Fire Marshal Division

December 20, 2018

Mr. Brett Strickland

Re: Day Hall Renovation
200 Day Dorm Road
Lillington, NC 27546

Application Number BCOM1812-0007

Mr. Strickland,

Thank you for submitting the plans for the building alterations. The plans have been carefully reviewed by a qualified code enforcement official to examine for compliance with the North Carolina Fire Prevention Code and all other fire protection regulatory documents. There are some items that were found during the plan review process that need to be addressed before a final inspection of the facility can be given. These items are outlined and described below.

- **901.2.1 State of Compliance.**
  - Before requesting final approval of the installation, where required by the fire code official, the installing contactor shall furnish a written statement to the fire code official that the subject fire protection system has been installed in accordance with the manufacture's specifications and the appropriate installation standard. Any deviations from the design standards shall be noted and copies of the approvals for such deviations shall be attached to the written statement.
  - All work shall be performed in accordance with NFPA 13 and the NCSFC.

- **906.1 Fire Extinguishers**

  - Minimum of (1) 2A10:BC fire extinguisher shall be installed not to exceed 75' distance of travel.
  - All Fire extinguishers shall be properly mounted and tagged by a fire extinguisher company.

- **1006.1 Means of Egress Illumination**
  - The means of egress, including the exit discharge, shall be illuminated at all time the building space is served by the means of egress is occupied.

    - Means of egress consist of three separate and distinct parts: the exit access, the exit and the exit discharge.
  - The means of egress illumination shall not be less than 1 foot-candle at the walking surface.

- **Penetrations**
  - All penetrations in fire rated construction must be UL listed and inspected.

- **Smoke Detectors**
  - A smoke detector shall be located in each office space. This may occur by relocating or adding additional detectors as required for coverage.
  - The detectors shall be compatible with existing detectors and alarm system.
  - All equipment and work shall be conducted per NFPA 72.
  - A certification of completion, from the alarm company and an acceptance test shall be provide at final inspection.

- **Notes**
  - **All additions to existing systems shall properly communicate to existing fire panel.**
  - **A fire alarm construction permit is required.**
  - **Please schedule all inspections through the Fire Marshal's Office. 910-984-4003.**

Thank you again for submitting the plans for the building alterations. Please review the plans and adhere to any notes and alterations that were made in addition to the original drawings. If you have any questions, please do not hesitate to call this office.

Again, thank you and we look forward to working with you during the construction period!

Sincerely,

D. Banks Wallace

D. Banks Wallace
Chief Deputy Fire Marshal

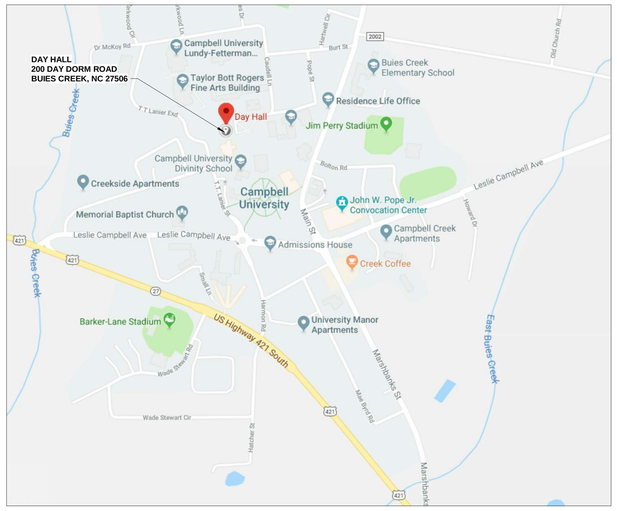
CAMPBELL UNIVERSITY DAY HALL RENOVATIONS

200 Day Dorm Road
Buies Creek, NC 27506

PERMIT SET - 09.11.2018

Reviewed For Code Compliance By:
D. Banks Wallace
Chief Deputy Fire Marshal
12/20/2018 2:05:10 PM

VICINITY MAP



OWNER	ARCHITECT	STRUCTURAL	PLUMBING	MECHANICAL	ELECTRICAL
Campbell University	LITTLE	LITTLE	RMF Engineering	RMF Engineering	RMF Engineering
143 Main Street Buies Creek, NC 27506 (919) 893-1200	410 Blackwell Street Durham, NC 27701 (919) 474-2500	410 Blackwell Street Durham, NC 27701 (919) 474-2500	8081 Arco Corporate Drive, Suite 300 Raleigh, NC 27616 (919) 941-9876	8081 Arco Corporate Drive, Suite 330 Raleigh, NC 27617 (919) 941-9876	8081 Arco Corporate Drive, Suite 300 Raleigh, NC 27617 (919) 941-9876
Jim Roberts	**Shane Webster, AIA**	**David Blankfard, PE**	**Blake Smith, PE**	**Blake Smith, PE**	**Anastasiya Smurygina, PE**

LITTLE
DIVERSIFIED ARCHITECTURAL CONSULTING
5815 Westpark Drive
Charlotte, NC 28217
T: 704.525.6350
www.littleonline.com

LITTLE DIVERSIFIED ARCHITECTURAL CONSULTING, INC. REGISTERED ARCHITECTURAL CORPORATION IN THE STATE OF NORTH CAROLINA CERT. NO. 50033 CHARLOTTE, N.C.

SHANE WEBSTER REGISTERED ARCHITECT 6452 NORTH CAROLINA RALEIGH, N.C.

09/11/2018

ISSUE FOR
PERMIT SET

ISSUE DATE
09.11.2018

REVISIONS

NO.	REASON	DATE
1	AV Revisions by Owner and Quality Control	08.20.18
2	Revisions by Owner	09.11.18

PROJECT TEAM
PRINCIPAL IN CHARGE
ROB KLINEDINST, AIA
PROJECT MANAGER
SHANE WEBSTER, AIA
DESIGN TEAM
LITTLE

PROJECT NAME
CAMPBELL UNIVERSITY
DAY HALL RENOVATIONS

PROJECT NO.
513.9660.00

SHEET TITLE
COVER SHEET

SHEET NUMBER
CS

C:\Users\rstone.CORP\Documents\513966000-Day-Hall-A-v18_rstone942QF.rvt
9/12/2018 9:51:13 AM

ABBREVIATIONS

Abbr.	Abbreviated Phrase
ACT	ACOUSTIC CEILING TILE
ADA	AMERICANS WITH DISABILITIES ACT
ADJ	ADJUSTABLE
AED	AUTOMATED EXTERNAL DEFIBRILLATOR
AFF	ABOVE FINISH FLOOR
AL	ALUMINUM
ALT	ALTERNATE
AMC	ACOUSTICAL METAL CEILING
APPROX	APPROXIMATE
ARCH	ARCHITECT(URAL)
AWC	ACOUSTICAL WOOD CEILING
BBD	BULLETIN BOARD
BD	BOARD
BO	BOTTOM OF
BOT	BOTTOM
C/L, CL	CENTERLINE
CAB	CABINET
CC	CUBICLE CURTAIN
CIR	CIRCLE
CLG	CEILING
CLOS	CLOSET
CLR	CLEAR(ANCE)
COL	COLUMN
CONC	CONCRETE
CONST	CONSTRUCTION
CONT	CONTINUOUS / CONTINUE
CONTR	CONTRACTOR
COORD	COORDINATE
CPT	CARPET
CRB	COVED RUBBER BASE
CT	CERAMIC OR PORCELAIN TILE
CTR	CENTER
D	DRYER
DBL	DOUBLE
DEG	DEGREE
DEMO	DEMOLISH / DEMOLITION
DET, DTL	DETAIL
DIA	DIAMETER
DIM	DIMENSION
DR	DOOR
DS	DOWNSPOUT
DWG	DRAWING(S)
DWN	DOWN
DWR	DRAWER
EA	EACH
EL	ELEVATION
ELEC	ELECTRICAL
ELEV	ELEVATOR
EOS	EDGE OF SLAB
EP	EPOXY FLOORING
EQ	EQUAL(LY)
EQPT	EQUIPMENT
EW	EACH WAY
EWC	ELECTRIC WATER COOLER
EXIST	EXISTING
EXP	EXPANSION
EXT	EXTERIOR
FAAP	FIRE ALARM ANNUNCIATOR PANEL
FBO	FURNISHED BY OTHERS
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FF	FINISH FLOOR
FIN	FINISH(ED)
FLR	FLOOR(ING)
FLUOR	FLUORESCENT
FO	FACE OF
FOB	FACE OF BRICK
FOG	FACE OF GLASS
FOS	FACE OF SHEATHING
FR	FIRE RETARDANT TREATED
FT	FOOT, FEET
FURR	FURR(ED), (ING)
FUT	FUTURE
FWC	FABRIC WALL COVERING
FWP	FABRIC WRAPPED PANEL
GA	GAUGE
GALV	GALVANIZED
GB	GLASS BOARD
GC	GENERAL CONTRACTOR
GL	GLASS, GLAZING
GR	GROUT
GRAN	GRANITE
GWB	GYPSUM WALL BOARD
GYP	GYPSUM
HC	HOLLOW CORE
HD	HAND DRYER
HDR	HEADER
HDW	HARDWARE
HGT	HEIGHT
HORIZ	HORIZONTAL(LY)
HR	HOUR
HVAC	HEATING, VENTILATION, AND AIR CONDITIONING
HWD	HARDWOOD
IBC	INTERNATIONAL BUILDING CODE
ID	INSIDE DIAMETER
INCL	INCLUDE(D), (ING)
INSUL	INSULATE(D), (ING)
INT	INTERIOR
JAN	JANITOR'S CLOSET
JT	JOINT
KIT	KITCHEN
KPL	KICK PLATE
L	LENGTH
LAM	LAMINATE(D)
LBL	LABEL
LCKR	LOCKER
LIN	LINOLEUM
LT	LIGHT
LVL	LAMINATED VENEER LUMBER
LVT	LUXURY VINYL TILE
MATL	MATERIAL(S)
MAX	MAXIMUM
MB	MARKER BOARD
MECH	MECHANICAL
MFR	MANUFACTURER(R)
MIN	MINIMUM
MISC	MISCELLANEOUS
MP	METAL PANEL
MTD	MOUNTED
MTL	METAL
MULL	MULLION
MWK	MILLWORK
N	NORTH
NIC	NOT IN CONTRACT
NO, #	NUMBER
NR	NOISE REDUCTION
NRC	NOISE REDUCTION COEFFICIENT
NTS	NOT TO SCALE
OC	ON CENTER
OFF	OFFICE
OH	OPPOSITE HAND
OPNG	OPENING
PED	PEDESTAL, PEDESTRIAN, PEDIATRIC
PERF	PERFORATE(D)
PFB	PREFABRICATE(D)
PFN	PREFINISH(ED)
PL, PLAM	PLASTIC LAMINATE
PLAS	PLASTER, PLASTIC
PLWD	PLYWOOD
PNL	PANEL
PNT	PAINT(ED)
PR	PAIR
PT	PRESSURE TREAT(ED)
PTN	PARTITION
QT	QUARRY TILE, QUART
RB	RUBBER BASE
RBT	RUBBER TILE
REC	RECEPTACLE
REF	REFERENCE, REFER
REFR	REFRIGERATOR
REM	REMOVE
REQ'D	REQUIRED
RM	ROOM
RS	RESILIENT
S&R	SHELF AND ROD
SCW	SOLID CORE WOOD
SECT	SECTION
SF	SQUARE FEET
SFRM	SPRAYED FIRE RESISTIVE MATERIAL
SHR	SHOWER
SIM	SIMILAR
SPEC	SPECIFICATION(S)
SS	STAINLESS STEEL
SSM	SOLID SURFACE MATERIAL
ST	STONE
STD	STANDARD
STOR	STORAGE
SUSP	SUSPENDED
SUSP CLG	SUSPENDED CEILING
SV	SHEET VINYL
SYS	SYSTEM
TEMP	TEMPERED, TEMPORARY
TME	TO MATCH EXISTING
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
VB	VINYL BASE
VCT	VINYL COMPOSITE TILE
VERT	VERTICAL(LY)
VIF	VERIFY IN FIELD
VIN	VINYL
VT	VINYL TILE
VWC	VINYL WALL COVERING
W	WIDTH
W/	WITH
W/O	WITHOUT
WB	WOOD BASE
WC	WATER CLOSET
WD	WOOD
WGT	WEIGHT
WIN	WINDOW
WTW	WALL TO WALL

GENERAL NOTES

A. FIELD VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS.
B. WHERE NEW PARTITION ALIGNS WITH THE FACE OF AN EXISTING FURRED COLUMN OR PARTITION, REMOVE CORNER BEAD, TAPE AND SPACKLE NEW PARTITION TO EXISTING GYPSUM BOARD.
C. ALL EXISTING WALL SURFACES AND PARTITIONS TO REMAIN SHALL BE PATCHED, SPACKLED AND SANDED SMOOTH SO AS NOT TO LEAVE ANY EVIDENCE OF DEMOLITION OR REPAIR WORK. PREPARE SURFACES FOR NEW FINISHES AS REQUIRED.
D. PROVIDE SEMI-RECESSED FIRE EXTINGUISHER CABINETS, SMOKE DETECTORS, AND ALL OTHER LIFE SAFETY DEVICES AS INDICATED ON DRAWINGS. DO NOT PLACE IN FIRE RATED PARTITIONS.
E. ALL WORK SHALL CONFORM TO THE CONTRACT DOCUMENTS WHICH INCLUDE THE OWNER/CONTRACTOR AGREEMENT, THE DRAWINGS AND ALL ADDENDA AND MODIFICATIONS ISSUED BY THE ARCHITECT.
F. THE CONTRACTOR SHALL REVIEW ALL DOCUMENTS AND VERIFY ALL DIMENSIONS AND FIELD CONDITIONS AND SHALL CONFIRM THAT WORK IS BUILDABLE AS SHOWN. ANY CONFLICTS OR OMISSIONS SHALL BE IMMEDIATELY REPORTED TO THE ARCHITECT FOR CLARIFICATION PRIOR TO THE PERFORMANCE OF ANY WORK IN QUESTION.
G. CONTRACTOR SHALL COORDINATE WITH OWNER THE SCHEDULE FOR ALL TELEPHONE COMPANY AND DATA INSTALLATIONS.
H. "ALIGN" SHALL MEAN TO ACCURATELY LOCATE FINISH FACES IN THE SAME PLANE.
I. CONTRACTOR SHALL COORDINATE AND PROVIDE METAL BACKING PLATES OR SOLID WOOD BLOCKING (FIRE TREATED) IN PARTITIONS AND CEILING FOR ALL MILLWORK, WALL AND CEILING ATTACHED ITEMS AS REQUIRED BY EACH SPECIFIC ITEM.
J. ALL WORK NOTED "BY OTHERS" OR "NIC" SHALL BE PROVIDED BY OWNER OR UNDER SEPARATE CONTRACT.
K. DO NOT SCALE DRAWINGS. WRITTEN DIMENSIONS GOVERN. ALL PARTITION LOCATIONS, DIMENSIONS AND TYPES, ALL DOOR AND WINDOW LOCATIONS SHALL BE AS SHOWN ON PARTITION PLAN. IN CASE OF CONFLICT, NOTIFY ARCHITECT; PARTITION PLAN BY DESIGN INTENT ARCHITECT SUPERSEDES OTHER PLANS.
L. ALL PARTITIONS ARE DIMENSIONED FROM FINISH FACE TO FINISH FACE, UNLESS OTHERWISE NOTED. ALL DIMENSIONS MARKED "CLEAR" SHALL BE MAINTAINED AND SHALL ALLOW FOR THICKNESS OF ALL FINISHES INCLUDING CARPET, CERAMIC TILE, VCT, ETC.
M. PARTITIONS AT BUILDING PERIMETER SHALL BE CENTERED ON CENTER LINE OF COLUMN OR WINDOW MULLION, UNLESS OTHERWISE NOTED.
N. COLUMN CENTER LINES (OR GRID LINES) ARE SHOWN FOR DIMENSIONING, VERIFY EXACT LOCATIONS IN FIELD.
O. PARTITION TYPES ENCLOSING ROOMS AND SPACES SHALL BE CONTINUOUS THROUGHOUT ENTIRE ROOM OR SPACE.
P. PROVIDE ACOUSTICAL CAULKING AROUND ALL PERIMETER EDGES AND/OR PENETRATIONS AT SOUND INSULATED WALLS. OFFSET ELECTRICAL AND TELEPHONE OUTLETS 16" MINIMUM IN SEPARATE STUD CAVITIES.

LIST OF DRAWING SHEETS

Sheet Number	Sheet Name	Current Revision	Current Revision Date
00 - COVERSHEET			
CS	COVER SHEET	2	09.11.18
01 - GENERAL / LIFE SAFETY			
G001	GENERAL INFORMATION AND SHEET INDEX	2	09.11.18
G002	BUILDING CODE SUMMARY	2	09.11.18
G003	DECISION DIAGRAM	1	08.20.18
G011	FIRE RESISTANCE DESIGNS		
G012	FIRE RESISTANCE DESIGNS		
G111	LIFE SAFETY PLANS - LEVELS 0 AND 1	2	09.11.18
G112	LIFE SAFETY PLANS - LEVELS 2 AND 3	2	09.11.18
04 - ARCHITECTURE			
AD111	DEMOLITION FLOOR PLANS - LEVELS 0 AND 1	3	09.11.18
AD112	DEMOLITION FLOOR PLANS - LEVELS 2 AND 3, DEMOLITION ROOF PLAN	3	09.11.18
A010	WALL TYPES - INTERIOR PARTITIONS		
A111	FLOOR PLANS - BASE BID - LEVELS 0 AND 1	2	09.11.18
A112	FLOOR PLANS - BASE BID - LEVELS 2 AND 3	2	09.11.18
A113	ENLARGED COURTYARD / MECHANICAL YARD PLAN AND DETAILS	2	09.11.18
A114	ROOF PLAN - BASE BID	1	08.20.18
A121	REFLECTED CEILING PLANS - BASE BID - LEVELS 0 AND 1	2	09.11.18
A122	REFLECTED CEILING PLANS - BASE BID - LEVELS 2 AND 3	2	09.11.18
A211	EXTERIOR ELEVATIONS - BASE BID	2	09.11.18
A321	WALL SECTIONS	2	09.11.18
A322	WALL SECTIONS AND DETAILS	2	09.11.18
A401	ENLARGED TOILET PLANS AND ELEVATIONS, ENLARGED WORKROOM PLAN	1	09.11.18
A601	VERTICAL CIRCULATION	2	09.11.18
A602	VERTICAL CIRCULATION	2	09.11.18
A801	FINISH PLAN - LEVEL 1, FINISH SCHEDULE AND DETAILS	2	09.11.18
A802	FINISH PLANS - LEVELS 2 AND 3	2	09.11.18
A821	INTERIOR ELEVATIONS	2	09.11.18
A831	INTERIOR SECTIONS	1	08.20.18
A851	FURNITURE PLANS - BASE BID - LEVEL 1	2	09.11.18
A852	FURNITURE PLANS - BASE BID - LEVELS 2 AND 3	2	09.11.18
A901	DOOR SCHEDULE, DOOR AND FRAME TYPES AND DETAILS	2	09.11.18
06 - STRUCTURAL			
S001	GENERAL NOTES		
S002	STATEMENT OF SPECIAL INSPECTIONS		
S101	FLOOR PLANS - LEVELS 0 AND 1	2	09.11.18
S102	FLOOR PLANS -LEVELS 2 AND 3	2	09.11.18
S103	ROOF FRAMING PLAN		
S201	FOUNDATION DETAILS		
S202	FOUNDATION DETAILS	2	09.11.18
S211	FLOOR FRAMING DETAILS		
S221	ROOF FRAMING DETAILS		
S301	MASONRY DETAILS		
P001	PLUMBING NOTES, SYMBOLS AND ABBREVIATIONS		
P101	SANITARY/DOMESTIC WATER DEMOLITION FLOOR PLANS - LEVELS 0 AND 1		
P102	SANITARY/DOMESTIC WATER DEMOLITION FLOOR PLANS - LEVELS 2 AND 3		
P201	SANITARY FLOOR PLANS - LEVELS 0 AND 1	1	08.20.18
P202	SANITARY FLOOR PLANS - LEVELS 2 AND 3	1	09.11.18
P211	DOMESTIC WATER FLOOR PLANS - LEVELS 0 AND 1		
P212	DOMESTIC WATER FLOOR PLANS - LEVELS 2 AND 3	1	09.11.18
P401	PLUMBING ENLARGED PLANS	1	09.11.18
P501	PLUMBING DETAILS		
P601	PLUMBING SCHEDULES	1	09.11.18
P701	PLUMBING RISER DIAGRAMS	1	09.11.18
M001	MECHANICAL NOTES, SYMBOLS AND ABBREVIATIONS		
M101	MECHANICAL DEMOLITION FLOOR PLANS - LEVELS 0 AND 1		
M102	MECHANICAL DEMOLITION FLOOR PLANS - LEVELS 2 AND 3		
M103	MECHANICAL DEMOLITION PLANS - ROOF LEVEL		
M201	MECHANICAL FLOOR PLANS - LEVELS 0 AND 1	2	09.11.18
M202	MECHANICAL FLOOR PLANS - LEVELS 2 AND 3	2	09.11.18
M203	MECHANICAL FLOOR PLANS - ROOF LEVEL	1	09.11.18
M301	MECHANICAL SECTIONS	2	09.11.18
M501	MECHANICAL DETAILS		
M502	MECHANICAL DETAILS		
M601	MECHANICAL SCHEDULES	2	09.11.18
M701	MECHANICAL CONTROLS		
M702	MECHANICAL CONTROLS	1	09.11.18
E001	ELECTRICAL SYMBOLS AND ABBREVIATIONS		
E002	ELECTRICAL SPECIFICIATIONS		
E003	ELECTRICAL GENERAL NOTES	1	08.20.18
E101	ELECTRICAL POWER FLOOR PLANS - LEVELS 0 AND 1	1	08.20.18
E102	ELECTRICAL POWER FLOOR PLANS - LEVELS 2 AND 3	2	09.11.18
E103	ELECTRICAL POWER FLOOR PLANS - LEVEL 3 PHASE 2	2	09.11.18
E201	ELECTRICAL LIGHTING FLOOR PLANS - LEVELS 0 AND 1	2	09.11.18
E202	ELECTRICAL LIGHTING FLOOR PLANS - LEVELS 2 AND 3	1	08.20.18
E203	ELECTRICAL LIGHTING FLOOR PLANS - LEVEL 3 PHASE 2	1	08.20.18
E301	ELECTRICAL SPECIAL SYSTEMS FLOOR PLANS - LEVELS 0 AND 1	1	08.20.18
E302	ELECTRICAL SPECIAL SYSTEMS FLOOR PLANS - LEVELS 2 AND 3	2	09.11.18
E303	ELECTRICAL SPECIAL SYSTEMS FLOOR PLANS - LEVEL 3 PHASE 2	1	08.20.18
E401	ELECTRICAL ENLARGED PLANS	2	09.11.18
E501	ELECTRICAL DETAILS		
E502	ELECTRICAL DETAILS		
E503	ELECTRICAL DETAILS	2	09.11.18
E504	ELECTRICAL DETAILS		
E601	ELECTRICAL SCHEDULES	2	09.11.18
E602	ELECTRICAL PANELBOARD SCHEDULES	1	08.20.18
E603	ELECTRICAL PANELBOARD SCHEDULES	2	09.11.18
E701	ELECTRICAL SINGLE LINE DIAGRAM	2	09.11.18
E702	ELECTRICAL FIRE ALARM RISER DIAGRAM		

UPDATED LIST OF DRAWING SHEETS 2

SYMBOLS

ARCHITECTURAL ELEMENTS

ROOM NAME / 101 — ROOM NAME, ROOM NUMBER
ACT-1 / +1' - 0" — CEILING TYPE, FINISH ELEVATION
2222 — DOOR NUMBER
0A00A KX — WALL TAG
AFS-20 — ALUMINUM FRAMING SYSTEM TAG
A — WINDOW TAG
X — TOILET ACCESSORIES TAG
? — MATERIALS TAG
PTD — EQUIPMENT TAG
CR — CARD READER

VIEW ELEMENTS

2 / A301 — DETAIL MARKER
1 / A101 SIM — SECTION MARKER
1 / A5.0.2E — EXTERIOR ELEVATION MARKER
1 / A5.0.2E 1 1 1 — INTERIOR ELEVATION MARKER

SITE & LOCATION ELEMENTS

Level Name / 0'-0" — ELEVATION DATUM POINT
AA — COLUMN GRID AND GRID BUBBLES
00 — SHEET KEYNOTE
N — NORTH ARROW

ANNOTATIONS

00 — SHEET KEYNOTE

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SHANE WEBSTER — REGISTERED ARCHITECT — 6452 — RALEIGH, N.C.
09/11/2018

ISSUE FOR: PERMIT SET
ISSUE DATE: 09.11.2018

REVISIONS

NO.	REASON	DATE
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PROJECT TEAM
PRINCIPAL IN CHARGE: ROB KLINEDINST, AIA
PROJECT MANAGER: SHANE WEBSTER, AIA
DESIGN TEAM: LITTLE

PROJECT NAME: CAMPBELL UNIVERSITY DAY HALL RENOVATIONS
PROJECT NO.: 513.9660.00
SHEET TITLE: GENERAL INFORMATION AND SHEET INDEX
SHEET NUMBER: G001 1

BUILDING CODE SUMMARY

2012 APPENDIX B
FOR ALL COMMERCIAL PROJECTS

Name of Project: CAMPBELL DAY HALL RENOVATIONS
Address: CAMPBELL UNIVERSITY, BUIES CREEK, NC
Proposed Use: BUSINESS
Owner or Authorized Agent: LITTLE / SHANE WEBSTER Phone # 919-474-2524
Owned By: ☐ City/County ■ Private ☐ State
Code Enforcement Jurisdiction: ☐ City ■ County ☐ State

LEAD DESIGN PROFESSIONAL: Little Diversified Architectural Consulting

DESIGNER	FIRM	NAME	LICENSE #	PHONE #	E-MAIL
Architectural	LITTLE	Shane Webster	6452	919-474-2524	swebster@littleonline.com
Civil	NA	-	-	-	-
Electrical	RMF	Anastasiya Smurygina	04480	919-941-9876	anastasiya.smurygina@rmf.com
Fire Alarm	NA	-	-	-	-
Plumbing	RMF	Blake Smith	041471	919-941-9876	blake.smith@rmf.com
Mechanical	RMF	Blake Smith	041471	919-941-9876	blake.smith@rmf.com
Sprinkler-Standpipe	NA	-	-	-	-
Structural	LITTLE	David Blankfard	027106	919-474-2549	david.blankfard@littleonline.com
Retaining walls > 5' high	-	-	-	-	-
Other	-	-	-	-	-

2012 EDITION OF NC CODE FOR:

☐ New Construction ■ Renovation (Existing Bldg.) ☐ Addition ☐ Upfit ☐ Alteration ☐ Reconstruction ☐ Repair

CONSTRUCTED: (date) 1937 ORIGINAL USE(S): (ch.3) RESIDENTIAL PROPOSED USE(S): (ch.3) BUSINESS
RENOVATED: (date) * AUG, 1959 CURRENT USE(S) (ch.3): NOT OCCUPIED
* 1958 NCSBC used for 1959 Additions to original building.
* 2015 EXISTING BUILDING CODE

BASIC BUILDING DATA

Construction Type: (check all that apply) ☐ I-A ☐ I-B ☐ II-A ■ II-B ☐ III-A ☐ III-B ☐ IV ☐ V-A ☐ V-B

Sprinklers: ■ No ☐ Partial ☐ Yes ☐ NFPA 13 ☐ NFPA 13R ☐ NFPA 13D
Standpipes: ■ No ☐ Yes Class: ☐ I ☐ II ☐ III ☐ Wet ☐ Dry
Fire District: ■ No ☐ Yes (Primary) **Flood Hazard Area:** ■ No ☐ Yes
Building Height: 40' Feet

Gross Building Area (sq. ft.): 19,616 sf

FLOOR	EXISTING	NEW	RENO/ UPFIT
6th Floor			
5th Floor			
4th Floor			
3rd Floor	5,929	269	5,929
2nd Floor	5,929	269	5,929
1st Floor	5,929	269	5,929
Basement	963	59	963
TOTAL +/-SF	18,750	866	18,750

FLOOR	EXISTING	NEW	RENO/ UPFIT
14th Floor	-	-	-
13th Floor	-	-	-
12th Floor	-	-	-
11th Floor	-	-	-
10th Floor	-	-	-
9th Floor	-	-	-
8th Floor	-	-	-
7th Floor	-	-	-

ALLOWABLE AREA

Primary Occupancy:
■ Business ☐ Assembly ☐ A-1 ☐ A-2 ☐ A-3 ☐ A-4 ☐ A-5
☐ Hazardous ☐ Educational ☐ Factory ☐ F-1 Moderate ☐ F-2 Low
☐ Institutional ☐ H-1 Detonate ☐ H-2 Deflagrate ☐ H-3 Combust ☐ H-4 Health ☐ H-5 HPM
I-3 Use Condition ☐ I-1 ☐ I-2 ☐ I-3 ☐ I-4
☐ Mercantile ☐ Residential ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
☐ Storage ☐ S-1 Moderate ☐ R-1 ☐ R-2 ☐ R-3 ☐ R-4
☐ Utility and Miscellaneous ☐ S-2 Low ☐ High-piled
☐ Parking Garage ☐ Open ☐ Enclosed ☐ Repair

Accessory Occupancy:
☐ Business ☐ Assembly ☐ A-1 ☐ A-2 ■ A-3 ☐ A-4 ☐ A-5
☐ Hazardous ☐ Educational ☐ Factory ☐ F-1 Moderate ☐ F-2 Low
☐ Institutional ☐ H-1 Detonate ☐ H-2 Deflagrate ☐ H-3 Combust ☐ H-4 Health ☐ H-5 HPM
I-3 Use Condition ☐ I-1 ☐ I-2 ☐ I-3 ☐ I-4
☐ Mercantile ☐ Residential ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
☐ Storage ☐ S-1 Moderate ☐ R-1 ☐ R-2 ☐ R-3 ☐ R-4
☐ Utility and Miscellaneous ■ S-2 Low ☐ High-piled
☐ Parking Garage ☐ Open ☐ Enclosed ☐ Repair

Incidental Uses: (Table 508.2.5)
☐ Furnace room where any piece of equipment is over 400,000 Btu per hour input
☐ Rooms with boilers where the largest piece of equipment is over 15 psi and 10 horsepower
☐ Refrigerant machine room
☐ Hydrogen cutoff rooms, not classified as Group H
☐ Incinerator rooms
☐ Paint shops not classified as Group H , located in occupancies other than Group F
☐ Laboratories and vocational shops, not classified as Group H, located in a Group E or I-2 occupancy
☐ Laundry rooms over 100 square feet
☐ Group I-3 cells equipped with padded surfaces
☐ Group I-2 waste and linen collection rooms over 100 square feet
☐ Waste and linen collection rooms over 100 square feet
☐ Stationary storage battery systems having a liquid electrolyte capacity of more than 50 gallons, or a lithium-ion capacity of 1,000 pounds used for facility standby power or uninterrupted power Supplies.
☐ Rooms containing fire pumps
☐ Group I-2 storage rooms over 100 square feet
☐ Group I-2 Commercial kitchens
☐ Group I-2 laundries equal to or less than 100 square feet
☐ Group I-2 rooms or spaces that contain fuel-fired heating equipment

Special Uses: ☐ 402 ☐ 403 ☐ 404 ☐ 405 ☐ 406 ☐ 407 ☐ 408 ☐ 409 ☐ 410 ☐ 411 ☐ 412 ☐ 413 ☐ 414 ☐ 415 ☐ 416 ☐ 417 ☐ 418 ☐ 419 ☐ 420 ☐ 421 ☐ 422 ☐ 423 ☐ 424 ☐ 425 ☐ 426 ☐ 427

Special Provisions: ☐ 509.2 ☐ 509.3 ☐ 509.4 ☐ 509.5 ☐ 509.6 ☐ 509.7 ☐ 509.8 ☐ 509.9

Mixed Occupancy: ■ No ☐ Yes Separation: - Hr. Exception: _____

■ Incidental Use Separation (508.2.5)
This separation is not exempt as a Non-Separated Use (see exceptions)

☐ Non-Separated Mixed Occupancy (508.3)
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 Mixed Occupancy (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 each use divided by the allowable floor area for each use shall not exceed 1.

Actual Area of Occupancy A / Allowable Area of Occupancy A + Actual Area of Occupancy B / Allowable Area of Occupancy B = < 1
+ = < 1.00

STORY NO.	DESCRIPTION AND USE	(A) BLDG. AREA PER STORY (ACTUAL)	(B) TABLE 503[3] AREA	(C) AREA FOR OPEN SPACE INCREASE[2]	(D) AREA FOR SPRINKLER INCREASE[2]	(E) ALLOWABLE AREA OR UNLIMITED[3]	(F) MAXIMUM BUILDING AREA[4]
LEVEL1	-	-	-	N/A	NOT USED		
LEVEL 2	-	-	-	N/A	NOT USED		
LEVEL 3		-	-	N/A	NOT USED		
							-

[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 with = (F)
b. Total Building Perimeter.= (P)
c. Ratio (F/P) = (F/P)
d. W = Minimum width of public way.= (W)
e. Percent of frontage increase I = 100 [F/P - 0.25] x W/30 = (%)
[2] The sprinkler increase per Section 506.3 is as follows:
a. Multi-story building = 200 percent
b. Single story building = 300 percent
[3] Unlimited area applicable under conditions of Section 507
[4] Maximum Building Area = total number of stories in the building x E (506.4).
[5] The maximum area of parking garages must comply with 406.3.5. The maximum area of air traffic control towers must comply with 412.1.2.

ALLOWABLE HEIGHT

	ALLOWABLE (TABLE 503)	INCREASE FOR SPRINKLERS	SHOWN ON PLANS	CODE REFERENCE
Type of Construction	Type -		Type IIB	602.2
Building Hgt. in Feet	Feet 55	Feet=H+20'= NA	Feet 40	
Building Hgt. in Stories	Stories 3	Stories+1= NA	Stories 3	

FIRE PROTECTION REQUIREMENTS (EXISTING)

Life Safety Plan Sheets: G111, G112

BUILDING ELEMENT	FIRE SEPARATION DISTANCE (FEET)	RATING REQ'D	RATING PROVIDED (W/ * REDUCTION)	DETAIL # AND SHEET #	DESIGN # FOR RATED ASSEMBLY	DESIGN # FOR RATED PENETRATED	DESIGN # FOR RATED JOINTS
Structural Frame, including columns, girders, trusses		0 HR	0 HR				
Bearing Walls		NA	NA				
Exterior	> 30'						
North	> 30'	0/N.C.	NA				
East	> 30'	0/N.C.	NA				
West	> 30'						
South	> 30'						
Interior		0/N.C.	NA				
Nonbearing walls and Partitions							
Exterior	> 30'						
North	> 10'	0/N.C.	0/N.C.				
East	> 30'	0/N.C.	0/N.C.				
West	> 30'	0/N.C.	0/N.C.				
South	> 30'	0/N.C.	0/N.C.				
Interior Walls and Partitions		0/N.C.	0/N.C.				
Floor Construction including supporting beams and joists **		0/N.C.	0/N.C.				
Roof Construction including supporting beams and joists		0 HR	0 HR				
Shafts - Exit	G012	1 HR	1 HR	UL U419 UL U905			
Shafts - Other	G011	1 HR	1 HR	UL U415			
Corridor Separation		N.R.	N.R.				
Occupancy Separation		N/A					
Party/Fire Wall Separation		N/A					
Smoke Barrier Separation		N.R.					
Tenant Separation		N.R.					
Incidental Use Separation		1 HR					

* PER 508.2.5
** Ceiling panels are not a part of floor assembly.

N.C. = Non Combustible
N.R. = Not Required
N/A = Not Applicable
S = Section
T = Table

LIFE SAFETY SYSTEM REQUIREMENTS

Emergency Lighting: ☐ No ■ Yes
Exit Signs: ☐ No ■ Yes
Fire Alarm: ☐ No ■ Yes
Smoke Detection Systems: ☐ No ■ Yes ☐ Partial _____
Panic Hardware: ☐ No ■ Yes

LIFE SAFETY PLAN REQUIREMENTS

Life Safety Plan Sheet #_____

☐ Fire and/or smoke rated wall locations (chapter 7)
☐ Assumed and real property line locations
☐ Exterior wall opening area with repect to distance to assumed property lines (706.8)
☐ Existing Structures within 30' of the proposed building
☐ Occupancy types for each area as it related to occupant load calculation (Table 1004.1.1)
☐ Occupant loads for each area
☐ Exit access travel distances (1014.3 & 1028.8)
☐ Dead end lengths (1018.4)
☐ Clear exit widths for each exit door
☐ Maximum calculated occupant load capacity each exit door can accomodate based on egress width (1005.1)
☐ 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
☐ Location of doors with panic hardware (1008.1.10)
☐ Location of doors with delayed egress locks and the amount of delay (1008.1.9.7)
☐ Location of doors with electronmagnetic egress locks (1008.1.9.8)
☐ Location of doors with hold-open devices
☐ Location of emergency escape windows (1029)
☐ The square footage of each smoke compartment (407.4)
☐ Note any code exceptions or table notes that may have been utilized regarding the items above

ACCESSIBLE DWELLING UNITS (SECTION 1107)

TOTAL UNITS	ACCESSIBLE UNITS REQUIRED	ACCESSIBLE UNITS PROVIDED	TYPE A UNITS REQUIRED	TYPE A UNITS PROVIDED	TYPE B UNITS REQUIRED	TYPE B UNITS PROVIDE D	TOTAL ACCESSIBLE UNITS PROVIDED
NA	-	-	-	-	-	-	-

ACCESSIBLE PARKING

LOT OR PARKING AREA	TOTAL # OF PARKING SPACES		# OF ACCESSIBLE SPACES PROVIDED			TOTAL # ACCESSIBLE PROVIDED
	REQUIRED	PROVIDED	REGULAR WITH 5' ACCESS AISLE	VAN SPACES WITH 132" ACCESS AISLE	VAN SPACES WITH 8' ACCESS AISLE	
Business	Existing	Existing	Existing	Existing	Existing	Existing
.						
TOTAL	Existing	Existing	Existing	Existing	Existing	Existing

STRUCTURAL DESIGN ☐ No Change to Building Structural Design

DESIGN LOADS:

Importance Factors: Wind (I_W) = _____ Snow (I_S) = _____ Seismic (I_E) = _____

Live Load: Roof _____ psf Mezzanine _____ psf Floor _____ psf

Ground Snow Load: _____ psf

Wind Load: Basic Speed = _____ mph (ASCE-7) Exposure Category: _____ Wind Base Shears (for MWFRS) Vx = _____ Vy = _____

SEISMIC DESIGN CATEGORY: ☐ A ☐ B ☐ C ☐ D

Provide the following Seismic Design Parameters:
Occupancy Category (Table 1604.5) ☐ I ☐ II ☐ III ☐ IV
Spectral Response Acceleration Ss = _____ %g S1 = _____ %g
Site Classification (Table 1613.5.2) ☐ A ☐ B ☐ C ☐ D ☐ E ☐ F
Data Source: ☐ Field Test ☐ Presumptive ☐ Historical Data
Basic Structural System (check one)
☐ Bearing Wall ☐ Dual w/ Special Moment Frame
☐ Building Frame ☐ Dual w/ Intermediate R/C or Special Steel
☐ Moment Frame ☐ Inverted Pendulum
Seismic Base Shear: V_x = _____ V_y = _____
Analysis Procedure ☐ Simplified ☐ Equivalent Lateral Force ☐ Dynamic
Architectural, Mechanical, Components anchored ? ☐ Yes ☐ No

LATERAL DESIGN CONTROL: ☐ Earthquake ☐ Wind

SOIL BEARING CAPACITIES:
Field Test (provide copy of test report) _____ psf
Presumptive Bearing Capacity _____ psf
Pile size, type, and capacity _____

SPECIAL INSPECTIONS REQUIRED: ☐ Yes ☐ No

PLUMBING FIXTURE REQUIREMENTS (Table 2902.1)

USE		WATER CLOSETS MALE	WATER CLOSETS FEMALE	URINALS	LAVATORIES MALE	LAVATORIES FEMALE	SHOWERS/ TUBS	DRINKING FOUNTAINS REGULAR	DRINKING FOUNTAINS ACCESSIBLE
SPACE	EXISTING	-	-	-	-	-	-	-	-
	NEW	-	-	-	-	-	-	-	-
	REQUIRED	-	-	-	-	-	-	-	-

SPECIAL APPROVALS

Special Approval: (Local Jurisdiction, Department of Insurance, ICC, etc., describe below)
-

ENERGY SUMMARY

ENERGY REQUIREMENTS:

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.

Climate Zone: ☐ 3 ■ 4 ☐ 5

Method of Compliance: ☐ No Change to Building Envelope
☐ Prescriptive (Energy Code) ☐ Performance (Energy Code) ☐ Prescriptive (ASHRAE 90.1) ☐ Performance (ASHRAE 90.1)

THERMAL ENVELOPE (ADDITION / EXISTING NO CHANGE)

Roof/ceiling Assembly (each assembly)
Description of assembly: Membrane roof on Polyiso on metal deck
U-Value of total assembly: -
R-Value of insulation: R-30
Skylights in each assembly: n/a
U-Value of skylight: n/a
total square footage of skylights in each assembly: n/a

Exterior Walls
Description of assembly: Brick Veneer over airspace over weather barrier over 2" Rigid Insulation over CMU
U-Value of total assembly: -
R-Value of insulation: R-15
Openings (windows or doors with glazing): n/a
U-Value of assembly: .
solar heat gain coefficient: .
projection factor: .
low e required, if applicable: .
Door R-Value: -

Walls below grade (each assembly)
Description of assembly: Brick/CMU Veneer over air space over weather barrier over 2" Rigid Insulation over CMU
U-Value of total assembly: -
R-Value of insulation: R-15

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

Floors slab on grade
Description of assembly: 5" Slab on Grade
U-Value of total assembly: -
R-Value of insulation: R-15
Horizontal/vertical requirement: Vertical
Slab heated: n/a

MECHANICAL SUMMARY

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT

Thermal Zone .
winter dry bulb .
summer dry bulb .

Interior design conditions
winter dry bulb .
summer dry bulb .
relative humidity .

Building heating load .
Building cooling load .

Mechanical Spacing Conditioning System
Unitary
description of unit .
heating efficiency .
cooling efficiency .
size category of unit .
Boiler
size category. If oversized, state reason .
Chiller
size category. If oversized, state reason .

List equipment efficiencies

SEE MECHANICAL DRAWINGS

ELECTRICAL SUMMARY

ELECTRICAL SYSTEM AND EQUIPMENT

Method of Compliance: ☐ No Change to Building System
Energy Code: ☐ Prescriptive ☐ Performance
ASHRAE 90.1: ☐ Prescriptive ☐ Performance

Lighting schedule (each fixture type)
Lamp type required in fixture
number of lamps in fixture
ballast type used in the fixture
number of ballasts in fixture
total wattage per fixture
total interior wattage specified vs. allowed (whole building or single space)
total exterior wattage specified vs. allowed

Additional Prescriptive Compliance
☐ 506.2.1 More efficient mechanical equipment
☐ 506.2.2 Reduced lighting power density
☐ 506.2.3 Energy Recovery Ventilation Systems
☐ 506.2.4 Higher Efficiency service water heating
☐ 506.2.5 On-site supply of renewable energy
☐ 506.2.6 Automatic daylighting control systems

SEE ELECTRICAL DRAWINGS

UPDATED BUILDING CODE SUMMARY 2

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SHANE WEBSTER 6452 REGISTERED ARCHITECT RALEIGH, NC
09/11/2018

ISSUE FOR: PERMIT SET
ISSUE DATE: 09.11.2018

REVISIONS

NO.	REASON	DATE
1	AV Revisions by Owner and Quality Control	08.20.18
2	Revisions by Owner	09.11.18

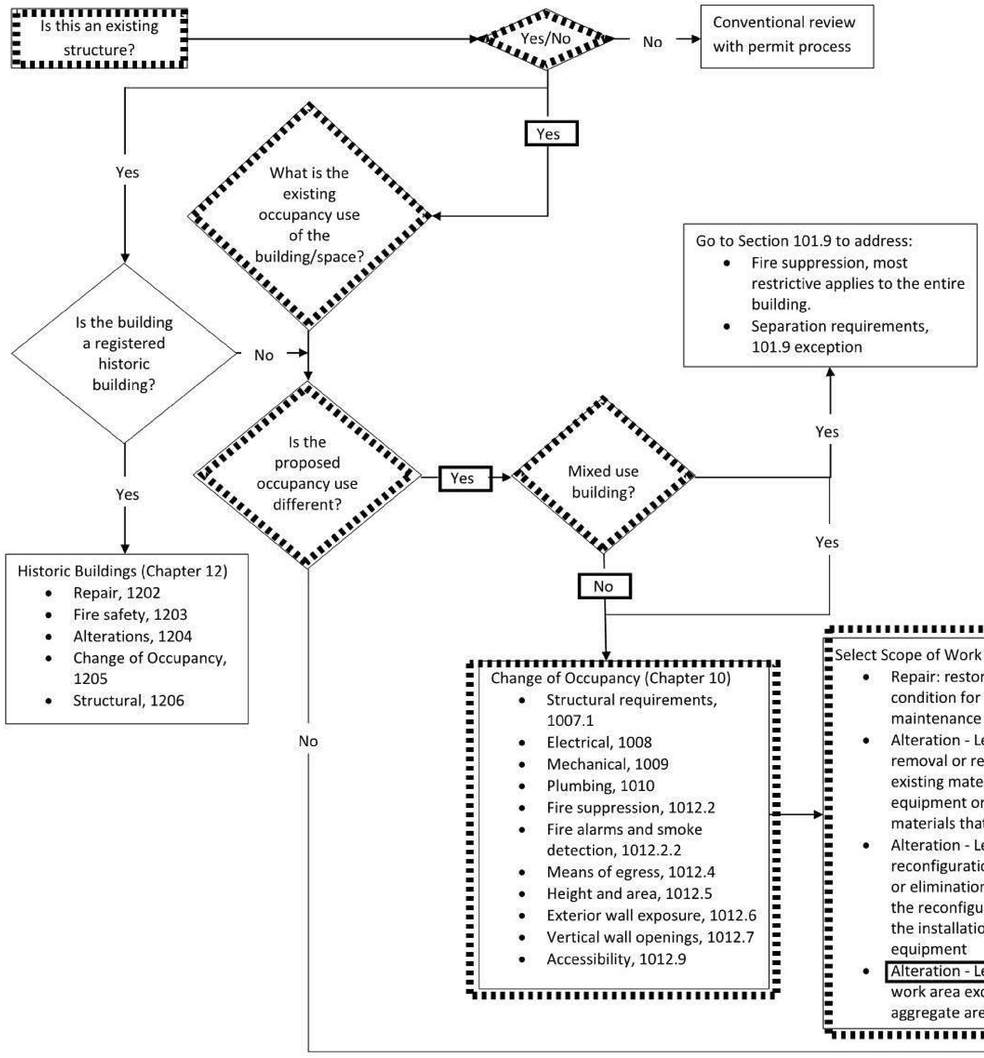
PROJECT TEAM
PRINCIPAL IN CHARGE: ROB KLINEDINST, AIA
PROJECT MANAGER: SHANE WEBSTER, AIA
DESIGN TEAM: LITTLE

PROJECT NAME: CAMPBELL UNIVERSITY DAY HALL RENOVATIONS
PROJECT NO.: 513.9660.00
SHEET TITLE: BUILDING CODE SUMMARY
SHEET NUMBER: G002 1

3/11/15

NC Existing Building Code Decision Diagram

(Work Area Compliance Method)



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09/11/2018

ISSUE FOR
PERMIT SET

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1	AV Revisions by Owner and Quality Control	08.20.18

PROJECT TEAM
PRINCIPAL IN CHARGE
ROB KLINEDINST, AIA
PROJECT MANAGER
SHANE WEBSTER, AIA
DESIGN TEAM
Designer

PROJECT NAME
CAMPBELL UNIVERSITY
DAY HALL RENOVATIONS

PROJECT NO.
513.9660.00

SHEET TITLE
DECISION DIAGRAM

SHEET NUMBER
G003

Design No. U415
BXUV.U415
Fire Resistance Ratings - ANSI/UL 263

Page Bottom

Design/System/Construction/Assembly Usage Disclaimer

- Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and use of UL Certified products, equipment, system, devices, and materials.
- Authorities Having Jurisdiction should be consulted before construction.
- Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance encountered in the field.
- When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials and alternate methods of construction.
- Only products which bear UL's Mark are considered Certified.

BXUV - Fire Resistance Ratings - ANSI/UL 263 Certified for United States

BXUV7 - Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada

See General Information for Fire-resistance Ratings - ANSI/UL 263 Certified for United States
Design Criteria and Allowable Variances

See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada
Design Criteria and Allowable Variances

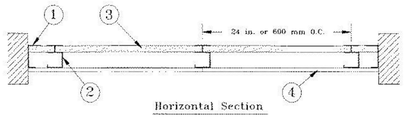
Design No. U415

March 06, 2018

Nonbearing Wall Ratings — 1, 2, 3 or 4 Hr

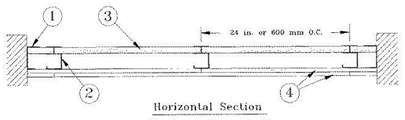
*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**

System A — 1 Hr.



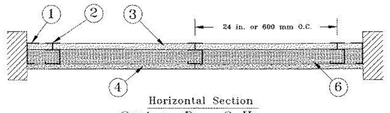
Horizontal Section

System B — 2 Hr.



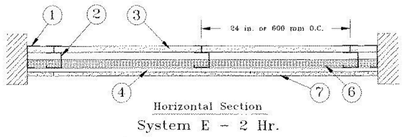
Horizontal Section

System C — 2 Hr.



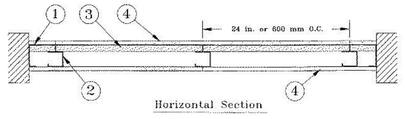
Horizontal Section

System D — 2 Hr.



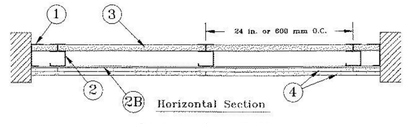
Horizontal Section

System E — 2 Hr.



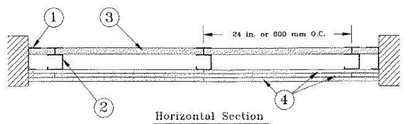
Horizontal Section

System F — 2 Hr.



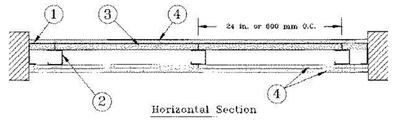
Horizontal Section

System G — 3 Hr.



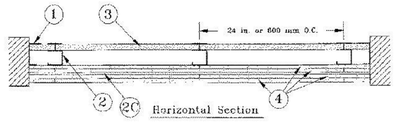
Horizontal Section

System H — 3 Hr.



Horizontal Section

System I — 4 Hr.



Horizontal Section

1. **Floor, Side and Ceiling Runners —** "J" - shaped runner, min 2-1/2 in. deep (min 4 in. deep when System C is used), with unequal legs of 1 in. and 2 in., fabricated from min 24 MSG (min 20 MSG when Item 4A, 4B, 4C, 4D or 7 are used) galv steel. Runners positioned with short leg toward finished side of wall. Runners attached to structural supports with

steel fasteners located not greater than 2 in. from ends and not greater than 24 in. OC. "E" - shaped studs (Item 2A) may be used as side runners in place of "J" - shaped runners.

2. **Steel Studs —** "C-H" - shaped studs, min 2-1/2 in. deep (min 4 in. deep when System C is used), fabricated from min 25 MSG (min 20 MSG when Items 2D, 4A, 4B, 4C, 4D or 7 is used) galv steel. Cut to lengths 3/8 to 1/2 in. less than floor-to-ceiling height and spaced 24 in. or 600 mm OC (max 16 in. OC when Items 4A, 4B, 4C, or 4D are used).

2A. **Steel Studs —** (Not Shown) — "E" - shaped studs installed back to back in place of "C-H" - shaped studs (Item 2) "E" - shaped studs secured together with steel screws spaced a maximum 12 in. OC. Fabricated from min 25 MSG (min 20 MSG when Item 2D, 4A, 4B or 7 is used) galv steel, min 2-1/2 in. deep (min 4 in. deep when System C is used), with one leg 1 in. long and two legs 3/4 in. long. Shorter legs 1 in. apart to engage gypsum liner panels. Cut to lengths 3/8 to 1/2 in. less than floor to ceiling heights.

2B. **Furring Channels —** (Optional, Not Shown) — For use with single or double layer systems. Resilient furring channels fabricated from min 25MSG corrosion protected steel, installed horizontally, and spaced vertically a max 24 in. OC. Flange portion of channel attached to each intersecting "C-H" or "E" stud on side of stud opposite the 1 in. liner panels with 1/2 in. long Type S or S-12 pan-head steel screws. When furring channels are used, wallboard to be installed vertically only. Not to be used with Type FRX-G gypsum wallboard, Type RB-LBG (Item 4A), Type Nelco (Item 4B) or cementitious backer units (Item 7).

2C. **Furring Channels —** For use with System I - "Hat" - shaped, 25 MSG galv steel furring channels attached directly over the inner layers of wallboard to each stud with 2 in. long Type S pan head steel screws. Screws alternate from top flange to bottom flange at each stud intersection. Furring channels spaced vertically max 24 in. OC.

2D. **Steel Framing Members* —** (Optional, Not Shown) — For use with single or double layer systems. Furring channels and Steel Framing Members as described below. Not to be used with Type FRX-G gypsum wallboard, Type RB-LBG (Item 4A), Type Nelco (Item 4B) or cementitious backer units (Item 7):

a. Furring Channels — Formed of No. 25 MSG galv steel. 2-9/16 in. or 2-23/32 in. wide by 7/8 in. deep, spaced max. 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Gypsum board installed vertically only and attached to furring channels as described in Item 4.

b. Steel Framing Members* — Used to attach furring channels (Item 2Da) to studs (Item 2 or 2A). Clips spaced max. 24 in. OC., and secured to studs with No. 8 x 1-1/2 in. minimum self-drilling, S-12 steel screw through the center grommet. Furring channels are friction fitted into clips. RSIC-1 clip for use with 2-9/16 in. wide furring channels. RSIC-1 (2.75) clip for use with 2-23/32 in. wide furring channels.

PAC INTERNATIONAL L L C — Types RSIC-1, RSIC-1 (2.75)

2E. **Steel Framing Members* —** (Optional, Not Shown) — Furring channels and Steel Framing Members as described below. . Not to be used with Type FRX-G gypsum wallboard, Type RB-LBG (Item 4A), Type Nelco (Item 4B), Type X-Ray Shielded Gypsum (Item 4C), Type RPP-Lead Lined Drywall (Item 4F) or cementitious backer units (Item 7).

a. Furring Channels — Formed of No. 25 MSG galv steel. Spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 AWG galvanized steel wire.Gypsum board attached to furring channels as described in Item 4.

b. Steel Framing Members* — Used to attach furring channels (Item 2Ea) to studs. Clips spaced 24 in. OC., and secured to studs with 2 in. coarse drywall screw with 1 in. diam washer through the center hole. Furring channels are friction fitted into clips.

STUDCO BUILDING SYSTEMS — RESILMOUNT Sound Isolation Clips - Type A237R

2F. **Steel Framing Members* —** (Optional, Not Shown) — For use with single or double layer systems. Furring channels and Steel Framing Members as described below. Not to be used with Type FRX-G gypsum wallboard, Type RB-LBG (Item 4A), Type Nelco (Item 4B) or cementitious backer units (Item 7):

a. Furring Channels — Formed of No. 25 MSG galv steel. 2-3/8 in. wide by 7/8 in. deep, spaced max. 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Gypsum board installed vertically only and attached to furring channels as described in Item 3.

b. Steel Framing Members* — Used to attach furring channels (Item 2Da) to studs (Item 2 or 2A.). Clips spaced max. 24 in. OC. GENIECLIPS secured to studs with No. 8 x 1-1/2 in. minimum self-drilling, S-12 steel screw through the center grommet. Furring channels are friction fitted into clips.

PLITEQ INC — Type GENIECLIP

2G. **Steel Framing Members* —** (Optional, Not Shown) — Furring channels and Steel Framing Members as described below. Not to be used with Type FRX-G gypsum wallboard, Type RB-LBG (Item 4A), Type Nelco (Item 4B), Type X-Ray Shielded Gypsum (Item 4C), Type RPP-Lead Lined Drywall (Item 4F) or cementitious backer units (Item 7):

a. Furring Channels — Formed of No. 25 MSG galv steel. Spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item 2Gb. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 AWG galvanized steel wire. Gypsum board attached to furring channels as described in Item 4.

b. Steel Framing Members* — Used to attach furring channels (Item 2Ga) to studs. Clips spaced 24 in. OC., and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips.

REGUPOL AMERICA — Type SonusClip

3. **Gypsum Board* —** Gypsum liner panels, nom 1 in. thick, 24 in. or 600 mm (for metric spacing) wide. Panels cut 1 in. less in length than floor to ceiling height. Vertical edges inserted in "H" portion of "C-H" studs or the gap between the two 3/4 in. legs of the "E" studs. Free edge of end panels attached to long leg of vertical "J" - runners with 1-5/8 in. long Type S steel screws spaced not greater than 12 in. OC. When wall height exceeds liner panel length, liner panel may be butted to extend to the full height of the wall. Horizontal joints need not be backed by steel framing. In System I, butt joints in liner panels are staggered min 36 in. Butt joints backed with 6 in. by 22 in. strips of 3/4 in. thick gypsum wallboard (Item 4). Wallboard strips centered over butt joints and secured to liner panels with six 1-1/2 in. long Type G steel screws, three screws along the 22 in. dimension at the top and bottom of the strips.

CGC INC — Type SLX

UNITED STATES GYPSUM CO — Type SLX

USG BORAL DRYWALL SFZ LLC — Type SLX

USG MEXICO S A DE C V — Type SLX

4. **Gypsum Board* —**

System A — 1 Hr

Gypsum panels, with beveled, square or tapered edges, nom 5/8 in. thick, 48 in. or 1200 mm wide, applied vertically or horizontally, attached to studs with 1 in. long Type S steel screws spaced 12 in. when installed vertically or 8 in OC when installed horizontally. Horizontal joints need not be backed by steel framing.

CGC INC — Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX

UNITED STATES GYPSUM CO — Types AR, C, FRX-G, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SGX, SHX, ULIX, ULX, WRC, WRX, USGX. When ULIX is used insulation, Item 6, **Batts and Blankets*** is required and minimum stud depth is 4 in.

USG BORAL DRYWALL SFZ LLC — Types C, SCX, SGX, USGX

USG MEXICO S A DE C V — Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX

System B — 2 Hr

Gypsum panels, with beveled, square or tapered edges, nom 1/2 in. or 5/8 in. thick, 48 in. or 1200 mm wide, applied vertically or horizontally in two layers. Inner or base layer attached to studs with 1 in. long Type S steel screws spaced 24 in. OC when installed vertically or 16 in. OC when installed horizontally. Outer or face layer attached to studs with 1-5/8 in. long Type S steel screws spaced 12 in. OC when installed vertically and staggered 12 in. from base layer screws or 8 in. OC when installed horizontally and staggered 8 in. from base layer screws. Horizontal joints between inner and outer layers staggered a min of 12 in. Horizontal joints need not be backed by steel framing. Vertical joints centered over studs and staggered 24 in.

CGC INC — 1/2 in. Type C, IP-X2, IPC-AR or WRC; 5/8 in. Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX

UNITED STATES GYPSUM CO — 1/2 in. Types C, IP-X2, IPC-AR; or WRC; 5/8 in. Types AR, C, FRX-G, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SGX, SHX, ULIX, ULX, USGX, WRC, WRX.

USG BORAL DRYWALL SFZ LLC — 1/2 in. Type C; 5/8 in. Types C, SCX, SGX, USGX

USG MEXICO S A DE C V — 1/2 in. Types C, IP-X2, IPC-AR; or WRC; 5/8 in. Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX

System C — 2 Hr

Gypsum panels, with beveled, square or tapered edges, nom 3/4 in. thick, 48 in. or 1200 mm wide, applied vertically or horizontally, secured with 1-1/4 in. long Type S steel screws spaced 8 in. OC along vertical edges and 12 in. OC in the field when installed vertically or 8 in. OC along the vertical edges and in the field when installed horizontally. Horizontal joints need not be backed by steel framing. Screws along side joints offset 4 in. Requires min 4 in. deep framing per Items 1, 2 and 3. Requires min 3 in. thick mineral wool batts per Item 6.

CGC INC — Types IP-X3 or ULTRACODE

UNITED STATES GYPSUM CO — Types IP-X3 or ULTRACODE

USG BORAL DRYWALL SFZ LLC — Type ULTRACODE

USG MEXICO S A DE C V — Types IP-X3 or ULTRACODE

System D — 2 Hr

Gypsum panels, with beveled, square or tapered edges, nom 5/8 in. thick, 48 in. or 1200 mm wide, applied vertically or horizontally, attached directly to studs with 1 in. long Type S steel screws spaced 24 in. when installed vertically or 16 in. OC when installed horizontally. Horizontal joints need not be backed by steel framing. Requires face layer of 1/2 or 5/8 in. thick cementitious backer units per Item 7 and min 1-1/2 in. thick mineral wool batts per Item 6.

CGC INC — Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX

UNITED STATES GYPSUM CO — Types AR, C, FRX-G, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SGX, SHX, ULIX, ULX, USGX, WRC, WRX.

USG BORAL DRYWALL SFZ LLC — Types C, SCX, SGX, USGX

USG MEXICO S A DE C V — Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX

System E — 2 Hr

Gypsum panels, with beveled, square or tapered edges, nom 1/2 in. or 5/8 in. thick, 48 in. or 1200 mm wide, applied vertically or horizontally, attached to studs with 1 in. long Type S steel screws spaced 12 in. OC when installed vertically or 8 in. when installed horizontally. Horizontal joints need not be backed by steel framing.

CGC INC — 1/2 in. Types C, IP-X2, IPC-AR; 5/8 in. Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX

UNITED STATES GYPSUM CO — 1/2 in. Types C, IP-X2, IPC-AR; 5/8 in. Types AR, C, FRX-G, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SGX, SHX, ULIX, ULX, USGX, WRC, WRX.

USG BORAL DRYWALL SFZ LLC — 1/2 in. Type C; 5/8 in. Types C, SCX, SGX, USGX

USG MEXICO S A DE C V — 1/2 in. Types C, IP-X2, IPC-AR; 5/8 in. Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX

System F — 2 Hr

Gypsum panels, with beveled, square or tapered edges, nom 1/2 in. or 5/8 in. thick, 48 in. or 1200 mm wide, applied vertically in two layers. Inner or base layer attached to resilient furring channels (Item 2B) with 1 in. long Type S steel screws spaced 24 in. Outer or face layer attached to resilient furring channels (Item 2B) with 1-5/8 in. long Type S steel screws spaced 12 in. OC and staggered 12 in. from base layer screws. Joints between inner and outer layers staggered 24 in.

CGC INC — 1/2 in. Type C, IP-X2, IPC-AR or WRC; 5/8 in. Types AR, C, FRX-G, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX

UNITED STATES GYPSUM CO — 1/2 in. Type C, IP-X2, IPC-AR or WRC; 5/8 in. Types AR, C, FRX-G, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX.

USG BORAL DRYWALL SFZ LLC — 1/2 in. Type C; 5/8 in. Types C, SCX

USG MEXICO S A DE C V — 1/2 in. Types C, IP-X2, IPC-AR or WRC; 5/8 in. Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX

System G — 3 Hr

Gypsum panels, with beveled, square or tapered edges, nom 5/8 in. thick, 48 in. or 1200 mm wide, applied vertically or horizontally in three layers. Inner or base layer attached to studs with 1 in. long Type S steel screws spaced 24 in. OC when installed vertically or 16 in OC when installed horizontally. Middle layer attached to studs with 1-5/8 in. long Type S steel screws spaced 24 in. when installed vertically or 16 in. OC when installed horizontally. Outer or face layer attached to studs with 2-1/4 in. long Type S steel screws spaced 16 in. when installed vertically or 12 in. OC when installed horizontally. Screws offset 6 in. from layer below. Horizontal joints on adjacent layers staggered a min of 12 in.. Horizontal joints need not be backed by steel framing. Vertical joints centered over studs and staggered 24 in. on adjacent layers.

CGC INC — Types C, IP-X2, IPC-AR, WRC

UNITED STATES GYPSUM CO — Types C, IP-X2, IPC-AR, WRC

USG BORAL DRYWALL SFZ LLC — Type C

USG MEXICO S A DE C V — Types C, IP-X2, IPC-AR, WRC

System H — 3 Hr

Gypsum panels, with beveled, square or tapered edges, nom 5/8 in. thick, 48 in. or 1200 mm wide, applied vertically or horizontally, two layers over the flange of the "C" section of the studs, one layer over the flange of the "H" section of the studs. Inner or base layer attached to studs with 1 in. long Type S steel screws spaced 24 in. OC when installed vertically or 16 in. OC when installed horizontally. Face layer attached to studs with 1-5/8 in. long Type S steel screws spaced 16 in. when installed vertically or 12 in. OC when installed horizontally. Screws offset 6 in. from layer below. Horizontal joints on adjacent layers staggered a min of 12 in. Horizontal joints need not be backed by steel framing. Vertical joints centered over studs and staggered 24 in. on adjacent layers.

CGC INC — Types C, IP-X2, IPC-AR, WRC

UNITED STATES GYPSUM CO — Types C, IP-X2, IPC-AR, WRC

USG BORAL DRYWALL SFZ LLC — Type C

USG MEXICO S A DE C V — Types C, IP-X2, IPC-AR, WRC

System I — 4 Hr

Gypsum panels, with beveled, square or tapered edges, nom 3/4 in. thick, 4 ft wide (or 1200 mm for metric spacing) wallboard with square or tapered edges. Total of four layers to be used. First and second (inner) layers applied vertically or horizontally over the steel studs. Horizontal joints need not be backed by steel framing. When applied vertically, joints centered over studs and staggered min 24 in., otherwise all joints staggered min 12 in. First layer secured to studs with 1-1/4 in. long Type S self-drilling, self-tapping bugle-head steel screws spaced 24 in. OC. Second layer secured to studs with 2-1/4 in. long Type S self-drilling, self-tapping bugle-head steel screws spaced 12 in. OC. Third layer applied vertically over the furring channels (Item 2C) with a 1-1/4 in. long Type S self-drilling, self-tapping bugle-head steel screws spaced 12 in. OC. Fourth layer applied vertically or horizontally with 2-1/4 in. long Type S self-drilling, self-tapping bugle-head steel screws spaced 12 in. OC. When applied vertically, joints to be staggered min 24 in. from third layer, otherwise all joints staggered min 12 in.

CGC INC — Types IP-X3 or ULTRACODE

UNITED STATES GYPSUM CO — Types IP-X3 or ULTRACODE

USG BORAL DRYWALL SFZ LLC — Type ULTRACODE

USG MEXICO S A DE C V — Types IP-X3 or ULTRACODE

4A. **Gypsum Board* —** (As an alternate to Item 4 Systems A, B, C, D, E, G, H, and I when used as the base layer, For direct attachment only) — Nom 5/8 in. or 3/4 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over 20 MSG steel studs and staggered min 1 stud cavity on opposite sides of studs. See Items 1, 2, 2A, 2B and 2D. Wallboard secured to studs with 1-1/4 in. long Type S-12 steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. For Joint Compound see Item 5. To be used with Lead Batten Strips (see Item 9) or Lead Discs or Tabs (see Item 10).

RAY-BAR ENGINEERING CORP — Type RB-LBG

4B. **Gypsum Board* —** (As an alternate to Item 4 Systems A, B, C, D, E, G, H, and I when used as the base layer, For direct attachment only) — Nominal 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-1/4 in. long Type S-12 (or #6 by 1-1/4 in. long bugle head fine driller) steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field.

NEW ENGLAND LEAD BURNING CO INC, DBA NELCO — Type Nelco

4C. **Gypsum Board* —** (As an alternate to Item 4 Systems A, B, C, D, E, G, H, and I when used as the base layer, For direct attachment only) — Nom 5/8 or 3/4 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over 20 MSG steel studs and staggered min 1 stud cavity on opposite sides of studs. See Items 1, 2, 2A, 2B and 2D. Wallboard secured to studs with 1-1/4 in. long Type S-12 steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. For Joint Compound see Item 5. To be used with Lead Batten Strips (see Item 9A) or Lead Discs (see Item 10A). Lead batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations. Lead batten strips, min 2 in. wide, max 10 ft long with a max thickness of 0.140 in. placed on the face of studs and attached to the stud with two 1 in. long Type S-8 pan head steel screws, one at the top of the strip and one at the bottom of the strip.

MAYCO INDUSTRIES INC — Type X-Ray Shielded Gypsum

4D. **Gypsum Board* —** (As an alternate to Item 4 Systems A, B, C, D, E, G, H, and I when used as the base layer, For direct attachment only) — Nom 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-1/4 in. long Type S-12 steel screws gypsum panel steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. Lead batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations. Lead batten strips, min 2 in. wide, max 8 ft long with a max thickness of 0.14 in. placed on the face of studs and attached to the stud with construction adhesive and two 1 in. long Type S-12 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead discs, nominal 3/8 in. diam by max 0.085 in. thick. Compression fitted or adhered over the screw heads. Lead batten strips and discs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C".

RADIATION PROTECTION PRODUCTS INC — Type RPP - Lead Lined Drywall

5. **Joint Tape and Compound —** (Not Shown)

Systems A, B, C, E, F, G, H, I

Joints on outer layers of gypsum boards (Item 4 and 4A) covered with paper tape and joint compound. Paper tape and joint compound may be omitted when gypsum boards are supplied with square edges. Exposed screw heads covered with joint compound.

6. **Batts and Blankets* —**

Systems A, B, E, F, G, H, I

(Optional) — Mineral wool or glass fiber batts partially or completely filling stud cavity. Any mineral wool or glass fiber batt mineral bearing the UL Classification Marking as to Fire Resistance.

System A With Type ULIX Gypsum Boards

Placed in stud cavities, any min. 3-1/2 in. thick glass fiber insulation bearing the UL Classification Marking as to Surface Burning Characteristics and/or Fire Resistance. See **Batts and Blankets (BKNV or BZJZ) Categories** for names of Classified companies.

Systems C & D

Min 3 in. (System C) and min 1-1/2 in. (System D) thick mineral wool batts, friction fitted between the studs and floor and ceiling runners.

ROCKWOOL — Type AFB

THERMAFIBER INC — Type SAFB, SAFB FF

7. **Cementitious Backer Units* —** (System D) — Nom 1/2 or 5/8 in. thick panels, square edge, attached to studs over gypsum wallboard with 1-5/8 in. long, Type S-12, corrosion resistant steel screws spaced 8 in. OC and staggered 8 in. from gypsum wall board screws. Joints covered with glass fiber mesh tape. Vertical joints staggered one stud cavity from gypsum wallboard joints. Horizontal joints staggered a min of 12 in. from the gypsum wallboard joints.

UNITED STATES GYPSUM CO — Type DCB

8. **Laminating Adhesive* —** (Optional, Not Shown) — Used to bond outer layer of Cementitious Backer Units (Item 7) to inner layers of Gypsum Board (Item 4) in System D. ANSI A136.1 Type 1 organic adhesive applied with 1/4 in. square notched trowel. See Adhesives (BYWR) in the Fire Resistance Directory or Adhesives (BJLZ) in the Building Materials Directory for names of Classified companies.

9. **Lead Batten Strips —** (Not Shown, For Use With Item 4A) — Lead batten strips, min 1-1/2 in. wide, max 10 ft long with a max thickness of 0.125 in. Strips placed on the interior face of studs and attached from the exterior face of the stud with two 1 in. long Type S-8 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead batten strips to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Lead batten strips required behind vertical joints of lead backed gypsum wallboard (Item 4A) and optional at remaining stud locations. Required behind vertical joints.

9A. **Lead Batten Strips —** (Not Shown, for use with Item 4C) — Lead batten strips, 2 in. wide, max 10 ft long with a max thickness of 0.140 in. Strips placed on the face of studs and attached to the stud with two min. 1 in. long min. Type S-8 pan head steel screws, one at the top of the strip and one at the bottom of the strip or with one min. 1 in. long min. Type S-8 pan head steel screw at the top of the strip. Lead batten strips to have a purity of 99.5% meeting the Federal specification QQ-L-201f, Grades "B, C or D". Lead batten strips required behind vertical joints of lead backed gypsum wallboard (Item 6) and optional at remaining stud locations.

10. **Lead Discs or Tabs —** (Not Shown, For Use With Item 4A) — Used in lieu of or in addition to the lead batten strips (Item 9) or optional at other locations - Max 3/4 in. diam by max 0.125 in. thick lead discs compression fitted or adhered over steel screw heads or max 1/2 in. by 1-1/4 in. by max 0.125 in. thick lead tabs placed on gypsum boards (Item 4A) underneath screw locations prior to the installation of the screws. Lead discs or tabs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C".

10A. **Lead Discs —** (Not Shown, for use with Item 4C) — Max 5/16 in. diam by max 0.140 in. thick lead discs compression fitted or adhered over steel screw heads. Lead discs to have a purity of 99.5% meeting the Federal Specification QQ-L-201f, Grades "B, C or D".

11. **Lead Batten Strips —** (Not Shown, For Use With Item 4B) — Lead batten strips, 2 in. wide, max 10 ft long with a max thickness of 0.142 in. Strips placed on the face of studs and attached to the stud with two min. 1 in. long min. Type S-8 pan head steel screws, one at the top of the strip and one at the bottom of the strip or with one min. 1 in. long min. Type S-8 pan head steel screw at the top of the strip. Lead batten strips to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Lead batten strips required behind vertical joints of lead backed gypsum wallboard (Item 4B) and optional at remaining stud locations.

12. **Lead Tabs —** (Not Shown, For Use With Item 4B) — 2 in. wide, 5 in. long with a max thickness of 0.142 in. Tabs friction-fit around front face of stud, the stud folded back flange, and the back face of the stud. Tabs required at each location where a screw (that secures the gypsum boards, Item 4B) will penetrate the steel stud. Lead tabs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Lead tabs may be held in place with standard adhesive tape if necessary.

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**

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SHANE WEBSTER
6452
REGISTERED ARCHITECT
RALEIGH, NC
09/11/2018

ISSUE FOR:
PERMIT SET

ISSUE DATE:
09.11.2018

REVISIONS

NO.	REASON	DATE

PROJECT TEAM

PRINCIPAL IN CHARGE:
ROB KLINEDINST, AIA

PROJECT MANAGER:
SHANE WEBSTER, AIA

DESIGN TEAM:
Designer

PROJECT NAME:
CAMPBELL UNIVERSITY
DAY HALL RENOVATIONS

PROJECT NO.:
513.9660.00

SHEET TITLE:
FIRE RESISTANCE
DESIGNS

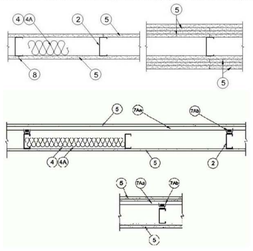
SHEET NUMBER:
G011

Design No. U419

May 14, 2014

Nonbearing Wall Ratings — 1, 2, 3 or 4 Hr (See Items 4 & 5)

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**



1. **Floor and Ceiling Runners —**(Not shown) — For use with Item 2 - Channel shaped, fabricated from min 25 MSG corrosion-protected steel, min depth to accommodate stud size, with min 1-1/4 in. long legs, attached to floor and ceiling with fasteners 24 in. OC max.

1A. **Framing Members* - Floor and Ceiling Runner —**Not shown - In lieu of Item 1 — For use with Item 2B, proprietary channel shaped runners, 3-5/8 in. deep attached to floor and ceiling with fasteners 24 in. OC max.

CALIFORNIA EXPANDED METAL PRODUCTS CO — Viper25™ Track

CRACO MFG INC — SmartTrack25™

MARINOWARE, DIV OF WARE INDUSTRIES INC — Viper25™ Track

PHILLIPS MFG CO L L C — Viper25™ Track

1B. **Framing Members* - Floor and Ceiling Runner —**Not shown - In lieu of Item 1 — For use with Item 2C, proprietary channel shaped runners, 1-1/4 in. wide by 3-5/8 in. deep fabricated from min 0.020 in. thick galv steel, attached to floor and ceiling with fasteners spaced 24 in. OC max.

CALIFORNIA EXPANDED METAL PRODUCTS CO — Viper20™ Track

MARINOWARE, DIV OF WARE INDUSTRIES INC — Viper20™ Track

PHILLIPS MFG CO L L C — Viper20™ Track

1C. **Framing Members*— Floor and Ceiling Runners —**(Not shown) —In lieu of Item 1 - Channel shaped, attached to floor and ceiling with fasteners 24 in. OC. max.

ALLSTEEL & GYPSUM PRODUCTS INC — Type SUPREME Framing System

CONSOLIDATED FABRICATORS CORP, BUILDING PRODUCTS DIV — Type SUPREME Framing System

QUAIL RUN BUILDING MATERIALS INC — Type SUPREME Framing System

SCAFCO STEEL STUD MANUFACTURING CO — Type SUPREME Framing System

STEEL CONSTRUCTION SYSTEMS INC — Type SUPREME Framing System

UNITED METAL PRODUCTS INC — Type SUPREME Framing System

1D. **Floor and Ceiling Runners —**(Not shown)—For use with Item 2A- Channel shaped, fabricated from min 20 MSG corrosion-protected or galv steel, min depth to accommodate stud size, with min 1 in. long legs, attached to floor and ceiling with fasteners spaced max 24 in. OC.

1E. **Framing Members*— Floor and Ceiling Runners —**(Not shown, As an alternate to Item 1) — For use with Items 2E, 5F or 5G or SI only, channel shaped, fabricated from min. 0.016 in. (min bare metal thickness) galvanized steel, attached to floor and ceiling with fasteners 24 in. OC. max.

CLARKDIETRICH BUILDING SYSTEMS — CD ProTRAK

DMFCWBS L L C — ProTRAK

MBA METAL FRAMING — ProTRAK

RAM SALES L L C — Ram ProTRAK

SOUTHEASTERN STUD & COMPONENTS INC — ProTRAK

STEEL STRUCTURAL SYSTEMS L L C — Tri-S ProTRAK

1F. **Framing Members* - Floor and Ceiling Runner —**Not shown - In lieu of Item 1 — For use with Item 2F, proprietary channel shaped runners, minimum width to accommodate stud size, with 1- 1/8 in. long legs fabricated from min 0.015 in. (min bare metal thickness) galv steel, attached to floor and ceiling with fasteners spaced 24 in. OC max.

SUPER STUD BUILDING PRODUCTS — The Edge

1G. **Framing Members* - Floor and Ceiling Runner —**For use with Item 2G, proprietary channel shaped runners, minimum width to accommodate stud size attached to floor and ceiling with fasteners 24 in. OC max.

STUDCO BUILDING SYSTEMS — CROCSTUD Track

1H. **Floor and Ceiling Runners —**(Not shown) — Channel shaped, fabricated from min 0.02 in. galv steel, min width to accommodate stud size, with min 1 in. long legs, for use with studs specified below and fabricated from min 0.02 in. galv steel or thicker, attached to floor and ceiling with fasteners spaced max 24 in. OC.

MARINOWARE, DIV OF WARE INDUSTRIES INC — Viper25™ Track VT100.

1I. **Framing Members*— Floor and Ceiling Runners —**(Not shown, As an alternate to Item 1) — For use with Items 2H, channel shaped, fabricated from min. 0.015 in. (min bare metal thickness) galvanized steel, attached to floor and ceiling with fasteners 24 in. OC. max.

TELLING INDUSTRIES L L C — TRUE-TRACK™

1J. **Framing Members* - Floor and Ceiling Runner —**Not shown - In lieu of Item 1 — For use with Item 2I, proprietary channel shaped runners, 3-5/8 in. deep attached to floor and ceiling with fasteners 24 in. OC max.

TELLING INDUSTRIES L L C — Viper25™ Track

1K. **Framing Members* - Floor and Ceiling Runner —**Not shown - In lieu of Item 1 — For use with Item 2J, proprietary channel shaped runners, 1-1/4 in. wide by 3-5/8 in. deep fabricated from min 0.020 in. thick galv steel, attached to floor and ceiling with fasteners spaced 24 in. OC max.

TELLING INDUSTRIES L L C — Viper20™ Track

2. **Steel Studs —**Channel shaped, fabricated from min 25 MSG corrosion-protected steel, min depth as indicated under Item 5, spaced a max of 24 in. OC. Studs to be cut 3/8 to 3/4 in. less than assembly height.

2A. **Steel Studs —**(As an alternate to Item 2. For use with Items 5B, 5E, 5H and 5J) Channel shaped, fabricated from min 20 MSG corrosion-protected or galv steel, 3-1/2 in. min depth, spaced a max of 16 in. OC. Studs to be cut 5/8 to 3/4 in. less than assembly height.

2B. **Framing Members* - Steel Studs —**As an alternate to Item 2. For use with Items 5C or 5I) - Proprietary channel shaped studs, 3-5/8 in. deep spaced a max of 24 in. OC. Studs to be cut 3/4 in less than the assembly height and installed with a ⅛" in. gap between the end of the stud and track at the bottom of the wall. For direct attachment of gypsum board only.

CALIFORNIA EXPANDED METAL PRODUCTS CO — Viper25™

CRACO MFG INC — SmartStud25™

MARINOWARE, DIV OF WARE INDUSTRIES INC — Viper25™

PHILLIPS MFG CO L L C — Viper25™

2C. **Framing Members* - Steel Studs —**Not shown - In lieu of Item 2 — proprietary channel shaped steel studs, min depth as indicated under Item 5, spaced a max if 24 in. OC, fabricated from min 0.020 in. thick galv steel. Studs cut 3/8 in. to 3/4 in. less in lengths than assembly heights.

CALIFORNIA EXPANDED METAL PRODUCTS CO — Viper20™

MARINOWARE, DIV OF WARE INDUSTRIES INC — Viper20™

PHILLIPS MFG CO L L C — Viper20™

2D. **Framing Members*— Steel Studs —**In lieu of Item 2 - Channel shaped studs, min depth as indicated under Item 5, spaced a max of 24 in. OC. Studs to be cut 3/4 in. less than assembly height.

ALLSTEEL & GYPSUM PRODUCTS INC — Type SUPREME Framing System

CONSOLIDATED FABRICATORS CORP, BUILDING PRODUCTS DIV — Type SUPREME Framing System

QUAIL RUN BUILDING MATERIALS INC — Type SUPREME Framing System

SCAFCO STEEL STUD MANUFACTURING CO — Type SUPREME Framing System

STEEL CONSTRUCTION SYSTEMS INC — Type SUPREME Framing System

UNITED METAL PRODUCTS INC — Type SUPREME Framing System

2E. **Framing Members*— Steel Studs —**(Not shown, As an alternate to Item 2) —For use with Items 5F or 5G or SI only, channel shaped studs, min depth as indicated under Item 5F, 5G or SI, fabricated from min. 0.015 in. (min bare metal thickness) galvanized steel, spaced a max of 24 in. OC. Studs to be cut 3/4 in. less than assembly height.

CLARKDIETRICH BUILDING SYSTEMS — CD ProSTUD

DMFCWBS L L C — ProSTUD

MBA METAL FRAMING — ProSTUD

RAM SALES L L C — Ram ProSTUD

SOUTHEASTERN STUD & COMPONENTS INC — ProSTUD

STEEL STRUCTURAL SYSTEMS L L C — Tri-S ProSTUD

2F. **Framing Members* - Steel Studs —**Not shown - In lieu of Item 2 — proprietary channel shaped steel studs, minimum width indicated under Item 5, 1-1/4 in. deep fabricated from min 0.015 in. (min bare metal thickness) galvanized steel. Studs 3/8 in. to 3/4 in. less in lengths than assembly heights.

SUPER STUD BUILDING PRODUCTS — The Edge

2G. **Framing Members* - Steel Studs —**Not shown - In lieu of Item 2 - proprietary channel shaped studs, minimum width indicated under Item 5, Studs to be cut 3/8 to 3/4 in less than the assembly height.

STUDCO BUILDING SYSTEMS — CROCSTUD

2H. **Framing Members*— Steel Studs —**(Not shown, As an alternate to Item 2) — Fabricated from min. 0.015 in. (min bare metal thickness) galvanized steel, spaced a max of 24 in. OC. Studs to be cut 3/4 in. less than assembly height.

TELLING INDUSTRIES L L C — TRUE-STUD™

2I. **Framing Members* - Steel Studs —**(As an alternate to Item 2. For use with Items 5C or 5L) - Proprietary channel shaped studs, 3-5/8 in. deep spaced a max of 24 in. OC. Studs to be cut 3/4 in less than the assembly height and installed with a ⅛" in. gap between the end of the stud and track at the bottom of the wall. For direct attachment of gypsum board only.

TELLING INDUSTRIES L L C — Viper25™

2J. **Framing Members* - Metal Studs —**Not shown - In lieu of Item 2 — proprietary channel shaped steel studs, min depth as indicated under Item 5, spaced a max if 24 in. OC, fabricated from min 0.020 in. thick galv steel. Studs cut 3/8 in. to 3/4 in. less in lengths than assembly heights.

TELLING INDUSTRIES L L C — Viper20™

3. **Wood Structural Panel Sheathing —**(Optional, For use with Item 5 Only)- (Not Shown) - 4 ft wide, 7/16 in. thick oriented strand board (OSB) or 15/32 in. thick structural 1 sheathing (plywood) complying with DOC PS1 or PS2, or APA Standard PRP-108, manufactured with exterior glue, applied horizontally or vertically to the steel studs. Vertical joints centered on studs, and staggered one stud space from wallboard joints. Attached to studs with flat-head self-drilling tapping screws with a min. head diam. of 0.292 in. at maximum 8 in. OC. in the perimeter and 12 in. OC. in the field. When used, fastener lengths for gypsum panels increased by min. 1/2 in.

4. **Batts and Blankets* —**(Required as indicated under Item 5) —Mineral wool batts, friction fitted between studs and runners. Min nom thickness as indicated under Item 5. See **Batts and Blankets (BKNY or BZJZ) Categories** for names of Classified companies.

4A. **Batts and Blankets' —**(Optional) — Placed in stud cavities, any glass fiber or mineral wool insulation bearing the UL Classification Marking as to Surface Burning Characteristics and/or Fire Resistance. See **Batts and Blankets (BKNY or BZJZ) Categories** for names of Classified companies.

5. **Gypsum Board* —**Gypsum panels with beveled, square or tapered edges, applied vertically or horizontally. Vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Vertical joints in adjacent layers (multilayer systems) staggered one stud cavity. Horizontal joints need not be backed by steel framing. Horizontal edge joints and horizontal butt joints on opposite sides of studs need not be staggered. Horizontal edge joints and horizontal butt joints in adjacent layers (multilayer systems) staggered a min of 12 in. The thickness and number of layers for the 1 hr, 2 hr, 3 hr and 4 hr ratings are as follows:

Gypsum Board Protection on Each Side of Wall

Rating, Hr	Min Stud Depth, in. Items 2, 2C, 2D, 2F and 2G	No. of Layers & Thkns of Panel	Min Thkns of Insulation (Item 4)
1	3-1/2	1 layer, 5/8 in. thick	Optional
1	2-1/2	1 layer, 1/2 in. thick	1-1/2 in.
1	1-5/8	1 layer, 3/4 in. thick	Optional
2	1-5/8	2 layers, 1/2 in. thick	Optional
2	1-5/8	2 layers, 5/8 in. thick	Optional
2	3-1/2	1 layer, 3/4 in. thick	3 in.
3	1-5/8	3 layers, 1/2 in. thick	Optional
3	1-5/8	2 layers, 3/4 in. thick	Optional
3	1-5/8	3 layers, 5/8 in. thick	Optional
4	1-5/8	4 layers, 5/8 in. thick	Optional
4	1-5/8	4 layers, 1/2 in. thick	Optional
4	2-1/2	2 layers, 3/4 in. thick	2 in.

CGC INC — 1/2 in. thick Type C, IP-X2 or IPC-AR; WRC, 5/8 in. thick Type AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, WRX or WRC, 3/4 in. thick Types IP-X3 or ULTRACODE

UNITED STATES GYPSUM CO — 1/2 in. thick Type C, IP-X2, IPC-AR or WRC; 5/8 in. thick Type SCX, SGX, SHX, WRX, IP-X1, AR, C, WRC, FRX-G, IP-AR, IP-X2, IPC-AR , 3/4 in. thick Types IP-X3 or ULTRACODE

USG MEXICO S A DE C V — 1/2 in. thick Type C, IP-X2, IPC-AR or WRC; 5/8 in. thick Type AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, WRX, WRC or, 3/4 in. thick Types IP-X3 or ULTRACODE

When Item 7B, Steel Framing Members*, is used, Nonbearing Wall Rating is limited to 1 Hr. Min. stud depth is 3-1/2 in., min. thickness of insulation (Item 4) is 3 in., and two layers of gypsum board panels (1/2 in. or 5/8 in. thick) shall be attached to furring channels as described in Item 6. One layer of gypsum board panels (1/2 in. or 5/8 in. thick) attached to opposite side of stud without furring channels as described in Item 6.

5A. **Gypsum Board* —**As an alternate to Item 5) — 5/8 in. thick, 24 to 54 in. wide, applied horizontally as the outer layer to one side of the assembly. Secured as described in Item 6.

CGC INC — Type SHX.

UNITED STATES GYPSUM CO — Type FRX-G, SHX.

USG MEXICO S A DE C V — Type SHX.

5B. **Gypsum Board* —**(Not Shown) - As an alternate to Item 5 when used as the base layer on one or both sides of wall when 5/8 in.or ⅜ in. thick products are specified. For direct attachment only to steel studs Item 2A, (not to be used with Item 3) - Nom 5/8 in. or ⅜ in. may be used as alternate to all 5/8 in. or ⅜ in. shown in Item 5, Wallboard Protection on Each Side of Wall table. Nom 5/8 in. or ⅜ in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Gypsum board secured to 20 MSG steel studs Item 2A with 1-1/4 in. long Type S-12 steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. To be used with Lead Batten Strips (see Item 11) or Lead Discs or Tabs (see Item 12).

RAY-BAR ENGINEERING CORP — Type RB-LBG

5C. **Gypsum Board* —**(For Use With Item 2B) Rating Limited to 1 Hour. 5/8 in. thick, 48 in. wide, Gypsum panels with beveled, square or tapered edges, applied vertically or horizontally. (Vertical Application)- The gypsum board is to be installed on each side of the studs with 1 in. long Type S coated steel screws spaced 8 in. OC starting 4 in. from the edge of the board at the center of each board. Gypsum boards are to be secured to the top and bottom track with screws spaced 8 in. OC and to be secured to the top and bottom track with screws spaced 8 in. OC starting 4 in. from the board edge. Fasteners shall not penetrate through both the stud and the track at the same time. Vertical joints are to be centered over studs and staggered one stud cavity on opposite sides of studs. (Horizontal Application) - The gypsum board is to be installed on each side of the studs with 1 in. long Type S coated steel screws spaced 8 in. OC starting 4 in. from the edge of the board at the vertical edges and 12 in. OC starting 6 in. from the edge of the board at the center of each board. Gypsum boards are to be secured to the top and bottom track with screws spaced 8 in. OC. Fasteners shall not penetrate through both the stud and the track at the same time. All horizontal joints are to be backed as outlined under section VI of Volume 1 in the Fire Resistive Directory.

CGC INC — Type SCX.

UNITED STATES GYPSUM CO — Type SCX, SGX.

USG MEXICO S A DE C V — Type SCX.

5D. **Gypsum Board* —**(As an alternate to Item 5) — 5/8 in. thick, 48 in. wide, applied vertically or horizontally. Secured as described in Item 6. For use with Items 1 and 2 only

UNITED STATES GYPSUM CO — Type USGX.

5E. **Gypsum Board* —**(Not Shown) - (As an alternate to Item 5 when used as the base layer on one or both sides of wall when 1/2 in. or 5/8 in thick products are specified. For direct attachment only to steel studs Item 2A, not to be used with Item 3) Nominal 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-1/4 in. long Type S-12 (or No. 8 by 1-1/4 in. long bugle head fine driller) steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field.

NEW ENGLAND LEAD BURNING CO INC, DBA NELCO — Nelco

5F. **Gypsum Board* —**(As an alternate to Item 5) — For use with Items 1E and 2E and limited to 1 Hour Rating only. Gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs. Gypsum board secured to studs with 1 in. long Type S screws spaced 8 in. OC along vertical and bottom edges and 12 in. OC in the field. Vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Steel stud depth shall be a minimum 3-5/8 in.

UNITED STATES GYPSUM CO — 5/8 in. thick Type SCX, SGX.

5G. **Gypsum Board* —**(As an alternate to Item 5) — For use with Items 1E and 2E only. Gypsum panels with beveled, square or tapered edges, applied vertically or horizontally, as specified in the table below and fastened to the steel studs as described in Item 6. Vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Vertical joints in adjacent layers (multilayer systems) staggered one stud cavity. Horizontal joints need not be backed by steel framing. Horizontal edge joints and horizontal butt joints on opposite sides of studs need not be staggered. Horizontal edge joints and horizontal butt joints in adjacent layers (multilayer systems) staggered a min of 12 in. The thickness and number of layers for the 2 hr,3 hr and 4 hr ratings are as follows:

Gypsum Board Protection on Each Side of Wall

Rating, Hr	Min Stud Depth, in. Item 2E	No. of Layers & Thickness of Panel	Min Thkns of Insulation (Item 4)
2	1-5/8	2 layers, 1/2 in. thick	Optional
2	1-5/8	2 layers, 5/8 in. thick	Optional
3	1-5/8	3 layers, 1/2 in. thick	Optional
3	1-5/8	3 layers, 5/8 in. thick	Optional
4	1-5/8	4 layers, 5/8 in. thick	Optional
4	1-5/8	4 layers, 1/2 in. thick	Optional

CGC INC — 1/2 in. thick Type C, IP-X2 or IPC-AR; 5/8 in. thick Type AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, or, 3/4 in. thick Types IP-X3 or ULTRACODE

UNITED STATES GYPSUM CO — 1/2 in. thick Type C, IP-X2, IPC-AR or, 5/8 in. thick Type SCX, SGX, SHX, IP-X1, AR, C, , FRX-G, IP-AR, IP-X2, IPC-AR ; 3/4 in. thick Types IP-X3 or ULTRACODE

USG MEXICO S A DE C V — 1/2 in. thick Type C, IP-X2, IPC-AR or, 5/8 in. thick Type AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, or, 3/4 in. thick Types IP-X3 or ULTRACODE

5H. **Gypsum Board* —**(Not Shown) - (As an alternate to Item 5 when used as the base layer on one or both sides of wall when 5/8 or 3/4 in thick products are specified. For direct attachment only to steel studs Item 2A, (not to be used with Item 3) - Nom 5/8 or 3/4 in. may be used as alternate to all 5/8 or 3/4 in. shown in Item 5, Wallboard Protection on Each Side of Wall table. Nom 5/8 or 3/4 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over 20 MSG steel studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-1/4 in. long Type S-12 steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. Gypsum board secured to 20 MSG steel studs Item 2A with 1-1/4 in. long Type S-12 steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. For Joint Compound see Item 5. To be used with Lead Batten Strips (see Item 11A) or Lead Discs (see Item 12A).

MAYCO INDUSTRIES INC — Type X-Ray Shielded Gypsum

5I. **Gypsum Board* —**(As an alternate to Item 5) - Nom. 5/8 in. thick gypsum panels with beveled, square or tapered edges installed as described in Item 5. Steel stud minimum depth shall be as indicated in Item 5.

CGC INC — Type ULX

UNITED STATES GYPSUM CO — Type ULX

USG MEXICO S A DE C V — Type ULX

5J. **Gypsum Board* —**(Not Shown) - (As an alternate to Item 5 when used as the base layer on one or both sides of wall when 1/2 in. or 5/8 in thick products are specified. For direct attachment only to steel studs Item 2A, not to be used with Item 3) Nom 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-1/4 in. long Type S-12 steel screws gypsum panel steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. Lead batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations. Lead batten strips, min 2 in. wide, max 8 ft long with a max thickness of 0.14 in. placed on the face of studs and attached to the stud with hot-mop min 1 in. long min. Type S-8 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead discs, nominal 3/8 in. diam by max 0.080 in. thick. Compression fitted or adhered over the screw heads. Lead batten strips and discs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C".

RADIATION PROTECTION PRODUCTS INC — Type RPP- Lead Lined Drywall

6. **Fasteners —**(Not shown) — For use with Items 2 and 2F - Type S or S-12 steel screws used to attach panels to studs (Item 2) or furring channels (Item 7). **Single layer systems:** 1 in. long for 1/2 and 5/8 in. thick panels or 1-1/4 in. long for 3/4 in. thick panels, spaced 8 in. OC when panels are applied horizontally, or 8 in. OC along vertical and bottom edges and 12 in. OC in the field when panels are applied vertically. **Two layer systems:** First layer- 1 in. long for 1/2 and 5/8 in. thick panels or 1-1/4 in. long for 3/4 in. thick panels, spaced 24 in. OC. Second layer-1-5/8 in. long for 1/2 and 5/8 in. thick panels, spaced 24 in. OC. Screws offset min 8 in. from first layer. **Three-layer systems:** First layer- 1 in. long for 1/2 in., 5/8 in. thick panels, spaced 24 in. OC. Second layer-1-5/8 in. long for 1/2 in., 5/8 in. thick panels, spaced 24 in. OC. Third layer- 2-1/4 in. long for 1/2 in., 5/8 in. thick panels or 2-5/8 in. long for 5/8 in. thick panels, spaced 12 in. OC. Screws offset min 8 in. from layer below. **Four-layer systems:** First layer- 1 in. long for 1/2 in., 5/8 in. thick panels, spaced 24 in. OC. Second layer- 1-5/8 in. long for 1/2 in., 5/8 in. thick panels, spaced 24 in. OC. Third layer- 2-1/4 in. long for 1/2 in. thick panels or 2-5/8 in. long for 5/8 in. thick panels, spaced 24 in. OC. Fourth layer- 2-5/8 in. long for 1/2 in. thick panels or 3 in. long for 5/8 in. thick panels, spaced 12 in. OC. Screws offset min 8 in. from layer below.

7. **Furring Channels —**(Optional, not shown, for single or double layer systems) — Resilient furring channels fabricated from min 25 MSG corrosion-protected steel, spaced vertically a max of 24 in. OC. Flange portion attached to each intersecting stud with 1/2 in. long Type S-12 steel screws. Not for use with Item 5A and 5E.

7A. **Framing Members* —**(Optional on one or both sides, not shown, for single or double layer systems) — As an alternate to Item 7, furring channels and Steel Framing Members as described below:

a. **Furring Channels —** Formed of No. 25 MSG galv steel. 2-9/16 in. or 2-23/32 in. wide by 7/8 in. deep, spaced max. 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Gypsum board attached to furring channels as described in Item 6. Not for use with Item 5A and 5E.

b. **Steel Framing Members* —**Used to attach furring channels (Item 7Aa) to studs (Item 2). Clips spaced max. 48 in. OC. RSIC-1 and RSIC-1.(2.75) clips secured to studs with No. 8 x 1-1/2 in. minimum self-drilling, S-12 steel screw through the center grommet. RSIC-V and RSIC-V.(2.75) clips secured to studs with No. 8 x 9/16 in. minimum self-drilling, S-12 steel screw through the center hole. Furring channels are friction fitted into clips. RSIC-1 and RSIC-V clips for use with 2-9/16 in. wide furring channels. RSIC-1 (2.75) and RSIC-V (2.75) clips for use with 2-23/32 in. wide furring channels.

PAC INTERNATIONAL INC — Types RSIC-1, RSIC-V, RSIC-1.(2.75), RSIC-V (2.75).

7B. **Framing Members* —**(Optional, Not Shown) — As an alternate to Item 7, for single or double layer systems, furring channels and Steel Framing Members on only one side of studs as described below:

a. **Furring Channels —** Formed of No. 25 MSG galv steel, spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Batts and Blankets placed in stud cavity as described in Item 5. Two layers of gypsum board attached to furring channels as described in Item 5. Not for use with Item 5A and 5E.

b. **Steel Framing Members* —**Used to attach furring channels (Item 7Aa) to one side of studs (Item 2) only. Clips spaced 48 in. OC., and secured to studs with hex No. 8 x 2-1/2 in. coarse drywall screws, one through the hole at each end of the clip. Furring channels are friction fitted into clips.

KINETICS NOISE CONTROL INC — Type Isomax

7C. **Framing Members* —**(Not Shown) — (Optional on one or both sides, not shown, for single or double layer systems) — As an alternate to Item 7, furring channels and Steel Framing Members as described below:

a. **Furring Channels —**Formed of No. 25 MSG galv steel. 2-3/8 in. wide by 7/8 in. deep, spaced max. 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Gypsum board attached to furring channels as described in Item 6. Not for use with Item 5A and 5E.

b. **Steel Framing Members* —**Used to attach furring channels (Item 7Aa) to studs (Item 2). Clips spaced max. 48 in. OC. GENIECLIPS secured to studs with No. 8 x 1-1/2 in. minimum self-drilling, S-12 steel screw through the center grommet. Furring channels are friction fitted into clips.

PLITEQ INC — Type GENIECLIP

7D. **Steel Framing Members —**(Optional, Not Shown)* - Furring channels and resilient sound isolation clip as described below:

a. **Furring Channels —**Formed of No. 25 MSG galv steel. Spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels overlapped 6 in. and secured together with four self-tapping No. 8x1/2 Self Drilling screws (2 per side 1 in. and 4 in. from overlap edge). Gypsum board attached to furring channels as described in Item 4. Side joint furring channels shall be attached to studs with No. 8 x 1-1/2 in. minimum self-drilling, S-12 steel screw through the center grommet. Resilient Sound Isolation Clip Boards at side joints fastened into channel with screws spaced 8 in. OC, approximately 1/2 in. from joint edge. Not for use with Item 5A and 5E.

b. **Steel Framing Members* —**Resilient sound isolation clip used to attach furring channels (Item 7Da) to studs. Clips spaced 24 in. OC., and secured to studs with No. 10 x 2-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips.

STUDCO BUILDING SYSTEMS — RESILMOUNT Sound Isolation Clips - Type A237 or A237R

8. **Joint Tape and Compound —**(*Vinyl or casein, dry or premixed joint compound* applied in two coats to joints and screw heads of outer layers. Paper tape, nom 2 in. wide, embedded in first layer of compound over all joints of outer layer panels. Paper tape and joint compound may be omitted when gypsum panels are supplied with a square edge.

9. **Siding, Brick or Stucco —**(Optional, not shown) — Aluminum, vinyl or steel siding, brick veneer or stucco, meeting the requirements of local code agencies, installed over gypsum panels. Brick veneer attached to studs with corrugated metal wall ties attached to each stud with steel screws, not more than each sixth course of brick.

10. **Caulking and Sealants* —**(Optional, not shown) — A bead of acoustical sealant applied around the partition perimeter for sound control.

UNITED STATES GYPSUM CO — Type AS

11. **Lead Batten Strips —**(Not Shown, For Use With Item 5B) - Lead batten strips, min 1-1/2 in. wide, max 10 ft long with a max thickness of 0.125 in. Strips placed on the interior face of studs and attached from the exterior face of the stud with hot-1 in. long Type S-12 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead batten strips to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Lead batten strips required behind vertical joints of lead backed gypsum wallboard (Item 5B) and optional at remaining stud locations. Required behind vertical joints.

11A. **Lead Batten Strips —**(Not Shown, For Use With Item 5H) Lead batten strips, 2 in. wide, max 10 ft long with a max thickness of 0.140 in. Strips placed on the face of studs and attached to the stud with hot-mop min 1 in. long min. Type S-8 pan head steel screws, one at the top of the strip and one at the bottom of the strip or with one min. 1 in. long min. Type S-8 pan head steel screw at the top of the strip. Lead batten strips to have a purity of 99.5% meeting the Federal specification QQ-L-201f, Grades "B, C or D". Lead batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations.

12. **Lead Discs or Tabs —**(Not Shown, For Use With Item 5B) - Used in lieu of or in addition to the lead batten strips (Item 11) or optional at other locations - Max 3/4 in. diam by max 0.125 in. thick lead discs compression fitted or adhered over steel screw heads or max 1/2 in. by 1-1/4 in. by max 0.125 in. thick lead tabs placed on gypsum boards (Item 5B) underneath screw locations prior to the installation of the screws. Lead discs or tabs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C".

12A. **Lead Discs —**(Not Shown, for use with Item 5H) Max 5/16 in. diam by max 0.140 in. thick lead discs compression fitted or adhered over steel screw heads. Lead discs to have a purity of 99.5% meeting the Federal Specification QQ-L-201f, Grades "B, C or D".

13. **Lead Batten Strips —**(Not Shown, For Use With Item 5E) Lead batten strips, 2 in. wide, max 10 ft long with a max thickness of 0.142 in. Strips placed on the face of studs and attached to the stud with hot-mop min. 1 in. long min. Type S-8 pan head steel screws, one at the top of the strip and one at the bottom of the strip or with one min. 1 in. long min. Type S-8 pan head steel screw at the top of the strip. Lead batten strips to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Lead batten strips required behind vertical joints of lead backed gypsum wallboard (Item 5E) and optional at remaining stud locations.

14. **Lead Tabs —**(Not Shown, For Use With Item 5E) 2 in. wide, 5 in. long with a max thickness of 0.142 in. Tabs friction-fit around front face of stud, the stud folded back flange, and the back face of the stud. Tabs required at each location where a screw (that secures the gypsum boards, Item 5E) will penetrate the steel stud. Lead tabs to

have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Lead tabs may be held in place with standard adhesive tape if necessary.

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**

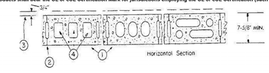
Design No. U905

October 02, 2014

Bearing Wall Rating — 2 HR.
Nonbearing Wall Rating — 2 HR

This design was evaluated using a load design method other than the Limit States Design Method (e.g., Working Stress Design Method). For jurisdictions employing the Limit States Design Method, such as Canada, a load restriction factor shall be used — See Guide 9XUV or 8XUV7

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**



1. **Concrete Blocks* —**Various designs. Classification D-2 (2 hr).

See **Concrete Blocks** category for list of eligible manufacturers.

2. **Mortar —**Blocks laid in full bed of mortar, nom. 3/8 in. thick, of not less than 2-1/4 and not more than 3-1/2 parts of clean sharp sand to 1 part Portland cement (proportioned by volume) and not more than 50 percent hydrated lime (by cement volume). Vertical joints staggered.

3. **Portland Cement Stucco or Gypsum Plaster —**Add 1/2 hr to classification if used. Where combustible members are framed in wall, plaster or stucco must be applied on the face opposite framing to achieve a max. Classification of 1-1/2 hr. Attached to concrete blocks (Item 1).

4. **Loose Masonry Fill —**If all core spaces are filled with loose dry expanded slag, expanded clay or shale (Rotary Kiln Process), water repellant vermiculite masonry fill insulation, or silicone treated perlite loose fill insulation add 2 hr to classification.

5. **Foamed Plastic* —**(Optional-Not Shown) — 1-1/2 in. thick max, 4 ft wide sheathing attached to concrete blocks (Item 1).

ATLAS ROOFING CORP — "EnergyShield Pro Wall Insulation" and "EnergyShield Pro 2 Wall Insulation."

CARLISLE COATINGS & WATERPROOFING INC — Type R2+ Sheath

HUNTER PANELS — Type Xci-Class A, Xci 286

THE DOW CHEMICAL CO — Type Thermax Sheathing, Thermax Light Duty Insulation, Thermax Heavy Duty Insulation, Thermax Metal Building Board, Thermax White Finish Insulation, Thermax cc Exterior Insulation, Thermax IH Insulation, Thermax Plus Liner Panel and Thermax Heavy Duty Plus (HDP)

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SHANE WEBSTER
REGISTERED ARCHITECT
6462
NORTH CAROLINA
RALEIGH, NC

09/11/2018

ISSUE FOR
PERMIT SET

**ISSUE D

LEGEND

- 34" — CLEAR OPENING WIDTH
- 0.2" — CLEAR WIDTH PER OCCUPANT
- 170 — OCCUPANT CAPACITY
- 75 — ACTUAL OCCUPANT LOAD
- PANIC ACCESS | Yes, REQUEST | No — PANIC HARDWARE / ACCESS CONTROL DEVICE (E.G. CARD READER) / REQUEST TO EXIT
- 34" — CLEAR STAIR WIDTH
- 0.2" — CLEAR WIDTH PER OCCUPANT
- 170 — OCCUPANT CAPACITY
- 75 — ACTUAL OCCUPANT LOAD
- OCCUPANCY CLASS
- AREA
- OCCUPANT COUNT
- SF PER OCCUPANT

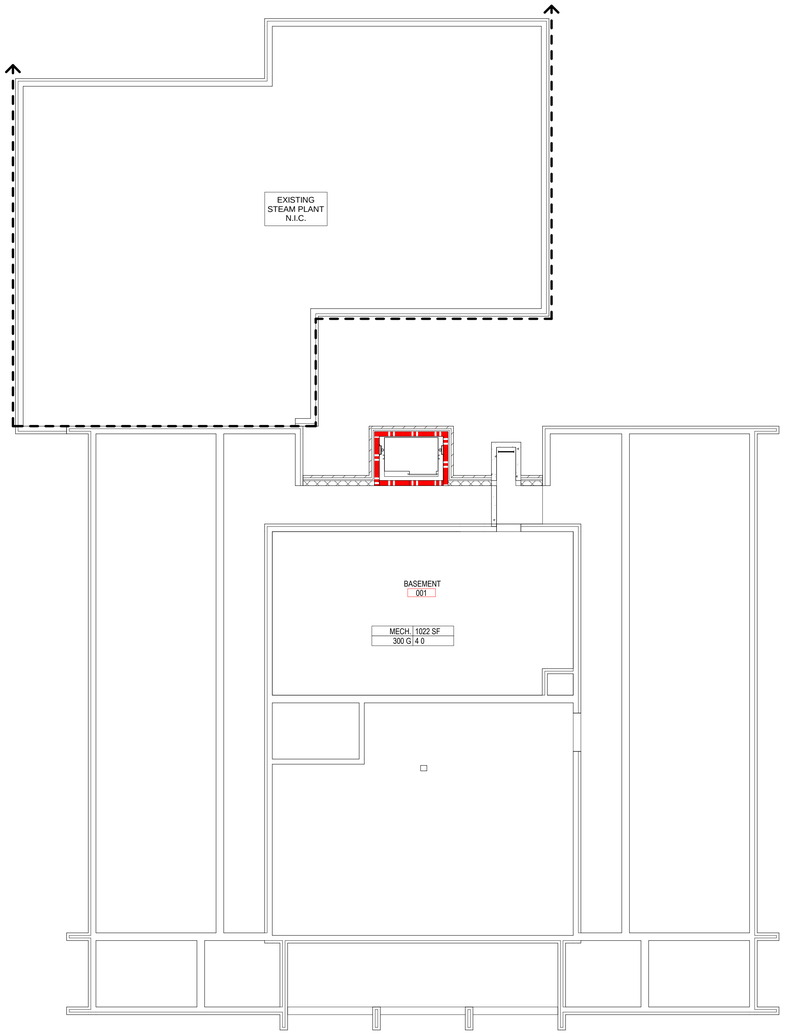
- TRAVEL DISTANCE SHOWN: 000' — EXIT EGRESS DISTANCE / EXIT EGRESS COMMON PATH
- TRAVEL DISTANCE SHOWN: 000' — EXIT EGRESS DEAD END DISTANCE
- OVERALL DIAGONAL DIMENSION - 14' — OVERALL DIAGONAL DISTANCE
- DISTANCE BETWEEN EXITS - 14' — EXIT REMOTENESS DISTANCE
- CR — CARD READER
- OO — DOOR OPERATOR
- ILLUMINATED EXIT SIGN

GENERAL NOTES

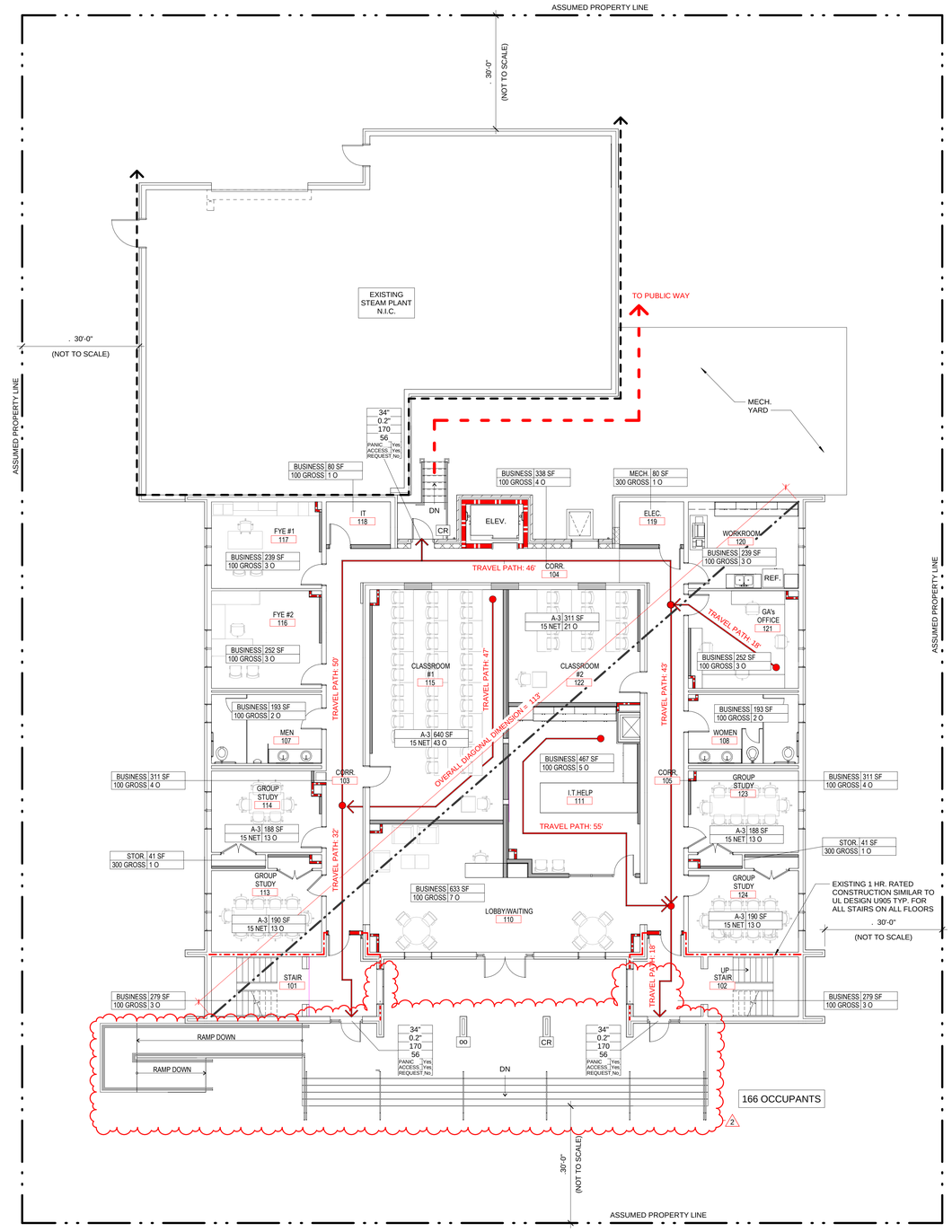
A. FIELD VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS.

SHEET KEYNOTES

VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS, TYPICAL



1A G111 Level 0 - Base Bid Life Safety
1/8" = 1'-0"



4A G111 Level 1 - Base Bid Life Safety
1/8" = 1'-0"

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SHANE WEBSTER REGISTERED ARCHITECT 6452 NORTH CAROLINA RALEIGH, NC
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ISSUE FOR
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ISSUE DATE
09.11.2018

REVISIONS

NO.	REASON	DATE
1	AV Revisions by Owner and Quality Control	08.20.18
2	Revisions by Owner	09.11.18

PROJECT TEAM
PRINCIPAL IN CHARGE
ROB KLINEDINST, AIA
PROJECT MANAGER
SHANE WEBSTER, AIA
DESIGN TEAM
LITTLE

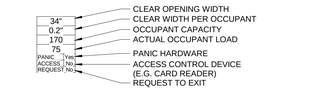
PROJECT NAME
CAMPBELL UNIVERSITY
DAY HALL RENOVATIONS

PROJECT NO.
513.9660.00

SHEET TITLE
LIFE SAFETY PLANS - LEVELS 0 AND 1

SHEET NUMBER
G111 1

LEGEND



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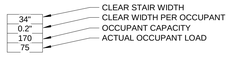
- PANIC HARDWARE
- ACCESS CONTROL DEVICE (E.G. CARD READER)
- REQUEST TO EXIT



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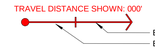

- EXIT EGRESS DISTANCE
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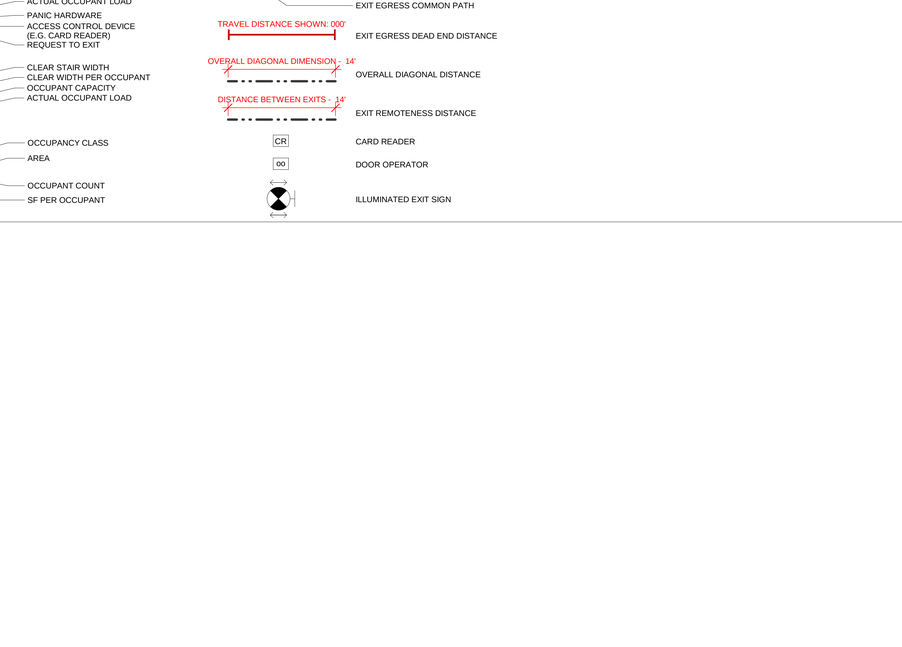

1A G112 Level 2 - Base Bid Life Safety

1/8" = 1'-0"

4A G112 Level 3 - Base Bid Life Safety

1/8" = 1'-0"

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LIFE SAFETY PLANS - LEVELS 2 AND 3

SHEET NUMBER
G112 1