project start date: 10 Sep 2018
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by Jill Berry layout tab: A0.0

1411 South Potomac • Spec Suite 140

Provide a sign stating "EXIT" in raised, visual characters and braille adjacent to each door in an area of refuge, an exterior area for assisted rescue, an exit stairway or ramp, an exit passageway and the exit discharge. **2015 IBC 1013.4**

Spec Suite 140

Code violations that are found during inspection are required to be corrected. Permit issuance does not grant approval of a code violation.

Field Inspection consultation is available upon request. Call 303-739-7420 to request a consultation

Abbreviations

Ø	diameter
℄	centerline
A	ampere
A/C	air conditioning
A/V	audio/ visual
ADA	Americans with Disabilities Act
AFF	above finished floor
alt.	alternate
amp.	ampere
approx	approximately
C.	conduit
CKT.	circuit
clg.	ceiling
clr.	clear
const.	construction
d.	depth/ deep
dia.	diameter
dim.	dimension
DN	down
DW	dishwasher
E	existing (*device or fixture to remain*)
Elev.	elevator
eq.	equal
EWC	electric water cooler
EWH	electric water heater
F.D.	floor drain
F.E.	fire extinguisher
F/A	fire alarm
FEC	fire extinguisher cabinet
FHC	fire hose connection
fin.	finish *or* finished
ga.	gauge
gyp.	gypsum board
hd.	height/ high
H.C.	hollow core
H.M.	hollow metal
HVAC	heating, ventilating, air conditioning
I.F.	inside face
I.T.	information technology
Jan.	janitor(s')/ janitorial
J-Box	junction box
l.	length/ long
mfd.	manufactured
mil	millimeter
min.	minimum *or* minute (*per context*)
mm	millimeter
mw	microwave
N	new *(device or fixture)*
NIC	not in contract
nom.	nominal
NTS	not to scale
o.c.	on center
O.H.	opposite hand
Occ.	occupants
oz.	ounces
P.Lam.	plastic laminate
R	relocated *(device or fixture)*
R.O.	rough opening
Re:	refer to:
reqd.	required
R/A	return air
RM.	room
RSF	Rentable Square Feet
S.C.	solid core
S.M.	surface mounted
S.Stl.	stainless steel
S/A	supply air
SDT	static dissipative tile
SF	square feet
sim.	similar
sq.yd.	square yard
std.	standard
T.O.	throughout
TBD	to be determined
th.	thickness/ thick
typ.	typical
U.L.	Underwriters Laboratory
UNO	unless noted otherwise
USF	Usable Square Feet
V.	volt
VCT	vinyl composition tile
VIF	verify in field
w.	width/ wide
W.S.	work station
w/	with
WC	wallcovering
WF	water fountain

Reference Symbols

1	Keyed Note
℄	Center Line
# / A1.0	Detail Reference Detail Number Sheet Reference
# / A1.0	Section Reference Section Number Sheet Reference
# / A1.0	Elevation Reference Elevation Number Sheet Reference
001	Door Reference Tag, refer to Door Schedule
PL1	Plastic Laminate Reference, Refer to Finish Treatment Schedule
P1	Wall Treatment Reference, Refer to Finish Treatment Schedule
C1 / RB1	Floor Treatments Reference, Refer to Finish Treatment Schedule

General Notes

1. **GENERAL STANDARDS**: All work defined herein shall be constructed in accordance with the approved drawings and specifications and shall be in compliance with all applicable codes, ordinances, and regulations. Work performed in the shop or on-site shall be performed by mechanics, craftsmen and workers skilled and experienced in the fabrication and installation of the work involved. The work shall be performed in accordance with the best established practices of the industry standard for the trade involved.

2. **FEES AND PERMITS**: The General Contractor shall obtain all licenses and permits required by the jurisdiction and/or its agencies, not withstanding licenses and permits that may be required of respective subcontractors. The cost of said licenses and permits shall be incurred by that contractor responsible for the procurement of same.

3. **DRAWINGS AND SPECIFICATIONS**: The General Contractor shall maintain a complete and current set of project documents, drawings and specifications on the job site at all times and shall include all approved shop drawings and submittals. The General Contractor shall be responsible for distribution of adequate copies of all drawings and specifications to all applicable trades. Upon completion of the work, the General Contractor shall submit one complete set of red-lined drawings to TPS indicating any and all changes, omissions, or modifications made.

4. **ENGINEERED DRAWINGS**: Refer to structural, mechanical, electrical and plumbing drawings (when provided) for detailed design of the structural, mechanical, electrical, and plumbing systems. Portions of this work may be shown on the architectural drawings for reference to, and in coordination with, other work.
   - 4.1. When indicated on the drawings, the General Contractor shall provide engineering drawings on a design/build basis for mechanical systems, electrical systems and plumbing. Provide one copy of all drawings to TPS for review prior to construction.
   - 4.2. The General Contractor is responsible for required permits and approvals necessary for the work as described above. Precedence: the architectural drawings shall precede the engineered drawings (if provided) relative to device and fixture locations.

5. **OMISSIONS AND DISCREPANCIES**: The General Contractor shall field verify all conditions and dimensions shown on the drawings, and shall notify TPS of any discrepancies, omissions or conflicts prior to commencing with construction.

6. **MATERIALS**: Unless otherwise specified, all materials shall be new, unused, and in compliance with the specifications set forth in these documents. All materials used throughout the project shall be of the same brand name and quality for consistency. All materials must meet the ASTM and ANSI standards and be in compliance with all applicable codes, ordinances and regulations. Unless authorized in writing by the owner or its representative, no existing fixture, device or component shall be removed from adjacent areas or buildings to facilitate this project.

7. **MATERIAL INVENTORY**: Upon award of the construction contract, and when building materials are stocked and made available for the project, coordinate with the Building Representative for purchase of materials. All materials shall be bid as if new. Do not assume use of materials from building stock.

8. **SUBMITTALS/DEVIATIONS**: No substitutions, variations and deviations from these documents shall be permitted without prior approval of TPS, the Building and/or Tenant's Representative. Application for any substitutions and/or variations shall be submitted to TPS by the General Contractor for approval. Application shall be made in writing accompanied with product specifications and/or samples. Five complete sets of submittals are required.

9. **SHOP DRAWINGS**: When requested on the drawings, the General Contractor shall prepare, review, approve and submit shop drawings to TPS. The General Contractor shall check and coordinate all product data and samples and verify all materials, field measurements and related field construction criteria contained in such submittal conforms to the requirements of the work, and the contract documents. Five complete sets of submittals are required.

10. **SUBCONTRACTORS**: The General Contractor shall coordinate and review the work of all subcontractors, trades and suppliers, and to make known all requirements of the contract documents, and to assure that all parties are fully aware of the requirements, regardless of whether the requirements occur in the contract documents, which might affect the work of that party. Subcontractors shall conform to the following:
    - 10.1. Subcontractors shall coordinate all installations, schedules, locations, decisions, sizes, and resolve all conflicts and interferences of their trade with other trades.
    - 10.2. Subcontractors shall be responsible for coordinating routes of water, sprinkler, mechanical and electrical services.
    - 10.3. Light fixtures/ fittings, diffusers/ ducts, sprinkler heads, etc. as depicted on the drawings, both above and below the ceiling, which conflict with any existing services shall be reported immediately when it becomes apparent that a conflict will prevail. All costs incurred by the General Contractor or other subcontractors for failure to report conflicts immediately shall be borne by the contractor.

11. **TENANT VENDORS**: The General Contractor shall be responsible for coordinating with the Tenant and the Tenant's vendors for scheduling and providing access to the space for the Tenant's movable partition systems, communications/ data processing systems, security systems, and audio/ video systems.

12. **INSPECTIONS**: the General Contractor shall permit and facilitate inspection, by the owner and the architect or their representatives, during the course of construction.

13. **TENANT RESPONSIBILITIES**: Unless specified otherwise in the contract documents, the following items are not a part of these drawings and if so desired shall be provided by the Tenant.
    - 13.1. Furnishings, files and accessories
    - 13.2. Portable or movable office partitions
    - 13.3. Racks, bins, prefabricated shelving systems
    - 13.4. Coffee makers, microwaves, refrigerators, vending machines
    - 13.5. Copy/fax equipment and computer equipment
    - 13.6. Security systems, sound systems, intercom systems
    - 13.7. Telephone equipment including wiring/cabling
    - 13.8. Clocks, time clocks
    - 13.9. Connection of all equipment, furnishings and panels
    - 13.10. Moving or relocation of Tenant's furnishings, fixtures, and equipment
    - 13.11. Schedule and coordination of Tenant vendors

14. **PROTECTION**: The General Contractor shall protect the work, adjacent space/property, common areas, public utilities, and the public, and shall be responsible for any damage or injury due to neglect. Protection shall include but not be limited to the following:
    - 14.1. Draw window coverings and wrap or bag with plastic for dust protection.
    - 14.2. Provide plywood or masonite floor protection with tape sealed joints completely along routes used for delivery and removal of materials.
    - 14.3. Provide and/or use protective pads at designated freight elevator cab walls and around openings.
    - 14.4. When necessary, x-ray the floor slab to confirm locations of objects embedded in the concrete prior to making any penetrations in the slab.

15. **DAMAGES**: Should the General Contractor or any associated subcontractor cause damage to any adjacent fixture or structure while completing or cleaning current construction, that contractor or subcontractor shall be responsible for repair or replacement of said damaged fixture or structure.

16. **INSURANCE**: The General Contractor shall purchase and maintain certifications of insurance with respect to workers compensation, public liability and property damage for the limits as required by law. The certificates shall name the client and Tenant Planning Services, Inc. as additional insured. The General Contractor and subcontractors performing work on-site shall conform to the Landlord's insurance requirements.

17. **GUARANTEE/WARRANTY**: The General Contractor shall enforce a specific and unconditional warranty on all materials, workmanship, equipment, fixtures and sub-assemblies subject to normal use and maintenance for a period not to exceed one (1) year from date of substantial completion. Said warranty shall not be exclusive of implied or specific warranties enforced by manufacturers and/or suppliers of aforementioned materials, equipment, fixtures and/or sub-assemblies.

18. **SECURITY**: The General Contractor shall be responsible for securing and controlling access to the job site during construction and for disconnecting power and lighting when not in use.

19. **INTERRUPTION OF SERVICES**: All work requiring dangerous, toxic, or noisy operations and installations which might affect the operation of the existing tenants shall be performed during non-business hours. Coordinate with Building Management.

20. **HAZARDOUS MATERIALS**: TPS has no knowledge of, and shall not be held liable for, any asbestos or other hazardous materials on the project site. Prior to commencing with the work on-site, it shall be the responsibility of the General Contractor to inspect and make a good faith effort to identify the presence of asbestos, toxic or other hazardous materials. Should hazardous materials be discovered at any time before or during construction, stop the work immediately and report to the Building Management for further instructions before proceeding.

21. **BUILDING RULES AND REGULATIONS**: The General Contractor shall be responsible for consulting with the Building Representative for rules and regulations governing the building and pertaining to deliveries, removal of materials and debris, use of building facilities, noise restrictions, protection of existing conditions, hours of operation, building access, etc.

22. **CLEANING**: The General Contractor shall clean the job site and adjoining areas during construction and upon completion. Cleaning includes, but is not limited to, vacuuming carpets; wet mopping floor tile and other resilient flooring; cleaning all glass, including interior side of exterior glazing; dusting and wiping clean all lint and soiled areas on doors, millwork, window coverings, baseboard, etc.; removing all construction debris, scraps, materials and equipment; and water seal all marble, granite and ceramic tile and grout.

23. **FIRE RESISTIVE STANDARDS**: Conform to the following:
    - 23.1. Materials and assemblies required to be fire resistive shall bear a label affixed to the product indicating fire resistive rating and testing agency with approved test certification number
    - 23.2. All blocking and nailer strips used in connection with fire resistive partitions shall be fire retardant wood as defined by the Building Code.
    - 23.3. All concealed wood shall be treated with an approved fire retardant.
    - 23.4. Fire ratings of existing materials and/or systems which may become damaged or modified due to the work shall be maintained with a fire rating equal to or greater than the existing rating.
    - 23.5. All pipe and conduit penetrations in fire rated partitions and floors/ceilings shall be sealed in accordance with a U.L. listed "fire stop" compatible with the material and fire rating required.
    - 23.6. Flame-spread: minimum ratings for flame spread shall be as follows:
      - 23.6.1. Enclosed vertical exit ways: Class I (0-25 F.S.I.)
      - 23.6.2. Other exit ways: Class II (26-75 F.S.I.)
      - 23.6.3. Rooms or areas: Class III (76-200 F.S.I.)

24. **ARCHITECTURAL WOODWORK**: Provide architectural woodwork as specified on the drawings. The "quality standards" of the architectural woodwork institute shall apply and hereby made a part of this document. All prefabricated work shall be economy grade. All other work shall be custom grade as defined by the quality standards of the AWI, unless noted otherwise.

25. **SURFACE PREPARATION**: Inspect existing conditions of all floor and wall surfaces for voids, holes, cracks, and other damages and make repairs. Grind and/or fill imperfections, fill holes, cracks, and other damages prior to installation. **The General Contractor shall provide budget for floor prep as required. The General Contractor shall provide RH moisture testing for any concrete locations less than one year old and for all slab on grade (regardless of age) locations.**

26. **CLEARANCES**: The General Contractor shall verify ceiling height and clearances above ceiling to the underside of structure above for installation of ductwork and diffusers; conduits and junction boxes; fire sprinkler pipes and heads; and light fixtures. All work shall be coordinated by all trades to avoid interference with methods of installation. Notify TPS of conflicts immediately and prior to commencing with construction.

27. **FIRE SPRINKLER SYSTEM**: In buildings equipped with fire sprinkler systems, furnish all labor, materials, fixtures, trim, equipment and services necessary for the installation of a complete and properly functioning fire sprinkler system. All work shall conform to the following:
    - 27.1. Relocate and/or add fire sprinkler heads as required for new conditions as shown on the drawings.
    - 27.2. Rework and/or add to existing pipes, fittings, hangers and support as necessary for new sprinkler head locations.
    - 27.3. Design standards, materials and workmanship shall be compatible with existing conditions.
    - 27.4. Install new sprinkler head locations in the center of the ceiling board or section and symmetrical throughout rooms and open areas.

28. **FIRE EXTINGUISHERS:** Provide portable, wall mounted fire extinguishers every 75' of exit travel distance throughout limit of construction or as required by the local fire department or life safety department. Portable fire extinguishers shall comply with NFPA 10.

29. **PLUMBING SYSTEM**: Furnish all labor, materials, fixtures, trim, equipment and services necessary for the installation of a complete and properly functioning plumbing system. All work shall conform to the following:
    - 29.1. Refer to drawings for specific information pertaining to materials, fixtures, etc. scheduled as new and not contained herein.
    - 29.2. Re-use existing plumbing piping and/or fixtures and components where possible. Inspect and confirm existing conditions are within specifications.
    - 29.3. New materials shall be compatible with existing conditions, where possible.
    - 29.4. Provide fixtures with all anchors, supports, traps and trim, for a complete installation.
    - 29.5. Provide stop valves on all hot and cold water connections to fixtureSF
    - 29.6. Caulk around all fixtures with silicone based caulking compound.
    - 29.7. Install all fixtures level and square with surrounding enclosures.
    - 29.8. Install escutcheons for all pipes exposed to view passing through walls, floors and ceilings.
    - 29.9. Provide templates or cut-outs of fixtures to the millwork subcontractor for cutting of openings.
    - 29.10. All materials and workmanship shall be in compliance with state and local codes and ordinances, and the Americans with Disabilities Act (ADA).

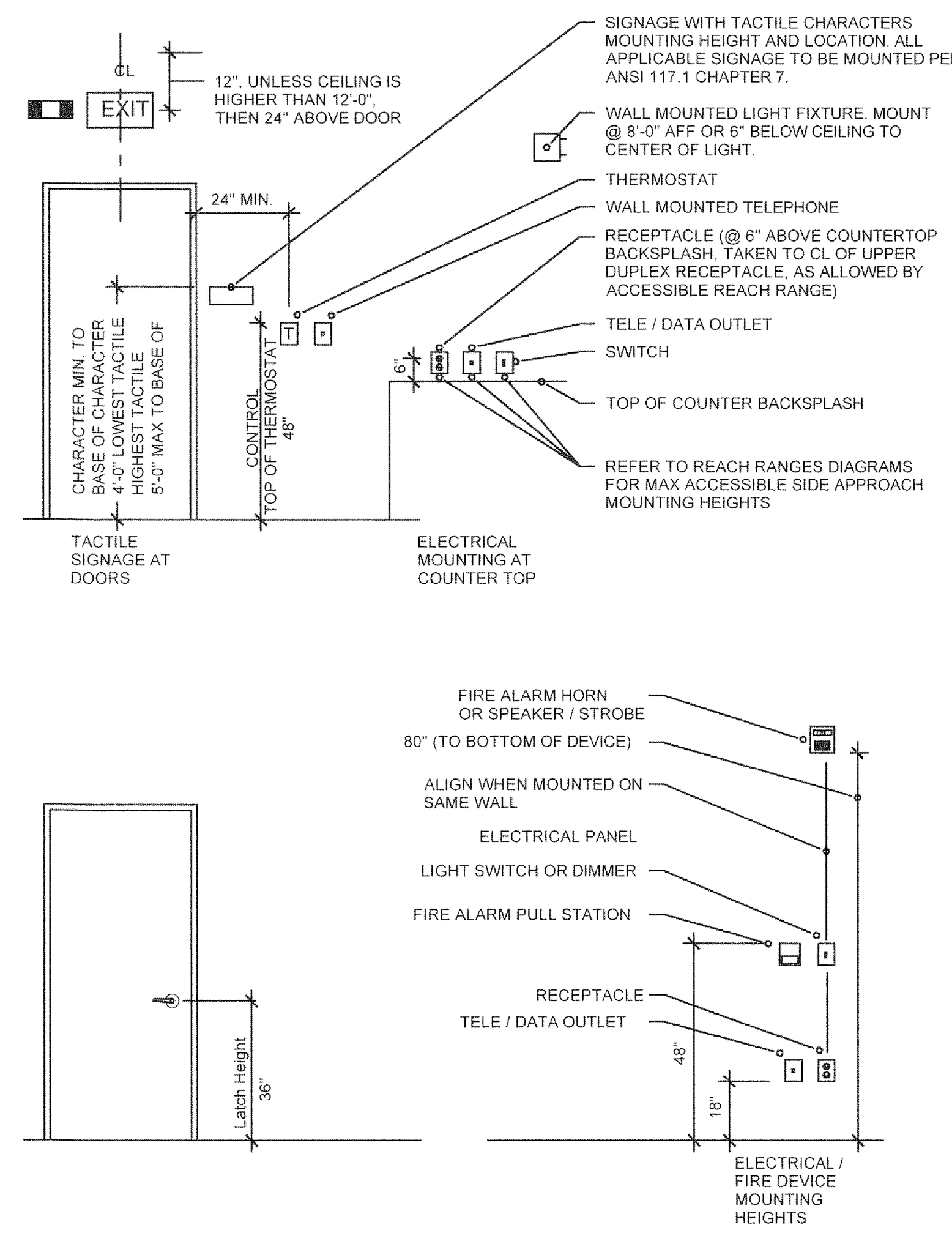
30. **HVAC SYSTEM**: Furnish all labor, materials, fixtures, trim, equipment and services necessary for the installation of a complete and properly functioning HVAC system. All work shall conform to the following:
    - 30.1. Standards: all standards and specifications established in the base building construction documents, or as evidenced in the existing conditions of construction shall govern, unless noted otherwise. All work shall be coordinated with the building maintenance manager. Refer to base building construction documents and specifications and existing conditions of system for equipment or materials not specified on the engineered drawings or contained herein. All materials and workmanship shall be in compliance with ASHRAE and SMACNA, state and local codes and ordinances, and the Americans with Disabilities Act (ADA).
    - 30.2. Repairs and replacement: the contractor shall verify proper operation of existing ductwork for breaks and leaks. In the event that the contractor has observed system failure or defects, notify the Owner's construction manager immediately for further direction. For bid purposes, it shall be assumed that all HVAC equipment and associated ductwork and components are in proper operating condition. Repairs or replacement of materials and workmanship shall be performed as a separate portion of the work.
    - 30.3. Abandoned equipment: all abandoned HVAC equipment and components within the area of construction shall be removed and all duct connections patched, capped and/or sealed.
    - 30.4. Fire dampers shall be installed in all ducts which penetrate fire resistive partitions (one-hour rated and above). Fire dampers shall be 100% free area design.
    - 30.5. Return air plenum: allow for transfer of air above Tenant demising partitions and spaces continuously and unobstructed to the building system return air shaft. Refer to engineered drawings (if provided) and detailed drawings for wall construction and opening size. During construction, the contractor shall place temporary filters over openings to the return air shaft. Remove filters upon completion of construction. Coordinate this work with the building maintenance manager.
    - 30.6. Thermostats: locate thermostats so as not to interfere with the occupants' furnishings and systems, avoiding locations in the middle of walls, in traffic areas, in file/supply rooms, etc.
    - 30.7. Air testing, adjusting, and balancing: adjust and balance terminal units, diffusers, dampers and registers to provide design condition air flow or to the air quantities shown on the drawings (if provided). Balance work shall be performed in accordance with NEBB standards by a certified contractor. Submit a balancing report to TPS. Calibrate and adjust all thermostats.

31. **FIRE/SMOKE ALARM SYSTEMS**: In buildings equipped with fire and/or smoke alarm systems, furnish all labor, materials, fixtures, trim, equipment and services necessary for the installation of a complete and properly functioning fire/smoke alarm system. All work shall conform to the following:
    - 31.1. Relocate and/or add fire alarms, smoke or heat detectors, strobe alarms, pull stations, remote indicator lights and other components of the system as required for new conditions of the space.
    - 31.2. Rework systems to be compatible with existing design standards and conditions.
    - 31.3. Locations and specifications of alarms shall comply with the Americans with Disabilities Act (ADA).

32. **ELECTRICAL SYSTEM**: Furnish all labor, materials, fixtures, trim, equipment and services necessary for the installation of a complete and properly functioning electrical system. All work shall conform to the following:
    - 32.1. Standards: all standards and specifications established in the base building construction documents, or as evidenced in the existing conditions of construction shall govern, unless noted otherwise. All work shall be coordinated with the building maintenance manager. Refer to base building construction documents and specifications and existing conditions of system for equipment or materials not specified on the engineered drawings or contained herein.
    - 32.2. All materials and workmanship shall be in compliance with the national electric code (NEC), state and local codes and ordinances, and the Americans with Disabilities Act (ADA).
    - 32.3. Repairs and replacement: the contractor shall verify proper operation of existing panels and switch-gear. In the event that the contractor has observed system failure or defects, notify the Owner's construction manager immediately for further direction. For bid purposes, it shall be assumed that all equipment and associated components are in proper operating condition. Repairs or replacement of materials and workmanship shall be performed as a separate portion of the work.
    - 32.4. Panels: provide new typed panel circuit directory for each panel affected.

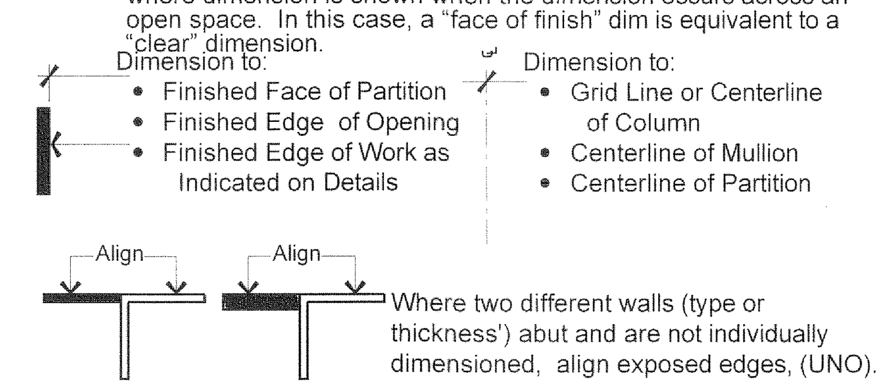
Dimensional Conventions

1. Except where directed to place items of the work at the "approximate location shown," do **not** scale drawings for dimensional information. All elements of the drawings **may** not be drawn to exact scale. All dimensions required are shown, or may be derived from those shown on the floor plans, detail plans, elevations, sections, details, schedules, and specifications. See notes on this sheet and symbols on the "Architectural Symbols" drawing for dimensions conventions used on this project.
2. Do not scale drawings; dimensions shall govern, details shall govern over plans and elevations. Large scale plans shall govern over small scale plans. Large scale details shall govern over small scale details. If unable to locate dimensions for any item of work, consult the Architect prior to construction.
3. All heights are dimensioned from top of existing slab unless noted "AFF". (Above Finished Floor).



NOTES:
1. ALL DIMENSIONS ARE TO TOP OF DEVICE BOX, UNLESS NOTED OTHERWISE.
2. INSTALL ALL REQUIRED SIGNAGE IN ALL REQUIRED LOCATIONS PER NCSBC 1110 & ANSI

4. Dimensions are not adjustable, unless noted (+/-), without TPS' written approval.
5. Except where specifically noted to the contrary, all dimensions shown on the architectural drawings conform to the following conventions:
   - A. Dimensions utilizing the "centerline" symbol are measured to:
     - Structural or dimensional grid lines.
     - Centerline of wall or partition assemblies, exclusive of any applied finish having thickness
     - Centerline of door, window, cased opening and window mullion.
   - B. Dimensions typically utilized are to the face of finished wall and are measured to:
     - Face of finished wall
     - Inside edge of finished door opening. Refer to "door schedule" for additional information.
     - Finish faces at the most narrow or constricted points of the section where dimension is shown when the dimension occurs across an open space. In this case, a "face of finish" dim is equivalent to a "clear" dimension.

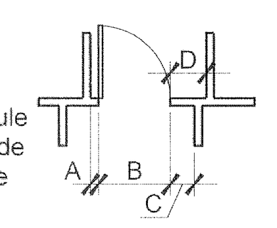


Where two different walls (type or thickness') abut and are not individually dimensioned, align exposed edges, (UNO).

6. Where dimensions are not provided on the floor plans to locate door openings, apply the following rules, in order, to determine the location of door openings.
   - A. Door openings may be dimensioned on drawings other than the floor plans. Refer to the sections, elevations, details, and door schedule notes for additional dimensional information.
   - B. Where the hinge-side of a door is shown adjacent to a wall, or walls, perpendicular to the wall in which the door opening occurs, locate the hinge-side finished edge of the door opening 4 inches from the face (exclusive of any applied finish) of the closest perpendicular wall or partition assembly.

Dimensional Key

- A = 4" (min.)
- B = Refer to Door Schedule
- C = 12" (min.) at Push Side
- D = 18" (min.) at Pull Side



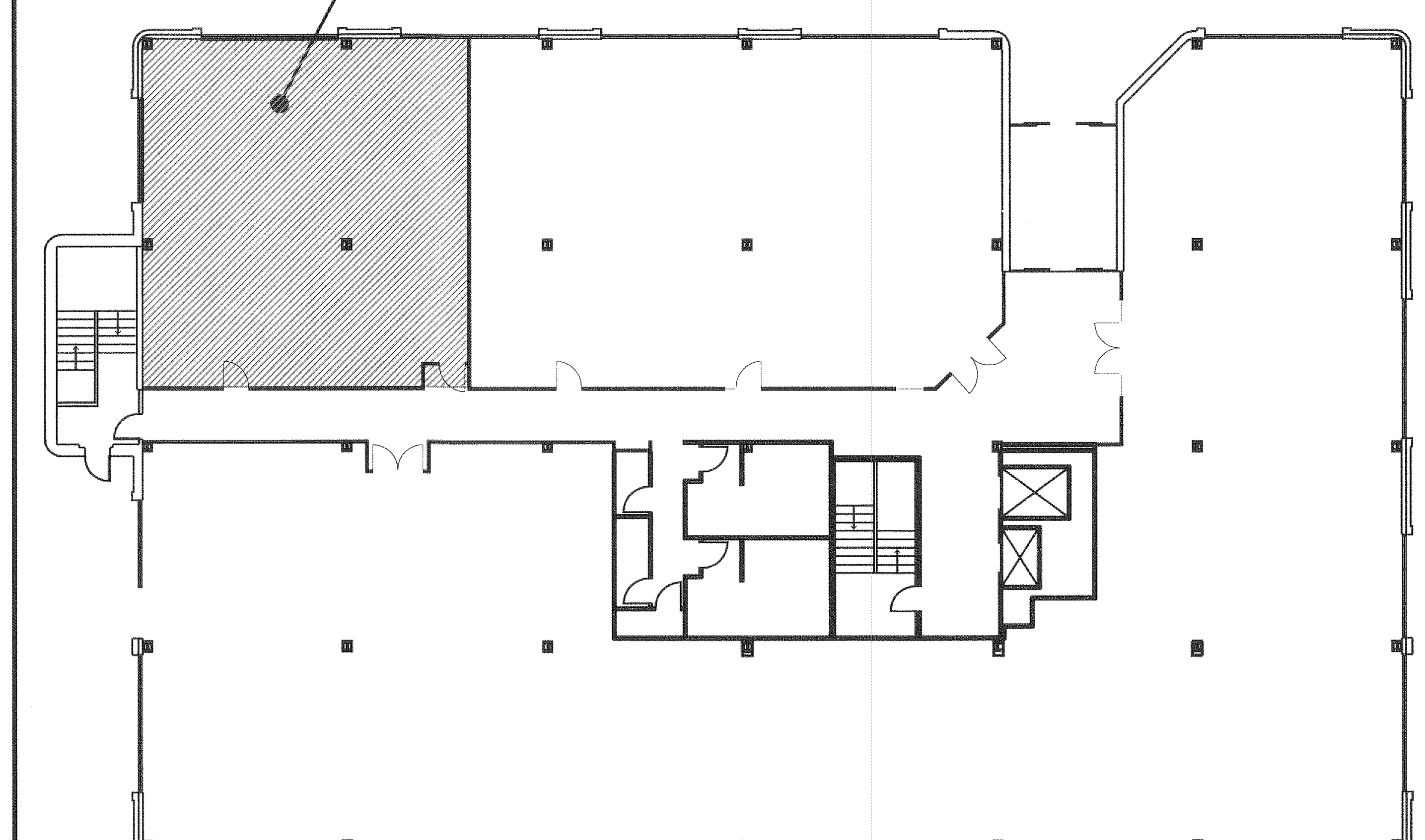
Definitions

- **Approve**: where used in conjunction with TPS's or its consultant's response to submittals, requests, applications, inquiries, reports and claims by the contractor, the meaning of the term 'approved' will be held to the limitations of TPS's responsibilities and duties as specified in the general conditions and supplementary conditions. In no case will 'approved' by TPS be interpreted as an assurance to the contractor that the requirements of the contract documents have been fulfilled.
- **Furnish**: except as otherwise defined in greater detail, the term 'furnish' is used to mean to supply and deliver to the project site, ready for unloading, unpacking, assembly and installation, etc. as applicable in each instance.
- **Install**: except as otherwise defined in greater detail, the term 'install' is used to describe operations at the project site including unloading, unpacking, assembly, erection, placing, anchoring, applying, working to dimension, finish, curing protection, cleaning and similar operations, as applicable in each instance.
- **Provide**: except as otherwise defined in greater detail, the term 'provide' means to furnish and install, complete and ready for the intended use as applicable in each instance.
- **Products**: defined as products which must be substantially cut, shaped, worked, mixed, furnished, refined otherwise fabricated, processed, installed or applied to form units of work.
- **Equipment**: defined as products with operational parts, regardless of whether motorized or manually operated, and particularly including connections (wiring, piping, etc.).
- **Typical**: 'typical' or 'typ' means identical for all similar conditions.
- **Similar**: 'similar' or 'sim' means comparable to characteristics for the condition noted. Verify dimensions and orientation on plan.
- **As required**: 'as required' means as required by regulatory requirements, by referenced standards, by existing conditions, by generally accepted construction practice, or by the contract documents.
- **Align**: 'align' means accurately locate finish faces of materials in same plane.
- **Relocate**: means to reuse a particular device, fixture, or item in a new location.
- **Remain**: to continue unchanged.
- **Reused**: to use again especially in a new way or in a new location.

City of Aurora Building Division
Project: *Tenant Improvement*
Address: *1411S. Potomac St. Unit 140*
Occupancy Group: *IBC TYPE B*
Construction Type: *IBC TYPE IIB-SPK*
RSN: *1426505*
Permit: *19-1741436 LT*

City of Aurora Building Division
Reviewed for Code Compliance
Approved as Noted: William Griffin
Date: Dec 23, 2019
2015 INTERNATIONAL CODES & 2017 NEC

RSN: *1426505*
Permit #: *19-1741436 LT*



1 Proximity Plan
Level One
Not to Scale
North

Building Proprietary Vendors

Provide U.L. Class 2A10BC minimum rating fire extinguishers at a maximum 50'-0" travel distance prior to the Certificate of Occupancy issuance 2009 IFC Table 906.3[1] and 2007 NFPA 10

SEPARATE FIRE ALARM PERMIT REQUIRED:
Due to the proposed work the general contractor is required to obtain the services of a fire alarm contractor to determine if a separate alarm permit is required. If it is determined that the spacing of the fire alarm devices is not in compliance, then a separate fire alarm permit is required. Approval of the documents is required prior to system installation or any request for inspection. A certificate of occupancy or final approval cannot be issued by the Building Division without this fire protection system. **2015 IFC, Section 105.7.6.**

SEPARATE FIRE SPRINKLER PERMIT REQUIRED:
Due to the proposed work the general contractor is required to obtain the services of a fire sprinkler contractor to determine if a separate sprinkler permit is required. If it is determined that the spacing of the fire sprinkler heads is not in compliance, then a separate fire sprinkler permit is required. Approval of the documents is required prior to system installation or any request for inspection. A certificate of occupancy or final approval cannot be issued by the Building Division without this fire protection system. **2015 IFC, Section 105.7.1.**

Project Team

Designer/ Space Planner
Tenant Planning Services
1660 Lincoln Street, Suite 100
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Phone: 303.309.6933
email: blennon@coreyeng.com

Drawing List

Approvals

☒ Issued For Construction
☐ Preliminary - Not Issued for Construction

Construction Document Approval

Construction work shall not proceed until the Owner and the intended occupant have given approval to these Construction Documents. Approval by these parties shall be interpreted as approval of the drawings for content, scope of work, and all dimensions regarded by either party as being necessary to their operations, use of the space, furnishings, equipment installation, and any agreements between the Owner and the intended occupant.

Construction and/or initiation of construction authorized by the Owner from these Construction Documents, shall be interpreted by the Designer as approval in full of these Construction Documents by both the Owner and intended occupant.

- ☐ Approved - No Exceptions Taken
- ☐ Approved As Noted
- ☐ Approved As Noted - Resubmit
- ☐ Revise And Resubmit

Signature Date

TPS
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1411 South Potomac Street
Aurora, CO 80012
Suite 140

COLORADO LICENSED ARCHITECT
B-3282
12/12/19

Spec Suite 140

Dates of Record

Project Start Date: 10 Sep 2018

Issued On	Issued For
12 Dec 2019	Tenant Review & Approval; and Construction

Project #	Proj Mgr	Designed by	Drafted by	Checked by
426009	GBS	JMB	JMB	GBS

A0.0

project start date: 10 Sep 2018
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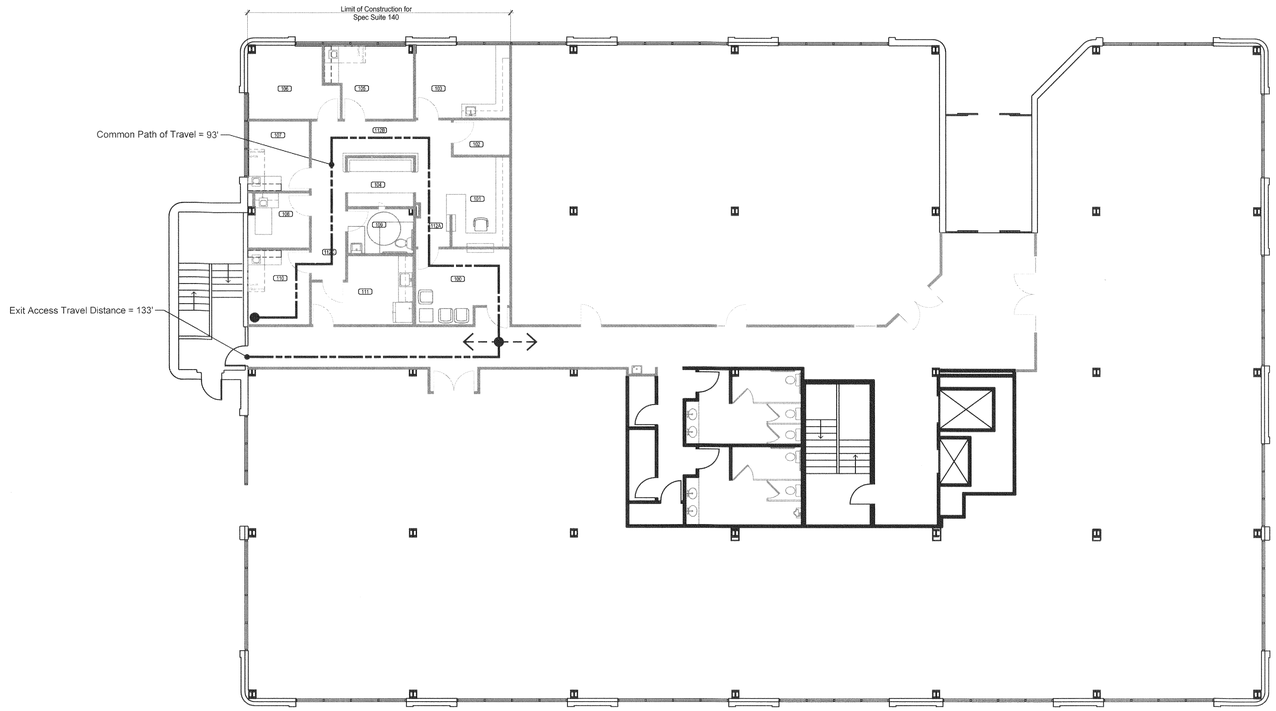


Provide lever or other approved hardware on all new or relocated doors.
2003 ANSI A117.1

1 Egress Plan
Level One

Scale: 3/32" = 1'-0"

North

Life Safety Legend

- (100) Room Number
- Overall Diagonal
- Exit Separation
- Common Path Of Egress

Room Schedule

100	Waiting	107	Exam #2
101	Reception	108	Exam #3
102	Storage	109	Restroom
103	Procedure	110	Exam #4
104	MA Station	111	Break Room
105	Exam #1	112	Hallway
106	Office		

Codes and Regulations

Building Profile

City/ County: Aurora / Arapohoe County
Fire District: City of Aurora Fire Rescue
Construction Classification: II-B
Building Height / Levels: Uknown / 4 Stories
Automatic Sprinklers Throughout

Use and Occupancy

Occupant Name: Spec Suite 140
Occupant Use: General Business Office
Occupancy Classification: Business Group B

Tenant Area

	Total	Existing	Expansion
(approx.) Useable SF:	1,636		
Construction Area:			

City of AURORA

Applicable Codes

2015 IBC (International Building Code) with Amendments
2015 IPC (International Plumbing Code)
2015 IMC (International Mechanical Code)
2015 IFC (International Fire Code)
2015 IECC (International Energy Conservation Code)
2017 NEC (National Electric Code)

Interpretations

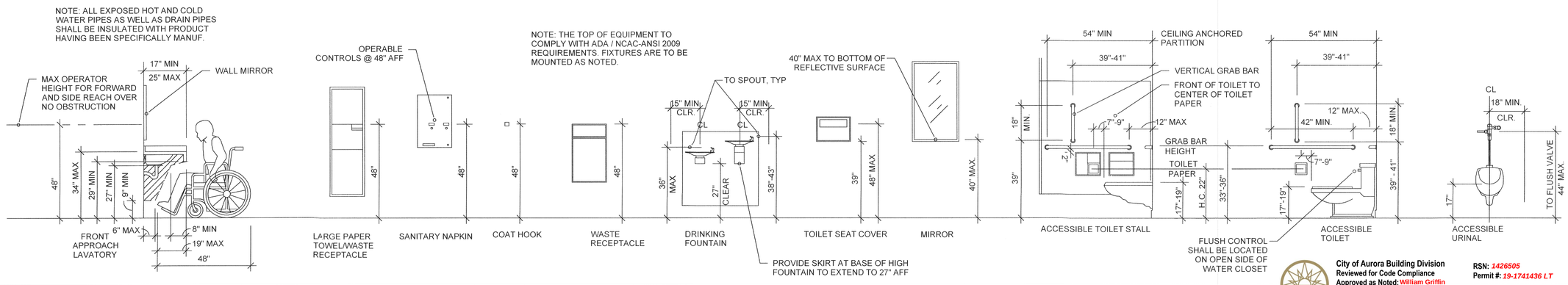
Occupancy Load Analysis

Suite	Function Per Table 1004.1.1	Floor Area (USF)	Floor Area (SF/Occ)	Number of Occupants
140	Business	1636	÷100 gross =	17

Means of Egress

	Required	Provided
Egress Width:	min: 34"	34"
Number of Exits:	min: 1	2
Common Path of Travel:	max: 100'	93'
Exit Access Travel Distance	max: 133'	300'

Accessible Installation Standards (n.t.s.)



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1411 South Potomac
1411 South Potomac Street
Aurora, CO 80012
Suite 140

COLORADO LICENSED ARCHITECT
JILL M. BERRY
B-3282
12/12/19
ARCHITECT

Spec Suite 140

Dates of Record

Project Start Date: 10 Sep 2018

Issued On	Issued For
23 Oct 2019	Tenant Review & Approval; and Construction

Sheet Contents: Egress Plan

Project #	Proj Mgr	Designed by	Drafted by	Checked by
426009	GBS	JMB	JMB	GBS

A0.1

City of Aurora Building Division
Reviewed for Code Compliance
Approved as Noted: William Griffin
Date: Dec 23, 2019
2015 INTERNATIONAL CODES & 2017 NEC

RSN: 1426505
Permit #: 19-1741436 LT

1411 South Potomac • Spec Suite 140

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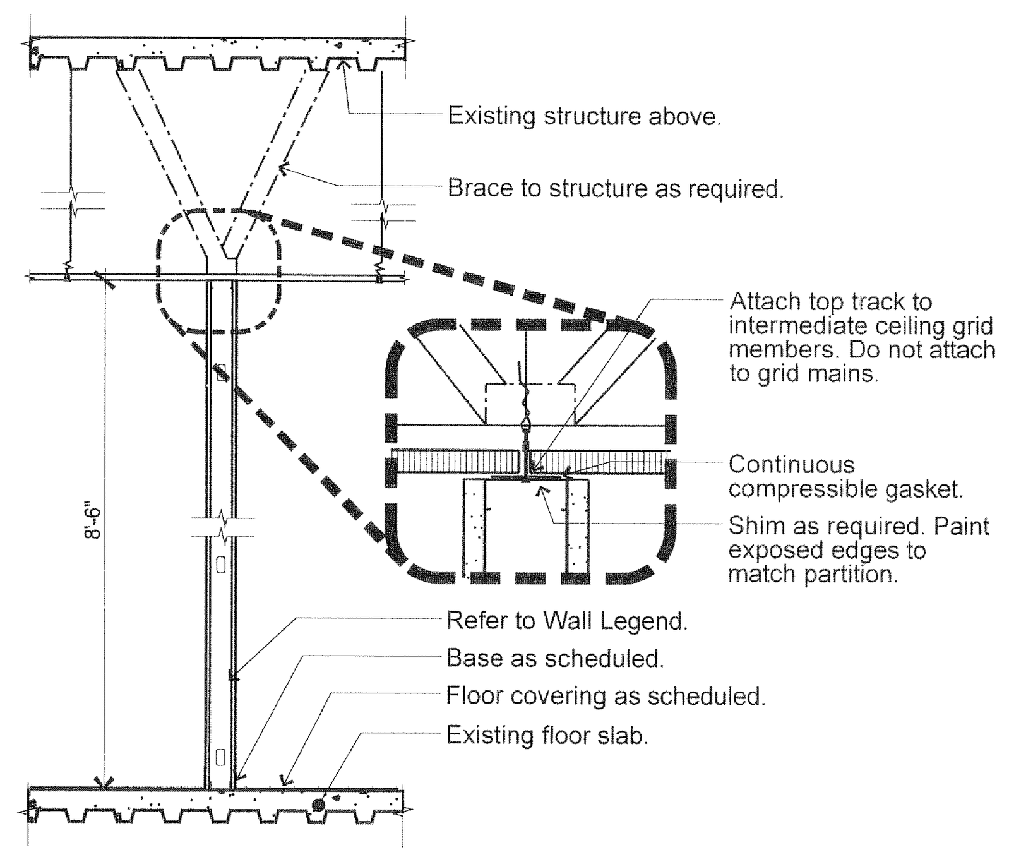
1411 South Potomac • Spec Suite 140

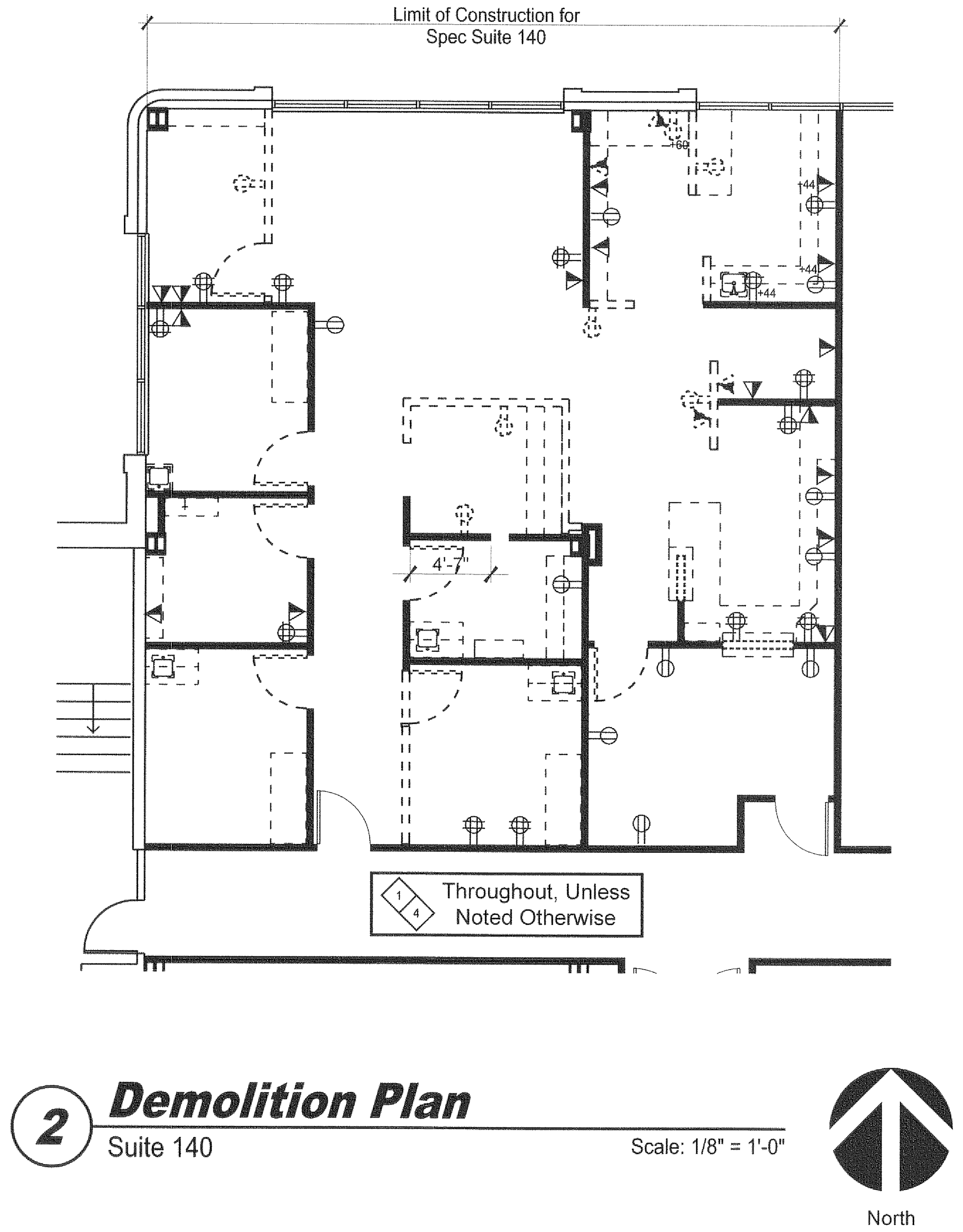
Sheet A1.0 Plan Notes

1. **Refer to General Notes** for additional requirements.
2. **GENERAL DEMOLITION**: Demolish and remove all partitions, materials and debris as shown on the drawings or specified otherwise herein. Removal as described shall be accomplished without storing excessive quantities of any material, rubbish, dirt, debris or waste of any kind within this demised area of construction or adjacent areas.
3. **FINISH TREATMENTS** scheduled to remain and be re-used are as follows: carpet, resilient flooring, base trim, wall treatments.
4. **FINISH TREATMENTS** scheduled to be removed are as follows: carpet, resilient flooring, base trim, wall treatments.
5. **DISPOSAL**: All existing equipment, materials and fixtures not scheduled for re-use shall remain the property of the Owner. Coordinate with the Building Representative and comply with all regulations and/or requirements pertaining to removal, salvage and storage of materials demolished as scheduled.
6. **RE-USE**: Investigate condition of all materials scheduled for demolition and not re-used on this project. Document characteristics of each material or component and submit inventory statement to building representative. Include characteristics such as type, color, size, quantity, physical condition and make/model number, if possible.
7. **CLEAN AND REPAIR**: Verify condition of all materials scheduled for demolition and re-use where possible. Clean and/or repair materials as needed.
8. **PREPARATION**: Unless otherwise specified, remove all existing wall coverings, floor coverings, and baseboards throughout and prepare existing surfaces for new finish treatments. The Demolition Contractor shall scrape existing adhesives to a smooth condition. Refer to finish plans and/or schedules.
9. **PATCHING**: Remove all unused sleeves through the floor slab and fill/patch all penetrations.
10. **ELECTRICAL DEMOLITION**: Existing electrical and communications/data wiring within partitions, raceways or above the ceiling which are not scheduled for re-use shall be removed entirely, including hangers, supports, terminals, conduit and junctions from source to point of termination. Maintain circuit and/or transmission continuity to remaining devices, where necessary.
11. **PIPES AND CONDUITS**: All pipes and conduit in partitions scheduled for demolition shall be removed entirely when not scheduled for re- use.
12. **ABANDONED APPARATUS**: Abandoned electrical circuits, fixtures and devices discovered by the contractor and not scheduled for re-use shall be reported to the building representative for further direction.
13. **TELEPHONE/DATA REMOVAL**: Unless otherwise indicated on the drawings, remove of all existing telephone equipment or components not currently in use.
14. **DOOR ASSEMBLIES:**
    - 14.1. All assemblies shown on the drawings and not referenced to the Door Schedule ☼OR☼ in the Sheet Plan Notes are existing to remain (unless noted otherwise).
    - 14.2. Inspect, make repairs to, and clean ALL existing assemblies and components to like new conditions. Re-use existing door assemblies and/or components where possible.
    - 14.3. Provide new door assemblies and/or components as specified on the drawings. Door frames shall be securely fastened in place and the entire assembly shall be installed plumb and square with maximum diagonal distortion of 1/8". Undercut doors as needed for specified floor coverings.
15. **INSULATION and ATTENUATION**: Provide insulation or sound attenuation in walls and above suspended ceiling if indicated on the drawings. Specifications shall conform to the following:
    - 15.1. Sound attenuation in walls shall be unfaced fiberglass, 16" to 24" wide to correspond with stud width.
    - 15.2. Thermal insulation in walls shall be Kraft faced fiberglass, 16" to 24" wide, with R-13 thermal value.
    - 15.3. Sound attenuation in ceilings shall be foil faced fiberglass, 24" wide, for use in return air plenums.
16. **BACKING/BLOCKING**: Provide solid wood blocking in partitions for plumbing fixtures, door stops, wall mounted equipment (including televisions), millwork, etc., and as indicated on the drawings. Plywood backing may be used for shelving. Framing material for blocking, nailers, etc. shall be Western Douglas Fir or Hemlock.
17. **PARTITIONS**: Conform to the following:
    - 17.1. Partitions shall be erected plumb and true.
    - 17.2. Drywall partitions and joints shall be taped and finished smooth and prepared for specified finish treatment. Coat vertical joints from floor to ceiling for additional substrate to the base trim.
    - 17.3. Skim coat existing partitions as needed.
    - 17.4. All exposed corners shall be fitted with metal corner bead and top of walls at underside of suspended ceilings shall be straight and true.
    - 17.5. Provide "kickers" or metal stud support from the top of the partition to the underside of the structure above for:
        - 17.5.1. Runs in excess of 9 feet;
        - 17.5.2. At all strike side jambs of door assembly openings ;
        - 17.5.3. At any glazed opening within 36" of the strike side of swinging doors; and
        - 17.5.4. At 8 feet on center, maximum.
18. **EXISTING LIFE SAFETY SYSTEMS**: Modify (fire alarm/smoke detection) on a ***DESIGN-BUILD*** basis. Conform to these drawings and documents and as required for obtaining a building permit. Refer to General Notes.
19. **EXISTING PLUMBING SYSTEMS**: Modify on a ***DESIGN-BUILD*** basis. Conform to these drawings and documents and as required for obtaining a building permit. Refer to General Notes.
20. **COMMON AREA FINISH TREATMENTS:** Rework and/or add new finish treatments as necessary at all common areas of the building where construction occurs. All materials and workmanship shall match existing conditions (unless noted otherwise).
21. **GENERAL FINISH TREATMENT NOTES**:
    - 21.1. Coordination: finish treatment subcontractors and installers shall coordinate with other trades for applications affecting other tradework, especially millwork, etc.
    - 21.2. Unless noted otherwise, all floor coverings, baseboard, and floor preparation shall be the responsibility of the General Contractor, including removal of existing materials.
    - 21.3. Installation: all finish treatments shall be installed or applied in strict accordance with the manufacturer's written specifications and the drawings.
    - 21.4. Protection: protect all surfaces, doors, hardware, outlet plates, etc. From spills, splatters and overspray of paint, drywall compound, adhesive and other materials.
    - 21.5. Preparation: field measure each space to receive finish treatment as a basis of supplying, cutting and seaming material. Do not scale the drawings or calculate sizes from dimensions shown.
    - 21.6. Surfaces: all surfaces shall be properly prepared prior to installation of material including but not limited to priming of walls to receive paint, sizing of walls to receive wall covering, patching/filling holes and depressions, etc.
    - 21.7. Surface texture: unless noted otherwise, all drywall finish shall be smooth.
22. **CARPET INSTALLATION**: carpet installation shall comply with the workmanship guidelines as published by the American Carpet Institute (latest edition), and in strict accordance with the manufacturer's written specifications, and shall also conform to the following:
    - 22.1. Where carpet seams occur in doorways, locate seam beneath center of door slab.
    - 22.2. Furnish and install resilient type reducer strip (saddle) where resilient floor coverings abutt carpet. See drawing for color.
    - 22.3. Coordinate installation for uniformity where dye-lot variations may occur in material.
23. **WALLCOVERING INSTALLATION**: wall covering shall be installed or applied in complete accordance with the manufacturer's written specifications and shall also conform to the following:
    - 23.1. Wrap all device cover plates with wall covering only on walls scheduled to receive wall covering (match wall finish).
    - 23.2. Furnish and install "J" metal polished aluminum edge cap (mudded in) at corners where wall coverings terminate and ends are exposed.
24. **PAINT**: paint shall be installed or applied in strict accordance with the manufacturer's written specifications and as recommended by "The Modern Guide To Painting Specifications" (latest edition) and shall also conform to the following:
    - 24.1. Surfaces scheduled for painting shall receive no less than two coats of paint (3.0 mil, min. Thickness).
    - 24.2. All materials shall be evenly applied avoiding runs, sags, flashing or splotching. All coats shall be allowed to dry thoroughly prior to application of succeeding coats. Where necessary, provide masking to avoid inadvertent applications.
    - 24.3. Unpainted gypsum board and drywall shall be primed prior to painting. The primer may be tinted with the paint color only as recommended by the paint manufacturer.
    - 24.4. At the completion of the job and after installation of the floor covering, touch-up paint all areas as required. Blend paint touch-up in with existing for a consistent and uniform appearance.
25. **WINDOW COVERINGS**: unless noted otherwise, window coverings shall be the responsibility of the General Contractor and shall conform to the following:
    - 25.1. **FURNISH AND INSTALL NEW WINDOW COVERINGS** at exterior glazing throughout. Specification: ☼☼☼☼
    - 25.2. **RE-USE EXISTING WINDOW COVERINGS** at exterior glazing throughout. Wrap and bag all window coverings during construction. The General Contractor shall inspect existing conditions of material and operation and make necessary repairs or replace to match existing. Replace window coverings if missing. Upon completion of job, clean material, hardware and housings thoroughly, including both sides of window covering material.
26. The General Contractor is responsible to verify all specified finishes match existing at ☼☼☼☼☼☼☼ prior to order/ installation.

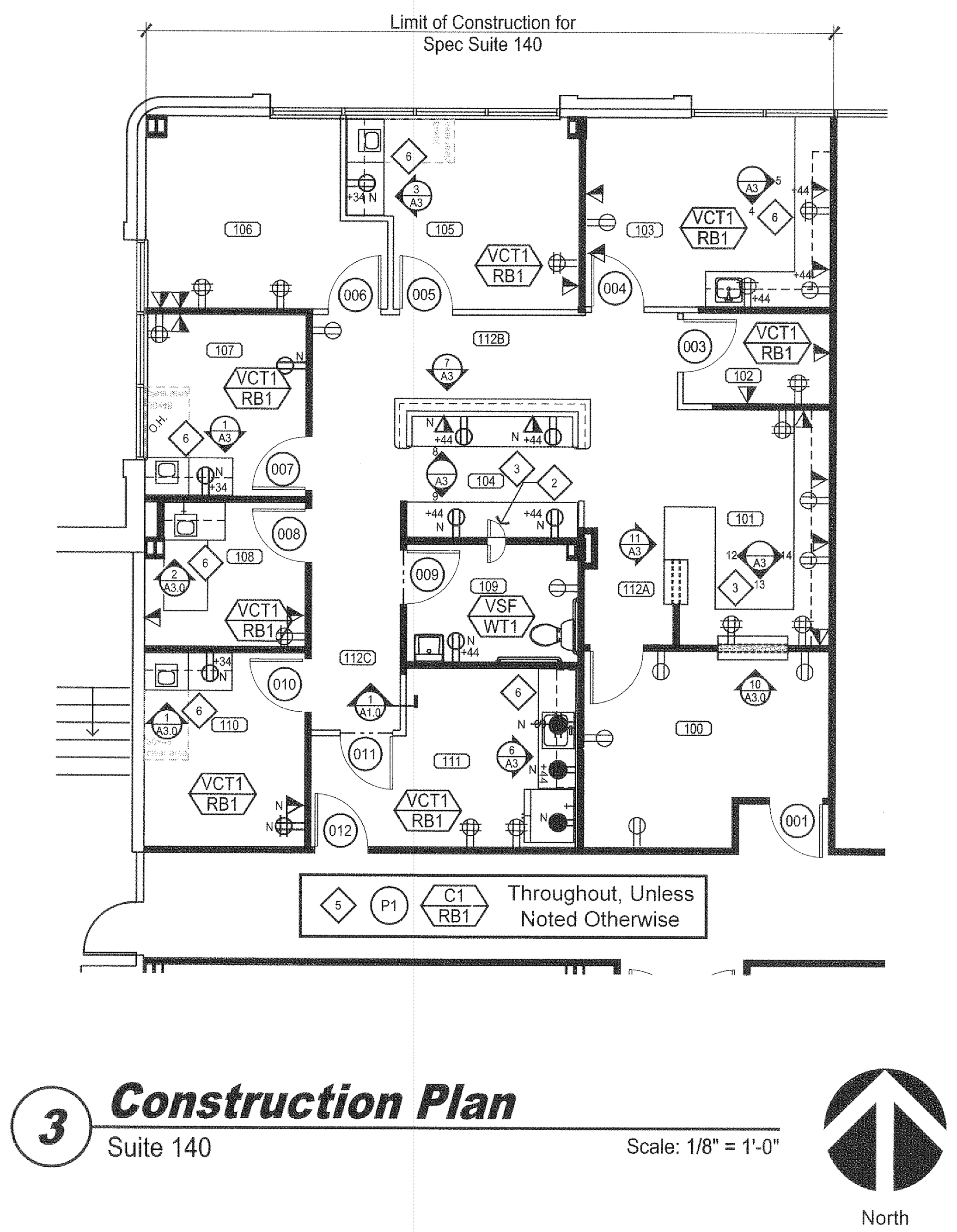
Provide lever or other approved hardware on all new or relocated doors.
2003 ANSI A117.1



1 **Section: Partition**
Typical Standard Interior Partition
Scale: 1/2" = 1'-0"



2 **Demolition Plan**
Suite 140
Scale: 1/8" = 1'-0"



3 **Construction Plan**
Suite 140
Scale: 1/8" = 1'-0"

Room Schedule

100	Waiting	107	Exam #2
101	Reception	108	Exam #3
102	Storage	109	Restroom
103	Procedure	110	Exam #4
104	MA Station	111	Break Room
105	Exam #1	112	Hallway
106	Office		

Sheet Keyed Notes

1. SALVAGE DOOR FRAMES. Remove existing interior door frames throughout limit of construction and set aside for re-use.
2. Provide NEW PASS-THRU SPECIMEN assembly. 12"w. × 12"h. set in cased gypsum board opening at 42" AFF.
3. NEW MILLWORK. Refer to elevations and details.
4. DEMO ALL EXISTING chair rail throughout limit of construction.
5. Replace all existing non-white devices and cover plates with white.
6. NEW MILLWORK AND PLUMBING. Refer to elevations, details and plumbing drawings.

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1411 South Potomac
1411 South Potomac Street
Aurora, CO 80012
Suite 140

COLORADO LICENSED ROBERT ... B-3282 12/12/19 ARCHITECT

Door Schedule[1]

Mark	State[2]	Type	DOOR Leaf Size	DOOR Material	DOOR Finish	DOOR FRR[3]	FRAME Material	FRAME Finish	FRAME FRR[3]	HARDWARE Latch Func.	HARDWARE Additional Components	Remarks	Mark
001	E	FI	3'-0" x 8'-4" x 1 3/4"	S.C.Wood	Stained	None	Hm	P5	None	2	Etr	Existing to Remain	001
002	N	FI	3'-0" x 6'-8" x 1 3/4"	S.C.Wood	Stained	None	Aluminum	Prefinished	None	1	--	--	002
003	N	FI	3'-0" x 6'-8" x 1 3/4"	S.C.Wood	Stained	None	Aluminum	Prefinished	None	1	--	--	003
004	N	FI	3'-0" x 6'-8" x 1 3/4"	S.C.Wood	Stained	None	Aluminum	Prefinished	None	1	--	--	004
005	N	FI	3'-0" x 6'-8" x 1 3/4"	S.C.Wood	Stained	None	Aluminum	Prefinished	None	1	--	--	005
006	N	FI	3'-0" x 6'-8" x 1 3/4"	S.C.Wood	Stained	None	Aluminum	Prefinished	None	1	--	--	006
007	N	FI	3'-0" x 6'-8" x 1 3/4"	S.C.Wood	Stained	None	Aluminum	Prefinished	None	1	--	--	007
008	N	FI	3'-0" x 6'-8" x 1 3/4"	S.C.Wood	Stained	None	Aluminum	Prefinished	None	1	--	--	008
009	N	FI	3'-0" x 6'-8" x 1 3/4"	S.C.Wood	Stained	None	Aluminum	Prefinished	None	3	--	--	009
010	N	FI	3'-0" x 6'-8" x 1 3/4"	S.C.Wood	Stained	None	Aluminum	Prefinished	None	1	--	--	010
011	N	FI	3'-0" x 6'-8" x 1 3/4"	S.C.Wood	Stained	None	Aluminum	Prefinished	None	1	--	--	011
012	E	FI	3'-0" x 8'-4" x 1 3/4"	S.C.Wood	Stained	None	Hm	P5	None	2	Etr	Existing to Remain	012

Footnotes
[1] **The General Contractor shall field verify that all door and hardware specifications match Building Standards** (unless noted otherwise) **and coordinate ANY AND ALL discrepancies directly with the TPS representative** (as indicated on the cover sheet Project Team list) ***prior* to proceeding**. This includes, but is not limited to, species, stain, finish, style, function, part/ product numbers, and design specifications as well as extent of inclusions / exclusions to component lists and the like.
[2] State:
E = Existing to remain. Assure proper working condition.
N = Provide New Door, Frame or Hardware in its entirety.
[3] Rating: Minimum Fire-resistive Rating (per UL) required in minutes

Door, Frame, and Hardware Specifications

Wood Doors:
Wood veneer interior doors shall be 1¾" thick, 5-ply particle board core complying with CS 236, Type I, Density C, Class 1, and with AWI standard PC-5 construction, NWWDA I.S. 1.6 Type II adhesive, solid core, flush slab style.
(The General Contractor shall confirm the Building Standard specifications and match accordingly.)

Door Frames:
Entry/Exit: Hollow Metal
Interior: Building Standard
(The General Contractor shall confirm the Building Standard specifications and match accordingly.)

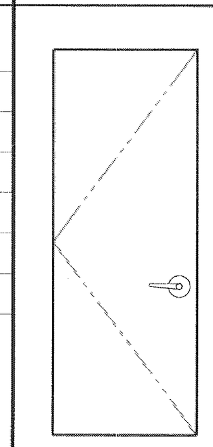
Hardware:
Hardware shall meet Building Standard specifications, with Building Standard Finish finish.
Standard hardware to be included with every door in the Door Schedule shall include:
- Latchset: Lever Handle at interior and exterior (UNO), with 1" minimum throws.
- Hinges
- Dust Proof Strike Plate
- Silencers
- Wall or Door Stop
The General Contractor shall provide separate cost to label all keys (locksets). Coordinate with Tenant and Building Management on labeling numbers.

Latch Function Legend

Hardware shall meet Building Standard specifications.

1. Passage
2. Keyed Lock
3. Privacy
4. Push/Pull
5. Single Action Panic Bar
6. Recessed Finger Pulls
7. Wire Pulls

Door Types



Type "FI"
Standard Flush Swinging Door

Finish Treatment Schedule[1]

NOTE: all surfaces must be clean, dull, and dry before coatings are applied
All product is assumed to be NEW, unless noted otherwise

Material	Manufacturer	Style/ Line	Color	MARK	Remarks/Comments
Wallcovering					
Primer	Sherwin-Williams	ProMar 200	White	(Not Shown)	Primer for all new exposed gypsum board surfaces.
Primer	Sherwin-Williams	B66W1	White		Primer for new steel, galvanized or aluminum substrate
Interior Paint	Sherwin-Williams	ProMar 200 Eg-Shel	SW7656 Rhinestone	P1	Provide two (2) coats (minimum) at all new surfaces. • P1: Paint all exposed gypsum board surfaces throughout Limit of Construction (UNO). • P2 &: Accent paint. Locations TBD by owner.
Interior Paint	Sherwin-Williams	ProMar 200 Eg-Shel	SW7669 Summit Grey	P2	
Interior Paint	Sherwin-Williams	B21W200 ProMar200	SW7656 Rhinestone	P4	Paint for all exposed gypsum board surfaces at restrooms.
Interior Paint	Sherwin-Williams	B34 Series ProClassic	SW 7674 Peppercorn	P5	Paint for hollow metal steel frames.
Interior Paint	Sherwin-Williams	B30W00206 ProMar 200 Latex Flat	SW7656 Rhinestone	P6	Paint for gyp. board ceilings/soffits/headers throughout Limit of Construction.
Porcelain Wall Tile	American Olean	Method Polished	Taupe Technique MT04	WT1	
Millwork					
Plastic Laminate	Wilsonart	Fine Velvet Texture	Crisp Linen 4942-38	PL1	Countertops and Splashes, UNO
Plastic Laminate	Wilsonart	Gloss Line Finish	Veranda Teak 8209k-28	PL2	Vertical Surfaces, UNO. Plastic laminate pattern shall run vertically on all surfaces, UNO. Confirm with Tenant Planning Services.
Floorcovering					
Carpet Tile	J+J	TBD	TBD	C1	Include schluter strip at flooring transition.
Vinyl Composition Tile	Armstrong Standard Excelon	Imperial Texture 12×12×⅛	59234 Silk	VCT1	
Vinyl Sheet Flooring	Mannington	TBD	TBD	VSF1	
Luxury Vinyl Tile	Mohawk	Frisco Timbers	958 Two Tone	LVT1	Include schluter strip at flooring transition.
Base Trim					
4" Rubber Base Trim	Tarkett	4"	29 Moon Rock WG	RB1	Only coiled base trim approved. Coved at carpet, straight at hard surfaces.

City of Aurora Building Division
Reviewed for Code Compliance
Approved as Noted: William Griffin
Date: Dec 23, 2019
2015 INTERNATIONAL CODES & 2017 NEC

Wall Legend

	DEMO EXISTING. Partitions, door assemblies, electrical devices and/or millwork to be demolished/ removed (typ.). Return all millwork/ fixtures and/or door assemblies, not re-used in this limit of construction, to Building Management. Patch partitions and prepare to receive the scheduled finish treatments. *NOTE: At exterior curtain wall sill partitions (only), where power/ phone/ data devices are designated to be removed/ demolished, all conduit and J-boxes* shall remain. *Provide building standard blank face plates. All demolition of power/ phone/ data devices at interior partitions shall include removal of all associated conduit and J-boxes and patching/ painting of partitions.*
▬	**EXISTING PARTITION** to remain.
┅	**EXISTING PARTIAL HEIGHT PARTITION** (Shown underneath a millwork surface) to remain.
▭ Re: 1/A1.0	**NEW STANDARD INTERIOR PARTITION**. Non-rated assembly. 25 gauge 3-5/8" metals studs at 24" o.c. with 5/8" gypsum board each side floor to finished ceiling.
┅ Re: 9/A2.0	**NEW PARTIAL HEIGHT PARTITION** (Shown underneath a millwork surface). 5/8" gypsum board each side of 20 Gauge, 3⅝" metal studs at 24" o.c. Refer to Millwork Section Detail.

Match existing construction. Field verify existing construction for extent of work and verify match to these partition types.

Symbol Legend

Wall Mounted Fixtures/ Devices

- Duplex electrical receptacle & face plate
- Quadplex electrical receptacle & face plate
- Duplex electrical receptacle & face plate on dedicated circuit
- Combination telephony/ data outlet rough-in (3/4"Ø conduit) w/ double gang J-box and single gang plaster ring with pull string to above finished ceiling.
- Water supply line

Symbols shown shaded and/or dashed indicate devices to be removed/ demolished.
NOTE: At exterior curtain wall sill partitions (only), where power/ phone/ data devices are designated to be removed/ demolished, conduit and j-boxes shall remain. Provide building standard blank face plates. All demolition of power/ phone/ data devices at interior partition shall include removal of all associated conduit and j-boxes and patch/ paint of partitions.

"N" New fixture/ device to be installed at this location.

Refer to Engineering Drawings for complete specifications

RSN: 1426505
Permit #: 19-1741436 LT

Spec Suite 140

Dates of Record

Project Start Date: 10 Sep 2018

Issued On	Issued For
23 Oct 2019	Tenant Review & Approval; and Construction

Sheet Contents: Demolition Plan, Construction Plan, Finish Schedule, Door Schedule & Details

Project #	Proj Mgr	Designed by	Drafted by	Checked by
426009	GBS	JMB	JMB	GBS

A1.0

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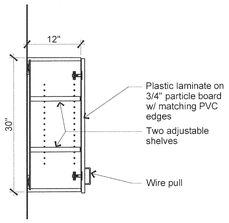
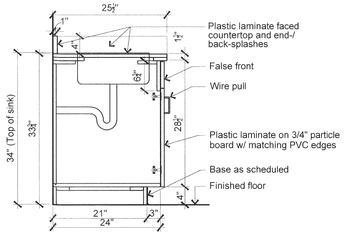
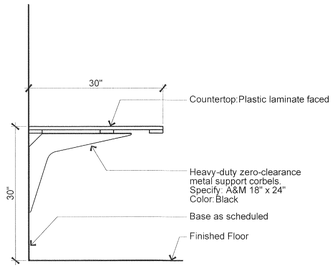


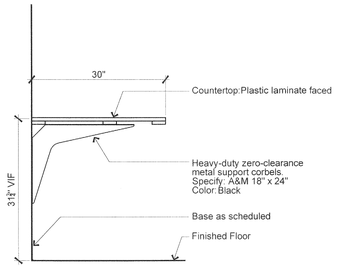
1 Section: Millwork
Wall Cabinet — Scale: 3/4" = 1'-0"



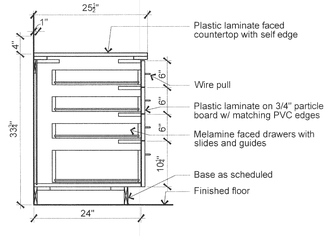
2 Section: Millwork
Sink Cabinet — Scale: 3/4" = 1'-0"



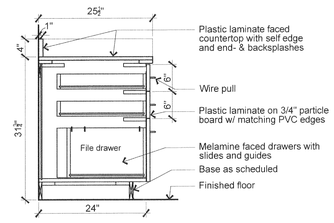
3 Section: Millwork
Work Surface — Scale: 3/4" = 1'-0"



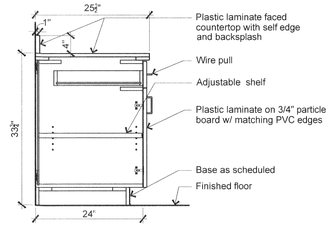
4 Section: Millwork
Work Surface — Scale: 3/4" = 1'-0"



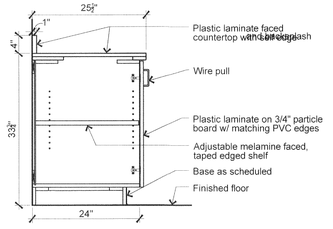
5 Section: Millwork
Base Cabinet — Scale: 3/4" = 1'-0"



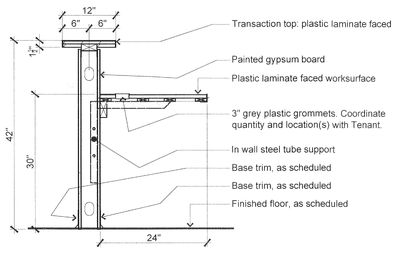
6 Section: Millwork
Box Box File — Scale: 3/4" = 1'-0"



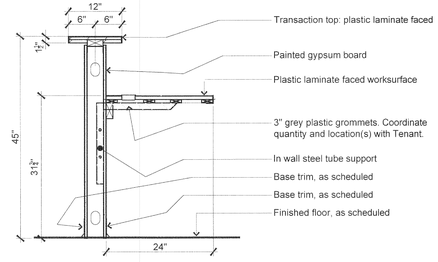
7 Section: Millwork
Base Cabinet — Scale: 3/4" = 1'-0"



8 Section: Millwork
Base Cabinet No Drawers — Scale: 3/4" = 1'-0"



9 Section: Millwork
Transaction Top — Scale: 3/4" = 1'-0"



10 Section: Millwork
Transaction Top — Scale: 3/4" = 1'-0"

Room Schedule

100	Waiting	107	Exam #2
101	Reception	108	Exam #3
102	Storage	109	Restroom
103	Procedure	110	Exam #4
104	MA Station	111	Break Room
105	Exam #1	112	Hallway
106	Office		

Symbol Legend

Ceiling Mounted Fixtures/ Devices

- Building Standard 2×4 LED light fixture
- Pendant fixture
- Recessed downlight fixture

NOTE: all fixtures shown half shaded shall have night light egress function.

- Building Standard Exit Sign. Green letters on white face. Battery backup. Shade indicates face(s) and arrows (if any) indicate direction.

Wall Mounted Fixtures/ Devices

- Building Standard single pole switch Special function switches: "D" = dimable switch and ballast
- Symbols shown shaded and/or dashed indicate devices to be removed/ demolished.
- "E" Existing fixture to remain.

Refer to Engineering Drawings for complete specifications

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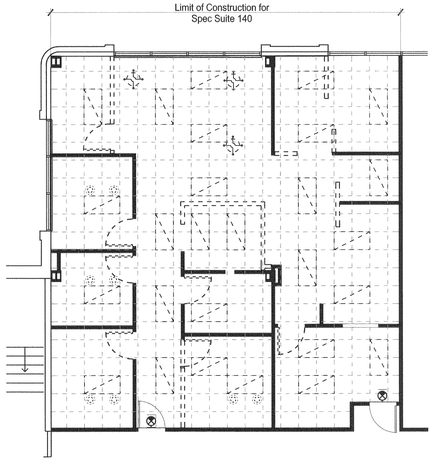
1411 South Potomac
1411 South Potomac Street
Aurora, CO 80012
Suite 140

COLORADO LICENSED ARCHITECT
B-3282
12/12/19
ARCHITECT

1411 South Potomac • Spec Suite 140

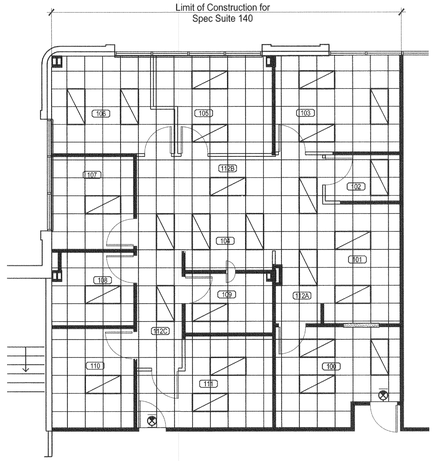
Sheet A2.0 Plan Notes

1. **Refer to General Notes** for additional requirements.
2. **PROVIDE NEW SUSPENDED CEILING SYSTEM** throughout as follows:
   - 2.1. Suspended grid system shall match building standard (Armstrong).
   - 2.2. Ceiling tile shall match building standard (Armstrong)
   - 2.3. Installation of grid system shall be in complete accordance with the manufacturer's specifications utilizing the layout as indicated on the drawings.
   - 2.4. Install all grid members level and true and suspend from the structure above in accordance with ASTM C635, "standard specification per metal suspension system for acoustical tile and lay-in panels-intermediate duty."
   - 2.5. Installation of tiles shall be continuous over walls. Refer to drawings for specific requirements.
   - 2.6. All tiles shall be seated tight, level and true within the grid system.
   - 2.7. The suspended ceiling system shall conform to requirements set forth by U.L.
3. **CEILING HEIGHT**: 8'-6" AFF, VIF (UNO). Refer to construction details for ceiling construction and interface with partitions.
4. **FIXTURES AND DEVICES**: Provide and/or relocate light fixtures, switches, and controls indicated on the drawings.
   - 4.1. Refer to Symbols Legend for fixture type and/or specification.
   - 4.2. Install and support fixtures from the structure in accordance with the code.
   - 4.3. Install all new light fixtures, sprinkler heads, diffusers, speakers, detectors, alarms, etc. in the center of the ceiling board or section and symmetrical throughout rooms and open areas, unless noted otherwise.
   - 4.4. The contractor shall field verify all proposed locations of light fixtures prior to commencing construction and shall notify TPS of any discrepancies and/or conflicts with existing installations.
   - 4.5. Existing fixtures scheduled to remain or be re-used shall be inspected and reworked, if necessary. Fixtures shall be cleaned, including lenses and lamps. Defective ballasts and other components shall be replaced. Match existing conditions.
   - 4.6. All light fixtures, exit signs, and switch devices shown throughout are new (unless noted otherwise).
     'E' indicates existing fixtures/device to remain
     'R' indicates relocated fixture or device
5. **LIGHTING DIMENSIONS:** Unless noted otherwise, all light fixtures and devices are dimensioned to the centerline of the fixture.
6. **EXISTING FIRE SPRINKLER HEADS** mounted in the ceiling may be shown on the drawings, and are intended for informational purposes only. Drawings shall be submitted by the General Contractor for any new work required.
7. **MODIFY EXISTING FIRE SPRINKLER SYSTEM** on a ***DESIGN-BUILD*** basis. Conform to these drawings and documents and as required for obtaining a building permit. Refer to General Notes.



11 Demolition RCP
Suite 140 — Scale: 1/8" = 1'-0"

North



12 RCP
Suite 140 — Scale: 1/8" = 1'-0"

North

City of Aurora Building Division
Reviewed for Code Compliance
Approved as Noted: William Griffin
Date: Dec 23, 2019
2015 INTERNATIONAL CODES & 2017 NEC

RSN: *1426505*
Permit #: *19-1741436 LT*

Spec Suite 140

Dates of Record
Project Start Date: 10 Sep 2018

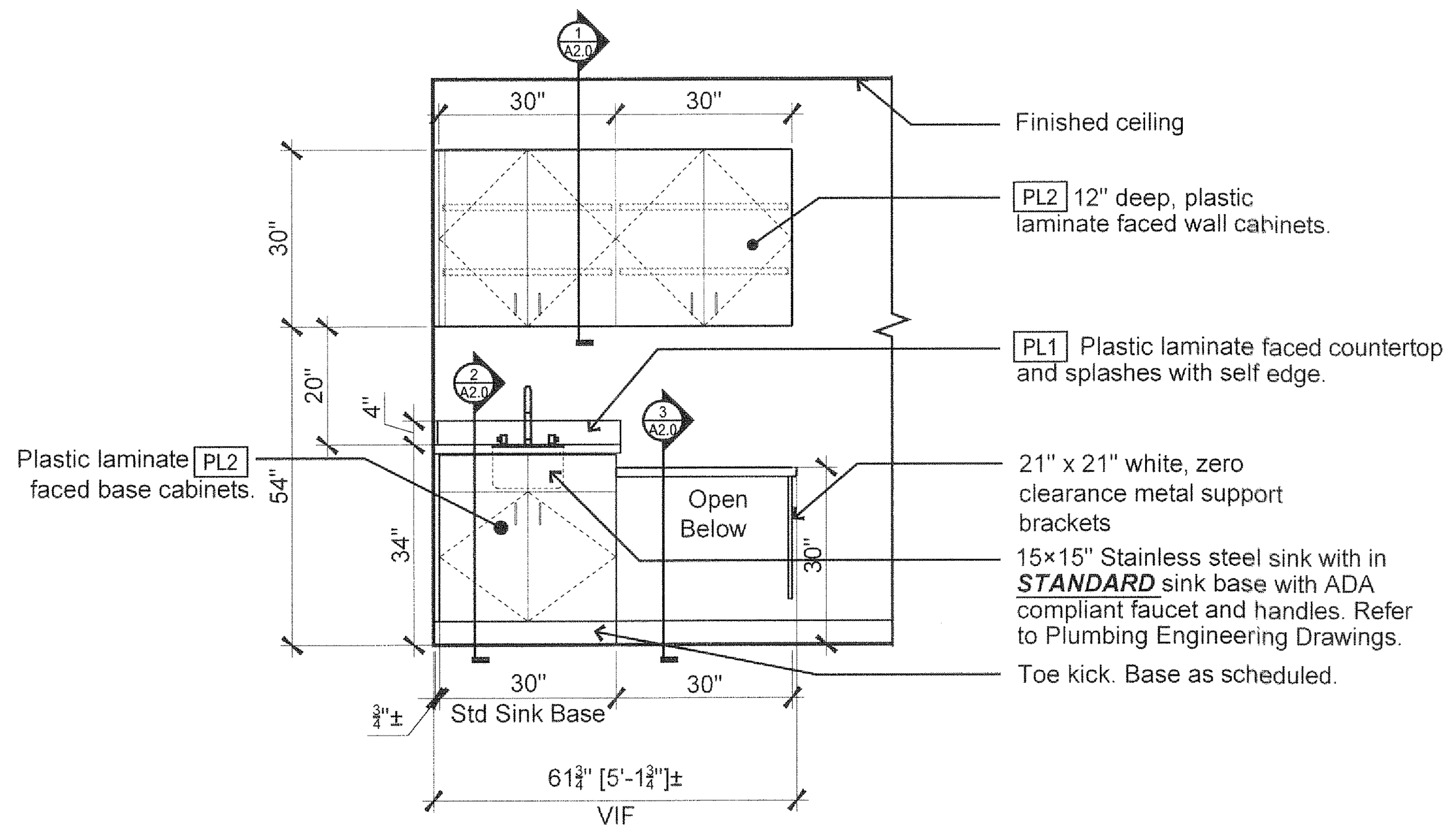
Issued On	Issued For
23 Oct 2019	Tenant Review & Approval; and Construction

Sheet Contents	Demolition RCP, RCP, Millwork Sections

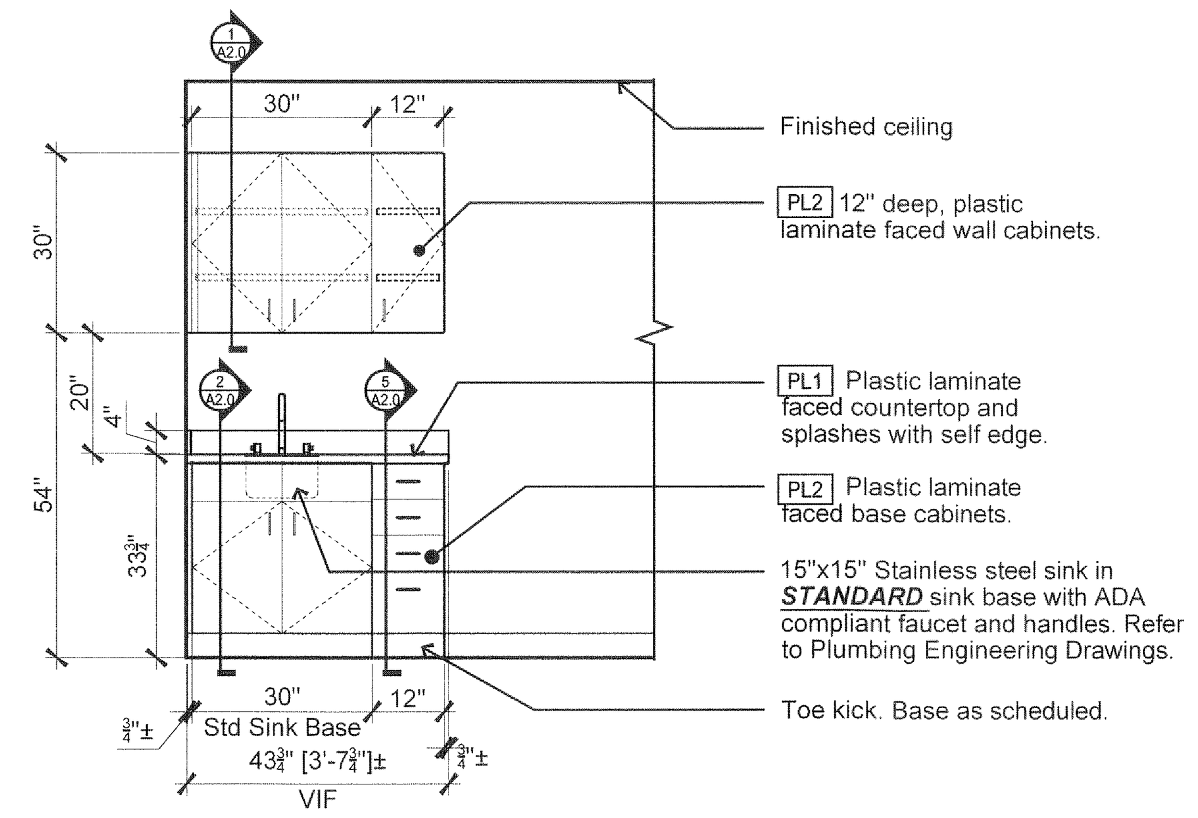
Project #	Proj Mgr	Designed by	Drafted by	Checked by
426009	GBS	JMB	JMB	GBS

A2.0

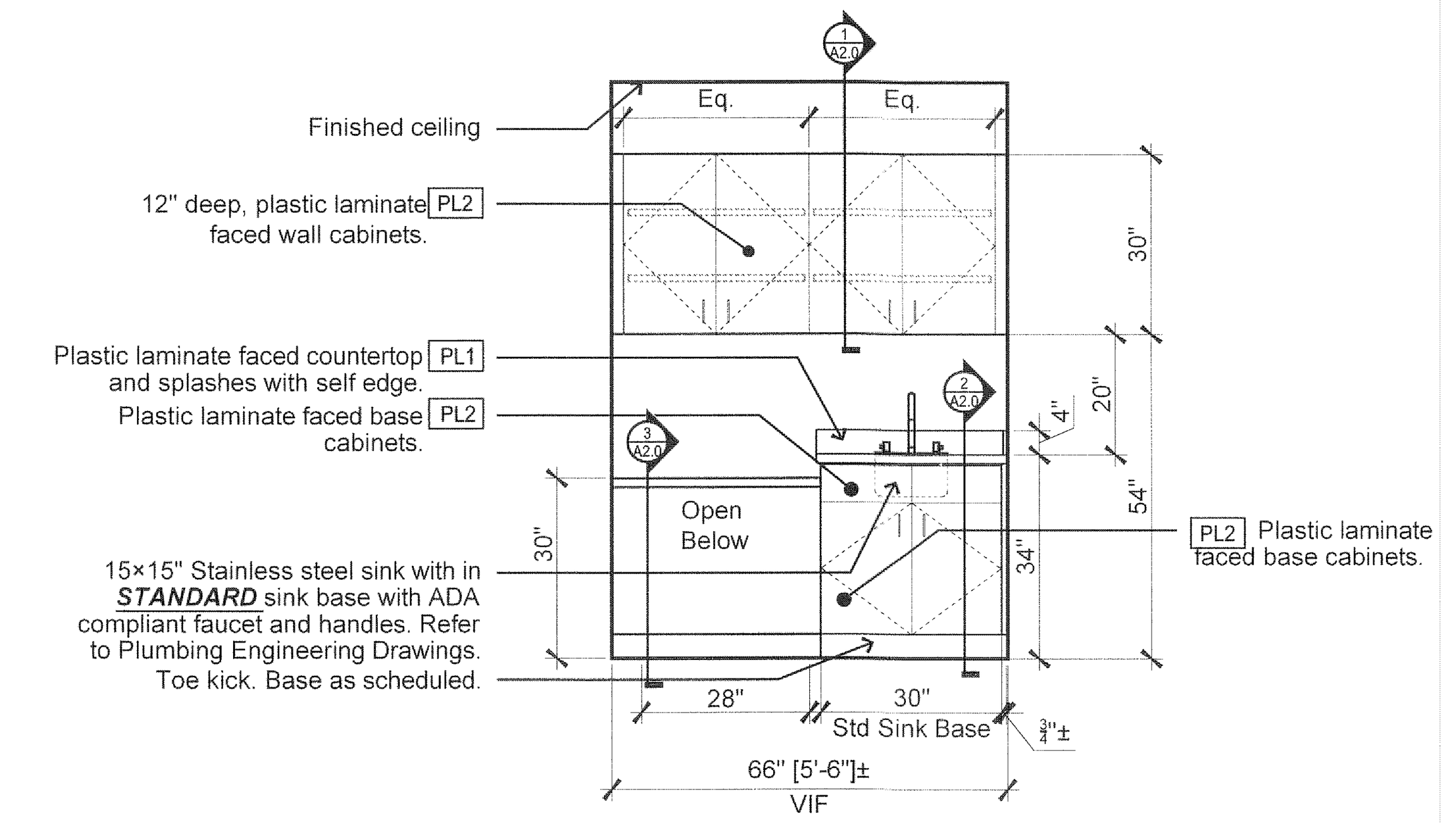
project start date: 10 Sep 2018
dwg create date: 12/2/2019 4:23:19 PM
dwg save date: 12/11/2019 5:39:20 PM
plt create date: 12/12/2019 10:27:24 AM
by jill to P:\426_1411 South Potomac\426009_Spec Suite #140\drawings\construction documents\426009c.dwg
by Jill Berry layout tab: A3.0



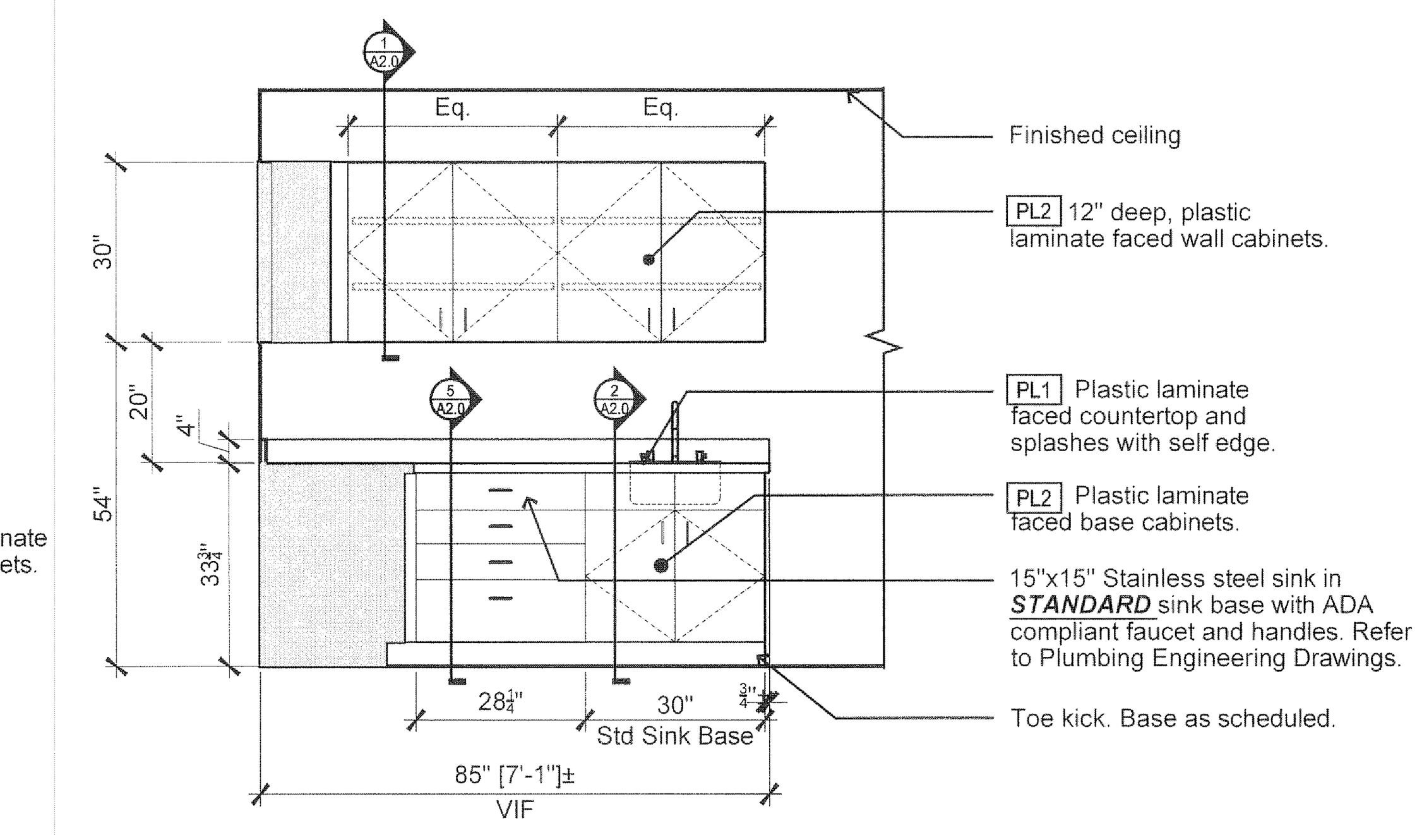
1 Elevation: Millwork
At Exam Rooms 107 & 110 Scale: 3/8" = 1'-0"



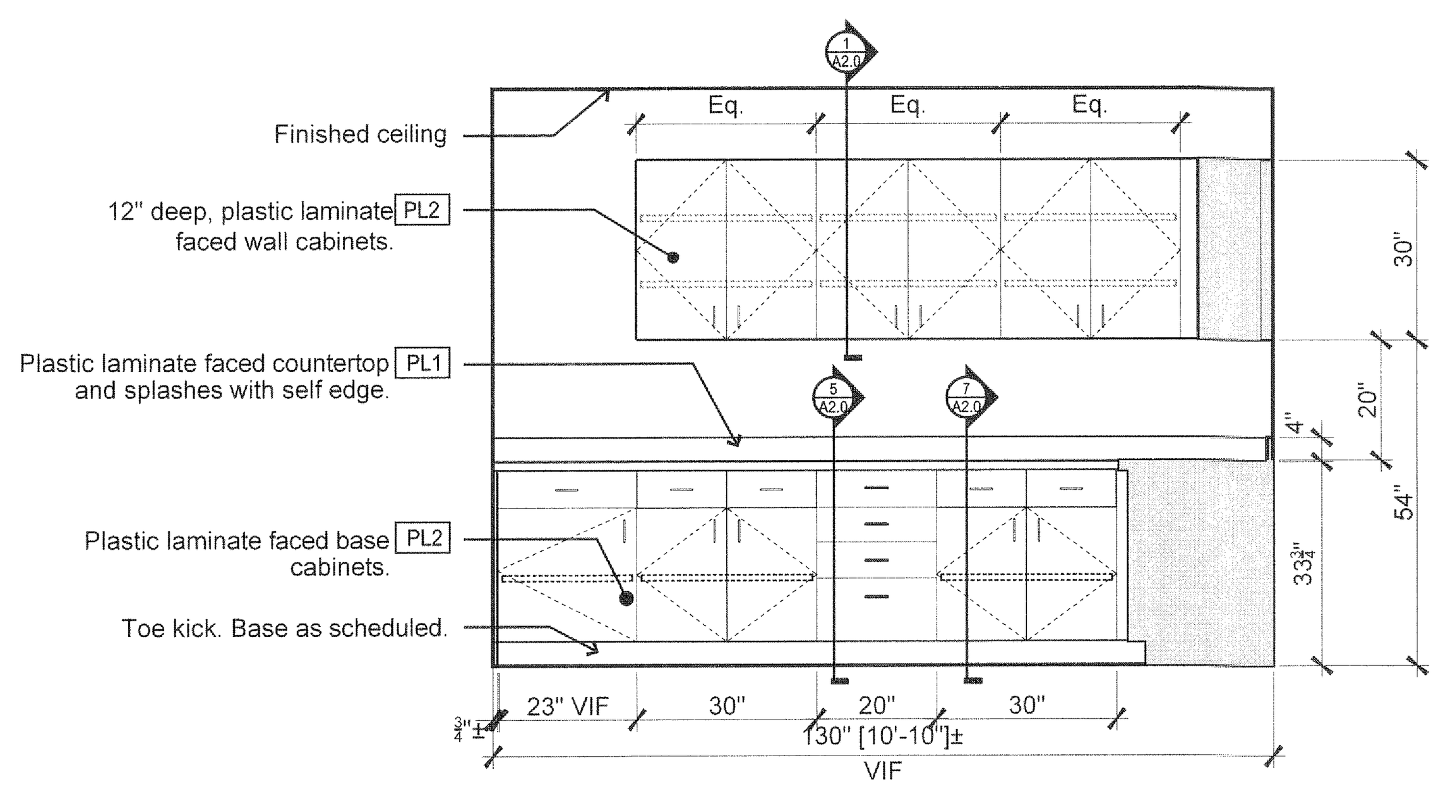
2 Elevation: Millwork
At Exam Rooms 108 Scale: 3/8" = 1'-0"



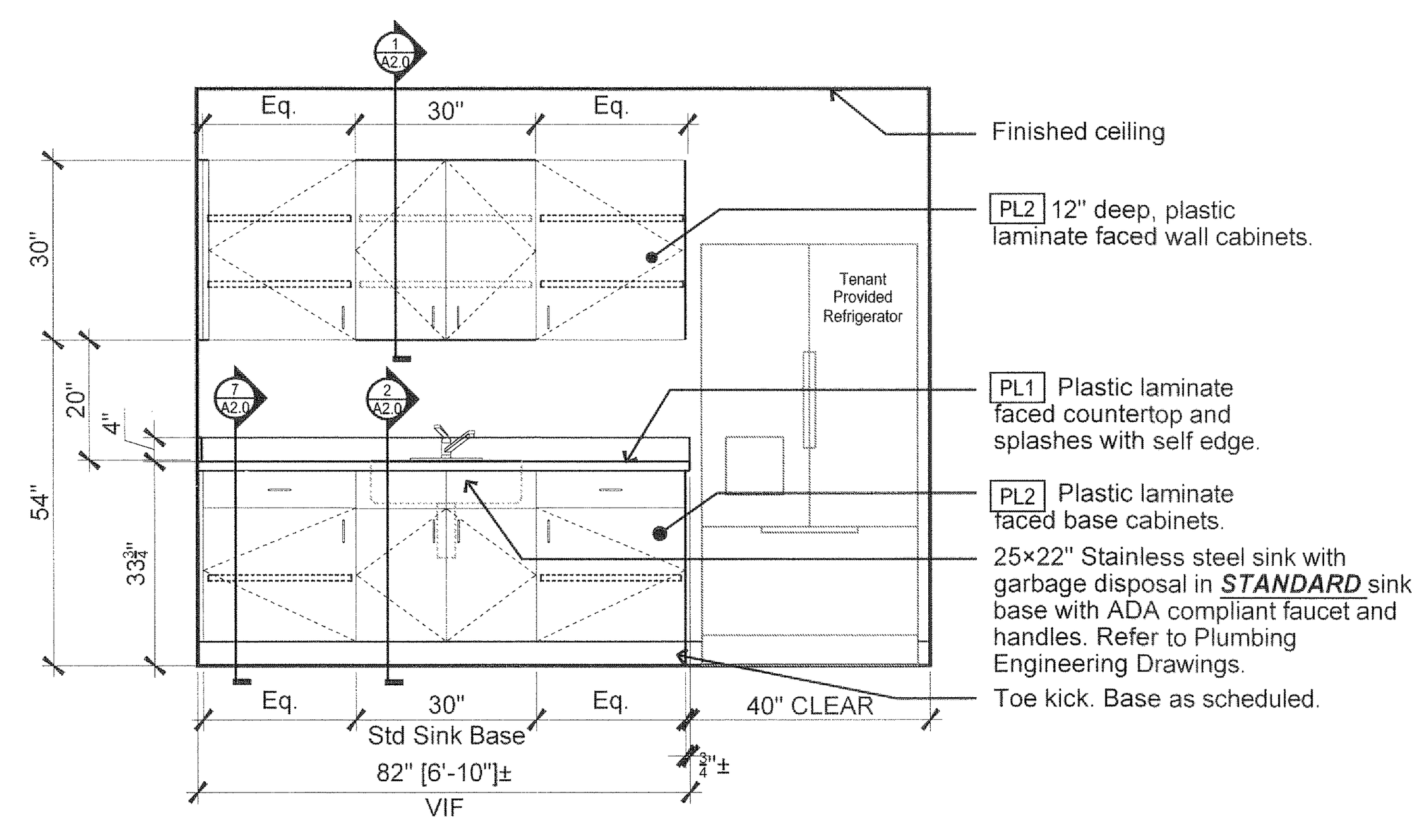
3 Elevation: Millwork
At Exam Room 105 Scale: 3/8" = 1'-0"



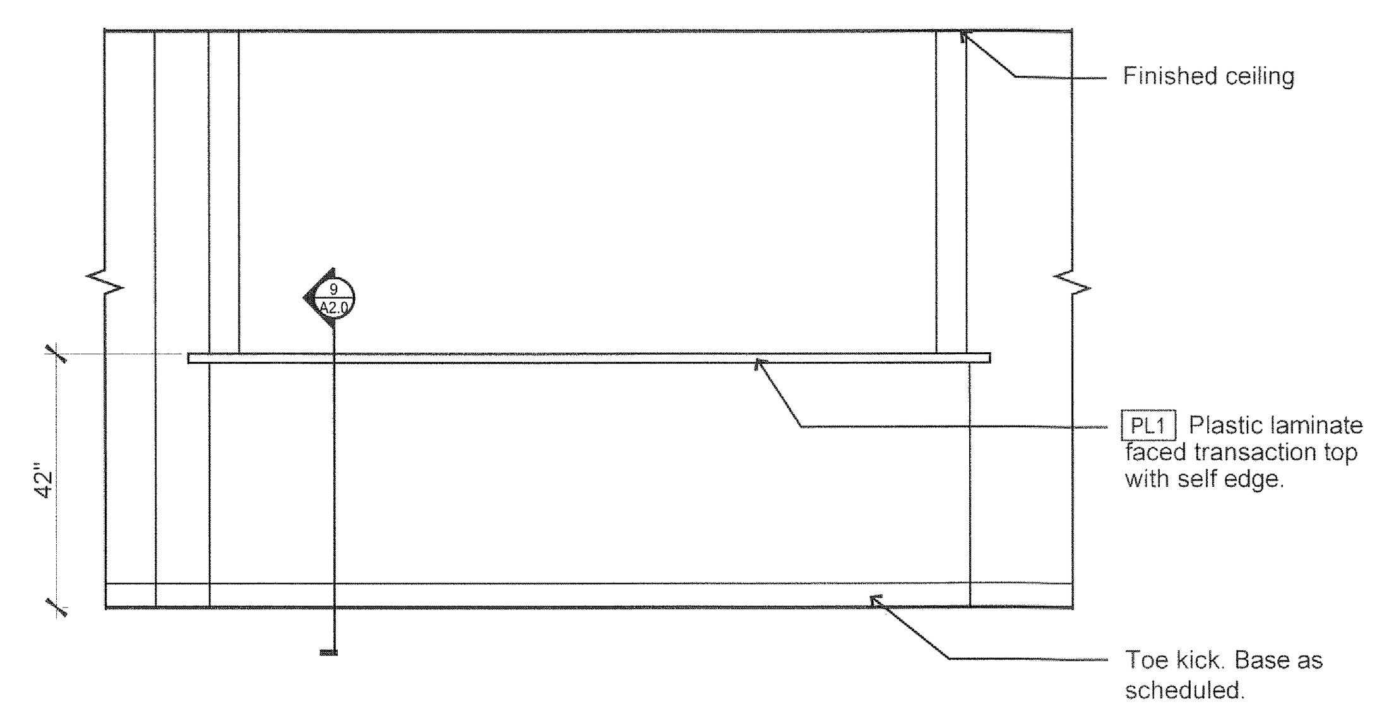
4 Elevation: Millwork
At Procedure Room 103 Scale: 3/8" = 1'-0"



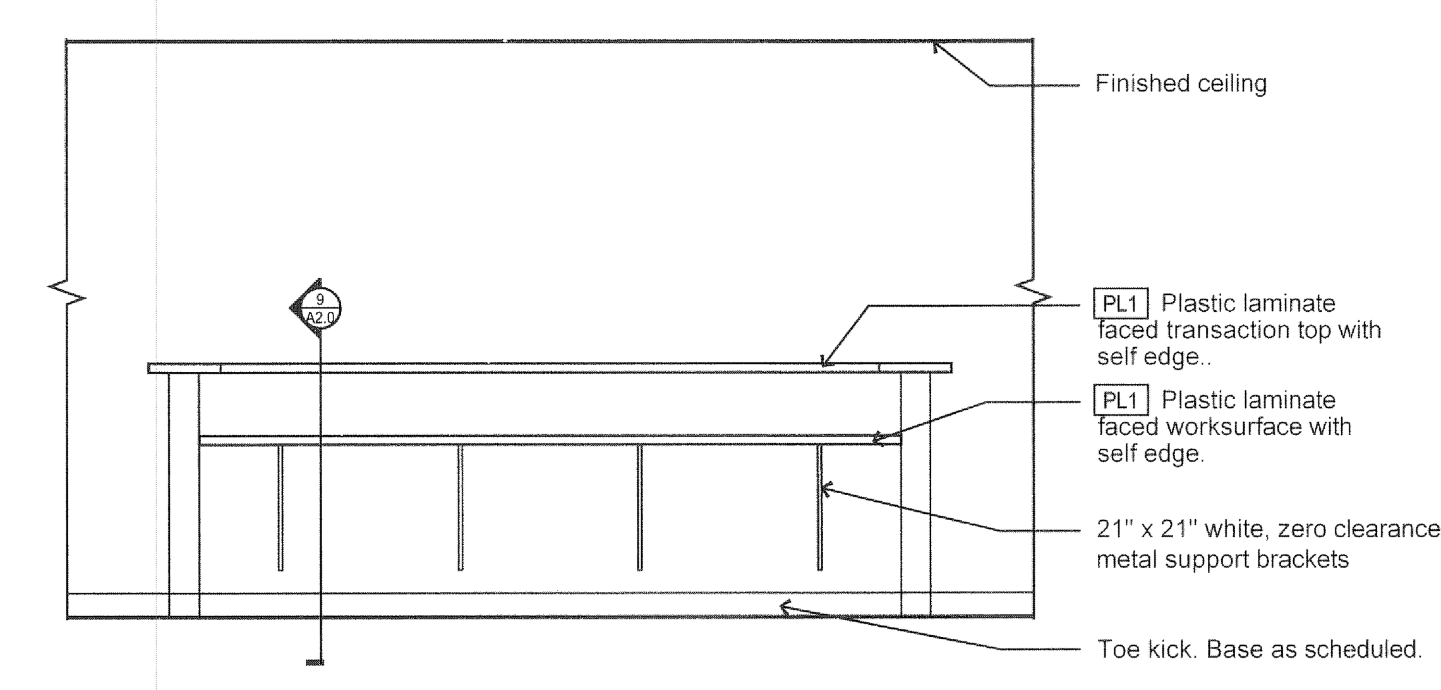
5 Elevation: Millwork
At Procedure Room 103 Scale: 3/8" = 1'-0"



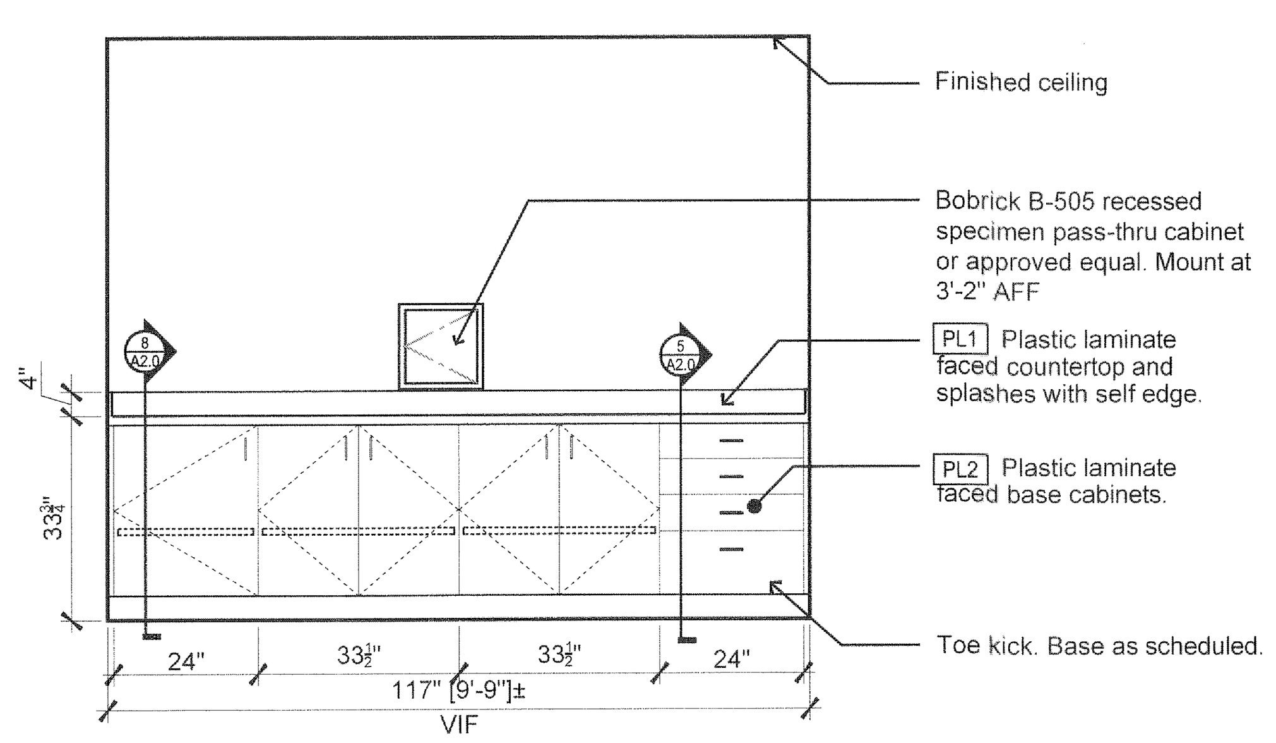
6 Elevation: Millwork
At Break Room 111 Scale: 3/8" = 1'-0"



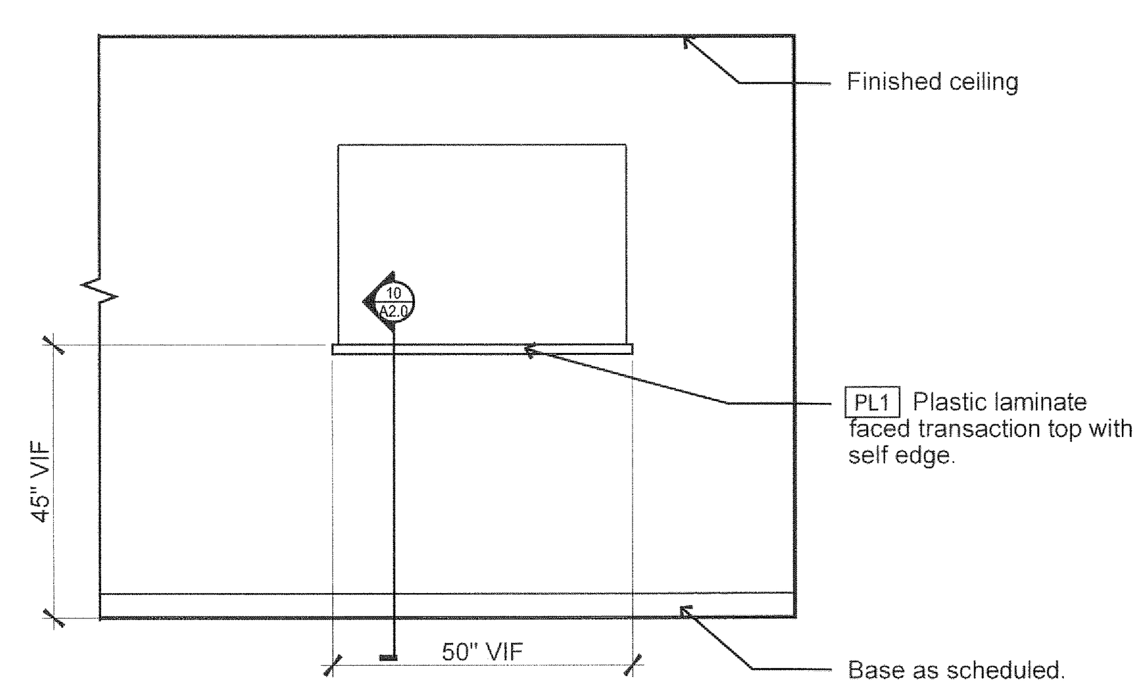
7 Elevation: Millwork
At MA Station 104 Scale: 3/8" = 1'-0"



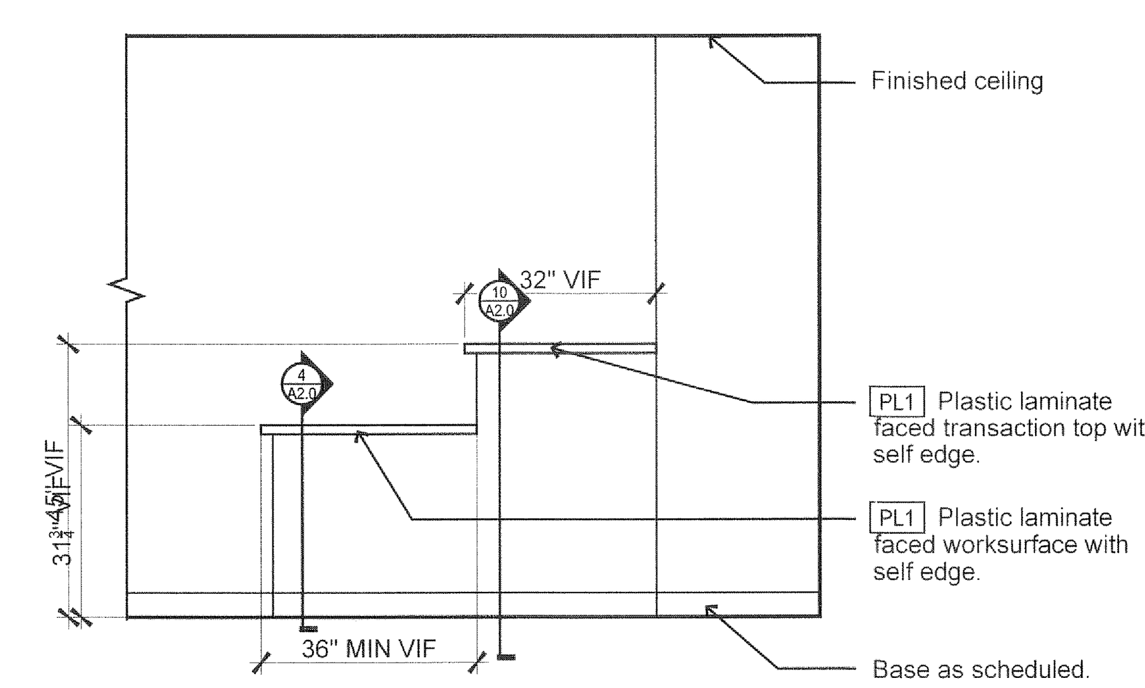
8 Elevation: Millwork
At MA Station 104 Scale: 3/8" = 1'-0"



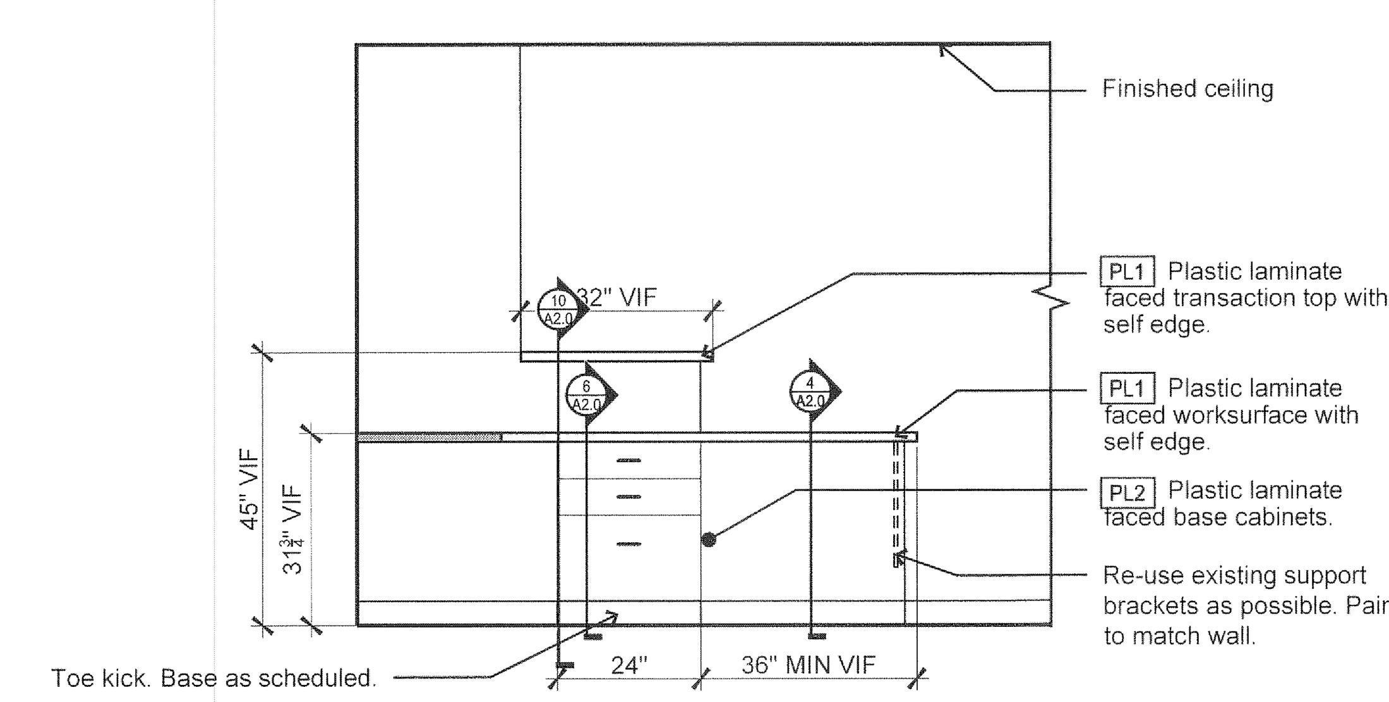
9 Elevation: Millwork
At MA Station 104 Scale: 3/8" = 1'-0"



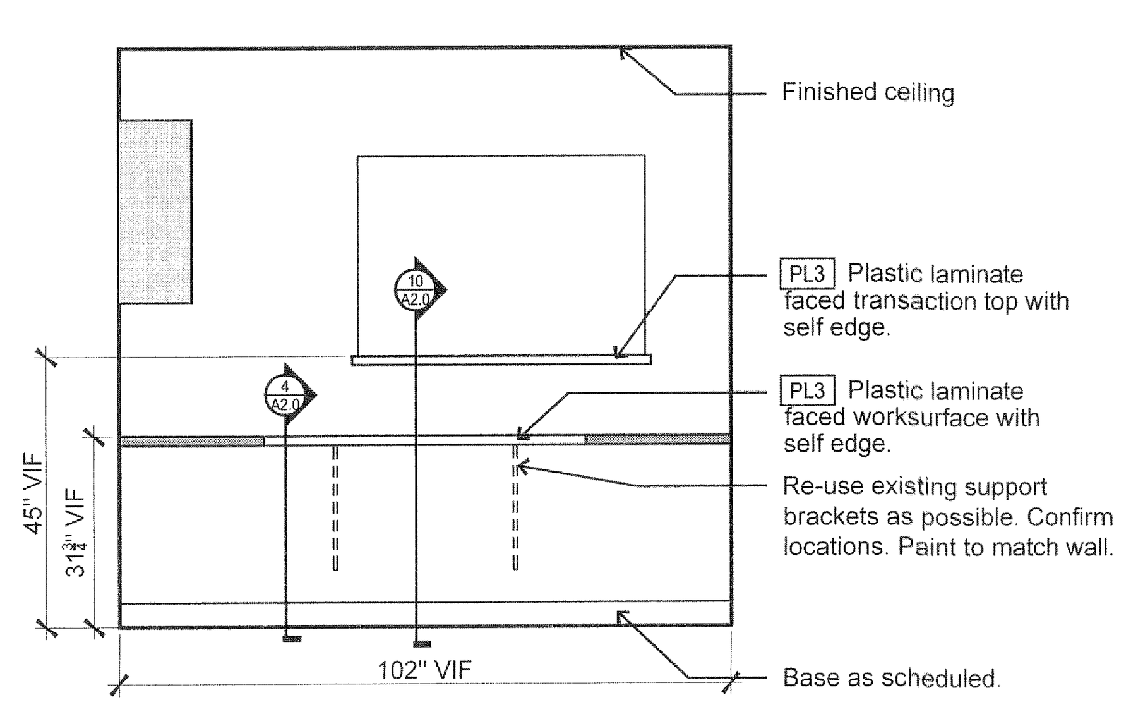
10 Elevation: Millwork
At Reception 101 Scale: 3/8" = 1'-0"



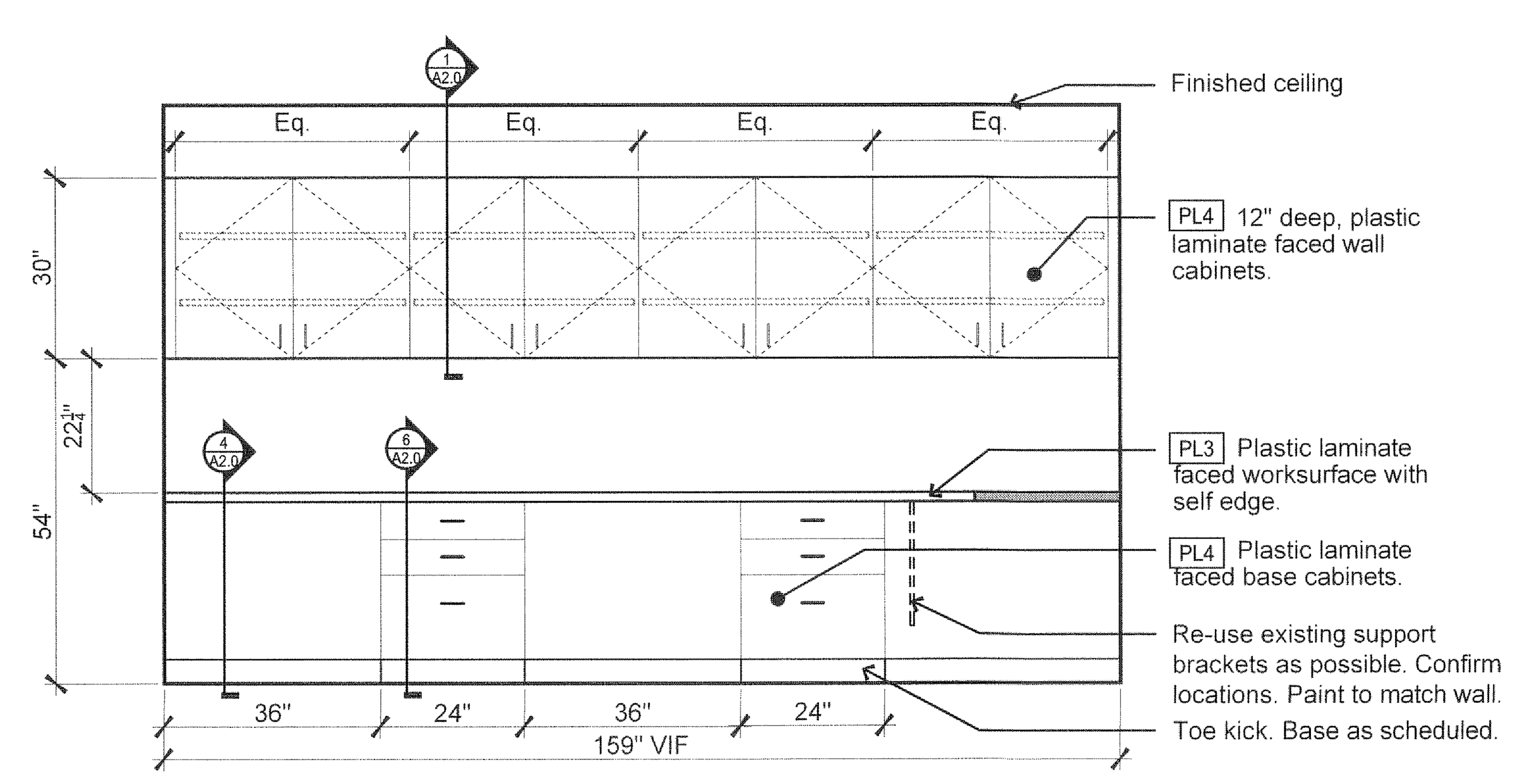
11 Elevation: Millwork
At Reception 101 Scale: 3/8" = 1'-0"



12 Elevation: Millwork
At Reception 101 Scale: 3/8" = 1'-0"



13 Elevation: Millwork
At Reception 101 Scale: 3/8" = 1'-0"



14 Elevation: Millwork
At Reception 101 Scale: 3/8" = 1'-0"

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1411 South Potomac
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Aurora, CO 80012
Suite 140

COLORADO LICENSED
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ARCHITECT

Spec Suite 140

1411 South Potomac • Spec Suite 140

Dates of Record
Project Start Date: 10 Sep 2018

Issued On	Issued For
23 Oct 2019	Tenant Review & Approval; and Construction

RSN: 1426505
Permit #: 19-1741436 LT

Sheet Contents: Millwork Elevations

Project #	Proj Mgr	Designed by	Drafted by	Checked by
426009	GBS	JMB	JMB	GBS

A3.0

MECHANICAL GENERAL NOTES

GENERAL

SCOPE
THE INTENT OF THE SPECIFICATION AND THE DRAWINGS IS TO PROVIDE A COMPLETE AND FULLY OPERATIONAL MECHANICAL SYSTEM. THE MECHANICAL CONTRACTOR SHALL FURNISH AND INSTALL ALL LABOR, MATERIAL AND EQUIPMENT NECESSARY TO COMPLETE THE MECHANICAL WORK.

SITE EXAMINATION
THE MECHANICAL CONTRACTOR SHALL THOROUGHLY EXAMINE ALL AREAS WHERE EQUIPMENT, DUCTWORK, AND PIPING WILL BE INSTALLED AND WILL REPORT ANY CONDITION THAT, IN HIS OPINION, PREVENTS THE PROPER INSTALLATION OF THE MECHANICAL WORK.

STANDARDS
EQUIPMENT AND MATERIALS SHALL CONFORM WITH APPROPRIATE PROVISIONS OF ARI, ASME, ASTM, UL, NEMA, ANSI, SMACNA, ASHRAE, AND NFPA, AS APPLICABLE TO EACH INDIVIDUAL UNIT OR ASSEMBLY.

CODES
ALL WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH ALL APPLICABLE STATE AND LOCAL CODES AND ORDINANCES. IN CASE OF CONFLICT BETWEEN THE DRAWINGS AND SPECIFICATION AND THE CODES AND THE ORDINANCES, THE HIGHEST STANDARDS SHALL APPLY. THE MECHANICAL CONTRACTOR SHALL SATISFY CODE REQUIREMENTS AS A MINIMUM STANDARD WITHOUT ANY EXTRA COST TO OWNER/TENANT.

PERMITS AND FEES
THE MECHANICAL CONTRACTOR SHALL PROCURE AND PAY FOR ALL PERMITS, FEES AND INSPECTORS NECESSARY TO COMPLETE THE MECHANICAL WORK.

WARRANTY
THE MECHANICAL CONTRACTOR SHALL UNCONDITIONALLY WARRANT ALL WORK TO BE FREE OF DEFECTS IN MATERIAL AND WORKMANSHIP FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF FINAL ACCEPTANCE BY OWNER/TENANT AND WILL REPAIR OR REPLACE ANY DEFECTIVE WORK PROMPTLY AND WITHOUT CHARGE AND RESTORE ANY OTHER EXISTING WORK DAMAGED IN THE COURSE OF REPAIRING DEFECTIVE MATERIAL AND WORKMANSHIP.

FILTERS
PROVIDE TWO (2) SETS OF PLEATED DISPOSABLE FILTERS. USE ONE SET UNTIL COMPLETION OF CONSTRUCTION. INSTALL ONE SET AT COMPLETION OF CONSTRUCTION. FILTERS TO BE FARR, OR SIMILAR.

DUCTWORK & ACCESSORIES

SHEETMETAL DUCTWORK
ALL DUCTWORK TO BE RIGID SHEETMETAL CONSTRUCTED FROM GALVANIZED SHEET STEEL IN ACCORDANCE WITH SMACNA 1" PRESSURE CLASS DUCT CONSTRUCTION STANDARDS ALL EXPOSED DUCTWORK TO BE ROUND, SPIRAL, OR RECTANGULAR LOCK-SEAM TYPE, AS SHOWN ON HVAC PLAN. ASSEMBLE AND INSTALL DUCTWORK IN ACCORDANCE WITH RECOGNIZED INDUSTRY PRACTICE FOR ACHIEVING AIR TIGHT (5% LEAKAGE) AND NOISELESS (NO OBJECTIONABLE NOISE) SYSTEMS, CAPABLE OF PERFORMING EACH INDICATED SERVICE. FURNISH ALL REQUIRED DAMPERS, TRANSITIONS, CONNECTIONS TO AIR TERMINALS, AND OTHER ACCESSORIES NECESSARY FOR A COMPLETE OPERATING SYSTEM. NO VARIATION OF DUCT CONFIGURATION OR SIZES WILL BE PERMITTED EXCEPT BY PERMISSION FROM THE ENGINEER.

DUCT SEALANT
SEAL ALL CONCEALED LONGITUDINAL AND TRANSVERSE JOINTS WITH A NON-HARDENING, NON-MIGRATING MASTIC OR LIQUID ELASTIC SEALANT OF A TYPE RECOMMENDED BY THE MANUFACTURER FOR SEALING JOINTS AND SEAMS IN SHEET METAL DUCTWORK. COVER ALL FIELD JOINTS, JOINTS AROUND SPIN-IN FITTINGS AND FASTENING SCREWS WITH MASTIC. DO NOT SEAL EXPOSED DUCT.

SUPPORTS
PROVIDE HOT-DIPPED GALVANIZED STEEL FASTENERS, ANCHORS, RODS, STRAPS, TRIM, AND ANGLES FOR SUPPORT OF DUCTWORK.

DAMPERS
PROVIDE OPPOSED-BLADE, MULTI-LEAF VOLUME CONTROL DAMPERS WHERE INDICATED ON DRAWINGS AND AT POINTS ON LOW PRESSURE SUPPLY, RETURN AND EXHAUST DUCTS WHERE BRANCHES ARE TAKEN FROM LARGER DUCTS. PROVIDE UL LISTED FIRE DAMPERS WHERE REQUIRED AND IN ACCORDANCE WITH NFPA AND LOCAL CODES. PROVIDE CONVENIENTLY LOCATED ACCESS DOORS OF AMPLE SIZE AND QUANTITY FOR SERVICING THE DAMPERS.

GRILLES, REGISTERS, & DIFFUSERS
GRILLES, REGISTERS AND DIFFUSERS SHALL BE MANUFACTURED BY PRICE. DIFFUSERS SHALL BE INSTALLED AS INDICATED ON THE DRAWINGS AND SCHEDULES. THE MECHANICAL CONTRACTOR SHALL PROVIDE ALL MISCELLANEOUS ITEMS NECESSARY FOR A COMPLETE AND PROPER INSTALLATION IN THE TYPE OF CEILING AND WALLS USED IN THIS PROJECT.

THERMAL INSULATION
PROVIDE EXTERNAL THERMAL INSULATION WITH AN INTEGRAL VAPOR BARRIER FACING OF SUFFICIENT THICKNESS TO PROVIDE R6 WHEN LOCATED IN UNCONDITIONED SPACE & R12 WHEN LOCATED OUTSIDE THE BUILDING. PROVIDE INSULATION ON EXHAUST AND OUTSIDE AIR DUCTS. DO NOT INSULATE EXPOSED DUCTWORK AND PORTIONS OF DUCTWORK THAT ARE INTERNALLY LINED. THERMAL INSULATION TO COMPLY WITH AN NFPA FLAME SPREAD OF 25 OR LESS, AND SMOKE DEVELOPED NO GREATER THAN 50.

CONTROLS AND OPERATIONS

CONTROL WIRING
THE MECHANICAL CONTRACTOR SHALL PROVIDE ALL CONTROL WIRING NECESSARY FOR THE COMPLETE AND PROPER OPERATING TEMPERATURE CONTROL SYSTEM.

CONTROLS
MOUNT ALL CONTROLS @ 48" ABOVE FINISH FLOOR. UNLESS OTHERWISE NOTED.

TESTING, ADJUSTING, AND BALANCING

TESTING, ADJUSTING, BALANCING
MECHANICAL CONTRACTOR OR AN INDEPENDENT NEBB OR AABC CERTIFIED AIR BALANCE CONTRACTOR SHALL ACCURATELY BALANCE THE AIR SYSTEM TO PROVIDE AIR QUANTITIES INDICATED ON THE DRAWINGS AND IN THE SPECIFICATION. OPERATE AUTOMATIC CONTROLS SYSTEM AND VERIFY SET POINTS DURING BALANCING. SUBMIT TWO (2) COPIES OF THE BALANCE REPORT TO THE ENGINEER FOR APPROVAL. INCLUDE A COPY OF THE BALANCE REPORT AS APPROVED BY THE ENGINEER WITH APPLICATION FOR FINAL CONTRACT PAYMENT.

LEGEND

- DIFFUSER, SEE SCHEDULE
- GRILLE, SEE SCHEDULE
- NEW RIGID RECTANGULAR DUCTWORK
- RECTANGULAR DUCT W/ ACOUSTICAL DUCT LINER
- EXISTING RIGID RECTANGULAR DUCTWORK
- NEW RIGID ROUND DUCTWORK
- EXISTING RIGID ROUND DUCTWORK
- EXPOSED SPIRAL DUCTWORK
- DUCTWORK TO BE REMOVED
- FLEX, DUCTWORK.
- (T) THERMOSTAT TO MATCH EQUIPMENT
- (200) CFM, BALANCE WITHIN 10%
- (M 1) EQUIPMENT DESIGNATION
- SPIN-IN WITH DAMPER
- RETURN AIR ARROW
- SUPPLY AIR ARROW
- CONNECT TO EXISTING

Room Schedule

100	Waiting	107	Exam #2
101	Reception	108	Exam #3
102	Storage	109	Restroom
103	Procedure	110	Exam #4
104	MA Station	111	Break Room
105	Exam #1	112	Hallway
106	Office		

OUTSIDE AIR COMPLIANCE

DESCRIPTION	ROOM NUMBER	AREA SF	PEOPLE/1000SF	POPULATION	CFM/PERSON	AREA AIRFLOW RATE	Ez	REQUIRED OUTSIDE AIR CFM	SUPPLY AIR	% OUTSIDE AIR	OUTSIDE AIR PROVIDED	EXHAUST AIR PROVIDED
WAITING	100	130	30	4	5	0.06	0.8	34	250	25%	63	0
RECEPTION	101	165	5	1	5	0.06	0.8	18	150	25%	38	0
PROCEDURE	103	140	5	1	5.0	0.06	0.8	15	425	25%	106	0
MA STATION	104	170	5	1	5.0	0.06	0.8	18	250	25%	63	0
EXAM # 1	105	120	5	1	5.0	0.06	0.8	13	425	25%	106	0
OFFICE	106	125	5	1	5.0	0.06	0.8	13	315	25%	79	0
EXAM # 2	107	90	5	0	5.0	0.06	0.8	10	250	25%	63	0
EXAM # 3	108	70	5	0	5.0	0.06	0.8	7	125	25%	31	0
RESTROOM	109	60	0	0	0.0	0	0.8	0	80	25%	20	75
EXAM # 4	110	95	5	0	5.0	0.06	0.8	10	125	25%	31	0
BREAK ROOM	111	125	5	1	5.0	0.06	0.8	13	200	25%	50	0
HALLWAY	112	115	0	0	5.0	0.06	0.8	9	150	25%	38	0
TOTALS		1405		9				160	2745		686	75

FAN TERMINAL UNIT SCHEDULE

MARK	MFR. & MODEL NUMBER	AIR INLET SIZE	PRIMARY AIR		HEATING			FAN MOTOR			MCA	REMARKS
			MAX. CFM	MIN. CFM	VOLTAGE	KW	HEATING CFM	VOLTAGE	HP	FLA		
FVAV-1-6	VFPE11C2	8"Ø	815	200	277/1	7.5	800	277/1	1/3HP	1.9	36.4	1

NOTES:
1. EXISTING TO REMAIN.

DIFFUSER SCHEDULE

MARK	SERVICE	FACE SIZE	NECK SIZE	FIRE DAMPER	VOLUME DAMPER	MFR	MODEL	REMARKS
A	SUPPLY	-	-	-	-	-	-	EXISTING TO BE RELOCATED
B	SUPPLY	24" x 24"	10"Ø	NO	NO	PRICE	PDF	NEW
R	RETURN	-	-	-	-	-	-	EXISTING TO BE RELOCATED
R1	RETURN	24" x 12"	22" x 10"	NO	NO	PRICE	PFRF	NEW. PROVIDE RETURN AIR CANOPY.

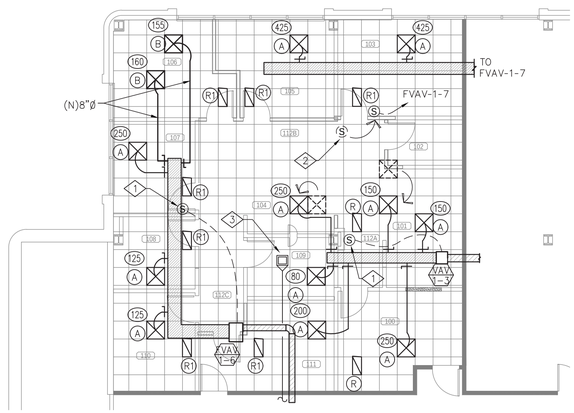
VAV TERMINAL SCHEDULE

MARK	MANUFACTURER	MODEL	AIR INLET SIZE	MAX. PRIMARY AIR CFM COOLING	MIN. PRIMARY AIR CFM (% OF MAX. SETTING)	REMARKS
VAV-1-3	TRANE	VCCE17	10"Ø	1080	25%	1

NOTES:
1. EXISTING TO REMAIN.

DETAIL NOTES:
1. (E) TEMPERATURE SENSOR TO REMAIN.
2. (E) TEMPERATURE SENSOR TO BE RELOCATED.
3. (E) EXHAUST FAN TO REMAIN.

ALL DUCTWORK & GRILLES AND DIFFUSERS ARE EXISTING TO BE RELOCATED TO (N) CEILING GRID. SALVAGE ALL GRILLES & DIFFUSERS PRIOR TO DEMOLITION. (N) DUCTWORK & GRILLES AND DIFFUSERS WILL BE NOTED AS SUCH.



1 M1.0 MECHANICAL PLAN
SCALE: 1/8" = 1'-0"

Heating system shall be capable of maintaining 68 degrees F a 3'0" above the floor.
2015 IMC 309, IRC 303.9 and IBC 1204.1

Provide proof of a flame spread less than 26 and a smoke development less than 50 for any material used in a plenum.
2015 IMC 602.2.1

City of Aurora Building Division
Reviewed for Code Compliance
Approved as Noted: William Griffin
Date: Dec 23, 2019
2015 INTERNATIONAL CODES & 2017 NEC

RSN: 1426505
Permit #: 19-1741436 LT

BRIAN SEYFERTH & ASSOCIATES, INC.
PROFESSIONAL ENGINEER

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Suite 140

COLORADO REGISTERED BRIAN SEYFERTH 23978 PROFESSIONAL ENGINEER

Digitally signed by Brian Seyferth
Date: 2019.12.17 10:06:19 -07'00'

Spec Suite 140

Dates of Record
Project Start Date: ##########

Issued On	Issued For
17 DEC 2019	Tenant's Review & Approval; and Construction

Sheet Contents	MECHANICAL PLAN AND NOTES
Project Team	LC/BS
Project Number	19495
Sheet Mark	M1.0

PLUMBING GENERAL NOTES

GENERAL

SCOPE
THE INTENT OF THE SPECIFICATION AND THE DRAWINGS IS TO PROVIDE A COMPLETE AND FULLY OPERATIONAL PLUMBING SYSTEM. THE PLUMBING CONTRACTOR SHALL FURNISH AND INSTALL ALL LABOR, MATERIAL AND EQUIPMENT NECESSARY TO COMPLETE THE PLUMBING WORK.

SITE EXAMINATION
THE PLUMBING CONTRACTOR SHALL THOROUGHLY EXAMINE ALL AREAS WHERE FIXTURES, EQUIPMENT, AND PIPING WILL BE INSTALLED AND WILL REPORT ANY CONDITION THAT, IN HIS OPINION, PREVENTS THE PROPER INSTALLATION OF THE PLUMBING WORK.

STANDARDS
EQUIPMENT AND MATERIALS SHALL CONFORM WITH APPROPRIATE PROVISIONS OF ASME, ASTM, UL, NEMA, ANSI, ASHRAE, NFPA, AS APPLICABLE TO EACH INDIVIDUAL UNIT OR ASSEMBLY.

CODES
ALL WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH ALL APPLICABLE STATE AND LOCAL CODES AND ORDINANCES. IN CASE OF CONFLICT BETWEEN THE DRAWINGS/SPECIFICATIONS AND THE CODES AND ORDINANCES, THE HIGHEST STANDARD SHALL APPLY. THE PLUMBING CONTRACTOR SHALL SATISFY CODE REQUIREMENTS AS A MINIMUM STANDARD WITHOUT ANY EXTRA COST.

PERMITS AND FEES
THE PLUMBING CONTRACTOR SHALL PROCURE AND PAY FOR ALL PERMITS, FEES AND INSPECTIONS NECESSARY TO COMPLETE THE PLUMBING WORK.

WARRANTY
THE PLUMBING CONTRACTOR SHALL UNCONDITIONALLY WARRANT ALL WORK TO BE FREE OF DEFECTS IN MATERIAL AND WORKMANSHIP FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF FINAL ACCEPTANCE BY OWNER AND WILL REPAIR OR REPLACE ANY DEFECTIVE WORK PROMPTLY AND WITHOUT CHARGE AND RESTORE ANY OTHER EXISTING WORK DAMAGED IN THE COURSE OF REPAIRING DEFECTIVE MATERIALS AND WORKMANSHIP.

PIPING

SOIL, WASTE AND VENT PIPING
SOIL, WASTE AND VENT PIPING 10" AND SMALLER SHALL BE SERVICE WEIGHT, HUBLESS, CAST IRON PIPE AND FITTINGS CONFORMING WITH THE REQUIREMENTS OF CISPI STD 301, ASTM A888 OR ASTM A74, WITH NEOPRENE GASKET AND STAINLESS STEEL SHIELD AND CLAMP. PROVIDE HUB-TYPE PIPE AND FITTINGS BELOW GRADE WHERE REQUIRED BY LOCAL CODES. PIPE AND FITTINGS SHALL BE MARKED WITH THE CISPI TRADEMARK. HORIZONTAL RUNS SHALL DRAIN AT A GRADE OF 1/4 INCH PER FOOT WHERE POSSIBLE BUT IN NO CASE LESS THAN 1/8" PER FOOT. COORDINATE WITH LOCAL AUTHORITIES FOR DRAINAGE REQUIREMENTS FOR EQUIPMENT DESIGNATED WITH INDIRECT WASTE TO FLOOR DRAINS. PROVIDE PIPED DRAIN TO SANITARY IF REQUIRED BY LOCAL JURISDICTION.

DOMESTIC WATER PIPING
DOMESTIC WATER PIPING 2" AND SMALLER SHALL BE COPPER TUBE WITH WROUGHT COPPER SWEAT FITTINGS JOINED WITH LEAD FREE SOLDER. PROVIDE TYPE "L" COPPER TUBE ABOVE GRADE AND TYPE "K" BELOW GRADE.

HANGERS & SUPPORTS
THE PLUMBING CONTRACTOR SHALL FURNISH ALL PIPE SUPPORTS REQUIRED FOR HIS EQUIPMENT AND MATERIAL. HANGERS AND PIPE ATTACHMENTS TO BE FACTORY FABRICATED WITH GALVANIZED COATINGS; NONMETALLIC COATED FOR HANGERS IN DIRECT CONTACT WITH COPPER TUBING.

CONNECTIONS
INSTALL UNIONS ADJACENT TO EACH VALVE AND AT FINAL CONNECTION TO EACH PIECE OF EQUIPMENT. INSTALL DIELECTRIC COUPLINGS TO CONNECT PIPING MATERIALS OF DISSIMILAR METALS. SCREW JOINT STEEL PIPING UP TO AND INCLUDING 1-1/2". WELD PIPING USE LEAD FREE SOLDER FOR SOLDERING DOMESTIC WATER COPPER PIPE.

CLEANOUTS
PROVIDE J.R. SMITH OR EQUIVALENT FLOOR AND WALL CLEANOUTS AS INDICATED ON THE DRAWINGS OR WHERE REQUIRED IN ALL SOIL, WASTE, AND DRAIN LINES. IN AREAS WITH CERAMIC TILE OR CARPETED FLOORING, PROVIDE CLEANOUTS WITH SQUARE, ADJUSTABLE, NICKEL BRONZE TOP. IN AREAS WITH RESILIENT FLOORING, PROVIDE CLEANOUTS WITH SQUARE, ADJUSTABLE, NICKEL BRONZE TOP WITH TILE RECESS. CLEANOUTS SHALL BE SAME SIZE AS PIPE EXCEPT THAT CLEANOUTS LARGER THAN 4" WILL NOT BE REQUIRED. WHERE CLEANOUTS OCCUR IN WALLS OF FINISHED AREAS, THEY SHALL BE CONCEALED BEHIND CHROME PLATED ACCESS COVERS.
INSTALLATION
INSTALL PIPING FREE OF SAGS AND BENDS. INSTALL FITTINGS FOR CHANGES IN DIRECTION AND BRANCH CONNECTIONS. INSTALL SLEEVES FOR PIPES PASSING THROUGH CONCRETE AND MASONRY WALLS, GYPSUM-BOARD PARTITIONS, CONCRETE FLOOR, AND ROOF SLABS. SEAL PIPE PENETRATIONS THROUGH RATED CONSTRUCTION WITH FIRESTOPPING SEALANT MATERIAL. UNDERGROUND WATER AND SEWER LINES SHALL BE LAID IN SEPARATE TRENCHES WITH A MINIMUM HORIZONTAL SPACING AS REQUIRED BY CODE, EXCAVATED TO THE PROPER DEPTH AND GRADED TO PRODUCE THE REQUIRED FALL.

TESTING
ALL PIPES SHALL BE TESTED BY AN APPROVED METHOD BEFORE THEY ARE BACKFILLED OR CONCEALED.

VALVES

GENERAL
PLUMBING CONTRACTOR TO PROVIDE VALVES WHERE INDICATED ON PLANS AND AS NECESSARY FOR PROPER SYSTEM OPERATION AND COMPONENT ISOLATION. INSTALL VALVES FOR EACH FIXTURE AND ITEM OF EQUIPMENT. PROVIDE BRAIDED STAINLESS STEEL HOSE (UNLESS OTHERWISE NOTED) BETWEEN VALVE AND EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS. LOCATE SHUT-OFF VALVES ADJACENT TO EQUIPMENT FOR EASY ACCESS SUCH THAT VALVES CAN BE REACHED WITHOUT MOVING EQUIPMENT.

VALVES
PROVIDE VALVES FOR WORKING PRESSURE IN WATER PIPING OF 125 PSI OR GREATER.

INSULATION

WATER PIPING
PROVIDE THERMAL INSULATION ON ALL HOT & COLD WATER PIPING. USE SELF-SEALING CLOSED CELL FOAM OR JACKETED FIBERGLASS INSULATION WITH MANUFACTURER APPROVED ADHESIVES, SEALERS, AND COATINGS. ALL MATERIALS USED SHALL NOT EXCEED 25 FOR FLAME SPREAD, 50 FOR FUEL CONTRIBUTED, OR 50 FOR SMOKE DEVELOPED.

SAFETY COVERS
INSTALL NO-SCALD SAFETY COVERS WITH INSULATED FOAM LINER AND TAMPER PROOF STRAP AT ALL EXPOSED HOT WATER & WASTE PIPING.

MISC PLUMBING FIXTURES

OWNER FURNISHED CONTRACTOR INSTALLED
PLUMBING FIXTURES/EQUIPMENT

THE PLUMBING CONTRACTOR SHALL MAKE ALL FINAL CONNECTIONS TO EQUIPMENT INCLUDING REQUIRED MATERIAL SUCH AS PIPING, VALVES, FILTERS, TRAPS, CHECKS VALVES, VACUUM BREAKERS, AND FLEXIBLE AND RIGID TUBING.

MINIMUM HYDRONIC & DOMESTIC HOT WATER PIPE INSULATION THICKNESS (IN INCHES)

FLUID OPERATING TEMPERATURE RANGE AND USAGE (°F)	INSULATION CONDUCTIVITY		NOMINAL PIPE OR TUBE SIZE (INCHES)				
	CONDUCTIVITY BTU - IN./(H - FT² - °F)[B]	MEAN RATING TEMPERATURE, °F	1	1 TO < 1-1/2	1-1/2 TO < 4	4 TO < 8	≥ 8
201 -250	0.27 - 0.30	150	2.5	2.5	2.5	3.0	3.0
141 - 200	0.25 - 0.29	125	1.5	1.5	2.0	2.0	2.0
105 - 140	0.21 - 0.28	100	1.0	1.0	1.5	1.5	1.5
40 - 60	0.21 - 0.27	75	0.5	0.5	1.0	1.0	1.0

PIPE HANGER SPACING REQUIREMENTS

MATERIAL	SIZE	MAX HORIZONTAL SPACING	MAX VERTICAL SPACING
ABS	ALL	4'	10'
CAST IRON < 10'	ALL	5'	15'
CAST IRON - 10'	ALL	10'	15'
COPPER	< 1-1/2	6'	10'
COPPER	≥ 1-1/2	10'	10'
PEX	ALL	32"	10'
PVC	ALL	4'	10'

PIPE SIZE EQUIVALENTS

DESIGN SIZE	NOMINAL COPPER TUBE	NOMINAL PEX	NOMINAL BLACK IRON	CSST EHD
½"	½"	½"	½"	18
¾"	¾"	1"	¾"	23
1"	1"	1¼"	1"	31
1¼"	1¼"	1½"	1¼"	37
1½"	1½"	2"	1½"	47
2"	2"	-	2"	60

PLUMBING FIXTURE SCHEDULE

MARK	DESCRIPTION	MANUFACTURER	MODEL	CW	HW	TW	W	REMARKS
P100	WATER CLOSET	AMERICAN STANDARD	211AA.104	1/2"			3"	COLOR WHITE, W OPEN SEAT, 17" FLOOD RIM
P105	STAINLESS STEEL SINK	ELKAY	DLR2522				2"	
P106	SINK FAUCET	DELTA	100-WF	1/2"	1/2"			
P129	ICE MAKER	WATER TITE	SSIB1	3/8"				
P130	SUMP PUMP	ZOELLER	MODEL 53				2"	115V, .3 HP, 1 PH, 9.7 AMPS, 60HZ
P144	EXAM ROOM SINK	ELKAY	LRAD1517					
P145	LAB FAUCET	DELTA	1501T3320	1/2"	1/2"			

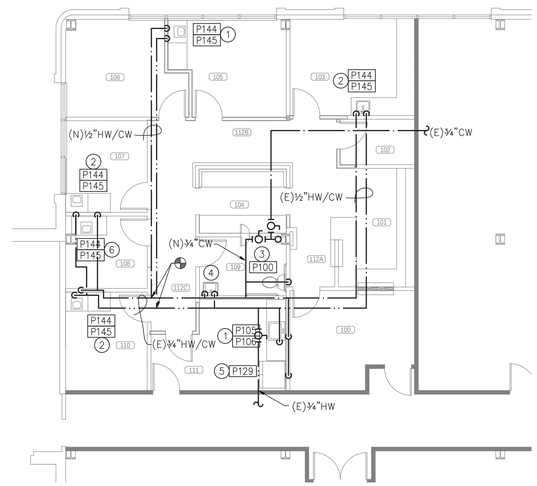
Room Schedule

100	Waiting	107	Exam #2
101	Reception	108	Exam #3
102	Storage	109	Restroom
103	Procedure	110	Exam #4
104	MA Station	111	Break Room
105	Exam #1	112	Hallway
106	Office		

Provide self-closing or metered faucets in public restrooms.
2015 COA 22-326 (a)

PLUMBING DETAIL NOTES

1. (N) ½"CW/HW TO SINK.
2. EXISTING SINK TO REMAIN. ADD ALTERNATE: REPLACE EXISTING SINK.
3. CONNECT (N) WATER CLOSET TO EXISTING PLUMBING STUB.
4. (E) LAVATORY TO REMAIN.
5. (N) ⅜"CW TO ICE MAKER ROUGH-IN.
6. CONNECT (N) SINK TO EXISTING PLUMBING STUB.



1 P1.0 PLUMBING PLAN
SCALE: 1/8" = 1'-0"

City of Aurora Building Division
Reviewed for Code Compliance
Approved as Noted: William Griffin
Date: Dec 23, 2019
2015 INTERNATIONAL CODES & 2017 NEC

RSN: 1426505
Permit #: 19-1741436 LT

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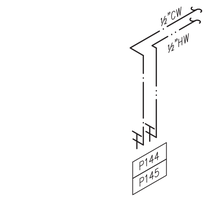
Digitally signed by Brian Seyferth
Date: 2019.12.17 10:06:45 -07'00'

Spec Suite 140

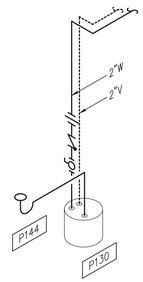
Dates of Record
Project Start Date: ##########

Issued On	Issued For
17 DEC 2019	Tenant's Review & Approval; and Construction

Sheet Contents	PLUMBING PLAN AND NOTES
Project Team	LC/BS
Project Number	19495
Sheet Mark	P1.0



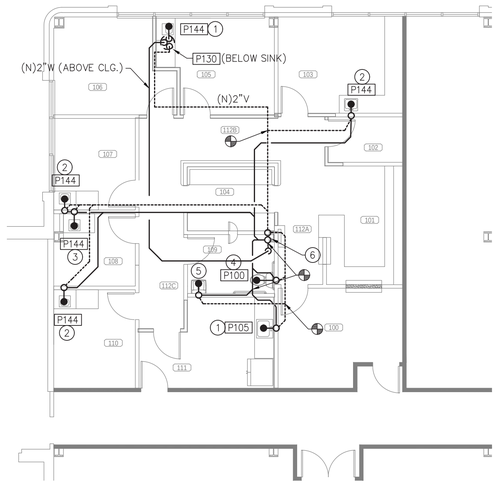
2 P2.0 PARTIAL PLUMBING ISOMETRIC
SCALE: NTS



3 P2.0 PARTIAL WASTE ISOMETRIC
SCALE: NTS

WASTE PIPING NOTES

1. (N) 2"W/2"V TO (N) SINK
2. EXISTING SINK TO REMAIN. ADD. ALTERNATE: REPLACE EXISTING SINK.
3. CONNECT (N) SINK TO EXISTING WASTE STUB.
4. CONNECT (N) WATER CLOSET TO EXISTING WASTE STUB.
5. (E) LAVATORY TO REMAIN.
6. (E) 4"W/4"V RISERS.



1 P2.0 WASTE PIPING PLAN
SCALE: 1/8" = 1'-0"

Room Schedule			
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106	Office		

Provide self-closing or metered faucets in public restrooms.
2015 COA 22-326 (a)

Provide drains no smaller than allowed by **2015 IPC 709.1 and 710.1(1)**

The dry vent must rise 6" vertically above the flood level rim of the highest trapped fixture being vented.
2015 IPC 905.4

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Sheet Contents	WASTE PIPING PLAN
Project Team	LC/BS
Project Number	19495
Sheet Mark	*P2.0*

ELECTRICAL GENERAL NOTES - APPLICABLE TO ALL ELECTRICAL SHEETS

1. PRIOR TO SUBMITTING BIDS THE ELECTRICAL CONTRACTOR SHALL VISIT THE SITE TO VERIFY EXISTING ELECTRICAL EQUIPMENT CONDITIONS AND DIFFICULTIES THAT WILL AFFECT EXECUTION OF THE WORK. FIELD VERIFY QUANTITIES OF EXISTING LIGHT FIXTURES, ELECTRICAL DEVICES, COMMUNICATION DEVICES, FIRE ALARM DEVICES, AND ELECTRICAL EQUIPMENT. NOTIFY THE ARCHITECT AND ENGINEER OF ANY EXISTING CONDITIONS WHICH MODIFY THE SCOPE OF WORK AS SHOWN ON THE CONSTRUCTION DOCUMENTS. SUBMISSION OF A BID PROPOSAL WILL BE CONSTRUED AS EVIDENCE THAT SUCH AN EXAMINATION HAS BEEN MADE AND LATER CLAIMS FOR MOBILIZATION, LABOR, EQUIPMENT, AND/OR MATERIALS REQUIRED BECAUSE OF DIFFICULTIES ENCOUNTERED WILL NOT BE RECOGNIZED.

2. THE ELECTRICAL CONTRACTOR SHALL EXAMINE THE DRAWINGS OF ALL TRADES WHOSE WORK RELATES TO OR IS DEPENDENT ON ELECTRICAL WORK TO BECOME FULLY INFORMED OF THE EXTENT AND CHARACTER OF THEIR SPECIFIED WORK AND BE ABLE TO COORDINATE IT WHILE AVOIDING POSSIBLE INTERFERENCE WITH THE ELECTRICAL WORK.

3. IT IS THE INTENTION OF THESE SPECIFICATIONS AND DRAWINGS TO CALL FOR FINISHED WORK, TESTED AND READY FOR OPERATION. WHEREVER THE WORD "PROVIDE" IS USED, IT SHALL MEAN "FURNISH AND INSTALL COMPLETE AND READY FOR USE." "REPLACE" SHALL MEAN TO PUT NEW IN PLACE OF EXISTING. THE ARCHITECTURAL GENERAL AND SPECIAL CONDITIONS FOR THE WORK OF THIS PROJECT AND BASE BUILDING SPECIFICATIONS SHALL BE PART OF THE ELECTRICAL SPECIFICATIONS. THE ELECTRICAL CONTRACTOR SHALL EXAMINE THE GENERAL AND SPECIAL CONDITIONS BEFORE SUBMITTING A BID.

4. ALONGSIDE SUBMISSION OF THE BID, THE ELECTRICAL CONTRACTOR SHALL GIVE WRITTEN NOTICE TO THE ARCHITECT/ENGINEER OF ANY NECESSARY ITEMS OR WORK THAT HAVE BEEN OMITTED FROM THE DRAWINGS OR SPECIFICATIONS. IN THE ABSENCE OF SUCH WRITTEN NOTICE, IT IS MUTUALLY AGREED THAT THE ELECTRICAL CONTRACTOR HAS INCLUDED THE COST OF ALL REQUIRED ITEMS IN HIS BID, AND THAT THE ELECTRICAL CONTRACTOR WILL BE RESPONSIBLE FOR THE APPROVED SATISFACTORY FUNCTIONING OF THE ENTIRE SYSTEM WITHOUT EXTRA COMPENSATION.

5. THE CONTRACTOR IS RESPONSIBLE FOR THE COMPLETE AND SATISFACTORY ELECTRICAL INSTALLATION IN ACCORDANCE WITH THE TRUE INTENT OF THE DRAWINGS AND SPECIFICATIONS. HE SHALL PROVIDE, WITHOUT EXTRA CHARGE, ALL INCIDENTAL ITEMS REQUIRED, AS A PART OF THIS ELECTRICAL INSTALLATION. THE INSTALLATION SHALL BE SO MADE THAT ITS SEVERAL COMPONENT PARTS WILL FUNCTION TOGETHER AS A WORKABLE SYSTEM AND SHALL BE LEFT WITH ALL PARTS ADJUSTED AND IN WORKING ORDER.

6. ELECTRICAL CONTRACTOR SHALL OBTAIN AND PAY FOR ALL LOCAL FEES, PERMITS, AND SERVICES OF INSPECTION AUTHORITIES REQUIRED BY ELECTRICAL WORK FOR THIS ELECTRICAL CONSTRUCTION. FILE ALL NECESSARY PLANS, PREPARE ALL DOCUMENTS, AND OBTAIN ALL NECESSARY APPROVALS REQUIRED BY ALL GOVERNMENTAL DEPARTMENTS HAVING JURISDICTION. ALL WORK PERFORMED UNDER THIS CONTRACT SHALL REMAIN EXPOSED TO VIEW UNTIL APPROVED BY THE INSPECTION AUTHORITY.

7. ELECTRICAL CONTRACTOR SHALL FULLY COORDINATE WITH OWNER REPRESENTATIVES. ALL ELECTRICAL WORK PERFORMED UNDER THIS CONTRACT SHALL CONFORM WITH LATEST EDITIONS OF THE NATIONAL ELECTRICAL CODE, INTERNATIONAL BUILDING CODE, LOCAL BUILDING AND FIRE DEPARTMENT REQUIREMENTS. PERFORM WORK IN ACCORDANCE WITH REQUIREMENTS OF OWNER REPRESENTATIVE.

8. ELECTRICAL CONTRACTOR SHALL NOTIFY THE ARCHITECT AND ENGINEER OF ANY CHANGES REQUIRED BY THE BUILDING MANAGEMENT AND TENANT REPRESENTATIVES.

9. BEFORE STARTING WORK, ELECTRICAL CONTRACTOR SHALL PREPARE AND SUBMIT TO THE ARCHITECT/ENGINEER FIVE (5) SETS OF SHOP DRAWINGS, BROCHURES, INSTALLATION INSTRUCTIONS, AND DESCRIPTIVE EQUIPMENT DATA RELATED TO SPECIFIED EQUIPMENT, WIRING DEVICES, AND ACCESSORIES FOR APPROVAL. ELECTRONIC SUBMITTALS (PDF OR SIMILAR) ARE ACCEPTABLE WITH PRIOR APPROVAL FROM THE ARCHITECT. THE CONTRACTOR SHALL IDENTIFY ANY "LONG LEAD TIME" ITEMS WHICH MAY IMPACT THE OVERALL PROJECT SCHEDULE. ALL BIDS SHALL INCLUDE COSTS ASSOCIATED WITH THE PURCHASE AND DELIVERY OF EQUIPMENT TO MEET THE PROJECT SCHEDULE. NO EQUIPMENT SHALL BE ORDERED, PURCHASED, OR INSTALLED PRIOR TO THE APPROVAL OF SHOP DRAWINGS, BROCHURES, INSTALLATION INSTRUCTIONS, AND SCHEDULES. APPROVAL BY THE ARCHITECT/ENGINEER IS INTENDED TO ESTABLISH CONFORMANCE WITH THE PROJECT DESIGN CONCEPT AND THE REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS.

10. THE NAMING OF THE MANUFACTURER OR BRAND WITH CATALOG NUMBER OR OTHER PRODUCT IDENTIFICATION WITHOUT THE WORDS "OR EQUAL" IN THE SPECIFICATIONS OR NOTES SHALL INDICATE THAT IT IS THE ONLY PRODUCT APPROVED FOR PURCHASE. IF THE WORDS "OR EQUAL" ARE USED THEY SHALL BE INTERPRETED AS ESTABLISHING A QUALITY OR PERFORMANCE STANDARD FOR THE MATERIAL OR PRODUCT TO BE PURCHASED. THIS SHALL INDICATE THAT THE ELECTRICAL CONTRACTOR IS NOT RESTRICTED TO THE USE OF THE NAMED AND IDENTIFIED PRODUCT IF A SUBSTITUTE APPROVED BY THE ARCHITECT/ENGINEER IS AVAILABLE. HOWEVER, WHERE A SUBSTITUTION IS REQUESTED, IT WILL BE PERMITTED ONLY WITH THE WRITTEN APPROVAL OF THE ARCHITECT/ENGINEER. NO SUBSTITUTE MATERIAL OR PRODUCT SHALL BE ORDERED, FABRICATED, SHIPPED OR PROCESSED IN ANY MATTER PRIOR TO THE APPROVAL OF THE ARCHITECT/ENGINEER. THE ELECTRICAL CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY FOR ADDITIONAL EXPENSES AS REQUIRED MAKING CHANGES FROM THE ORIGINAL MATERIAL OR PRODUCT SPECIFIED.

11. THE ELECTRICAL DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENT OF ELECTRICAL WORK. LOCATIONS ARE APPROXIMATE AND SHALL BE SUBJECT TO MINOR MODIFICATIONS AS DIRECTED BY THE GENERAL CONTRACTOR AND OWNER REPRESENTATIVES. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE EXACT FITTING OF ALL MATERIALS, EQUIPMENT, ETC., IN THE BUILDING AND TENANT SPACE. ALL DIMENSIONS SHALL BE VERIFIED ON THE JOB.

12. DRAWINGS SHALL NOT BE SCALED FOR ROUGH-IN MEASUREMENTS OR USED AS SHOP DRAWINGS, WHERE DIMENSIONS ARE SHOWN ON PLANS OR DETAILS, THESE DIMENSIONS ARE TO BE FIELD-VERIFIED BY THE ELECTRICAL CONTRACTOR AGAINST EXISTING FIELD CONDITIONS, INSTALLATION REQUIREMENTS OF OTHER TRADES, AND THE MANUFACTURER'S SUBMITTALS FOR EQUIPMENT TO BE INSTALLED. SHOULD ANY CONFLICTS ARISE WHICH CANNOT BE EASILY RESOLVED IN THE FIELD WITHOUT CHANGING THE DESIGN INTENT, THE ELECTRICAL CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY.

13. WHILE ALL WORK IS IN PROGRESS, EXCEPT FOR SHORT DESIGNATED INTERVALS DURING WHICH CONNECTIONS ARE TO BE MADE, CONTINUITY OF SERVICE TO ALL EXISTING SYSTEMS SERVING OCCUPIED SPACES SHALL BE MAINTAINED. THE CONTRACTOR SHALL COORDINATE AND COOPERATE WITH OWNER AT ALL TIMES FOR ALL NEW-TO-EXISTING CONNECTIONS, SYSTEM SHUTDOWNS, AND RESTART-UP.

14. ANY WORK WHICH WILL AFFECT THE BUILDING OCCUPANTS, INCLUDING, BUT NOT LIMITED TO WORK WHICH GENERATES EXCESSIVE NOISE, DUST, SMOKE, OR INCONVENIENCE TO BUILDING OCCUPANTS, SHALL BE PERFORMED AFTER BUSINESS HOURS. UNLESS PRIOR APPROVAL HAS BEEN OBTAINED FROM THE BUILDING MANAGER OR OWNER.

15. ELECTRICAL ITEMS AFFECTED BY REMODEL WORK ARE SHOWN ON DRAWINGS ALONG WITH EXISTING ELECTRICAL INSTALLATION SHOWN WITH LIGHT LINE WEIGHT. EXISTING ELECTRICAL INSTALLATION SHOWN IS NOT NECESSARILY ALL-INCLUSIVE. RETAIN CIRCUIT CONTINUITY FOR EXISTING ELECTRICAL EQUIPMENT, FIXTURES, AND DEVICES THAT ARE TO REMAIN. SUCH EQUIPMENT SHALL BE RECONNECTED TO EXISTING CIRCUITS OR CONNECTED TO NEW CIRCUIT(S) AS INDICATED ON DRAWINGS. ENSURE ALL ELECTRICAL DEVICES IN WORK AREA ARE FULLY FUNCTIONAL. FOR DEVICES OR JUNCTION BOXES LOCATED IN WALLS, THAT MUST REMAIN IN PLACE FOR CIRCUIT CONTINUITY, PROVIDE BLANK COVER PLATES TO MATCH WALL PLATES STYLE IN THE AREA OF WORK. FOR ALL OTHER UNUSED JUNCTION BOXES, REMOVE WIRING AND PROVIDE BLANK COVER PLATE, OR COORDINATE WITH GENERAL CONTRACTOR FOR PATCHING OF WALL TO MATCH ADJACENT SURFACE AS DIRECTED BY ARCHITECT. WHERE EXISTING DEVICES CONFLICT WITH NEW WALL CONSTRUCTION, RELOCATE EXISTING DEVICE AND REWORK CIRCUITRY AS REQUIRED TO MAINTAIN CIRCUIT CONTINUITY. DEVICES MAY ONLY BE REMOVED WITH PRIOR APPROVAL FROM THE DESIGN TEAM AND BUILDING MANAGEMENT. COORDINATE FINAL DIRECTIONS WITH ARCHITECT PRIOR TO DEMOLITION.

16. REPORT ANY EXISTING DAMAGED EQUIPMENT OR SYSTEMS TO THE OWNER PRIOR TO BEGINNING THE PROJECT.

17. BEFORE ANY EQUIPMENT IS INSTALLED, DETERMINE THAT SAID EQUIPMENT WILL PROPERLY FIT WITHIN THE SPACE ALLOCATED. INSTALL ALL EQUIPMENT AND MATERIALS IN SUCH A MANNER AS TO PROVIDE REQUIRED ACCESS FOR SERVICING AND MAINTENANCE. ALLOW AMPLE SPACE FOR REMOVAL OF ALL PARTS THAT REQUIRE REPLACEMENT OR SERVICING.

18. MINIMUM WORKING CLEARANCES PER THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE SHALL BE PROVIDED AROUND AND IN FRONT OF ALL ELECTRICAL EQUIPMENT.

19. ALL CIRCUIT BREAKER LUGS SHALL BE RATED FOR A MINIMUM OF 75 DEGREES CELSIUS.

20. ALL MATERIALS AND EQUIPMENT SHALL BE NEW, UNDAMAGED, BEAR THE UL LABEL WHERE APPLICABLE, AND BE AS SPECIFIED FOR USE IN EACH SPECIFIC LOCATION. ANY INCIDENTAL ACCESSORIES NECESSARY TO COMPLETE THE WORK IN ALL RESPECTS AND MAKE IT READY FOR OPERATION, EVEN IF NOT SPECIFICALLY SPECIFIED, SHALL BE FURNISHED, DELIVERED, AND INSTALLED BY THE ELECTRICAL CONTRACTOR WITHOUT ADDITIONAL EXPENSE TO THE CLIENT.

21. MINOR DETAILS NOT USUALLY SHOWN OR SPECIFIED, BUT NECESSARY FOR THE PROPER INSTALLATION AND OPERATION OF A SYSTEM OR EQUIPMENT, SHALL BE INCLUDED IN THE ELECTRICAL CONTRACTOR'S ESTIMATE, AS IF SPECIFIED HEREIN OR SHOWN.

22. ALL NEW, RELOCATED AND EXISTING MATERIALS, IN CEILING PLENUMS NOT ENCLOSED IN CONDUIT SHALL HAVE CLASS, FLAME SPREAD AND SMOKE DEVELOPMENT RATINGS AS REQUIRED FOR USE IN OPEN PLENUMS. REMOVE AND REPLACE ALL EXISTING MATERIALS IN WORK AREA NOT IN COMPLIANCE.

23. COORDINATE THE INSTALLATION OF ELECTRICAL MATERIALS AND EQUIPMENT ABOVE AND BELOW CEILINGS WITH SUSPENSION SYSTEM, MECHANICAL EQUIPMENT, AND OTHER BUILDING COMPONENTS. ALL COMPONENTS SHALL BE LOCATED AS TIGHT TO STRUCTURE AS POSSIBLE. COORDINATE CEILING CAVITY SPACE CAREFULLY WITH ALL TRADES.

24. NEUTRALS, RACEWAYS, AND NON-CURRENT CARRYING PARTS OF ELECTRICAL EQUIPMENT AND ASSOCIATED ENCLOSURES SHALL BE GROUNDED IN FULL ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE. PROVIDE HARD WIRE GROUND CONNECTIONS TO ALL DEVICES AND SEPARATE, CONTINUOUS, INSULATED GROUND WIRE IN EACH CIRCUIT (#12 CU MINIMUM "GREEN" TRACER GROUND). COORDINATE EQUIPMENT GROUNDING CONDUCTOR WIRE SIZE WITH MANUFACTURER REQUIREMENTS.

25. CONDUIT JOINTS SHALL BE CUT SQUARE, THREADED, REAMED SMOOTH, AND DRAWN UP TIGHT. BENDS OR OFFSETS SHALL BE MADE WITH AN APPROVED BENDER OR HICKEY, OR HUB-TYPE CONDUIT FITTINGS. THE NUMBER OF BENDS PER RUN SHALL CONFORM TO THOSE STATED IN CURRENT NEC.

26. WHERE POSSIBLE ALL WIRING SHALL BE RUN CONCEALED. ALL HOME RUNS SHALL BE EMT. CONCEALED CONDUIT SYSTEMS SHALL BE RUN IN A DIRECT LINE WITH LONG SWEEP BENDS AND AND OFFSETS. EXPOSED CONDUIT RUNS SHALL BE PARALLEL TO AND AT RIGHT ANGLES TO BUILDING LINES, USING CONDUIT FITTINGS FOR ALL TURNS AND OFFSETS. ALL EMPTY CONDUITS SHALL BE SUPPLIED WITH PULL WIRES AND BUSHINGS.

27. "MC" AND "AC" TYPE CABLE WITH INTERNAL GROUND WIRES SHALL BE PERMITTED FOR BRANCH CIRCUIT WIRING WHERE APPROVED IN WRITING BY BUILDING MANAGEMENT AND THE LOCAL AHJ ONLY AND INSTALLED PER NATIONAL ELECTRICAL CODE AND LOCAL BUILDING DEPARTMENT REQUIREMENTS. USE LISTED AND APPROVED TYPE COUPLINGS AND CONNECTORS. PROVIDE CONDUIT SUPPORTS AS REQUIRED BY THE NATIONAL ELECTRICAL CODE AS A MINIMUM.

28. ALL ROOF PENETRATIONS SHALL BE SEALED WATER TIGHT, PROVIDE FLASHING AND COUNTER FLASHING AS REQUIRED. COORDINATE ROOFING WORK WITH THE GENERAL CONTRACTOR.

29. ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL JUNCTION AND PULL BOXES TO PROVIDE ACCESS POINTS FOR PULLING AND FEEDING CONDUCTORS INTO A RACEWAY SYSTEM. JUNCTION AND PULL BOXES AND THEIR COVERS SHALL BE FORMED FROM SHEET STEEL AND SHALL BE FINISHED IN GRAY ENAMEL PAINT. BOXES SHALL BE IN INDUSTRY STANDARD SIZES. OUTLET BOXES WITH THE CORRECT FITTING FOR THE APPLICATION SHALL BE LOCATED AT EACH CONDUCTOR SPLICE POINT, AT EACH OUTLET, SWITCH POINT, OR JUNCTION POINT, AND AT EACH PULL POINT FOR THE CONNECTION OF CONDUIT AND OTHER RACEWAYS. OUTLET BOXES FOR CONCEALED WIRING SHALL BE MADE FROM GALVANIZED OR CADMIUM-PLATED SHEET STEEL, AND THEY SHALL HAVE A DEPTH OF AT LEAST 1.5 INCHES, WHETHER SINGLE OR GANGED. THE BOXES SHALL BE LARGE ENOUGH SIZE TO ACCOMMODATE THE NUMBER OF WIRING DEVICES AND CONDUCTORS AS SPECIFIED IN THE FILL SCHEDULE OF THE CURRENT NEC. SECURE BOXES WITH MOUNTING BRACKET, BRACES, HANGER OR BOX MOUNTING SUPPORT.

30. ALL NEW SWITCHES, POWER OUTLETS, TELEPHONE OUTLETS, FIRE ALARM DEVICES, AND COMMUNICATIONS OUTLETS SHALL MEET THE REQUIREMENTS FOR AMERICANS WITH DISABILITIES (A.D.A) MOUNTING HEIGHTS AND ORIENTATIONS, TYPICAL UNLESS OTHERWISE NOTED. RECEPTACLES SHALL BE A MINIMUM OF 15" A.F.F. AND SWITCHES A MAXIMUM OF 48" A.F.F. TO CENTERLINE, TYPICAL UNLESS OTHERWISE NOTED.

31. ALL WALL MOUNTED OUTLETS SHALL BE OFFSET SO THEY ARE NOT BACK TO BACK, FOR SOUND TRANSMISSION PURPOSES. A HORIZONTAL DISTANCE OF AT LEAST 6 INCHES SHALL SEPARATE OUTLET BOXES ON OPPOSITE SIDES OF WALLS AND PARTITIONS. MOUNT ELECTRICAL AND COMMUNICATIONS OUTLETS ON WALLS AS CLOSE TOGETHER AS POSSIBLE.

32. WIRING DEVICES SHALL BE SPECIFICATION GRADE. MINIMUM DEVICE RATING SHALL BE 20 AMPS FOR ALL WIRING DEVICES UNLESS SPECIFICALLY NOTED OTHERWISE. DEVICES WITH DEDICATED CIRCUITS SHALL BE RATED AS REQUIRED BY CIRCUIT LOAD. ISOLATED GROUND RECEPTACLES SHALL BE ORANGE. MATCH COLOR AND TYPE TO EXISTING BUILDING STANDARD. PROVIDE MATCHING NYLON COVER PLATES FOR ALL OUTLETS. ELECTRICAL CONTRACTOR SHALL VERIFY ALL OUTLETS WITH ARCHITECTURAL PLANS AND TENANT BEFORE ORDERING AND PURCHASING OF MATERIALS.

33. FIRE RESISTIVE WALLS AND PARTITIONS MAY HAVE OPENINGS FOR STEEL ELECTRICAL OUTLET BOXES NOT EXCEEDING 16 SQUARE INCHES IN AREA, PROVIDED THE AGGREGATE AREA OF SUCH OPENINGS IS NOT MORE WITH THAN 100 SQUARE INCHES FOR ANY 100 SQUARE FEET OF WALL. A HORIZONTAL DISTANCE OF AT LEAST 24 INCHES SHALL SEPARATE OUTLET BOXES ON OPPOSITE SIDES OF FIRE RESISTIVE WALLS AND PARTITIONS.

34. ALL JUNCTION BOX COVERS SHALL BE INDELIBLY LABELED WITH PANEL DESIGNATION AND BRANCH CIRCUIT NUMBER OF EACH WIRE WITHIN THE JUNCTION BOX.

35. ALL WIRING SHALL BE COPPER, TYPE THHN OR THWN INSULATION, UNLESS SPECIFICALLY NOTED OTHERWISE. MINIMUM SIZE SHALL BE #12 AWG. CONDUCTORS SHALL BE FACTORY COLOR-CODED WITH WIRE COLOR CODING AS REQUIRED BY THE NATIONAL ELECTRICAL CODE AND USING STANDARD CONDUCTOR COLOR CODES:

120/208 VOLTS:		277/480 VOLTS:	
A:	BLACK	A:	BROWN
B:	RED	B:	ORANGE
C:	BLUE	C:	YELLOW
NEU:	WHITE	NEU:	GRAY
GND:	GREEN	GND:	GREEN

ISO. G: GREEN W/YELLOW STRIPE

36. RECEPTACLES FOR COMPUTERS, COPIERS, AND PRINTERS, WHICH ARE SEMI-DEDICATED, DEDICATED, OR ISOLATED, SHALL HAVE A SEPARATE NEUTRAL AND DEDICATED GROUND CONDUCTOR RUN FROM THE BRANCH CIRCUIT PANEL BOARD.

37. ALL JOINTS OR SPLICES FOR 10 AWG. CONDUCTORS OR SMALLER SHALL BE MADE WITH UL-APPROVED WIRE NUTS, OR COMPRESSION-TYPE CONNECTORS.

38. ALL JOINTS OR SPLICES FOR CONDUCTORS 8 AWG AND LARGER SHALL BE MADE WITH A MECHANICAL COMPRESSION OR BOLTED CONNECTOR. AFTER THE CONDUCTORS HAVE BEEN MADE MECHANICALLY AND ELECTRICALLY SECURE, THE ENTIRE JOINT OR SPLICE SHALL BE COVERED WITH 3M SCOTCH BRAND NO. 33 TAPE OR APPROVED EQUAL, TO MAKE THE INSULATION VALUE AT THE JOINT OR SPLICE EQUAL TO THE VALUE OF THE CONDUCTOR INSULATION. ALL CONNECTORS SHALL BE UL APPROVED.

39. ALL NEW MULTI-WIRE BRANCH CIRCUITS SHALL INCLUDE SEPARATE NEUTRAL CONDUCTORS OR BREAKER TIES AS REQUIRED BY CURRENT NEC SECTION 210.4 (B).

40. VOLTAGE DROP: THE ELECTRICAL CONTRACTOR SHALL ENSURE THAT VOLTAGE DROP FOR FEEDERS TO DISTRIBUTION EQUIPMENT DOES NOT EXCEED 2% AND VOLTAGE DROP IN BRANCH CIRCUITING DOES NOT EXCEED 3% FOR OVERALL VOLTAGE DROP OF 5% (MAXIMUM). FEEDERS LISTED ON SCHEDULES AND THE ELECTRICAL ONE-LINE DIAGRAM ARE A BASE FEEDER/BRANCH CIRCUIT SIZE AND SHALL BE ADJUSTED AS NEEDED BASED ON ACTUAL LENGTHS OF CONDUCTORS.

41. ELECTRICAL CONTRACTOR SHALL UP SIZE SHARED NEUTRAL CONDUCTOR WITHIN FURNITURE SYSTEMS TO A #10 AWG CU CONDUCTOR. ELECTRICAL CONTRACTOR TO CONSIDER THE NEUTRAL CONDUCTOR AS A CURRENT CARRYING CONDUCTOR WHEN FEEDING ELECTRONIC LOADS.

42. ALL LIGHT FIXTURES SHALL BE SUPPORTED INDEPENDENTLY FROM STRUCTURE. REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATIONS OF LIGHT FIXTURES AND ELECTRICAL DEVICES.

43. FOR ALUMINUM CONDUCTOR TERMINATIONS, ALUMINUM BI-METALLIC PIN CONNECTORS ARE REQUIRED UNLESS COMPACT CONDUCTORS ARE USED. THESE CONNECTORS SHALL BE UL LISTED PER UL 486B AND RATED FOR USE UP TO 600V AND TEMPERATURE UP TO 90'C. CONNECTORS SHALL BE INSTALLED WITH MANUFACTURER'S SPECIFIED CRIMPING TOOLS AND DIES.

44. INSTALLATION IN AREAS OF DRYWALL CEILING SHALL BE COORDINATED SUCH THAT ACCESS PANELS ARE NOT REQUIRED. ELEMENTS REQUIRING ACCESS SHALL BE LOCATED IN THE AREAS OF ACCESSIBLE CEILING OR IN THE LOCATIONS COORDINATED WITH ARCHITECT. ACCESS PANELS REQUIRED WITHIN DRYWALL CEILINGS SHALL BE INSTALLED SYMMETRICALLY WITH OTHER PANELS OR DEVICES AND SHALL BE MINIMUM SIZE REQUIRED. "MUD-IN" TYPE, AND FIRE RATED, IF REQUIRED. ACCESS PANELS IN FIRE-RATED WALLS AND CEILINGS SHALL HAVE PROPER UL LABEL AND FIRE RATING LISTING.

45. WALL AND CEILING ROUGH-IN INSTALLATIONS FOR LOW-VOLTAGE CONTROL WIRING OF ANY TYPE SUCH AS DATA/TELECOMMUNICATIONS WIRING, FIRE ALARM WIRING, HVAC CONTROL WIRING, SECURITY SYSTEMS WIRING, TV CABLING, OPTICAL FIBER CABLING, ETC., SHALL BE COMPLETE AND READY FOR INSPECTION AT THE TIME ELECTRICAL ROUGH-IN INSPECTIONS ARE REQUESTED. ALL SHARP EDGES, CONDUIT ENDS AND METAL STUDS, ETC. FOR LOW-VOLTAGE CABLING SHALL BE PROTECTED BY INSULATED BUSHINGS OR GROMMETS AND SECURELY FASTENED IN THE OPENINGS FOR THE WALL ROUGHT-IN INSPECTIONS. WORK SHALL BE INSTALLED IN A NEAT AND WORKMANLIKE MANNER (GROUPED CABLES ROUTED WITH SQUARE CORNERS AND PARALLEL TO BUILDING LINES.) CABLES SHALL BE INSTALLED PER NEC REQUIRED SEPARATIONS AND SUPPORTED FROM THE BUILDING STRUCTURE. CABLE TIES USED IN DUCTS, PLENUMS, AND OTHER AIR-HANDLING SPACES ARE REQUIRED TO HAVE A TESTING LABORATORY LISTING NUMBER AND LABEL ON EACH UNOPENED PACKAGE AS BEING APPROVED FOR USE IN THESE LOCATIONS.

46. COORDINATE MOUNTING HEIGHTS AND LOCATIONS OF ALL ELECTRICAL DEVICES LOCATED WITHIN, ABOVE, OR NEAR MILLWORK WITH ARCHITECTURAL DRAWINGS, APPROVED "SHOP DRAWINGS", AND MILLWORK CONTRACTOR. MAINTAIN CONSISTENT MOUNTING PRACTICES FOR A UNIFORM APPEARANCE. VERIFY ALL OUTLET REQUIREMENTS PRIOR TO ROUGH IN.

47. ELECTRICAL CONTRACTOR SHALL COORDINATE EXACT LOCATIONS OF LIGHTING FIXTURES IN MECHANICAL ROOMS/SPACES WITH MECHANICAL DUCT WORK INSTALLER PRIOR TO ROUGH IN. LOCATE BELOW DUCT WORK (8'-0" A.F.F. MIN.) CENTERED IN ROOM AS MUCH AS POSSIBLE.

48. ELECTRICAL CONTRACTOR SHALL COMPLY WITH NEC AND LOCAL CODES FOR CONDUIT FILL REQUIREMENTS DEPENDING ON WIRE SIZES, QUANTITY, AND CORRECTION FACTORS. COORDINATE WITH LOCAL AUTHORITY HAVING JURISDICTION IF UPGRADE OF THE EXISTING ELECTRICAL INSTALLATION IS REQUIRED. THIS UPGRADE MAY INCLUDE REPLACEMENT OF THE EXISTING CONDUITS AND WIRING AFFECTED BY SCOPE OF THIS PROJECT TO ACCOMMODATE CURRENT CODE CONDUIT FILL AND CORRECTION REQUIREMENTS. INCLUDE COST ASSOCIATED WITH THIS UPGRADE IN THE BID.

49. ELECTRICAL CABINETS AND ENCLOSURES LOCATED IN PUBLIC AREAS SHALL BE LOCKABLE TYPE.

50. PENETRATIONS THROUGH STRUCTURAL MEMBERS SHALL NOT BE PERMITTED WITHOUT SPECIFIC WRITTEN PERMISSION FROM STRUCTURAL ENGINEER AND ARCHITECT. SUBMIT REQUESTS FOR PENETRATIONS TO ARCHITECT FOR REVIEW AND DISPOSITION. PRIOR TO CORE, DRILLING THROUGH FLOORS, VERIFY CLEARANCE OF BEAMS, DUCTWORK, ETC IN CEILING SPACE BELOW, AND X-RAY FOR CONDUIT AND/OR REBAR IN SLAB. COORDINATE WITH BUILDING MANAGEMENT/OWNER TO INFORM TENANT BELOW FOR SCHEDULING OF CORE DRILLING AND TO ADVICE CONCERNING PROTECTION FOR ANY SENSITIVE EQUIPMENT PRIOR TO COMMENCEMENT OF WORK. ALL X-RAYS AND CORE DRILLS MUST BE SCHEDULED FOR AFTER HOURS UNLESS BUILDING MANAGEMENT/OWNER AUTHORIZES OTHERWISE.

51. RACEWAYS SHALL BE PROVIDED WITH EXPANSION FITTINGS WHERE NECESSARY TO COMPENSATE FOR THERMAL EXPANSION AND CONTRACTION, AND TO ALLOW FOR MINOR MOVEMENT OF THE STRUCTURAL ELEMENTS OF THE BUILDING EXPANSION FITTINGS FOR METAL RACEWAYS SHALL BE MADE ELECTRICALLY CONTINUOUS BY EQUIPMENT BONDING JUMPERS OR OTHER MEANS.

52. PROVIDE TYPEWRITTEN, UPDATED PANELBOARD DOOR DIRECTORIES FOR ALL AFFECTED PANELS PER NEC 408.4, REFLECTING ACCURATE BRANCH CIRCUIT DESTINATIONS. CLEARLY MARK JUNCTION BOXES IN CEILING SPACE WITH PANEL DESIGNATIONS AND CIRCUIT NUMBERS. PROVIDE NEW ENGRAVED PLASTIC LABELS TO REPLACE ANY DAMAGED MISLABELED, TEMPORARY OR OTHERWISE ILLEGIBLE EXISTING IDENTIFICATION LABELS FOR DISTRIBUTION EQUIPMENT AFFECTED BY THIS CONTRACT. ATTACH THESE LABELS PERMANENTLY TO EQUIPMENT WITH RIVETS OR SCREWS. ALL PANEL SCHEDULES SHALL INDICATE THE NAME OF THE UPSTREAM PANEL OR SWITCHBOARD PROVIDING POWER.

53. CLEAN EXPOSED PANEL BOARD SURFACES AND CHECK TIGHTNESS OF ELECTRICAL CONNECTIONS. REPLACE DAMAGED CIRCUIT BREAKERS AS REQUIRED AND PROVIDE CLOSURE PLATES FOR VACANT SPACES. ALL NEW PANELS PROVIDED UNDER THIS CONTRACT SHALL BE DOOR-IN-DOOR CONSTRUCTION TYPE, WITH BOLT-ON CIRCUIT BREAKERS AND COPPER BUSSING, UNLESS SPECIFICALLY NOTED OTHERWISE.

54. PROVIDE FIRE STOPPING MATERIAL AND SYSTEMS AS LISTED IN THE UL FIRE RESISTANCE DIRECTORY EQUAL TO THE FIRE RESISTANCE RATING OF THE RESPECTIVE WALL OR FLOOR ASSEMBLY FOR ALL PENETRATIONS OF CONDUIT, SLEEVES, WIRING, CABLES AND OTHER ELECTRICAL ITEMS THROUGH FIRE-RATED CORRIDOR WALLS, FIRE RESISTIVE WALLS, FIRE RESISTIVE SHAFTS, AND FLOOR PENETRATIONS.

55. VERIFY ALL SPECIFIC KITCHEN AND BREAK ROOM EQUIPMENT REQUIREMENTS WITH EQUIPMENT SUPPLIER PRIOR TO ROUGH IN. COORDINATION SHALL INCLUDE MOUNTING HEIGHTS, CONNECTION TYPE AND POWER REQUIREMENTS. ALL CONNECTIONS FOR KITCHEN EQUIPMENT SHALL BE IN ACCORDANCE WITH EQUIPMENT MANUFACTURER'S AND SUPPLIER'S RECOMMENDATIONS. PROVIDE CORD AND PLUG FOR DISHWASHERS AND GARBAGE DISPOSER PER NEC 422.16(B)(1) AND (2).

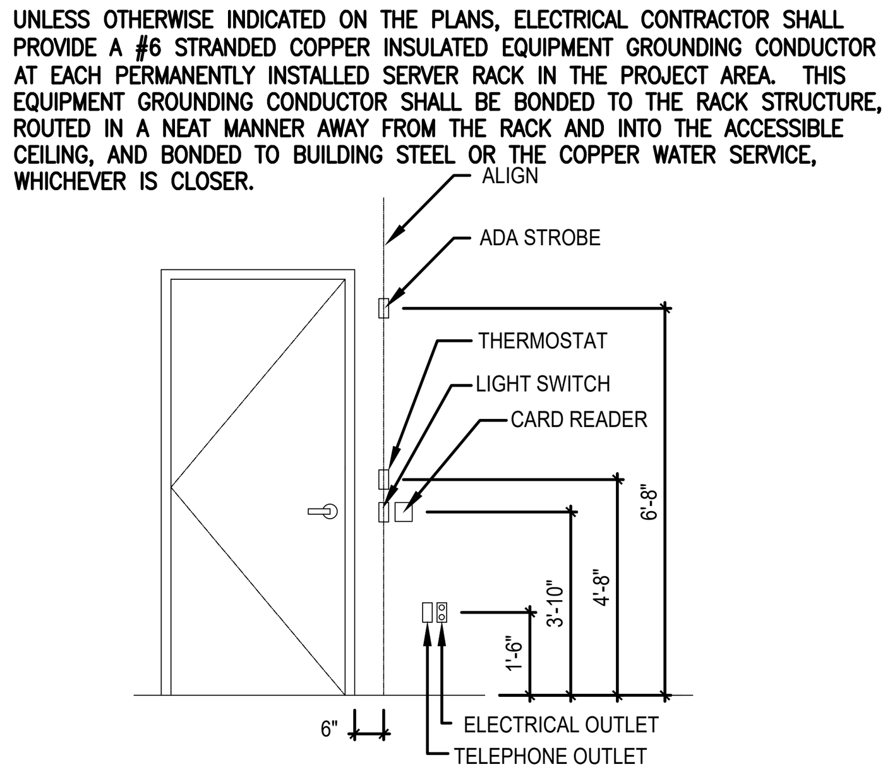
56. SECURITY: ELECTRICAL CONTRACTOR SHALL COORDINATE EXACT LOCATIONS AND REQUIREMENTS FOR J-BOX ROUGH-INS, CONDUIT RUNS WITH PULL WIRE AND POWER REQUIREMENTS FOR SECURITY SYSTEM WITH SECURITY SYSTEM CONTRACTOR PRIOR TO ROUGH-IN. THE SECURITY SYSTEM CONTRACTOR SHALL ALSO COORDINATE WORK WITH FIRE ALARM CONTRACTOR FOR COORDINATION OF THE INTERCONNECTION OF THE SECURITY SYSTEM WITH FIRE ALARM SYSTEM AS REQUIRED PER LOCAL CODES AND FIRE DEPARTMENT REGULATIONS.

57. AUDIO-VISUAL EQUIPMENT: ELECTRICAL CONTRACTOR SHALL COORDINATE EXACT LOCATIONS AND REQUIREMENTS FOR J-BOX ROUGH-INS, CONDUIT RUNS WITH PULL WIRE, REQUIRED PENETRATIONS, AND POWER REQUIREMENTS FOR AUDIO-VIDEO EQUIPMENT WITH AUDIO-VIDEO CONTRACTOR PRIOR TO ROUGH-IN.

58. COORDINATE CONTROL OF LUMINAIRES IN BUILDING COMMON CORRIDOR AREAS WITH BUILDING MANAGEMENT.

59. EXISTING LIGHT FIXTURES TO BE RELOCATED: LUMINAIRES SCHEDULED TO BE RELOCATED ARE CONSIDERED AS NEW INSTALLATION AND SHALL BE EITHER RETROFITTED WITH AN INDIVIDUAL DISCONNECTING MEANS WHICH SIMULTANEOUSLY DISCONNECTS ALL BALLAST CONDUCTORS FROM THE SOURCE OF SUPPLY OR RETROFITTED WITH NEW BALLASTS AND LAMP POSTS COMPLYING WITH THE REQUIREMENTS SET IN NEC 410.130 (G). THE ELECTRICAL CONTRACTOR SHALL INCLUDE IN THEIR BID A SEPARATE LINE ITEM COST FOR EACH LUMINAIRE RETROFIT. FIELD VERIFY QUANTITY UPON AWARD OF BID AND ADJUST PRICE ACCORDINGLY.

60. UNLESS OTHERWISE INDICATED ON THE PLANS, ELECTRICAL CONTRACTOR SHALL PROVIDE A #6 STRANDED COPPER INSULATED EQUIPMENT GROUNDING CONDUCTOR AT EACH PERMANENTLY INSTALLED SERVER RACK IN THE PROJECT AREA. THIS EQUIPMENT GROUNDING CONDUCTOR SHALL BE BONDED TO THE RACK STRUCTURE, ROUTED IN A NEAT MANNER AWAY FROM THE RACK AND INTO THE ACCESSIBLE CEILING, AND BONDED TO BUILDING STEEL OR THE COPPER WATER SERVICE, WHICHEVER IS CLOSER.



TYPICAL DETAIL FOR DEVICES AT DOOR LOCATION

SCALE: NONE

FIRE ALARM SYSTEM

1. GENERAL CONTRACTOR SHALL SOLICIT BIDS FROM BUILDING OWNER'S DESIGNATED FIRE ALARM CONTRACTOR FOR DESIGN AND INSTALLATION OF AN APPROVED FIRE ALARM SYSTEM AND DEVICES WHICH SHALL COMPLY WITH ALL APPLICABLE CODES AND ALL REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION. (GENERAL CONTRACTOR SHALL VERIFY WITH BUILDING MANAGEMENT/OWNER CONCERNING DESIGNATED FIRE ALARM CONTRACTOR.)

2. REQUIRED MODIFICATIONS TO EXISTING FIRE ALARM SYSTEM SHALL BE PROVIDED ON A DESIGN/BUILD BASIS BY FIRE ALARM CONTRACTOR. PRIOR TO BIDDING, FIRE ALARM CONTRACTOR SHALL FIELD VERIFY EXISTING FIRE ALARM SYSTEM CAPABILITY AND FIRE ALARM DEVICE LOCATIONS IN THIS SCOPE OF WORK. IF REQUIRED BY LOCAL JURISDICTION, FIRE ALARM SYSTEM SHALL BE UPGRADED TO MEET CURRENT CODES. FIRE ALARM CONTRACTOR SHALL PREPARE AND SUBMIT ALL SHOP DRAWINGS AND EQUIPMENT BROCHURES TO AUTHORITIES HAVING JURISDICTION, SUCH AS FIRE DEPARTMENT, BUILDING DEPARTMENT, ETC., AS REQUIRED, FOR REVIEW AND APPROVAL. CONTRACTOR SHALL ALSO PROVIDE THE ENGINEER WITH ONE (1) SET OF DRAWINGS, CALCULATIONS AND EQUIPMENT SUBMITTALS FOR HIS REVIEW AND RECORD.

3. IF REQUIRED, RELOCATE EXISTING SMOKE DETECTORS, REMOTE INDICATOR LIGHTS, FIRE ALARM HORNS, STROBES, SPEAKERS, ETC., BASED ON REMODELED AREA MODIFICATION, AND RECONNECT TO EXISTING SYSTEM AS REQUIRED. NEW FIRE ALARM DEVICES SHALL BE OF THE SAME MANUFACTURER AS THE EXISTING DEVICES AND SHALL BE COMPATIBLE WITH EXISTING FIRE ALARM SYSTEM. PROVIDE ADDITIONAL CONDUCTORS, ZAM'S IAM'S AND OTHER EQUIPMENT NECESSARY IN ORDER TO EXPAND SYSTEM AS REQUIRED. PROVIDE SYNCHRONIZING MODULES FOR STROBES. IF REQUIRED, REPLACE EXISTING FIRE ALARM DEVICES THAT ARE NOT CURRENTLY BUILDING STANDARD OR COMPATIBLE WITH NEW BUILDING STANDARD FIRE ALARM DEVICES. PRIOR TO PURCHASING FIRE ALARM DEVICES, PROVIDE CUT SHEETS, SHOP DRAWINGS, AND SEQUENCE OF OPERATION TO BUILDING MANAGEMENT AND FIRE PREVENTION BUREAU FOR THEIR APPROVAL AND TO ENGINEER FOR HIS REVIEW.

4. PROVIDE NEW BUILDING STANDARD FIRE ALARM STROBES, ADA HIGH INTENSITY, COMPATIBLE WITH EXISTING OR NEW FIRE ALARM SYSTEM AS REQUIRED. MODIFY EXISTING FIRE ALARM CIRCUIT CONDUCTORS AND FIRE ALARM PANELS PER MANUFACTURER'S REQUIREMENTS. MOUNT STROBES +80" A.F.F OR 6" BELOW THE CEILING, WHICHEVER IS LOWER. REPLACE EXISTING STROBE LIGHTS WITH NEW BUILDING STANDARD STROBE LIGHTS, AND ENSURE ALL STROBE LIGHTS ARE SYNCHRONIZED.

5. FIRE ALARM CONTRACTOR SHALL FURNISH DUCT DETECTORS (120V OR 24V), WITH REMOTE INDICATING LIGHT AND TEST SWITCH, FOR ALL MECHANICAL AIR-MOVING SYSTEMS WHERE REQUIRED BY CODE OR LOCAL AUTHORITIES. DETECTORS SHALL BE OF THE SAME MANUFACTURER AS EXISTING OR NEW FIRE ALARM SYSTEM. MECHANICAL CONTRACTOR SHALL INSTALL DETECTORS IN THE MECHANICAL DUCTWORK, AS REQUIRED BY CODE, TO FACILITATE MOTOR SHUTDOWN UPON DETECTION OF SMOKE. ELECTRICAL CONTRACTOR SHALL HARDWIRE DETECTOR TO THE FAN MOTOR (THROUGH A POWER-INTERRUPTING RELAY) FOR SHUTDOWN UPON DETECTION OF SMOKE; AND IF REQUIRED BY CODE, THE FIRE ALARM CONTRACTOR SHALL CONNECT TO FIRE ALARM SYSTEM AS TROUBLE ALARM. COORDINATE ALL REQUIREMENTS AND SPECIFICATIONS WITH BUILDING ENGINEER OR BUILDING FIRE ALARM REPRESENTATIVE. SUBMIT DRAWINGS AND EQUIPMENT CUT SHEETS FOR ENGINEERS' REVIEW AND FIRE DEPARTMENT APPROVAL.

6. IF A PRE-ACTION DRY PIPE SPRINKLER SYSTEM IS REQUIRED FOR THIS PROJECT, THE PRE-ACTION FIRE ALARM SYSTEM CONTROL PANEL SHALL BE ANNUNCIATED ON THE BUILDING MAIN FIRE ALARM CONTROL PANEL (FACP) IN THE FIRE COMMAND CENTER (FCC.)

7. IF THE PROJECT REQUIRES A UPS SYSTEM AND COMPUTER ROOM AIR CONDITIONING (CRAC) UNITS, THE UPS SYSTEM AND CRAC UNITS SHALL BE CONNECTED TO THE BUILDING FIRE ALARM SYSTEM AND TO THE PRE-ACTION FIRE ALARM CONTROL PANEL. THE UPS SYSTEM, CRAC UNITS, AND FIRE/SMOKE DAMPERS SERVING THE COMPUTER ROOM SHALL BE SHUT DOWN UPON ACTIVATION OF FIRE ALARM SYSTEM. PROVIDE INTERFACE WIRING AS REQUIRED. PROVIDE WIRING FROM CRAC UNIT TO MOISTURE SENSORS OR SITE MONITORING SYSTEM IF IT IS PROVIDED UNDER MECHANICAL CONTROL AND ALARM SECTION. THE CRAC UNITS SHALL SHUT DOWN AND ALARM UPON DUCT DETECTOR ACTIVATION AS PART OF UL SYSTEM. COORDINATE ALL OF THE ABOVE WITH APPROPRIATE UPS, PDU AND CRAC UNIT MANUFACTURERS.

COMMUNICATIONS SYSTEMS

1. ELECTRICAL CONTRACTOR SHALL FULLY FIELD COORDINATE COMMUNICATIONS SYSTEM INSTALLATION (DEVICES AND CABLING) WITH TENANT REPRESENTATIVE PRIOR TO ROUGH IN AND PURCHASING OF MATERIALS.

2. AT TELEPHONE AND DATA SERVICE POINT FOR EACH MODULAR FURNITURE GROUPING, THE ELECTRICAL CONTRACTOR SHALL PROVIDE 4" SQUARE DEEP STEEL JUNCTION BOX WITH TWO 1" CONDUITS (OR AS OTHERWISE SPECIFIED ON PLAN, OR BY DATA/TELECOMMUNICATIONS CONTRACTOR) WITH PULL WIRE. STUB CONDUITS ABOVE CEILING LINE AND PROVIDE PLASTIC BUSHINGS ON CONDUIT ENDS. CABLING SHALL BE PULLED AND WIRED BY OTHERS. COORDINATE ALL WORK WITH DATA/TELECOMMUNICATIONS CONTRACTOR PRIOR TO ROUGH-IN.

3. ALL DATA AND TELECOMMUNICATIONS CABLING SHALL BE INSTALLED BY TENANT'S VENDOR.

4. FOR EACH NEW SINGLE TELEPHONE/DATA OR TV CABLE OUTLET SHOWN MOUNTED IN WALL, ELECTRICAL CONTRACTOR SHALL PROVIDE A 4" SQUARE DOUBLE-GANG STEEL JUNCTION BOX WITH SINGLE-GANG PLASTER RING AND A 3/4" CONDUIT (OR AS OTHERWISE SPECIFIED BY SYSTEM INSTALLER) WITH PULL WIRE. STUB CONDUIT 6" INTO CEILING SPACE AND PROVIDE PLASTIC BUSHINGS. CABLING SHALL BE PULLED BY OTHERS. COORDINATE ALL WORK WITH DATA/TELECOMMUNICATIONS CONTRACTOR PRIOR TO ROUGH-IN.

5. IF REQUESTED, ELECTRICAL CONTRACTOR SHALL REMOVE ALL ABANDONED AND UNUSED DATA/TELECOMMUNICATIONS CABLING, CONDUIT, JUNCTION BOXES, AND ASSOCIATED WIRING LOCATED IN THE CEILING SPACE BACK TO POINT OF ORIGIN, UNLESS THE TENANT DATA/TELECOMMUNICATIONS CONTRACTOR IS CONTRACTED TO REMOVE THE DATA/TELECOMMUNICATIONS CABLING UNDER A SEPARATE CONTRACT. THE GENERAL CONTRACTOR SHALL COORDINATE WITH THE APPROPRIATE CONTRACTOR FOR THE REMOVAL OF THE PHONE/DATA CABLING. PRIOR TO DISCONNECTING AND REMOVING ANY EQUIPMENT, DEVICES OR CABLING, THE APPROPRIATE CONTRACTOR SHALL COORDINATE WITH OWNER AND ARCHITECT TO ENSURE EQUIPMENT SHALL BE REMOVED.

6. ELECTRICAL CONTRACTOR SHALL VERIFY QUANTITY AND TYPE OF DATA/PHONE/AUDIO/VIDEO PORTS TO BE INCLUDED IN FLOOR POKE-THRU DEVICES WITH DATA/TELECOMMUNICATIONS CONTRACTOR PRIOR TO ORDERING.

7. VERIFY ALL SPECIFIC COMPUTER AND COMMUNICATIONS EQUIPMENT REQUIREMENTS WITH EQUIPMENT SUPPLIER PRIOR TO ROUGH IN. COORDINATION SHALL INCLUDE MOUNTING HEIGHTS, CONNECTION TYPE AND POWER REQUIREMENTS. ALL CONNECTIONS FOR COMPUTER AND COMMUNICATIONS EQUIPMENT SHALL BE IN ACCORDANCE WITH EQUIPMENT MANUFACTURER'S AND SUPPLIER'S RECOMMENDATIONS

RECORD DOCUMENTS

1. RECORD DOCUMENTS: THE ELECTRICAL CONTRACTOR SHALL MAINTAIN ACCURATE RECORDS OF ALL DEVIATIONS IN WORK AS INSTALLED FROM WORK SPECIFIED ON THE DRAWINGS OR IN THE SPECIFICATIONS AND IDENTIFY ORIGIN OF CHANGE.

2. KEEP A COMPLETE SET OF RECORD DOCUMENT PRINTS IN CUSTODY DURING ENTIRE PERIOD OF CONSTRUCTION AT THE CONSTRUCTION SITE. ON COMPLETION OF THE PROJECT, TWO COMPLETE SETS OF MARKED-UP PRINTS SHOWING THESE DEVIATIONS SHALL BE DELIVERED TO GENERAL CONTRACTOR AND ARCHITECT/ENGINEER. THIS CONTRACT WILL NOT BE CONSIDERED COMPLETED UNTIL THESE RECORD DRAWINGS HAVE BEEN RECEIVED AND REVIEWED BY THE ENGINEER.

MECHANICAL SYSTEM

1. ELECTRICAL CONTRACTOR SHALL REVIEW MECHANICAL AND PLUMBING DRAWINGS AND SCHEDULES FOR VERIFICATION OF THE EQUIPMENT USED, WIRING AND ADDITIONAL INSTALLATION REQUIREMENTS PRIOR TO PROVIDING REQUIRED ROUGH-INS STARTERS/DISCONNECT SWITCHES, WHEN EQUIPMENT DELIVERED TO JOB SITE. ELECTRICAL CONTRACTOR SHALL VERIFY THIS DATA WITH EQUIPMENT NAMEPLATES OR MANUALS IF SIGNIFICANT DISCREPANCIES OCCUR CONTACT ELECTRICAL ENGINEER FOR REVISION OF THE CONSTRUCTION DOCUMENTS.

2. PROVIDE ALL REQUIRED OUTLETS; HEAVY-DUTY SAFETY DISCONNECT SWITCHES, FUSES AND CONNECTIONS FOR ALL MECHANICAL EQUIPMENT UNLESS PROVIDED BY MECHANICAL CONTRACTOR AS SPECIFICALLY DIRECTED ON MECHANICAL DRAWING OR SPECIFICATION REQUIREMENTS.

3. ELECTRICAL POWER WIRING IN CONNECTION WITH THE AUTOMATIC TEMPERATURE CONTROL SYSTEM, WHERE SHOWN ON THE ELECTRICAL DIVISION DRAWINGS, SHALL BE PERFORMED BY THE ELECTRICAL CONTRACTOR. ALL OTHER WIRING, INCLUDING LOW VOLTAGE REQUIRED FOR PROPER OPERATION OF THE AUTOMATIC TEMPERATURE CONTROL SYSTEM, SHALL BE PERFORMED BY THE MECHANICAL CONTRACTOR.

DEMOLITION

1. DURING THE DEMOLITION PHASE OF THIS CONTRACT, IT IS THE RESPONSIBILITY OF THIS CONTRACTOR TO VERIFY DEMOLITION SCOPE AND ITEMS WITH ARCHITECTURAL AND ELECTRICAL DRAWINGS. EXISTING LIGHT FIXTURES, ELECTRICAL DEVICES, EQUIPMENT AND RELATED ITEMS SHALL BE CAREFULLY REMOVED EITHER AS SHOWN ON THE DEMOLITION DRAWINGS AS BEING REMOVED, OR AS REQUIRED FOR THE WORK UNDER THIS CONTRACT. THESE ITEMS SHALL BE TAGGED, PROTECTED FROM DAMAGE, AND STORED AS DIRECTED BY THE BUILDING MANAGEMENT/OWNER, ARCHITECT OR ENGINEER.

2. DEMOLITION OR ABANDONING ANY ELECTRICAL AND COMMUNICATIONS CONDUIT, WIRING, CABLING, OR DEVICE MEANS TO REMOVE IN ITS ENTIRETY. REMOVE UNUSED CONDUITS FROM CEILING SPACES IN AREAS OF WORK. ABANDONED OUTLET JUNCTION BOXES ARE TO BE REMOVED AND COVERED WITH NEW GYPSUM BOARD. ABANDONED POKE THRU OUTLETS SHALL HAVE COVER PLATES AND BE FILLED WITH FIRE RATED FOAM SEALANT TO MAINTAIN FIRE RATING OF FLOOR.

3. EXISTING LIGHT FIXTURES IN WORK AREA, NOTED ON DRAWINGS TO BE RE-USED SHALL BE THOROUGHLY CLEANED AND/OR REFINISHED TO MATCH NEW.

4. CONTRACTOR SHALL REMOVE SWITCHES, DATA/TELEPHONE OUTLETS, AND ELECTRICAL OUTLETS SCHEDULED FOR DEMOLITION. ALL UNUSED POWER WIRING SHALL BE REMOVED BACK TO JUNCTION BOX IN CEILING SPACE OR TO THE ELECTRICAL PANEL FEEDING THE CIRCUIT. THE SPARE CIRCUIT BREAKER SHALL BE SWITCHED TO THE "OFF" POSITION AND NOTED ON PANEL DIRECTORY AS SPARE WITH THE JUNCTION BOX LOCATION IF APPLICABLE.

5. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR RINGING OUT ALL CIRCUITS WHICH ARE OR MAY BE AFFECTED BY THIS PROJECT TO ENSURE CIRCUIT CONTINUITY AND TO PREVENT OVERLOADING OF ANY SINGLE CIRCUIT. CONTRACTOR SHALL ENSURE THAT CIRCUITS SHARED BETWEEN PROJECT AREA AND EXISTING TENANT SPACES REMAIN INTACT PER ORIGINAL DESIGN INTENT. CORRECT ANY MISLABELED J-BOX COVERS WITH ACCURATE PANEL/BRANCH CIRCUIT IDENTIFICATION. REFER TO DETAIL NOTES ON PLANS THAT APPLY TO WORK TO BE PERFORMED UNDER THIS CONTRACT. CIRCUIT BREAKERS FOR ALL UNUSED CIRCUITS SHALL BE TURNED TO THE "OFF" POSITION AND LABELED AS SPARE ON REVISED PANEL DIRECTORIES.

6. PROVIDE NEW JUNCTION BOXES, NEW CONDUIT AND WIRING AS REQUIRED TO REPAIR, REROUTE AND RECONNECT CONDUCTORS THAT ARE DAMAGED, DISTURBED OR OTHERWISE ADVERSELY AFFECTED BY THE DEMOLITION AND REMODEL WORK.

7. THE LOCATIONS OF EXISTING LIGHTING FIXTURES, POWER DEVICES AND WIRING, ETC., SHOWN ON THE DRAWINGS HAS BEEN TAKEN FROM EXISTING DRAWINGS AND ARE, THEREFORE, ONLY AS ACCURATE AS THAT INFORMATION. ALL EXISTING CONDITIONS SHALL BE VERIFIED AT THE FIELD WITH NECESSARY ADJUSTMENT BEING MADE TO THE DRAWING INFORMATION.

8. ALL FLOOR AND WALL PENETRATIONS WHERE ELECTRICAL DEVICES AND RACEWAY HAVE BEEN REMOVED MUST BE REPAIRED AND SEALED TO MAINTAIN THE REQUIRED FIRE RATING. ALL LUMINAIRES PENETRATING A ONE HOUR FIRE RESISTIVE ENCLOSURE SHALL BE PROPERLY TENTED TO MAINTAIN FIRE RATING OF THE ENCLOSURE. ALL CONDUITS PENETRATING A ONE HOUR FIRE RATED WALL OR CEILING SHALL BE FIRE STOPPED WITH A U.L. LISTED FIRE STOPPING COMPOUND SEALANT.

9. MAINTAIN LIGHTING CIRCUIT AND SWITCHING CONTROL CONTINUITY IN VACANT AND NON-VACANT SUITES THAT ARE ADJACENT TO PROJECT.

10. MAINTAIN RECEPTACLE CIRCUIT CONTINUITY THROUGH WALLS WHICH ARE TO BE DEMOLISHED AND THROUGH RECEPTACLES WHICH ARE TO BE REMOVED.

11. OWNER HAS RIGHT OF FIRST REFUSAL FOR ALL REMOVED EQUIPMENT, FIXTURES, DEVICES, AND CONDUCTORS. THE ELECTRICAL CONTRACTOR SHALL COORDINATE STORAGE AND/OR DISPOSAL OF ALL SUCH ITEMS WITH OWNER/PROPERTY MANAGEMENT PRIOR TO REMOVAL FROM SITE.

WARRANTY

1. PROVIDE COMPLETE WARRANTY INFORMATION FOR EACH ITEM, WHICH SHALL INCLUDE NAME OF PRODUCT OR EQUIPMENT: DATE OF BEGINNING OF WARRANTY OR BOND; DURATION OF WARRANTY OR BOND; AND NAMES, ADDRESSES, AND TELEPHONE NUMBERS OF MANUFACTURING/SERVICING PERSONNEL AS WELL AS PROCEDURES FOR FILING A CLAIM AND OBTAINING WARRANTY SERVICES.

2. THE CONTRACTOR SHALL WARRANT ALL MATERIALS, WORKMANSHIP AND THE SUCCESSFUL OPERATION OF ALL EQUIPMENT AND APPARATUS INSTALLED FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF FINAL ACCEPTANCE OF THE ENTIRE WORK AS IDENTIFIED IN THE GENERAL CONDITIONS.

ELECTRICAL SYMBOLS LEGEND

LIGHTING

SYMBOL	DESCRIPTION
SURFACE / RECESSED	SHADING INDICATES CONNECTION TO EMERGENCY CIRCUIT OR 90-MINUTE BATTERY BACKUP
	2'x4' LIGHT FIXTURE
	2'x2' LIGHT FIXTURE
	1'x4' LIGHT FIXTURE
	NARROW 4' FIXTURE
WALL / CEILING	EXIT SIGN
	EMERGENCY BATTERY PACK FIXTURE

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	NARROW PENDANT FIXTURE		STRIP FIXTURE
	PENDANT FIXTURE		UNDER CABINET FIXTURE
	WALL BRACKET		PENDANT FIXTURE
	DOWNLIGHT FIXTURE		WALLWASH FIXTURE
	WALL MOUNTED FIXTURE		POLE MOUNTED OUTDOOR FIXTURE
	TRACK LIGHTING		
	COMBINATION LIGHT AND EXHAUST FAN		REMOTE EMERGENCY LIGHT HEAD
	PHOTOCELL		

SWITCHING

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
S	SINGLE POLE SWITCH	SD	DIMMER SWITCH
S2	DOUBLE POLE SWITCH	SK	KEYED SWITCH
S3	THREE WAY SWITCH	STO	THERMAL OVERLOAD SWITCH
S4	FOUR WAY SWITCH	SS	GANGED SWITCHES

WALL	CEILING	
SM	OC	OCCUPANCY SENSOR FOR LIGHTING CONTROLS

ABBREVIATIONS

ABBR.	DESCRIPTION
AFF	ABOVE FINISHED FLOOR
AC	ABOVE COUNTER
GFI	GROUND FAULT CIRCUIT INTERRUPTER
GND	GROUND
IG	ISOLATED GROUND
NL	NIGHT LIGHT
RL	RELOCATED DEVICE OR EQUIPMENT
WP	WEATHER PROOF
EM	EMERGENCY
HD	HEAVY DUTY
TR	TAMPER RESISTANT
EG	EGRESS LIGHTING

POWER

SYMBOL (WALL / CEILING / FLOOR)	DESCRIPTION
	JUNCTION BOX
(NOTE)	DUPLEX RECEPTACLE
(NOTE)	DEDICATED DUPLEX RECEPTACLE
(NOTE)	DOUBLE DUPLEX RECEPTACLE
(NOTE)	DEDICATED DOUBLE RECEPTACLE
	SPECIAL PURPOSE RECEPTACLE

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
C	CONTACTOR		FLOOR SURFACE DUPLEX
	SIMPLEX RECEPTACLE		FLOOR SURFACE DOUBLE DUPLEX
	PUSH BUTTON		

SURFACE / RECESSED	DESCRIPTION
	NEW ELECTRICAL PANEL
	EXISTING ELECTRICAL PANEL
	DEMO ELECTRICAL PANEL

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	DISCONNECT, NON FUSED		DISCONNECT, FUSED
	GROUND BAR	P/B	PULLBOX
M	MOTOR	T/F	TRANSFORMER
TC	TIMECLOCK	M	METER
WH	WATER HEATER		SWITCHBOARD
PP	POWER POLE		COMBINATION POWER/COMM. FLOOR BOX
PM	PLUGMOLD		
WM	WIREMOLD		

COMMUNICATION

SYMBOL (WALL / CEILING / FLOOR)	DESCRIPTION
CLG.	COMBINATION DATA/ TELEPHONE OUTLET
CLG.	CRT OR DATA OUTLET
CLG.	TELEPHONE OUTLET
CLG.	TV OUTLET

CIRCUITING

SYMBOL	DESCRIPTION
	HOMERUN, SOLID 120/208 V, OPEN 277/480 V
	CIRCUIT; RUN CONCEALED IN WALL OR CEILING
	CIRCUIT; RUN CONCEALED IN FLOOR OR GRADE
	CONDUIT RISER; TURNED UP, TURNED DOWN
UGE	UNDERGROUND ELECTRICAL

FIRE ALARM AND SECURITY

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
T	THERMOSTAT		MANUAL PULL STATION
F	DUCT DETECTOR		REMOTE LAMP
M	MOTION SENSOR	D	FIRE/SMOKE DAMPER
H	HEAT DETECTOR	ANN	ANNUNCIATOR PANEL
FACP	FIRE ALARM CONTROL PANEL	CR	CARD READER
			SECURITY CAMERA
		DH	DOOR HOLDER

SYMBOL (WALL / CEILING)	DESCRIPTION
	SMOKE DETECTOR
F	FIRE HORN STROBE LIGHT
	FIRE ALARM STROBE LIGHT
S	PAGER OR MUSIC SPEAKER
F	FIRE ALARM SPEAKER

ONE-LINE

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	PANEL BOARD		FUSED DISCONNECT WITHIN SWITCHBOARD
	NON-FUSED DISCONNECT SWITCH		TRANSFER SWITCH
	FUSED DISCONNECT SWITCH	G	GENERATOR
T/F	EXTERIOR PAD-MOUNTED TRANSFORMER	M	METER
T/F	INTERIOR TRANSFORMER		WEATHER HEAD
C/T	CURRENT TRANSFORMER		CURRENT TRANSFORMER
			GROUNDING CONDUCTOR
P/B	PULL BOX	M	MOTOR
SPARE	SPARE SWITCH WITHIN SWITCHBOARD	SPACE	SPACE WITHIN SWITCHBOARD
			CIRCUIT BREAKER

OCCUPANCY/VACANCY/DAYLIGHT SENSOR SCHEDULE

SYMBOL	MANUFACTURER	CATALOG #	DESCRIPTION	NOTES
SMD(V)D	WATTSTOPPER SENSORSWITCH COOPER/GREENGATE LEVITON	DSW-301 WSX-PDT-(SA) ONW-D-1001-MV-N OSSMT-GDX	DUAL TECHNOLOGY, WALL-MOUNTED SINGLE-LEVEL 120/277V OCCUPANCY SENSOR SWITCH; COLOR TO MATCH BUILDING-STANDARD. WHERE DENOTED, ADDITIONAL "D" INDICATES DIMMING. MODIFY PART AS REQUIRED.	1,4,5,7
SMP(V)D	WATTSTOPPER SENSORSWITCH COOPER/GREENGATE LEVITON	PW-301 WSX-(SA) OSW-P-1001-MV-N ODS15-IDX	PASSIVE-INFRARED, WALL-MOUNTED SINGLE-LEVEL 120/277V OCCUPANCY SENSOR SWITCH; COLOR TO MATCH BUILDING-STANDARD. WHERE DENOTED, ADDITIONAL "D" INDICATES DIMMING. MODIFY PART AS REQUIRED.	1,4,5,7
SSMD(V)D	WATTSTOPPER SENSORSWITCH COOPER/GREENGATE LEVITON	DSW-302 WSX-PDT-2P-(SA) ONW-D-1001-DMV-N OSSMD-GDX	DUAL TECHNOLOGY, WALL-MOUNTED DUAL-LEVEL 120/277V OCCUPANCY SENSOR SWITCH; COLOR TO MATCH BUILDING-STANDARD. SEE PLAN NOTES FOR CONNECTION INFORMATION FOR EACH OF (2) SWITCH LEGS ON THIS SENSOR. WHERE DENOTED, ADDITIONAL "D" INDICATES DIMMING. MODIFY PART AS REQUIRED.	1,4,5,7
OC DR	WATTSTOPPER SENSORSWITCH COOPER/GREENGATE LEVITON	DT-355 CMR-PDT-9 OAC-DT-1000-MV ODC10-MDX	DUAL TECHNOLOGY, CEILING MOUNTED OCCUPANCY SENSOR WITH BUILT-IN 120/277V SWITCHING RELAY FOR STANDALONE OPERATION. STANDARD 1000 SQ. FT. COVERAGE. RATED FOR 800W MINIMUM LOAD AT 120V, 1200W AT 277V.	1,3,4
OC D(V)	WATTSTOPPER SENSORSWITCH COOPER/GREENGATE LEVITON	LMDC-100/LMRC-XXX (LMSW-XXX) CM-PDT-9 / PP20(SPODM-SA) OAC-DT-1000 / SP20-MV(GMDS) OSC10-M0X/OPP20-0D2(56081-2W)	DUAL TECHNOLOGY, CEILING MOUNTED OCCUPANCY SENSOR. STANDARD 1000 SQ. FT. COVERAGE. SEPARATE POWER PACK/ROOM CONTROLLER (SPECIFIED) REQUIRED FOR OPERATION.	1,2,3,4,6,7
OC X(V)	WATTSTOPPER SENSORSWITCH COOPER/GREENGATE LEVITON	WT-2200 / BZ-50(RS2-3) CM-PDT-10 / PP20(SPODM-SA) OAC-DT-2000 / SP20-MV(GMDS) OSC20-M0X/OPP20-0D2(56081-2W)	EXTENDED-RANGE (2000 SQ. FT.) CEILING MOUNTED OCCUPANCY SENSOR. ULTRASONIC OR DUAL TECHNOLOGY. SEPARATE POWER PACK (SPECIFIED) REQUIRED FOR OPERATION.	1,2,3,4,7
OC WP	WATTSTOPPER SENSORSWITCH COOPER/GREENGATE CRESTRON	CB-100 / BZ-50 SBR-10-ODP OXC-P-1500-R / SP20-MV GLA-WSP	WEATHER-PROOF, EXTREME-TEMPERATURE OCCUPANCY SENSOR. SEPARATE POWER PACK REQUIRED, DEPENDING ON MANUFACTURER.	1,2,3,4
DS	WATTSTOPPER SENSORSWITCH COOPER/GREENGATE LEVITON	LMLS-400-L CM-PC-ADC/PP20 DLC-PD-DIM/SP20-MV O5C20-MDW	LOW VOLTAGE COMBO DIMMING AND ON/OFF STAND ALONE DAYLIGHT PHOTOSENSOR. SET POINT TO BE LIGHT LEVEL WITHOUT DAYLIGHT. NOTE DIRECTIONAL ARROW.	1,2,3,4,7
OC (V)D #	AS SPECIFIED ON PLAN	AS SPECIFIED ON PLAN	OTHER CEILING-MOUNTED OCCUPANCY SENSOR, AS SPECIFIED IN PLAN NOTES AND/OR SCHEDULES.	1,3,4,6
S M(V)D #	AS SPECIFIED ON PLAN	AS SPECIFIED ON PLAN	OTHER WALL-MOUNTED OCCUPANCY SENSOR SWITCH, AS SPECIFIED IN PLAN NOTES. WHERE DENOTED, "D" INDICATES DIMMING. MODIFY PART AS REQUIRED.	1,4,5,6,7
S LVD	MATCH SYSTEM	SEE ABOVE	LOW VOLTAGE WALL MNT SWITCH, MOMENTARY OR MAINTAINED. WHERE DENOTED, "D" INDICATES DIMMING. MODIFY PART AS REQUIRED.	1,4,5,6,7

NOTES:
1. INSTALL ALL SENSORS, POWER PACKS, ROOM CONTROLLERS, AND ACCESSORIES PER MANUFACTURER'S INSTRUCTIONS. PROVIDE ALL ACCESSORIES REQUIRED FOR COMPLETE SYSTEM.
2. REFER TO THE MANUFACTURER'S SPECIFICATIONS FOR MAXIMUM QUANTITY OF SENSORS PER POWER PACK AND PROVIDE ADDITIONAL POWER PACKS AS REQUIRED.
3. CONTRACTOR TO FIELD-ADJUST SENSOR PLACEMENT AND AIM IN EACH LOCATION IN THE FIELD, FOR OPTIMUM COVERAGE.
4. ALL DEVICES AND ACCESSORIES FOR THE PROJECT SHALL BE SUPPLIED FROM A SINGLE MANUFACTURER. MATCH EXISTING/BUILDING STANDARD WHERE PRESENT.
5. PROVIDE NEUTRAL CONDUCTOR IN SWITCH BOX FOR ALL WALL-MOUNTED OCCUPANCY SENSOR/SWITCHES WHERE REQUIRED BY MANUFACTURER.
6. WHERE DESIGNATED WITH THE LETTER V (PER THE LEGEND) THE SENSOR IS TO BE PROVIDED/PROGRAMMED/SET AS AN AUTOMATIC OFF/MANUAL ON VACANCY SENSOR. CATALOG DESIGNATION ADDITIONS ARE IN PARENTHESES TO MEET THIS REQUIREMENT. PROVIDE LOW VOLTAGE SWITCH WHERE REQUIRED
7. PROVIDE READILY ACCESSIBLE CALIBRATION METHOD, SUCH AS REMOTES, TESTING, MANUALS, AND AS-BUILTS PER LATEST IECC.
8. ELECTRICAL CONTRACTOR TO PROVIDE FOR COMMISSIONING OF LIGHTING CONTROL SYSTEM(S) PER LATEST IECC REQUIREMENTS AS REQUIRED BY THE LOCAL AUTHORITY HAVING JURISDICTION.

RSN: 1426505
Permit #: 19-1741436 LT

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1411 South Potomac
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Suite 140

46607
DEC 17 2019
PROFESSIONAL ENGINEER

Code violations that are found during inspection are required to be corrected. Permit issuance does not grant approval of a code violation.

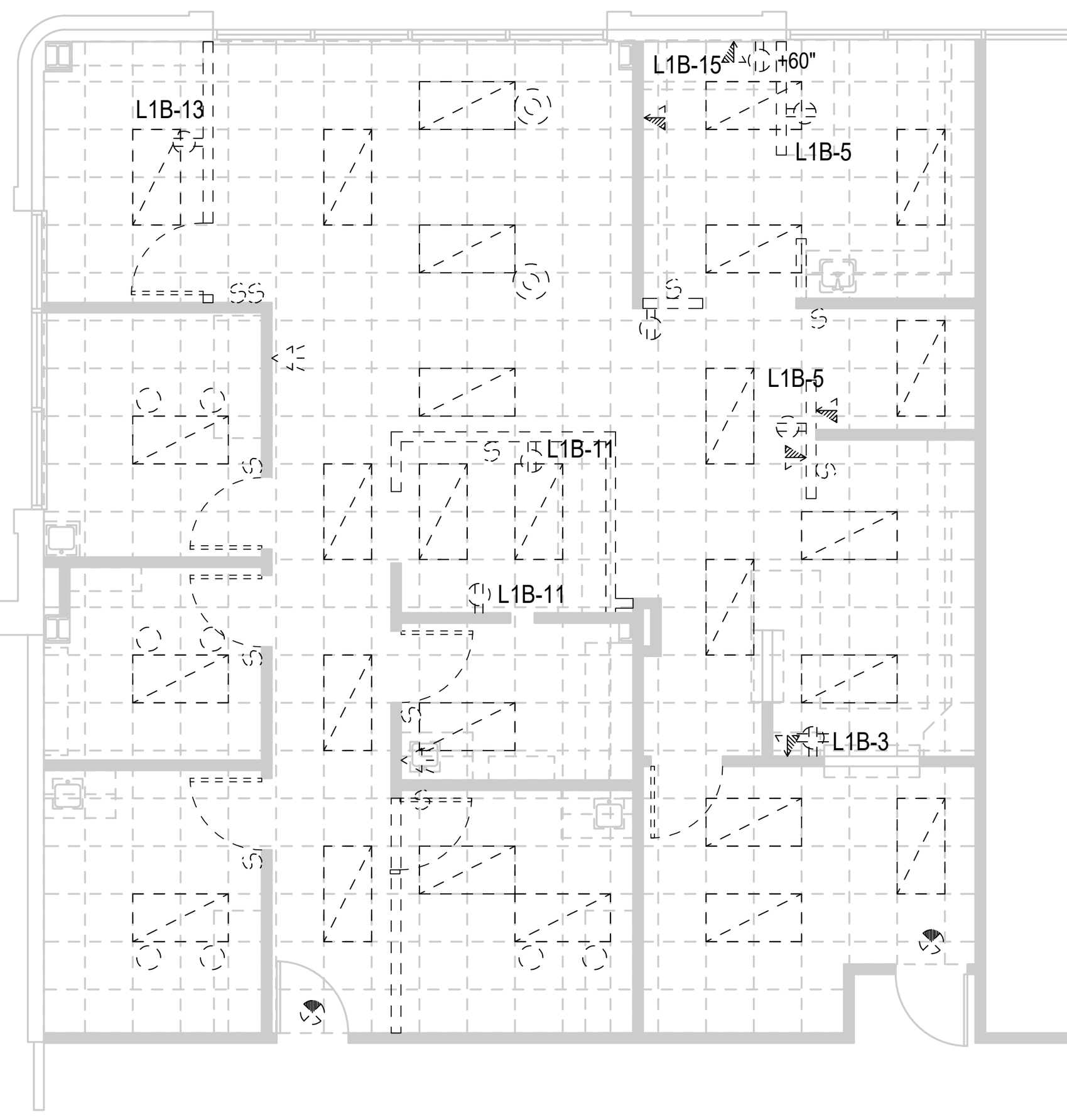
Spec Suite 140

Dates of Record

Project Start Date: 10 Sep 2019

Issued On	Issued For
11 Dec 2019	Tenant's Review & Approval; and Construction

Sheet Contents	General Notes and Legend
Project Team	BL/AW
Project Number	19370
Sheet Mark	E0.0



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DEMOLITION PLAN

SCALE: 1/8"=1'-0"

GENERAL NOTES:

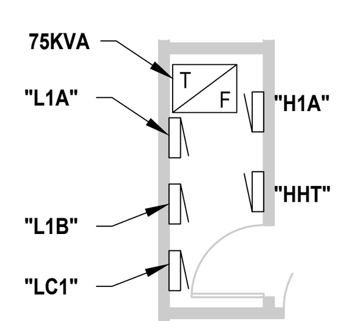
A. REMOVED ITEMS SHOWN AS DASHED AND LIGHT.

B. E.C. TO REMOVE ALL ABANDONED CONDUIT/CABLING/WIRING FROM SPACE INCLUDING ABOVE THE CEILING BACK TO SOURCE. ANY CIRCUITS MADE SPARE TO BE TURNED OFF AND LABELED AS SUCH WITH NEW TYPED PANEL SCHEDULES.

C. RETURN LIGHTING FIXTURES NOT REUSED TO PROPERTY MANAGEMENT STOCK.

D. PROTECT CIRCUITS AFFECTED BY DEMOLITION THAT HAVE DEVICES REMAINING AFTER DEMOLITION.

E. PROTECT ANY DEMOLISHED FIRE ALARM DEVICES AND EXIT SIGNS FOR RELOCATION. RETURN ANY UNUSED DEVICES TO BUILDING MANAGEMENT.



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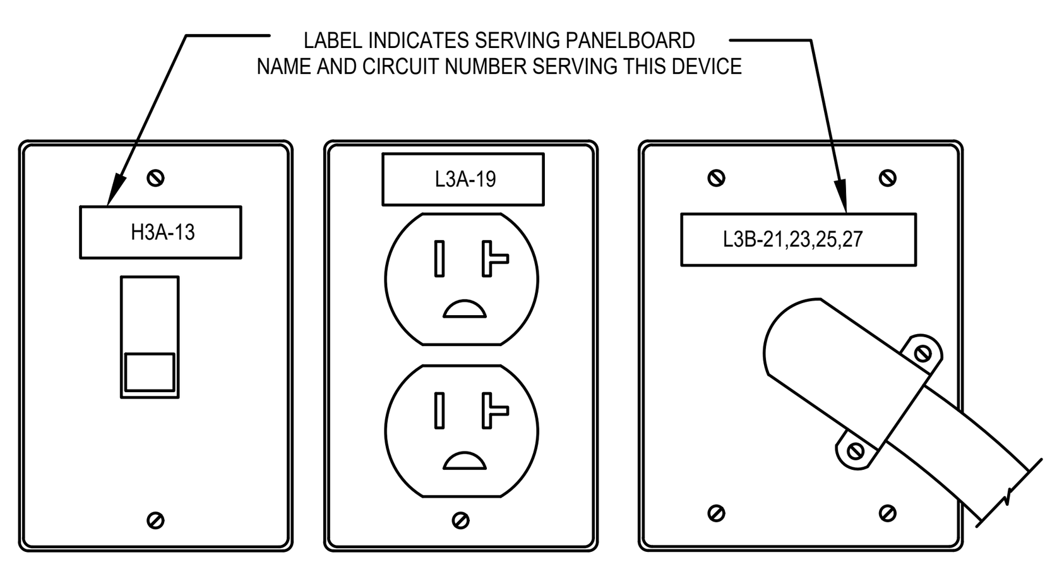
ELECTRICAL ROOM LAYOUT

SCALE: 1/8"=1'-0"



TYPICAL DEVICE LABELING DETAIL

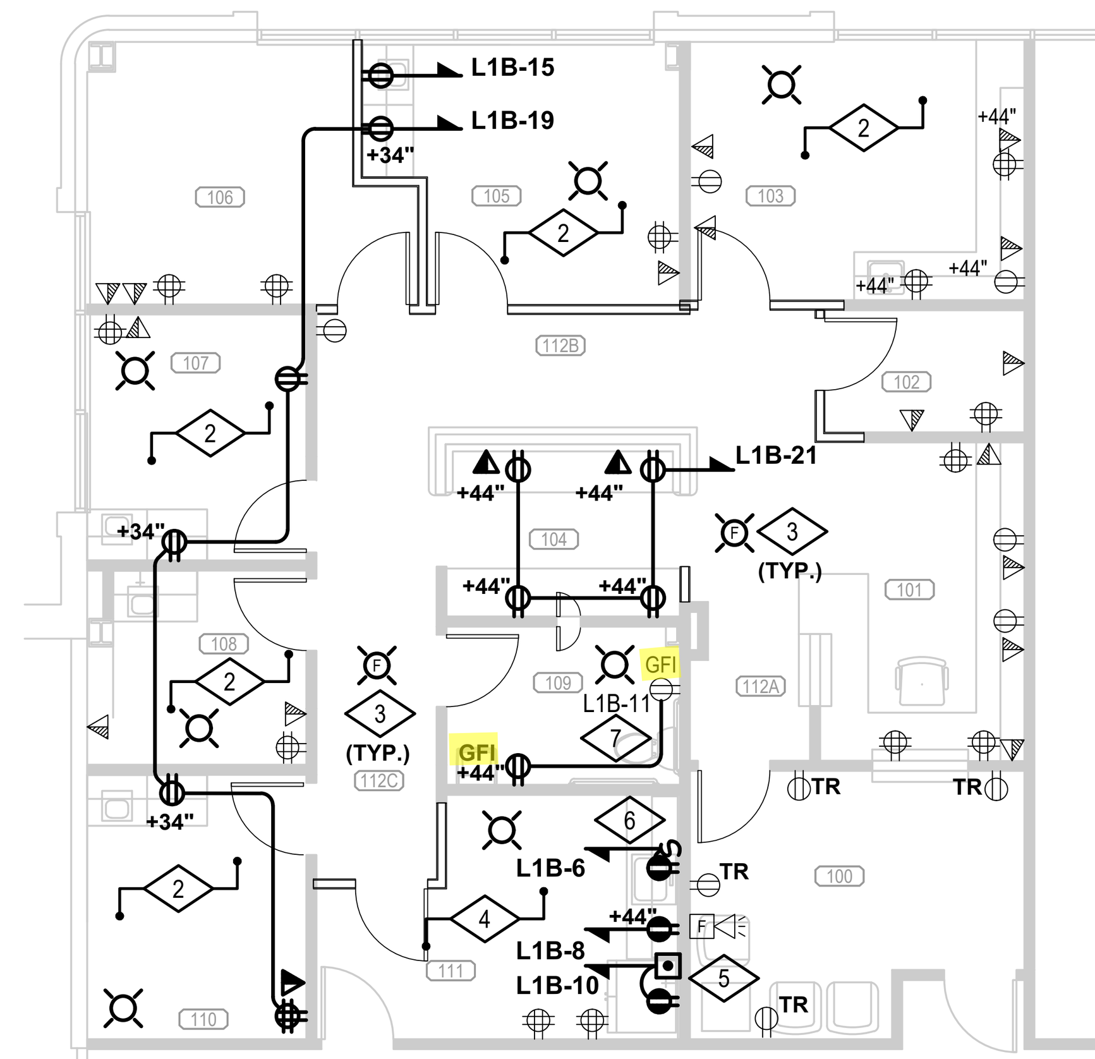
1

SCALE: NONE

Locate the required overcurrent protection per 2017 NEC 240.21

Install electrical connections per 2017 NEC 110.14, identify disconnects per 2017 NEC 110.22 and provide working space around electrical equipment per 2017 NEC 110.26.

Wiring in air handling spaces must comply with 2017 NEC 300.22. Firestop penetrations per 2017 NEC 300.21. Secure and support equipment per 2017 NEC 300.11.



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POWER PLAN

SCALE: 1/8"=1'-0"

GENERAL NOTES:

A. NEW AND RELOCATED ITEMS SHOWN AS BOLD
EXISTING ITEMS SHOWN AS LIGHT

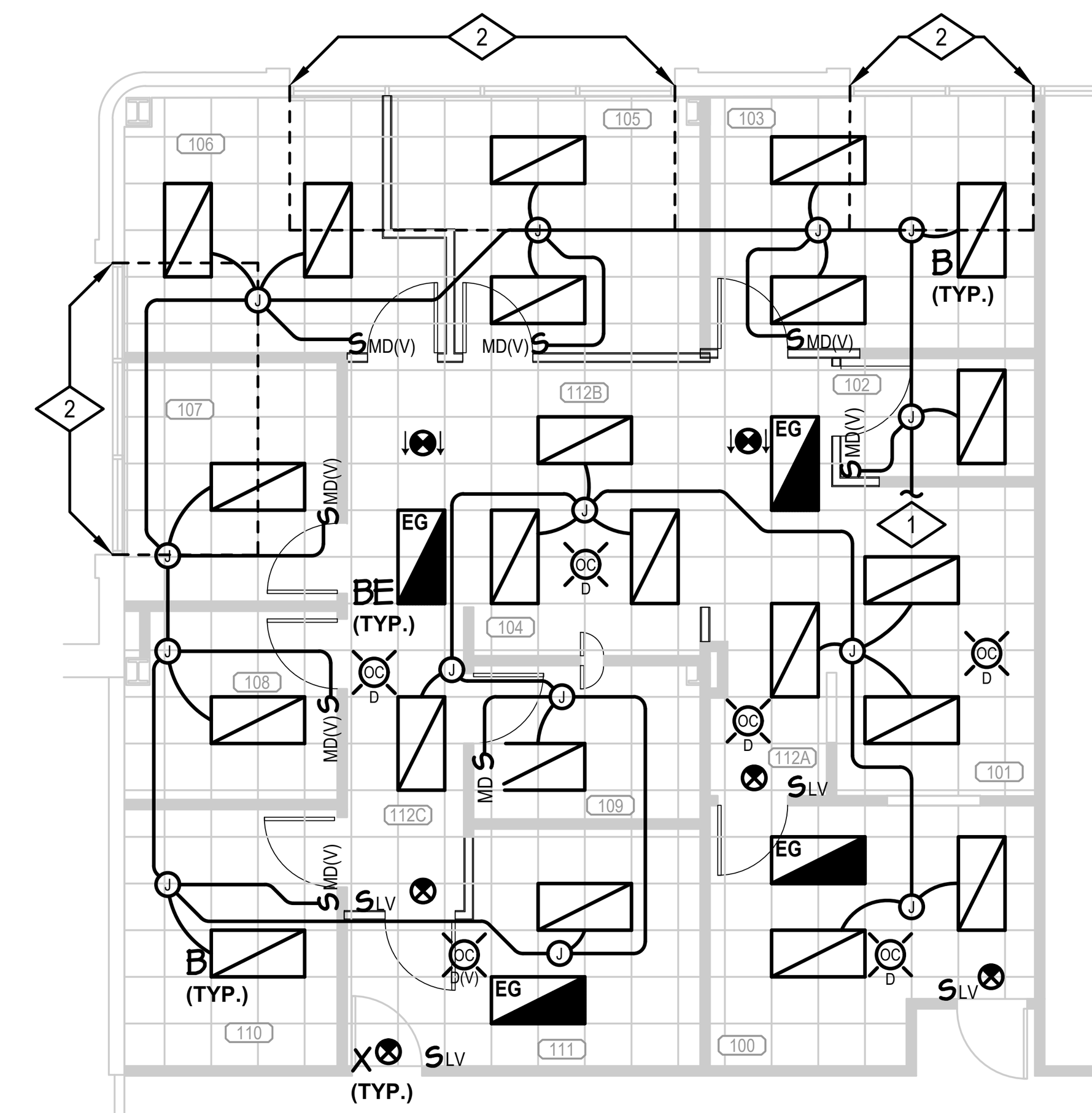
DETAIL NOTES

1. PROVIDE ADHESIVE LABEL WITH CIRCUIT NUMBER ON RECEPTACLES. COORDINATE STYLE OF LABEL WITH PROPERTY MANAGEMENT PRIOR TO INSTALLING. SEE TYPICAL DEVICE LABELING DETAIL.
2. PROVIDE/ENSURE HOSPITAL-GRADE RECEPTACLES FOR ALL DEVICES IN THIS ROOM. ALL BRANCH CIRCUITS IN THIS AREA SHALL BE RUN ENTIRELY IN EMT CONDUIT IN ORDER TO UTILIZE CONDUIT AS REDUNDANT GROUND (PER NEC 517.13) OR PROVIDE GREEN HOSPITAL-GRADE AC/MC CABLE FOR REDUNDANT GROUND. PROVIDE GFCI DEVICES THROUGHOUT. PROVIDE EQUIPMENT GROUNDING CONDUCTOR THROUGHOUT.
3. NEW FIRE ALARM DEVICE, SEE FIRE ALARM GENERAL NOTES. UTILISE DEMOLISHED DEVICES AND COORDINATE WITH BUILDING ENGINEER FOR DEVICES IN BUILDING STOCKPILE PRIOR TO ORDERING NEW.
4. ENSURE/PROVIDE GFCI PROTECTION WITHIN 6' OF SINK EDGE IN THIS AREA.
5. PROVIDE ABOVE COUNTER DEADFRONT GFI DEVICE AHEAD OF KITCHEN OUTLET TO PROVIDE AN ACCESSIBLE GFI PROTECTION FOR KITCHEN DEVICE. PROVIDE ADHESIVE LABEL TO COVER INDICATING DEVICE SERVED, P&S MODEL 2085 OR EQUAL.
6. PROVIDE SWITCHED GFI DUPLEX OUTLET UNDER SINK WITHIN CABINETRY FOR DISPOSAL. SEE MECHANICAL PLANS FOR DETAILS.
7. CONNECT TO EXISTING CIRCUIT SHOWN.

Recepts within 6' of a sink shall be GFI protected per 2017 NEC Art. 210.8.

Room Schedule

100	Waiting	107	Exam #2
101	Reception	108	Exam #3
102	Storage	109	Restroom
103	Procedure	110	Exam #4
104	MA Station	111	Break Room
105	Exam #1	112	Hallway
106	Office	0	



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LIGHTING PLAN

SCALE: 1/8"=1'-0"

GENERAL NOTES:

A. NEW AND RELOCATED ITEMS SHOWN AS BOLD
EXISTING ITEMS SHOWN AS LIGHT

B. LOWER CASE LETTERING INDICATED ON SWITCHES AND FIXTURES IF SHOWN, WHICH SWITCHES CONTROL WHICH FIXTURES.

DETAIL NOTES

1. CONNECT TO LOCAL LIGHTING CIRCUIT (AND CONTROLS, AS APPLICABLE). E.C. TO VERIFY NO MORE THAN 70% LOAD ON A SINGLE 277V LIGHTING CIRCUIT.
2. EXTENTS OF DAYLIGHT ZONE. DAYLIGHT DIMMING NOT APPLIED. FIXTURES IN DAYLIGHT ZONE ARE LESS THAN 150W TOTAL PER SPACE.

Provide emergency illumination equipment that complies with 2017 NEC 700.12 (F) or 2017 NEC 700.

Suspended ceiling systems and the luminaires they support shall meet the requirements of 2017 NEC 410.36(B).

LIGHTING FIXTURE SCHEDULE

ID	TYPE	SIZE	DESCRIPTION	MANUFACTURER	MODEL	CATALOG NUMBER	MOUNTING	DIMMING	LUMENS (LM)	TEMP (K)	CRI	VOLTS (V)	WATTS (W)	NOTES	#
BE	LED	2' X 4'	EM RECESSED TROFFER	ORION LIGHTING	HARRIS	LTHE1-G1-UNV-FDXX-835-24-M	RECESSED	10% (0-10V)	3000	3500	80+	277	26	[EG]	
B	LED	2' X 4'	RECESSED TROFFER	ORION LIGHTING	HARRIS	LTHE1-G1-UNV-FDXX-835-24-M-BB	RECESSED	10% (0-10V)	3000	3500	80+	277	26		
X	LED	-	EXIT SIGN	LITHONIA LIGHTING	UNIVERSAL MOUNT EXIT SIGN	LITHONIA EDG-**-*	UNIVERSAL	-	-	-	-	277	-	[EX]	

PROVIDE ALL PARTS AND PIECES AS NEEDED FOR COMPLETE INSTALLATION. COORDINATE FINAL LOCATIONS, MOUNTING HEIGHTS, AND FIXTURE OPTIONS WITH ARCHITECT AND/OR TENANT. FIXTURES ON SCHEDULE MAY BE SHOWN FOR REFERENCE ONLY. VERIFY FIXTURE QUANTITIES WITH DRAWINGS PRIOR TO ORDERING.

* COORDINATE OPTION WITH ARCHITECT/TENANT.

EG **PROVIDE EG FIXTURES WITH 90-MIN UL924 SWITCHABLE BATTERY BACKUP AND TEST SWITCH AND CIRCUIT TO LOCAL LIGHTING CIRCUIT AHEAD OF MANUAL CONTROL, BUT NOT SENSORS. CONNECT SWITCH LEADS SO POWER FAILURE OVERRIDES SENSOR CONTROL.**

[EX] **PROVIDE EXIT SIGNS WITH 90-MIN BATTERY BACKUP AND CONNECT TO LOCAL LIGHTING CIRCUIT AHEAD OF CONTROL.**

2015 IECC CONTROL MATRIX

SPACE TYPE	MAN. ON	MAN. OFF	MAN. DIM	OVRD. SW. (TC)	TC ON	TC OFF	OCC. SENS. ON	OCC. SENS. OFF	12PM-6AM DIM 30% DOWN	DAY-LTG. DIM	90-MIN BATT./GEN.	EXT. PHOTO-CELL	REMARKS:
PRIVATE OFFICE/EXAM ROOM	X	X	*	**	**	**		X					
OPEN OFFICE AREA	X	X	*	**	**	**	X	X					DUAL LEVEL CONTROL THIS AREA. ONLY 50% TO BE AUTO ON.
DAYLIGHT ZONES	X	X	*	**	**	**		X		X			SEPARATE SWITCH FROM OTHER ZONES
WALK IN COOLER/FREEZER	X	X	*	**	**	**	X	X					
TRAINING/CLASS/CONFERENCE/BREAK/COPY/WORK/LAB/LOCKER	X	X	*	**	**	**		X					
STORAGE/CLOSETS/DATA	X	X	*	**	**	**		X					
HALLWAYS/LOBBIES	X	X	*	**	**	**	X	X					
ENTRY VESTIBULES/STAIRWELLS													NIGHTLIGHT BASED ON SAFETY/SECURITY EXCEPTION
RESTROOMS	X	X	*	**	**	**	X	X					
ELECTRICAL/MECHANICAL ROOMS	X	X	*	**	**	**	X	X					PROVIDE OVERRIDE SWITCH FOR SENSOR CONTROL
COMMERCIAL KITCHEN	X	X	*	**	**	**	X	X					
PHARMACY/GYM/LIBRARY	X	X	*	**	**	**	X	X					DUAL LEVEL CONTROL THIS AREA. ONLY 50% TO BE AUTO ON.
WAREHOUSE	X	X	*	**	**	**	X	X					EACH AISLE INDEPENDENT
RETAIL/RESTAURANT SEATING	X	X	*	**	**	**							DUAL LEVEL CONTROL MINIMUM, UNLESS DIMMED
SPECIFIC APPLICATION CONTROL	X	X	*										MANUAL ONLY PER IECC
FACTORY/INDUSTRIAL	X	X	*	**	**	**	X	X					DUAL LEVEL CONTROL THIS AREA. ONLY 50% TO BE AUTO ON.
EXTERIOR SITE LIGHTING					X	X			X			X	
EXTERIOR FAÇADE/WALLPACKS					X	X						X	
LOADING DOCK					X	X						X	
EXTERIOR EG WALLPACKS					X	X					X	X	UL924/SWITCHED LEADS
INTERIOR EG NON-NL				**	**	**	X***	X***			X		UL924/SWITCHED LEADS. SENSOR IN PARALLEL WITH TC
INTERIOR EG NL (EXIT SIGNS / FIXTURES DESIGNATED NL)											X		NIGHTLIGHT BASED ON SAFETY/SECURITY EXCEPTION

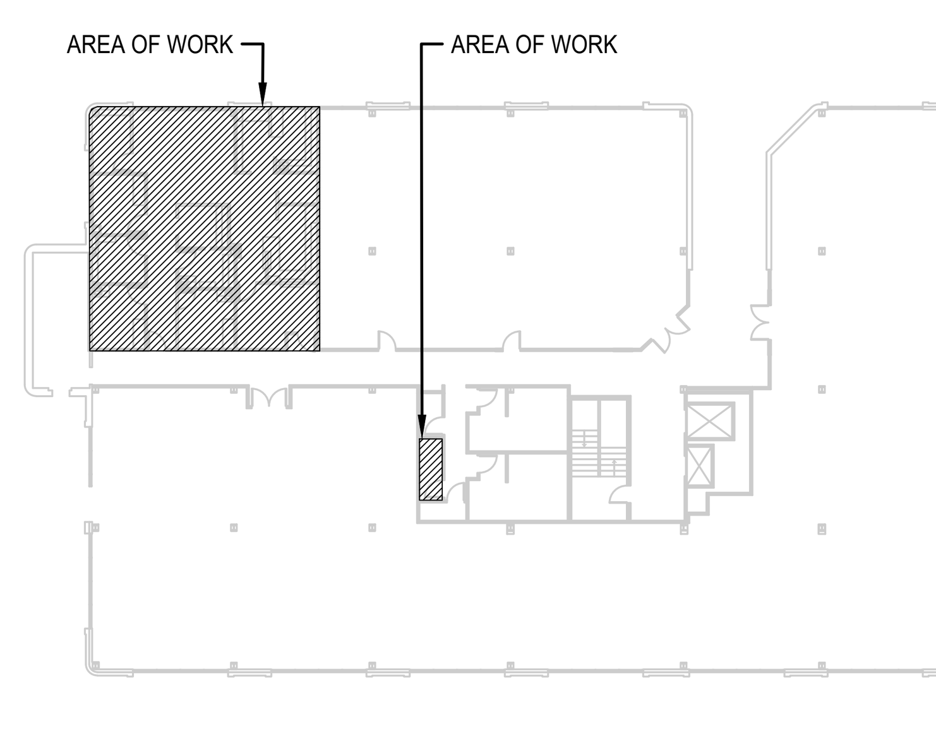
E.C. TO PROVIDE SHOP DRAWINGS AND SUBMITTALS THROUGH THE APPROPRIATE LIGHTING CONTROLS MANUFACTURER REPRESENTATIVE TO MEET THE ABOVE CONTROL INTENT.

SEE OCCUPANCY/VACANCY/DAYLIGHT SENSOR SCHEDULE ON COVERSHEET FOR DETAILS. PROVIDE ADDITIONAL POWER PACKS WHERE CONTROLLING MULTIPLE/ADDITIONAL VOLTAGES.

*** MANUAL DIMMING WHERE REQUIRED BY PLANS.**

**** OVERRIDE SWITCH AND TIME CLOCK CONTROL WHERE/IF NOTED ON PLANS.**

***** PROVIDE SECOND OCCUPANCY POWER PACK WHERE CONTROLLED IN ROOMS WITH VACANCY SENSORS.**



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KEY PLAN

City of Aurora Building Division
Reviewed for Code Compliance
Approved as Noted: William Griffin
Date: Dec 23, 2019
2015 INTERNATIONAL CODES & 2017 NEC

RSN: 1426505
Permit #: 19-1741436 LT

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1411 South Potomac

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46607
DEC 17 2019
PROFESSIONAL ENGINEER
#19370

Spec Suite 140

Dates of Record

Project Start Date: 10 Sep 2019

Issued On	Issued For
11 Dec 2019	Tenant's Review & Approval; and Construction

Sheet Contents: Electrical Plans

Project Team: BL/AW

Project Number: 19370

Sheet Mark: **E1.0**

Legibly identify each breaker or switch for it's use or purpose on the circuit directory in the panel/switchboard per 2017 NEC 408.4.

SUPPLIED FROM: 75 KVA TRANSFORMER

PANEL "L1A" (EXISTING) | VOLTAGE 120 / 208 V 3 Φ | MANF. SQUARE D
FLUSH | M.C.B. 200 A | MLO | I.G. BAR | C.B. BOLT ON
SURFACE X | BUS 225 A CU | FEED THRU L1B | A.I.C. 10 K

TYPE	DESCRIPTION	BKR	CIR	LOAD (VOLT AMPS) / PHASE A	B	C	CIR	BKR	DESCRIPTION	TYPE
R	CORRIDOR RECEPTS	20	1	720	720		2	20	BATHROOM RECEPTS	R
R	CORRIDOR RECEPTS	20	3		720	0	4	-	BLANK	
G	CHILLER	20	5			1000 1500	6	20	WATER HEATER	G
R	EXISTING LOAD	20	7	720	1500		8	20	WATER HEATER	G
R	EXISTING LOAD	20	9		720	720	10	20	SUITE 109 RECEPTS	R
R	EXISTING LOAD	20	11			720 720	12	20	SUITE 109 RECEPTS	R
R	EXISTING LOAD	20	13	720	720		14	20	SUITE 109 RECEPTS	R
R	EXISTING LOAD	20	15		720	720	16	20	SUITE 109 RECEPTS	R
R	EXISTING LOAD	20	17			720 720	18	20	SUITE 109 RECEPTS	R
R	EXISTING LOAD	20	19	720	720		20	20	SUITE 109 RECEPTS	R
R	EXISTING LOAD	20	21		720	720	22	20	SUITE 109 RECEPTS	R
R	EXISTING LOAD	20	23			720 720	24	20	SUITE 109 RECEPTS	R
R	EXISTING LOAD	20	25	720	720		26	20	SUITE 109 RECEPTS	R
R	EXISTING LOAD	20	27		720	720	28	20	SUITE 109 RECEPTS	R
R	EXISTING LOAD	20	29			720 720	30	20	SUITE 109 RECEPTS	R
G	EXISTING LOAD	30	31	1500	720		32	20	SUITE 109 RECEPTS	R
G	-	2P	33		1500	720	34	20	SUITE 109 RECEPTS	R
	BLANK	-	35			0 720	36	20	SUITE 109 RECEPTS	R
	BLANK	-	37	0	720		38	20	SUITE 109 RECEPTS	R
	BLANK	-	39		0	720	40	20	SUITE 109 RECEPTS	R
	BLANK	-	41			0 720	42	20	SUITE 109 RECEPTS	R
				L1A 10920	9420	9700				
				L1B 14200	11475	12445				
				TOTAL 25120	20895	22145				

LOAD TYPE	CONNECTED KVA A	B	C	TOTAL ALL PHASES	FACTOR	DEMAND KVA A	B	C	TOTAL ALL PHASES
LIGHTING	0.0	0.0	0.0	0.0	125%	0.0	0.0	0.0	0
RECEPTACLE (10KVA OR LESS)	3.3	3.3	3.3	10.0	100%	3.3	3.3	3.3	10
RECEPTACLE (OVER 10KVA)	13.6	12.2	12.2	37.9	50%	6.8	6.1	6.1	19
HVAC/MOTOR	0.0	0.0	0.0	0.0	100%	0.0	0.0	0.0	0
MOTOR (LARGEST)	0.0	1.2	0.0	1.2	125%	0.0	1.5	0.0	1
KITCHEN EQUIPMENT	1.0	0.8	1.2	2.9	90%	0.9	0.7	1.0	3
MISCELLANEOUS	7.2	3.5	5.5	16.2	100%	7.2	3.5	5.5	16
TOTAL KVA	25.1	20.9	22.1	68.2	TOTAL KVA	18.2	15.0	16.0	49
WITH GROUND BUS					TOTAL AMPS	151.9	125.3	132.9	137

LEGEND: L = LIGHTING R = RECEPTACLE M = HVAC / MOTOR K = KITCHEN G = MISCELLANEOUS
MAX PERCENT DIFFERENCE BETWEEN PHASES (A,B,C): 17%

PANEL SHOWN FOR REFERENCE ONLY.

SUPPLIED FROM: PANEL "L1A"

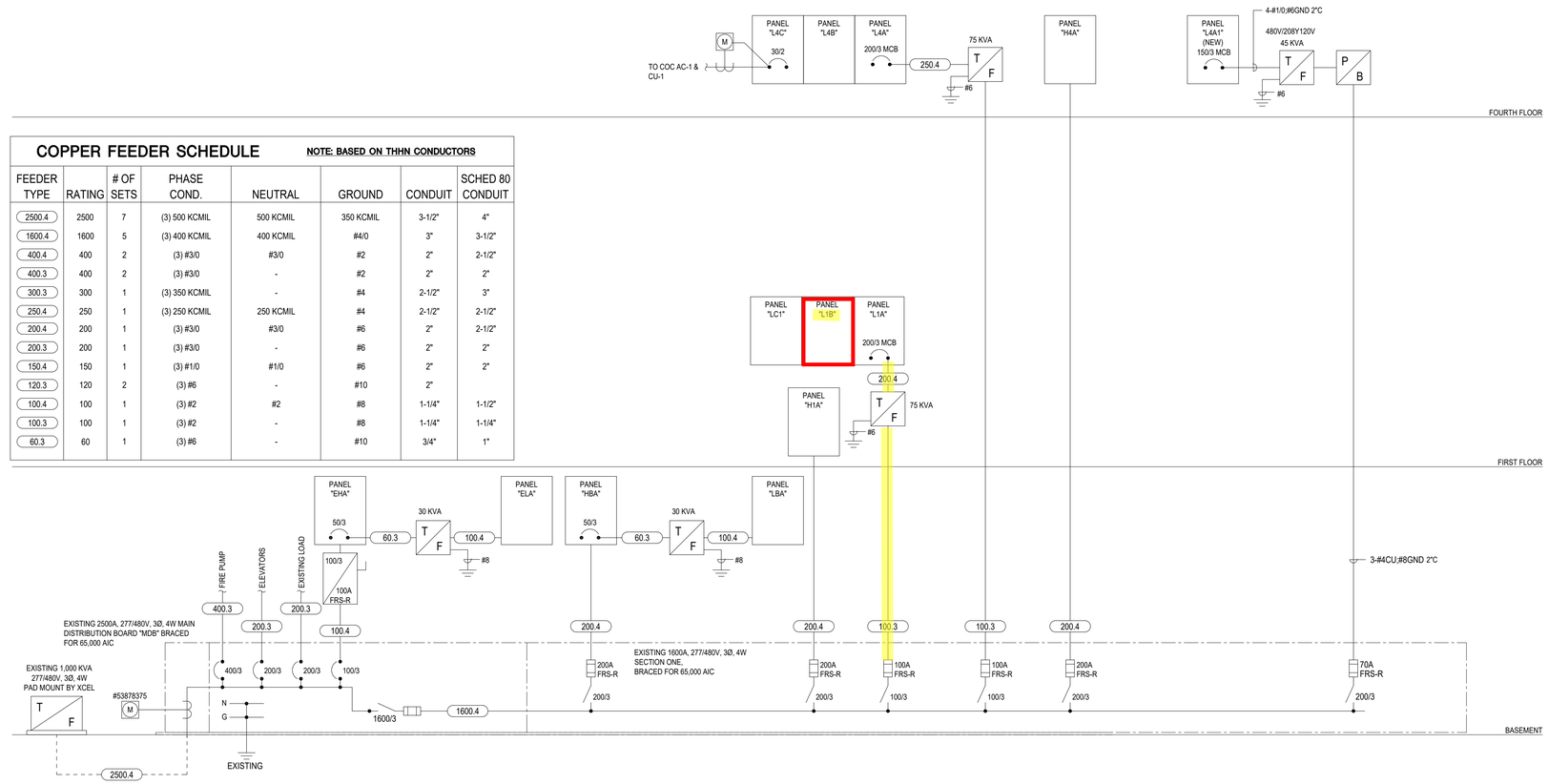
PANEL "L1B" (EXISTING) | VOLTAGE 120 / 208 V 3 Φ | MANF. SQUARE D
FLUSH | M.C.B. | MLO X | I.G. BAR | C.B. BOLT ON
SURFACE X | BUS 225 A CU | FEED THRU LC1 | A.I.C. 10 K

	TYPE	DESCRIPTION	BKR	CIR	LOAD (VOLT AMPS) / PHASE A	B	C	CIR	BKR	DESCRIPTION	TYPE
	R	140 WAITING ROOM RECEPTS	20	1	720	1000		2	20	REST ROOM DOOR OPENERS	G
1	R	140 RECEPTION RECEPTS	20	3		720	500	4	20	OFFICE DIRECTORS BOARD	G
1	R	140 RECEPTS	20	5			1080 1165	6	20	140 DISPOSAL	K 1
	R	140 EXAM RECEPTS	20	7	1080	1000		8	20	140 A.C. BREAK RECEPT	K 1
	R	140 OFFICE RECEPTS	20	9		1080	760	10	20	140 FRIDGE	K 1
1	R	140 BATHROOM RECEPTS	20	11			360 720	12	20	EXISTING LOAD	R
1	R	140 OFFICE RECEPTS	20	13	1080	720		14	20	EXISTING LOAD	R
1	M	140 SUMP PUMP	20	15		1165	720	16	20	EXISTING LOAD	R
	R	EXISITNG LOAD	20	17			1080 720	18	20	EXISTING LOAD	R
1	R	140 EXAM RECEPTS	20	19	1080	0		20	-	BLANK	
1	R	140 MA STATION RECEPTS	20	21		720	0	22	-	BLANK	
	G	EXISITNG LOAD	30	23			1500 0	24	-	BLANK	
	G		2P	25	1500	0		26	-	BLANK	
	G	HEATER	30	27		1500	0	28	-	BLANK	
	G	-	/	29			1500 0	30	-	BLANK	
	G	-	3P	31	1500	0		32	-	BLANK	
		BLANK	-	33		0	0	34	-	BLANK	
		BLANK	-	35			0 0	36	-	BLANK	
		BLANK	-	37	0	0		38	-	BLANK	
		BLANK	-	39		0	0	40	-	BLANK	
		BLANK	-	41			0 0	42	-	BLANK	
				L1B 9680	7155	8125					
				LC1 4520	4320	4320					
				TOTAL 14200	11475	12445					

LOAD TYPE	CONNECTED KVA A	B	C	TOTAL ALL PHASES	FACTOR	DEMAND KVA A	B	C	TOTAL ALL PHASES
LIGHTING	0.0	0.0	0.0	0.0	125%	0.0	0.0	0.0	0
RECEPTACLE (10KVA OR LESS)	3.3	3.3	3.3	10.0	100%	3.3	3.3	3.3	10
RECEPTACLE (OVER 10KVA)	5.7	4.2	5.0	14.8	50%	2.8	2.1	2.5	7
HVAC/MOTOR	0.0	0.0	0.0	0.0	100%	0.0	0.0	0.0	0
MOTOR (LARGEST)	0.0	1.2	0.0	1.2	125%	0.0	1.5	0.0	1
KITCHEN EQUIPMENT	1.0	0.8	1.2	2.9	90%	0.9	0.7	1.0	3
MISCELLANEOUS	4.2	2.0	3.0	9.2	100%	4.2	2.0	3.0	9
TOTAL KVA	14.2	11.5	12.4	38.1	TOTAL KVA	11.3	9.6	9.9	31
WITH GROUND BUS					TOTAL AMPS	93.9	79.8	82.1	85

LEGEND: L = LIGHTING R = RECEPTACLE M = HVAC / MOTOR K = KITCHEN G = MISCELLANEOUS
MAX PERCENT DIFFERENCE BETWEEN PHASES (A,B,C): 19%

1 CIRCUIT REVISED THIS CONTRACT.



COPPER FEEDER SCHEDULE

NOTE: BASED ON THHN CONDUCTORS

FEEDER TYPE	RATING	# OF SETS	PHASE COND.	NEUTRAL	GROUND	CONDUIT	SCHED 80 CONDUIT
2500.4	2500	7	(3) 500 KCMIL	500 KCMIL	350 KCMIL	3-1/2"	4"
1600.4	1600	5	(3) 400 KCMIL	400 KCMIL	#4/0	3"	3-1/2"
400.4	400	2	(3) #3/0	#3/0	#2	2"	2-1/2"
400.3	400	2	(3) #3/0	-	#2	2"	2"
300.3	300	1	(3) 350 KCMIL	-	#4	2-1/2"	3"
250.4	250	1	(3) 250 KCMIL	250 KCMIL	#4	2-1/2"	2-1/2"
200.4	200	1	(3) #3/0	#3/0	#6	2"	2-1/2"
200.3	200	1	(3) #3/0	-	#6	2"	2"
150.4	150	1	(3) #1/0	#1/0	#6	2"	2"
120.3	120	2	(3) #6	-	#10	2"	
100.4	100	1	(3) #2	#2	#8	1-1/4"	1-1/2"
100.3	100	1	(3) #2	-	#8	1-1/4"	1-1/4"
60.3	60	1	(3) #6	-	#10	3/4"	1"

PARTIAL EXISTING ONE-LINE DIAGRAM

SCALE: NONE

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Project Team	BL/AW
Project Number	19370
Sheet Mark	E2.0

COMcheck Software Version 4.1.1.0

Interior Lighting Compliance Certificate

Project Information

Energy Code: 2015 IECC
Project Title:
Project Type: Alteration

Construction Site:

Owner/Agent:

Designer/Contractor:
Bernard Lennon
Corey Electrical Engineering
7822 S. Wheeling Court
Suite B
Englewood, CO 80112

Allowed Interior Lighting Power

A Area Category	B Floor Area (ft2)	C Allowed Watts / ft2	D Allowed Watts (B X C)
1-Healthcare Facility:Exam/Treatment	1600	1.66	2656
		Total Allowed Watts =	2656

Proposed Interior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
Healthcare Facility:Exam/Treatment (1600 sq.ft.)				
LED 1: B: Other:	1	25	26	650
		Total Proposed Watts =		650

Interior Lighting PASSES

Interior Lighting Compliance Statement

Compliance Statement: The proposed interior lighting alteration project represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed interior lighting systems have been designed to meet the 2015 IECC requirements in COM*check* Version 4.1.1.0 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Bernard Lennon - Project Engineer
Name - Title

Signature

12/10/2019
Date

COMcheck Software Version 4.1.1.0

Inspection Checklist

Energy Code: 2015 IECC

Requirements: 0.0% were addressed directly in the COM*check* software

Text in the "Comments/Assumptions" column is provided by the user in the COMcheck Requirements screen. For each requirement, the user certifies that a code requirement will be met and how that is documented, or that an exception is being claimed. Where compliance is itemized in a separate table, a reference to that table is provided.

Section # & Req.ID	Plan Review	Complies?	Comments/Assumptions
C103.2 [PR4][1]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the interior lighting and electrical systems and equipment and document where exceptions to the standard are claimed. Information provided should include interior lighting power calculations, wattage of bulbs and ballasts, transformers and control devices.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Section # & Req.ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
C405.2.1 [EL15][1]	Lighting controls installed to uniformly reduce the lighting load by at least 50%.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.1 [EL18][1]	Occupancy sensors installed in required spaces.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.1, C405.2.2.3 [EL23][2]	Independent lighting controls installed per approved lighting plans and all manual controls readily accessible and visible to occupants.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.2.1 [EL22][2]	Automatic controls to shut off all building lighting installed in all buildings.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.3 [EL16][2]	Daylight zones provided with individual controls that control the lights independent of general area lighting.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.3, C405.2.3.1, C405.2.3.2 [EL20][1]	Primary sidelighted areas are equipped with required lighting controls.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.3, C405.2.3.1, C405.2.3.3 [EL21][1]	Enclosed spaces with daylight area under skylights and rooftop monitors are equipped with required lighting controls.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.4 [EL4][1]	Separate lighting control devices for specific uses installed per approved lighting plans.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.4 [EL8][1]	Additional interior lighting power allowed for special functions per the approved lighting plans and is automatically controlled and separated from general lighting.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.3 [EL6][1]	Exit signs do not exceed 5 watts per face.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
C303.3, C408.2.5.2 [FI17][3]	Furnished O&M instructions for systems and equipment to the building owner or designated representative.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.4.1 [FI18][1]	Interior installed lamp and fixture lighting power is consistent with what is shown on the approved lighting plans, demonstrating proposed watts are less than or equal to allowed watts.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Interior Lighting fixture schedule for values.*
C408.2.5.1 [FI16][3]	Furnished as-built drawings for electric power systems within 90 days of system acceptance.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C408.3 [FI33][1]	Lighting systems have been tested to ensure proper calibration, adjustment, programming, and operation.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

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