# PIEDMONT TECHNICAL COLLEGE PTC - E BUILDING FIRE DOOR

GREENWOOD, SC

Project No:14016.00

Date:February 14, 2014

### PROJECT DESCRIPTION:

NEW WORK INCLUDES BUT IS NOT LIMITED TO: THE REMOVAL OF AN EXISTING FIRE 1. THE WORK SHALL INCLUDE DEMOLITION OF EXISTING AS DEFINED HEREIN AND THE SHUTTER - TO BE REPLACED WITH NEW RATED WALL CONSTRUCTION AS DEFINED BY THE DRAWINGS; REPAIR AND REPLACEMENT AS NECESSARY OF THE EXISTING WALL AND FLOOR SUBSTRATE AND FINISHES; RUBBER BASE; RELOCATION AND RECONFIGURATION OF THE EXISTING LAY-IN CEILING AND RATED CEILINGS AND

THE CONTRACTOR SHALL ACKNOWLEDGE AND RESPECT THE CAMPUS WORKING ENVIRONMENT. ALL PERSONNEL WILL BE SUBJECT TO ACCESS RULES AND PROCEDURES OF THE SCHOOL AND WILL NOT FRATERNIZE WITH THE STUDENTS. LIMITS TO ALL WORKERS. THE SCHOOL RESERVES THE RIGHT TO RECOMMEND REMOVAL OR TERMINATION OF ANY WORKER WHO VIOLATES THESE CONDITIONS CONTRACTOR TO CHECK IN AND OUT WITH FACILITIES FOR NAME TAG DAILY. CONSTRUCTION SUPERINTENDENT MUST BE PRESENT DURING CONSTRUCTION ACTIVITIES. PIEDMONT TECHNICAL COLLEGE IS A TOBACCO FREE CAMPUS.

AND CONFIRMATION OF BIDS. THE DATE OF COMMENCEMENT SHALL BE ESTABLISHED BY A NOTICE TO PROCEED. THE CONTRACTOR SHOULD PROCEED WITH SUBMITTALS AND EQUIPMENT ORDERING PROCESS IMMEDIATELY UPON

NTERNATIONAL ENERGY CONSERVATION CODE INTERNATIONAL FIRE CODE NATIONAL ELECTRICAL CODE ICC/ANSI 117.1 - ACCESSIBILITY CODE

NEW CONSTRUCTION IS IN AN EXISTING NON-SPRINKLERED, TWO STORY 37,693 SF

LARGE ADDITION AND RENOVATION, INCLUDING THE ADDITION OF THE CURRENT SCOPE WAS CONSTRUCTED IN 1998 AS TYPE IV CONSTRUCTION. PER IBC 2012 THE OCCUPANCY GROUP IS CLASSIFIED AS (B) BUSINESS AND THE OCCUPANCY LOAD IS 378.

### DRAWING INDEX:

A1.00 PROJECT SCOPE, ARCHITECTURAL PLANS AND LEGENDS E1.00 FIRE ALARM SYSTEM PLAN, NOTES AND LEGEND

Banks Engineering Inc. 412 Main Street, Suite 201

(864) 223-1656

Greenwood, SC. 29646

Piedmont Technical College 620 North Emerald Road Greenwood, SC 29646 (864) 941-8331

McMillan Pazdan Smith Architecture 200 E. Broad Street, Suite 300 Greenville, SC 29601 (864) 242-2033

CONSTRUCTION OF THAT AS DEFINED HEREIN AND ALL REQUIRED CONSTRUCTION TO COORDINATE WITH COLLEGE TO DETERMINE AVAILABLE TIMES AND ACCESS. AFTER HOURS ACCESS SHOULD BE COORDINATED WITH CAMPUS POLICE (864) 941-8000. 2. COORDINATE SPACE REQUIREMENTS AND INSTALLATION OF THE WORK WHICH ARE INDICATED DIAGRAMMATICALLY ON THE DRAWINGS, CONCEAL PIPES, DUCTS, WIRING WITHIN THE CONSTRUCTION WHERE FEASIBLE. COORDINATE THE WORK OF EACH TRADE TO ENSURE A COMPLETE PROJECT. FIELD MEASURE EXISTING CONDITIONS PRIOR TO FABRICATION OF THE WORK. NOTIFY THE ARCHITECT OF ANY CONDITIONS WHICH WILL NOT PERMIT THE PROPER INSTALLATION OF THE WORK. MODIFY THE EXISTING

3. CUTTING AND PATCHING: CUT MATERIALS USING KNIFE, SAW OR DRILL. RESTORE WORK WITH NEW PRODUCTS OF LIKE MATERIAL. FIT WORK TIGHT TO ADJACENT ELEMENTS. MAINTAIN INTEGRITY OF WALL, CEILING OR FLOOR CONSTRUCTION AND COMPLETELY SEAL VOIDS. FIT WORK TIGHT TO PIPES, SLEEVES, DUCTS, CONDUITS AND OTHER PENETRATIONS THROUGH SURFACES. REFINISH SURFACES TO MATCH ADJACENT FINISHES

CONDITIONS AND SYSTEMS AS REQUIRED TO PROPERLY ACCOMMODATE THE NEW WORK.

PROVIDE ALL OTHER MATERIALS AND EQUIPMENT NOT SPECIFICALLY NOTED BUT

4. PREPARE SUBSTRATE SURFACES PRIOR TO APPLYING NEXT MATERIAL OR SUBSTANCE, APPLY MANUFACTURER REQUIRED OR RECOMMENDED SUBSTRATE PRIMER SEALER OR CONDITIONER PRIOR TO APPLYING NEW MATERIAL OR SUBSTANCE IN

5. PROTECT EXISTING PROPERTY AND INSTALLED WORK FROM DAMAGE. 6. PROTECT THE WORK AND EXISTING PROPERTY AND OWNER FROM UNAUTHORIZED ENTRY, VANDALISM AND THEFT.

7. PROGRESS CLEANING AND WASTE REMOVAL SHALL BE ACCOMPLISHED ON A DAILY BASIS. COLLECT AND MAINTAIN AREAS FREE OF WASTE MATERIAL, DEBRIS AND RUBBISH. MAINTAIN SITE IN A CLEAN AND ORDERLY CONDITION. 8. FINAL CLEANING SHALL BE EXECUTED PRIOR TO FINAL INSPECTION. CLEAN INTERIOR

AND EXTERIOR SURFACES EXPOSED TO VIEW. CLEAN CONSTRUCTION DEBRIS FROM THE

SITE. REMOVE WASTE AND SURPLUS MATERIALS, RUBBISH AND CONSTRUCTION FACILITIES

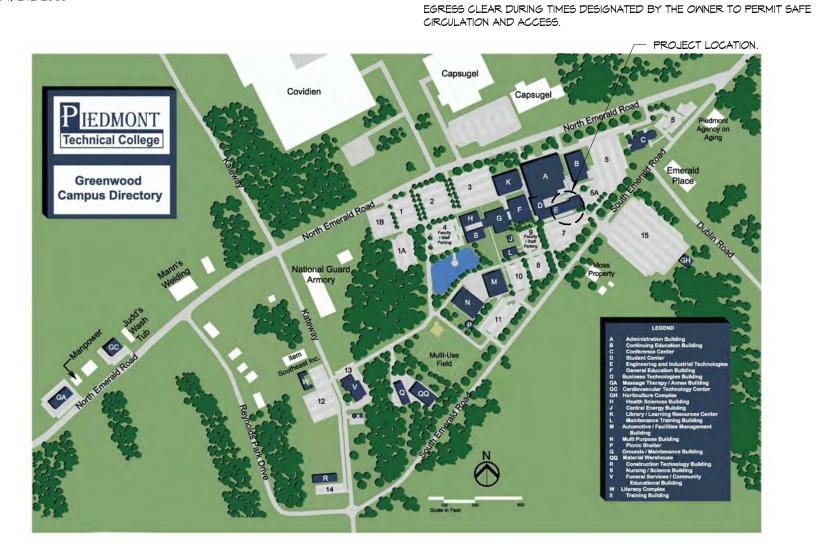
9. ADJUSTING SHALL BE ACCOMPLISHED FOR ALL INSTALLED WORK TO ENSURE SMOOTH AND UNHINDERED OPERATION.

10. ALL WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH APPLICABLE 11. CONFORM TO APPLICABLE CODE FOR DEMOLITION, SAFETY OF ADJACENT

STRUCTURES, DUST CONTROL, SERVICE UTILITIES AND DISCOVERED HAZARDS. PROVIDE, ERECT AND MAINTAIN TEMPORARY BARRIERS AND SECURITY DEVICES. ERECT AND MAINTAIN. ERECT AND MAINTAIN TEMPORARY PARTITIONS TO PREVENT SPREAD OF DUST, ODORS AND NOISE. PROTECT EXISTING ITEMS WHICH ARE NOT INDICATED TO BE

12. CONTRACTOR TO SUBMIT PRODUCT DATA AND SAMPLES FOR SPECIFIED PRODUCTS FOR OWNER REVIEW AND APPROVAL.

13. THE CONTRACTOR WILL COORDINATE ALL REQUIRED IBC CHAPTER ONE SPECIAL INSPECTIONS WITH THE OWNER'S SELECTED INSPECTION AGENCY. 14. THE BUILDING WILL BE OCCUPIED DURING THE COURSE OF THE CONSTRUCTION. MAINTAIN THE EXISTING BUILDING IN A WEATHER TIGHT CONDITION THROUGHOUT CONSTRUCTION. TAKE PRECAUTIONS NECESSARY TO PROTECT THE BUILDING OCCUPANTS DURING THE CONSTRUCTION PERIOD. KEEP ACCESS TO ELEVATOR AND



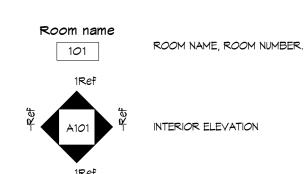
# **VICINITY MAP**

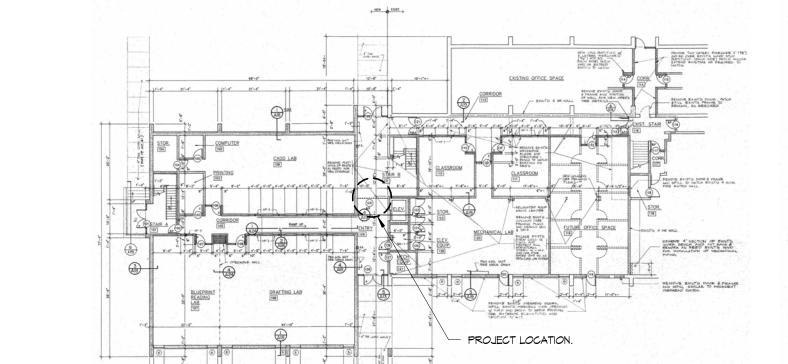
# RCP LEGEND

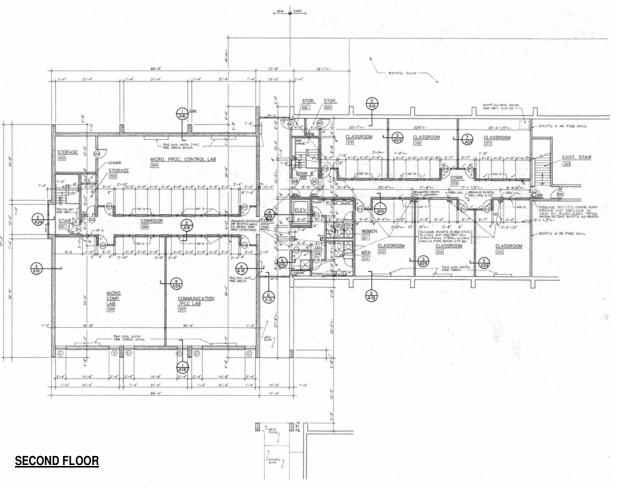
EXISTING 2x4 LAY-IN CEILING TILE AND GRID.

EXISTING WALL CONSTRUCTION TO REMAIN. --- EXISTING ONE (1) HOUR RATED CONSTRUCTION. - NEW ONE (1) HOUR RATED CONSTRUCTION. ---- EXISTING TWO (2) HOUR RATED CONSTRUCTION.

### SYMBOLS LEGEND







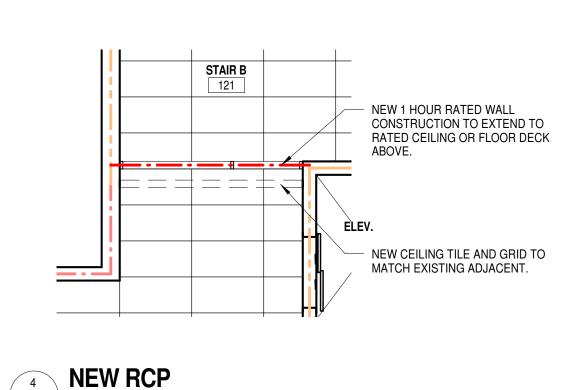
**E BUILDING KEY PLANS** 

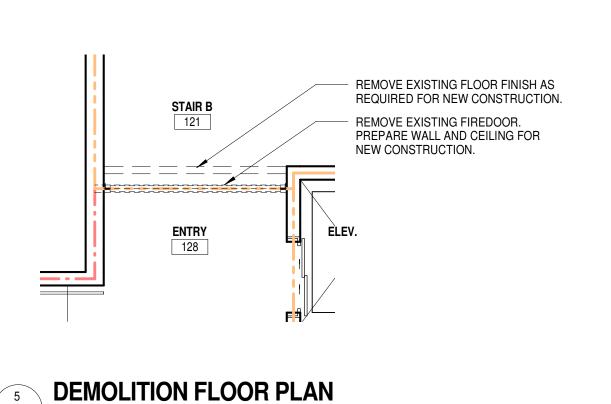
**DEMOLITION RCP** 

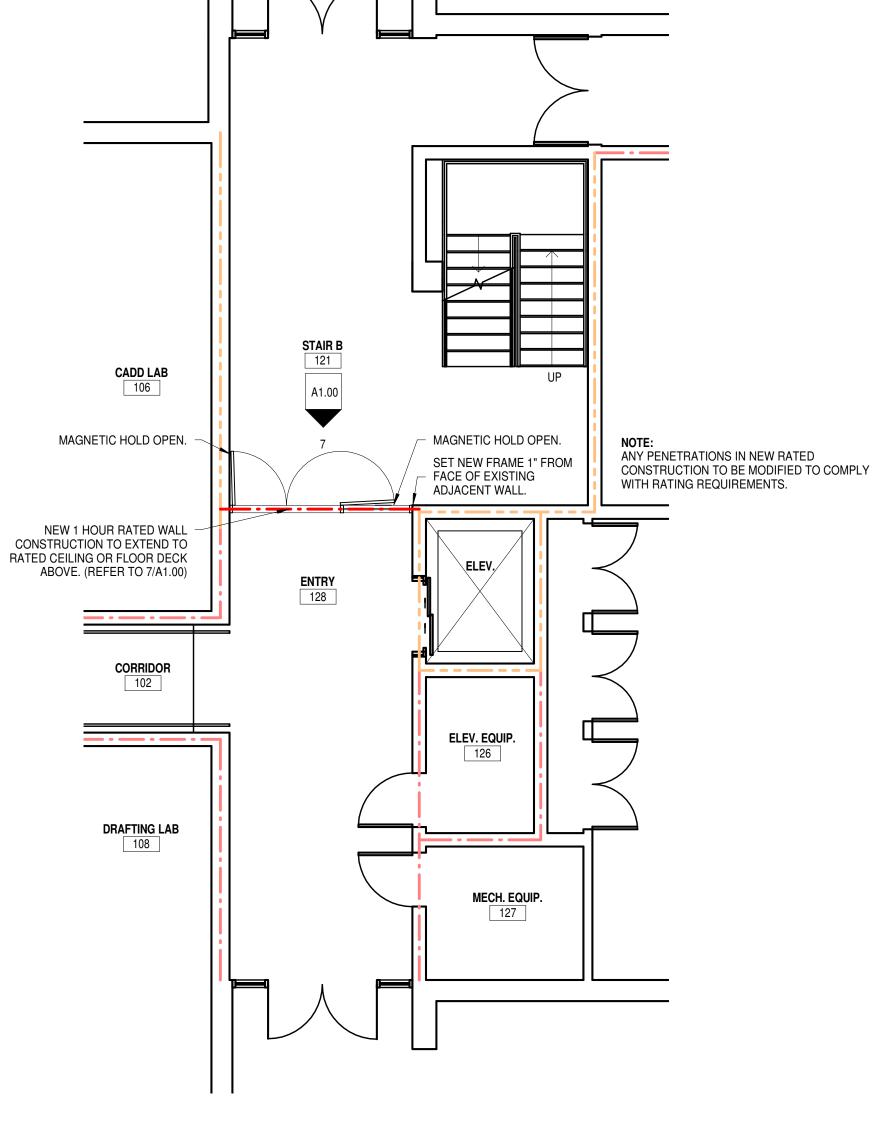
A1.00 3/16" = 1'-0"

A1.00 3/16" = 1'-0"

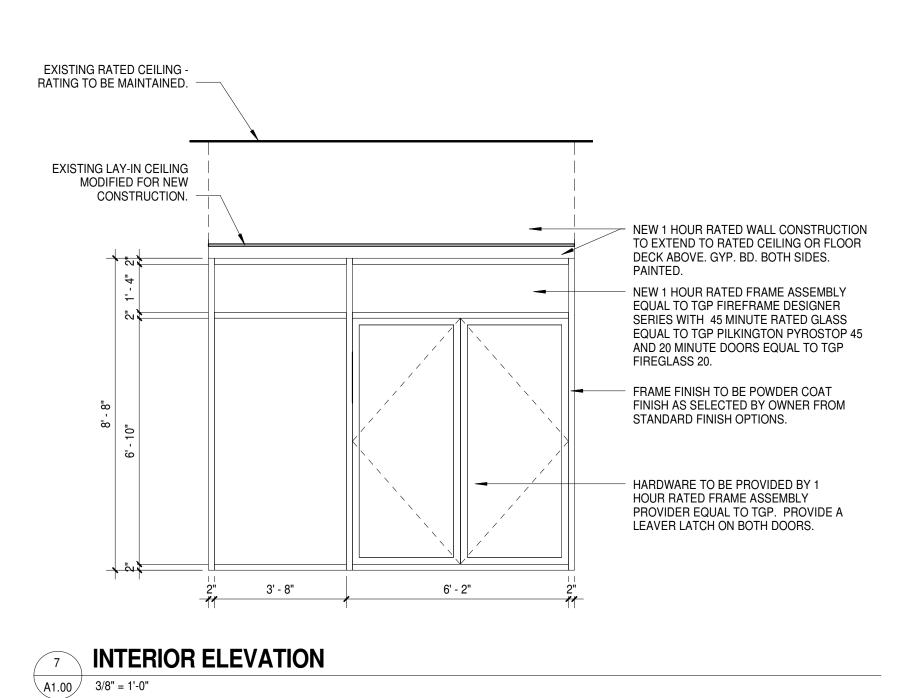
## REMOVE EXISTING CEILING AS REQUIRED AND PREPARE WALL AND STAIR B CEILING FOR NEW CONSTRUCTION. PATCH AND REPAIR RATED **CEILING AS REQUIRED TO** MAINTAIN RATING.

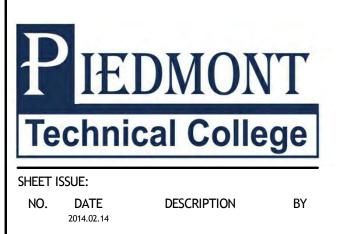






6 NEW FLOOR PLAN





PRINCIPAL IN CHARGE: PROJECT ARCHITECT: SHEET TITLE: PROJECT SCOPE, ARCHITECTURAL PLANS

> PROJ. NO. 14016.00

AND LEGENDS

CONDUIT INSTALLED CONCEALED

PANELBOARD 208YI2OV. 3P, 4W.

NEW SMOKE DETECTOR, CEILING MTD., PHOTOELECTRIC ADDRESSABLE TYPE

FIRE ALARM CONTROL PANEL (EXISTING)

NEW MAGNETIC DOOR HOLDER, WALL MOUNTED, 24V.

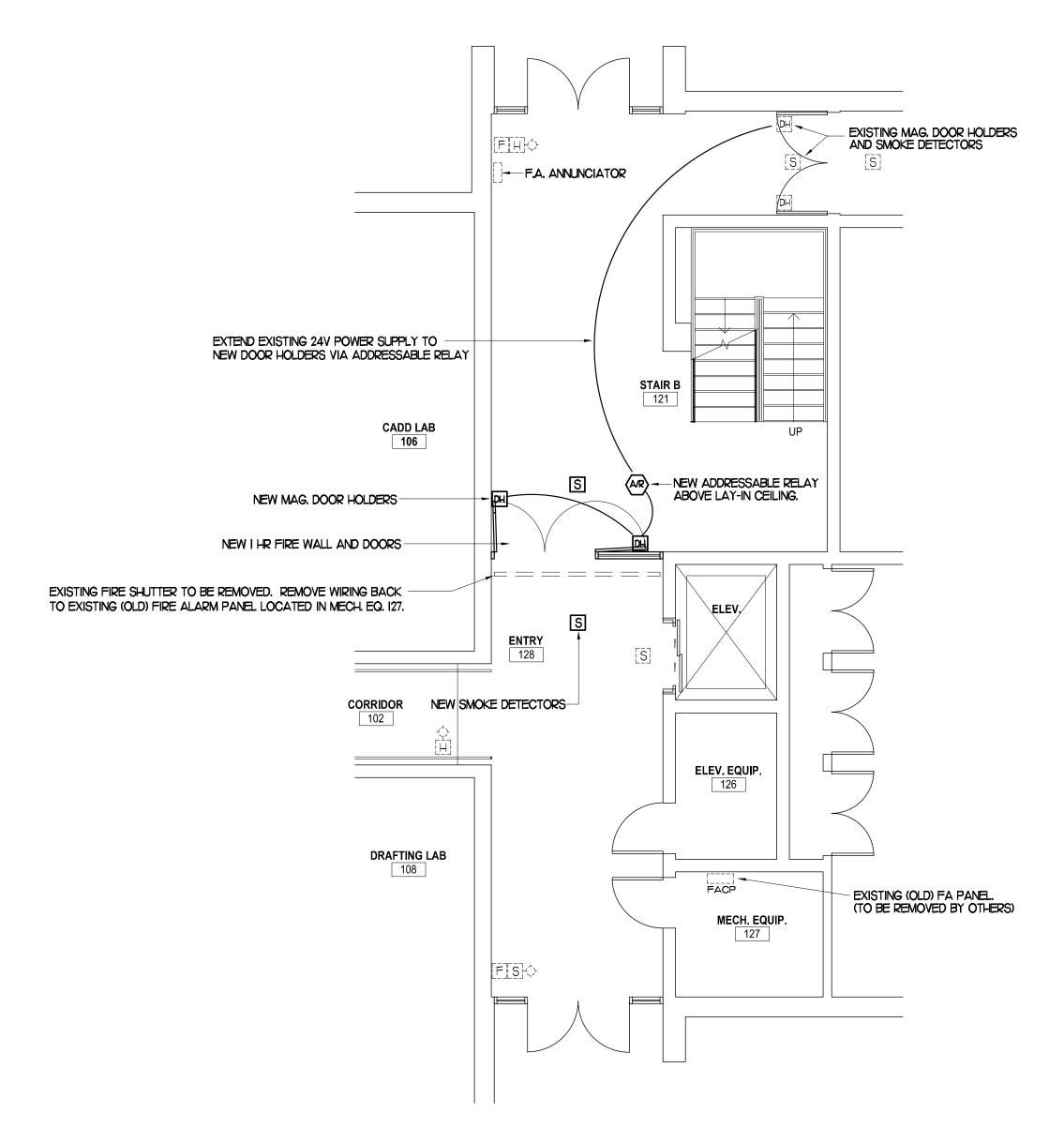
NEW FIRE ALARM SYSTEM ADDRESSABLE RELAY

FIRE ALARM PULL STATION (EXISTING)

FIRE ALARM HORN / STROBE (EXISTING)

MAGNETIC DOOR HOLDER, WALL MOUNTED, 24V.

SMOKE DETECTOR (EXISTING)



I. INSTALL MAGNETIC DOOR HOLDERS AT THE TOP OF THE DOORS, APPROX. 6' 8" AFF.

3. CEILING MOUNT NEW SMOKE DETECTORS 3 FT. FROM NEW DOOR ON EACH SIDE.

FURNISHED WITH THE STOREFRONT...

FIRE ALARM PLAN

3/16" = 1' O"

PAINT RACEWAY TO MATCH EXISTING WALL FINISH.

COORDINATE EXACT MOUNTING HEIGHT AND LOCATIONS WITH THE G.C. BASED ON THE PARTICULAR DOORS AND HARDWARE USED. LEFT SIDE DOOR HOLDER WILL BE SURFACE

2. DROP WIRING TO THE DOOR HOLDERS FROM THE CEILING IN SURFACE METALLIC RACEWAY.

WALL MOUNTED, AND THE LEFT SIDE DOOR HOLDER WILL MOUNT ON A PLATE TO BE

4. ANY PENETRATIONS OF THE NEW FIRE WALL SHALL BE FIRE STOPPED TO I HR. RATING.

CURRENTLY THERE IS A PROJECT UNDERWAY TO REPLACE THE FIRE ALARM SYSTEM THROUGHOUT BUILDING "E". (S.C. PROJECT NO. H59-N773-JM) THE FIRE ALARM DEVICES SHOWN AS EXISTING ASSUME COMPLETION OF THAT PROJECT. ALL NEW WORK INDICATED HEREIN MUST BE COMPATIBLE WITH THE NEW SYSTEM, INCLUDING WIRING, DEVICES, AND SOFTWARE, AND ALL NEW WORK MUST BE COORDINATED WITH THE CONTRACTOR PERFORMING THE FIRE ALARM

FOR INFORMATION REGARDING THE NEW FIRE ALARM SYSTEM PROJECT CONTACT E INTERNATIONAL SECURITY LLC, MR. ANDREW EARLEY, TEL: 843-305-0577.

3. Fill, Void or Cavity Material\* — Sealant — Min 5/8 in. (16 mm) thickness of fill material applied within annulus, flush with both

\*Bearing the UL Classification Mark

and shall include the following construction features:

opening is 14-1/2 in. (368 mm) for wood stud walls.

bead of fill material shall be applied at the gypsum wallboard/through penetrant interface on both surfaces of wall. SPECIFIED TECHNOLOGIES INC - SpecSeal LC 150 Sealant, SpecSeal LE600 Sealant

Specified Technologies Inc. 200 Evans Way Somerville, NJ 08876
Reproduced courtesy of Underwriters Laboratories, Inc. STI (800) 992-1180 • (908) 526-8000 • FAX (908) 231-8415 • E-Mail:techserv@stifirestop.com • Website:www.stifirestop.com

GENERAL NOTES:

- I. ALL NEW WORK SHALL MEET THE REQUIREMENTS OF NFPA 72, THE 2012 INTERNATIONAL FIRE CODE, 2012 INTERNATIONAL BUILDING CODE, ANSI AII7, AND OTHER APPLICABLE CODES. 2. SYSTEM WIRING SHALL BE RUN IN METALLIC CONDUIT. USE E.M.T. IN DRY LOCATIONS NOT SUBJECT TO DAMAGE. WHERE EXPOSED, USE SURFACE METALLIC RACEWAY, WIREMOLD V500 OR EQUAL. SINGLE CONDUCTORS SHALL BE STRANDED COPPER, THWN-THHN. SHIELDED OR TWISTED PAIR CABLES SHALL BE PER THE SYSTEM MANUFACTURER'S REQUIREMENTS, BY BELDEN OR APPROVED EQUAL.
- 3. THESE FIRE ALARM SYSTEM ADDITIONS PROVIDE FOR MONITORING AND CONTROL OF A NEW FIRE DOOR. THE DOOR WILL NORMALLY BE HELD OPEN BY MAGNETIC DOOR HOLDERS, WHICH WILL RELEASE UPON UTILITY POWER FAILURE OR DETECTION OF SMOKE BY THE NEW SMOKE DETECTORS LOCATED ON EITHER SIDE OF THE NEW DOOR, OR UPON A GENERAL SYSTEM ALARM. IN ADDITION, AN ALARM CONDITION ON EITHER OF THESE TWO NEW SMOKE DETECTORS SHALL ALSO SOUND A GENERAL EVACUATION ALARM.
- 4. NEW FIRE ALARM DEVICES SHALL BE AS FOLLOWS TO MATCH THOSE USED IN THE CURRENT FIRE ALARM REPLACEMENT PROJECT.

SMOKE DETECTORS: EDWARDS SIGA-PS (2), PHOTOELECTRIC, INTELLIGENT TYPE. DOOR HOLDERS: MAGLOCK #DHS2412OC (2) ADDRESSABLE RELAY: EDWARDS SIGA-CR (I)

- 5. PROVIDE ALL NECESSARY ACCESSORIES FOR A COMPLETE AND OPERATIONAL SYSTEM PER NFPA 72 REQUIREMENTS.
- 6. SYSTEM STARTUP, PROGRAMMING, AND TESTING SHALL BE BY AN AUTHORIZED MANUFACTURER'S
- 7. PROVIDE SITE SPECIFIC VENDOR DRAWINGS, EQUIPMENT SPECIFICATIONS, WIRING DIAGRAMS, AND CALCULATIONS AS REQUIRED FOR SYSTEM INSTALLATION, MAINTENANCE, AND REVIEW BY CODE OFFICIALS.
- 8. CONDUITS SHALL NOT BE SUPPORTED FROM THE LAY-IN CEILING GRID. INSTEAD, SUPPORT THEM INDEPENDENTLY, DIRECTLY FROM THE BUILDING STRUCTURE.
- 9. WHERE SMOKE DETECTORS OR OTHER EMERGENCY COMPONENTS (IP=1.5) ARE CEILING MOUNTED, DO NOT SUPPORT THEM SOLELY FROM THE CEILING SYSTEM. PROVIDE A RECESSED METALLIC BOX IN THE CEILING FOR MOUNTING THE DEVICE, AND SUPPORT THE BOX INDEPENDENTLY OF THE CEILING USING STRUT AND MIN. TWO HANGER WIRES.
- IO. THE CONTRACTOR SHALL INSTRUCT THE OWNER IN OPERATION OF THE SYSTEM. ADDITIONALLY, IF REQUIRED HE SHALL TEST AND DEMONSTRATE PROPER OPERATION OF THE SYSTEM TO CODE OFFICIALS.

System No. W-L-1090

F Ratings — 1 and 2 Hr (See Item 1)

T Rating — 0 Hr

Section A-A

. Wall Assembly — The 1 or 2 hr fire rated gypsum board/stud wall assembly shall be constructed of the materials and in the

clearance is present between the penetrating item and the framing in all four sides.

of wall assembly. The following types and sizes of metallic pipes, conduit or tubing may be used:

conduit or nom 1 in. (25 mm) diam (or smaller) flexible steel conduit.

A. Steel Pipe - Nom 24 in. (610 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.

B. Iron Pipe - Nom 24 in. (610 mm) diam (or smaller) cast or ductile iron pipe.

manner described in the individual U300, U400 or V400 Series Wall and Partition Design in the UL Fire Resistance Directory

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

B. Gypsum Board\* — 5/8 in. (16 mm) thick, 4 ft (1.2 m) wide with square or tapered edges. The gypsum board type, thickness,

Through Penetrant — One metallic pipe, conduit or tubing to be installed either concentrically or eccentrically within the firestop system. The annular space between pipe, conduit or tubing and periphery of opening is dependent upon the diam of the pipe, conduit or tubing. If the nom diam of the pipe, conduit or tubing is 4 in. or less, the annular space between pipe, conduit or tubing and periphery of opening shall be min 0 in. (point contact) to max 1-1/2 in. (38 mm). If the nom diam of the pipe, conduit or tubing is greater than 4 in. (102 mm) the annular space between pipe, conduit or tubing and periphery of opening shall be min 0 in. (point contact) to max 5/8 in. (16 mm). Pipe, conduit or tubing to be rigidly supported on both sides

number of layers, fastener type and sheet orientation shall be as specified in the individual U300, U400 or V400 Series Design in the UL Fire Resistance Directory. Max diam of opening is 24-5/8 in. (625 mm) for steel stud walls. Max diam of

The hourly F rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed.

C. Conduit - Nom 4 in. (102 mm) diam (or smaller) steel electrical metallic tubing, nom 6 in. (152 mm) diam (or smaller) steel

surfaces of wall. At the point contact location between through penetrant and gypsum wallboard, a min 3/8 in. (10 mm) diam

by 102 mm) lumber spaced 16 in. (406 mm) OC. Steel studs to be min 3-1/2 in. (89 mm) wide and spaced max 24 in. OC. When steel studs are used and the diam of opening exceeds the width of stud cavity, the opening shall be framed on all sides using lengths of steel stud installed between the vertical studs and screw—attached to the steel studs at each

end. The framed opening in the wall shall be 4 to 6 in. (102 to 152 mm) wider and 4 to 6 in. (102 to 152 mm) higher than

the diam of the penetrating item such that, when the penetrating item is installed in the opening, a 2 to 3 in. (51 to 76 mm)

FIRE

BANKS

412 MAIN ST. SUITE 201

TEL. 864-223-1656

ENGINEERING INC.

GREENWOOD, SOUTH CAROLINA, 29646

**E-MAIL:** rbanks@banks-eng.com



SHEET ISSUE: NO. DATE DESCRIPTION

PRINCIPAL IN CHARGE: PROJECT ARCHITECT:

DRAWN BY:

SHEET TITLE: FIRE ALARM SYSTEM PLAN NOTES, AND LEGEND

SHEET NO.

PROJ. NO. 14016.00