. In case of conflict between codes, reference standards, drawings and the other Contract Documents, the most stringent requirements shall govern. All conflicts shall be brought to the attention of the Contracting Officer for clarification and directions prior to ordering or providing any materials or furnishing labor. The CONTRACTOR shall bid for the most stringent requirements.
- E. The CONTRACTOR shall construct the Work specified herein in accordance with the requirements of the Contract Documents and the referenced portions of those referenced codes, standards, and Specifications listed herein.
- F. Applicable Standard Specifications: References in Contract Sections 02801, 02802, 02803, 02807, 02808, and 02809, as applicable, shall mean the Alaska DEPARTMENT OF ADMINISTRATION "STANDARD SPECIFICATIONS for Highway Construction - 1988" and any supplements or amendments thereto.
- G. References herein to "OSHA Regulations for Construction" shall mean Title 29, Part 1926, Construction Safety and Health Regulations, Code of Federal Regulations (OSHA), including all changes and amendments thereto.
- H. References herein to "OSHA Standards" shall mean Title 29, Part 1910, Occupational Safety and Health Standards, Code of Federal Regulations (OSHA), including all changes and amendments thereto.

1.6 DEFINITIONS

- A. The basic Contract definitions are included in SECTION 00700 - GENERAL CONDITIONS. The following definitions have the meaning defined in the Technical Portions of the Work:

Approve - Used in conjunction with action on submittals, applications, and requests, is limited to the Contracting Officer's duties and responsibilities as stated in the requirements of the Contract.

Directed - Terms such as 'directed', 'requested', 'authorized', 'selected', 'approved', 'required', and 'permitted' mean "directed by the Contracting Officer," "requested by the Contracting Officer", etc.

Experienced - means having a minimum of five previous projects similar in size to this Project, and being familiar with precautions required and with requirements of the authority having jurisdiction.

Furnish - means to supply and deliver to the site, to unload and unpack ready for assembly, installation, testing, and start-up.

Indicated - is a word used to direct the CONTRACTOR to information contained on the drawings or in the Specifications. Terms such as "shown," "noted," "scheduled," and

"specified" also may be used to assist in locating information but no limitation of location is implied or intended.

Install - defines operations at the site including assembly, erection, placing, anchoring, applying, shaping to dimension, finishing, curing, protecting, and cleaning, ready for the Using Agency's use.

Installer - A CONTRACTOR or an entity engaged by the CONTRACTOR, as an employee or Subcontractor for performance of a particular construction activity, including installation, erection, application, and similar operations. Installers are required to be experienced in the operations they are engaged to perform.

Project Site - Area available for construction activities, either exclusively or with others performing other construction on the Project. The extent of the Project Site is shown on the Drawings and may or may not be identical with the description of the land upon which the Project is to be built.

Provide - is defined as furnish and install, ready for the intended use.

Regulation - Includes laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, and rules, conventions, and agreements within the construction industry that control performance of the Work.

Testing Laboratories - An independent entity engaged to perform specific inspections or tests at the Project Site or elsewhere, and to report on and, if required, to interpret results of those inspections or tests.

PART 2 - PRODUCTS

(Not Used)

PART 3 - EXECUTION

(Not Used)

END OF SECTION



TEMPORARY UTILITIES

Project Name: FROB Building Renovations

Project Number: 2013-0222-1851

PART 1 – GENERAL

1.1 GENERAL REQUIREMENTS

- A. Types. The types of utility services required for general temporary use at the Project site include the following:
1. Electric power service, distribution and lighting. (If necessary see Sections 3.1, 3.2, 3.3).
 2. Water service (potable for certain uses). (If necessary, see section 3.4).
 3. Sanitary sewer and temporary facilities. (If necessary, see section 3.5).
 4. Telephone and communication services. (If necessary, see section 3.8).
 5. Fire protection and alarm services. (if necessary, see section 3.6).

1.2 JOB CONDITIONS

- A. Scheduled Uses. The CONTRACTOR shall, in conjunction with establishment of the Project Progress Schedule, establish a schedule for implementation and termination of service for each temporary utility or facility, at the earliest feasible time, and when acceptable to the Using Agency and the Contracting Officer, change over from use of existing services to temporary utility service, and back to permanent service.

PART 2 – PRODUCTS

2.1 MATERIALS

- A. The CONTRACTOR shall provide new materials and equipment, which are in undamaged condition and without significant deterioration and which are recognized in the construction industry, by compliance with appropriate standards, as being suitable for intended use in each case. Where a portion of temporary utility is provided for CONTRACTOR by utility company, the CONTRACTOR shall provide remainder with matching and compatible materials and equipment and comply with recommendations of utility company.

PART 3 – EXECUTION

3.1 INSTALLATION OF TEMPORARY UTILITY SERVICES

- A. General. Wherever feasible, the CONTRACTOR shall engage the utility company to install temporary service to Project, or as a minimum, to make connection to existing utility service; locate services where they will not interfere with total Project construction Work, including installation of permanent utility services; and maintain temporary services as installed for required period of use; and relocate, modify or extend as necessary from time to time during that period as required to accommodate total Project construction Work.
- B. Approval of Electrical Connections. All temporary connections for electricity shall be subject to approval of the Contracting Officer and the power company representative, and shall be removed in like manner at the CONTRACTOR's expense prior to Final Acceptance of the Work.
- C. Separation of Circuits. Unless otherwise permitted by the Contracting Officer, circuits separate from lighting circuits shall be used for all power purposes.
- D. Construction Wiring. All wiring for temporary electric light and power shall be properly installed and maintained and shall be securely fastened in place. All electrical facilities shall conform to the requirements of the OSHA Safety and Health Standards for Construction.

3.2 POWER DISTRIBUTION SYSTEM

- A. Power. The CONTRACTOR shall coordinate with the Contracting Officer and Using Agency prior to providing all necessary power required for its operations under the Contract, and shall provide and maintain all temporary power lines required to perform the Work in a safe and satisfactory manner. Since temporary power for this Project is to be furnished by the Using Agency, CONTRACTOR shall take appropriate measures to minimize power consumption.
- B. Temporary Power Distribution. The CONTRACTOR shall provide a weatherproof, grounded, temporary power distribution system sufficient to accommodate performance of entire Work of project, including, but not necessarily limited to, temporary electrical heating where indicated, operation of test equipment and test operation of building equipment and systems which cannot be delayed until permanent power connections are operable, temporary operation of other temporary facilities, including permanent equipment and systems which must be placed in operation prior to use of permanent power connections (pumps, HVAC equipment, elevators, and similar equipment), and power for temporary operation of existing facilities (if any) at the site during change-over to new permanent power system. Provide circuits of adequate size and proper power characteristics for each use; run circuit wiring generally overhead, and rise vertically in locations where it will be least exposed to possible damage from construction operations, and result in least interference with performance of the Work; provide rigid steel conduit or equivalent raceways for wiring which must be exposed on grade, floors, decks, or other recognized exposures to damage or abuse.

3.3 LIGHTING

- A. Construction Lighting. All Work conducted at night or under conditions of deficient daylight shall be suitably lighted to insure proper Work and to afford adequate facilities for inspection and safe working conditions.
- B. Temporary Lighting. The CONTRACTOR shall provide a general, weatherproof, grounded temporary lighting system in every area of construction Work, as soon as overhead floor/roof deck structure has been installed; and provide sufficient illumination for safe Work and traffic conditions; and run circuit wiring generally overhead, and rise vertically in locations where it will be least exposed to possible damage from construction operations on grade, floors, decks, or other recognized areas of possible damage or abuse.

3.4 WATER SUPPLY

- A. General. The CONTRACTOR shall coordinate with the Contracting Officer and Using Agency for obtaining water service. The CONTRACTOR shall provide all facilities necessary to convey the water from the source to the points of use in accordance with the requirements of the Contract Documents.
- B. CONTRACTOR shall provide and operate all pumping facilities, pipelines, valves, hydrants, storage tanks, and all other equipment necessary for the adequate development and operation of the water supply system. Water used for domestic purposes shall be free of contamination and shall conform to the requirements of the State and local authorities for potable water.
- C. The CONTRACTOR shall be solely responsible for the adequate functioning of its water supply system and shall be solely liable for any claims arising from the use of same, including discharge or waste of water therefrom.
- D. Water Connections. The CONTRACTOR shall not make connection to, or draw water from, any fire hydrant or pipeline without first obtaining the Contracting Officer's permission and that of the authority having jurisdiction over the use of said fire hydrant or pipeline and from the agency owning the affected water system. For each such connection made, the CONTRACTOR shall first attach to the fire hydrant or pipeline a valve and a meter, if required by the said authority, of a size and type acceptable to said authority and agency. CONTRACTOR shall pay all permit and water connection charges.

3.5 SANITARY FACILITIES

- A. Toilet Facilities. N/A
- B. Sanitary and Other Organic Wastes. N/A
- C. Sewer Connection. N/A

3.6 FIRE PROTECTION

- A. Fire Protection. The construction plant and all other parts of the Work shall be connected with the CONTRACTOR's water supply system and shall be adequately protected against damage by fire. Hose connections and hose, water casks, chemical equipment, or other sufficient means shall be provided for fighting fires in the temporary structures and other portions of the Work, and responsible persons shall be designated and instructed in the operation of such fire apparatus

so as to prevent or minimize the hazard of fire. The CONTRACTOR's fire protection program shall conform to the requirements of the OSHA Standards for Construction.

- B. Project Wide Fire Protection: CONTRACTOR shall ensure that existing fire protection and alarm systems elsewhere on the Project site remain in service at all times and are not affected by the Work of the CONTRACTOR, Subcontractors, Suppliers or others involved with the Project.

3.8 INSTALLATION OF COMMUNICATIONS

- A. Telephone Services. The CONTRACTOR shall provide and maintain at all times during the progress of the Work not less than one telephone in good working order, at its own field construction office, at or near the site of the Work included in the Contract. Each such telephone shall be connected to an established exchange for toll service and with all other telephones utilized by the CONTRACTOR.
- B. Facsimile Telephone. The CONTRACTOR shall also furnish and install a separate telephone and facsimile machine (separate trunk line) similarly connected to an established exchange.

Telephone/Facsimile Use. The CONTRACTOR shall permit the Contracting Officer, the Using Agency, or their authorized representatives or employees free and unlimited use of said telephone/facsimile facilities for all calls that do not involve published toll charges. Calls originated by the Contracting Officer, the Using Agency, their authorized representatives or employees which involve toll or message unit charges shall be billed to the Contracting Officer by the CONTRACTOR at the rates charged by the telephone company.

- C. Cellular Phone: CONTRACTOR shall provide a cellular phone for their Project superintendent and require such phones to be available to all Subcontractors, Suppliers and other installers performing Work at the site. Such phone shall be activated during hours of construction and workers shall respond to any call from the Contracting Officer, Using Agency or governing authority without delay.

3.9 OPERATIONS AND TERMINATIONS

- A. Inspections. Prior to placing temporary utility services into use, and in addition to notifying the Contracting Officer, the CONTRACTOR shall inspect and test each service and arrange for governing authorities' required inspection and tests, and obtain required certifications and permits for use thereof.
- B. Protection. The CONTRACTOR shall maintain distinct markers for underground lines, and protect from damage during excavating operations.
- C. Termination and Removal. When need for a temporary utility service or a substantial portion thereof has ended, or when its service has been replaced by use of permanent services, or not later than time of Substantial Completion, the CONTRACTOR shall promptly remove installation unless requested by Contracting Officer to retain it for a longer period. The CONTRACTOR shall complete and restore Work which may have been delayed or affected by installation and use of temporary utility, including repairs to construction and grades and restoration and cleaning of exposed surfaces.

- D. Removal of Water Connections. Before final acceptance of the Work on the Project, all temporary connections and piping installed by the CONTRACTOR shall be entirely removed, and all affected improvements shall be restored to their original condition, or better, to the satisfaction of the Contracting Officer and to the agency owning the affected utility.

END OF SECTION



TEMPORARY ENVIRONMENTAL CONTROLS

Project Name: FROB Building Renovations
Project Number: 2013-0222-1851

PART 1 - GENERAL

1.1 DUST ABATEMENT

- A. The CONTRACTOR shall furnish all labor, equipment, and means required and shall carry out effective measures wherever and as often as necessary to prevent its operation from producing dust in amounts damaging to property, machinery or equipment, or causing a nuisance to persons within the facility or living in buildings in the vicinity. The CONTRACTOR shall be responsible for any damage resulting from any dust originating from its operations. The dust abatement measures shall be continued until the CONTRACTOR is relieved of further responsibility by the Contracting Officer.

1.2 RUBBISH CONTROL

- A. During the progress of the Work, the CONTRACTOR shall keep the site of the Work and other areas used by it in a neat and clean condition, and free from any accumulation of rubbish. The CONTRACTOR shall dispose of all rubbish and waste materials of any nature occurring at the Work site, and shall establish regular intervals of collection and disposal of such materials and waste. The CONTRACTOR shall also keep its haul routs free from trash, rubbish, and unnecessary obstructions resulting from its operations. Disposal of all rubbish and surplus materials shall be off the site of construction in accordance with local codes and ordinances governing locations and methods of disposal, and in conformance with all applicable safety laws, and to the particular requirements of Part 1926 of the OSHA Safety and Health Standards for Construction. All fire exits shall be maintained at all times.

1.3 SANITATION

- A. Toilet Facilities. Toilets within the Project Work Site are available for CONTRACTOR's use.
- B. Sanitary and Other Organic Wastes. The CONTRACTOR shall establish a regular collection of all sanitary and organic wastes. All wastes and refuse from sanitary facilities provided by the CONTRACTOR or organic material wastes from any other source related to the CONTRACTOR's operations shall be disposed of away from the site in a manner satisfactory to the Contracting Officer and in accordance with all laws and regulations pertaining thereto.

1.4 CHEMICALS

- A. All chemicals used during project construction or furnished for project operation, whether defoliant, soil sterilant, herbicide, pesticide, disinfectant, polymer, reactant or of other classification, shall show approval of either the U.S. Environmental Protection Agency or the

U.S. Department of Agriculture. Use of all such chemicals and disposal of residues shall be in strict accordance with the printed instructions of the manufacturer. In addition, see the requirements set forth in paragraph 6.11 of the General Conditions.

1.5 CULTURAL RESOURCES

- A. The CONTRACTOR's attention is directed to the National Historic Preservation Act of 1966 (16 U.S.C. 470) and 36 CFR 800 which provides for the preservation of potential historical architectural, archaeological, or cultural resources (hereinafter called "cultural resources").
- B. The CONTRACTOR shall conform to the applicable requirements of the National Historic Preservation Act of 1966 as it relates to the preservation of cultural resources.
- C. In the event potential cultural resources are discovered during subsurface excavations at the site of construction, stop Work immediately and notify the Contracting Officer.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION



MATERIALS AND EQUIPMENT

Project Name: FROB Building Renovations
Project Number: 2013-0222-1851

1.1 GENERAL

- A. The word "Products," as used herein, is defined to include purchased items for incorporation into the Work, regardless of whether specifically purchased for the Project or taken from CONTRACTOR's stock of previously purchased products. The word "Materials," is defined as products which must be substantially cut, shaped, worked, mixed, finished, refined, or otherwise fabricated, processed, installed, or applied to form units of Work. The word "Equipment" is defined as products with operational parts, regardless of whether motorized or manually operated, and particularly including products with service connections (wiring, piping, and other like items). Definitions in this paragraph are not intended to negate the meaning of other terms used in Contract Documents, including "specialties," "systems," "structure," "finishes," "accessories," "furnishings," "special construction," and similar terms, which are self-explanatory and have recognized meanings in the construction industry.
- B. Neither "Products" nor "Materials" nor "Equipment" includes machinery and equipment used for preparation, fabrication, conveying and erection of the Work.

1.2 QUALITY ASSURANCE

- A. Source Limitations. To the greatest extent possible for each unit of work, the CONTRACTOR shall provide products, materials, or equipment of a singular generic kind from a single source.
- B. Compatibility of Options. Where more than one choice is available as options for CONTRACTOR's selection of a product, material, or equipment, the CONTRACTOR shall select an option which is compatible with other products, materials, or equipment already selected. Compatibility is a basic general requirement of product/material selections.

1.3 PRODUCT DELIVERY-STORAGE-HANDLING

- A. The CONTRACTOR shall deliver, handle, and store products in accordance with manufacturer's written recommendations and by methods and means which will prevent damage, deterioration, and loss including theft. Delivery schedules shall be controlled to minimize long-term storage of

products at site and overcrowding of construction spaces. In particular, the CONTRACTOR shall ensure minimum holding or storage times for products recognized to be flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other sources of loss.

1.4 TRANSPORTATION AND HANDLING

- A. Products shall be transported by methods to avoid product damage and shall be delivered in undamaged condition in manufacturer's unopened containers or packaging.
- B. The CONTRACTOR shall provide equipment and personnel to handle products, materials, and equipment by methods to prevent soiling and damage.
- C. The CONTRACTOR shall provide additional protection during handling to prevent marring and otherwise damaging products, packaging, and surrounding surfaces.

1.5 STORAGE AND PROTECTION

- A. Products shall be stored in accordance with manufacturer's written instructions, with seals and labels intact and legible. Sensitive products shall be stored in weather-tight climate controlled enclosures and temperature and humidity ranges shall be maintained within tolerances required by manufacturer's written instructions.
- B. For exterior storage of fabricated products, they shall be placed on sloped supports above ground. Products subject to deterioration shall be covered with impervious sheet covering; ventilation shall be provided to avoid condensation.
- C. Loose granular materials shall be stored on solid surfaces in a well-drained area and shall be prevented from mixing with foreign matter.
- D. Storage shall be arranged in a manner to provide access for maintenance of stored items and for inspection. The CONTRACTOR shall periodically inspect to assure products are undamaged and are maintained under required conditions.

1.6 MAINTENANCE OF STORAGE

- A. Stored products shall be periodically inspected on a scheduled basis. The CONTRACTOR shall maintain a log of inspections and shall make said log available on request.
- B. The CONTRACTOR shall verify that storage facilities comply with manufacturer's product storage requirements.
- C. The CONTRACTOR shall verify that manufacturer-required environmental conditions are maintained continually.
- D. The CONTRACTOR shall verify that surfaces of products exposed to the elements are not adversely affected and that any weathering of finishes does not occur.

- E. For mechanical and electrical equipment, the CONTRACTOR shall provide a copy of the manufacturer's service instructions with each item and the exterior of the package shall contain notice that instructions are included.
- F. Products shall be serviced on a regularly scheduled basis, and a log of services shall be maintained and submitted as a record document prior to Approval by the Contracting Officer in accordance with the Contract Documents.

PART 2 - PRODUCTS
(Not Used)

PART 3 - EXECUTION
(Not Used)

END OF SECTION



MOBILIZATION

Project Name: FROB Building Renovations
Project Number: 2013-0222-1851

PART 1 – GENERAL

1.1 GENERAL

- A. Mobilization shall include obtaining all permits; moving all plant and equipment onto the Project site; furnishing and erecting plants, temporary buildings, and other construction facilities; implementing security requirements, all as required for the proper performance and completion of the Work. Mobilization shall include the following principal items:
1. Moving all the CONTRACTOR's plant and equipment required for operations onto the site.
 2. Providing all on-site communication facilities, including radios and cellular phones.
 3. Providing on-site sanitary facilities.
 4. Obtaining all required permits.
 5. Having all OSHA required notices and establishment of safety programs.
 6. Having the CONTRACTOR's superintendent at the Project site full time.
 7. Submitting and obtaining Approval of initial submittals.
 8. Arranging for, and erection of, CONTRACTOR's Work and storage yard.

1.2 PAYMENT FOR MOBILIZATION

- A. The CONTRACTOR's attention is directed to the condition that no payment for mobilization, or any part thereof, will be Approved for payment under the Contract until all mobilization items listed above have been completed as specified.
- B. As soon as practicable, after receipt of Notice to Proceed, the CONTRACTOR shall submit a breakdown showing the estimated value of each major component of mobilization to the Contracting Officer for Approval. When Approved by the Contracting Officer, the breakdown will be the basis for initial progress payments in which Mobilization is included.

PART 2 – PRODUCTS
[Not Used]

PART 3 – EXECUTION
[Not Used]

END OF SECTION



CUTTING & PATCHING

Project Name: FROB Building Renovations
Project Number: 2013-0222-1851

PART 1 – GENERAL

1.5 SUMMARY

- B. This Section includes procedural requirements for cutting and patching.

PART 2 – PRODUCTS

2.1 MATERIALS

- A. General: Comply with requirements specified in other Sections.
- B. In-Place Materials: Use materials identical to in-place materials. For exposed surfaces, use materials that visually match in-place adjacent surfaces to the fullest extent possible.
 - 1. If identical materials are unavailable or cannot be used, use materials that, when installed, will match the visual and functional performance of in-place materials.

PART 3 – EXECUTION

3.1 EXAMINATION

- A. Examine surfaces to be cut and patched and conditions under which cutting and patching are to be performed.
 - 1. Compatibility: Before patching, verify compatibility with and suitability of substrates, including compatibility with in-place finishes or primers.
 - 2. Proceed with installation only after unsafe or unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. 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.

- B. Adjoining Areas: Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.

3.3 PERFORMANCE

- A. 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 possible. Provide materials and comply with installation requirements specified in other Sections.
1. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.
 2. Floor 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.
 3. Ceilings: Patch, repair, or rehang in-place ceilings as necessary to provide an even-plane surface of uniform appearance.
- B. Cleaning: Clean areas and spaces where cutting and patching are performed. Completely remove paint, mortar, oils, putty, and similar materials.

END OF SECTION



FINAL CLEANUP AND SITE RESTORATION

Project Name: FROB Building Renovations
Project Number: 2013-0222-1851

PART 1 - GENERAL

1.1 DESCRIPTION

The Work under this Section includes providing all supervision, labor, materials, tools and equipment necessary for final clean-up and restoration of all areas disturbed by construction activities, to a condition equal to, or better than, before construction started. This does not include clean-up or restoration incidental to, or directly provided for by other construction items.

PART 2 – PRODUCTS

2.1 MATERIALS

All materials requiring cleaning shall conform to appropriate Specification Sections.

PART 3 – EXECUTION

3.1 GENERAL

- A. The CONTRACTOR shall promptly remove from the vicinity of the completed Work and all sites disturbed by the construction, all rubbish and debris, unused materials, construction equipment, and temporary structures and facilities used during construction and shall grade the sites so that no standing water is evident. Final acceptance of the Work by the Contracting Officer will be withheld until the CONTRACTOR has satisfactorily complied with the foregoing requirements for final clean-up of the Project site.

3.2 FINAL CLEANING OF SURFACES.

- A. The CONTRACTOR shall employ experienced workers for final cleaning. Clean each surface to the condition expected in a commercial building cleaning and maintenance program. Complete the following before requesting inspection for Certification of Substantial Completion:
 - 1. Remove labels that are not permanent labels.

2. Clean transparent materials. Remove glazing compound. Replace chipped or broken glass.
3. Clean exposed hard-surfaced finishes to a dust-free condition, free of stains, films and similar foreign substances. Restore reflective surfaces to their original reflective condition. Leave concrete floors broom clean. Vacuum carpeted surfaces.
4. Clean exterior light fixtures and lamps from falling debris or caulking.
5. Clean the site of rubbish, litter and other foreign substances.
6. Sweep paved areas, remove stains, spills and other foreign deposits.
7. Comply with regulations of authorities having jurisdiction and safety standards for cleaning. Remove waste materials from the site and dispose of in a lawful manner.
8. Remove temporary protection and facilities.

END OF SECTION



PROJECT CLOSEOUT

Project Name: FROB Building Renovations
Project Number: 2013-0222-1851

PART 1 - GENERAL

1.1. CLOSEOUT TIMETABLE.

- A. The CONTRACTOR shall establish dates for product testing, acceptance periods, and on-site instructional periods (as required under the Contract). Such dates shall be established not less than one week prior to beginning any of the foregoing items, to allow the Using Agency, the Contracting Officer, and their authorized representatives sufficient time to schedule attendance at such activities.

1.2 SUBSTANTIAL COMPLETION.

- A. Before requesting inspection for certification of Substantial Completion, complete the following:
1. In the Application for Payment that coincides with the date Substantial Completion is claimed, show 100 percent completion for the portion of the Work claimed substantially complete.
 2. Submit specific warranties, workmanship bonds, maintenance agreements, final certifications and similar documents.
 3. Submit maintenance manuals.
 4. Complete testing of caulking for adhesion and instruction of Using Agency's maintenance personnel. Remove temporary facilities from the site, along with construction tools, mock ups, and similar elements.
 5. Complete final clean-up. Touch-up and repair and restore marred or damaged finishes where exposed.

Transmit "site access" keys to the Contracting Officer.

1.3 INSPECTION PROCEDURES

- A. Upon receipt of a request for inspection for Substantial Completion, the Contracting Officer will proceed and advise the CONTRACTOR of unfilled requirements. The Contracting Officer will

prepare the Certificate of Substantial Completion following inspection, or advise the CONTRACTOR of construction that must be completed or corrected before the certificate will be issued.

- B. The Contracting Officer will re-inspect the Work upon receipt of notice by the CONTRACTOR that the Work has been completed, except items whose completion has been delayed because of circumstances acceptable to the Contracting Officer. If re-inspection is requested and the CONTRACTOR has not completed all punch list items, the cost of that inspection will be paid by the CONTRACTOR.

Upon completion of re-inspection, the Contracting Officer will prepare a certificate of final acceptance, or advise the CONTRACTOR of Work that is incomplete or of obligations that have not been fulfilled but are required for final acceptance. If necessary, re-inspection will be repeated.

- C. The Contracting Officer will repeat inspection when requested and assured by the CONTRACTOR that the Work has been substantially completed.
- D. Results of the completed inspection will form the basis of requirements for Final Acceptance.

1.4 FINAL ACCEPTANCE.

- A. Before requesting inspection for certification of Final Acceptance and final payment, complete and submit the following:
 - 1. Submit final payment request.
 - 2. Submit a final change order request.
 - 3. Submit a copy of the final inspection list stating that each item has been completed or otherwise resolved for acceptance.
 - 4. Submit final meter readings for utilities and similar data as of Substantial Completion.
 - 5. Submit consent of surety to final payment.
 - 6. Submit evidence of continuing insurance coverage complying with insurance requirements.
 - 7. Submit those items listed under Article 1.5 - FINAL SUBMITTALS of this section as they apply.
 - 8. Written guarantees, where required.
 - 9. Certificates of inspection and acceptance by local governing agencies having jurisdiction.
 - 10. Releases from all parties who are entitled to claims against the subject project, property, or improvement pursuant to the provisions of law.

11. Completed Certificate of Compliance and Release for all contractors involved in the Work.
12. Submit "Notice of Work"
and "Notice of Completion" from the Department of Labor.

1.5 FINAL SUBMITTALS

- A. Maintenance Manuals. Organize maintenance data into sets of manageable size. Bind in individual heavy-duty 2-inch (maximum), 3-ring vinyl-covered binders, with pocket folders for folded sheet information. Mark identification on front and spine of each binder. Include the following information:
 1. Emergency instructions.
 2. Copies of warranties.
 3. Recommended "turn around" cycles.
 4. Inspection procedures.
 5. Shop drawings and product data.
- B. Product and Maintenance Instructions. Arrange for the installer of the product to meet with Using Agency personnel to provide instruction in proper product maintenance per the requirements of Section 017900.

MAINTENANCE AND GUARANTEE

- A. The CONTRACTOR shall comply with the maintenance and guarantee requirements contained in Article 13 of the General Conditions and as may be modified in the Supplementary General Conditions.
- B. The CONTRACTOR shall make all repairs and replacements promptly upon receipt of written order from the Contracting Officer. If the CONTRACTOR fails to make such repairs or replacements promptly, the Contracting Officer reserves the right to do the Work and the CONTRACTOR and its surety shall be liable to the DEPARTMENT for the cost thereof.

PART 2 - MATERIALS

(Not Used)

PART 3 - EXECUTION

(Not Used)

END OF SECTION



FINAL TESTING AND MAINTENANCE TRAINING

Project Name: FROB Building Renovations
Project Number: 2013-0222-1851

PART 1 – GENERAL

1.1 GENERAL

- A. Final testing and maintenance procedures are requisite to satisfactory completion of the Contract and, therefore, shall be completed within the Contract Time.

1.2 PRODUCT TESTING

- A. The CONTRACTOR shall provide the services of an experienced and authorized representative of the manufacturer of each item provided as a part of the Work, who shall visit the site of the Work and inspect, check, adjust if necessary, and approve the product's performance. In each case, the CONTRACTOR shall arrange to have the manufacturer's representative revisit the job site as often as necessary until any and all trouble is corrected and the product installation is satisfactory to the Contracting Officer.
- B. The CONTRACTOR shall require that each manufacturer's representative furnish to the Contracting Officer a written report addressed to the Using Agency certifying that the product has been properly installed.
- C. The CONTRACTOR shall be responsible for scheduling all product testing. The CONTRACTOR is advised that the Contracting Officer and the Using Agency's Maintenance personnel will witness product testing. Qualified persons who have been made familiar in advance with the product requirements shall conduct the testing. Prior to scheduling any product testing, the CONTRACTOR shall have previously furnished the Product Manuals required under Section 013219, CONTRACTOR Submittals and described within paragraph 1.3 of this Section.
- D. CONTRACTOR shall notify the Contracting Officer at least 3 days in advance of each product test.
- E. The CONTRACTOR shall furnish all personnel, and all other necessary product, facilities, and services required for conducting the tests.

1.3 PRODUCT OPERATION AND MAINTENANCE (O&M) MANUALS

- Z. Provide O&M manuals specified in Section 013219, CONTRACTOR Submittals, for all products furnished under the Specifications within the Contract Documents. Submit 2

preliminary copies, complete including the bound cover, prior to scheduled product testing for checking and review. Deliver final bound corrected copies as specified in Section 013219, CONTRACTOR Submittals, prior to scheduled product testing.

AA. The information included must be the exact product installed. Where sheets show the product installed and other product, the installed product shall be neatly and clearly identified on such sheets.

BB. These O&M manuals shall contain all the information needed to maintain all products provided in the Project. Present and arrange information in a logical manner for efficient use by the Using Agency's maintenance personnel. The information provided shall include but not be limited to the following:

1. Product manufacturer, make, model number, size, nameplate data, etc.
2. Dimensional and performance data for products provided as appropriate.
3. Manufacturer's recommended servicing data including frequency.
4. Complete product list including reordering information, and anticipated useful life (if appropriate). Product lists shall give full ordering information assigned by the original product manufacturer. Relabeled and/or renumbered product information as reassigned by product supplier not acceptable.
5. Shop Drawings.
6. A complete list of local (nearest) manufacturer representative and distributor contacts for each type of product and manufacturer. Include name, company, address, phone, fax, e-mail address, and web site.

CC. Group the information contained in the manuals in an orderly arrangement by Specification index. Provide a typewritten index and divider sheets between categories with identifying tabs. Bind the documents into heavy-duty, "D" ring binders no larger than 3". Materials should not exceed 80% of the binder capacity, if exceeded, provide multiple volumes as required. Imprint the covers with the name of the Project, Project Number, DEPARTMENT, CONTRACTOR and year of completion.

1.4 PRODUCT MAINTENANCE TRAINING

A. Activities associated to the proper maintenance and care of all products are fundamental to ensuring the maximum life expectancy and warranty coverage of the products. The CONTRACTOR shall provide the required expertise through the presence of manufacturers,

subcontractors, and installers to insure, to the satisfaction of the Contracting Officer, that the Using Agency's operating personnel are properly instructed in the maintenance and care of all products.

- B. Training shall not commence until all required product testing has been completed to the satisfaction of the Contracting Officer.
- C. Instruction shall cover as a minimum, routine care and maintenance of the product, annual maintenance such as cleaning, testing and repairs to be made by the Using Agency's personnel and that are permitted under warranty. Instruction shall include the "hands on" training and operation of any required maintenance product. Such instruction shall be scheduled at a time arranged with the Using Agency at least 1 week in advance.
- D. The CONTRACTOR shall provide qualified personnel for the duration of the product training. Additionally, the CONTRACTOR shall provide all required consumables.
- E. The CONTRACTOR shall immediately correct all defects in materials or quality of Work, which appear during this training period.

PART 2 - PRODUCTS

(Not Used)

PART 3 - EXECUTION

(Not Used)

END OF SECTION



PROTECTION AND RESTORATION OF EXISTING FACILITIES

Project Name: FROB Building Renovations
Project Number: 2013-0222-1851

PART 1 – GENERAL

1.1 GENERAL

- A. The CONTRACTOR shall protect all existing utilities and improvements not designated for removal and shall restore damaged or temporarily relocated utilities and improvements to a condition equal to or better than they were prior to such damage or temporary relocation, all in accordance with requirements of the Contract Documents.
- B. CONTRACTOR shall be the responsible for all utility locates.
- C. The CONTRACTOR shall verify the exact location and depth of all utilities. CONTRACTOR shall make exploratory excavations of all utilities that may interfere with the Work. All such exploratory excavations shall be performed as soon as practicable after Award of the Contract and, in any event, a sufficient time in advance of construction to avoid possible delays to the CONTRACTOR's Work. The CONTRACTOR, prior beginning the Work and to avoid damage, shall rebury any utility or service in conflict with the Work.
- D. The number of exploratory excavations required shall be that number which is sufficient to determine the alignment and grade of the utility.

1.2 RIGHTS-OF-WAY (Not Used)

1.3 PROTECTION OF SURVEY MONUMENTS, STREET OR ROADWAY MARKERS. (Not Used)

1.4 RESTORATION OF PAVEMENT (Not Used)

1.5 EXISTING UTILITIES AND IMPROVEMENTS

- A. General. The CONTRACTOR shall protect all concealed or Underground Utilities and other improvements that may be impaired during construction operations. It shall be the CONTRACTOR's responsibility to ascertain the actual location of all existing utilities and other improvements that will be encountered in its construction operations, and to see that such utilities or other improvements are adequately protected from damage due to such operations.

The CONTRACTOR shall take all possible precautions for the protection of unforeseen utility lines to provide for uninterrupted service and to provide such special protection as may be necessary.

- B. Utilities to be Moved. When utility lines that are to be removed are encountered within the area of operations, the CONTRACTOR shall notify the Contracting Officer a sufficient time in advance for the necessary measures to be taken to prevent interruption of service.
- C. Where the proper completion of the Work requires the temporary or permanent removal and/or relocation of an existing utility or other improvement which is indicated, the CONTRACTOR shall remove and, without unnecessary delay, temporarily replace or relocate such utility or improvement in a manner satisfactory to the Contracting Officer and the owner of the facility. In all cases of such temporary removal or relocation, restoration to former location shall be accomplished by the CONTRACTOR in a manner that will restore or replace the utility or improvement as nearly as possible to its former locations and to as good or better condition than found prior to removal.
- D. DEPARTMENT's Right of Access. The right is reserved to the DEPARTMENT to enter the Project site at any time for the purpose of making changes in their property made necessary by the Work of this Contract.
- E. Concealed or Underground Utilities Indicated. Existing utility lines that are indicated or the locations of which are made known to the CONTRACTOR prior to excavation and that are to be retained, and all utility lines that are constructed during excavation operations shall be protected from damage during excavation, backfilling or other construction. If damaged, such utilities shall be immediately repaired or replaced by the CONTRACTOR.
- F. Concealed or Underground Utilities Not Indicated. In the event that the CONTRACTOR damages any existing utility lines that are not indicated, or locations thereof are not made known to the CONTRACTOR prior to excavation, a written report thereof shall be made immediately to the Contracting Officer. If directed by the Contracting Officer, repairs shall be made by the CONTRACTOR under the provisions for changes and extra Work contained in Articles 10, 11, and 12 of the General Conditions.
- G. All costs of locating, repairing damage not due to failure of the CONTRACTOR to exercise reasonable care, and removing or relocating such utility facilities not shown in the Contract Documents with reasonable accuracy, and for equipment on the project which was actually working on that portion of the Work which was interrupted or idled by removal or relocation of such utility facilities, and which was necessarily idled during such work will be paid for as extra Work in accordance with the provisions of Articles 10, 11, and 12 of the General Conditions.
- H. Approval of Repairs. All repairs to a damaged utility or improvement are subject to inspection and approval by the Contracting Officer before being concealed by backfill or other Work.
- I. Maintaining in Service. All oil and gasoline pipelines, power, telephone, cables or communication cable ducts, gas and water lines, sewer lines, storm/roof drain lines, poles, and overhead power and communication wires and cables encountered during Work operations shall remain continuously in service. When other arrangements, satisfactory to the Contracting Officer, are made with the owner of said pipelines, duct, main, sewer, drain, pole, or wire or cable, services may be interrupted. The CONTRACTOR shall be responsible for and shall

repair all damage due to its operations, and the provisions of this Section shall not be abated even in the event such damage occurs after backfilling or concealment and is not discovered until after completion of the backfilling or other construction.

**1.6 TREES WITHIN STREET RIGHTS-OF-WAY AND PROJECT LIMITS
(Not Used)**

1.7 PROTECTION OF EXISTING STRUCTURES

- A. Compaction Equipment and Similar Operations. The CONTRACTOR shall restrict his compaction operations as necessary to assure no damage occurs to adjacent building components.

**PART 2 – PRODUCTS
(Not Used)**

**PART 3 – EXECUTION
(Not Used)**

END OF SECTION



SHEET INDEX	
A0.0	COVER SHEET
ARCHITECTURAL	
A0.1	LOCATION MAP, ABBREVIATIONS, & WALL TYPES
A0.2	EXITING PLAN & CODE REVIEW
A1.0	DEMOLITION PLANS
A2.0	PARTIAL SECOND FLOOR PLAN
A4.0	ENLARGED PLAN
A8.0	INTERIOR ELEVATIONS AND MOUNTING HEIGHTS
A9.0	RCP DEMOLITION
A9.1	REFLECTED CEILING PLAN
A11.0	INTERIOR DETAILS
A12.0	SCHEDULES
STRUCTURAL	
S1.0	BEAM OPEININGS
MECHANICAL	
M0.1	LEGEND & ABBREVIATIONS
M0.2	SCHEDULES
M0.3	SPECIFICATIONS
M1.1	DEMOLITION PLAN-SECOND FLOOR-MECHANICAL
M2.1	FLOOR PLAN-FIRST FLOOR-PIPING
M2.2	FLOOR PLAN-SECOND FLOOR-MECHANICAL
M3.1	DIAGRAM-PLUMBING
M3.2	DETAILS
ELECTRICAL	
E0.1	LEGEND, ABBREVIATIONS & DRAWING INDEX
E0.2	SPECIFICATIONS & PANEL SCHEDULE
E1.1	FLOOR PLAN-FIRST FLOOR-ELECTRICAL
E1.2	DEMOLITION PLAN-SECOND FLOOR-ELECTRICAL
E2.1	ELECTRICAL PLAN-SECOND FLOOR-LIGHTING
E2.2	ELECTRICAL PLAN-SECOND FLOOR-POWER
E2.3	ELECTRICAL PLAN-SECOND FLOOR-SPECIAL SYSTEMS
E3.1	DIAGRAMS

FROB Building Renovations

Fairbanks, Alaska

SOA project no. 2013-0222-1851

Construction Documents

April 25, 2013

ECI/Hyer project no. 11-0013.24

Contract Agency

SOA/ DOA

Division of General Services
550 West 7th Ave, Ste 1970
Anchorage, Alaska 99811

p 907.269.0300

Architecture + Interiors

ECI/Hyer, Inc.

101 West Benson Blvd. , Suite 306
Anchorage, Alaska 99503
p 907.561.5543
www.ecihyer.com

Mechanical + Electrical Engineer

AMC Engineers, Inc.

701 East Tudor Road, Suite 250
Anchorage, Alaska 99503
p 907.257.9100
www.amc-engineers.com

Structural Engineer

BBFM Engineers, Inc.

510 L Street, Suite 200
Anchorage, Alaska 99501
p 907.274.2236
www.bbfm.com

Cost Estimator

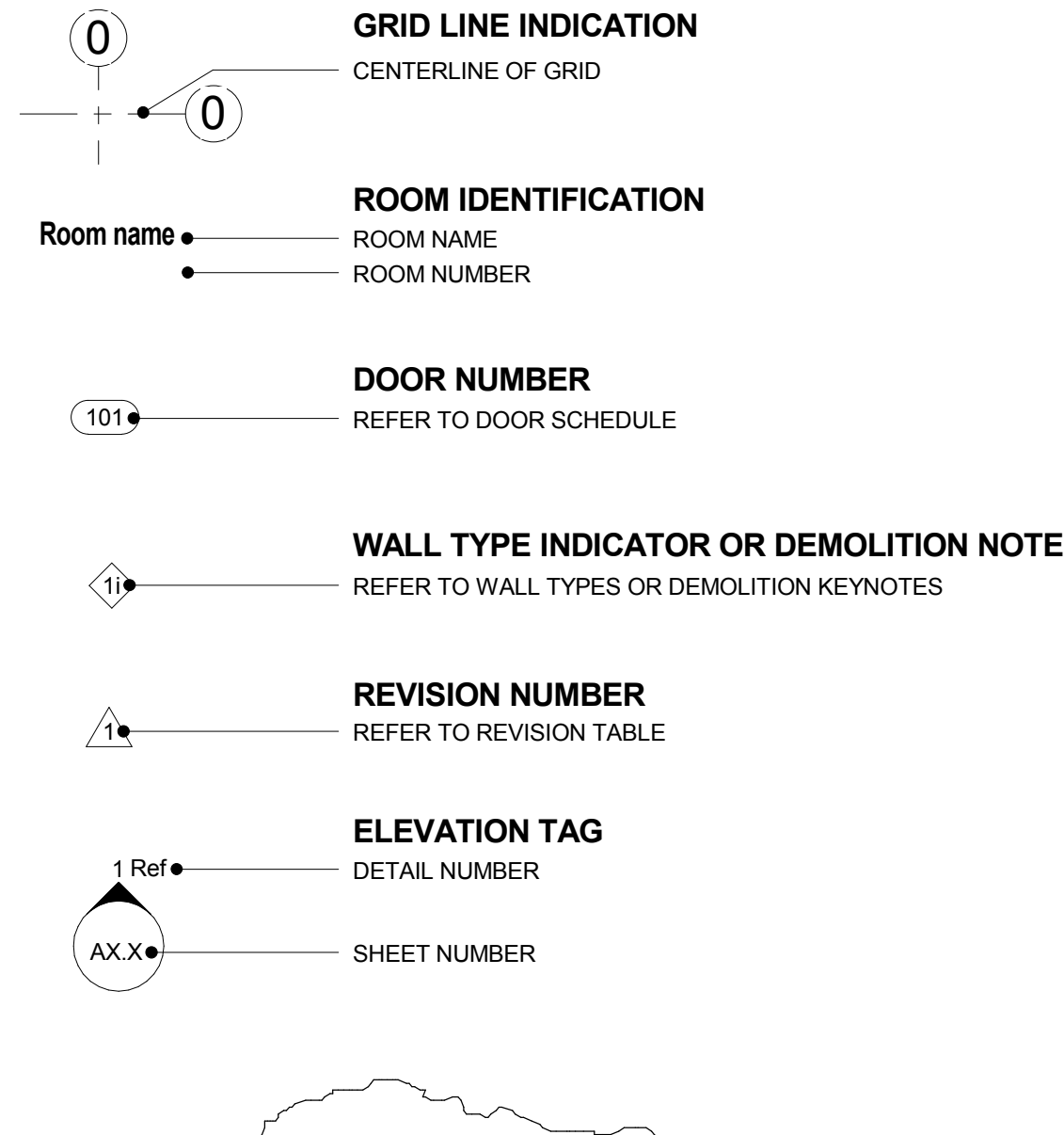
Tonsina, Inc

3733 Ben Walters Lane, Suite 4
Homer, Alaska 99603
p 907.235.9020

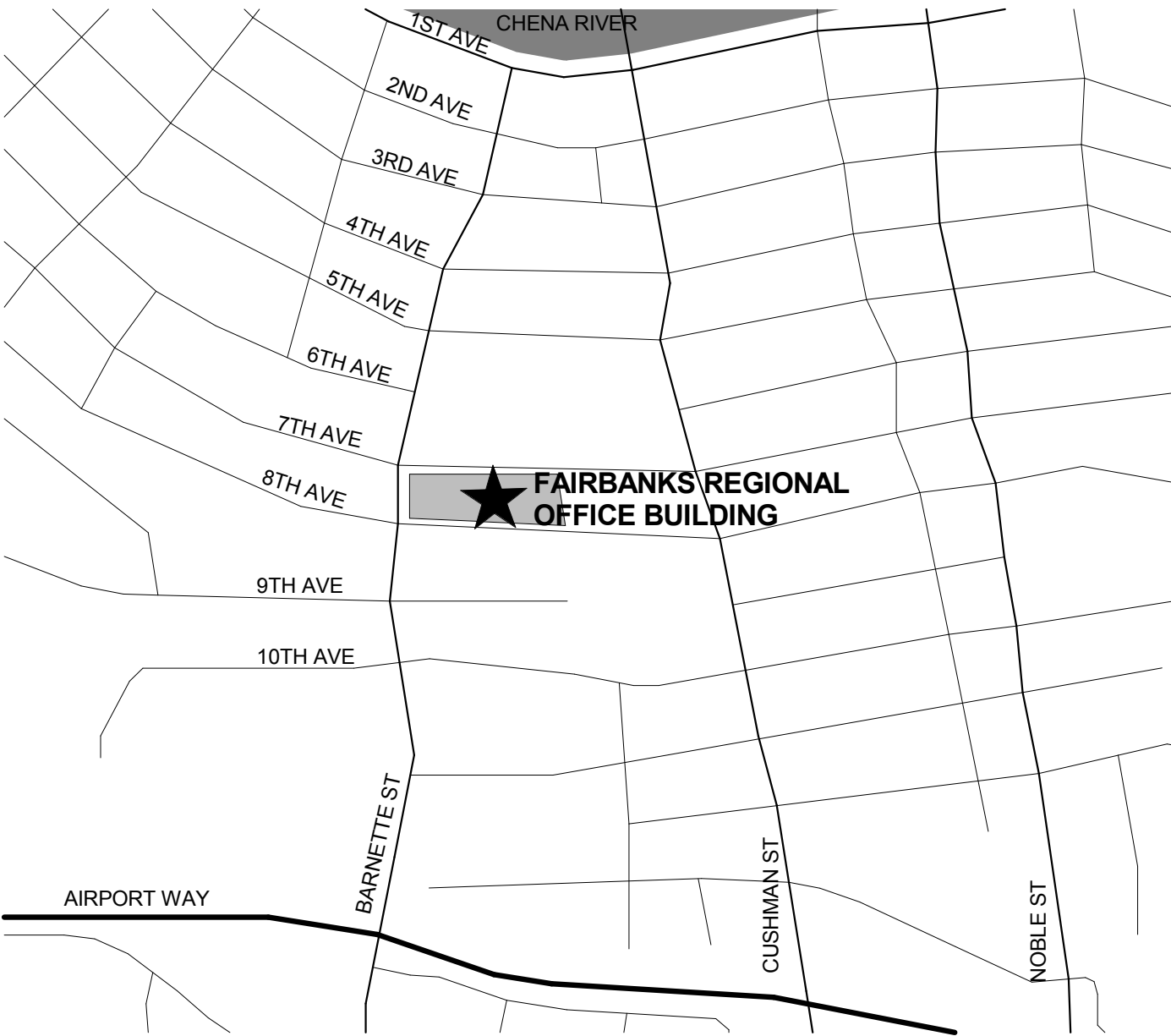
ABBREVIATIONS

#	pound or number	DIA	diameter	HORIZ	horizontal	PR	pair	TPN	toilet partition
&	and	DIM	dimension	HR	hour	PREFAB	prefabricated	TSCD	toilet seat cover dispenser
(E)	existing	DIV	division	HT	height	PREFIN	prefinish(ed)	TSPN	transparent
(R)	relocated	DN	down	HTG	heating	PSF	pounds per square foot	TTD	toilet tissue dispenser
+	plus	DR	door	HTR	heater	PSI	pounds per square inch	TV	television
-	minus	DW	dishwasher	HVC	heating/ventilating/cooling	PT	paint	TWF	troweled wall finish
<	Angle	DWG	drawing	HWH	hot water heater	PTD	paper towel dispenser	TYP	typical
=	equal	DWR	drawer	ID	inside diameter	PTDR	paper towel dispenser and receptacle	UL	Underwriters Laboratories, Inc.
@	at	E	east	IG	insulated glass	PTN	partition	UNFIN	unfinished
A/C	air conditioning	EA	each	IHM	insulated hollow metal	PTR	paper towel receptacle	UNO	unless noted otherwise
ABV	above	EF	exhaust fan	INCL	include	PVMT	pavement	UR	urinal
ACOUS	acoustical	EL	elevation	INSUL	insulation	QT	quarry tile	VCT	vinyl composition tile
ACT	acoustical ceiling tile	ELEC	electrical	INT	interior	RB	resilient/rubber base	VERT	vertical
ADJ	adjacent	ELEV	elevator	JST	joist	RCP	reflected ceiling plan	VEST	vestibule
ADJUST	adjustable	EM	entry mat	JT	joint	RD	roof drain	VIF	verify in field
AFF	above finished floor	EMER	emergency	KC	key card	RE	regarding (see)	VR	vapor retarder
ALT	alternate	ENCL	enclosure	KCR	key card reader	REBAR	reinforcing bar	W	west, wide, width
ALUM	aluminum	EP	electrical panelboard	KD	knock down	REF	reference	W/	with
ANC	anchorage	EPX	epoxy	KIT	kitchen	REFL	reflected	W/O	without
APPROX	approximate	EQ	equal	KO	knock out	REQD	required	WB	window blind
ARCH	architectural	EQUIP	equipment	L	length, long	RESIL	resilient	WC	water closet
ARG	abuse resistant gypsum wall board	EXIST	existing	LAB	laboratory	RFEC	recessed fire extinguisher cabinet	WCS	wood ceiling system
AVG	average	EXP	exposed	LAM	laminated	RH	robe hook, right hand	WCV	wall covering
AWP	acoustical wood panel	EXPAN	expansion	LB	lock box (telephone)	RM	room	WD	wood
BD	board	EXT	exterior/extend	LH	left hand	RP	resin panel	WDG	wood grille
BLDG	building	F	factory finish	LIN	linoleum flooring	RTD	rated	WDP	wood panel
BLK	block	FA	fire alarm	LKR	locker	SCHED	schedule	WDW	window
BLKG	blocking	FAB	fabricate	LM	laminated glass	SD	soap dispenser	WDWT	window treatment
BLW	below	FBCT	folding baby changing table	LT	light	SECT	section	WH	wall hung
BO	bottom of	FDC	fire department connection	M&E	mechanical and electrical	SH	shelf	WM	walkoff mat
BOT	bottom	FE	fire extinguisher	MACH	machine	SHTG	sheeting	WP	waterproof
BSBD	baseboard	FEC	fire extinguisher cabinet	MATL	material	SHV	sheet vinyl	WR	water resistant/waste receptical
BSMT	basement	FFL	finished floor line	MAX	maximum	SIM	similar	WS	window shade
BTWN	between	FH	fire hydrant	MEMB	membrane	SLR	sealer	WSC	wainscot
CAB	cabinet	FIN	finish	MET	metal	SPEC	specification	WSCT	wainscot
CB	cove base	FLASH	flashing	MFR	manufacturer	SQ	square	WWF	woven wire fence
CF	cubic foot	FLR	floor	MH	manhole	SR	slip resistant	Σ	summation
CFCI	contractor furnish/ contractor install	FO	face of	MIL	millimeter	SS	stainless steel	≈	approximately
CG	corner guard	FOC	face of concrete	MIN	minimum	SSK	service sink		
CL	center line	FOF	face of finish	MIR	mirror	SSM	solid surface material		
CLG	ceiling	FOS	face of studs	MPI	Master Painter's Institute	ST	stain		
CLO	closet	FRMG	framing	MR	moisture resistant	STA	station		
CMTBD	cement board	FRT	fire retardant treated	MRGB	moisture resistant gypsum board	STD	standard		
CNR	corner	FS	full size	MSB	mop service basin	STL	steel		
CNTR	counter	FT	foot, feet	MTD	mounted	STN	stone		
CO	clear clean out	FTG	footing	MTL	metal	STRUCT	structural		
COL	column	FURR	furring	MUL	mullion	SUSP	suspended		
CONC	concrete	FUT	future	MWP	metal wall panel	SYM	symmetrical		
CONN	connection	GA	gauge	N	north	SYS	system		
CONST	construction	GALV	galvanized	N/A	not applicable	T	perpendicular		
CONT	continuous	GB	grab bar	NIC	not in contract	T&G	tongue and groove		
CONTR	contractor	GEN	general	NO	number	T.O.	top of		
CORR	corridor	GL	glass	NOM	nominal	TB	tread towel bar/tack board		
CPT	carpet	GND	ground	NTS	not to scale	TBD	to be determined		
CR	closet rod	GRD	grade	OC	on center	TBM	tack board (modular)		
CT	ceramic tile	GT	glass tile	OD	outside diameter	TEL	telephone		
CTR	center	GWB	gypsum board	OFCI	owner furnish/contractor install	TEMP	temporary		
CUH	cabinet unit heater	GYP	gypsum	OFOI	owner furnish/owner install	TFF	troweled floor finish		
CW	curtain wall	H2O	water cooler	OH	overhead	TG	tempered glass		
D	deep, depth	HB	hose bibb	OPNG	opening	THK	thick		
DBL	double	HC	hollow core	OPP	opposite	TKBD	tackboard		
DEB	dry erase board	HDR	header	OPQ	opaque	TOB	top of beam		
DEMO	demolish, demolition	HDWD	hardwood	PL	plastic laminate	TOC	top of concrete, top of curb		
DEPT	department	HDWE	hardware	PLUM	plumb, plumbing	TOP	top of pavement		
DET	detail	HM	hollow metal	PLYWD	plywood	TOS	top of steel		
DF	drinking fountain	HMT	hollow metal thermal break	PNL	panel	TOW	top of wall		

SYMBOLS

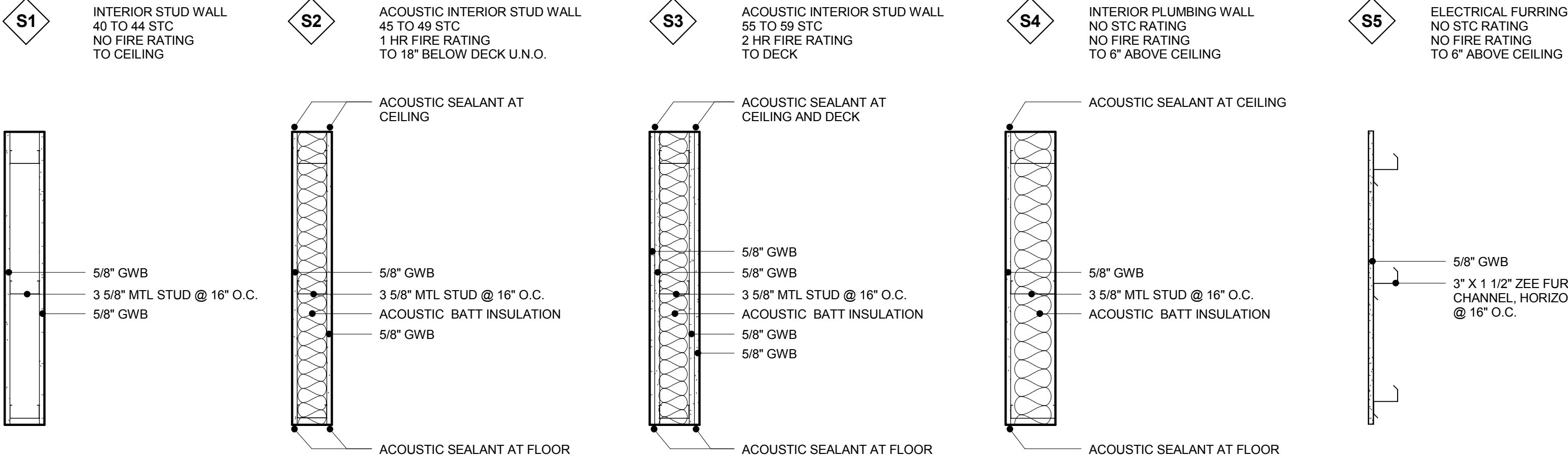


LOCATION MAP



VICINITY MAP
FAIRBANKS

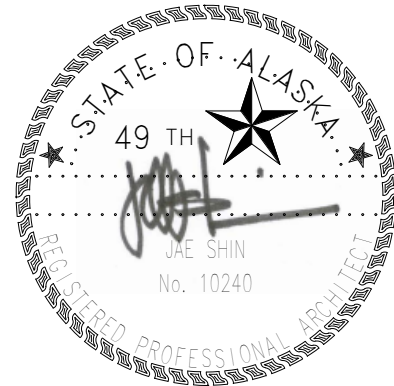
WALL TYPES



LOCATION MAP , ABBREVIATIONS,
TITLE: & WALL TYPES

FILE NAME:
AUTHOR: CD
REVISIONS:
04.25.2013

CHECKED: JS



BUILDING DATA

PROJECT: FAIRBANKS REGIONAL OFFICE BUILDING
675 7TH AVE
FAIRBANKS, AK 99701
OWNER: STATE OF ALASKA
LEGAL: LOTS 2 AND 3, BLOCK 93A
CENTRAL BUSINESS DISTRICT
FAIRBANKS TOWNSITE
TOTAL BUILDING FLOOR AREA (APPROX): 47,000 SF
SECOND FLOOR AREA (APPROX): 17,500 SF
BUILDING HEIGHT: 2 STORY
CONSTRUCTION CLASSIFICATION: VA
BUILDING OCCUPANCY CLASSIFICATION: TYPE B
TOTAL OCCUPANCY LOAD: 468 PERSONS
SECOND FLOOR: 175 PERSONS
SPRINKLERED: YES
ALARMED: YES
PARKING: NO INCREASE

PROJECT DESCRIPTION

A renovation of four suites in the south east part of the second floor of the Fairbanks Regional Office Building. The renovation includes relocation of suites H2-Department of Labor Inspections and Testing, H3-Division of Elections Voter Registration, H4-Building Shared Conference Room, and H5-Office of the Governor. The renovation includes demolition of the building standard movable track-wall system and replacement with more acoustically insulated GWB walls.

CODE ANALYSIS PER IBC 2009

CH 3 BUILDING OCCUPANCY
B: OFFICES

CH 4 SPECIAL DETAILED REQUIREMENTS
404.6 ENCLOSURE OF ATRIUMS: 1-HR Fire Separation will be maintained between Atrium and adjacent spaces. No smoke evacuation is required for atriums that only connect two floors. 404.3 Approved Automatic Sprinkler System (Accordance with Section 903.3.1.1)

CH 5 GENERAL BUILDING HEIGHTS AND AREAS
TYPE VA-B GROUP-Sprinklered-Adjoining public way
ALLOWED 3 STORIES 61,500SF

Building Area Modification not required- Renovation shall not increase current building square footage.

CH 6 TYPES OF CONSTRUCTION
TYPE VA-TABLE 601-Fire-Resistance Rating Requirements
Structural Frame 1 Hour
Bearing Walls Interior and Exterior 1 Hour
Nonbearing Walls-Exterior 0 Hour
Nonbearing Walls-Interior 0 Hour
Floor Construction 1 Hour
Roof Construction 1 Hour

CH 7 FIRE-RESISTANCE-RATED CONSTRUCTION

SECTION 708- Shaft Enclosures-708.4-1 hour for shafts connecting less than 4 floors.

SECTION 709.3- Fire-Resistance Rating (Fire Partitions)- Fire Partitions shall have a Fire-Resistance Rating of not less than 1 hour. 709.6 Openings in a Fire Partition wall shall comply with section 715 and Table 715.4

CH 8 INTERIOR FINISHES

TABLE 803.9- Sprinklered

Occupancy	Exit Enclosures and Exit Passage-ways	Corridors	Rooms and Enclosed Spaces
B	Class B	Class C	Class C

CH 9 FIRE PROTECTION SYSTEMS

Sprinklered provided per NFPA 13

SECTION 906- Portable Fire Extinguishers-as per the International Fire Code

SECTION 907- Fire Alarm and Detection Systems-provided as per 907.2.2

CH 10 MEANS OF EGRESS

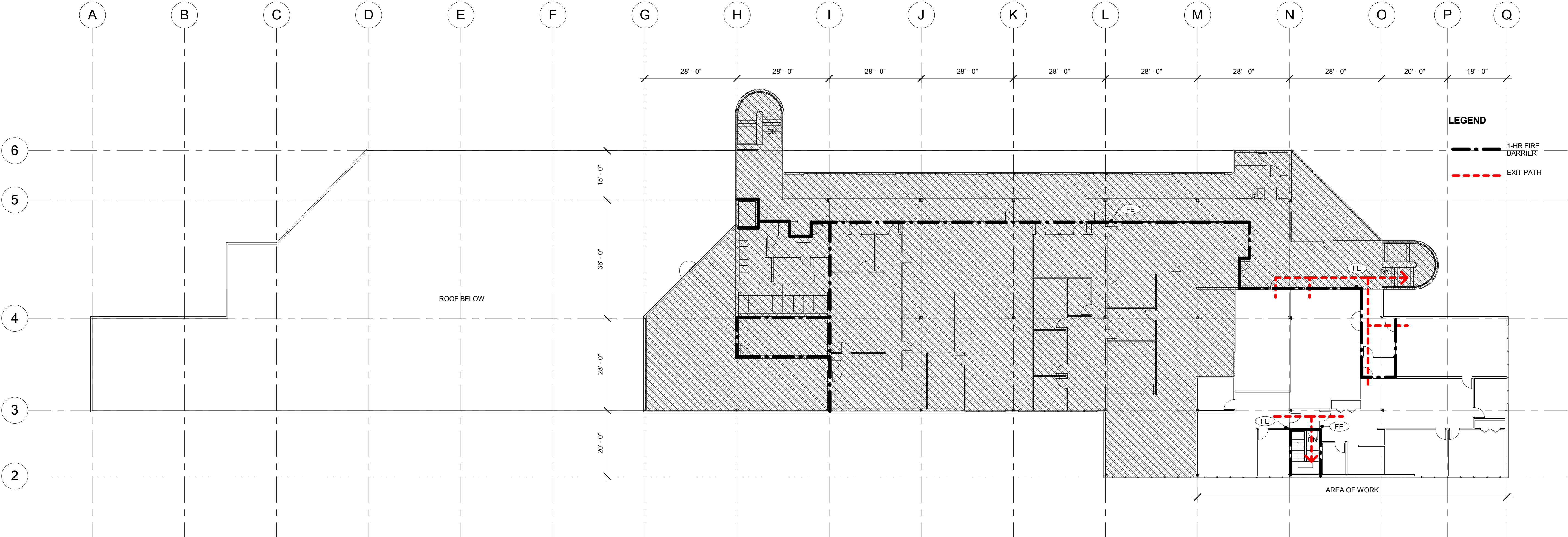
SECTION 1004.1.1 Occupant Load per Table 1004.1.1
Second Floor Occupancy Total: 175 persons

Offices: 17,481 GSF/100 GSF= 175 persons
Area of Work: 4,261 GSF/100 GSF=43 persons

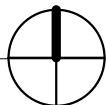
SECTION 1008.1.2 Door Swing- Swinging Doors used for Egress Doors except in office areas with occupant load of 10 or less persons.

CH 11 ACCESSIBILITY

This project is required to comply with ICC/ANSI 117.51 and ADA Requirements.



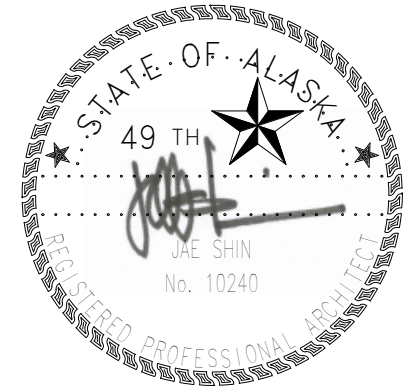
1 2ND FLOOR EXITING PLAN
1/16" = 1'-0"



TITLE: EXITING PLAN & CODE STUDY

FILE NAME:
AUTHOR: CD
REVISIONS:
04.25.2013

CHECKED: JS

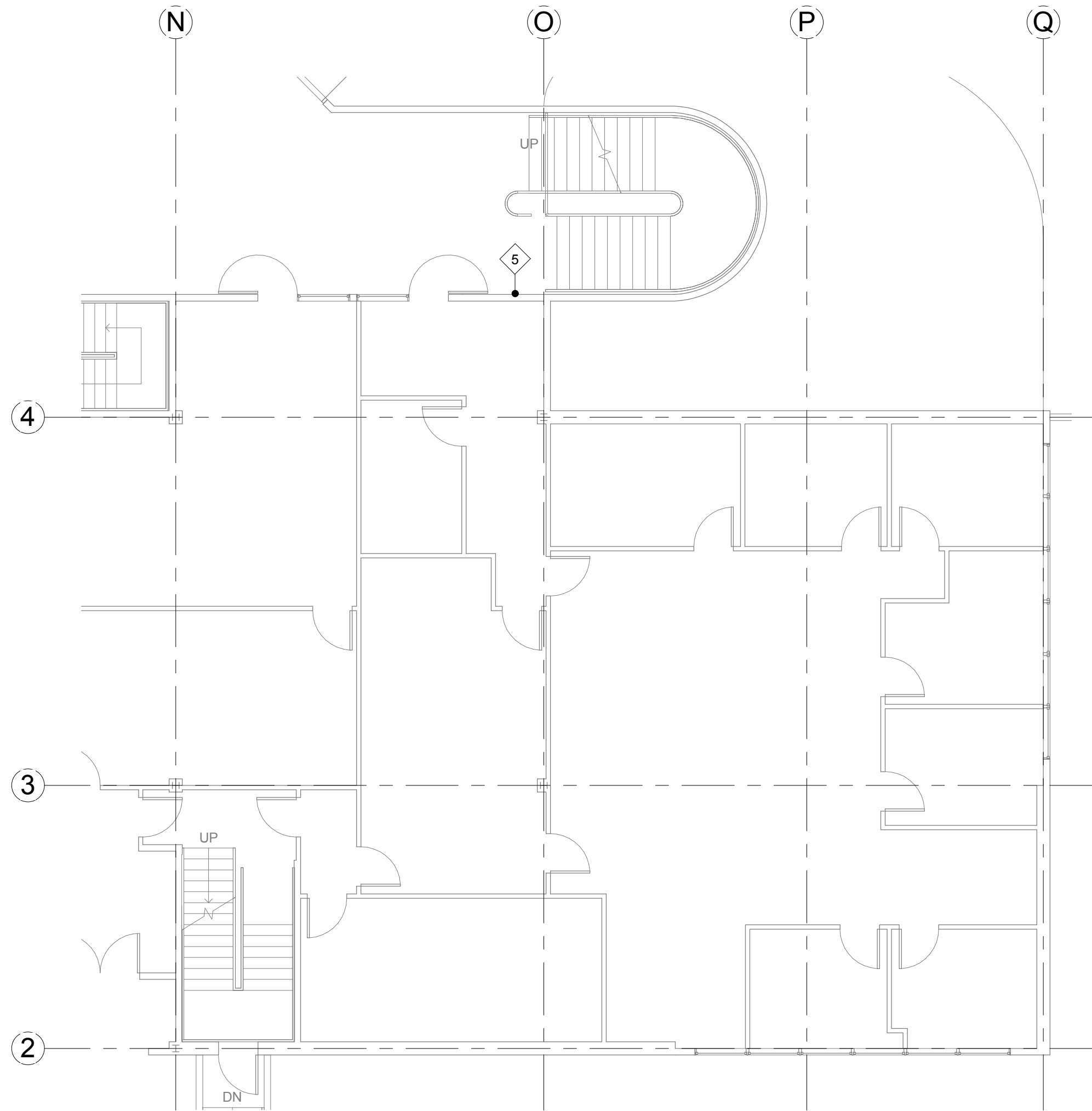


FROB BUILDING RENOVATIONS

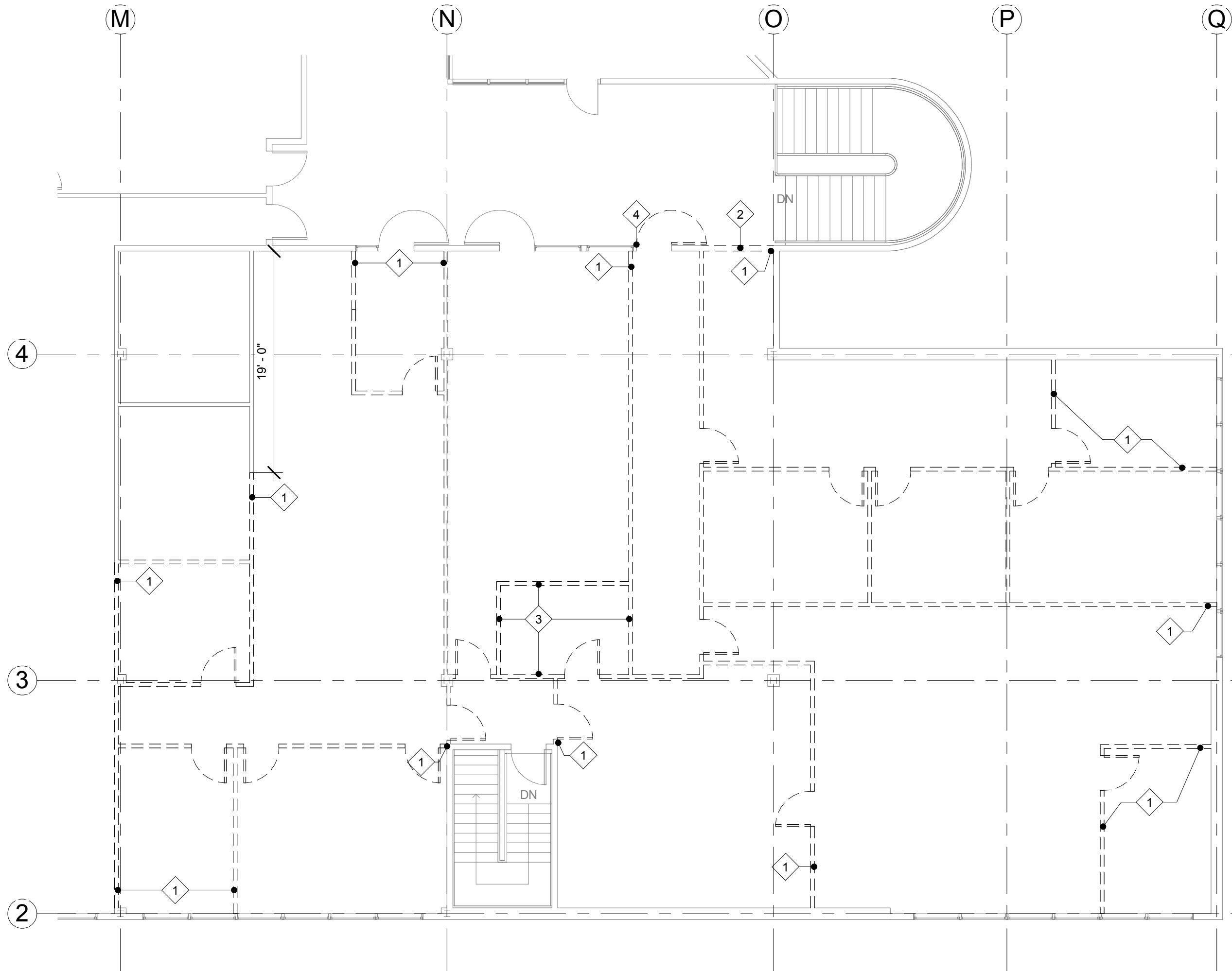
CONSTRUCTION DOCUMENTS

©2013 ECI/Hyer, Inc.

ECI/HYER ARCHITECTURE + INTERIORS
101 WEST BENSON BOULEVARD, SUITE 306
ANCHORAGE, ALASKA 99503 907.561.5543
PROJECT NO.: 11-0013.24



2 FIRST FLOOR DEMOLITION PLAN
1/8" = 1'-0"



1 SECOND FLOOR DEMOLITION PLAN
1/8" = 1'-0"

DEMOLITION LEGEND & NOTES

- EXISTING TO REMAIN
- EXISTING TO BE REMOVED

ALL DOORS, RELITES, & FRAMES NOTED FOR DEMOLITION ARE TO BE REMOVED, STORED, & PROTECTED FOR REINSTALLATION.

PATCH/REFINISH WALLS WHERE ELECTRICAL & COMMUNICATIONS ITEMS HAVE BEEN REMOVED TO LIKE NEW CONDITION.

ALL ITEMS THAT ARE REMOVED, INCLUDING TRIM, DOORS, RELITES, LIGHTS, HARDWARE, AND CEILING TILE ARE TO BE PROTECTED AND TURNED OVER TO BUILDING MANAGEMENT.

ALL FLOORING WITHIN AREA OF WORK TO BE REMOVED, UNLESS NOTED OTHERWISE.

SEE MECHANICAL/ELECTRICAL FOR ADDITIONAL DEMOLITION WORK.

DEMOLITION KEYNOTES

1. REMOVE EXISTING WALL ASSEMBLY/DEMOUNTABLE PARTITION AS SHOWN. PATCH AND REPAIR WALL AND FLOOR PENETRATIONS TO MATCH ADJOINING SURFACES. REPLACE FLOOR FINISH AND BASEBOARD AS REQUIRED TO PROVIDE A COMPLETE FINISHED ASSEMBLY. PROTECT ALL USABLE DEMOUNTABLE PARTITION COMPONENTS, TURN OVER TO BUILDING MANAGEMENT.
2. EXISTING FIRE EXTINGUISHER CABINET AND HOSE TO BE REMOVED. SEE 'NEW WORK' PLANS FOR REQUIRED LOCATIONS OF FIRE EXTINGUISHERS. CONTRACTOR TO VERIFY ALL REQUIRED EXTINGUISHER CABINET LOCATIONS PRIOR TO PURCHASE.
3. EXISTING SECURE STORAGE CAGE TO BE REMOVED FROM ALL WALLS AND CEILING.
4. REMOVE, STORE, PROTECT DOOR FOR REUSE. PATCH FIRE-RATED WALL, ENSURE FIRE RATING MAINTAINED.
5. ADDITIONAL PLUMBING FROM FIRE HOSE CABINET ABOVE TO BE REMOVED. PATCH AND PAINT WALL TO LIKE NEW CONDITION.

GENERAL NOTES

CONSTRUCTION IS TO BE IN COMPLIANCE WITH ALL LOCAL & FEDERAL BUILDING CODES.

DEMOLITION AND NEW WORK IS BASED ON RECORD DOCUMENTS PROVIDED BY THE BUILDING OWNER AND LIMITED FIELD VERIFICATION. CONTRACTOR TO VERIFY ALL EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF WORK AND NOTIFY ARCHITECT OF ANY DISCREPANCIES TO AS-BUILT CONDITIONS.

CONTRACTOR TO UTILIZE EXISTING ELECTRICAL RECEPTACLES WHERE POSSIBLE.

DIMENSIONS ARE TO FACE OF STUD UNLESS OTHERWISE NOTED.

EXISTING DATA & PHONE WIRING OR CABLING MARKED FOR DEMOLITION IS TO BE REMOVED BACK TO THE SOURCE WITH NO ABANDONED WIRING OR CABLING REMAINING IN WALLS OR CEILING PLENUMS.

ELECTRICAL & COMMUNICATION RECEPTACLE & SWITCH PLATES TO MATCH BUILDING STANDARD.

THE BUILDING WILL BE OCCUPIED DURING CONSTRUCTION. PROTECT THE BUILDING AS REQUIRED TO PREVENT DAMAGE TO EXISTING BUILDING. COORDINATE AN INTERRUPTION IN BUILDING SERVICES WITH THE BUILDING OWNER'S REPRESENTATIVE.

PROTECT CEILING TILE & TRACK OUTSIDE OF THE AREA OF WORK AT ALL TIMES DURING CONSTRUCTION.

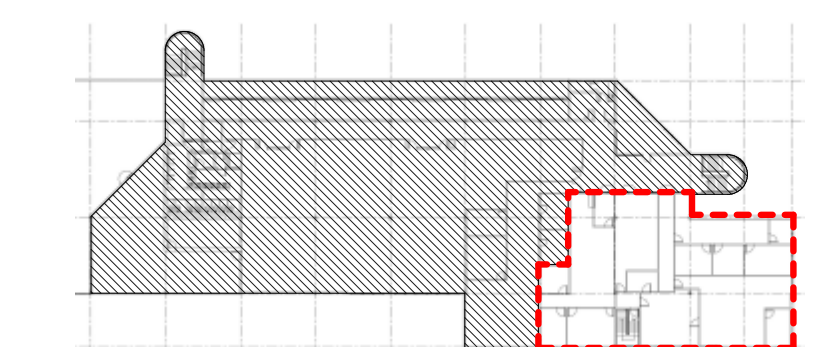
PROTECT EXTERIOR & RELITE WINDOW TREATMENTS AT ALL TIMES DURING CONSTRUCTION. EXISTING WINDOW TREATMENTS TO REMAIN. REVISE DRAWS AS NEEDED FOR NEW WALL LAYOUT.

INFILL OF OPENINGS IN EXISTING PARTITION TO MATCH EXISTING PARTITION THICKNESS AND FINISHES WHERE WORK OCCURS. PATCH, PAINT, REPAIR & RESTORE EXISTING FINISHES TO LIKE NEW CONDITION.

SEE MECHANICAL AND PLUMBING DRAWINGS FOR LOCATION AND TYPE OF PLUMBING FIXTURES.

SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

NOTE, IN THE CASE OF A CONFLICT IN THE DOCUMENTS, THE CONTRACTOR SHALL ASSUME THE GREATER VALUE OF SUCH CIRCUMSTANCE.

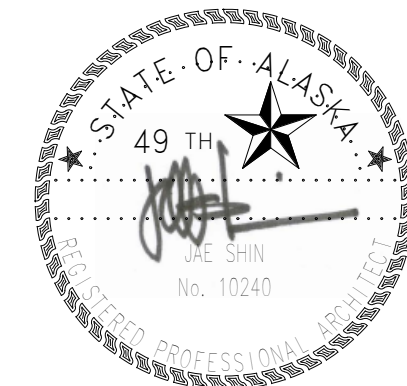


KEY PLAN

©2013 ECI/Hyer, Inc.

ECI/HYER ARCHITECTURE + INTERIORS
101 WEST BENSON BOULEVARD, SUITE 306
ANCHORAGE, ALASKA 99503 907.561.5543
PROJECT NO.: 11-0013.24

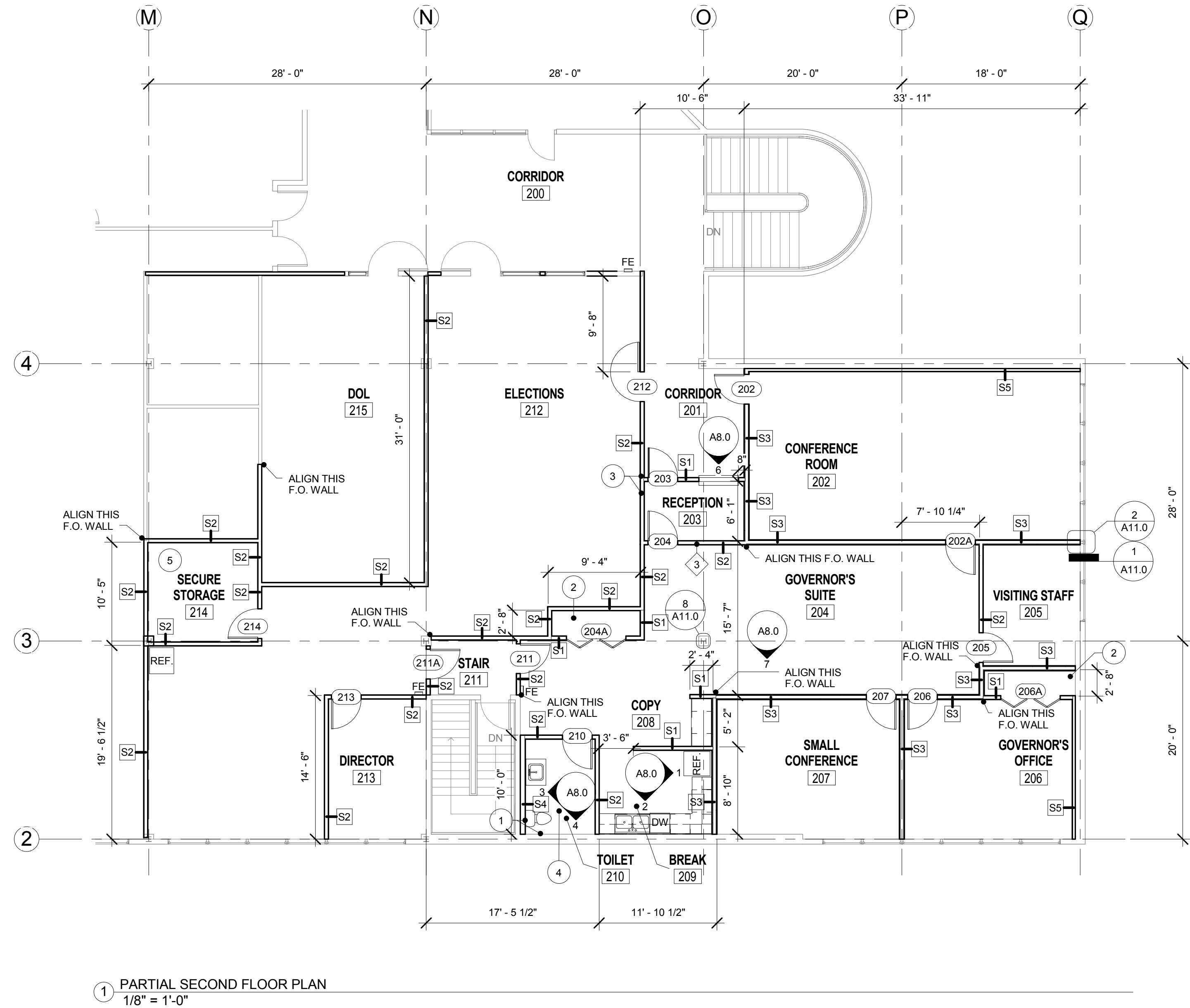
FROB BUILDING RENOVATIONS
CONSTRUCTION DOCUMENTS



TITLE: DEMOLITION PLANS

FILE NAME:
AUTHOR: CD
CHECKED: JS
REVISIONS:
04.25.2013

A1.0



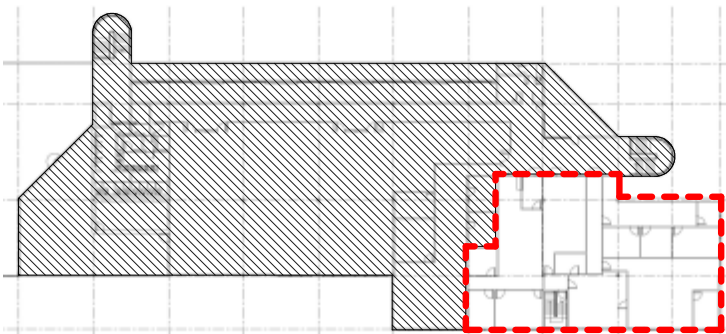
1 PARTIAL SECOND FLOOR PLAN
1/8" = 1'-0"

KEYNOTES

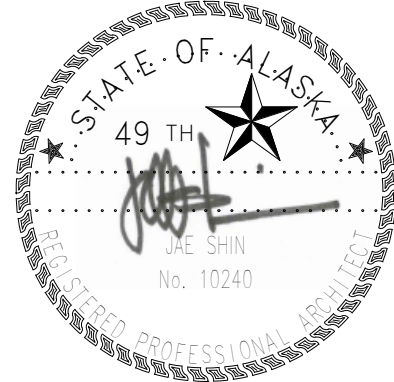
1. PROVIDE BLOCKING IN WALL TO SUPPORT FUTURE INSTALLATION OF ADA GRAB BARS.
2. PROVIDE SHELF & HANGING RODS IN CLOSETS.
3. S2 WALL TYPE TO DECK.
4. FLOOR SLAB TO BE DRPRESSED AROUND FLOOR DRAIN, SEE MECHANICAL DRAWINGS
5. SECURE CAGE SURROUNDING ROOM, SEE A11.0 FOR WALL DETAIL

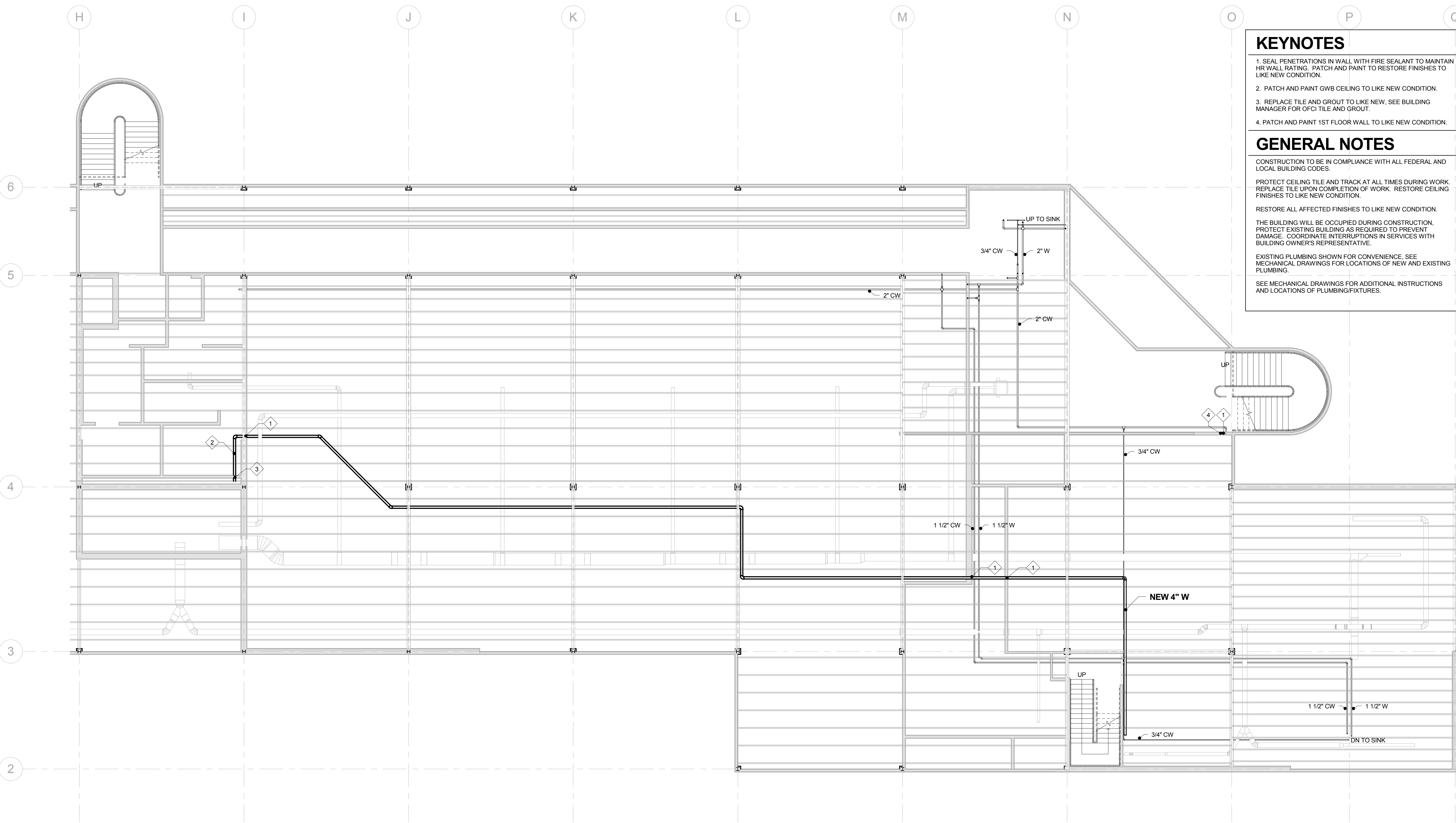
GENERAL NOTES

- CONSTRUCTION IS TO BE IN COMPLIANCE WITH ALL LOCAL & FEDERAL BUILDING CODES.
- DEMOLITION AND NEW WORK IS BASED ON RECORD DOCUMENTS PROVIDED BY THE BUILDING OWNER AND LIMITED FIELD VERIFICATION. CONTRACTOR TO VERIFY ALL EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF WORK AND NOTIFY ARCHITECT OF ANY DISCREPANCIES TO AS-BUILT CONDITIONS.
- CONTRACTOR TO UTILIZE EXISTING ELECTRICAL RECEPTACLES WHERE POSSIBLE.
- DIMENSIONS ARE TO FACE OF STUD UNLESS OTHERWISE NOTED.
- EXISTING DATA & PHONE WIRING OR CABLING MARKED FOR DEMOLITION IS TO BE REMOVED BACK TO THE SOURCE WITH NO ABANDONED WIRING OR CABLING REMAINING IN WALLS OR CEILING PLENUMS.
- ELECTRICAL & COMMUNICATION RECEPTACLE & SWITCH PLATES TO MATCH BUILDING STANDARD.
- THE BUILDING WILL BE OCCUPIED DURING CONSTRUCTION. PROTECT THE BUILDING AS REQUIRED TO PREVENT DAMAGE TO EXISTING BUILDING. COORDINATE AN INTERRUPTION IN BUILDING SERVICES WITH THE BUILDING OWNER'S REPRESENTATIVE.
- PROTECT CEILING TILE & TRACK OUTSIDE OF THE AREA OF WORK AT ALL TIMES DURING CONSTRUCTION.
- PROTECT EXTERIOR & RELITE WINDOW TREATMENTS AT ALL TIMES DURING CONSTRUCTION; EXISTING WINDOW TREATMENTS TO REMAIN. REVISE DRAWS AS NEEDED FOR NEW WALL LAYOUT.
- INFILL OF OPENINGS IN EXISTING PARTITION TO MATCH EXISTING PARTITION THICKNESS AND FINISHES WHERE WORK OCCURS. PATCH, PAINT, REPAIR & RESTORE EXISTING FINISHES TO LIKE NEW CONDITION.
- SEE MECHANICAL AND PLUMBING DRAWINGS FOR LOCATION AND TYPE OF PLUMBING FIXTURES.
- SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
- NOTE, IN THE CASE OF A CONFLICT IN THE DOCUMENTS, THE CONTRACTOR SHALL ASSUME THE GREATER VALUE OF SUCH CIRCUMSTANCE.



KEY PLAN





KEYNOTES

1. SEAL PENETRATIONS IN WALL WITH FIRE SEALANT TO MAINTAIN 1-HR WALL RATING. PATCH AND PAINT TO RESTORE FINISHES TO LIKE NEW CONDITION.
2. PATCH AND PAINT GWB CEILING TO LIKE NEW CONDITION.
3. REPLACE TILE AND GROUT TO LIKE NEW. SEE BUILDING MANAGER FOR OFCI TILE AND GROUT.
4. PATCH AND PAINT 1ST FLOOR WALL TO LIKE NEW CONDITION.

GENERAL NOTES

CONSTRUCTION TO BE IN COMPLIANCE WITH ALL FEDERAL AND LOCAL BUILDING CODES.

PROTECT CEILING TILE AND TRACK AT ALL TIMES DURING WORK. REPLACE TILE UPON COMPLETION OF WORK. RESTORE CEILING FINISHES TO LIKE NEW CONDITION.

RESTORE ALL AFFECTED FINISHES TO LIKE NEW CONDITION.

THE BUILDING WILL BE OCCUPIED DURING CONSTRUCTION. PROTECT EXISTING BUILDING AS REQUIRED TO PREVENT DAMAGE. COORDINATE INTERRUPTIONS IN SERVICES WITH BUILDING OWNER'S REPRESENTATIVE.

EXISTING PLUMBING SHOWN FOR CONVENIENCE. SEE MECHANICAL DRAWINGS FOR LOCATIONS OF NEW AND EXISTING PLUMBING.

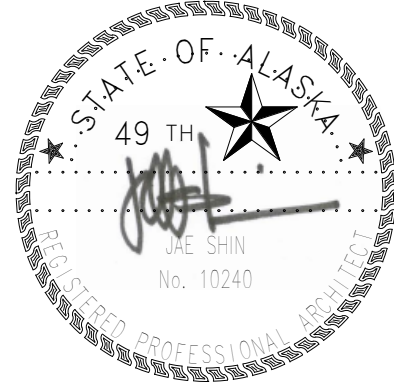
SEE MECHANICAL DRAWINGS FOR ADDITIONAL INSTRUCTIONS AND LOCATIONS OF PLUMBING/FIXTURES.

1 PIPING PLAN
1/8" = 1'-0"



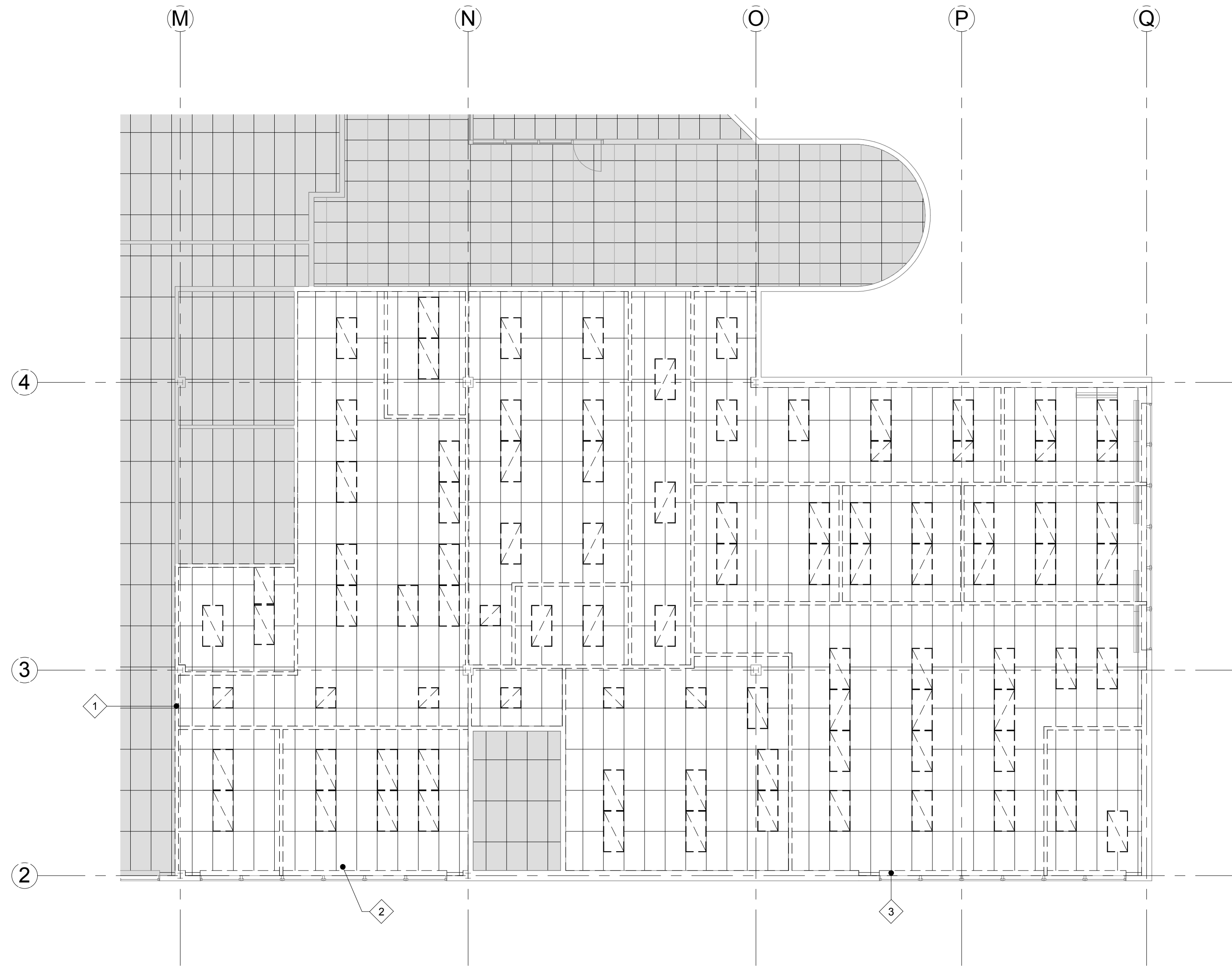
TITLE: ENLARGED PLAN
FILE NAME:
AUTHOR: CD
REVISIONS:
04.25.2013

CHECKED: JS



FROB BUILDING RENOVATIONS
CONSTRUCTION DOCUMENTS

ECI/HYER ARCHITECTURE + INTERIORS
101 WEST BENSON BOULEVARD, SUITE 306
ANCHORAGE, ALASKA 99503 907.561.5543
PROJECT NO.: 11-0013.24



1 RCP DEMOLITION
1/8" = 1'-0"

DEMOLITION LEGEND & NOTES

- EXISTING TO REMAIN
- EXISTING TO BE REMOVED
- EXISTING CEILING GRID TO REMAIN

ALL DOORS, RELITES, & FRAMES NOTED FOR DEMOLITION ARE TO BE REMOVED, STORED, & PROTECTED FOR REINSTALLATION.

ALL LIGHTS ARE TO BE REMOVED, STORED, & PROTECTED FOR REINSTALLATION

PATCH/REFINISH WALLS WHERE ELECTRICAL & COMMUNICATIONS ITEMS HAVE BEEN REMOVED TO LIKE NEW CONDITION

ALL ITEMS THAT ARE REMOVED, INCLUDING TRIM, DOORS, RELITES, LIGHTS, HARDWARE, AND CEILING TILE ARE TO BE PROTECTED AND TURNED OVER TO BUILDING MANAGEMENT

SEE MECHANICAL AND ELECTRICAL FOR ADDITIONAL DEMOLITION WORK

DEMOLITION KEYNOTES

- EXISTING GRID MAY NEED ADDITIONAL SUPPORT DURING DEMOLITION AND CONSTRUCTION WORK. SUPPORT EXISTING GRID AS NECESSARY.
- DEMOLISH ALL EXISTING GRID WITHIN WORK AREA
- DEMOLISH EXISTING GWB AT ENDS AND PREPARE FOR INSTALLATION OF EXTENSION

REFLECTED CLG NOTES

ALL NEW AND EXISTING WORK IS TO BE IN COMPLIANCE WITH ALL LOCAL & FEDERAL BUILDING CODES.

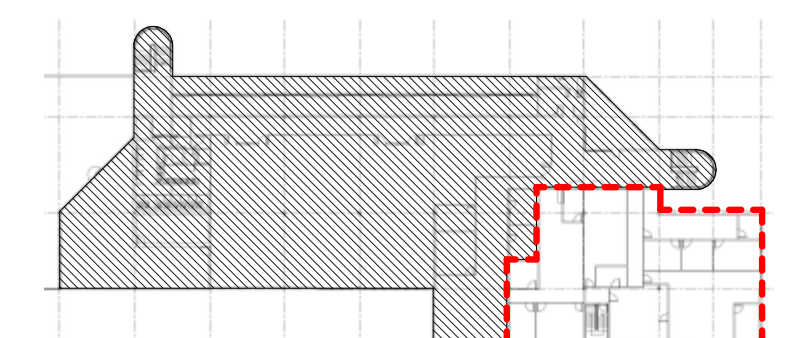
DEMOLITION AND NEW WORK IS BASED ON RECORD DOCUMENTS PROVIDED BY THE BUILDING OWNER AND LIMITED FIELD VERIFICATION. CONTRACTOR TO VERIFY ALL EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF WORK AND NOTIFY ARCHITECT OF ANY DISCREPANCIES TO AS-BUILT CONDITIONS.

DIMENSIONS ARE TO FACE OF FINISH UNLESS OTHERWISE NOTED.

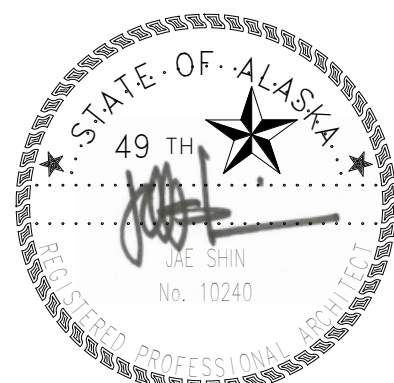
PROTECT CEILING TILE & TRACK OUTSIDE OF THE AREA OF WORK AT ALL TIMES DURING CONSTRUCTION.

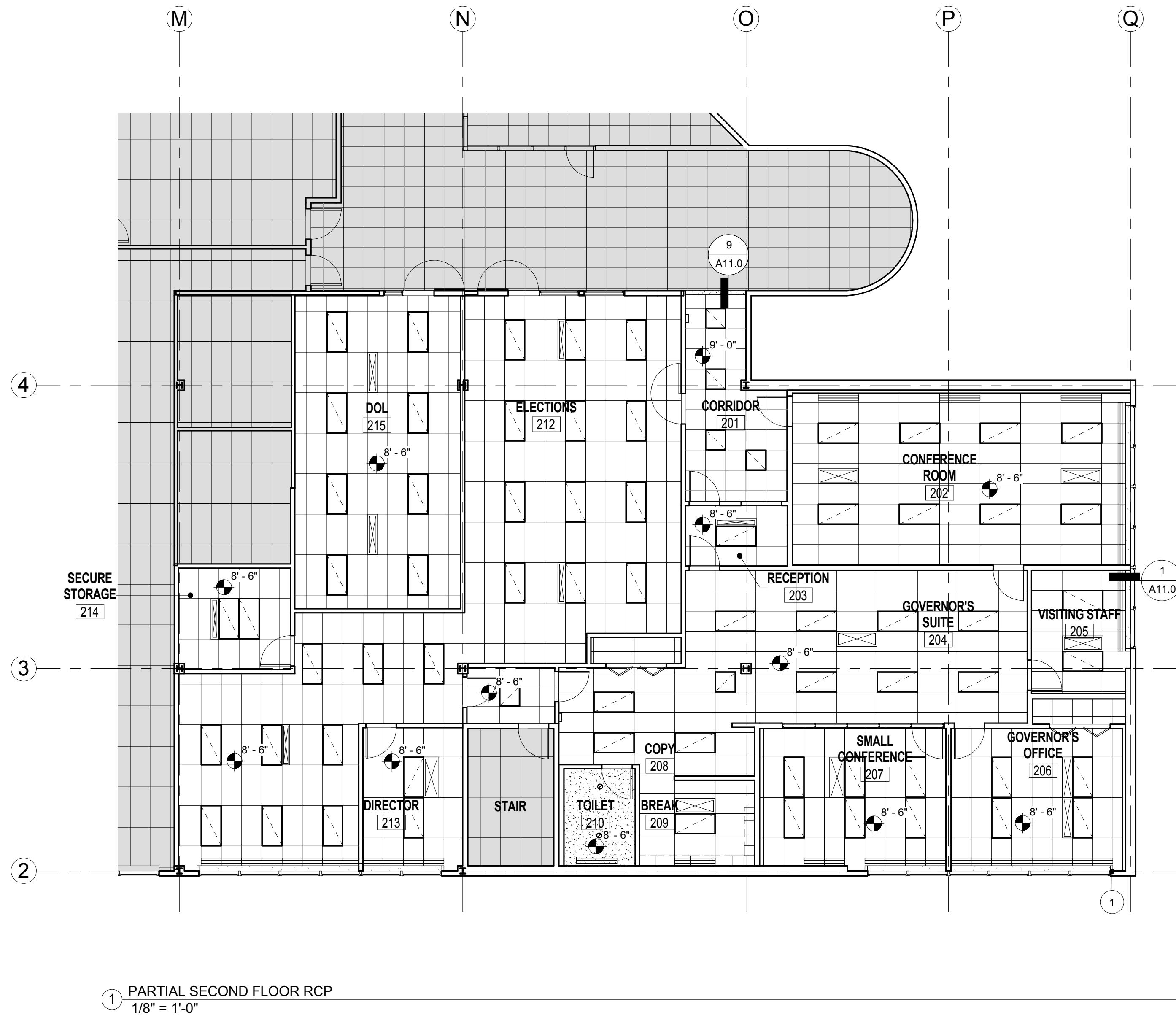
MECHANICAL AND ELECTRICAL EQUIPMENT SHOWN IS FOR CONVENIENCE. REFER TO MECHANICAL AND ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR LOCATIONS OF EXISTING, DEMOLISHED, AND NEW MECHANICAL AND ELECTRICAL EQUIPMENT.

NOTE, IN THE CASE OF A CONFLICT IN THE DOCUMENTS, THE CONTRACTOR SHALL ASSUME THE GREATER VALUE OF SUCH CIRCUMSTANCE.



KEY PLAN

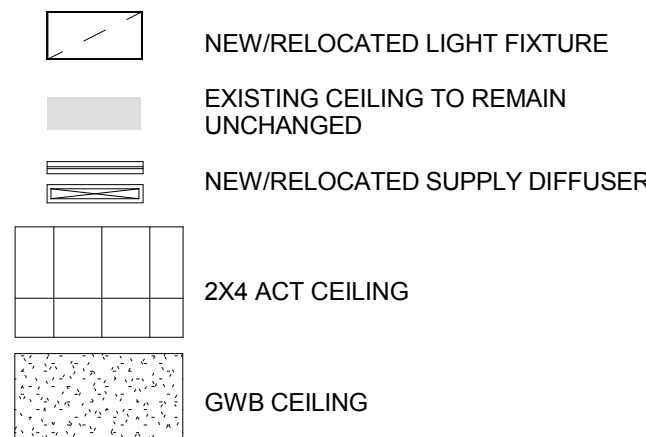




KEYNOTES

1. EXTEND ENDS OF GWB DROP TO ALIGN WITH GRID

REFLECTED CLG LEGEND



MECHANICAL AND ELECTRICAL EQUIPMENT SHOWN IS FOR CONVENIENCE. REFER TO MECHANICAL AND ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR LOCATIONS OF EXISTING, DEMOLISHED, AND NEW MECHANICAL AND ELECTRICAL EQUIPMENT.

REFLECTED CLG NOTES

ALL NEW AND EXISTING WORK IS TO BE IN COMPLIANCE WITH ALL LOCAL & FEDERAL BUILDING CODES.

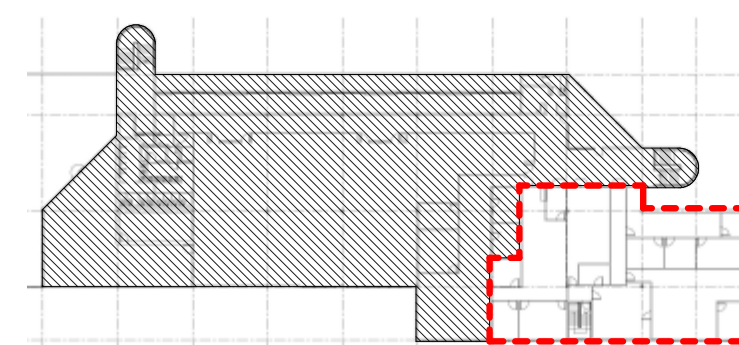
DEMOLITION AND NEW WORK IS BASED ON RECORD DOCUMENTS PROVIDED BY THE BUILDING OWNER AND LIMITED FIELD VERIFICATION. CONTRACTOR TO VERIFY ALL EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF WORK AND NOTIFY ARCHITECT OF ANY DISCREPANCIES TO AS-BUILT CONDITIONS.

DIMENSIONS ARE TO FACE OF FINISH UNLESS OTHERWISE NOTED.

PROTECT CEILING TILE & TRACK OUTSIDE OF THE AREA OF WORK AT ALL TIMES DURING CONSTRUCTION.

MECHANICAL AND ELECTRICAL EQUIPMENT SHOWN IS FOR CONVENIENCE. REFER TO MECHANICAL AND ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR LOCATIONS OF EXISTING, DEMOLISHED, AND NEW MECHANICAL AND ELECTRICAL EQUIPMENT.

NOTE, IN THE CASE OF A CONFLICT IN THE DOCUMENTS, THE CONTRACTOR SHALL ASSUME THE GREATER VALUE OF SUCH CIRCUMSTANCE.

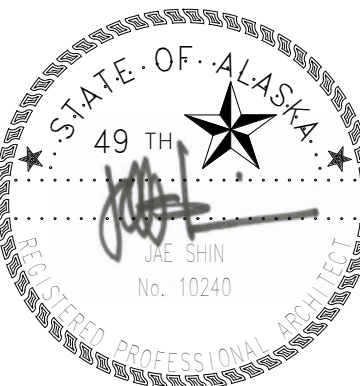


KEY PLAN

TITLE: REFLECTED CEILING PLAN

FILE NAME:
AUTHOR: CD
REVISIONS:
04.25.2013

CHECKED: JS

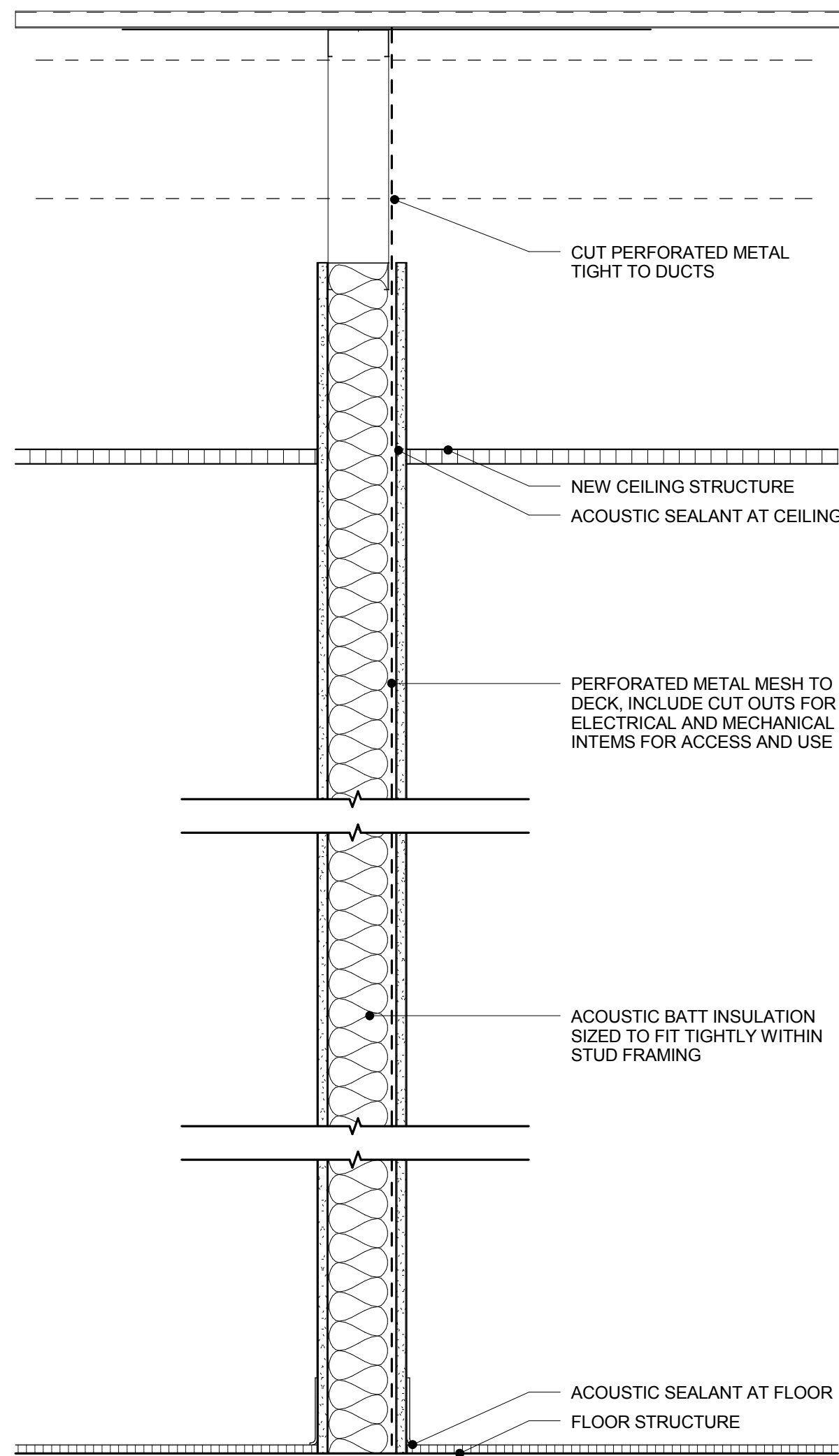


ECI/HYER ARCHITECTURE + INTERIORS
101 WEST BENSON BOULEVARD, SUITE 306
ANCHORAGE, ALASKA 99503 907.561.5543
PROJECT NO. 11-0013.24

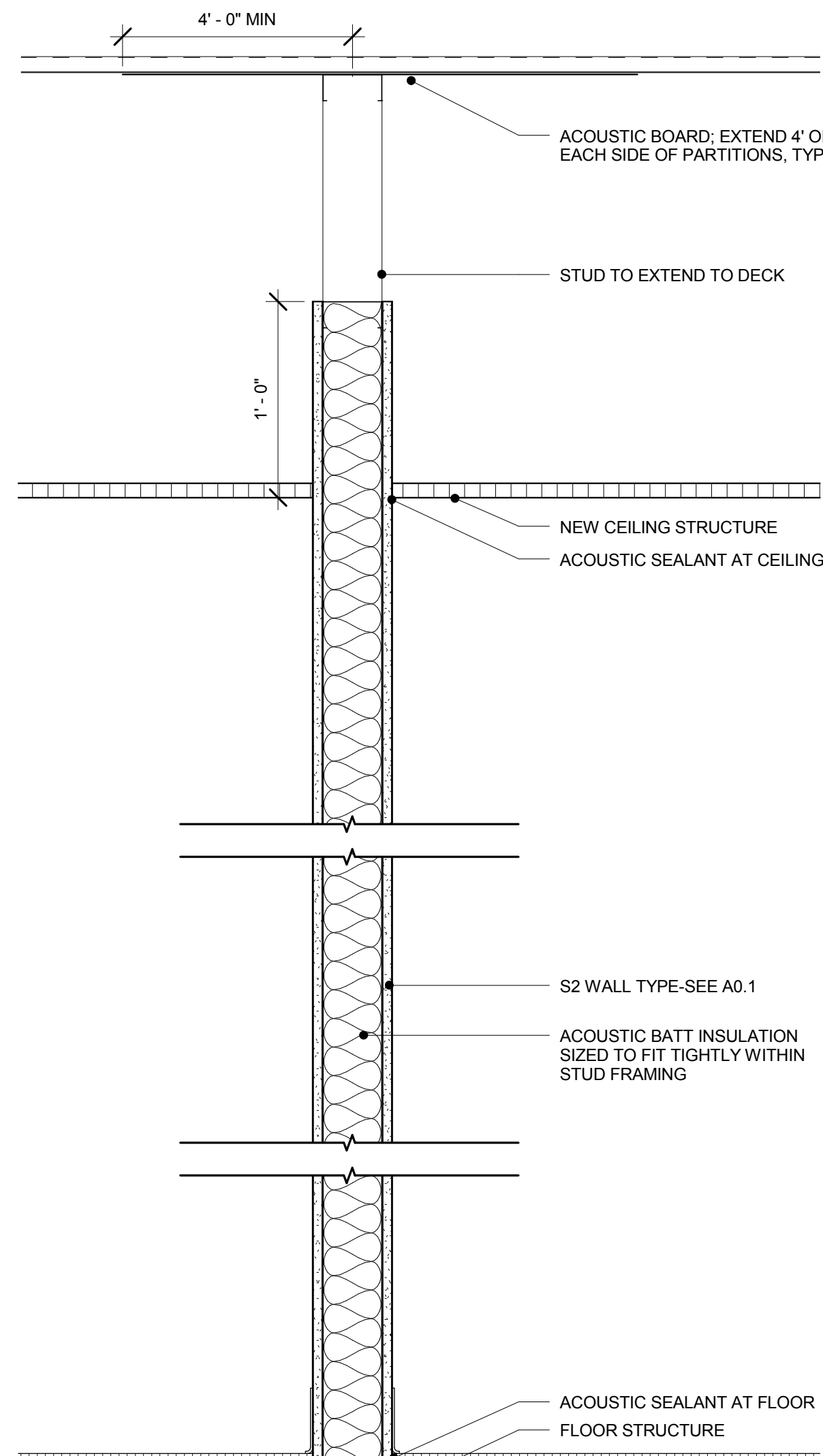
FROB BUILDING RENOVATIONS

CONSTRUCTION DOCUMENTS

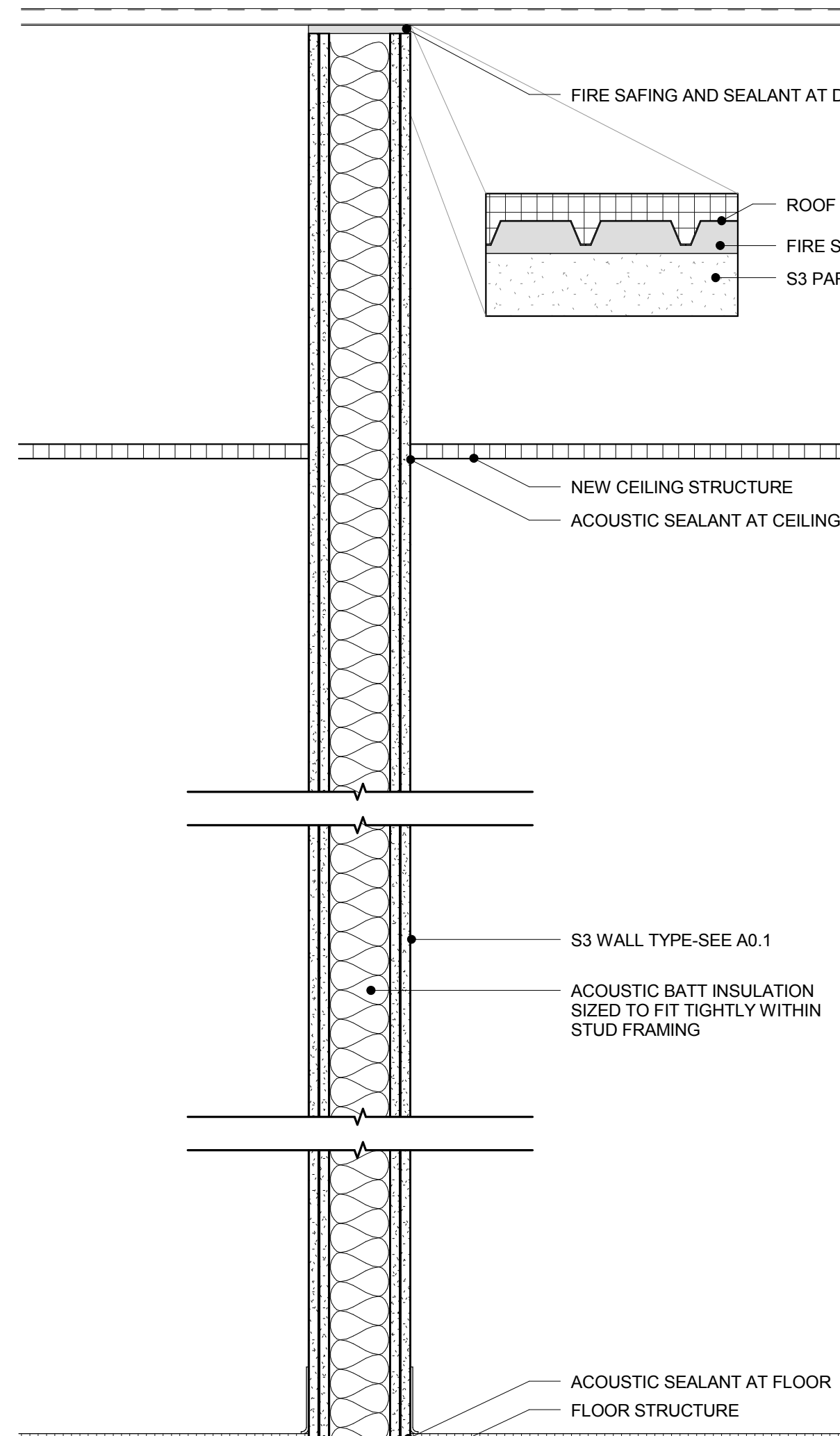
A9.1



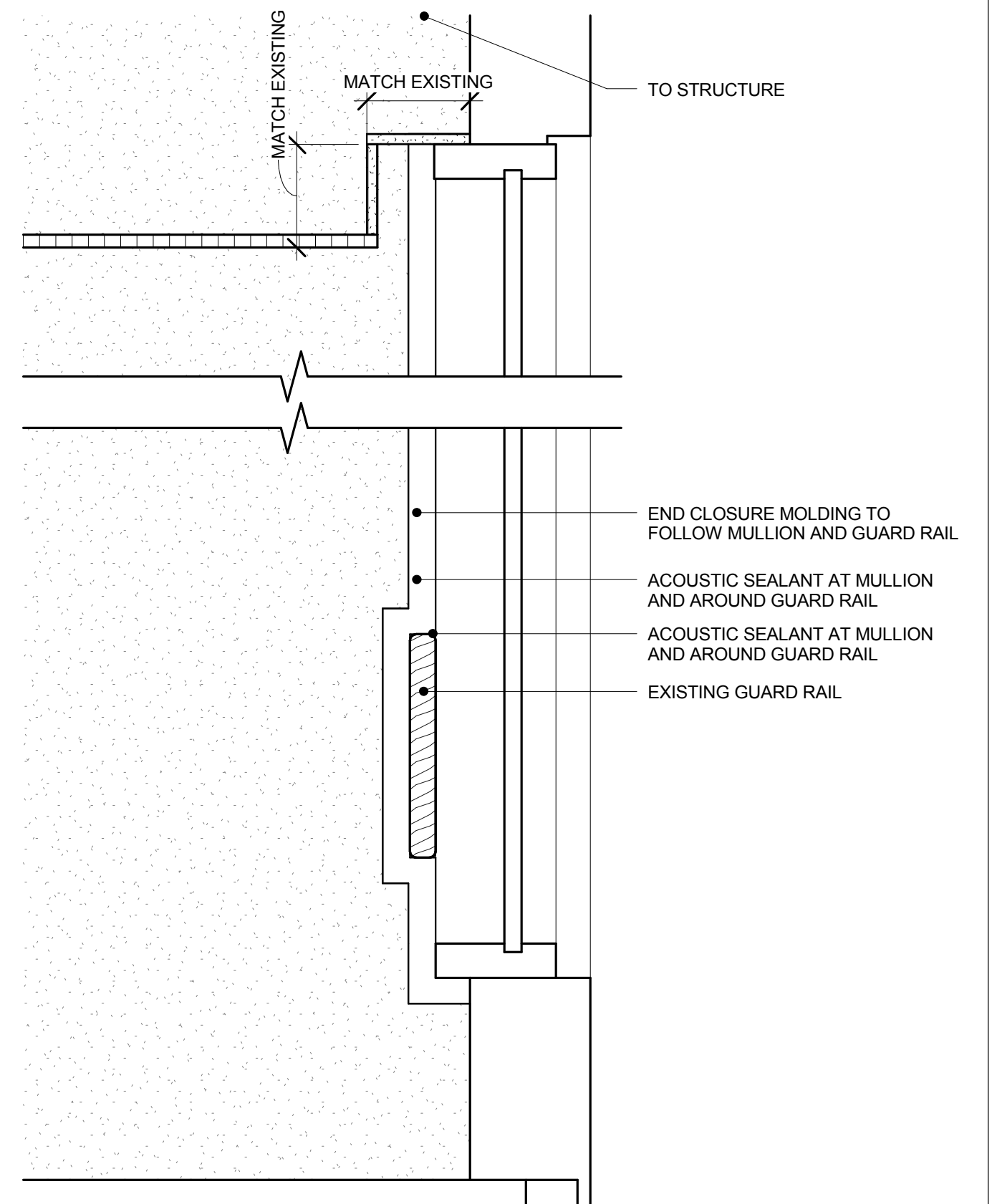
10 SECURE STORAGE CAGE
1 1/2" = 1'-0"



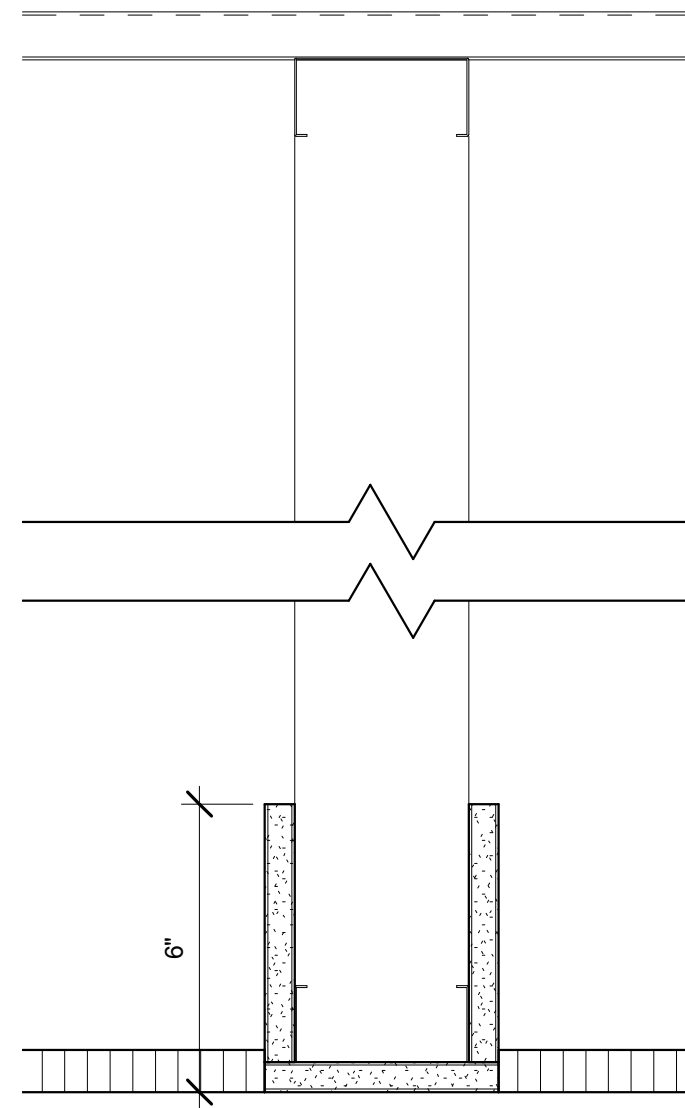
7 S2 PARTITION TYPE-TYP.
1 1/2" = 1'-0"



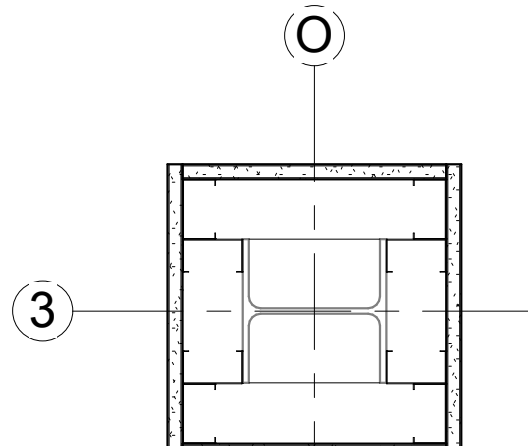
4 S3 PARTITION TYPE
1 1/2" = 1'-0"



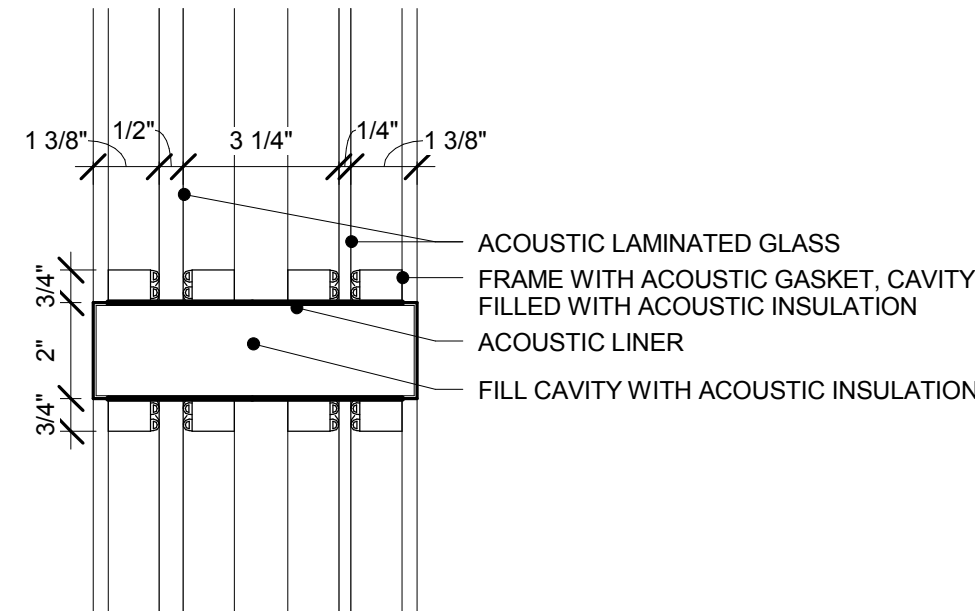
1 WALL DETAIL AT CHAIR RAIL
1 1/2" = 1'-0"



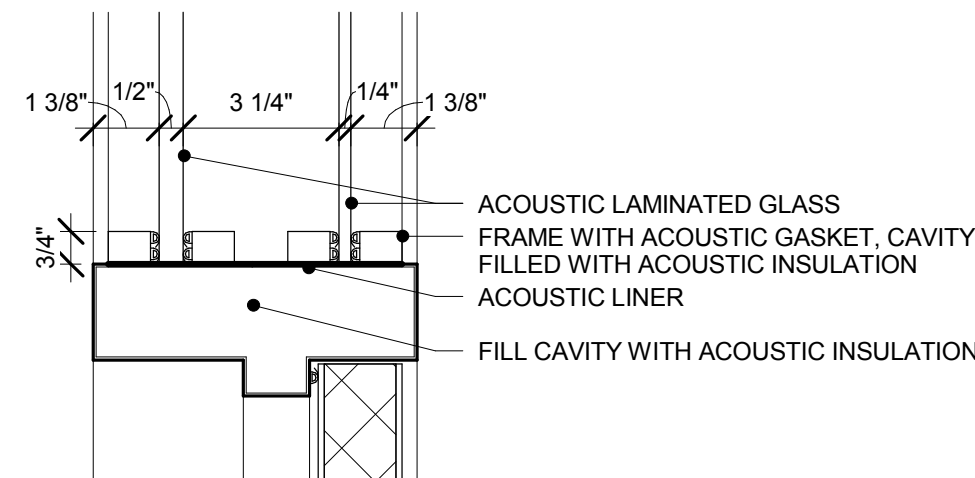
9 CORRIDOR BULKHEAD DETAIL
3" = 1'-0"



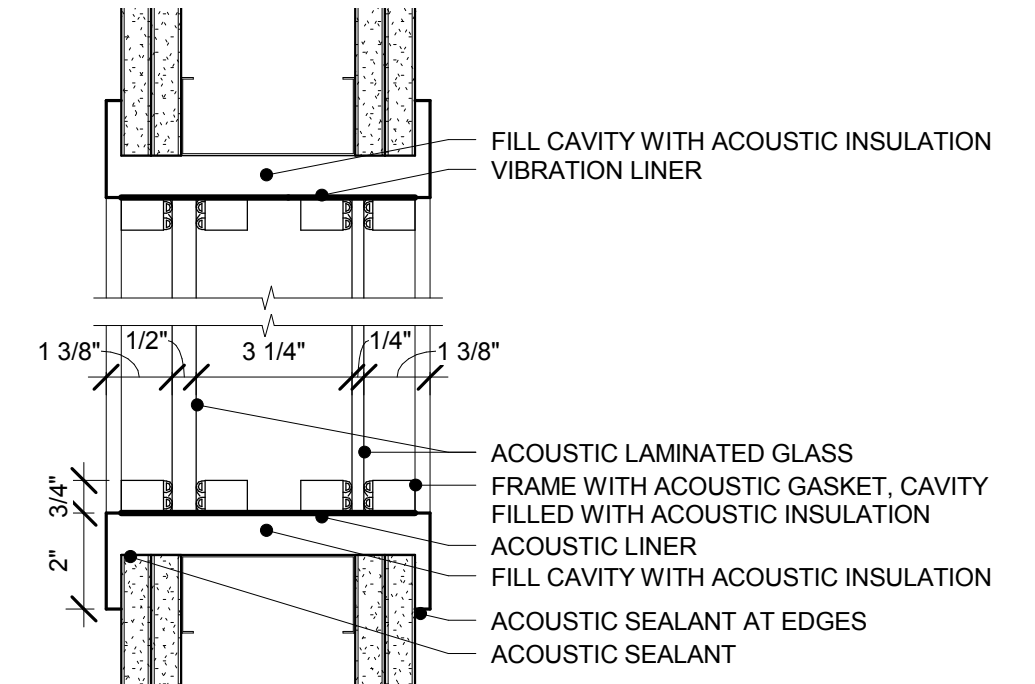
8 GWB WRAP AT COLUMN
1 1/2" = 1'-0"



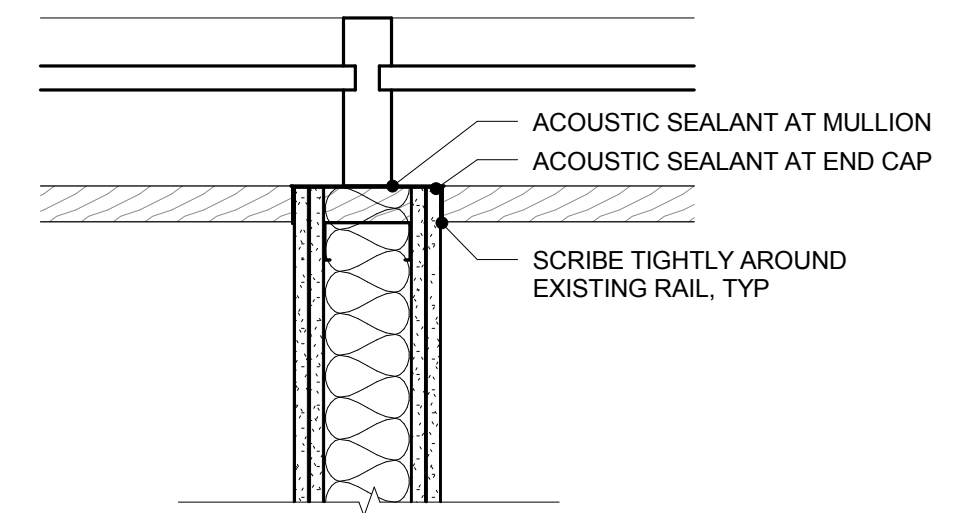
6 TRANSOM WINDOW JAMB DETAIL
3" = 1'-0"



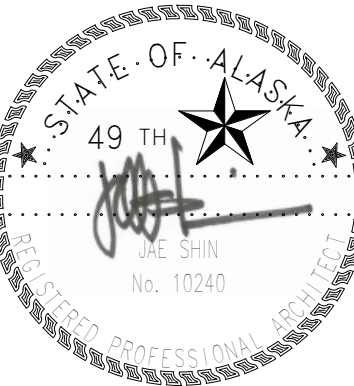
5 DOOR HEAD AT TRANSOM WINDOW
3" = 1'-0"



3 TRANSOM WINDOW HEAD & SILL
3" = 1'-0"



2 PLAN DETAIL AT CHAIR RAIL
1 1/2" = 1'-0"



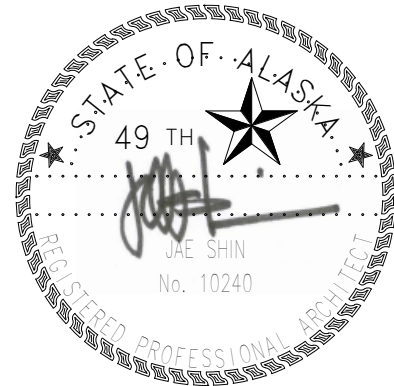
TITLE: INTERIOR DETAILS
FILE NAME:
AUTHOR: CD
REVISIONS:
04.25.2013
CHECKED: JS

A11.0

FROB BUILDING RENOVATIONS
CONSTRUCTION DOCUMENTS

ECI/HYER ARCHITECTURE + INTERIORS
101 WEST BENSON BOULEVARD, SUITE 306
ANCHORAGE, ALASKA 99503 907.561.5543
PROJECT NO. 11-0013.24

©2013 ECI/Hyer, Inc.



ROOM SCHEDULE						
NO.	NAME	BASE	FLOOR	WALL	CEILING	COMMENTS
200	CORRIDOR	EXIST	EXIST	EXIST	EXIST	
201	CORRIDOR	RB-1	CPT-1	PT-1	ACT-2	8' - 10" 1
202	CONFERENCE ROOM	RB-1	CPT-2	PT-1	ACT-1	8' - 10"
203	RECEPTION	RB-2	CPT-2	PT-1	ACT-1	8' - 10"
204	GOVERNOR'S SUITE	RB-2	CPT-2	PT-1	ACT-1	8' - 10"
205	VISITING STAFF	RB-2	CPT-2	PT-1	ACT-1	8' - 10"
206	GOVERNOR'S OFFICE	RB-2	CPT-2	PT-1	ACT-1	8' - 10"
207	SMALL CONFERENCE	RB-2	CPT-2	PT-1	ACT-1	8' - 10"
208	COPY	RB-2	CPT-2	PT-1	ACT-1	8' - 10"
209	BREAK	RB-2	CPT-2	PT-1	ACT-1	8' - 10"
210	TOILET	-	LIN-1	PT-1/PL-1	GWB	8' - 10" 2
211	STAIR	EXIST	EXIST	EXIST	EXIST	
212	ELECTIONS	RB-1	CPT-1	PT-1	ACT-1	8' - 10"
213	DIRECTOR	RB-1	CPT-1	PT-1	ACT-1	8' - 10"
214	SECURE STORAGE	RB-1	CPT-1	PT-1	ACT-1	8' - 10"
215	DOL	RB-1	CPT-1	PT-1	ACT-1	8' - 10"

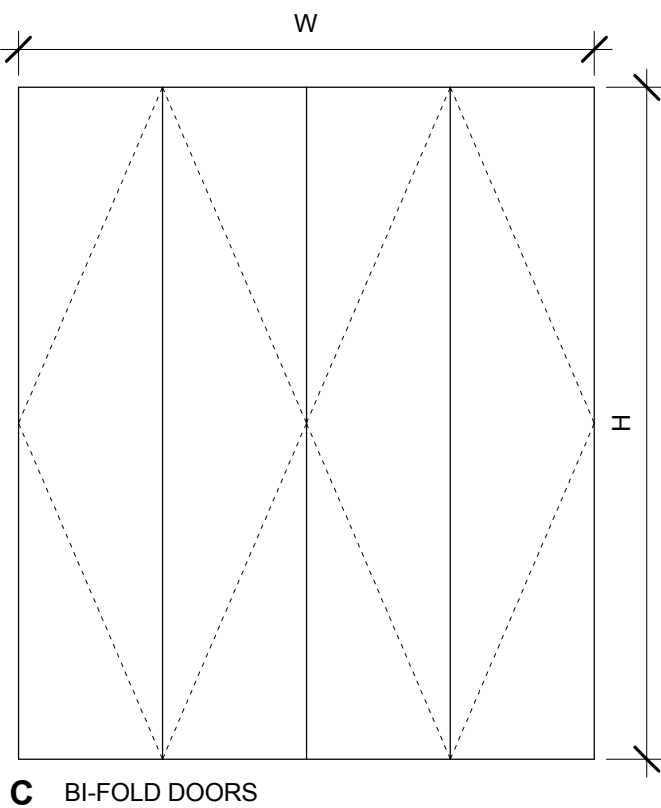
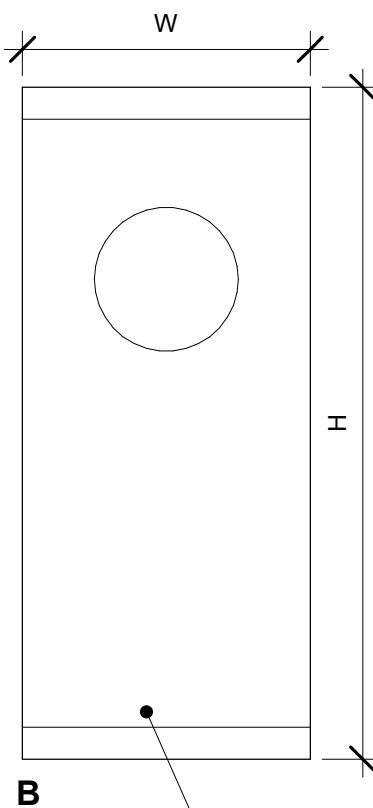
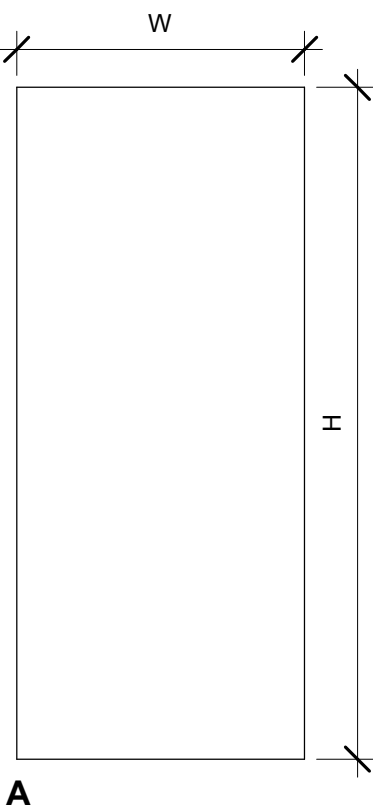
ROOM FINISH LEGEND

ABBREVIATION	TYPE	SPECIFICATION
RB-1	RUBBER BASE	MATCH BUILDING STANDARD
RB-2	RUBBER BASE	
CPT-1	CARPET TILE	
CPT-2	CARPET TILE	
PT-1	PAINT	ICI DULUXE-EGRET A0052-SATIN
ACT-1	ACT	ARMSTRONG FISSURED 2' X 4' ARMSTRONG CORTEGA SECOND LOOK II 2' X 4' PAINTED GWB CEILING-COLOR: PT-1
ACT-2	ACT	
GWB	GWB	
LIN-1	SHEET LINOLEUM	FORBO MARMOLEUM REAL-3234 FOREST GROUND
PL-1	PLASTIC LAMINATE	FORMICA 5878-58 POSSUM WARP TRIM-SCHLUTER-QUADEC OR EQUAL
SSM-1	SOLID SURFACE MATERIAL	FORMICA 651 CHICORY MOSAIC 1/2" THICK
MIRROR	MFG-GATCO STYLE-MAX SIZE-23.5" X 31.5" FINISH-SATIN NICKEL	TISSUE HOLDER MFG-GATCO STYLE-MAX FINISH-SATIN NICKEL

ROOM FINISH COMMENTS

1. RETAIN EXISTING FINISHES-MATCH EXISTING
2. COVE LIN-1 UP WALL 4"

DOOR TYPES

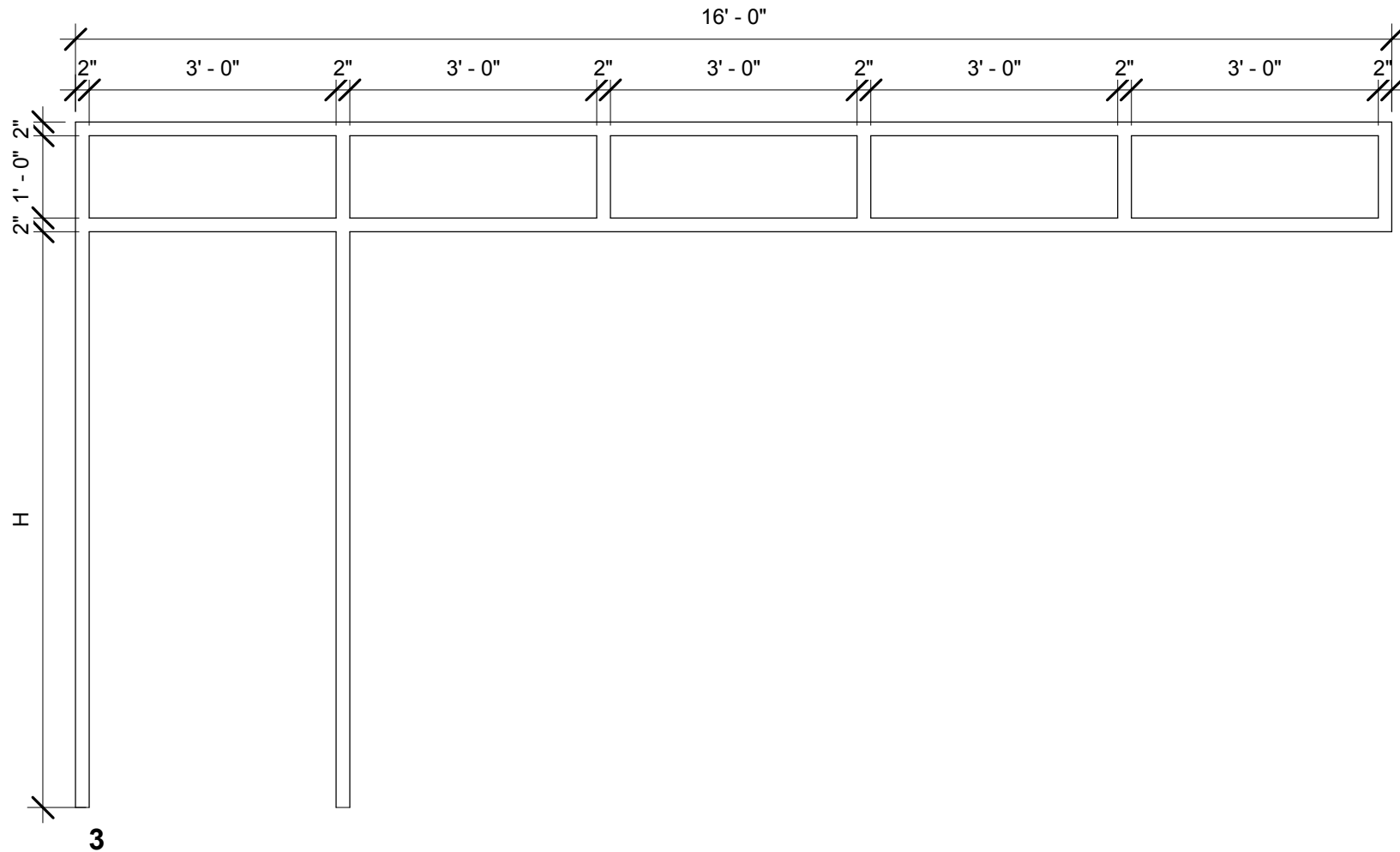
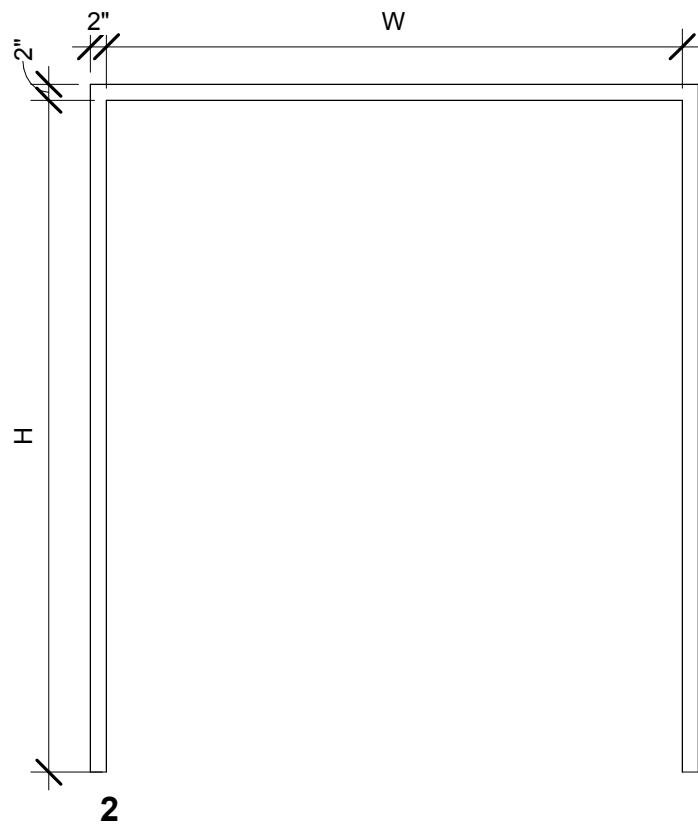
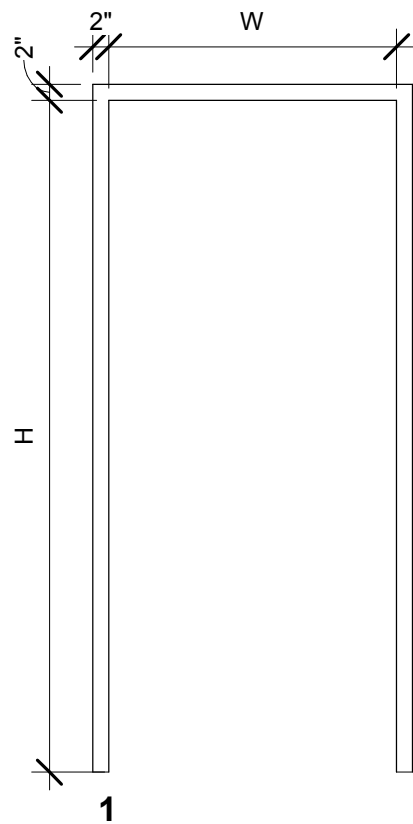


DOOR SCHEDULE										
MARK	TYPE	HEIGHT	WIDTH	THICK	MATERIAL	FRAME TYPE	FIRE RATING	FRAME MATERIAL	HARDWARE GROUP	COMMENTS
202	A	7' - 0"	3' - 0"	0' - 1 3/4"	WD	1	1 HR	ALUM	01	1
202A	A	7' - 0"	3' - 0"	0' - 1 3/4"	WD	1		ALUM	01	1
203	B	7' - 0"	3' - 0"	0' - 1 3/4"	GLASS	1		ALUM	04	
204	A	7' - 0"	3' - 0"	0' - 1 3/4"	WD	1	1 HR	ALUM	01	
204A	C	7' - 0"	6' - 0"	0' - 1 1/2"	WD	2		ALUM	05	
205	A	7' - 0"	3' - 0"	0' - 1 3/4"	WD	1		ALUM	03	
206	A	7' - 0"	3' - 0"	0' - 1 3/4"	WD	1		ALUM	02	1
206A	C	7' - 0"	6' - 0"	0' - 1 1/2"	WD	2		ALUM	05	
207	A	7' - 0"	3' - 0"	0' - 1 3/4"	WD	3		ALUM	02	1
210	A	7' - 0"	3' - 0"	0' - 1 3/4"	WD	1		ALUM	02	
211	A	7' - 0"	3' - 0"	0' - 1 3/4"	WD	1		ALUM	01	
211A	A	7' - 0"	3' - 0"	0' - 1 3/4"	WD	1		ALUM	01	
212	A	7' - 0"	3' - 0"	0' - 1 3/4"	WD	1	1HR	ALUM	01	
213	A	7' - 0"	3' - 0"	0' - 1 3/4"	WD	1		ALUM	03	
214	A	7' - 0"	3' - 0"	0' - 1 3/4"	WD	1		ALUM	04	

COMMENTS

1. USE WELDED FRAME, FILL FRAME WITH ACOUSTIC INSULATION AND ACOUSTICALLY SEAL JOINTS

FRAME TYPES



GENERAL FINISH NOTES

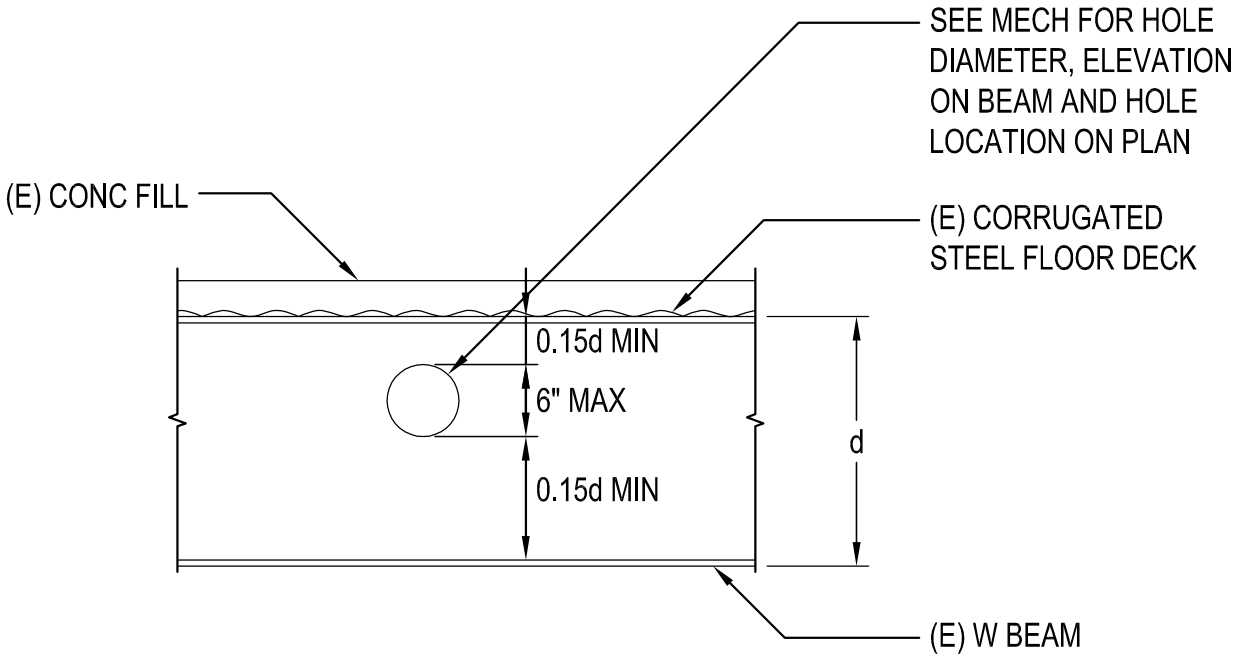
1. EXISTING FINISHES (WALLS, BASE, & FLOOR) TO BE PROTECTED AT ALL TIMES DURING WORK.
2. PAINT TO BE BUILDING STANDARD GENERAL LOW-VOC TYPE; MEET MPI 144 PREMIUM GRADE REQUIREMENTS. ONE FINISH COAT MINIMUM.
3. PATCH/PAINT ALL HOLES & WALL DAMAGE FROM REMOVED WALL-HUNG OBJECTS.
4. ALL PATCHED WALLS & NEW WALLS ARE TO RECIEVE PRIMER AND MINIMUM OF TWO FINISH PAINT COATS.
5. PROTECT EXISTING CEILING GRID TILES AT ALL TIMES DURNING WORK.
6. TURN OVER ALL USABLE EXCESS MATERIALS TO BUILDING MANAGER.
7. REMOVE, SAVE, AND PROTECT ALL CARPET TILE FOR ACOUSTIC WALL CONSTRUCTION. RUEN OVER ALL USABLE MATERIAL TO BUILDING MANAGEMENT.
8. CORNER GAURDS AT ALL OUTSIDE CORNERS EXCEPT OFFICES.

DOOR, FRAME, & HARDWARE NOTES

1. REUSE DOORS, DOOR & RELITE FRAMES, RELITES, AND DOOR HARDWARE AS ABLE.
2. IN LOCATIONS WHERE IT IS NOT POSSIBLE TO REUSE EXISTING DOORS, DOOR FRAMES, AND DOOR HARDWARE, THESE ITEMS MAY BE AVAILABLE FROM BUILDING STORAGE; COORDINATE WITH BUILDING MANAGER.
3. COORDINATE NEW KEYING WITH BUILDING MANAGER.
4. ALL DOORS TO HAVE THREE (3) BUTT HINGES.
5. PATCH AND REPAIR ALL NEW AND EXISTING DOOR FRAME FINISHES WITH FINISH TO MATCH EXISTING.
6. DOOR OPENING FORCE NOT TO EXCEED 5 POUNDS FOR ALL DOORS.

HARDWARE GROUPS

- SET 01-SECURE PRIVACY
- 'SOUND' HINGE SET
 - LOCK SET
 - CLOSER
 - O.H. DOOR STOP
 - ACOUSTIC AUTOMATIC DOOR BOTTOM
- SET 02-PRIVACY
- 'SOUND' HINGE SET
 - WALL STOP
 - LOCK SET
 - ACOUSTIC AUTOMATIC DOOR BOTTOM
- SET 03-STANDARD
- HINGE SET
 - LEVER, BOTH SIDES
 - WALL STOP
- SET 04-SECURE
- HINGE SET
 - O.H. DOOR STOP
 - LOCK SET
 - CLOSER
- SET 05-CLOSET (BIFOLD)
- TRACK WITH HANGER AND GUIDE
 - 2X HINGE SET
 - KNOB



NOTE:
GRIND HOLE SMOOTH TO PRECISE DIAMETER.

1

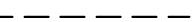
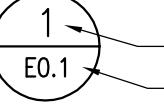
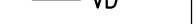
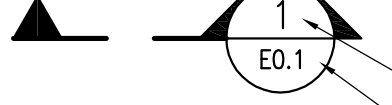
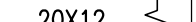
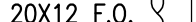
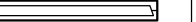
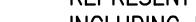
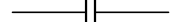
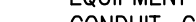
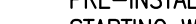
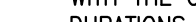
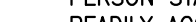
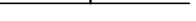
OPENINGS IN STEEL BEAMS
SCALE: 3/4" = 1'-0"



TITLE: BEAM OPENINGS

FILE NAME:
REVISIONS:
AUTHOR: JWC
04.25.2013

CHECKED: DM
PROJECT NO. 11-0013.24

ABBREVIATIONS				GENERAL		GENERAL PIPING			VENTILATION			
⊙	AT	IN WC	INCHES WATER COLUMN	SYMBOL	DESCRIPTION	SYMBOL	ABBR.	DESCRIPTION	SYMBOL	ABBR.	DESCRIPTION	
&	AND	INSUL	INSULATION		SHEET NOTE CONVENTION:		V	VENT			DOUBLE LINE DUCTWORK	
#	NUMBER	IPS	INTERNATIONAL PIPE STANDARD	2.	REFERENCED SHEET NOTE		GV	GATE VALVE			SINGLE LINE DUCTWORK	
%	PERCENT	K	THERMAL CONDUCTIVITY		GENERAL SHEET NOTE			GLOBE VALVE			FLEX DUCTWORK	
AD	ACCESS DOOR	KWH	KILOWATT HOUR				BV	BUTTERFLY VALVE		S/A	SLOT GRILLES/REGISTERS/DIFFUSERS	
AAP	AREA ALARM PANEL	LAT	LEAVING AIR TEMPERATURE				TDV	TRIPLE DUTY VALVE		R/A	GRILLES/REGISTERS/DIFFUSERS - RETURN AIR	
ADA	AMERICANS WITH DISABILITIES ACT	LB/HR	POUNDS PER HOUR				CV	CHECK VALVE		E/A	GRILLES/REGISTERS/DIFFUSERS - EXHAUST AIR	
AFF	ABOVE FINISHED FLOOR	LBS	POUNDS		DETAIL REFERENCE			BACKFLOW PREVENTER ASSEMBLY			AIR FLOW ARROW	
AFG	ABOVE FINISHED GRADE	LF	LINEAR FEET	E0.1	DETAIL NUMBER		PRV	PRESSURE RELIEF VALVE		VD	AIR VOLUME DAMPER	
AHU	AIR-HANDLING UNIT	L	LENGTH		SHEET WHERE DETAIL APPEARS		PRV	PRESSURE REGULATOR VALVE		FD	FIRE DAMPER	
ALT	ALTERNATE	LWT	LEAVING WATER TEMPERATURE		SECTION REFERENCE		PRV	PLUG VALVE		SD	SMOKE DAMPER	
AMB	AMBIENT	LOC	LOCATION/LOCATED	E0.1	SECTION NUMBER		SOV	SOLENOID OPERATED VALVE		FSD	FIRE-SMOKE DAMPER	
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE	LP	LOW PRESSURE		SHEET WHERE SECTION APPEARS					AL	ACOUSTICAL DUCT LINING	
APD	AIR PRESSURE DROP	LR	LONG RADIUS				MOV	2 WAY MOTOR OPERATED VALVE			DUCT INSULATION	
APPROX	APPROXIMATE	MAN	MANUAL				MOV	3 WAY MOTOR OPERATED VALVE			DUCT: ROUND	
AR	ACID RESTRAINT	MAT	MIXED AIR TEMPERATURE							12#	DUCT: RECTANGULAR FIRST FIGURE SIDE SHOWN	
ARCH	ARCHITECTURAL	MAV	MANUAL AIR VENT				FCV	AUTOMATIC FLOW CONTROL VALVE		20X12	DUCT: FLAT OVAL FIRST FIGURE SIDE SHOWN	
ASME	AMERICAN SOCIETY OF MECHANICAL ENGINEERS	MAX	MAXIMUM				SV	SAFETY VALVE, RELIEF VALVE		20X12 F.O.		
ATM	ATMOSPHERE	MBH	THOUSAND BTU PER HOUR				VB	VACUUM BREAK			MOD	MOTORIZED OPERATED DAMPER
AUTO	AUTOMATIC	MECH	MECHANICAL				AAV	AIR VENT, AUTO WITH ISOLATION VALVE			OBD	OPPOSED BLADE DAMPER
AVG	AVERAGE	MFR	MANUFACTURER				MAV	AIR VENT, MANUAL			PBD	PARALLEL BLADE DAMPER
AWG	AMERICAN WIRE GAUGE	MH	MANHOLE				PTTP	PRESSURE & TEMP TEST PLUG			BDD	BACK DRAFT DAMPER
BAS	BUILDING AUTOMATION SYSTEM	MIN	MINIMUM, MINUTE									DAMPER
BDD	BACKDRAFT DAMPER	MPH	MILES PER HOUR									
BHP	BRAKE HORSEPOWER, BOILER HORSEPOWER	MTD	MOUNTED									
BLDG	BUILDING	N/A	NOT APPLICABLE									
BLW	BELOW	NC	NOISE CRITERIA, NORMALLY CLOSED									
BOD	BOTTOM OF DUCT	NFPA	NATIONAL FIRE PROTECTION AGENCY									
BOP	BOTTOM OF PIPE	NIC	NOT IN CONTRACT									
BTU	BRITISH THERMAL UNIT	NO	NORMALLY OPEN, NUMBER									
BTUH	BTU PER HOUR	NTS	NOT TO SCALE									
C	COMMON, CONDENSATE	OD	OUTSIDE DIAMETER									
C-C	CENTER TO CENTER	OFOI	OWNER FURNISHED, OWNER INSTALLED									
CAP	CAPACITY, END CAP	OSA	OUTSIDE AIR									
CCW	COUNTER-CLOCKWISE	OZ	OUNCE									
CF	COOLING FAN, CIRCULATING FAN, CUBIC FOOT	PD	PRESSURE DROP OR DIFFERENCE									
CFM	CUBIC FEET PER MINUTE	PG	PROPYLENE GLYCOL									
CI	CAST IRON	PL	PLATE									
CL	CENTER LINE	PLBG	PLUMBING									
CLG	CEILING	POC	POINT OF CONNECTION									
CMPR	COMPRESSOR	PNL	PANEL									
CO	CLEANOUT	PH	PHASE (ELECTRICAL)									
COEF	COEFFICIENT	PPM	PARTS PER MILLION									
CONC	CONCRETE	PSI	POUNDS PER SQUARE INCH									
COND	CONDENSER	PSIA	POUNDS PER SQUARE INCH - ABSOLUTE									
CTR	CENTER	PSID	POUNDS PER SQUARE INCH - DIFFERENTIAL									
CU	COPPER, CONDENSING UNIT	PSIG	POUNDS PER SQUARE INCH - GAUGE									
CU IN	CUBIC INCH	PRESS	PRESSURE									
CV	VALVE FLOW COEFFICIENT	PRI	PRIMARY									
CW	CLOCKWISE	R-12,R-22	REFRIGERANT (12,22,ETC.)									
DB	DECIBEL	R/A	RETURN AIR									
DBT	DRY-BULB TEMPERATURE	RAD	RADIANT OR RADIATION									
DDC	DIRECT DIGITAL CONTROL	RCVR	RECEIVER									
DEG	DEGREE	RECIRC	RECIRCULATE									
DEG OR	DEGREE	RED	REDUCER									
DEG C	DEGREE CENTIGRADE	REFRIG	REFRIGERATION									
DEG F	DEGREE FAHRENHEIT	REV	REVOLUTIONS									
DEN	DENOLITION	RF	RELIEF FAN OR RETURN FAN									
DENS	DENSITY	RH	RELATIVE HUMIDITY									
DGM	DIAGRAM	RM	ROOM									
DI	DUCTILE IRON	RPM	REVOLUTIONS PER MINUTE									
DIA OR	DIAMETER	RPS	REVOLUTIONS PER SECOND									
DIFF	DIFFERENCE OR DELTA	S/A	SUPPLY AIR									
DIP	DUCTILE IRON PIPE	S										

PLUMBING FIXTURE CONNECTION SCHEDULE						
SYMBOL	FIXTURE	WASTE INCH	VENT INCH	HW INCH	CW INCH	REMARKS, BASIS OF DESIGN
P-1H	WATER CLOSET	4	2-1/2	-	3/4	FLOOR MOUNTED, PRESSURE-ASSISTED FLUSH TANK, ADA COMPLIANT.
P-2H	LAVATORY	1-1/2	1-1/2	1/2	1/2	COUNTER MOUNTED, GOOSENECK FAUCET, ADA COMPLIANT.
P-3H	BREAK ROOM SINK	1-1/2	1-1/2	1/2	1/2	STAINLESS STEEL, DOUBLE BOWL, 6-1/2" DEPTH, WITH GOOSENECK FAUCET, AIR GAP, AND FOOD DISPOSER, ADA COMPLIANT.
USP-1	UNDER SINK PUMP	2	2	-	-	CORROSION-RESISTANT BASIN, MOTOR ELECTRICAL CHARACTERISTICS: 1/3 HP, 115V, 1 PH.
FD-1	FLOOR DRAIN	2	1-1/2	-	-	CAST IRON BODY WITH ADJUSTABLE NICKEL-BRONZE TOP.

MISCELLANEOUS EQUIPMENT SCHEDULE					
SYMBOL	LOCATION	MOTOR HP,V,PH	Ip (1)	WEIGHT LBS	REMARKS, BASIS OF DESIGN
WH-1	BREAK 209	-	1.0	86	ELECTRIC WATER HEATER: 6 GALLON STORAGE, ELECTRICAL CHARACTERISTICS: 120 V, 2000 W ELEMENT. RHEEM 81VP6S.
NOTES: (1) SEISMIC COMPONENT IMPORTANCE FACTOR.					

VAV BOX LIST								
VAV- NUMBER	LOCATION	MIN CFM	MAX CFM	LAT DEG F	MAX APD IN WC	BOX INLET SIZE	NUMBER OF SLOTS	EXISTING CONTROL TYPE
1	DOL (215)	90	300	55	0.30	6	3	DDC
2	DOL (215)	90	300	55	0.30	6	4	DDC
3	GOVERNOR'S OFFICE (206)	130	425	55	0.50	6	4	PNEUMATIC
4	GOVERNOR'S OFFICE (206)	130	425	55	0.50	6	4	PNEUMATIC
5	ELECTIONS (212)	100	210	55	0.20	4	1	PNEUMATIC
6	SECURE STORAGE (214)	50	50	55	0.11	4	1	PNEUMATIC
7	DIRECTOR (213)	135	450	55	0.36	7	4	DDC
8	BREAK (209)	100	330	55	0.36	7	4	DDC
9	GOVERNOR'S SUITE (204)	160	320	55	0.36	7	4	PNEUMATIC
10	RECEPTION (203)	50	90	55	0.11	4	1	PNEUMATIC
11	ELECTIONS (212)	130	360	55	0.60	5	2	PNEUMATIC
12	CONFERENCE ROOM (202)	240	550	55	0.55	7	4	PNEUMATIC
13	CONFERENCE ROOM (202)	240	550	55	0.55	7	4	PNEUMATIC
14	SMALL CONFERENCE (207)	220	690	55	0.80	7	4	DDC
15	VISITING STAFF (205)	100	330	55	0.36	7	4	DDC
16	ELECTIONS (212)	100	210	55	0.20	4	1	PNEUMATIC
NOTES: 1. VAV BOXES ARE TEMPMASTER CD SERIES.								

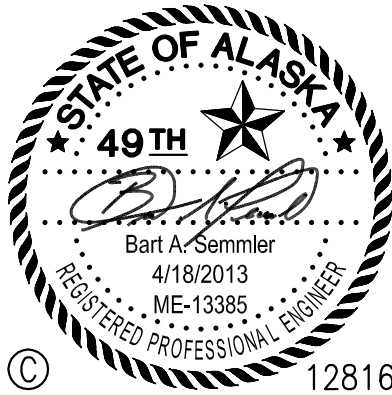
FAN SCHEDULE								
SYMBOL	LOCATION	USE	SCFM	FAN SP IN WC	FAN RPM	MOTOR HP,V,PH	Ip (1)	REMARKS BASIS OF DESIGN
EF-1	TOILET 210	EXHAUST	120	0.25	920	22W,115,1	1.0	CEILING MOUNTED FAN: PANASONIC FV-13VKS3.
NOTES: (1) SEISMIC COMPONENT IMPORTANCE FACTOR.								

LOUVER/HOOD SCHEDULE									
SYMBOL	UNIT AND USAGE	SCFM	SIZE	MIN FREE AREA SF	MAX FREE AREA VEL FPM	MAX APD IN WC	WEIGHT LBS	Ip (1)	REMARKS, BASIS OF DESIGN
HD-1	EF-1 DISCHARGE HOOD	120	8" DIA.	0.37	325	0.04	7	1.0	GRAVITY RELIEF HOOD: ROOF MOUNTED, LOW PROFILE, INSULATED CURB. GREENHECK GRSR.
NOTES: (1) SEISMIC COMPONENT IMPORTANCE FACTOR.									

TITLE: SCHEDULES
FILE NAME:
REVISIONS:
AUTHOR: BAS
04.25.2013

CHECKED: BAS

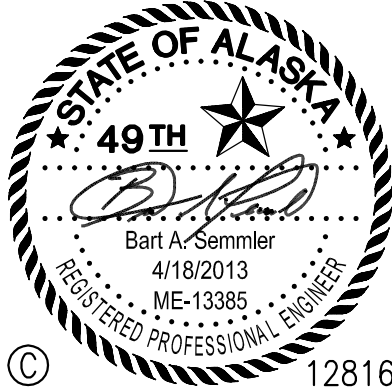
M0.2



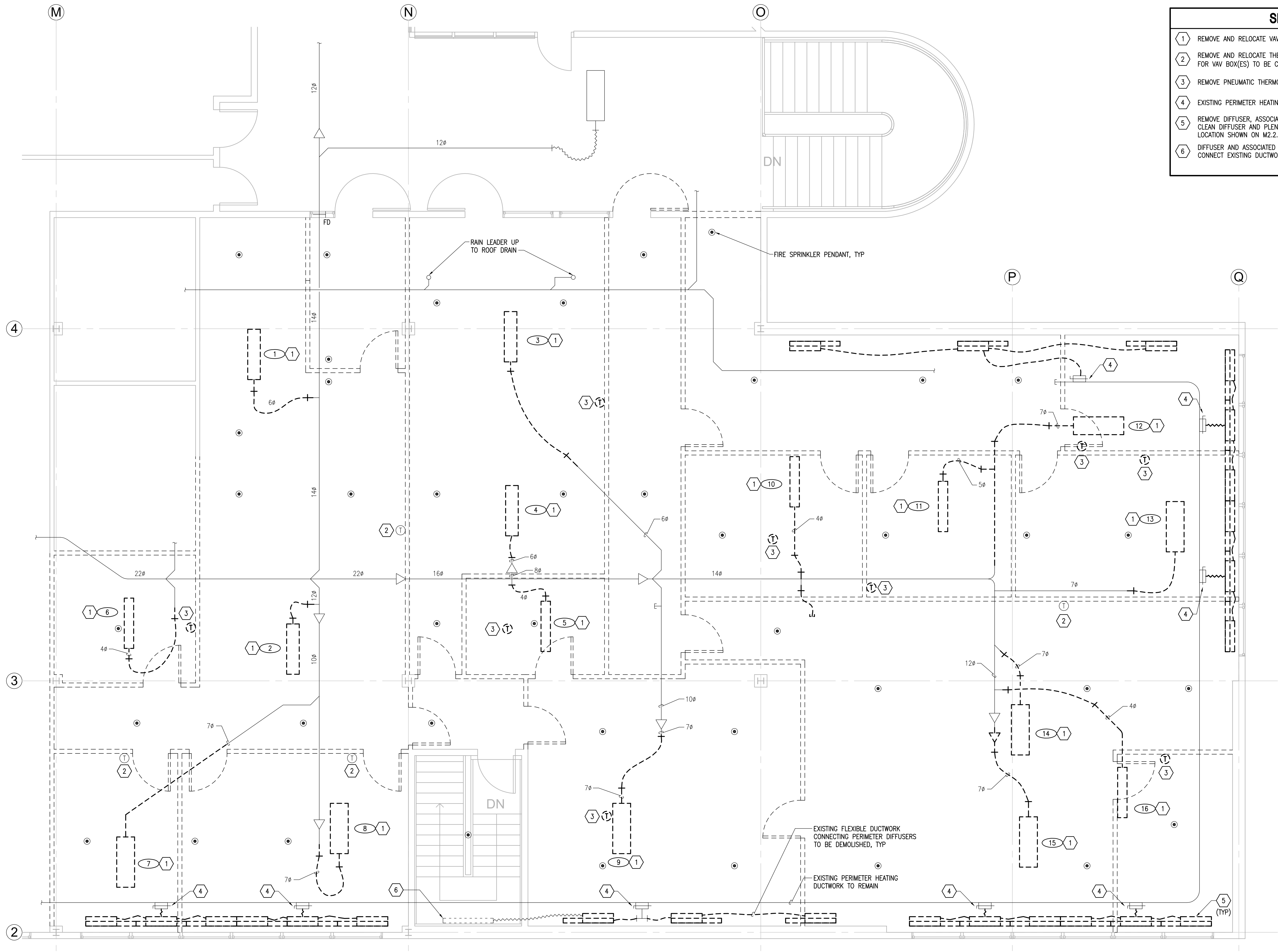
©

12816

SPECIFICATIONS			
MECHANICAL GENERAL REQUIREMENTS - PROVIDE LABOR, PRODUCTS, AND SERVICE REQUIRED FOR THE COMPLETE AND PROPER OPERATION OF MECHANICAL SYSTEMS SHOWN AND SPECIFIED. THE DRAWINGS ARE PARTLY DIAGRAMMATIC AND DO NOT SHOW EXACT ROUTING, LOCATION, AND DETAILS OR ALL OFFSETS AND FITTINGS REQUIRED TO INSTALL THE WORK. PROVIDE FITTINGS, OFFSETS AND ACCESSORIES AS REQUIRED TO INSTALL THE WORK. WHERE THE WORK OF SEVERAL CRAFTS IS INVOLVED COORDINATE WITH RELATED WORK TO PROVIDE EACH SYSTEM IN COMPLETE AND PROPER OPERATING ORDER. - COMPLY WITH APPLICABLE LOCAL, STATE, AND NATIONAL CODES, ORDINANCES, AND REGULATIONS, INCLUDING: 2009 INTERNATIONAL BUILDING CODE (IBC) 2009 INTERNATIONAL MECHANICAL CODE (IMC) 2009 INTERNATIONAL FIRE CODE (IFC) 2009 UNIFORM PLUMBING CODE (UPC) 2011 NATIONAL ELECTRIC CODE (NEC) - FOLLOW THE RECOMMENDED PRACTICES OF ASME, SMACNA, ASHRAE, NFPA, AGA, AND OSHA, AS THEY APPLY TO THIS PROJECT, EXCEPT IN CASES WHERE STATUTES GOVERN. - UNLESS DIRECTED OTHERWISE, PRODUCTS SHALL BE NEW, UNUSED AND UNDAMAGED, OF STANDARD MANUFACTURE, OF LATEST DESIGN AND QUALITY, AND SUITABLE FOR THE PARTICULAR INSTALLATION. FURNISH AND INSTALL EQUIPMENT IN ACCORDANCE WITH APPLICABLE CODES, LISTINGS AND MANUFACTURER'S INSTRUCTIONS. - PRODUCTS SHALL BE ASBESTOS AND LEAD FREE. FIXTURES, EQUIPMENT, ASSEMBLIES, AND DEVICES SHALL BE LISTED FOR THE INTENDED SERVICE: IAPMO, FM, UL, OR OTHER NATIONALLY RECOGNIZED TESTING LABORATORY. - IMMEDIATELY NOTIFY THE OWNER'S REPRESENTATIVE IN WRITING SHOULD CLARIFICATION BE REQUIRED DUE TO A CONFLICT OF QUANTITY, COORDINATION, LOCATION, ETC. - OBTAIN AND PAY FOR PERMITS AND INSPECTIONS REQUIRED BY LAWS, ORDINANCES, AND RULES GOVERNING THE WORK. COMPLY WITH FEDERAL, STATE AND LOCAL REGULATIONS FOR DISPOSAL, AND SECURE NECESSARY PERMITS. THIS INCLUDES MATERIALS USED IN SHIPPING, CONSTRUCTION OR TESTING. ARRANGE FOR INSPECTION OF WORK BY INSPECTORS. - PLUG, PATCH, AND REPAIR ALL PENETRATIONS AND SURFACES DAMAGED UNDER THIS CONTRACT. REFINISH SURFACES AND ASSEMBLY RATING TO MATCH EXISTING. REPAIR OR REPLACE DAMAGED EQUIPMENT, SURFACES, CEILING TILES, FIRE PROOFING AND INSULATION. - ITEMS REQUIRING RELOCATION OR TEMPORARILY SUPPORTED DURING DEMOLITION OR NEW WORK SHALL BE RESTORED COMPLETE TO MAINTAIN THEIR LISTING, SERVICEABILITY, AND FUNCTION. - PIPE HANGERS AND SUPPORTS SHALL BE IN ACCORDANCE WITH MSS SP69, MSS SP89, AND MSS SP58; SPACING AND ADDITIONAL CRITERIA SHALL BE PER APPLICABLE CODES AND ASME B31.9 BUILDING SERVICES PIPING. SUPPORT, BRACE, AND ANCHOR PIPES, EQUIPMENT, AND DEVICES TO BUILDING STRUCTURE TO RESIST GRAVITY, OPERATIONAL, AND VIBRATION FORCES; COORDINATE WITH SEISMIC RESTRAINTS. - PROVIDE SEISMIC DESIGN, ANCHORS AND RESTRAINT DEVICES TO RESIST LOADS PER IBC, CHAPTER 16 AND ASCE 7-05. COORDINATE WITH STRUCTURAL REQUIREMENTS TO ENSURE ATTACHMENT POINTS CAN ACCOMMODATE FORCES. COORDINATE WITH SPECIAL INSPECTIONS PER IBC CHAPTER 17 AND AHJ REQUIREMENTS. - PROVIDE MECHANICAL IDENTIFICATION CONSISTING OF LABELS, TAGS AND FLOW ARROWS FOR DUCTS, PIPES AND EQUIPMENT INSTALLED UNDER THIS CONTRACT AND EXISTING ITEMS TO REMAIN THAT LACK IDENTIFICATION. - UPON COMPLETION OF THE INSTALLATION, CONDUCT A COMPLETE OPERATIONAL TEST OF EACH SYSTEM TO DEMONSTRATE PROPER OPERATION OF CONTROLS, INDICATIONS AND ALARMS ASSOCIATED WITH THE SYSTEMS. PERFORM THE OPERATIONAL TESTS IN THE PRESENCE OF THE OWNER'S REPRESENTATIVE. SUBMITTALS - SUBMIT PRODUCT DATA FOR PRODUCTS PROVIDED UNDER THIS CONTRACT. GATHER DATA INTO BINDERS WITH AN INDEX AND TABBED DIVIDERS AND ANNOTATE TO DEMONSTRATE PRODUCTS MEET OR EXCEED SPECIFIED ITEMS. OBTAIN OWNER'S APPROVAL OF PRODUCTS PRIOR TO ORDERING OR INSTALLING ANY PART OF THE SYSTEM. PRODUCTS SPECIFIED HEREIN ARE THE BASIS OF DESIGN. ALTERNATE PRODUCTS OF EQUAL QUALITY AND PERFORMANCE MAY BE SUBMITTED FOR APPROVAL. PIECEMEAL SUBMITTALS ARE NOT ACCEPTABLE. - FURNISH INSTALLATION, OPERATING AND MAINTENANCE MANUALS FOR ALL EQUIPMENT. PROVIDE ALL INFORMATION NEEDED TO OPERATE AND MAINTAIN THE EQUIPMENT INCLUDING CHANGES TO THE CONTROL SYSTEM. BIND MANUALS IN HARD BACKED, LOOSE-LEAF BINDER. MANUALS SHALL INCLUDE MAINTENANCE INSTRUCTIONS, MANUFACTURER'S BROCHURES, CUT SHEETS, SHOP DRAWINGS, CONTROLS, FIRE PROTECTION, EQUIPMENT DIRECTORIES, AND FINAL BALANCE REPORTS. - CONTINUALLY RECORD THE ACTUAL MECHANICAL SYSTEM(S) INSTALLATION ON A FULL SIZE SET OF DRAWING PRINTS KEPT READILY AVAILABLE AT THE PROJECT DURING CONSTRUCTION. AT THE END OF THE PROJECT THE CONTRACTOR SHALL SUBMIT COMPLETED RECORD DRAWINGS SHOWING AS-BUILT CONDITIONS FOR ALL NEW AND EXISTING MECHANICAL SYSTEMS IN THE AREA OF THE PROJECT WORK. MECHANICAL INSULATION - FIBERGLASS PIPE INSULATION WITH FACTORY APPLIED VAPOR-BARRIER AND FLAME RETARDANT ALL SERVICE JACKET AND TAPE IN COMPLIANCE WITH NFPA 90A AND 90B WITH THE FOLLOWING PERFORMANCE CHARACTERISTICS: - FLAME SPREAD 25, FUEL CONTRIBUTED 50, SMOKE DEVELOPED 50 TESTED ACCORDING TO UL 723, ASTM E84 OR NFPA 255. - THERMAL CONDUCTIVITY EQUAL TO 0.24 AT 100 DEGREES F MEAN TEMPERATURE. ASTM C335. - PERMEABILITY RATING EQUAL TO 0.02 PERMS. ASTM E96. - TEMPERATURE LIMIT OF 350 DEGREES F. - INSULATE DOMESTIC HOT AND COLD WATER PIPING WITH 1 INCH THICK INSULATION. JOHNS MANVILLE, OWENS CORNING OR APPROVED EQUAL. - INSULATE EXPOSED LAVATORY AND SINK PIPING WITH PROTECTIVE, MOLDED VINYL, FIRE-RESISTANT COVER MANUFACTURED SPECIFICALLY FOR PLUMBING FIXTURE SUPPLIES AND DRAINS WITH INTERNAL RIBS AND CONCEALED GRIP FASTENERS. TRUEBRO LAV GUARD 2 OR APPROVED EQUAL. - FLEXIBLE FIBERGLASS DUCT INSULATION WITH FACTORY APPLIED VAPOR BARRIER FLAME-RETARDANT FOIL-SCRIM-KRAFT (FSK) OR ALL SERVICE JACKET AND TAPE IN COMPLIANCE WITH NFPA 90A AND 90B WITH THE FOLLOWING PERFORMANCE CHARACTERISTICS: - FLAME SPREAD 25, FUEL CONTRIBUTED 50, SMOKE DEVELOPED 50 TESTED ACCORDING TO UL 723, ASTM E84 OR NFPA 255. - THERMAL CONDUCTIVITY EQUAL TO 0.24 AT 75 DEGREES F MEAN TEMPERATURE AT 1.5 PCF DENSITY, ASTM C335. - PERMEABILITY RATING EQUAL TO 0.02 PERMS. ASTM E96. - TEMPERATURE LIMIT OF 250 DEGREES F.	- INSULATE SUPPLY DUCTWORK UPSTREAM OF VAV BOXES WITH 1 INCH THICK INSULATION. INSULATED EXHAUST DUCTWORK FROM POINT OF DISCHARGE TO MOTORIZED DAMPER WITH 3 INCH THICK INSULATION. JOHNS MANVILLE, OWENS CORNING OR APPROVED EQUAL. - PIPE AND DUCT INSULATION SEAMS SHALL BE TAPED WITH 3" WIDE FSK OR ASJ TAPE TO MATCH THE INSULATION JACKET TO PROVIDE CONTINUOUS VAPOR BARRIER. PENETRATIONS OF THE INSULATION JACKET SHALL BE TAPED OVER. INSULATION SHALL PASS CONTINUOUSLY THROUGH NON-FIRE RATED WALLS. PROVIDE ACOUSTICAL SEALANT ON BOTH SIDES OF PENETRATIONS. - ACOUSTICAL LINING SHALL BE 1 LBS/CF DENSITY, RATED FOR PLENUM USE AND FLAT BLACK IN COLOR. KINETICS NOISE CONTROL MODEL KNM-100B, ARMAFLEX OR APPROVED EQUAL. DOMESTIC WATER PIPING AND SPECIALTIES - TYPE L TUBING (ASTM B88) AND WROUGHT COPPER FITTINGS (ASME B16.22) WITH GRADE 50B SOLDERED JOINTS (ASTM B32). - TWO PIECE TYPE, FULL PORT BALL VALVE WITH BRONZE BODY AND BALL, TFE SEATS, BLOWOUT PROOF STEM AND 150 PSIG PRESSURE/TEMPERATURE RATING (STEAM). - PRESSURIZED PISTON TYPE WATER HAMMER ARRESTERS WHERE SHOWN. SIOUX CHIEF, PRECISION PLUMBING PRODUCTS (PPP) INC. OR APPROVED EQUAL. - AUTOMATIC TRAP PRIMER ASSEMBLY FACTORY SET FOR PROPER OPERATION WITH WATER PRESSURE OF 20 TO 80 PSI, CDA 360 BRASS BODY AND CAP, NEOPERL CHECK VALVE, NITRILE O-RINGS AND STAINLESS STEEL SCREEN. MINIMUM DISCHARGE RATE AT 20 PSI SHALL BE 0.845 OUNCES AND MAXIMUM DISCHARGE RATE AT 80 PSI SHALL BE 1.65 OUNCES. PRECISION PLUMBING PRODUCTS (PPP) INC OR APPROVED EQUAL. - THERMOSTATIC TEMPERING VALVE: BRASS AND STAINLESS STEEL INTERNAL COMPONENTS, STAINLESS STEEL STRAINERS, INTEGRAL CHECKS, MINIMUM FLOW RATE OF 00.5 GPM AND WALL MOUNTING BRACKET. SYMMONS MAXLINE 5-230-CK-FS OR APPROVED EQUAL. WASTE AND VENT PIPING AND SPECIALTIES - CONTRACTOR'S OPTION TO PROVIDE: - CISPI 301 HUB-LESS, CAST IRON PIPE WITH CISPI 310, NEOPRENE GASKET AND STAINLESS STEEL CLAMP-AND-SHIELD JOINT ASSEMBLIES. - DWV COPPER PIPING (ASTM B306) AND WROUGHT COPPER FITTINGS (ASME B16.29) WITH GRADE 50B SOLDERED JOINTS (ASTM B32). FIRE PROTECTION - PROVIDE SERVICES OF AN OWNER APPROVED AND QUALIFIED FIRE PROTECTION CONTRACTOR TO MODIFY AND ADD SPRINKLER HEADS TO THE EXISTING SPRINKLER SYSTEM FOR COMPLETE COVERAGE OF AREAS CONSTRUCTED AND REMODELED UNDER THIS CONTRACT. ADD AND RELOCATE HEADS IN EXISTING AREAS AS REQUIRED TO ACCOMMODATE FLOOR PLAN CHANGES AND PROVIDE FULL SPRINKLER COVERAGE OF THE REMODELED SPACES. EXTEND EXISTING WET SPRINKLER SYSTEM TO NEW AREAS CONSTRUCTED UNDER THIS PROJECT. MATERIALS, EQUIPMENT, SPRINKLER HEADS, PIPING AND DESIGN CRITERIA SHALL MEET AHJ AND OWNER REQUIREMENTS. REMOVAL OF SPRINKLERS IS CONTINGENT UPON VERIFICATION BY THE CONTRACTOR THAT COVERAGE WILL NOT BE COMPROMISED. - PROVIDE A COMPLETE DESIGN OF THE MODIFIED SPRINKLER SYSTEM; PROVIDE DRAWINGS, CALCULATIONS AND SUBMITTALS WITH DETAILS THAT MAY BE NECESSARY TO OBTAIN FIRE MARSHAL APPROVAL. - DETERMINATION OF EXISTING BUILDING SPRINKLER COVERAGE AND CONDITIONS, INCLUDING WATER PRESSURE AND FLOW ARE THE RESPONSIBILITY OF THE CONTRACTOR. FIELD CHECK EXISTING PIPING, PROVIDE FLOW TEST, MAKE CALCULATIONS AND PROVIDE ANY OTHER SERVICES NECESSARY TO PROPERLY DESIGN OR MODIFY THE SYSTEMS, AS REQUIRED BY THE AUTHORITY HAVING JURISDICTION AND FOR CONTRACTOR'S WORK. - WORK SHALL BE SCHEDULED SO NORMAL COMMERCIAL OPERATION OF THE BUILDING IS NOT DISRUPTED AND FIRE PROTECTION IS MAINTAINED AT ALL TIMES DURING HOURS OF OCCUPANCY. - PROVIDE ALL SERVICES NECESSARY TO PROPERLY DESIGN THE SYSTEM AS REQUIRED BY THE FIRE MARSHAL. - SUBMIT COPIES OF ANY FIRE PROTECTION DRAWINGS THAT ARE REQUIRED AND OBTAIN APPROVAL FROM THE OWNER, AND THE FIRE MARSHAL (AHJ) BEFORE INSTALLATION OF THE SYSTEM. SUBMIT CORRESPONDENCE WITH THE FIRE MARSHAL TO THE OWNER. - OBTAIN APPROVAL OF THE OWNER PRIOR TO ORDERING, FABRICATING OR INSTALLING ANY PART OF THE SYSTEMS. SPRINKLER HEAD LOCATIONS ARE SUBJECT TO THIS REVIEW AND APPROVAL. - IN ADDITION TO NFPA 13 - 2010 CRITERIA, PROVIDE SEISMIC CLEARANCE FOR SPRINKLER PIPING AND HEADS PER IBC AND ASCE-07-05. - SYSTEM PIPING OTHER THAN STEEL (SCHEDULE 40) SHALL HAVE A CORROSION RESISTANCE RATIO (CRR) EQUAL TO OR GREATER THAN 1.0. SUBMIT A STATEMENT THAT THE PIPING COMPLIES WITH NFPA 13 STANDARDS; INCLUDE THIS CRR DATA IN PRODUCT SUBMITTAL. - QUICK-RESPONSE TYPE SPRINKLER HEADS FOR AREAS MODIFIED. FINISH, ESCUTCHEON AND APPEARANCE TO MATCH EXISTING FOR AREAS MODIFIED. PLUMBING FIXTURES - HANDICAPPED FIXTURES: PROVIDE FIXTURES IN COMPLIANCE WITH ANSI A117.1 - 2009 ACCESSIBLE AND USEABLE BUILDINGS AND FACILITIES. - PLUMBING FIXTURES SHALL RECEIVE 17 GAUGE CHROME-PLATED TUBULAR BRASS OR CAST BRASS P-TRAPS, FLEXIBLE STAINLESS STEEL SUPPLIES AND QUARTER-TURN REMOVABLE KEY TYPE STOP. COMMERCIAL QUALITY METAL COMPONENTS ONLY; NO PLASTIC PARTS. - P-1H - WATER CLOSET. - TANK TYPE, ONE-PIECE, FLOOR-MOUNTED, VITREOUS CHINA, PRESSURE-ASSISTED WATER CLOSET WITH ELONGATED BOWL. POWER LITE OPERATING SYSTEM, TWIN TOUCH FLUSH ACTUATOR MEETING ADA HEIGHT REQUIREMENTS. COLOR TO BE SANDBAR WITH POLISHED CHROME FLUSH ACTUATOR. KOHLER SAN RAPHAEL K-3393-G9, SO SUBSTITUTIONS. - SEAT SHALL BE LUSTRA ELONGATED, OPEN-FRONT TOILET SEAT TO MATCH WATER CLOSET COLOR. - P-2H - LAVATORY. - UNDERCOUNTER-MOUNTED, VITREOUS CHINA, 18 INCH BY 12 INCH LAVATORY WITH FRONT OVERFLOW AND CLAMP ASSEMBLY. COLOR TO BE SANDBAR. KOHLER LADENA K-2214-G9, NO SUBSTITUTIONS. - DECK MOUNTED, POLISHED STAINLESS STEEL, GOOSENECK FAUCET WITH POP-UP DRAIN, ADA COMPLIANT LEVER HANDLES AND 1.5 GPM LOW-FLOW AERATOR. RESTORATION HARDWARE MODEL SPRITZ RH-5600, NO SUBSTITUTIONS. - P-3H - BREAK ROOM SINK. - ADA COMPLIANT, DROP-IN, DOUBLE COMPARTMENT, SELF-RIMMING, 18 GAUGE, TYPE 304 STAINLESS STEEL SINK WITH 19 INCH BY 16 INCH BY 6-1/2 INCH DEEP INSIDE DIMENSIONS, SOUND DEADENING UNDERSIDE COATING AND J-35 STRAINER. JUST MANUFACTURING MODEL SL-2143-A-GR. - SINGLE LEVER, PULL-OUT SPOUT FAUCET WITH 8 INCH CENTERS. DELTA MODEL 470-WE-DST.	3/4 HP, 120V FOOD WASTE DISPOSER WITH PERMANENTLY LUBRICATED UPPER AND LOWER BEARINGS, SOUND REDUCING SINK Baffle, STAINLESS STEEL GRIND CHAMBER AND COMPONENTS, DISHWASHER DRAIN CONNECTION AND ON/OFF WALL SWITCH CONTROL. IN-SINK-ERATOR EVOLUTION ESSENTIAL. - FD-1 - FLOOR DRAIN. - CAST IRON BODY FLOOR DRAIN WITH ADJUSTABLE, POLISHED NICKEL BRONZE TOP, NO-HUB OUTLET, 5-INCH ROUND GRATE SECURED BY VANDAL-PROOF SCREWS AND TRAP PRIMER CONNECTION. JR SMITH MODEL 2005-A-PB-U-P050 OR APPROVED EQUAL. - USP-1 - UNDER-SINK PUMP. - DRAIN PUMP CAPABLE OF 20 GPM AT 14 FEET OF HEAD WITH 1/3HP, 115V, 1PH MOTOR, UL LISTED 3-WIRE. CORD AND PLUG AND POLYPROPYLENE BASIN AND LID. BASIS OF DESIGN IS LIBERTY 404L SERIES. WATER HEATER (WH-1) - TANK-TYPE ELECTRIC WATER HEATER WITH 120 VOLT AC 2000 WATT ELEMENT, 3/4-INCH INLET AND OUTLET CONNECTIONS AND T&P RELIEF VALVE CONNECTION, RELIEF VALVE AND SEISMIC RESTRAINTS. BASIS OF DESIGN IS RHEEM ENERGY MISER MODEL 81VP6S. - AUXILIARY DRAIN PAN FOR INSTALLATION BENEATH WATER HEATER. DRAIN PAN SHOULD BE A MINIMUM OF 2 INCHES LARGER THAN THE WATER HEATER DIAMETER. PROVIDE A MAXIMUM RIM HEIGHT OF 2 INCHES. DUCTS - METAL DUCTWORK AND FITTINGS SHALL BE FABRICATED IN ACCORDANCE WITH SMACNA HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE. MINIMUM 26 GAUGE G90 ZINC COATED, MEDIUM PRESSURE (4 INCHES WC, +/-) CLASS UPSTREAM OF TERMINAL UNITS AND LOW PRESSURE (2 INCHES WC, +/-) DOWNSTREAM OF TERMINAL UNITS WITH CLASS "A" SEALS. - FLEXIBLE DUCTWORK SHALL HAVE THE FOLLOWING CHARACTERISTICS: - UL LISTED, CLASS 1 FLEXIBLE DUCTWORK IN ACCORDANCE WITH NFPA 90A. - BI-DIRECTIONAL, RAVAL RESISTANT, REINFORCED METALIZED VAPOR BARRIER. - ACOUSTICALLY RATED BLACK CPE CORE PERMANENTLY BONDED TO COATED SPRING STEEL WIRE HELIX. - POSITIVE PRESSURE RATING OF 10 INCHES WC - OPERATING TEMPERATURE RANGE OF MINUS 20 DEGREES F TO 200 DEGREES F CONTINUOUS AND MINUS 20 DEGREES F TO 250 DEGREES F INTERMITTENT. - FIBERGLASS INSULATION WITH INSULATING VALUE OF R-4.2. - ACOUSTICAL NET INSERTION LOSS BASED ON 10 FOOT LONG, 8 INCH DUCT WITH 2,500 FEET PER MINUTE AIRFLOW IS 13 DB IN THE 125 HZ BAND, 35 DB IN THE 250 HZ BAND, 34 DB IN THE 500 HZ BAND, 39 DB IN THE 1000 HZ BAND AND 29 DB IN THE 2000 HZ BAND. - MANUFACTURERS: THERMAFLEX MODEL M-KE OR APPROVED EQUAL. - INSTALLATION: - INSTALL METAL DUCTWORK AND FITTINGS IN ACCORDANCE WITH SMACNA HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE FOR THE DUCT PRESSURE CLASS AND SEAL CLASS SPECIFIED. PROVIDE STANDARD 45-DEGREE LATERAL WYE TAKEOFFS. WHEN SPACE DOES NOT ALLOW FOR 45-DEGREE LATERAL WYE TAKEOFFS, USE 90-DEGREE CONICAL TEE OR LOW-LOSS TEE CONNECTIONS. - INSTALL FLEXIBLE DUCTWORK IN LENGTHS OF 8 TO 10 FEET WITH ONE 90-DEGREE BEND OR LARGE RADIUS 180-DEGREE CURVE IN ADDITION TO OUTLET CONNECTION. SUPPORT FLEXIBLE DUCT AT CONNECTIONS TO AIR OUTLETS TO MAINTAIN MINIMUM RECOMMENDED BEND RADIUS. SEAL FLEXIBLE DUCT CONNECTIONS TO RIGID DUCTWORK WITH DRAW BANDS TO THE PRESSURE CLASS OF THE RIGID DUCT SYSTEM. DUCT ACCESSORIES - VOLUME/BALANCING DAMPERS FOR ROUND DUCTS TO 12 INCHES DIAMETER AND RECTANGULAR TO 6 INCHES BLADE WIDTH SHALL HAVE THE FOLLOWING CHARACTERISTICS: - FLAT SHEET, GALVANIZED STEEL, SINGLE LEAF DAMPER. - DAMPER LEAF TWO GAUGES THICKER THAN THE DUCT GAUGE AT THE LOCATION INSTALLED. - CONTINUOUS STEEL ROD. - ACCESSIBLE AND LOCKABLE DAMPER OPERATORS. - PROVIDE VOLUME DAMPERS AT EACH LOW-PRESSURE DUCT MAIN AND BRANCH TAKE OFF UPSTREAM OF FLEX DUCTING FOR PROPER AIR BALANCING. LOCATE A MINIMUM OF 10 FEET FROM DIFFUSERS UNLESS CLEARLY SHOWN OTHERWISE. - FIRE/SMOKE DAMPERS: UL LISTED AND LABELED IN ACCORDANCE WITH UL STANDARD 555 AND 555S. MINIMUM 1-1/2 HOUR FIRE RATING. TEMPERATURE RESISTANCE CLASSIFICATION OF 250 DEGREES F AND CLASS II LEAKAGE CLASSIFICATION. RUSKIN, GREENHECK OR APPROVED EQUAL. FANS - EF-1: UL LISTED CEILING MOUNTED EXHAUST FAN WITH GALVANIZED STEEL BODY, VARIABLE SPEED MOTOR, NO MORE THAN 0.7 SONES AT 0.25 INCHES OF STATIC PRESSURE, SIX INCH DUCT ADAPTER, INTEGRAL GRILLE WITH CONCEALED ATTACHMENT AND INTEGRAL BACKDRAFT DAMPER. PANASONIC WHISPER GREEN FV-13VKS3. AIR OUTLETS AND INLETS - HD-1: HEAVY GAUGE ALUMINUM ROOF MOUNTED EXHAUST HOOD WITH BUILT-IN CURB CAP WITH PRE-PUNCHED HOLES AND INTEGRAL BIRD SCREEN. GREENHECK GRGR OR APPROVED EQUAL. AIR TERMINAL UNITS - PROVIDE ADEQUATE CLEARANCES FOR OPERATIONS AND MAINTENANCE FOR AIR TERMINAL UNITS, DAMPERS, LINKS AND ACTUATORS. - EXISTING AIR TERMINAL UNITS HAVE A MIX OF DDC AND PNEUMATIC CONTROLLED DAMPER ACTUATORS. - FOR TERMINAL UNITS WITH A DDC CONTROLLED DAMPER ACTUATOR: - REMOVE TERMINAL UNIT AND PERMANENTLY TAG WITH THE NUMBER AS INDICATED ON DRAWINGS. - VACUUM CLEAN AND WIPE DOWN TERMINAL UNITS TO LIKE-NEW APPEARANCE. - REINSTALL IN LOCATION SHOWN ON DRAWINGS. - FOR TERMINAL UNITS WITH A PNEUMATIC CONTROLLED DAMPER ACTUATOR: - REMOVE TERMINAL UNIT AND PERMANENTLY TAG WITH THE NUMBER AS INDICATED ON DRAWINGS. - VACUUM CLEAN AND WIPE DOWN TERMINAL UNITS TO LIKE-NEW APPEARANCE.	- OBTAIN NEW DDC CONTROLLED DAMPER ACTUATORS FROM OWNER. REMOVE PNEUMATIC ACTUATOR AND REPLACE WITH DDC ACTUATOR. - REINSTALL IN LOCATION SHOWN ON DRAWINGS. BUILDING AUTOMATION SYSTEM - PROVIDE THE SERVICES OF ALASKA INTEGRATED SERVICES TO MODIFY ALL HVAC CONTROLS. - VAV CONTROLS AND THERMOSTATS SHALL BE DE-ENERGIZED PRIOR TO ANY MODIFICATIONS TO LOCATION OR WIRING. - OBTAIN ADDITIONAL DDC THERMOSTATS REQUIRED FROM OWNER. PERIMETER HEATING/COOLING AIR SEQUENCE OF OPERATION - PERIMETER AIR IS CONSTANT VOLUME AND TEMPERATURE IS CONTROLLED BY OUTDOOR AIR TEMPERATURE. PERIMETER SYSTEM TO FUNCTION AS INSTALLED. INTERIOR COOLING & IAQ ONLY VAV TERMINAL UNIT SEQUENCE OF OPERATION - MODULATE INTERIOR VAV TERMINAL UNIT VOLUME DAMPER BETWEEN MINIMUM AND MAXIMUM CFM TO MAINTAIN ROOM SETPOINT TEMPERATURE OF 72 DEGREES F (ADJUSTABLE) TO WITHIN PLUS OR MINUS 1 DEGREE F. EXHAUST FAN (EF-1) SEQUENCE OF OPERATION - EXHAUST FAN TO BE CONTROLLED BY TOILET ROOM OCCUPANCY SENSOR. OPEN MOTORIZED DAMPER AND ENERGIZE FAN WHEN THE ROOM IS OCCUPIED. DE-ENERGIZE FAN AND CLOSE MOTORIZED DAMPER WHEN ROOM IS UNOCCUPIED. TESTING, ADJUSTING AND BALANCING - PROVIDE THE SERVICES OF AN NEBB CERTIFIED TESTING AND BALANCING AGENCY FOR AIR BALANCING UNDER THIS CONTRACT. - ADJUST INDIVIDUAL AIR OUTLETS AND INLETS TO WITHIN PLUS OR MINUS 10 PERCENT OF DESIGN. ADJUST TOTAL TO WITHIN PLUS OR MINUS 10 PERCENT OF DESIGN TO SPACE. - PRIOR TO ACTUAL START OF TESTING, ADJUSTING AND BALANCING, VERIFY THE SYSTEMS AND EQUIPMENT ARE READY FOR THIS WORK. REVIEW PLANS BEFORE CONSTRUCTION STARTS AND INSTALLATION FOR EQUIPMENT AND ACCESS TO BALANCE SYSTEMS. CORRECT AIR SYSTEM DEFICIENCIES DISCLOSED BY INITIAL TESTING AND NOTIFICATION TO ENGINEER PRIOR TO FINAL BALANCING - ADJUST AIR PATTERN CONTROLLERS, GRILLE AND REGISTER BLADES FOR PROPER AIR DIFFUSION PATTERNS PRIOR TO TESTING, ADJUSTING AND BALANCING. - VAV TERMINAL CONTROL UNITS SHALL BE ADJUSTED FOR THE AIR QUANTITIES INDICATED. AIR QUANTITIES SHALL BE MEASURED AND ADJUSTED AT EACH OUTLET AND THIS SUMMATION SHALL BE USED TO CORRECT BOX FLOW COEFFICIENT. THE BOX FLOW COEFFICIENT SHALL BE RECORDED FOR EACH DDC TERMINAL AND INCLUDED IN BALANCING REPORT AND SPREADSHEET. ADJUST THERMOSTATS WHICH CONTROL VAV BOXES AND RECORD MAXIMUM AND MINIMUM CFMS. - AFTER ADJUSTMENT, TAKE MEASUREMENTS TO VERIFY BALANCE HAS NOT BEEN DISRUPTED OR THAT SUCH DISRUPTION HAS BEEN RECTIFIED. ONCE FINAL ADJUSTMENTS ARE MADE, PERMANENTLY MARK SETTINGS OF DAMPERS ALLOWING SETTINGS TO BE RESTORED. - SUBMIT A COMPLETE REPORT OF THE TESTING AND BALANCING OF ALL DEVICES, INCLUDING AN ANNOTATED FLOOR PLAN/REFLECTED CEILING PLAN WHICH MATCHES EACH AIR INLET AND OUTLET IDENTIFIED ON THE BALANCING REPORT FOR COMPARISON.



PLOT DATE: 4/18/2013 4:03 PM
DRAWING FILE: x:\12816 Froben\dwg\sheet files\12816 - m1.1.dwg

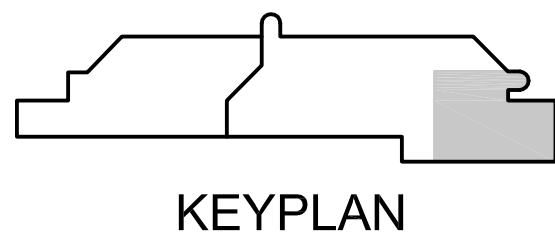
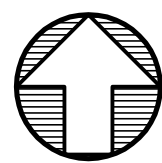


SHEET NOTES

- 1 REMOVE AND RELOCATE VAV BOX TO LOCATION SHOWN ON M2.2.
- 2 REMOVE AND RELOCATE THERMOSTAT TO LOCATION SHOWN ON M2.2. SEE M2.2 FOR VAV BOX(ES) TO BE CONTROLLED BY RELOCATED THERMOSTAT.
- 3 REMOVE PNEUMATIC THERMOSTAT AND TURN OVER TO OWNER.
- 4 EXISTING PERIMETER HEATING BALANCE DAMPER TO REMAIN IN CURRENT POSITION.
- 5 REMOVE DIFFUSER, ASSOCIATED PLENUM AND FLEX DUCT. WIPE DOWN AND VACUUM CLEAN DIFFUSER AND PLENUM TO LIKE-NEW APPEARANCE. RELOCATE DIFFUSER TO LOCATION SHOWN ON M2.2.
- 6 DIFFUSER AND ASSOCIATED DUCTING WITHIN STAIRWELL TO REMAIN AS INSTALLED. CONNECT EXISTING DUCTWORK TO REVISED DUCTWORK AS SHOWN ON M2.2.

1 DEMOLITION PLAN - SECOND FLOOR - MECHANICAL
M1.1 SCALE: 1/4" = 1'-0"

0 2' 4' 8' 12'



DEMOLITION PLAN - SECOND
TITLE: FLOOR - MECHANICAL

FILE NAME:
REVISIONS:
AUTHOR: BAS
04.25.2013

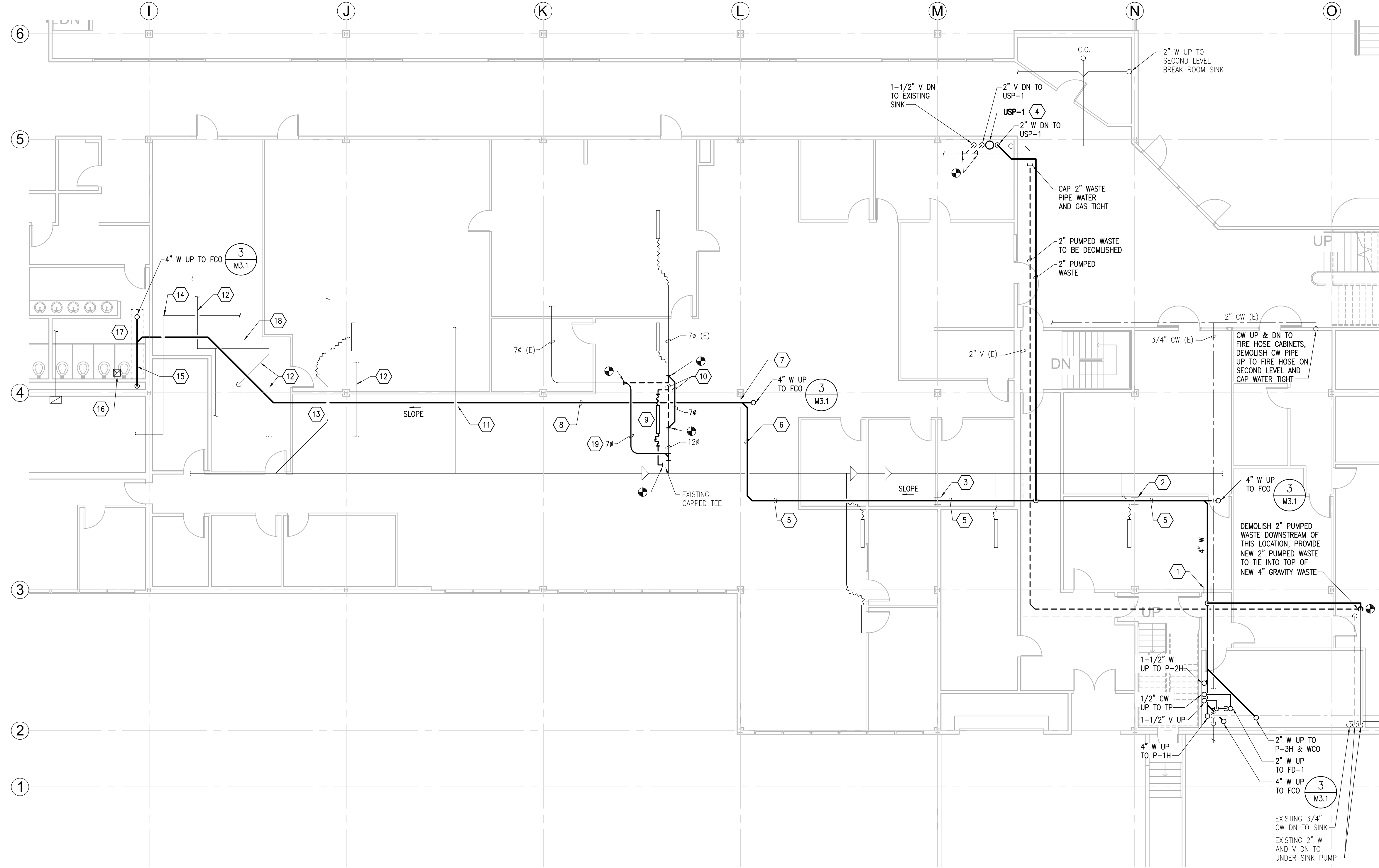
CHECKED: BAS



12816

PLOT DATE: 4/18/2013 4:03 PM
DRAWING FILE: x:\12816 frobren\dwgs\m2\dwg\sheet files\12816 - m2.1.dwg

1 FLOOR PLAN - FIRST FLOOR - PIPING
M2.1 SCALE: 1/8" = 1'-0"



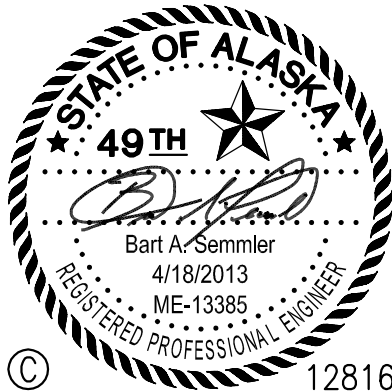
SHEET NOTES

- CUT 6" HOLE IN 18" DEEP BEAM WITH CENTERLINE OF WASTE PIPE APPROXIMATELY 9 INCHES BELOW THE SECOND LEVEL DECK. SEE STRUCTURAL FOR BEAM PENETRATION DETAIL. PROVIDE WASTE PIPE COUPLINGS AND SUPPORTS APPROXIMATELY 2'-0" ON EITHER SIDE OF BEAM PENETRATION.
- CUT 6" HOLE IN 21" DEEP BEAM WITH CENTERLINE OF WASTE PIPE APPROXIMATELY 11-1/2 INCHES BELOW THE SECOND LEVEL DECK. SEE STRUCTURAL FOR BEAM PENETRATION DETAIL. PROVIDE WASTE PIPE COUPLINGS AND SUPPORTS APPROXIMATELY 2'-0" ON EITHER SIDE OF BEAM PENETRATION.
- CUT 6" HOLE IN 21" DEEP BEAM WITH CENTERLINE OF WASTE PIPE APPROXIMATELY 15 INCHES BELOW THE SECOND LEVEL DECK. SEE STRUCTURAL FOR BEAM PENETRATION DETAIL. PROVIDE WASTE PIPE COUPLINGS AND SUPPORTS APPROXIMATELY 2'-0" ON EITHER SIDE OF BEAM PENETRATION.

- UNDER SINK PUMP, USP-1, INSTALLED IN CABINETS BENEATH FIRST LEVEL BREAK ROOM SINK. REVISE EXISTING 2" WASTE FROM SECOND LEVEL BREAK ROOM SINK & FIRST LEVEL BREAK ROOM SINK TO DISCHARGE INTO USP-1. CAP EXISTING WASTE DOWN TO PARKING LEVEL CEILING WATER AND GAS TIGHT. SEE DIAGRAM 5/M3.1.
- ROUTE 4" W IN JOIST SPACE AT 1% GRADE.
- ROUTE 4" WASTE IN AT END OF JOISTS.
- ROUTE WASTE TIGHT TO BOTTOM OF BEAM.
- ROUTE 4" W PIPE AT 1% GRADE.

- ROTATE EXISTING TERMINAL UNIT 180° AND RECONNECT TO EXISTING TEE NEAR TRUNK DUCT.
- REMOVE EXISTING 10# NORTH-SOUTH RUNNING DUCT SHOWN DASHED AND REPLACE WITH 7# DUCT ROUTED THROUGH JOIST SPACE ABOVE DRAIN, RECONNECT TO DUCT NEAR TERMINAL UNIT.
- REROUTE DUCT THROUGH JOIST SPACE ABOVE WASTE PIPE.
- REVISE SPRINKLER PIPING TO AVOID WASTE PIPE, TYP.
- REVISE AND RAISE EXISTING DUCT UP INTO SPACE AT END OF JOIST TO BE ABOVE WASTE. ESTIMATED TOP OF WASTE TO BOTTOM OF BEAM ON GRID J IS 6".
- RAISE DUCT IN JOIST END SPACE TO CLEAR WASTE LINE.

- REPLACE EXISTING 4" W FROM LEVEL 2 ABOVE TOILET CEILING AT A LOWER ELEVATION TO ACCEPT CONNECTION OF NEW 4" WASTE. EXTENT OF WORK IS FROM ABOUT 2' UPSTREAM OF NEW WASTE TIE-IN TO THE DROP IN THE TOILET ROOM PLUMBING WALL.
- RELOCATE EXHAUST AIR OUTLET CLEAR OF NEW WASTE.
- REPAIR GWB CEILING, PAINT TO MATCH EXISTING.
- MOVE EXISTING BRANCH DUCT VERTICAL OFFSET UP INTO JOIST SPACE TO A LOCATION CLOSER TO TRUNK DUCT TO MAKE CLEARANCE FOR WASTE LINE. REROUTE INLET OF CONNECTED TERMINAL UNIT TO CLEAR NEW WASTE.
- ROUTE 7# DUCT IN JOIST SPACE ABOVE WASTE PIPE.



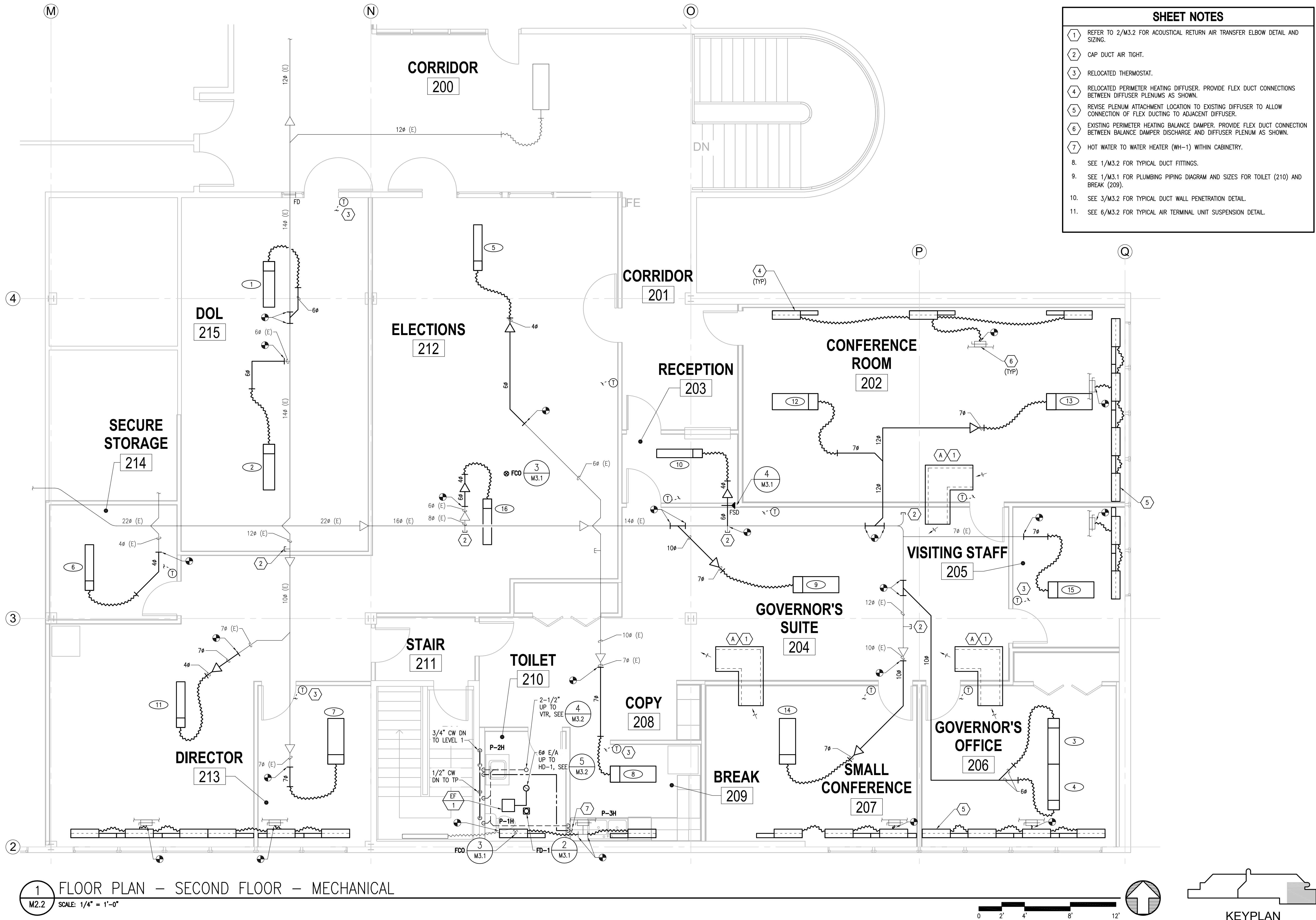
TITLE: FLOOR PLAN - FIRST
FILE NAME: FLOOR - PIPING
REVISIONS:
AUTHOR: BAS
CHECKED: BAS
04.25.2013

M2.1

© 2013 ECI/Hyer, Inc.
Adams, Morganthaler and Co., Inc.
701 East Tudor Road, Suite 250
Anchorage, Alaska 99503
phone 907.257.9100
www.amc-engineers.com
ENGINEERS
ECI/HYER ARCHITECTURE + INTERIORS
101 WEST BENSON BOULEVARD, SUITE 306
ANCHORAGE, ALASKA 99503
907.561.5543
PROJECT NO. 11-0013.24

FROB BUILDING RENOVATIONS
CONSTRUCTION DOCUMENTS

PLOT DATE: 4/18/2013 4:03 PM
DRAWING FILE: x:\12816 frob\m2.mech\sheet files\12816 - m2.2.dwg



SHEET NOTES

1. REFER TO 2/M3.2 FOR ACOUSTICAL RETURN AIR TRANSFER ELBOW DETAIL AND SIZING.
2. CAP DUCT AIR TIGHT.
3. RELOCATED THERMOSTAT.
4. RELOCATED PERIMETER HEATING DIFFUSER. PROVIDE FLEX DUCT CONNECTIONS BETWEEN DIFFUSER PLENUMS AS SHOWN.
5. REVISE PLENUM ATTACHMENT LOCATION TO EXISTING DIFFUSER TO ALLOW CONNECTION OF FLEX DUCTING TO ADJACENT DIFFUSER.
6. EXISTING PERIMETER HEATING BALANCE DAMPER. PROVIDE FLEX DUCT CONNECTION BETWEEN BALANCE DAMPER DISCHARGE AND DIFFUSER PLENUM AS SHOWN.
7. HOT WATER TO WATER HEATER (WH-1) WITHIN CABINETRY.
8. SEE 1/M3.2 FOR TYPICAL DUCT FITTINGS.
9. SEE 1/M3.1 FOR PLUMBING PIPING DIAGRAM AND SIZES FOR TOILET (210) AND BREAK (209).
10. SEE 3/M3.2 FOR TYPICAL DUCT WALL PENETRATION DETAIL.
11. SEE 6/M3.2 FOR TYPICAL AIR TERMINAL UNIT SUSPENSION DETAIL.

FLOOR PLAN - SECOND
TITLE: FLOOR - MECHANICAL

FILE NAME:
REVISIONS:
AUTHOR: BAS
04.25.2013

CHECKED: BAS

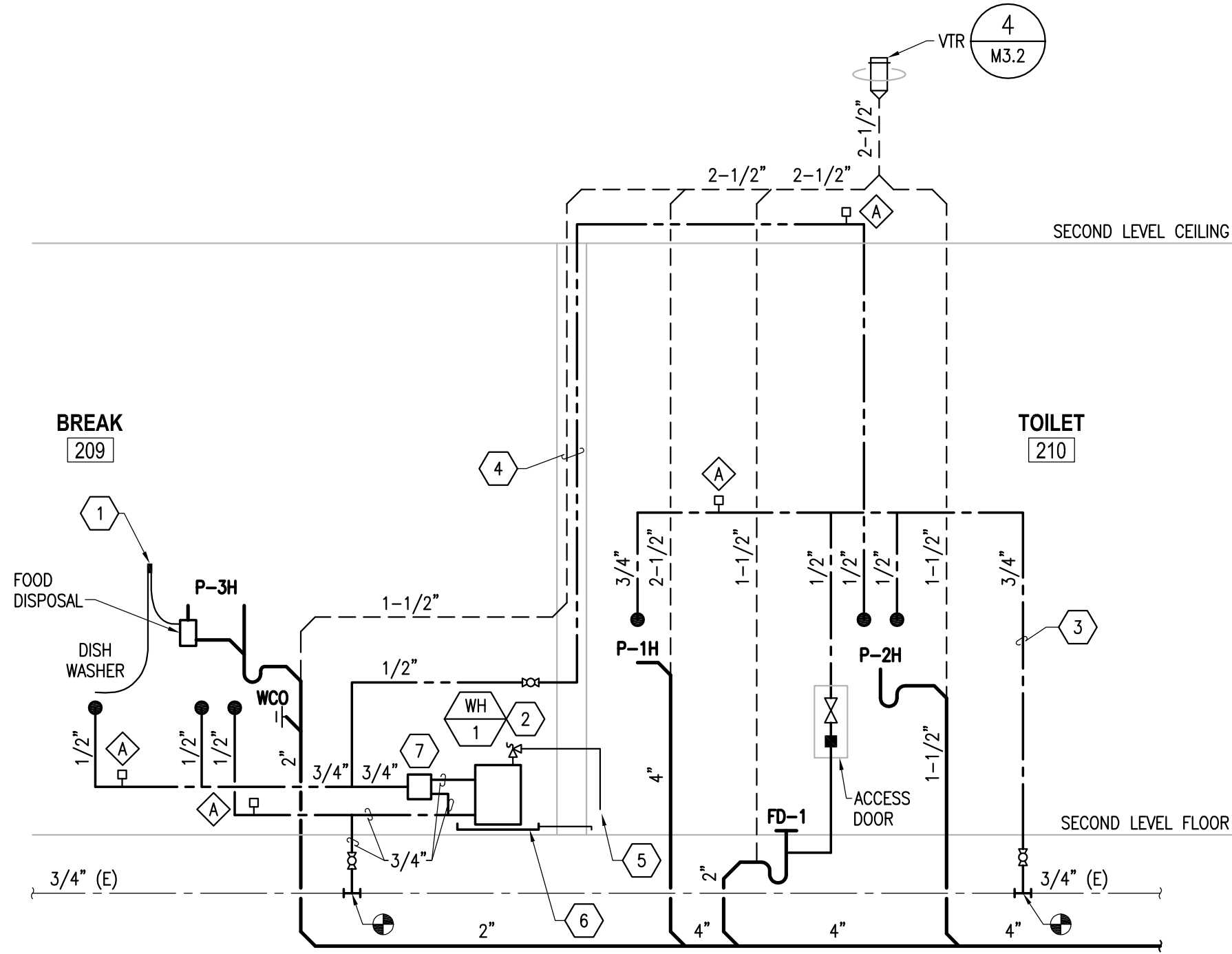


© 2013 ECI/Hyer, Inc.
Adams, Morgenthaler and Co., Inc.
701 East Tudor Road - Suite 250
Anchorage, Alaska 99503
phone 907.257.9100
www.amc-engineers.com
ENGINEERS
ECI/HYER ARCHITECTURE + INTERIORS
101 WEST BENSON BOULEVARD, SUITE 306
ANCHORAGE, ALASKA 99503
907.561.5543
PROJECT NO. 11-0013.24

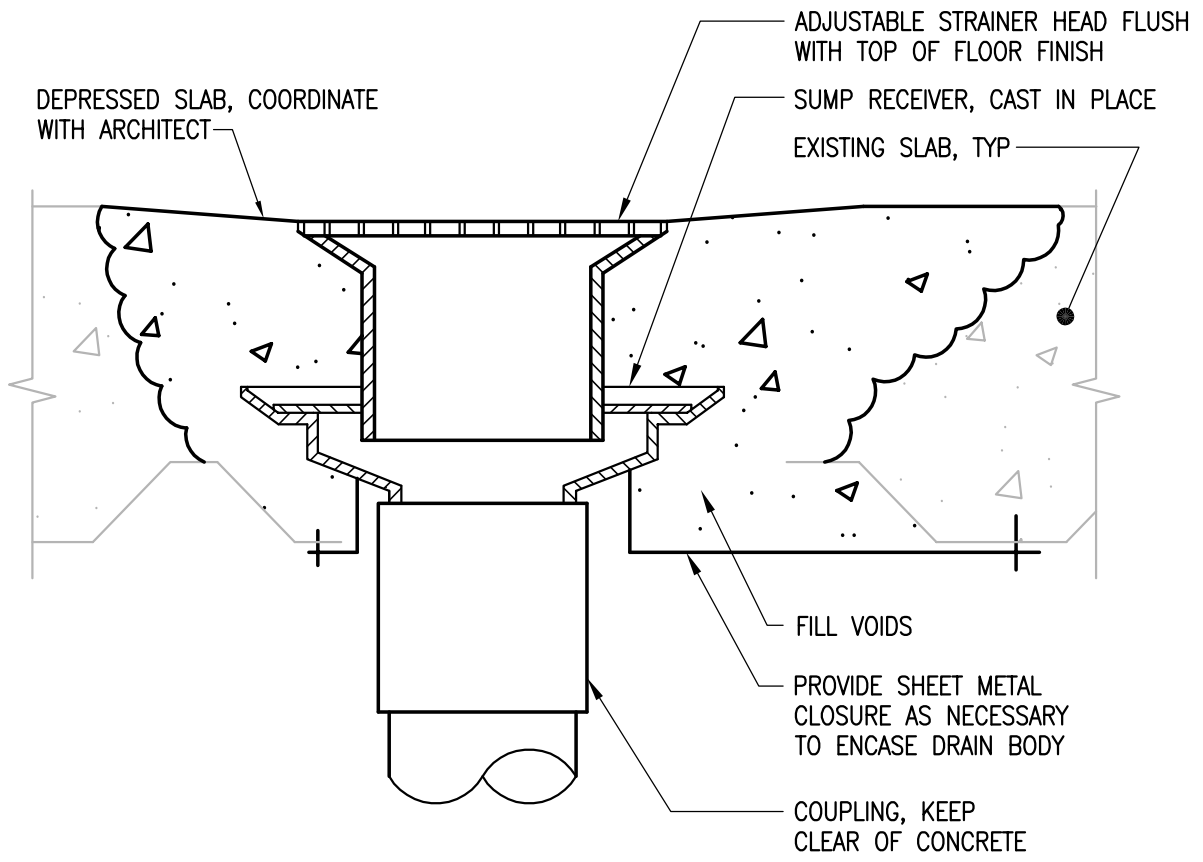
FROB BUILDING RENOVATIONS
CONSTRUCTION DOCUMENTS

M2.2

PLOT DATE: 4/18/2013 4:04 PM
DRAWING FILE: x:\12816 frobren\dwg\m3.dwg\sheet files\12816 - m3.1.dwg

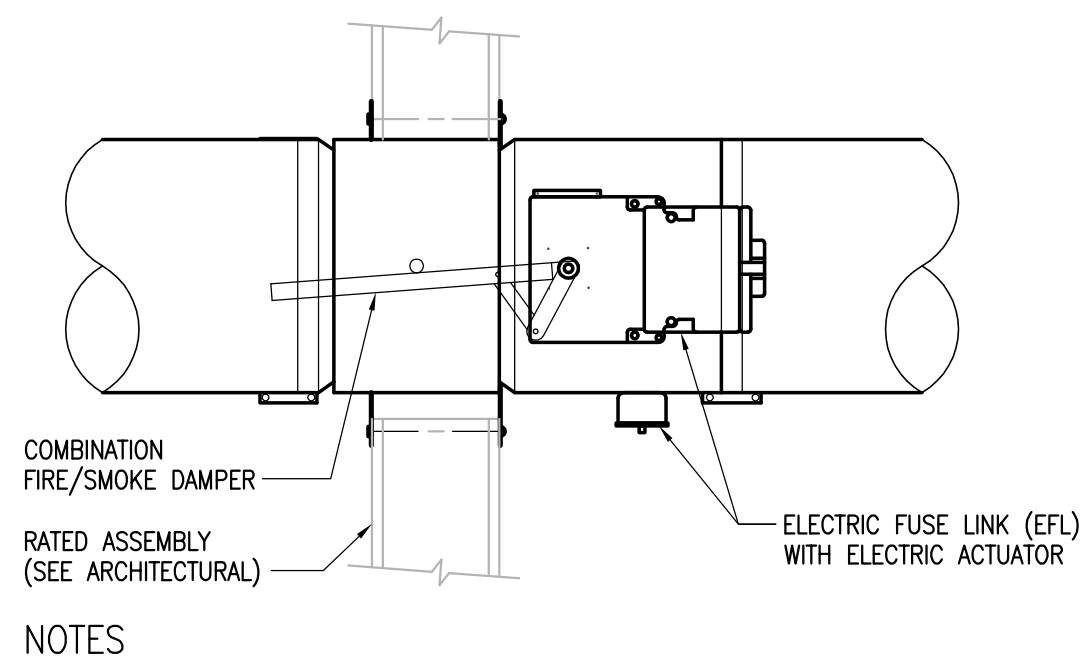
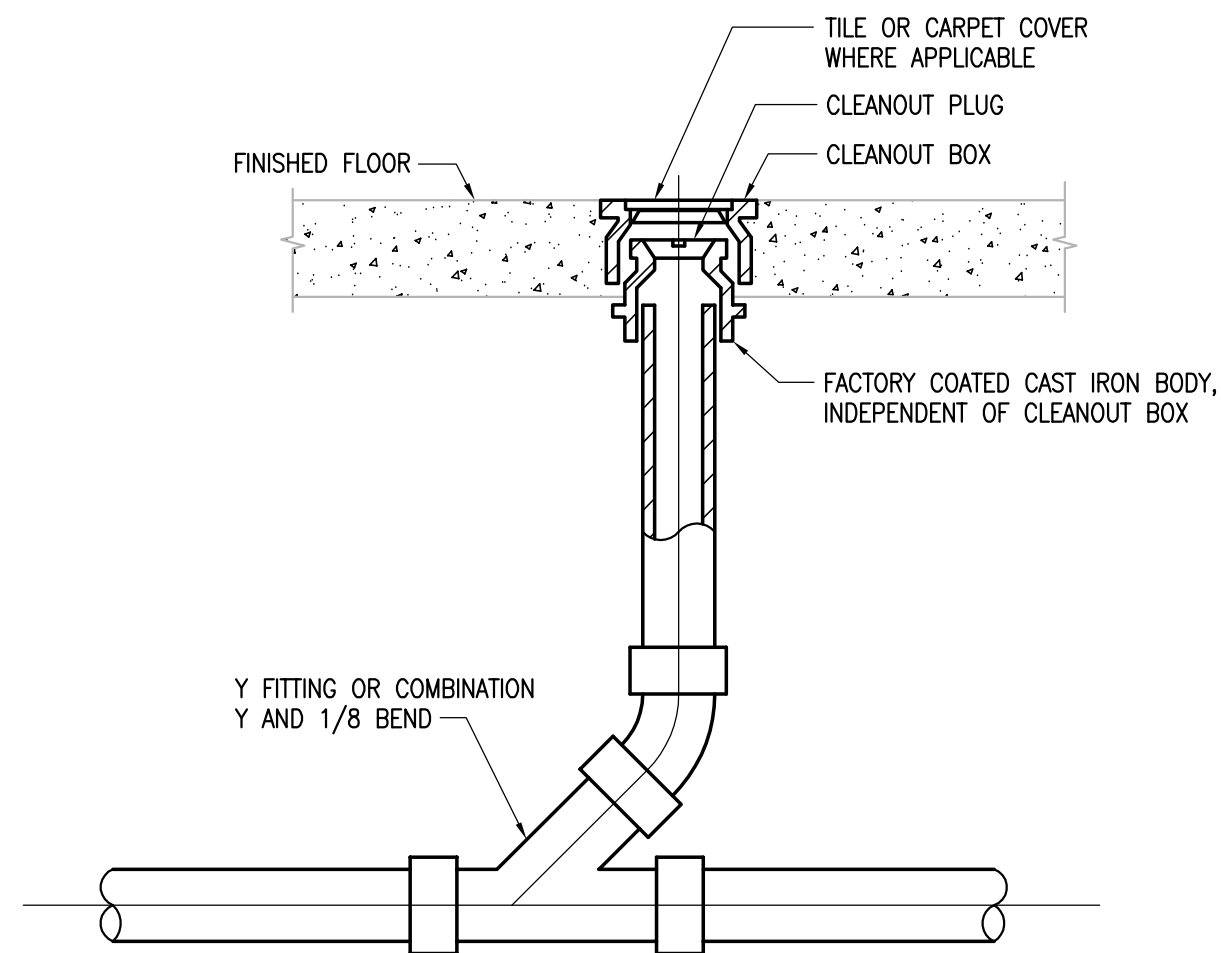


SHEET NOTES	
1	DISHWASHER WASTE ROUTED THROUGH DECK-MOUNTED AIR GAP AND INTO FOOD WASTE DISPOSER DISHWASHER CONNECTION.
2	WATER HEATER, WH-1, LOCATED IN CABINETY BELOW BREAK ROOM SINK.
3	3/4" CW PIPE ROUTED WITHIN WALL BEHIND LAVATORY (P-2H) AND WATER CLOSET (P-1H) IN TOILET (210).
4	1-1/2" V & 1/2" HW PIPE ROUTED UP TO CEILING IN WALL BETWEEN BREAK (209) AND TOILET (210) TO SERVE LAVATORY P-2H.
5	PIPE RELIEF VALVE DISCHARGE TO TOILET (210) AND TERMINATE 12 INCHES ABOVE FINISHED FLOOR.
6	GALVANIZED STEEL AUXILIARY CATCH PAN BENEATH WATER HEATER. ROUTE 3/4" CATCH PAN DRAIN TO TOILET (210).
7	THERMOSTATIC TEMPERING VALVE LOCATED IN CABINETY BELOW BREAK ROOM SINK WITH TEMPERATURE INDICATOR ON TEMPERED WATER PIPE. SET TEMPERED WATER TEMPERATURE TO 120 DEGREES F.

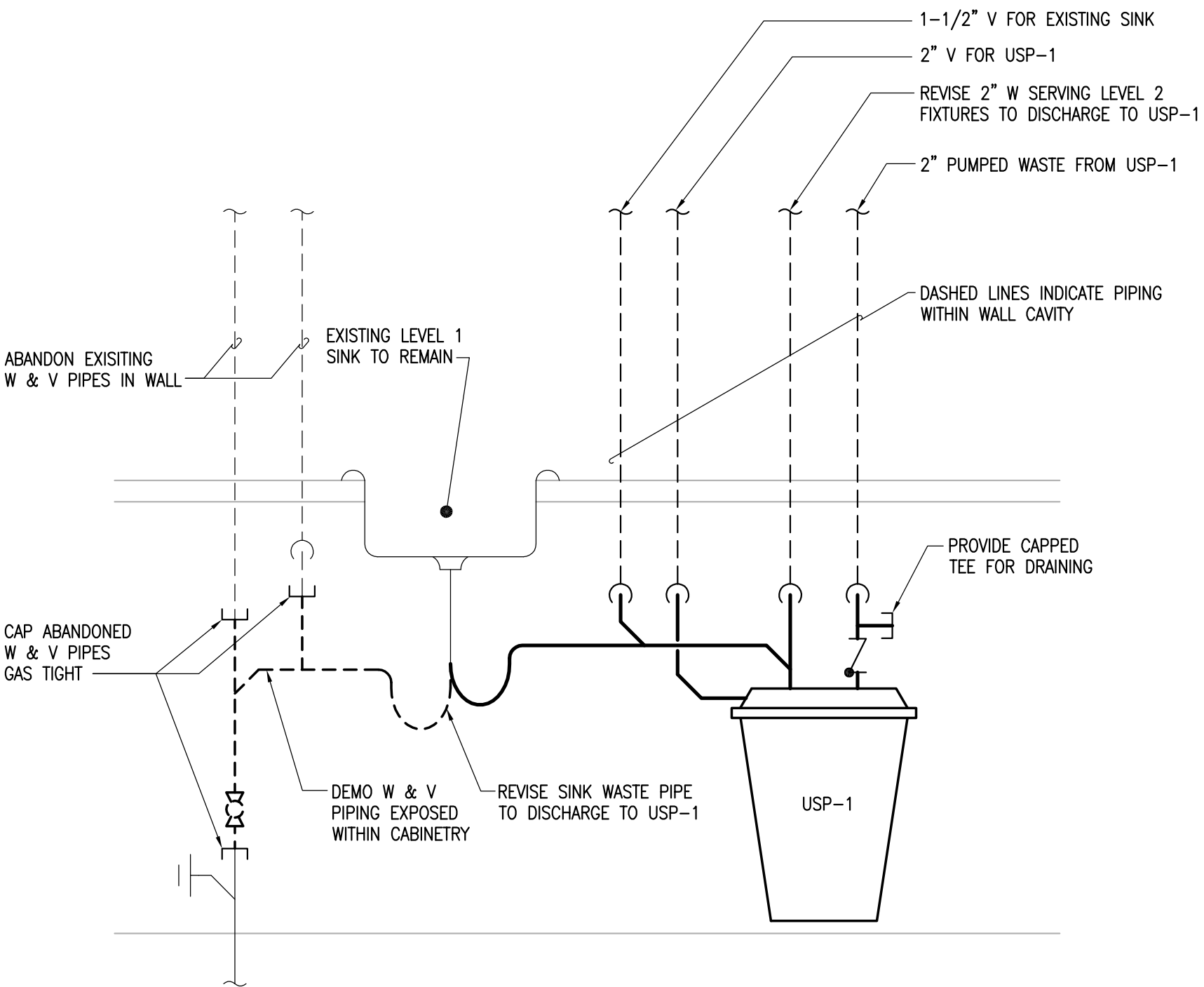


1 DIAGRAM – TOILET (210) & BREAK (209)
M3.1 SCALE: NONE

2 DETAIL – FLOOR DRAIN
M3.1 SCALE: NONE



- NOTES
- FOR ROUND DUCT SIZES 6" TO 18" DIAMETER.
 - PROVIDE FIRE/SMOKE DAMPER INSTALLATION IN ACCORDANCE WITH MANUFACTURER'S UL LISTING.
 - SEAL DUCT CONNECTIONS TO DAMPER WITH DUCT SEALANT.



3 DETAIL – FLOOR CLEANOUT
M3.1 SCALE: NONE

4 DETAIL – DUCTED FSD
M3.1 SCALE: NONE

5 DIAGRAM – USP-1 – LEVEL 1
M3.1 SCALE: NONE

TITLE: DIAGRAM - PLUMBING

FILE NAME:

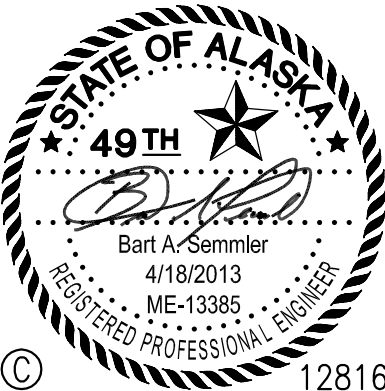
REVISIONS:

AUTHOR: BAS

04.25.2013

CHECKED: BAS

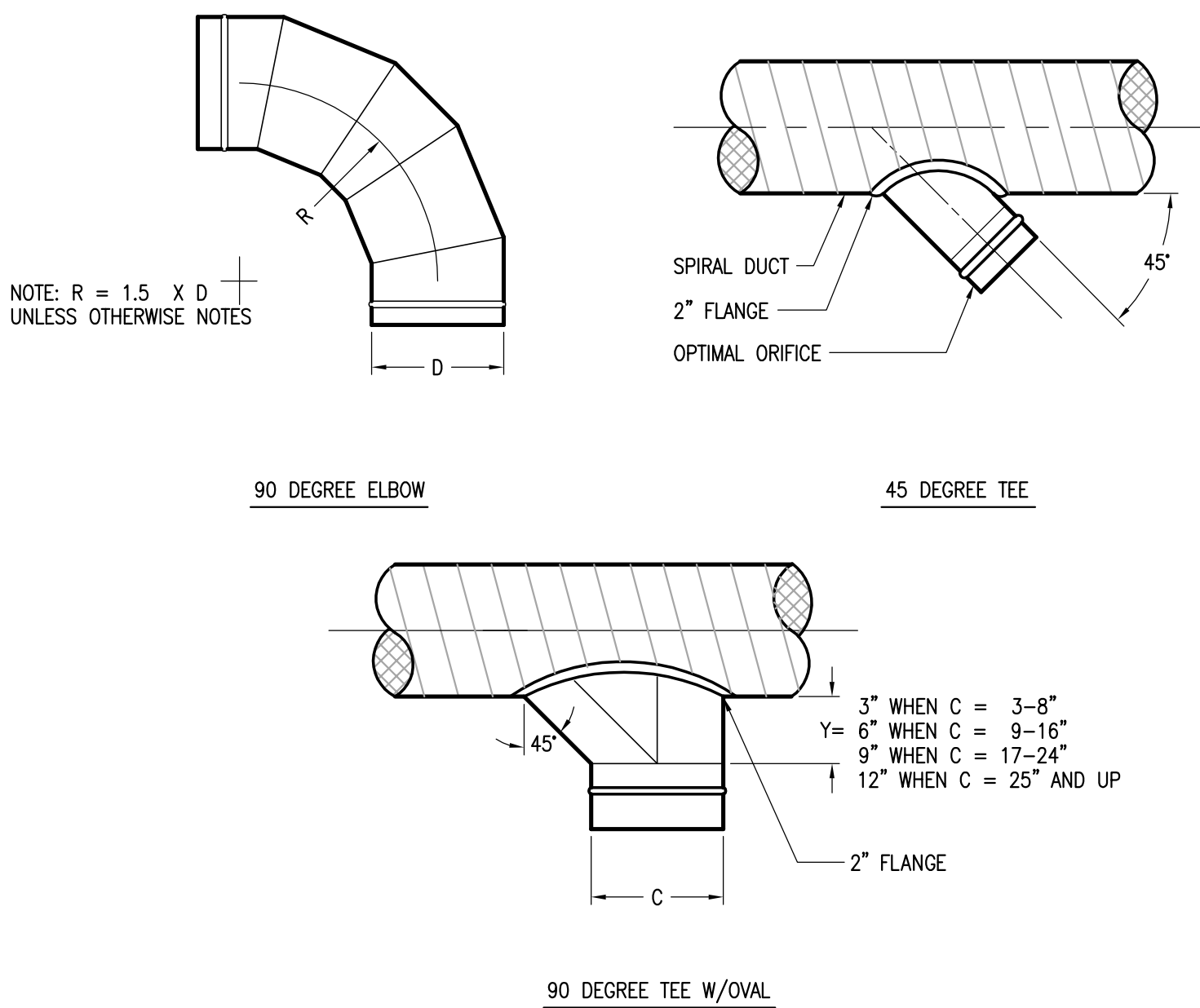
FROB BUILDING RENOVATIONS
CONSTRUCTION DOCUMENTS



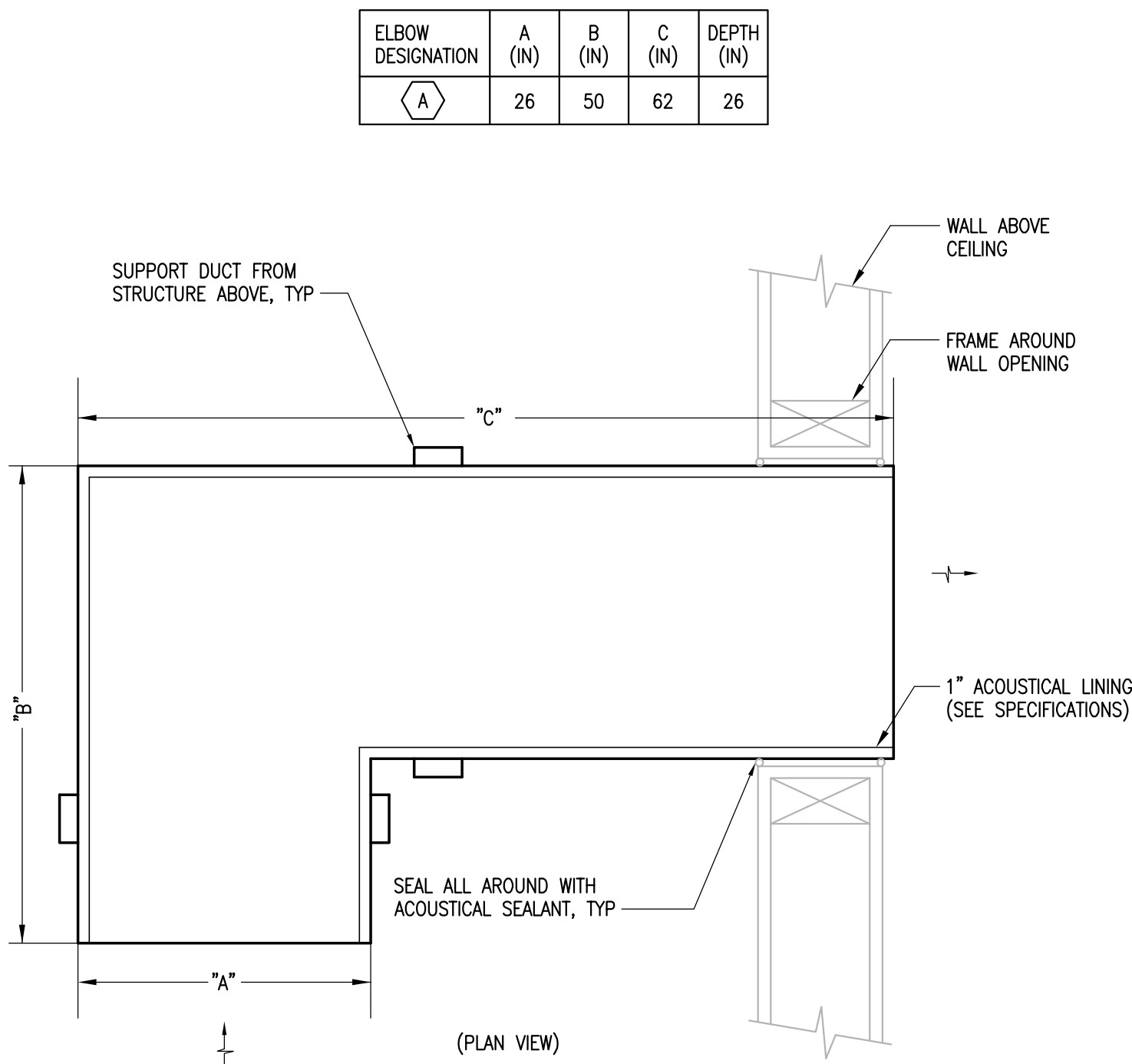
© 2013 ECI/Hyer, Inc.
Adams, Morgenthaler and Co., Inc.
701 East Tudor Road, Suite 250
Anchorage, Alaska 99503
phone 907.257.9100
www.amc-engineers.com
ECI/HYER ARCHITECTURE + INTERIORS
101 WEST BENSON BOULEVARD, SUITE 306
ANCHORAGE, ALASKA 99503
907.561.5543
PROJECT NO. 11-0013.24

M3.1

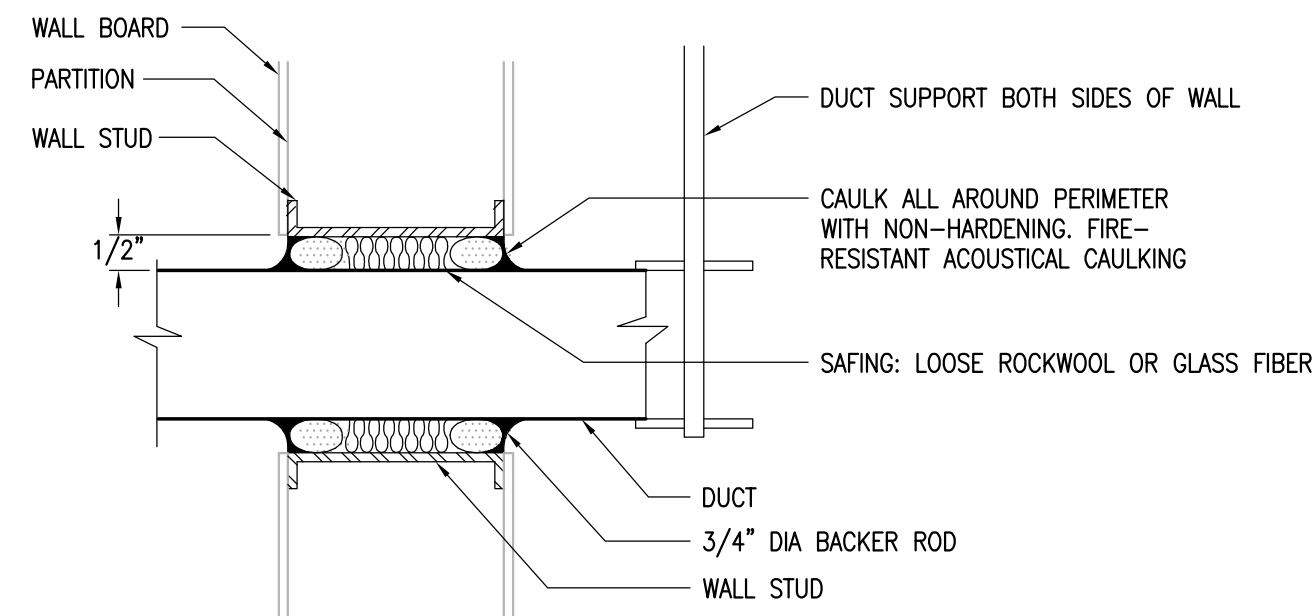
PLOT DATE: 4/18/2013 4:04 PM
DRAWING FILE: x:\12816 frobren\dwgs\m3.dwg\sheet files\12816 - m3.2.dwg



1 DETAIL – TYPICAL DUCT FITTINGS
M3.2 SCALE: NONE

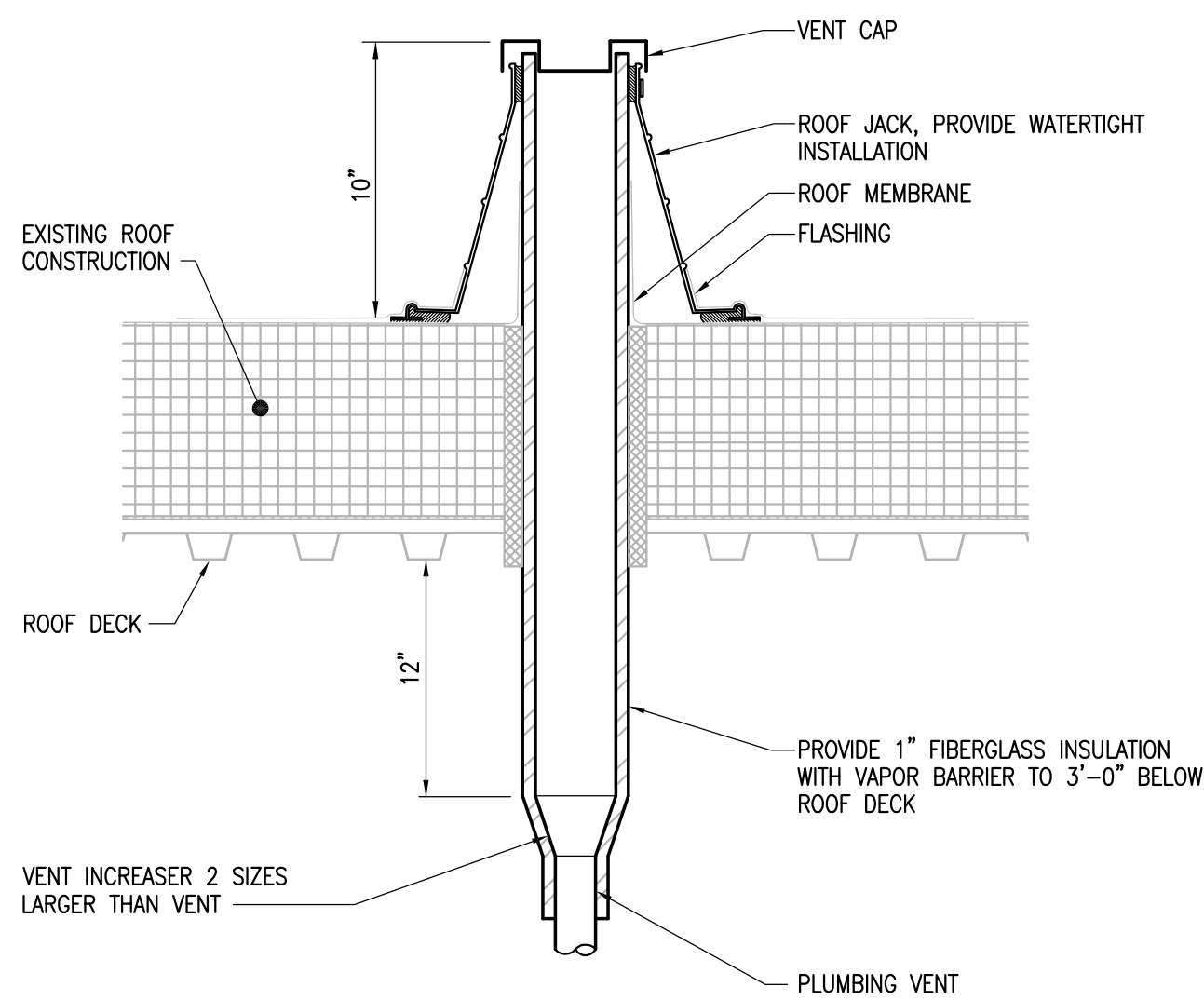


2 DETAIL – ACOUSTICAL RETURN AIR TRANSFER ELBOW
M3.2 SCALE: NONE

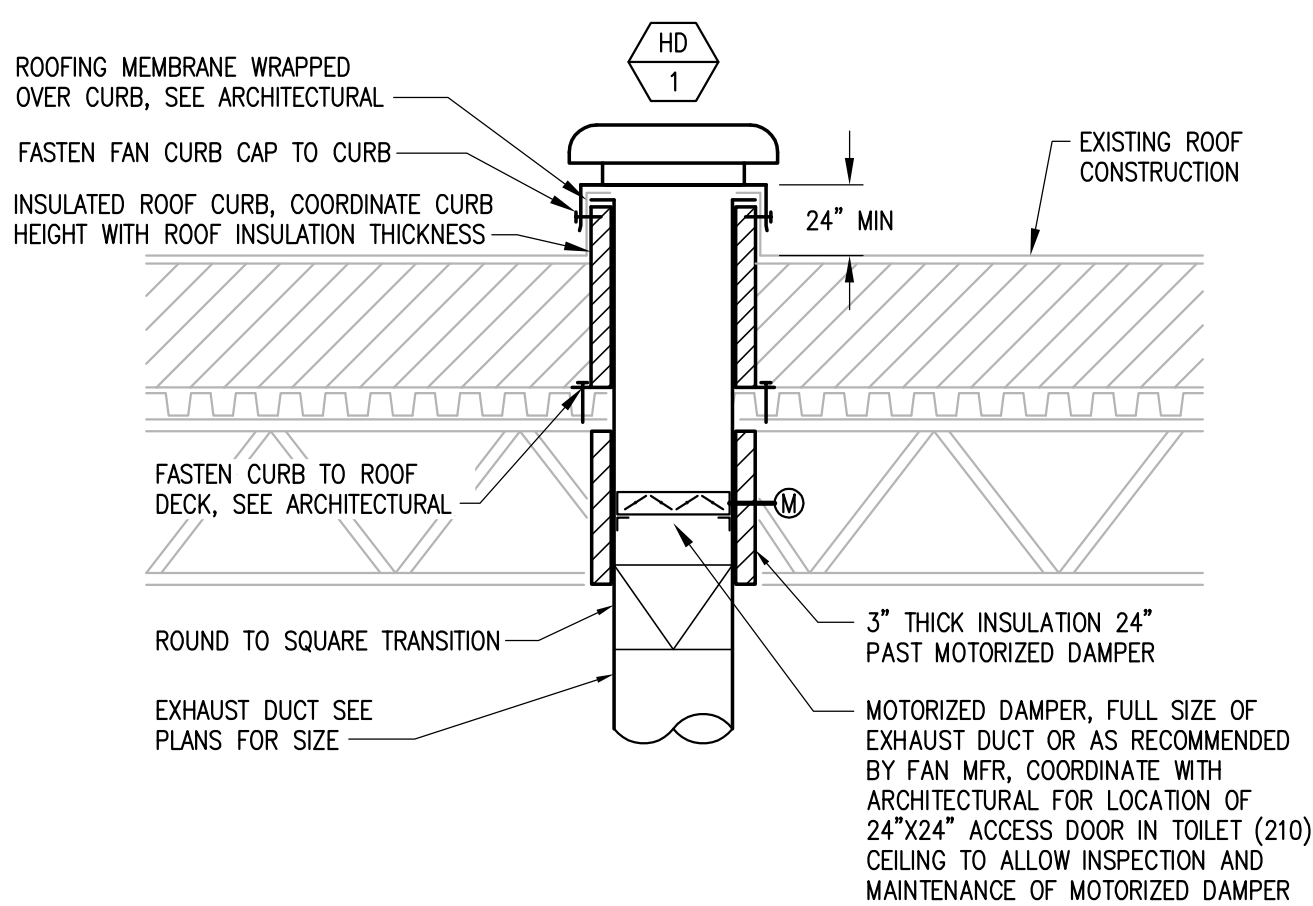


- NOTES
- DUCT SHALL NOT CONTACT WALL.
 - CAULKING SHALL FORM AIR-TIGHT SEAL AROUND DUCT.
 - TERMINATE AND SEAL DUCT INSULATION ON BOTH SIDES OF WALL PENETRATION.

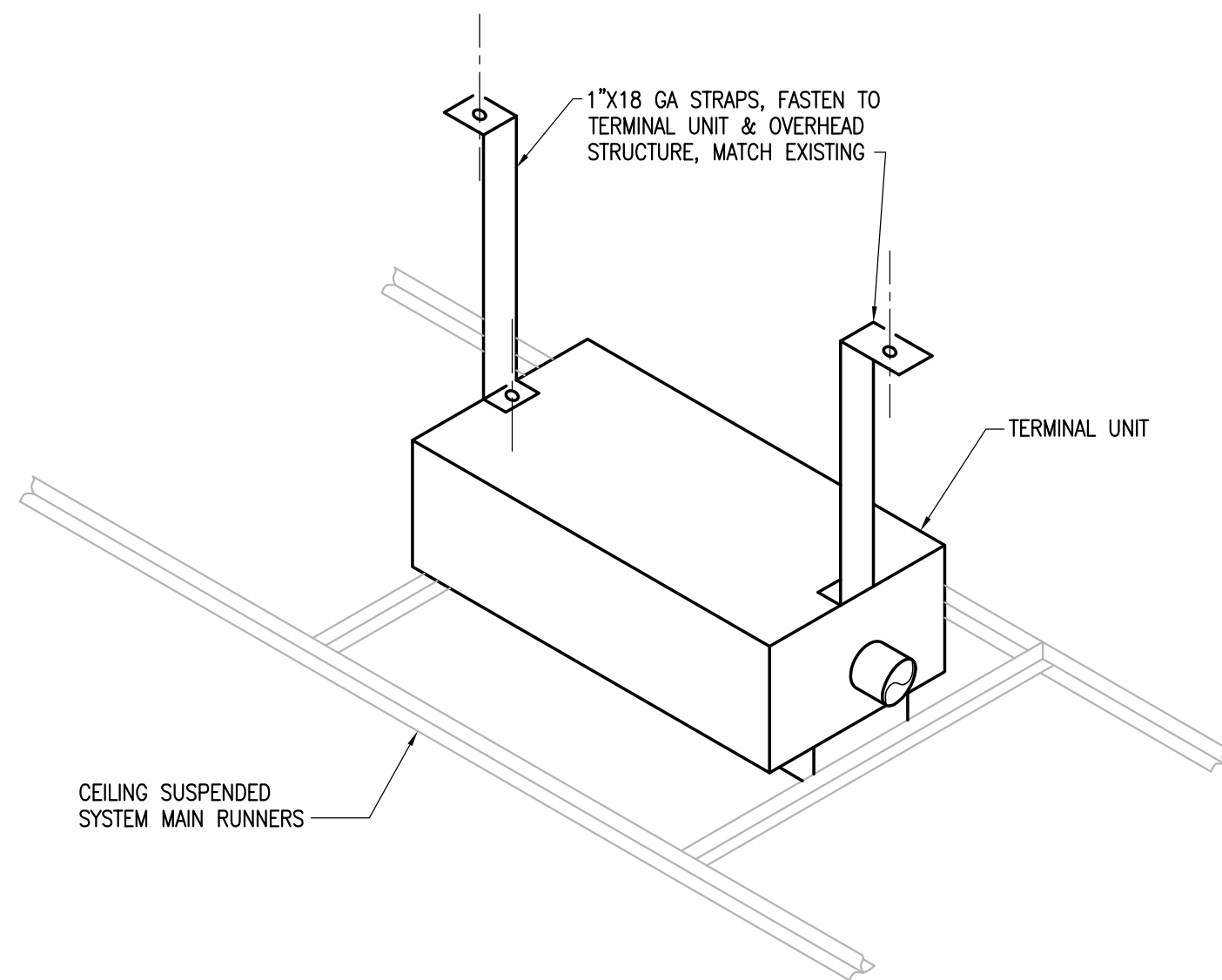
3 DETAIL – TYPICAL DUCT WALL PENETRATION
M3.2 SCALE: NONE



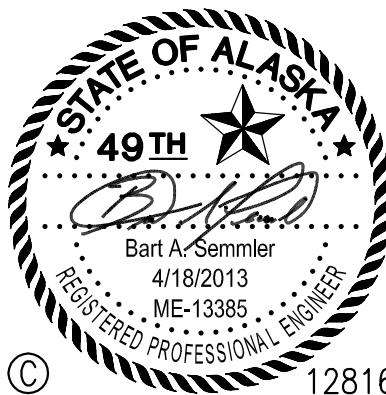
4 DETAIL – DWV VENT THROUGH ROOF
M3.2 SCALE: NONE



5 DETAIL – ROOF HOOD TERMINATION
M3.2 SCALE: NONE



6 AIR TERMINAL UNIT SUSPENSION
M3.2 SCALE: NONE



TITLE: DETAILS
FILE NAME:
REVISIONS:
AUTHOR: BAS
04.25.2013
CHECKED: BAS

© 2013 ECI/Hyer, Inc.
Adams, Morgenthaler and Co., Inc.
701 East Tudor Road - Suite 250
Anchorage, Alaska 99503
phone 907.257.9100
www.amc-engineers.com
ENGINEERS
ECI/HYER ARCHITECTURE + INTERIORS
101 WEST BENSON BOULEVARD, SUITE 306
ANCHORAGE, ALASKA 99503
907.561.5543
PROJECT NO. 11-0013.24

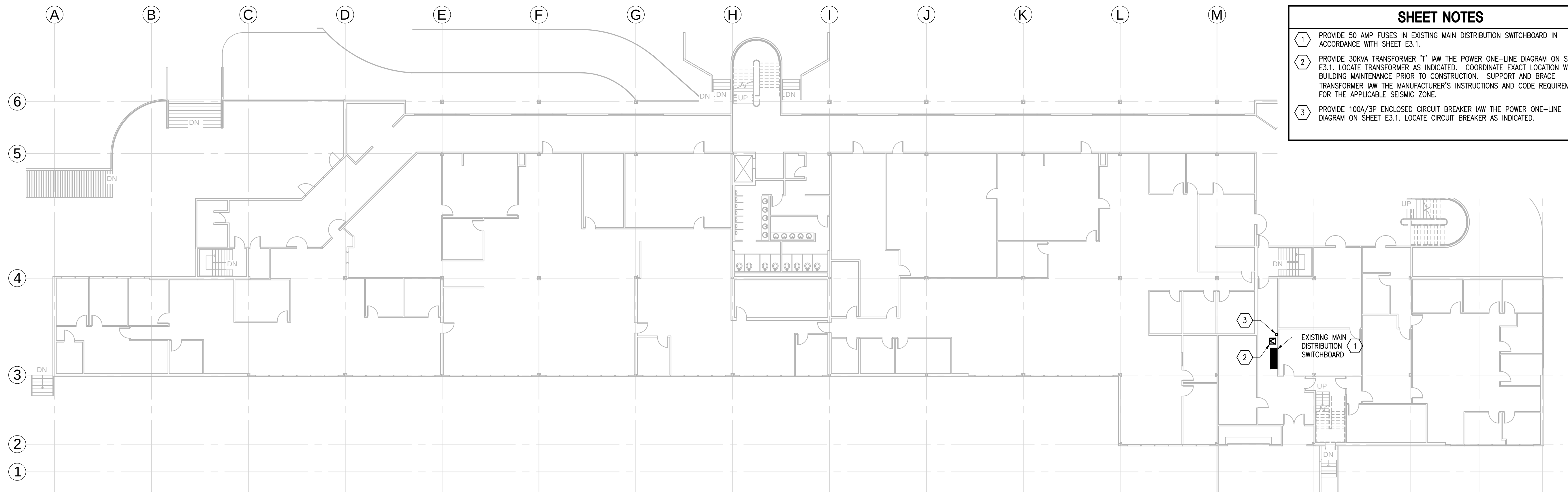
FROB BUILDING RENOVATIONS
CONSTRUCTION DOCUMENTS

M3.2

[illegible]

ELECTRICAL SPECIFICATIONS		
ELECTRICAL SPECIFICATIONS	WITH THE SCOPE OF WORK. REPORT DISCREPANCIES TO OWNER BEFORE DISTURBING EXISTING INSTALLATION. VERIFY FIELD MEASUREMENTS AND CIRCUITING ARRANGEMENTS. VERIFY THAT ABANDONED WIRING AND EQUIPMENT SERVE ONLY ABANDONED FACILITIES. BEGINNING OF DEMOLITION IMPLIES CONTRACTOR ACCEPTS EXISTING CONDITIONS.	SHOWN ON THE PANELBOARD SCHEDULE. BUS STRUCTURE SHALL ALLOW 1 AND/OR 2 POLE BREAKERS OF VARIOUS FRAME SIZES TO BE MOUNTED IN ANY LOCATION AND IN ANY COMBINATION UP TO THE CAPABILITY OF THE PANEL.
1) PROVIDE ALL LABOR, MATERIAL AND EQUIPMENT REQUIRED FOR COMPLETE, SAFE WORKABLE ELECTRICAL SYSTEMS AS INDICATED ON THE DRAWINGS AND IN THE SPECIFICATIONS. COMPLY WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE AND APPLICABLE LOCAL, STATE AND NATIONAL CODES AND STANDARDS.	18) PREPARATION	e) EACH PANELBOARD, AS A COMPLETE UNIT, SHALL HAVE A SHORT CIRCUIT CURRENT RATING (SCCR) EQUAL TO OR GREATER THAN 10,000 AMPS AT 240 VOLTS, AND 14,000 AMPS AT 480 VOLTS.
2) MATERIALS SHALL BE NEW, FULL WEIGHT, AMERICAN MADE AND BEAR THE UL LABEL.	a) DISCONNECT ELECTRICAL SYSTEMS IN WALLS, FLOORS, AND CEILINGS SCHEDULED FOR REMOVAL.	f) BRANCH CIRCUIT BREAKERS SHALL BE AS NOTED IN PANEL SCHEDULES.
3) USE THE DRAWINGS AS A GUIDE FOR QUANTITY, APPROXIMATE EQUIPMENT LOCATIONS AND DESIGN CRITERIA. COORDINATE WORK WITH OTHER TRADES AND ARCHITECTURAL FEATURES TO PROVIDE SYMMETRICAL APPEARANCE. IMMEDIATELY NOTIFY THE OWNER IN WRITING SHOULD CLARIFICATION BE REQUIRED DUE TO A CONFLICT OF QUANTITY, COORDINATION, LOCATION, ETC. THE OWNER'S DECISION IS FINAL AND BINDING. EXTRA COSTS INVOLVED TO COMPLY WITH THE SPECIFICATIONS AND DRAWINGS CAUSED BY A CONFLICT NOT BROUGHT TO THE ATTENTION OF THE OWNER IMMEDIATELY UPON DISCOVERY SHALL BE BORNE BY THE ELECTRICAL CONTRACTOR UNLESS EXTRA COST IS APPROVED IN WRITING.	b) COORDINATE UTILITY SERVICE OUTAGES WITH UTILITY COMPANY AND CONTRACTING AGENCY.	g) PANELBOARD SHALL BE EQUIPPED WITH AN INSULATED NEUTRAL TERMINAL BAR.
4) CONDUCT A SITE VISIT PRIOR TO SUBMISSION OF BID AND EXAMINE DRAWINGS AND SPECIFICATIONS FOR DISCREPANCIES BETWEEN THIS AND OTHER DIVISIONS OF THE WORK AND THE SITE. REPORT IN WRITING FIVE WORKING DAYS PRIOR TO BID OPENING ANY DISCREPANCIES WHICH THE CONTRACTOR BELIEVES ARE CONTRARY TO CODE OR THAT WILL NOT FUNCTION AS SHOWN. IF NONE ARE REPORTED IT IS ASSUMED THAT THE ABOVE CONDITIONS HAVE BEEN MET AND THE CONTRACTOR WILL BE RESPONSIBLE FOR A COMPLETE INSTALLATION WITH NO ADDITIONAL COST TO THE OWNER.	c) PROVIDE TEMPORARY WIRING AND CONNECTIONS TO MAINTAIN EXISTING SYSTEMS IN SERVICE DURING CONSTRUCTION. WHEN WORK MUST BE PERFORMED ON ENERGIZED EQUIPMENT OR CIRCUITS, USE PERSONNEL EXPERIENCED IN SUCH OPERATIONS.	h) PANELBOARD SHALL BE EQUIPPED WITH AN EQUIPMENT GROUNDING TERMINAL BAR TO TERMINATE EQUIPMENT GROUNDING CONDUCTORS.
5) OBTAIN AND PAY FOR ALL PERMITS AND REQUIRED INSPECTIONS.	d) EXISTING ELECTRICAL SERVICE: MAINTAIN EXISTING SYSTEMS IN SERVICE UNTIL NEW SYSTEM IS COMPLETE AND READY FOR SERVICE. DISABLE SYSTEM ONLY TO MAKE SWITCHOVERS AND CONNECTIONS. OBTAIN PERMISSION FROM OWNER AT LEAST 24 HOURS BEFORE PARTIALLY OR COMPLETELY DISABLING SYSTEM. CONTRACTOR SHALL NOT BE ENTITLED TO ANY ADDITIONAL COMPENSATION DUE TO INABILITY OF OWNER TO GRANT AN OUTAGE AT THE DESIRED TIME. MINIMIZE OUTAGE DURATION. MAKE TEMPORARY CONNECTIONS TO MAINTAIN SERVICE IN AREAS ADJACENT TO WORK AREA.	i) PROVIDE PANELBOARD WITH INTEGRAL SPD DEVICES.
6) EMPLOY WORKMEN SKILLED IN THE TRADE AND FAMILIAR WITH TECHNIQUES REQUIRED TO COMPLETE THE WORK IN A NEAT AND WORKMANLIKE MANNER. WORKMANSHIP IS SUBJECT TO APPROVAL BY THE OWNER.	19) FIRE ALARM SYSTEM	j) INTEGRAL SPD DEVICES SHALL BE FACTORY INSTALLED IN THE PANELBOARD.
7) FURNISH A ONE YEAR GUARANTEE FOR ALL ELECTRICAL MATERIALS AND LABOR. GUARANTEE SHALL COMMENCE AT FINAL PAYMENT. MAKE ALL NECESSARY REPAIRS IN A TIMELY MANNER AT NO COST TO THE OWNER.	a) EXISTING FIRE ALARM SYSTEM: MAINTAIN EXISTING SYSTEM IN SERVICE UNTIL NEW SYSTEM IS ACCEPTED. DISABLE SYSTEM ONLY TO MAKE SWITCHOVERS AND CONNECTIONS. NOTIFY OWNER AND APPLICABLE FIRE DEPARTMENT AUTHORITIES AT LEAST 24 HOURS BEFORE PARTIALLY OR COMPLETELY DISABLING SYSTEM. MINIMIZE OUTAGE DURATION. MAKE TEMPORARY CONNECTIONS TO MAINTAIN SERVICE IN AREAS ADJACENT TO WORK AREA.	k) VERIFY MOUNTING ARRANGEMENTS FOR EACH LOCATION SHOWN ON THE PLANS. WHERE CABINETS ARE RECESSED, VERIFY ADEQUATE THICKNESS OF WALL AND MAKE ARRANGEMENTS FOR FURRING OR TRIM AS REQUIRED. IN GENERAL, ALL CONDUITS SHALL ENTER THE TOP OR BOTTOM OF PANEL.
8) WIRING SHALL BE COPPER. XHHW, THHN/THWN INSULATION MINIMUM. MINIMUM WIRE SIZE #12 AWG. ALL CONDUCTORS USED ON THIS PROJECT SHALL BE COPPER, SOLID OR STRANDED FOR WIRING #10 OR SMALLER, STRANDED FOR #8 OR LARGER.	b) PROVIDE, REMOVE OR RELOCATE EXISTING FIRE ALARM DEVICES AS SHOWN ON THE PLANS. NEW DEVICES SHALL BE IDENTICAL TO EXISTING SIMILAR DEVICES AND UL LISTED WITH THE EXISTING FIRE ALARM SYSTEM.	23) OVERCURRENT PROTECTIVE DEVICES
9) WIRING SHALL BE IN METAL RACEWAYS. PROVIDE PROPERLY SIZED AND BONDED GROUNDING CONDUCTORS WITH POWER CIRCUITS.	c) IDENTIFY FIRE ALARM CONDUIT AND BOXES WITH RED PAINT.	a) CIRCUIT PROTECTIVE DEVICES SHALL BE MOLDED CASE CIRCUIT BREAKERS SAME MANUFACTURER AS PANELBOARD. RATINGS SHALL BE AS SHOWN ON PANEL SCHEDULES AND/OR DRAWINGS.
10) FEEDERS ARE SIZED FOR AMPACITY ONLY. THE CONTRACTOR SHALL INCREASE FEEDER SIZES IF REQUIRED TO PREVENT FEEDER VOLTAGE DROP FROM EXCEEDING 3%. VOLTAGE DROP AT OUTLETS SHALL NOT EXCEED 5%.	d) PROVIDE REQUIRED EQUIPMENT, CARDS, PROGRAMMING, BATTERIES, ETC. AT THE EXISTING FIRE ALARM SYSTEM CONTROL PANEL(S) AND THE REMOTE SYSTEM FRONT END TERMINALS TO SUPPORT REVISED FIRE ALARM SYSTEM. SUBMIT BATTERY CALCULATIONS FOR REVISED SYSTEM. FIRE ALARM WORK SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF NFPA 72.	b) CIRCUIT BREAKERS SHALL HAVE A PERMANENT TRIP UNIT CONTAINING INDIVIDUAL THERMAL AND MAGNETIC TRIP ELEMENTS IN EACH POLE.
11) WIRING DEVICES SHALL BE SPECIFICATION GRADE. COLOR SELECTED BY THE DEPARTMENT, FOR NON DEDICATED CIRCUITS, CONNECT A MAXIMUM OF FOUR DUPLEX RECEPTACLES TO A SINGLE CIRCUIT.	e) PERFORM REACCEPTANCE TESTING OF THE FIRE ALARM SYSTEM IN ACCORDANCE WITH NFPA 72, CHAPTER 7. COORDINATE TESTING WITH THE OWNER. PROVIDE A MINIMUM OF 72 HOURS NOTICE. CONTRACTOR SHALL NOT BE ENTITLED TO ANY ADDITIONAL COMPENSATION DUE TO INABILITY OF OWNER TO SCHEDULE TEST AT THE DESIRED TIME. SUBMIT FINAL TEST RESULTS.	24) PANELBOARD SURGE PROTECTIVE DEVICE (SPD)
12) FURNISH NEATLY TYPED, FULLY DETAILED BRANCH CIRCUIT DIRECTORY IN PANEL. ODD CIRCUITS ON LEFT, EVEN ON RIGHT.	20) DEMOLITION OF EXISTING ELECTRICAL WORK	a) THE SPD SHALL HAVE A WARRANTY PERIOD OF FIVE YEARS, INCORPORATING UNLIMITED REPLACEMENTS OF SUPPRESSOR PARTS IF THEY ARE DESTROYED BY TRANSIENTS DURING THE WARRANTY PERIOD.
13) LIGHTING FIXTURES SHALL COMPLY WITH THE REQUIREMENTS OF N.E.C. ARTICLE 410. PROVIDE SAFETY HANGAR WIRES FOR FIXTURES, AS FOLLOWS:	a) REMOVE, RELOCATE, AND EXTEND EXISTING INSTALLATIONS TO ACCOMMODATE NEW CONSTRUCTION.	b) ACCEPTABLE MANUFACTURERS INCLUDE: ADVANCED PROTECTION TECHNOLOGIES, LIEBERT, CURRENT TECHNOLOGY, OR APPROVED EQUAL. THE MANUFACTURER SHALL BE REGULARLY ENGAGED IN THE MANUFACTURE OF SPD DEVICES FOR ANSI C62.41 B AND C EXPOSURE CATEGORIES FOR AT LEAST FIVE YEARS. NOTE SPECIFIC PRODUCTS ARE SUBJECT TO APPROVAL.
a) PROVIDE SAFETY WIRES (A MINIMUM OF TWO 12 GAUGE HANGERS) OR EQUIVALENT CHAINS FOR EACH LIGHT FIXTURE WEIGHING LESS THAN 56 POUNDS INSTALLED IN T-BAR OR OTHER CEILING SUSPENSION SYSTEMS. SAFETY WIRES AND CHAINS SHALL BE SECURELY ATTACHED TO DIAGONALLY OPPOSITE CORNERS OF EACH FIXTURE AND TO STRUCTURE. FIXTURES WEIGHING 56 POUNDS OR MORE SHALL BE SUPPORTED FROM STRUCTURE.	b) REMOVE ABANDONED WIRING TO SOURCE OF SUPPLY.	c) WHERE SPD DEVICES ARE SPECIFIED AS AN INTEGRAL PART OF DISTRIBUTION EQUIPMENT, THE MANUFACTURER OF THE SPD DEVICE SHALL BE PARTNERED WITH THE DISTRIBUTION EQUIPMENT MANUFACTURER IN PROVIDING A UL LISTED DEVICE.
b) SURFACE MOUNTED LIGHTING FIXTURES SUPPORTED FROM T-BAR GRID SHALL BE ATTACHED TO THE GRID WITH A POSITIVE CLAMP DEVICE THAT COMPLETELY SURROUNDS THE SUPPORTING MEMBER SIMILAR TO CADDY "IDS". PROVIDE SAFETY WIRES AS SPECIFIED IN THE FOREGOING.	c) REMOVE EXPOSED ABANDONED CONDUIT, INCLUDING ABANDONED CONDUIT ABOVE ACCESSIBLE CEILING FINISHES. CUT CONCEALED CONDUIT FLUSH WITH WALLS AND FLOORS, AND PATCH SURFACES.	d) SPD SHALL BE COMPATIBLE WITH THE ELECTRICAL SYSTEM VOLTAGE, CURRENT, CONFIGURATION AND INTENDED APPLICATION.
c) PROVIDE SAFETY WIRES (A MINIMUM OF TWO 12 GAUGE HANGERS) OR EQUIVALENT AIRCRAFT CABLE FOR EACH PENDANT MOUNTED FIXTURE. HANGARS OR CABLE SHALL BE SECURELY ATTACHED TO FIXTURE, THEN ROUTED THROUGH STEM AND SECURELY ATTACHED TO STRUCTURE.	d) DISCONNECT ABANDONED OUTLETS AND REMOVE DEVICES. REMOVE ABANDONED OUTLETS IF CONDUIT SERVICING THEM IS ABANDONED AND REMOVED. PROVIDE BLANK COVER FOR ABANDONED OUTLETS WHICH ARE NOT REMOVED. IN FINISHED AREAS, BLANK COVERS SHALL BE BLANK PLATES MATCHING THE DEVICE PLATES SPECIFIED FOR NEW WORK, UNLESS OTHERWISE NOTED OR SPECIFIED.	e) SPD SHALL BE PARALLEL IN DESIGN.
14) FLUORESCENT LAMPS SHALL BE PREMIUM ENERGY SAVING TYPE, CRI = 80 OR BETTER, COLOR TEMPERATURE = 4100K. ALL BALLASTS SHALL BE ELECTRONIC WITH THD <10%.	e) DISCONNECT AND REMOVE ELECTRICAL DEVICES AND EQUIPMENT SERVING UTILIZATION EQUIPMENT THAT HAS BEEN REMOVED.	f) SPD SHALL BE MODULAR IN DESIGN. EACH SUPPRESSION ELEMENT SHALL BE A USER REPLACEABLE SURGE CURRENT DIVERSION MODULE (MOV BASED). EACH SURGE CURRENT DIVERSION MODULE SHALL BE FUSED WITH 200,000 AIR RATED FUSES.
15) TELECOMMUNICATIONS OUTLETS SHALL HAVE THE FOLLOWING MINIMUM FEATURES:	f) DISCONNECT AND REMOVE ABANDONED LUMINAIRES. REMOVE BRACKETS, STEMS, HANGERS, AND OTHER ACCESSORIES.	g) SPD SHALL HAVE A MAXIMUM CONTINUOUS OPERATION VOLTAGE (MCOV) NOT LESS THAN 115% OF THE NOMINAL RMS VOLTAGE CONTINUOUSLY WITHOUT DEGRADATION. FOR EXAMPLE, DEVICES THAT USE 130V MOV'S FOR 120V SYSTEMS ARE NOT ACCEPTABLE.
a) BE PROVIDED COMPLETE WITH BOXES, BOX MUD RINGS, RACEWAYS, BUSHINGS, AND UNTERMINATED CABLES WITH SLACK AT BOTH ENDS. AT HEAD END, PROVIDE ADEQUATE SLACK FOR TERMINATION.	g) REPAIR ADJACENT CONSTRUCTION AND FINISHES DAMAGED DURING DEMOLITION AND EXTENSION WORK.	h) SPD SHALL HAVE A MINIMUM EMI/RFI FILTERING OF -50DB AT 100KHZ WITH AN INSERTION RATIO OF 50:1 USING MIL STD. 220A METHODOLOGY.
b) BOXES SHALL BE MINIMUM 4-11/16" SQ BY 2-1/8" DEEP.	h) MAINTAIN ACCESS TO EXISTING ELECTRICAL INSTALLATIONS WHICH REMAIN ACTIVE. MODIFY INSTALLATION OR PROVIDE ACCESS PANELS AS APPROPRIATE.	i) SPD SHALL PROVIDE BOTH VISUAL AND AUDIBLE INDICATION OF PROPERLY PERFORMING PROTECTION FOR EACH PHASE.
c) RACEWAYS SHALL BE MINIMUM 1" EMT.	i) RESTORE CIRCUITS AND SYSTEMS THAT REMAIN THAT ARE AFFECTED IN ANY WAY BY DEMOLITION WORK SUCH AS LOADS DOWNSTREAM OF DEMOLISHED EQUIPMENT, SWITCHED LIGHTING CIRCUITS WHERE SELECTED LIGHT FIXTURES ARE DEMOLISHED, ETC.	j) SPD SHALL PROVIDE FULL CYCLE TRACKING CIRCUITRY TO PROVIDE TIGHT TRANSIENT CLAMPING REGARDLESS OF THE TRANSIENT POSITION ON THE SINE WAVE.
d) RACEWAY STUBS AND SLEEVES SHALL BE EQUIPPED WITH INSULATING BUSHINGS.	j) SALVAGE OR DISPOSAL OF REMOVED ITEMS SHALL BE AS NOTED ON THE DRAWINGS OR AS DIRECTED BY THE CONTRACTING AGENCY. ITEMS WHICH THE OWNER DOES NOT DESIRE TO RETAIN SHALL BE DISPOSED OF AT A LEGAL DISPOSAL SITE.	k) SPD MODULES SHALL BE FUSED AND SPD SHALL BE CAPABLE OF SAFELY INTERRUPTING THE POWER SYSTEM'S AVAILABLE FAULT CURRENT.
e) RACEWAYS SHALL BE PROVIDED INSIDE WALLS AND FOR TRANSITION FROM ABOVE CEILING TO THE HEAD END EQUIPMENT. ALL RACEWAYS SHALL BE PROPERLY FIRESTOPPED. OPEN PLENUM-RATED CABLE SHALL BE PROVIDED ABOVE THE CEILING. SUPPORT OPEN CABLES IN "J" HOOKS.	21) CLEANING AND REPAIR	l) SPD SHALL INCORPORATE A LOW IMPEDANCE SURGE DIVERSION PLATFORM FOR THE SURGE CURRENT PATH. THE SURGE CURRENT SHALL BE SYMMETRICALLY DISBURSED TO ALL SUPPRESSION ELEMENTS TO INSURE EQUAL STRESSING AND MAXIMUM PERFORMANCE OF THE SUPPRESSION ELEMENTS. THE SURGE DIVERSION PLATFORM SHALL PROVIDE EQUAL IMPEDANCE PATHS TO EACH SUPPRESSION ELEMENT FOR SHUNTING OF HIGH FREQUENCY SURGES. THE SURGE CURRENT DIVERSION MODULES SHALL BE BOLTED DIRECTLY TO THE PLATFORM TO INSURE RELIABLE LOW IMPEDANCE CONNECTIONS. SMALL GAUGE ROUND WIRING OR PLUG-IN CONNECTIONS SHALL NOT BE USED IN THE PATH FOR SURGE CURRENT DIVERSION.
f) CABLES SHALL BE 4-PAIR CATEGORY 5e, PLENUM RATED. QUANTITIES AS SHOWN ON THE PLANS. NO FACTORY OR OTHER SPLICES ARE ALLOWED.	a) CLEAN AND REPAIR EXISTING MATERIALS AND EQUIPMENT WHICH REMAIN OR ARE TO BE REUSED OR ARE AFFECTED BY THIS WORK.	m) SPD SHALL BE TESTED AGAINST ANSI C62.41 CATEGORY B3 IMPULSE AND CATEGORY B3 RINGWAVE TRANSIENTS.
g) THE INSTALLER OF THE TELECOM CABLES AND RACEWAYS SHALL HAVE AT LEAST FIVE (FIVE) YEARS EXPERIENCE WITH SIMILAR INSTALLATIONS.	b) MODIFICATIONS TO SPECIAL SYSTEMS (I.E., INTERCOM, PUBLIC ADDRESS) SHALL BE CERTIFIED AND THE SYSTEM PERFORMANCE SHALL BE CERTIFIED TO BE EQUAL OR BETTER TO PERFORMANCE PRIOR TO CONSTRUCTION BY THE SYSTEM MANUFACTURER'S AUTHORIZED REPAIR/SERVICE PERSONNEL.	n) SPD SHALL BE CAPABLE OF SURVIVING 5000 SEQUENTIAL ANSI C62.41 B3 IMPULSES, WITHOUT FAILURE OR DEGRADATION OF UL 1449 SUPPRESSED VOLTAGE RATING BY MORE THAN 10%.
h) ALL WORK SHALL COMPLY WITH APPLICABLE ANSI/TIA/EIA AND BICSI STANDARDS, SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS, AND SHALL BE ACCEPTABLE TO THE DATA SYSTEM AND THE TELEPHONE SYSTEM PROVIDERS.	22) PANELBOARDS	a) SPD SHALL HAVE A U.L. 1449 SUPPRESSED VOLTAGE RATING (SVR) OR CLAMP RATING AS FOLLOWS: 400 VOLTS (L-N AND N-G) FOR 120/208 VOLT SYSTEMS. SPD SHALL HAVE A MINIMUM SINGLE IMPULSE CURRENT RATING OF 160,000 AMPS PER PHASE.
i) TERMINATE DIRECTLY AT PATCH PANEL(S).	a) THE BASIS OF DESIGN IS EQUIPMENT FROM SQUARE D COMPANY TO SET A STANDARD FOR QUALITY. EQUIPMENT FROM CUTLER-HAMMER, SIEMENS ENERGY & AUTOMATION, GENERAL ELECTRIC, OR ALTERNATIVE SYSTEMS WILL BE CONSIDERED PROVIDING THAT SUFFICIENT DOCUMENTATION IS PROVIDED TO SATISFY THE CONTRACTING AGENCY THAT THE EQUIPMENT MEETS THE REQUIREMENTS OF THE SPECIFICATIONS, AND MATCHES THE BASIS OF DESIGN ON ALL POINTS WHICH ARE PERTINENT TO THE PROJECT.	p) PROVIDE OVERCURRENT PROTECTION AND A MEANS OF DISCONNECT FOR THE SPD. OVERCURRENT AND DISCONNECT DEVICES SHALL BE EXCLUSIVELY UTILIZED FOR SPD. SIZE OVERCURRENT PROTECTION IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
1) TELECOMMUNICATIONS OUTLETS SHALL HAVE THE FOLLOWING MINIMUM FEATURES:	b) PANELBOARD ASSEMBLY SHALL BE ENCLOSED IN A STEEL CABINET. FRONTS SHALL INCLUDE DOORS AND HAVE FLUSH, BRUSHED STAINLESS STEEL, CYLINDER TUMBLER-TYPE LOCKS WITH CATCHES AND SPRING-LOADED DOOR PULLS. ALL PANELBOARD LOCKS SHALL BE KEYED ALIKE. FRONTS SHALL HAVE ADJUSTABLE, INDICATING TRIM CLAMPS THAT SHALL BE COMPLETELY CONCEALED WHEN THE DOORS ARE CLOSED. DOORS SHALL BE MOUNTED BY COMPLETELY CONCEALED STEEL HINGES. FRONTS SHALL NOT BE REMOVABLE WITH DOOR IN THE LOCKED POSITION. A CIRCUIT DIRECTORY FRAME AND CARD WITH A CLEAR PLASTIC COVERING SHALL BE PROVIDED ON THE INSIDE OF THE DOOR. THE DIRECTORY CARD SHALL PROVIDE A SPACE AT LEAST 1/4" HIGH BY 3" LONG OR EQUIVALENT FOR EACH CIRCUIT. THE DIRECTORY SHALL BE TYPED TO IDENTIFY THE LOAD FED BY EACH CIRCUIT. FRONTS SHALL BE OF CODE GAUGE, FULL FINISHED STEEL WITH RUST-INHIBITING PRIMER AND BAKED ENAMEL FINISH.	q) THE SPD DIAGNOSTIC MONITORING DEVICES SHALL BE MOUNTED ON THE FRONT OF THE DISTRIBUTION EQUIPMENT ENCLOSURE.
a) TELECOMMUNICATIONS OUTLETS WITH ASSOCIATED FACEPLATE AND JACKS SHALL MAKE UP A 4 POSITION MODULAR ASSEMBLY RATED FOR CATEGORY 5e USE WITH INTEGRAL AT&T 110 TYPE TERMINATIONS. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.		s) PROVIDE SPD DEVICES INTEGRAL TO PANELS AS INDICATED ON THE PANEL SCHEDULES AND DRAWINGS. SPD DEVICES SHALL BE AN INTEGRAL PART OF THE DISTRIBUTION EQUIPMENT, AND SHALL BE INSTALLED BY AND SHIPPED FROM THE ELECTRICAL DISTRIBUTION EQUIPMENT MANUFACTURER'S FACTORY.
b) JACKS SHALL BE OF TYPE TIA 568B FOR ALL DATA CONNECTIONS. JACKS SHALL BE OF TYPE TIA 568A OR 568B (VERIFY PRIOR TO INSTALLATION) FOR ALL PHONE CONNECTIONS. PHONE EQUIPMENT REQUIRING UTILIZATION OF OTHER THAN PAIR 1 AND PAIR 2 IN EACH JACK SHALL BE COORDINATED WITH THE CONTRACTING AGENCY FOR THE REQUIRED JACK PAIR SEQUENCING.		25) EXISTING UNDER FLOOR DUCT SYSTEM
c) EACH JACK SHALL BE LABELED ON THE OUTLET FACEPLATE WITH BOTH SOURCE AND DESTINATION INFORMATION CONSISTENT WITH ANSI/TIA/EIA-606A SPECIFICATIONS.		a) THE RE-MODEL AREA EFFECTED BY THIS CONTRACT HAS AN EXTENSIVE UNDER FLOOR DUCT SYSTEM FOR BOTH LINE VOLTAGE AND LOW VOLTAGE SYSTEMS. THE CONTRACTOR MAY UTILIZE THESE UNDER FLOOR DUCT SYSTEMS PROVIDED THAT SHOP DRAWINGS ARE SUBMITTED AND APPROVED PRIOR TO CONSTRUCTION.
17) DEMOLITION		
a) EXAMINATION: DRAWINGS INVOLVING EXISTING CONDITIONS ARE BASED ON BUILDING RECORD DRAWINGS AND/OR LIMITED FIELD OBSERVATION. CONDUCT A SITE INSPECTION PRIOR TO SUBMISSION OF BID TO BECOME THOROUGHLY FAMILIARIZED	a) THE PANELBOARD INTERIOR ASSEMBLY SHALL BE DEAD FRONT WITH PANELBOARD FRONT REMOVED.	
	d) PANELBOARD BUS STRUCTURE AND MAIN LUGS SHALL HAVE CURRENT RATINGS AS	

PANEL SCHEDULE - "T" 208Y/120 VOLTS, 3-PH, 4-W 225 AMP LUG	NEMA 1 FLUSH MOUNTED 10K A.I.R.							PROVIDE SPD IN PANEL	
	KVA	AMP	POLE	ABC	KVA	AMP	POLE	CIRCUIT DESCRIPTION	
REC - TOILET 210, EF-1	0.20	20	1	1+---2	1.59	25	1	FOOD WASTE DISPOSER (3/4 HP) - BREAK 209	
REC - COPIER - COPY 208 (DEDICATED)	1.20	20	1	3+---4	2.00	25	1	WATER HEATER WH-1 - BREAK 209	
REC - COPY 208, BREAK 209	0.72	20	1	5+---6	1.02	15	1	REC - WATER CLOSET PH-1H (2 HP, DEDICATED)	
REC - FRIDGE - BREAK 209 (DEDICATED)	1.00	20	1	7+---8	0.50	20	1	REMOTE DOOR LOCK - RECEPTION 203	
REC - ELECTIONS 212 SW, SECURE STORAGE 214	0.72	20	1	9+---10	0.20	20	1	FSD - RECEPTION 203	
REC - ELECTIONS 212 SW	0.72	20	1	11+---12	0.86	20	1	REC - UNDER SINK PUMP US-1 (1/3 HP) - BREAK 209	
REC - SMALL CONFERENCE 207	0.90	20	1	13+---14	1.00	20	1	REC - DISHWASHER	
REC - FLOOR - SMALL CONFERENCE 207	0.72	20	1	15+---16	---	20	1	SPARE	
REC - GOVERNOR'S OFFICE 206	0.90	20	1	17+---18	---	20	1	SPARE	
REC - GOVERNOR'S SUITE 204	1.08	20	1	19+---20	---	20	1	SPARE	
REC - VISITING STAFF 205	0.90	20	1	21+---22	---	20	1	SPARE	
REC - CONFERENCE ROOM 202	0.90	20	1	23+---24	---	20	1	SPARE	
REC - CONFERENCE ROOM 202	1.08	20	1	25+---26	---	20	1	SPARE	
REC - RECEPTION 203, CORRIDOR 201	0.72	20	1	27+---28				SPACE	
REC - ELECTIONS 212	0.72	20	1	29+---30				SPACE	
REC - ELECTIONS 212	0.90	20	1	31+---32				SPACE	
REC - DOL 215	1.26	20	1	33+---34				SPACE	
REC - DOL 215	1.44	20	1	35+---36				SPACE	
REC - DIRECTOR 213	0.90	20	1	37+---38				SPACE	
REC - DOL 215	1.08	20	1	39+---40				SPACE	
REC - BREAK 209	0.18	20	1	41+---42				SPACE	
TOTAL CONNECTED LOADS - A 9.1 KVA 34 POLE SPACES USED									
" - B 8.8 "									
" - C 7.5 "									
" - ALL 25.4 " = 71 AMPS @ 208 VOLTS, 3-PHASE									
TOTAL LOAD WITH NEC FACTORS 24.3 " = 67 AMPS									



- SHEET NOTES
- 1

PROVIDE 50 AMP FUSES IN EXISTING MAIN DISTRIBUTION SWITCHBOARD IN ACCORDANCE WITH SHEET E3.1.
- 2

PROVIDE 30KVA TRANSFORMER "T" IAW THE POWER ONE-LINE DIAGRAM ON SHEET E3.1. LOCATE TRANSFORMER AS INDICATED. COORDINATE EXACT LOCATION WITH BUILDING MAINTENANCE PRIOR TO CONSTRUCTION. SUPPORT AND BRACE TRANSFORMER IAW THE MANUFACTURER'S INSTRUCTIONS AND CODE REQUIREMENTS FOR THE APPLICABLE SEISMIC ZONE.
- 3

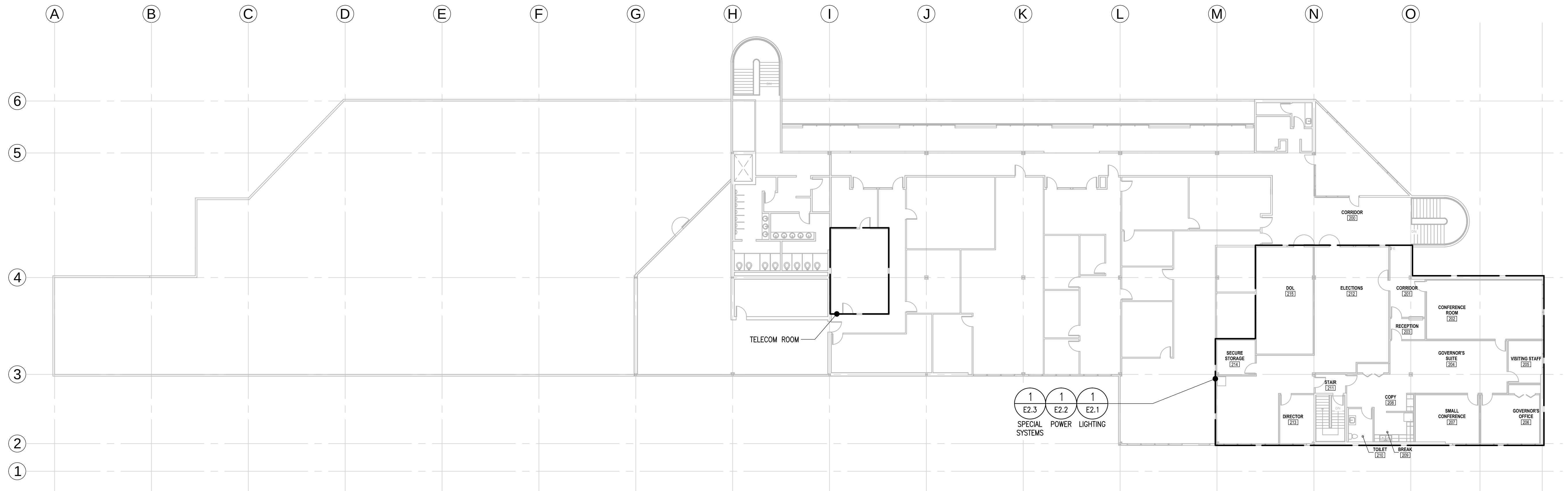
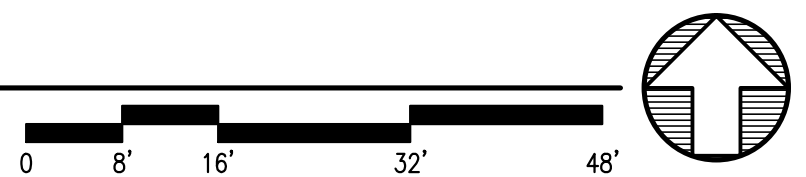
PROVIDE 100A/3P ENCLOSED CIRCUIT BREAKER IAW THE POWER ONE-LINE DIAGRAM ON SHEET E3.1. LOCATE CIRCUIT BREAKER AS INDICATED.

1

OVERALL FLOOR PLAN – FIRST FLOOR – ELECTRICAL

E1.1

SCALE: 1/16" = 1'-0"

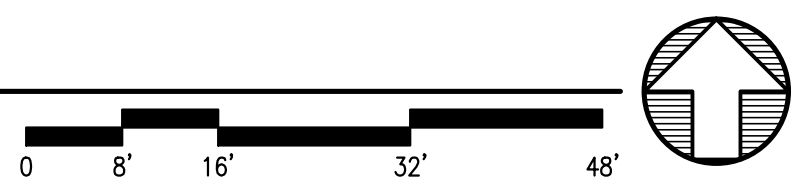


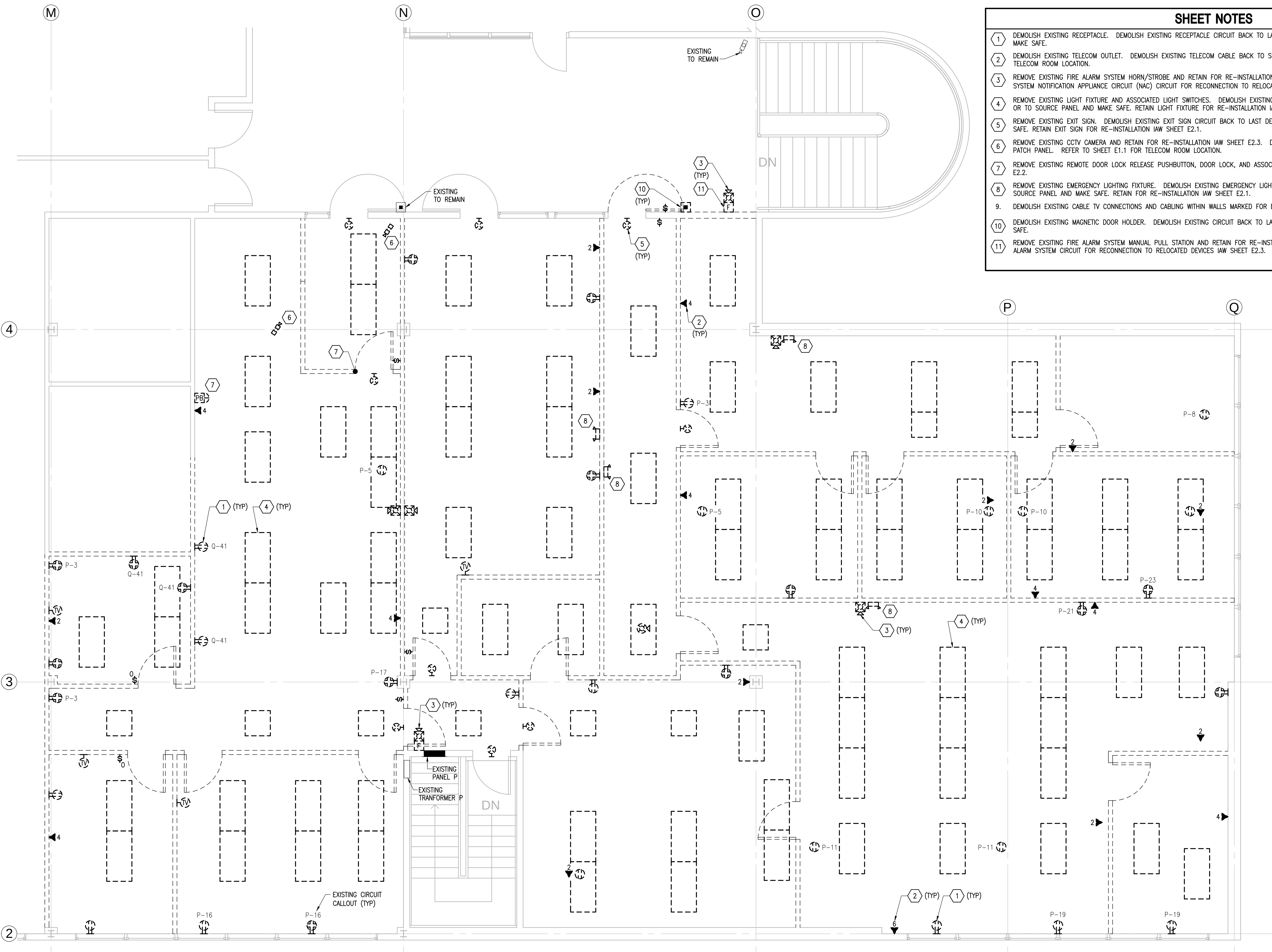
2

OVERALL FLOOR PLAN – SECOND FLOOR – ELECTRICAL

E1.1

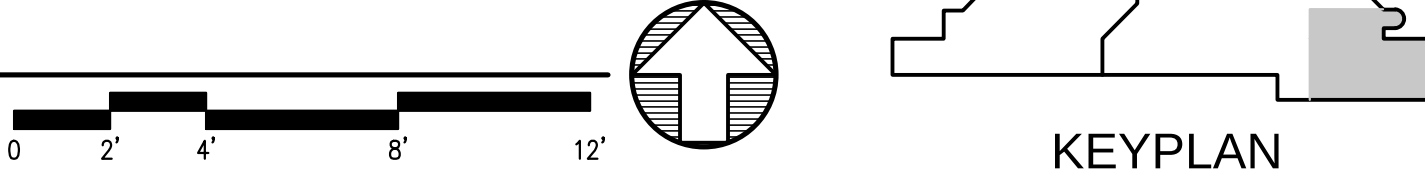
SCALE: 1/16" = 1'-0"





SHEET NOTES	
1	DEMOLISH EXISTING RECEPTACLE. DEMOLISH EXISTING RECEPTACLE CIRCUIT BACK TO LAST DEVICE TO REMAIN OR TO SOURCE PANEL AND MAKE SAFE.
2	DEMOLISH EXISTING TELECOM OUTLET. DEMOLISH EXISTING TELECOM CABLE BACK TO SOURCE PATCH PANEL. REFER TO SHEET E1.1 FOR TELECOM ROOM LOCATION.
3	REMOVE EXISTING FIRE ALARM SYSTEM HORN/STROBE AND RETAIN FOR RE-INSTALLATION IAW SHEET E2.3. RETAIN EXISTING FIRE ALARM SYSTEM NOTIFICATION APPLIANCE CIRCUIT (NAC) CIRCUIT FOR RECONNECTION TO RELOCATED DEVICES IAW SHEET E2.3.
4	REMOVE EXISTING LIGHT FIXTURE AND ASSOCIATED LIGHT SWITCHES. DEMOLISH EXISTING LIGHTING CIRCUIT BACK TO LAST DEVICE TO REMAIN OR TO SOURCE PANEL AND MAKE SAFE. RETAIN LIGHT FIXTURE FOR RE-INSTALLATION IAW SHEET E2.1.
5	REMOVE EXISTING EXIT SIGN. DEMOLISH EXISTING EXIT SIGN CIRCUIT BACK TO LAST DEVICE TO REMAIN OR TO SOURCE PANEL AND MAKE SAFE. RETAIN EXIT SIGN FOR RE-INSTALLATION IAW SHEET E2.1.
6	REMOVE EXISTING CCTV CAMERA AND RETAIN FOR RE-INSTALLATION IAW SHEET E2.3. DEMOLISH EXISTING TELECOM CABLE BACK TO SOURCE PATCH PANEL. REFER TO SHEET E1.1 FOR TELECOM ROOM LOCATION.
7	REMOVE EXISTING REMOTE DOOR LOCK RELEASE PUSHBUTTON, DOOR LOCK, AND ASSOCIATED EQUIPMENT AND RETAIN FOR RE-INSTALLATION IAW E2.2.
8	REMOVE EXISTING EMERGENCY LIGHTING FIXTURE. DEMOLISH EXISTING EMERGENCY LIGHTING CIRCUIT BACK TO LAST DEVICE TO REMAIN OR TO SOURCE PANEL AND MAKE SAFE. RETAIN FOR RE-INSTALLATION IAW SHEET E2.1.
9	DEMOLISH EXISTING CABLE TV CONNECTIONS AND CABLING WITHIN WALLS MARKED FOR DEMOLITION.
10	DEMOLISH EXISTING MAGNETIC DOOR HOLDER. DEMOLISH EXISTING CIRCUIT BACK TO LAST DEVICE TO REMAIN OR TO SOURCE PANEL AND MAKE SAFE.
11	REMOVE EXISTING FIRE ALARM SYSTEM MANUAL PULL STATION AND RETAIN FOR RE-INSTALLATION IAW SHEET E2.3. RETAIN EXISTING FIRE ALARM SYSTEM CIRCUIT FOR RECONNECTION TO RELOCATED DEVICES IAW SHEET E2.3.

1 DEMOLITION PLAN - SECOND FLOOR - ELECTRICAL
E1.2 SCALE: 1/4" = 1'-0"





- SHEET NOTES
- 1

INSTALL EXISTING LIGHT FIXTURE RETAINED FOR RE-INSTALLATION IAW SHEET E1.2.
- 2

INSTALL EXISTING EXIT SIGN RETAINED FOR RE-INSTALLATION IAW SHEET E1.2.
- 3

PROVIDE DUAL CONTACT OCCUPANCY SENSOR SWITCH, ONE CONTACT FOR LIGHTING, ONE CONTACT FOR OPERATION OF THE EXHAUST FAN PROVIDED UNDER DIVISION 15.
- 4

PROVIDE WALL MOUNTED GATCO MAX COLLECTION 1-LIGHT SCONCE IN SATIN NICKEL FINISH. MOUNT FIXTURE AT 6'-0" AFF AND EQUALLY CENTER/SPACE ON VANITY/SINK/FURNITURE AS SHOWN. PROVIDE A TYPE LED LAMP OF EQUIVALENT INCANDESCENT LUMEN OUTPUT. REFER TO ARCHITECTURAL ELEVATIONS FOR ADDITIONAL INFORMATION.
- 5

PROVIDE GOTHAM LIGHTING (#EVO-41-14-GAR-277), 6-INCH LED DOWNLIGHT FIXTURE, 1400 LUMENS, SEMI-SPECULAR FINISH. INTERCEPT EXISTING UNSWITCHED LEG OF LOCAL LIGHTING CIRCUIT, EXTEND, AND CONNECT TO LIGHTS VIA OCCUPANCY SENSOR PROVIDED IAW SHEET NOTE 3.
- 6

SWITCH RELOCATED 2 FOOT x 2 FOOT CORRIDOR H FIXTURES WITH EXISTING CORRIDOR 200 LIGHTING (NOT SHOWN).
- 7

SWITCH RELOCATED 2 FOOT x 2 FOOT FIXTURE WITH EXISTING STAIR 211 LIGHTING (NOT SHOWN).
- 8

CONNECT ALL LIGHTING TO EXISTING LIGHTING CIRCUIT(S) SERVING AREA. PROVIDE SWITCHING AS NOTED.
- 9

NUMBER INDICATES NUMBER OF LAMPS WITHIN RELOCATED 2 FOOT x 4 FOOT FIXTURE. 2 = 2-LAMP, 3 = 3-LAMP, 4 = 4-LAMP.
- 10

PROVIDE MULTI-LEVEL SWITCHING BY CONNECTING OUTBOARD LAMPS TO SWITCH 'g' AND INBOARD LAMP TO SWITCH 'b' FOR 3-LAMP FIXTURES AND BY CONNECTING ONE LAMP TO SWITCH 'g' AND THE OTHER TO SWITCH 'b' FOR 2-LAMP FIXTURES.
- 11

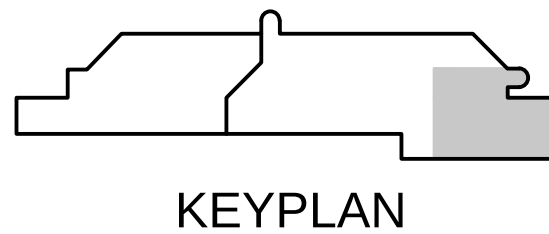
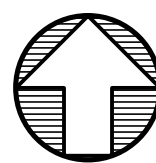
RE-INSTALL EMERGENCY LIGHT FIXTURE REMOVED IAW SHEET E1.2. CONNECT TO UNSWITCHED LEG OF LOCAL AREA LIGHTING CIRCUIT.

1E2.1

ELECTRICAL PLAN – SECOND FLOOR – LIGHTING

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

0 2' 4' 8' 12'



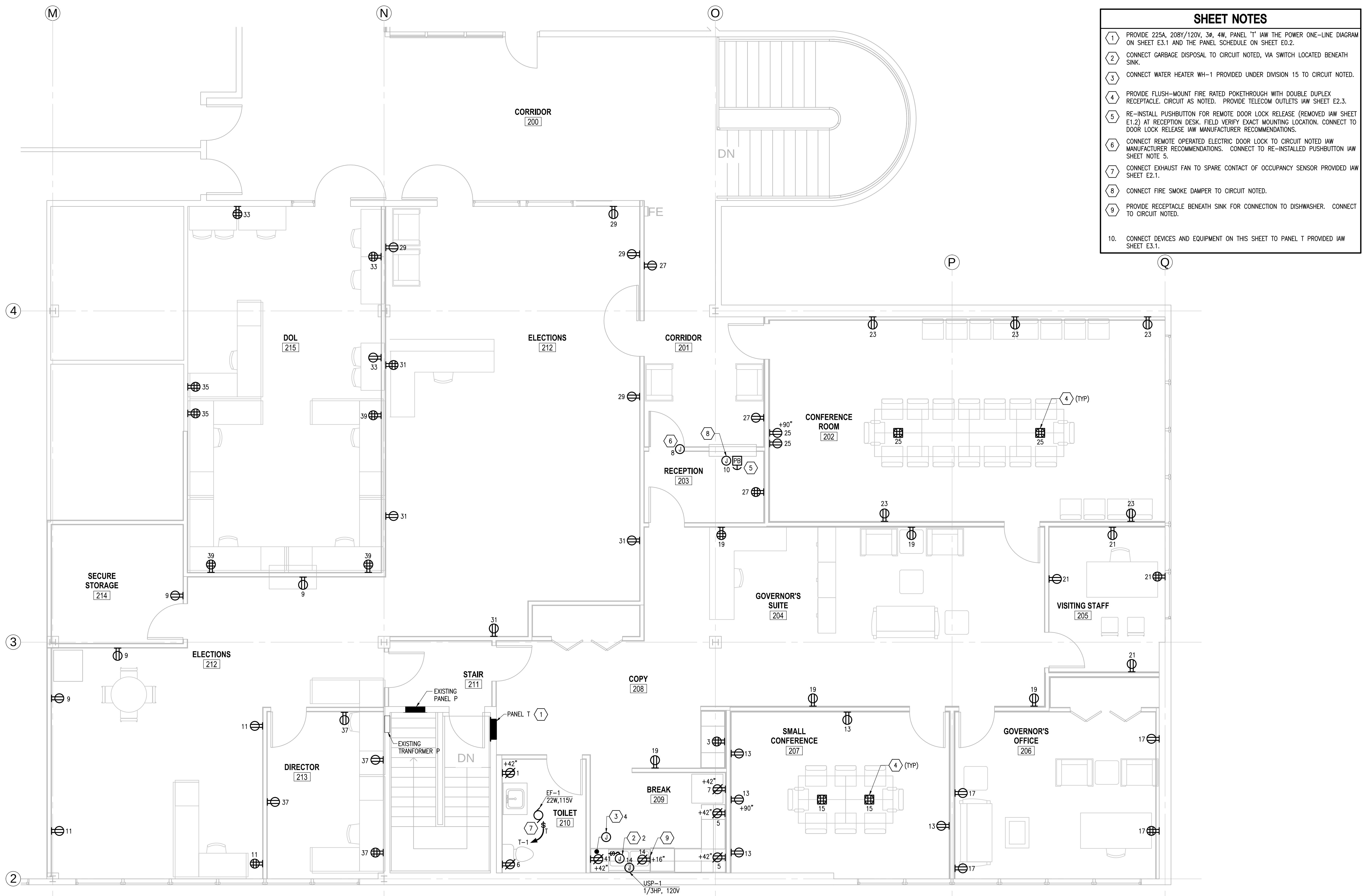
TITLE: ELECTRICAL PLAN - SECOND FLOOR - LIGHTING
REVISIONS:
AUTHOR: KAC
CHECKED: KAC
04.25.2013



FROB BUILDING RENOVATIONS
CONSTRUCTION DOCUMENTS

ECI/HYER ARCHITECTURE + INTERIORS
101 WEST BENSON BOULEVARD, SUITE 306
ANCHORAGE, ALASKA 99503
907.561.5543

© 2013 ECI/Hyer, Inc.
Adams, Morgenthaler and Co., Inc.
701 East Tudor Road • Suite 250
Anchorage, Alaska 99503
phone 907.257.9100
www.amc-engineers.com



SHEET NOTES

1. PROVIDE 225A, 208Y/120V, 3Ø, 4W, PANEL 'T' IAW THE POWER ONE-LINE DIAGRAM ON SHEET E3.1 AND THE PANEL SCHEDULE ON SHEET E0.2.
2. CONNECT GARBAGE DISPOSAL TO CIRCUIT NOTED, VIA SWITCH LOCATED BENEATH SINK.
3. CONNECT WATER HEATER WH-1 PROVIDED UNDER DIVISION 15 TO CIRCUIT NOTED.
4. PROVIDE FLUSH-MOUNT FIRE RATED POKETHROUGH WITH DOUBLE DUPLEX RECEPTACLE. CIRCUIT AS NOTED. PROVIDE TELECOM OUTLETS IAW SHEET E2.3.
5. RE-INSTALL PUSHBUTTON FOR REMOTE DOOR LOCK RELEASE (REMOVED IAW SHEET E1.2) AT RECEPTION DESK. FIELD VERIFY EXACT MOUNTING LOCATION. CONNECT TO DOOR LOCK RELEASE IAW MANUFACTURER RECOMMENDATIONS.
6. CONNECT REMOTE OPERATED ELECTRIC DOOR LOCK TO CIRCUIT NOTED IAW MANUFACTURER RECOMMENDATIONS. CONNECT TO RE-INSTALLED PUSHBUTTON IAW SHEET NOTE 5.
7. CONNECT EXHAUST FAN TO SPARE CONTACT OF OCCUPANCY SENSOR PROVIDED IAW SHEET E2.1.
8. CONNECT FIRE SMOKE DAMPER TO CIRCUIT NOTED.
9. PROVIDE RECEPTACLE BENEATH SINK FOR CONNECTION TO DISHWASHER. CONNECT TO CIRCUIT NOTED.
10. CONNECT DEVICES AND EQUIPMENT ON THIS SHEET TO PANEL T PROVIDED IAW SHEET E3.1.

© 2013 ECI/Hyer, Inc.

Adams, Morganthaler and Co., Inc.

701 East Tudor Road, Suite 250

Anchorage, Alaska 99503

phone 907.257.9100

www.amc-engineers.com



ECI/HYER ARCHITECTURE + INTERIORS

101 WEST BENSON BOULEVARD, SUITE 306

ANCHORAGE, ALASKA 99503

907.561.5543



TITLE: ELECTRICAL PLAN - SECOND FLOOR - POWER

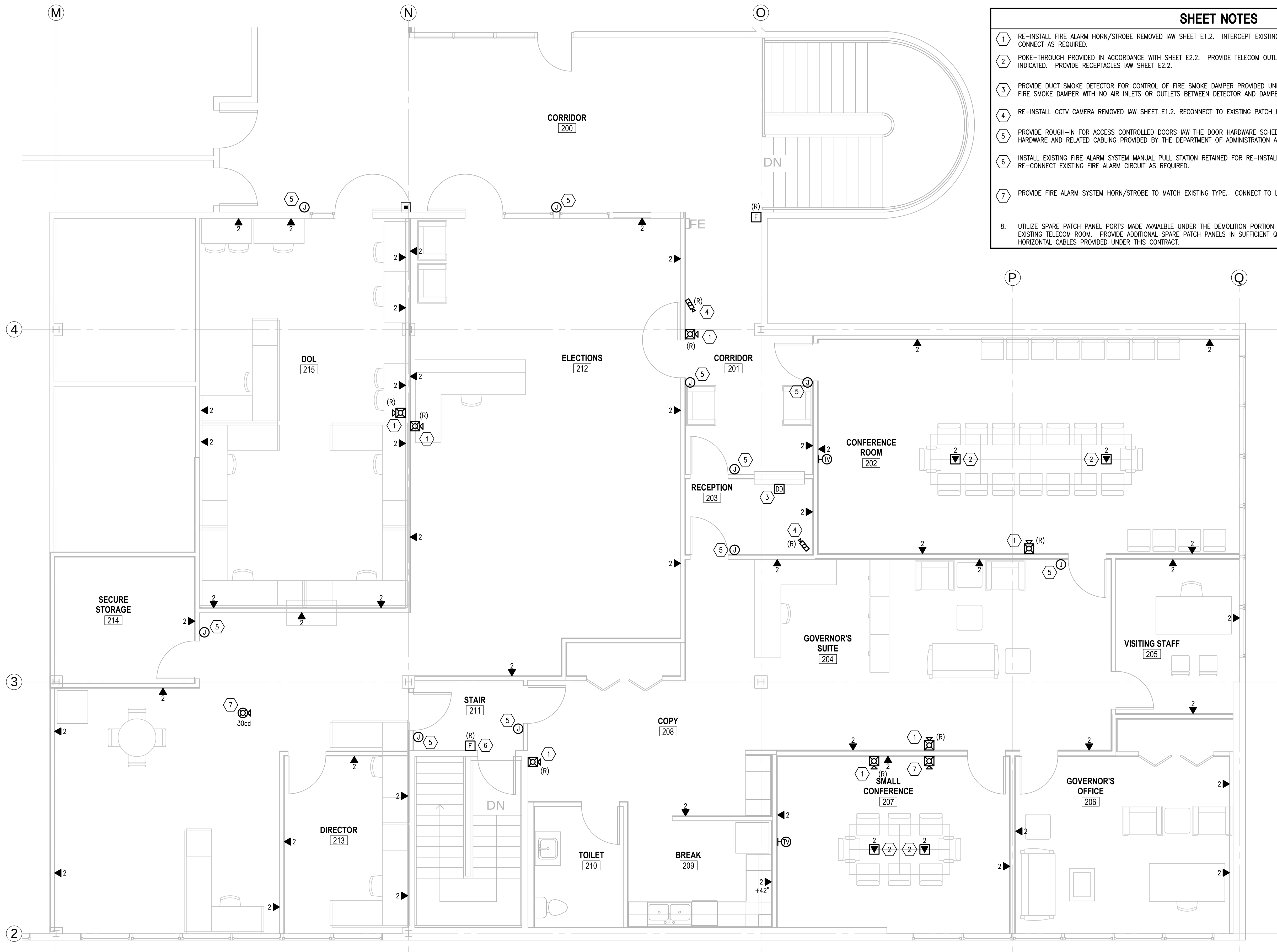
REVISIONS:

AUTHOR: KAC

CHECKED: KAC

04.25.2013

E2.2



- SHEET NOTES
- 1

RE-INSTALL FIRE ALARM HORN/STROBE REMOVED IAW SHEET E1.2. INTERCEPT EXISTING FIRE ALARM SYSTEM NAC CIRCUIT, EXTEND, AND CONNECT AS REQUIRED.
- 2

POKE-THROUGH PROVIDED IN ACCORDANCE WITH SHEET E2.2. PROVIDE TELECOM OUTLET IN FLOOR BOX, NUMBER OF TELECOM JACKS AS INDICATED. PROVIDE RECEPTACLES IAW SHEET E2.2.
- 3

PROVIDE DUCT SMOKE DETECTOR FOR CONTROL OF FIRE SMOKE DAMPER PROVIDED UNDER DIVISION 15. INSTALL DETECTOR WITHIN 5 FEET OF FIRE SMOKE DAMPER WITH NO AIR INLETS OR OUTLETS BETWEEN DETECTOR AND DAMPER. CONNECT TO FIRE ALARM SYSTEM.
- 4

RE-INSTALL CCTV CAMERA REMOVED IAW SHEET E1.2. RECONNECT TO EXISTING PATCH PANEL IN TELECOM ROOM.
- 5

PROVIDE ROUGH-IN FOR ACCESS CONTROLLED DOORS IAW THE DOOR HARDWARE SCHEDULES, AND DIVISION 8. ACCESS CONTROL SYSTEM HARDWARE AND RELATED CABLING PROVIDED BY THE DEPARTMENT OF ADMINISTRATION ACCESS CONTROL SYSTEM CONTRACTOR.
- 6

INSTALL EXISTING FIRE ALARM SYSTEM MANUAL PULL STATION RETAINED FOR RE-INSTALLATION IAW SHEET E1.2. INTERCEPT, EXTEND, AND RE-CONNECT EXISTING FIRE ALARM CIRCUIT AS REQUIRED.
- 7

PROVIDE FIRE ALARM SYSTEM HORN/STROBE TO MATCH EXISTING TYPE. CONNECT TO LOCAL FIRE ALARM SYSTEM NAC CIRCUIT.
8.

UTILIZE SPARE PATCH PANEL PORTS MADE AVAILABLE UNDER THE DEMOLITION PORTION OF THIS CONTRACT IN EXISTING TELECOM RACK IN EXISTING TELECOM ROOM. PROVIDE ADDITIONAL SPARE PATCH PANELS IN SUFFICIENT QUANTITY TO FULLY TERMINATE AND TEST TELECOM HORIZONTAL CABLES PROVIDED UNDER THIS CONTRACT.

1

E2.3

ELECTRICAL PLAN – SECOND FLOOR – SPECIAL SYSTEMS

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

FROB Building Renovations
Technical Specifications
divisions 2-16

Fairbanks Regional Office Building
675 7th Avenue
Fairbanks, AK 99701

April 25, 2013

SECTION 00 0110
TABLE OF CONTENTS

SPECIFICATIONS

DIVISION 02 -- EXISTING CONDITIONS

02 4100 - Demolition

DIVISION 03 -- CONCRETE

03 3000 - Cast-in-Place Concrete

DIVISION 05 -- METALS

05 5000 - Metal Fabrications

DIVISION 06 -- WOOD, PLASTICS, AND COMPOSITES

06 4100 - Architectural Wood Casework

DIVISION 07 -- THERMAL AND MOISTURE PROTECTION

07 7100 - Roof Specialties

07 8400 - Firestopping

07 9005 - Joint Sealers

DIVISION 08 -- OPENINGS

08 1213 - Hollow Metal Frames

08 1416 - Flush Wood Doors

08 3100 - Access Doors and Panels

08 4126 - All-Glass Entrances and Storefronts

08 5123 - Steel Windows

08 7100 - Door Hardware

08 8000 - Glazing

08 8717 - Safety and Security Glazing Films

DIVISION 09 -- FINISHES

09 2116 - Gypsum Board Assemblies

09 3000 - Tiling

09 5100 - Acoustical Ceilings

09 6500 - Resilient Flooring

09 6813 - Tile Carpeting

09 9000 - Painting and Coating

DIVISION 10 -- SPECIALTIES

10 4400 - Fire Protection Specialties

DIVISION 11 -- EQUIPMENT (NOT USED)

DIVISION 12 -- FURNISHINGS (NOT USED)

DIVISION 13 -- SPECIAL CONSTRUCTION (NOT USED)

DIVISION 14 -- CONVEYING EQUIPMENT (NOT USED)

DIVISION 15 -- MECHANICAL - SEE DRAWINGS

DIVISION 16 -- ELECTRICAL - SEE DRAWINGS

END OF TABLE OF CONTENTS

SECTION 02 4100
DEMOLITION

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Selective demolition of building elements for alteration purposes.

1.02 RELATED REQUIREMENTS

- A. Division 0 for additional requirements.

1.03 REFERENCE STANDARDS

- A. 29 CFR 1926 - U.S. Occupational Safety and Health Standards; current edition.
- B. NFPA 241 - Standard for Safeguarding Construction, Alteration, and Demolition Operations; 2013.

1.04 SUBMITTALS

- A. Demolition Plan: Submit demolition plan as specified by OSHA and local authorities.
 - 1. Indicate extent of demolition, removal sequence, bracing and shoring, and location and construction of barricades and fences.
 - 2. Identify demolition firm and submit qualifications.
 - 3. Include a summary of safety procedures.
 - 4. Provide demolition schedule and sequencing to ensure adjacent spaces and occupants are not disturbed.
- B. Project Record Documents: Accurately record actual locations of capped and active utilities and subsurface construction.

1.05 QUALITY ASSURANCE

- A. Demolition Firm Qualifications: Company specializing in the type of work required.
 - 1. Minimum of 5 years of documented experience.

PART 2 PRODUCTS -- NOT USED

PART 3 EXECUTION

3.01 SCOPE

- A. Remove other items indicated, for salvage, relocation, recycling, and reuse.

3.02 GENERAL PROCEDURES AND PROJECT CONDITIONS

- A. Comply with applicable codes and regulations for demolition operations and safety of adjacent structures and the public.
 - 1. Obtain required permits.
 - 2. Comply with applicable requirements of NFPA 241.
 - 3. Use of explosives is not permitted.
 - 4. Take precautions to prevent catastrophic or uncontrolled collapse of structures to be removed; do not allow worker or public access within range of potential collapse of unstable structures.
 - 5. Provide, erect, and maintain temporary barriers and security devices.
 - 6. Use physical barriers to prevent access to areas that could be hazardous to workers or the public.
 - 7. Conduct operations to minimize effects on and interference with adjacent structures and occupants.
 - 8. Provide safety personnel exclusively for the protection of the public and building occupants during construction, and not tasked with construction related labor.
 - 9. Do not close or obstruct roadways or sidewalks without permit.

10. Conduct operations to minimize obstruction of public and private entrances and exits; do not obstruct required exits at any time; protect persons using entrances and exits from removal operations.
 11. Obtain written permission from owners of adjacent properties when demolition equipment will traverse, infringe upon or limit access to their property.
- B. Do not begin removal until receipt of notification to proceed from Owner's Representative.
 - C. Protect existing structures and other elements that are not to be removed.
 1. Provide bracing and shoring.
 2. Prevent movement or settlement of adjacent structures.
 3. Stop work immediately if adjacent structures appear to be in danger.
 - D. If hazardous materials are discovered during removal operations, stop work and notify Architect and Owner's Representative; hazardous materials include regulated asbestos containing materials, lead, PCB's, and mercury.

3.03 EXISTING UTILITIES

- A. Coordinate work with utility companies; notify before starting work and comply with their requirements; obtain required permits.
- B. Protect existing utilities to remain from damage.
- C. Do not disrupt public utilities without permit from authority having jurisdiction.
- D. Do not close, shut off, or disrupt existing life safety systems that are in use without at least 7 days prior written notification to Owner's Representative.
- E. Do not close, shut off, or disrupt existing utility branches or take-offs that are in use without at least 3 days prior written notification to Owner's Representative.
- F. Locate and mark utilities to remain; mark using highly visible tags or flags, with identification of utility type; protect from damage due to subsequent construction, using substantial barricades if necessary.
- G. Remove exposed piping, valves, meters, equipment, supports, and foundations of disconnected and abandoned utilities.

3.04 SELECTIVE DEMOLITION FOR ALTERATIONS

- A. Drawings showing existing construction and utilities are based on casual field observation and existing record documents only.
 1. Verify that construction and utility arrangements are as shown.
 2. Report discrepancies to Architect before disturbing existing installation.
 3. Beginning of demolition work constitutes acceptance of existing conditions that would be apparent upon examination prior to starting demolition.
- B. Separate areas in which demolition is being conducted from other areas that are still occupied.
 1. Provide, erect, and maintain temporary dustproof partitions of construction as required to protect occupants, equipment, and spaces. .
 2. Provide sound retardant partitions of construction indicated as required to protect affected occupants, equipment, and spaces.
 3. Provide dust filters at all return air openings that are within the area of work.
- C. Maintain weatherproof exterior building enclosure except for interruptions required for replacement or modifications; take care to prevent water and humidity damage.
- D. Remove existing work as indicated and as required to accomplish new work.
 1. Remove rotted wood, corroded metals, and deteriorated masonry and concrete; replace with new construction specified.
 2. Remove items indicated on drawings.
- E. Services (Including but not limited to HVAC, Plumbing, Fire Protection, Electrical, and Telecommunications): Remove existing systems and equipment as indicated.

1. Maintain existing active systems that are to remain in operation; maintain access to equipment and operational components.
 2. Where existing active systems serve occupied facilities but are to be replaced with new services, maintain existing systems in service until new systems are complete and ready for service.
 3. Verify that abandoned services serve only abandoned facilities before removal.
 4. Remove abandoned pipe, ducts, conduits, and equipment, including those above accessible ceilings; remove back to source of supply where possible, otherwise cap stub and tag with identification.
- F. Protect existing work to remain.
1. Prevent movement of structure; provide shoring and bracing if necessary.
 2. Perform cutting to accomplish removals neatly and as specified for cutting new work.
 3. Repair adjacent construction and finishes damaged during removal work.
 4. Patch as specified for patching new work or where specifically not mentioned, repair to match original conditions.

3.05 SALVAGE MATERIALS

- A. Where indicated on Drawings as "Salvage-For Owner Use", or listed in Division 1 sections of the Specifications, carefully remove indicated items, clean, store, and turn over to Owner's Representative and obtain receipt. Items to be salvaged include, but are not limited to:
1. Trendwall (Trendway) top track and wall panels.
 2. Doors, aluminum frames and standard door hardware (closures, locks, handles, hinges, etc.).
 3. Relites and frames.
 4. Acoustic ceiling tile and supporting system
 5. Modular electrical components.
 6. Lighting fixtures and exit lighting.
 7. Fire extinguisher cabinets.
 8. Mechanical diffusers.

3.06 DEBRIS AND WASTE REMOVAL

- A. Remove debris, junk, and trash from site.
- B. Leave site in clean condition, ready for subsequent work.

END OF SECTION

SECTION 03 3000
CAST-IN-PLACE CONCRETE

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Concrete for composite floor construction.
- B. Concrete reinforcement.
- C. Concrete curing.

1.02 REFERENCE STANDARDS

- A. ACI 211.1 - Standard Practice for Selecting Proportions for Normal, Heavyweight, and Mass Concrete; American Concrete Institute International; 1991 (Reapproved 2002).
- B. ACI 301 - Specifications for Structural Concrete; American Concrete Institute International; 2010.
- C. ACI 318 - Building Code Requirements for Structural Concrete and Commentary; American Concrete Institute International; 2011.
- D. ASTM A185/A185M - Standard Specification for Steel Welded Wire Reinforcement, Plain, for Concrete; 2007.
- E. ASTM C33/C33M - Standard Specification for Concrete Aggregates; 2011a.
- F. ASTM C150/C150M - Standard Specification for Portland Cement; 2012.

1.03 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Submit manufacturers' data on manufactured products showing compliance with specified requirements and installation instructions.
 - 1. For curing compounds, provide data on method of removal in the event of incompatibility with floor covering adhesives.

1.04 QUALITY ASSURANCE

- A. Perform work of this section in accordance with ACI 301 and ACI 318.

PART 2 PRODUCTS

2.01 REINFORCEMENT

- A. Reinforcing Steel: ASTM A615/A615M Grade 60 (420).
- B. Steel Welded Wire Reinforcement: ASTM A 185/A 185M, plain type.

2.02 CONCRETE MATERIALS

- A. Cement: ASTM C150, Type I - Normal Portland type.
- B. Fine and Coarse Aggregates: ASTM C 33.

2.03 ACCESSORY MATERIALS

- A. Non-Shrink Cementitious Grout: Premixed compound consisting of non-metallic aggregate, cement, water reducing and plasticizing agents.
- B. Non-Shrink Epoxy Grout: Moisture-insensitive, two-part; consisting of epoxy resin, non-metallic aggregate, and activator.

2.04 CONCRETE MIX DESIGN

- A. Proportioning Normal Weight Concrete: Comply with ACI 211.1 recommendations.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify lines, levels, and dimensions before proceeding with work of this section.

3.02 INSTALLING REINFORCEMENT AND OTHER EMBEDDED ITEMS

- A. Comply with requirements of ACI 301. Clean reinforcement of loose rust and mill scale, and accurately position, support, and secure in place to achieve not less than minimum concrete coverage required for protection.
- B. Install welded wire reinforcement in maximum possible lengths, and offset end laps in both directions. Splice laps with tie wire.
- C. Key in all patches to prevent new areas from falling out. Use embeds as required.

3.03 PLACING CONCRETE

- A. Place concrete in accordance with ACI 304R.

3.04 CONCRETE FINISHING

- A. Unexposed Form Finish: Rub down or chip off fins or other raised areas 1/8 inch (3 mm) or more in height.

3.05 CURING AND PROTECTION

- A. Comply with requirements of ACI 308R. Immediately after placement, protect concrete from premature drying, excessively hot or cold temperatures, and mechanical injury.
- B. Maintain concrete with minimal moisture loss at relatively constant temperature for period necessary for hydration of cement and hardening of concrete.

3.06 DEFECTIVE CONCRETE

- A. Repair or replacement of defective concrete will be determined by the Architect. The cost of additional testing shall be borne by Contractor when defective concrete is identified.

END OF SECTION

SECTION 05 5000
METAL FABRICATIONS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Shop fabricated steel items.

1.02 RELATED REQUIREMENTS

- A. Section 09 2116 Gypsum Board Assemblies

1.03 REFERENCE STANDARDS

1.04 SUBMITTALS

- A. Product Data: indicating size, thickness, configuration, etc.

PART 2 PRODUCTS

2.01 MATERIALS - STEEL

- A. Perforated Metal Panel:
 - 1. Basis of Design Product: McNichols round perforated metal panel
 - a. Gauge: 20
 - b. Perforations: 1/4" round on 5/16" staggered
 - c. Size: 48" x 120"
 - d. Finish: galvanized G90

2.02 FABRICATION

- A. Fit and assemble items in largest practical sections, for delivery to site.
- B. Fabricate items with joints tightly fitted and secured.

2.03 FABRICATION TOLERANCES

- A. Squareness: 1/8 inch (3 mm) maximum difference in diagonal measurements.
- B. Maximum Bow: 1/8 inch (3 mm) in 48 inches (1.2 m).
- C. Maximum Deviation From Plane: 1/16 inch (1.5 mm) in 48 inches (1.2 m).

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that field conditions are acceptable and are ready to receive work.

3.02 INSTALLATION

- A. Install items plumb and level, accurately fitted, free from distortion or defects.
- B. Provide for erection loads, and for sufficient temporary bracing to maintain true alignment until completion of erection and installation of permanent attachments.
- C. Obtain approval prior to site cutting or making adjustments not scheduled.

END OF SECTION

SECTION 06 4100
ARCHITECTURAL WOOD CASEWORK

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Specially fabricated cabinet units.
- B. Countertops.
- C. Cabinet hardware.
- D. Factory finishing.

1.02 RELATED REQUIREMENTS

- A. Section 09 2116 Gypsum Board Assemblies
- B. Section 09 9000 - Painting and Coating: Site finishing of cabinet exterior.

1.03 REFERENCE STANDARDS

- A. ANSI A208.1 - American National Standard for Particleboard; 2009.
- B. AWI/AWMAC/WI (AWS) - Architectural Woodwork Standards; 2009.
- C. BHMA A156.9 - American National Standard for Cabinet Hardware; Builders Hardware Manufacturers Association; 2010 (ANSI/BHMA A156.9).
- D. NEMA LD 3 - High-Pressure Decorative Laminates; National Electrical Manufacturers Association; 2005.

1.04 SUBMITTALS

- A. Shop Drawings: Indicate materials, component profiles, fastening methods, jointing details, and accessories.
- B. Product Data: Provide data for hardware accessories.
- C. Samples: Submit actual samples of architectural cabinet construction, minimum 12 inches (300 mm) square, illustrating proposed cabinet, countertop, and shelf unit substrate and finish.
- D. Samples: Submit actual sample items of proposed pulls, hinges, shelf standards, locksets, and sliding hardware, demonstrating hardware design, quality, and finish.

1.05 QUALITY ASSURANCE

- A. Fabricator Qualifications: Company specializing in fabricating the products specified in this section with minimum five years of documented experience.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Protect units from moisture damage.

1.07 FIELD CONDITIONS

- A. During and after installation of custom cabinets, maintain temperature and humidity conditions in building spaces at same levels planned for occupancy.

PART 2 PRODUCTS

2.01 CABINETS

- A. Quality Grade: Unless otherwise indicated provide products of quality specified by AWI/AWMAC/WI Architectural Woodwork Standards for Premium Grade.
- B. Plastic Laminate Faced Cabinets: Custom grade.
- C. Cabinets :
 - 1. Finish - Exposed Exterior Surfaces: Decorative laminate.
 - 2. Finish - Exposed Interior Surfaces: Decorative laminate.
 - 3. Finish - Concealed Surfaces: Manufacturer's option.
 - 4. Door and Drawer Front Edge Profiles: Square edge with thick applied band.

5. Cabinet Design Series: As indicated on the Drawings.
6. Adjustable Shelf Loading: 50 lbs. per sq. ft..
7. Cabinet Style: Flush overlay.
8. Cabinet Doors and Drawer Fronts: Flush style.
9. Drawer Side Construction: Multiple-dovetailed.
10. Drawer Construction Technique: Dovetail joints.

2.02 LAMINATE MATERIALS

- A. High Pressure Decorative Laminate (HPDL): NEMA LD 3, types as recommended for specific applications.

2.03 COUNTERTOPS

- A. Solid Surfacing Countertops: Solid surfacing sheet or plastic resin casting over continuous substrate.
 1. Flat Sheet Thickness: 1/2 inch (12 mm), minimum.
 2. Solid Surfacing Sheet and Plastic Resin Castings: Complying with ISSFA-2 and NEMA LD 3; acrylic or polyester resin, mineral filler, and pigments; homogenous, non-porous and capable of being worked and repaired using standard woodworking tools; no surface coating; color and pattern consistent throughout thickness.
 - a. Finish on Exposed Surfaces: Matte, gloss rating of 5 to 20.
 - b. Color and Pattern: As indicated on drawings.
 3. Other Components Thickness: 1/2 inch (12 mm), minimum.
 4. Exposed Edge Treatment: Built up to minimum 1-1/4 inch (32 mm) thick; square edge; use marine edge at sinks.
 5. Back and End Splashes: Same sheet material, square top; minimum 4 inches (102 mm) high.

2.04 ACCESSORIES

- A. Adhesive: Type recommended by fabricator to suit application.
- B. Plastic Edge Banding: Extruded PVC, convex shaped; smooth finish; self locking serrated tongue; of width to match component thickness.
- C. Fasteners: Size and type to suit application.
- D. Bolts, Nuts, Washers, Lags, Pins, and Screws: Of size and type to suit application; galvanized or chrome-plated finish in concealed locations and stainless steel or chrome-plated finish in exposed locations.
- E. Concealed Joint Fasteners: Threaded steel.
- F. Grommets: Standard plastic, painted metal, or rubber grommets for cut-outs, in color to match adjacent surface.

2.05 HARDWARE

- A. Adjustable Shelf Supports: Standard side-mounted system using recessed metal shelf standards or multiple holes for pin supports and coordinated self rests, polished chrome finish, for nominal 1 inch (25 mm) spacing adjustments.
- B. Drawer and Door Pulls: "U" shaped wire pull, steel with satin finish, 4 inch centers.
- C. Cabinet Locks: Keyed cylinder, two keys per lock, master keyed, steel with satin finish.
- D. Drawer Slides:
 1. Type: Full extension.
 2. Static Load Capacity: Heavy Duty grade.
 3. Mounting: Side mounted.
 4. Stops: Integral type.
 5. Features: Provide self closing/stay closed type.
- E. Hinges: European style concealed self-closing type, steel with polished finish.

2.06 FABRICATION

- A. Assembly: Shop assemble cabinets for delivery to site in units easily handled and to permit passage through building openings.
- B. Edging: Fit shelves, doors, and exposed edges with specified edging. Do not use more than one piece for any single length.
- C. Fitting: When necessary to cut and fit on site, provide materials with ample allowance for cutting. Provide matching trim for scribing and site cutting.
- D. Plastic Laminate: Apply plastic laminate finish in full uninterrupted sheets consistent with manufactured sizes. Fit corners and joints hairline; secure with concealed fasteners. Slightly bevel arises. Locate counter butt joints minimum 2 feet (600 mm) from sink cut-outs.
 - 1. Cap exposed plastic laminate finish edges with material of same finish and pattern.
- E. Provide cutouts for plumbing fixtures. Verify locations of cutouts from on-site dimensions. Prime paint cut edges.

2.07 SHOP FINISHING

- A. Sand work smooth and set exposed nails and screws.
- B. For opaque finishes, apply wood filler in exposed nail and screw indentations and sand smooth.
- C. On items to receive transparent finishes, use wood filler matching or blending with surrounding surfaces and of types recommended for applied finishes.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify adequacy of backing and support framing.
- B. Verify location and sizes of utility rough-in associated with work of this section.

3.02 INSTALLATION

- A. Provide solid blocking in walls as required
- B. Set and secure custom cabinets in place, assuring that they are rigid, plumb, and level.
- C. Use fixture attachments in concealed locations for wall mounted components.
- D. Use concealed joint fasteners to align and secure adjoining cabinet units.
- E. Carefully scribe casework abutting other components, with maximum gaps of 1/32 inch (1 mm). Do not use additional overlay trim for this purpose.
- F. Secure cabinets to floor using appropriate angles and anchorages.
- G. Countersink anchorage devices at exposed locations. Conceal with solid wood plugs of species to match surrounding wood; finish flush with surrounding surfaces.

3.03 ADJUSTING

- A. Adjust installed work.

3.04 CLEANING

- A. Clean casework, counters, shelves, hardware, fittings, and fixtures.

END OF SECTION

SECTION 07 7100
ROOF SPECIALTIES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Manufactured roof specialties, including pipe flashings.

1.02 RELATED REQUIREMENTS

- A. Section 07 9005 - Joint Sealers.

1.03 REFERENCE STANDARDS

1.04 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data on shape of components, materials and finishes, anchor types and locations.
- C. Shop Drawings: Indicate configuration and dimension of components, adjacent construction, required clearances and tolerances, and other affected work.
- D. Manufacturer's Installation Instructions: Indicate special procedures and perimeter conditions requiring special attention.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Pipe and Penetration Flashings:
 - 1. Portals Plus by Commercial Products Group of Hart and Cooley, Inc.:
www.portalsplus.com.
 - 2. Carlisle Syntec Systems www.carlisesyntec.com

2.02 COMPONENTS

- A. Pipe and Penetration Flashing: Base of _____, compatible with EPDM roof systems, and capable of accomodating pipes sized between 0.375 inches (9.5 mm) and 12 inches (30.5 cm).
 - 1. Caps: EPDM.
 - 2. Color: Black.

2.03 ACCESSORIES

- A. Sealant: Per manufacturer's recommednation

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that deck, curbs, roof membrane, base flashing, and other items affecting work of this Section are in place and positioned correctly.

3.02 INSTALLATION

- A. Install components in accordance with manufacturer's instructions.
- B. Coordinate installation of sealants and roofing cement with work of this section to ensure water tightness.

END OF SECTION

SECTION 07 8400 FIRESTOPPING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Firestopping systems.
- B. Firestopping of all joints and penetrations in fire-resistance rated and smoke-resistant assemblies, whether indicated on drawings or not, and other openings indicated.
- C. Firestopping systems used for acoustic purposes

1.02 RELATED REQUIREMENTS

- A. Section 07 9005 - Joint Sealers
- B. Section 09 2116 - Gypsum Board Assemblies

1.03 REFERENCE STANDARDS

- A. ASTM E119 - Standard Test Methods for Fire Tests of Building Construction and Materials; 2012.
- B. ASTM E814 - Standard Test Method for Fire Tests of Through-Penetration Fire Stops; 2011a.
- C. ASTM E2837 - Standard Test Method for Determining Fire Resistance of Continuity Head-of-Wall Joint Systems Installed Between Rated Wall Assemblies and Nonrated Horizontal Assemblies; 2011.
- D. UL (FRD) - Fire Resistance Directory; Underwriters Laboratories Inc.; current edition.

1.04 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data on product characteristics, performance ratings, and limitations.
- C. Manufacturer's Installation Instructions: Indicate preparation and installation instructions.
- D. Manufacturer's Certificate: Certify that products meet or exceed specified requirements.
- E. Certificate from authority having jurisdiction indicating approval of materials used.
- F. Qualification statements for installing mechanics.

1.05 QUALITY ASSURANCE

- A. Fire Testing: Provide firestopping assemblies of designs that provide the scheduled fire ratings when tested in accordance with methods indicated.
- B. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum five years documented experience.
- C. Installer Qualifications: Company specializing in performing the work of this section and:
 - 1. With minimum 3 years documented experience installing work of this type.
 - 2. Able to show at least 5 satisfactorily completed projects of comparable size and type.

1.06 FIELD CONDITIONS

- A. Comply with firestopping manufacturer's recommendations for temperature and conditions during and after installation. Maintain minimum temperature before, during, and for 3 days after installation of materials.
- B. Provide ventilation in areas where solvent-cured materials are being installed.

PART 2 PRODUCTS

2.01 FIRESTOPPING - GENERAL REQUIREMENTS

- A. Firestopping: Any material meeting requirements.

- B. Firestopping Materials with Volatile Content: Provide only products having lower volatile organic compound (VOC) content than required by South Coast Air Quality Management District Rule No.1168.
- C. Primers, Sleeves, Forms, Insulation, Packing, Stuffing, and Accessories: Type required for tested assembly design.
- D. Fire Ratings: See Drawings for required systems and ratings.

2.02 FIRESTOPPING ASSEMBLY REQUIREMENTS

- A. Head-of-Wall Firestopping at Joints Between Non-Rated Floor and Fire-Rated Wall: Use any system that has been tested according to ASTM E2837 to have fire resistance F Rating equal to required fire rating of floor or wall, whichever is greater.
- B. Through Penetration Firestopping: Use any system that has been tested according to ASTM E814 to have fire resistance F Rating equal to required fire rating of penetrated assembly.

2.03 MATERIALS

- A. Firestopping Sealants: Provide only products having a lower volatile organic compound (VOC) content than required by South Coast Air Quality Management District Rule No. 1168.
- B. Elastomeric Silicone Firestopping: Single component silicone elastomeric compound and compatible silicone sealant; conforming to the following:
 - 1. Durability and Longevity: Permanent
 - 2. Color: Black, dark grey, or red.
- C. Foam Firestopping: Single component silicone foam compound; conforming to the following:
 - 1. Durability and Longevity: Permanent
 - 2. Color: Dark grey.
- D. Fibered Compound Firestopping: Formulated compound mixed with incombustible non-asbestos fibers; conforming to the following:
 - 1. Durability and Longevity: Permanent
 - 2. Color: Dark Grey
- E. Fiber Firestopping: Mineral fiber insulation used in conjunction with elastomeric surface sealer forming airtight bond to opening; conforming to the following:
 - 1. Durability and Longevity: Permanent
- F. Intumescent Putty: Compound that expands on exposure to surface heat gain; conforming to the following:
 - 1. Potential Expansion: Minimum 1000 percent
 - 2. Durability and Longevity: Permanent
 - 3. Color: Black, dark grey, or red.
- G. Primers, Sleeves, Forms, Insulation, Packing, Stuffing, and Accessories: Type required for tested assembly design.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify openings are ready to receive the work of this section.

3.02 PREPARATION

- A. Clean substrate surfaces of dirt, dust, grease, oil, loose material, or other matter that could adversely affect bond of firestopping material.
- B. Remove incompatible materials that could adversely affect bond.

3.03 INSTALLATION

- A. Install materials in manner described in fire test report and in accordance with manufacturer's instructions, completely closing openings.

3.04 CLEANING

- A. Clean adjacent surfaces of firestopping materials.

3.05 PROTECTION

- A. Protect adjacent surfaces from damage by material installation.

END OF SECTION

SECTION 07 9005
JOINT SEALERS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Sealants and joint backing.

1.02 RELATED REQUIREMENTS

- A. Section 07 7100 - Roof Specialties: Pipe and Penetration Flashings.
- B. Section 07 8400 - Firestopping: Firestopping sealants.
- C. Section 08 8000 - Glazing: Glazing sealants and accessories.
- D. Section 09 2116 - Gypsum Board Assemblies: Acoustic sealant.

1.03 REFERENCE STANDARDS

- A. ASTM C834 - Standard Specification for Latex Sealants; 2010.
- B. ASTM C919 - Standard Practice for Use of Sealants in Acoustical Applications; 2012.
- C. ASTM C920 - Standard Specification for Elastomeric Joint Sealants; 2011.
- D. ASTM C1193 - Standard Guide for Use of Joint Sealants; 2012.
- E. ASTM D2240 - Standard Test Method for Rubber Property--Durometer Hardness; 2005 (Reapproved 2010).
- F. SCAQMD 1168 - South Coast Air Quality Management District Rule No.1168; current edition; www.aqmd.gov.

1.04 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data indicating sealant chemical characteristics and performance criteria.
- C. Manufacturer's Installation Instructions: Indicate special procedures and perimeter conditions requiring special attention.

1.05 QUALITY ASSURANCE

- A. Maintain one copy of each referenced document covering installation requirements on site.
- B. Manufacturer Qualifications: Company specializing in manufacturing the Products specified in this section with minimum three years documented experience.
- C. Applicator Qualifications: Company specializing in performing the work of this section with minimum five years experience.

1.06 FIELD CONDITIONS

- A. Maintain temperature and humidity recommended by the sealant manufacturer during and after installation.

1.07 WARRANTY

- A. Correct defective work within a one year period after Date of Substantial Completion.
- B. Warranty: Include coverage for installed sealants and accessories which fail to achieve airtight seal, exhibit loss of adhesion or cohesion, or do not cure.

PART 2 PRODUCTS

2.01 SEALANTS

- A. Sealants and Primers - General: Provide only products having lower volatile organic compound (VOC) content than required by South Coast Air Quality Management District Rule No.1168.
- B. Roof Sealant:

1. Compatible with EPDM roofing system.
 2. Use for: Seal pipe boot flashing to EPDM roof.
- C. General Purpose Interior Sealant: Acrylic emulsion latex; ASTM C834, Type OP, Grade NF single component, paintable.
1. Color: Match adjacent finished surfaces.
 2. Applications: Use for:
 - a. Interior wall and ceiling control joints.
 - b. Joints between door and window frames and wall surfaces unless acoustic sealant required.
 - c. Other interior joints for which no other type of sealant is indicated.
 3. Products:
 - a. Pecora Corporation; AC-20 + Silicone Acrylic Latex Caulking Compound: www.pecora.com.
 - b. Substitutions: See Section 01 6000 - Product Requirements.
- D. Bathtub/Tile Sealant: Clear silicone; ASTM C920, Uses I, M and A; single component, mildew resistant. White only to be used where adjacent areas are white.
1. Applications: Use for:
 - a. Joints between plumbing fixtures and floor and wall surfaces.
 - b. Joints between kitchen and bath countertops and wall surfaces.
- E. Acoustical Sealant for Concealed Locations:
1. Applications: Use for concealed locations only:
 - a. Sealant bead between top stud runner and structure and between bottom stud track and floor.
 - b. See drawings for additional locations.
- F. Concrete Floor Joint Filler: Self-leveling, pourable, semi-rigid sealant intended for filling cracks and control joints not subject to significant movement; rigid enough to support concrete edges under traffic.
1. Composition: Polyurea or epoxy, single or multi-part, 100 percent solids by weight.
 2. Hardness: 75 to 80 after 7 days, when tested in accordance with ASTM D2240 Shore A.
 3. Color: Concrete gray.
 4. Joint Width: 1/8 to 1/4 inch (3 to 6 mm).

2.02 ACCESSORIES

- A. Primer: Non-staining type, recommended by sealant manufacturer to suit application.
- B. Joint Cleaner: Non-corrosive and non-staining type, recommended by sealant manufacturer; compatible with joint forming materials.
- C. Joint Backing: Round foam rod compatible with sealant; ASTM D 1667, closed cell PVC; oversized 30 to 50 percent larger than joint width.
- D. Bond Breaker: Pressure sensitive tape recommended by sealant manufacturer to suit application.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that substrate surfaces are ready to receive work.
- B. Verify that joint backing and release tapes are compatible with sealant.

3.02 PREPARATION

- A. Remove loose materials and foreign matter that could impair adhesion of sealant.
- B. Clean and prime joints in accordance with manufacturer's instructions.
- C. Perform preparation in accordance with manufacturer's instructions and ASTM C1193.
- D. Protect elements surrounding the work of this section from damage or disfigurement.

3.03 INSTALLATION

- A. Perform work in accordance with sealant manufacturer's requirements for preparation of surfaces and material installation instructions.
- B. Perform installation in accordance with ASTM C1193.
- C. Perform acoustical sealant application work in accordance with ASTM C919.
- D. Install bond breaker where joint backing is not used.
- E. Install sealant free of air pockets, foreign embedded matter, ridges, and sags.
- F. Apply sealant within recommended application temperature ranges. Consult manufacturer when sealant cannot be applied within these temperature ranges.
- G. Tool joints concave.

3.04 CLEANING

- A. Clean adjacent soiled surfaces.

3.05 PROTECTION

- A. Protect sealants until cured.

END OF SECTION

SECTION 08 1213
HOLLOW METAL FRAMES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Non-fire-rated steel frames for non-steel doors.
- B. Fire-rated steel door frames for non-steel doors.
- C. Frames for non-steel sound-rated doors.
- D. Interior glazed light frames.

1.02 RELATED REQUIREMENTS

- A. Section 08 7100 - Door Hardware: Hardware and silencers.
- B. Section 08 8000 - Glazing: Glass for borrowed lites.
- C. Section 09 9000 - Painting and Coating: Field painting of frames.

1.03 REFERENCE STANDARDS

- A. ANSI/ICC A117.1 - American National Standard for Accessible and Usable Buildings and Facilities; International Code Council; 2009.
- B. ANSI A250.10 - Test Procedure and Acceptance Criteria for Prime Painted Steel Surfaces for Steel Doors and Frames; 1998 (R2011).
- C. BHMA A156.115 - Hardware Preparation in Steel Doors and Steel Frames; 2006.
- D. NAAMM HMMA 840 - Guide Specifications for Installation and Storage of Hollow Metal Doors and Frames; The National Association of Architectural Metal Manufacturers; 2007.
- E. NFPA 80 - Standard for Fire Doors and Other Opening Protectives; 2013.
- F. UL (BMD) - Building Materials Directory; Underwriters Laboratories Inc.; current edition.
- G. UL 10C - Standard for Positive Pressure Fire Tests of Door Assemblies; Current Edition, Including All Revisions.

1.04 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements for submittal procedures.
- B. Product Data: Materials and details of design and construction, hardware locations, reinforcement type and locations, anchorage and fastening methods, and finishes; and one copy of referenced grade standard.
- C. Shop Drawings: Details of each opening, showing elevations, glazing, frame profiles, and identifying location of different finishes, if any.
- D. Installation Instructions: Manufacturer's published instructions, including any special installation instructions relating to this project.
- E. Manufacturer's Certificate: Certification that products meet or exceed specified requirements.

1.05 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum five years of documented experience.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Store in accordance with NAAMM HMMA 840.

PART 2 PRODUCTS

2.01 STEEL DOOR FRAMES - GENERAL REQUIREMENTS

- A. Refer to Door and Frame Schedule on the drawings for frame sizes, fire ratings, sound ratings, finishing, door hardware to be installed, and other variations, if any.

- B. Door Frame Type: Provide steel door frames with integral casings, for field finishing.
- C. Accessibility: Comply with ANSI/ICC A117.1.
- D. Combined Requirements: If a particular door and frame unit is indicated to comply with more than one type of requirement, comply with all the specified requirements for each type; for instance, an exterior door that is also indicated as being sound-rated must comply with the requirements specified for exterior doors and for sound-rated doors; where two requirements conflict, comply with the most stringent.
- E. Hardware Preparation: In accordance with BHMA A156.115, with reinforcement welded in place, in addition to other requirements specified.
- F. Transom Bars: Fixed, of profile same as jamb and head.
- G. Frames for Interior Glazing or Borrowed Lights: Construction and face dimensions to match door frames, and as indicated on drawings.

2.02 STEEL DOOR FRAMES WITH INTEGRAL CASINGS

- A. Finish: Factory primed, for field finishing.
- B. Interior Door Frames, Non-Fire-Rated: Fully welded type.
 - 1. Finish: Factory primed, for field finishing.
- C. Interior Door Frames, Fire-Rated: Fully welded type.
 - 1. Fire Rating: As indicated on Door and Frame Schedule, tested in accordance with UL 10C ("positive pressure").
 - a. Provide units listed and labeled by UL.
 - b. Attach fire rating label to each fire rated unit.
 - 2. Finish: Factory primed, for field finishing.
- D. Sound-Rated Door Frames: Fully welded type.
 - 1. Sound Rating: Tested with the door to achieve the rating specified for the door opening.
 - 2. Finish: Factory primed, for field finishing.

2.03 ACCESSORY MATERIALS

- A. Silencers: Resilient rubber, fitted into drilled hole; 3 on strike side of single door, 3 on center mullion of pairs, and 2 on head of pairs without center mullions.

2.04 FINISH MATERIALS

- A. Primer: Rust-inhibiting, complying with ANSI A250.10, door manufacturer's standard.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify existing conditions before starting work.
- B. Verify that opening sizes and tolerances are acceptable.
- C. Verify that finished walls are in plane to ensure proper door alignment.

3.02 INSTALLATION

- A. Install frames in accordance with manufacturer's instructions and recommendations and as follows.
- B. In addition, install fire rated units in accordance with NFPA 80.
- C. Coordinate frame anchor placement with wall construction.
- D. Coordinate installation of glazing.
- E. Coordinate installation of hardware.

3.03 TOLERANCES

- A. Maximum Diagonal Distortion: 1/16 inch (1.5 mm) measured with straight edges, crossed corner to corner.

3.04 SCHEDULE

- A. Refer to Door and Frame Schedule on the drawings.

END OF SECTION

SECTION 08 1416
FLUSH WOOD DOORS

PART 1 GENERAL

1.01 RELATED REQUIREMENTS

- A. Section 08 1213 - Hollow Metal Frames.
- B. Section 08 7100 - Door Hardware.
- C. Section 08 8000 - Glazing.
- D. Section 09 9000 - Painting and Coating: Site finishing of doors.

1.02 REFERENCE STANDARDS

- A. ASTM E413 - Classification for Rating Sound Insulation; 2010.
- B. ASTM E1408 - Standard Test Method for Laboratory Measurement of the Sound Transmission Loss of Door Panels and Door Systems; 1991 (Reapproved 2000).
- C. AWI/AWMAC/WI (AWS) - Architectural Woodwork Standards; 2009.
- D. ICC (IBC) - International Building Code; 2012.
- E. ITS (DIR) - Directory of Listed Products; Intertek Testing Services NA, Inc.; current edition.
- F. NFPA 80 - Standard for Fire Doors and Other Opening Protectives; 2013.
- G. NFPA 252 - Standard Methods of Fire Tests of Door Assemblies; National Fire Protection Association; 2012.
- H. UL (BMD) - Building Materials Directory; Underwriters Laboratories Inc.; current edition.
- I. UL 10B - Standard for Fire Tests of Door Assemblies; Current Edition, Including All Revisions.

1.03 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements for submittal procedures.
- B. Product Data: Indicate door core materials and construction; veneer species, type and characteristics.
- C. Shop Drawings: Show doors and frames, elevations, sizes, types, swings, undercuts, beveling, blocking for hardware, factory machining, factory finishing, cutouts for glazing and other details.
- D. Specimen warranty.
- E. Test Reports: Show compliance with specified requirements for the following:
 - 1. Sound-retardant doors and frames; sealed panel tests are not acceptable.
- F. Samples: Submit two samples of door construction, 12 by 12 inch (300 by 300 mm) in size cut from top corner of door.
- G. Samples: Submit two samples of door veneer, 12 by 12 inch (300 by 300 mm) in size illustrating wood grain, stain color, and sheen.
- H. Manufacturer's Installation Instructions: Indicate special installation instructions.
- I. Warranty, executed in Owner's Representative's name.

1.04 QUALITY ASSURANCE

- A. Maintain one copy of the specified door quality standard on site for review during installation and finishing.
- B. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum five years of documented experience.
- C. Installed Fire Rated Door and Transom Panel Assembly: Conform to NFPA 80 for fire rated class as indicated.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Package, deliver and store doors in accordance with specified quality standard.
- B. Accept doors on site in manufacturer's packaging. Inspect for damage.
- C. Protect doors with resilient packaging sealed with heat shrunk plastic. Do not store in damp or wet areas; or in areas where sunlight might bleach veneer. Seal top and bottom edges with tinted sealer if stored more than one week. Break seal on site to permit ventilation.

1.06 WARRANTY

- A. See Section 01 7800 - Closeout Submittals for additional warranty requirements.
- B. Interior Doors: Provide manufacturer's warranty for the life of the installation.
- C. Include coverage for delamination of veneer, warping beyond specified installation tolerances, defective materials, and telegraphing core construction.

PART 2 PRODUCTS

2.01 DOORS

- A. All Doors: .
 - 1. Quality Level: Premium Grade, in accordance with AWI/AWMAC/WI Architectural Woodwork Standards.
 - 2. Wood Veneer Faced Doors: 5-ply unless otherwise indicated.
- B. Interior Doors: 1-3/4 inches (44 mm) thick unless otherwise indicated; flush construction.
 - 1. Provide solid core doors at all locations .
 - 2. Fire Rated Doors: Tested to ratings indicated on drawings in accordance with NFPA 252, UL 10B, or UBC Standard 7-2-94 ("neutral pressure"); UL or WH (ITS) labeled without any visible seals when door is open.
 - 3. Sound Retardant Doors: Minimum STC of 50, calculated in accordance with ASTM E413, tested in accordance with ASTM E1408.
 - 4. Wood veneer facing with factory transparent finish .

2.02 DOOR AND PANEL CORES

- A. Non-Rated Solid Core and 20 Minute Rated Doors: Type particleboard core (PC), plies and faces as indicated above.
- B. Fire Rated Doors: Mineral core, Type FD, plies and faces as indicated above; with core blocking as required to provide adequate anchorage of hardware without through-bolting.
- C. Sound Retardant Doors: Equivalent to Type PC construction with core as required to achieve rating specified; plies and faces as indicated above.

2.03 DOOR FACINGS

- A. Wood Veneer Facing for Transparent Finish: match existing, veneer grade as specified above, match existing, _____ veneer match, balance assembly match; unless otherwise indicated.
 - 1. Vertical Edges: Same species as face veneer.
 - 2. Pairs: Pair match each pair; set match pairs within 10 feet (3 m) of each other when doors are closed.

2.04 ACCESSORIES

2.05 DOOR CONSTRUCTION

- A. Fabricate doors in accordance with door quality standard specified.
- B. Where supplementary protective edge trim is required, install trim after veneer facing has been applied full-width.
- C. Factory machine doors for hardware other than surface-mounted hardware, in accordance with hardware requirements and dimensions.

- D. Factory fit doors for frame opening dimensions identified on shop drawings, with edge clearances in accordance with specified quality standard.
 - 1. Exception: Doors to be field finished.
- E. Provide edge clearances in accordance with the quality standard specified.

2.06 FACTORY FINISHING - WOOD VENEER DOORS

- A. Finish work in accordance with AWI/AWMAC/WI Architectural Woodwork Standards, Section 5 - Finishing for Grade specified and as follows:
 - 1. Transparent:
 - a. System - 1, Lacquer, Nitrocellulose.
 - b. Sheen: Semigloss.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify existing conditions before starting work.
- B. Verify that opening sizes and tolerances are acceptable.
- C. Do not install doors in frame openings that are not plumb or are out-of-tolerance for size or alignment.

3.02 INSTALLATION

- A. Install doors in accordance with manufacturer's instructions and specified quality standard.
- B. Factory-Finished Doors: Do not field cut or trim; if fit or clearance is not correct, replace door.
- C. Use machine tools to cut or drill for hardware.
- D. Coordinate installation of doors with installation of frames and hardware.

3.03 TOLERANCES

- A. Conform to specified quality standard for fit and clearance tolerances.
- B. Conform to specified quality standard for telegraphing, warp, and squareness.

3.04 ADJUSTING

- A. Adjust doors for smooth and balanced door movement.
- B. Adjust closers for full closure.

3.05 SCHEDULE - SEE DRAWINGS

END OF SECTION

SECTION 08 3100
ACCESS DOORS AND PANELS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Wall access door and frame units.
- B. Ceiling access door and frame units.

1.02 REFERENCE STANDARDS

- A. UL (FRD) - Fire Resistance Directory; Underwriters Laboratories Inc.; current edition.

1.03 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide sizes, types, finishes, hardware, scheduled locations, and details of adjoining work.
- C. Shop Drawings: Indicate exact position of all access door units.

PART 2 PRODUCTS

2.01 ACCESS DOOR AND PANEL APPLICATIONS

- A. Walls, Unless Otherwise Indicated:
 - 1. Material: Stainless steel.
- B. Walls in Wet Areas:
 - 1. Material: Stainless steel.
- C. Ceilings, Unless Otherwise Indicated: Same type as for walls.

2.02 WALL AND CEILING UNITS

- A. Access Doors: Factory fabricated door and frame units, fully assembled units with corner joints welded, filled, and ground flush; square and without rack or warp; coordinate requirements with assemblies units are to be installed in.
 - 1. Door Style: Single thickness with rolled or turned in edges.
 - 2. Hardware:
 - a. Hinges for Non-Fire-Rated Units: Concealed, constant force closure spring type.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that rough openings are correctly sized and located.

3.02 INSTALLATION

- A. Install units in accordance with manufacturer's instructions.
- B. Install frames plumb and level in openings. Secure rigidly in place.
- C. Position units to provide convenient access to the concealed work requiring access.

END OF SECTION

SECTION 08 4126
ALL-GLASS ENTRANCES AND STOREFRONTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. All-glass entrances.
- B. Swinging doors.

1.02 RELATED REQUIREMENTS

- A. Section 08 7100 - Door Hardware.

1.03 REFERENCE STANDARDS

- A. ASTM B455 - Standard Specification for Copper-Zinc-Lead Alloy (Leaded-Brass) Extruded Shapes; 2010.
- B. ASTM C920 - Standard Specification for Elastomeric Joint Sealants; 2011.
- C. ASTM C1036 - Standard Specification for Flat Glass; 2011e1.
- D. ASTM C1048 - Standard Specification for Heat-Strengthened and Fully Tempered Flat Glass; 2012.

1.04 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Manufacturer's descriptive literature for each component in all-glass entrance assembly.
- C. Shop Drawings: Drawings showing layout, dimensions, identification of components, and interface with adjacent construction.
 - 1. Include field measurements of openings.
 - 2. Include elevations showing:
 - a. Appearance of all-glass entrance layouts.
 - b. Locations and identification of manufacturer-supplied door hardware and fittings.
 - c. Locations and sizes of cut-outs and drilled holes for other door hardware.
 - 3. Include details of:
 - a. Requirements for support and bracing at openings.
 - b. Installation details.
 - c. Appearance of manufacturer-supplied door hardware and fittings.
- D. Verification Samples: Two samples, minimum size 2 by 3 inches (50 by 75 mm), representing actual material and finish of exposed metal.
- E. Certificates: Contractor's certification that installer of entrance assemblies meets specified qualifications.
- F. Operation and Maintenance Data: For manufacturer-supplied operating hardware.

1.05 QUALITY ASSURANCE

- A. Installer Qualifications: Minimum five of experience installing entrance assemblies similar to those specified in this section.

PART 2 PRODUCTS

2.01 ASSEMBLIES

- A. Entrances and Storefronts: Factory fabricated assemblies consisting of frameless glass panels fastened with metal structural fittings in configuration indicated on the drawings.
 - 1. Operational Loads: Designed to withstand door operation under normal traffic without damage, racking, sagging, or deflection.
 - 2. Prepared for all specified hardware whether specified in this section or not.
 - 3. Finished metal surfaces protected with strippable film.

4. Factory assembled to greatest extent practicable; may be disassembled to accommodate shipping constraints.

2.02 FITTINGS

- A. Exposed Fittings: Brass, bright polished with clear baked enamel finish.
- B. Fixed Glazed Panel Fittings: Sufficient to structurally support glazing and doors under specified loads; including but not limited to cover caps for door hardware, glazing mullions, clamp fittings, and panel corner patches.
- C. Swinging Door Fittings: Continuous rail at top and bottom of door.
 1. Rail Cross-Section: 1-3/4 inches (44.4 mm) wide by 3-1/2 inches (88.9 mm) high.
 2. Rail Profile: Tapered.

2.03 DOOR HARDWARE

- A. Finish of Exposed Metals: Match finish of fittings.
- B. Swinging Door Hardware: Provided by storefront manufacturer:
 1. Hinges: floor mounted pivot, 105 degree non-hold open.
 2. Closers: concealed overhead.
 3. Push/pulls: CLR - CM12X28BR or equal.
 4. Locksets: mortise shear mag with DPS and mag bond sensor.

2.04 MATERIALS

- A. Glass: Tempered float glass meeting requirements of ASTM C1036, Type I, Quality Q3, fully tempered in accordance with ASTM C1048, Kind FT, and as follows:
 1. Thickness: 1/2 inch (12 mm).
 2. Color: Clear, Class 1.
 3. Prepare glazing panels for indicated fittings and hardware before tempering.
 4. Polish edges that will be exposed in finished work to bright flat polish.
 5. Temper glass materials horizontally; visible tong marks or tong mark distortions are not permitted.
 6. Film: frosted film applied to office side per architects selection, State of Alaska seal on public side
- B. Brass Components: Conforming to ASTM B455, UNS C38500, Architectural Bronze.
- C. Sealant: One-part silicone sealant, conforming to ASTM C920, clear.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that openings are acceptable.
- B. Do not begin installation until substrates and openings have been properly prepared.
- C. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.02 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Tolerances:
 1. Horizontal Components and Sight Lines: Not more than 1/8 inch in 10 feet (1:1000) variation from level, non-cumulative.
 2. Vertical Components and Sight Lines: Not more than 1/8 inch in 10 feet (1:1000) variation from plumb, non-cumulative.
 3. Variation from Plane or Indicated Location: Not more than 1/16 inch (1.5 mm).

3.03 ADJUSTING

- A. Adjust doors to operate correctly, without binding to frame, sill, or adjacent doors.
- B. Adjust door hardware for smooth operation.

3.04 CLEANING

- A. Clean installed work to like-new condition.

3.05 PROTECTION

- A. Protect installed products until completion of project.
- B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION

SECTION 08 5123
STEEL WINDOWS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Factory finished steel windows with fixed sash.
- B. Perimeter sealant.

1.02 RELATED REQUIREMENTS

- A. Section 07 9005 - Joint Sealers: Perimeter sealant and back-up materials.
- B. Section 08 8000 - Glazing.

1.03 REFERENCE STANDARDS

- A. ASTM A123/A123M - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products; 2012.

1.04 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide component dimensions, anchorage and fasteners, glass .
- C. Shop Drawings: Indicate opening dimensions, framed opening tolerances, affected related work; installation requirements.
- D. Certificates: Certify that products of this section meet or exceed specified requirements.
- E. Warranty: Submit manufacturer warranty and ensure that forms have been completed in Owner's name and registered with manufacturer.

1.05 QUALITY ASSURANCE

- A. Installer Qualifications: Company specializing in performing the work of this section with minimum five years of experience.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Protect factory finished surfaces with wrapping. Do not use adhesive papers or sprayed coatings that bond when exposed to sunlight or weather.

1.07 WARRANTY

- A. See Section 01 7800 - Closeout Submittals, for additional warranty requirements.
- B. Correct defective Work within a one year period after Date of Substantial Completion.

PART 2 PRODUCTS

2.01 STEEL WINDOWS

- A. Steel Windows: Hot rolled steel sections, factory fabricated, factory finished, with vision glass, infill panels, related flashings, anchorage and attachment devices.
 - 1. Grade: SWI Heavy Custom design.
- B. Performance Requirements:
 - 1. Member Deflection: Limit member deflection to 1/200 of the longer dimension; with full recovery of glazing materials.
 - 2. Acoustic Performance: STC 50 min.

2.02 FINISHES

- A. Window Frames: Prime painted finish.

PART 3 EXECUTION

3.01 EXAMINATION

3.02 INSTALLATION

- A. Install window frames and glass and glazing in accordance with manufacturers instructions.
- B. Attach window frame and shims to perimeter opening to accommodate construction tolerances and other irregularities.
- C. Align window plumb and level, free of warp or twist. Maintain dimensional tolerances and alignment with adjacent work.
- D. Install glass and infill panels in accordance with Section 08 8000, to glazing method required to achieve performance criteria.

3.03 TOLERANCES

- A. Maximum Variation from Level or Plumb: 1/16 inches in 3 ft (1.5 mm/m) non-cumulative or 1/8 inches per 10 ft (3 mm/3 m).

3.04 CLEANING

- A. Remove labels and visible markings.
- B. Wash surfaces by method recommended and acceptable to sealant and window manufacturer; rinse and wipe surfaces clean.
- C. Remove excess sealant by method acceptable to sealant manufacturer.

3.05 PROTECTION

- A. Do not permit continuing construction activities near unprotected finish surfaces.

END OF SECTION

SECTION 08 7100
DOOR HARDWARE

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Hardware for wood doors.
- B. Hardware for fire-rated doors.
- C. Electrically operated and controlled hardware.
- D. Weatherstripping, seals and door gaskets.

1.02 RELATED REQUIREMENTS

- A. Section 08 1213 - Hollow Metal Frames.
- B. Section 08 1416 - Flush Wood Doors.
- C. Section 08 4126 All-Glass Entrances and Storefronts

1.03 REFERENCE STANDARDS

- A. 36 CFR 1191 - Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities; Final Rule; current edition; (ADA Standards for Accessible Design).
- B. ANSI/ICC A117.1 - American National Standard for Accessible and Usable Buildings and Facilities; International Code Council; 2009.
- C. NFPA 80 - Standard for Fire Doors and Other Opening Protectives; 2013.
- D. UL (BMD) - Building Materials Directory; Underwriters Laboratories Inc.; current edition.

1.04 ADMINISTRATIVE REQUIREMENTS

- A. Coordinate the manufacture, fabrication, and installation of products onto which door hardware will be installed.
- B. Furnish templates for door and frame preparation to manufacturers and fabricators of products requiring internal reinforcement for door hardware.
- C. Convey Owner's Representative's keying requirements to manufacturers.
- D. Coordinate with existing hardware to ensure new hardware is alike and functionally compatible.

1.05 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Manufacturer's catalog literature for each type of hardware, marked to clearly show products to be furnished for this project.
- C. Samples: Prior to preparation of hardware schedule:
 - 1. Submit 1 sample of hinge, latchset, lockset, and closer illustrating style, color, and finish.
- D. Hardware Schedule: Detailed listing of each item of hardware to be installed on each door. Use door numbering scheme as included in the Contract Documents. Identify electrically operated items and include power requirements.
- E. Keying Schedule: Submit for approval of Owner's Representative.
- F. Project Record Documents: Record actual locations of concealed equipment, services, and conduit.
- G. Maintenance Data: Include data on operating hardware, lubrication requirements, and inspection procedures related to preventative maintenance.
 - 1. Submit manufacturer's parts lists and templates.
- H. Keys: Deliver with identifying tags to Owner's Representative by security shipment direct from hardware supplier.

- I. Warranty: Submit manufacturer's warranty and ensure that forms have been completed in Owner's Representative's name and registered with manufacturer.
- J. Maintenance Materials and Tools: Furnish the following for Owner's use in maintenance of project.
 - 1. See Section 01 6000 - Product Requirements, for additional provisions.

1.06 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum five years of documented experience.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Package hardware items individually; label and identify each package with door opening code to match hardware schedule.

1.08 WARRANTY

- A. See Section 01 7800 - Closeout Submittals, for additional warranty requirements.
- B. Provide five year warranty for door hardware.

PART 2 PRODUCTS

2.01 DOOR HARDWARE - GENERAL

- A. Provide hardware to match existing
- B. Provide all items of a single type of the same model by the same manufacturer.
- C. Provide products that comply with the following:
 - 1. Applicable provisions of federal, state, and local codes.
 - 2. Fire-Rated Doors: NFPA 80.
 - 3. All Hardware on Fire-Rated Doors : Listed and classified by UL as suitable for the purpose specified and indicated.
 - 4. Products Requiring Electrical Connection: Listed and classified by UL as suitable for the purpose specified and indicated.
- D. Electrically Operated and/or Controlled Hardware: Provide all power supplies, power transfer hinges, relays, and interfaces required for proper operation; provide wiring between hardware and control components and to building power connection.
- E. Finishes: Finish in general to match existing building standard, unless noted otherwise.
 - 1. Door Closers: Sprayed Aluminum to match existing.
 - 2. Kick Plates: Color as selected, match existing.
 - 3. Threshold: Aluminum, to match existing
 - 4. Weatherstrip and Door Bottoms: Clear Anodized to match existing.

2.02 SLIDING AND BIFOLDING DOOR HARDWARE

- A. Bifolding Door Hardware: Track, hanger fasteners, guides, and pulls; size track and hangers according to manufacturer's recommendations for weight of doors.
 - 1. Provide one pull for each pair of panels hinged together.
- B. Manufacturers - Sliding and Bifolding Hardware:
 - 1. Hager Companies: www.hagerco.com.
 - 2. Stanley Black & Decker: www.stanleyblackanddecker.com.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that doors and frames are ready to receive work; labeled, fire-rated doors and frames are present and properly installed, and dimensions are as indicated on shop drawings.
- B. Verify that electric power is available to power operated devices and of the correct characteristics.

3.02 INSTALLATION

- A. Install hardware in accordance with manufacturer's instructions and applicable codes.
- B. Use templates provided by hardware item manufacturer.
- C. Install hardware on fire-rated doors and frames in accordance with code and NFPA 80.
- D. Provide solid backing where required.
- E. Mounting heights for hardware from finished floor to center line of hardware item: As listed in Schedule, unless otherwise noted:

3.03 FIELD QUALITY CONTROL

- A. Provide an Architectural Hardware Consultant to inspect installation and certify that hardware and installation has been furnished and installed in accordance with manufacturer's instructions and as specified.

3.04 ADJUSTING

- A. Adjust work under provisions of Section 01 7000.
- B. Adjust hardware for smooth operation.
- C. Adjust gasketing for complete, continuous seal; replace if unable to make complete seal.

3.05 CLEANING

- A. Clean adjacent surfaces soiled by hardware installation. Clean finished hardware per manufacturer's instructions after final adjustments has been made. Replace items that cannot be cleaned to manufacturer's level of finish quality at no additional cost.

3.06 PROTECTION

- A. Protect finished Work under provisions of Section 01 7000.
- B. Do not permit adjacent work to damage hardware or finish.

3.07 SCHEDULE - SEE DRAWINGS

END OF SECTION

SECTION 08 8000
GLAZING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Glass.
- B. Plastic glazing film.
- C. Glazing compounds and accessories.

1.02 RELATED REQUIREMENTS

- A. Section 07 9005 - Joint Sealers: Sealant and back-up material.
- B. Section 08 1213 - Hollow Metal Frames: Glazed borrowed lites.
- C. Section 08 1416 - Flush Wood Doors: Glazed lites in doors.
- D. Section 08 5123 - Steel Windows: Glazing furnished by window manufacturer.

1.03 REFERENCE STANDARDS

- A. 16 CFR 1201 - Safety Standard for Architectural Glazing Materials; current edition.
- B. ANSI Z97.1 - American National Standard for Safety Glazing Materials Used in Buildings, Safety Performance Specifications and Methods of Test; 2010.
- C. ASTM C864 - Standard Specification for Dense Elastomeric Compression Seal Gaskets, Setting Blocks, and Spacers; 2005 (Reapproved 2011).
- D. ASTM C920 - Standard Specification for Elastomeric Joint Sealants; 2011.
- E. ASTM C1036 - Standard Specification for Flat Glass; 2011e1.
- F. ASTM C1048 - Standard Specification for Heat-Treated Flat Glass--Kind HS, Kind FT Coated and Uncoated Glass; 2012.
- G. ASTM C1172 - Standard Specification for Laminated Architectural Flat Glass; 2009e1.
- H. ASTM C1193 - Standard Guide for Use of Joint Sealants; 2011a.
- I. GANA (GM) - GANA Glazing Manual; Glass Association of North America; 2009.
- J. GANA (SM) - GANA Sealant Manual; Glass Association of North America; 2008.

1.04 ADMINISTRATIVE REQUIREMENTS

- A. Coordinate with existing adjacent glazing to ensure alike color, tinting, etc.

1.05 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data on Glass Types: Provide structural, physical and environmental characteristics, size limitations, special handling or installation requirements.
- C. Product Data on Glazing Compounds: Provide chemical, functional, and environmental characteristics, limitations, special application requirements. Identify available colors.
- D. Samples: Submit two samples 6 x 6 inch (152 x 152 mm) in size of glass units.
- E. Samples: Window Film: Provide entire product line for selection by Architect.

1.06 QUALITY ASSURANCE

- A. Perform Work in accordance with GANA Glazing Manual and FGMA Sealant Manual for glazing installation methods.
- B. Installer Qualifications: Company specializing in performing the work of this section with minimum 5 years documented experience.

1.07 FIELD CONDITIONS

- A. Maintain minimum ambient temperature before, during and 24 hours after installation of glazing compounds.

1.08 WARRANTY

- A. See Section 01 7800 - Closeout Submittals, for additional warranty requirements.
- B. Sealed Insulating Glass Units: Provide a five (5) year warranty to include coverage for seal failure, interpane dusting or misting, including replacement of failed units.
- C. Laminated Glass: Provide a five (5) year warranty to include coverage for delamination, including replacement of failed units.

PART 2 PRODUCTS

2.01 GLAZING TYPES

- A. Type A - Glass Units: Vision glazing.
 - 1. Application(s): Interior acoustic transom glazing.
 - 2. Hall-side Lite: Laminated, 1/2 inch (12 mm) thick.
 - a. Saflex 0.030-1/4 www.saflex.com or equivalent.
 - b. Tint: Clear.
 - 3. Inboard Lite: Laminated, 1/4 inch (6 mm) thick.
 - a. Saflex 0.030-1/8 www.saflex.com or equivalent.
 - b. Tint: Clear.

2.02 GLASS MATERIALS

- A. Laminated Glass: Float glass laminated in accordance with ASTM C1172.
 - 1. Plastic Interlayer: 0.060 inch (1.52 mm) thick, minimum.
 - 2. Where fully tempered is specified or required, provide glass that has been tempered by the tong-less horizontal method.

2.03 PLASTIC FILMS

- A. Manufacturers:
 - 1. 3M Window Film: www.3m.com/US/arch_construct/scpd/windowfilm.
 - a. 3M Fasara Decorative Window Film or equal.
 - b. To be selected from entire line of available types.
 - c. Application - all glass reception door

2.04 GLAZING COMPOUNDS

- A. Acrylic Sealant : Single component, solvent curing, non-bleeding; ASTM C 920, Type S, Grade NS, Class 12-1/2, Uses M and A; cured Shore A hardness of 15 to 25; color as selected.
- B. Silicone Sealant : Single component; neutral curing; capable of water immersion without loss of properties; non-bleeding, non-staining; ASTM C 920, Type S, Grade NS, Class 25, Uses M, A, and G; cured Shore A hardness of 15 to 25; color as selected.

2.05 GLAZING ACCESSORIES

- A. Glazing Tape: Preformed butyl compound with integral resilient tube spacing device; 10 to 15 Shore A durometer hardness; coiled on release paper; 1/8 x 3/8 inch (6 x 9 mm) size; black color.
 - 1. Manufacturers:
 - a. Pecora Corporation: www.pecora.com.
 - b. Substitutions: Refer to Section 01 6000 - Product Requirements.
- B. Glazing Gaskets: ASTM C864 Option I
 - 1. Zero International-Compress-O-Matic Extruded Bulb/Finger
 - 2. Solid Neoprene Gasket
 - 3. Color: Black

4. Or equal product.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that openings for glazing are correctly sized and within tolerance.
- B. Verify that surfaces of glazing channels or recesses are clean, free of obstructions that may impede moisture movement, weeps are clear, and ready to receive glazing.

3.02 PREPARATION

- A. Prime surfaces scheduled to receive sealant.
- B. Install sealants in accordance with ASTM C1193 and GANA Sealant Manual.
- C. Install sealant in accordance with manufacturer's instructions.

3.03 CLEANING

- A. Remove glazing materials from finish surfaces.
- B. Remove labels after Work is complete.
- C. Clean glass and adjacent surfaces.

3.04 PROTECTION

- A. After installation, mark pane with an 'X' by using removable plastic tape or paste.

END OF SECTION

SECTION 08 8717
SAFETY AND SECURITY GLAZING FILMS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Glazing film applied to existing glazing assemblies.

1.02 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Test Reports: Detailed reports of full-scale chamber tests to specified criteria, using assemblies identical to those required for this project.
- C. Shop Drawings: Detailing installation of film, anchoring accessories, and sealant.
- D. Samples: For each film product to be used, minimum size 4 inches (102 mm) by 6 inches (152 mm), representing actual product, color, and patterns.
- E. Specimen warranty.

1.03 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Glazing film manufacturer specializing in manufacture of safety glazing films with minimum 10 years successful experience.
- B. Installer Qualifications: Certified by glazing film manufacturer.

1.04 DELIVERY, STORAGE, AND HANDLING

- A. Store products in manufacturer's unopened packaging until ready for installation.
- B. Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of authorities having jurisdiction.

1.05 FIELD CONDITIONS

- A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

1.06 WARRANTY

- A. Provide 10 year manufacturer's replacement warranty to cover film against peeling, cracking, discoloration, and deterioration.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. 3M Window Film: www.3m.com/us/arch_construct/scpd/windowfilm.

2.02 MATERIALS

- A. Glazing Film: Transparent polyester film for permanent bonding to glass.
 - 1. 3M Ultra S150 Safety & Security Window film or equal.
 - 2. Color: Clear.
 - 3. Application: Exterior windows

PART 3 EXECUTION

3.01 EXAMINATION

- A. Field -Applied Film: Verify that existing conditions are adequate for proper application and performance of film.
- B. Examine glass and frames. Verify that existing conditions are adequate for proper application and performance of film.
- C. Verify glass is not cracked, chipped, broken, or damaged.
- D. Verify that frames are securely anchored and free of defects.

- E. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.02 PREPARATION

- A. Clean glass of dust, dirt, paint, oil, grease, mildew, mold, and other contaminants that would inhibit adhesion.
- B. Immediately prior to applying film, thoroughly wash glass with neutral cleaning solution.
- C. Protect adjacent surfaces.
- D. Do not begin installation until substrates have been properly prepared.

3.03 INSTALLATION

- A. Do not apply glazing film when surface temperature is less than 40 degrees F (4 degrees C) or if precipitation is imminent.
- B. Install in accordance with manufacturer's instructions, without air bubbles, wrinkles, streaks, bands, thin spots, pinholes, or gaps, as required to achieve specified performance.
- C. Accurately cut film with straight edges to required sizes allowing 1/16 inch (2 mm) to 1/8 inch (3 mm) gap at perimeter of glazed panel unless otherwise required by anchorage method.
- D. Seams: Seam film only as required to accommodate material sizes; form seams vertically without overlaps and gaps; do not install with horizontal seams.
- E. Clean glass and anchoring accessories following installation. Remove excess sealants and other glazing materials from adjacent finished surfaces.
- F. Remove labels and protective covers.

3.04 PROTECTION

- A. Protect installed products until completion of project.
- B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION

SECTION 09 2116
GYPSUM BOARD ASSEMBLIES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Performance criteria for gypsum board assemblies.
- B. Metal stud wall framing.
- C. Metal channel ceiling framing.
- D. Acoustic insulation.
- E. Cementitious backing board.
- F. Gypsum wallboard.
- G. Joint treatment and accessories.

1.02 RELATED REQUIREMENTS

- A. Section 07 8400 - Firestopping: Top-of-wall assemblies at fire rated walls.
- B. Section 07 9005 - Joint Sealers: Acoustic sealant.

1.03 REFERENCE STANDARDS

- A. AISI SG02-1 - North American Specification for the Design of Cold-Formed Steel Structural Members; American Iron and Steel Institute; 2001 with 2004 supplement. (replaced SG-971)
- B. ANSI A108.11 - American National Standard for Interior Installation of Cementitious Backer Units; 2012.1.
- C. ANSI A118.9 - American National Standard Specifications for Test Methods and Specifications for Cementitious Backer Units; 2012.1.
- D. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2011.
- E. ASTM C475/C475M - Standard Specification for Joint Compound and Joint Tape for Finishing Gypsum Board; 2002 (Reapproved 2007).
- F. ASTM C645 - Standard Specification for Nonstructural Steel Framing Members; 2011a.
- G. ASTM C665 - Standard Specification for Mineral-Fiber Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing; 2012.
- H. ASTM C754 - Standard Specification for Installation of Steel Framing Members to Receive Screw-Attached Gypsum Panel Products; 2011.
- I. ASTM C840 - Standard Specification for Application and Finishing of Gypsum Board; 2011.
- J. ASTM C954 - Standard Specification for Steel Drill Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Steel Studs From 0.033 in. (0.84 mm) to 0.112 in. (2.84 mm) in Thickness; 2011.
- K. ASTM C1002 - Standard Specification for Steel Self-Piercing Tapping Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Wood Studs or Steel Studs; 2007.
- L. ASTM C1047 - Standard Specification for Accessories for Gypsum Wallboard and Gypsum Veneer Base; 2010a.
- M. ASTM C1325 - Standard Specification for Non-Asbestos Fiber-Mat Reinforced Cement Substrate Sheets; 2008b.
- N. ASTM C1396/C1396M - Standard Specification for Gypsum Board; 2011.
- O. ASTM C1629/C1629 - Standard Classification for Abuse-Resistant Nondecorated Interior Gypsum Panel Products and Fiber-Reinforced Cement Panels; 2006.

- P. ASTM D3273 - Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber; 2012.
- Q. GA-216 - Application and Finishing of Gypsum Board; Gypsum Association; 2010.
- R. GA-226 - Application of Gypsum Board to Form Curved Surfaces; Gypsum Association; 2008.
- S. GA-600 - Fire Resistance Design Manual; Gypsum Association; 2009.

1.04 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data on metal framing, gypsum board, accessories, and joint finishing system.
- C. Product Data: Provide manufacturer's data on partition head to structure connectors, showing compliance with requirements.

1.05 QUALITY ASSURANCE

- A. Installer Qualifications: Company specializing in performing gypsum board application and finishing, with minimum 5 years of documented experience.

PART 2 PRODUCTS

2.01 GYPSUM BOARD ASSEMBLIES

- A. Provide completed assemblies complying with ASTM C840 and GA-216.
- B. Fire Rated Assemblies: Provide completed assemblies with the following characteristics:
 - 1. Gypsum Association File Numbers: Comply with requirements of GA-600 for the particular assembly.

2.02 METAL FRAMING MATERIALS

- A. Non-Loadbearing Framing System Components: ASTM C645; galvanized sheet steel, of size and properties necessary to comply with ASTM C754 for the spacing indicated, with maximum deflection of wall framing of L/360 at 5 psf (240 Pa).
 - 1. Studs: "C" shaped with flat or formed webs with knurled faces.
 - 2. Runners: U shaped, sized to match studs.
 - 3. Ceiling Channels: C shaped.
 - 4. Furring: Hat-shaped sections, minimum depth of 7/8 inch (22 mm).
- B. Shaft Wall Studs and Accessories: ASTM C645; galvanized sheet steel, of size and properties necessary to comply with ASTM C754 and specified performance requirements.
- C. Ceiling Hangers: Type and size as specified in ASTM C754 for spacing required.
- D. Partition Head to Structure Connections: Provide mechanical anchorage devices that accommodate deflection using slotted holes, screws and anti-friction bushings, preventing rotation of studs while maintaining structural performance of partition.
 - 1. Structural Performance: Maintain lateral load resistance and vertical movement capacity required by applicable code, when evaluated in accordance with AISI North American Specification for the Design of Cold-Formed Steel Structural Members.
 - 2. Material: ASTM A653/A653M steel sheet, SS Grade 50/340, with G60/Z180 hot dipped galvanized coating.

2.03 BOARD MATERIALS

- A. Gypsum Wallboard: Paper-faced gypsum panels as defined in ASTM C1396/C1396M; sizes to minimize joints in place; edges tapered.
 - 1. Application: Use for vertical surfaces and ceilings, unless otherwise indicated.
 - 2. Mold Resistance: Score of 10, when tested in accordance with ASTM D3273.
 - a. Mold-resistant board is required at locations in proximity to wet areas.
 - 3. At Assemblies Indicated with Fire-Rating: Use type required by indicated tested assembly; if no tested assembly is indicated, use Type X board, UL or WH listed.

4. Thickness:
 - a. Vertical Surfaces: 5/8 inch (16 mm).
 - b. Ceilings: 5/8 inch (16 mm).
 - c. Multi-Layer Assemblies: Thicknesses as indicated on drawings.
- B. Impact-Rated Wallboard: Tested to Level 3 soft-body and hard-body impact in accordance with ASTM C1629.
 1. Application: High-traffic areas indicated.
 2. Mold Resistance: Score of 10, when tested in accordance with ASTM D3273.
 3. Type: Fire-resistance rated Type X, UL or WH listed.
 4. Thickness: 5/8 inch (16 mm).
 5. Edges: Tapered.
- C. Backing Board For Non-Wet Areas: Water-resistant gypsum backing board as defined in ASTM C1396/C1396M; sizes to minimum joints in place; ends square cut.
 1. Application: Vertical surfaces behind thinset tile, except in wet areas.
 2. Mold Resistance: Score of 10, when tested in accordance with ASTM D3273.
 3. Type X Thickness: 5/8 inch (16 mm).
 4. Edges: Tapered.

2.04 ACCESSORIES

- A. General: Provide auxiliary materials that comply with referenced installation standards and manufacturer's written recommendations.
- B. Acoustic Insulation: ASTM C665; preformed glass fiber, friction fit type, unfaced.
- C. Acoustic Neoprene Closure Strips: sized to fit in roof deck profile.
 1. Use where acoustic wall type S3 is perpendicular to roof deck flute profile. Refer to drawings.
 2. Manufacturer: Carrington Specialty Products www.carrington-specialty.com or equal.
 3. Substitutions: See Section 01 6000 - Product Requirements.
- D. Acoustic Sealant: As specified in Section 07 9005 - Joint Sealers.
- E. Firestopping: See Section 07 08400 - Firestopping
- F. Finishing Accessories: ASTM C1047, galvanized steel or rolled zinc, unless otherwise indicated.
 1. Types: As detailed or required for finished appearance.
 2. Special Shapes: In addition to conventional cornerbead and control joints, provide U-bead at exposed panel edges.
- G. Joint Materials: ASTM C475 and as recommended by gypsum board manufacturer for project conditions.
- H. Screws for Attachment to Steel Members Less Than 0.03 inch (0.7 mm) In Thickness, to Wood Members, and to Gypsum Board: ASTM C1002; self-piercing tapping type; cadmium-plated for exterior locations.
- I. Screws: ASTM C 1002; self-piercing tapping type
 1. Screws for Attachment to Steel Members From 0.033 to 0.112 inch (0.8 to 2.8 mm) in Thickness: use screws complying with ASTM C954.
- J. Solid Blocking: provide solid wood blocking for all required applications

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that project conditions are appropriate for work of this section to commence.

3.02 SHAFT WALL INSTALLATION

- A. Shaft Wall Framing: Install in accordance with manufacturer's installation instructions.
- B. Shaft Wall Liner: Cut panels to accurate dimension and install sequentially between special friction studs.

3.03 FRAMING INSTALLATION

- A. Metal Framing: Install in accordance with ASTM C754 and manufacturer's instructions.
- B. Suspended Ceilings and Soffits: Space framing and furring members as indicated.
- C. Studs: Space studs as permitted by standard.
 - 1. Extend partition framing to structure where indicated and to ceiling in other locations.
 - 2. Partitions Terminating at Ceiling: Attach ceiling runner securely to ceiling track in accordance with manufacturer's instructions.
 - 3. Partitions Terminating at Structure: Attach top runner to structure, maintain clearance between top of studs and structure, and connect studs to track using specified mechanical devices in accordance with manufacturer's instructions; verify free movement of top of stud connections; do not leave studs unattached to track.
- D. Openings: Reinforce openings as required for weight of doors or operable panels, using not less than double studs at jambs.
- E. Acoustic Furring: Install resilient channels at maximum 24 inches (600 mm) on center. Locate joints over framing members.
- F. Blocking: Install mechanically fastened steel sheet blocking for use and support required.

3.04 ACOUSTIC ACCESSORIES INSTALLATION

- A. Acoustic Insulation: Place tightly within spaces, around cut openings, behind and around electrical and mechanical items within partitions, and tight to items passing through partitions.
- B. Acoustic Sealant: Install in accordance with manufacturer's instructions.

3.05 BOARD INSTALLATION

- A. Comply with ASTM C 840, GA-216, and manufacturer's instructions. Install to minimize butt end joints, especially in highly visible locations.
- B. Fire-Rated Construction: Install gypsum board in strict compliance with requirements of assembly listing.
- C. Cementitious Backing Board: Install over steel framing members and plywood substrate where indicated, in accordance with ANSI A108.11 and manufacturer's instructions.
- D. Curved Surfaces: Apply gypsum board to curved substrates in accordance with GA-226.

3.06 INSTALLATION OF TRIM AND ACCESSORIES

- A. Control Joints: Place control joints consistent with lines of building spaces and as indicated.
 - 1. Not more than 30 feet (10 meters) apart on walls and ceilings over 50 feet (16 meters) long.
- B. Corner Beads: Install at external corners, using longest practical lengths.
- C. Edge Trim: Install at locations where gypsum board abuts dissimilar materials and as indicated.

3.07 JOINT TREATMENT

- A. Finish gypsum board in accordance with levels defined in ASTM C840, as follows:
 - 1. Level 4: Walls and ceilings to receive paint finish or wall coverings, unless otherwise indicated.
 - 2. Level 1: Fire rated wall areas above finished ceilings, whether or not accessible in the completed construction.
- B. Tape, fill, and sand exposed joints, edges, and corners to produce smooth surface ready to receive finishes.
 - 1. Feather coats of joint compound so that camber is maximum 1/32 inch (0.8 mm).

3.08 TOLERANCES

- A. Maximum Variation of Finished Gypsum Board Surface from True Flatness: 1/8 inch in 10 feet (3 mm in 3 m) in any direction.

END OF SECTION

SECTION 09 3000
TILING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Tile for wall applications.

1.02 RELATED REQUIREMENTS

- A. Section 07 9005 - Joint Sealers.

1.03 REFERENCE STANDARDS

- A. ANSI A108 Series/A118 Series/A136.1 - American National Standard Specifications for the Installation of Ceramic Tile (Compendium); 2012.1.
- B. ANSI A108.1c - Specifications for Contractors Option: Installation of Ceramic Tile in the Wet-Set Method with Portland Cement Mortar or Installation of Ceramic Tile on a Cured Portland Cement Mortar Bed with Dry-Set or Latex Portland Cement
- C. ANSI A108.10 - American National Standard Specifications for Installation of Grout in Tilework; 2012.1.
- D. ANSI A108.11 - American National Standard for Interior Installation of Cementitious Backer Units; 2012.1.
- E. ANSI A108.12 - American National Standard for Installation of Ceramic Tile with EGP (Exterior glue plywood) Latex-Portland Cement Mortar; 2012.1.
- F. ANSI A108.13 - American National Standard for Installation of Load Bearing, Bonded, Waterproof Membranes for Thin-Set Ceramic Tile and Dimension Stone; 2012.1.
- G. ANSI A118.4 - American National Standard Specifications for Latex-Portland Cement Mortar; 2012.1.
- H. TCNA (HB) - Handbook for Ceramic, Glass, and Stone Tile Installation; 2012.

1.04 QUALITY ASSURANCE

- A. Maintain one copy of The Tile Council of North America Handbook and ANSI A108 Series/A118 Series on site.
- B. Installer Qualifications: Company specializing in performing tile installation, with minimum of 5 years of documented experience.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Protect adhesives from freezing or overheating in accordance with manufacturer's instructions.

1.06 FIELD CONDITIONS

- A. Do not install solvent-based products in an unventilated environment.
- B. Maintain ambient and substrate temperature of 50 degrees F (10 degrees C) during installation of mortar materials.

PART 2 PRODUCTS

2.01 TILE

- A. Ceramic Wall Tile: OFCI
 - 1. Coordinate with Owner's Representative for owner supplied tiles.

2.02 SETTING MATERIALS

- A. Latex-Portland Cement Mortar Bond Coat: ANSI A118.4.

2.03 GROUTS

- A. Standard Grout: OFCI
 - 1. Coordinate with Owner's Representative for owner supplied grout.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that wall surfaces are smooth and flat within the tolerances specified for that type of work, are dust-free, and are ready to receive tile.

3.02 PREPARATION

- A. Protect surrounding work from damage.
- B. Vacuum clean surfaces and damp clean.
- C. Seal substrate surface cracks with filler. Level existing substrate surfaces to acceptable flatness tolerances.

3.03 INSTALLATION - GENERAL

- A. Install tile and grout in accordance with applicable requirements of ANSI A108.1 through A108.13, manufacturer's instructions, and The Tile Council of North America Handbook recommendations.
- B. Lay tile to pattern indicated. Do not interrupt tile pattern through openings.
- C. Cut and fit tile to penetrations through tile, leaving sealant joint space. Form corners neatly.
- D. Place tile joints uniform in width, subject to variance in tolerance allowed in tile size. Make grout joints without voids, cracks, excess mortar or excess grout, or too little grout.
- E. Sound tile after setting. Replace hollow sounding units.
- F. Prior to grouting, allow installation to completely cure; minimum of 48 hours.
- G. Grout tile joints.
- H. Apply sealant to junction of tile and dissimilar materials and junction of dissimilar planes.

3.04 CLEANING

- A. Clean tile and grout surfaces.

END OF SECTION

SECTION 09 5100
ACOUSTICAL CEILINGS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Suspended metal grid ceiling system.
- B. Acoustical units.

1.02 RELATED REQUIREMENTS

- A. Section 01 6000 - Product Requirements

1.03 REFERENCE STANDARDS

- A. ASTM C635 - Standard Specification for the Manufacture, Performance, and Testing of Metal Suspension Systems for Acoustical Tile and Lay-in Panel Ceilings; 2007.
- B. ASTM C636/C636M - Standard Practice for Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-in Panels; 2008.
- C. ASTM E580/E580M - Standard Practice for Installation of Ceiling Suspension Systems for Acoustical Tile and Lay-in Panels in Areas Subject to Earthquake Ground Motions; 2011.
- D. ASTM E1264 - Standard Classification for Acoustical Ceiling Products; 2008e1.

1.04 ADMINISTRATIVE REQUIREMENTS

- A. Sequence work to ensure acoustical ceilings are not installed until building is enclosed, sufficient heat is provided, dust generating activities have terminated, and overhead work is completed, tested, and approved.
- B. Do not install acoustical units until after interior wet work is dry.
- C. Coordinate with Owner's Representative for owner supplied (OFCl) ceiling tiles.

1.05 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data on suspension system components.
- C. Samples: Submit two full size samples illustrating material and finish of acoustical units.
- D. Samples: Submit two samples each, 12 inches (300 mm) long, of suspension system main runner.

1.06 QUALITY ASSURANCE

- A. Suspension System Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum five years documented experience.

PART 2 PRODUCTS

2.01 ACOUSTICAL UNITS

- A. Acoustical Panel Type ACT-1: Painted mineral fiber, with to the following characteristics:
 - 1. Size: 24 x 48 inches (600 x 600 mm).
 - 2. Thickness: 5/8 inches (15 mm).
 - 3. Product: 895-Fine Fissured Square Lay-in by Armstrong World Industries, Inc. www.armstrong.com or equal
 - 4. Substitutions: Not Permitted. Match existing.
 - 5. Coordinate with Owner's Representative for owner supplied (OFCl) ceiling tiles.
- B. Acoustical Panel Type ACT-2: Painted mineral fiber, with the following characteristics:
 - 1. Size: 24 x 48 inches (600 x 1200 mm).
 - 2. Thickness: 5/8 inches (15 mm).
 - 3. Product: 2758-Cortega Second Look II 15/16" Grid Face by Armstrong World Industries, Inc. www.armstrong.com

4. Substitutions: Not Permitted. Match existing.
5. Coordinate with Owner's Representative for owner supplied (OFCl) ceiling tiles.

2.02 SUSPENSION SYSTEM(S)

- A. Manufacturers:
 1. Armstrong World Industries, Inc; Product Prelude XL Fire Guard 15/16" Exposed Tee System: www.armstrong.com.
 2. Substitutions: Not permitted. Match Existing.
- B. Suspension Systems - General: ASTM C635; die cut and interlocking components, with stabilizer bars, clips, splices, perimeter moldings, and hold down clips as required.
 1. Match existing ceiling grid system.

2.03 ACCESSORIES

- A. Support Channels and Hangers: Galvanized steel; size and type to suit application, seismic requirements, and ceiling system flatness requirement specified.
- B. Perimeter Moldings: Same material and finish as grid.
- C. Acoustical Sealant For Perimeter Moldings: Specified in Section 07 9005 - Joint Sealers

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify existing conditions before starting work.
- B. Verify that layout of hangers will not interfere with other work.

3.02 INSTALLATION - SUSPENSION SYSTEM

- A. Install suspension system in accordance with ASTM C636/C636M, ASTM E580/E580M, and manufacturer's instructions and as supplemented in this section.
- B. Rigidly secure system, including integral mechanical and electrical components, for maximum deflection of 1:360.
- C. Install after major above-ceiling work is complete. Coordinate the location of hangers with other work.
- D. Hang suspension system independent of walls, columns, ducts, pipes and conduit. Where carrying members are spliced, avoid visible displacement of face plane of adjacent members.
- E. Where ducts or other equipment prevent the regular spacing of hangers, reinforce the nearest affected hangers and related carrying channels to span the extra distance.
- F. Do not support components on main runners or cross runners if weight causes total dead load to exceed deflection capability.
- G. Support fixture loads using supplementary hangers located within 6 inches (150 mm) of each corner, or support components independently.
- H. Do not eccentrically load system or induce rotation of runners.
- I. Perimeter Molding: Install at intersection of ceiling and vertical surfaces and at junctions with other interruptions.
 1. Install in bed of acoustical sealant.
 2. Use longest practical lengths.
 3. Overlap and rivet corners.

3.03 INSTALLATION - ACOUSTICAL UNITS

- A. Install acoustical units in accordance with manufacturer's instructions.
- B. Fit acoustical units in place, free from damaged edges or other defects detrimental to appearance and function.
- C. Fit border trim neatly against abutting surfaces.
- D. Install units after above-ceiling work is complete.

- E. Install acoustical units level, in uniform plane, and free from twist, warp, and dents.
- F. Cutting Acoustical Units:
 - 1. Make field cut edges of same profile as factory edges.

3.04 TOLERANCES

- A. Maximum Variation from Flat and Level Surface: 1/8 inch in 10 feet (3 mm in 3 m).
- B. Maximum Variation from Plumb of Grid Members Caused by Eccentric Loads: 2 degrees.

3.05 SCHEDULE

- A. See drawings

END OF SECTION

SECTION 09 6500
RESILIENT FLOORING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Resilient sheet flooring.
- B. Resilient tile flooring.
- C. Resilient base.
- D. Installation accessories.

1.02 RELATED REQUIREMENTS

- A. Section 03 3000 - Cast-in-Place Concrete: Restrictions on curing compounds for concrete slabs and floors.

1.03 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data on specified products, describing physical and performance characteristics; including sizes, patterns and colors available; and installation instructions.
- C. Selection Samples: Submit manufacturer's complete set of color samples for Architect's initial selection.
- D. Verification Samples: Submit two samples, 12 x 12 inch (305 x 305 mm) in size illustrating color and pattern for each resilient flooring product specified.
- E. Maintenance Data: Include maintenance procedures, recommended maintenance materials, and suggested schedule for cleaning, stripping, and re-waxing.
- F. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
 - 1. See Section 01 6000 - Product Requirements, for additional provisions.
 - 2. Extra Flooring Material: 100 square feet (10 square meters) of each type and color.
 - 3. Extra Wall Base: 50 linear feet (15 linear meters) of each type and color.

PART 2 PRODUCTS

2.01 SHEET FLOORING

- A. Linoleum Sheet Flooring: Homogeneous wear layer bonded to backing, with color and pattern through wear layer thickness:
 - 1. Minimum Requirements: Comply with ASTM F2034, Type corresponding to type specified.
 - 2. Backing: Jute fabric.
 - 3. Wear Layer Thickness: 0.080 inch (2.0 mm), minimum, excluding backing.
 - 4. Pattern: Solid color.
 - 5. Manufacturer and Color: As shown on drawings.
 - 6. Seams: Heat welded.
- B. Linoleum Welding Rod: Solid color linoleum produced by flooring manufacturer for heat welding seams, in color in color matching predominant flooring color.

2.02 RESILIENT BASE

- A. Resilient Base: ASTM F1861, Type TS rubber, vulcanized thermoset; top set Style B, Cove, and as follows:
 - 1. Height: 4 inch (100 mm).
 - 2. Thickness: 0.125 inch (3.2 mm) thick.
 - 3. Length: Roll.
 - 4. Color: see drawings.
 - 5. Accessories: Premolded external corners and end stops.
 - 6. Manufacturers:
 - a. Johnsonite, Inc: www.johnsonite.com.

- b. Roppe Corp: www.roppe.com.
- c. Mercer: www.burkeflooring.com.
- d. Allstate: www.allstaterubber.com.
- e. Substitutions: See Section 01 6000 - Product Requirements.

2.03 ACCESSORIES

- A. Subfloor Filler: White premix latex; type recommended by adhesive material manufacturer.
- B. Primers, Adhesives, and Seaming Materials: Waterproof; types recommended by flooring manufacturer.
 - 1. Provide only products having lower volatile organic compound (VOC) content than required by the more stringent of the South Coast Air Quality Management District Rule No.1168 and the Bay Area Air Quality Management District Regulation 8, Rule 51.
- C. Moldings, Transition and Edge Strips: Same material as flooring.
- D. Filler for Coved Base: Plastic.
- E. Sealer and Wax: Types recommended by flooring manufacturer.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that surfaces are flat to tolerances acceptable to flooring manufacturer, free of cracks that might telegraph through flooring, clean, dry, and free of curing compounds, surface hardeners, and other chemicals that might interfere with bonding of flooring to substrate.

3.02 PREPARATION

- A. Remove existing flooring and flooring adhesives; follow the recommendations of RFCI Recommended Work Practices for Removal of Resilient Floor Coverings.
- B. Prepare floor substrates as recommended by flooring and adhesive manufacturers.
- C. Remove sub-floor ridges and bumps. Fill minor low spots, cracks, joints, holes, and other defects with sub-floor filler to achieve smooth, flat, hard surface.
- D. Prohibit traffic until filler is cured.

3.03 INSTALLATION

- A. Starting installation constitutes acceptance of sub-floor conditions.
- B. Install in accordance with manufacturer's instructions.
- C. Spread only enough adhesive to permit installation of materials before initial set.
- D. Fit joints tightly.
- E. Set flooring in place, press with heavy roller to attain full adhesion.
- F. Where type of floor finish, pattern, or color are different on opposite sides of door, terminate flooring under centerline of door.
- G. Install edge strips at unprotected or exposed edges, where flooring terminates, and where indicated.
- H. Scribe flooring to walls, columns, cabinets, floor outlets, and other appurtenances to produce tight joints.

3.04 SHEET FLOORING

- A. Lay flooring with joints and seams parallel to longer room dimensions, to produce minimum number of seams. Lay out seams to avoid widths less than 1/3 of roll width; match patterns carefully at seams.
- B. Double cut sheet at seams.
- C. Lay flooring with tightly butted seams, without any seam sealer unless otherwise indicated.
- D. Finish seams in linoleum by heat welding.

3.05 RESILIENT BASE

- A. Fit joints tightly and make vertical. Maintain minimum dimension of 18 inches (45 mm) between joints.
- B. Install base on solid backing. Bond tightly to wall and floor surfaces.

3.06 CLEANING

- A. Remove excess adhesive from floor, base, and wall surfaces without damage.
- B. Clean in accordance with manufacturer's instructions.

3.07 PROTECTION

- A. Prohibit traffic on resilient flooring for 48 hours after installation.
- B. Protect from damage and soiling for duration of construction.

END OF SECTION

SECTION 09 6813
TILE CARPETING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Carpet tile, fully adhered.
- B. Removal of existing carpet tile.

1.02 RELATED REQUIREMENTS

- A. Section 03 3000 - Cast-in-Place Concrete: Restrictions on curing compounds for concrete slabs and floors.

1.03 REFERENCE STANDARDS

- A. ASTM D2859 - Standard Test Method for Ignition Characteristics of Finished Textile Floor Covering Materials; 2006 (Reapproved 2011).
- B. ASTM F710 - Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring; 2011.
- C. CRI (CIS) - Carpet Installation Standard; Carpet and Rug Institute; 2009.
- D. CRI (GLA) - Green Label Testing Program - Approved Adhesive Products; Carpet and Rug Institute; Current Edition.

1.04 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Shop Drawings: Indicate layout of joints.
- C. Product Data: Provide data on specified products, describing physical and performance characteristics; sizes, patterns, colors available, and method of installation.
- D. Samples: Submit two carpet tiles illustrating color and pattern design for each carpet color selected.
- E. Submit two, 12 inch (300 mm) long samples of edge strip.
- F. Manufacturer's Installation Instructions: Indicate special procedures.
- G. Maintenance Data: Include maintenance procedures, recommended maintenance materials, and suggested schedule for cleaning.
- H. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
 - 1. See Section 01 6000 - Product Requirements, for additional provisions.
 - 2. Extra Carpet Tiles: Quantity equal to 5 percent of total installed of each color and pattern installed.

1.05 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing specified carpet tile with minimum three years documented experience.
- B. Installer Qualifications: Company specializing in installing carpet with minimum three years experience.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Carpet Tile Type CPT-1 & CPT-2: Tufted, manufactured in one color dye lot.
 - 1. Tile Size: 18 x 18 inch (450 x 450 mm), nominal.
 - 2. Color: to be selected from manufacturers full line.

2.02 ACCESSORIES

- A. Sub-Floor Filler: White premix latex; type recommended by flooring material manufacturer.

- B. Edge Strips: Rubber, match existing building standard color.
- C. Adhesives: Acceptable to carpet tile manufacturer, compatible with materials being adhered; maximum VOC of 50 g/L; CRI Green Label certified.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that sub-floor surfaces are smooth and flat within tolerances specified for that type of work and are ready to receive carpet tile.
- B. Verify that wall surfaces are smooth and flat within the tolerances specified for that type of work, are dust-free, and are ready to receive carpet tile.

3.02 PREPARATION

- A. Remove existing carpet tile and cushion.
- B. Prepare floor substrates as recommended by flooring and adhesive manufacturers.
- C. Remove sub-floor ridges and bumps. Fill minor or local low spots, cracks, joints, holes, and other defects with sub-floor filler.
- D. Apply, trowel, and float filler to achieve smooth, flat, hard surface. Prohibit traffic until filler is cured.

3.03 INSTALLATION - GENERAL

- A. Starting installation constitutes acceptance of sub-floor conditions.
- B. Install carpet tile in accordance with manufacturer's instructions and CRI Carpet Installation Standard.
- C. Verify carpet match before cutting to ensure minimal variation in color match.
- D. Cut carpet tile clean. Fit carpet tight to intersection with vertical surfaces without gaps.
- E. Lay carpet tile in square pattern, with pile direction parallel to next unit, set parallel to building lines and in accordance with shop drawings.
- F. Locate change of color or pattern between rooms under door centerline.
- G. Fully adhere carpet tile to substrate.
- H. Trim carpet tile neatly at walls and around interruptions.
- I. Complete installation of edge strips, concealing exposed edges.

3.04 CLEANING

- A. Remove excess adhesive without damage, from floor, base, and wall surfaces.
- B. Clean and vacuum carpet surfaces.

END OF SECTION

SECTION 09 9000
PAINTING AND COATING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Surface preparation.
- B. Field application of paints, stains, varnishes, and other coatings.
- C. Scope: Finish all interior and exterior surfaces exposed to view, unless fully factory-finished and unless otherwise indicated, including the following:
 - 1. Both sides and edges of plywood backboards for electrical and telecom equipment before installing equipment.
 - 2. Surfaces inside cabinets.
 - 3. Prime surfaces to receive wall coverings.
 - 4. Mechanical and Electrical:
 - a. In finished areas, paint all insulated and exposed pipes, conduit, boxes, insulated and exposed ducts, hangers, brackets, collars and supports, mechanical equipment, and electrical equipment, unless otherwise indicated.
 - b. In finished areas, paint shop-primed items.
 - c. Paint interior surfaces of air ducts and convector and baseboard heating cabinets that are visible through grilles and louvers with one coat of flat black paint to visible surfaces.
 - d. Paint dampers exposed behind louvers, grilles, and convector and baseboard cabinets to match face panels.
- D. Do Not Paint or Finish the Following Items:
 - 1. Items fully factory-finished unless specifically so indicated; materials and products having factory-applied primers are not considered factory finished.
 - 2. Items indicated to receive other finishes.
 - 3. Items indicated to remain unfinished.
 - 4. Fire rating labels, equipment serial number and capacity labels, and operating parts of equipment.
 - 5. Non-metallic roofing and flashing.
 - 6. Stainless steel, anodized aluminum, bronze, terne, and lead items.
 - 7. Marble, granite, slate, and other natural stones.
 - 8. Floors, unless specifically so indicated.
 - 9. Ceramic and other tiles.
 - 10. Brick, architectural concrete, cast stone, integrally colored plaster and stucco.
 - 11. Glass.
 - 12. Concealed pipes, ducts, and conduits.

1.02 RELATED REQUIREMENTS

- A. Section 05 5000 - Metal Fabrications: Shop-primed items.
- B. Section 09 2116 - Gypsum Wallboard.

1.03 REFERENCE STANDARDS

- A. 40 CFR 59, Subpart D - National Volatile Organic Compound Emission Standards for Architectural Coatings; U.S. Environmental Protection Agency; current edition.
- B. ASTM D4442 - Standard Test Methods for Direct Moisture Content Measurement of Wood and Wood-Base Materials; 2007.
- C. GreenSeal GS-11 - Paints; 1993.

1.04 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

- B. Product Data: Provide data on all finishing products, including VOC content.
- C. Samples: Submit two paper chip samples, 12 x 12 inch (300 x 300 mm) in size illustrating range of colors available for each surface finishing product scheduled.
- D. Samples: Submit two painted samples, illustrating selected colors and textures for each color and system selected with specified coats cascaded. Submit on tempered hardboard, 12 x 12 inch (300 x 300 mm) in size.
- E. Certification: By manufacturer that all paints and coatings comply with VOC limits specified.
- F. Certification: By manufacturer that all paints and coatings do not contain any of the prohibited chemicals specified; GreenSeal GS-11 certification is not required but if provided shall constitute acceptable certification.
- G. Maintenance Data: Submit data on cleaning, touch-up, and repair of painted and coated surfaces.
- H. Maintenance Materials: Furnish the following for Owner's Representative's use in maintenance of project.
 - 1. See Section 01 6000 - Product Requirements, for additional provisions.
 - 2. Extra Paint and Coatings: 1 gallon (4 L) of each color; store where directed.
 - 3. Label each container with color in addition to the manufacturer's label.

1.05 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing the products specified, with minimum three years documented experience.
- B. Applicator Qualifications: Company specializing in performing the type of work specified with minimum five years experience.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Deliver products to site in sealed and labeled containers; inspect to verify acceptability.
- B. Container Label: Include manufacturer's name, type of paint, brand name, lot number, brand code, coverage, surface preparation, drying time, cleanup requirements, color designation, and instructions for mixing and reducing.
- C. Paint Materials: Store at minimum ambient temperature of 45 degrees F (7 degrees C) and a maximum of 90 degrees F (32 degrees C), in ventilated area, and as required by manufacturer's instructions.

1.07 FIELD CONDITIONS

- A. Do not apply materials when surface and ambient temperatures are outside the temperature ranges required by the paint product manufacturer.
- B. Follow manufacturer's recommended procedures for producing best results, including testing of substrates, moisture in substrates, and humidity and temperature limitations.
- C. Provide lighting level of 80 ft candles (860 lx) measured mid-height at substrate surface.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Provide all paint and coating products used in any individual system from the same manufacturer; no exceptions.
- B. Paints:
 - 1. ICI: www.icipaints.com
 - 2. Dulux: www.dulux.com
- C. Substitutions: See Section 01 6000 - Product Requirements.

2.02 PAINTS AND COATINGS - GENERAL

- A. Paints and Coatings: Ready mixed, unless intended to be a field-catalyzed coating.

1. Provide paints and coatings of a soft paste consistency, capable of being readily and uniformly dispersed to a homogeneous coating, with good flow and brushing properties, and capable of drying or curing free of streaks or sags.
 2. Supply each coating material in quantity required to complete entire project's work from a single production run.
 3. Do not reduce, thin, or dilute coatings or add materials to coatings unless such procedure is specifically described in manufacturer's product instructions.
- B. Primers: Where the manufacturer offers options on primers for a particular substrate, use primer categorized as "best" by the manufacturer.
- C. Volatile Organic Compound (VOC) Content:
1. Provide coatings that comply with the most stringent requirements specified in the following:
 - a. 40 CFR 59, Subpart D--National Volatile Organic Compound Emission Standards for Architectural Coatings.
 2. Determination of VOC Content: Testing and calculation in accordance with 40 CFR 59, Subpart D (EPA Method 24), exclusive of colorants added to a tint base and water added at project site; or other method acceptable to authorities having jurisdiction.
- D. Colors: As indicated on drawings
1. In finished areas, finish pipes, ducts, conduit, and equipment the same color as the wall/ceiling they are mounted on/under.
 2. In utility areas, finish equipment, piping, conduit, and exposed duct work in colors according to the color coding scheme indicated.

2.03 PAINT SYSTEMS - INTERIOR

- A. Paint MI-OP-2A - Ferrous Metals, Primed, Alkyd, 2 Coat:
1. Touch-up with alkyd primer.
 2. Semi-gloss: Two coats of alkyd enamel.
- B. Paint Mgl-OP-3A - Galvanized Metals, Alkyd, 3 Coat:
1. One coat galvanize primer.
 2. Semi-gloss: Two coats of alkyd enamel.
- C. Paint GI-OP-3LA - Gypsum Board/Plaster, Latex-Acrylic, 3 Coat:
1. One coat of alkyd primer sealer.
 2. Eggshell: Two coats of latex-acrylic enamel.

2.04 ACCESSORY MATERIALS

- A. Accessory Materials: Provide all primers, sealers, cleaning agents, cleaning cloths, sanding materials, and clean-up materials required to achieve the finishes specified whether specifically indicated or not; commercial quality.
- B. Patching Material: Latex filler.
- C. Fastener Head Cover Material: Latex filler.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that surfaces are ready to receive work as instructed by the product manufacturer.
- B. Examine surfaces scheduled to be finished prior to commencement of work. Report any condition that may potentially affect proper application.
- C. Test shop-applied primer for compatibility with subsequent cover materials.
- D. Measure moisture content of surfaces using an electronic moisture meter. Do not apply finishes unless moisture content of surfaces are below the following maximums:
1. Gypsum Wallboard: 12 percent.
 2. Masonry, Concrete, and Concrete Unit Masonry: 12 percent.

3. Interior Wood: 15 percent, measured in accordance with ASTM D4442.

3.02 PREPARATION

- A. Clean surfaces thoroughly and correct defects prior to coating application.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
- C. Remove or mask surface appurtenances, including electrical plates, hardware, light fixture trim, escutcheons, and fittings, prior to preparing surfaces or finishing.
- D. Seal surfaces that might cause bleed through or staining of topcoat.
- E. Remove mildew from impervious surfaces by scrubbing with solution of tetra-sodium phosphate and bleach. Rinse with clean water and allow surface to dry.
- F. Concrete and Unit Masonry Surfaces to be Painted: Remove dirt, loose mortar, scale, salt or alkali powder, and other foreign matter. Remove oil and grease with a solution of tri-sodium phosphate; rinse well and allow to dry. Remove stains caused by weathering of corroding metals with a solution of sodium metasilicate after thoroughly wetting with water. Allow to dry.
- G. Gypsum Board Surfaces to be Painted: Fill minor defects with filler compound. Spot prime defects after repair.
- H. Galvanized Surfaces to be Painted: Remove surface contamination and oils and wash with solvent. Apply coat of etching primer.
- I. Corroded Steel and Iron Surfaces to be Painted: Prepare using at least SSPC-PC 2 (hand tool cleaning) or SSPC-SP 3 (power tool cleaning) followed by SSPC-SP 1 (solvent cleaning).
- J. Uncorroded Uncoated Steel and Iron Surfaces to be Painted: Remove grease, mill scale, weld splatter, dirt, and rust. Where heavy coatings of scale are evident, remove by hand or power tool wire brushing or sandblasting; clean by washing with solvent. Apply a treatment of phosphoric acid solution, ensuring weld joints, bolts, and nuts are similarly cleaned. Prime paint entire surface; spot prime after repairs.
- K. Shop-Primed Steel Surfaces to be Finish Painted: Sand and scrape to remove loose primer and rust. Feather edges to make touch-up patches inconspicuous. Clean surfaces with solvent. Prime bare steel surfaces. Re-prime entire shop-primed item.
- L. Interior Wood Surfaces to Receive Opaque Finish: Wipe off dust and grit prior to priming. Seal knots, pitch streaks, and sappy sections with sealer. Fill nail holes and cracks after primer has dried; sand between coats. Back prime concealed surfaces before installation.
- M. Interior Wood Surfaces to Receive Transparent Finish: Wipe off dust and grit prior to sealing, seal knots, pitch streaks, and sappy sections with sealer. Fill nail holes and cracks after sealer has dried; sand lightly between coats. Prime concealed surfaces with gloss varnish reduced 25 percent with thinner.
- N. Wood Doors to be Field-Finished: Seal wood door top and bottom edge surfaces with clear sealer.

3.03 APPLICATION

- A. Remove unfinished louvers, grilles, covers, and access panels on mechanical and electrical components and paint separately.
- B. Apply products in accordance with manufacturer's instructions.
- C. Do not apply finishes to surfaces that are not dry. Allow applied coats to dry before next coat is applied.
- D. Apply each coat to uniform appearance.
- E. Sand wood and metal surfaces lightly between coats to achieve required finish.
- F. Vacuum clean surfaces of loose particles. Use tack cloth to remove dust and particles just prior to applying next coat.

- G. Wood to Receive Transparent Finishes: Tint fillers to match wood. Work fillers into the grain before set. Wipe excess from surface.
- H. Reinstall electrical cover plates, hardware, light fixture trim, escutcheons, and fittings removed prior to finishing.

3.04 CLEANING

- A. Collect waste material that could constitute a fire hazard, place in closed metal containers, and remove daily from site.

3.05 PROTECTION

- A. Protect finished coatings until completion of project.
- B. Touch-up damaged coatings after Substantial Completion.

3.06 SCHEDULE

- A. Colors: see drawings

END OF SECTION

SECTION 10 4400
FIRE PROTECTION SPECIALTIES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Fire extinguishers.
- B. Fire extinguisher cabinets.
- C. Accessories.

1.02 RELATED REQUIREMENTS

- A. Section 09 9000 - Painting and Coating: Field paint finish.

1.03 REFERENCE STANDARDS

- A. NFPA 10 - Standard for Portable Fire Extinguishers; 2013.

1.04 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Shop Drawings: Indicate cabinet physical dimensions.
- C. Product Data: Provide extinguisher operational features.
- D. Manufacturer's Installation Instructions: Indicate special criteria and wall opening coordination requirements.
- E. Maintenance Data: Include test, refill or recharge schedules and re-certification requirements.

PART 2 PRODUCTS

2.01 FIRE EXTINGUISHERS

- A. Fire Extinguishers - General: Comply with product requirements of NFPA 10 and applicable codes, whichever is more stringent.
- B. Dry Chemical Type Fire Extinguishers: Carbon steel tank, with pressure gage.
 - 1. Class: A:B:C.
 - 2. Size: 5 pound (2.27 kg).

2.02 FIRE EXTINGUISHER CABINETS

- A. Metal: Formed stainless steel sheet; 0.036 inch (0.9 mm) thick base metal.
- B. Cabinet Configuration: Semi-recessed type, match existing
 - 1. Sized to accommodate accessories.
- C. Door: 0.036 inch (0.9 mm) thick, reinforced for flatness and rigidity; latch. Hinge doors for 180 degree opening with two butt hinge. Provide nylon catch.
- D. Finish of Cabinet Exterior Trim and Door: Red baked enamel.
- E. Finish of Cabinet Interior: White enamel.

2.03 ACCESSORIES

- A. Cabinet Signage: FIRE EXTINGUISHER.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify existing conditions before starting work.
- B. Verify rough openings for cabinet are correctly sized and located.

3.02 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Place extinguishers and accessories in cabinets.

3.03 SCHEDULES

- A. See drawings for locations

END OF SECTION