| 2018 APF | PENDIX B BUILDING CODE SUM | 1MARY |
|--|--|--|
| me of Project: Campbell University Engineering Annex II | | ACCESSIBLE PARKING (SECTION 1106) |
| dress: Buies Creek, North Carolina Zip Code: 27506 | STORY DESCRIPTION BLDG AREA TABLE 506.24 AREA FOR ALLOWABLE FRONTAGE AREA PER STORY OR | (SECTION 1106) TOTAL # PARKING SPACES # ACCESSIBLE SPACES PROVIDED TOTAL # |
| posed Use: Engineering Shops/Classrooms | NO. AND USE PER STORY (ACTUAL) AREA FRONTAGE INCREASE 1,5 UNLIMITED 2,3 1 S-1 (Most Restrictive) 4,800 9,000 Not Used 9,000 | LOT OR PARKING AREA REQUIRED PROVIDED REGULAR WITH 5' ACCESS AISLE 132" ACCESS 8' ACCESS SPACES PROVIDED |
| rner or Authorized Agent : Brett Strickland Phone # 919-222-7272 E-Mail: bretts@si-nc.com | The second secon | See Site Plan |
| rned By: | | |
| de Enforcement Jurisdiction: City State State | ¹ Frontage area increases from Section 506.2 are computed thus: a. Perimeter which fronts a public way or open space having 20 feet minimum width = (F) | TOTAL |
| EAD DESIGN PROFESSIONAL: Joe T. Smith, Jr. | b. Total Building Perimeter =(P) c. Ratio (F/P) =(F/P) | PLUMBING FIXTURE REQUIREMENTS |
| SIGNER FIRM NAME LICENSE # TELEPHONE # E-MAIL | d. W = Minimum width of public way =(W) e. Percent of frontage increase $I_f = 100 [F/P - 0.25] x W/30 =(%)$ | (TABLE 2902.1) WATER CLOSETS LAVATORIES SHOWERS DRINKING FOUNTAINS |
| Idding Smith Engineering & Design Joe T. Smith, Jr. 24916 (919)-736-2141 smithengineeringnc@hotmail.com | Unlimited area applicable under conditions of Section 507. Maximum Building Area = total number of stories in the building x D (maximum 3 stories) (506.2). | USE MALE FEMALE UNISEX URINALS MALE FEMALE UNISEX & TUBS REGULAR ACCESSIBLE |
| ctrical Smith Engineering & Design Joe T. Smith, Jr. 24916 (919)—827—0864 @daa.com (919)—827—0864 @daa.com (919)—736—2141 smithengineeringnc@hotmail.com | 4 The maximum area of parking garages must comply with 406.5.4. The maximum area of air traffic control towers must comply with Table 412.3.1. | Max bldg. EXISTING 0 |
| e Alarm | ⁵ Frontage increase is based on the unsprinklered area value in Table 506.2. | 75 people REQUIRED 2 2 0 0 1 1 0 0 1 1 |
| mbing Smith Engineering & Design Joe T. Smith, Jr. 24916 (919)-736-2141 smithengineeringnc@hotmail.com chanical Comfort Mechanical Contractors Brent A. Sigmon 028407 (919)-383-2507 bsigmon@comfortmc.com | | CDECIAL ADDROVALG |
| inkler-Standpipe | ALLOWABLE HEIGHT | Special approval: (Local Jurisdiction, Department of Insurance, OSC, DPI, DHHS, ICC, etc., describe below) |
| uctural Smith Engineering & Design Joe T. Smith, Jr. 24916 (919)-736-2141 smithengineeringnc@hotmail.com | ALLOWABLE SHOWN ON CODE PLANS REFERENCE | |
| raining Walls >5' High | Building Height in Feet (Table 504.3) 40 23'-6" | - |
| | Building Height in Stories (Table 504.4) 1 1 | |
| 8 NC BUILDING CODE: New Construction Shell/Core 1st Time Interior Completion Addition Phased Construction-Shell Core | 1. Provide code reference if the "Shown on Plans" quantity is not based on Table 504.3 or 504.4. | STRUCTURAL DESIGN Metal building portion to be supplied. |
| 8 NC EXISTING CODE: Prescriptive Alteration Level I Historic Property theck all that apply) | | DESIGN LOADS: Metal building portion to be supplied by metal building manufacturer |
| Repair Alteration Level II Change of Use Chapter 14 Alteration Level III | FIRE RATING DESIGN# DESIGN# DESIGN# | Importance Wind (I _W) Factors: Snow (I _S) 1.0 |
| NSTRUCTED: (date) CURRENT USE(s) (Ch. 3) | BUILDING ELEMENT BUILDING ELE | Seismic $(I_{\mathbf{E}})$ 1.0 |
| NOVATED: (date) PROPOSED USE(s) (Ch. 3) B Business | (FEET) REDUCTION) SILE 1 # ASSEMBL 1 LENGTHATION JOINTS | Live Loads: Roof 20 PSF Mezzanine N/A |
| JILDING DATA | girders, trusses | Floor 50/125 PSF Ground Snow Load: 15 PSF |
| heck all that apply) | Bearing walls Exterior | Wind Loads: Basic Wind Speed 118 MPH (ASCE 7-10) |
| intering in the character in the charac | North | Exposure Category B |
| ndpipes: NO Class: I III Wet Dry mary Fire District: NO YES (Primary) Flood Hazard Area: No YES | West N/A 0 HOUR N/A South N/A 0 HOUR N/A | SEISMIC CATEGORY |
| mary Fire District: NO YES (Primary) Flood Hazard Area: No YES cial Inpections Required: NO YES | Interior 0 HOUR N/A Nonbearing walls and partitions | Provide the following Seismic Design Parameters: |
| CROSS NULL DING A DEA TARLE | Nonbearing walls and partitions Exterior North >30' 0 HOUR 0 HOUR | Occupancy Category (Table 1604.5) |
| CROSS BUILDING AREA TABLE LOOR EXISTING (SQ. FT.) NEW (SQ. FT.) SUB-TOTAL | East >30' 0 HOUR 0 HOUR West >15' 0 HOUR 0 HOUR | Site Classification (ASCE-7) |
| h Floor | South >15' O HOUR O HOUR Interior walls and partitions O HOUR O HOUR | Data source: Field Test Presumptive Historical Data Basic Structural System: (check one) |
| de Floor de Flor de Floor de F | Floor Construction including supporting beams and joists 0 HOUR 0 HOUR | ☐ Bearing Wall ☐ Dual W/ Special Moment Frame ☐ Building Frame ☐ Dual W/ Intermediate R/C or Special Steel |
| stFloor (Upper Level) 0 4,800 4,800 | Roof Construction including supporting beams and joists 0 HOUR 0 HOUR | Moment Frame Inverted Pendulum |
| OTAL: 0 4,800 4,800 | Roof Ceiling Assembly N/A N/A | Analysis Procedure: Simplified Equivalent Lateral Force Dynamic |
| | Columns Supporting Roof 0 HOUR 0 HOUR Shafts Enclosures - Exit N/A N/A | Architectural, Mechanical, Components Anchored? \[\sum \text{Yes} \] No |
| ALLOWABLE AREA mary Occupancy: | Shafts Enclosures - Other N/A N/A Corridor Separation N/A N/A | LATERAL DESIGN CONTROL: Earthquake Wind |
| Assembly A-1 A-2 A-3 A-4 A-5 | Occupancy/Fire Barrier Separation N/A N/A Party/Fire Wall Separation N/A N/A | SOIL BEARING CAPACITIES: Field Test (provide copy of test report) N/A psf |
| Business | Smoke Barrier Separation N/A N/A Smoke Partition N/A N/A | Presumptive Bearing Capacity 2000 psf |
| Factory F-1 Moderate F-2 Low | Tenant/Dwelling Unit/ Sleeping Unit Separation N/A N/A | Pile Size, Type, and Capacity N/A |
| Hazardous | Incidental Use Separation *Indicates section number permitting reduction. | SPECIAL INSPECTIONS REQUIRED: Yes No |
| I-3 Condition | PERCENTAGE OF WALL OPENING CALCULATIONS | ENERGY SUMMARY |
| I-2 Condition ☐ 1 ☐ 2 I-1 Condition ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 | FIRE SEPARATION DISTANCE (feet) FROM PROPERTY LINES (TABLE 705.8) (%) (%) (%) | ENERGY REQUIREMENTS: |
| Mercantile | (feet) FROM PROPERTY LINES (TABLE 705.8) (%) (%) West Side 15'<20' Unprotected, Nonsprinklered 25% 18% | The following data shall be considered minimum and any special attribute required to meet the energy code shall also be provided. Each Designer shall furnish the required portions of the project information for the plan data sheet. If performance method, state the annual energy cost for the standard reference design vs annual energy cost for the proposed design. |
| Residential R-1 R-2 R-3 R-4 Storage S-1 Moderate S-2 Low High-Piled | South Side 15'<20' Unprotected, Nonsprinklered 25% 10% | |
| Parking Garage Open Enclosed Repair Garage | | Existing building envelope complies with code: [(If checked, the remainder of this section is not applicable.) Exempt Building: Provide code or statutory reference: |
| Utility and Misc. cessory Occupancy Classification(s): | LIFE SAFETY SYSTEM REQUIREMENTS | Climate Zone: 3 \(\square 4 \square 5 \) |
| idental Uses: (Table 509) | Emergency Lighting: No Yes Exit Signs: No Yes | Method of Compliance : Energy Code: ☐ Performance ☐ Prescriptive ☐ Trade-Off |
| This separation is not exempt as a Nonseparated Use (see exceptions). cetal Uses: (Chapter 4 - List Code Sections): | Fire Alarm: No Yes | ASHRAE 90.1: Performance Prescriptive Trade-Off |
| ecial Provisions: (Chapter 5 - List Code Sections): | Smoke Detection Systems: No Yes Carbon Monoxide Detection: No Yes | Other: Performance (specify source) THERMAL ENVELOPE: |
| xed Occupancy: □ NO ☑ YES Secondary occupancy type(s): S-1 Separation: 0 Hour Exception: 508.3 | | Roof/Ceiling Assembly (each assembly) Description of Assembly Metal Building W/ "Simple Saver" Sys. |
| Non-Separated Use (508.3) | Life Safety Plan Sheet #: N/A Life Safety Plan Sheet #: N/A | Description of Assembly Metal Building w/ Simple Saver Sys. U-value of Total Assembly 0.040 |
| The required type of construction for the building shall be determined by applying the height and area limitations for each of the applicable occupancies to the entire building. The most restrictive type of construction, so determined, shall apply to the entire building. Separated Use (508.4) See below for area calculations for each story, the area of the occupancy shall be such that the sum of the ratios of the actual floor area of | Fire and/or smoke rated wall locations (Chapter 7) | R-value of Insulation |
| each use divided by the allowable floor area for each use shall not exceed 1. | ∑ Assumed and real property line locations ∑ Exterior wall opening area with respect to distance to assumed property lines (705.8) | Skylights in each assembly N/A U-Value of skylight N/A |
| Actual Area of Occupancy A Actual Area of Occupancy B | ☑ Exterior warr opening area with respect to distance to assumed property lines (703.8) ☑ Occupancy Use for each area as it relates to occupant load calculation (Table 1004.1.2) | Total square footage of skylights in each assembly N/A |
| Allowable Area of Occupancy A Allowable Area of Occupancy B Allowable Area of Occupancy B | ✓ Occupant loads for each area ✓ Exit access travel distances (1017) | Exterior Walls (each assembly) Description of Assembly M.B. W/ "Simple Saver" Sys. |
| $\frac{N/A}{N/A} \qquad N/A \qquad + \qquad \frac{N/A}{N/A} \qquad N/A \qquad = \qquad N/A \qquad \leq 1.0$ | ☑ Common path of travel distances [Tables 1006.2.1 & 1006.3.2(1)] | U-value of Total Assembly |
| | ☐ Dead end lengths (1020.4) ☐ Clear exit widths for each exit door | R-value of Insulation 25 Openings (windows or doors with glazing) Alum. Storefront |
| | ☐ Clear exit widths for each exit door ☐ Maximum calculated occupant load capacity each exit door can accommodate based on egress width (1005.3) | U-Value of assembly |
| | Actual occupant load for each exit door A separate schematic plan indicating where fire rated floor/ceiling and/or roof structure is provided for purposes of occupancy separation | Solar heat gain coefficient: <0.25 Projection factor: 0.15, 0.52 |
| | Location of doors with panic hardware (1010.1.10) | Door R-Values: 1.11 |
| | Location of doors with delayed egress locks and the amount of delay (1010.1.9.7) Location of doors with electromagnetic egress locks (1010.1.9.9) | Walls below grade (each assembly) Description of AssemblyN/A |
| | Location of doors equipped with hold-open devices | U-value of Total AssemblyN/A |
| | Location of emergency escape windows (1030) The square footage of each fire area (202) | R-value of Insulation N/A Floors over unconditioned space (each assembly) |
| | ☐ The square footage of each smoke compartment for Occupancy Classification I-2 (407.5) | Description of AssemblyN/A |
| | Note any code exceptions or table notes that may have been utilized regarding the items above | U-value of Total Assembly N/A R-value of Insulation N/A |
| | ACCESSIBLE DWELLING UNITS (SECTION 1107) | Floors slab on grade |
| | (SECTION 1107) TOTAL ACCESSIBLE ACCESSIBLE TYPE A TYPE B TYPE B TOTAL INVESTIGATION OF THE PROPERTY OF THE PR | Description of Assembly SLAB ON GRADE U-value of Total Assembly 0.07 |
| | UNITS | R-value of Insulation R-15 |
| | N/A | Horizontal/vertical requirement 24" Min. or to Bottom of Footing |

INDEX TO DRAWINGS

COVER / CODE SUMMARY T-1 COVER SHEET

LIFE SAFETY

LF-1 LIFE SAFETY PLAN

STRUCTURAL

S-1 FOUNDATION PLAN S-2 FOUNDATION DETAILS

GENERAL

G-1 FLOOR PLAN

G-2 EXTERIOR ELEVATIONS G-3 EXTERIOR ELEVATIONS / WALL SECTION

PLUMBING

P-1 PLUMBING WASTE PIPING PLAN

P-2 PLUMBING SUPPLY PIPING PLAN P-2 PLUMBING SCHEDULES AND DETAILS

MECHANICAL M-1 MECHANICAL PLAN AND SCHEDULES

ELECTRICAL E-1 ELECTRICAL LIGHTING PLAN

E-2 ELECTRICAL POWER PLAN E-3 ELECTRICAL PANEL SCHED. AND RISER DIAGRAM

E-4 ELECTRICAL SCHEDULES

E-5 ELECTRICAL DETAILS

N/A

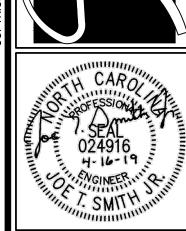
Slab heated ___

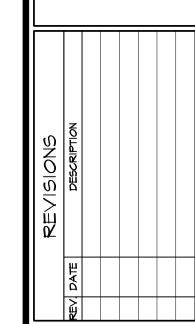
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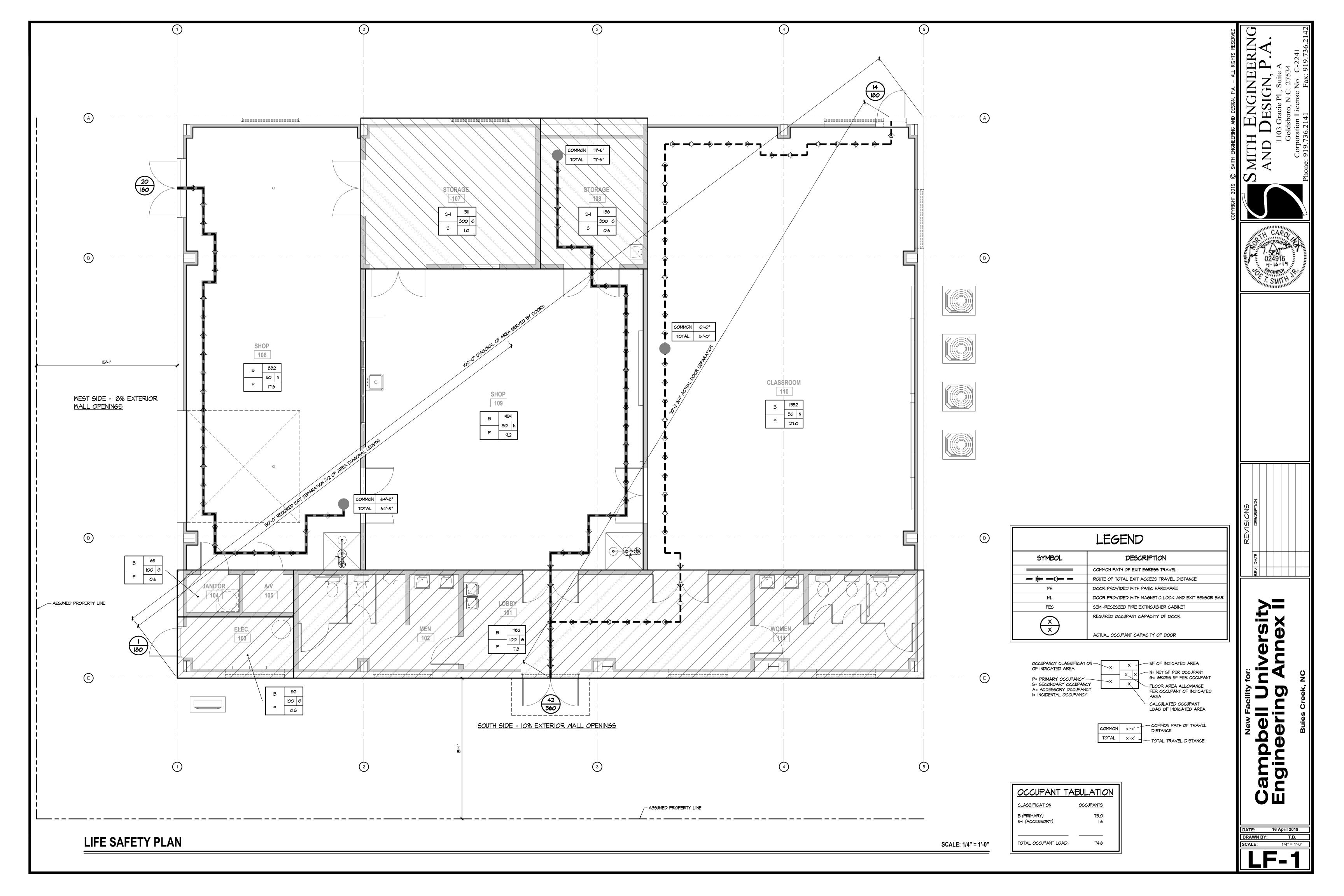
D. Banks Wallace

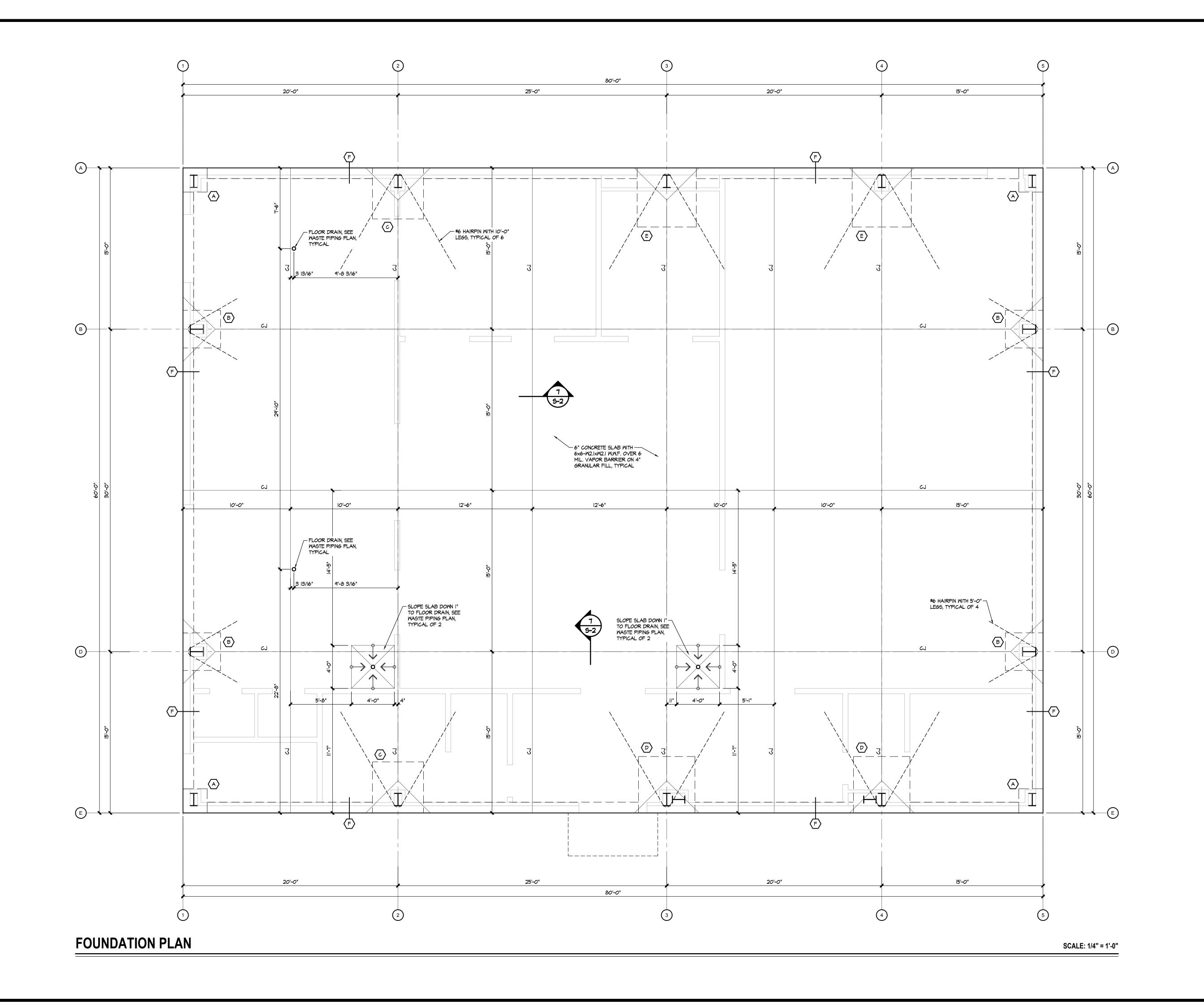
Chief Deputy Fire Marshal

05/10/2019 8:22:46 AM









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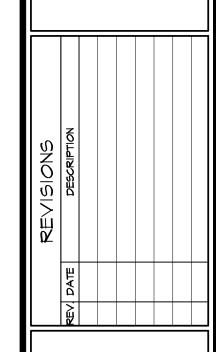
AND DESIGN, P.A.

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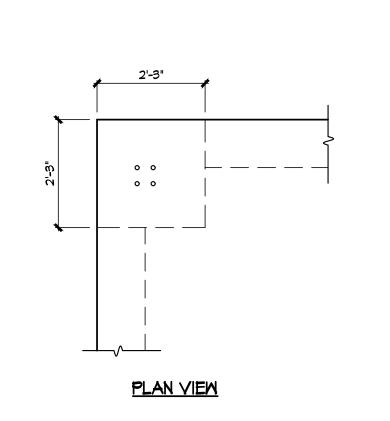


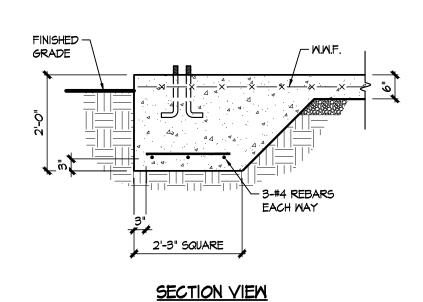
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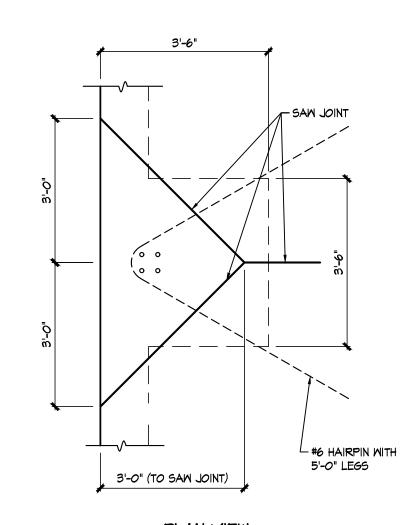
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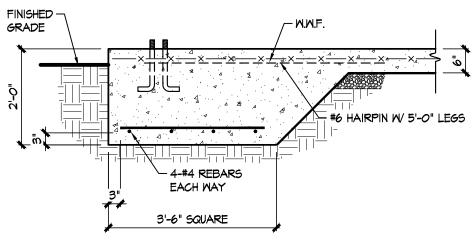


COLUMN FOOTING "A"

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



<u>PLAN VIEW</u>



SECTION VIEW

COLUMN FOOTING "B"

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



FIN. GRADE -

COLUMN FOOTING "C"

SECTION VIEW

4'-9" SQUARE

+ 6-#5 REBARS EACH WAY

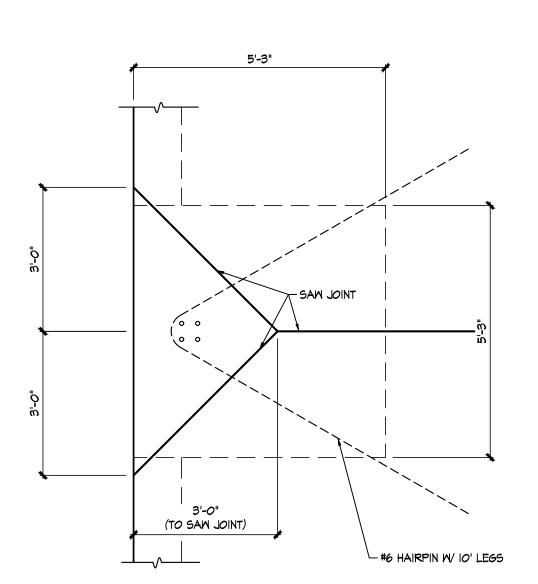
4'-9"

(TO SAW JOINT)

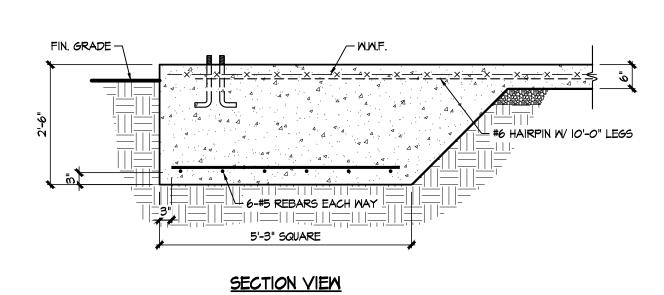
<u>PLAN VIEW</u>

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

#6 HAIRPIN W/ 10'-0" LEGS

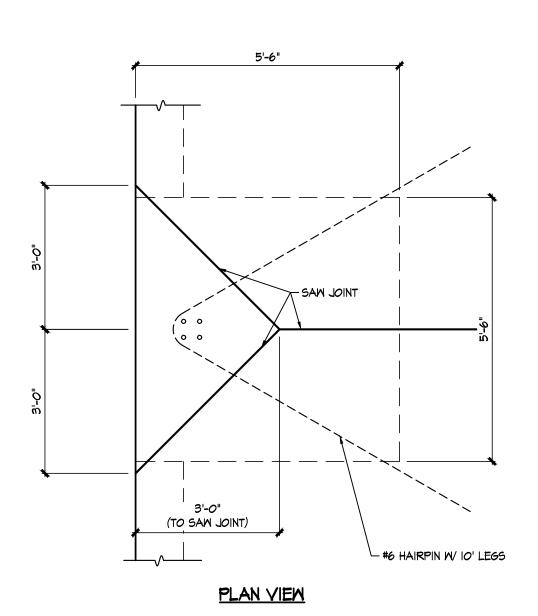


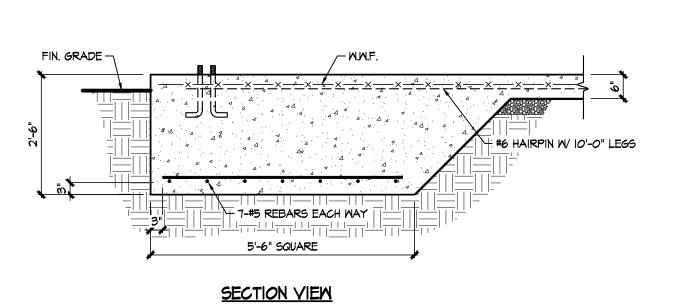
PLAN VIEW



COLUMN FOOTING "D"

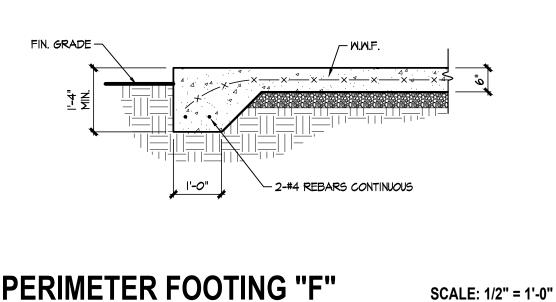
SCALE: 1/2" = 1'-0"





COLUMN FOOTING "E"

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



PERIMETER FOOTING "F" S-2

TYPICAL SLAB EDGE FOOTING

- #6 HAIRPIN W/ 10' LEGS

SAW JOINT FILLED WITH -- 6x6-W2.IxW2.I WELDED WIRE FABRIC AT MID-DEPTH OF SEMI-RIGID EPOXY SLAB, TYPICAL

NOTE:
SAW JOINT SHALL BE MADE AS SOON AS
CONCRETE HAS GAINED SUFFICIENT STRENGTH TO RETAIN AGGREGATE AGAINST THE SAWING ACTION OR AT 8 HOURS MAXIMUM AFTER PLACEMENT.

─6 MIL. VAPOR BARRIER

DETAIL

SCALE: 3" = 1'-0"

TYPICAL SLAB CRACK CONTROL JOINT

4" COMPACTED GRANULAR -

FILL, TYPICAL

STRUCTURAL NOTES

- THESE DRAWINGS ARE TO BE COORDINATED WITH THE ARCHITECTURAL, MECHANICAL, PLUMBING, ELECTRICAL, AND CIVIL DRAWINGS.
- THIS STRUCTURE AND ALL CONSTRUCTION SHALL CONFORM TO ALL APPLICABLE SECTIONS OF THE NC BUILDING CODE AND ANY LOCAL LAWS WHERE THE STRUCTURE IS TO BE CONSTRUCTED.

<u>MISCELLANEOUS</u>

- THE CONTRACTOR SHALL PROVIDE ADEQUATE TEMPORARY BRACING, SHORING, AND GUYING OF FRAMING AND WALLS AGAINST WIND, CONSTRUCTION LOADS, AND OTHER TEMPORARY FORCES UNTIL SUCH PROTECTION IS NO LONGER REQUIRED FOR THE SAFE SUPPORT OF THE FRAMING.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR REVIEWING THE DIMENSIONS OF THE STRUCTURAL DRAWINGS AND ADVISING THE ENGINEER OF ANY DIFFERENCES IN DIMENSIONS BETWEEN THE METAL BUILDING PLANS AND SECTIONS PRIOR TO COMMENCING CONSTRUCTION.
- CONSTRUCTION SAFETY: THESE STRUCTURAL DRAWINGS DO NOT CONTAIN NECESSARY COMPONENTS FOR SAFETY DURING CONSTRUCTION.

<u>FOUNDATIONS</u>

- THE STRUCTURAL ENGINEER HAS NOT PERFORMED A SUBSURFACE INVESTIGATION. THE FOUNDATION IS BASED UPON AN ASSUMED SOIL BEARING CAPACITY OF 2000 PSF NET BEARING. VERIFICATION OF THIS ASSUMED VALUE IS THE RESPONSIBILITY OF THE OWNER OR CONTRACTOR. SHOULD ANY ADVERSE SOIL CONDITION BE ENCOUNTERED, THE STRUCTURAL ENGINEER MUST BE CONTACTED
- ANY FILL SHALL BE PLACED UNDER THE DIRECTION OR RECOMMENDATION OF A LICENSED PROFESSIONAL ENGINEER. THE RESULTING SOIL SHALL BE COMPACTED TO A MINIMUM OF 95

<u>CONCRETE</u>

- REINFORCED CONCRETE WORK SHALL COMPLY WITH BOTH "SPECIFICATIONS FOR STRUCTURAL BUILDINGS" ACI 301 AND "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" ACI 318.
- CONCRETE SHALL BE PLACED IN ACCORDANCE WITH ACI 304R. DURING HOT WEATHER THE CONTROL OF CONCRETE PLACEMENT, PROTECTION AND CURING SHALL
- COMPLY WITH ACI 305R. WHEN THE MEAN DAILY TEMPERATURE IS BELOW 40 DEGREES F THE CONTROL OF PLACEMENT,
- PROTECTION AND CURING SHALL COMPLY WITH ACI 306R.
- CONCRETE SHALL HAVE NORMAL WEIGHT AGGREGATE AND A MINIMUM COMPRESSIVE STRENGTH (Fc) AT 28 DAYS AS LISTED BELOW.
 - 5.1 FOOTINGS 3000 PSI
 - 5.2 SLABS-ON-GRADE 3000 PSI
- ENTRAINED AIR MUST BE USED IN ALL CONCRETE THAT WILL BE EXPOSED TO FREEZING AND THAWING AND DEICING CHEMICALS. AMOUNT OF AIR ENTRAINMENT (PERCENT) SHALL BE IN ACCORDANCE WITH THE FOLLOWING SCHEDULE WITH A RANGE OF -1 TO +2 PERCENTAGE POINTS
- OF THE TARGET VALUE:

PERCENT MAXIMUM DRY DENSITY.

- 6.1 FOOTINGS
- 6.2 INTERIOR SLABS 0%, SEE NOTE BELOW 6.3 EXTERIOR SLABS 5%
- NOTE: IT IS RECOMMENDED THAT INTERIOR SLABS TO BE GIVEN A SMOOTH, DENSE, HARD-TROWELED FINISH NOT TO CONTAIN ENTRAINED AIR SINCE BLISTERING OR DELAMINATION MAY OCCUR. IF SLAB WILL BE EXPOSED TO DEICING OR OTHER AGGRESSIVE CHEMICALS, CONTACT
- CONCRETE SLABS ON GRADE SHALL BE CONSTRUCTED IN ACCORDANCE WITH ACI 302.1R-96 "GUIDE FOR CONCRETE SLAB AND SLAB CONSTRUCTION".

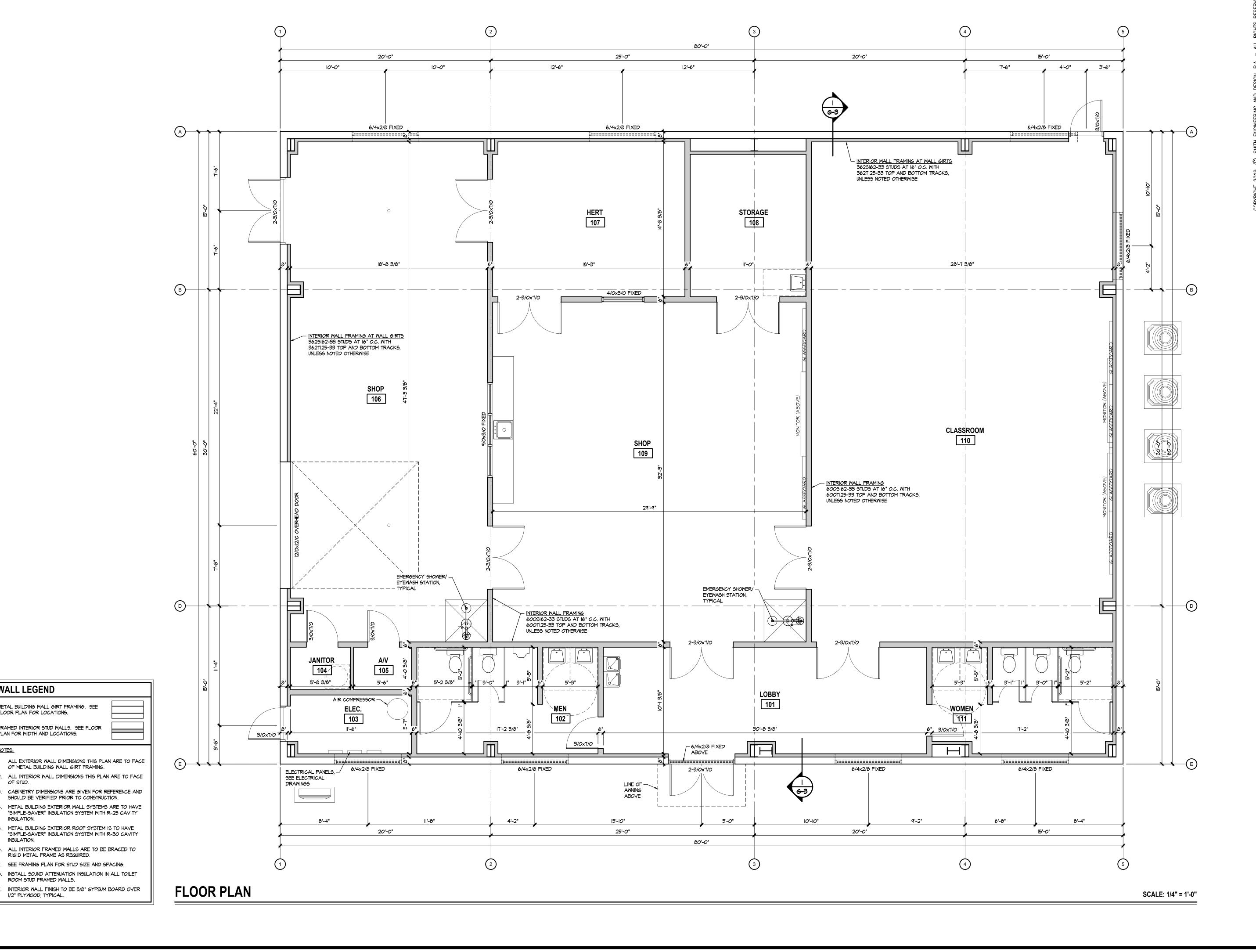
STRUCTURAL ENGINEER FOR PROPER AIR ENTRAINMENT REQUIREMENTS.

CONTROL JOINTS SHALL BE SPACED IN SLABS ON GRADE AT A MAXIMUM OF 15'-0" O.C. UNLESS

OTHERWISE NOTED. <u>REINFORCING STEEL</u>

- REINFORCING STEEL SHALL COMPLY WITH ASTM A615, GRADE 60. WELDED WIRE FABRIC SHALL COMPLY WITH ASTM A185. WELDABLE REINFORCING BARS SHALL COMPLY WITH ASTM A706, GRADE 60.
- CLEAR CONCRETE COVER ON REINFORCING STEEL: BOTTOM OF FOOTINGS= 3", SIDE AND TOP
- SURFACE OF FOOTINGS= 2", BOTTOM OF SLAB ON GRADE = 2 1/2", WALL SURFACE = 2", TOP OR BOTTOM SURFACE OF FLOOR SLABS = 3/4".
- PROVIDE CLASS 3 BAR AND MESH SUPPORTS.
- DETAILING, FABRICATION AND PLACEMENT OF REINFORCING STEEL SHALL BE IN ACCORDANCE WITH ACI 315 (LATEST EDITION) MANUAL OF STANDARD PRACTICE FOR DETAILING CONCRETE STRUCTURES.
- HORIZONTAL FOOTING SHALL BE CONTINUOUS AND AND SHALL HAVE 90° BENDS OR CORNER BARS SHALL BE INSTALLED. THE CORNER BAR SHALL HAVE THE SAME SIZE AND SPACING AS THE HORIZONTAL REINFORCEMENT WITH A CLASS B TENSION SPLICE.
- LAP REINFORCEMENT AS REQUIRED A MINIMUM OF 40 BAR DIAMETERS FOR TENSION OR COMPRESSION UNLESS NOTED OTHERWISE. SPLICES IN MASONRY SHALL BE A MINIMUM OF 48

DATE: 16 April 2019 DRAWN BY:



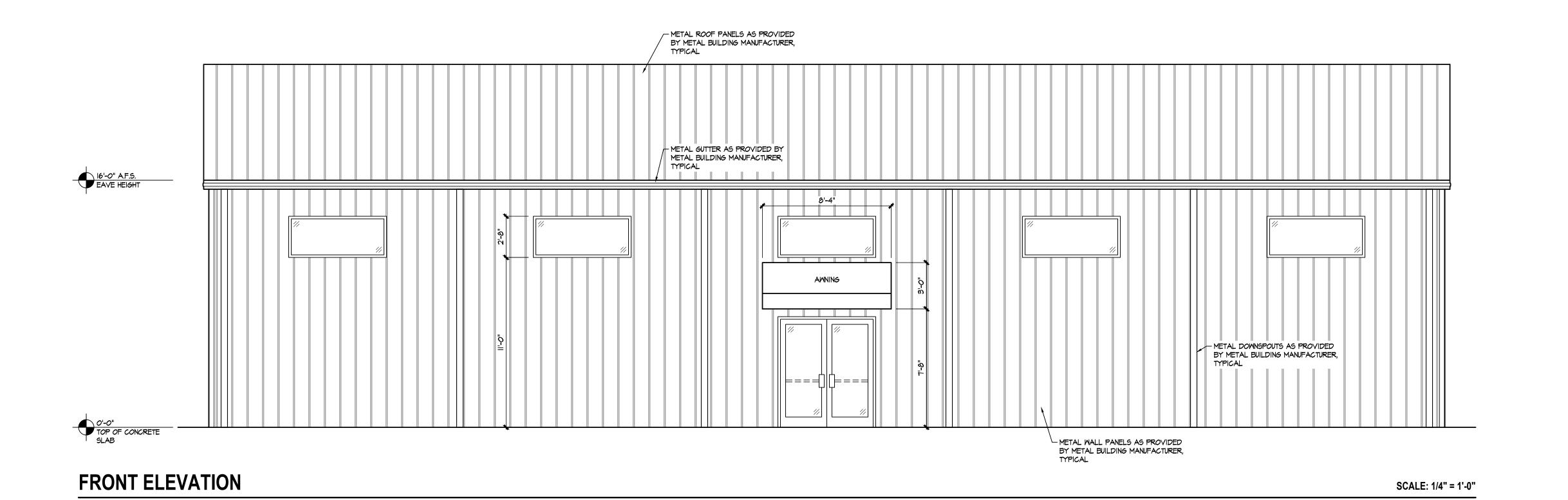
WALL LEGEND

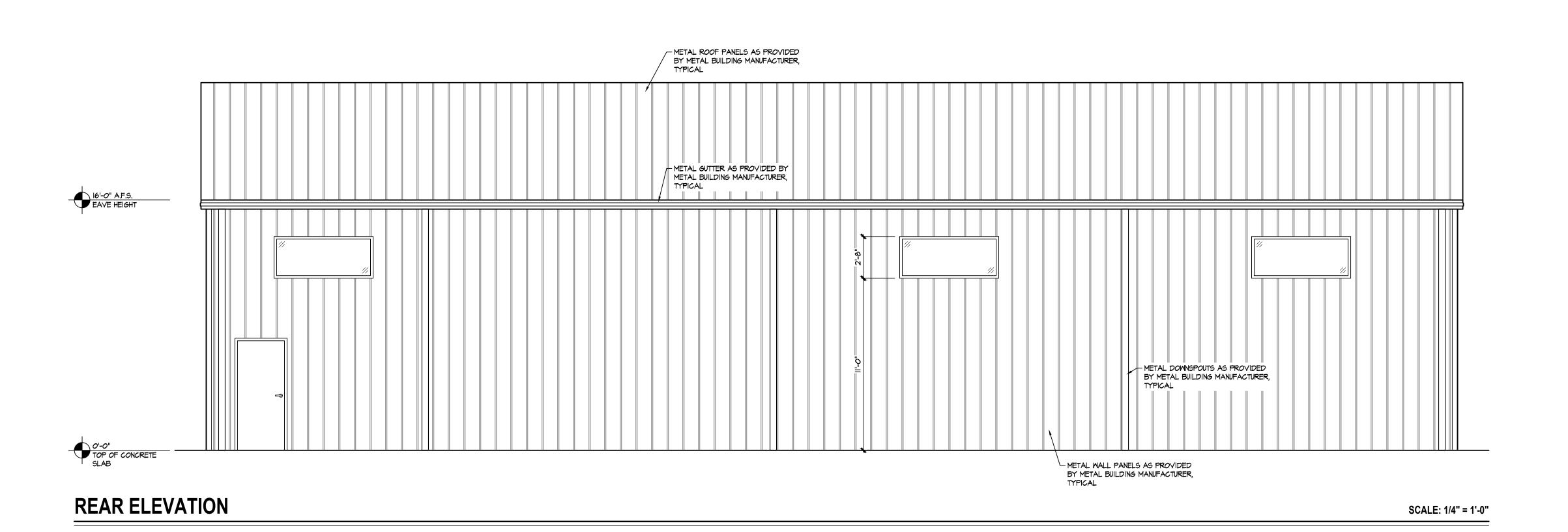
METAL BUILDING WALL GIRT FRAMING. SEE FLOOR PLAN FOR LOCATIONS.

FRAMED INTERIOR STUD WALLS. SEE FLOOR PLAN FOR WIDTH AND LOCATIONS.

ROOM STUD FRAMED WALLS.

DATE: 16 April 2019





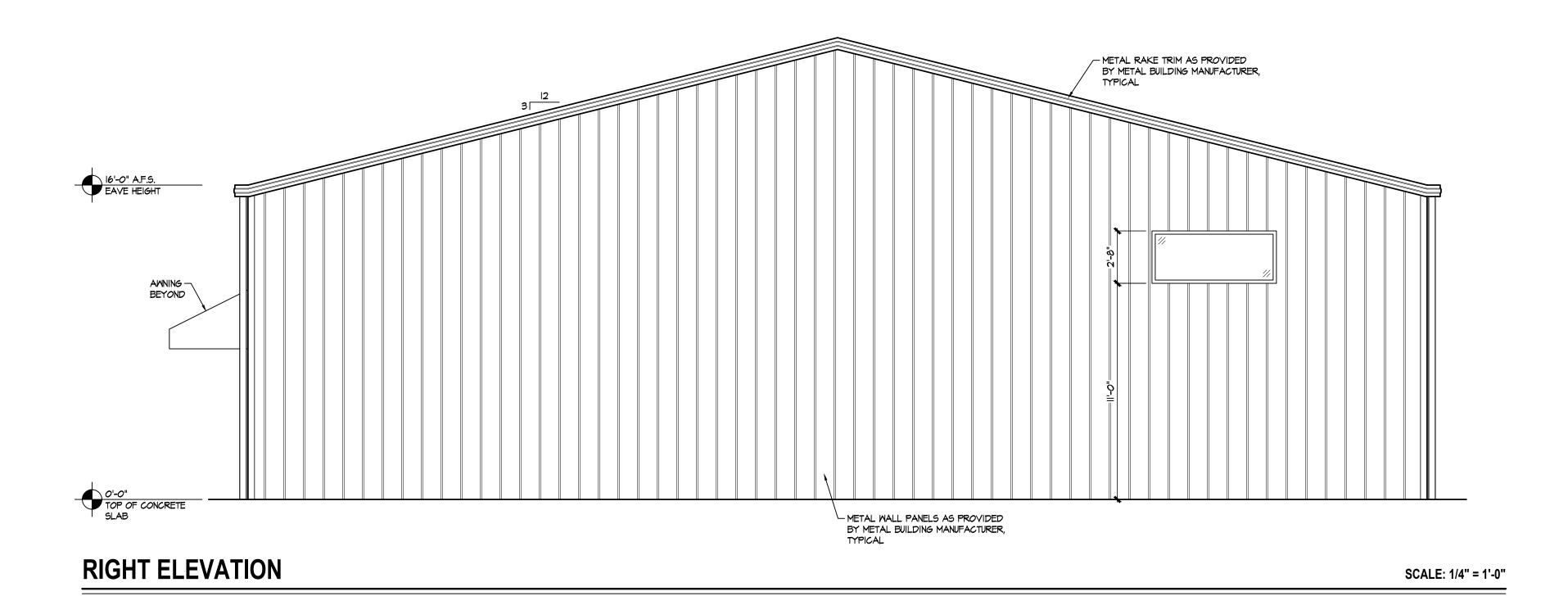
REVISIONS
REVIDATE DESCRIPTION

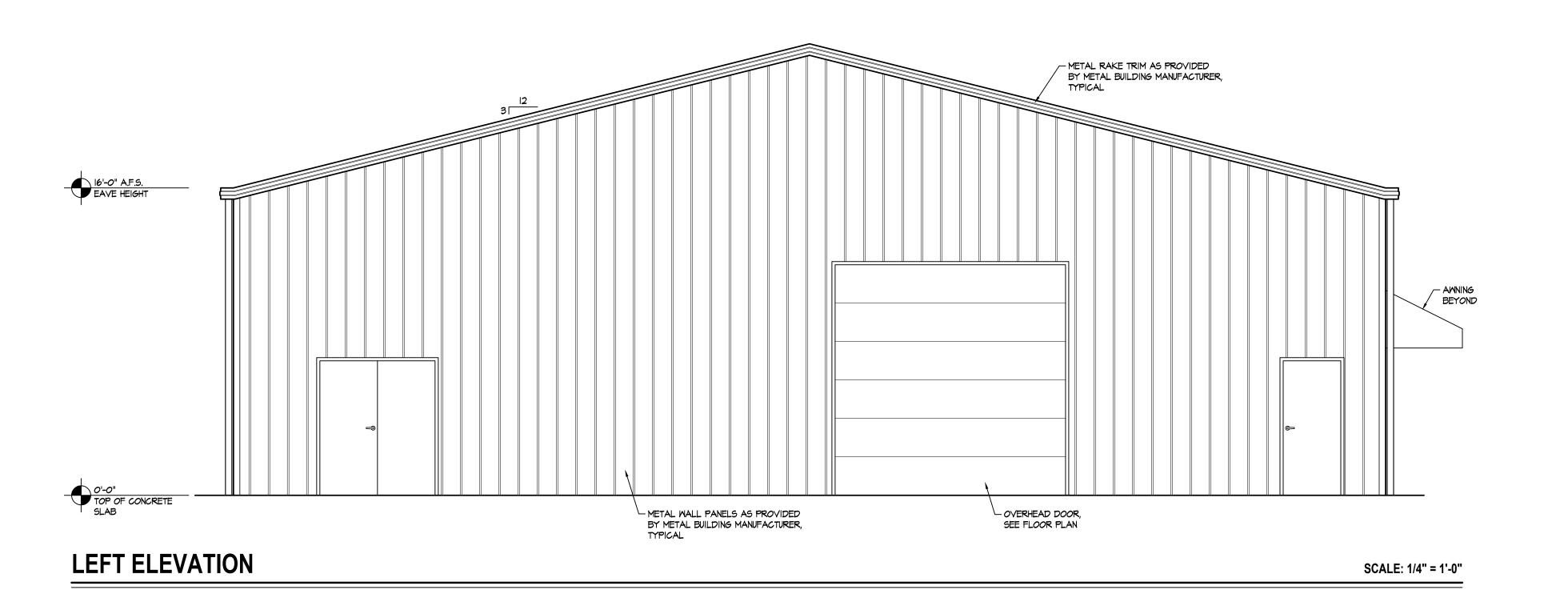
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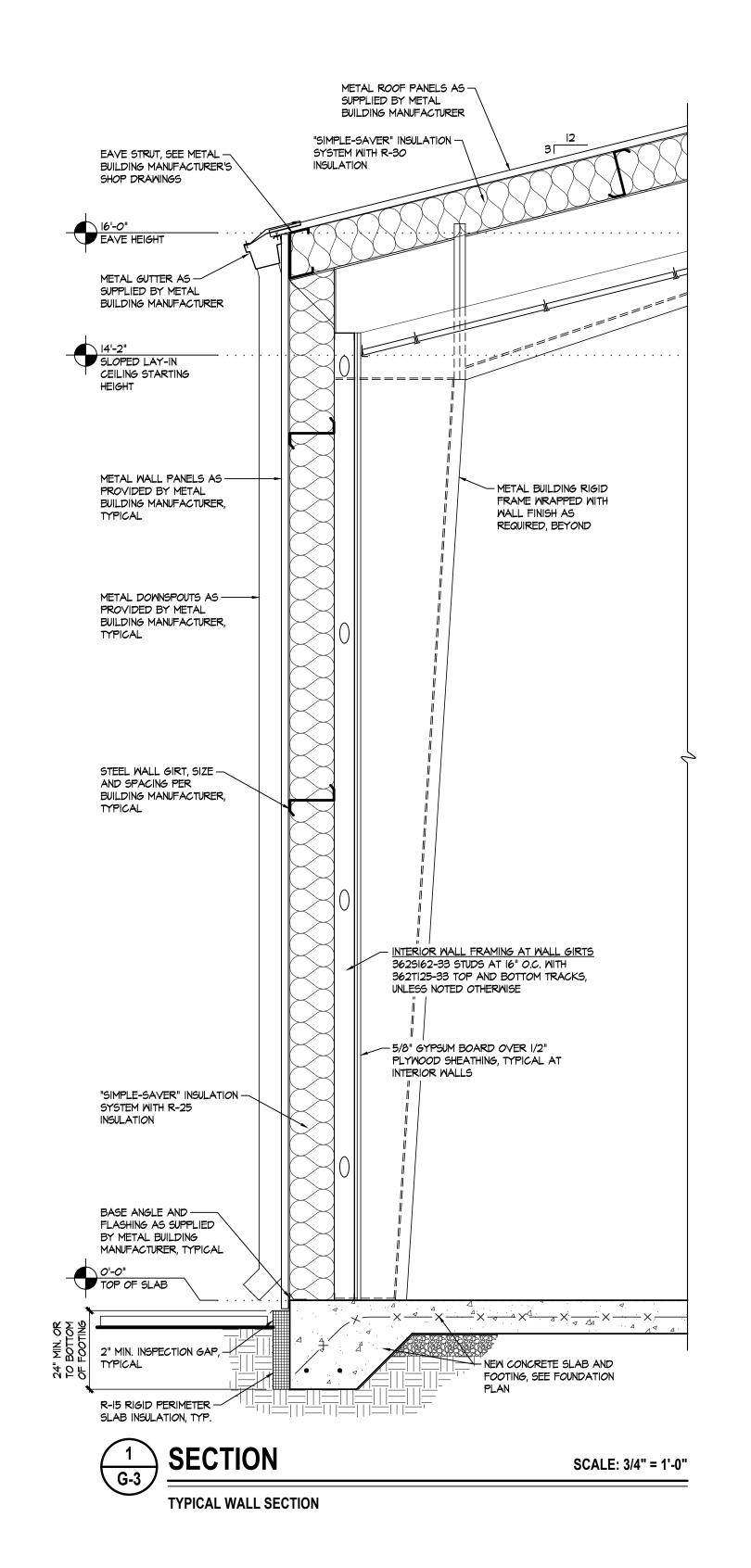
DATE: 16 April 2019

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







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THE SIGNATURE A

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AND DESIGN, P.A. – ALL RIGH
AND DESIGN, P

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Corporation License No. C-22

Phone: 919.736.2141 Fax: 919.

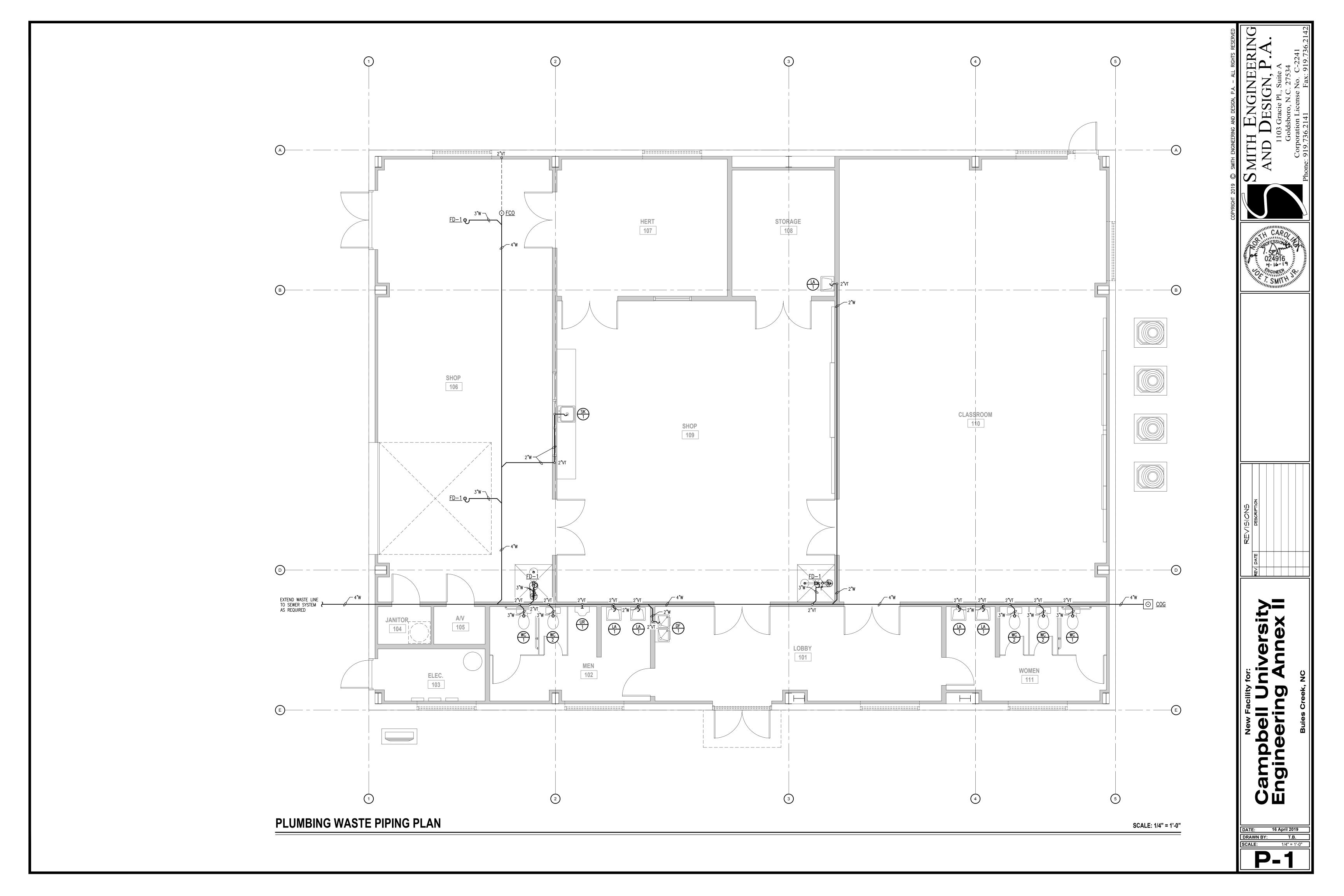
REV. DATE DESCRIPTION

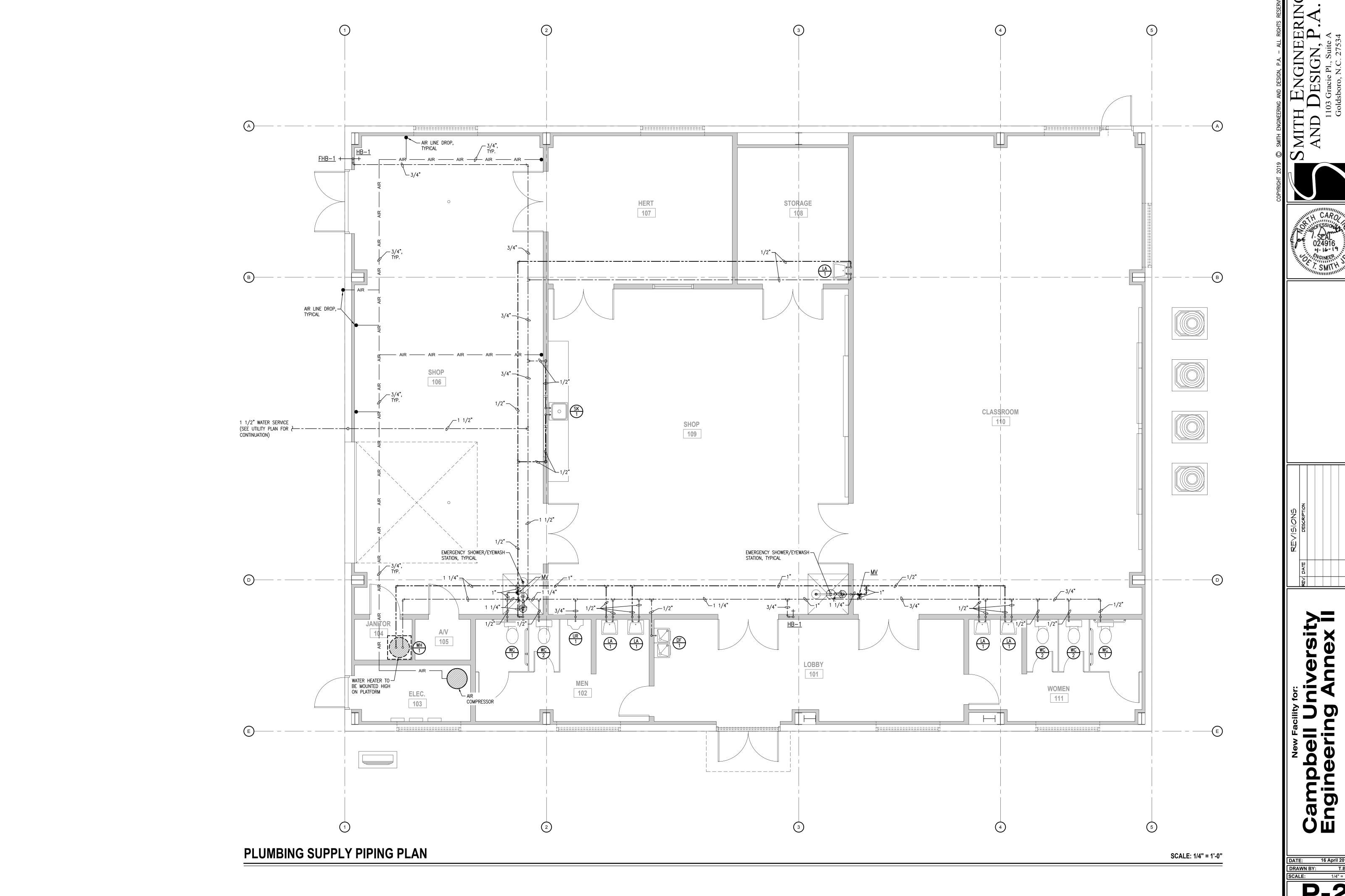
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DATE: 16 April 2019

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





PLUMBING NOTES:

- 1. PLUMBING PLANS ARE INTENDED TO PROVIDE INFORMATION FOR INSTALLATION OF A COMPLETE PLUMBING SYSTEM. PROVIDE ALL ESSENTIAL LABOR, MATERIALS & DEVICES REQUIRED TO PRODUCE A QUALITY END PRODUCT.
- 2. CONTRACTOR SHALL REVIEW & BECOME FAMILIAR WITH THE WORK OF ALL TRADES FOR PURPOSES OF COORDINATION AND ROUTING. CONTRACTOR SHALL PROVIDE REQUIRED PLANNING, COORDINATION AND SEQUENCING OF PLUMBING INSTALLATION WITH BUILDING COMPONENTS AND OTHER TRADES.
- 3. COORDINATE CONNECTION OF PLUMBING SYSTEMS WITH SITE UTILITIES AND SERVICES.
- 4. COORDINATE ROOF VENT LOCATIONS WITH OUTSIDE AIR INTAKES OF HVAC UNITS TO MAINTAIN A MINIMUM CLEARANCE OF 10 FEET.
- 5. ALL WORK SHALL COMPLY WITH LOCAL, STATE & ADA CODES. WORKMANSHIP SHALL MEET OR EXCEED INDUSTRY STANDARDS.
- 6. DRAIN, WASTE & VENT (DWV) PIPING SHALL BE ASTM D 1784, SOLID-WALL, SCHEDULE 40 PVC WITH SOCKET TYPE FITTINGS AND SOLVENT-WELDED JOINTS.
- 7. ABOVE GRADE WATER PIPING SHALL BE ASTM B 88, HARD DRAWN, TYPE L COPPER WITH SOLDERED OR BRAZED WROUGHT-COPPER FITTINGS.
- 8. BELOW GRADE WATER PIPING (INSIDE OF BUILDING) SHALL BE ASTM B 88, SOFT ANNEALED, TYPE K COPPER WITH SOLDERED OR BRAZED WROUGHT-COPPER FITTINGS. MINIMIZE JOINTS BELOW SLAB.
- 9. PROVIDE PIPE & FITTINGS AND LEAD FREE SOLDER & FLUX IN ACCORDANCE WITH NC PLUMBING CODE SECTION 605.3.
- 10. INDIVIDUAL SUPPLY AND DRAIN CONNECTIONS SIZES ARE NOT INDICATED ON PLANS FOR CLARITY. SIZE EACH TO SUIT RESPECTIVE FIXTURE.
- 11. WATER PIPING INSTALLED IN UNCONDITIONED SPACE SHALL BE INSULATED WITH FIBERGLASS INSULATION WITH A MINIMUM R VALUE OF 6.5.
- 12. DOMESTIC HOT WATER & COLD WATER PIPING SHALL BE INSULATED WITH FIBERGLASS AND FOIL & PAPER JACKET AS FOLLOWS: RUNOUTS 3/4" OR LESS: 1/2" THICK
 - PIPING 3/4" TO 2" 1" THICK PIPING 2 1/2" & LARGER: 1 1/2" THICK
- 13. WATER PIPING ON OUTSIDE WALLS AND IN CEILING SHALL BE LOCATED BETWEEN BUILDING INSULATION AND CONDITIONED SPACE.
- 14. PROVIDE SHUTOFF VALVES AT EACH MAIN BRANCH LINE. VALVES SHALL BE INSTALLED IN A READILY ACCESSIBLE LOCATION. PROVIDE CEILING ACCESS DOORS WHERE REQUIRED TO ACCESS SERVICABLE VALVES LOCATED ABOVE GYPBOARD CEILINGS.
- 15. UNLESS NOTED OTHERWISE ALL VALVES SHALL BE FULL PORT BRONZE OR BRASS BALL VALVES WITH THREADED OR SWEAT CONNECTIONS AS APPLICABLE TO THE CONNECTING PIPING.
- 16. PROTECT COPPER PIPING FROM DIRECT CONTACT WITH MASONRY OR DISSIMILAR
- 17. HANGERS, SUPPORTS, ANCHORS AND CLIPS SHALL BE COPPER PLATED OR PROVIDED WITH ELECTROLYTIC ISOLATION MATERIAL ON COPPER PIPING. ALL OTHER HANGERS AND SUPPORTS SHALL BE PAINTED OR GALVANIZED.
- 18. PIPING PASSING THROUGH CONCRETE/MASONRY WALLS OR FLOORS SHALL BE PROTECTED AGAINST EXTERNAL CORROSION BY PROTECTIVE SHEATHING OR
- 19. INSTALL SCHEDULE 40 PIPE SLEEVE TWO SIZES LARGER AT PENETRATIONS THROUGH FOUNDATION WALLS. SEAL SLEEVE TIGHT TO FOUNDATION WALL.
- 20. PROVIDE INSULATION EQUAL TO MCGUIRE PROWRAP ON P-TRAP ASSEMBLIES AND HOT & COLD WATER PIPING FOR LAVATORIES WITH EXPOSED PIPING.
- 21. VERIFY FINAL LOCATIONS FOR ROUGH-INS WITH FIELD MEASUREMENTS AND WITH THE REQUIREMENTS OF THE ACTUAL EQUIPMENT TO BE CONNECTED.
- 22. INSTALL PLUMBING FIXTURES AND EQUIPMENT LEVEL & PLUMB. ROUTE PIPING PARALLEL & PERPENDICULAR TO OTHER BUILDING SYSTEMS AND COMPONENTS.
- 23. INSTALL EQUIPMENT TO FACILITATE SERVICING, MAINTENANCE & REPAIR IN ACCORDANCE WITH MFG'S WRITTEN INSTALLATION INSTRUCTIONS AS WELL AS SPECIFIC INSTRUCTIONS ON PLANS.
- 24. DWV AND WATER DISTRIBUTION PIPING SHALL BE TESTED IN ACCORDANCE WITH NC PLUMBING CODE SECTION 312.

| | PLUMBING FIXTURE SCHEDULE | | | | | | | | | | |
|--------|--|------|------|--------|--|--|--|--|--|--|--|
| FIX NO | FIX NO DESCRIPTION CW HW WASTE REFERENCE MODEL NO. | | | | | | | | | | |
| WC-1 | WATER CLOSET FLUSH TANK (SEE NOTE) ADA | 1/2" | - | 3" | AMERICAN STANDARD 2216.143 CADET II 17"H EL 1.6 SEAT: CHURCH MODEL 290TL (OPEN FRONT W/COVER) COLOR: WHITE | | | | | | |
| WC-2 | WATER CLOSET FLUSH TANK | 1/2" | _ | 3" | AMERICAN STANDARD 2174.139 CADET II EL 1.6 SEAT: CHURCH MODEL 290TL (OPEN FRONT W/COVER) COLOR: WHITE | | | | | | |
| UR-1 | URINAL ADA & NON—ADA | 3/4" | - | 2" | AMERICAN STANDARD 6501.010 WASHBROOK FLUSH VALVE: SLOAN 186-1 STRAINER: 047068-0070A COLOR: WHITE | | | | | | |
| LA-1 | LAVATORY WALL HUNG ADA & NON—ADA | 1/2" | 1/2" | 1 1/4" | AMERICAN STANDARD 0355.012 LUCERNE FAUCET: DELTA MODEL 501WFHGMHDF STRAINER: MCGUIRE MODEL 155A COLOR: WHITE | | | | | | |
| SK-1 | SINGLE BOWL SINK 22"x25"x6 1/2" DEEP ADA | 1/2" | 1/2" | 1 1/2" | JUST SL-ADA-2225-AGR FAUCET: DELTA MODEL 400 STRAINER: MCGUIRE MODEL 151A | | | | | | |
| DF-1 | DRINKING FOUNTAIN SPLIT LEVEL ADA & NON—ADA | 3/8" | _ | 1 1/4" | ELKAY MODEL EBFATL-8 410W 120V/1ø 4.8 FLA PROVIDE WITH APRON OPTION | | | | | | |

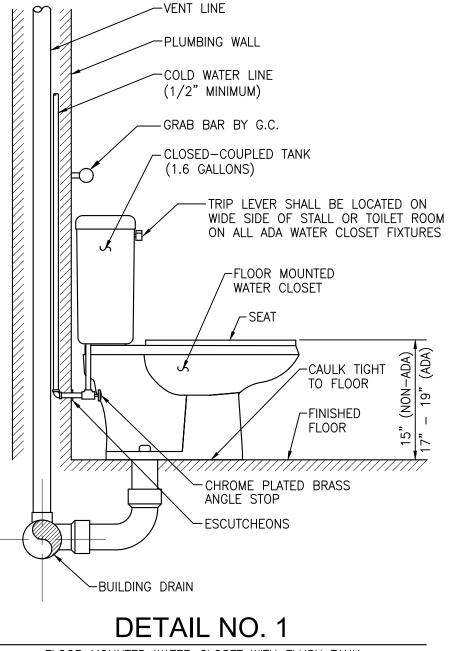
P.C. SHALL COORDINATE ADA WATER CLOSET TRIP LEVER TO BE LOCATED ON WIDE SIDE OF STALL OR TOILET ROOM.

| | PLUMBING SPECIALTIES SCHEDULE | | | | | | | | |
|--|---|---------------------------------------|--|--|--|--|--|--|--|
| MARK | DESCRIPTION | MANF. | REFERENCE MODEL NO. | | | | | | |
| COG FCO WCO FHB-1 HB-1 FD-1 | CLEANOUT ON GRADE FLOOR CLEANOUT WALL CLEANOUT FREEZELESS WALL FAUCET WALL HYDRANT WITH TEE KEY FLOOR DRAIN | ZURN ZURN ZURN WOODFORD WOODFORD ZURN | Z-1449 ZN-1400 Z-1468 27 SERIES 75 SERIES ZN-415-3"-W/TYPE "B" STRAINER-6" | | | | | | |

| | ELECTRIC WATER HEATER SCHEDULE | | | | | | | | | | |
|------|--|-----|------------|----|---------|-----|----------|----------|-------|-------|--------|
| MARK | SIZE | GPH | TEMP. RISE | KW | VOLT/PH | FLA | CW CONN. | HW CONN. | MANF. | MODEL | WEIGHT |
| WH-1 | WH-1 40 GAL 23.0 80 DEG. F 4.5 208/10 22.0 3/4" 3/4" TBD TBD TBD | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

- 1. SET OUTLET WATER TEMPERATURE AT 110°F.
- 2. PROVIDE WITH 3-YEAR TANK WARRANTY AND 1-YEAR PARTS WARRANTY.

| PLUMBING LEGEND | | | | | | | |
|--|---|---|--|--|--|--|--|
| SYMBOL | ABBR | DESCRIPTION | | | | | |
| | CW HW HWR W VT | COLD WATER LINE HOT WATER LINE HOT WATER RETURN LINE SOIL OR WASTE LINE VENT LINE | | | | | |
| | AAV VTR WCO FCO | AIR ADMITTANCE VALVE VENT THRU ROOF WALL CLEANOUT FLOOR CLEANOUT | | | | | |
| | COG FD HD FS | CLEANOUT ON GRADE ROUND FLOOR DRAIN HUB DRAIN FLOOR SINK | | | | | |
| -+ -+ | HB FHB G C | HOSE BIBB/HYDRANT FROSTPROOF HOSE BIBB/HYDRANT GAS PIPING CONDENSATE PIPING CHECK VALVE | | | | | |
| \[\times \\ \times \\ \times \\ \times \\ \times \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ | – – – BFP – | SHUTOFF VALVE GAS COCK BACKFLOW PREVENTER UNION | | | | | |
| | SP - - - - | SUMP PUMP CONCENTRIC REDUCER FLOW DIRECTION ARROW FIXTURE MARK (SEE SCHEDULE) NEW/EXISTING CONNECTION | | | | | |
| | G.C. P.C. M.C. E.C. AFF AFG BFG | GENERAL CONTRACTOR PLUMBING CONTRACTOR MECHANICAL CONTRACTOR ELECTRICAL CONTRACTOR ABOVE FINISHED FLOOR ABOVE FINISHED GRADE BELOW FINISHED GRADE | | | | | |



FLOOR MOUNTED WATER CLOSET WITH FLUSH TANK SCALE: NTS

✓ VENT LINE

← COLD WATER LINE

(3/4" MINIMUM)

— ESCUTCHEONS

— FLUSH VALVE

WHERE REQUIRED

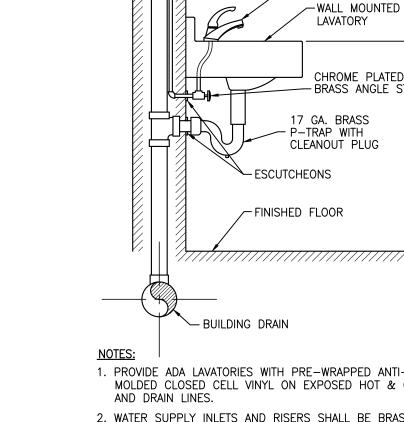
PLUMBING WALL

FINISHED FLOOR

→BUILDING DRAIN

►ADA COMPLIANT HANDLE

─WALL MOUNTED



1. PROVIDE ADA LAVATORIES WITH PRE-WRAPPED ANTI-MICROBIAL MOLDED CLOSED CELL VINYL ON EXPOSED HOT & COLD WATER 2. WATER SUPPLY INLETS AND RISERS SHALL BE BRASS OR COPPER

PLUMBING WALL

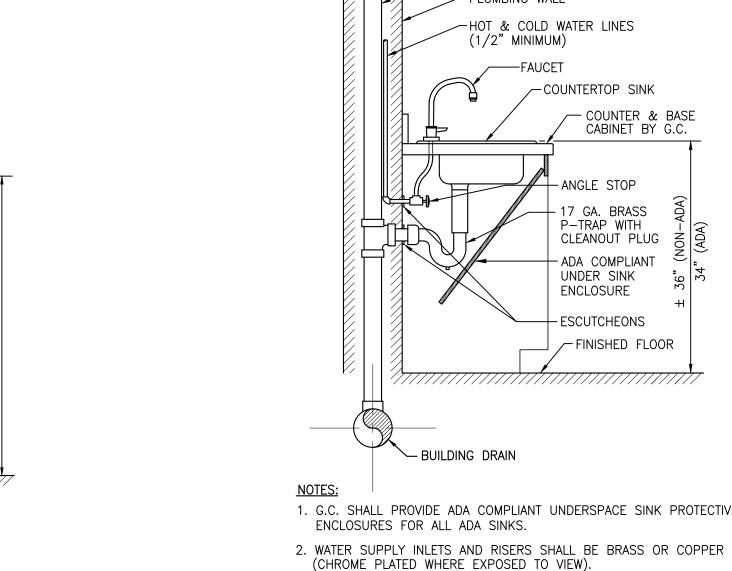
(1/2" MINIMUM)

──HOT & COLD WATER LINES

DETAIL NO. 2

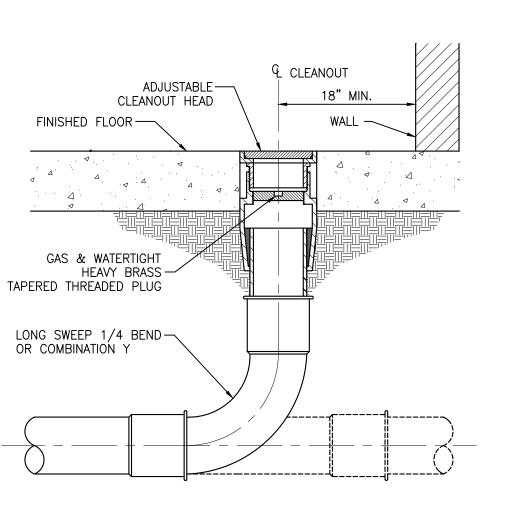
(CHROME PLATED WHERE EXPOSED TO VIEW).



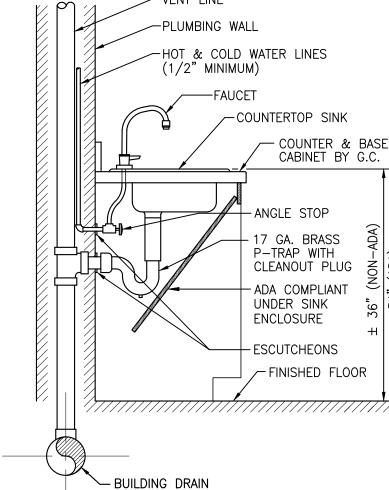


DETAIL NO. 3 WALL MOUNTED URINAL

SCALE: NTS



DETAIL NO. 5 FLOOR CLEANOUT WITH SWEEP BEND OR COMBINATION Y SCALE: NTS

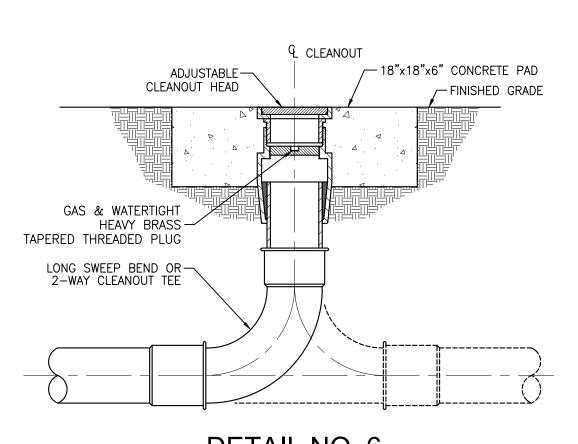


1. G.C. SHALL PROVIDE ADA COMPLIANT UNDERSPACE SINK PROTECTIVE ENCLOSURES FOR ALL ADA SINKS.

DETAIL NO. 4

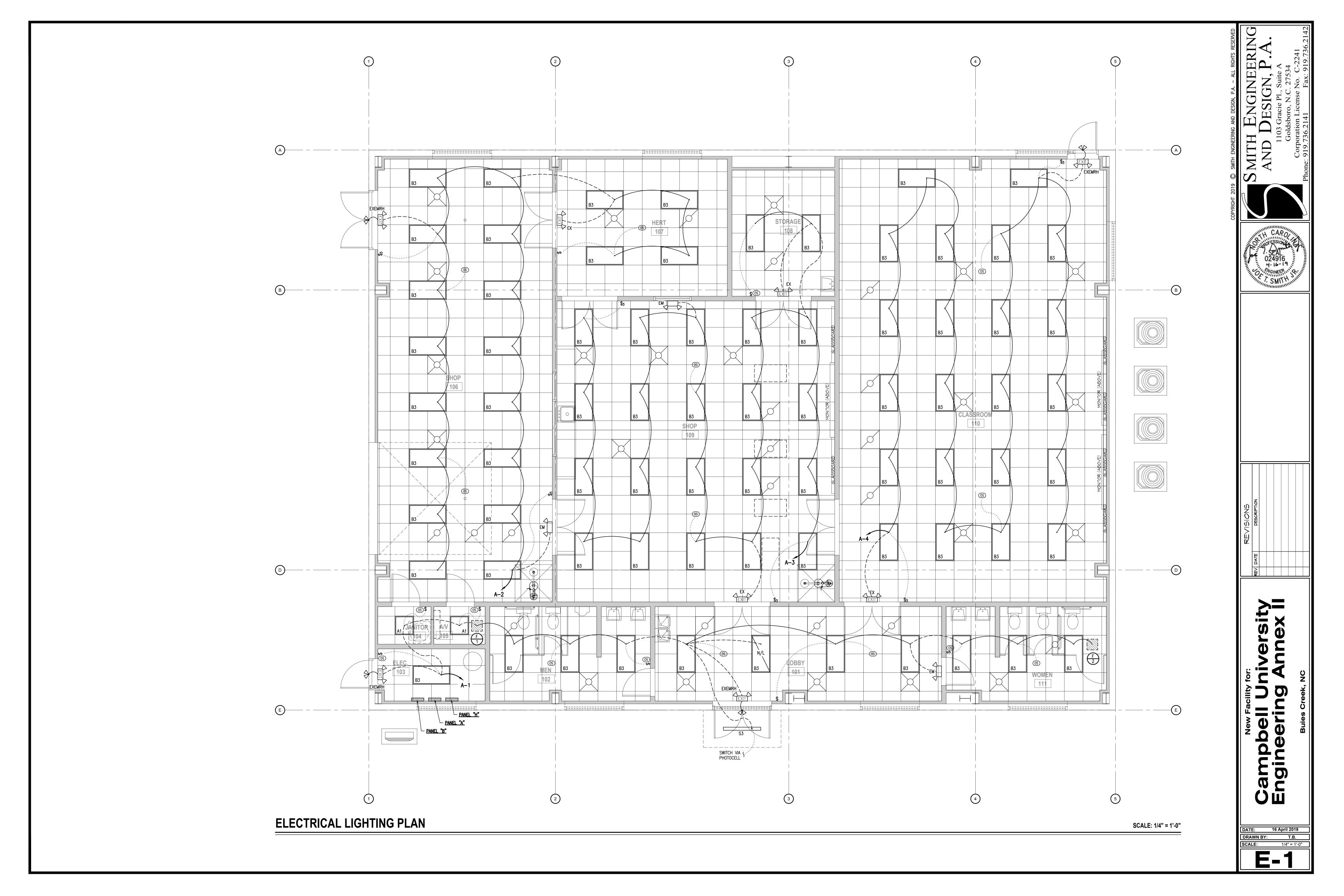
COUNTERTOP MOUNTED SINK

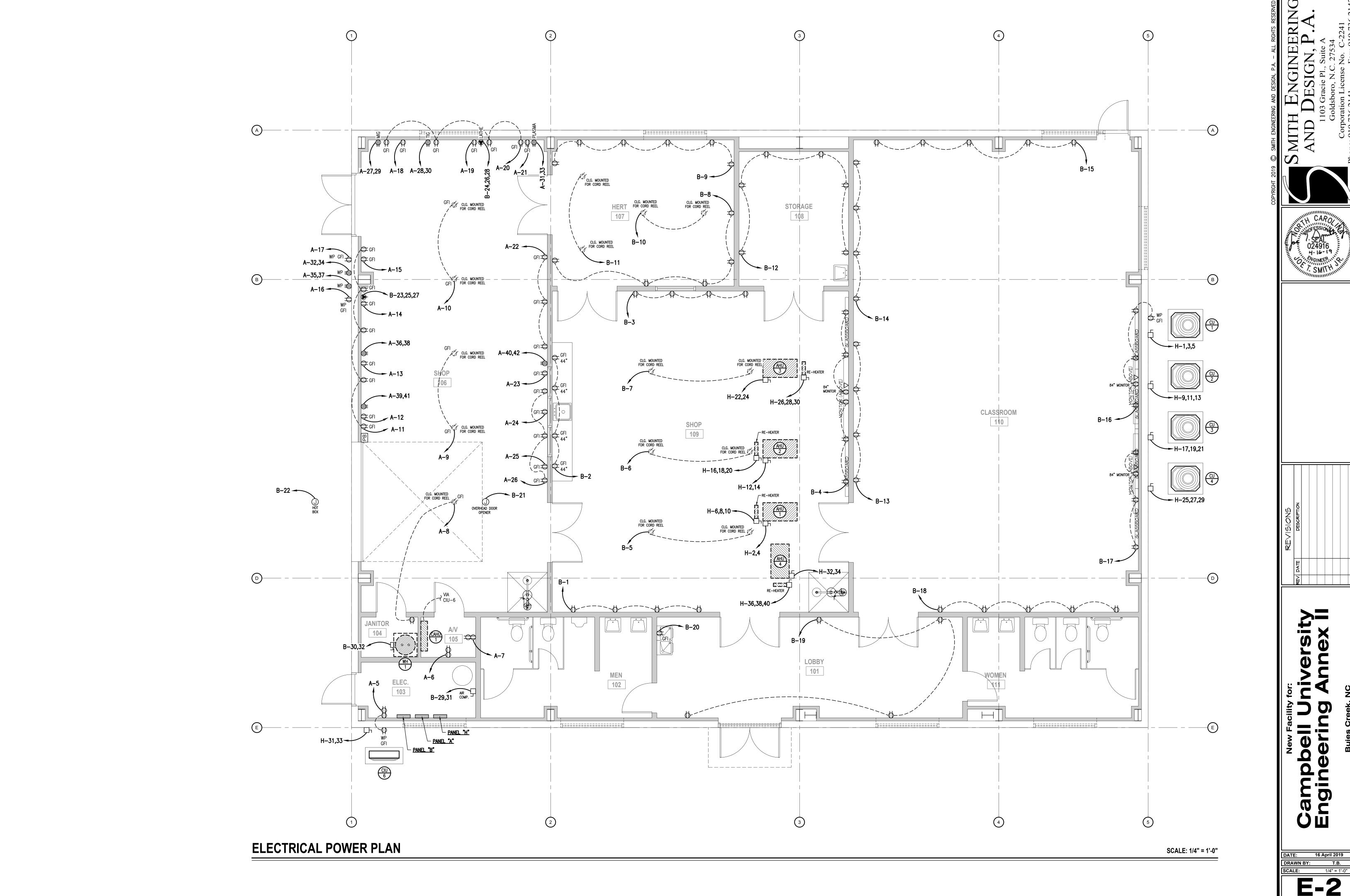
SCALE: NTS



DETAIL NO. 6 CLEANOUT ON GRADE WITH LONG SWEEP BEND OR 2-WAY TEE SCALE: NTS

DATE: 16 April 2019 DRAWN BY: T.B. AS NOTED





| | PANELBOARD SCHEDULE | | | | | | | | | | |
|--------------|---------------------|--|--------------|-----------------|--|--|--|--|--|--|--|
| PANEL "H" | SURFACE MOUNTED | SERVICE ENTRANCE RATED | 400 AMP | 3ø, 4 WIRE | | | | | | | |
| MAIN BREAKER | BOTTOM FEED | 22kw AIC | 120/208 VOLT | | | | | | | | |
| NEMA 1 | COPPER BUS | | | | | | | | | | |
| LOAD SERVED | WIRE SIZE | CKT PHASE CKT NO. 20 15 | WIRE SIZE | LOAD SERVED | | | | | | | |
| CU-1 | #12 | 1 2 4 | #12 | AHU-1 | | | | | | | |
| | | 5 6 8 9 10 | #8 | AHU-1 RE-HEATER | | | | | | | |
| CU-2 | #12 | 11 12 12 14 | #12 | AHU-2 | | | | | | | |
| CU-3 | #10 | 15 15 17 19 45 16 18 20 | #8 | AHU-2 RE-HEATER | | | | | | | |
| | | 21 22 24 24 | #12 | AHU-3 | | | | | | | |
| CU-4 | #10 | 25 27 29 28 30 | #8 | AHU-3 RE-HEATER | | | | | | | |
| CIU-6 | #12 | 31 33 33 34 | #12 | AHU-4 | | | | | | | |
| | | 35 36 | | | | | | | | | |
| | | 37 38 | #8 | AHU-4 RE-HEATER | | | | | | | |
| | | 39 40 | | | | | | | | | |
| | | 41 42 | | | | | | | | | |

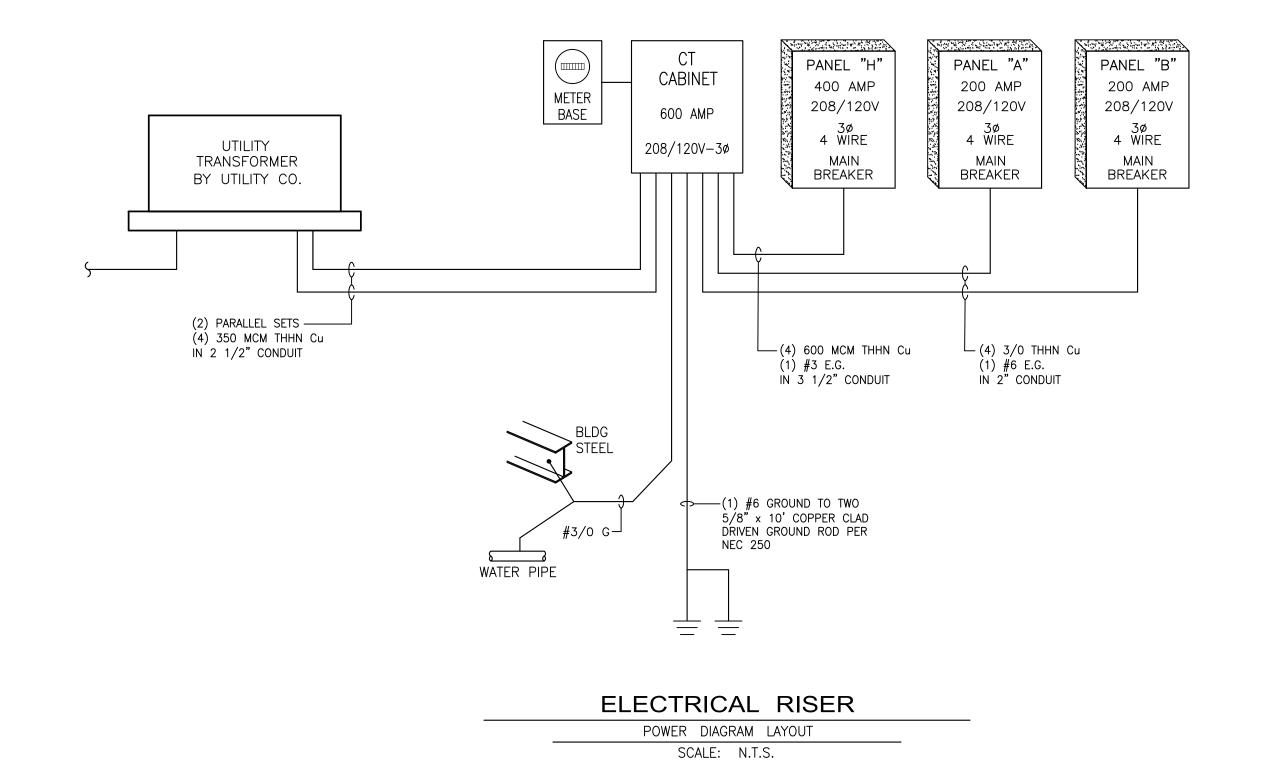
| NOTE: VE | RIFY BREAKER | Δ NID | CONDUCTOR | SIZES | WITH | FOLIPMENT | MANUFACTURER | PRIOR | TO | NOITA I IATONI |
|----------|--------------|--------------|-----------|-------|------|-----------|--------------|-------|----|----------------|

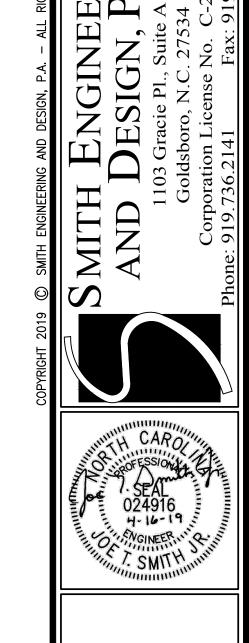
| | | P | ANE | ELBOARD | SCHE | DUL | E | | |
|----|---------------------|-----------------|----------------|----------------|-----------|----------------|--------------|----------------------|--|
| | PANEL "B" | SURFACE MOUNTED | | SERVICE ENTRAN | ICE RATED | | 200 AMP | 3ø, 4 WIRE | |
| | MAIN BREAKER | BOTTOM FEED | | 22kw / | AIC | | 120/208 VOLT | | |
| | NEMA 1 | COPPER BUS | | | | | | | |
| | LOAD SERVED | WIRE SIZE | CKT NO. | | c 20 | CKT NO. | WIRE SIZE | LOAD SERVED | |
| | RECEPTACLES | #12 | 1 | 20 | 20 | 2 | #12 | RECEPTACLES | |
| | RECEPTACLES | #12 | 3 | 20 | 20 | 4 | #12 | RECEPTACLES | |
| | RECEPTACLES | #12 | 5 | 20 | 20 | 6 | #12 | RECEPTACLES | |
| | RECEPTACLES | #12 | 7 | 20 | 20 | 8 | #12 | RECEPTACLES | |
| | RECEPTACLES | #12 | 9 | 20 | 20 | 10 | #12 | RECEPTACLES | |
| | RECEPTACLES | #12 | 11 | 20 | 20 | 12 | #12 | RECEPTACLES | |
| | RECEPTACLES | #12 | 13 | 20 | 20 | 14 | #12 | RECEPTACLES | |
| | RECEPTACLES | #12 | 15 | 20 | 20 | 16 | #12 | RECEPTACLES | |
| | RECEPTACLES | #12 | 17 | 20 | 20 | 18 | #12 | RECEPTACLES | |
| | RECEPTACLES | #12 | 19 | 20 | 20 | 20 | #12 | DRINKING FOUNTAIN | |
| O۷ | /ERHEAD DOOR OPENER | #12 | 21 | 15 | 30 | 22 | #12 | HOT BOX | |
| | MILL (GFCI BREAKER) | #12 | 23 25 27 | 60 | 30 | 24 26 28 | #10 | LATHE (GFCI BREAKER) | |
| | AIR COMPRESSOR | #8 | 29 31 | | | 30 | #10 | WATER HEATER WH-1 | |
| | | | 33 | | | 34 | | | |
| | | | 35 | 1 | | 36 | | | |
| | | | 37 | | | 38 | | | |
| | | | 39 | | | 40 | | | |
| | | | 41 | 1 | | 42 | | | |

* NOTE: VERIFY BREAKER AND CONDUCTOR SIZES WITH EQUIPMENT MANUFACTURER PRIOR TO INSTALLATION

| | P | ANELB | OARD SCHI | EDUL | _E | |
|-------------------------------|-----------------|----------------|-------------------|--------------|--------------|------------------------------|
| PANEL "A" | SURFACE MOUNTED | SERV | ICE ENTRANCE RATE | .D | 200 AMP | 3ø, 4 WIRE |
| MAIN BREAKER | BOTTOM FEED | | 22kw AIC | | 120/208 VOLT | |
| NEMA 1 | COPPER BUS | | | | | |
| LOAD SERVED | WIRE SIZE | CKT NO. | PHASE A B C | CKT NO. | WIRE SIZE | LOAD SERVED |
| LIGHTS | #12 | 1 20 | | _ 2 | #12 | LIGHTS |
| LIGHTS | #12 | 3 20 | | 4 | #12 | LIGHTS |
| RECEPTACLES | #12 | 5 20 | | 6 | #12 | RECEPTACLES |
| RECEPTACLES | #12 | 7 20 | | _ 8 | #12 | RECEPTACLES |
| RECEPTACLES | #12 | 9 20 | | 10 | #12 | RECEPTACLES |
| RECEPTACLES | #12 | 11 20 | | 12 | #12 | RECEPTACLES |
| RECEPTACLES | #12 | 13 20 | | 14 | #12 | RECEPTACLES |
| RECEPTACLES | #12 | 115 — | | 16 | #12 | RECEPTACLES |
| RECEPTACLES | #12 | 17 20 | | 18 | #12 | RECEPTACLES |
| RECEPTACLES | #12 | 19 20 | | 20 | #12 | RECEPTACLES |
| RECEPTACLES | #12 | 21 20 | | 22 | #12 | RECEPTACLES |
| RECEPTACLES | #12 | 123 — | | 24 | #12 | RECEPTACLES |
| RECEPTACLES | #12 | 25 20 | | 26 | #12 | RECEPTACLES |
| MIG WELDER | #8 | 27 50 | | 28 30 | #8 | TIG WELDER |
| PLASMA CUTTER | #8 | 31 - 33 | | 32 34 | #8 | WELDER (GFCI BREAKER) |
| 08V RECEPTACLE (GFCI BREAKER) | #10 | 35 30 37 37 | | - 36 - 38 | #10 | 208V RECEPTACLE (GFCI BREAKE |
| 08V RECEPTACLE (GFCI BREAKER) | #10 | 39 41 | 30 | 40 | #10 | 208V RECEPTACLE (GFCI BREAKE |

 $[\]star$ <u>NOTE:</u> VERIFY BREAKER AND CONDUCTOR SIZES WITH EQUIPMENT MANUFACTURER PRIOR TO INSTALLATION





REV DATE DESCRIPTION
1 5/16/17 REMOVED EXH. FANS & INTAKE LOUVERS

bell University
eering Annex II

Buies Creek, NC

DATE: 16 April 2019

DRAWN BY: T.B.

SCALE: AS NOTED

| Ф FLUORESCENT 7 WAY DIMMED SWITCH MOUNT 48" TOD AFF | | ELECTRICAL LEGE | ND |
|--|--------------------|--|--|
| THERMOSTAT JUNCTION BDX □□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□ | SYM. | DESCRIPTION | REMARKS |
| NON-FUSED DISCONNECT | <u> </u> | JUNCTION BOX | DOUBLE GANG UNO |
| FUSED DISCONNECT COMBINATION STARTER SOCCUPANCY SENSOR SWITCH MOUNT 48" TOD AFF SPOTT SINGLE POLE DOUBLE THROW SWITCH MOUNT 48" TOD AFF SPOTT SINGLE POLE DOUBLE THROW SWITCH MOUNT 48" TOD AFF CORDINATE WITH BALLAST SOCCUPANCY SENSOR FLUORESCENT DIMMER SWITCH MOUNT 48" TOD AFF COORDINATE WITH BALLAST COORDINATE WITH BALLAST MOUNT 48" TOD AFF TO AFF TO AFF MOUNT 48" TOD AFF MOUNT 48" TOD AFF MOUNT 48" TOD AFF MOUNT 48" TOD AFF TO AFF TO AFF MOUNT 48" TOD AFF MOUNT 16" BOD AFF MOUNT 24" BOD AFG MOUNT 34" BOD AFG M | T | THERMOSTAT JUNCTION BOX | MOUNT 48" TOD AFF UNO |
| COMBINATION STARTER S OCCUPANCY SENSOR SWITCH DOUBLE POLE SINGLE THROW SWITCH Sppt DOUBLE POLE SINGLE THROW SWITCH Sppt SINGLE POLE DOUBLE THROW SWITCH MOUNT 48" TOD AFF COORDINATE WITH BALLAST DOUBLE POLE DOUBLE THROW SWITCH MOUNT 48" TOD AFF COORDINATE WITH BALLAST DOUBLE POLE SINGLE THROW SWITCH MOUNT 48" TOD AFF COORDINATE WITH BALLAST DOUBLE POLE SINGLE THROW SWITCH MOUNT 48" TOD AFF COORDINATE WITH BALLAST DOUBLE MOUNT 48" TOD AFF COORDINATE WITH BALLAST DOUBLE MOUNT 48" TOD AFF COORDINATE WITH BALLAST MOUNT 48" TOD AFF MOUNT 48" TOD AFF MOUNT 48" TOD AFF BY PILOT LIGHT SWITCH MOUNT 48" TOD AFF T 15-MINUTE TIMER SWITCH W/HOLD - \$3 3 WAY SWITCH MOUNT 48" TOD AFF MOUNT 16" BOD AFF MOUNT 24" BOD AFG MOUNT 34" BOD AFF MO | □ | NON-FUSED DISCONNECT | _ |
| S OCCUPANCY SENSOR S SWITCH \$ DOUBLE POLE SINGLE THROW SWITCH \$ MOUNT 48" TOD AFF \$ SPOT \$ SINGLE POLE DOUBLE THROW SWITCH \$ MOUNT 48" TOD AFF \$ CORDINATE WITH BALLAST \$ COORDINATE WITH BALLAST \$ D 1000W INCANDESCENT DIMMER SWITCH \$ D 1000W INCANDESCENT JEWAY DIMMER SWITCH \$ D 2000W INCANDESCENT JEWAY DIMER SWITCH \$ D 2000W INCANDESCENT JEWAY DIMER SWITCH \$ D 2000W INCANDESCENT JEWAY DIMER SWITCH | Zh | FUSED DISCONNECT | - |
| \$ SWITCH MOUNT 48" TOD AFF \$_{DPST}\$ DOUBLE POLE SINGLE THROW SWITCH MOUNT 48" TOD AFF \$_{SPDT}\$ SINGLE POLE DOUBLE THROW SWITCH MOUNT 48" TOD AFF \$_{D}\$ FLUORESCENT JEMER SWITCH MOUNT 48" TOD AFF COORDINATE WITH BALLAST \$_{D}\$ FLUORESCENT 3—WAY DIMMER SWITCH MOUNT 48" TOD AFF COORDINATE WITH BALLAST \$_{D}\$ 1000W INCANDESCENT DIMMER SWITCH MOUNT 48" TOD AFF \$_{D}\$ 2000W INCANDESCENT JEMER SWITCH MOUNT 48" TOD AFF \$_{D}\$ 2000W INCANDESCENT JEMER SWITCH MOUNT 48" TOD AFF \$_{D}\$ 2000W INCANDESCENT JEMER SWITCH MOUNT 48" TOD AFF \$_{D}\$ 3000W INCANDESCENT JEMER SWITCH MOUNT 48" TOD AFF \$_{D}\$ 15—MINUTE TIMER SWITCH W/HOLD \$_{T}\$ 3 3 WAY SWITCH MOUNT 48" TOD AFF \$_{T}\$ 15—MINUTE TIMER SWITCH W/HOLD \$_{T}\$ 3 3 WAY SWITCH MOUNT 48" TOD AFF \$_{T}\$ 15—MINUTE TIMER SWITCH W/HOLD \$_{T}\$ 3 4 WAY SWITCH MOUNT 48" TOD AFF \$_{T}\$ 15—MINUTE TIMER SWITCH W/HOLD \$_{T}\$ 3 5 WAY SWITCH MOUNT 48" TOD AFF \$_{T}\$ 15 MINUTE TIMER SWITCH W/HOLD \$_{T}\$ 10 AFF \$_{T}\$ | ⊠h | COMBINATION STARTER | - |
| \$_DEST DOUBLE POLE SINGLE THROW SWITCH MOUNT 48" TOD AFF \$_SENT SINGLE POLE DOUBLE THROW SWITCH MOUNT 48" TOD AFF \$_D | OS) | OCCUPANCY SENSOR | - |
| \$_spdt Single Pole Double Throw Switch | \$ | SWITCH | MOUNT 48" TOD AFF |
| SSPDT SINGLE POLE DOUBLE THROW SWITCH MOUNT 48" TOD AFF \$_D\$ FLUORESCENT DIMMER SWITCH COORDINATE WITH BALLAST \$_D\$ FLUORESCENT 3—WAY DIMMER SWITCH MOUNT 48" TOD AFF COORDINATE WITH BALLAST \$_D\$ 1000W INCANDESCENT DIMMER SWITCH MOUNT 48" TOD AFF \$_D\$ 2000W INCANDESCENT DIMMER SWITCH MOUNT 48" TOD AFF \$_D\$ 2000W INCANDESCENT DIMMER SWITCH MOUNT 48" TOD AFF \$_D\$ 2000W INCANDESCENT DIMMER SWITCH MOUNT 48" TOD AFF \$_D\$ 3000W INCANDESCENT 3—WAY DIMMER SWITCH MOUNT 48" TOD AFF \$_D\$ 15—MINUTE TIMER SWITCH MOUNT 48" TOD AFF \$_D\$ 15—MINUTE TIMER SWITCH W/HOLD \$_S\$ 3 3 WAY SWITCH MOUNT 48" TOD AFF \$_K\$ KEYED SWITCH MOUNT 48" TOD AFF \$_K\$ KEYED SWITCH MOUNT 48" TOD AFF \$_K\$ KEYED 3—WAY SWITCH MOUNT 48" TOD AFF \$_D\$ MANUAL MOTOR STARTER SWITCH MOUNT 48" TOD AFF \$_D\$ MOUNT 48" TOD AFF #_D\$ | \$ _{DPST} | DOUBLE POLE SINGLE THROW SWITCH | MOUNT 48" TOD AFF |
| \$\(\) FLUORESCENT DIMMER SWITCH \$\(\) S_{D3} FLUORESCENT 3-WAY DIMMER SWITCH \$\(\) 1000W INCANDESCENT JEMMER SWITCH \$\(\) 1000W INCANDESCENT DIMMER SWITCH \$\(\) 1000W INCANDESCENT DIMMER SWITCH \$\(\) 1000W INCANDESCENT JEMMER SWITCH \$\(\) 1000W INCANDESCENT JEMER SWITCH \$\(\) 1000W I | | SINGLE POLE DOUBLE THROW SWITCH | MOUNT 48" TOD AFF |
| \$\(\) 1000W INCANDESCENT DIMMER SWITCH \$\(\) 1000W INCANDESCENT DIMMER SWITCH \$\(\) 1000W INCANDESCENT DIMMER SWITCH \$\(\) 2000W INCANDESCENT JOHMER SWITCH \$\(\) 2000W INCANDESCENT DIMMER SWITCH \$\(\) 2000W INCANDESCENT DIMMER SWITCH \$\(\) 2000W INCANDESCENT DIMMER SWITCH \$\(\) MOUNT 48" TOD AFF \$\(\) 2000W INCANDESCENT JOHMER SWITCH \$\(\) MOUNT 48" TOD AFF \$\(\) 15-MINUTE TIMER SWITCH W/HOLD \$\(\) 3 3 WAY SWITCH \$\(\) MOUNT 48" TOD AFF \$\(\) 4 WAY SWITCH \$\(\) MOUNT 48" TOD AFF \$\(\) KEYED SWITCH \$\(\) MOUNT 48" TOD AFF \$\(\) KEYED 3-WAY SWITCH \$\(\) MOUNT 48" TOD AFF \$\(\) MOUNT 48 | | FLUORESCENT DIMMER SWITCH | MOUNT 48" TOD AFF COORDINATE WITH BALLAST |
| \$\begin{array}{c}\$ \$D_3\$ 1000W INCANDESCENT 3-WAY DIMMER SWITCH | \$ _{D3} | FLUORESCENT 3-WAY DIMMER SWITCH | MOUNT 48" TOD AFF COORDINATE WITH BALLAST |
| \$\(\) 2000W INCANDESCENT DIMMER SWITCH \$\(\) 2000W INCANDESCENT 3-WAY DIMMER SWITCH \$\(\) 2000W INCANDESCENT 3-WAY DIMMER SWITCH \$\(\) 4 PILOT LIGHT SWITCH \$\(\) 15-MINUTE TIMER SWITCH W/HOLD \$\(\) 3 3 WAY SWITCH \$\(\) MOUNT 48" TOD AFF \$\(\) 4 4 WAY SWITCH \$\(\) MOUNT 48" TOD AFF \$\(\) KEYED SWITCH \$\(\) MOUNT 48" TOD AFF \$\(\) KEYED 3-WAY SWITCH \$\(\) MOUNT 48" TOD AFF \$\(\) MOUNT 16" BOD AFF \$\(\) M | \$ _D | 1000W INCANDESCENT DIMMER SWITCH | MOUNT 48" TOD AFF |
| \$\begin{array}{c c c c c c c c c c c c c c c c c c c | \$ _{D3} | 1000W INCANDESCENT 3-WAY DIMMER SWITCH | MOUNT 48" TOD AFF |
| \$_P PILOT LIGHT SWITCH MOUNT 48" TOD AFF \$_T 15-MINUTE TIMER SWITCH W/HOLD | | 2000W INCANDESCENT DIMMER SWITCH | MOUNT 48" TOD AFF |
| \$_P PILOT LIGHT SWITCH MOUNT 48" TOD AFF \$_T 15-MINUTE TIMER SWITCH W/HOLD | \$ _{D3} | 2000W INCANDESCENT 3-WAY DIMMER SWITCH | MOUNT 48" TOD AFF |
| \$\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ | | PILOT LIGHT SWITCH | MOUNT 48" TOD AFF |
| \$\frac{1}{3}\$ 4 WAY SWITCH MOUNT 48" TOD AFF \$\frac{1}{8}\$ KEYED SWITCH MOUNT 48" TOD AFF \$\frac{1}{8}\$ KEYED 3—WAY SWITCH MOUNT 48" TOD AFF \$\frac{1}{8}\$ MANUAL MOTOR STARTER SWITCH MOUNT AS REQUIERD \$\frac{1}{9}\$ RECEPTACLE MOUNT 16" BOD AFF \$\frac{1}{9}\$ UPS RECEPTACLE MOUNT 16" BOD AFF \$\frac{1}{9}\$ GROUND FAULT RECEPTACLE MOUNT 16" BOD AFF \$\frac{1}{9}\$ GROUND FAULT, WEATHERPROOF RECEPT. MOUNT 24" BOD AFG \$\frac{1}{9}\$ CEILING RECEPTACLE \$\frac{1}{9}\$ TAMPER RESISTANT RECEPTACLE \$\frac{1}{9}\$ SPECIAL RECEPTACLE \$\frac{1}{9}\$ DOUBLE DUPLEX RECEPTACLE \$\frac{1}{9}\$ HOSPITAL GRADE GROUND FAULT RECEPTACLE \$\frac{1}{9}\$ VERIFY RECEPTACLE \$\frac{1}{9}\$ HOSPITAL GRADE GROUND FAULT RECEPTACLE \$\frac{1}{9}\$ DRY TYPE TRANSFORMER \$\frac{1}{9}\$ TRANSIENT VOLTAGE SURGE PROTECTOR \$\frac{1}{9}\$ TRANSIENT VOLTAGE SURGE PROTECTOR \$\frac{1}{9}\$ TRANSIENT VOLTAGE SURGE PROTECTOR \$\frac{1}{9}\$ MOUNT 48" TOD AFF MOUNT 16" BOD | \$ _T | 15-MINUTE TIMER SWITCH W/HOLD | - |
| \$\(\) KEYED SWITCH \$\(\) KEYED 3—WAY SWITCH \$\(\) MOUNT 48" TOD AFF \$\(\) MOUNT AS REQUIERD \$\(\) MOUNT AS REQUIERD \$\(\) MOUNT 16" BOD AFF \$\(\) UPS RECEPTACLE \$\(\) MOUNT 16" BOD AFF \$\(\) MOUNT 6" ABV. COUNTER \$\(\) MOUNT 6" ABV. COUNTER \$\(\) MOUNT 24" BOD AFG \$\(\) CEILING RECEPTACLE \$\(\) TAMPER RESISTANT RECEPTACLE \$\(\) SPECIAL RECEPTACLE \$\(\) FLOOR RECEPTACLE \$\(\) DOUBLE DUPLEX RECEPTACLE \$\(\) HOSPITAL GRADE RECEPTACLE \$\(\) HOSPITAL GRADE GROUND FAULT RECEPTACLE \$\(\) MOUNT 24" BOD AFG \$\(\) CEILING RECEPTACLE \$\(\) HOSPITAL GRADE RECEPTACLE \$\(\) HOSPITAL GRADE RECEPTACLE \$\(\) HOSPITAL GRADE GROUND FAULT RECEPTACLE \$\(\) HOSPITAL GRADE GROUND FAULT RECEPTACLE \$\(\) DRY TYPE TRANSFORMER \$\(\) TRANSIENT VOLTAGE SURGE PROTECTOR \$\(\) TRANSIENT VOLTAGE SURGE PROTECTOR \$\(\) MOUNT 48" TOD AFF **MOUNT 48" TOD AFF **MOUNT 16" BOD AFF **MOUNT 16" | \$3 | 3 WAY SWITCH | MOUNT 48" TOD AFF |
| \$\(\) KEYED 3-WAY SWITCH \$\(\) MANUAL MOTOR STARTER SWITCH \$\(\) MOUNT AS REQUIERD \$\(\) MOUNT 16" BOD AFF \$\(\) UPS RECEPTACLE \$\(\) MOUNT 16" BOD AFF \$\(\) UPS RECEPTACLE \$\(\) MOUNT 16" BOD AFF \$\(\) MOUNT 6" ABV. COUNTER \$\(\) MOUNT 6" ABV. COUNTER \$\(\) MOUNT 6" ABV. COUNTER \$\(\) MOUNT 24" BOD AFG \$\(\) CEILING RECEPTACLE \$\(\) CEILING RECEPTACLE \$\(\) TAMPER RESISTANT RECEPTACLE \$\(\) SPECIAL RECEPTACLE \$\(\) DOUBLE DUPLEX RECEPTACLE \$\(\) HOSPITAL GRADE RECEPTACLE \$\(\) HOSPITAL GRADE GROUND FAULT RECEPTACLE \$\(\) VERIFY RECEPTACLE \$\(\) HOSPITAL GRADE GROUND FAULT RECEPTACLE \$\(\) MOUNT 24" BOD AFG \$\(\) — \$\(\) WOUNT 24" BOD AFG \$\(\) — \$\(\) HOUNT 24" BOD AFG \$\(\) — \$\(\) WOUNT 24" BOD AFG \$\(\) — \$\(\) WOUNT 24" BOD AFG \$\(\) — \$\(\) HOUNT 24" BOD AFG \$\(\) — \$\(\) WOUNT 24" BOD AFG \$\(\) — \$\(\) WOUNT 24" BOD AFG \$\(\) — \$\(\) WOUNT 24" BOD AFG \$\(\) — \$\(\) WOUNT 24" BOD AFG \$\(\) — \$\(\) WOUNT 24" BOD AFG \$\(\) — \$\(\) WOUNT 24" BOD AFG \$\(\) — \$\(\) WOUNT 24" BOD AFG \$\(\) — \$\(\) WOUNT 24" BOD AFG \$\(\) — \$\(\) WOUNT 24" BOD AFG \$\(\) — \$\(\) WOUNT 24" BOD AFG \$\(\) — \$\(\) WOUNT 24" BOD AFG \$\(\) — \$\(\) WOUNT 24" BOD AFG \$\(\) — \$\(\) WOUNT 24" BOD AFG \$\(\) — \$\(\) WOUNT 24" BOD AFG \$\(\) — \$\(\) — \$\(\) WOUNT 24" BOD AFG \$\(\) — \$\(\) — \$\(\) WOUNT 24" BOD AFG \$\(\) — \$\(\) — \$\(\) WOUNT 24" BOD AFG \$\(\) — \$\(\) — \$\(\) WOUNT 24" BOD AFG \$\(\) — \$\(\) — \$\(\) — \$\(\) WOUNT 24" BOD AFG \$\(\) — \$\(\) — \$\(\) — \$\(\) — \$\(\) WOUNT 24" BOD AFG \$\(\) — \$\(\) — \$\(\) — \$\(\) — \$\(\) WOUNT 24" BOD AFG \$\(\) — \$\ | \$4 | 4 WAY SWITCH | MOUNT 48" TOD AFF |
| \$M MANUAL MOTOR STARTER SWITCH MOUNT AS REQUIERD ★ RECEPTACLE MOUNT 16" BOD AFF ★ UPS RECEPTACLE MOUNT 16" BOD AFF ★ MOUNT 16" BOD AFF ★ MOUNT 16" BOD AFF ★ MOUNT 6" ABV. COUNTER ★ MOUNT 6" ABV. COUNTER ★ MOUNT 24" BOD AFG ★ CEILING RECEPTACLE ★ TAMPER RESISTANT RECEPTACLE ★ SPECIAL RECEPTACLE ★ DOUBLE DUPLEX RECEPTACLE ★ HOSPITAL GRADE RECEPTACLE ★ HOSPITAL GRADE RECEPTACLE ★ HOSPITAL GRADE GROUND FAULT RECEPTACLE ★ HOSPITAL GRADE GROUND FAULT RECEPTACLE ★ DRY TYPE TRANSFORMER ★ DRY TYPE TRANSFORMER ★ TYMPE TRANSFORMER | \$ _K | KEYED SWITCH | MOUNT 48" TOD AFF |
| \$M MANUAL MOTOR STARTER SWITCH MOUNT AS REQUIERD ★ RECEPTACLE MOUNT 16" BOD AFF ★ UPS RECEPTACLE MOUNT 16" BOD AFF ★ MOUNT 16" BOD AFF ★ MOUNT 16" BOD AFF ★ MOUNT 6" ABV. COUNTER ★ MOUNT 6" ABV. COUNTER ★ MOUNT 24" BOD AFG ★ CEILING RECEPTACLE ★ TAMPER RESISTANT RECEPTACLE ★ SPECIAL RECEPTACLE ★ DOUBLE DUPLEX RECEPTACLE ★ HOSPITAL GRADE RECEPTACLE ★ HOSPITAL GRADE RECEPTACLE ★ HOSPITAL GRADE GROUND FAULT RECEPTACLE ★ HOSPITAL GRADE GROUND FAULT RECEPTACLE ★ DRY TYPE TRANSFORMER ★ DRY TYPE TRANSFORMER ★ TYMPE TRANSFORMER | \$ _{K3} | KEYED 3-WAY SWITCH | MOUNT 48" TOD AFF |
| ## UPS RECEPTACLE ## UPS RECEPTACLE ## UPS RECEPTACLE ## ISOLATED GROUND RECEPTACLE ## MOUNT 16" BOD AFF ## MOUNT 6" ABV. COUNTER ## MOUNT 24" BOD AFG ## MOUNT 24" BOD AFG ## HOUNT 24" BOD | | MANUAL MOTOR STARTER SWITCH | MOUNT AS REQUIERD |
| ➡GIG ISOLATED GROUND RECEPTACLE MOUNT 16" BOD AFF ➡GFI GROUND FAULT RECEPTACLE MOUNT 6" ABV. COUNTER ➡WP GFI GROUND FAULT, WEATHERPROOF RECEPT. MOUNT 24" BOD AFG ➡CLG CEILING RECEPTACLE - ➡TR TAMPER RESISTANT RECEPTACLE - ➡S SPECIAL RECEPTACLE - ➡FLR FLOOR RECEPTACLE - ➡OUBLE DUPLEX RECEPTACLE - ➡OUBLE DUPLEX RECEPTACLE VERIFY RECEPTACLE HEIGHTS WITH OWNER ➡OFI HOSPITAL GRADE GROUND FAULT RECEPTACLE VERIFY RECEPTACLE HEIGHTS WITH OWNER ➡ORY TYPE TRANSFORMER - ➡ORY TYPE TRANSFORMER - ➡ORY TYPE TRANSFORMER - ➡ORY TYPE TRANSFORMER - | Ф | RECEPTACLE | MOUNT 16" BOD AFF |
| ⊕GFI GROUND FAULT RECEPTACLE MOUNT 6" ABV. COUNTER ⊕GFI GROUND FAULT, WEATHERPROOF RECEPT. MOUNT 24" BOD AFG ⊕CLG CEILING RECEPTACLE — ⊕TR TAMPER RESISTANT RECEPTACLE — ⊕S SPECIAL RECEPTACLE — ⊕FLR FLOOR RECEPTACLE — DOUBLE DUPLEX RECEPTACLE — ⊕ HOSPITAL GRADE RECEPTACLE VERIFY RECEPTACLE HEIGHTS WITH OWNER ⊕GFI HOSPITAL GRADE GROUND FAULT RECEPTACLE VERIFY RECEPTACLE HEIGHTS WITH OWNER ⊕ DRY TYPE TRANSFORMER — ■ TVSS TRANSIENT VOLTAGE SURGE PROTECTOR — | • | UPS RECEPTACLE | MOUNT 16" BOD AFF |
| ₩P GFI GROUND FAULT, WEATHERPROOF RECEPT. MOUNT 24" BOD AFG ♦ CLG CEILING RECEPTACLE — ★ TAMPER RESISTANT RECEPTACLE — ♦ SPECIAL RECEPTACLE — ♦ DOUBLE DUPLEX RECEPTACLE — ♦ HOSPITAL GRADE RECEPTACLE VERIFY RECEPTACLE ♦ HOSPITAL GRADE GROUND FAULT RECEPTACLE VERIFY RECEPTACLE ♦ HOSPITAL GRADE GROUND FAULT RECEPTACLE VERIFY RECEPTACLE HEIGHTS WITH OWNER — ▼ DRY TYPE TRANSFORMER — ▼ TVSS TRANSIENT VOLTAGE SURGE PROTECTOR — | ЫG | ISOLATED GROUND RECEPTACLE | MOUNT 16" BOD AFF |
| ₩P GFI GROUND FAULT, WEATHERPROOF RECEPT. MOUNT 24" BOD AFG ♦ CLG CEILING RECEPTACLE — ★ TAMPER RESISTANT RECEPTACLE — ♦ SPECIAL RECEPTACLE — ♦ DOUBLE DUPLEX RECEPTACLE — ♦ HOSPITAL GRADE RECEPTACLE VERIFY RECEPTACLE ♦ HOSPITAL GRADE GROUND FAULT RECEPTACLE VERIFY RECEPTACLE ♦ HOSPITAL GRADE GROUND FAULT RECEPTACLE VERIFY RECEPTACLE HEIGHTS WITH OWNER — ▼ DRY TYPE TRANSFORMER — ▼ TVSS TRANSIENT VOLTAGE SURGE PROTECTOR — | Ы _{GFI} | GROUND FAULT RECEPTACLE | MOUNT 6" ABV. COUNTER |
| → TAMPER RESISTANT RECEPTACLE - → SPECIAL RECEPTACLE - → FLR FLOOR RECEPTACLE - → DOUBLE DUPLEX RECEPTACLE - → HOSPITAL GRADE RECEPTACLE VERIFY RECEPTACLE HEIGHTS WITH OWNER → HOSPITAL GRADE GROUND FAULT RECEPTACLE VERIFY RECEPTACLE HEIGHTS WITH OWNER → DRY TYPE TRANSFORMER - TVSS TRANSIENT VOLTAGE SURGE PROTECTOR - | | GROUND FAULT, WEATHERPROOF RECEPT. | MOUNT 24" BOD AFG |
| → TAMPER RESISTANT RECEPTACLE - → SPECIAL RECEPTACLE - → FLR FLOOR RECEPTACLE - → DOUBLE DUPLEX RECEPTACLE - → HOSPITAL GRADE RECEPTACLE VERIFY RECEPTACLE HEIGHTS WITH OWNER → HOSPITAL GRADE GROUND FAULT RECEPTACLE VERIFY RECEPTACLE HEIGHTS WITH OWNER → DRY TYPE TRANSFORMER - TVSS TRANSIENT VOLTAGE SURGE PROTECTOR - | Фсге | CEILING RECEPTACLE | _ |
| SPECIAL RECEPTACLE - → FLR FLOOR RECEPTACLE - DOUBLE DUPLEX RECEPTACLE - → HOSPITAL GRADE RECEPTACLE VERIFY RECEPTACLE HEIGHTS WITH OWNER → HOSPITAL GRADE GROUND FAULT RECEPTACLE VERIFY RECEPTACLE HEIGHTS WITH OWNER DRY TYPE TRANSFORMER - TVSS TRANSIENT VOLTAGE SURGE PROTECTOR - | | TAMPER RESISTANT RECEPTACLE | _ |
| DOUBLE DUPLEX RECEPTACLE HOSPITAL GRADE RECEPTACLE HOSPITAL GRADE GROUND FAULT RECEPTACLE HOSPITAL GRADE GROUND FAULT RECEPTACLE DRY TYPE TRANSFORMER TRANSIENT VOLTAGE SURGE PROTECTOR | | SPECIAL RECEPTACLE | _ |
| DOUBLE DUPLEX RECEPTACLE HOSPITAL GRADE RECEPTACLE HOSPITAL GRADE GROUND FAULT RECEPTACLE HOSPITAL GRADE GROUND FAULT RECEPTACLE DRY TYPE TRANSFORMER TRANSIENT VOLTAGE SURGE PROTECTOR | \bigcup_{FLR} | FLOOR RECEPTACLE | - |
| HOSPITAL GRADE RECEPTACLE HOSPITAL GRADE GROUND FAULT RECEPTACLE HEIGHTS WITH OWNER VERIFY RECEPTACLE HEIGHTS WITH OWNER VERIFY RECEPTACLE HEIGHTS WITH OWNER TVSS TRANSIENT VOLTAGE SURGE PROTECTOR TVSS TRANSIENT VOLTAGE SURGE PROTECTOR TVSS TRANSIENT VOLTAGE SURGE PROTECTOR | | DOUBLE DUPLEX RECEPTACLE | _ |
| HOSPITAL GRADE GROUND FAULT RECEPTACLE HEIGHTS WITH OWNER DRY TYPE TRANSFORMER TVSS TRANSIENT VOLTAGE SURGE PROTECTOR - | ⊕• | HOSPITAL GRADE RECEPTACLE | |
| TVSS TRANSIENT VOLTAGE SURGE PROTECTOR - | LI ● I | HOSPITAL GRADE GROUND FAULT RECEPTACLE | |
| <u>→</u> | P | DRY TYPE TRANSFORMER | _ |
| CKT # CIRCUIT IDENTIFIER - | TVSS | TRANSIENT VOLTAGE SURGE PROTECTOR | - |
| l · | CKT # | CIRCUIT IDENTIFIER | - |
| ALS ASSISTIVE LISTENING SYSTEM SYSTEM SHALL BE PERMANENTLY INSTALLED | ALS | ASSISTIVE LISTENING SYSTEM | |
| ARA MASTER AREA OF RESCUE ASSISTANCE MASTER STATION LOCATE AT MAIN ENTRANCE | ARA MASTER | AREA OF RESCUE ASSISTANCE MASTER STATION | LOCATE AT MAIN ENTRANCE |
| AREA OF RESCUE ASSISTANCE DEVICE MOUNT 48" TOD AFF | ARA | AREA OF RESCUE ASSISTANCE DEVICE | MOUNT 48" TOD AFF |
| PHONE OUTLET DOUBLE GANG UNO | ∇ | PHONE OUTLET | DOUBLE GANG UNO |
| DATA/PHONE OUTLET DOUBLE GANG UNO | T | DATA/PHONE OUTLET | DOUBLE GANG UNO |
| Value Cable Television outlet Single gang uno | ▽ CATV | CABLE TELEVISION OUTLET | SINGLE GANG UNO |

NOTES

- STANDARD MOUNTING HEIGHTS OF DEVICES SHALL BE AS LISTED IN LEGEND.
 SPECIFIC MOUNTING HEIGHT OF A DEVICE MAY VARY AS NOTED ON PLANS.
 E.C. SHALL COORDINATE COLOR SELECTION OF DEVICES AND COVERPLATES
 WITH ARCHITECT, OWNER AND/OR G.C.
- 3. PROVIDE EQUIPMENT SHOWN BY HUBBELL, PASS & SEYMOUR, COOPER WIRING DEVICES, OR EQUAL PRODUCT.
- 4. OPERATING DEVICES AND OPERABLE PARTS OF OPERATING DEVICES SUCH AS LIGHT SWITCHES, RECEPTACLES, THERMOSTATS, ALARMS, ETC., SHALL BE LOCATED WITHIN REACH RANGES AS SPECIFIED PER ANSI A117.1-2009.

| ABBREVIATIONS: | |
|----------------|------------------------|
| G.C. | GENERAL CONTRACTOR |
| P.C. | PLUMBING CONTRACTOR |
| M.C. | MECHANICAL CONTRACTOR |
| E.C. | ELECTRICAL CONTRACTOR |
| AFF | ABOVE FINISHED FLOOR |
| AFG | ABOVE FINISHED GRADE |
| UNO | UNLESS NOTED OTHERWISE |
| <u>Ç</u> | CENTERLINE OF DEVICE |
| BOD | BOTTOM OF DEVICE |
| TOD | TOP OF DEVICE |

ELECTRICAL NOTES:

- 1. ELECTRICAL PLANS ARE INTENDED TO PROVIDE INFORMATION FOR INSTALLATION OF A COMPLETE ELECTRICAL SYSTEM. PROVIDE ALL ESSENTIAL LABOR, MATERIALS & DEVICES REQUIRED TO PRODUCE A QUALITY END PRODUCT.
- 2. CONTRACTOR SHALL REVIEW & BECOME FAMILIAR WITH THE WORK OF ALL TRADES FOR PURPOSES OF COORDINATION AND ROUTING. CONTRACTOR SHALL PROVIDE REQUIRED PLANNING, COORDINATION AND SEQUENCING OF ELECTRICAL INSTALLATION WITH BUILDING COMPONENTS AND OTHER TRADES.
- 3. ALL WORK SHALL COMPLY WITH THE NATIONAL ELECTRICAL CODE (NEC). WORKMANSHIP SHALL MEET OR EXCEED INDUSTRY STANDARDS.
- 4. PROTECT ALL NEW MATERIALS FROM THE WEATHER IN STORAGE TRAILERS OR PROVIDE SUITABLE COVERING.
- 5. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL DISCONNECTS, STARTERS, DEVICES AND ELECTRICAL COMPONENTS UNLESS SPECIFICALLY NOTED AS PROVIDED BY OTHERS.
- 6. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL LINE AND LOAD SIDE WIRING INCLUDING ALL TERMINATIONS TO EQUIPMENT PROVIDED UNDER OTHER TRADES. POWER WIRING TO CONTROL DEVICES SHALL BE PROVIDE BY E.C.. INTERLOCK WIRING SHALL BE PROVIDED BY THE CONTRACTOR INSTALLING THE CONTROL DEVICE.
- 7. ALL WIRING, PANELBOARDS, DEVICES AND OTHER LIKE MATERIALS SHALL BE UL LISTED & LABELED.
 ALL MATERIALS SHALL MEET THE NEC FOR THE INTENDED USE AND INSTALLED IN ACCORDANCE WITH
- 8. PROVIDE THHN/THWN COPPER WIRE. PROVIDE A MINIMUM WIRE SIZE OF #12. ALL WIRE #8 AND LARGER SHALL BE STRANDED. CONDUCTORS AND CONDUIT ON PLANS AND SCHEDULES REFLECT AMPACITIES PER NEC 310-16 75C RATING. CONTRACTOR SHALL VERIFY ALL TERMINATIONS, LUGS, ETC. ARE RATED FOR USE PER NEC 110-4C. OTHERWISE PROVIDE CONDUCTOR AND CONDUIT SIZED PER LOWEST TEMPERATURE RATING OF ANY TERMINATION WITHIN A CIRCUIT. A SEPERATE INSULATED EQUIPMENT GROUNDING CONDUCTOR SHALL BE PROVIDED FOR ALL CIRCUITS.
- 9. PROVIDE MC CABLE FOR ALL SINGLE PHASE BRANCH CIRCUITS 30 AMPS AND SMALLER. PROVIDE CONDUIT FOR ALL OTHER WIRING. EMT OR RIGID SHALL BE USED WHERE EXPOSED TO PHYSICAL DAMAGE. CONDUIT ABOVE GRADE SHALL BE STEEL. CONDUIT BELOW GRADE MAY BE PVC CHANGING TO STEEL IN THE ELBOW TURNING UP. EMT SHALL NOT BE USED IN DIRECT CONTACT WITH THE EARTH OR WHERE EXPOSED TO SEVERE PHYSICAL DAMAGE. FITTINGS ON STEEL CONDUIT SHALL BE COMPRESSION TYPE.
- 10. PROVIDE ONE—INCH EMPTY CONDUITS EXTENDING ABOVE CEILING FOR ALL TELEPHONE AND DATA OUTLETS SHOWN ON PLANS. PROVIDE PROTECTIVE BUSHINGS ON ENDS OF CONDUIT. ALL CABLING IS PROVIDED BY OTHERS.
- 11. PROVIDE 3/4-INCH EMPTY CONDUITS TERMINATING ABOVE THE CEILING FOR ALL HVAC THERMOSTATS. JUNCTION BOXES SHALL MATCH ORIENTATION OF THERMOSTATS PROVIDED BY M.C.. MOUNT JUNCTION BOXES 48-INCHES A.F.F. UNLESS NOTED OTHERWISE. PROVIDE PROTECTIVE BUSHINGS ON ENDS OF CONDUIT. ALSO PROVIDE DOUBLE GANG BOX AT 84" AFF OVER THERMOSTATS OR WHERE SHOWN ON PLANS FOR REMOTE ALARM/TEST STATIONS OF HVAC DUCT SMOKE DETECTORS (NOT REQUIRED IF CENTRAL FIRE ALARM SYSTEM EXISTS).
- 12. PANELBOARDS FOR SERVICE ENTRANCE SHALL BE SERVICE ENTRANCE RATED. PROVIDE NEMA 3R PANELBOARDS WHERE LOCATED OUTSIDE. PROVIDE NEUTRAL AND GROUNDING BARS IN ALL PANELBOARDS UNLESS NOTED OTHERWISE. GROUND ALL SERVICE ENTRANCE PANELS IN ACCORDANCE WITH THE NEC. PROVIDE BOLT—IN BREAKERS UNLESS NOTED OTHERWISE.
- 13. PROVIDE TYPE WRITTEN PANEL SCHEDULES IN EACH PANEL INDICATING THE LOAD DESCRIPTION FOR EACH BREAKER. LABEL PANELS ON PANEL FACE WITH PHENOLIC LABELS INDICATING PANEL NUMBER OR LETTER DESIGNATION, VOLTAGE AND PHASE.
- 14. PROVIDE FUSED AND NON-FUSED DISCONNECT SWITCHES AS INDICATED ON PLANS. DISCONNECTS LOCATED OUTSIDE SHALL BE NEMA-3R. PROVIDE REJECTION CLIPS IN FUSED DISCONNECTS.
- 15. PROVIDE HORSEPOWER RATED STARTERS AND DISCONNECTS WHEN CONNECTED TO MOTORS. STARTERS SHALL BE PROVIDED WITH OVERLOAD SIZED TO MATCH MOTOR RATINGS.
- 16. PROVIDE LIGHTING AS SCHEDULED IN THE FIXTURE SCHEDULE OR OTHERWISE NOTED ON PLANS. LIGHTING INSTALLED IN SUSPENDED CEILINGS SHALL BE SUPPORTED INDEPENDENTLY OF THE CEILING GRID SYSTEM.
- 17. PROVIDE EMERGENCY AND EXIT LIGHTS AS SHOWN ON PLANS. POWER SHALL BE PROVIDED FROM LIGHTING CIRCUITS ON THE UNSWITCHED LEG OF THE CIRCUIT SUCH THAT POWER TO THE EMERGENCY AND EXIT LIGHTS IS NOT DISCONNECTED WHEN NORMAL LIGHTING IS OFF. EXTERIOR EMERGENCY LIGHTS SHALL BE WIRED SUCH THAT PHOTOCELL AND/OR TIME CLOCK OPERATION DOES NOT DISCONNECT POWER TO BATTERIES.
- 18. RECEPTACLES SHALL BE 20 AMP. 120V UNLESS NOTED OTHERWISE.
- 19. RECEPTACLES ABOVE COUNTERTOPS AND ADJACENT TO SINKS & LAVATORIES SHALL BE GROUND FAULT. KITCHEN RECEPTACLES SHALL BE GROUND FAULT.
- 20. RECEPTACLES INSTALLED OUTSIDE SHALL BE GROUND FAULT WITH "IN USE" WEATHERPROOF COVERS.
- 21. WALL SWITCHES SHALL BE SINGLE POLE, 20 AMP, 120/277V.
- 22. PROVIDE STANDARD SIZE WALL PLATES FOR ALL DEVICES AND BLANK WALL PLATES FOR JUNCTION BOXES. WALL PLATES SHALL BE HIGH IMPACT, SMOOTH NYLON, COLOR TO MATCH DEVICE.
- 23. UL LISTED DUCT SMOKE DETECTORS SHALL BE FURNISHED, INSTALLED & TESTED BY THE M.C.. THE E.C. SHALL PROVIDE 120V POWER TO EACH DUCT SMOKE DETECTOR WHERE REQUIRED. THE M.C. SHALL PROVIDE REMOTE ALARM/TEST STATIONS FOR EACH DUCT SMOKE DETECTOR.
- 24. GUARANTEE ALL EQUIPMENT, MATERIALS AND INSTALLATION FREE OF DEFECTS FOR A PERIOD OF 1—YEAR AFTER DATE OF ACCEPTANCE.

| | LIGHT FIXTURE SCHEDULE | | | | | | | | | | | |
|--------|---------------------------------------|--------------|------|-------|---------|------|-------------|-------|--------|-------|--|--|
| MARK | DESCRIPTION | 7/05 | LAMP | | BALLAST | L NO | FIXTURE | VOLTS | LUMENS | NOTES | | |
| | | TYPE | NO. | WATTS | TYPE | NO. | INPUT WATTS | | | | | |
| A1 | 2x2 LAY-IN TROFFER | LED | _ | 18 | _ | _ | 18 | 120 | 2000 | | | |
| В3 | 2x4 LAY-IN TROFFER | LED | _ | 47 | - | _ | 47 | 120 | 5500 | | | |
| S3 | 4' SURF. MOUNTED LED | LED | _ | 50 | - | _ | 50 | 120 | 6500 | | | |
| EX | EXIT LIGHT | LED | 1 | 1 | - | _ | 1 | 120 | _ | | | |
| EXEM | EXIT/EMER. LIGHT | (LED) PAR | 2 | 6 | - | _ | 12 | 120 | _ | | | |
| EXEMRH | EXIT/EMER. LIGHT WITH REMOTE HEADS | (LED) PAR | 4 | 6 | - | _ | 24 | 120 | _ | | | |
| ЕМ | EMERGENCY LIGHT | (LED) PAR | 2 | 6 | - | _ | 12 | 120 | _ | | | |

NOTES:

- 1. PROVIDE EXIT LIGHTS WITH SINGLE OR DOUBLE-FACE AS REQUIRED, CHEVRON DIRECTIONAL INDICATORS, MOUNTING BRACKETS & NICKEL CADMIUM BATTERY BACKUP.
- 2. PROVIDE ALL FIXTURES WITH LAMPS OF MODERATE TONE (3500K) AND GOOD CRI (COLOR RENDERING INDEX).
- 3. FIXTURES SHOWN WITH DIAGONAL LINES SHALL OPERATE ALL TIMES AS NIGHT LIGHTS.
- 4. PROVIDE FIXTURES BY LITHONIA, COLUMBIA, HUBBLE, OR EQUAL PRODUCT.

| BUILDING SERVICE LOAD SUMMARY | | | |
|---|------------|------------------|------------|
| LOAD DESCRIPTION | LOAD | DIVERSITY FACTOR | LOAD |
| INDOOR LIGHTING | 14.40 KVA | 100% | 14.40 KVA |
| OUTDOOR LIGHTING | 0.05 KVA | 100% | 0.05 KVA |
| RECEPTACLES | 10 KVA | 100% | 10 KVA |
| RECEPTACLES | 10.88 KVA | 50% | 5.44 KVA |
| OVERHEAD DOORS | 1.00 KVA | 100% | 1.00 KVA |
| AIR HANDLERS | 69.36 KVA | 100% | 69.36 KVA |
| HVAC EQUIPMENT | 24.96 KVA | 100% | 24.96 KVA |
| DRINKING FOUNTAIN | 0.40 KVA | 100% | 0.40 KVA |
| WATER HEATER | 4.50 KVA | 100% | 4.50 KVA |
| нот вох | 1.50 KVA | 100% | 1.50 KVA |
| AIR COMPRESSOR | 6.72 KVA | 100% | 6.72 KVA |
| SHOP EQUIPMENT | 74.40 KVA | 60% | 44.64 KVA |
| CONTINUOUS | 6.72 KVA | 25% | 1.68 KVA |
| MISCELLANEOUS | 0.00 KVA | 100% | 0.00 KVA |
| TOTAL | 224.89 KVA | | 184.65 KVA |
| SERVICE LOAD | | | |
| $\frac{184.65 \text{ KVA}}{2} = 513 \text{ AMPS}$ | | | |
| 0.208 X $\sqrt{3}$ | | | |

ELECTRICAL SYSTEM AND EQUIPMENT

TRADE-OFF

METHOD OF COMPLIANCE:

PRESCRIPTIVE ☑ PERFORMANCE □

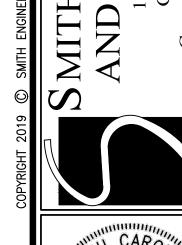
LIGHTING SCHEDULE

EQUIPMENT SCHEDULES WITH MOTORS (NOT USED FOR MECHANICAL SYSTEMS)

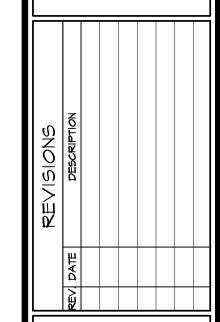
MOTOR HORSEPOWER N/A - NO MOTORS LARGER THAN 1 HP SPECIFIED ON THE

MOTOR HORSEPOWER N/A - NO MOTORS LARGER THAN 1 HP SPECIFIED ON THESE PLANS
NUMBER OF PHASES OTHER THAN AS LISTED IN MECHANICAL SCHEDULES
MINIMUM EFFICIENCY
MOTOR TYPE
OF POLES

TH ENGINEERING AND DESIGN, P.A. - ALL RIGHTS RE
TH ENGINEERI
ID DESIGN, P.A.





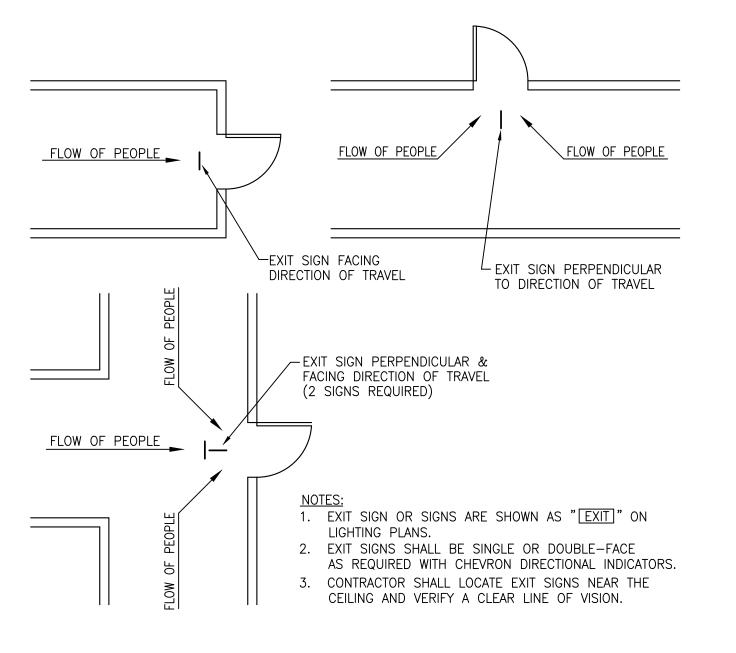


pbell Univers

DATE: 16 April 2019

DRAWN BY: T.B.

SCALE: AS NOTED



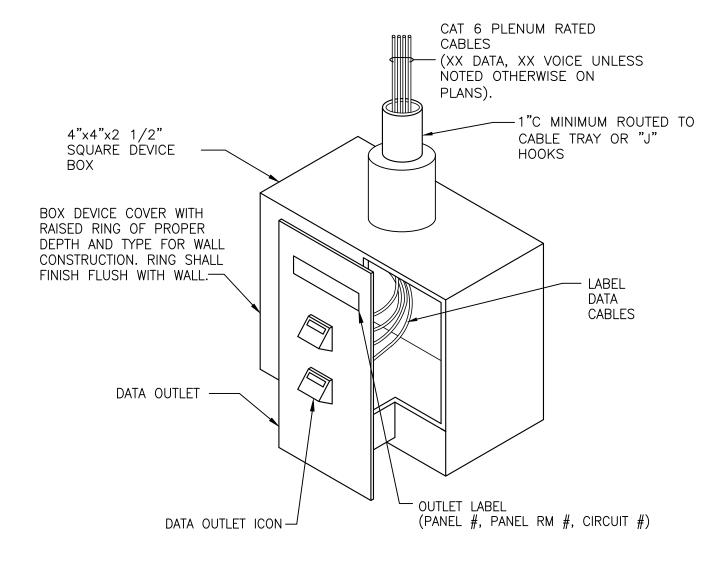
DETAIL NO. 1

LOCATIONS OF EXIT SIGNS SCALE: NTS

BRANCH CIRCUIT CONDUIT 4" SQUARE DEVICE BOX — BOX DEVICE COVER WITH RAISED RING OF PROPER DEPTH AND TYPE FOR WALL CONSTRUCTION. RING TO - MAKE CIRCUIT JOINT WITH FINISH FLUSH WITH WALL. TWIST-ON CONNECTOR AND CONNECT TO DEVICE WITH SINGLE LEADS DEVICE TRIM PLATE ----- 1 #12 AWG SOLID COPPER GRËEN INSULATED JUMPER TO BOX BONDING SCREW -1 #12 AWG SOLID COPPER GREEN INSULATED JUMPER TO DEVICE GROUNDING SCREW

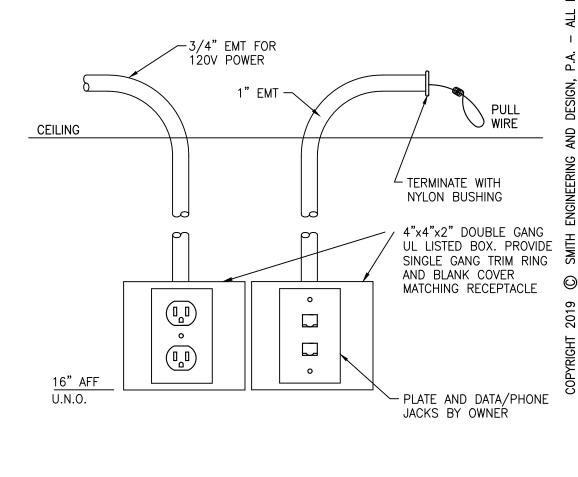
DETAIL NO. 2

RECEPTACLE GROUNDING DIAGRAM SCALE: NTS



DETAIL NO. 3

DATA OUTLET SCALE: NTS



FINISHED FLOOR

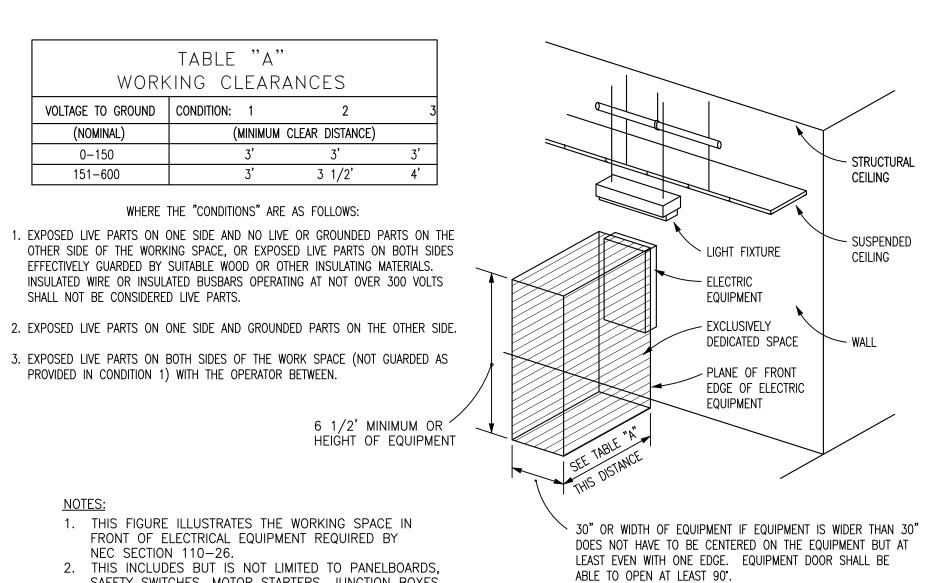
DETAIL NO. 4

POWER/DATA/PHONE OUTLET SCALE: NTS

FLEXIBLE CONDUIT CONNECTION TO FIXTURE (6'-0" MAX. LENGTH)─NO. 12 GUAGE GALVANIZED TIE WIRE LOCATED WITHIN 6-INCHES FROM FIXTURE CORNER (2 TYPICAL) ATTACH FIXTURE TO CEILING GRID AND GRID GRID AT ALL HANGERS BY OTHERS FOUR CORNERS. -

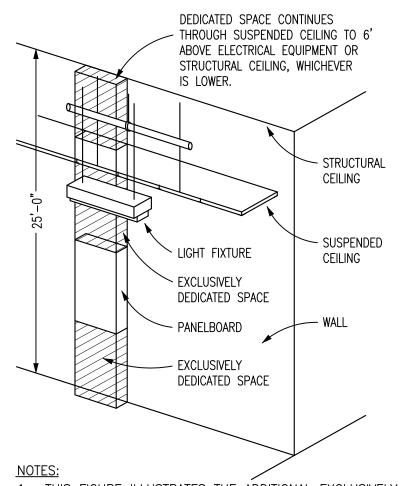
DETAIL NO. 5

TYPICAL RECESSED FIXTURE SUPPORT SCALE: NTS



ALL ELECTRIC EQUIPMENT

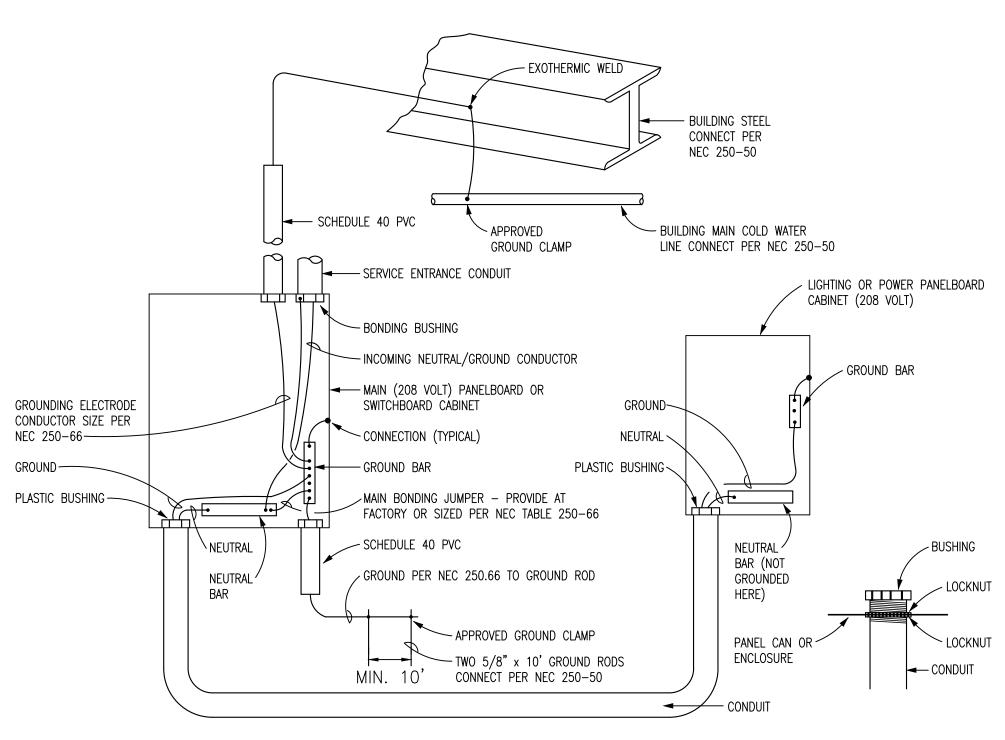
SAFETY SWITCHES, MOTOR STARTERS, JUNCTION BOXES AND OTHER ELECTRICAL EQUIPMENT.



1. THIS FIGURE ILLUSTRATES THE ADDITIONAL EXCLUSIVELY DEDICATED SPACE REQUIRED OVER AND UNDER PANELBOARDS FOR CABLES, RACEWAYS, ETC. TO AND FROM PANELBOARDS REQUIRED BY NEC SECTION 110-26. 2. NO PIPING, DUCTWORK OR EQUIPMENT FOREIGN TO THE ELECTRICAL EQUIPMENT OR ARCHITECTURAL APPURTENANCES SHALL BE PERMITTED TO BE INSTALLED IN, ENTER OR PASS THROUGH THE DEDICATED SPACES SHOWN. FOR EXCEPTIONS SEE NEC SECTION 110-26f. PANELBOARDS -

DETAIL NO. 6 DEDICATED WORKING SPACE REQUIREMENTS

SCALE: NTS



NOTES: 1. GROUNDING ELECTRODE CONDUCTOR SHALL BE RUN CONTINUOUSLY (UNBROKEN) FROM COLD WATER LINE AND/OR BUILDING STEEL AND GROUND ROD TO GROUND BAR BEFORE BONDING TO ANY CONDUIT

2. ALL THE FOLLOWING GROUNDING ELECTRODES THAT ARE PRESENT SHALL BE BONDED TOGETHER TO FORM THE GROUNDING ELECTRODE SYSTEM PER NEC 250.52:

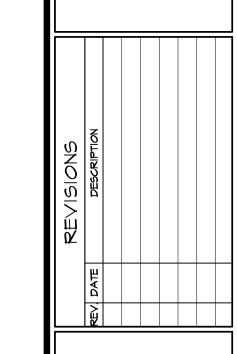
2.1. METAL UNDERGROUND WATER PIPE IN DIRECT CONTACT WITH EARTH FOR 10 FT OR MORE 2.2. METAL FRAME OF THE BUILDING, ANY ELECTRODE ENCASED BY AT LEAST 2 IN. OF CONCRETE, CONSISTING OF 20 FT OR MORE BARE OR ZINC GALVANIZED OR OTHER ELECTRICALLY CONDUCTIVE COATED STEEL REINFORCING BARS OR

RODS NOT LESS THAN 1/2" IN DIAMETER. 2.4. GROUND RING ENCIRCLING THE BUILDING 2.5. ROD AND PIPE ELECTRODES NOT LESS THAN 8 FT.

2.6. PLATE ELECTRODES DETAIL NO. 7

TYPICAL BONDING & GROUNDING DIAGRAM

SCALE: NTS



DATE: 16 April 2019 DRAWN BY: T.B. AS NOTED