

Interior and Exterior Repairs and Improvements MSHP Aircraft Hangar Jefferson City, Missouri



Peckham & Wright Architects, Inc., d.b.a.
PWArchitects, Inc.
2120 Forum Blvd., Ste. 101
Columbia, Missouri 65203
PWArchitects.com | 573.449.2683

OWNER: STATE OF MISSOURI
MICHAEL L. PARSON,
GOVERNOR

DEPARTMENT OF
PUBLIC SAFETY

PROJECT
MANAGEMENT: OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES MANAGEMENT,
DESIGN AND CONSTRUCTION

DESIGNER: PWArchitects
2120 Forum Blvd. Suite 101
Columbia, MO 65203

PROJECT NUMBER: R2007-01

SITE NUMBER: 6011
FACILITY NUMBER: 8136011011

SHEET NUMBER:

G-001

1 OF 28 SHEETS
12/27/2019



12/27/2019



PWArchitects, Inc.

2120 Forum Blvd, Suite 101
Columbia, Missouri 65203
Ph:(573) 449-2683 Fax:(573) 442-6213

PWA Project No. 201919

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DEPARTMENT OF
PUBLIC SAFETY

Interior and Exterior
Repairs and Improvements
MSHP AIRCRAFT HANGAR

CITY OF JEFFERSON AIRPORT

JEFFERSON CITY, MISSOURI

PROJECT # R2007-01

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REVISION: _____
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CAD DWG FILE: A-FP-01
DRAWN BY: LC
CHECKED BY: EM
DESIGNED BY: EM

SHEET TITLE:
SHEET INDEX,
SYMBOLS LEGEND
& LOCATION MAP

SHEET NUMBER:

G002

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12/27/2019

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- G002 SHEET INDEX, SYMBOLS LEGEND,
AND LOCATION MAP
- G003 CODE AND EGRESS PLANS

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- D102 DEMOLITION REFLECTED CEILING PLANS

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- S-100 COVER SHEET
- S-200 FRAMING PLAN
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- P-101 PLUMBING PLAN
- P-500 PLUMBING DETAILS & SCHEDULES

SYMBOLS LEGEND

DRAWING BULLET WITH NORTH ARROW	
	DRAWING TITLE SCALE: XX" = 1'-0"
	GRID REFERENCE
	ARCH. SCALE
DRAWING BULLET WITHOUT NORTH ARROW	
	DRAWING TITLE SCALE: XX" = 1'-0"
	GRID REFERENCE
	ARCH. SCALE
	PAGE FIRST REFERENCED (IF APPLICABLE)
ELEVATION BULLETS	PLAN / ELEVATION DETAIL BULLET
ONE ELEVATION	
SCOPE OF WORK BULLET	
DOOR MARK BULLET	SECTION BULLET
WINDOW MARK BULLET	
REVISION NOTE BULLET	NORTH ARROW
GENERAL NOTE BULLET	COLUMN LINE BULLETS
BENCHMARK BULLET	SPOT ELEV. BULLETS
WALL PARTITION (TYPE) FLAG	TC - TOP OF CURB TG - TOP OF GRADE TW - TOP OF WALL TP - TOP OF PAVING



PROJECT LOCATION

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A

LOCATION MAP
NOT-TO-SCALE

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15



12/27/2019



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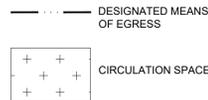
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DESIGNED BY: EM

SHEET TITLE:
CODE PLANS

SHEET NUMBER:
G-003

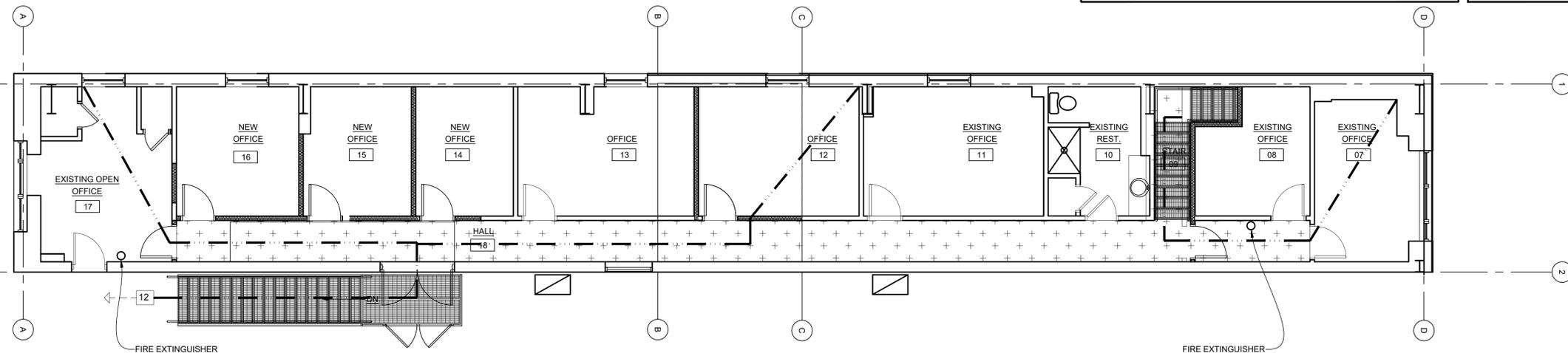
3 OF 28 SHEETS
12/27/2019

LINETYPE AND HATCH DESIGNATIONS

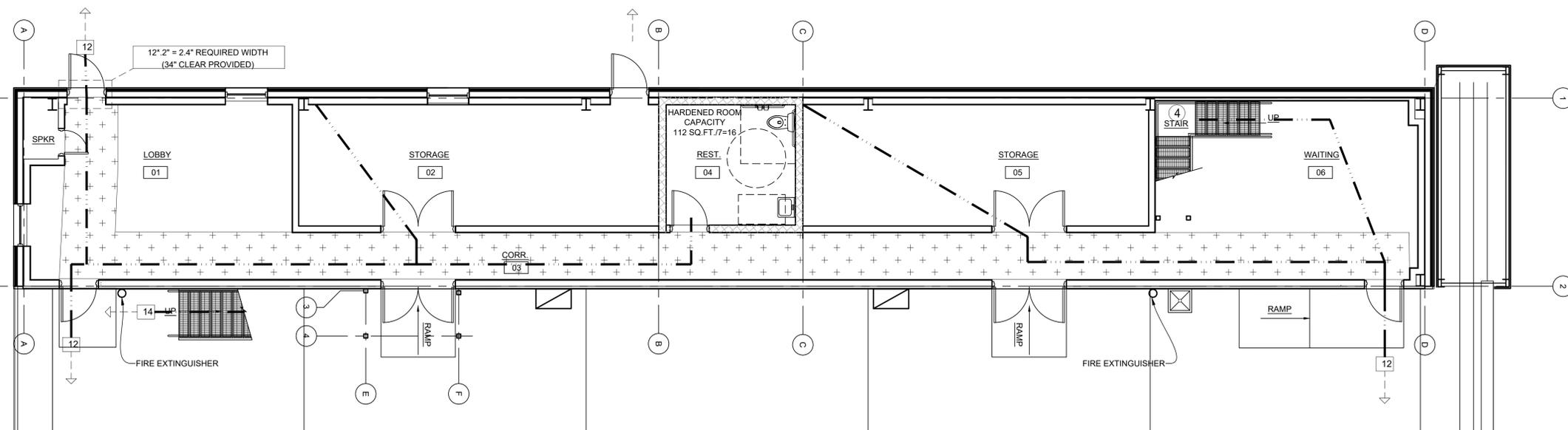


GENERAL INFORMATION	
LOCATION OF PROJECT: Missouri State Highway Patrol Aviation Support Hanger Office 511 Airport Road Jefferson City, MO 65101 1000 W. NIFONG BLVD. COLUMBIA, MO 65203 (573) 441-0292	ARCHITECT: PWA ARCHITECTS 2120 FORUM BLVD, SUITE 101 COLUMBIA, MO 65203 (573) 449-2683 ME/EP ENGINEER: J-SQUARED ENGINEERING 2401 BERNADETTE DRIVE, SUITE 201 COLUMBIA, MISSOURI 65203 (573) 234-4992 OFFICE
PROJECT DESCRIPTION	
RENOVATIONS AND REPAIR OF EXISTING 2 STORY OFFICE BUILDING. NEW METAL STUD WALLS WITH GEMENTITIOUS SIDING FLOOD ZONE?	
APPLICABLE CODES	
2015 - International Building Code 2015 - International Mechanical Code 2015 - International Plumbing Code 2015 - International Fuel Gas Code 2009 - National Electrical Code 2015 - International Energy Conservation Code 2015 - International Fire Code 2015 - International Existing Building Code	
BUILDING HEIGHTS AND AREAS (Chapter 5)	
BASIC ALLOWABLE B BUSINESS, TYPE V-B: 2 STORIES NOT TO EXCEED 40' ABOVE GRADE, 9,000 S.F. S-1 STORAGE, TYPE V-B: 1 STORIES NOT TO EXCEED 40' ABOVE GRADE, 36,000 S.F. (S1)	
EXISTING HANGER BUILDING: 30' TALL, 15,980 S.F. EXISTING OFFICE 2 STORIES, 20' TALL, 2,059 S.F. PER LEVEL	
OCCUPANCY TYPE (Chapter 3)	
S-1 STORAGE AIRCRAFT HANGER STORAGE AND REPAIR, B-1 BUSINESS	
TYPES OF CONSTRUCTION (Chapter 6)	
CONSTRUCTION TYPE VB Structural Fire Ratings (Table 601) Structural Frame including columns, girders & trusses 0 hr. Bearing exterior walls 0 hr. Bearing interior walls 0 hr. Nonbearing exterior walls & partitions 0 hr. Nonbearing interior walls & partitions 0 hr. Floor construction including supporting beams & joists 0 hr. Roof construction including supporting beams & joists 0 hr.	Fire Resistance Rating - Exterior Walls (Table 602) Type VB - S-1/B <5' 2hr. >5' <10' 1hr. >10' <30' 0hr. >30' 0hr. Exterior Opening Requirements (Table 704.8) No Limit

FIRE PROTECTION FEATURES	
Fire Alarm: Not Required/Not Provided Fire Alarm Through Suppression-Standpipes: Not Required/Not Provided Remote Annunciator Panel: Not Required/Not Provided Smoke Detection: Not Required Heat Detection: Not Required/Not Provided Fire Pump: Not Required/Not Provided Backup Power: Not Required/Not Provided Suppression - Standpipes: Not Required/Provided in Hanger Suppression - Automatic: Not Required/Provided in Hanger Fire Extinguishers: Required/Provided: Per NFPA 10 - 1 PER 75' = 6 PROVIDED Type I Commercial Hoods: Not Required/Not Provided	
MEANS OF EGRESS (Chapter 10)	
1005.1 EGRESS WIDTHS - SEE BELOW 1004 DESIGN OCCUPANT LOADS B - Business = sq. ft. / 100 A - Assembly unseated = sq. ft. / 15 S - Storage (mechanical) = sq. ft. / 300 S - Storage (warehouse) = sq. ft. / 500 TOTAL = limited 12 EGRESS WIDTH REQUIRED = "X", "X" PROVIDED	1011.1 EXIT SIGNS 100 feet or viewable. 1011.2 Exit signs shall be internally or externally illuminated. 1014.3 Common path of egress Shall not exceed 75 feet 1016.1 TRAVEL DISTANCE S 300 feet 1017.1 CORRIDORS "Minimum width is 36" 1017.3 Dead ends is 20 feet 1018 MIN NUMBER OF EXITS 2 exits required
PLUMBING FIXTURES (2015 IPC)	
OCCUPANT LOADS FOR DETERMINING REQUIRED PLUMBING FIXTURES n/a B - 1 PER 25 FOR THE FIRST 50 & 1 PER 50 REMAINING = 1 REQUIRED, 1 PROVIDED, 1 EXISTING SERVICE SINK REQUIRED AND PROVIDED	



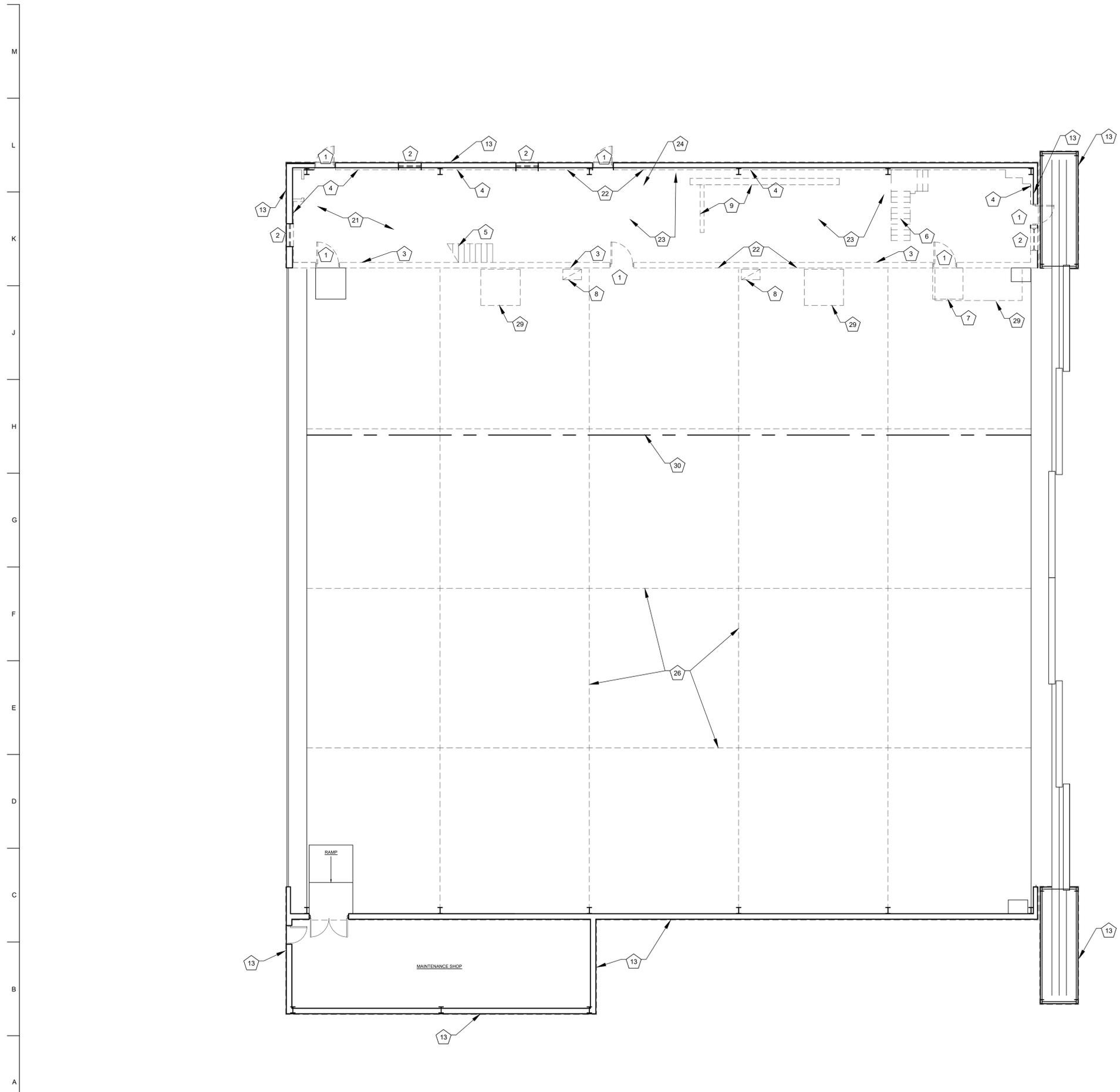
SECOND FLOOR CODE PLAN
SCALE: 3/16" = 1'-0"



FIRST FLOOR CODE PLAN
SCALE: 3/16" = 1'-0"

M
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1 2 3 4 5 6 7 8 9 10 11 12 13 14 15



GENERAL DEMOLITION NOTES

1. FIELD VERIFY ALL DIMENSIONS AND CONDITIONS PRIOR TO EXECUTING ANY WORK. NOTIFY OWNER'S REPRESENTATIVE OF ANY DIMENSIONS OR WORK DIFFERING FROM THAT SHOWN, PRIOR TO PROCEEDING WITH WORK.
2. ALL DIMENSIONS ARE TO FACE OF FINISHED WALL UNLESS OTHERWISE NOTED.
3. DO NOT SCALE DRAWINGS - WHERE DIMENSIONAL DISCREPANCIES ARE ENCOUNTERED, NOTIFY OWNER'S REPRESENTATIVE PRIOR TO PROCEEDING WITH THE WORK.
4. REMOVE ALL TRASH, DEBRIS, AND OTHER MATERIAL CREATED AS A RESULT OF THE CONSTRUCTION WORK.
5. PROTECT ALL ADJACENT AREAS NOT DESIGNATED FOR WORK. REPLACE OR RESTORE DAMAGED ITEMS & AREAS AT NO ADDITIONAL COST TO OWNER.
6. DEMOLISH AND REMOVE ALL EXISTING BUILDING ELEMENTS AS NOTED AND THOSE THAT WOULD INTERFERE WITH THE NEW RENOVATION WORK. VERIFY WITH OWNER'S REPRESENTATIVE REMOVAL OF ANY ITEMS NOT NOTED FOR DEMOLITION.
7. DEMOLITION CONTRACTOR TO VERIFY WALL TYPES.
8. DASHED LINES INDICATE EXISTING BUILDING COMPONENTS TO BE REMOVED.
9. SEE MEP DEMOLITION PLANS.

DEMOLITION SCOPE OF WORK NOTES

- 1 DEMO AND REMOVE EXISTING DOOR AND FRAME
- 2 DEMO AND REMOVE EXISTING VINYL CASEMENT WINDOW AND FRAME
- 3 SHORE UP EXISTING FLOOR FRAMING. DEMO AND REMOVE EXISTING 2X4 WOOD STUD WALL
- 4 SHORE UP EXISTING FLOOR FRAMING. DEMO AND REMOVE EXISTING FLAT 2X4 WOOD STUD WALL
- 5 DEMO AND REMOVE EXISTING WOOD STAIRS
- 6 DEMO AND REMOVE EXISTING WOOD STAIR
- 7 DEMO AND REMOVE EXISTING CONCRETE RAMP
- 8 DISASSEMBLE AND REMOVE EXISTING EXHAUST DUCTWORK TO ABOVE SECOND FLOOR. SALVAGE, TO BE REINSTALLED
- 9 WET SAW CUT AND DEMO EXISTING 10" CONCRETE FLOOR SLAB AS REQUIRED FOR NEW PLUMBING INSTALLATION - SEE MEP
- 10 DEMO AND REMOVE EXISTING WOOD STUD AND GYPSUM BOARD WALLS
- 11 DEMO AND REMOVE EXISTING FLOOR AND FLOOR JOISTS AS REQUIRED FOR NEW RESTROOM CONSTRUCTION
- 12 REMOVE EXISTING CARPET
- 13 REMOVE ALL EXISTING PRE-FINISHED METAL BUILDING SIDING FROM THE BOTTOM UP TO THE SECOND GIRT 7'-0" F.V. AROUND ENTIRE BUILDING
- 14 DEMO AND REMOVE EXISTING GYPSUM BOARD AND WOOD TRIM ON EXISTING WOOD STUD WALLS.
- 15 DEMO AND REMOVE EXISTING WOOD FLOOR AND WALL FRAMING, GYPSUM BOARD AND SUBFLOOR AS REQUIRED FOR NEW STAIR WIDTH AND OVERHEAD CLEARANCE.
- 16 EXISTING RESTROOM WALLS AND FINISHES TO REMAIN
- 17 DEMO AND REMOVE EXISTING WOOD STUD AND GYPSUM BOARD WALLS FOR NEW DOOR LOCATION
- 18 REMOVE, SALVAGE, TO BE RELOCATED EXISTING PREHUNG WOOD DOOR AND FRAME
- 19 DEMO AND REMOVE EXISTING PLASTIC LAMINATE BASE AND WALL CABINETS AND COUNTER TOP
- 21 REMOVAL AND ABATEMENT OF EXISTING ASBESTOS CONTAINING FLOOR MASTIC BY OWNER PRIOR TO DEMOLITION.
- 22 DEMO AND REMOVE EXISTING REMAINING GYPSUM BOARD ON LOWER LEVEL WALLS AT TOP OF WALL
- 23 DEMO AND REMOVE EXISTING CERAMIC TILE FLOORING
- 24 DEMO AND REMOVE EXISTING SANITARY SEWER, VENT AND WATER PIPING, SEE MEP.
- 25 DEMO AND REMOVE EXISTING PAPER FACED FIBERGLASS BATT INSULATION AT EXTERIOR WALLS ABOVE THE SECOND GIRT. DEMO AND REMOVE EXISTING METAL BUILDING INSULATION UP TO NEXT GIRT ABOVE THE SECOND LEVEL FINISH FLOOR.

- 27 TEMPORARY SHORING FOR EXISTING WALL: INSTALL 2 PLY 2X12X16'-0" SYP SELECT STRUCTURAL BEAM CENTERED ON FLOOR OPENING FASTENED TO EACH STUD WITH 3 #10 TEK SCREWS WITH 1" EMBEDMENT INTO EACH EXISTING WALL STUD.
- 28 PROVIDE TEMPORARY SUPPORT FOR REMAINING PORTION OF EXISTING FLOOR JOISTS UNTIL PERMANENT SUPPORT IS PROVIDED
- 29 SAW CUT AND DEMO EXISTING CONCRETE SLAB AS REQUIRED FOR NEW RAMP INSTALLATION - SEE STRUCTURAL
- 30 TEMPORARY CONSTRUCTION BARRIER

ALTERNATE DEMOLITION SCOPE OF WORK

- 20 **ALTERNATE #1:** REMOVE EXISTING DOUBLE HUNG VINYL WINDOWS. TO BE REPLACED.
- 26 **ALTERNATE #2:** RAKE BACK DEMO AND REMOVE EXISTING EXPANSION JOINTS

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SHEET TITLE:
**DEMOLITION
PLANS**

SHEET NUMBER:

D-101

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12/27/19



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SHEET TITLE:
**DEMOLITION
REFLECTED CEILING
PLANS**

SHEET NUMBER:

D-102

5 OF 28 SHEETS
12/27/2019

REFLECTED CEILING PLAN DEMOLITION
SCOPE OF WORK NOTES

- 1 DEMO AND REMOVE EXISTING ACOUSTIC CEILING TILE AND GRID, LIGHTS AND HVAC GRILLS AND DIFFUSERS
- 2 NOT USED
- 3 EXISTING GYPSUM BOARD CEILING AND ATTIC ACCESS LADDER TO REMAIN
- 4 EXISTING GYPSUM BOARD CEILING AND ATTIC ACCESS LADDER TO REMAIN
- 5 DEMO AND REMOVE ALL EXISTING GYPSUM BOARD CEILING ON THE UNDERSIDE OF EXISTING FLOOR JOISTS.
- 6 DEMO AND REMOVE ALL EXISTING DUCTWORK, SEE MEP
- 7 DEMO AND REMOVE EXISTING LIGHTING, SEE MEP
- 8 DEMO AND REMOVE EXISTING CONDUIT AND WIRING, SEE MEP
- 9 DEMO AND REMOVE EXISTING REMAINING GYPSUM BOARD ON WALLS

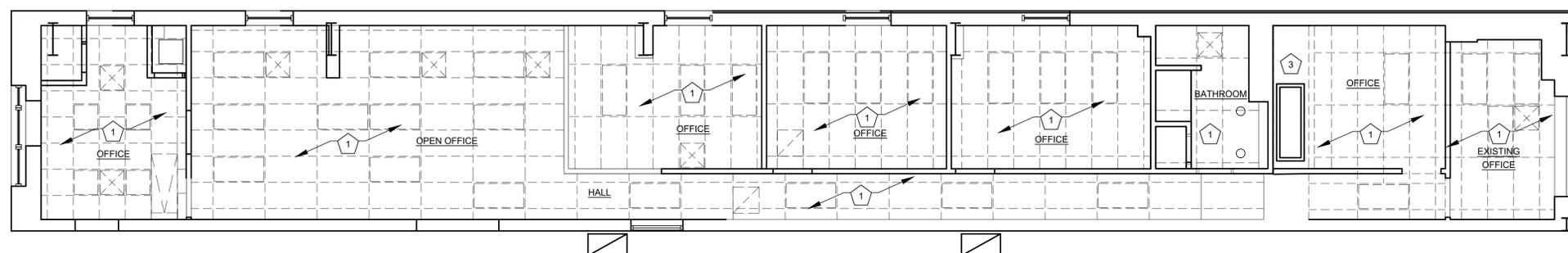
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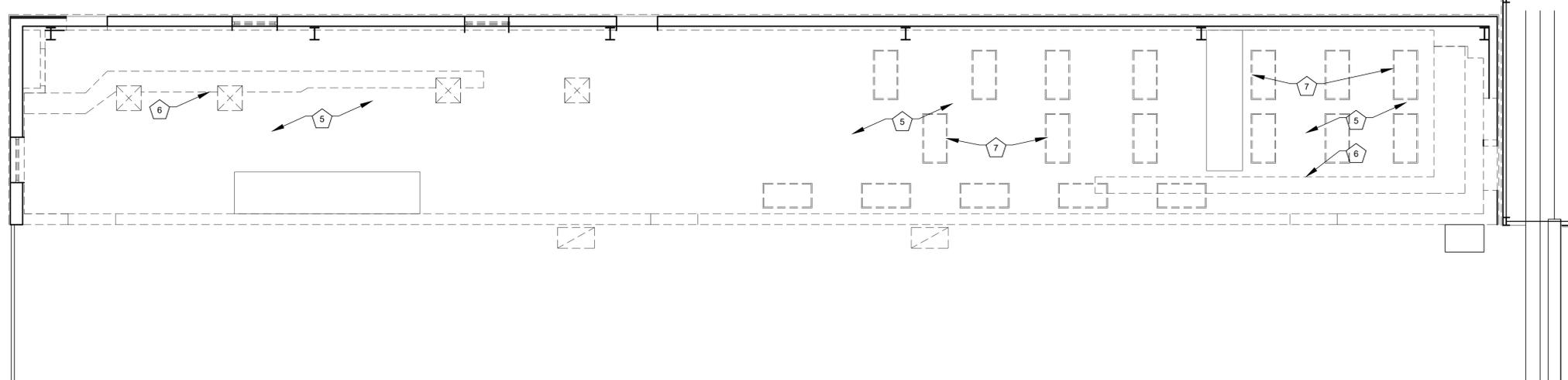
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ALTERNATE DEMOLITION SCOPE OF WORK

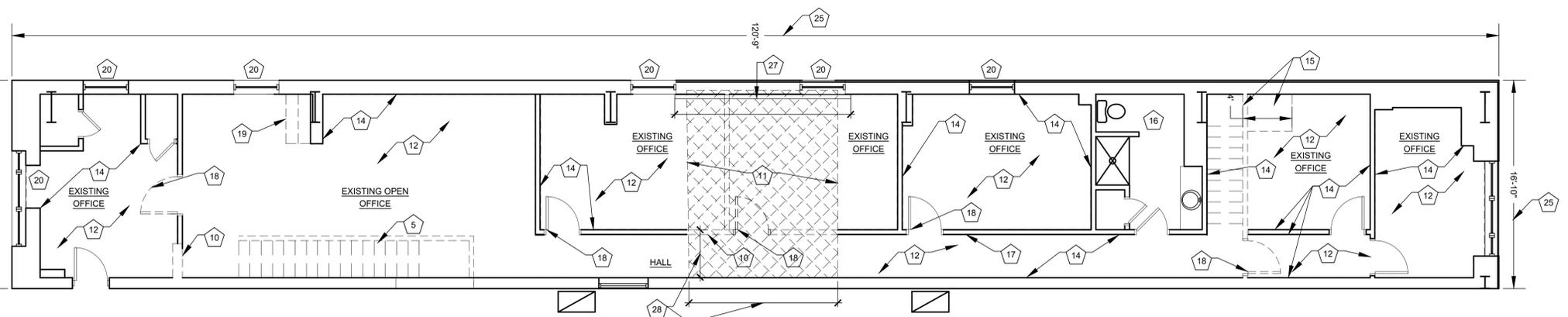
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- 26 ALTERNATE #2: RAKE BACK, DEMO AND REMOVE EXISTING EXPANSION JOINTS



J1 SECOND FLOOR REFLECTED CEILING DEMOLITION PLAN
SCALE: 3/16" = 1'-0"



E1 FIRST FLOOR REFLECTED CEILING DEMOLITION PLAN
SCALE: 3/16" = 1'-0"



A1 SECOND FLOOR DEMOLITION PLAN
SCALE: 3/16" = 1'-0"

Interior and Exterior Repairs and Improvements MSHP Aircraft Hangar

Jefferson City, Cole County, Missouri

STATE OF MISSOURI
MICHAEL L. PARSON,
GOVERNOR



GREGORY L. LINNEMAN - PE
MO LICENSE - 2005001013



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DESIGNED BY: GLL

SHEET TITLE:

COVER / GENERAL
STRUCTURAL DATA

SHEET NUMBER:

S-100

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12/27/2019

GENERAL NOTES

ELEVATION DATUM
SEE ARCHITECTURAL DRAWINGS OR SITE PLAN FOR FINISH FLOOR ELEVATIONS

DESIGN SPECIFICATIONS
2015 INTERNATIONAL BUILDING CODE

EARTHWORK
EARTHWORK OPERATIONS SHALL BE PERFORMED UNDER THE DIRECTION OF A PROFESSIONAL TESTING AGENCY TO ASSURE COMPLIANCE WITH THE RECOMMENDATIONS OF THE SOILS REPORT.

CONCRETE

CONCRETE WORK SHALL CONFORM TO ALL REQUIREMENTS OF THE CURRENT ACI 301, SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS, ACI 318 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE, ACI 305 SPECIFICATIONS FOR HOT WATER CONCRETE, AND ACI 306 SPECIFICATIONS FOR COLD WEATHER CONCRETE, WITH THE FOLLOWING ADDITIONAL REQUIREMENTS:

- CONCRETE SHALL DEVELOP THE FOLLOWING 28-DAY MINIMUM COMPRESSIVE STRENGTH:

FOUNDATIONS	-	3,000 PSI
CAST-IN-PLACE WALLS	-	3,500 PSI
FLOOR SLAB	-	4,000 PSI
EXTERIOR SLABS, WALLS AND CURBS	-	4,000 PSI
- ALL FOOTINGS SHALL BEAR ON UNDISTURBED SOIL OR ENGINEERED FILL.
- CHLORIDE-BASED ADMIXTURES ARE PROHIBITED IN ALL REINFORCED CONCRETE.
- REINFORCING STEEL SHALL CONFORM TO ASTM A615, A616, OR A617, GRADE 60.
- ALL CONTINUOUS REINFORCING STEEL THAT MEETS AT A CORNER SHALL BE TIED TOGETHER WITH A CORNER BAR THAT HAS SUFFICIENT LAP DISTANCE IN EACH DIRECTION
- CONTINUOUS REINFORCING BARS LAP LENGTH SHALL BE A MINIMUM OF 48 BAR DIAMETERS UNLESS NOTED OTHERWISE
- CONCRETE SLUMP SHALL BE A MAXIMUM OF 4" +/- 1" (ASTM C- 143) AS DELIVERED IN THE FIELD. CONTRACTOR MAY USE CHEMICAL ADMIXTURES TO ATTAIN A MAXIMUM SLUMP OF 8" FOR WORKABILITY. NO WATER MAY BE ADDED TO THE CONCRETE MIX ON SITE UNLESS WATER IS WITHHELD AT THE BATCHING FACILITY. IF WATER IS WITHHELD AT THE BATCHING FACILITY IT SHOULD BE REFLECTED ON THE LOAD TICKET. THE TOTAL AMOUNT OF WATER IN THE MIX SHALL NOT EXCEED WHAT IS NOTED ON THE APPROVED TICKET. THIS SHALL BE NOTED IN THE SPECIAL INSPECTOR'S RECORDS.
- CONCRETE EXPOSED TO WEATHER, VEHICLES, AND/OR DEICING CHEMICALS SHALL BE AIR-ENTRAINED WITH 6% (+/-) 1.5% ENTRAINED AIR BY VOLUME AT POINT OF DISCHARGE. DO NOT ALLOW AIR CONTENT OF TROWELED FINISHED FLOORS TO EXCEED 3%.
- SUBMIT CONCRETE MIX PROPORTIONS PRIOR TO START OF WORK. DO NOT BEGIN CONCRETE PRODUCTION UNTIL MIXES HAVE BEEN REVIEWED AND ARE ACCEPTABLE TO THE ENGINEER.
- READY MIX CONCRETE SHALL COMPLY WITH REQUIREMENTS OF ASTM C94.
- CONCRETE WORK EXECUTION
 - CONSTRUCT FORMS TO CORRECT SIZE, SHAPE, ALIGNMENT, ELEVATION AND POSITION; AND TO SUPPORT VERTICAL AND LATERAL LOADS.
 - POSITION, SUPPORT, AND SECURE REINFORCEMENT AGAINST DISPLACEMENT. MINIMUM CONCRETE COVER FOR REINFORCEMENT SHALL BE, UNLESS NOTED OTHERWISE ON THE DRAWINGS:

CAST AGAINST AND EXPOSED TO EARTH.....	3 INCHES
EXPOSED TO EARTH OR WEATHER.....	2 INCHES
NOT EXPOSED TO WEATHER OR IN CONTACT WITH EARTH.....	1 1/2 INCHES
 - PROVIDE CONTROL JOINTS IN SLABS-ON-GRADE AT NOT GREATER THAN 15 FEET ON CENTER IN EACH DIRECTION. SAW CUT CONTROL JOINTS MINIMUM 1/4" OF SLAB DEPTH, AS SOON AFTER SLAB FINISHING WITHOUT DISLODGING AGGREGATE.
 - STEEL TROWEL FINISH ALL INTERIOR CONCRETE SLABS, BROOM FINISH ALL EXTERIOR CONCRETE SLABS.
 - CURE ALL CONCRETE IN COMPLIANCE WITH ACI 301, USING A LIQUID TYPE MEMBRANE, NON-RESIDUAL, CURING COMPOUND COMPLYING WITH ASTM C309. ASSURE COMPATIBILITY WITH FINISH FLOOR COVERING.

MASONRY

MASONRY WORK SHALL CONFORM TO ALL REQUIREMENTS OF THE CURRENT ACI 530.1 SPECIFICATIONS FOR MASONRY STRUCTURES WITH THE FOLLOWING ADDITIONAL REQUIREMENTS:

- HOLLOW MASONRY BLOCK SHALL CONFORM TO ASTM C90 REGULAR WEIGHT GRADE N1.
- COURSE GROUT SHALL CONFORM TO ASTM C476 WITH A MAXIMUM AGGREGATE SIZE OF 3/8" AND A MINIMUM COMPRESSIVE STRENGTH OF 2,500 PSI.
- MORTAR SHALL BE TYPE S CONFORMING TO ASTM C270. AVERAGE COMPRESSIVE STRENGTH IS 2,000 PSI.
- MINIMUM 28-DAY COMPRESSIVE STRENGTH OF MASONRY; $f'_m = 2,000$ PSI.
- WIRE REINFORCING SHALL CONFORM TO ASTM A82, STANDARD TRUSS-TYPE DUR-O-WALL REINFORCING (OR APPROVED EQUAL) AND SHALL BE PLACED CONTINUOUSLY IN ALTERNATE HORIZONTAL MORTAR JOINTS.
- REINFORCING STEEL SHALL CONFORM TO ASTM A615, A616, OR A617, GRADE 60. THE MINIMUM LAP FOR SPLICES SHALL BE 48 BAR DIAMETERS. PROVIDE DUR-O-WALL REBAR POSITIONERS.
- ALL STEEL LINTELS TO BE A36 STEEL OR A992 GRADE 50. ALL LINTELS TO BE HOT DIPPED GALVANIZED.
- INTERSECTING STRUCTURAL WALLS SHALL BE ANCHORED BY STEEL CONNECTORS SPACED VERTICALLY AT 48" O.C. MAXIMUM. THE CONNECTORS SHALL CONFORM TO ASTM A36 AND SHALL HAVE A MINIMUM SECTION OF 1/4" x 1 1/2". THEY SHALL BE 28" LONG WITH 2" AT EACH END BENT AT 90 DEGREES TO FORM A "U" OR "Z" SHAPE. ALL CELLS ABOVE AND BELOW THE ANCHOR SHALL BE GROUTED, AND THE BENT ENDS OF THE CONNECTORS SHALL BE EMBEDDED IN THE GROUT, 2" MIN.
- EXPANSION JOINTS SHALL BE PROVIDED IN CMU BLOCK WALLS FULL HEIGHT OF WALL AT INTERVALS NOT EXCEEDING 24'-0". NOT CLOSER THAN 2'-0" FROM OPENINGS JOINT REINFORCING SHALL BE SEVERED AT EXPANSION JOINT LOCATIONS, HOWEVER BOND BEAM REINFORCING SHALL BE CONTINUOUS THROUGH THE JOINT.
- BOND BEAMS OR GROUTED CELLS ARE REQUIRED AT ALL CONNECTIONS TO CMU.

COLD-FORMED METAL FRAMING

- ALL PRODUCTS TO BE MANUFACTURED BY CURRENT MEMBERS OF THE STEEL STUD MANUFACTURERS ASSOCIATION.
- ALL GALVANIZED STUDS AND JOISTS SHALL BE FORMED FROM STEEL THAT CORRESPONDS TO THE MINIMUM REQUIREMENTS OF THE AISI STANDARDS. $F_y = 33$ KSI UNLESS NOTED OTHERWISE.
- ALL STRUCTURAL MEMBERS SHALL BE DESIGNED IN ACCORDANCE WITH THE AISI SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS, AND SHALL CONFORM TO ASTM C955.
- FASTENING OF COMPONENTS SHALL BE WITH CORROSION RESISTANT SELF-DRILLING SCREWS, OR WELDS COMPLYING WITH AWS STANDARDS. ALL WELDS OF GALVANIZED STEEL SHALL BE TOUCHED UP WITH ZINC-RICH PAINT. WELDERS SHALL BE QUALIFIED PER AWS D1.3.
- SLIP TRACK IS EXPECTED AT ROOF TO WALL CONNECTIONS @ INTERIOR WHEN WALLS ARE GROUND SUPPORTED.
- ALL MATERIAL TO BE G90 GALVANIZED.
- SCREWS SHALL HAVE RUST-INHIBITIVE COATING PER ASTM F1941, SUCH AS CLIMASEAL BY ITW BUILDEX.

TIMBER

TIMBER WORK SHALL CONFORM TO ALL REQUIREMENTS OF THE CURRENT ANSI/AF&PA NATIONAL DESIGN SPECIFICATION (NDS) FOR WOOD CONSTRUCTION, WITH THE FOLLOWING SUPPLEMENTAL REQUIREMENTS:

- FOR COMMON MEMBER SIZES, THE SPECIES AND GRADES SHALL BE AS FOLLOWS, UNLESS NOTED OTHERWISE:

A.	2X4	SPF No.1/No.2
B.	2X6	SPF No.1/No.2
C.	2X8	DF-L No.2
D.	2X10	DF-L S.S.
E.	2X12	DF-L S.S.

EQUIVALENT (OR BETTER) GRADES & SPECIES MAY BE SUBMITTED FOR THE ENGINEER'S APPROVAL.
- SIZES SHOWN FOR LUMBER ARE NOMINAL SIZES.
- TIMBER EXPOSED TO WEATHER OR GROUND, OR IN CONTACT WITH CONCRETE OR MASONRY SHALL BE PRESSURE-IMPREGNATED BY AN APPROVED PROCESS AND PRESERVATIVE.
- SPLICING OF JOISTS, STUDS, OR HEADERS IS PROHIBITED EXCEPT AS SHOWN.
- BOLTS SHALL CONFORM TO ASTM A307. HOLES SHALL BE DRILLED PER SECTION 11.1.2 OF THE 2005 ANSI/AF&PA NDS FOR WOOD CONSTRUCTION.
- LAG SCREWS AND WOOD SCREWS SHALL BE INSTALLED PER SECTIONS 11.1.3 AND 11.1.4, RESPECTIVELY, OF THE 2005 ANSI/AF&PA NDS FOR WOOD CONSTRUCTION.
- COMMON NAILS SHALL BE USED, UNLESS NOTED OTHERWISE. IN ADDITION, NAILS SHALL BE GALVANIZED, IF EXPOSED TO WEATHER OR MOISTURE. TOE-NAILS SHALL BE DRIVEN PER SECTION 11.1.5.4 OF THE 2005 ANSI/AF&PA NDS FOR WOOD CONSTRUCTION.
- FASTENING SHALL BE PER THE IBC MINIMUM FASTENING SCHEDULE, TABLE 2304.9.1, UNLESS NOTED OTHERWISE.
- CONNECTIONS/CONNECTORS SHALL BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS.

STRUCTURAL STEEL

- FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH THE CURRENT EDITION OF THE AISC SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS, THE AISC CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES AND CURRENT OSHA STANDARDS.
- WIDE FLANGE SHAPES SHALL CONFORM TO ASTM A992. STRUCTURAL TUBES SHALL CONFORM TO ASTM A500 GRADE B. ALL OTHER STRUCTURAL STEEL SHALL CONFORM TO ASTM A36.
- BOLTS, UNLESS OTHERWISE SHOWN, SHALL CONFORM TO ASTM A325-N, SIZE AS PER PLAN.
- ANCHOR BOLTS, UNLESS OTHERWISE SHOWN, SHALL CONFORM TO ASTM F1554 GRADE 36.
- SPLICING OF STRUCTURAL STEEL IS PROHIBITED EXCEPT AS DETAILED.
- ALL STRUCTURAL AND MISCELLANEOUS STEEL ITEMS SHALL BE HOT DIPPED GALVANIZED.
- ALL WELDING SHALL BE DONE BY QUALIFIED WELDERS IN ACCORDANCE WITH THE CURRENT EDITION OF THE AWS STRUCTURAL WELDING CODE. WELDING ELECTRODES SHALL BE E70XX.

POST-INSTALLED ANCHORS

- ALL POST-INSTALLED ANCHORS SHALL MEET THE REQUIREMENTS OF THE CODE-CITED EDITION OF ACI 318, APPENDIX D1, AND SHALL BE ACCEPTABLE FOR BOTH CRACKED AND UNCRACKED CONCRETE.
- EXPANSION ANCHORS HAVE BEEN DESIGNED AS HILTI KWIK BOLT TZ ANCHORS, UNLESS NOTED OTHERWISE.
- ADHESIVE ANCHORS HAVE BEEN DESIGNED TO USE HILTI HIT HY 200 ADHESIVE IN CONCRETE OR SOLID MASONRY, UNLESS NOTED OTHERWISE.
- EQUIVALENT ANCHORS MAY BE SUBMITTED FOR THE ENGINEER'S APPROVAL. SUBMITTALS ARE THE CONTRACTOR'S RESPONSIBILITY AND MUST INCLUDE EVALUATION REPORTS FROM THE INTERNATIONAL CONFERENCE OF BUILDING OFFICIALS (ICBO).
- EMBEDMENT DEPTH IS DEFINED AS THE DISTANCE FROM THE SURFACE OF THE LOAD-BEARING BASE MATERIAL TO THE DEEPEST PART OF THE ANCHOR AFTER THE ANCHOR HAS BEEN DRIVEN INTO THE HOLE BUT NOT YET EXPANDED.
- ADHESIVE ANCHORS SHALL BE ACCEPTABLE FOR LONG-TERM LOADING. WHEN BASE MATERIAL TEMPERATURES ARE BELOW 40 DEG F, ONLY NON-EPOXY-BASED ADHESIVES SHALL BE USED.
- POST-INSTALLED ANCHORS SHALL ONLY BE USED WHERE SPECIFIED ON THE DRAWINGS. THE CONTRACTOR SHALL OBTAIN APPROVAL FROM THE ENGINEER PRIOR TO USING POST-INSTALLED ANCHORS FOR MISSING OR MISPLACED CAST-IN-PLANE ANCHORS. CARE SHALL BE TAKEN TO AVOID CONFLICTS WITH EXISTING REINFORCING BARS. HOLES SHALL BE DRILLED AND CLEANED PER ANCHOR MANUFACTURER'S SPECIFICATIONS.
- STAINLESS STEEL ANCHORS ARE REQUIRED AT ALL PERMANENTLY EXPOSED WEATHER CONDITIONS.

NON-COMPOSITE DECK / SUSPENDED SLABS

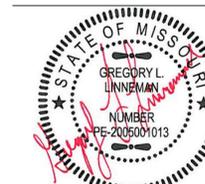
- FABRICATE RIBBED-STEEL-SHEET NONCOMPOSITE FORM-DECK PANELS TO COMPLY WITH "SDI SPECIFICATIONS AND COMMENTARY FOR NONCOMPOSITE STEEL FORM DECK," IN SDI PUBLICATION NO. 31.
- GALVANIZED-STEEL SHEETS SHALL BE CONSTRUCTED TO MEET ASTM A 653, STRUCTURAL STEEL (SS), GRADE 33 G90 GALVANIZED.
- DECK BUNDLES SHALL BE PLACED ON JOISTS WITH EXTREME CAUTION, FOLLOWING THE JOIST MANUFACTURER'S RECOMMENDATIONS FOR PROPER PLACEMENT. DECKING OR DECK ACCESSORY BUNDLES SHALL NOT EXCEED 4000 LBS.
- DECK SHALL BE CONTINUOUS OVER A MINIMUM OF THREE SPANS.
- ALL WELDING SHALL BE DONE BY QUALIFIED WELDERS, IN ACCORDANCE WITH THE CURRENT EDITION OF THE AWS D1.3 - STRUCTURAL WELDING CODE - SHEET STEEL (AND COMMENTARY). WELDING ELECTRODES SHALL BE E6022.
- SHORING OF STRUCTURAL STEEL OR DECK MEMBERS PRIOR TO CASTING CONCRETE IS NOT REQUIRED.
- DEPTH OF CONCRETE SLAB SHALL BE BY GAGE/MEASUREMENT METHOD, NOT BY TRANSIT OR SITE LEVEL METHOD PER ACI 117-90 FOR SUSPENDED SLABS. FLOOR FLATNESS (FF) TO EXCEED 35 FOR ALL SUSPENDED SLABS NOT INTENDED FOR ROOFS.
- NON-COMPOSITE SLABS SHALL NOT BE SAW CUT.

INDEX OF SHEETS

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STAIR FRAMING PLANS AND DETAILS	S-201
ENLARGED FRAMING PLAN AND DETAILS	S-202

MEZZANINE DESIGN DATA

2015 INTERNATIONAL BUILDING CODE / ASCE 7-10	
BUILDING OCCUPANCY CATEGORY	II
FLOOR LOAD	
LIVE LOAD	50
FLOOR FRAMING	70
MECHANICAL ALLOWANCE	40
COLLATERAL	70
TOTAL	68 lbs/sqft
EARTHQUAKE DESIGN DATA	
RISK CATEGORY	II
I_e	10
S_{ps}	02
S_{ps}	0105
SITE CLASS	
S_{DS}	D
S_{D1}	0213
S_{D2}	0167
SEISMIC DESIGN CATEGORY	
BASIC SEISMIC-FORCE-RESISTING SYSTEM =	
LIGHT-FRAMED WALL SYSTEMS USING FLAT STRAP BRACING	
R	4
Ω_o	20
C_u	35
DESIGN BASE SHEAR	
EQUIVALENT LATERAL FORCE PROCEDURE	
$V = 0.054W$	
NET ALLOWABLE SOIL BEARING	
*ALLOW BEARING VALUE PER IBC TABLE 1806.2	
1500 lbs/sqft**	



GREGORY L. LINNEMAN - PE
MO LICENSE - 2005001013

CROCKETT
ENGINEERING CONSULTANTS
1000 W. Nifong Blvd., Bldg. 1
Columbia, Missouri 65203
(573) 447-0292
www.crockettengineering.com
Crockett Engineering Consultants, LLC
Missouri Certificate of Authority
#2000151301

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DEPARTMENT OF
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Interior and Exterior
Repairs and Improvements
MSHP AIRCRAFT HANGAR

CITY OF JEFFERSON AIRPORT

JEFFERSON CITY, MISSOURI

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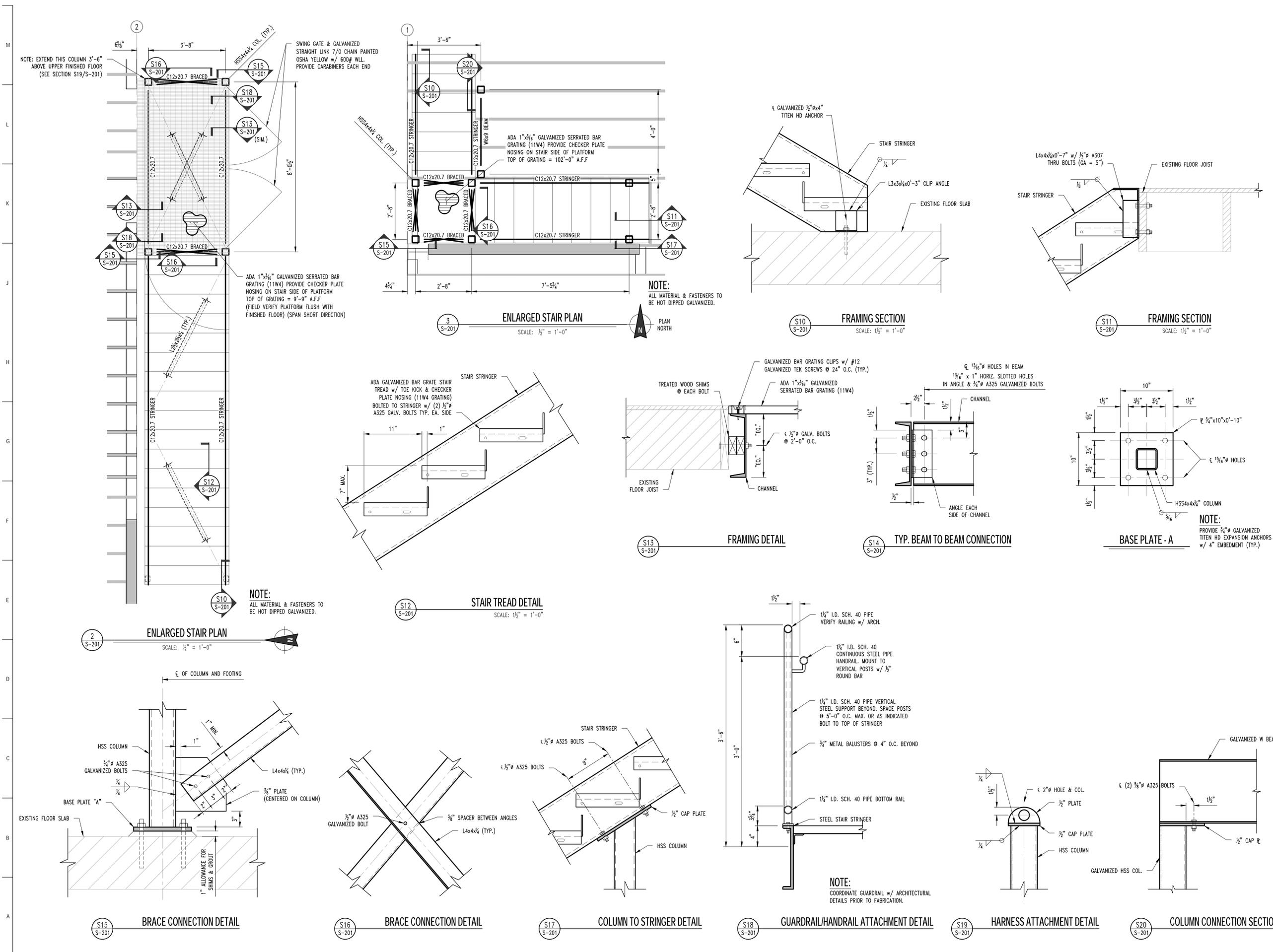
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DRAWN BY: RCA
CHECKED BY: GLL
DESIGNED BY: GLL

SHEET TITLE:
**STAIR FRAMING
PLANS & DETAILS**

SHEET NUMBER:

S-201

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12/27/2019





PWArchitects, Inc.

2120 Forum Blvd, Suite 101
Columbia, Missouri 65203
Ph:(573) 449-2683 Fax:(573) 442-6213

PWA Project No. 201919

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CHECKED BY: EM
DESIGNED BY: EM

SHEET TITLE:
OVERALL BUILDING
PLAN

SHEET NUMBER:

A-100

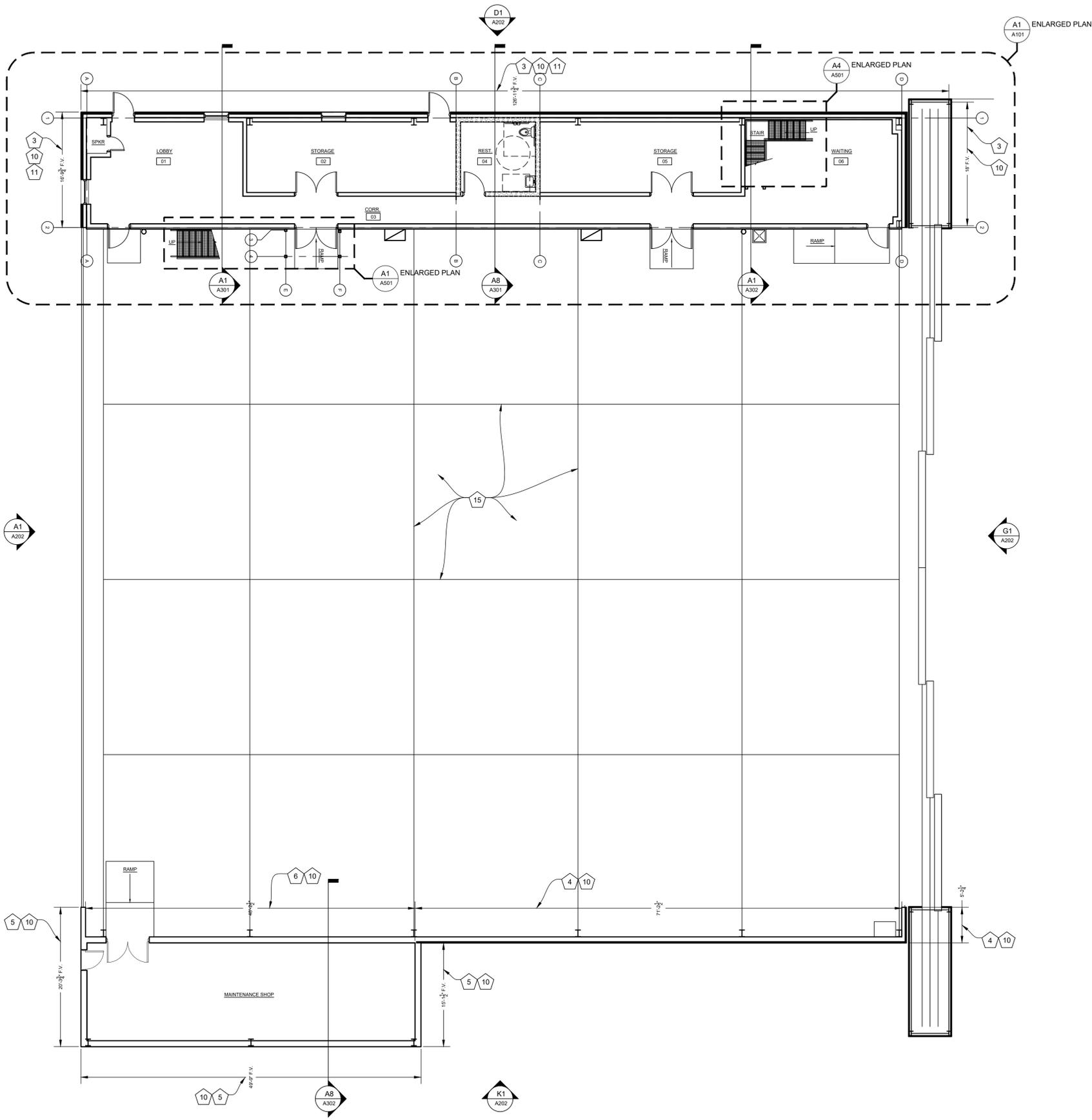
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GENERAL FLOOR PLAN NOTES

- FIELD VERIFY ALL DIMENSIONS AND CONDITIONS PRIOR TO EXECUTING ANY WORK. NOTIFY ARCHITECT OF ANY DIMENSIONS OR WORK DIFFERING FROM THAT SHOWN, FOR CLARIFICATION BY THE ARCHITECT PRIOR TO PROCEEDING WITH WORK.
- VERIFY ALL ROUGH OPENINGS FOR DOORS, WINDOWS, EQUIPMENT, & OTHER "BUILT-IN" ITEMS PRIOR TO EXECUTION OF ANY WORK AFFECTED BY SAME.
- LOCATE DOOR OPENINGS WHICH ARE NOT DIMENSIONED OTHERWISE, CENTERED IN WALL AND 4" FROM FINISHED WALL TO FINISHED JAMB.
- COORDINATE ALL FLOOR DRAINS AND OTHER REFERENCED MECHANICAL, ELECTRICAL, OR PLUMBING ITEMS WITH M.E.P. ENGINEER.
- COORDINATE ALL REQUIRED UTILITIES WITH EQUIPMENT MANUFACTURER.
- ALL DIMENSIONS ARE TO FACE OF STUD UNLESS NOTED OTHERWISE.
- DO NOT SCALE DRAWINGS. WHERE DIMENSIONAL DISCREPANCIES ARE ENCOUNTERED NOTIFY ARCHITECT PRIOR TO PROCEEDING WITH THE WORK.
- COORDINATE HEIGHTS OF OUTLETS AND SWITCHING WITH ALL ARCHITECTURAL ITEMS. SEE ELECTRICAL DRAWINGS FOR LOCATIONS.

SCOPE OF WORK NOTES

- NEW CONCRETE RAMP SEE STRUCTURAL
 - REINSTALL EXISTING DUCTWORK - SEE MEP
 - INSTALL NEW CLOSED CELL POLYISOCYANURATE R-21 SPRAY FOAM INSULATION ON THE INSIDE FACE OF THE EXTERIOR METAL WALL PANELS FROM FLOOR TO THE THIRD WALL GIRT (13'-0" +/- F.V.)
 - INSTALL NEW CLOSED CELL POLYISOCYANURATE R-21 SPRAY FOAM INSULATION ON THE INSIDE FACE OF THE EXTERIOR METAL WALL PANELS FROM FLOOR TO THE THIRD WALL GIRT (12'-0" +/- F.V.) AND INSTALL NEW PRE-FINISHED METAL LINERS FULL HEIGHT (23'-6" +/- F.V.) WITH A PANEL SEAM MID HEIGHT.
 - INSTALL NEW CLOSED CELL POLYISOCYANURATE R-21 SPRAY FOAM INSULATION ON THE INSIDE FACE OF THE EXTERIOR METAL WALL PANELS FROM FLOOR TO THE SECOND WALL GIRT (7'-0" +/- F.V.)
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 - PRE-ENGINEERED GALVANIZED STEEL STAIR STRUCTURE WITH ENCLOSED BACK GALVANIZED STEEL BAR GRATE TREADS, 1-1/4" I.D. SCH. 40 PIPE W/ VERTICAL POSTS @ 6'-0" O.C. MAX. GALVANIZED STEEL GUARDRAILS AND HANDRAILS.
 - PREPARE, STAIN AND SEAL ALL NEW AND EXISTING CONCRETE FLOORS
 - INSTALL NEW CARPET TILE FLOORING
 - INSTALL NEW PRE-FINISHED ALUMINUM METAL BUILDING SIDING FROM THE BOTTOM UP TO THE SECOND GIRT 7'-0" +/- F.V.
 - INSTALL NEW CLOSED CELL POLYISOCYANURATE R-21 SPRAY FOAM INSULATION ON THE INSIDE FACE OF THE EXTERIOR METAL WALL PANELS FROM THE SECOND WALL GIRT UP TO EXISTING METAL BUILDING INSULATION (36" +/- F.V.)
 - NEW PAINTED GYPSUM BOARD WALLS AND TRIM ON EXISTING 2X WOOD STUDS
 - RE-FRAME AND DECK FLOOR WHERE REMOVED TO MATCH EXISTING. SEE STRUCTURAL
 - RE-FRAME AND DECK FLOOR WHERE STAIR WAS REMOVED TO MATCH EXISTING. SEE STRUCTURAL
 - PAINT NEW AND EXISTING CONCRETE RAMPS WITH EPOXY TO MATCH EXISTING WITH 2" SAFETY YELLOW STRIPING AT ALL EDGES
- DOOR KEY: SEE DOOR SCHEDULE A-601
- A NEW 3'-0" x 7'-0" HOLLOW METAL FRAME, INSULATED FRP DOOR
 - B NEW PAIR 3'-0" x 7'-0" HOLLOW METAL FRAME, INSULATED FRP DOOR
 - C NEW PAIR 3'-0" x 7'-0" HOLLOW METAL FRAME, FRP DOOR
 - D NEW 2'-0" x 7'-0" HOLLOW METAL FRAME, FRP DOOR
 - E NEW 3'-0" x 7'-0" HOLLOW METAL FRAME, STEEL DOOR
 - F NEW 3'-0" x 7'-0" PRE-HUNG WOOD DOOR AND FRAME
 - G EXISTING DOOR AND FRAME TO REMAIN
 - H NEW 3'-0" x 7'-0" HOLLOW METAL FRAME, INSULATED FRP DOOR
- WINDOW KEY: SEE WINDOW SCHEDULE A-601
- B REPLACE EXISTING VINYL CASEMENT WINDOW WITH NEW FIXED ALUMINUM WINDOW
- WALL KEY: SEE FINISH SCHEDULE A-601
- A NEW 6" 16 GA. GALVANIZED METAL STUDS @ 24" O.C., CEMENTIOUS SIDING WALL PANELS ON INTERIOR SIDE. PRE-FINISHED METAL LINER WALL PANELS W/ CLOSED CELL SPRAY FOAM INSULATION SPRAYED ON THE INSIDE OF CEMENTIOUS SIDING WALL PANELS
 - B NEW 6" 16 GA. GALVANIZED METAL STUDS @ 16" O.C., CEMENTIOUS SIDING WALL PANELS ONE SIDE
 - C NEW 6" 16 GA. GALVANIZED METAL STUDS @ 16" O.C., PRE-FINISHED METAL LINERS FULL HEIGHT
 - D 8" CMU GROUTED SOLID
 - E 2x4 WOOD STUDS @ 16" O.C., SOUND BATT INSULATION w/ 1/2" GYPSUM BOARD EACH SIDE TO UNDERSIDE OF EXISTING CEILING. PAINTED TO MATCH EXISTING
 - F NEW 6" 16 GA. GALVANIZED METAL STUDS @ 24" O.C., CEMENTIOUS SIDING WALL PANELS BOTH SIDES
- ALTERNATE SCOPE OF WORK NOTES
- WINDOW KEY: SEE WINDOW SCHEDULE A-601
- A ALTERNATE #1: REPLACE EXISTING VINYL WINDOWS WITH NEW ALUMINUM WINDOWS
 - 15 ALTERNATE #2: RESEAL EXISTING CONCRETE FLOOR SLAB CONTROL JOINTS. WASH AND CLEAN EXISTING EPOXY FLOOR.



OVERALL BUILDING PLAN
SCALE: 1/8" = 1'-0"



PWA Architects, Inc.

2120 Forum Blvd, Suite 101
Columbia, Missouri 65203
Ph: (573) 449-2683 Fax: (573) 442-6213

PWA Project No. 201919

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DRAWN BY: LC
CHECKED BY: EM
DESIGNED BY: EM

SHEET TITLE:
**RENOVATION
PLANS**

SHEET NUMBER:

A-101

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12/27/2019

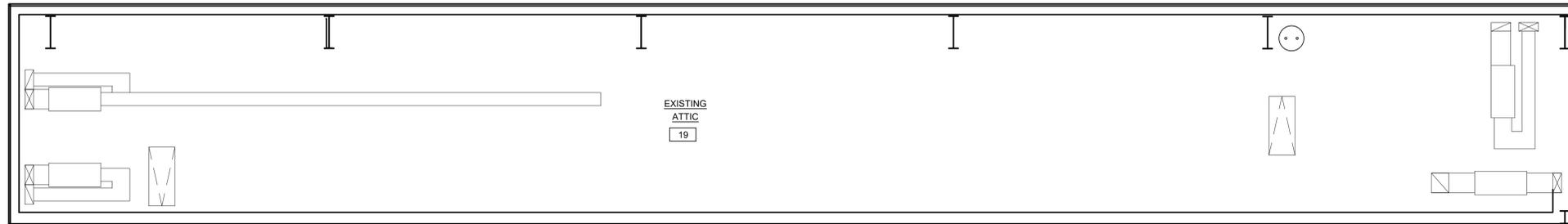
SCOPE OF WORK NOTES

- 1 NEW CONCRETE RAMP SEE STRUCTURAL
- 2 REINSTALL EXISTING DUCTWORK - SEE MEP
- 3 INSTALL NEW CLOSED CELL POLYISOCYANURATE R-21 SPRAY FOAM INSULATION ON THE INSIDE FACE OF THE EXTERIOR METAL WALL PANELS FROM FLOOR TO THE THIRD WALL GIRT (13'-0" +/- F.V.)
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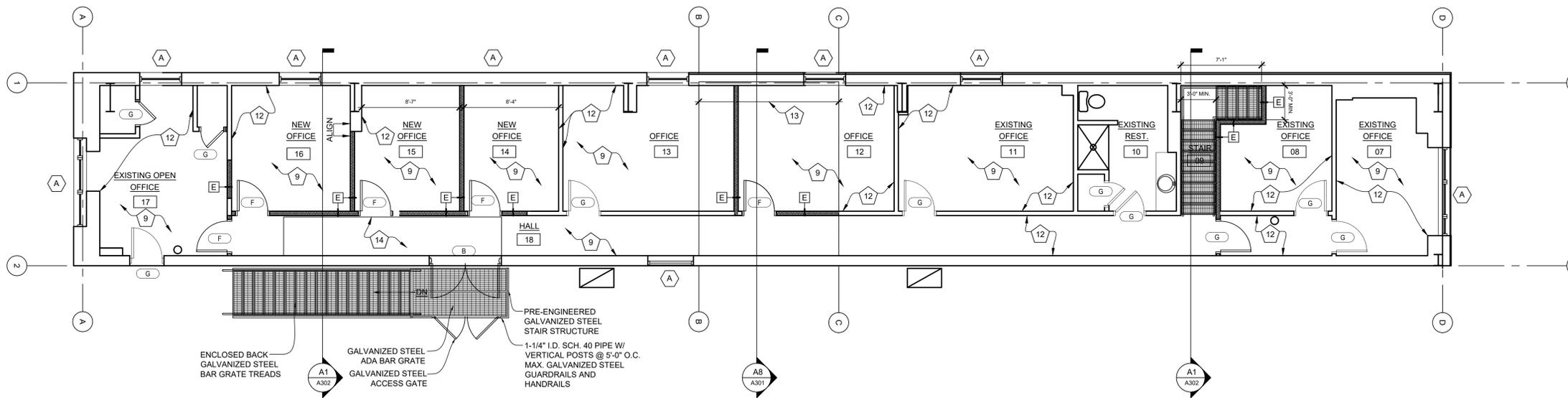
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- DOOR KEY: SEE DOOR SCHEDULE A-601
- A NEW 3'-0" x 7'-0" HOLLOW METAL FRAME, INSULATED FRP DOOR
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- WINDOW KEY: SEE WINDOW SCHEDULE A-601
- B REPLACE EXISTING VINYL CASEMENT WINDOW WITH NEW FIXED ALUMINUM WINDOW
- WALL KEY: SEE FINISH SCHEDULE A-601
- A NEW 6" 16 GA. GALVANIZED METAL STUDS @ 24" O.C. CEMENTIOUS SIDING WALL PANELS ON INTERIOR SIDE. PRE-FINISHED METAL LINER WALL PANELS W/ CLOSED CELL SPRAY FOAM INSULATION SPRAYED ON THE INSIDE OF CEMENTIOUS SIDING WALL PANELS
 - B NEW 6" 16 GA. GALVANIZED METAL STUDS @ 16" O.C. CEMENTIOUS SIDING WALL PANELS ONE SIDE.
 - C NEW 6" 18 GA. GALVANIZED METAL STUDS @ 16" O.C. PRE-FINISHED METAL LINERS FULL HEIGHT
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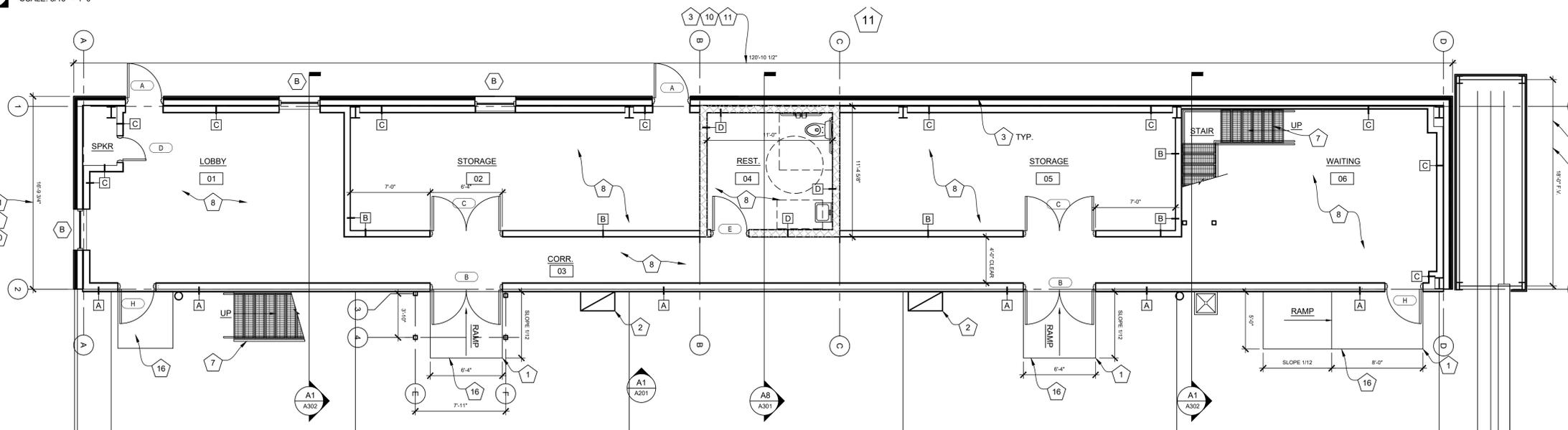
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J1 ATTIC LEVEL RENOVATION OPEN FLOOR PLAN
SCALE: 3/16" = 1'-0"



E1 SECOND FLOOR RENOVATION FLOOR PLAN
SCALE: 3/16" = 1'-0"



A1 FIRST FLOOR RENOVATION FLOOR PLAN
SCALE: 3/16" = 1'-0"



12/27/2019



PWArchitects, Inc.

2120 Forum Blvd, Suite 101
Columbia, Missouri 65203
Ph:(573) 449-2683 Fax:(573) 442-6213

PWA Project No. 201919

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DEPARTMENT OF
PUBLIC SAFETY

Interior and Exterior
Repairs and Improvements
MSHP AIRCRAFT HANGAR

CITY OF JEFFERSON AIRPORT

JEFFERSON CITY, MISSOURI

PROJECT # R2007-01
SITE # 6011
FACILITY # 8136011011

REVISION: _____
DATE: _____
REVISION: _____
DATE: _____
REVISION: _____
DATE: _____
ISSUE DATE: 12/27/2019

CAD DWG FILE: A-FP-01
DRAWN BY: LC
CHECKED BY: EM
DESIGNED BY: EM

SHEET TITLE:
REFLECTED
CEILING
PLANS

SHEET NUMBER:

A-102

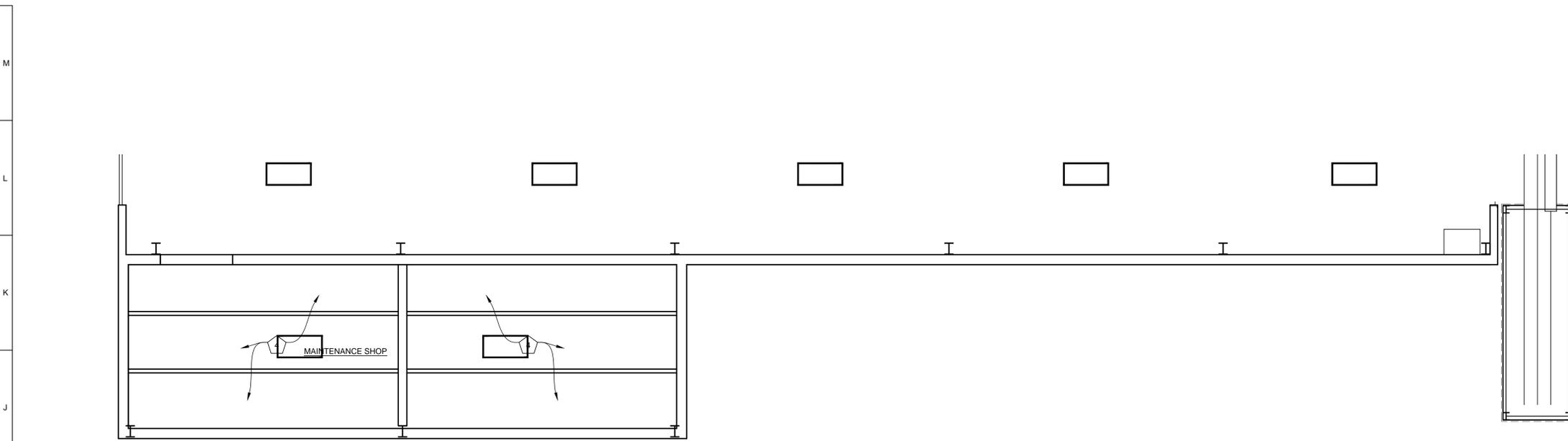
12 OF 28 SHEETS
12/27/2019

GENERAL CEILING PLAN NOTES

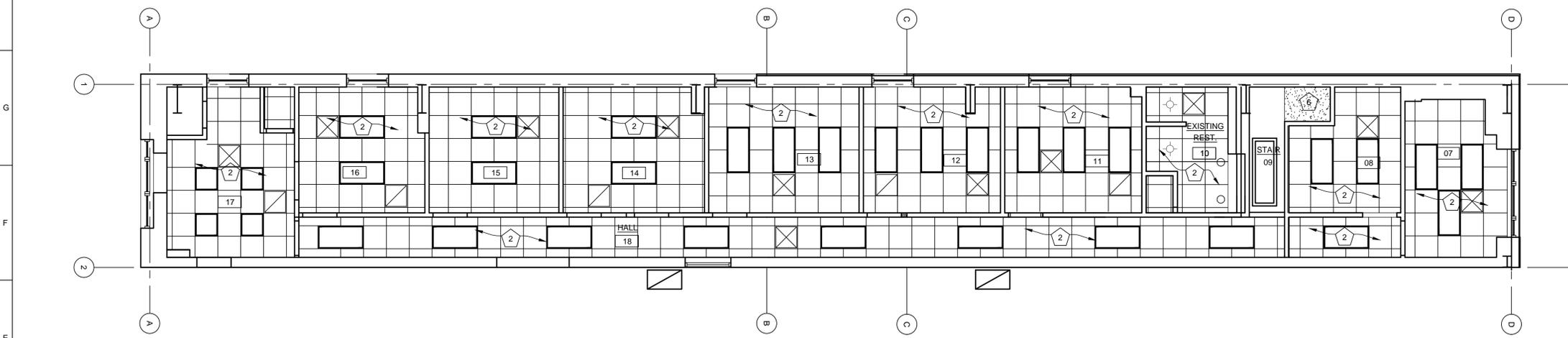
1. REFER TO ELECTRICAL DRAWINGS FOR LIGHT FIXTURE SPECIFICATIONS.
2. REFER TO MECHANICAL DRAWINGS FOR SUPPLY AND RETURN AIR DIFFUSER LOCATIONS AND HVAC SYSTEM LAYOUT.
3. COORDINATE CEILING / SOFFIT FRAMING AND SUPPORTS WITH EXISTING STRUCTURE AND REQUIRED MECHANICAL, ELECTRICAL, AND PLUMBING DESIGN.
4. REFER TO ROOM FINISH SCHEDULE AND LEGEND FOR ALL CEILING HEIGHTS AND FINISH REQUIREMENTS.

SCOPE OF WORK NOTES

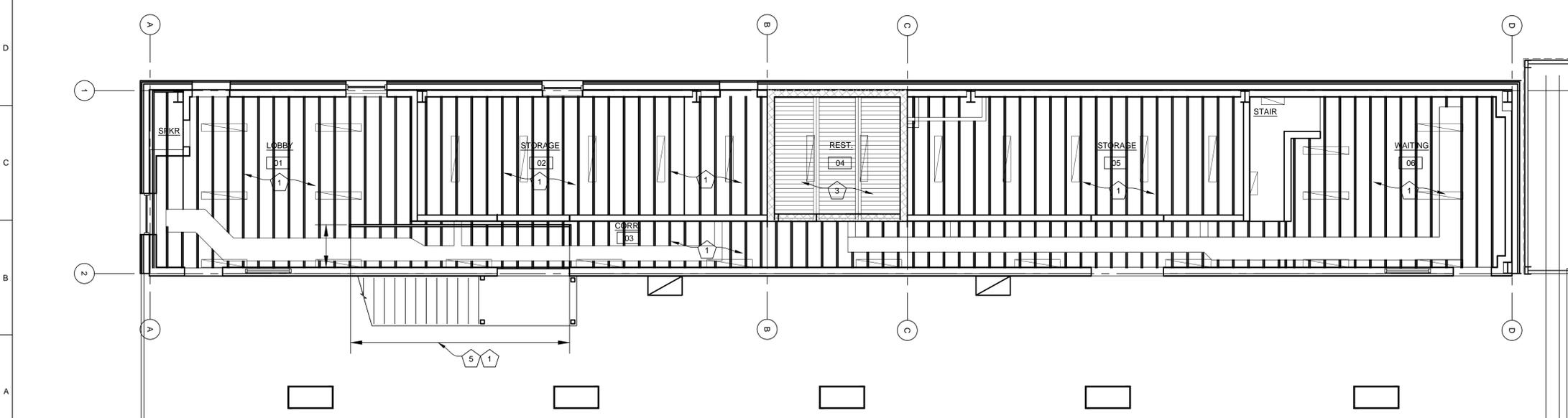
- 1 PAINT ALL NEW AND EXISTING FLOOR JOISTS AND DECK, DUCT WORK AND CONDUITS.
- 2 NEW ACOUSTIC CEILING TILE AND GRID. SEE MEP FOR LIGHTS AND HVAC
- 3 PAINT ALL NEW STRUCTURE, DECK, DUCT WORK AND CONDUITS.
- 4 INSTALL NEW R-30 THERMAL DESIGN SIMPLE SAVER ROOF RETROFIT INSULATION SYSTEM ON EXISTING ROOF
- 5 NEW JOISTS SLICED INTO EXISTING JOISTS. SEE STRUCTURAL
- 6 NEW GYPSUM BOARD ON EXISTING CEILING JOISTS. FINISH AND PAINT TO MATCH EXISTING.



H1 REFLECTED CEILING PLAN - MAINTENANCE SHOP
SCALE: 3/16" = 1'-0"



E1 SECOND FLOOR REFLECTED CEILING PLAN
SCALE: 3/16" = 1'-0"



A1 FIRST FLOOR REFLECTED CEILING PLAN
SCALE: 3/16" = 1'-0"

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15



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ISSUE DATE: 12/27/2019

CAD DWG FILE: A201
DRAWN BY: LC
CHECKED BY: EM
DESIGNED BY: EM

SHEET TITLE:
INTERIOR
ELEVATIONS

SHEET NUMBER:

A-201

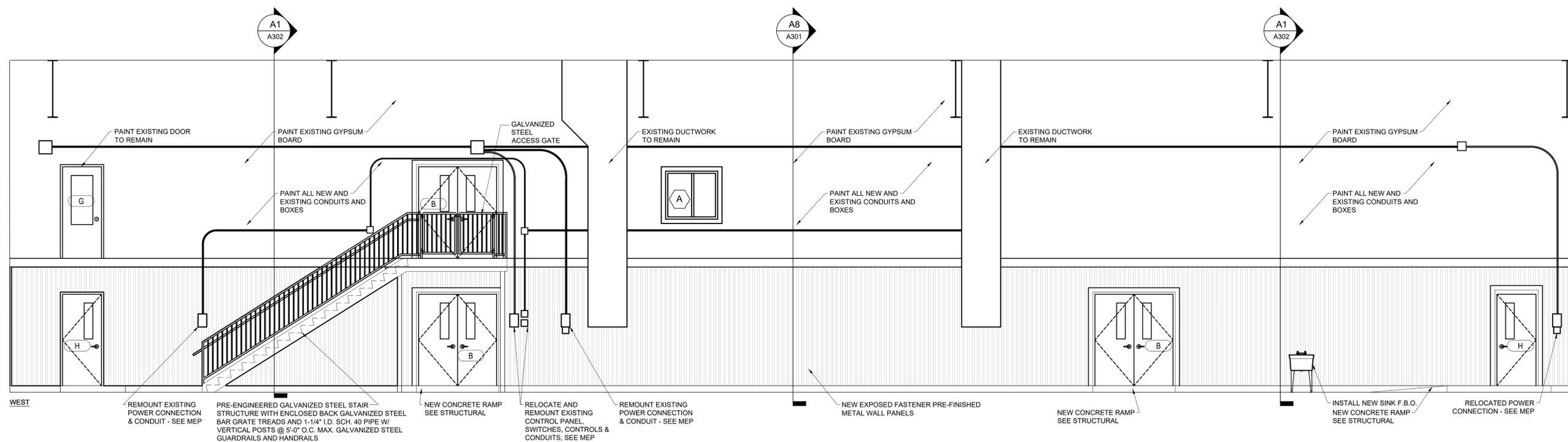
13 OF 28 SHEETS
12/27/2019

SCOPE OF WORK NOTES

- 1 NEW CONCRETE RAMP SEE STRUCTURAL
 - 2 REINSTALL EXISTING DUCTWORK - SEE MEP
 - 3 INSTALL NEW CLOSED CELL POLYISOCYANURATE R-21 SPRAY FOAM INSULATION ON THE INSIDE FACE OF THE EXTERIOR METAL WALL PANELS FROM FLOOR TO THE THIRD WALL GIRT (13'-0" +/- F.V.)
 - 4 INSTALL NEW CLOSED CELL POLYISOCYANURATE R-21 SPRAY FOAM INSULATION ON THE INSIDE FACE OF THE EXTERIOR METAL WALL PANELS FROM FLOOR TO THE THIRD WALL GIRT (12'-0" +/- F.V.) AND INSTALL NEW PRE-FINISHED METAL LINERS FULL HEIGHT (23'-6" +/- F.V.) WITH A PANEL SEAM MID HEIGHT.
 - 5 INSTALL NEW CLOSED CELL POLYISOCYANURATE R-21 SPRAY FOAM INSULATION ON THE INSIDE FACE OF THE EXTERIOR METAL WALL PANELS FROM FLOOR TO THE SECOND WALL GIRT (7'-0" +/- F.V.)
 - 6 INSTALL NEW PRE-FINISHED METAL LINERS FULL HEIGHT (23'-6" +/- F.V.)
 - 7 PRE-ENGINEERED GALVANIZED STEEL STAIR STRUCTURE WITH ENCLOSED BACK GALVANIZED STEEL BAR GRATE TREADS, 1-1/4" I.D. SCH. 40 PIPE W/ VERTICAL POSTS @ 5'-0" O.C. MAX. GALVANIZED STEEL GUARDRAILS AND HANDRAILS.
 - 8 PREPARE, STAIN AND SEAL ALL NEW AND EXISTING CONCRETE FLOORS
 - 9 INSTALL NEW CARPET TILE FLOORING
 - 10 INSTALL NEW PRE-FINISHED ALUMINUM METAL BUILDING SIDING FROM THE BOTTOM UP TO THE SECOND GIRT 7'-0" +/- F.V.
 - 11 INSTALL NEW CLOSED CELL POLYISOCYANURATE R-21 SPRAY FOAM INSULATION ON THE INSIDE FACE OF THE EXTERIOR METAL WALL PANELS FROM THE SECOND WALL GIRT UP TO EXISTING METAL BUILDING INSULATION (36" +/- F.V.)
 - 12 NEW PAINTED GYPSUM BOARD WALLS AND TRIM ON EXISTING 2X WOOD STUDS
 - 13 RE-FRAME AND DECK FLOOR WHERE REMOVED TO MATCH EXISTING. SEE STRUCTURAL
 - 14 RE-FRAME AND DECK FLOOR WHERE STAIR WAS REMOVED TO MATCH EXISTING. SEE STRUCTURAL
 - 15 PAINT NEW AND EXISTING CONCRETE RAMP WITH EPOXY TO MATCH EXISTING WITH 2" SAFETY YELLOW STRIPING AT ALL EDGES
- DOOR KEY: SEE DOOR SCHEDULE A-601
- A NEW 3'-0" x 7'-0" HOLLOW METAL FRAME, INSULATED FRP DOOR
 - B NEW PAIR 3'-0" x 7'-0" HOLLOW METAL FRAME, INSULATED FRP DOOR
 - C NEW PAIR 3'-0" x 7'-0" HOLLOW METAL FRAME, FRP DOOR
 - D NEW 2'-0" x 7'-0" HOLLOW METAL FRAME, FRP DOOR
 - E NEW 3'-0" x 7'-0" HOLLOW METAL FRAME, STEEL DOOR
 - F NEW 3'-0" x 7'-0" PRE-HUNG WOOD DOOR AND FRAME
 - G EXISTING DOOR AND FRAME TO REMAIN
 - H NEW 3'-0" x 7'-0" HOLLOW METAL FRAME, INSULATED FRP DOOR
- WINDOW KEY: SEE WINDOW SCHEDULE A-601
- B REPLACE EXISTING VINYL CASEMENT WINDOW WITH NEW FIXED ALUMINUM WINDOW
- WALL KEY: SEE FINISH SCHEDULE A-601
- A NEW 6" 16 GA. GALVANIZED METAL STUDS @ 24" O.C. CEMENTIOUS SIDING WALL PANELS ON INTERIOR SIDE, PRE-FINISHED METAL LINER WALL PANELS W/ CLOSED CELL SPRAY FOAM INSULATION SPRAYED ON THE INSIDE OF CEMENTIOUS SIDING WALL PANELS
 - B NEW 6" 16 GA. GALVANIZED METAL STUDS @ 16" O.C., CEMENTIOUS SIDING WALL PANELS ONE SIDE.
 - C NEW 6" 16 GA. GALVANIZED METAL STUDS @ 16" O.C. PRE-FINISHED METAL LINERS FULL HEIGHT
 - D 8" CMU GROUTED SOLID
 - E 2x4 WOOD STUDS @ 16" O.C., SOUND BATT INSULATION w/ 1/2" GYPSUM BOARD EACH SIDE TO UNDERSIDE OF EXISTING CEILING. PAINTED TO MATCH EXISTING
 - F NEW 6" 16 GA. GALVANIZED METAL STUDS @ 24" O.C. CEMENTIOUS SIDING WALL PANELS BOTH SIDES

ALTERNATE SCOPE OF WORK NOTES

- WINDOW KEY: SEE WINDOW SCHEDULE A-601
- A ALTERNATE #1: REPLACE EXISTING VINYL WINDOWS WITH NEW ALUMINUM WINDOWS
 - B ALTERNATE #2: RESEAL EXISTING CONCRETE FLOOR SLAB CONTROL JOINTS. WASH AND CLEAN EXISTING EPOXY FLOOR.





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ISSUE DATE: 12/27/2019

CAD DWG FILE: A201
DRAWN BY: LC
CHECKED BY: EM
DESIGNED BY: EM

SHEET TITLE:
EXTERIOR
ELEVATIONS

SHEET NUMBER:

A-202

14 OF 28 SHEETS
12/27/2019

SCOPE OF WORK NOTES

- 1 NEW CONCRETE RAMP SEE STRUCTURAL
- 2 REINSTALL EXISTING DUCTWORK - SEE MEP
- 3 INSTALL NEW CLOSED CELL POLYISOCYANURATE R-21 SPRAY FOAM INSULATION ON THE INSIDE FACE OF THE EXTERIOR METAL WALL PANELS FROM FLOOR TO THE THIRD WALL GIRT (13'-0" +/- F.V.)
- 4 INSTALL NEW CLOSED CELL POLYISOCYANURATE R-21 SPRAY FOAM INSULATION ON THE INSIDE FACE OF THE EXTERIOR METAL WALL PANELS FROM FLOOR TO THE THIRD WALL GIRT (12'-0" +/- F.V.) AND INSTALL NEW PRE-FINISHED METAL LINERS FULL HEIGHT (23'-6" +/- F.V.) WITH A PANEL SEAM MID HEIGHT.
- 5 INSTALL NEW CLOSED CELL POLYISOCYANURATE R-21 SPRAY FOAM INSULATION ON THE INSIDE FACE OF THE EXTERIOR METAL WALL PANELS FROM FLOOR TO THE SECOND WALL GIRT (7'-0" +/- F.V.)
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- 9 INSTALL NEW CARPET TILE FLOORING
- 10 INSTALL NEW PRE-FINISHED ALUMINUM METAL BUILDING SIDING FROM THE BOTTOM UP TO THE SECOND GIRT 7'-0" +/- F.V.
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- 12 NEW PAINTED GYPSUM BOARD WALLS AND TRIM ON EXISTING 2X WOOD STUDS
- 13 RE-FRAME AND DECK FLOOR WHERE REMOVED TO MATCH EXISTING. SEE STRUCTURAL
- 14 RE-FRAME AND DECK FLOOR WHERE STAIR WAS REMOVED TO MATCH EXISTING. SEE STRUCTURAL

- 16 PAINT NEW AND EXISTING CONCRETE RAMPS WITH EPOXY TO MATCH EXISTING WITH 2" SAFETY YELLOW STRIPING AT ALL EDGES

DOOR KEY: SEE DOOR SCHEDULE A-601

- A NEW 3'-0" x 7'-0" HOLLOW METAL FRAME, INSULATED FRP DOOR
- B NEW PAIR 3'-0" x 7'-0" HOLLOW METAL FRAME, INSULATED FRP DOOR
- C NEW PAIR 3'-0" x 7'-0" HOLLOW METAL FRAME, FRP DOOR
- D NEW 2'-0" x 7'-0" HOLLOW METAL FRAME, FRP DOOR
- E NEW 3'-0" x 7'-0" HOLLOW METAL FRAME, STEEL DOOR
- F NEW 3'-0" x 7'-0" PRE-HUNG WOOD DOOR AND FRAME
- G EXISTING DOOR AND FRAME TO REMAIN
- H NEW 3'-0" x 7'-0" HOLLOW METAL FRAME, INSULATED FRP DOOR

WINDOW KEY: SEE WINDOW SCHEDULE A-601

- B REPLACE EXISTING VINYL CASEMENT WINDOW WITH NEW FIXED ALUMINUM WINDOW

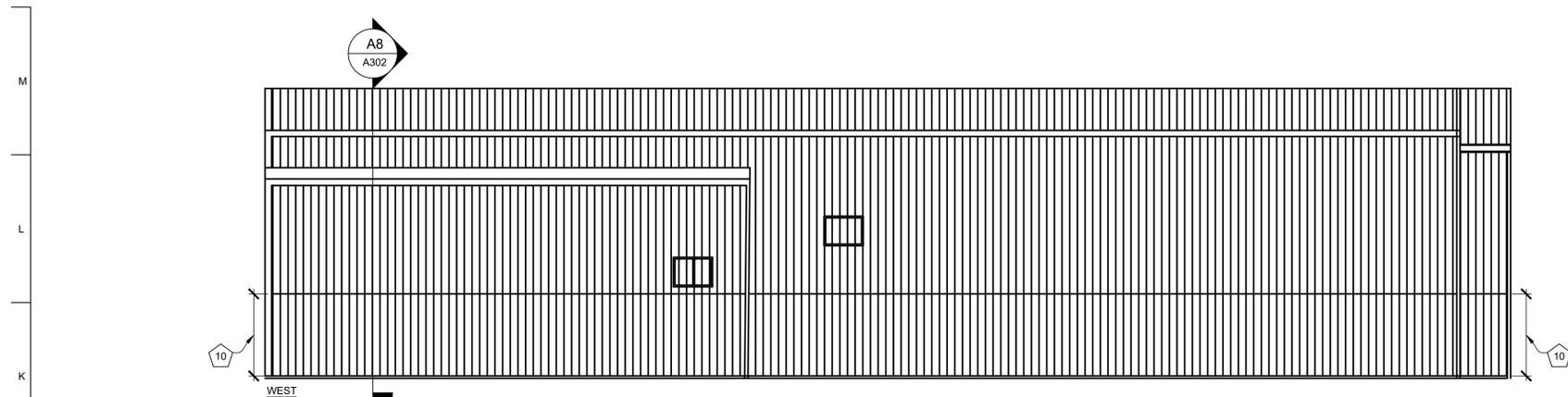
WALL KEY: SEE FINISH SCHEDULE A-601

- A NEW 6" 16 GA. GALVANIZED METAL STUDS @ 24" O.C., CEMENTIOUS SIDING WALL PANELS ON INTERIOR SIDE, PRE-FINISHED METAL LINER WALL PANELS w/ CLOSED CELL SPRAY FOAM INSULATION SPRAYED ON THE INSIDE OF CEMENTIOUS SIDING WALL PANELS
- B NEW 6" 16 GA. GALVANIZED METAL STUDS @ 16" O.C., CEMENTIOUS SIDING WALL PANELS ONE SIDE.
- C NEW 6" 16 GA. GALVANIZED METAL STUDS @ 16" O.C., PRE-FINISHED METAL LINERS FULL HEIGHT
- D 8" CMU GROUTED SOLID
- E 2x4 WOOD STUDS @ 16" O.C., SOUND BATT INSULATION w/ 1/2" GYPSUM BOARD EACH SIDE TO UNDERSIDE OF EXISTING CEILING. PAINTED TO MATCH EXISTING
- F NEW 6" 16 GA. GALVANIZED METAL STUDS @ 24" O.C., CEMENTIOUS SIDING WALL PANELS BOTH SIDES

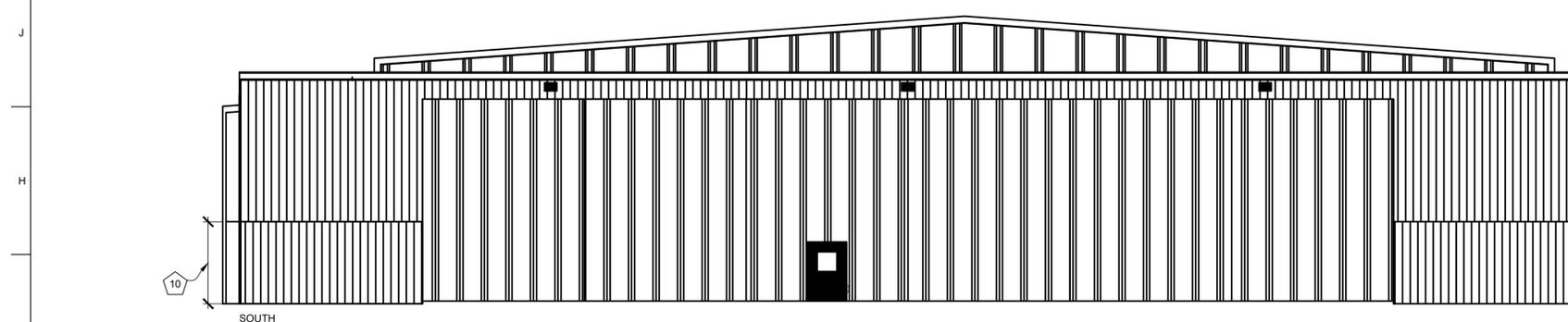
ALTERNATE SCOPE OF WORK NOTES

WINDOW KEY: SEE WINDOW SCHEDULE A-601

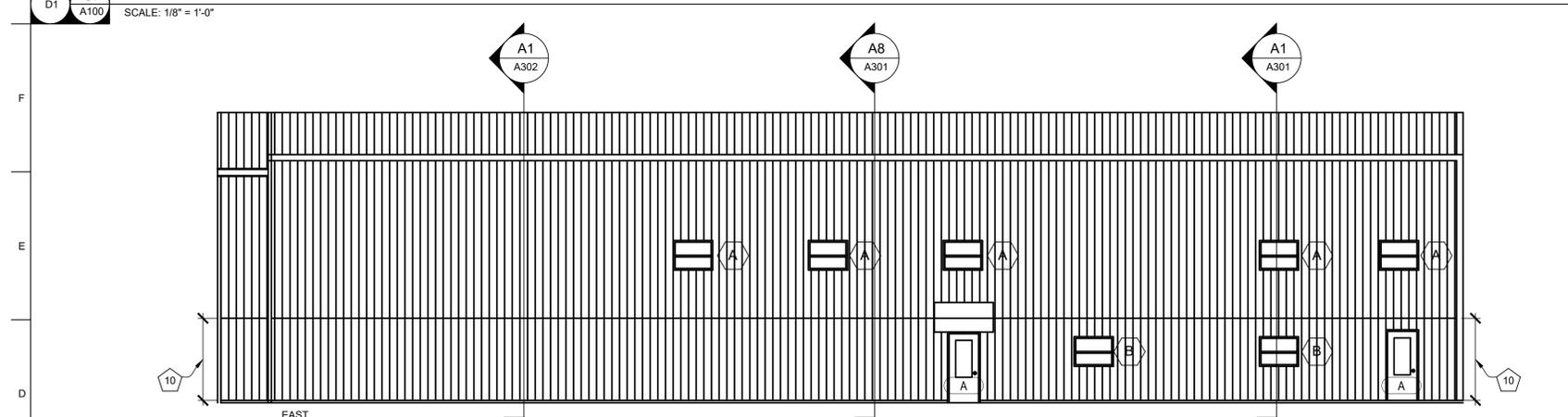
- A ALTERNATE #1: REPLACE EXISTING VINYL WINDOWS WITH NEW ALUMINUM WINDOWS
- 15 ALTERNATE #2: RESEAL EXISTING CONCRETE FLOOR SLAB CONTROL JOINTS. WASH AND CLEAN EXISTING EPOXY FLOOR.



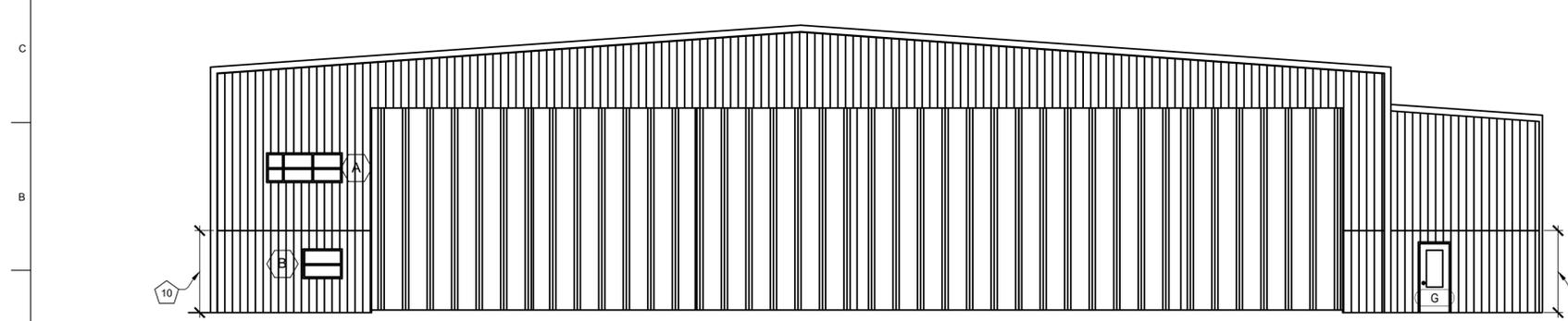
K1 A6 A100 WEST ELEVATION
SCALE: 1/8" = 1'-0"



D1 G1 A100 SOUTH ELEVATION
SCALE: 1/8" = 1'-0"



D1 M6 A100 EAST ELEVATION
SCALE: 1/8" = 1'-0"



A1 G1 A100 NORTH ELEVATION
SCALE: 1/8" = 1'-0"



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2120 Forum Blvd, Suite 101
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SITE # 6011

FACILITY # 8136011011

REVISION:
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ISSUE DATE: 12/27/2019

CAD DWG FILE:A301
DRAWN BY: LC
CHECKED BY: EM
DESIGNED BY: EM

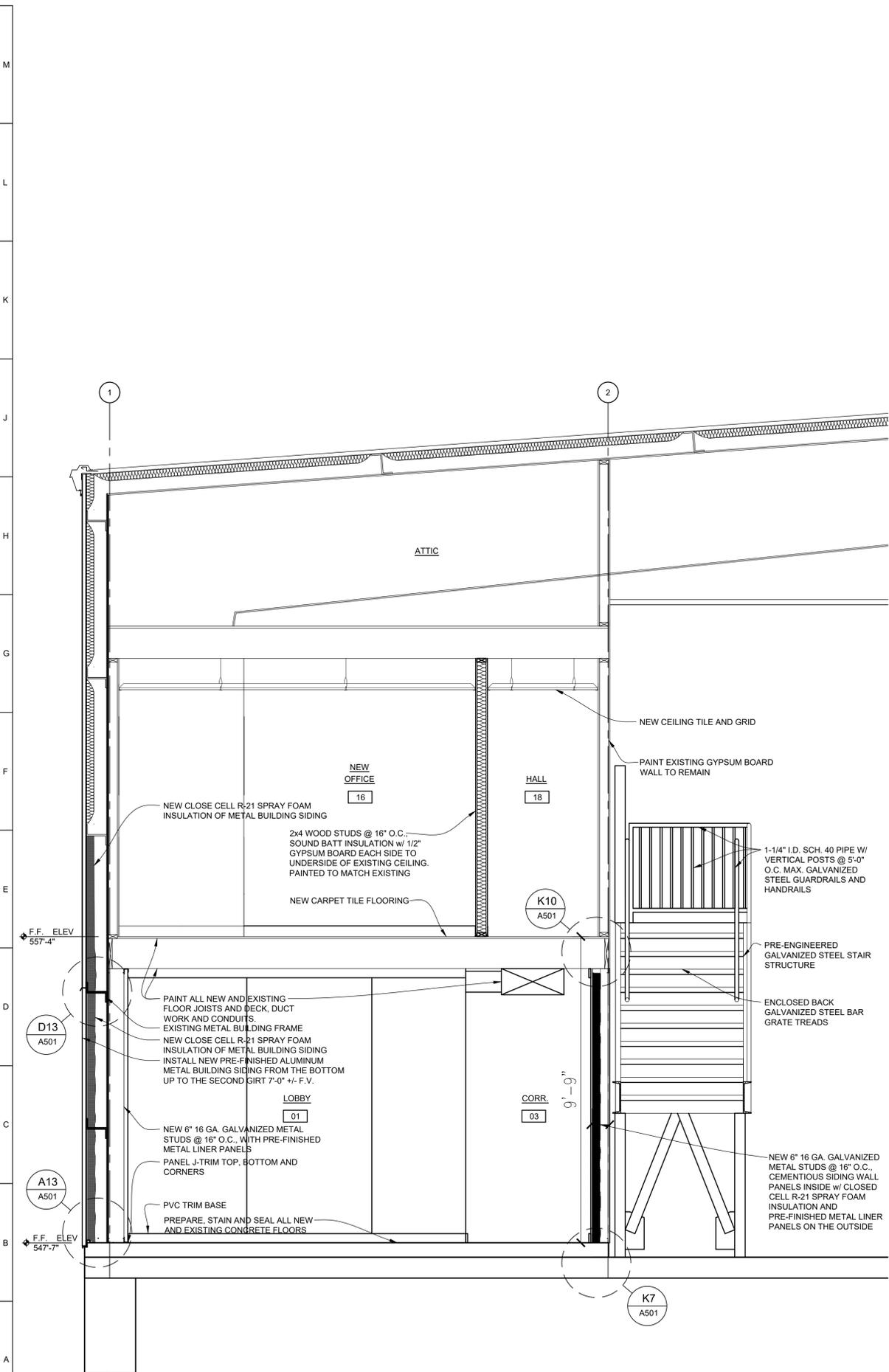
SHEET TITLE:

BUILDING
SECTIONS

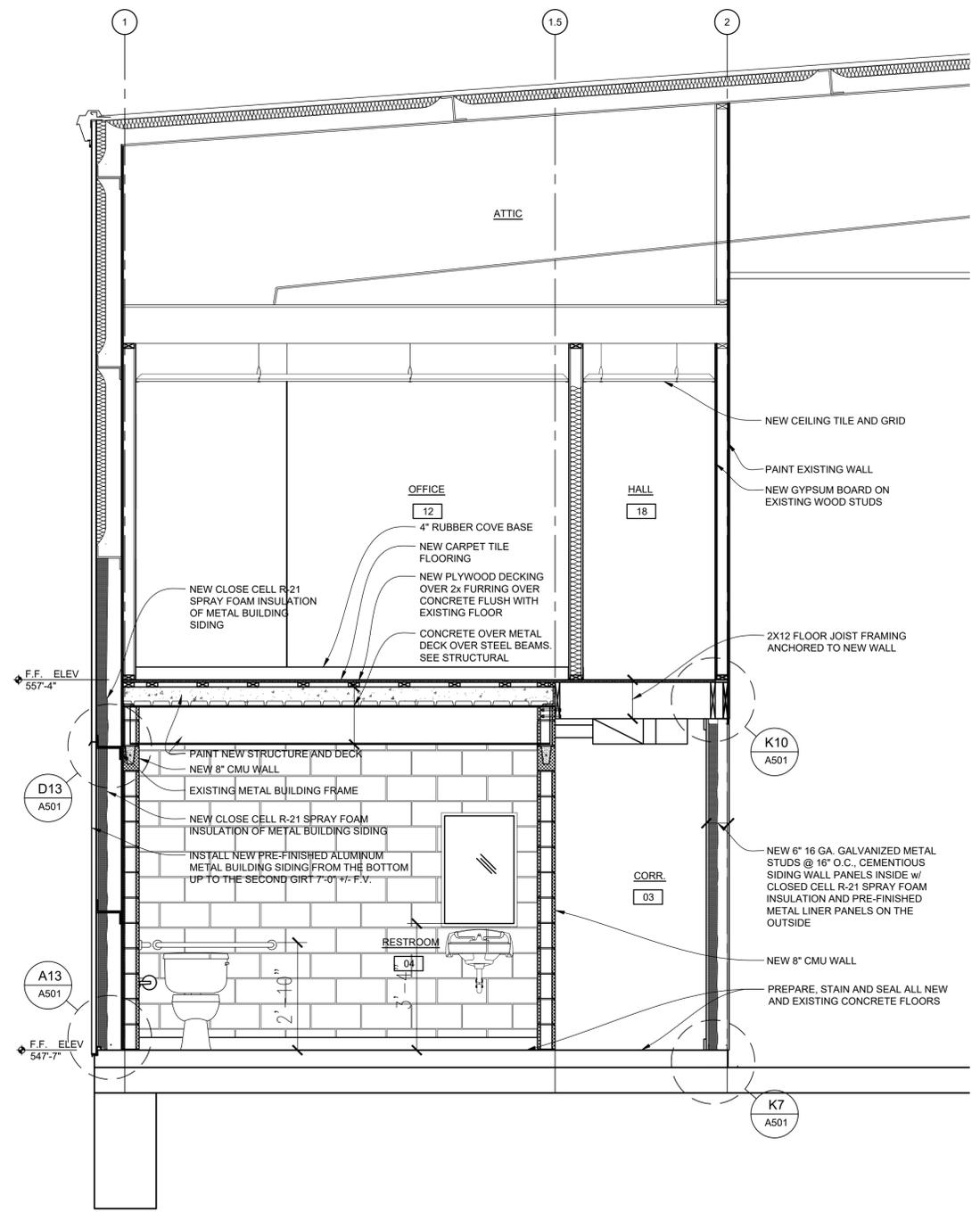
SHEET NUMBER:

A-301

15 OF 28 SHEETS
12/27/2019



A1 A3 A101 BUILDING SECTION
SCALE: 1/2" = 1'-0"



A8 A7 A101 BUILDING SECTION
SCALE: 1/2" = 1'-0"





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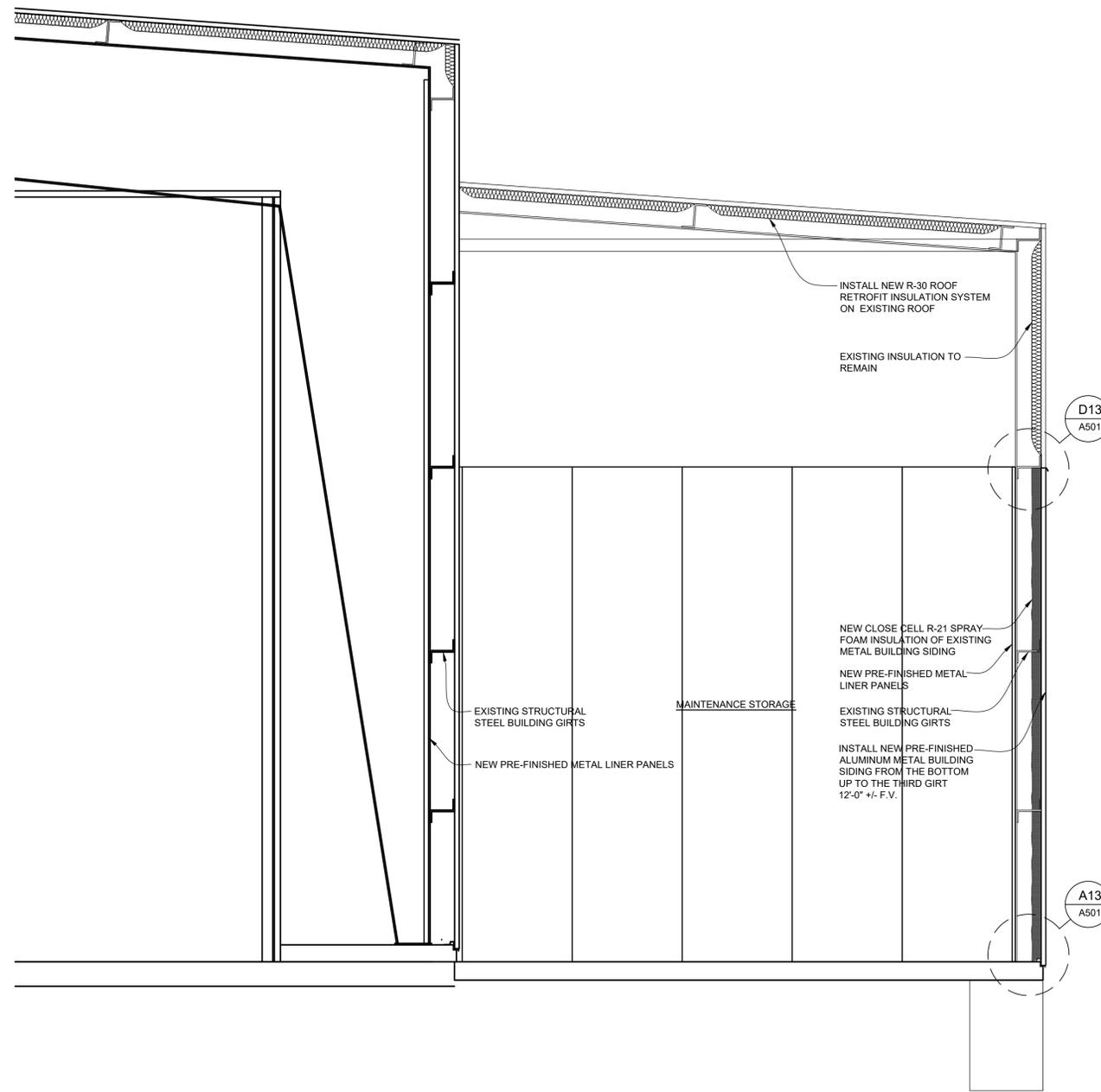
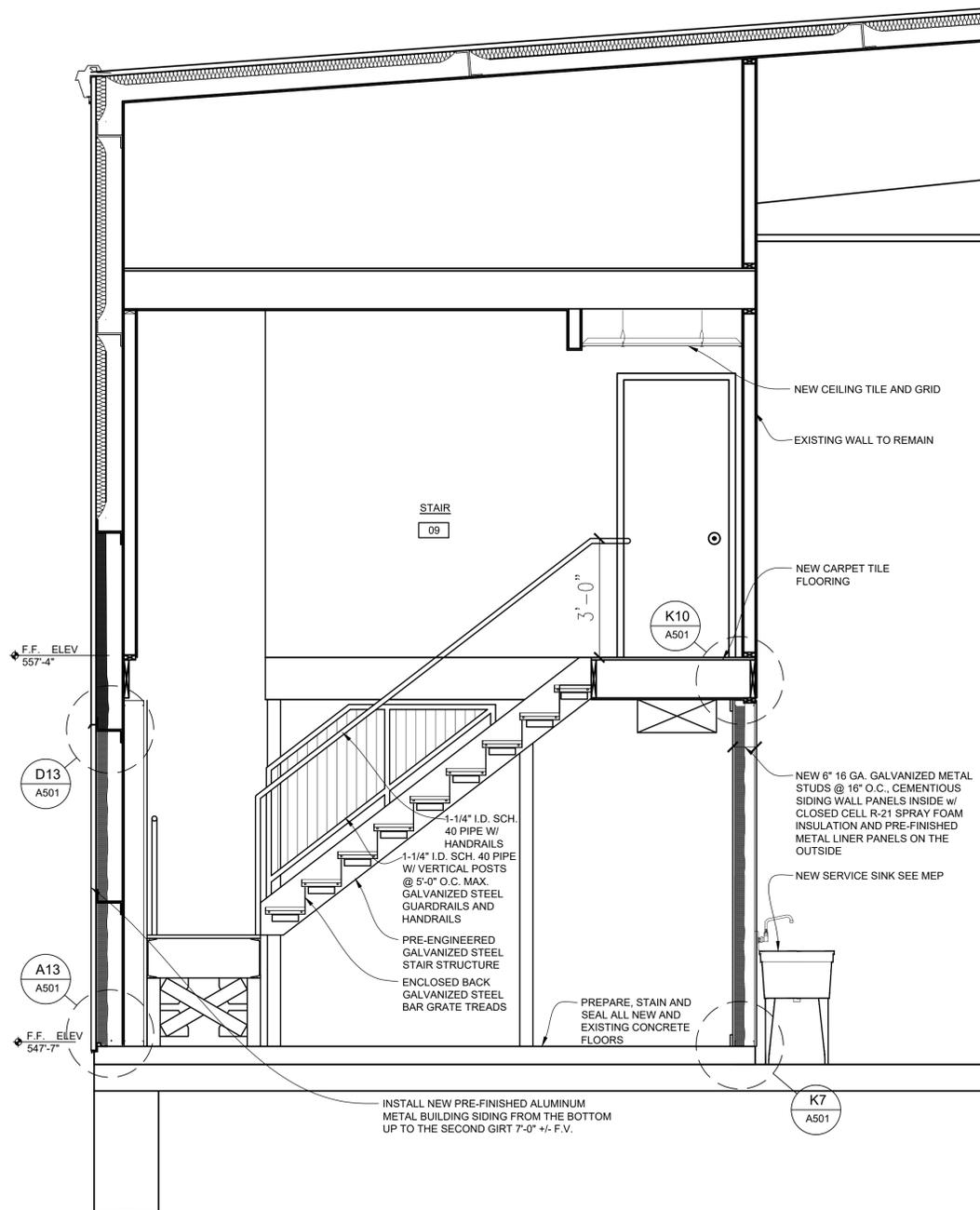
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BUILDING
SECTIONS

SHEET NUMBER:

A-302

16 OF 28 SHEETS
12/27/2019



M
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1 2 3 4 5 6 7 8 9 10 11 12 13 14 15



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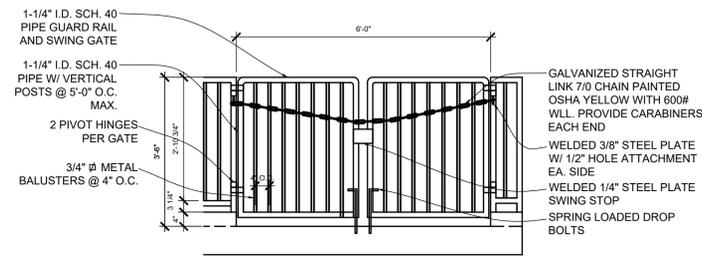
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DESIGNED BY: EM

SHEET TITLE:
WALL AND SECTION
DETAILS

SHEET NUMBER:

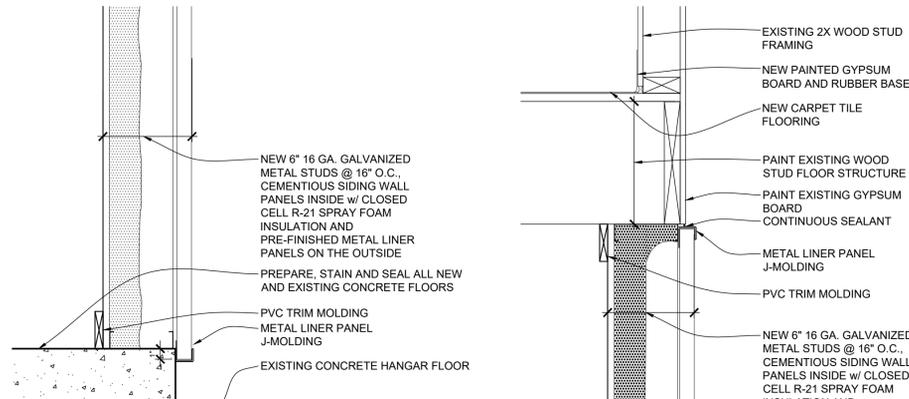
A-501

17 OF 28 SHEETS
12/27/2019



K1 GUARDRAIL SWING GATE DETAIL

SCALE: 1/2" = 1'-0"

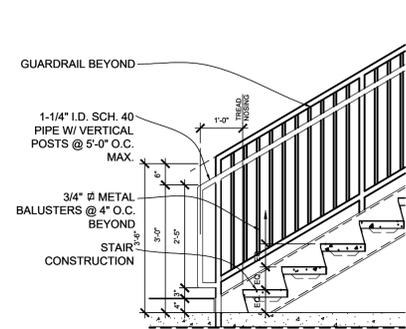


K7 WALL DETAIL

SCALE: 1-1/2" = 1'-0"

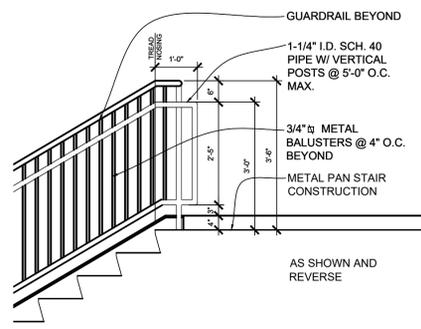
K10 WALL DETAIL

SCALE: 1-1/2" = 1'-0"



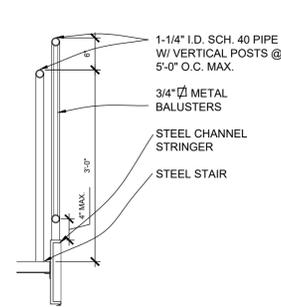
G1 GUARDRAIL AND HANDRAIL DETAIL

SCALE: 1/2" = 1'-0"



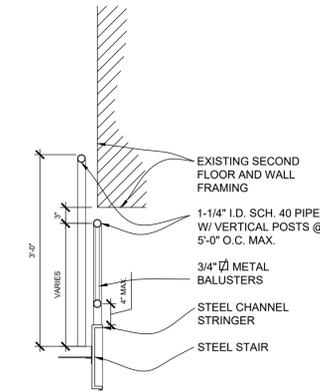
G4 GUARDRAIL AND HANDRAIL DETAIL

SCALE: 1/2" = 1'-0"



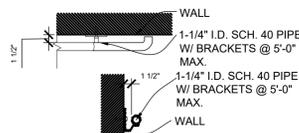
G7 GUARDRAIL AND HANDRAIL DETAIL

SCALE: 3/4" = 1'-0"



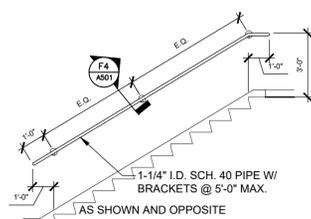
G10 GUARDRAIL AND HANDRAIL DETAIL

SCALE: 3/4" = 1'-0"



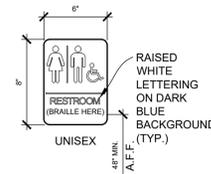
F4 E5 A501 HANDRAIL DETAILS

SCALE: 3/4" = 1'-0"



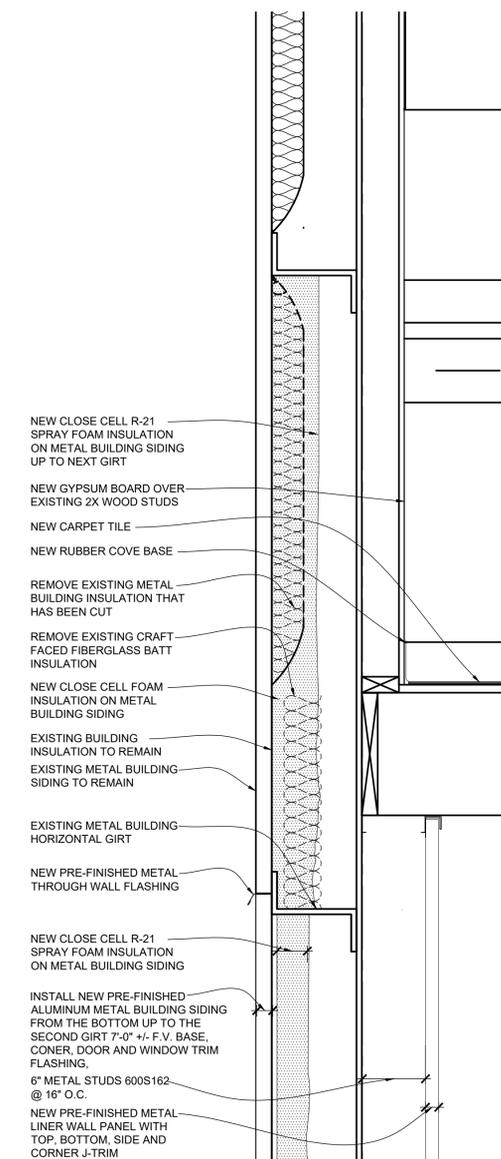
D4 HANDRAIL ELEVATION

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



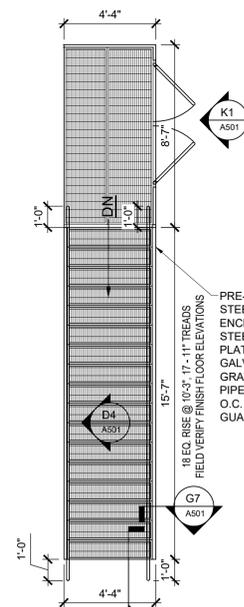
D10 RESTROOM SIGN DETAIL

SCALE: 1-1/2" = 1'-0"



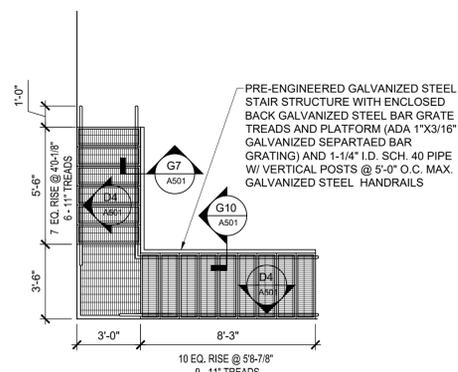
D13 WALL DETAIL

SCALE: 1-1/2" = 1'-0"



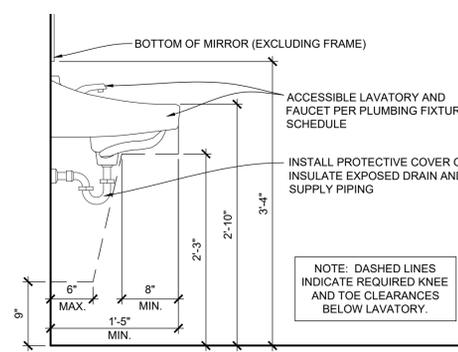
A1 ENLARGED STAIR PLAN

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



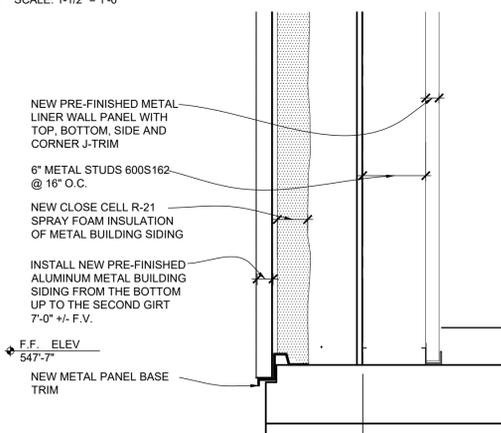
A4 ENLARGED STAIR PLAN

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



A10 WALL-MOUNTED LAVATORY

SCALE: 1" = 1'-0"



A13 WALL DETAIL

SCALE: 1-1/2" = 1'-0"

ROOM FINISH SCHEDULE										
ROOM NAME	ROOM NUMBER	FLOOR MAT'L	BASE MAT'L	CEILING MAT'L	CEILING HEIGHT	WALL				REMARKS
						NORTH	EAST	SOUTH	WEST	
LOBBY	01	STAINED CONC.	WB-2 / LPT	WOOD / P-1	--	WLP-1	WP-1 / P-1	WLP-1	WLP-1	
STORAGE	02	STAINED CONC.	-	WOOD / P-1	--	WLP-1	-	-	-	
CORRIDOR	03	STAINED CONC.	WB-2 / LPT	WOOD / P-1	--	WP-1 / P-1	WP-1 / P-1	WP-1 / P-1	WP-1 / P-1	
RESTROOM	04	STAINED CONC.	WB-1	WOOD / P-1	--	P-1	P-1	P-1	P-1	
STORAGE	05	STAINED CONC.	-	WOOD / P-1	--	WLP-1	-	-	-	
WAITING	06	STAINED CONC.	WB-2 / LPT	WOOD / P-1	--	WLP-1	WP-1 / P-1	WP-1 / P-1	WLP-1	
OFFICE	07	EXIST.	EXIST.	EXIST. A.C.T.	--	EXIST.	EXIST.	EXIST.	EXIST.	
OFFICE	08	EXIST.	EXIST.	EXIST. A.C.T.	--	EXIST.	EXIST.	EXIST.	EXIST.	
STAIR	09	CT-1	WB-1	EXIST. ACT	--	EXIST.	EXIST.	EXIST.	EXIST.	
RESTROOM	10	CT-1	WB-1	EXIST. A.C.T.	--	EXIST.	EXIST.	EXIST.	EXIST.	
OFFICE	11	CT-1	WB-1	EXIST. A.C.T.	--	EXIST.	EXIST.	EXIST.	EXIST.	
OFFICE	12	CT-1	WB-1	EXIST. ACT	--	P-1	P-1	P-1	P-1	
OFFICE	13	CT-1	WB-1	EXIST. A.C.T.	--	P-1	P-1	P-1	P-1	
OFFICE	14	CT-1	WB-1	EXIST. A.C.T.	--	P-1	P-1	P-1	P-1	
OFFICE	15	CT-1	WB-1	EXIST. ACT	--	P-1	P-1	P-1	P-1	
OFFICE	16	CT-1	WB-1	EXIST. A.C.T.	--	P-1	P-1	P-1	P-1	
OFFICE	17	CT-1	WB-1	EXIST. A.C.T.	--	P-1	P-1	P-1	P-1	
HALL	18	CT-1	WB-1	EXIST. ACT	--	P-1	P-1	P-1	P-1	

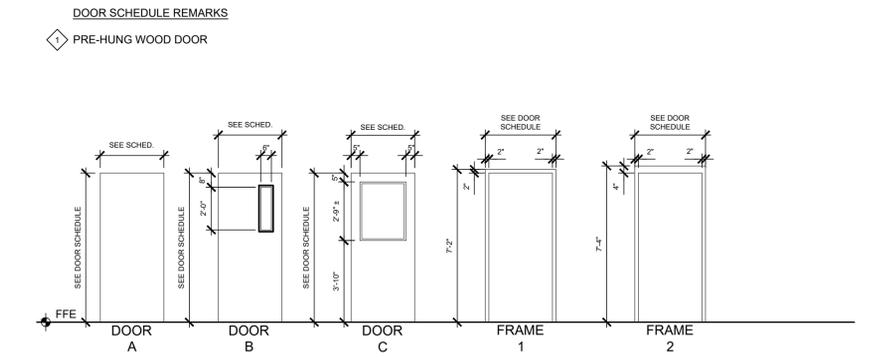
DOOR SCHEDULE				FRAME SCHEDULE				REMARKS
DOOR NO.	DOOR LEAF SIZE W X H	MATERIAL		FRAME SIZE W X H	MATERIAL	DETAILS		
		DOOR ELEV.			FRAME ELEV.			* ALL GLAZING TEMPERED, TYPICAL
		WOOD	HOLLOW METAL		HOLLOW METAL	WOOD		
		F.R.P.	GLAZING		ALUMINUM	HEAD	JAMB	
							HARDWARE GROUP	
A	3'-0" x 7'-0"	C		3'-4" x 7'-2"	1	A6 / A601	A6 / A601	1
B	PAIR 3'-0" x 7'-0"	B		6'-4" x 7'-2"	1	A6 / A601	A6 / A601	2
C	PAIR 3'-0" x 7'-0"	B		6'-4" x 7'-2"	1	A9 / A601	A9 / A601	3
D	2'-0" x 7'-0"	A		2'-4" x 7'-2"	1	A9 / A601	A9 / A601	4
E	3'-0" x 7'-0"	A		3'-4" x 7'-4"	2	E6 / A601	E9 / A601	5
F	2'-8" x 6'-8"	A		3'-0" x 7'-0"	1	-	-	6
G	EXISTING	-		EXISTING	-	-	-	-
H	3'-0" x 7'-0"	C		3'-4" x 7'-2"	1	A6 / A601	A6 / A601	7

WINDOW SCHEDULE			
WINDOW NUMBER	WINDOW SIZE WxH ± FIELD VERIFY ALL DIMENSIONS	REMARKS	DETAIL
A	--	EXISTING TO REMAIN	
B	4'-0" x 4'-0"	REPLACE EXISTING	A12 / A-601

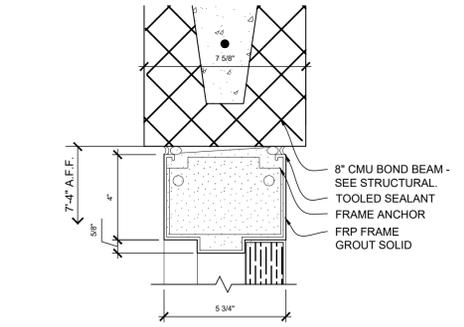
WINDOW SCHEDULE REMARKS
 NOTE

FINISH SCHEDULE REMARKS
 NOTE

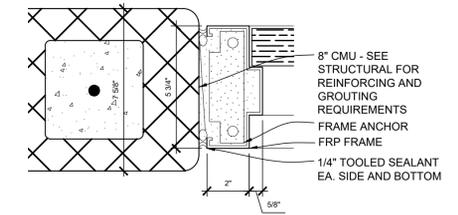
- FINISHES**
- STAINED CONCRETE: TBD
- CT-1 CARPET TILE
 COLOR: TBD
 INSTALL: TBD
- WLP-1 WALL LINER PANEL
 PRODUCT: TBD
 SIZE: 16" WIDTH
 COLOR: MFG. STANDARD
- WP-1 WALL PANEL
 PRODUCT: CEMENTIOUS SIDING
 SIZE: 48" WIDTH
 COLOR: TBD MFG. STANDARD
- WB-1 WALL BASE
 PRODUCT: RUBBER COVE BASE
 SIZE: 4" TALL
 COLOR: TBD MFG. STANDARD
- WB-2 WALL BASE
 PRODUCT: CEMENT BOARD TRIM
 SIZE: 4" TALL
 COLOR: TBD MFG. STANDARD
- LPT LINER PANEL TRIM
- P-1 PAINT
 PRODUCT: LATEX PAINT
 COLOR: TBD



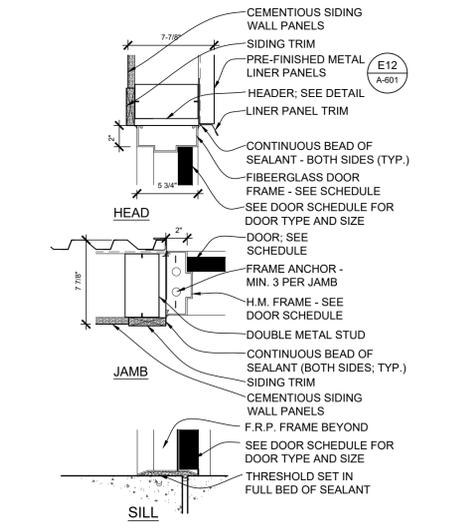
H6 DOOR AND FRAME ELEVATIONS
 SCALE: 1/4" = 1'-0"



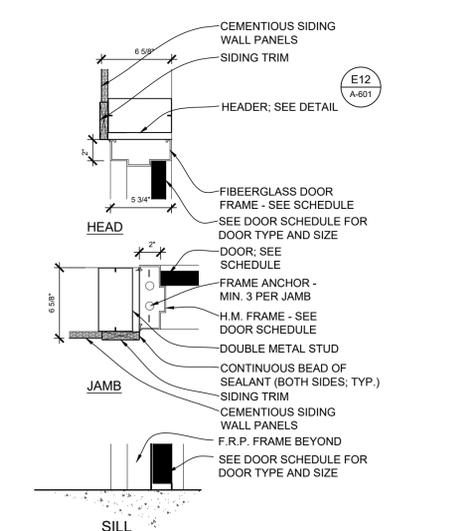
E6 DOOR FRAME DETAIL
 SCALE: 3" = 1'-0"



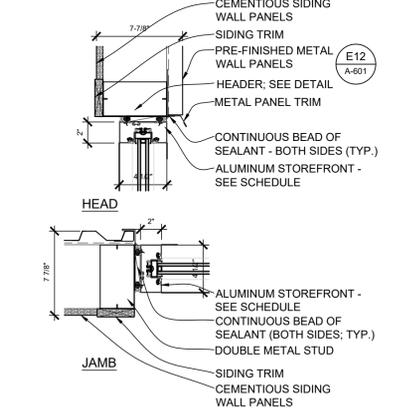
E9 DOOR FRAME DETAIL
 SCALE: 3" = 1'-0"



A6 DOOR FRAME DETAIL
 SCALE: 1-1/2" = 1'-0"



A9 DOOR FRAME DETAIL
 SCALE: 1-1/2" = 1'-0"



A12 WINDOW DETAIL
 SCALE: 1-1/2" = 1'-0"



12/27/2019



2120 Forum Blvd, Suite 101
 Columbia, Missouri 65203
 Ph:(573) 449-2683 Fax:(573) 442-6213

PWA Project No. 201919

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DEPARTMENT OF
 PUBLIC SAFETY

Interior and Exterior
 Repairs and Improvements
 MSHP AIRCRAFT HANGAR

CITY OF JEFFERSON AIRPORT

JEFFERSON CITY, MISSOURI

PROJECT # R2007-01
 SITE # 6011
 FACILITY # 8136011011

REVISION: _____
 DATE: _____
 REVISION: _____
 DATE: _____
 REVISION: _____
 DATE: _____
 ISSUE DATE: 12/27/2019

CAD DWG FILE: A301
 DRAWN BY: LC
 CHECKED BY: EM
 DESIGNED BY: EM

SHEET TITLE:
**FINISH, DOOR &
 WINDOW SCHEDULES
 & DETAILS**

SHEET NUMBER:

A-601

18 OF 28 SHEETS
 12/27/2019



DECEMBER 27, 2019
JAMES P. WATSON, PE MO NO. 2015017071



J-SQUARED
ENGINEERING

2401 Bernadette Drive, Suite 201
Columbia, Missouri 65203
573-234-4492 phone
www.j-squaredeng.com

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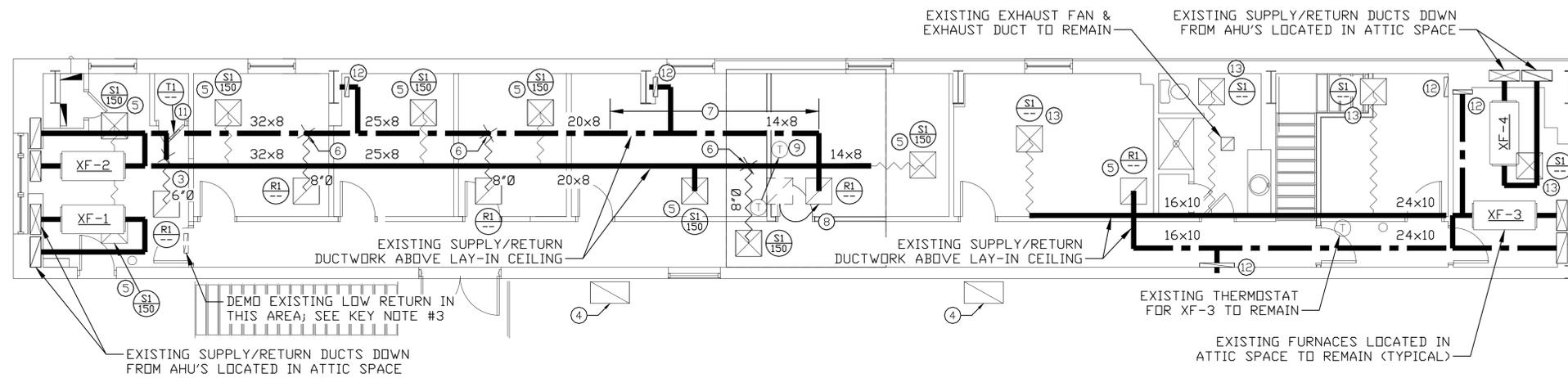
CAD DWG FILE: R2007-01/6011
DRAWN BY: ACW
CHECKED BY: JAP
DESIGNED BY: ACW

SHEET TITLE:
**MECHANICAL
PLAN**

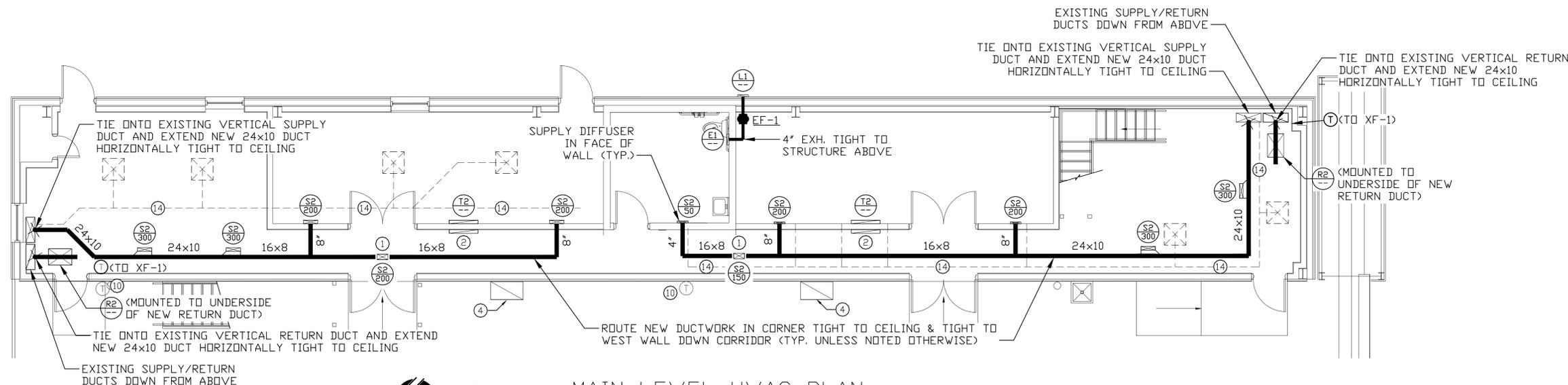
SHEET NUMBER:

M-100

19 OF 28 SHEETS
12/27/2019



2 **M-100** **UPPER LEVEL HVAC PLAN**
SCALE: 3/16" = 1'-0"



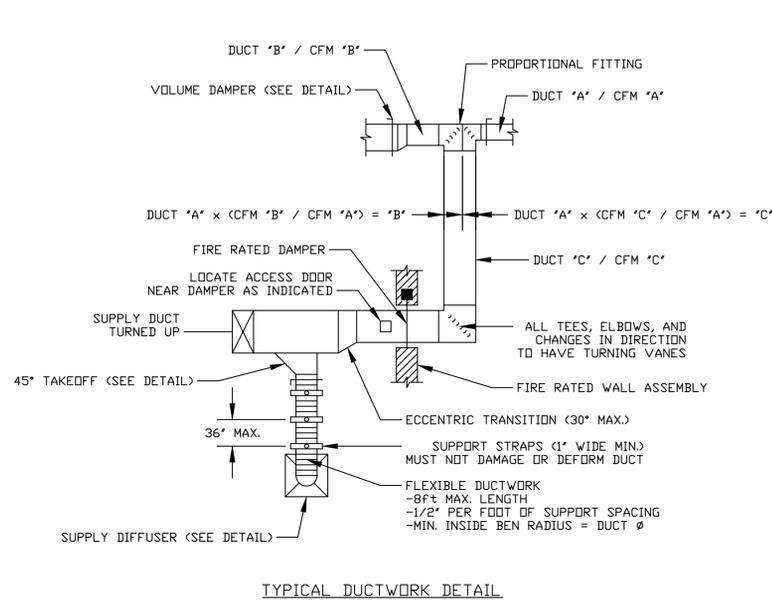
1 **M-100** **MAIN LEVEL HVAC PLAN**
SCALE: 3/16" = 1'-0"

GENERAL NOTES

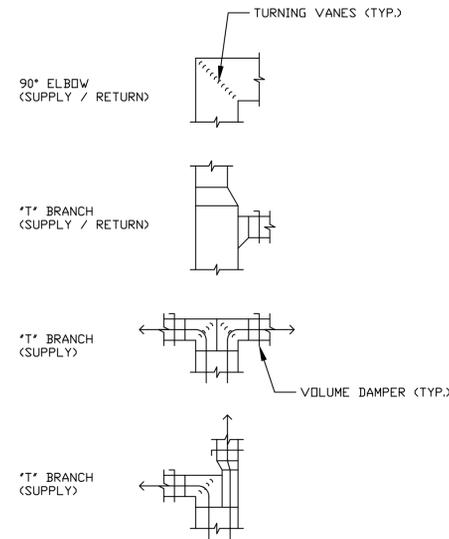
- REFER TO SHEET M501 FOR ADDITIONAL HVAC DETAILS, SCHEDULES, ETC.
- EXISTING CONDENSING UNITS LOCATED ON ROOF ARE TO REMAIN.
- EXISTING FURNACE VENT, COMBUSTION AIR, CONDENSATE DRAINS, FRESH AIR DUCTS, GAS PIPING, ETC. TO REMAIN UNLESS NOTED OTHERWISE.
- ALL EXISTING DUCTWORK ON MAIN LEVEL TO BE REMOVED/UNINSTALLED & DISCARDED BY HVAC CONTRACTOR UNLESS NOTED OTHERWISE. ALL EXISTING DUCTWORK ON UPPER LEVEL IS TO REMAIN UNLESS NOTED OTHERWISE. FIELD VERIFY EXISTING QUANTITIES AND LOCATIONS OF DUCTWORK.
- ALL NEW EXPOSED DUCTWORK ON LOWER LEVEL TO HAVE PRIMER/PAIN-T-GRIP FINISH.
- EXISTING HEATER CONTROLS LOCATED ON WEST SIDE OF HANGAR (2 THERMOSTATS) ARE TO BE TEMPORARILY REMOVED/SUPPORTED AS NEEDED DURING WALL RENOVATION. CONFIRM DETAILS ON SITE.
- HVAC CONTRACTOR TO CLEAN EXISTING EVAPORATOR COILS LOCATED IN ATTIC, CONDENSING COILS LOCATED ON ROOF, AND REPLACE ALL FURNACE FILTERS WHEN (1) WORK IS STARTED AND (2) WHEN ALL WORK IS COMPLETED.

KEY NOTES

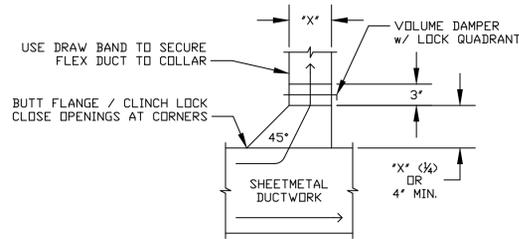
- | | |
|--|---|
| <ol style="list-style-type: none"> AIR DEVICE INSTALLED ON UNDERSIDE OF NEW SUPPLY DUCT. HIGH/LOW TRANSFER GRILLES: (1) ON CORRIDOR SIDE OF WALL AT 84" A.F.F. & (1) ON ROOM SIDE OF WALL AT 12" A.F.F. TIE INTO EXISTING RETURN DUCT ABOVE CEILING AND INSTALL NEW RETURN AIR GRILLE; DEMO EXISTING LOW-RETURN GRILLE. DISMOUNT/DISASSEMBLE EXISTING EXHAUST DUCT (ROUTED FROM APPROXIMATELY 68" A.F.F. OF MAIN LEVEL UP THRU ROOF) DURING WALL DEMOLITION AND REASSEMBLE/MOUNT AS REQUIRED. REPLACE EXISTING SUPPLY DIFFUSER/RETURN GRILLE WITH NEW; BALANCE TO AMOUNT SHOWN (FOR SUPPLY DIFFUSERS). SHIFT/RELOCATE DIFFUSER AS NECESSARY TO ACCOMMODATE NEW LIGHT FIXTURE LOCATIONS/NEW CEILING GRID. TAP/TIE INTO EXISTING DUCTWORK WITH NEW DUCT SHOWN. PATCH/SEAL EXISTING UNUSED OPEN RETURN DUCT TAPS IN THIS AREA. REPLACE EXISTING RETURN GRILLE; RELOCATE TO SOUTH SIDE OF NEW WALL; EXTEND/MODIFY EXISTING DUCTWORK AS NECESSARY FOR RELOCATION. | <ol style="list-style-type: none"> RELOCATE EXISTING THERMOSTAT TO NEW LOCATION SHOWN. TEMPORARILY SUPPORT EXISTING HVAC CONTROLS AS NEEDED DURING REPLACEMENT OF EXISTING WALL, PERMANENTLY AFFIX WHEN NEW WALL IS CONSTRUCTED. (2) TRANSFER GRILLES (REFER TO SCHEDULE) MOUNTED IN DOOR; (1) AT 12" A.F.F., (1) AT 60" A.F.F. EXISTING RETURN GRILLE TO REMAIN. REPLACE EXISTING SUPPLY DIFFUSER; BALANCE TO FIELD-MEASURED FLOW AMOUNT PRIOR TO REPLACEMENT. DEMO ANY/ALL EXISTING DUCTWORK/GRILLES/DIFFUSERS ON MAIN LEVEL UNLESS NOTED OTHERWISE. SEE GENERAL NOTE #4. |
|--|---|



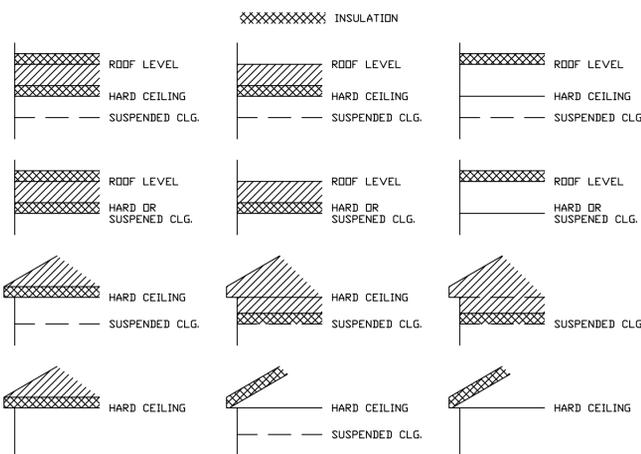
TYPICAL DUCTWORK DETAIL



TYPICAL DUCTWORK FITTINGS DETAIL



TYPICAL 45° TAKEOFF DETAIL



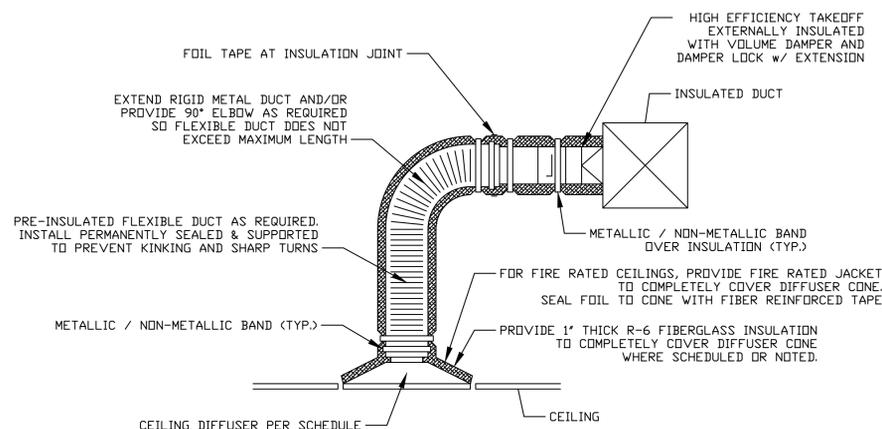
DUCT INSIDE THERMAL ENVELOPE INSULATION REQUIREMENTS

- RECTANGULAR
- SUPPLY = 1" LINER
 - RETURN = 1" LINER
 - EXHAUST = NONE
 - OUTSIDE AIR = 2" WRAP
- ROUND
- SUPPLY = 1 1/2" WRAP
 - RETURN = NONE
 - EXHAUST = NONE
 - OUTSIDE AIR = 2" WRAP
- SPIRAL
- SUPPLY = NONE
 - RETURN = NONE
 - EXHAUST = NONE
 - OUTSIDE AIR = 2" WRAP

DUCT OUTSIDE THERMAL ENVELOPE INSULATION REQUIREMENTS

- RECTANGULAR
- SUPPLY = 1" LINER & 1 1/2" WRAP
 - RETURN = 1" LINER @ 1 1/2" WRAP
 - EXHAUST = 1 1/2" WRAP
 - OUTSIDE AIR = NONE
- ROUND
- SUPPLY = 2" WRAP
 - RETURN = 2" WRAP
 - EXHAUST = 1 1/2" WRAP
 - OUTSIDE AIR = NONE
- SPIRAL
- SUPPLY = 2" WRAP
 - RETURN = 2" WRAP
 - EXHAUST = 1 1/2" WRAP
 - OUTSIDE AIR = NONE

TYPICAL BUILDING INTERIOR DUCT INSULATION DIAGRAM



TYPICAL LAY-IN DIFFUSER DETAIL

HVAC EQUIPMENT SCHEDULE								
TAG	EQUIPMENT DESCRIPTION	SIZE (TONS)	ORIENTATION	TOTAL AIRFLOW (CFM)	ELECTRICAL			NOTES
					VOLTS/PH	MCA	OCP	
XF-1	EXISTING FURNACE	3.0	HORIZONTAL	1200	-	-	-	1,2
XF-2	EXISTING FURNACE	3.0	HORIZONTAL	1200	-	-	-	2,3
XF-3	EXISTING FURNACE	3.0	HORIZONTAL	1200	-	-	-	2,3
XF-4	EXISTING FURNACE	3.0	HORIZONTAL	1200	-	-	-	1,2
EF-1	NEW EXHAUST FAN	-	IN-LINE	80	120/1	1	20-1	4

NOTES:

- PROVIDE AND INSTALL 7-DAY PROGRAMABLE THERMOSTAT.
- EQUAL TO DAIKIN SINGLE STAGE FURNACE WITH MATCHING CONDENSING UNIT (CU'S MOUNTED ON ROOF)
- EXISTING THERMOSTAT TO REMAIN OR BE RELOCATED, SEE PLANS FOR DETAILS.
- EQUAL TO SOLER & PALAU #TD-SILENT SERIES INLINE EXHAUST FAN, FLOW RATED AT 3/8" S.P., WITH BACK-DRAFT DAMPER

AIR DEVICE SCHEDULE						
TAG	SERVICE	MANUFACTURER (OR EQUAL)	MODEL (OR EQUAL)	SIZE	COLOR / FINISH	NOTES
S1	SUPPLY	PRICE	SPD	24x24	WHITE	
S2	SUPPLY	PRICE	520	12x6	WHITE	
R1	RETURN	PRICE	80	24x24	WHITE	
R2	RETURN	PRICE	530	28x18	WHITE	
T1	TRANSFER	PRICE	STG	12x12	WHITE	
T2	TRANSFER	PRICE	530	32x16	WHITE	
E1	EXHAUST	PRICE	530	12x12	WHITE	
L1	EXHAUST	POTTORFF	EFD	8x8	PRIMED	PAINT TO MATCH EXTERIOR

NOTES:

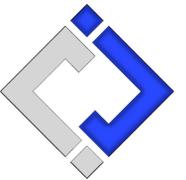
- VERIFY AIR DEVICE FINISHES WITH OWNER/ARCHITECT PRIOR TO INSTALLATION

HVAC SPECIFICATIONS

- WORKMANSHIP
 - COORDINATE WITH OTHER TRADES SO THAT HVAC EQUIPMENT AND DUCT WORK DOES NOT BLOCK REQUIRED ACCESS OR CLEARANCE TO EQUIPMENT.
 - ALL HVAC EQUIPMENT IS TO BE INSTALLED PER MANUFACTURER'S PUBLISHED RECOMMENDATIONS.
 - ALL EQUIPMENT TO BE INSTALLED LEVEL AND PLUMB.

HVAC PLAN SYMBOL LEGEND

- (X ##) DIFFUSER/GRILLE TYPE (SEE SCHEDULE)
- (##) CUBIC FEET PER MINUTE (CFM) / FACE SIZE (BALANCE SUPPLY DEVICES TO AMOUNT SHOWN)
- XF-# EQUIPMENT TAG (SEE SCHEDULE)
- SUPPLY DIFFUSER
- RETURN GRILLE
- SUPPLY DUCT
- - - RETURN DUCT
- - - - DUCT TO BE DEMOLISHED (SEE PLAN FOR NOTES)
- Ⓣ THERMOSTAT



J-SQUARED
ENGINEERING
2401 Bernadette Drive, Suite 201
Columbia, Missouri 65203
573 - 234 - 4492 phone
www.j-squaredeng.com



DECEMBER 27, 2019
JAMES P. WATSON, PE MO NO. 2015017071



J-SQUARED
ENGINEERING

2401 Bernadette Drive, Suite 201
Columbia, Missouri 65203
573-234-4492 phone
www.j-squaredeng.com

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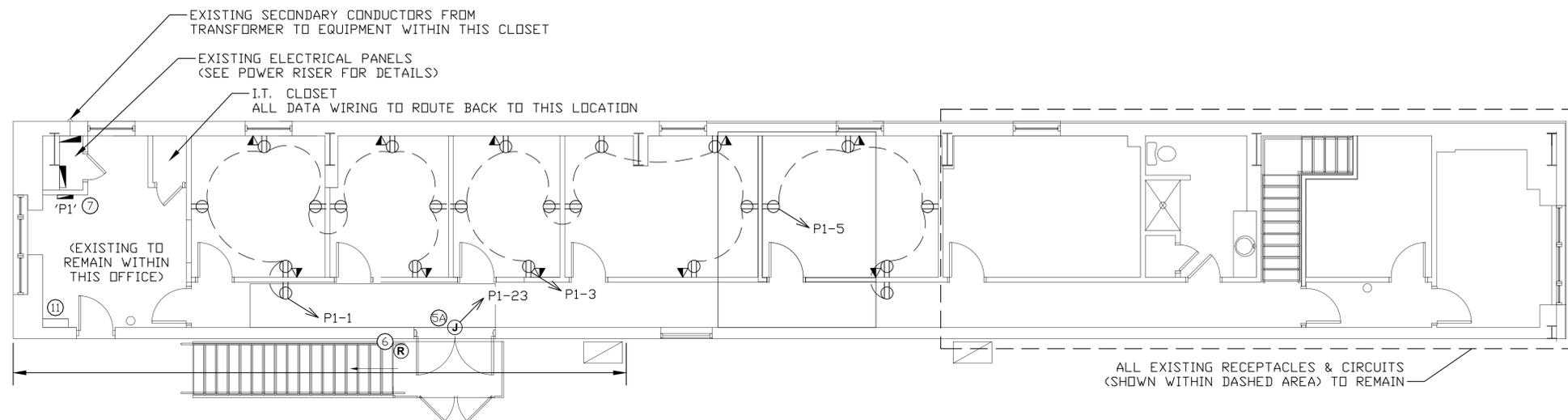
CAD DWG FILE: R2007-01/6011
DRAWN BY: ACW
CHECKED BY: JAP
DESIGNED BY: ACW

SHEET TITLE:
**POWER
PLAN**

SHEET NUMBER:

EP-100

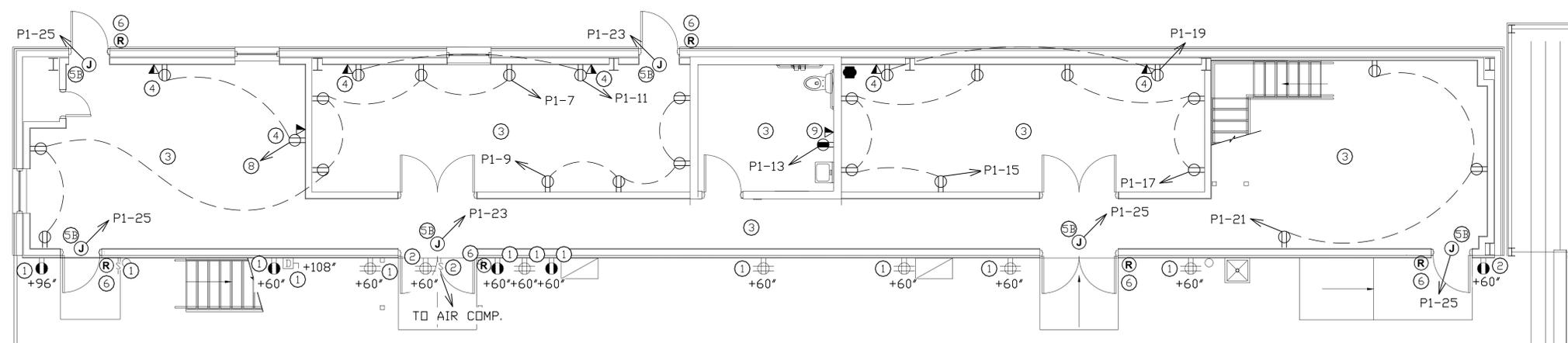
21 OF 28 SHEETS
12/27/2019



2
EP-100

UPPER LEVEL POWER PLAN

SCALE: 3/16" = 1'-0"



1
EP-100

MAIN LEVEL POWER PLAN

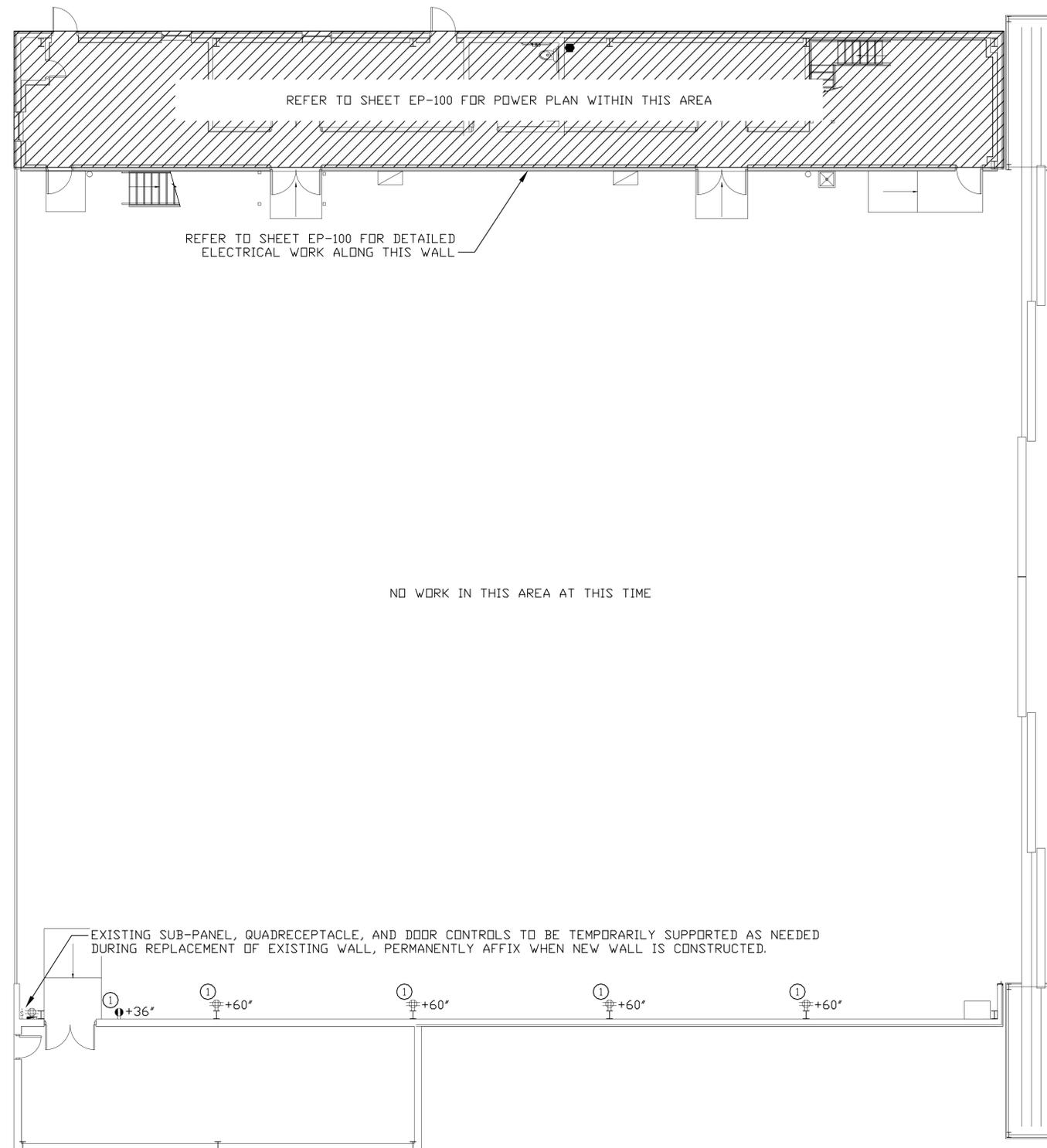
SCALE: 3/16" = 1'-0"

GENERAL NOTES

1. REFER TO SHEET E501 FOR ADDITIONAL POWER DETAILS, SCHEDULES, ETC.
2. ELECTRICAL CONTRACTOR TO REMOVE/UNINSTALL ANY/ALL PORTIONS OF UNUSED CONDUIT/CONDUCTORS ON MAIN LEVEL BACK TO ELECTRICAL PANEL. REMOVE/UNINSTALL ANY/ALL PORTIONS OF UNUSED CONDUIT/CONDUCTORS ON UPPER LEVEL BACK TO NEAREST J-BOX. FIELD VERIFY EXACT QUANTITIES & LOCATIONS.
3. EXISTING RECEPTACLES/EQUIPMENT ARE SHOWN FOR REFERENCE ONLY. ELECTRICAL CONTRACTOR TO FIELD VERIFY EXACT LOCATIONS AND COORDINATE ANY NECESSARY OUTAGES WITH OWNER PRIOR TO BEGINNING WORK.
4. ALL CONDUIT ON LOWER LEVEL TO BE EXPOSED GALVANIZED WITH GALVANIZED FASTENERS AND SHALL BE PAINTED (WITH GALVANIZED BOX COVERS); NO SURFACE-MOUNTED CONDUIT PERMITTED ON UPPER LEVEL (WITH PLASTIC BOX COVERS), REFER TO SPECIFICATIONS FOR DETAILS.
5. ELECTRICAL CONTRACTOR TO TRACE ALL EXISTING CIRCUITS IN EXISTING PANELS 'EP1', 'EP2', & 'EMP1' AND PROVIDE/INSTALL TYPED PANEL SCHEDULES WITH CORRECT IDENTIFICATION.
6. NUMBER OF HORIZONTAL CONDUIT RUNS ON MAIN LEVEL TO BE MINIMIZED AS MUCH AS POSSIBLE. FASTEN HORIZONTAL RUNS TO STRUCTURE ABOVE. INSTALL JUNCTION BOX AT CEILING AND ROUTE CONDUIT DIRECTLY DOWN WALL TO EACH RECEPTACLE LOCATION SHOWN.
7. LOW VOLTAGE WIRING:
 - 7.1. COORDINATE ALL LOW-VOLTAGE REQUIREMENTS, LOCATIONS, ETC. WITH OWNER REPRESENTATIVE PRIOR TO BEGINNING WORK.
 - 7.2. ALL LOW VOLTAGE WIRING TO BE PLENUM-RATED CAT6 CABLE.
 - 7.3. ELECTRICAL CONTRACTOR TO PROVIDE & INSTALL LOW-VOLTAGE WIRING FROM LOCATIONS SHOWN BACK TO EXISTING PATCH PANEL IN I.T. CLOSET. USE EXISTING LABELING METHOD AND TERMINATION STANDARD 568B.
 - 7.4. ALL LOW-VOLTAGE WIRING SHALL BE TESTED TO CONFIRM CONNECTIVITY/CONTINUITY. CONFIRM DETAILS WITH OWNER REPRESENTATIVE.
 - 7.5. REUSE ANY PORTIONS OF EXISTING DATA CABLING DETERMINED TO BE IN GOOD WORKING CONDITION (VERIFY ON SITE).
 - 7.6. ALL EXISTING SURVEILLANCE CAMERAS & ASSOCIATED LOW-VOLTAGE CABLING ARE TO REMAIN (TEMPORARILY REMOVE/SUPPORT AS NEEDED DURING RENOVATION).

KEY NOTES

- | | |
|---|---|
| <p>① → TEMPORARILY SUPPORT EXISTING RECEPTACLE/DISCONNECT/ETC. AS NEEDED DURING REPLACEMENT OF EXISTING WALL, PERMANENTLY AFFIX WHEN NEW WALL IS CONSTRUCTED.</p> <p>② → TEMPORARILY SUPPORT EXISTING RECEPTACLE/DISCONNECT/ETC. AS NEEDED DURING REPLACEMENT OF EXISTING WALL, RELOCATE TO SIDE OF NEW WALL OPENING AS NEEDED. REFER TO ARCHITECTURAL ELEVATIONS FOR DETAILED LOCATIONS.</p> <p>③ → ALL OUTLETS ON LOWER LEVEL TO BE MOUNTED AT 48" A.F.F. UNLESS NOTED OTHERWISE (ALL OUTLETS ON UPPER LEVEL TO BE MOUNTED AT STANDARD 18" HEIGHT UNLESS NOTED OTHERWISE).</p> <p>④ → PROVIDE & INSTALL ISOLATED-GROUND RECEPTACLE. PERMANENTLY LABEL RECEPTACLE AS ISOLATED-GROUND.</p> <p>⑤A → POWER AND LOW-VOLTAGE WIRING FOR ACCESS CONTROLS ABOVE CEILING ON SECURE SIDE OF DOOR. SEE DETAIL ON SHEET E500. COORDINATE EXACT LOCATION & REQUIREMENTS WITH DOOR HARDWARE SUPPLIER / INSTALLER.</p> <p>⑤B → POWER AND LOW-VOLTAGE WIRING FOR ACCESS CONTROLS ABOVE CEILING ON SECURE SIDE OF DOOR ON UPPER LEVEL, WIRING TO ROUTE DOWN IN WALL TO DOOR ON MAIN LEVEL. SEE DETAIL ON SHEET E500. COORDINATE EXACT LOCATION & REQUIREMENTS WITH DOOR HARDWARE SUPPLIER / INSTALLER.</p> | <p>⑥ → PROXIMITY CARD READER FOR ACCESS CONTROLS. COORDINATE EXACT LOCATION & REQUIREMENTS WITH DOOR HARDWARE SUPPLIER / INSTALLER. SEE SHEET E-500 FOR DETAILS.</p> <p>⑦ → NEW SUB-PANEL 'P1' FED FROM EXISTING ELECTRICAL PANEL 'EP1'. SEE POWER RISER FOR DETAILS.</p> <p>⑧ → LOCATE/IDENTIFY EXISTING 120V 20A CIRCUIT IN THIS AREA FED FROM EXISTING EMERGENCY PANEL 'EMP1'. RECEPTACLES TO BE FED FROM THIS CIRCUIT.</p> <p>⑨ → DEDICATED LAND-LINE PHONE CONNECTION (NOT VOIP); SEE KEYED NOTE 11 FOR TELEPHONE BOARD LOCATION. COORDINATE DETAILS & REQUIREMENTS WITH OWNER.</p> <p>⑩ → TEMPORARILY SUPPORT ANY SURFACE-MOUNTED CONDUIT FEEDING CIRCUITS SHOWN ON LOWER LEVEL AS NECESSARY DURING CONSTRUCTION. TEMPORARILY MOUNT TO WALL WHEN COMPLETED, COORDINATE WITH NEW DOOR OPENING LOCATION.</p> <p>⑪ → EXISTING TELEPHONE BOARD IN THIS AREA TO REMAIN. TEMPORARILY REMOVE/SUPPORT AS NECESSARY DURING RENOVATION.</p> |
|---|---|



1
EL-101

HANGAR AREA POWER PLAN

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

GENERAL NOTES

1. REFER TO SHEET E501 FOR ADDITIONAL POWER DETAILS, SCHEDULES, ETC.
2. ELECTRICAL CONTRACTOR TO REMOVE/UNINSTALL ANY/ALL PORTIONS OF UNUSED CONDUIT/CONDUCTORS BACK TO NEAREST J-BDX.
3. EXISTING RECEPTACLES/EQUIPMENT ARE SHOWN FOR REFERENCE ONLY. ELECTRICAL CONTRACTOR TO FIELD VERIFY EXACT LOCATIONS AND COORDINATE ANY NECESSARY OUTAGES WITH OWNER PRIOR TO BEGINNING WORK.
4. ALL CONDUIT ON LOWER LEVEL TO BE EXPOSED AND SHALL BE PAINTED; REFER TO ARCHITECTURAL PLANS FOR DETAILS.
5. ALL EXISTING SURVEILLANCE CAMERAS & ASSOCIATED LOW-VOLTAGE CABLING ARE TO REMAIN (TEMPORARILY REMOVE/SUPPORT AS NEEDED DURING RENOVATION).

KEY NOTES

- ① → TEMPORARILY SUPPORT EXISTING RECEPTACLE/DISCONNCT/ETC. & ASSOCIATED CONDUIT AS NEEDED DURING REPLACEMENT OF EXISTING WALL, PERMANENTLY AFFIX WHEN NEW WALL IS CONSTRUCTED.



DECEMBER 27, 2019
JAMES P. WATSON, PE MO NO. 2015017071



J-SQUARED
ENGINEERING

2401 Bernadette Drive, Suite 201
Columbia, Missouri 65203
573 - 234 - 4492 phone
www.j-squaredeng.com

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ISSUE DATE: 12/27/2019

CAD DWG FILE: R2007-01/6011
DRAWN BY: ACW
CHECKED BY: JAP
DESIGNED BY: ACW

SHEET TITLE:
**POWER
PLAN**

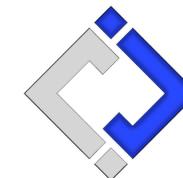
SHEET NUMBER:

EP-101

22 OF 28 SHEETS
12/27/2019



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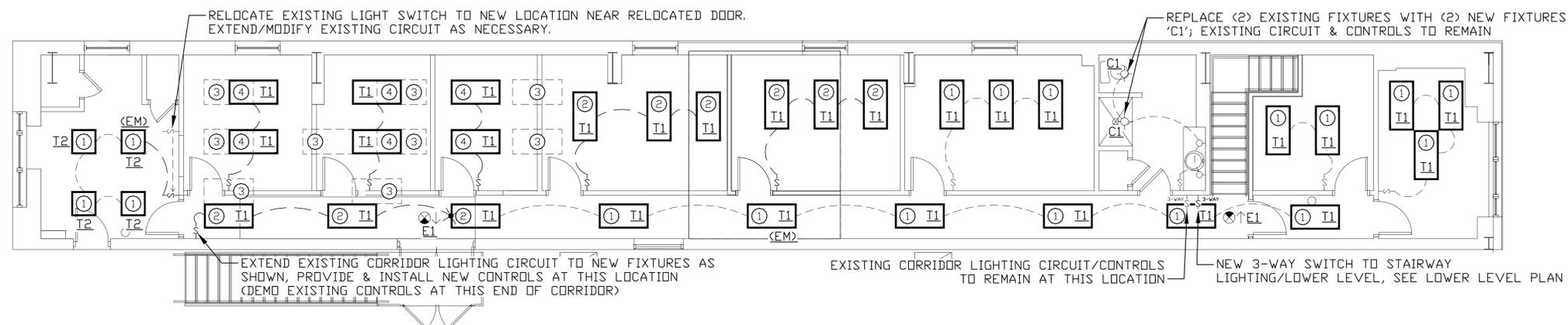
CAD DWG FILE: R2007-01/6011
DRAWN BY: ACW
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SHEET TITLE:
**LIGHTING
PLAN**

SHEET NUMBER:

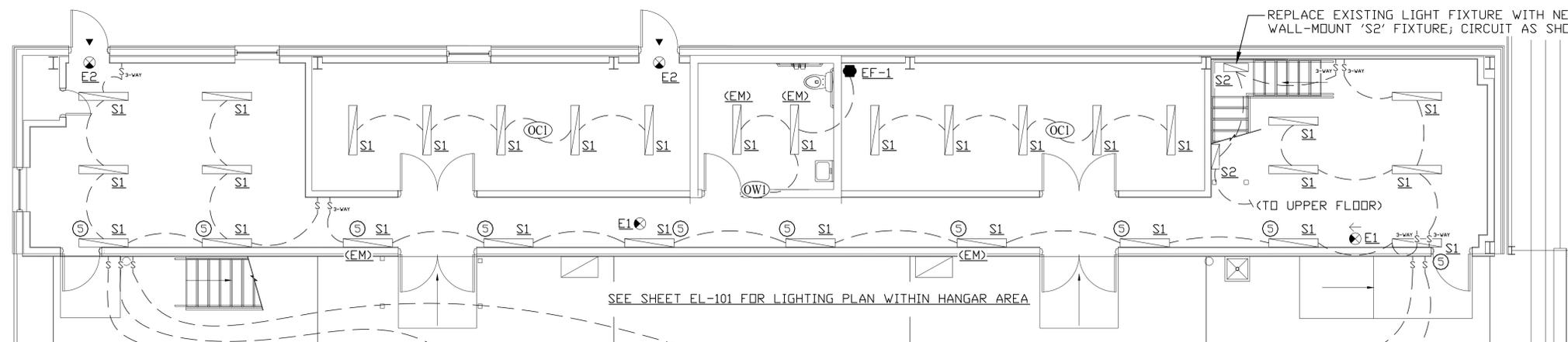
EL-100

23 OF 28 SHEETS
12/27/2019



UPPER LEVEL LIGHTING PLAN

SCALE: 3/16" = 1'-0"



MAIN LEVEL LIGHTING PLAN

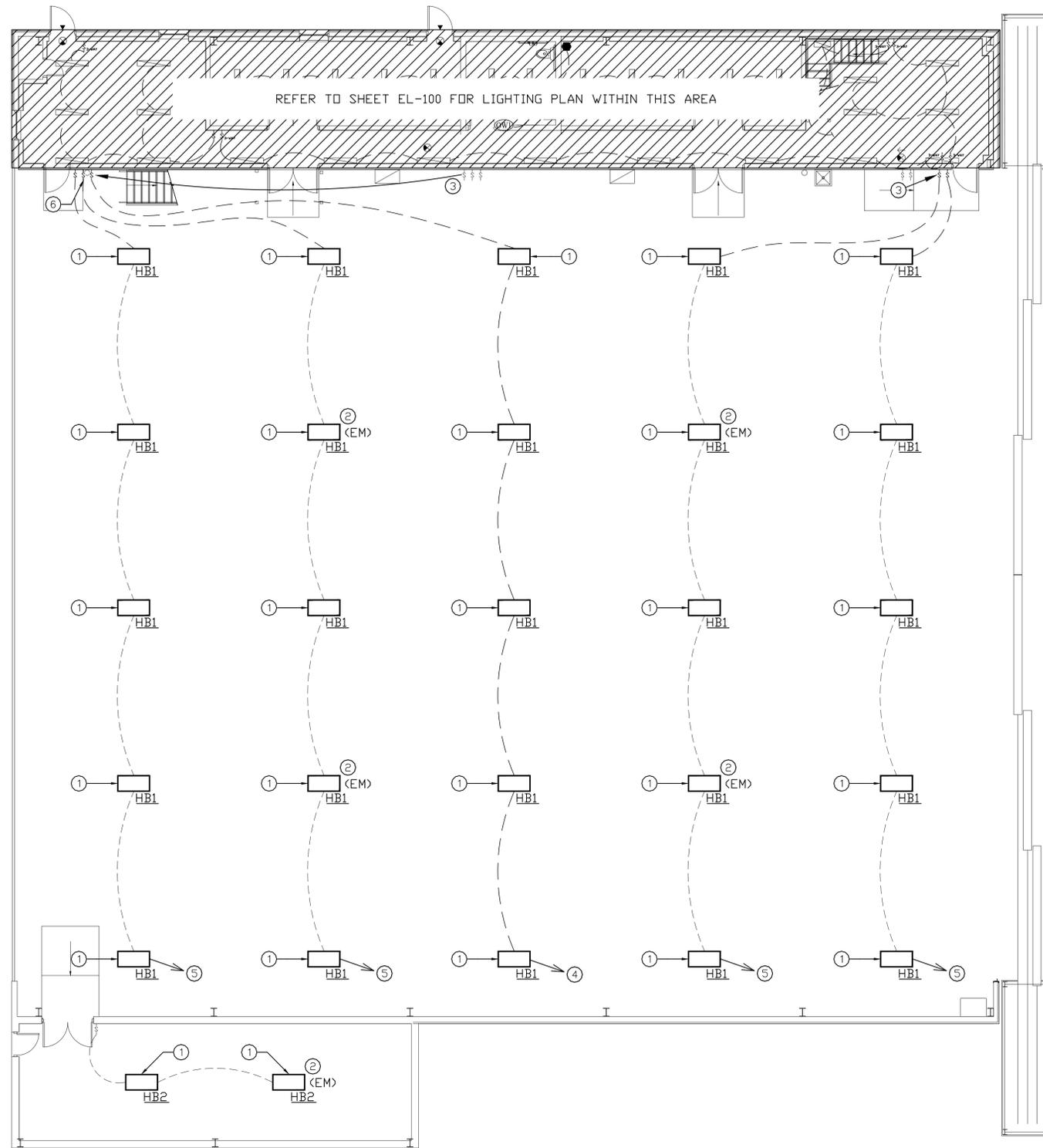
SCALE: 3/16" = 1'-0"

GENERAL NOTES

1. REFER TO SHEET E501 FOR ADDITIONAL LIGHTING DETAILS, SCHEDULES, ETC.
2. ELECTRICAL CONTRACTOR TO REMOVE/UNINSTALL ANY/ALL PORTIONS OF UNUSED CONDUIT/CONDUCTORS BACK TO NEAREST J-BOX.
3. EXISTING LIGHT FIXTURES ON UPPER LEVEL ARE SHOWN FOR REFERENCE ONLY. ELECTRICAL CONTRACTOR TO FIELD VERIFY EXACT LOCATIONS PRIOR TO BEGINNING WORK.
4. ALL EXISTING LIGHT FIXTURES AND CIRCUITS ON LOWER LEVEL ARE TO BE REMOVED/UNINSTALLED. ELECTRICAL CONTRACTOR TO FIELD VERIFY EXACT LOCATIONS PRIOR TO BEGINNING WORK.
5. ALL LIGHTING ON LOWER LEVEL TO BE CIRCUIT P1-27 UNLESS NOTED OTHERWISE.

KEY NOTES

- ① → REPLACE EXISTING LIGHT FIXTURE WITH NEW FIXTURE; REUSE EXISTING CIRCUIT & CONTROLS, EXTEND/MODIFY CIRCUIT AS NECESSARY.
- ② → REPLACE EXISTING LIGHT FIXTURE WITH NEW FIXTURE; CIRCUIT AS SHOWN WITH NEW CONTROLS ON EXISTING LIGHTING CIRCUIT.
- ③ → REMOVE/UNINSTALL EXISTING LIGHT FIXTURE.
- ④ → INSTALL NEW LIGHT FIXTURE, CIRCUIT AS SHOWN WITH NEW CONTROLS ON EXISTING LIGHTING CIRCUIT.
- ⑤ → WALL FIXTURE MOUNTED AS HIGH AS POSSIBLE BELOW DUCTWORK ELEVATION.



HANGAR AREA LIGHTING PLAN

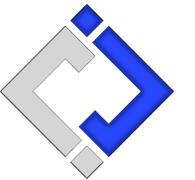
SCALE: 3/16" = 1'-0"

GENERAL NOTES

1. REFER TO SHEET E501 FOR ADDITIONAL LIGHTING DETAILS, SCHEDULES, ETC.
2. ELECTRICAL CONTRACTOR TO FIELD VERIFY EXISTING FIXTURE VOLTAGES AND CIRCUITS PRIOR TO BEGINNING WORK.

KEY NOTES

- | | |
|--|--|
| <ol style="list-style-type: none"> ① → REPLACE EXISTING LIGHT FIXTURE WITH NEW LIGHT FIXTURE, EXISTING CONTROLS TO REMAIN. ② → LIGHT FIXTURE WITH EMERGENCY BATTERY BACKUP, SEE LIGHTING SCHEDULE FOR DETAILS. ③ → RELOCATE EXISTING LIGHTING CONTROLS TO NEW LOCATION SHOWN. EXTEND/MODIFY CIRCUITS AS NECESSARY, SEE NOTE #6. ④ → PROVIDE & INSTALL NEW 3/4" CONDUIT WITH (2) #10 CU. & (1) #10 CU. EQ. GRD. FOR LIGHTING CIRCUIT TO EMERGENCY PANEL 'EP1'. REPLACE EXISTING 120V 20A CIRCUIT IN EMERGENCY PANEL 'EP1' WITH NEW 120V 30A CIRCUIT BREAKER TO FEED LIGHTING CIRCUIT. | <ol style="list-style-type: none"> ⑤ → REUSE EXISTING 30A LIGHTING CIRCUIT FED FROM EXISTING ELECTRICAL PANEL 'EP1'. ⑥ → REPLACE EXISTING LIGHT SWITCH WITH NEW 120V 30A HEAVY-DUTY SWITCH EQUAL TO LEVITON #3031-2. |
|--|--|



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SHEET TITLE:
LIGHTING
PLAN

SHEET NUMBER:

EL-101

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12/27/2019

ELECTRICAL SPECIFICATIONS

1. GENERAL
 - 1.1. THE ENTIRE ELECTRICAL SYSTEM SHALL BE CONTINUOUSLY GROUNDED. EVERY BRANCH CONDUIT SHALL INCLUDE A GREEN GROUND CONDUCTOR SIZED PER NEC.
 - 1.2. ARC-FAULT CIRCUITS SHALL BE RUN WITH A DEDICATED NEUTRAL AS REQUIRED BY MANUFACTURER.
 - 1.3. PROVIDE PERMANENT ARC-FLASH LABEL AFFIXED TO EVERY DISCONNECT AND PANEL.
 - 1.4. PROVIDE TYPE WRITTEN PANEL SCHEDULE FOR EACH PANEL.
2. MATERIALS
 - 2.1. CONDUIT & CONDUCTORS
 - 2.1.1. ALL CONDUCTORS SIZES INDICATED ON PLANS ARE COPPER UNLESS NOTED OTHERWISE.
 - 2.1.2. ABOVE GRADE CONDUCTORS SHALL BE THHN COPPER. BELOW GRADE CONDUCTORS SHALL BE XHHW-2.
 - 2.1.3. MINIMUM CONDUCTOR SIZE SHALL BE #12 UNLESS NOTED OTHERWISE. 120V, 20 AMP CIRCUITS WITH CONDUCTOR LENGTH GREATER THAN 100' SHALL BE MINIMUM #10. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR MEASURING ACTUAL CONDUCTOR LENGTH AND INCREASING CONDUCTOR SIZE TO COMPENSATE FOR VOLTAGE DROP AS REQUIRED BY NEC.
 - 2.1.4. RIGID GALVANIZED OR SCHEDULE 40 PVC CONDUIT SHALL BE USED FOR SERVICE WIRING, BELOW GRADE INSTALLATIONS, OR WHERE EXPOSED TO WEATHER. IN APPLICATIONS OTHER THAN THOSE LISTED IN 2.1.4, EMT OR MC CABLE IS ACCEPTABLE. WHERE CONDUCTORS ARE PROTECTED FROM DAMAGE, ENCLOSED IN BUILDING MATERIALS, AND CONSTRUCTION IS OF A PERMITTED TYPE, NM CABLE MAY BE USED.
 - 2.1.5. CONTRACTOR TO PROVIDE J-BOXES, COVER PLATES, AND ANY ACCESSORIES REQUIRED TO PROVIDE A COMPLETE SYSTEM. SEE ARCHITECTURAL PLANS FOR DEVICE COLORS. DUPLEX RECEPTACLES SHALL BE TAMPER RESISTANT, 20 AMP, EQUAL TO LEVITON CR20.
 - 2.2.2. TOGGLE WALL SWITCHES SHALL BE EQUAL TO LEVITON CS120-2
 - 2.2.3. DIMMER SWITCHES SHALL BE TESTED WITH FIXTURES AND LAMPS FOR COMPATIBILITY.

POWER PLAN SYMBOL LEGEND

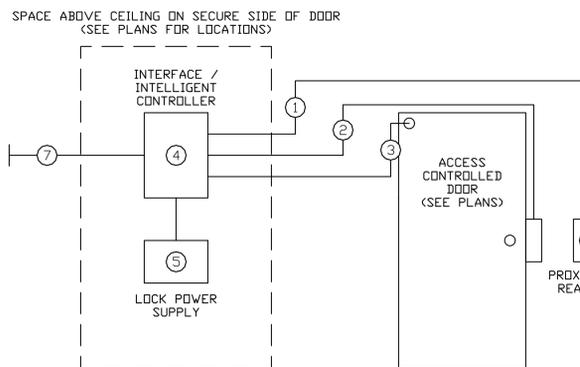
- CIRCUIT WIRING
- CIRCUIT TAG
- RECEPTACLE
 - '##' INDICATES MOUNTING HEIGHT (IF OTHER THAN 18" A.F.F.)
 - 'XX' = 'EX' EXISTING RECEPTACLE
 - 'XX' = 'WP' WEATHERPROOF
- 240 OR 208V RECEPTACLE
- JUNCTION BOX
- CARD READER (PROVIDED BY OWNER'S SUBCONTRACTOR)
- QUADRECEPTACLE
- DATA / PHONE JACK
 - BOX WITH 1" & CONDUIT BACK TO I.T. CLOSET
 - INCLUDE PLENUM-RATED CAT-6 WIRING
 - OWNER SUBCONTRACTOR TO TERMINATE WIRING

LIGHTING PLAN SYMBOL LEGEND

- LIGHT FIXTURE
 - 'X1' = FIXTURE TAG / REFER TO SCHEDULE
 - 'EM' = EMERGENCY BATTERY BACKUP
- EXISTING LIGHTING FIXTURE (REFER TO PLAN NOTES)
- LIGHT SWITCH (3-WAY OR 4-WAY IF NOTED)
- CIRCUIT WIRING
- CEILING-MOUNTED OCCUPANCY SENSOR EQUAL TO WATTSTOPPER DT-355
- WALL-MOUNTED OCCUPANCY SENSOR EQUAL TO WATTSTOPPER DSW-301

LIGHT FIXTURE SCHEDULE										
TAG	MANUFACTURER (OR EQUAL)	MODEL NUMBER (OR EQUAL)	DESCRIPTION	MOUNTING	LUMEN OUTPUT	CCT (*K)	CRI	VOLTS	WATTS	NOTES
C1	HALO	SLD612-8-40-WH	6" SURFACE CAN	SURFACE	1215	4000	80	120	15	
E1	H.E. WILLIAMS	EXIT/EM/LED-R-WHT-HL-D	EXIT LIGHT WITH INTERIOR HEADS	SURFACE	-	-	-	120	-	
E2	H.E. WILLIAMS	EXIT/EM/LED-R-WHT-RC-WETRHL-D	EXIT LIGHT WITH REMOTE HEAD	SURFACE	-	-	-	120	-	
S1	H.E. WILLIAMS	75S-4-L50/840	4' LED STRIP	SURFACE	5135	4000	80	120	42	WITH 'EM/10WRM' OPTION WHERE SHOWN
S2	H.E. WILLIAMS	75S-2-L30/840	2' LED STRIP	SURFACE	2700	4000	80	120	23	
T1	H.E. WILLIAMS	LP-24-L50/840	2x4 LED FLAT PANEL	ACT GRID	5053	4000	80	120	40	WITH 'EM/10WRM' OPTION WHERE SHOWN
T2	H.E. WILLIAMS	LP-22-L50/840	2x2 LED FLAT PANEL	ACT GRID	5114	4000	80	120	48	WITH 'EM/10WRM' OPTION WHERE SHOWN
HB1	H.E. WILLIAMS	GP6-L650/840-W-DL-DRV-120	INDUSTRIAL LED HIGHBAY	SUSPENDED	68200	4000	80	120	566	WITH 'EM20W' OPTION WHERE SHOWN
HB2	H.E. WILLIAMS	GL-4-L300/840-SCHA118-DRV-120	INDUSTRIAL LED HIGHBAY	SUSPENDED	30026	4000	80	120	251	WITH 'EM/12W/BMTD' OPTION WHERE SHOWN

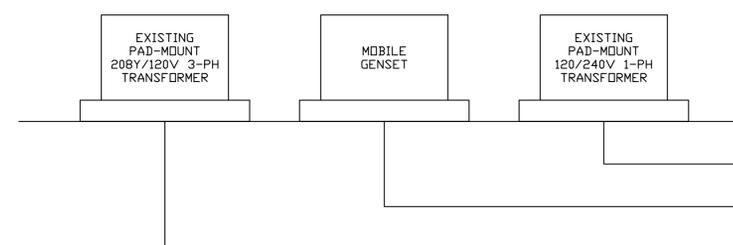
NOTES:
1. VERIFY LIGHT FIXTURE FINISHES WITH OWNER / ARCHITECT PRIOR TO INSTALLATION



GENERAL NOTE: COORDINATE ALL EXACT SYSTEM REQUIREMENTS WITH DOOR HARDWARE INSTALLER PRIOR TO BEGINNING WORK.

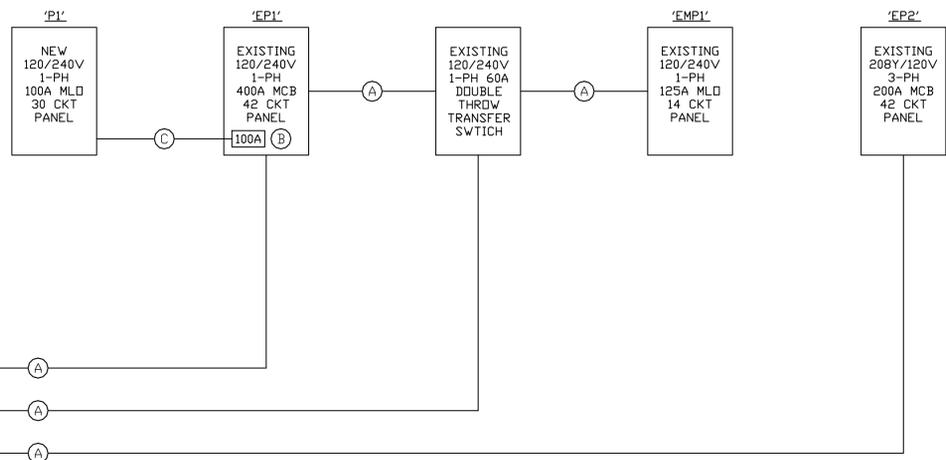
ACCESS CONTROLS KEY NOTES

- ① → 22-6 SHIELDED CABLE TO CARD READER (BY ELECTRICIAN).
- ② → 18-4 SHIELDED CABLE (BY ELECTRICIAN). IF MOTORIZED STRIKE, 18-4 & 22-2 CABLE (BY ELECTRICIAN).
- ③ → 22-2 SHIELDED CABLE FOR DPS (BY ELECTRICIAN).
- ④ → INTERFACE/INTELLIGENT CONTROLLER (PROVIDED & INSTALLED BY OWNER'S SUBCONTRACTOR).
- ⑤ → POWER SUPPLY (PROVIDED & INSTALLED BY OWNER'S SUBCONTRACTOR). ELECTRICIAN TO PROVIDE 120V POWER. COORDINATE DETAILS WITH ACCESS CONTROLS EQUIPMENT INSTALLER.
- ⑥ → REFER TO ARCHITECTURAL PLANS FOR CARD READER MOUNTING HEIGHT.
- ⑦ → CAT6 CABLING BACK TO EXISTING NETWORK SWITCH IN I.T. CLOSET.



NEW ELECTRICAL PANEL 'P1' SCHEDULE										
VOLTAGE		PANEL SIZE		MOUNTING		AIC RATING		PHASE "A" LOAD		57
120/208		100A MLD		SURFACE		10,000		PHASE "B" LOAD		62.5
NEMA RATING: 1										
CIRCUIT NUMBER	DESCRIPTION	BREAKER SIZE	AMPS	PHASE	AMPS	BREAKER SIZE	DESCRIPTION	CIRCUIT NUMBER		
1	UPPER LEVEL N. OFFICE RECEP.TS.	20-1	13.5	A		20-1	SPARE	2		
3	UPPER LEVEL MIDDLE OFFICE RECEP.TS.	20-1	13.5	B		20-1	SPARE	4		
5	UPPER LEVEL MIDDLE OFFICE RECEP.TS.	20-1	7.5	A		20-1	SPARE	6		
7	LOWER LEVEL STORAGE RECEP.TS.	20-1	9	B		20-1	SPARE	8		
9	LOWER LEVEL STORAGE RECEP.TS.	20-1	6	A			OPEN	10		
11	LOWER LEVEL STORAGE I.G. RECEP.TS.	20-1	3	B			OPEN	12		
13	LOWER LEVEL RESTROOM RECEP.T.	20-1	1.5	A			OPEN	14		
15	LOWER LEVEL STORAGE RECEP.TS.	20-1	6	B			OPEN	16		
17	LOWER LEVEL STORAGE RECEP.TS.	20-1	6	A			OPEN	18		
19	LOWER LEVEL STORAGE I.G. RECEP.TS.	20-1	3	B			OPEN	20		
21	LOWER LEVEL SOUTH END RECEP.TS.	20-1	4.5	A			OPEN	22		
23	ACCESS CONTROLS	20-1	8	B			OPEN	24		
25	ACCESS CONTROLS	20-1	8	A			OPEN	26		
27	LOWER LEVEL LIGHTING	20-1	10	B	10	20-1	RE-FEED EXISTING CIRCUIT ('EP1')	28		
29	SPARE	20-1		A	10	20-1	RE-FEED EXISTING CIRCUIT ('EP1')	30		

NOTES:
A: PANEL SHALL BE EQUAL TO SQUARE D MODEL "00"
B: ELECTRICIAN SHALL VERIFY BREAKER WITH EQUIPMENT PRIOR TO PURCHASE & INSTALL.
C: AFTER COMPLETION OF WORK, ELECTRICIAN SHALL PROVIDE A TYPE WRITTEN PANEL DIRECTORY IN NEW PANEL.

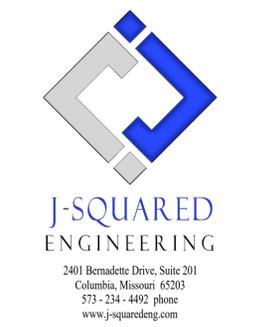


POWER RISER KEY NOTES

- Ⓐ → EXISTING CONDUIT/CONDUCTORS TO REMAIN.
- Ⓑ → REMOVE (2) EXISTING 120V 20A SPARE CIRCUIT BREAKERS FROM FULL ELECTRICAL PANEL 'EP1'. INSTALL (1) NEW 100A DOUBLE-POLE CIRCUIT BREAKER IN OPEN SPACES. RE-FEED (2) REPLACED EXISTING CIRCUIT BREAKERS FROM NEW SUB-PANEL 'P1' IF NECESSARY.
- Ⓒ → 1-1/2" PVC CONDUIT WITH (3) #3 CU. & (1) #8 CU. EQ. GRD. FROM NEW 100A CIRCUIT BREAKER IN 'EP1' TO FEED NEW PANEL 'P1'.



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SHEET TITLE:
ELECTRICAL
DETAILS &
SCHEDULES

SHEET NUMBER:

E-500

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12/27/2019



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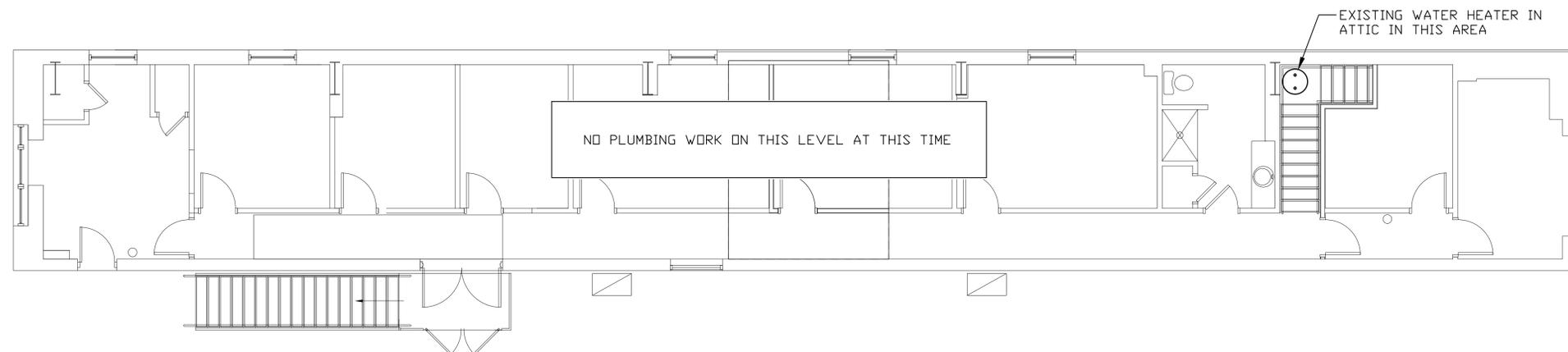
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SHEET TITLE:
**PLUMBING
PLAN**

SHEET NUMBER:

P-100

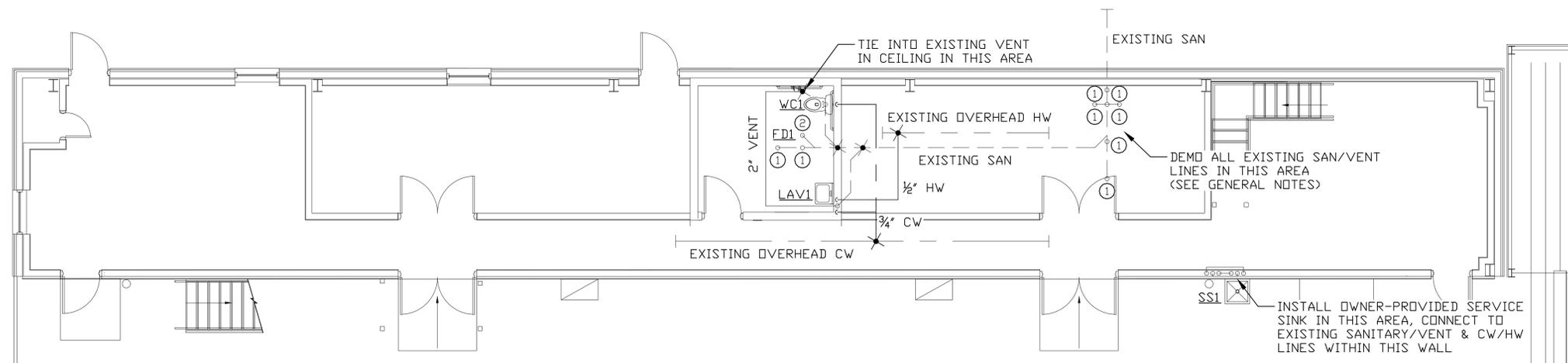
26 OF 28 SHEETS
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2
P-100

UPPER LEVEL PLUMBING PLAN

SCALE: 3/16" = 1'-0"



1
P-100

MAIN LEVEL PLUMBING PLAN

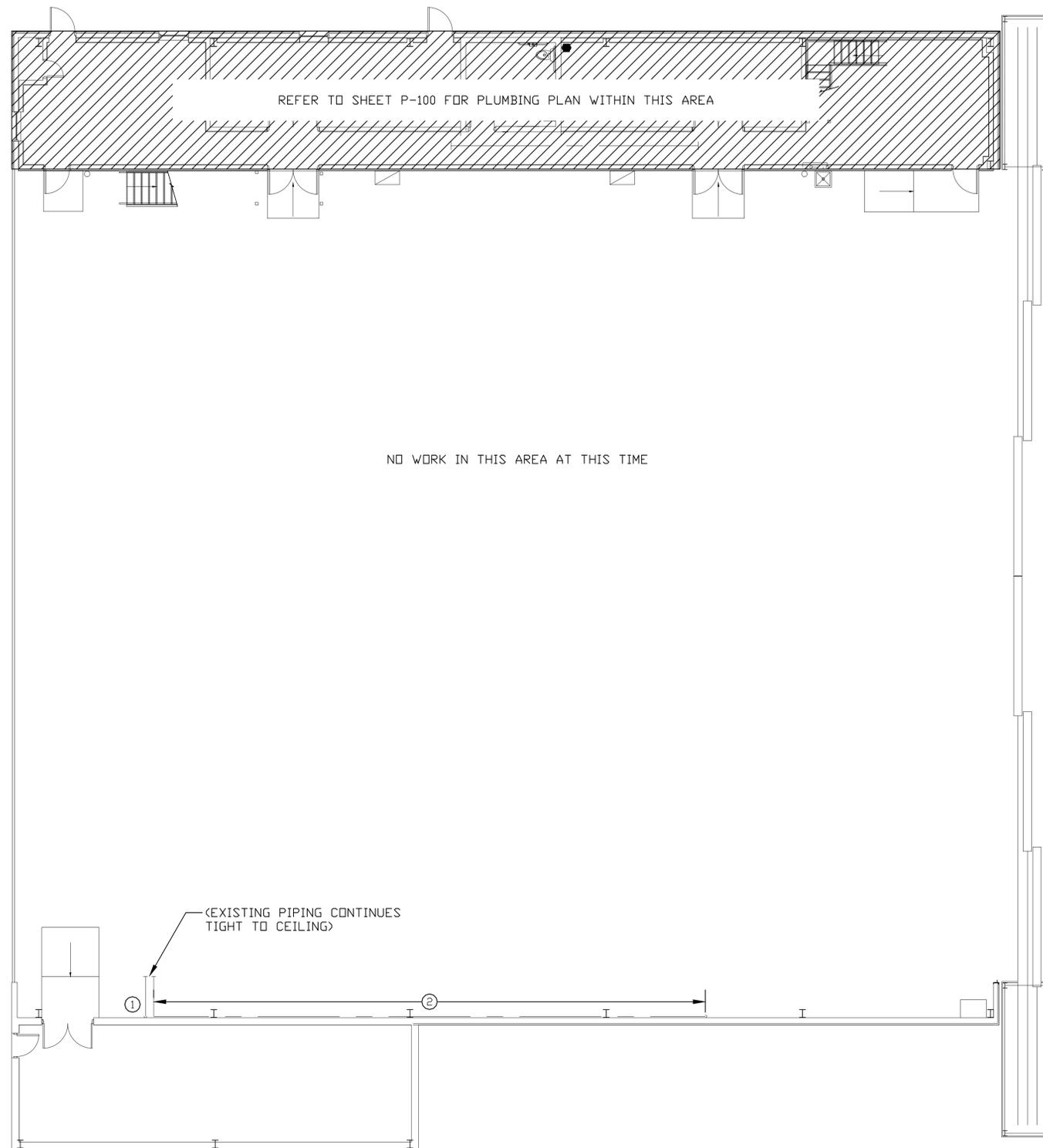
SCALE: 3/16" = 1'-0"

GENERAL NOTES

1. REFER TO SHEET P501 FOR ADDITIONAL PLUMBING DETAILS, SCHEDULES, ETC.
2. REMOVE/UNINSTALL ALL UNUSED PORTIONS OF EXISTING PLUMBING LINES ON MAIN LEVEL.
3. EXISTING SANITARY SEWER SHOWN FOR REFERENCE ONLY. PLUMBING CONTRACTOR TO FIELD VERIFY EXACT LOCATION, DEPTH, CONDITION, ETC. OF EXISTING SANITARY LINES PRIOR TO BEGINNING WORK.
4. EXISTING CW/HW PIPING SHOWN FOR REFERENCE ONLY. PLUMBING CONTRACTOR TO FIELD VERIFY EXACT LOCATION, CONDITION, ETC. OF EXISTING SUPPLY LINES PRIOR TO BEGINNING WORK.
5. PLUMBING CONTRACTOR TO CAP ANY/ALL UNUSED SANITARY PENETRATIONS THRU FLOOR BELOW SLAB AND REMOVE ANY UNUSED PORTIONS OF VENT PIPING (AND CAP AT CEILING).

KEY NOTES

- ① → CAP EXISTING SANITARY BELOW FLOOR.
- ② → INSTALL FLOOR DRAIN 'FDI' AT EXISTING SANITARY FLOOR PENETRATION.



HANGAR AREA PLUMBING PLAN

SCALE: 3/16" = 1'-0"

GENERAL NOTES

1. REFER TO SHEET E501 FOR ADDITIONAL LIGHTING DETAILS, SCHEDULES, ETC.
2. ELECTRICAL CONTRACTOR TO FIELD VERIFY EXISTING FIXTURE VOLTAGES AND CIRCUITS PRIOR TO BEGINNING WORK.

KEY NOTES

- ① → DOMESTIC COLD WATER PIPING TO BE TEMPORARILY SUPPORTED AS NEEDED DURING REPLACEMENT OF EXISTING WALL, PERMANENTLY AFFIX WHEN NEW WALL IS CONSTRUCTED.
- ② → COMPRESSED AIR PIPING TO BE TEMPORARILY SUPPORTED AS NEEDED DURING REPLACEMENT OF EXISTING WALL, PERMANENTLY AFFIX WHEN NEW WALL IS CONSTRUCTED.



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**PLUMBING
DETAILS &
SCHEDULES**

SHEET NUMBER:

P-500

28 OF 28 SHEETS
12/27/2019

PLUMBING SPECIFICATIONS

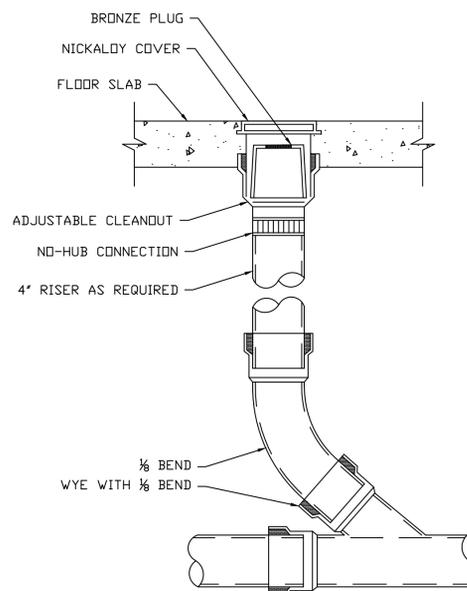
1. GENERAL
1.1. PLUMBING CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL ESCUTCHEONS, 1/4 TURN STOPS, P-TRAPS, AND SUPPLY LINES TO PROVIDE A COMPLETE SYSTEM AT EACH FIXTURE INDICATED ON PLANS UNLESS NOTED OTHERWISE.

PLUMBING FIXTURE SCHEDULE				
TAG	DESCRIPTION	MANUFACTURER (OR EQUAL)	MODEL (OR EQUAL)	NOTES
FD1	FLOOR DRAIN	ZURN	Z415-BZ	WITH Z1072 TRAP SEAL
LAV1	LAVATORY (WALL HUNG W/MANUAL FAUCET)	AMERICAN STANDARD	0355.012	WITH ZURN Z81104-XL FAUCET, 1/4 TURN STOPS, BRAIDED STAINLESS STEEL SUPPLIES, AND TRUBRO LAV GUARD 2; WITH 'TMV1'
SS1	FREE-STANDING UTILITY SINK	(OWNER PROVIDED)	(OWNER PROVIDED)	PLUMBING CONTRACTOR TO INSTALL
TMV1	THERMOSTATIC MIXING VALVE - POINT OF USE	WATTS	LFUSG	
WC1	WATER CLOSET - ADA HEIGHT - TANK	AMERICAN STANDARD	215AA.004	WITH CHURCH 9500SSCT SELF SUSTAINING SEAT, STAINLESS BRAIDED SUPPLY, AND 1/4 TURN SHUT-OFF.
NOTES: 1. VERIFY NECESSARY FIXTURES MEET ADA REQUIREMENTS WITH ARCHITECT PRIOR TO INSTALLATION				

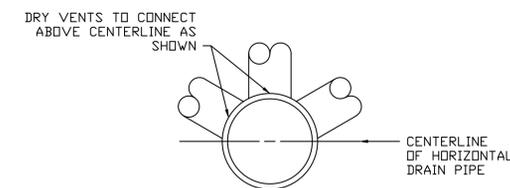
PLUMBING PLAN SYMBOL LEGEND

- — — — — DOMESTIC COLD WATER PIPING
 — — — — — DOMESTIC HOT WATER PIPING
 — — — — — SANITARY SEWER PIPING
 — — — — — SANITARY VENT PIPING
 — — — — — ELBOW DOWN / ELBOW UP

PLUMBING CONNECTION SIZING SCHEDULE					
FIXTURE	TYPICAL ABBREVIATION	SANITARY PIPING		SUPPLY PIPING	
		WASTE CONNECTION	VENT CONNECTION	COLD WATER CONNECTION	HOT WATER CONNECTION
DRINKING FOUNTAIN	DF	1-1/2"	1-1/4"	1/2"	-
FLOOR DRAIN	FD	3"	2"	-	-
HAND / HAIR SINK	HS / SK	2"	1-1/4"	1/2"	1/2"
HOSE BIBB	HB	-	-	3/4"	-
LAVATORY	LAV	1-1/2"	1-1/4"	1/2"	1/2"
MOP SINK	MS	3"	1-1/2"	1/2"	1/2"
ICE MAKER OUTLET BOX	REF	-	-	1/2"	-
SHOWER	SH	3"	1-1/2"	1/2"	1/2"
URINAL	UR	2"	1-1/4"	3/4"	-
WATER CLOSET (FLUSH TANK)	WC	3"	2"	1/2"	-
WATER CLOSET (FLUSH VALVE)	WC	3"	2"	1"	-
NOTES: 1. SIZES SHOWN ABOVE ARE TYPICAL UNLESS NOTED OTHERWISE ON PLANS					



INTERIOR FLOOR CLEANOUT DETAIL



TYPICAL DRY VENT DETAIL