

2018 APPENDIX B BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS (EXCEPT 1 AND 2-FAMILY DWELLINGS AND TOWNHOUSES)

Name of Project: **BEAUFORT COUNTY DNA LABORATORY ADDITION**
 Address: **111 INDUSTRIAL VILLAGE ROAD, BEAUFORT SC** Zip Code: **29906**
 Owner or Authorized Agent: **DANIEL C. SALTRICK, AIA** Phone #: **(843) 466-3664** E-Mail: **DANSALTRICK@DESIGNBUILD.COM**
 Owned By: **BEAUFORT COUNTY**
 Code Enforcement Jurisdiction: **CITY OF BEAUFORT**

CONTACT: **DANIEL C. SALTRICK, AIA - BEAUFORT DESIGN BUILD LLC.**

DESIGNER: FIRM NAME LICENSE # TELEPHONE # EMAIL
 Architectural: **BEAUFORT DESIGN BUILD DANIEL C. SALTRICK 7155 (704) 618-1302 DANSALTRICK@DESIGNBUILD.COM**
 Civil: **N/A N/A N/A N/A N/A**
 Electrical: **OPTIMA ENGINEERING ZANE KUSEYEB 17011 (919) 926-2200 ZKUSEYEB@OPTIMAENGINEERING.COM**
 Fire Alarm: **OPTIMA ENGINEERING ZANE KUSEYEB 17011 (919) 926-2200 ZKUSEYEB@OPTIMAENGINEERING.COM**
 Plumbing: **OPTIMA ENGINEERING GEORGE FOWLER 21021 (704) 338-1292 GFOWLER@OPTIMAENGINEERING.COM**
 Mechanical: **OPTIMA ENGINEERING STEVE DALEY 22151 (704) 338-1292 SDALEY@OPTIMAENGINEERING.COM**
 Sprinkler-Standpipe: **N/A N/A N/A N/A N/A**
 Structural: **N/A N/A N/A N/A N/A**
 Retaining Walls -5' High: **N/A N/A N/A N/A N/A**
 Other: **N/A N/A N/A N/A N/A**

(*Other* should include firms and individuals such as, truss, precast, pre-engineered, interior designers, etc.)

2018 BUILDING CODE: **2018 INTERNATIONAL BUILDING CODE**
 2018 EXISTING BUILDING CODE: **N/A**
 CONSTRUCTED: (date) **2009** CURRENT OCCUPANCY(S) (Ch.3) **B**
 RENOVATED: (date) **N/A** PROPOSED OCCUPANCY(S) (Ch.3) **B**
 OCCUPANCY CATEGORY (Table 1604.5): Current: **B** Proposed: **B**

BASIC BUILDING DATA
 Construction Type: **VB** Special Inspections Required: **NO**
 Sprinklers: **NO** Floor Hazard Area: **NO**
 Standpipes: **NO**
 Primary Fire District: **BURTON**

FLOOR	EXISTING (SQ FT)	NEW (SQ FT)	RENOVATED	COMMENTS
6th Floor	-	-	-	
5th Floor	-	-	-	
4th Floor	-	-	-	
3rd Floor	-	-	-	
2nd Floor	-	-	-	
Mezzanine	-	-	-	
1st Floor	4,105	1,970	-	
Basement	-	-	-	
TOTAL	4,105	1,970	-	

STORY NOS.	DESCRIPTION AND USE	(A) BUILDING AREA PER STORY (ACTUAL)	(B) ALLOWABLE AREA PER STORY (TABLE 506.2)	(C) AREA FOR FRONTAGE INCREASE ^{1,2}	(D) ALLOWABLE AREA PER STORY OR UNLIMITED ^{1,3}
1	BUSINESS OFFICE (NEW)	1,970 SF	9,000 SF	7,897 SF	11,700 SF
1	BUSINESS OFFICE (EXISTING)	4,105 SF	9,000 SF	7,897 SF	11,700 SF
	TOTAL BUILDING AREA	6,075 SF	9,000 SF		

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 = **107.25** (ft)
 b. Total Building Perimeter (P) = **341.25** (ft)
 c. Ratio (P/P) = **.30** (P/P)
 d. Minimum width of public way (W) = **30** (ft)
 e. Percent of frontage increase: $I_1 = 100[(P/P) - 0.25] + W/30 = \mathbf{.30}$ (%)

² Unlimited area applicable under conditions of Section 507.
³ Maximum Building Area = total number of stories in the building x (maximum) stories (506.2).
⁴ The maximum area of open parking garages must comply with Table 406.5.4. The maximum area of air traffic control towers must comply with Table 412.1.1.
⁵ Frontage increase is based on the un sprinklered area value in Table 506.2.

	ALLOWABLE	SHOWN ON PLANS	CODE REFERENCE
Building Height in Feet (Table 504.3)	Feet: 40	Feet: 17'-4"	
Building Height in Stories (Table 504.4)	Stories: 2	Stories: 1	

* Provide code reference if the "Shown on Plans" quantity is not based on Table 504.3 or 504.4.

BUILDING ELEMENT	FIRE SEPARATION DISTANCE (FEET)	RATING TABLE 601 REQUIRED	PROVIDED (w/ REDUCTIONS)	DETAIL # AND SHEET #	DESIGN # FOR RATED ASSEMBLY	SHEET # FOR RATED PENETRATION	SHEET # FOR RATED JOINTS
Structural Frame including columns, girders, trusses	3'-2"	0	0	-	-	-	-
Bearing Walls							
Exterior							
North	13'-6"	0	0	-	-	-	-
East	10'-6"	0	0	-	-	-	-
West	30'-0"	0	0	-	-	-	-
South	6'-4"	0	0	-	-	-	-
Interior	0	0	0	-	-	-	-
Nonbearing Walls and Partitions							
Exterior							
North	13'-6"	0	0	-	-	-	-
East	10'-6"	0	0	-	-	-	-
West	30'-0"	0	0	-	-	-	-
South	3'-7"	0	0	-	-	-	-
Interior	0	0	0	-	-	-	-
Floor Construction including supporting beams and joists	-	0	0	-	-	-	-
Floor Ceiling Assembly	-	0	0	-	-	-	-
Columns Supporting Floors	-	0	0	-	-	-	-
Roof Construction including supporting beams and joists	-	0	0	-	-	-	-
Roof Ceiling Assembly	-	0	0	-	-	-	-
Columns Supporting Roof	-	0	0	-	-	-	-
Shaft Enclosures - Exit	-	N/A	N/A	-	-	-	-
Shaft Enclosures - Other	-	N/A	N/A	-	-	-	-

BUILDING ELEMENT	FIRE SEPARATION DISTANCE (FEET)	RATING REQUIRED	PROVIDED (w/ REDUCTIONS)	DETAIL # AND SHEET #	DESIGN # FOR RATED ASSEMBLY	SHEET # FOR RATED PENETRATION	SHEET # FOR RATED JOINTS
Corridor Separation	N/A	N/A	N/A				
Occupancy/Fire Barrier Separation	N/A	N/A	N/A				
Party/Fire Wall Separation	N/A	N/A	N/A				
Smoke Barrier Separation	N/A	N/A	N/A				
Tenant Separation	N/A	N/A	N/A				
Incidental Separation	N/A	N/A	N/A				

* Indicate section number permitting reduction

FIRE SEPARATION DISTANCE (FEET) FROM PROPERTY LINES	DEGREE OF OPENING PROTECTION (TABLE 705.8)	ALLOWABLE AREA (%)	ACTUAL SHOWN ON PLANS (%)
NORTH 13'-6"	NS	NO LIMIT	9
EAST 10'-6"	NS	15	7
WEST 30'-0"	NS	NO LIMIT	7
SOUTH 6'-4"	NS	NO LIMIT	7

LIFE SAFETY SYSTEMS REQUIREMENTS

Emergency Lighting: **YES**
 Exit Signs: **YES**
 Fire Alarm: **YES**
 Smoke Detection Systems: **YES**
 Carbon Monoxide Detection: **NO**

LIFE SAFETY PLAN REQUIREMENTS

Life Safety Plan Sheet #: **G-103**

Fire and/or smoke rated wall locations (Chapter 7)
 Assumed and real property line locations (if not on the site plan)
 Exterior wall opening area with respect to distance to assumed property lines (705.8)
 Occupancy Use for each area as it relates to occupant load calculation (Table 1004.1.2)
 Occupant load for each area
 Exit access travel distances (1017)
 Common path of travel distances (Tables 1006.2.1 & 1006.3.2(1))
 Dead end lengths (1020.4)
 Clear exit widths for each exit door
 Maximum calculated occupant load capacity each exit door can accommodate based on egress width (1005.3)
 Actual occupant load for each exit door
 A separate schematic plan indicating where fire rated floor/ceiling and/or roof structure is provided for purpose of occupancy separation
 Location of doors with panic hardware (1010.1.10)
 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)
 Location of doors equipped with hold-open devices
 Location of emergency escape windows (1030)
 The square footage of each fire area (202)
 The square footage of each smoke compartment for Occupancy Classification I-2 (407.5)
 Note any code exceptions or table notes that may have been utilized regarding the items above

TOTAL UNITS	ACCESSIBLE UNITS REQUIRED	ACCESSIBLE UNITS PROVIDED	TYPE A UNITS REQUIRED	TYPE A UNITS PROVIDED	TYPE B UNITS REQUIRED	TYPE B UNITS PROVIDED	TOTAL ACCESSIBLE UNITS PROVIDED
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

LOT OR PARKING AREA	TOTAL # OF PARKING SPACES REQUIRED	PROVIDED	# OF ACCESSIBLE SPACES PROVIDED REGULAR WITH 5' ACCESS AISLE	VAN SPACES WITH 132" ACCESS AISLE	8' ACCESS AISLE	TOTAL # ACCESSIBLE SPACES PROVIDED
NO CHANGE TO THE PARKING COUNT AND ACCESSIBLE PARKING ASSOCIATED WITH THE EXISTING BUILDING						
TOTAL						

USE	WATERCLOSETS		URINALS		LAVATORIES		SERVICE SINK	DRINKING FOUNTAINS	
	MALE	FEMALE	UNISEX	MALE	FEMALE	UNISEX		REGULAR	ACCESSIBLE
TOTAL REQUIRED	1	1	N/A	0	1	1	N/A	1	1
TOTAL PROVIDED	1.5	N/A	0	1.5	1.5	N/A	1	1	1

SPECIAL APPROVALS

Special approval: (Local Jurisdiction, Department of Insurance, OSC, DPI, DHHS, ICC, etc., describe below)
NO SPECIAL APPROVALS REQUIRED

ENERGY SUMMARY

ENERGY REQUIREMENTS:
 The following data shall be considered minimum and any special attribute required to meet the North Carolina Energy Conservation 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.

Existing building envelope complies with code: **N/A**
 Exempt Building: **N/A**
 Climate Zone: **3**
 Method of Compliance: **ComCheck**
 (If "Other" specify source here)

THERMAL ENVELOPE: (Prescriptive method only)

Roof/Ceiling Assembly (each assembly)
 Description of assembly: **N/A**
 U-Value of total assembly: **N/A**
 R-Value of insulation: **N/A**
 Skylights in each assembly: **N/A**
 U-Value of skylight: **N/A**
 Total square footage of skylight in each assembly: **N/A**

Exterior Walls (each assembly)
 Description of assembly: **N/A**
 U-Value of total assembly: **N/A**
 R-Value of insulation: **N/A**
 Openings in windows or doors with glazing: **N/A**
 U-Value of assembly: **N/A**
 Solar heat gain coefficient: **N/A**
 Projection Factor: **N/A**
 Door R-values: **N/A**

Walls below grade (each assembly)
 Description of assembly: **N/A**
 U-Value of total assembly: **N/A**
 R-Value of insulation: **N/A**

Floors over unconditioned space (each assembly)
 Description of assembly: **N/A**
 U-Value of total assembly: **N/A**
 R-Value of insulation: **N/A**

Floors slab on grade
 Description of assembly: **N/A**
 U-Value of total assembly: **N/A**
 R-Value of insulation: **N/A**
 Horizontal/vertical requirement: **N/A**
 Slab heated: **N/A**

STRUCTURAL DESIGN (PROVIDE ON THE STRUCTURAL SHEETS IF APPLICABLE)

DESIGN LOADS:
 Importance Factors:
 Wind (W): **-**
 Snow (S): **-**
 Seismic (E): **-**

Live Loads:
 Roof: **-** psf
 Floor: **-** psf
 Floor: **-** psf

Ground Snow Load: **-** psf
 Wind Load: Basic Wind Speed: **-** mph (ASCE-7)
 Exposure Category: **-**

SEISMIC DESIGN CATEGORY: **-**
 Provide the following Seismic Design Parameters:
 Occupancy Category (Table 1604.5): **-**
 Spectral Response Acceleration: $S_s = \text{---} \%$ $S_1 = \text{---} \%$
 Site Classification (ASCE 7): **-**
 Data Source: **-**
 Basic Structural System (Check one): **-**
 Analysis Procedure: **-**
 Architectural, Mechanical, Components anchored? **-**

MECHANICAL DESIGN (PROVIDE ON THE MECHANICAL SHEETS IF APPLICABLE)

MECHANICAL SUMMARY

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT

Thermal Zone: **N/A**
 Winter dry bulb: **SEE MECHANICAL SHEET M-001**
 Summer dry bulb: **SEE MECHANICAL SHEET M-001**

Interior design conditions
 Winter dry bulb: **SEE MECHANICAL SHEET M-001**
 Summer dry bulb: **SEE MECHANICAL SHEET M-001**
 Relative humidity: **SEE MECHANICAL SHEET M-001**

Building heating load: **SEE MECHANICAL SHEET M-001**
 Building cooling load: **SEE MECHANICAL SHEET M-001**

Mechanical Spacing Conditioning System

Unitary
 Description of unit: **SEE MECHANICAL SHEET M-001**
 Heating efficiency: **SEE MECHANICAL SHEET M-001**
 Cooling efficiency: **SEE MECHANICAL SHEET M-001**
 Size category of unit: **SEE MECHANICAL SHEET M-001**

Boiler
 Size category: If oversized, state reason: **N/A**

Chiller
 Size category: If oversized, state reason: **N/A**

List equipment efficiencies: **N/A**

ELECTRICAL DESIGN (PROVIDE ON THE ELECTRICAL SHEETS IF APPLICABLE)

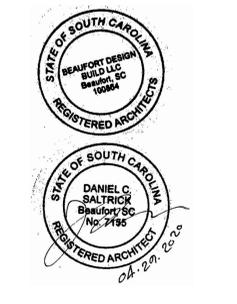
ELECTRICAL SUMMARY

ELECTRICAL SYSTEM AND EQUIPMENT
 Method of compliance: **SEE ELECTRICAL SHEET E-001**

Lighting Schedule (each fixture type)
 Lamp type required in fixture: **SEE ELECTRICAL SHEET E-001**
 Number of lamps in fixture: **SEE ELECTRICAL SHEET E-001**
 Ballast type used in the fixture: **SEE ELECTRICAL SHEET E-001**
 Number of ballasts in fixture: **SEE ELECTRICAL SHEET E-001**
 Total wattage per fixture: **SEE ELECTRICAL SHEET E-001**
 Total interior wattage specified vs. allowed (whole building or space by space): **SEE ELECTRICAL SHEET E-001**
 Total exterior wattage specified vs. allowed: **SEE ELECTRICAL SHEET E-001**

Additional Energy Package Options (When using the 2018 IECC, not required for ASHRAE 90.1)
 C406.2 More Efficient HVAC Equipment Performance
 C406.3 Reduced Lighting Power Density
 C406.4 Enhanced Digital Lighting Controls
 C406.5 On-Site Renewable Energy
 C406.6 Dedicated Outdoor Air System
 C406.7 Reduced Energy Use in Service Water Heating

**EXISTING BUILDING IS NOT
FIRE SPRINKLER,
PROPOSED ADDITION WILL
NOT BE PROVIDED WITH A
FIRE SPRINKLER SYSTEM**



**BEAUFORT COUNTY
ENGINEERING**
**BEAUFORT COUNTY DNA
LABORATORY ADDITION**
 111 INDUSTRIAL VILLAGE RD
 BEAUFORT, SC 29906

**FOR
CONSTRUCTION**

NO.	DESCRIPTION	DATE	
		REVISIONS / SUBMISSIONS	DATE

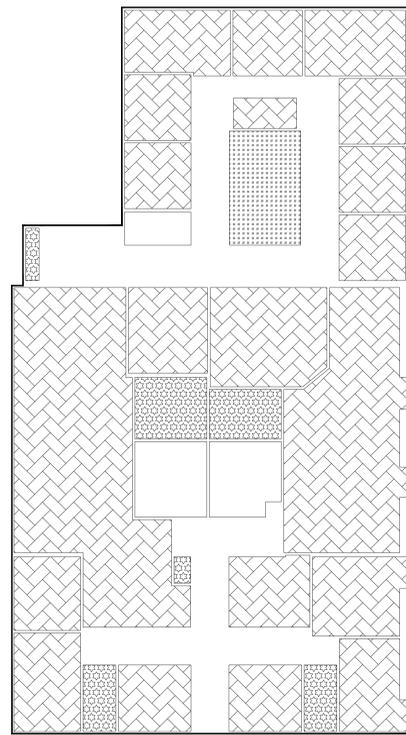
SHEET INFORMATION

DATE: **APRIL 29, 2020**
 JOB NUMBER: **19044.00**
 DRAWN: **ADB**
 CHECKED: **ADB**
 APPROVED: **DCS**

2018 IBC
 BUILDING CODE
 SUMMARY

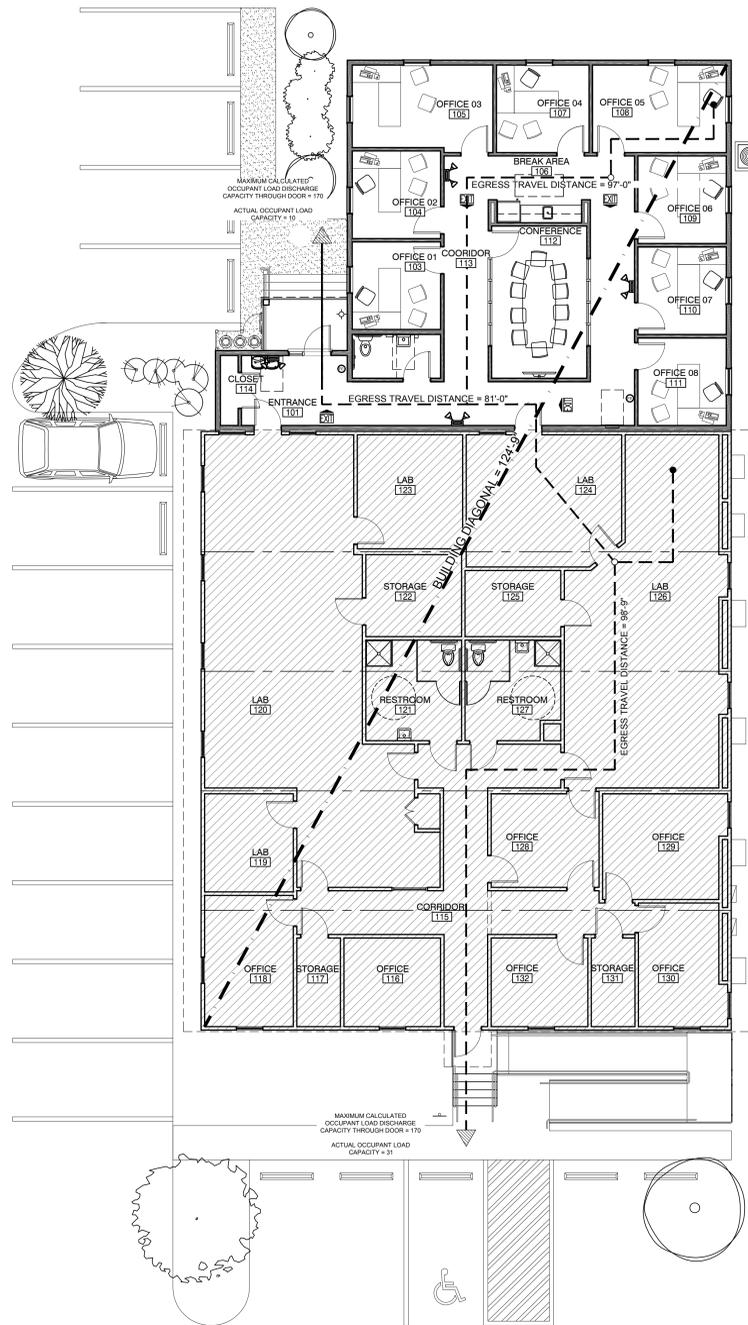
G-102

**IN ACCORDANCE WITH THE 2018
INTERNATIONAL BUILDING CODE, CHAPTER 10
(MEANS OF EGRESS), TABLE 1006.2.1 AND
TABLE 1006.3.3(2), SINCE THE EXISTING
BUILDING HAS AN OCCUPANT LOAD OF FEWER
THAN 30 PEOPLE, A SECOND MEANS OF
EGRESS (IN ADDITION TO THE MAIN ENTRANCE
/ EXIT) DOES NOT HAVE TO BE MAINTAINED**



B4 OCCUPANCY DIAGRAM
3/32" = 1'-0"
0 4 8 16'

USE GROUP OR SPACE DESCRIPTION	AREA SQ FT	AREA PER OCCUPANT (TABLE 1004.1.2)	CALCULATED OCCUPANT LOAD (a/b)
OFFICE / BUSINESS	3,804	150 GROSS	26
BOARD ROOM-MULTI-PURPOSE / ASSEMBLY	187	15 NET	13
STORAGE	309	300 GROSS	2
TRAVEL / UNOCCUPIED SPACE	1,775	N/A	-
TOTAL			41



A2 LIFE SAFETY PLAN
1/8" = 1'-0"
0 4 8 16'

GENERAL NOTES:

- ALL EXIT DOORS SHALL BE EQUIPPED WITH EXIT SIGNS AND EMERGENCY EGRESS LIGHT.
- COORDINATE FIRE EXTINGUISHER TYPES AND LOCATIONS WITH FIRE MARSHALL PRIOR TO INSTALLING.

SHEET KEY NOTES:

- EGRESS TRAVEL DISTANCE MEASURED TO PUBLIC WAY
- EXISTING KNOX BOX

2015 IBC EGRESS REQUIREMENTS:

OCCUPANT LOAD: 41 PEOPLE
 BUILDING IS FIRE SPRINKLERED: NO
 OCCUPANCY TYPE: BUSINESS
 MAXIMUM TRAVEL DISTANCE: 200'-0" (98'-8" SHOWN)
 MAXIMUM DEAD END CORRIDOR: 20'-0" (NONE)
 MINIMUM NUMBER OF EXITS: 2 (OCCUPANT LOAD IS GREATER THAN 50)
 MINIMUM CORRIDOR WIDTH: 36" (60" PROVIDED)

EGRESS NOTES:

- BUILDING DIAGONAL IS = 124'-9"
- REQUIRED DISTANCE BETWEEN EXIT DOORS IS 62'-5" (1/2 OF DIAGONAL). ACTUAL DISTANCE IS 79'-5"
- ALL EGRESS DOORS ARE 36" WIDE AND PROVIDE A MINIMUM 32" CLEAR OPENING
- PRIMARY OCCUPANCY IS: BUSINESS

FIRE DEPARTMENT NOTES:

- KNOX BOX IS EXISTING
- COORDINATE WITH FIRE MARSHALL FOR LOCATION OF FIRE EXTINGUISHERS.

LEGEND:

- BUILDING DIAGONAL
- EXIT ACCESS TRAVEL DISTANCE
- START OF TRAVEL DISTANCE / COMMON PATH OF EGRESS TRAVEL
- END OF COMMON PATH OF EGRESS TRAVEL POINT AT WHICH TWO EXIT PATHS ARE AVAILABLE
- EXIT DISCHARGE
 - SINGLE OR DOUBLE DOOR WITH A MINIMUM 34" CLEAR OPENING
 - CEILING MOUNTED ILLUMINATED EXIT SIGN
 - ILLUMINATED EXIT SIGN AND EMERGENCY EXIT LIGHT COMBO ON INSIDE AND EMERGENCY LIGHT ON OUTSIDE. 90 MINUTE BATTERY BACKUP ON ALL
- ROOM TAG
 - ROOM NAME
 - ROOM NUMBER
- EXTERIOR EMERGENCY EGRESS LIGHT WITH 90 MIN EMERGENCY BATTERY BACKUP
- LED EXIT SIGN WITH LED EMERGENCY "LIGHT PIPE"
PROVIDE WITH 90 MINUTE BATTERY BACKUP AND PUSH TO TEST SWITCH. ARROW INDICATES DIRECTION OF EGRESS TRAVEL
- PORTABLE HAND HELD TYPE ABC FIRE EXTINGUISHER IN NON-LOCKING SEMI-RECESSED CABINET
- PORTABLE HAND HELD TYPE K FIRE EXTINGUISHER MOUNTED TO WALL IN MANUFACTURER PROVIDED BRACKET.
NOTE: PROVIDE BLOCKING IN WALL AND MOUNT IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. MOUNTED WITH TOP NO MORE THAN 5'-0" AFF. REVIEW EXTINGUISHER TYPES AND LOCATIONS WITH LOCAL FIRE MARSHALL PRIOR TO INSTALLING BLOCKING. EXTINGUISHER AND INSTALLATION PER NFPA 10
- EXISTING BUILDING, NO WORK IN THIS AREA

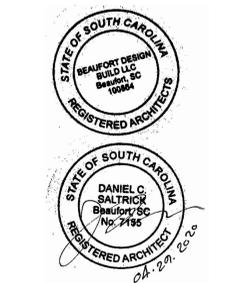
**EXISTING BUILDING IS NOT
FIRE SPRINKLER,
PROPOSED ADDITION WILL
NOT BE PROVIDED WITH A
FIRE SPRINKLER SYSTEM**

BEAUFORT
2 Fire Station Lane
Seabrook, SC 29940

CHARLOTTE
7315 Swainsa Lane
Cornellus, NC 28031

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ARCHITECT / ENGINEER'S SEAL



**BEAUFORT COUNTY
ENGINEERING**

**BEAUFORT COUNTY DNA
LABORATORY ADDITION**

111 INDUSTRIAL VILLAGE RD
BEAUFORT, SC 29906

**FOR
CONSTRUCTION**

NO.	DESCRIPTION	DATE

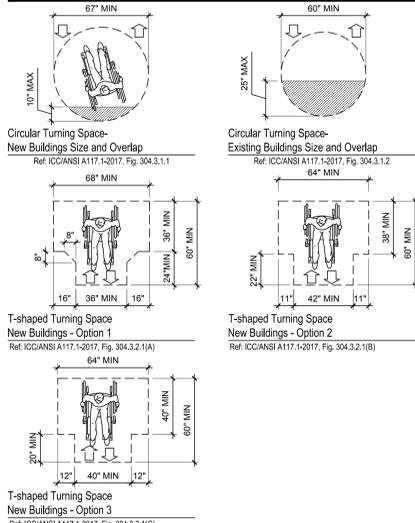
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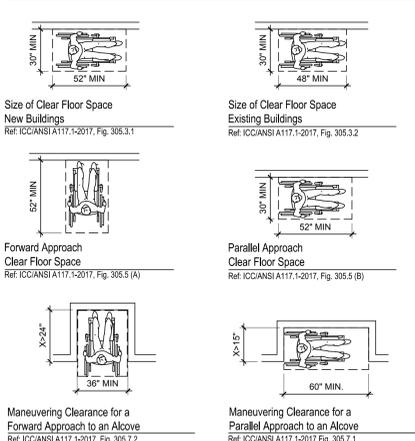
LIFE SAFETY PLAN

G-103

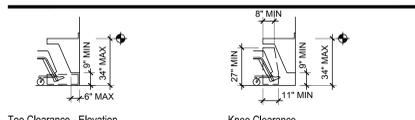
304 WHEELCHAIR TURNING SPACE



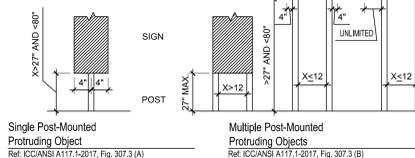
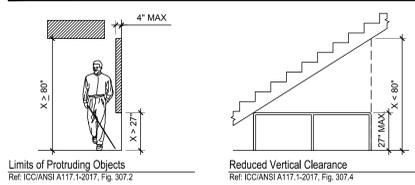
305 CLEAR FLOOR SPACE



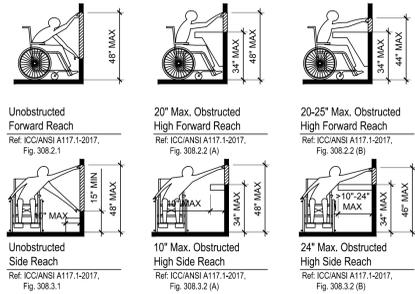
306 KNEE & TOE CLEARANCE; 606 LAVATORIES & SINKS; 902 SEATING AT TABLES, COUNTERS, & WORK SURFACES



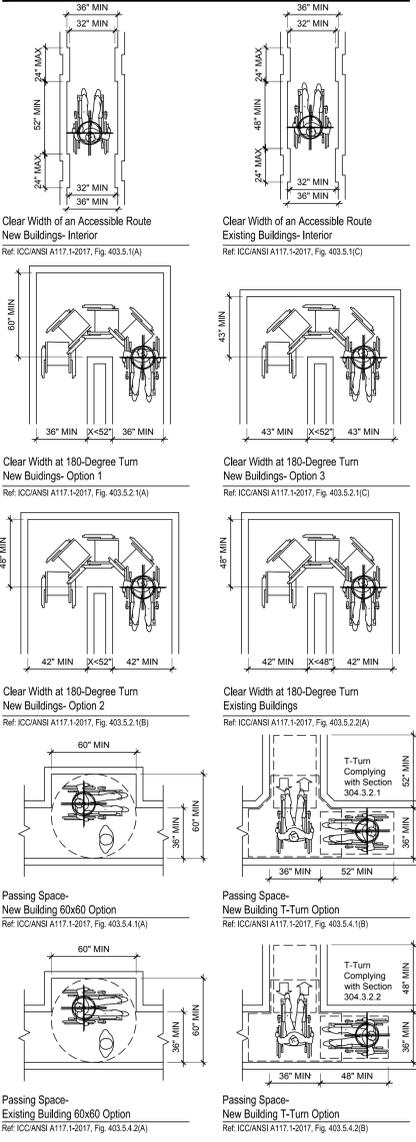
307 PROTRUDING OBJECTS



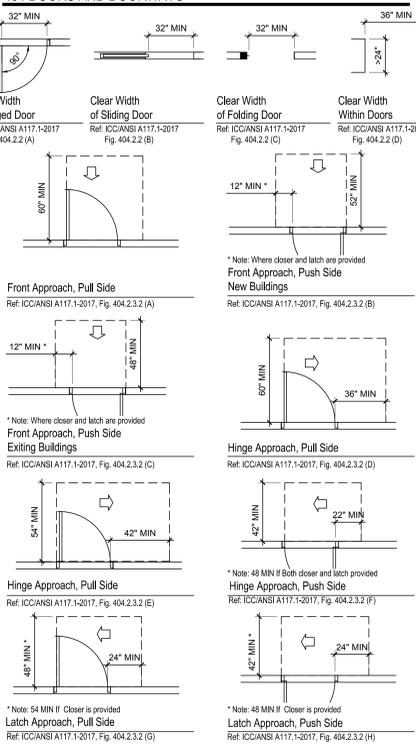
308 REACHING RANGES



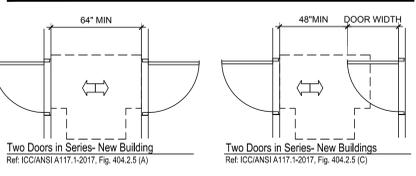
403 ACCESSIBLE ROUTES



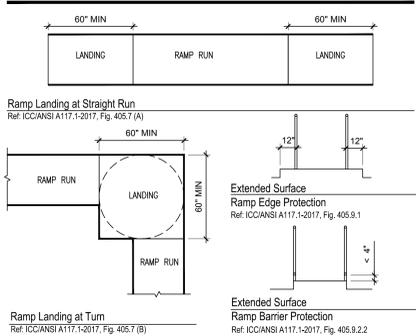
404 DOORS AND DOORWAYS



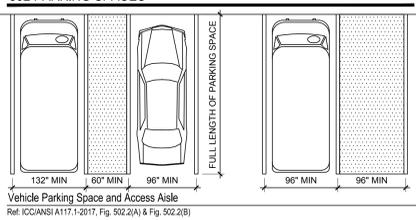
404 DOORS AND DOORWAYS (CONTINUED)



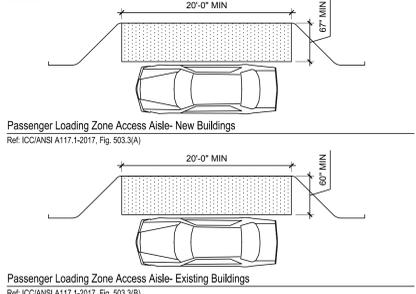
405 RAMPS



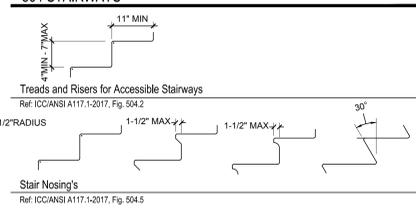
502 PARKING SPACES



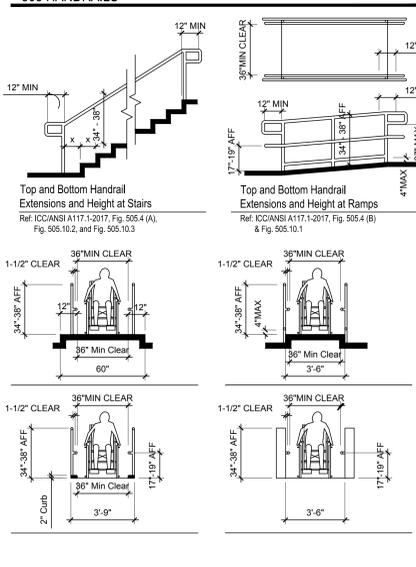
503 PASSENGER LOADING ZONE



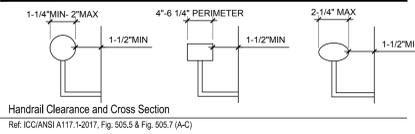
504 STAIRWAYS



505 HANDRAILS



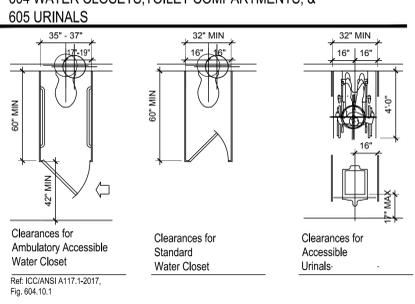
505 HANDRAILS (CONTINUED)



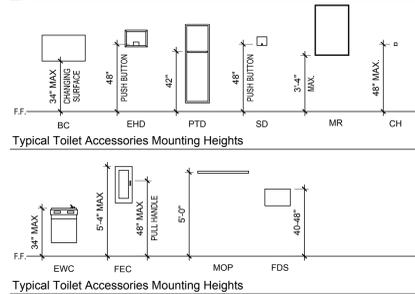
602 DRINKING FOUNTAINS AND WATER COOLERS



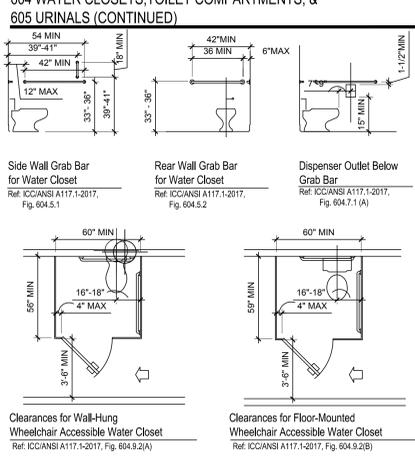
604 WATER CLOSETS, TOILET COMPARTMENTS, & 605 URINALS



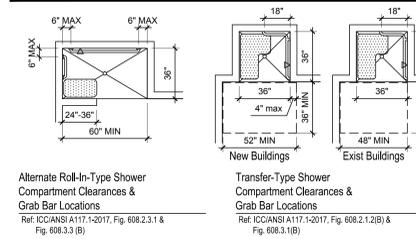
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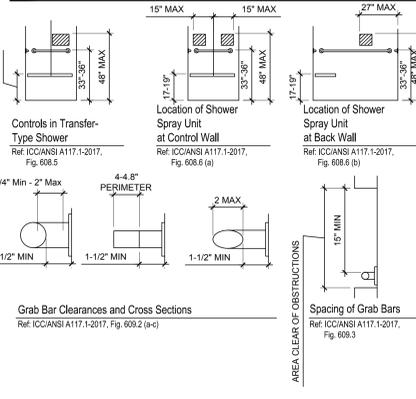
604 WATER CLOSETS, TOILET COMPARTMENTS, & 605 URINALS (CONTINUED)



608 SHOWER COMPARTMENTS (CONTINUED)



609 GRAB BARS



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BEAUFORT COUNTY ENGINEERING

BEAUFORT COUNTY DNA LABORATORY ADDITION

111 INDUSTRIAL VILLAGE RD
BEAUFORT, SC 29906

FOR CONSTRUCTION

NO.	REVISIONS / SUBMISSIONS	DESCRIPTION	DATE

SHEET INFORMATION

DATE	APRIL 29, 2020
JOB NUMBER	19044.00
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TYPICAL ACCESSIBILITY DETAILS

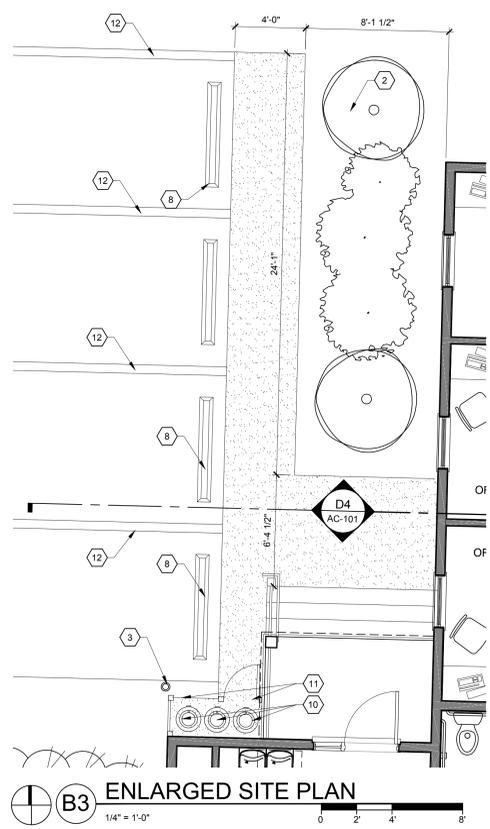
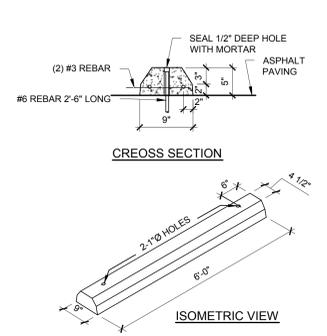
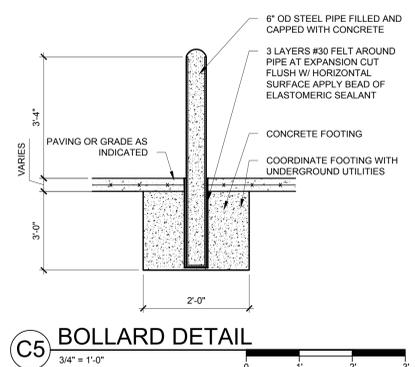
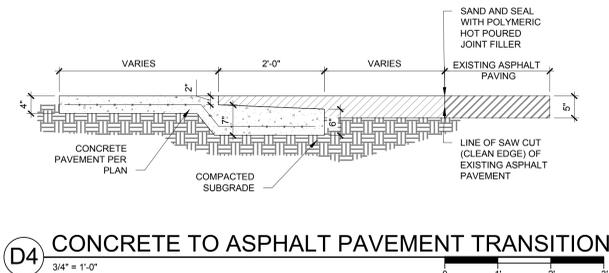
G-104

NOT ALL DETAILS ON THIS SHEET APPLY TO THIS PROJECT. THESE DETAILS PROVIDE STANDARD MOUNTING HEIGHTS CLEARANCES, RELATIONSHIPS AND TOLERANCES FOR BUILDING AND SITE ELEMENTS, SYSTEMS AND COMPONENTS. THESE DETAILS ARE PROVIDED TO HELP ENSURE COMPLIANCE WITH THE 2018 INTERNATIONAL BUILDING CODE, AMERICANS WITH DISABILITIES ACT AND THE INTERNATIONAL CODE COUNCIL (ICC) A117.1-2017. THESE DETAILS ARE INTENDED TO SUPPORT OTHER DETAILS, DIMENSIONS AND NOTES PROVIDED IN THE DRAWING SET. IN THE CASE OF CONFLICTING INFORMATION, THE MOST STRINGENT REQUIREMENT SHALL TAKE PRECEDENCE

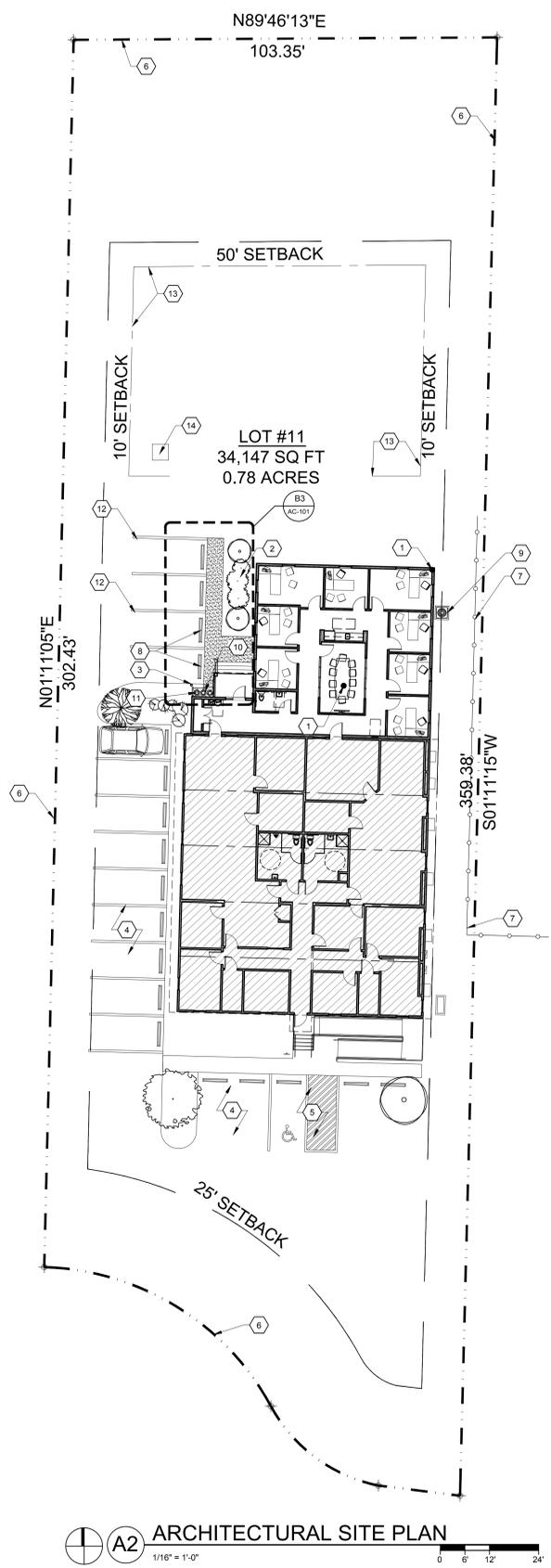
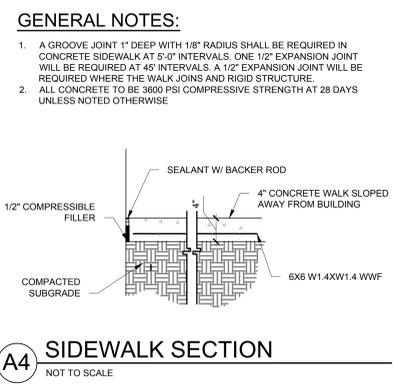
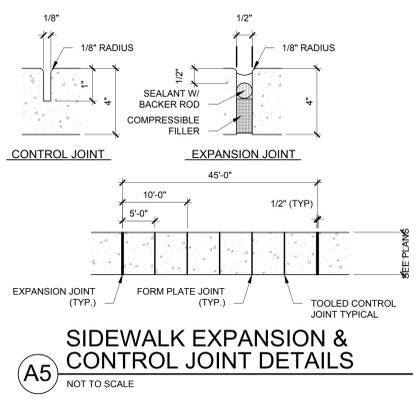
GAS CYLINDER STORAGE CAGE SPECIFICATIONS

RELOCATED GAS CYLINDERS ARE TO BE SECURED AND STORED IN A PRE-FABRICATED OUTDOOR STORAGE, VERTICAL CYLINDER, OUTDOOR STORAGE CAGE INSTALLED ON A 6" REINFORCED CONCRETE SLAB. THE CAGE IS TO BE PERMANENTLY ANCHORED TO THE CONCRETE SLAB WITH 13/16" ANCHOR BOLTS COORDINATED WITH THE PRE-DRILLED HOLES ON THE CAGE BASE AND SET 4" INTO THE SLAB WITH EPOXY. CAGE SHALL BE PROVIDED WITH A SAFETY CHAIN TO PREVENT CYLINDERS FROM FALLING OUT WHEN THE DOOR IS OPENED. IN ADDITION:

- SIZED FOR UP TO TWELVE (12) 9" DIAMETER CYLINDERS
- COMPLY WITH ALL APPLICABLE OSHA 1910 AND NFPA REGULATIONS
- LOCKABLE DOOR WITH HEAVY DUTY LOCK RECEIVER (LOCK TO BE PROVIDED BY OWNER)
- STAINLESS STEEL HINGES
- GALVANIZED STEEL MESH SIDES AND DOOR
- SOLID GALVANIZED STEEL TOP AND BACK
- ALUMINUM DIAMOND FLOOR PLATE
- POWDER COATED WITH OUTDOOR GRADE PAINT
- "FLAMMABLE GAS" AND "NO SMOKING" SIGNAGE IN RED TEXT PAINTED ON FRONT
- PRE-DRILLED HOLES (13/16") IN THE FOUR CORNERS OF THE FLOOR PLATE FOR ANCHORING
- BOLTED OR WELDED CONSTRUCTION
- ONE (1) YEAR WARRANTY AGAINST MANUFACTURING DEFECTS INCLUDING FINISH
- MANUFACTURER: EQUAL TO USA SAFETY, 12 CYLINDER, LARGE/TALL OUTDOOR VERTICAL STORAGE CYLINDER CAGE. WWW.USASAFETY.COM, 877-805-8690
- OTHER ACCEPTABLE MANUFACTURERS INCLUDE GLOBAL INDUSTRIAL AND KOKE, INC. PRODUCTS BY OTHER MANUFACTURER'S MAY BE ACCEPTED IF THEY ARE APPROVED AS AN ACCEPTABLE MANUFACTURER DURING THE BID PERIOD.
- SUBMITTALS: PROVIDE MANUFACTURER'S PRODUCT DATA SHOWING COMPLIANCE WITH THE SPECIFICATIONS OUTLINED ABOVE, MANUFACTURER'S WARRANTY, DRAWINGS SHOWING DIMENSIONS, CONSTRUCTION AND INSTALLATION AND ANCHORING METHODS, CONSTRUCTION AND INSTALLATION AND ANCHORING METHODS.



- GENERAL NOTES:**
1. CONSTRUCTION AND MATERIALS SHALL MEET THE FOLLOWING REQUIREMENTS OR APPROVED EQUAL.
 2. CONCRETE FOR WHEEL STOP: MINIMUM 3,000 PSI IN 28 DAYS
 3. REINFORCING STEEL: PER ASTM A615, GRADE 60
 4. ATTACHMENT PIS SHALL HAVE 7 INCH EMBEDMENT



GENERAL NOTES:

1. LOT PARCEL ID NUMBER IS: R122 000 0247 0000
2. THE SUBJECT PARCEL IS LOCATED WITHIN THE CITY LIMITS OF THE TOWN OF BEAUFORT, SOUTH CAROLINA.

SHEET KEY NOTES:

1. GEOTECHNICAL TEST BORING LOCATION(S), TYPICAL OF TWO
2. LANDSCAPING TO BE INSTALLED BY OWNER
3. NEW 6" CONCRETE FILLED STEEL PIPE BOLLARD
4. EXISTING ASPHALT PARKING AREA
5. EXISTING ACCESSIBLE PARKING AREA
6. PROPERTY LINE
7. EXISTING FENCE TO REMAIN. GO TO PROTECT FENCE FROM DAMAGE DURING CONSTRUCTION
8. NEW CONCRETE WHEEL BLOCK TYPICAL 4 SEE DETAIL D5 / AC-101
9. NEW HVAC UNIT SEE MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION
10. CONTRACTOR IS RESPONSIBLE FOR RELOCATING AND SECURING GAS CYLINDERS IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS
11. NEW GAS CYLINDER STORAGE CAGE SEE SPECIFICATIONS THIS SHEET
12. NEW PARKING SPACES TO BE STRIPED WITH APPROPRIATE PAVEMENT PAINT
13. STORAGE, LAYDOWN AND STAGING AREA AT CONCLUSION OF PROJECT FINE GRADE, SEED AND STABILIZE AS NECESSARY TO RETURN TO ORIGINAL CONDITION
14. TEMPORARY / PORTABLE RESTROOMS - EXISTING BUILDING IS OFF LIMITS TO CONSTRUCTION PERSONAL

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BEAUFORT COUNTY ENGINEERING
BEAUFORT COUNTY DNA LABORATORY ADDITION
111 INDUSTRIAL VILLAGE RD
BEAUFORT, SC 29906

FOR CONSTRUCTION

NO.	REVISIONS / SUBMISSIONS	DESCRIPTION	DATE	
			DATE	DATE

SHEET INFORMATION

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DRAWN	---
CHECKED	---
APPROVED	DCS

ARCHITECTURAL SITE PLAN

AC-101

6 5 4 3 2 1

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GENERAL NOTES:

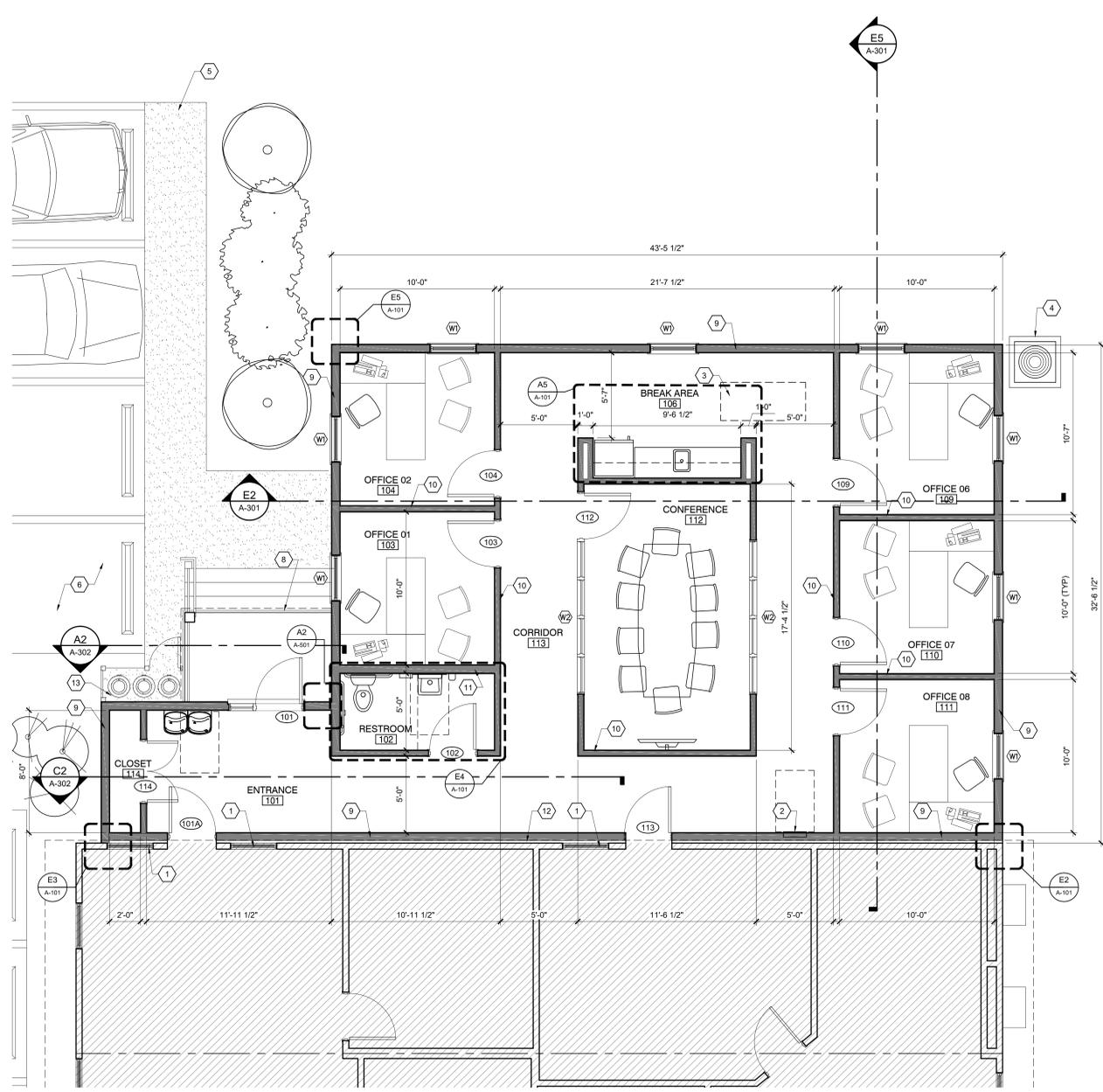
- A. ALL FURNITURE IS TO BE PROVIDED BY OWNER
- B. ALL INTERIOR DIMENSIONS ARE FROM FACE OF GYPSUM BOARD TO FACE OF GYPSUM BOARD
- C. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL DIMENSIONS
- D. CORNER AND END WALL GUARD AT ALL INTERIOR CORNERS 48" TALL

SHEET KEY NOTES: (X)

1. EXISTING WINDOW TO REMAIN PAINT EXTERIOR WITH SPANDREL GLASS PAINT
2. 200 AMP ELECTRICAL PANEL
3. SPLIT-SYSTEM HEAT PUMP - AIR HANDLER LOCATED ABOVE CEILING
4. SPLIT-SYSTEM HEAT PUMP - PAD MOUNTED CONDENSING UNIT. PROVIDE SECURITY CAGE
5. 4" CONCRETE SIDEWALK
6. ASPHALT PAVING
7. NOT USED
8. ENTRANCE STOOP
9. 2x6 FRAMED WOOD STUDS AT 16" OC WITH R-19 BATT INSULATION AT EXTERIOR WALLS
10. 2x4 FRAMED WOOD STUDS AT 16" OC, INTERIOR WALL WITH 5/8" GYPSUM BOARD EACH SIDE, TYPICAL
11. 2x6 WOOD FRAMED PLUMBING WALL
12. 2" EXPANSION JOINT BETWEEN NEW AND EXISTING STRUCTURES
13. NEW GAS CYLINDER STORAGE CAGE SEE SPECIFICATIONS AT SHEET AC-101
14. 8" CMU FOUNDATION WALL WITH 8"x16" FOUNDATION VENTS. PROVIDE SPRAY APPLIED SEALER TO CMU STEM WALL EXTERIOR
15. CEMENTITIOUS DRIP CAP AND SKIRT BOARD / WATER TABLE
16. BOARD AND BATTEN CLADDING AS INDICATED. BOARD WILL BE 3/8" CEMENT BOARD, BATTEN TO BE 1X2 CEMENT BOARD AT 12" O.C. (VERTICAL)
17. NEW SINGLE HUNG ALUMINUM WINDOWS TO MATCH EXISTING
18. NEW STANDING SEAM METAL ROOF 24 GAUGE
19. NEW 3'-0"x6'-8" HOLLOW METAL DOOR WITH HALF GLASS WITH 1'-6"x6'-8" SIDELIGHT. GLASS AT DOOR AND SIDELIGHT TO BE LAMINATED SAFETY/ SECURITY GLASS
20. 6X6 PRESERVATIVE TREATED POST WITH SHAPED / DECORATIVE TOP
21. 2X6 TREATED HANDRAIL AT PORCH (2X4 AT STAIR) WITH 1X1 PICKETS
22. 5/4X4 PRESERVATIVE TREATED T&G PORCH FLOORING OVER PRESERVATIVE TREATED WOOD PORCH FRAMING
23. 5/4X4 CPVC TRIM, TYPICAL AT ALL WINDOWS AND DOOR
24. 5/4X4 CEMENTITIOUS BOARD CORNER TRIM
25. 1X4 CPVC / TREATED BED FASCIA OVER CONT 1X8 CPVC TREATED SUB-FASCIA
26. PROVIDE MOISTURE RESISTANT GYPSUM BOARD BEHIND SINK
27. REFRIGERATOR BY OWNER
28. CRAWL SPACE ACCESS

LEGEND:

- EXISTING 4,105 SQUARE FOOT SINGLE-STORY DNA LABORATORY BUILDING - NO WORK
- EXISTING FENCE
- NEW WOOD FRAMED PARTITION WALLS
- DOOR TAG, SEE SHEET A-601 DOOR AND FRAME SCHEDULE
- WINDOW TAG, SEE C5, C6/A-101 TYPICAL WINDOW TYPES
- TEMPERED GLASS
- NEW 48" TALL PREFABRICATED VINYL CORNER GUARD, SEE DETAIL D4/A-101
- FINISH FLOOR ELEVATION



A2 ALTERNATE 01 FLOOR PLAN
1/4" = 1'-0"

EXISTING BUILDING IS NOT FIRE SPRINKLER, PROPOSED ADDITION WILL NOT BE PROVIDED WITH A FIRE SPRINKLER SYSTEM

BEAUFORT
2 Fire Station Lane
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ARCHITECT / ENGINEER'S SEAL



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111 INDUSTRIAL VILLAGE RD
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FOR CONSTRUCTION

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SHEET INFORMATION

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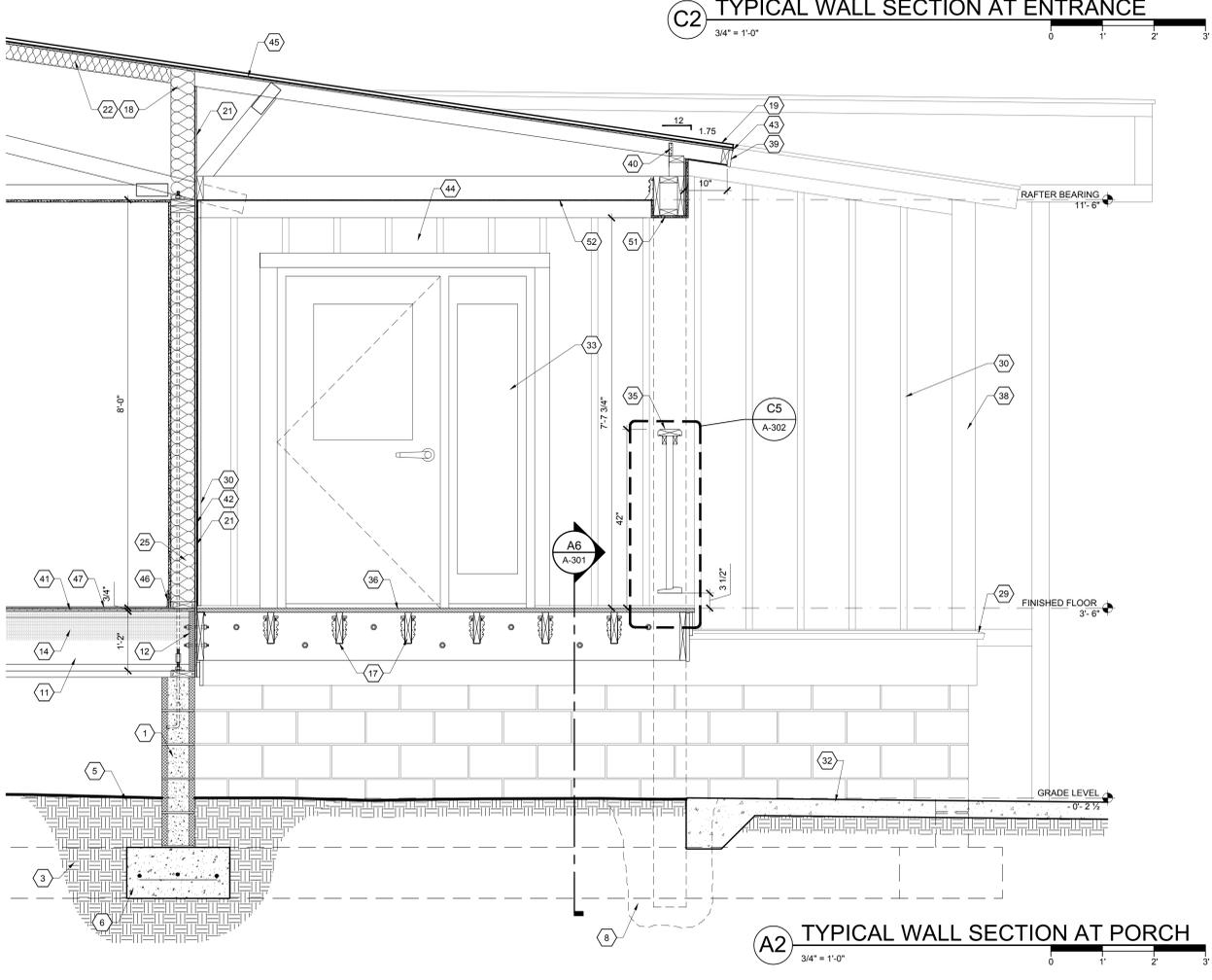
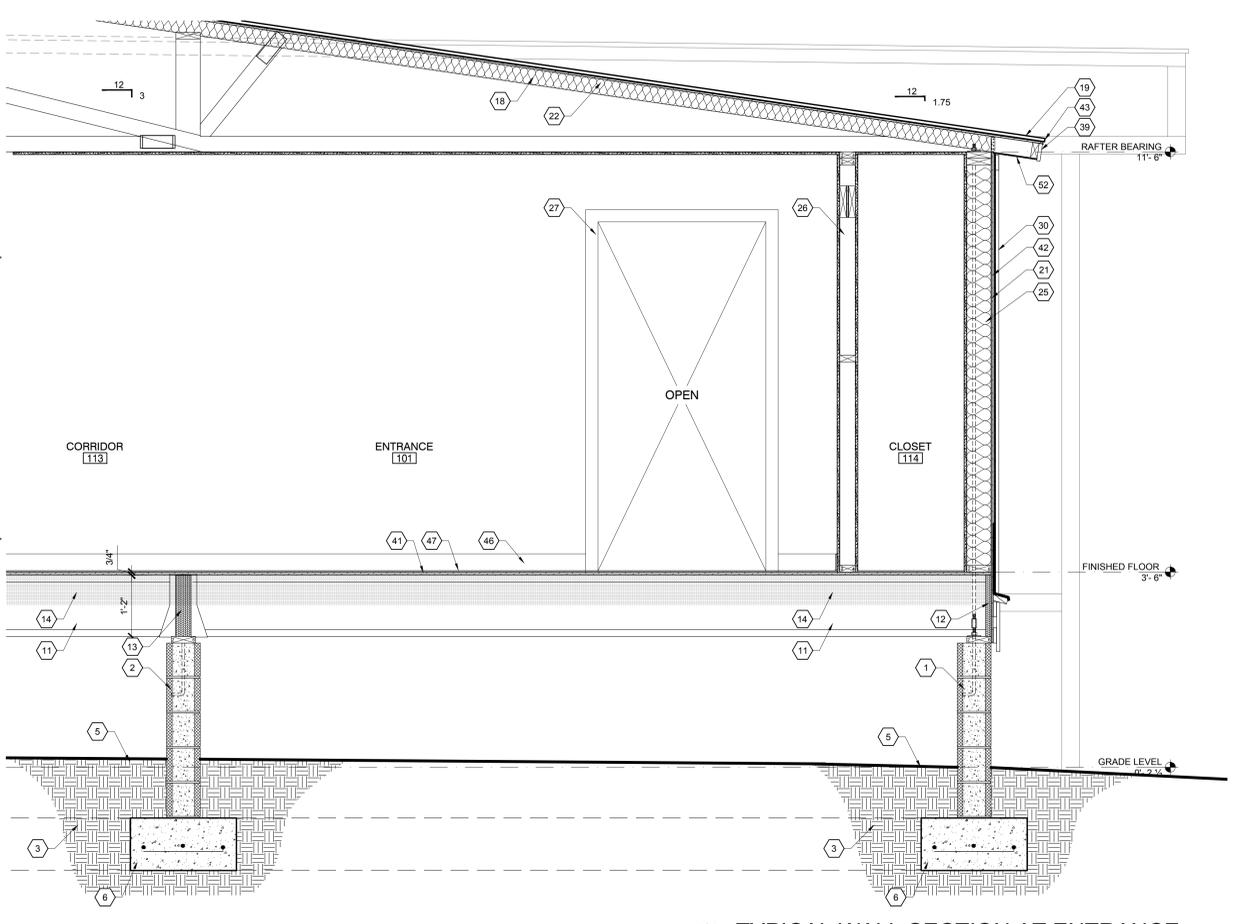
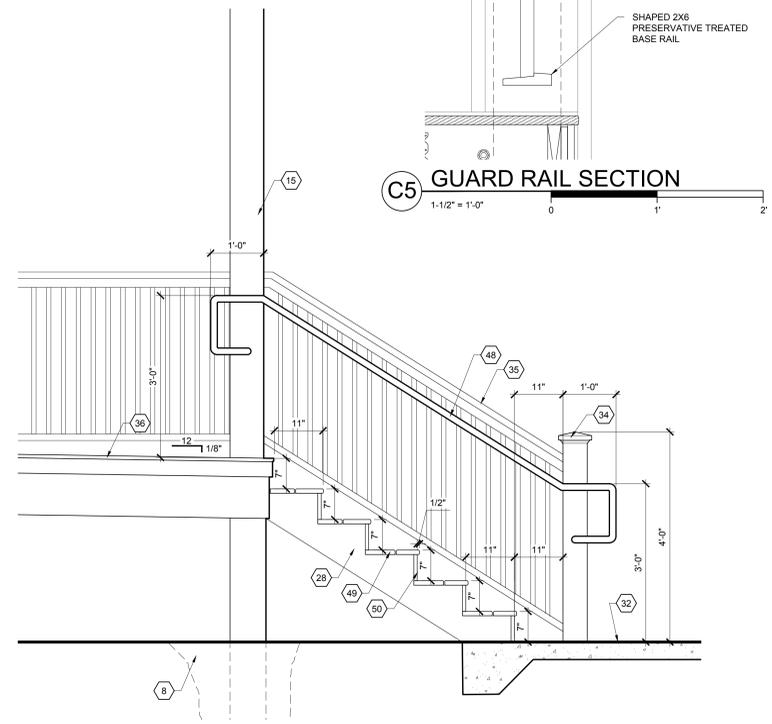
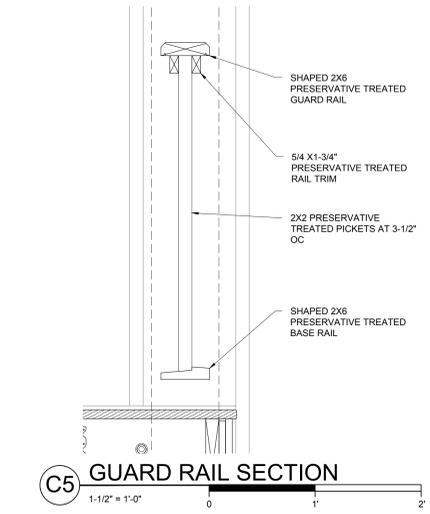
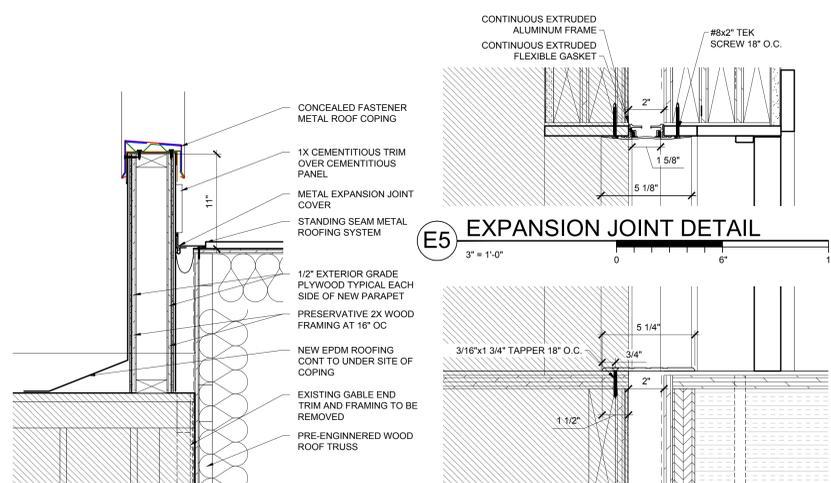
ALTERNATE 01 FLOOR PLAN

A-101.1

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6 5 4 3 2 1

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GENERAL NOTES:

- IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO FIELD VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS
- ALL DIMENSIONS ARE FROM FINISH FACE UNLESS OTHERWISE NOTED
- PROVIDE MOISTURE RESISTANT GYPSUM BOARD BEHIND AND WITHIN 24" OF ALL PLUMBING FIXTURES
- PROVIDE TWO (2) COATS OF EPOXY PAINT ON ALL WALLS IN RESTROOMS AND BREAK AREA

SHEET KEY NOTES:

- 8X8X16 CMU WALL WITH #4 REBAR AND CONCRETE FILL AT 32" OC AND 12" FROM CORNER AND ENDS. INSTALL LADDER BRACING EVERY OTHER COURSE. PROVIDE A 5/8" DIAMETER 16" LONG ANCHOR BOLT AT EACH VERTICAL #5 REBAR (TYPICAL AT PERIMETER WALL)
- 8X8X16 CMU PIERS. FILL ALL CELLS WITH CONCRETE. PROVIDE #5 VERTICAL REBAR IN EACH CELL. HOOK AND TIE BARS TO FOOTING REBAR WITH #9 WIRE
- CLEAN LOOSE FILL COMPACTED TO GRADE
- INSTALL ONE SIMPSON PAS1 STRAP PER PIER. (TYPICAL FOR INTERIOR PIERS)
- FINISH GRADING IN CRAWL SPACE SHALL BE HIGHER THAN FINISHED EXTERIOR GRADE, AND SLOPE TO EXTERIOR EDGE. INSTALL CONTINUOUS LAYER OF 6 MIL POLY VAPOR BARRIER BELOW ALL HEATED AREA
- 12"X24" CONTINUOUS CONCRETE FOOTING WITH 3 #5 REBAR, HELD 4" FROM BOTTOM. SEE SECTIONS FOR ADDITIONAL INFORMATION
- 12"X36" CONTINUOUS CONCRETE FOOTING WITH 4 #5 REBAR, HELD 4" FROM BOTTOM. SEE SECTIONS FOR ADDITIONAL INFORMATION
- 2" Ø X 2' DEEP 3,000 PSI CONCRETE FOOTING AT POST LOCATION
- EXISTING FOUNDATION WALL
- 2" EXPANSION JOINT BETWEEN NEW AND EXISTING STRUCTURES
- 14" T/J'S L360 FLOOR JOISTS @ 16" OC
- 1-3/4" X 1-1/4" RIM BOARD AROUND CONDITIONED BUILDING PERIMETER
- (3) 1-3/4" X 14 GIRDER BEAM GLUED AND NAILED
- R19 CLOSED CELL SPRAY FOAM INSULATION AT UNDERSIDE OF FLOOR DECK
- 8X8 PRESERVATIVE TREATED POST GROUND CONTACT
- (3) PT 2X12 GIRDER GLUED AND NAILED
- PT 2X8 JOIST @ 16" OC
- PRE-ENGINEERED WOOD ROOF TRUSS. CONTRACTOR TO PROVIDE TRUSS DRAWING PRIOR TO FABRICATION AND INSTALLATION TO ARCHITECT FOR REVIEW AND APPROVAL
- NEW STANDING SEAM METAL ROOF
- METAL RIDGE CAP
- 5/8" EXTERIOR GRADE PLYWOOD
- R-30 OR EQUAL OPEN CELL SPRAY APPLIED INSULATION AT UNDERSIDE OF ROOF DECK
- CONTINUOUS EPDM MEMBRANE FLASHING
- EXISTING EPDM ROOF. NO WORK IN THIS AREA
- 2x6 FRAMED WOOD STUDS AT 16" OC WITH R-19 BATT INSULATION AT EXTERIOR WALLS
- 2x4 FRAMED WOOD STUDS AT 16" OC, INTERIOR WALL WITH 5/8" GYPSUM BOARD EACH SIDE, TYPICAL
- REMOVE EXISTING DOOR AND FRAME AND EXPAND AND FINISH OPENING
- PT WOOD STAIR STRINGERS SPACED 2'-0" OC
- CEMENTITIOUS DRIP CAP AND SKIRT BOARD / WATER TABLE
- BOARD AND BATTEN CLADDING AS INDICATED. BOARD WILL BE 3/8" CEMENT BOARD, BATTEN TO BE 1X2 CEMENT BOARD AT 12" O.C. (VERTICAL)
- NEW SINGLE HUNG ALUMINUM WINDOWS TO MATCH EXISTING
- 4" CONCRETE SIDEWALK
- NEW 3'-0"x6'-8" HOLLOW METAL DOOR WITH HALF GLASS WITH 1'-6"x6'-8" SIDELIGHT. GLASS AT DOOR AND SIDELIGHT TO BE "LAMINATED SAFETY / SECURITY GLASS"
- 6X6 PRESERVATIVE TREATED POST WITH SHAPED / DECORATIVE TOP
- 2X6 TREATED HANDRAIL AT PORCH (2X4 AT STAIR) WITH 1X1 P/T PICKETS
- 5/4X4 PRESERVATIVE TREATED T&G PORCH FLOORING OVER PRESERVATIVE TREATED WOOD PORCH FRAMING
- 5/4X4 CPVC TRIM. TYPICAL AT ALL WINDOWS AND DOOR
- 5/4X4 CEMENTITIOUS BOARD CORNER TRIM
- 1X4 CPVC / TREATED / CEMENTITIOUS FASCIA OVER CONT 2X4 PRESERVATIVE TREATED SUB-FASCIA
- 3/4" T&G PLYWOOD SUB-FLOOR DECKING
- BUILDING WRAP (WIND AND WATER) OVER PLYWOOD SHEATHING
- HEAVY GAUGE METAL FLASHING AT STANDING SEAM ROOF TO BE SEALED WITH MANUFACTURER SPECIFIED SEALANT
- MEDIUM GAUGE ALUMINUM FLASHING
- 30# ASPHALT FELT
- 4" RUBBER BASE
- FINISH FLOOR. REFER TO A-601 FINISH SCHEDULE
- CONTINUOUS 1-1/2" PIPE RAIL AT 36" ABOVE STAIR SURFACE. EXTEND PAST END OF STAIR 1'-0"
- 5/4" PT WOOD STAIR TREADS
- 1X PT WOOD RISERS
- CEMENTITIOUS TRIM BOARDS TO WRAP AROUND PORCH BEAM
- CEMENTITIOUS SOFFIT CEILING AT PORCH AND ROOF EAVE. PROVIDE VENTED SOFFIT AT PORCH EAVE

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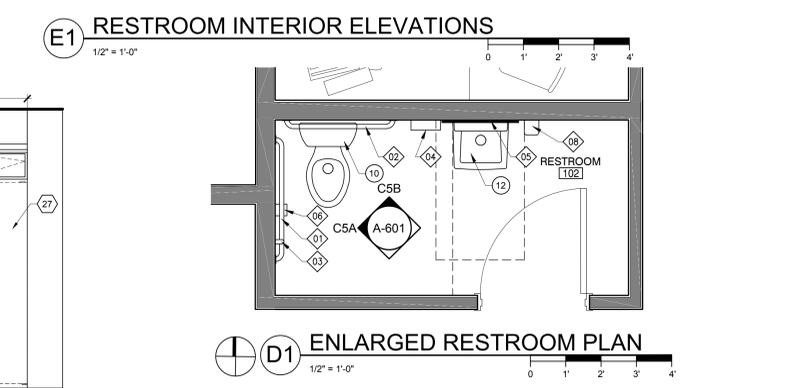
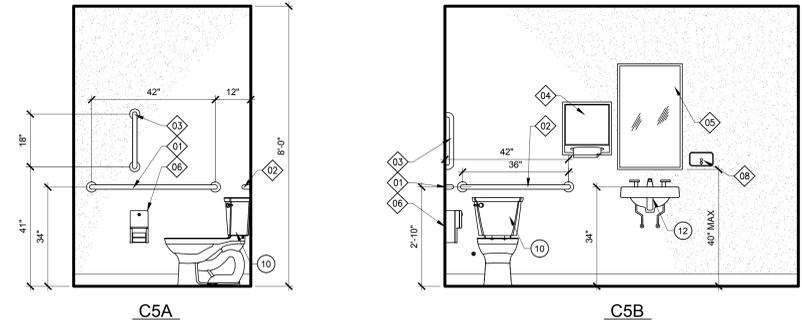
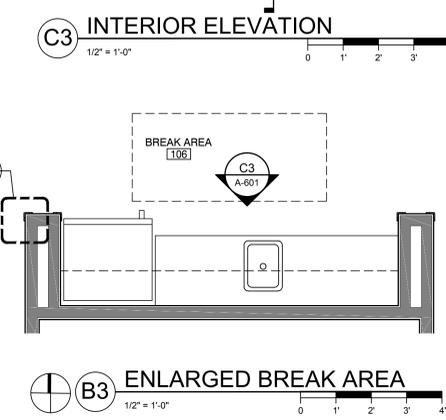
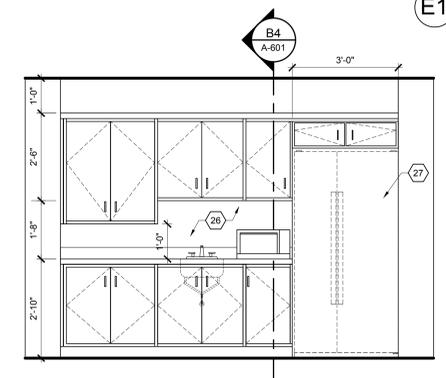
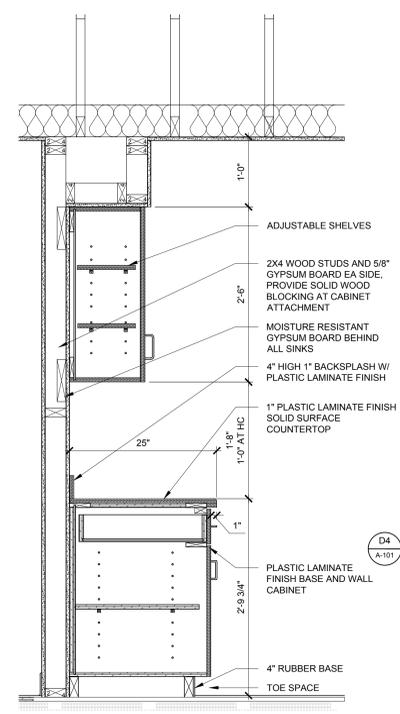
SHEET INFORMATION

DATE	APRIL 29, 2020
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APPROVED	DCS

WALL SECTIONS

A-302

INTERIOR PAINT SCHEDULE	
PT1 PAINTED GYPSUM BOARD WALLS (UON)	
PRIME:	
1.	SHERWIN WILLIAMS - MULTI-PURPOSE LATEX PRIMER WHITE
2.	TNEMEC SERIES 113 TNEMC-TUF-COAT
3.	PPG 17-921 SEAL GRIP LATEX INTERIOR/EXTERIOR UNIVERSAL PRIMER
TOPCOAT:	
1.	SHERWIN WILLIAMS - PRO INDUSTRIAL PRECATALYZED WATERBASED EPOXY EG-SHELL
2.	TNEMEC SERIES 113 TNEMC-TUF-COAT
3.	PPG 16-310 PITT-GLAZE WB1 PRECATALYZED WATERBASED EGGSHELL EPOXY
PT2 GYPSUM BOARD CEILINGS (UON)	
PRIME AND TOPCOAT:	
1.	SHERWIN WILLIAMS - PROMAR 200 ZERO VOC INTERIOR LATEX FLAT
2.	TNEMEC SERIES 113 TNEMC-TUF-COAT
3.	PPG 6-4110XI SPEEDHIDE NO VOC LATEX FLAT
PT4 PAINTED GYPSUM BOARD WALLS IN RESTROOMS	
PRIME:	
1.	SHERWIN WILLIAMS - PREPRITE® PROBLOCK® INTERIOR/EXTERIOR LATEX PRIMER/SEALER
2.	TNEMEC SERIES 113 TNEMC-TUF-COAT
3.	PPG 17-921 SEAL GRIP LATEX INTERIOR/EXTERIOR UNIVERSAL PRIMER
TOPCOAT:	
1.	SHERWIN WILLIAMS - PRO INDUSTRIAL PRECATALYZED WATERBASED EPOXY SEMI-GLOSS
2.	TNEMEC SERIES 113 TNEMC-TUF-COAT
3.	PPG 16-510 PITT-GLAZE WB1 PRECATALYZED WATERBASED SEMI-GLOSS EPOXY
PT5 WOOD TRIM & FRAMES	
PRIME:	
1.	SHERWIN WILLIAMS - PRO INDUSTRIAL PRO-CRYL UNIVERSAL ACRYLIC PRIMER
2.	TNEMEC SERIES 115 UNI-BOND
3.	PPG 17-921 SEAL GRIP LATEX INTERIOR/EXTERIOR UNIVERSAL PRIMER
TOPCOAT:	
1.	SHERWIN WILLIAMS - PRO INDUSTRIAL DTM ACRYLIC SEMI-GLOSS EPOXY
2.	TNEMEC SERIES 1029 ENDURATONE
3.	PPG 90-1210 PITT-TECH PLUS DTM SEMI-GLOSS
PT6 WOOD DOORS - TRANSPARENT FINISH - CLEAR COAT	
STAIN:	
1.	MINWAX PERFORMANCE SERIES TINTABLE WOOD STAIN
2.	GENERAL FINISHES - WATER BASED WOOD STAIN
3.	RUST-OLEUM - ULTIMATE WOOD STAIN
FINISH:	
1.	SHERWIN WILLIAMS A68V00091 - WOOD CLASSICS® WATERBORNE POLYURETHANE VARNISH GLOSS CLEAR
2.	TNEMEC SERIES 1079 CLEARCOAT
3.	PPG DEFT 157 INTERIOR WATER BASED POLYURETHANE GLOSS
PT7 METAL DOORS AND FRAMES	
PRIME:	
1.	CLOVERDALE PAINT - 7104 LINE- HIGH SOLIDS LOW VOC PRIMER 71044
2.	MATERCHEM INDUSTRIES - KILZ COMPLETE L1012
3.	RUST-OLEUM - UNIVERSAL ALKYD PRIMER 301240
TOPCOAT:	
1.	SHERWIN WILLIAMS - PRO INDUSTRIAL DTM ACRYLIC SEMI-GLOSS EPOXY
2.	TNEMEC SERIES 1029 ENDURATONE
3.	PPG 90-1210 PITT-TECH PLUS DTM SEMI-GLOSS



E1 RESTROOM INTERIOR ELEVATIONS
1/2" = 1'-0"

NO.	DESCRIPTION	MANUFACTURER	MODEL	COMMENTS
01	42" SIDE WALL GRAB BAR	BY GC	-	PROVIDE IN WALL BLOCKING
02	36" REAR WALL GRAB BAR	BY GC	-	PROVIDE IN WALL BLOCKING
03	18" VERTICAL GRAB BAR	BY GC	-	PROVIDE IN WALL BLOCKING
04	TRASH RECEPTACLE	BY OWNER	-	NOT SHOWN
05	MIRROR	BY OWNER	-	TILTED, ACCESSIBLE TYPE
06	TOILET PAPER HOLDER	BY OWNER	-	PROVIDE IN WALL BLOCKING
07	COAT HOOK	BY OWNER	-	-
08	SOAP DISPENSER	BY OWNER	-	PROVIDE IN WALL BLOCKING
09	PAPER TOWEL DISPENSER	BY OWNER	-	PROVIDE IN WALL BLOCKING

NO.	DESCRIPTION	MANUFACTURER	MODEL	COMMENTS
10	WATER CLOSET (ADA)	SLOAN	WETS-2029-STG	REFER TO PLUMBING DRAWINGS
11	LAVATORY (ADA)	SLOAN	SS-3003-STG	PROVIDE INSULATED COVER AT PLUMBING LINES
12	SINK	ELKAY	LRAD2219	-
13	ELECTRICAL WATER HEATER	AMTROL	ST-5	REFER TO PLUMBING DRAWINGS

NOTES:

- SEE G-104 FOR RESTROOM ACCESSORY MOUNTING HEIGHTS AND BLOCKING. ALL RESTROOM FIXTURES AND ACCESSORIES ARE TO BE MOUNTED IN ACCORDANCE WITH ICC A117.1-2017.
- PROVIDE SOLID WOOD PRESSURE TREATED BLOCKING IN WALL FOR ALL RESTROOM ACCESSORIES.
- COORDINATE ALL OWNER PROVIDED RESTROOM ACCESSORIES FOR INSTALLATION AND PROVIDE REQUIRED MOUNTING HARDWARE. ALL RESTROOM ACCESSORIES PROVIDED BY GC OR OWNER ARE TO BE MOUNTED IN ACCORDANCE WITH ICC 117.1-2017.
- ALL NEW SINKS ARE TO BE PROVIDED WITH
- PROVIDE INSULATION KIT, FOR ACCESSIBILITY AT ALL EXPOSED WATER AND WASTE PIPING
- PROVIDE MOISTURE RESISTANT GYPSUM BOARD AND 2 COATS OF SEMI-GLOSS EPOXY PAINT AT ALL RESTROOM WALLS
- PROVIDE MINERAL WOOL BATT INSULATION AT RESTROOM WALLS AND CEILING FOR SOUND DEADENING

ROOM NUMBER	ROOM NAME	BASE	WALLS	WALL FINISH	CLG	CLG FINISH	FLOOR	FLOOR FINISH	REMARKS
101	ENTRANCE	RBR	GWB	PT./GB	GWB	PT./GB	WD	LVT	-
102	RESTROOM	RBR	GWB	PT./GB	GWB	PT./GB	WD	LVT	-
103	OFFICE 01	RBR	GWB	PT./GB	GWB	PT./GB	WD	CPT	-
104	OFFICE 02	RBR	GWB	PT./GB	GWB	PT./GB	WD	CPT	-
105	OFFICE 03	RBR	GWB	PT./GB	GWB	PT./GB	WD	CPT	-
106	BREAK AREA	RBR	GWB	PT./GB	GWB	PT./GB	WD	LVT	-
107	OFFICE 04	RBR	GWB	PT./GB	GWB	PT./GB	WD	CPT	-
108	OFFICE 05	RBR	GWB	PT./GB	GWB	PT./GB	WD	CPT	-
109	OFFICE 06	RBR	GWB	PT./GB	GWB	PT./GB	WD	CPT	-
110	OFFICE 07	RBR	GWB	PT./GB	GWB	PT./GB	WD	CPT	-
111	OFFICE 08	RBR	GWB	PT./GB	GWB	PT./GB	WD	CPT	-
112	CONFERENCE	RBR	GWB	PT./GB	GWB	PT./GB	WD	CPT	-
113	CORRIDOR	RBR	GWB	PT./GB	GWB	PT./GB	WD	LVT	-
114	CLOSET	RBR	GWB	PT./GB	GWB	PT./GB	WD	LVT	-

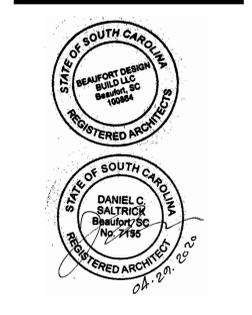
ABBREVIATIONS:	SG	SHADOW GAP SHIPLAP	
ALUM	ALUMINUM	W-1	WALL TILE / WALL FINISH 1
EXIST	EXISTING	EPP	EPOXY WALL PAINT
GL	TEMPERED GLASS	BB	BEAD BOARD
HM	HOLLOW METAL	TERR	TERRAZO
SM	INSULATED METAL	CPT	CARPET
MFR	MANUFACTURER	CT	CERAMIC TILE
SCW	SOLID CORE WOOD	SC	SEALED CONCRETE
HCW	HOLLOW CORE WOOD	LVT	LUXURY VINYL TILE
HCWL	HOLLOW CORE WOOD LOUVERED	VCT	VINYL COMPOSITE TILE
CONC	REINFORCED CONCRETE SLAB	RBR	RUBBER BASE
VPT	VINYL PLANK TILE EPB FLOORING	ACT	ACOUSTICAL CEILING TILE
GWB	5/8" TYPE X GYPSUM WALL BOARD SHEATHING	PT/GB	PAINTED GYPSUM BOARD
WD	WOOD	FRP	FIBER REINFORCED PLASTIC WALL PANEL
1x8 WD	WOOD TRIM BOARD		

BEAUFORT
2 Fire Station Lane
Seabrook, SC 29940

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BEAUFORT COUNTY ENGINEERING

BEAUFORT COUNTY DNA LABORATORY ADDITION

111 INDUSTRIAL VILLAGE RD
BEAUFORT, SC 29906

FOR CONSTRUCTION

NO.	DATE	DESCRIPTION	REVISIONS / SUBMISSIONS

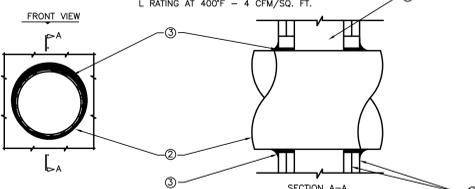
SHEET INFORMATION

DATE: APRIL 29, 2020
JOB NUMBER: 19044.00
DRAWN: ADB
CHECKED: ADB
APPROVED: DCS

ENLARGED PLANS, INT. ELEVATIONS AND FINISH SCHEDULES

A-601

UL SYSTEM NO. W-L-1085
 F RATING - 1-HR OR 2-HR (SEE ITEM 1B)
 T RATING - 0 HR
 L RATING AT AMBIENT - LESS THAN 1 CFM/SQ. FT.
 L RATING AT 400°F - 4 CFM/SQ. FT.

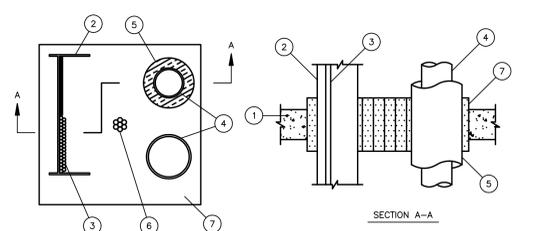


1. WALL ASSEMBLY - THE 1 OR 2 HR FIRE-RATED GYPSUM WALLBOARD/STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER SPECIFIED U300 OR U400 SERIES WALL AND PARTITION DESIGNS IN THE UL FIRE RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION FEATURES:

- A. STUDS - WALL FRAMING MAY CONSIST OF EITHER WOOD STUDS OR STEEL CHANNEL STUDS. WOOD STUDS TO CONSIST OF NOM 2 BY 4 IN. LUMBER SPACED 16 IN. OC. STEEL STUDS TO BE MIN 2-1/2 IN. WIDE AND SPACED MAX 24 IN. OC.
- B. GYPSUM BOARD - 5/8 IN. THICK, 4 FT WIDE WITH SQUARE OR TAPERED EDGES. THE GYPSUM WALLBOARD TYPE, THICKNESS, NUMBER OF LAYERS, FASTENER TYPE AND SHEET ORIENTATION SHALL BE AS SPECIFIED IN THE INDIVIDUAL WALL AND PARTITION DESIGN. MAX DIA OF OPENING IS 1-1/2 IN.
- C. DIA OF CIRCULAR OPENING CUT THROUGH GYPSUM WALLBOARD OF EACH SIDE OF WALL ASSEMBLY TO BE MIN 1/4 IN. TO MAX 1/2 IN. LARGER THAN OUTSIDE DIA OF THROUGH PENETRANT (ITEM 2). THE HOURLY F RATING OF THE FIRESTOP SYSTEM IS EQUAL TO THE HOURLY F RATING OF THE WALL ASSEMBLY IN WHICH IT IS INSTALLED.
- 2. THROUGH PENETRANTS - ONE METALLIC PIPE, CONDUIT OR TUBING TO BE INSTALLED EITHER CONCENTRICALLY OR ECCENTRICALLY WITHIN THE FIRESTOP SYSTEM. PIPE, CONDUIT OR TUBING TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF WALL ASSEMBLY. THE ANNULAR SPACE BETWEEN THE THROUGH-PENETRANT AND THE PERIPHERY OF THE OPENING SHALL BE MIN 0 IN. TO MAX 1/4 IN. THE FOLLOWING TYPES AND SIZES OF METALLIC PIPES, CONDUITS OR TUBING MAY BE USED:
 - A. STEEL PIPE - NOM 12 IN. DIA (OR SMALLER) SCHEDULE 10 (OR HEAVIER) STEEL PIPE.
 - B. IRON PIPE - NOM 12 IN. DIA (OR SMALLER) CAST OR DUCTILE IRON PIPE.
 - C. CONDUIT - NOM 6 IN. DIA (OR SMALLER) STEEL ELECTRICAL METALLIC TUBING OR STEEL CONDUIT.
 - D. COPPER TUBING - NOM 5 IN. DIA (OR SMALLER) TYPE L (OR HEAVIER) COPPER TUBING.
 - E. COPPER TUBING - NOM 6 IN. DIA (OR SMALLER) REGULAR (OR HEAVIER) COPPER PIPE.
- 3. FILL VOID, OR CAVITY MATERIAL - SEALANT - FILL MATERIAL TO BE FORCED INTO THE ANNULUS TO MAXIMUM EXTENT POSSIBLE. ADDITIONAL FILL MATERIAL TO BE INSTALLED SUCH THAT A MIN 1/2 IN. CROWN IS FORMED AROUND THE PENETRATING ITEM AND LAPPING 1/4 IN. BEYOND THE PERIPHERY OF THE OPENING.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC. SEALSANT
 *BEARING THE UL CLASSIFICATION MARK

System No. C-AJ-8056
 F Rating - 3 Hr
 T Rating - 0 Hr
 L Rating At Ambient - 5 CFM/Sq Ft
 L Rating At 400 F - 4 CFM/Sq Ft



1. FLOOR OR WALL ASSEMBLY - 4-1/2 IN. THICK REINFORCED LIGHTWEIGHT OR NORMAL WEIGHT (100-150 PCF) CONCRETE WALL MAY ALSO BE CONSTRUCTED OF ANY UL CLASSIFIED CONCRETE BLOCKS*. MAX AREA OF OPENING IS 270 SQ. IN. WITH MAX DIMENSION OF 30 IN. SEE CONCRETE BLOCKS (CAZT) CATEGORY IN THE FIRE RESISTANCE DIRECTORY FOR NAMES OF MANUFACTURERS.

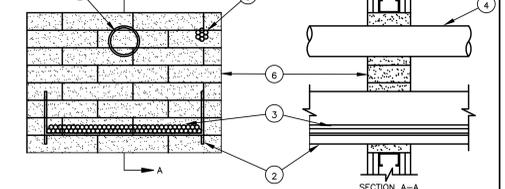
2. CABLE TRAY* - MAX 24 IN. WIDE BY MAX 6 IN. DEEP OPEN-LADDER OR SOLID-BACK CABLE TRAY WITH CHANNEL-SHAPED SIDE RAILS FORMED OF 0.10 IN. THICK ALUMINUM OR 0.060 IN. THICK GALV STEEL WITH 1-1/2 IN. WIDE BY 1 IN. CHANNEL SHAPE RUNGS SPACED 9 IN. OC OR A 0.029 IN. THICK STEEL SOLID BACK, RESPECTIVELY. ONE CABLE TRAY TO BE INSTALLED IN THE OPENING. THE MAX ANNULAR SPACE BETWEEN THE CABLE TRAYS IS 9 IN. AND BETWEEN THE PERIPHERY OF THE OPENING SHALL BE MIN 1-1/2 IN. TO MAX 4-1/2 IN. CABLE TRAY TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF FLOOR OR WALL ASSEMBLY.

3. CABLES - AGGREGATE CROSS-SECTIONAL AREA OF CABLES IN CABLE TRAY TO BE MAX 30 PERCENT OF THE CROSS-SECTIONAL AREA OF THE CABLE TRAY BASED ON A MAX 3 IN. CABLE LOADING DEPTH WITHIN THE CABLE TRAY. ANY COMBINATION OF THE FOLLOWING TYPES AND SIZES OF COPPER CONDUCTOR OR FIBER OPTIC CABLES MAY BE USED:

- A. 7/8 IN. NO. 12 AWG WITH POLYVINYL CHLORIDE (PVC) INSULATION AND PVC JACKET.
- B. 300 PAIR - NO. 24 AWG CABLE WITH PVC INSULATION AND JACKET.
- C. 1/2 IN. 500 KCMIL WITH THERMOPLASTIC INSULATION AND POLYVINYL CHLORIDE (PVC) JACKET.
- D. 1/2 IN. 500 KCMIL WITH THERMOPLASTIC INSULATION AND POLYVINYL CHLORIDE (PVC) JACKET.
- E. TWENTY FOUR FIBER OPTIC CABLE WITH PVC SUB UNIT AND JACKET.
- 4. THROUGH-PENETRANTS - ONE OR MORE PIPE, CONDUIT OR TUBE TO BE INSTALLED WITHIN THE OPENING. THE TOTAL NUMBER OF THROUGH-PENETRANTS IS DEPENDENT ON THE SIZE OF THE OPENING AND TYPES AND SIZES OF THE PENETRANTS. ANY COMBINATION OF THE PENETRANTS DESCRIBED BELOW MAY BE USED PROVIDED THAT THE FOLLOWING PARAMETERS RELATIVE TO THE ANNULAR SPACES AND THE SPACING BETWEEN THE PIPES ARE MAINTAINED. THE SPACE BETWEEN PIPES, CONDUITS OR TUBING AND BETWEEN THE PERIPHERY OF THE OPENING AND THE PIPES OR CONDUITS SHALL BE MIN 1 IN. TO MAX 4-1/2 IN. FIRE, CONDUIT OR TUBE TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF FLOOR OR WALL ASSEMBLY. THE FOLLOWING TYPES AND SIZES OF METALLIC PIPES, CONDUITS OR TUBING MAY BE USED:
 - A. NOM 6 IN. DIA (OR SMALLER) RIGID GALV STEEL CONDUIT.
 - B. NOM 4 IN. DIA (OR SMALLER) STEEL ELECTRICAL METALLIC TUBING.
 - C. NOM 4 IN. DIA (OR SMALLER) REGULAR (OR HEAVIER) COPPER PIPE.
 - D. NOM 4 IN. DIA (OR SMALLER) TYPE L (OR HEAVIER) COPPER PIPE.
 - E. NOM 6 IN. DIA (OR SMALLER) SCHEDULE 10 (OR HEAVIER) STEEL PIPE.
 - F. NOM 6 IN. DIA (OR SMALLER) CAST OR DUCTILE IRON PIPE.
- 5. PIPE COVERING - NOM 1-1/2 IN. THICK HOLLOW CYLINDRICAL HEAVY DENSITY (MIN 3.5 PCF) GLASS FIBER UNITS JACKETED ON THE OUTSIDE WITH AN ALL SERVICE JACKET. LONGITUDINAL JOINTS SEALED WITH METAL FASTENERS OR FACTORY APPLIED SELF-SEALING LAP TAPE. TRANSVERSE JOINTS SEALED WITH METAL FASTENERS OR WITH BUTT TAPE SUPPLIED WITH THE PRODUCT.
- 6. SEE PIPE AND EQUIPMENT COVERING AND MATERIALS (BROU) CATEGORY IN THE BUILDING MATERIALS DIRECTORY FOR NAMES OF MANUFACTURERS. ANY PIPE COVERING MEETING THE ABOVE SPECIFICATIONS AND BEARING THE UL CLASSIFICATION MARKING WITH A FLAME SPREAD INDEX OF 25 OR LESS AND A SMOKE DEVELOPED INDEX OF 50 MAY BE USED.
- 7. FLOOR OR WALL ASSEMBLY - MAX 2 IN. DIA TIGHT BUNDLE OF CABLES CENTERED IN OPENING AND RIGIDLY SUPPORTED ON BOTH SIDES OF FLOOR AND WALL. ANY COMBINATION OF THE FOLLOWING TYPES AND SIZES OF CABLES MAY BE USED:
 - A. 7/8 IN. NO. 12 AWG WITH POLYVINYL CHLORIDE (PVC) INSULATION AND PVC JACKET.
 - B. 1-1/2 IN. PAIR - NO. 24 AWG COAXIAL CABLE WITH AIR CORE AND PVC JACKET.
 - C. 2/C NO. 10 AWG WITH PVC INSULATION AND JACKET.
 - D. 3/C NO. 8 AWG ALUMINUM CLAD CABLE WITH CROSS-LINKED POLYETHYLENE (XLPE) INSULATION AND PVC JACKET.
 - E. TYPE RC - 62 A/U COAXIAL CABLE WITH PVC INSULATION AND JACKET.
 - F. 24 FIBER OPTIC CABLE WITH PVC SUB UNIT AND OUTER JACKET.
- 7. FIRESTOP SYSTEM - THE FIRESTOP SYSTEM SHALL CONSIST OF THE FOLLOWING:
 - A. FILL VOID OR CAVITY MATERIAL* - FIRE BLOCKS INSTALLED WITH LONG DIMENSION PASSING THROUGH THE OPENING EXTENDING MIN 1-1/2 IN. FROM EACH SURFACE. BLOCKS TO COMPLETELY FIT THE ENTIRE OPENING.
 - B. HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC. - FS-ONE SEALANT.
 - C. WIRE MESH (NOT SHOWN) - WHEN THE ANNULAR SPACE EXCEEDS 4-1/2 IN. TO THE PERIPHERY, A NOM 2 IN. SQ WIRE FENCING SHALL BE USED TO KEEP THE FIRE BLOCKS IN PLACE. THE WIRE FENCING IS FABRICATED FROM MIN 10.18 SWG (0.060 IN.) THICK GALV STEEL WIRE. THE WIRE IS CUT TO FIT THE CONTOUR OF THE PENETRATING ITEM WITH A MIN 3 IN. LAP BEYOND THE PERIPHERY OF THE OPENING. WIRE FENCING SECURED TO TOP SURFACE OF FLOOR AND BOTH SURFACES OF WALL ASSEMBLY WITH MEANS OF 1/4 IN. DIA BY 1 IN. LONG CONCRETE TO NAIL ANCHORS AND 1/4 IN. BY 1-1/2 IN. DIA FENDER WASHERS SPACED MAX 8 IN. OC.
 - *BEARING THE UL CLASSIFICATION MARK

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC. SEALSANT
 *BEARING THE UL CLASSIFICATION MARK

System No. W-L-8013
 F Rating - 0 Hr
 T Rating - 0 Hr
 L Rating At Ambient - 5 CFM/Sq Ft
 L Rating At 400 F - 2 CFM/Sq Ft



1. WALL ASSEMBLY - THE 1 OR 2 HR FIRE-RATED GYPSUM BOARD/STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER SPECIFIED IN THE INDIVIDUAL U300 OR U400 SERIES WALL AND PARTITION DESIGNS IN THE UL FIRE RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION FEATURES:

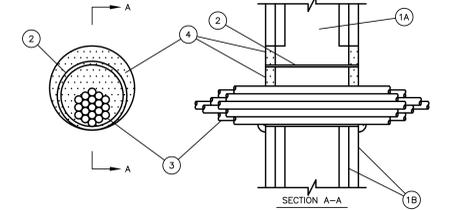
- A. STUDS - WALL FRAMING MAY CONSIST OF EITHER WOOD STUDS OR STEEL CHANNEL STUDS. WOOD STUDS TO CONSIST OF NOM 2 BY 4 IN. (51 MM) LUMBER SPACED 16 IN. (406 MM) OC. STEEL STUDS TO BE MIN 2-1/2 IN. (64 MM) WIDE AND SPACED MAX 24 IN. (610 MM) OC. ADDITIONAL STUDS INSTALLED TO COMPLETELY FRAME THE OPENING.
- B. GYPSUM BOARD* - 5/8 IN. (16 MM) THICK, 4 FT (1219 MM) WIDE WITH SQUARE OR TAPERED EDGES. THE GYPSUM BOARD TYPE, THICKNESS, NUMBER OF LAYERS, FASTENER TYPE AND SHEET ORIENTATION SHALL BE AS SPECIFIED IN THE INDIVIDUAL WALL AND PARTITION DESIGN. MAX AREA OF OPENING IS 352 SQ IN. (2271 SQ CM) WITH MAX DIMENSION OF 22 IN. (559 MM) WIDE.
- 2. CABLE TRAY* - MAX 24 IN. (610 MM) WIDE BY MAX 6 IN. (152 MM) DEEP OPEN-LADDER OR SOLID-BACK CABLE TRAY WITH CHANNEL-SHAPED SIDE RAILS FORMED OF 0.085 IN. (1.65 MM) THICK ALUMINUM OR 0.060 IN. (1.52 MM) THICK STEEL AND WITH 1-1/2 IN. (38 MM) WIDE BY 1 IN. (25 MM) CHANNEL SHAPE RUNGS SPACED 9 IN. (229 MM) OC OR A 0.029 IN. (0.74 MM) THICK STEEL SOLID BACK, RESPECTIVELY. ONE CABLE TRAY TO BE INSTALLED IN THE OPENING. THE MAX ANNULAR SPACE BETWEEN THE CABLE TRAY AND THE PERIPHERY OF THE OPENING SHALL BE MIN 1 IN. (25 MM) TO MAX 7 IN. (178 MM) CABLE TRAY TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF FLOOR OR WALL ASSEMBLY.
- 3. CABLES - AGGREGATE CROSS-SECTIONAL AREA OF CABLES IN CABLE TRAY TO BE MAX 30 PERCENT OF THE CROSS-SECTIONAL AREA OF THE CABLE TRAY. ANY COMBINATION OF THE FOLLOWING TYPES AND SIZES OF COPPER CONDUCTOR CABLES MAY BE USED:
 - A. 7/8 IN. NO. 12 AWG WITH POLYVINYL CHLORIDE (PVC) INSULATION AND PVC JACKET.
 - B. 100 PAIR - NO. 24 AWG CABLE WITH PVC INSULATION AND JACKET.
 - C. 1/2 IN. 500 KCMIL (OR SMALLER) WITH PVC INSULATION AND JACKET.
 - 4. THROUGH-PENETRANTS - ONE OR MORE PIPE OR TUBE TO BE INSTALLED WITHIN THE OPENING. THE TOTAL NUMBER OF THROUGH-PENETRANTS IS DEPENDENT ON THE SIZE OF THE OPENING AND TYPES AND SIZES OF THE PENETRANTS. ANY COMBINATION OF THE PENETRANTS DESCRIBED BELOW MAY BE USED PROVIDED THAT THE FOLLOWING PARAMETERS RELATIVE TO THE ANNULAR SPACES AND THE SPACING BETWEEN THE PIPES ARE MAINTAINED. THE SPACE BETWEEN THE PIPE OR TUBE AND THE PERIPHERY OF THE OPENING SHALL BE MIN 1-1/2 IN. (38 MM) TO MAX 9-1/4 IN. (235 MM) PIPE OR TUBE TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF FLOOR OR WALL ASSEMBLY. THE FOLLOWING TYPES AND SIZES OF NON-METALLIC OR METALLIC PIPES, OR TUBES MAY BE USED:
 - A. POLYVINYL CHLORIDE (PVC) PIPE - MAX 3 IN. (76 MM) DIA SCHEDULE 40 SOLID CORE PVC PIPE (OR SMALLER) FOR USE IN CLOSED (PROCESS OR SUPPLY) OR VENTED (DRAIN, WASTE OR VENT) PIPING SYSTEM.
 - B. STEEL PIPE - NOM 6 IN. (152 MM) DIA (OR SMALLER) SCHEDULE 40 (OR HEAVIER) STEEL PIPE.
 - C. CONDUIT - NOM 4 IN. (102 MM) DIA (OR SMALLER) STEEL ELECTRICAL METALLIC TUBING OR 6 IN. (152 MM) DIA STEEL CONDUIT.
 - D. COPPER PIPE - NOM 4 IN. (102 MM) DIA (OR SMALLER) REGULAR (OR HEAVIER) COPPER PIPE.
 - E. COPPER TUBE - NOM 4 IN. (102 MM) DIA (OR SMALLER) TYPE L (OR HEAVIER) COPPER TUBE.
 - 4A. PIPE COVERING - (NOT SHOWN) NOM 1-1/2 IN. (38 MM) THICK HOLLOW CYLINDRICAL HEAVY DENSITY (MIN 3.5 PCF) (56KG/M3) GLASS FIBER UNITS JACKETED ON THE OUTSIDE WITH AN ALL SERVICE JACKET. LONGITUDINAL JOINTS SEALED WITH METAL FASTENERS OR FACTORY APPLIED SELF-SEALING LAP TAPE. TRANSVERSE JOINTS SEALED WITH METAL FASTENERS OR WITH BUTT TAPE SUPPLIED WITH THE PRODUCT.
 - 5. SEE PIPE AND EQUIPMENT COVERING AND MATERIALS (BROU) CATEGORY IN THE BUILDING MATERIALS DIRECTORY FOR NAMES OF MANUFACTURERS. ANY PIPE COVERING MEETING THE ABOVE SPECIFICATIONS AND BEARING THE UL CLASSIFICATION MARKING WITH A FLAME SPREAD INDEX OF 25 OR LESS AND A SMOKE DEVELOPED INDEX OF 50 MAY BE USED.
 - 5. CABLES - MAX 1-1/2 IN. (38 MM) DIA TIGHT BUNDLE OF CABLES INSTALLED WITHIN THE OPENING AND RIGIDLY SUPPORTED ON BOTH SURFACES OF WALL. THE SPACE BETWEEN THE CABLES AND PERIPHERY OF THE OPENING SHALL RANGE FROM 1-1/2 IN. (38 MM) MIN TO A MAX OF 1-1/2 IN. (38 MM). ANY COMBINATION OF THE FOLLOWING TYPES AND SIZES OF CABLES MAY BE USED:
 - A. 7/8 IN. NO. 12 AWG WITH POLYVINYL CHLORIDE (PVC) INSULATION AND JACKET.
 - B. 25 PAIR - NO. 24 AWG CABLE WITH PVC INSULATION AND JACKET.
 - C. TYPE RC U/S COAXIAL CABLE WITH PVC OUTER JACKET.
 - D. 24 FIBER OPTIC CABLE WITH PVC SUB UNIT AND OUTER JACKET.
 - 6. FIRESTOP SYSTEM - THE FIRESTOP SYSTEM SHALL CONSIST OF THE FOLLOWING:
 - A. FILL VOID OR CAVITY MATERIAL* - FIRE BLOCKS FOR WALLS INCORPORATING MAX 3-5/8 IN. (92 MM) STEEL STUDS OR MAX 2 (51 MM) DIA (OR SMALLER) WOOD STUDS. FIRE BLOCK INSTALLED WITH 5 IN. (127 MM) DIMENSION PROJECTING THROUGH AND CENTERED IN OPENING. FOR WALLS CONSTRUCTED OF LARGER STEEL OR WOOD STUDS, FIRE BLOCK INSTALLED WITH LONG DIMENSION PASSING THROUGH AND CENTERED IN OPENING. BLOCKS MAY OR MAY NOT BE CUT FLUSH WITH BOTH SURFACES OF WALL. WHEN MULTIPLE LAYERS OF GYPSUM BOARD ARE USED, BLOCKS MAY BE RECESSED 1/2 IN. (13 MM) FROM SURFACE OF WALL.
 - HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC. - FS 657 FIRE BLOCK.
 - B. FILL VOID OR CAVITY MATERIAL* - SEALANT OR PUTTY - FILL MATERIAL TO BE FORCED INTO INTERSTICES OF CABLES, BETWEEN CABLES AND CABLE TRAYS, AROUND EACH PENETRANT AND WHERE OBVIOUS VOIDS ARE OBSERVED TO MAX EXTENT POSSIBLE ON BOTH SURFACES OF THE PENETRATING ITEM.
 - HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC. - FS-ONE SEALANT; CP 618 PUTTY STICK OR CP620 FIRE FOAM.
 - *BEARING THE UL CLASSIFICATION MARK

- ITEM NO. PEN. ITEM IN. DISTANCE BETWEEN ADJACENT THROUGH OPENING IN. DISTANCE FROM THROUGH OPENING IN.
- 2A 7-7/16 1-11/16 7-7/16 1/2
- 2B 7-7/16 1-11/16 7-7/16 1/2
- 2C 7-7/16 1-11/16 7-7/16 1/2
- 2D 7-7/16 1-11/16 7-7/16 1/2
- 2E 7-7/16 1-11/16 7-7/16 1-1/2

3. FIRESTOP SYSTEM THE FIRESTOP SYSTEM SHALL CONSIST OF THE FOLLOWING:
 A. STEEL WIRE MESH - NOM 8 STEEL WIRE MESH HAVING A MIN 1 IN. LAP ALONG THE LONGITUDINAL SEAM. LENGTH OF STEEL WIRE MESH TO BE 4-3/4 IN., CENTERED AND FORMED TO FIT PERIPHERY OF THROUGH OPENING. STEEL WIRE MESH IS NOT REQUIRED WHEN ADDITIONAL FRAMING MEMBERS (ITEM NO. 1A) ARE USED.
 B. PACKING MATERIAL MIN 4.0 IN. THICKNESS OF MIN 3.5 PCF MINERAL WOOL BATT INSULATION FIRMLY PACKED INTO OPENING AS A PERMANENT FORM. PACKING MATERIAL TO BE RECESSED FROM BOTH SURFACES OF WALL AS REQUIRED TO ACCOMMODATE THE REQUIRED THICKNESS OF FILL MATERIAL.
 C. FILL VOID OR CAVITY MATERIAL* - SEALANT MIN 1/2 IN. THICKNESS OF FILL MATERIAL APPLIED WITHIN THE ANNULUS, FLUSH WITH BOTH SURFACES OF WALL.
 HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC. - FS-ONE SEALANT
 *BEARING THE UL CLASSIFICATION MARK

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC. SEALSANT
 *BEARING THE UL CLASSIFICATION MARK

SYSTEM NO. W-L-3065
 F RATINGS - 1 AND 2 HR (SEE ITEM 1)
 T RATING - 0 HR

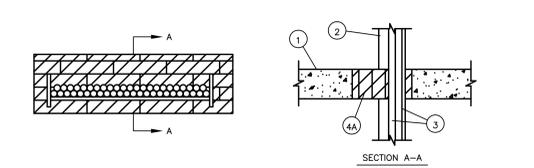


1. WALL ASSEMBLY - THE 1 OR 2 FIRE-RATED GYPSUM WALLBOARD/STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER SPECIFIED IN THE INDIVIDUAL U300, U400 OR U400 SERIES WALL AND PARTITION DESIGNS IN THE UL FIRE RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION FEATURES:

- A. STUDS - WALL FRAMING MAY CONSIST OF EITHER WOOD STUDS OR STEEL CHANNEL STUDS. WOOD STUDS TO CONSIST OF NOM 2 BY 4 IN. (51 BY 102 MM) LUMBER SPACED 16 IN. (406 MM) OC. STEEL STUDS TO BE MIN 2-1/2 IN. (64 MM) WIDE AND SPACED MAX 24 IN. (610 MM) OC.
- B. GYPSUM BOARD* - NOM 5/8 IN. (16 MM) THICK GYPSUM BOARD, WITH SQUARE OR TAPERED EDGES. THE GYPSUM BOARD TYPE, THICKNESS, NUMBER OF LAYERS, FASTENER TYPE AND SHEET ORIENTATION SHALL BE AS SPECIFIED IN THE INDIVIDUAL U300, U400 OR U400 SERIES DESIGN IN THE UL FIRE RESISTANCE DIRECTORY. MAX DIA OF OPENING IS 5-1/2 IN. (138 MM) WHEN SLEEVE (ITEM 2) IS EMPLOYED. MAX DIA OF OPENING IS 4 IN. (102 MM) WHEN SLEEVE (ITEM 2) IS NOT EMPLOYED. THE F RATING OF THE FIRESTOP SYSTEM IS EQUAL TO THE F RATING OF THE WALL ASSEMBLY.
- 2. METALLIC SLEEVE - (OPTIONAL) - NOM 4 IN. (102 MM) DIA (OR SMALLER) STEEL ELECTRICAL METALLIC TUBING (EMT) OR SCHEDULE 5 (OR HEAVIER) STEEL PIPE OR MIN 0.016 IN. THICK (0.41 MM, NO. 28 GA) GALV STEEL SLEEVE INSTALLED FLUSH WITH WALL SURFACES. THE ANNULAR SPACE BETWEEN THE STEEL SLEEVE AND PERIPHERY OF OPENING SHALL BE MIN 0 IN. (0 MM, POINT CONTACT) TO MAX 1 IN. (25MM), WHEN SCHEDULE 5 STEEL PIPE OR EMT IS USED, SLEEVE MAY EXTEND UP TO 18 IN. (457 MM) BEYOND THE WALL SURFACES.
- 3. CABLES - AGGREGATE CROSS-SECTIONAL AREA OF CABLE IN OPENING TO BE MAX 45 PERCENT OF THE CROSS-SECTIONAL AREA OF THE OPENING. THE ANNULAR SPACE BETWEEN THE CABLE BUNDLE AND THE PERIPHERY OF THE OPENING TO BE MIN 0 IN. (0 MM, POINT CONTACT) TO MAX 1 IN. (25 MM) CABLES TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF THE WALL ASSEMBLY. ANY COMBINATION OF THE FOLLOWING TYPES AND SIZES OF COPPER CONDUCTOR CABLES MAY BE USED:
 - A. MAX 7/8 IN. NO. 12 AWG WITH POLYVINYL CHLORIDE (PVC) INSULATION AND JACKET.
 - B. MAX 25 PAIR NO. 24 AWG TELEPHONE CABLE WITH PVC INSULATION AND JACKET.
 - B1. MAX 4 PR NO. 22 AWG CAT 5 OR CAT 6 COMPUTER CABLES.
 - C. TYPE RC/U COAXIAL CABLE WITH POLYETHYLENE (PE) INSULATION AND PVC JACKET HAVING A MAX OUTSIDE DIAMETER OF 3/4 IN. (19 MM).
 - D. MAX RG 6/U COAXIAL CABLE WITH FLUORINATED ETHYLENE INSULATION AND JACKETING.
 - E. MULTIPLE FIBER OPTICAL COMMUNICATION CABLE JACKETED WITH PVC AND HAVING A MAX OD OF 5/8 IN. (16 MM).
 - F. THROUGH PENETRATING PRODUCTS - MAX THREE COPPER CONDUCTOR NO. 8 AWG - METAL-CLAD CABLES.
 - G. CABLE SYSTEMS INC.
 - H. FIRE RESISTIVE CABLES* - MAX 1-1/4 IN. (32 MM) DIA SINGLE CONDUCTOR OR MULTI CONDUCTOR TYPE MI CABLE. A MIN 1/8 IN. (3 MM) SEPARATION SHALL BE MAINTAINED BETWEEN MI CABLES AND ANY OTHER TYPES OF CABLE.
 - I. MAX 4/8 IN. (19 MM) DIA COPPER GROUND CABLE WITH OR WITHOUT A PVC JACKET.
 - J. MAX 4/8 IN. (19 MM) DIA COPPER GROUND CABLE WITH OR WITHOUT A PVC JACKET.
 - K. MAX 4/8 IN. (19 MM) DIA COPPER GROUND CABLE WITH OR WITHOUT A PVC JACKET.
 - L. MAX 4/8 IN. (19 MM) DIA COPPER GROUND CABLE WITH OR WITHOUT A PVC JACKET.
 - M. THROUGH PENETRATING PRODUCTS - ANY CABLES, METAL-CLAD CABLES OR ARMORED CABLES CURRENTLY CLASSIFIED UNDER THE THROUGH PENETRATING PRODUCTS CATEGORY.
 - SEE THROUGH PENETRATING PRODUCTS (TP) CATEGORY IN THE FIRE RESISTANCE DIRECTORY FOR NAMES OF MANUFACTURERS.
 - 4. FILL VOID OR CAVITY MATERIAL* - SEALANT OR PUTTY - FILL MATERIAL APPLIED WITHIN THE ANNULUS, FLUSH WITH EACH END OF THE STEEL SLEEVE OR WALL SURFACE. FILL MATERIAL INSTALLED SYMMETRICALLY ON BOTH SIDES OF THE WALL. A MIN 5/8 IN. (16 MM) THICKNESS OF SEALANT IS REQUIRED FOR THE 1 OR 2 HR F RATING. AN ADDITIONAL 1/2 IN. (13 MM) DIA BEAD OF FILL MATERIAL SHALL BE APPLIED AROUND THE PERIMETER OF SLEEVE ON BOTH SIDES OF THE WALL WHEN SLEEVE EXTENDS BEYOND SURFACE OF WALL.
 - HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC. - CP601S, CP606, FS-ONE SEALANTS OR CP618 PUTTY
 *BEARING THE UL CLASSIFICATION MARK

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC. SEALSANT
 *BEARING THE UL CLASSIFICATION MARK

SYSTEM NO. C-AJ-4035
 F RATING - 3 HR
 T RATING - 0 HR



1. FLOOR OR WALL ASSEMBLY MIN 4-1/2 IN. THICK REINFORCED LIGHTWEIGHT OR NORMAL WEIGHT (100-150 PCF) CONCRETE WALL MAY ALSO BE CONSTRUCTED OF ANY UL CLASSIFIED CONCRETE BLOCKS*. MAX AREA OF OPENING IS 270 SQ. IN. WITH MAX DIMENSION OF 30 IN. SEE CONCRETE BLOCKS (CAZT) CATEGORY IN THE FIRE RESISTANCE DIRECTORY FOR NAMES OF MANUFACTURERS.

2. CABLE TRAY* - MAX 24 IN. WIDE BY MAX 4 IN. DEEP OPEN-LADDER OR SOLID-BACK CABLE TRAY WITH CHANNEL-SHAPED SIDE RAILS FORMED OF 0.10 IN. THICK ALUMINUM OR 0.060 IN. THICK GALV STEEL WITH 1-1/2 IN. WIDE BY 1 IN. CHANNEL SHAPE RUNGS SPACED 9 IN. OC OR A 0.029 IN. THICK STEEL SOLID BACK, RESPECTIVELY. THE ANNULAR SPACE BETWEEN THE CABLE TRAY AND THE PERIPHERY OF THE OPENING SHALL BE MIN 1 IN. TO MAX 4 IN. CABLE TRAY TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF FLOOR OR WALL ASSEMBLY.

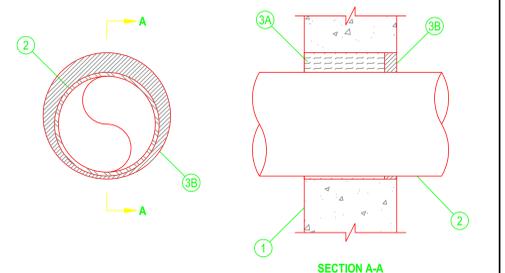
3. CABLES AGGREGATE CROSS-SECTIONAL AREA OF CABLES IN CABLE TRAY TO BE MAX 40 PERCENT OF THE CROSS-SECTIONAL AREA OF THE CABLE TRAY. ANY COMBINATION OF THE FOLLOWING TYPES AND SIZES OF COPPER CONDUCTOR OR FIBER OPTIC CABLES MAY BE USED:

- A. 1/2 IN. 500 KCMIL WITH THERMOPLASTIC INSULATION AND PVC JACKET.
- B. 300 PAIR - NO. 24 AWG CABLE WITH PVC INSULATION AND JACKET.
- C. 24 FIBER OPTIC CABLE WITH PVC SUBUNIT AND JACKET.
- D. THREE 1/2 IN. NO. 12 AWG, INSULATED WITH POLYVINYL CHLORIDE, IN A NOMINAL 3/4 IN. FLEXIBLE METAL CONDUIT.
- 4. FIRESTOP SYSTEM THE FIRESTOP SYSTEM SHALL CONSIST OF THE FOLLOWING:
 - A. FILL VOID OR CAVITY MATERIAL* - FIRE BLOCKS INSTALLED WITH LONG DIMENSION PLACED HORIZONTALLY WITHIN THE OPENING, FLUSH WITH BOTTOM OF FLOOR ASSEMBLY. BLOCKS TO COMPLETELY FIT THE ENTIRE WIDTH OF OPENING OF WALL ASSEMBLY.
 - HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC. - FS-FIRE BLOCK
 - B. FILL VOID OR CAVITY MATERIAL* - SEALANT OR PUTTY - NOT SHOWN FILL MATERIAL TO BE FORCED INTO INTERSTICES OF CABLES AND BETWEEN CABLES AND CABLE TRAYS TO MAX EXTENT POSSIBLE ON BOTH SURFACES OF THE PENETRATION.
 - HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC. - FS-ONE SEALANT OR CP618 PUTTY STICK OR CP620 FIRE FOAM.
 - *BEARING THE UL CLASSIFICATION MARK

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC. SEALSANT
 *BEARING THE UL CLASSIFICATION MARK

SYSTEM NO. W-J-1088

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F RATING - 1 AND 2 HR (SEE ITEM 3)	F RATING - 1 AND 2 HR (SEE ITEM 3)
T RATING - 0 HR	FT RATING - 0 HR
	FH RATING - 1 AND 2 HR (SEE ITEM 3)
	FTH RATING - 0 HR



1. WALL ASSEMBLY - MIN 3-3/4 IN. (95 MM) THICK REINFORCED LIGHTWEIGHT OR NORMAL WEIGHT (100-150 PCF OR 1600-2400 KG/M3) CONCRETE. WALL MAY ALSO BE CONSTRUCTED OF ANY UL CLASSIFIED CONCRETE BLOCKS*. MAX DIAMETER OF OPENING 10-1/2 IN. (267 MM). SEE CONCRETE BLOCKS (CAZT) CATEGORY IN THE FIRE RESISTANCE DIRECTORY FOR NAMES OF MANUFACTURERS.

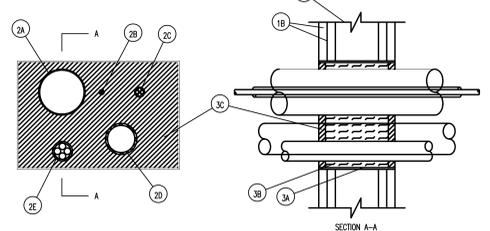
2. THROUGH-PENETRANTS - ONE METALLIC PIPE, CONDUIT OR TUBING TO BE INSTALLED EITHER CONCENTRICALLY OR ECCENTRICALLY WITHIN THE FIRESTOP SYSTEM. PIPE, CONDUIT OR TUBING TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF WALL ASSEMBLY. THE FOLLOWING TYPES AND SIZES OF METALLIC PIPES, CONDUITS OR TUBING MAY BE USED:

- A. STEEL PIPE - NOM 8 IN. (203 MM) DIA (OR SMALLER) SCHEDULE 10 (OR HEAVIER) STEEL PIPE.
- B. IRON PIPE - NOM 8 IN. (203 MM) DIA (OR SMALLER) CAST OR DUCTILE IRON PIPE.
- C. CONDUIT - NOM 4 IN. (102 MM) DIA (OR SMALLER) STEEL ELECTRICAL METALLIC TUBING (EMT) OR 6 IN. DIA STEEL CONDUIT.
- D. COPPER TUBING - NOM 4 IN. (102 MM) DIA (OR SMALLER) TYPE L (OR HEAVIER) COPPER TUBING.
- E. COPPER PIPE - NOM 4 IN. (102 MM) DIA (OR SMALLER) REGULAR (OR HEAVIER) COPPER PIPE.
- F. FLEXIBLE STEEL CONDUIT - NOM 2 IN. (51 MM) DIA (OR SMALLER) FLEXIBLE STEEL CONDUIT.
- SEE FLEXIBLE METAL CONDUIT (DUX2) CATEGORY IN THE ELECTRICAL CONSTRUCTION EQUIPMENT DIRECTORY FOR NAMES OF MANUFACTURERS.

- 3. FIRESTOP SYSTEM THE FIRESTOP SYSTEM SHALL CONSIST OF THE FOLLOWING:
 - A. FILL VOID OR CAVITY MATERIAL* - SEALANT OR PUTTY - FILL MATERIAL TO BE FORCED INTO INTERSTICES OF CABLES, BETWEEN CABLES AND CABLE TRAYS, AROUND EACH PENETRANT AND WHERE OBVIOUS VOIDS ARE OBSERVED TO MAX EXTENT POSSIBLE ON BOTH SURFACES OF THE PENETRATING ITEM.
 - HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC. - FS-ONE SEALANT; CP 618 PUTTY STICK OR CP620 FIRE FOAM.
 - *BEARING THE UL CLASSIFICATION MARK

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC. SEALSANT
 *BEARING THE UL CLASSIFICATION MARK

System No. W-L-8004
 F Rating - 2 Hr
 T Rating - 1/4 Hr



1. WALL ASSEMBLY THE FIRE-RATED GYPSUM WALLBOARD/STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER SPECIFIED IN THE INDIVIDUAL U300 OR U400 SERIES WALL AND PARTITION DESIGNS IN THE UL FIRE RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION FEATURES:

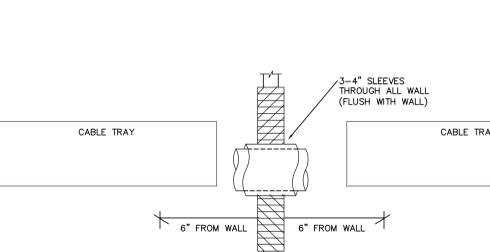
- A. STUDS WALL FRAMING MAY CONSIST OF EITHER WOOD STUDS OR STEEL CHANNEL STUDS. WOOD STUDS TO CONSIST OF NOM 2 BY 4 IN. LUMBER SPACED 16 IN. OC. STEEL STUDS TO BE MIN 2-1/2 IN. WIDE AND SPACED MAX 24 IN. OC. ADDITIONAL FRAMING (NOT SHOWN) MAY BE INSTALLED AROUND THE PERIMETER OF THE OPENING IN LIEU OF THE STEEL WIRE MESH (ITEM 3A).
- B. GYPSUM BOARD* - TWO LAYERS OF NOM 5/8 IN. THICK GYPSUM WALLBOARD, AS SPECIFIED IN THE INDIVIDUAL WALL AND PARTITION DESIGN. MAX AREA OF OPENING IS 96 SQ IN. WITH MAX DIMENSION OF 12 IN. MAX WIDTH OF OPENING IN WOOD STUD WALLS IS LIMITED TO 12 IN.
- 2. THROUGH PENETRANTS THE FOLLOWING TYPES AND SIZES OF PIPES, CONDUITS, TUBING OR CABLES MAY BE USED:
 - A. NOM 3 IN. DIA (OR SMALLER) ELECTRICAL METALLIC TUBING (EMT).
 - B. MAX 25 PAIR - NO. 24 AWG (OR SMALLER) TELEPHONE CABLE WITH POLYVINYL CHLORIDE (PVC) INSULATION AND JACKET.
 - C. MAX 3/8 IN. DIA (OR SMALLER) TYPE NM CABLE WITH PVC INSULATION AND JACKET.
 - D. NOM 2 IN. DIA (OR SMALLER) SCHEDULE 40 PVC PIPE FOR USE IN CLOSED (PROCESS OR SUPPLY) PIPING SYSTEMS ONLY.
 - E. MAX 300 KCMIL (OR SMALLER) POWER CABLE WITH PVC INSULATION AND NYLON JACKET. THE THROUGH PENETRATING ITEMS TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF WALL ASSEMBLY AND LOCATED AS SHOWN IN THE TABLE BELOW:

ITEM NO.	DISTANCE BETWEEN ADJACENT THROUGH OPENING IN.	DISTANCE FROM THROUGH OPENING IN.
2A	7-7/16	1-11/16
2B	7-7/16	1-11/16
2C	7-7/16	1-11/16
2D	7-7/16	1-11/16
2E	7-7/16	1-11/16

3. FIRESTOP SYSTEM THE FIRESTOP SYSTEM SHALL CONSIST OF THE FOLLOWING:
 A. STEEL WIRE MESH - NOM 8 STEEL WIRE MESH HAVING A MIN 1 IN. LAP ALONG THE LONGITUDINAL SEAM. LENGTH OF STEEL WIRE MESH TO BE 4-3/4 IN., CENTERED AND FORMED TO FIT PERIPHERY OF THROUGH OPENING. STEEL WIRE MESH IS NOT REQUIRED WHEN ADDITIONAL FRAMING MEMBERS (ITEM NO. 1A) ARE USED.
 B. PACKING MATERIAL MIN 4.0 IN. THICKNESS OF MIN 3.5 PCF MINERAL WOOL BATT INSULATION FIRMLY PACKED INTO OPENING AS A PERMANENT FORM. PACKING MATERIAL TO BE RECESSED FROM BOTH SURFACES OF WALL AS REQUIRED TO ACCOMMODATE THE REQUIRED THICKNESS OF FILL MATERIAL.
 C. FILL VOID OR CAVITY MATERIAL* - SEALANT MIN 1/2 IN. THICKNESS OF FILL MATERIAL APPLIED WITHIN THE ANNULUS, FLUSH WITH BOTH SURFACES OF WALL.
 HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC. - FS-ONE SEALANT
 *BEARING THE UL CLASSIFICATION MARK

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC. SEALSANT
 *BEARING THE UL CLASSIFICATION MARK

CABLE TRAY WALL INTERSECTION DETAIL



3-4" SLEEVES THROUGH ALL WALL (FLUSH WITH WALL)

6" FROM WALL

BEAUFORT DESIGN BUILD

2 Fire Station Lane
 Seabrook, SC 29940

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 7315 Swansea Lane
 Cornelius, NC 28031

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ARCHITECT / ENGINEER'S SEAL

04/29/2020

