Cain Rash West Architects
Architectural Services
130 Regional Park Drive
Kingsport, TN 37660
Phn (423) 349-7760
Fax (423) 349-7413
www.grcinc.com

RE-BID ADDENDUM ONE

Project: **Sullivan County Schools East High School S.T.E.M. Classroom Renovations RE-BID**

Address: **4180 Weaver Pike, Bluff City, TN**

January 29, 2024

This Addendum is part of the Contract Documents for the above referenced project and modifies the original drawings and/or specifications, dated **January 17, 2024**, as noted below. The bidder shall acknowledge receipt of this Addendum in the place provided in the Bid Form. The published bid date and time shall remain the same.

GENERAL:

1. See attached Pre-Bid Meeting sign in sheet.

CLARIFICATION:

1. The existing roof is a Garland product currently under warranty. Contact Matt Emery 615-496-1464 memery@garlandind.com. New roofing work is to maintain the current warranty.

DRAWINGS:

1. **REVISIONS FROM ORIGINAL BID TO RE-BID:**
    a. **DRAWING G-00 –** Issued Date
    b. **DRAWING G-00 –** Drawing Index updated
    c. **DRAWING G-00 –** Architect and Engineer Seals Updated
    d. **DRAWING G-01 –** Revised Bid Alternates
    e. **DRAWING S-11 –** Revised Structural to reflect a single rooftop HVAC unit
    f. **DRAWING A-10 –** Revisions: Key Notes, Wall Construction for back corridor wall, Alternate #3 borrowed lites
    g. **DRAWING A-20 –** Revisions: Key Notes, Interior Elevations
    h. **DRAWING I-10 –** Revisions: Key Notes, lighting layout
    i. **DRAWING MP-1.0 –** Revisions: RTU Schedule
    j. **DRAWING MP-1.1 –** Revisions: HVAC System & Ductwork layout
    k. **DRAWING E-11 –** Revisions to the lighting layout
    l. **DRAWING E-12 –** Revisions to the HVAC power

SPECIFICATIONS:

1. **SECTION 088000 GLAZING** – Item 2.7 Safety and Security Window Film – The Basis of Design is to be the SCL SR PS8 (Clear) product as Manufactured by LLumar.

Cain Rash West Architects

Richard Lutz

OFFICE OF THE SULLIVAN COUNTY PURCHASING AGENT
3411 HIGHWAY 126–SUITE 201
BLOUNTVILLE, TN 37617-0569

KRISTINIA DAVIS
PURCHASING AGENT

PHONE 423-323-6400
FAX 423-323-7249
kris.davis@sullivancountytn.gov

PRE–BID ATTENDANCE RECORD

DATE: 01.25.24 TIME: 2:00PM

PROJECT DESCRIPTION: Re-bid Sullivan East High School STEM Classroom Renovation

LOCATION OF PROJECT: Sullivan East High School

*NOTE: MANDATORY PRE-BID MEETING REQUIRES REPRESENTATION OF COMPANY AGENT, VERIFIED BY REGISTRATION, TO AFFORD AN OPPORTUNITY FOR COMPANY TO OFFER A PRICED PROPOSAL.

Purchasing Department: Michelle Ramey

YOUR NAME	COMPANY / AGENCY	PHONE NUMBER	EMAIL ADDRESS
RICHARD LUTZ	CRW	423-349-7760	RICHL@CRWINC.COM
TRAVIS BROOKS	CP, LLC	423-767-1560	travis@constpartnersllc.com
Debbie Madgett	Sullivan County Schools	423-354-1052	debbie.madgett@sullivank12.net
RODNEY CONNER	PRESTON CONST. CO	423-439-9831	

S.T.E.M. Classroom Renovations for:

Sullivan County East High School

4180 Weaver Pike, Bluff City, Sullivan County, Tennessee 37618

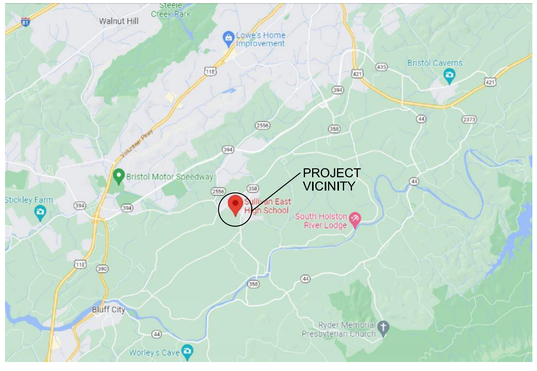
SULLIVAN EAST HIGH SCHOOL

OCTOBER 4, 2023 - ORIGINAL BID

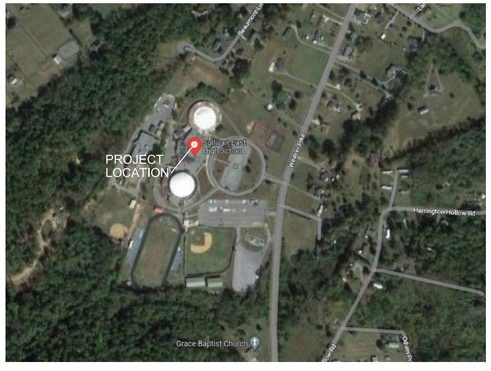
2 JANUARY 17, 2024 - RE-BID

CRW Project # 202336

VICINITY MAP



LOCATION MAP



DRAWING INDEX

2

GENERAL

NO.	DRAWING DESCRIPTION	ISSUED	REV. DATE	REV. DESCRIPTION
G-00	COVER SHEET	10/4/2023	01/17/2024	RE-BID REVISION
G-01	GENERAL INFORMATION SHEET	10/4/2023	01/17/2024	RE-BID REVISION

SITE / CIVIL

NOT USED

STRUCTURAL

S-11	ROOFTOP HVAC UNIT SUPPORT PLAN			

ARCHITECTURAL

A-01	DEMOLITION PLAN			
A-10	PARTIAL FLOOR PLAN	10/4/2023	01/17/2024	RE-BID REVISION
A-20	INTERIOR ELEVATIONS	10/4/2023	01/17/2024	RE-BID REVISION

INTERIORS

I-10	REFLECTED CEILING PLAN	10/4/2023	01/17/2024	RE-BID REVISION

MECHANICAL/PLUMBING

MP-1.0	SCHEDULE & SPECIFICATIONS	REVISED 10/20/2023
MP-1.1	HVAC & PLUMBING FLOOR PLANS	REVISED 10/20/2023

FIRE PROTECTION

NOT USED

ELECTRICAL

E-01	ELECTRICAL SCHEDULES, LEGEND AND DETAILS	REVISED 10/20/2023
E-11	LIGHTING PLAN	REVISED 10/20/2023
E-12	POWER & COMMUNICATIONS PLAN	REVISED 10/20/2023
E-21	PANEL BOARD SCHEDULE, FEEDER DIAGRAM & SPECIFICATIONS	REVISED 10/20/2023

STRUCTURAL

SPODEN & WILSON
CONSULTING ENGINEERS
430 CLAY STREET
KINGSPORT, TENNESSEE 37660
Phone: (423) 245-1181 Fax: (423) 245-0852
email: sweng@spodenwilson.com

STEVE D. WILSON — REGISTERED ENGINEER — AGRICULTURE — No. 22051 — STATE OF TENNESSEE

MECHANICAL / PLUMBING

BCE BEDINGER CONSULTING ENGINEERS
5641 Merchants Center Blvd;
STE A104
Knoxville, TN 37912
Ph: 865-5975
www.bce1946.com

STEVEN DANIEL [illegible] — REGISTERED ENGINEER — AGRICULTURE — No. 116221 — STATE OF TENNESSEE

ELECTRICAL

VREELAND ENGINEERS INC.
CONSULTING ELECTRICAL ENGINEERS
3107 SUTHERLAND AVENUE
P.O. BOX 10648
KNOXVILLE, TENNESSEE 37939-0648
PHONE 865/637-4451 FAX 865/637-1558

HAROLD E. DAMRON — REGISTERED ENGINEER — AGRICULTURE — No. 022989 — STATE OF TENNESSEE — 1-15-24

ARCHITECT / CIVIL

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www.grcinc.com

DINEEN BOLLING WISH — REGISTERED ARCHITECT — AGRICULTURE — No. 100987 — STATE OF TENNESSEE — 1-15-24

S.T.E.M. Classroom Renovations for: SULLIVAN EAST HIGH SCHOOL Blountville, Tennessee

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no.	date	rev. description
2	01-17-24	RE-BID REVISIONS

issued	JAN. 17, 2024
checked	NAME
drawn	RDL
project no.	202336

COVER SHEET

G-00

plotted:1/15/2024 8:49:38 AM file:G-00_COVER SHEET.DWG

ABBREVIATIONS

ABV.	ABOVE	HSV	HOMOGENEOUS SHEET VINYL
ACT	ACOUSTICAL TILE	HT.	HEIGHT
ADA	AMERICANS WITH DISABILITIES ACT	INSUL.	INSULATING, INSULATION
A.F.F.	ABOVE FINISHED FLOOR	JT.	JOINT
ALUM.	ALUMINUM	LAV.	LAVATORY
@	AT OR AT THE RATE OF	MANUF.	MANUFACTURER
APPROX.	APPROXIMATELY	MATL.	MATERIAL
℄	BUILDING LINE	MAX.	MAXIMUM
BLDG.	BUILDING	MECH.	MECHANICAL
BLKG.	BLOCKING	MDF	MEDIUM DENSITY FIBERBOARD
BOTT.	BOTTOM	MFD	MULTI-FUNCTION DEVICE
BRG.	BEARING	M.H.	MAN HOLE
C.B.	CATCH BASIN	MIN.	MINIMUM, OR MINUTES
℄	CENTERLINE	MIRR.	MIRROR IMAGE OF TYPICAL DETAIL
CJ	CONTROL JOINT	M.O.	MASONRY OPENING
CLG.	CEILING	M.R.	MOISTURE RESISTANT
CMU	CONCRETE MASONRY UNIT	MTL.	METAL
C.O.	CLEAN OUT	N.I.C.	NOT IN CONTRACT
CONC.	CONCRETE	NOM.	NOMINAL
CONT.	CONTINUOUS	O.C.	ON CENTER
COORD.	COORDINATE	OCC.	OCCUPANTS
CORR.	CORRIDOR	PH.	PHASE
CTR.	CENTER	PKG.	PACKAGE
DTL.	DETAIL	℄	PLATE
D.F.	DRINKING FOUNTAIN	POLY	POLYETHYLENE
DIA. Ø	DIAMETER	PR.	PAIR
DWG.	DRAWING	PSI	POUNDS PER SQUARE INCH
D.W.	DISH WASHER	P.T.	PRESSURE TREATED
(E)	EXISTING	PT.	PAINT, OR PAINTED
EA.	EACH	R	RADIUS, RISER
E.I.F.S.	EXTERIOR INSULATION AND FINISH SYSTEM	RD	ROOF DRAIN
EJ	EXPANSION JOINT	RDL	ROOF DRAIN LEADER
EL.	ELEVATION	REQ'D	REQUIRED
ELEC.	ELECTRICAL	R.O.	ROUGH OPENING
EQ.	EQUAL	⌀	SQUARE
EXIST.	EXISTING	SCHED.	SCHEDULE
EXP.	EXPANSION	SIM.	SIMILAR
EXT.	EXTERIOR	SQ.	SQUARE
F.D.	FLOOR DRAIN	STD.	STANDARD
FDTN.	FOUNDATION	STL.	STEEL
F.E.	FIRE EXTINGUISHER	STRUCT.	STRUCTURE, OR STRUCTURAL
F.F.	FINISHED FACE	SUSP.	SUSPENDED
FIN.	FINISHED	TK.	THICK
FLR.	FLOOR	TLT.	TOILET
FOF	FACE OF FINISH	T.O.	TOP OF
FTG.	FOOTING	T.O.F.	TOP OF FOOTING
F.V.	FIELD VERIFY	T.O.S.	TOP OF STEEL
GA.	GAUGE	TYP.	TYPICAL
GALV.	GALVANIZED, HOT DIPPED	U.L.	UNDERWRITER'S LABORATORIES, INC.
G.H.M.	GALVANIZED HOLLOW METAL	W.	WIDE
GYP. BD.	GYPSUM BOARD	W/	WITH
H.B.	HOSE BIBB	WD.	WOOD
H.C.	HANDICAPPED	WDW.	WINDOW
HDWE.	HARDWARE	W.H.	WATER HEATER
H.M.	HOLLOW METAL	WOW	WORKSTATION ON WHEELS
		WWF	WELDED WIRE FABRIC

LEGEND

- EXISTING WALL CONSTRUCTION TO REMAIN
- EXISTING CONSTRUCTION TO BE REMOVED
- CONCRETE MASONRY (NEW, VIEWED IN PLAN & SECTION)
- METAL STUD AND GYPSUM BOARD WALL (NEW)
- METAL STUD AND GYPSUM BOARD WALL (PARTIAL HEIGHT WALL WITH CAP) (NEW)
- BRICK
- GYPSUM BOARD CEILING (IN PLAN)
- CASEWORK (IN PLAN VIEW)
- GLASS OR MIRROR (ELEVATION)
- BATT INSULATION
- VAPOR BARRIER
- CONCRETE (SECTION)
- CRUSHED STONE
- EARTH
- DENOTES 2-HR RATED FREE STANDING FIRE WALL
- DENOTES 2-HR RATED FIRE SEPARATION WALL / SMOKE BARRIER
- DENOTES 1-HR RATED FIRE BARRIER
- DENOTES NON-RATED SMOKE PARTITION

LEGEND

- EXISTING CONSTRUCTION TO REMAIN
- NEW WALL CONSTRUCTION
- DENOTES AREA OF WORK
- DENOTES 1-HR RATED FIRE BARRIER
- T.D. = 100 FT. — TRAVEL DISTANCE TO EXIT (NOTE: TRAVEL DISTANCES INDICATED ON PLAN HAVE BEEN ROUNDED UP TO THE NEAREST WHOLE FOOT.)
- FEC — FIRE EXTINGUISHER / FIRE EXTINGUISHER CABINET

SYMBOLS

SECTION

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

A-30 / A-11
- IDENTIFICATION MARK LETTER (SECTIONS AND ELEVATIONS)
- IDENTIFICATION MARK NUMBER (DETAILS)
- DRAWING WHERE SECTION IS CUT OR ELEVATION OR DETAIL IS CALLED OUT
- DRAWING WHERE SECTION IS SHOWN

A / A-30
- SECTION IDENTIFICATION
- DRAWING WHERE SECTION IS SHOWN

A / A-20
- ELEVATION IDENTIFICATION
- DRAWING WHERE ELEVATION IS SHOWN

1 / A-14
- DETAIL IDENTIFICATION
- DRAWING WHERE DETAIL IS SHOWN

1
- WALL TYPE IDENTIFICATION

A
- WINDOW TYPE IDENTIFICATION

101 / A
- DOOR MARK NUMBER (CORRESPONDS WITH ROOM NUMBER)
- INDICATES QUANTITY OF DOORS PER SPACE/ROOM (A, B, C, ETC.)

ROOM / 100
- ROOM/SPACE IDENTIFICATION
- ROOM NUMBER

1
- REVISION NUMBER

ITEMS NOT IN CONTRACT

COMPUTERS
ROOM SIGNAGE
TELEVISIONS
WINDOW TREATMENTS
MICROWAVES
SHELVES (NOT SHADED)
EQUIPMENT
FREEZERS
CUBICLE WALLS
OVERHEAD PROJECTOR
LOCKERS
PHLEBOTOMY CHAIRS
EXAM TABLES
ANY ITEMS LABELED "NIC" OR "BY OWNER"
TABLES
FILING CABINETS
REFRIGERATORS
DISHWASHERS
COAT RACKS
PAPER TOWEL DISPENSERS
SOAP DISPENSERS
SCALES

THESE ITEMS MAY BE SHOWN FOR REFERENCE AND COORDINATION PURPOSES ONLY.

BID ALTERNATES

2

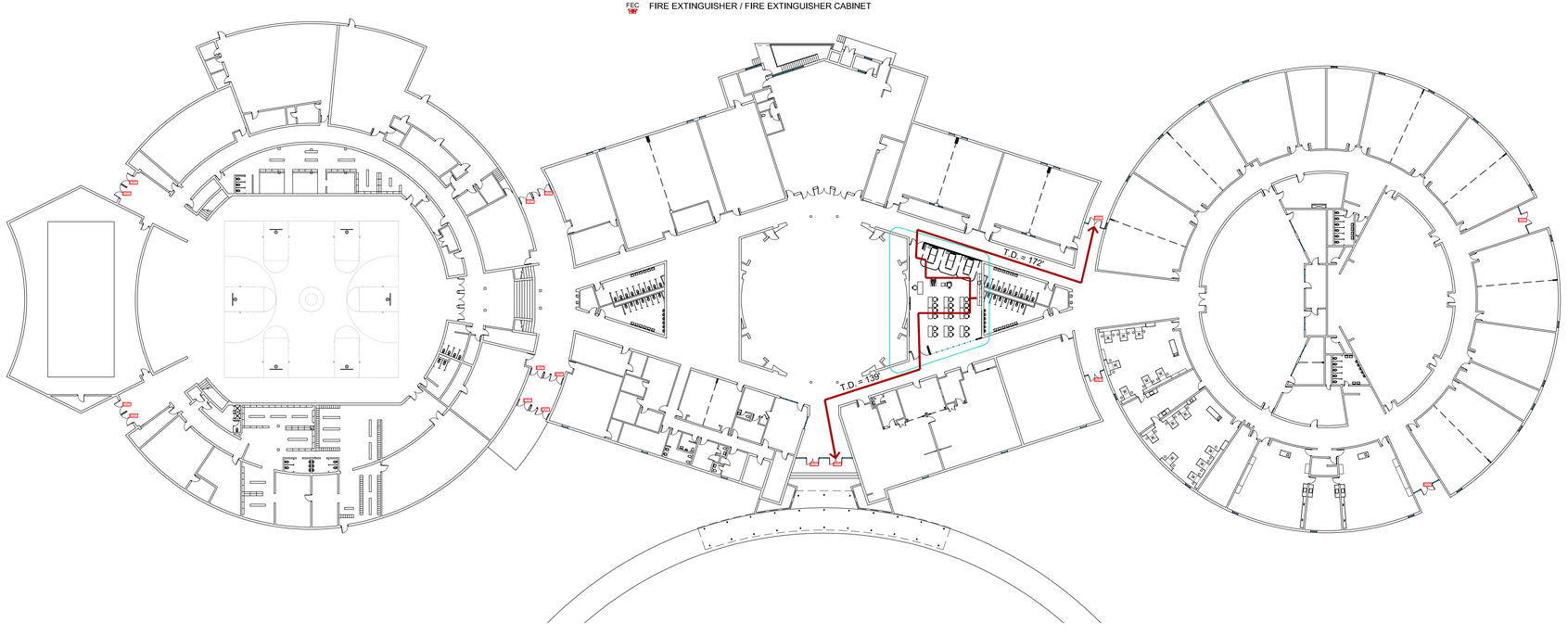
ALTERNATE #1
PROVIDE AND INSTALL LVT FLOORING, INCLUDING ALL MATERIAL, LABOR AND FLOOR PREP REQUIRED FOR A COMPLETE INSTALLATION.

ALTERNATE #2
PAINT EXISTING ROOM WALLS SHOWN TO REMAIN. INCLUDE ALL WALL CLEANING, PATCHING AND PREP FOR A COMPLETE PAINT JOB.

ALTERNATE #3
PROVIDE AND INSTALL STOREFRONT WINDOW SYSTEM IN BACK CORRIDOR WALL.

ALTERNATE #4
PROVIDE AND INSTALL MEDICAL CURTAIN AND TRACK.

ALTERNATE #5
PROVIDE AND INSTALL NON-FUNCTIONING MEDICAL HEADWALLS. (1) PER BED.



LIFE SAFETY PLAN

GENERAL NOTES

1. CONTRACTOR SHALL CONFINE HIS OPERATIONS TO THE IMMEDIATE VICINITY OF THE WORK SITE AS DIRECTED BY THE OWNER.
2. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE VERIFICATION OF ACTUAL CONDITIONS SURROUNDING THE PROJECT, INCLUDING THE AS-BUILT LOCATIONS AND CONDITIONS OF EXISTING UTILITIES AND THE BUILDING STRUCTURE.
3. CONTRACTOR SHALL COORDINATE THE LOCATIONS FOR THE STORAGE OF EQUIPMENT AND BUILDING MATERIALS WITH THE BUILDING OWNER. CONTRACTOR SHALL NOT BLOCK OR IMPEDE ACCESS TO THE BUILDING BY EXISTING TENANTS, CUSTOMERS OR EMERGENCY VEHICLES.
4. CONTRACTOR SHALL COORDINATE ANY REQUIRED SHUT-DOWN OF UTILITIES WITH THE LOCAL BODIES HAVING JURISDICTION. CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO PERFORMING ANY EXCAVATION OPERATIONS. ANY DAMAGE TO EXISTING UNDERGROUND UTILITIES, INADVERTENT OR OTHERWISE, RESULTING FROM CONSTRUCTION OPERATIONS, SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER.
5. UNLESS OTHERWISE NOTED, INTERIOR STUD WALLS SHALL BE CONSTRUCTED WITH 20 GA., 3 5/8" STEEL STUDS AT 16" ON CENTER WITH ONE (1) LAYER OF 5/8" THICK, TYPE "X", GYPSUM BOARD ON EACH FACE. (TOTAL WALL THICKNESS = 4 7/8") PROVIDE VERTICAL CONTROL JOINT AT ONE SIDE OF DOOR HEADS (TYPICAL). SET TRACK IN ACOUSTICAL SEALANT FOR SOUND CONTROL. (TYPICAL ALL WALLS.)
6. PLAN DIMENSIONS DENOTE FINISHED FACE OF WALL TO FINISHED FACE OF WALL UNLESS OTHERWISE NOTED. (TYPICAL FOR EXISTING WALLS.)
7. ALL PARTITIONS SHALL BE CONTINUOUS FROM TOP OF FLOOR SLAB TO MIN. 6" ABOVE FIN. CEILING UNLESS OTHERWISE NOTED OR DETAILED. PROVIDE FIBERGLASS SOUND ATTENUATION BLANKETS IN ALL WALLS. (TYPICAL FULL HEIGHT OF WALL.) (SEE WALL TYPES.)
8. PROVIDE ALL WALL BLOCKING AS REQUIRED FOR FIXTURES, CASEWORK, COMMUNICATIONS EQUIPMENT, ETC. ALL WOOD BLOCKING SHALL BE FIRE TREATED LUMBER. (CONTRACTOR MAY PROVIDE 20 GA. STEEL STUDS, IN LIEU OF WOOD BLOCKING, IN METAL STUD WALL CONSTRUCTION.) CONTRACTOR TO REVIEW LOCATIONS OF ALL WOOD BLOCKING WITH THE OWNER.
9. CONTRACTOR SHALL PROVIDE TEMPORARY CONSTRUCTION WALLS AND CLOSURES AS REQUIRED TO PREVENT THE SPREAD AND INFILTRATION OF DUST AND DEBRIS TO OTHER OCCUPIED AREAS OF THE BUILDING.
10. ALL DEBRIS SHALL BE REMOVED FROM THE PROJECT SITE BY THE CONTRACTOR AND DISPOSED OF IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL REQUIREMENTS. DEBRIS SHALL BE REMOVED FROM THE SITE DAILY.
11. THE CONTRACTOR SHALL ACCESS THE BUILDING ONLY FROM LOCATIONS APPROVED BY THE OWNER'S REPRESENTATIVE. CONSTRUCTION OPERATIONS SHALL NOT IMPEDE THE NORMAL FLOW OF TRAFFIC AT OTHER ENTRYWAYS.
12. CONTRACTOR SHALL NOTIFY BUILDING OWNER, AND ALL TENANTS, OF ANY REQUIRED UTILITY SHUT-DOWN NOT LESS THAN 48 HOURS IN ADVANCE OF THE SCHEDULED INTERRUPTION OF UTILITY SERVICES.
13. DURING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF THE BUILDING AND ITS CONTENTS FROM THE ELEMENTS AND FROM UNAUTHORIZED ENTRY. CONTRACTOR SHALL PROVIDE TEMPORARY CLOSURES AND BARRICADES AS REQUIRED TO MAINTAIN A SECURE ENVIRONMENT.
14. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE VERIFICATION OF ALL DIMENSIONS, LOCATIONS, SIZES, ETC. OF ALL BUILDING COMPONENTS, STRUCTURAL MEMBERS, EQUIPMENT, AND ACCESSORIES TO REMAIN.
15. CONTRACTOR SHALL NOT IMPEDE TRAFFIC FLOW IN ROADWAYS OR PARKING AREAS. COMPLETE ACCESS TO THE BUILDING BY EMERGENCY VEHICLES SHALL BE MAINTAINED AT ALL TIMES DURING DEMOLITION AND CONSTRUCTION OPERATIONS.
16. DOORS CONSTRUCTED AGAINST AN ADJACENT WALL SHALL BE PLACED 3" FROM THE OUTSIDE OF THE FRAME TO THE ADJACENT WALL (TYPICAL FOR STUD WALLS). DOORS IN MASONRY WALLS SHALL BE 8" (ONE BLOCK COURSE) FROM ADJACENT WALL. DOORS SHOWN IN THE CENTER OF A WALL SHALL BE CENTERED WITHIN THAT SPACE UNLESS OTHERWISE NOTED.
17. CONTRACTOR IS RESPONSIBLE FOR PATCHING AND FINISHING ALL EXISTING WALLS THAT ARE DAMAGED DURING DEMOLITION OPERATIONS OR THROUGH THE INSTALLATION OF NEW ITEMS AND APPURTENANCES TO A UNIFORM APPEARANCE TO MATCH THAT OF ADJACENT FINISHES.
18. THIS DRAWING SET UTILIZES COLOR FOR CLARITY AND IS BEST INTERPRETED WHEN VIEWED OR PRINTED IN COLOR.
19. THIS DRAWING SET IS INTENDED TO BE PRINTED AT 24"x36" SHEET SIZE. DO NOT SCALE DRAWINGS FROM ANY OTHER SIZE PRINT.

CODE DATA

SCOPE OF WORK SUMMARY

THIS PROJECT CONSISTS OF THE CREATION OF A NEW CLASSROOM WITHIN AN OPEN COMMONS AREA OF THE EXISTING SCHOOL, AND DOES NOT EFFECT EGRESS FROM THE BUILDING. THIS PROJECT DOES NOT INCLUDE ANY SITE WORK.

1

APPLICABLE CODES

NFPA 101 LIFE SAFETY CODE (2012 EDITION)
ICC INTERNATIONAL BUILDING CODE (2012 EDITION) (EXCLUDING CHAPTER 11 AND SECTION 3411)
ICC INTERNATIONAL EXISTING BUILDING CODE, 2012 EDITION (SCOPE OF WORK RELATED TO EXISTING BUILDINGS)
ICC INTERNATIONAL FIRE CODE (2012 EDITION)
ICC INTERNATIONAL MECHANICAL CODE (2012 EDITION)
ICC INTERNATIONAL FUEL GAS CODE (2012 EDITION)
ICC INTERNATIONAL PLUMBING CODE (2012 EDITION)
ICC INTERNATIONAL ENERGY CONSERVATION CODE (2012 EDITION)
NATIONAL ELECTRIC CODE (NFPA70) (2017 EDITION)
ACCESSIBILITY CODE; 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN.

NOTE; IN INSTANCES WHERE THE SPECIFIC REQUIREMENTS OF ICC AND NFPA 101 DIFFER, THE MORE STRINGENT OF THE TWO CODES SHALL APPLY.)

OCCUPANCY

EDUCATIONAL - GROUP E

CONSTRUCTION TYPE

TYPE II-B

1

GENERAL BUILDING LIMITATIONS

ALLOWABLE HEIGHT - UNCHANGED - EXISTING BUILDING IS LESS THAN THE PERMITTED 55'
ALLOWABLE STORIES - UNCHANGED - THE EXISTING BUILDING IS ONE (1) STORY
ALLOWABLE AREA - UNCHANGED - THE EXISTING BUILDING IS 128,557 SQUARE FEET

OCCUPANT LOAD

THE BUILDING OCCUPANT LOAD IS UNCHANGED

THE PROPOSED CLASSROOM IS 1,611 SF AT 50 SF PER PERSON FOR SHOPS/ OTHER VOCATIONAL ROOMS, THE PROPOSED OCCUPANCY LOAD FOR THIS SPACE IS 32 PEOPLE.

EGRESS

THE BUILDING EGRESS IS UNCHANGED.
REQUIRED TRAVEL DISTANCES IS 200' PER TABLE 1017.2
SEE ADJACENT PLAN FOR DISTANCES MAINTAINED UNDER 200'

INTERIOR FINISHES

TABLE 803.9 - INTERIOR FINISHES FOR GROUP B, NON-SPRINKLERED FACILITIES, SHALL BE CLASS "A" MATERIALS AT ALL
VERTICAL EXITS AND EXIT PASSAGEWAYS. EXIT ACCESS CORRIDORS SHALL BE CLASS "B" AND OTHER
ROOMS OR ENCLOSED SPACES MAY BE CLASS "C" MATERIALS.
(CLASS "A" = FLAMESPREAD 0-25, SMOKE 0-450)
(CLASS "B" = FLAMESPREAD 26-75, SMOKE 0-450)
(CLASS "C" = FLAMESPREAD 76-200, SMOKE 0-450)

804 - INTERIOR FLOOR FINISHES
CLASS II INTERIOR FLOOR FINISH - CRITICAL RADIANT FLUX NOT LESS THAN 0.22 W/cm² BUT LESS THAN 0.45 W/cm²

FIRE PROTECTION SYSTEMS

EXISTING FIRE ALARM SYSTEM TO BE MODIFIED AS REQUIRED FOR THE PROPOSED SCOPE OF WORK.

FIRE DEPARTMENT INFORMATION

SULLIVAN EAST VOLUNTEER FIRE DEPARTMENT
MATT KEGLEY - CHIEF
3287 WEAVER PIKE
BRISTOL, TN 37620
NON-EMERGENCY PHONE: 423-878-2787
FAX: 423-217-1043
WEB: HTTP://EASTSULLIVANCOUNTYVFD.COM

S.T.E.M. Classroom Renovations for:

SULLIVAN EAST HIGH SCHOOL

Blountville, Tennessee

Cain Rash West Architects
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no.	date	rev. description
1	11/20/23	CODE REVISIONS
2	1/17/24	RE-BID REVISIONS

TIMOTHY BOLLING WEST — REGISTERED ARCHITECT — AUTHORIZED AGENT — No. 100997 — STATE OF TENNESSEE

issued	JAN. 17, 2024
checked	NAME
drawn	RDL
project no.	202336

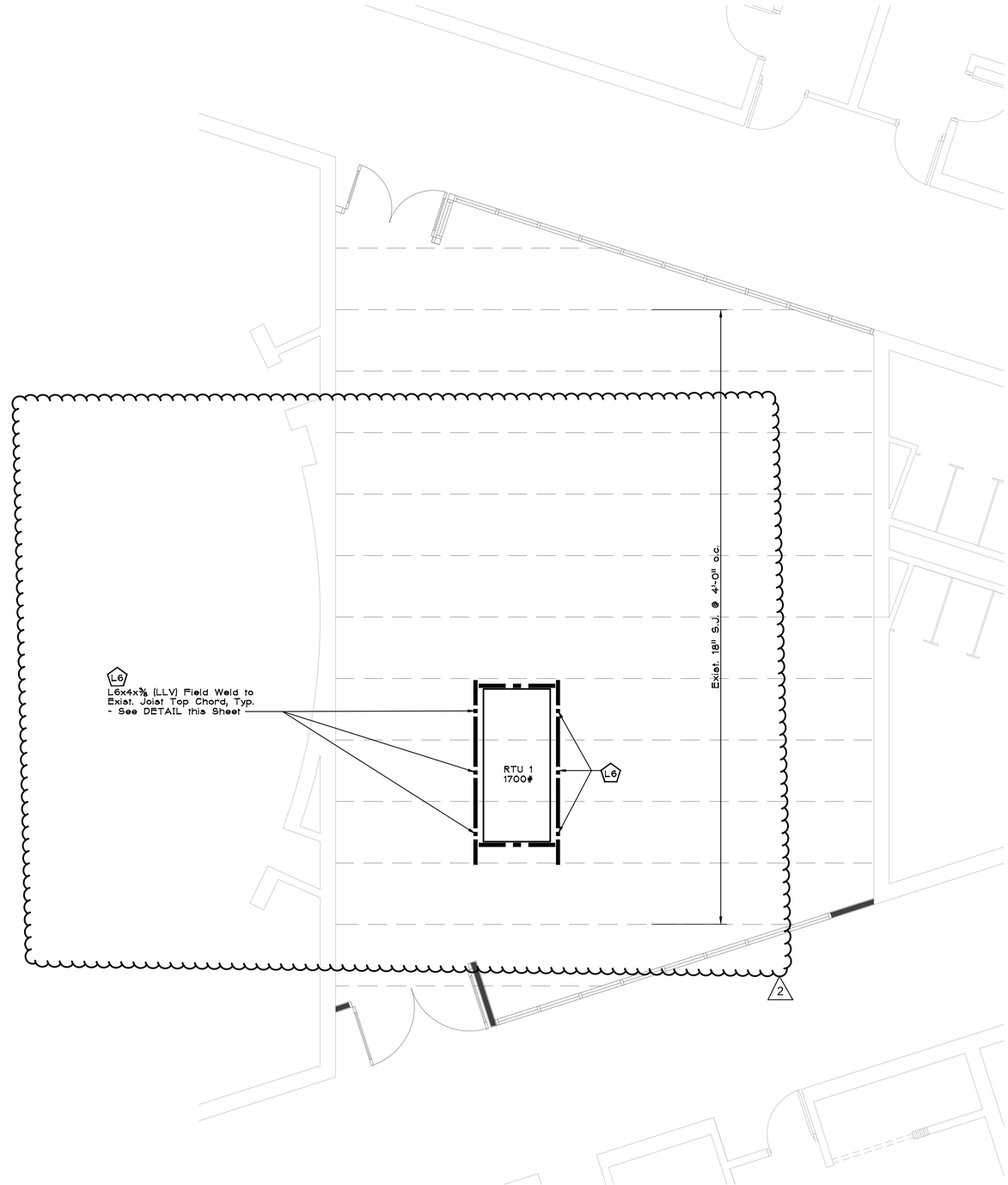
GENERAL INFORMATION

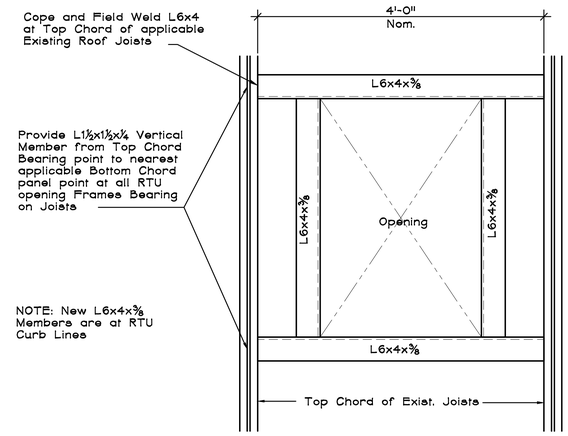
G-01

plotted:1/16/2024 8:31:25 AM file:G-01_GENERALINFO.DWG

SPODEN & WILSON
CONSULTING ENGINEERS
430 CLAY STREET
KINGSPORT, TENNESSEE 37660
Phone- (423) 245-1181 Fax- (423) 245-0852
email- sweng@spodenwilson.com

S&W Project No. 23096

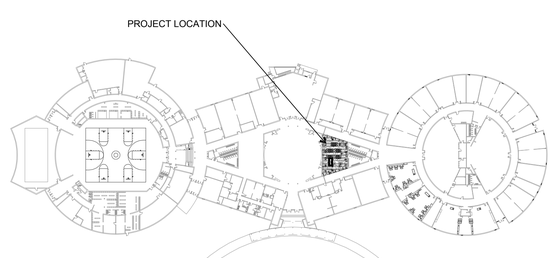




RTU SUPPORT DETAIL
1" = 1'-0"

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

PLAN NORTH / TRUE NORTH



KEY PLAN

S.T.E.M. Classroom Renovations for:
SULLIVAN EAST HIGH SCHOOL
Blountville, Tennessee

Cain Rash West
Architects
130 Regional Park Dr.
Kingsport, TN 37660
Phn (423) 349-7760
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2	1-17-24	Re-Bid Revisions

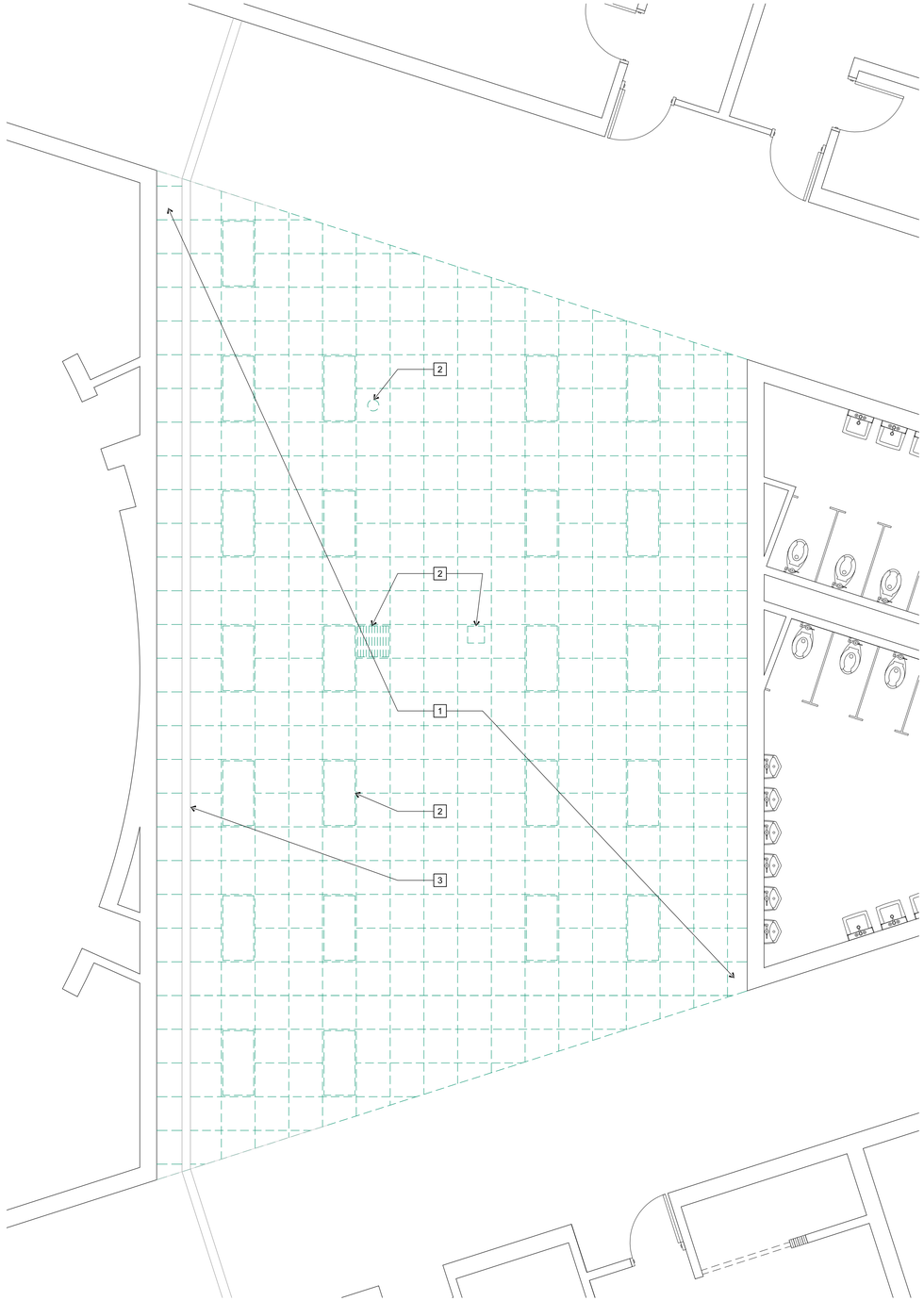
STEVE D. WILSON
REGISTERED
PROFESSIONAL
ENGINEER
STATE OF TENNESSEE

issued	9/20/2023
checked	SDW
drawn	TPE
project no.	202338

RTU SUPPORT

S-11

plotted: 1/11/2024 3:51:08 PM file 23096 - SEHS - DIGITAL ARTS - STRUCTURAL_R1.DWG



DEMOLITION PLAN

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

PLAN NORTH

TRUE NORTH

GENERAL DEMOLITION NOTES

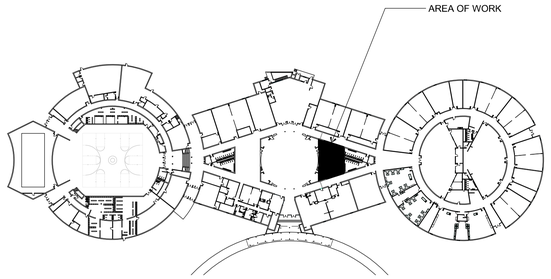
1. THE CONTRACTOR SHALL THOROUGHLY EXAMINE THE PROJECT SITE PRIOR TO COMMENCEMENT OF DEMOLITION OPERATIONS. CONTRACTOR SHALL SATISFY HIMSELF AS TO THE ACTUAL AS-BUILT CONDITION OF ALL BUILDINGS, STRUCTURES, IMPROVEMENTS, UTILITIES, ETC. THE LAYOUT OF THE EXISTING BUILDING IS DERIVED FROM OWNER FURNISHED DRAWINGS OF A SIMILAR STRUCTURE AND FROM SITE OBSERVATION. NEITHER THE OWNER NOR THE ARCHITECT MAKES ANY CLAIMS REGARDING THE COMPLETE ACCURACY OF SUCH EXISTING DRAWING INFORMATION COMPARED TO THE ACTUAL, CURRENT CONDITIONS OF THE BUILDING AND RELATED STRUCTURES.
2. FOR GENERAL NOTES SEE DRAWING G-01.
3. CONTRACTOR SHALL PROVIDE SIGNAGE, BARRICADES, ETC., AS REQUIRED TO MAINTAIN TRAFFIC CONTROL AND TENANT/CLIENT SAFETY IN AND AROUND THE CONSTRUCTION AREA.
4. EXISTING IMPROVEMENTS TO REMAIN, WHICH ARE DAMAGED BY DEMOLITION OPERATIONS, SHALL BE RESTORED TO THEIR PRE-DEMOLITION CONDITION BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER.
5. THE CONDITION OF EXISTING IMPROVEMENTS SHALL BE REVIEWED WITH THE OWNER PRIOR TO COMMENCEMENT OF DEMOLITION OPERATIONS.
6. CONTRACTOR SHALL PHOTOGRAPHICALLY RECORD THE CONDITION OF EXISTING CONDITIONS TO REMAIN PRIOR TO COMMENCEMENT OF DEMOLITION OPERATIONS.
7. WORK INDICATED TO BE REINSTALLED OR RELOCATED SHALL BE CAREFULLY REMOVED SO AS NOT TO BE DAMAGED, AND SHALL BE STORED AND PROTECTED UNTIL SUCH TIME AS NEW INSTALLATION IS TO BE MADE.
8. UNLESS NOTED OTHERWISE, ALL SYSTEMS, COMPONENTS, AND MATERIALS INDICATED FOR DEMOLITION SHALL BE REMOVED IN THEIR ENTIRETY, INCLUDING ALL APPURTENANCES.
9. ALL EXISTING UTILITIES IMPACTED BY THE REMOVAL OF MECHANICAL OR ELECTRICAL COMPONENTS SHALL BE CAPPED OR OTHERWISE APPROPRIATELY TERMINATED BY THE CONTRACTOR.
10. FOR DEMOLITION INSTRUCTIONS FOR MECHANICAL, PLUMBING AND ELECTRICAL COMPONENTS, REFER TO ENGINEERING DRAWINGS.
11. REMOVE EXISTING FLOOR FINISHES AND BASES WHERE NEW CONSTRUCTION OCCURS. AREAS SHOULD BE LEFT IN A CONDITION SUITABLE FOR NEW CONSTRUCTION.
12. COORDINATE WITH FINISH SCHEDULE TO DETERMINE REQUIRED PREPARATIONS SUCH AS GRINDING, LEVELING, AND/OR ADDITIONAL DEMOLITION NECESSARY TO PREPARE AREA(S) FOR NEW FINISHES SUCH AS FLOOR TILE.
13. DEMOLITION OPERATIONS INCLUDE FLOOR ROUGH-IN'S FOR ALL NEW PLUMBING LINES, SAW CUTTING AS NEEDED, AND/OR ELECTRICAL CONDUIT PER ENGINEER'S DIRECTION. SEE ENGINEERING DRAWINGS FOR FURTHER DIRECTION.
14. ALL DOORS, FINISH HARDWARE, PLUMBING FIXTURES, LIGHT FIXTURES, FURNISHINGS, OR ANY OTHER MISCELLANEOUS SALVAGED BUILDING COMPONENTS AND APPURTENANCES, REMOVED DURING THE COURSE OF DEMOLITION, SHALL BE TURNED OVER TO THE BUILDING OWNER. IF OWNER DECLINES TO TAKE THESE ITEMS THE CONTRACTOR SHALL PROPERLY DISPOSE OF THEM.

DEMOLITION KEY NOTES [X]

[1] REMOVE EXISTING SUSPENDED ACOUSTICAL TILE CEILING SYSTEM.

[2] SEE MEP DRAWINGS FOR REMOVAL OF ELECTRICAL AND MECHANICAL COMPONENTS. CEILING MOUNTED SPEAKERS, WIRELESS ACCESS PORTS, CEILING MOUNTED FIRE ALARM DEVICES ARE TO BE RE-INSTALLED IN NEW CEILING.

[3] EXISTING GYPSUM BOARD BULKHEAD TO REMAIN.



KEY PLAN

S.T.E.M. Classroom Renovations for:

SULLIVAN EAST HIGH SCHOOL

Blountville, Tennessee

Cain Rash West Architects

130 Regional Park Dr.
Kingsport, TN 37660
Phn (423) 349-7760
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no.	date	rev. description

DANIEL BOLLING WEST — REGISTERED ARCHITECT — No. 100997 — STATE OF TENNESSEE

issued	JAN. 17, 2024
checked	NAME
drawn	RDL
project no.	202336

DEMOLITION PLAN

A-01

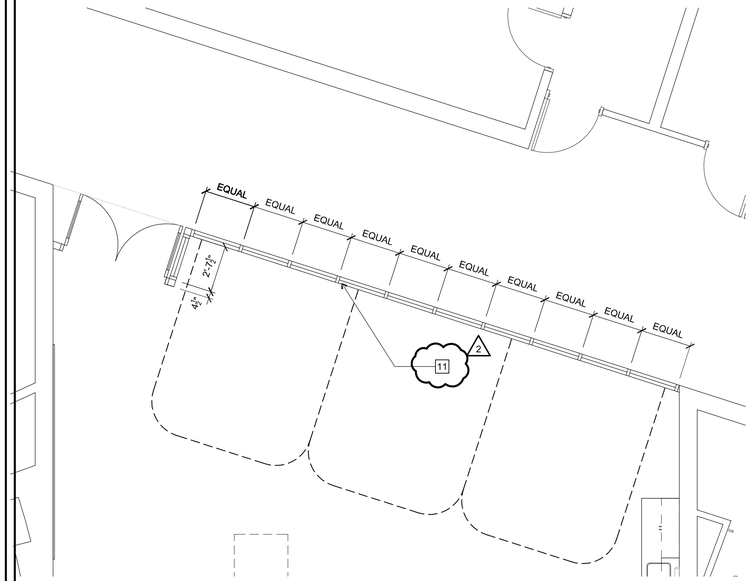
plotted:1/15/2024 8:46:50 AM file:A-01 DEMOLITION PLAN.DWG

GENERAL PLAN NOTES

1. ALL ROOM SIGNAGE SHALL BE PROVIDED AND INSTALLED BY THE OWNER.
2. PROVIDE ALL WALL BLOCKING AS REQUIRED FOR FIXTURES, CASEWORK, EQUIPMENT, ETC. ALL WOOD BLOCKING SHALL BE FIRE RETARDANT TREATED WOOD. (CONTRACTOR MAY PROVIDE 20 GA. STEEL STUDS, IN LIEU OF WOOD BLOCKING, IN METAL STUD WALL CONSTRUCTION.)
3. ALL ROOM FURNISHINGS AND EQUIPMENT TO BE SUPPLIED BY THE OWNER, EXCEPT FOR CASEWORK WORK INDICATED ON THE PLAN.
4. FOR GENERAL NOTES SEE DRAWING G-01.
5. PATCH EXISTING WALLS AS REQUIRED TO ACHIEVE A UNIFORM APPEARANCE, TYPICAL WALLS SHALL MATCH EXISTING ADJACENT CONSTRUCTION.
6. DIMENSIONS ARE FROM FACE OF STUD OR FACE OF MASONRY, UNLESS OTHERWISE NOTED F.O.F. (FACE OF FINISH)

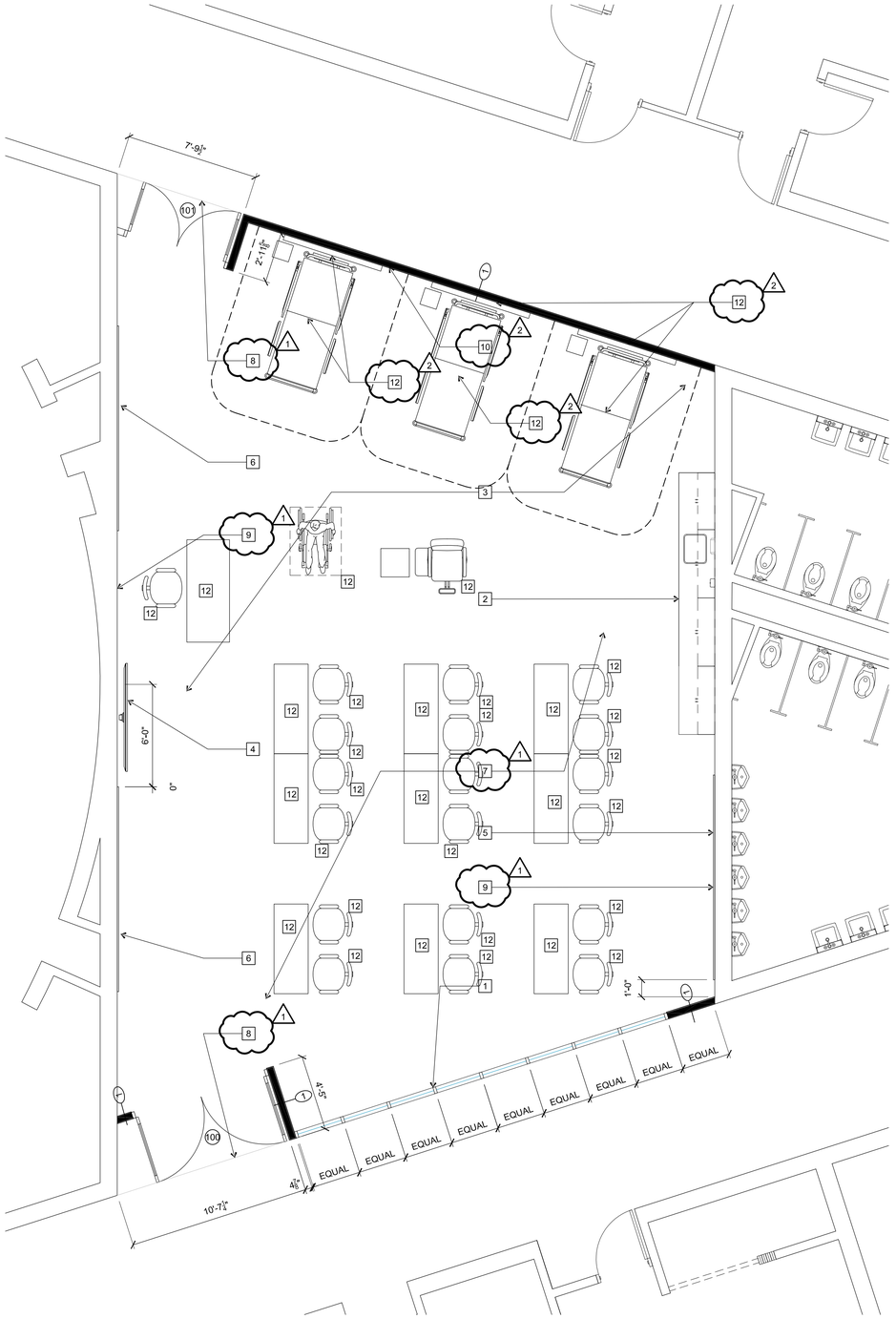
KEY NOTES [X]

1. ALUMINUM STOREFRONT WINDOW AND DOOR SYSTEM.
2. NEW BASE CABINET AND WALL CABINET. SEE DRAWING A-20.
3. EXISTING TERRAZZO FLOOR TO BE CLEANED AND POLISHED.
4. 75" LED MONITOR BY OWNER.
5. 12'-0" x 4'-0" WHITE BOARD WITH CHALK TRAY AT BOTTOM AND 1" MAP RAIL WITH CORK INSERT AT TOP MOUNTED 3'-0" ABOVE FINISH FLOOR.
6. 12'-0" x 4'-0" TACK BOARD MOUNTED 3'-0" ABOVE FINISH FLOOR.
7. ALTERNATE #1 - PROVIDE NEW LVT FLOORING IN THE ENTIRE NEW CLASSROOM. FLOORING TO BE INTERFACE, STEADY STRIDE (BASIS OF DESIGN) OR APPROVED EQUAL. COLOR TO BE SELECTED FROM MANUFACTURERS FULL LINE OF COLORS. PROVIDE ALL FLOOR PREP AND ACCESSORIES AS REQUIRED FOR A COMPLETE INSTALLATION.
8. EDGE OF NEW FLOORING. PROVIDE TRANSITION STRIP TO EXISTING FLOORING.
9. ALTERNATE #2 - PAINT EXISTING EAST AND WEST WALLS.
10. NEW WALL TO BE 3 5/8" METAL STUDS AT 16" O.C. WITH 5/8" GYPSUM BOARD EACH SIDE. WALL TYPE #1.
11. ALTERNATE #3 STOREFRONT WINDOW SYSTEM, SEE INTERIOR ELEVATIONS.
12. FURNITURE AND EQUIPMENT BY OWNER, NOT IN CONTRACT.



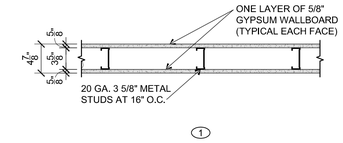
PARTIAL FLOOR PLAN ALT. #1

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



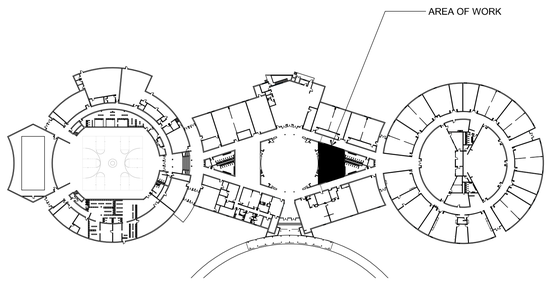
FLOOR PLAN

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



WALL TYPES

SCALE: 1" = 1'-0"



KEY PLAN

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Cain Rash West Architects

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1	11-20-23	CODE REVISIONS
2	1-17-24	RE-BID REVISIONS

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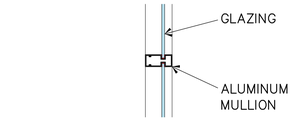
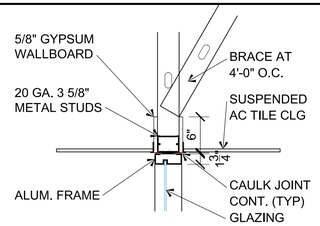
FLOOR PLAN

A-10

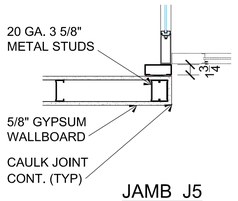
plotted:1/15/2024 8:45:50 AM file:A-10 FLOOR PLAN.DWG



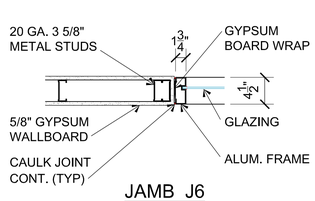
HEAD H7



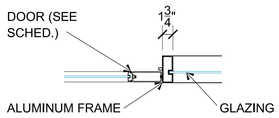
HEAD H6



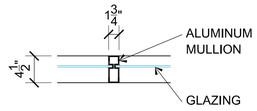
JAMB J5



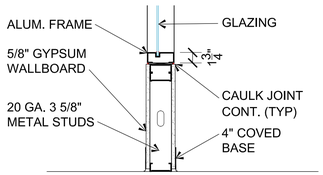
JAMB J6



JAMB J5A



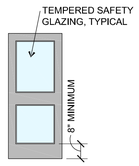
JAMB J6A



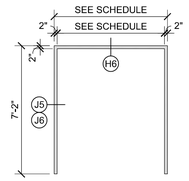
SILL S6

DOOR AND FRAME SCHEDULE

DOORS							FRAMES				
MARK	SIZE (WxHxT)	MATERIAL	TYPE	FIRE LABEL	GLAZING	HDWE. SET	TYPE	MATERIAL	HEAD	JAMB	REMARKS
100	PAIR 4'-0" x 7'-0" x 1 3/4"	ALUM	FG2	0	1/4" TEMP	1	3	ALUM	H6	J5/J6	
101	PAIR 3'-0" x 7'-0" x 1 3/4"	ALUM	FG2	0	1/4" TEMP	1	3	ALUM	H6	-	



FG2

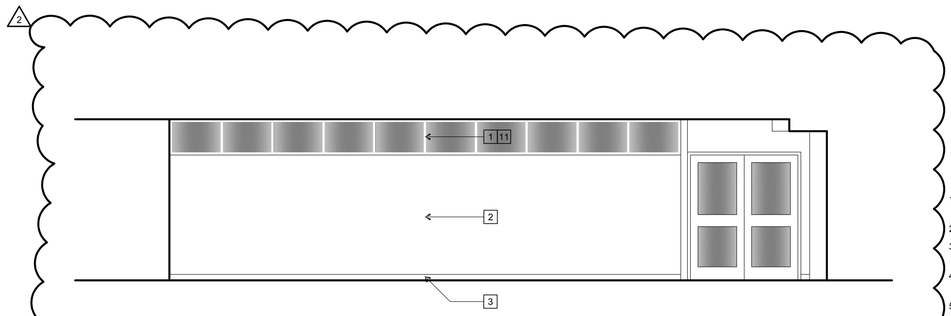


TYPE 3

KEY NOTES [X]

1. ALUMINUM STOREFRONT SYSTEM WINDOWS AND DOORS.
2. GYPSUM BOARD WALL
3. 4" HIGH COVED RUBBER BASE
4. PLASTIC LAMINATE COVERED CABINETRY. FLUSH DOORS WITH 4" WIRE PULLS AND EUROPEAN HINGES.
5. SOLID SURFACE COUNTERTOP AND 4" BACK SPLASH.
6. SINK, SEE PLUMBING DRAWINGS.
7. 1" THICK MELAMINE COVERED ADJUSTABLE SHELVES.
8. GLAZING TO BE ¼" TEMPERED GLASS IN ALL LOCATIONS. GLAZING TO ALSO HAVE BULLET RESISTANT FILM APPLIED.
9. 75" LED MONITOR BY OWNER
10. 12'-0" x 4'-0" WHITE BOARD WITH CHALK TRAY AT BOTTOM AND 1" MAP RAIL WITH CORK INSERT AT TOP MOUNTED 3'-0" ABOVE FINISH FLOOR.
11. GLAZING TO BE ¼" TEMPERED GLASS.
12. ALTERNATE NO. 5: PROVIDE ND INSTALL NON-FUNCTIONING HEADWALL. PROVIDE MODELS FROM ONE OF THE FOLLOWING:
    - A. AMICO SAPPHIRE NON-FUNCTIONAL SLIMRAIL TEACHING HEADWALL WITH ACCESSORIES, 30" AS MANUFACTURED BY POCKETNURSE.COM
    - B. SIMLABSOLUTIONS 30" DISCOVER HEADWALL BY DIAMEDICALUSA.COM
    - C. MIRAGE HEADWALL SIMULATION SURFACE MOUNTED AS MANUFACTURED BY STEVE WARD AND ASSOCIATES.

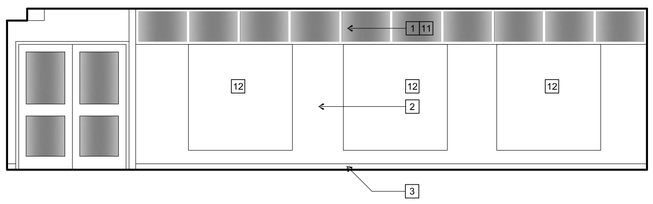
2



NORTH CORRIDOR ELEVATION

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

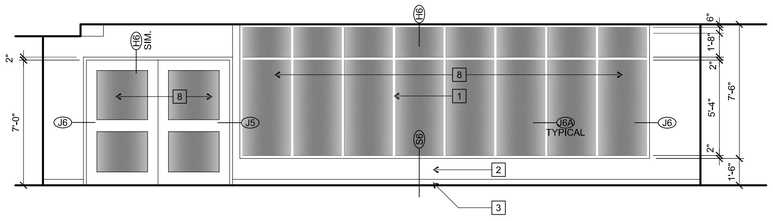
F A-20



NORTH ROOM ELEVATION

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

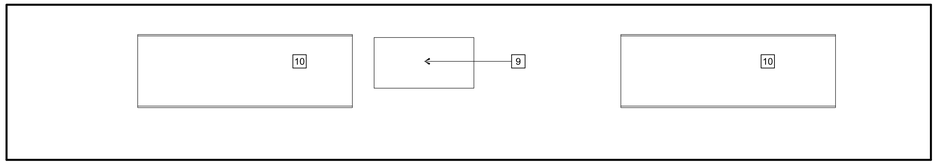
C A-20



SOUTH CORRIDOR ELEVATION

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

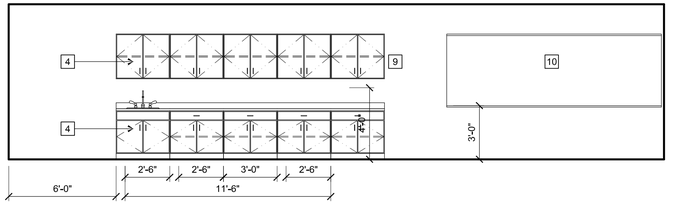
D A-20



WEST ROOM ELEVATION

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

A A-20



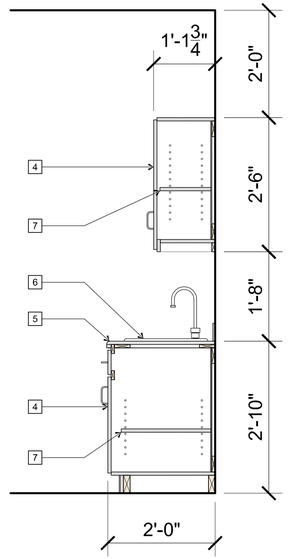
EAST ROOM ELEVATION

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

B A-20

GENERAL CASEWORK NOTES

1. ALL EXPOSED SURFACES OF CASEWORK SHALL BE COVERED WITH PLASTIC LAMINATE UNLESS OTHERWISE NOTED OR DETAILED ON THE DRAWINGS. (ALSO APPLICABLE TO DRAWER EDGES)
2. CONTRACTOR SHALL FIELD VERIFY ALL CASEWORK DIMENSIONS PRIOR TO FABRICATION.
3. PLASTIC LAMINATE AND SOLID SURFACE COLOR(S) SHALL BE SELECTED BY THE ARCHITECT FROM MANUFACTURER'S FULL RANGE.
4. SOLID SURFACE WORK SURFACES SHALL BE FURNISHED WITH MATCHING GROMMETS FOR THE ROUTING OF PHONE, COMPUTER AND ELECTRICAL DEVICE POWER CABLES.
5. PROVIDE LOCKS FOR ALL CABINET DOORS.



CABINETRY SECTION

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

A A-20

S.T.E.M. Classroom Renovations for:

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no.	date	rev. description
2	1-17-24	RE-BID REVISIONS

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checked	NAME
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project no.	202336

INTERIOR ELEVATIONS

A-20

plotted:1/16/2024 8:32:32 AM file:A-20 INTERIOR ELEVATIONS.DWG

KEY NOTES [X]

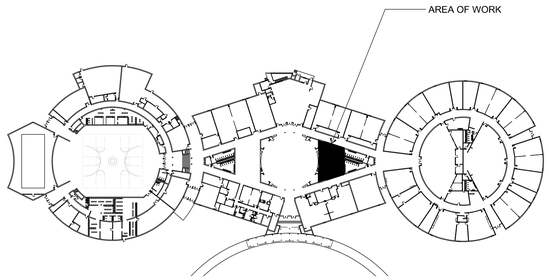
1. SUSPENDED ACOUSTICAL TILE CEILING SYSTEM.
2. SEE MEP DRAWINGS FOR NEW LIGHTING AND HVAC ITEMS.
3. EXISTING GYPSUM BOARD BULKHEAD TO BE PAINTED.
4. ALTERNATE #4: MEDICAL CURTAIN AND TRACK.

FLOOR PLAN

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

PLAN NORTH

TRUE NORTH



KEY PLAN

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no.	date	rev. description
2	01-17-24	RE-BID REVISION

ELIZABETH BOLLINGER WEST REGISTERED ARCHITECT No. 100991 STATE OF TENNESSEE

issued	JAN. 17, 2024
checked	NAME
drawn	RDL
project no.	202336

REFLECTED CEILING PLAN

I-10

plotted:1/15/2024 8:47:42 AM file:I-10 REFLECTED CEILING PLAN.DWG

HVAC SPECIFICATIONS

1. FURNISH ALL LABOR, MATERIALS AND EQUIPMENT REQUIRED TO INSTALL A COMPLETE HEATING AND COOLING SYSTEM AS INDICATED AND SPECIFIED ON THE DRAWINGS.
2. WORK SHALL COMPLY WITH IMC, NFPA, ALL APPLICABLE LAWS, ORDINANCES & CODES OF THE STATE OF TENNESSEE, LOCAL AUTHORITIES HAVING JURISDICTION AND WITH APPLICABLE RULES & REGULATIONS.
3. OBTAIN ALL PERMITS & INSPECTIONS REQUIRED FOR THE COMPLETION OF THE WORK & PAY ALL FEES & COSTS IN CONNECTION THEREWITH.
4. THE MECHANICAL DRAWINGS ARE GENERALLY DIAGRAMMATIC AND UNLESS SPECIFICALLY DIMENSIONED, THE LOCATIONS OF DUCTWORK AND EQUIPMENT AND THE ROUTING OF DUCTWORK IS APPROXIMATE ONLY AND SHALL NOT BE SCALED FROM THE MECHANICAL DRAWINGS.
5. INSTALL ALL EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
6. SUBMIT TO THE ARCHITECT FOR APPROVAL, 10 DAYS AFTER RECEIPT OF NOTICE TO PROCEED WITH THE WORK, A COMPLETE LIST OF MATERIALS, EQUIPMENT AND ACCESSORIES PROPOSED FOR USE, INCLUDING COMPLETE DESCRIPTIONS AND SPECIFICATIONS OF ANY PROPOSED SUBSTITUTIONS, MANUFACTURER'S SHOP DRAWINGS, ROUGHING-IN DRAWINGS, AND ANY OTHER INFORMATION REQUIRED FOR THE PROPER INSTALLATION OF THE WORK. SUBMITTALS SHALL BE IN PDF FORMAT (NO PAPER COPIES).
7. ALL DUCTWORK SHALL BE GALVANIZED STEEL FABRICATED ACCORDING TO SMACNA DETAILS. DUCTS SHALL BE SIZE INDICATED ON DRAWINGS (NET INSIDE DIMENSIONS), RIGIDLY BRACED, ADEQUATELY SUPPORTED & SECURELY FASTENED IN PLACE.
8. FLEXIBLE DUCT FOR INSULATED SYSTEMS SHALL BE THERMAFLEX M-KF, OR EQUAL, PRE-INSULATED DUCT WITH A MINIMUM R-VALUE OF 6.0. FLEXIBLE DUCT FOR NON-INSULATED DUCT SYSTEMS SHALL BE THERMAFLEX S-LD, OR EQUAL. ALL FLEXIBLE DUCT SHALL BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. DUCT RUNS SHALL BE AS STRAIGHT AS POSSIBLE AND LIMITED TO MAXIMUM OF 5 FEET IN LENGTH.
9. INSULATE ALL SHEET METAL SUPPLY AIR DUCTWORK WITH 2.2" THICK OWENS-CORNING ASW DUCTWRAP. THOROUGHLY TAPE ALL JOINTS AND SEAMS.
10. LINE ALL DUCTWORK (IN ADDITION TO DUCTWRAP) WITH 1" THICK OWENS-CORNING FIBERGLASS DUCT LINER WHERE INDICATED ON THE DRAWINGS.
11. INSTALL SINGLE WALL TURNING VANES AT RIGHT ANGLES AND SMALL RADIUS TURNS IN DUCTS. MAKE REDUCTIONS IN DUCT SIZE WITH TAPERED TRANSITION PIECES. TRANSITIONS FOR CONNECTIONS TO EQUIPMENT SHALL BE DESIGNED TO SUIT CONDITIONS AND SO THAT AIR FLOW IS NOT RESTRICTED.
12. WHEN THE INSTALLATION IS COMPLETE, IT SHALL BE RUN & ADJUSTED BY THE CONTRACTOR. ANY EXCESSIVE NOISE OR VIBRATION SHALL BE CORRECTED.
13. SUBMIT WRITTEN AIR BALANCE REPORT TO THE ARCHITECT A MINIMUM OF 10 DAYS PRIOR TO THE FINAL INSPECTION. THE AIR BALANCE CONTRACTOR SHALL BE AABC OR NEBB CERTIFIED.
14. THE CONTRACTOR SHALL INSTRUCT THE OWNER IN THE OPERATION OF EQUIPMENT & PROVIDE THE OWNER WITH A COMPLETE SET OF OPERATING INSTRUCTIONS FOR EQUIPMENT INSTALLED UNDER HIS CONTRACT.
15. THE WORK SHALL BE GUARANTEED AGAINST ALL DEFECTIVE MATERIALS & EQUIPMENT FOR A PERIOD OF ONE YEAR AFTER ACCEPTANCE. THE CONTRACTOR SHALL MAKE ALL NECESSARY CORRECTIONS WITHOUT COST TO THE OWNER.

PLUMBING SPECIFICATIONS

1. FURNISH ALL LABOR, MATERIALS AND EQUIPMENT REQUIRED TO INSTALL A COMPLETE PLUMBING SYSTEM AS INDICATED AND SPECIFIED ON THE DRAWINGS.
2. WORK SHALL COMPLY WITH THE INTERNATIONAL PLUMBING CODE AND ALL APPLICABLE LAWS, ORDINANCES & CODES OF THE STATE OF TENNESSEE, LOCAL AUTHORITIES HAVING JURISDICTION AND WITH APPLICABLE RULES & REGULATIONS.
3. OBTAIN ALL PERMITS & INSPECTIONS REQUIRED FOR THE COMPLETION OF THE WORK & PAY ALL FEES & COSTS IN CONNECTION THEREWITH.
4. THE PLUMBING DRAWINGS ARE GENERALLY DIAGRAMMATIC AND UNLESS SPECIFICALLY DIMENSIONED, THE LOCATIONS OF FIXTURES AND EQUIPMENT AND THE ROUTING OF PIPING IS APPROXIMATE ONLY AND SHALL NOT BE SCALED FROM THE PLUMBING DRAWINGS.
5. INSTALL ALL EQUIPMENT AND FIXTURES IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
6. INTERIOR SOIL, WASTE, AND VENT PIPING SHALL BE SCHEDULE 40 PVC-DWV ASSEMBLED WITH SOLVENT WELD JOINTS.
7. ABOVE GRADE DOMESTIC WATER PIPING SHALL BE HARD DRAWN COPPER, TYPE "L" PIPING ASSEMBLED WITH WROUGHT COPPER SOLDER FITTINGS. CONNECTIONS OF COPPER PIPE TO FERROUS PIPE SHALL BE MADE WITH DIELECTRIC UNIONS OR COUPLINGS.
8. DOMESTIC WATER PIPING MAY BE CROSSLINKED POLYETHYLENE PEXA OR PEXB AS MANUFACTURED BY ZURN, REHAU OR UPONOR. FITTINGS SHALL BE AS RECOMMENDED BY THE PEX MANUFACTURER. PIPE SIZES ARE BASED UPON COPPER, INCREASE SIZES AS RECOMMENDED BY THE MANUFACTURER.
9. SUBMIT TO THE ARCHITECT FOR APPROVAL, 10 DAYS AFTER RECEIPT OF NOTICE TO PROCEED WITH THE WORK, A COMPLETE LIST OF MATERIALS, EQUIPMENT AND ACCESSORIES PROPOSED FOR USE, INCLUDING COMPLETE DESCRIPTIONS AND SPECIFICATIONS OF ANY PROPOSED SUBSTITUTIONS, MANUFACTURER'S SHOP DRAWINGS, ROUGHING-IN DRAWINGS, AND ANY OTHER INFORMATION REQUIRED FOR THE PROPER INSTALLATION OF THE WORK. SUBMITTALS SHALL BE IN PDF FORMAT (NO PAPER COPIES).
10. AFTER THE WATER SYSTEM HAS BEEN TESTED FOR LEAKS AND BEFORE THE SYSTEM HAS BEEN PLACED IN USE, INTRODUCE HTH SOLUTION, CHLORINE GAS, OR OTHER SIMILAR CHLORINATING AGENT IN SUFFICIENT QUANTITY TO PRODUCE A RESIDUAL OF 100 PPM THROUGHOUT THE ENTIRE SYSTEM AND ALLOW TO STAND THUS FILLED FOR 24 HOURS. AFTER THE 24 HOURS PERIOD, FLUSH CLEAN WATER THROUGHOUT THE PIPING SYSTEM UNTIL ALL NOTICEABLE TRACE OF CHLORINE GAS HAS DISAPPEARED. VERIFY PROCEDURES AND TESTING REQUIREMENTS WITH THE PUBLIC HEALTH AGENCY HAVING JURISDICTION.
11. THE WORK SHALL BE GUARANTEED AGAINST ALL DEFECTIVE MATERIALS & WORKMANSHIP FOR A PERIOD OF ONE YEAR AFTER ACCEPTANCE. THE CONTRACTOR SHALL MAKE ALL NECESSARY CORRECTIONS WITHOUT COST TO THE OWNER.

ROOFTOP HEAT PUMP (RTU) SCHEDULE

MARK	AIR SYSTEM				COOLING CAPACITY		MIN. EER	HEATING CAPACITY				COP	MCA	MOCP	VOLTS/ PHASE	UNIT WEIGHT (LBS)	NOMINAL TONNAGE	TRANE MODEL
	TOTAL CFM	O.A. CFM	MIN. FAN HP	EXT. STATIC (INCHES W.G.)	SENS (MBH)	TOTAL (MBH)		@ 17°F (MBH)	@ 47°F (MBH)	ELEC. HEAT KW	ELEC. HEAT STEPS							
(2)	2000	450	1.5	1.0	49.8	60.4	11.7	43.7	65.3	15	1	3.2	37.0	40.0	460/3	1700	5	OABE060

NOTES:
(1) VERIFY VOLTAGE BEFORE ORDERING EQUIPMENT
(2) COOLING RATINGS FOR 95°F AMBIENT; 67°WB & 80°DB E.A.T. - HEATING RATINGS FOR 70°F E.A.T.
(3) RTU-2: SUPPLY AND RETURN SMOKE DETECTORS SHALL BE FURNISHED BY ELECTRICAL CONTRACTOR AND INSTALLED BY MECHANICAL CONTRACTOR. DETECTORS SHALL MEET ALL REQUIREMENTS OF THE INTERNATIONAL MECHANICAL CODE SECTION 606.
(4) UNIT SHALL BE FURNISHED WITH MICROPROCESSOR CONTROLS, LOW AMBIENT COOLING TO 0°F, MODULATING HOT GAS REHEAT, SCR MODULATING CONTROL FOR ELECTRIC HEAT, ROOF CURB, AND 100% ECONOMIZER WITH BAROMETRIC RELIEF
(5) UNIT SHALL BE FURNISHED WITH 7-DAY PROGRAMMABLE THERMOSTAT W/ HUMIDITY SENSOR TO ACTIVATE THE HOT GAS REHEAT COIL AS REQUIRED FOR HUMDITY CONTROL; OA DAMPER OPENS ONLY DURING OCCUPIED PERIODS
(6) INSTALL 2 TIGHT FITTING LAYERS OF 5/8" CEMENT BOARD WITH JOINTS OVERLAPPING & 2" THICK RIGID THERMAFIBER ACOUSTIC INSULATION INSIDE EACH ROOF CURB
(7) UNIT SHALL BE FURNISHED WITH ELECTRICAL NON-FUSED DISCONNECT AND POWERED CONVENIENCE OUTLET

2

DIFFUSER/GRILLE SCHEDULE

MARK	SERVICE	DESCRIPTION	ACCESSORIES/DETAILS
CD	SUPPLY	PRICE SMD-1 LOUVERED FACE DIFFUSER, SURFACE MOUNTED TYPE, 4-WAY BLOW	OPPOSED BLADE DAMPER, SQUARE TO ROUND APAPTER, PLASTER FRAME
CR	RETURN	PRICE 80D-TB EGG CRATE RETURN GRILLE, LAY-IN TYPE, 1/2" CUBES	OPPOSED BLADE DAMPER, SQUARE TO ROUND APAPTER

PLUMBING FIXTURE SCHEDULE

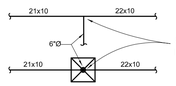
ITEM	DESCRIPTION	SPECIFICATION	CW	HW
S - EW	SINK - EYEWASH	ELKAY, LR3319 LUSTERTONE 2 BOWL 18GA STAINLESS STEEL 33" X 19-1/2" X 7-5/8" DROP IN SINK	1/2"	1/2"
	EMERGENCY EYE WASH AND FAUCET	BRADLEY, S19-500W TWO HANDLE CERAMIC VALVE GOOSENECK FAUCET WITH INTEGRAL 5.1 GPM EYEWASH SWING FROM RIGHT SIDE WHICH INCLUDES INTEGRAL STRAINER, SELF DRAINING SPRAYHEAD AND IS ONE STEP ACTIVATION		
	DRAIN	ZURN, Z8741-PC HEAVY DUTY BASKET STRAINER WITH CAST BRASS LOCK AND COUPLING NUT		
	P-TRAP	ZURN, Z8702-PC 1-1/2" CAST BRASS 17 GAUGE P-TRAP WITH CLEANOUT		
	EMERGENCY THERMOSTATIC MIXING VALVE	BRADLEY, S19-2010 ASSE 1071 AND 1017 THERMOSTATIC SAFETY MIXING VALVE AND STANDARD THERMOSTATIC MIXING VALVE WITH CHECK STOPS ON INLET ACCURATE TEMPERATURE CONTROL TO WITHIN +/- 3 DEGREES, BUILT-IN COLD WATER BYPASS ON SAFETY SIDE ASSURING COLD FLOW IF FAILURE OCCURS FROM HOT SUPPLY, POSITIVE		
	SUPPLIES	ZURN, Z8804-XL-8860-20-LRQ-PC 1/2" X 3/8" COMP X COMP LAVATORY SUPPLY KIT WITH ESCUTCHEONS, 1/4 TURN CHROME PLATED STOPS AND 20 INCH BRAIDED STAINLESS STEEL SUPPLY LINES		
	CONTINUOUS WASTE	ZURN, Z8751 1-1/2" 20 GAUGE CONTINUOUS WASTE END OUTLET WITH CAST BRASS TEE		

DUCT LEGEND

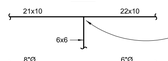
SUPPLY DUCT

RETURN DUCT

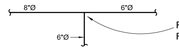
90° ELBOW WITH TURNING VANES (USE LONG RADIUS ELBOW IF ROUND DUCT)



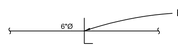
STICK ON FITTING WITH DAMPER FOR ALL ROUND TAKE-OFFS



45° TAKE-OFF



ROUND TO ROUND STICK ON FITTING WITH DAMPER



BUTTERFLY DAMPER

SUPPLY

RETURN OR EXHAUST

(T) THERMOSTAT - HIGHEST OPERATING PART SHALL BE 48" A.F.F.

(SI) INDICATES 1" THICK DUCT LINER FROM THIS POINT BACK TO AIR UNIT OR TERMINAL BOX

PLUMBING LEGEND

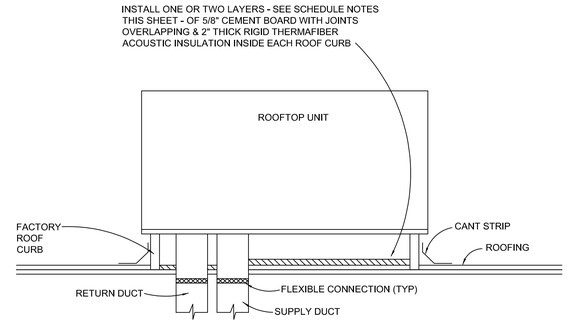
WASTE BELOW GRADE

VENT

COLD WATER

HOT WATER

BALL VALVE



ROOFTOP UNIT DETAIL - TYPICAL

NTS

NOTES:
1. THE OPENING IN THE ROOF DECK SHALL BE NO LARGER THAN WHAT IS REQUIRED FOR DUCT PENETRATIONS.
2. COND. DRAIN SHALL BE FULL SIZE WITH WATER SEAL - DRIP ON ROOF.

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no.	date	rev. description
2	1/17/24	Re-Bid Revisions

issued	17 JAN 2024
checked	SDZ
drawn	CJA
project no.	202336

SCHEDULE & SPECIFICATIONS

MP-1.0

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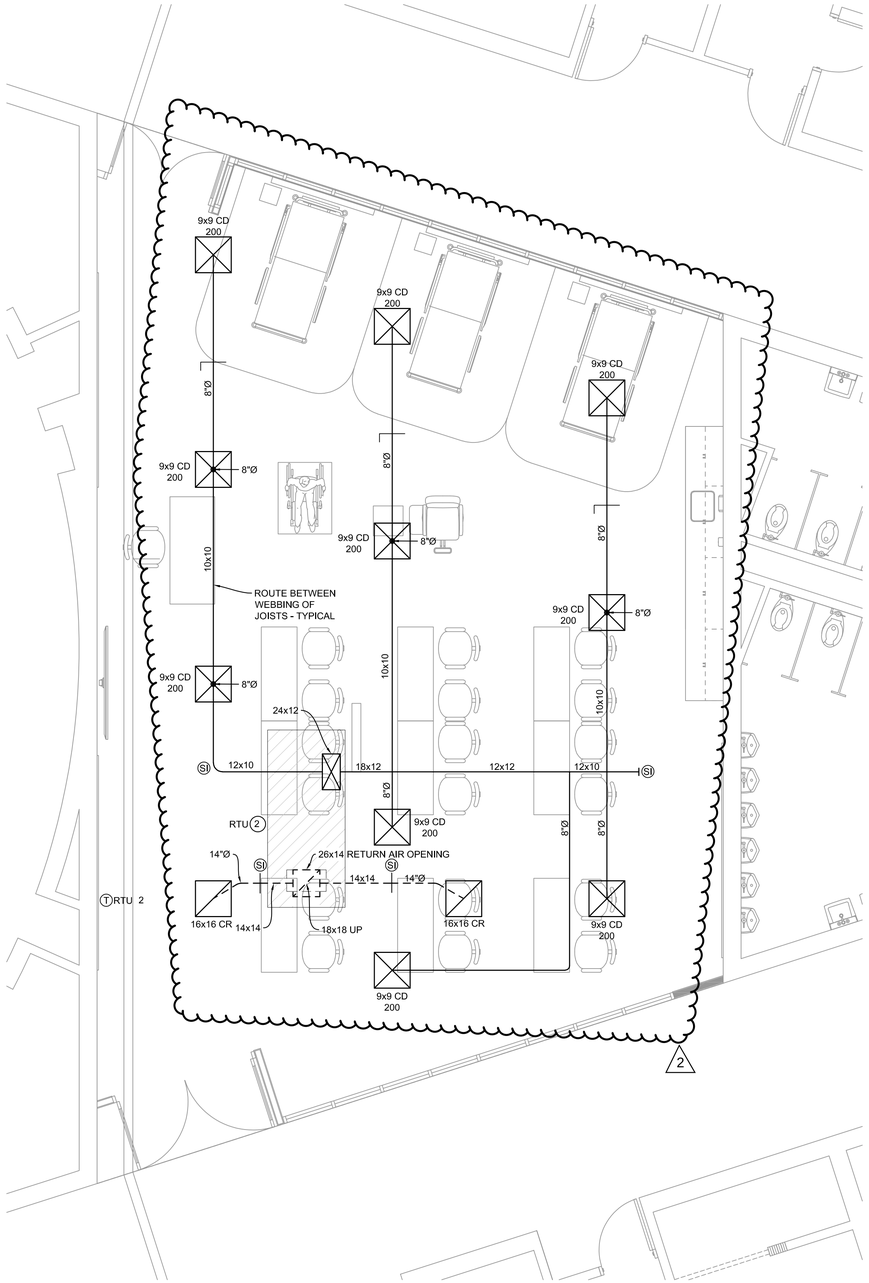
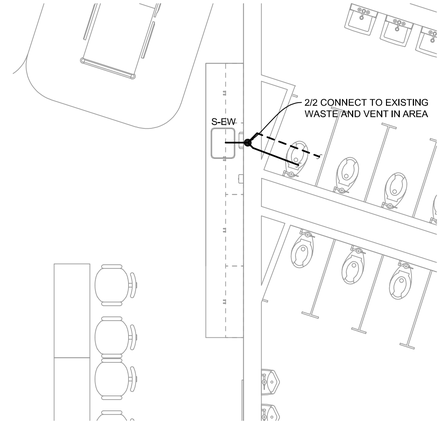


TRUE NORTH

FLOOR PLAN - HVAC

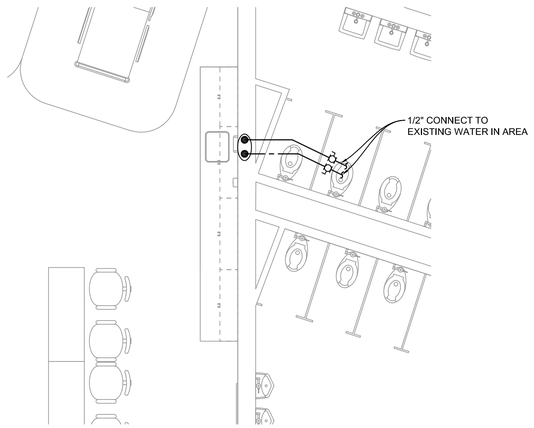
1/4"=1'-0"



TRUE NORTH

PARTIAL FLOOR PLAN - WASTE

1/4"=1'-0"



TRUE NORTH

PARTIAL FLOOR PLAN - WATER

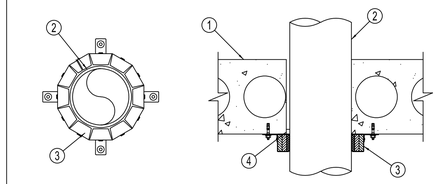
1/4"=1'-0"

System No. C-BJ-2021

F Rating — 2 Hr
T Ratings — 0 and 2 Hr (See Item 2)

CBJ 2021

Classified by Underwriters Laboratories, Inc. to UL 1479



SECTION A-A

1. Floor or Wall Assembly — Min 6 in. (152 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m3) concrete. Floor assembly may also be constructed of any 6 in. (152 mm) thick UL Classified hollow-core Precast Concrete Units* . Wall may also be constructed of any UL Classified Concrete Blocks*, Max diameter of opening is 7 in. (178 mm).
See Concrete Blocks (CAZT) and Precast Concrete Units (CFTV) category in the Fire Resistance Directory for names of manufacturers.
2. Through Penetrants — One nonmetallic pipe to be installed concentrically or eccentrically within the firestop system. Annular space between pipe or conduit and edge of opening to be min 0 in. (point contact) and max 1/2 in. (13 mm). Pipe to be rigidly supported on both sides of floor-ceiling assembly. The following types and sizes of nonmetallic pipes may be used:
   A. Polyvinyl Chloride (PVC) Pipe — Nom 6 in. (152 mm) diam (or smaller) Schedule 40 solid or cellular core PVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.
   B. Chlorinated Polyvinyl Chloride (CPVC) Pipe — Nom 6 in. (152 mm) diam (or smaller) SDR17 CPVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.
   C. Acrylonitrile Butadiene Styrene (ABS) Pipe — Nom 6 in. (152 mm) diam (or smaller) Schedule 40 solid or cellular core ABS pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.
   The T Rating for the firestop system is 2 hr except that when 6 in. (152 mm) diam cellular core ABS pipe is used in floors less than 8 in. (203 mm) thick, the T Rating is 0 hr.
3. Fill, Void or Cavity Materials*-Sealant — Min 1/2 in. (13 mm) thickness of fill material applied within the annulus, flush with bottom surface of floor. HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-ONE Sealant or FS-ONE MAX Intumescent Sealant.
4. Firestop Device*- Firestop Collar — Firestop collar shall be installed in accordance with the accompanying installation instructions. Collar to be installed and latched around the pipe and secured to underside of floor or both sides of wall using the anchors provided with the collar. Minimum 2 anchor hooks for 1-1/2 and 2 in. (38 and 51 mm) diam pipes, 3 anchor hooks for 3 and 4 in. (76 and 102 mm) diam pipes and 4 anchor hooks for 6 in. (152 mm) diam pipes. The anchor hooks are to be secured with 1/4 in. (6 mm) diam by min 1-1/2 in. (38 mm) long steel expansion bolts, in conjunction with steel nuts and min 3/4 in. (19 mm) diam steel washers with one anchor bolt in each anchor hook.
   HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP 643 50/1.5"N, CP 643 63/2"N, CP 643 90/3"N, CP 643 110/4"N and CP643 160/6"N, Firestop Collar

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

Hilti Firestop Systems

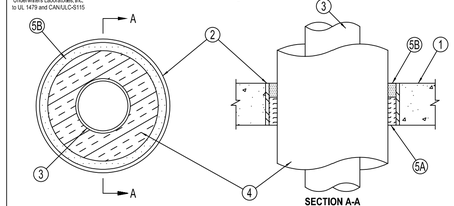
Reproduced by HILTI, Inc. Courtesy of Underwriters Laboratories, Inc. January 15, 2015

System No. C-AJ-5098

F Rating – 2 Hr
T Rating – 1 Hr

CAJ 5098

Classified by Underwriters Laboratories, Inc. to UL 1479 and CAN/ULC-S115



SECTION A-A

1. Floor or Wall Assembly — Min 114 mm (4-1/2 in.) thick reinforced lightweight or normal weight (1600-2400 kg/m3 or 100-150 pcf) concrete floor or min 6 in. thick reinforced lightweight or normal weight concrete wall. Wall may also be constructed of any UL Classified Concrete Blocks*. Max diam of opening is 346 mm (13-5/8 in.).
   See Concrete Blocks (CAZT) Category in the Fire Resistance Directory for names of manufacturers.
2. Metallic Sleeve — (Optional) — Nom 356 mm (14 in.) diam (or smaller) Schedule 10 (or heavier) steel pipe.
3. Through Penetrants — One metallic pipe or tubing to be installed concentrically within the firestop system. Pipe or tubing to be rigidly supported on both sides of floor or wall assembly.
   A. Steel Pipe — Nom 152 mm (6 in.) diam (or smaller) Schedule 10 (or heavier) steel pipe.
   B. Copper Pipe — Nom 152 mm (6 in.) diam (or smaller) Regular (or heavier) copper pipe.
   C. Copper Tubing — Nom 152 mm (6 in.) diam (or smaller) Type L (or heavier) copper tubing.
4. Pipe Covering — Nom 76 mm (3 in.) thick hollow cylindrical heavy density (min 56 kg/m3 or 3.5 pcf) glass fiber units jacketed on the outside with an all-service jacket. Longitudinal joints sealed with metal fasteners or factory-applied, self-sealing lap tape. Transverse joints secured with metal fasteners or with butt tape supplied with the product. The annular space between the insulated pipe and the edges of the periphery of the opening shall be 13 mm (1/2 in.).
   See Pipe Equipment Covering — Materials — (BRGU) Category in the Building Materials Directory for names of manufacturers. Any pipe covering material meeting the above specifications and bearing the UL Classification Marking with a Flame Spread Index of 25 or less and a Smoke Developed Index of 50 or less may be used.
5. Firestop System — The firestop system shall consist of the following:
   A. Packing Material — Min 76 mm (3 in.) thickness of min 4 pcf mineral wool batt Insulation firmly packed into opening as a permanent form. Packing material to be recessed from top surface of floor or from both surfaces of wall as required to accommodate the required thickness of fill material.
   B. Fill, Void or Cavity Material* — Sealant — Min 38 mm (1-1/2 in.) thickness of fill material applied within the annulus, flush on top surface of floor or with both surfaces of wall. When steel pipe (Item 3A) larger than 102 mm (4 in.) diam and FS-ONE MAX Intumescent Sealant is used, a 13 by 13 mm (1/2 by 1/2 in.) bead of sealant shall be installed around periphery of insulated steel pipe at top surface of floor or at both surfaces of wall.
   HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-ONE Sealant or FS-ONE MAX Intumescent Sealant

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

Hilti Firestop Systems

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no.	date	rev. description
1	10/20/23	STATE REVIEW
2	1/17/24	Re-Bid Revisions

issued	17 JAN 2024
checked	SDZ
drawn	CJA
project no.	202336

FLOOR PLANS - HVAC, WASTE, & WATER

MP-1.1

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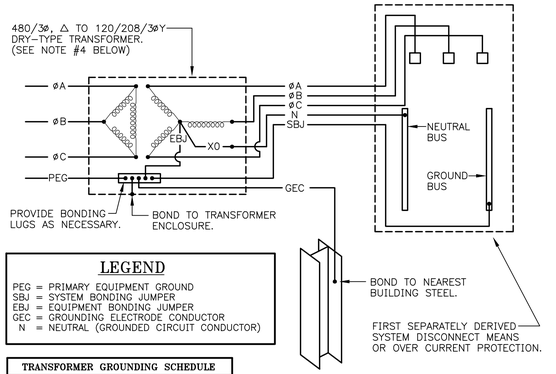
LIGHTING FIXTURE SCHEDULE

DESIGNATION	ILLUMINATION: WATTS	ILLUMINATION: DELIVERED LUMENS	ILLUMINATION: COLOR TEMPERATURE (°K)	ILLUMINATION: MINIMUM CRI	MOUNTING: CEILING: PENDANT STEM LENGTH	MOUNTING: CEILING: SURFACE	MOUNTING: CEILING: RECESSED	MOUNTING: WALL: HEIGHT ABOVE FINISHED FLOOR OR GRADE	DESCRIPTION: SHIELDING, TYPE MATERIALS, FINISH, MOUNTING	MANUFACTURER'S PRODUCT ITEM: COMPANY	MANUFACTURER'S PRODUCT ITEM: CATALOG NO.	✳EQUAL PRODUCT PERMITTED: YES	✳EQUAL PRODUCT PERMITTED: NO	REMARKS
A	39	4800	3500	80			•		2'x4' FLAT PANEL, 1% DIMMING DRIVER	LITHONIA	EPANL-2X4 4800LM-80CRI -35K-MIN1-ZT-MVOLT	•		
B	31	4000	3500	80			•		2'x2' FLAT PANEL, 1% DIMMING DRIVER	LITHONIA	EPANL-2X2 4000LM-80CRI -35K-MIN1-ZT-MVOLT	•		
C	28.2	3000	3500	80		•			WALL MOUNTED LENSED TASK LIGHT AT BED, 4'-0" LONG, WHITE FINISH	LITHONIA	WL4 30L MVOLT GZ10 LP835	•		

✳ UNLESS NOTED, EQUAL PRODUCT TO THAT SPECIFIED WILL BE ACCEPTED. THE DESIGN PROFESSIONAL SHALL HAVE SOLE JUDGEMENT CONCERNING EQUIVALENCY OF SUBSTITUTION.

L E G E N D

SYMBOL	DESCRIPTION
o B 2	LED LIGHTING FIXTURE; "B" REFERS TO DESIGNATION IN THE LIGHTING FIXTURE SCHEDULE; "o" REFERS TO SWITCH CONTROL; AND "2" REFERS TO CIRCUIT NUMBER.
W S C P D	EXIT SIGN WITH BUILT-IN TWIN HEAD EMERGENCY LIGHT, "W" INDICATES WALL MOUNTING, "C" INDICATES CEILING MOUNTING, "S" INDICATES SINGLE FACE, "D" INDICATES DOUBLE FACE, "P" INDICATES PENDANT MOUNTED. PROVIDE DIRECTIONAL ARROWS ON EXIT SIGNS AS INDICATED ON PLANS. UNIT EQUIPPED WITH BATTERY BACK-UP. CONNECT TO UNSWITCHED, "HOT", LIGHTING CIRCUIT.
P WP K 3 4	WALL SWITCH; SINGLE POLE UNLESS NOTED 3- OR 4-WAY; "P" INDICATES EQUIPPED WITH PILOT LIGHT TO INDICATE WHEN SWITCH IS ON; W.P. INDICATES WEATHERPROOF, "K" INDICATES KEY OPERATED SWITCH; +48"/- ABOVE FLOOR EXCEPT IN MASONRY WALLS WHERE HEIGHT SHALL BE ADJUSTED TO HAVE BOX EDGE OCCUR AT A MASONRY JOINT. PROVIDE NEUTRAL CONDUCTOR IN ADDITION TO LINE AND SWITCHED CONDUCTORS.
	DUPLEX PLUG RECEPTACLE; 120-VOLTS; 20-AMPERES; MOUNT 3" ABOVE BACKSPLASH AT WORK COUNTERS AND LAVATORIES AND +18" AFF ELSEWHERE UNLESS NOTED TO A DIFFERENT HEIGHT. TAMPER RESISTANT, UNLESS NOT REQUIRED BY CODE.
	DUPLEX PLUG RECEPTACLE, 120-VOLTS, 20-AMPERES, SHADED CENTER INDICATES EQUIPPED WITH BUILT-IN GROUND FAULT CIRCUIT INTERRUPTER, MOUNT 3" ABOVE BACKSPLASH AT WORK COUNTERS/LAVATORIES AND +18" AFF ELSEWHERE UNLESS NOTED TO A DIFFERENT HEIGHT. PROVIDE WEATHER RESISTANT DEVICE AND WEATHERPROOF "EXTRA DUTY WHILE IN USE" COVER WHERE LOCATED OUTDOORS. TAMPER RESISTANT, UNLESS NOT REQUIRED BY CODE.
	PANELBOARD, RECESSED OR SURFACE MOUNTED AS INDICATED ON DRAWINGS, TOP 6-FEET ABOVE FINISHED FLOOR ADJUSTED TO OCCUR AT A MASONRY JOINT, SEE PANELBOARD SCHEDULE FOR EQUIPMENT CONTAINED.
A-1,3,5	CONDUIT AND CONDUCTORS EXTENDED TO PANELBOARD A, CIRCUITS 1, 3, AND 5. CROSS LINES INDICATE #12 AWG PHASE AND NEUTRAL CONDUCTORS WHERE MORE THAN TWO. SINGLE CIRCUIT BRANCH CIRCUIT WIRING RUNS SHOWN WITHOUT CROSS LINES SHALL BE PROVIDED WITH 2#12, 1#12G. EACH 20 AMPERE BRANCH CIRCUIT SHALL BE PROVIDED WITH SEPARATE NEUTRAL CONDUCTOR. SHARING OF NEUTRAL CONDUCTORS SHALL NOT BE PERMITTED. PROVIDE EQUIPMENT GROUNDING CONDUCTOR IN EACH CONDUIT RUN.
	CONDUIT IN THE FLOOR CONSTRUCTION OR UNDERGROUND SHOWN TURNING UP.
	CONDUIT IN THE WALL OR CEILING CONSTRUCTION SHOWN TURNING DOWN.
J	JUNCTION BOX, SIZE AND USE AS REQUIRED; COVERPLATE SHALL OVERLAP THE BOX EDGE BY 1/2" WHERE RECESSED IN WALL WITH CONCEALED WIRING.
	FUSED DISCONNECT SWITCH, HEAVY DUTY "HP" RATED, PROVIDE NEMA 3R ENCLOSURE OUTDOORS.
C	SURFACE NONMETALLIC RACE WAY BUILT-IN DIVIDER FOR SEPARATION OF POWER AND DATA/VOICE WIRING. PROVIDE DUPLEX RECEPTACLES AND DATA/VOICE OUTLETS WHERE INDICATED ON PLANS. LOCATED 3" ABOVE BACKSPLASH AT WORK COUNTERS AND +18" AFF ELSEWHERE UNLESS NOTED OTHERWISE.
W C	DATA/VOICE OUTLET, PROVIDE 4 11/16" SQUARE BOX WITH SINGLE-GANG DEVICE RING AND BLANK COVERPLATE. EXTEND EMPTY 1" CONDUIT FROM OUTLET BOX TO POINT ABOVE ACCESSIBLE LAY-IN CEILING AND TERMINATE WITH BUSHING. LOCATE OUTLET BOX 3" ABOVE BACKSPLASH AT WORK COUNTERS AND +18" AFF ELSEWHERE UNLESS NOTED TO A DIFFERENT HEIGHT ON DRAWINGS. "W" BY DEVICE INDICATES DEVICE TO BE DEDICATED FOR WIRELESS ACCESS POINT USE.
	CEILING RECESSED INTERCOM LOUDSPEAKER.
DD	FIRE ALARM DUCT SMOKE DETECTOR, FURNISHED BY ELECTRICAL, INSTALLED DUCTWORK BY MECHANICAL, CONNECTED TO FIRE ALARM SYSTEM BY ELECTRICAL, CONNECT TO SHUT UNIT DOWN UPON ALARM. FURNISH AND INSTALL "LED" REMOTE STATUS INDICATOR, FIELD VERIFY LOCATION.
C L	FIRE ALARM COMBINATION SPEAKER/STROBE UNIT, CANDELA AND DBA RATING AS NOTED ON DRAWINGS, "C" INDICATES SPEAKER/STROBE UNIT TO BE CEILING MOUNTED. "WG" BY DEVICE INDICATES CONTRACTOR TO PROVIDE WIRE GUARD.
OS	OCCUPANCY/VACANCY SENSOR FOR LIGHTING CONTROL, CEILING OR WALL MOUNTED AS INDICATED ON PLANS. MOUNT WALL-MOUNTED SENSOR AT SAME HEIGHT AS WALL SWITCH (+48" ABOVE FINISHED FLOOR). "D" BY SENSOR ON PLANS INDICATES DUAL RELAY TYPE SENSOR ALLOWING INDEPENDENT CONTROL OF TWO SEPARATE LIGHTING LOADS. PROVIDE NEUTRAL CONDUCTOR IN ADDITION TO LINE AND SWITCHED CONDUCTORS.
PP	POWER PACK ROOM CONTROLLER FOR CEILING MOUNTED OCCUPANCY SENSOR SYSTEM, SEE PLANS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.
DC J	RETRACTABLE CEILING MOUNTED DROP CORD UNIT WITH 120-VOLT, 20 AMPERE NEMA 5-20R DUPLEX RECEPTACLE PENDANT OUTLET BOX CONNECTION ON END OF CORD. UNIT SHALL BE DANIEL WOODHEAD INDUSTRIAL DUTY CORD REEL WITH MINIMUM 12'-0" OF 12/3 RETRACTABLE CORD, RATED 600 VOLT AC.
	DUPLEX PLUG RECEPTACLE, 120-VOLTS, 20-AMPERES, SHADED SIDES INDICATES OUTLET TO BE FOR WALL MOUNTED TELEVISION, VERIFY EXACT MOUNTING HEIGHT PRIOR TO ROUGH-IN, LOCATE ADJACENT TO TELEVISION OUTLET.
TV	WALL MOUNTED TELEVISION OUTLET, PROVIDE 4" SQUARE BOX WITH SINGLE-GANG DEVICE RING AND APPROPRIATE COAXIAL TYPE COVER-PLATE, LOCATE ADJACENT TO 120V. OUTLET FOR TELEVISION. EXTEND 3/4" CONDUIT FROM BOX TO POINT ABOVE ACCESSIBLE CEILING AND TERMINATE WITH BUSHING.



LEGEND

PEG = PRIMARY EQUIPMENT GROUND
SBJ = SYSTEM BONDING JUMPER
EBJ = EQUIPMENT BONDING JUMPER
GEC = GROUNDING ELECTRODE CONDUCTOR
N = NEUTRAL (GROUNDED CIRCUIT CONDUCTOR)

TRANSFORMER GROUNDING SCHEDULE

TRANSFORMER KVA	GROUNDING CONDUCTOR: PEG	SBJ	EBJ	GEC
15	10	8	8	8
30	10	6	6	6
45	8	4	4	4
75	6	2	2	2
112.5	6	1/0	1/0	1/0
150	4	2/0 (✳)	2/0	2/0
225	3	3/0 (✳)	3/0	3/0
300	2 (✳)	3/0 (✳)	3/0	3/0
500	1/0 (✳)	3/0 (✳)	3/0	3/0

✳ INDICATES CONTRACTOR SHALL PROVIDE A CONDUCTOR OF THIS SIZE IN EACH CONDUIT CARRYING PARALLELED PHASE AND NEUTRAL CONDUCTORS.

NOTES:

1. TAKEN FROM NEC ARTICLE 250, TABLE 250.66.
2. NEUTRAL CONDUCTOR SHALL BE 100% OF PHASE CONDUCTORS UNLESS CALLED FOR LARGER ELSEWHERE.
3. BONDING OF GROUNDING ELECTRODE CONDUCTOR TO BUILDING STEEL SHALL BE BY CADWELD PROCESS PER SPECIFICATIONS.
4. WHERE PRIMARY AND SECONDARY VOLTAGE(S) ARE THE SAME (I.E. 208V-Δ TO 120/208,Y), PRIMARY EQUIPMENT GROUNDING CONDUCTOR SHALL BE SAME SIZE AS SECONDARY EQUIPMENT GROUNDING CONDUCTOR AS INDICATED IN "SEG" COLUMN OF SCHEDULE.

THREE-PHASE DRY-TYPE TRANSFORMER GROUNDING DETAIL

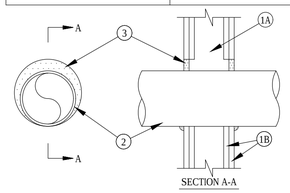
NO SCALE

WL 1054

System No. W-L-1054

Classified by Underwriters Laboratories, Inc. to UL 1479 and CAN/ULC-S115

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Ratings — 1 and 2 Hr (See Items 1 and 3)	F Rating — 2 Hr (See Items 1 and 3)
T Rating — 0 Hr	FT Rating — 0 Hr
L Rating at Ambient — Less Than 1 CFM/sq ft	FH Ratings — 1 and 2 Hr (See Items 1 and 3)
L Rating at 400 F — Less Than 1 CFM/sq ft	FTH Rating — 0 Hr
	L Rating at Ambient — Less Than 1 CFM/sq ft
	L Rating at 400 F — Less Than 1 CFM/sq ft



1. Wall Assembly — The 1 or 2 hr fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300 or U400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:
   A. Studs — Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. (406 mm) OC. Steel studs to be min 2-1/2 in. (64 mm) wide and spaced max 24 in. (610 mm) OC. When steel studs are used and the diam of opening exceeds the width of stud cavity, the opening shall be framed on all sides using lengths of steel stud installed between the vertical studs and screw-attached to the steel studs at each end. The framed opening in the wall shall be 4 to 6 in. (102 to 152 mm) wider and 4 to 6 in. (102 to 152 mm) higher than the diam of the penetrating item such that, when the penetrating item is installed in the opening, a 2 to 3 in. (51 to 76 mm) clearance is present between the penetrating item and the framing on all four sides.
   B. Gypsum Board* — 5/8 in. (16 mm) thick, 4 ft (122 cm) wide with square or tapered edges. The gypsum board type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300 or U400 Series Design in the UL Fire Resistance Directory. Max diam of opening is 32-1/4 in. (819 mm) for steel stud walls. Max diam of opening is 14-1/2 in. (368 mm) for wood stud walls.

   The F and FH Ratings of the firestop system are equal to the fire rating of the wall assembly.
2. Through-Penetrants — One metallic pipe, conduit or tubing to be installed either concentrically or eccentrically within the firestop system. The annular space shall be min 0 in. to max 2-1/4 in. (57 mm). Pipe may be installed with continuous point contact. Pipe, conduit or tubing to be rigidly supported on both sides of wall assembly. The following types and sizes of metallic pipes, conduits or tubing may be used:
   A. Steel Pipe — Nom 30 in. (762 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.
   B. Iron Pipe — Nom 30 in. (762 mm) diam (or smaller) cast or ductile iron pipe.
   C. Conduit — Nom 4 in. (102 mm) diam (or smaller) steel electrical metallic tubing or 6 in. (152 mm) . diam steel conduit.
   D. Copper Tubing — Nom 6 in. (152 mm) diam (or smaller) Type L (or heavier) copper tubing.
   E. Copper Pipe — Nom 6 in. (152 mm) diam (or smaller) regular (or heavier) copper pipe.
3. Fill, Void or Cavity Material* — Sealant — Min 5/8 in. (16 mm) thickness of fill material applied within the annulus, flush with both surfaces of wall. At the point or continuous contact locations between pipe and wall, a min 1/2 in. (13 mm) diam bead of fill material shall be applied at the pipe wall interface on both surfaces of wall.
   HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-One Sealant or FS-ONE MAX Intumescent Sealant

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

Hilti Firestop Systems

Reproduced by HILTI, Inc. Courtesy of Underwriters Laboratories, Inc. October 14, 2015

Wall Opening Protective Materials (CLIV, CLIV7)

Classified by Underwriters Laboratories, Inc. to UL 263 and CAN/ULC-S101

CP 617 or CFS-P PA Firestop Putty Pads, for use with flush device UL Listed Metallic Outlet Boxes installed with steel mud rings or UL Listed Nonmetallic Outlet Boxes in framed wall assemblies as specified below. When protective material is used on outlet boxes on both sides of the wall as directed, the horizontal separation between outlet boxes on opposite sides of the wall may be less than 24 in. provided that the boxes are not installed back-to-back (unless otherwise indicated). Installation shall comply with the National Electrical Code (NFPA 70). Min 1/8 in. thick (CP 617) or min 0.2 in. (CFS-P PA) thick moldable putty pads are to be installed to completely cover the exterior surfaces of the outlet box (except for the side of the outlet box against the stud) and conduit fittings/connectors and to completely seal against the stud and gypsum board in the wall cavity unless otherwise noted below. When CFS-P PA is used, the putty pads may be installed with the release liner intact on the outside of the pad with the exception of any overlaps, in which case the liner is to be removed from the bottom layer at the overlap location.

HILTI Firestop Box Insert, for use with flush device UL Listed Metallic Outlet Boxes installed with steel mud rings or UL Listed Nonmetallic Outlet Boxes in framed wall assemblies as specified below. When protective material is used on outlet boxes on both sides of the wall as directed, the horizontal separation between outlet boxes on opposite sides of the wall may be less than 24 in. provided that the boxes are not installed back-to-back (unless otherwise indicated). Installation shall comply with the National Electrical Code (NFPA 70).

Hilti Firestop Systems

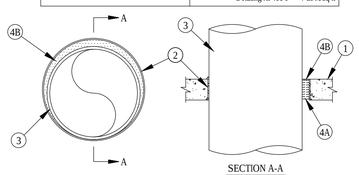
Reproduced by HILTI, Inc. Courtesy of Underwriters Laboratories, Inc. December 07, 2016

CAJ 1226

System No. C-AJ-1226

Classified by Underwriters Laboratories, Inc. to UL 1479 and CAN/ULC-S115

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Rating — 3 Hr	F Rating — 3 Hr
T Rating — 0 Hr	FT Rating — 0 Hr
L Rating At Ambient — Less Than 1 CFM/sq ft	FH Rating — 3 Hr
L Rating At 400 F — 4 CFM/sq ft	FTH Rating — 0 Hr
	L Rating At Ambient — Less Than 1 CFM/sq ft
	L Rating At 400 F — 4 CFM/sq ft



1. Floor or Wall Assembly — Min 4-1/2 in. (114 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m³) concrete. Wall may also be constructed of any UL Classified Concrete Blocks*. Max diam of opening is 32 in. (813 mm).
2. Metallic Sleeve — (Optional) Nom 32 in. (813 mm) diam (or smaller) Schedule 40 (or heavier) steel sleeve cast or grouted into floor or wall assembly, flush with floor or wall surfaces or extending a max of 3 in. (76 mm) above floor or beyond both surfaces of wall.

2A. Sheet Metal Sleeve — (Optional) Max 6 in. (152 mm) diam, min 26 ga. galv steel provided with a 26 ga galv steel square flange spot welded to the sleeve at approx mid-height, or flush with bottom of sleeve in floors, and sized to be a min of 2 in. (51 mm) larger than the sleeve diam. The sleeve is to be cast in place and may extend a max of 4 in. (102 mm) below the bottom of the deck and a max of 1 in. (25 mm) above the top surface of the concrete floor.

2B. Sheet Metal Sleeve — (Optional) - Max 12 in. (305 mm) diam, min 24 ga galv steel provided with a 24 ga galv steel square flange spot welded to the sleeve at approx mid-height, or flush with bottom of sleeve in floors, and sized to be a min of 2 in. (51 mm) larger than the sleeve diam. The sleeve is to be cast in place and may extend a max of 4 in. (102 mm) below the bottom of the deck and a max of 1 in. (25 mm) above the top surface of the concrete floor.

3. Through-Penetrant — One metallic pipe, tube or conduit to be installed either concentrically or eccentrically within the firestop system. The annular space between penetrant and periphery of opening shall be min 0 in. (point contact) to max 1-7/8 in. (48 mm). Penetrant may be installed with continuous point contact. Penetrant to be rigidly supported on both sides of floor or wall assembly. The following types and sizes of metallic penetrants may be used:
   A. Steel Pipe — Nom 30 in. (762 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.
   B. Iron Pipe — Nom 30 in. (762 mm) diam (or smaller) cast or ductile iron pipe.
   C. Copper Pipe — Nom 6 in. (152 mm) diam (or smaller) Regular (or heavier) copper pipe.
   D. Copper Tubing — Nom 6 in. (152 mm) diam (or smaller) Type L (or heavier) copper tubing.
   E. Conduit — Nom 6 in. (152 mm) diam (or smaller) steel conduit.
   F. Conduit — Nom 4 in. (102 mm) diam (or smaller) steel electrical metallic tubing (EMT).
4. Firestop System — The firestop system shall consist of the following:
   A. Packing Material — Min 4 in. (102 mm) thickness of min 4 pcf (64 kg/m³) mineral wool batt insulation firmly packed into opening as a permanent form. Packing material to be recessed from top surface of floor or sleeve or from both surfaces of wall or sleeve as required to accommodate the required thickness of fill material.
   B. Fill, Void or Cavity Material* — Sealant — Min 1/4 in. (6 mm) thickness of fill material applied within the annulus, flush with top surface of floor or sleeve or with both surfaces of wall or sleeve. At the point or continuous contact locations between penetrant and concrete or sleeve, a min 1/4 in. (6 mm) diam bead of fill material shall be applied at the concrete or sleeve/ pipe penetrant interface on the top surface of floor and on both surfaces of wall.
   HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-One Sealant or FS-ONE MAX Intumescent Sealant

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

Hilti Firestop Systems

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S.T.E.M. Classroom Renovations for:

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Cain Rash West

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no.	date	rev. description
1	10/19/23	SFMO COMMENT RESPONSES

HAROLD E. DAMRON — REGISTERED ENGINEER — AGRICULTURE — 1-1527 — COMMERCIAL — NO. 022989 — STATE OF TENNESSEE

issued	15 JAN 2024
checked	HED
drawn	VEI
project no.	202336

SCHEDULES, LEGEND, AND DETAILS

E-01

Vreeland Engineers Inc.
3107 Sutherland Ave.
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Knoxville, TN 37939
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1-800-362-9789
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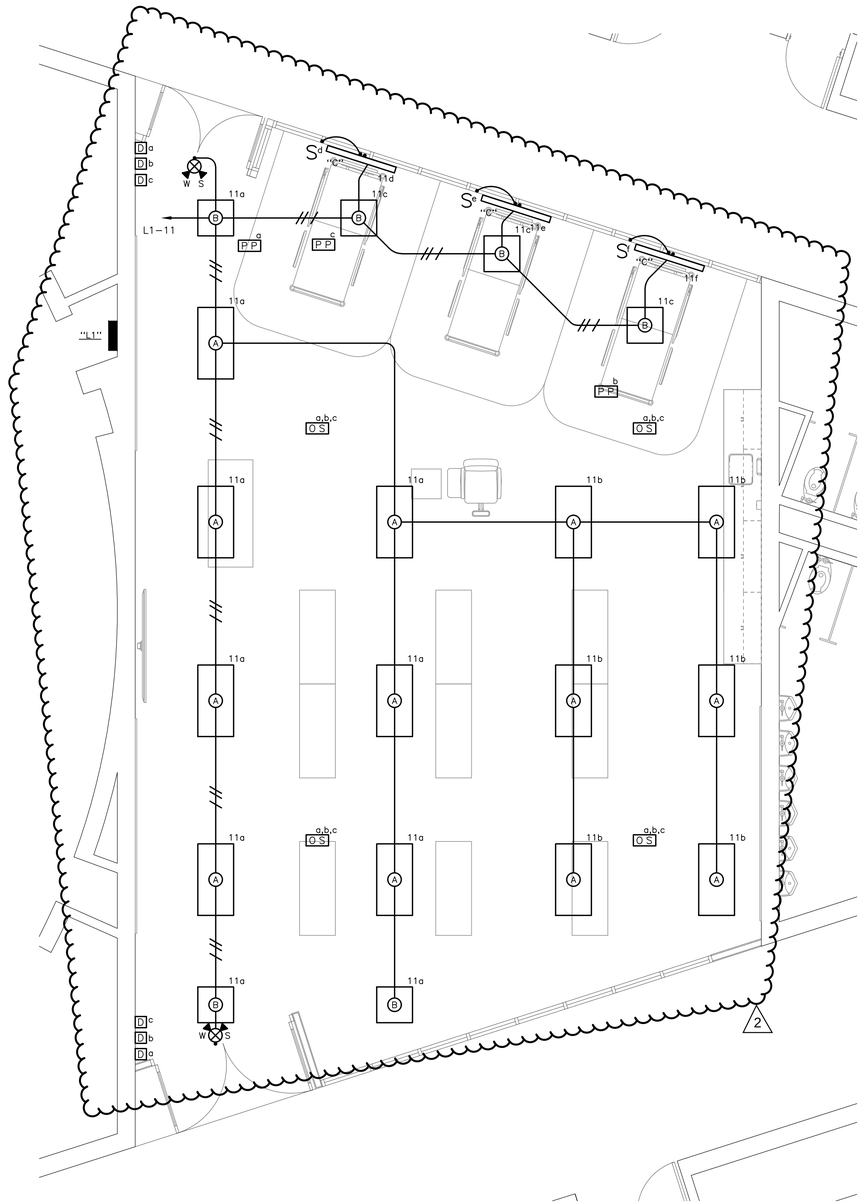
E-01 - Sullivan East High School Digital Arts Classroom Renovation - Schedules.dwg
B.L.E. 01/12/24 10:31 AM 23171



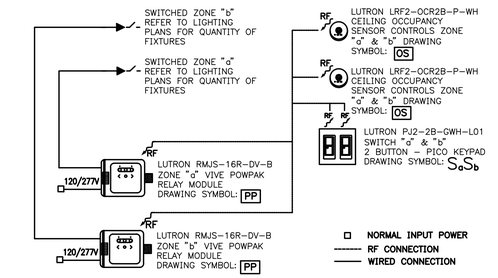
FLOOR PLAN – LIGHTING

SCALE: 1/4" = 1'–0"

0' 2' 4' 8'

LIGHTING NOTES:

1. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATIONS OF ALL LIGHTING FIXTURES.
2. EXIT SIGNS, BUILT–IN BATTERY PACKS AND EXTERIOR EMERGENCY LIGHTS SHALL BE CONNECTED TO LOCAL UNSWITCHED LIGHTING CIRCUITS AS INDICATED ON DRAWINGS.
3. REMOVE EXISTING LIGHTING FIXTURES AND ASSOCIATED WIRING IN RENOVATION AREA AND REPLACE WITH NEW LIGHTING FIXTURES AND WIRING INDICATED. REVISE WIRING AS REQUIRED. MAINTAIN SERVICE TO "DOWN STREAM" LIGHTING LOCATED OUTSIDE RENOVATION AREA.

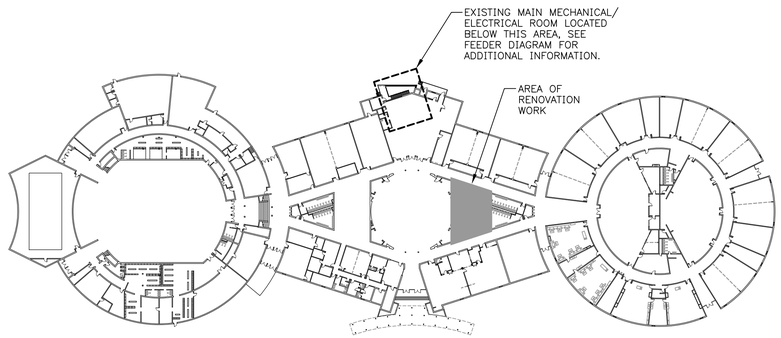


TYPICAL BI–LEVEL SWITCHING LIGHTING CONTROL DETAIL

NO SCALE

NOTE:

1. DETAIL ABOVE DEPICTS "WIRELESS" ARRANGEMENT FOR SENSORS AND SWITCHES. ALTERNATE SYSTEMS UTILIZING LOW VOLTAGE WIRING FROM POWER PACKS TO CEILING SENSORS AND SWITCHES SHALL BE ACCEPTABLE FOR USE PROVIDED THAT FUNCTIONALITY OF SPACE MATCHES WORK INDICATED ON THIS DETAIL AND SHOWN ON DRAWINGS.



KEY PLAN

NTS

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P.O. Box 10648
Knoxville, TN 37939
865–637–4451
1–800–362–9789
vreelandengineers.com

S.T.E.M. Classroom Renovations for:

SULLIVAN EAST HIGH SCHOOL

Blountville, Tennessee

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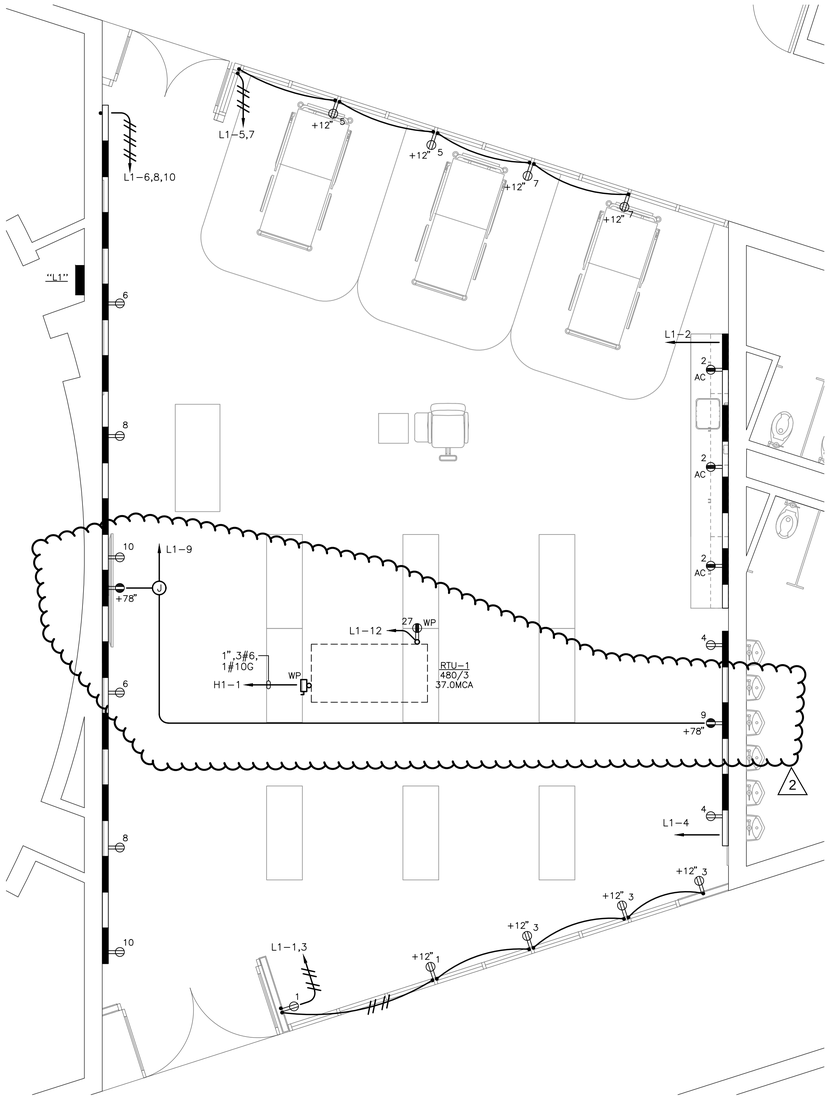
no.	date	rev. description
1	10/19/23	SFMO COMMENT RESPONSES
2	1/17/24	Re-Bid Revisions

HAROLD E. DAMRON REGISTERED ENGINEER AGRICULTURE NO. 022989 STATE OF TENNESSEE 1-15-24

issued	15 JAN 2024
checked	HED
drawn	VEI
project no.	202336

FLOOR PLAN - LIGHTING

E-11



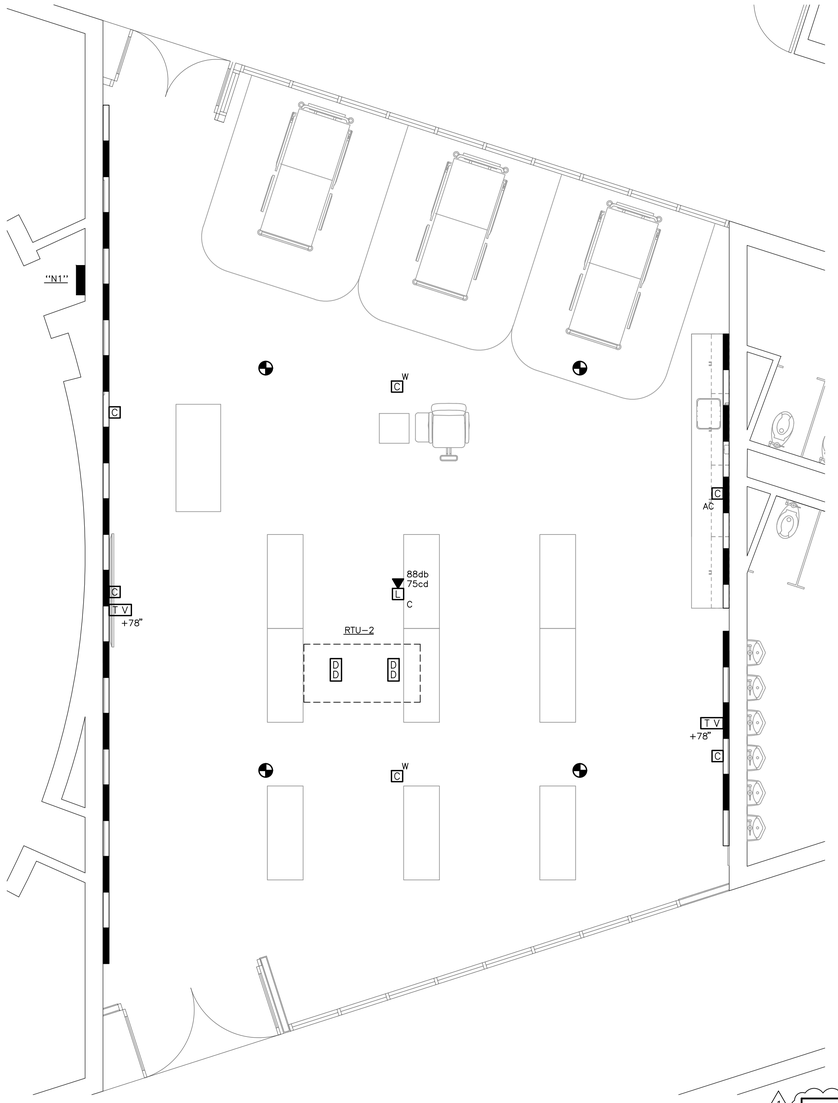
FLOOR PLAN – POWER

SCALE: ¼" = 1'–0"

0' 2' 4' 8'

POWER, COMMUNICATIONS, AND HVAC WIRING NOTES:

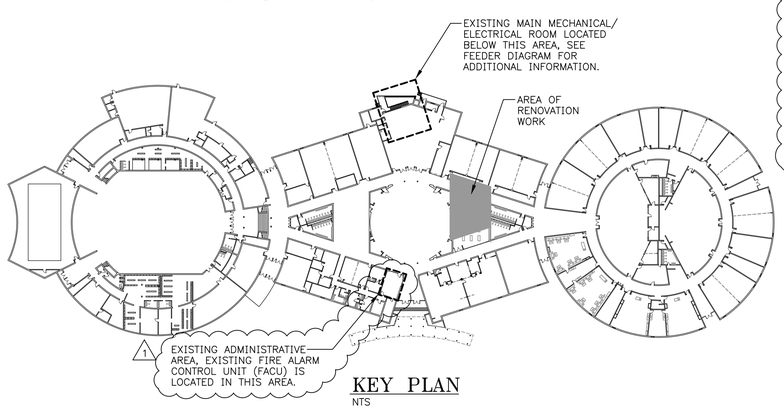
1. RECESSED OUTLET BOXES ON OPPOSITE SIDES OF FIRE RATED PARTITIONS SHALL BE SEPARATED BY A HORIZONTAL DISTANCE OF AT LEAST 24 INCHES.
2. PRIOR TO BEGINNING CONDUIT INSTALLATION FOR HVAC/PLUMBING EQUIPMENT ELECTRICAL CONTRACTOR SHALL CONFIRM WITH MECHANICAL/PLUMBING CONTRACTOR THE VOLTAGES FOR ALL HVAC/PLUMBING EQUIPMENT REQUIRING ELECTRICAL SERVICE. ELECTRICAL CONTRACTOR SHALL CALL ANY DISCREPANCIES BETWEEN ELECTRICAL DRAWINGS AND VOLTAGE INFORMATION PROVIDED BY MECHANICAL/PLUMBING CONTRACTOR TO THE ATTENTION OF ENGINEER PRIOR TO PROCEEDING WITH WORK.
3. CONFIRM EXACT ROUGH–IN LOCATIONS FOR ALL HVAC/PLUMBING EQUIPMENT WITH MECHANICAL/PLUMBING CONTRACTOR PRIOR TO INSTALLATION OF CONDUIT.
4. "AC" BY DEVICE INDICATES DEVICE TO BE MOUNTED ABOVE COUNTER SUCH THAT BOTTOM OF BOX IS 2" ABOVE COUNTER OR COUNTER BACKSPLASH, AS APPLICABLE. REFER TO ARCHITECTURAL INTERIOR ELEVATIONS FOR COUNTER DETAILS.
5. "✳" BY J. BOX "DC" INDICATES CONTRACTOR TO PROVIDE A SPECIAL PURPOSE 208–VOLT, 3–PHASE, RECEPTACLE ON DROP CORD FOR HEAT TRANSFER EQUIPMENT. CONFIRM RECEPTACLE CONFIGURATION REQUIRED FOR HEAT TRANSFER EQUIPMENT WITH OWNER PRIOR TO ORDERING MATERIALS.



FLOOR PLAN – COMMUNICATIONS

SCALE: ¼" = 1'–0"

0' 2' 4' 8'



KEY PLAN

NTS

1 FIRE ALARM NOTES:

1. ALL REQUIRED DOCUMENTATION REGARDING THE DESIGN OF FIRE DETECTION, ALARM, AND COMMUNICATIONS SYSTEMS AND THE PROCEDURES FOR MAINTENANCE, INSPECTION, AND TESTING OF FIRE DETECTION, ALARM, AND COMMUNICATIONS SYSTEMS SHALL BE MAINTAINED AT AN APPROVED, SECURED LOCATION FOR THE LIFE OF THE SYSTEM. (IFC 901.6.2.1).
2. FIRE ALARM CONTROL PANEL CIRCUIT DISCONNECTING MEANS SHALL HAVE A RED MARKING, SHALL BE ACCESSIBLE ONLY TO AUTHORIZED PERSONNEL, AND SHALL BE IDENTIFIED AS "FIRE ALARM CIRCUIT". THE LOCATION OF THE CIRCUIT DISCONNECTING MEANS SHALL BE PERMANENTLY IDENTIFIED AT THE FIRE ALARM CONTROL UNIT. (2010 NFPA 72 10.5.5.2.2).

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no.	date	rev. description
1	10/19/23	SFMO COMMENT RESPONSES
2	1/17/24	Re-Bid Revisions

HAROLD E. DAMRON REGISTERED ENGINEER AGRICULTURE COMMERCE NO. 022969 STATE OF TENNESSEE 1-15-24

issued	15 JAN 2024
checked	HED
drawn	VEI
project no.	202336

FLOOR PLAN - POWER AND COMMUNICATIONS

E-12

ELECTRICAL SPECIFICATIONS

1. SCOPE: FURNISH PLANT, LABOR, MATERIAL, SERVICES, AND EQUIPMENT NECESSARY FOR AND REASONABLY INCIDENTAL TO THE INSTALLATION OF ELECTRICAL FACILITIES SHOWN ON THE DRAWINGS AND CALLED FOR HEREINAFTER.

2. CODES AND PERMITS: SECURE NECESSARY PERMITS, PAY NECESSARY FEES, CONFORM TO ALL APPLICABLE LOCAL, STATE, AND NATIONAL CODES.

3. POWER SERVICE: POWER SERVICE SHALL BE TAKEN FROM THE EXISTING BUILDING POWER DISTRIBUTION SYSTEM AS INDICATED ON DRAWINGS.

4. WIRING METHODS: FURNISH AND INSTALL A SYSTEM OF LINE VOLTAGE POWER WIRING FOR RENOVATION AREA AS INDICATED ON DRAWINGS AND AS SET FORTH HEREINAFTER. ALL WIRING SHALL BE RUN CONCEALED TO THE MAXIMUM EXTENT POSSIBLE. UTILIZE ELECTRICAL-METALLIC TUBING (EMT) FOR NEW CONDUIT RUNS THAT ARE CONCEALED ABOVE LAY-IN ACOUSTICAL TILE CEILINGS AND CONCEALED IN NEW WALL CONSTRUCTION. EXISTING CONDUIT AND BOXES MAY BE UTILIZED WHERE PRACTICABLE TO ACHIEVE NEW BRANCH WIRING ARRANGEMENTS SHOWN ON DRAWINGS. OTHERWISE, PROVIDE ALL NEW CONDUIT AND BOXES AS ILLUSTRATED. PROVIDE TWO COMPARTMENT SURFACE NON-METALLIC RACEWAY SYSTEM WHERE INDICATED ON DRAWINGS, OTHERWISE, ALL NEW WIRING SHALL BE INSTALLED CONCEALED UNLESS SPECIFIC PERMISSION IS GIVEN BY ARCHITECT FOR EXPOSED WIRING. THE EXCEPTION SHALL BE WIRING FOR NEW WATER HEATERS AND RECIRCULATION PUMPS SHALL BE PERMITTED TO BE RUN EXPOSED IN STORAGE AND PREP ROOMS. ALL CONDUCTORS SHALL BE COPPER WITH "THHN/THWN" INSULATION. PROVIDE COLOR CODING OF CONDUCTORS IN ACCORDANCE WITH NATIONAL ELECTRICAL CODE REQUIREMENTS. MINIMUM CONDUCTOR SIZE SHALL BE #12 AWG WITH LARGER SIZES WHERE INDICATED ON DRAWINGS. ALL WIRING (CONCEALED AND EXPOSED) SHALL BE RUN IN A NEAT AND WORKMANLIKE MANNER, PARALLEL OR PERPENDICULAR TO BUILDING STRUCTURAL ELEMENTS. NO DIAGONAL RUNS WILL BE PERMITTED. NEW EXPOSED WIRING RUNS SHALL BE SUBJECT TO APPROVAL OF ROUTING IN ADVANCE OF INSTALLATION BY ARCHITECT.

5. PANELBOARDS: FURNISH AND INSTALL NEW BRANCH CIRCUIT PANELBOARDS WHERE INDICATED ON DRAWINGS. NEW PANELBOARDS SHALL BE RATED 120/208-VOLT, 3-PHASE, 4-WIRE, OR 480/277-VOLT, 3-PHASE, 4-WIRE AS INDICATED ON DRAWINGS. NEW PANELBOARDS SHALL BE SIMILAR AND EQUAL TO SQUARE D "NQ" OR "NF" SERIES FOR THE PARTICULAR VOLTAGE REQUIRED FOR EACH RESPECTIVE PANELBOARD. ALL BUSING IN NEW PANELBOARD SHALL BE COPPER. UTILIZE "BOLT-ON" TYPE CIRCUIT BREAKERS IN EACH NEW PANELBOARD. PROVIDE TYPEWRITTEN CIRCUIT DIRECTORY IN EACH PANELBOARD IDENTIFYING TYPE OF LOAD AND LOCATION OF LOAD FOR EACH PANELBOARD. HANDWRITTEN CIRCUIT DIRECTORIES WILL NOT BE PERMISSIBLE.

6. DRY TYPE TRANSFORMER: FURNISH AND INSTALL DRY TYPE TRANSFORMER WHERE INDICATED ON DRAWINGS. DRY TYPE TRANSFORMER SHALL UTILIZE ALUMINUM WINDINGS AND SHALL BE RATED 115-DEGREE CELSIUS RISE. REFER TO DRAWINGS FOR KVA AND VOLTAGE RATINGS OF DRY TYPE TRANSFORMER PROVIDED AS PART OF THIS PROJECT.

7. WORK AT EXISTING SWITCHBOARD: MAKE MODIFICATIONS TO EXISTING SWITCHBOARD AS ILLUSTRATED ON DRAWINGS. PROVIDE NEW CIRCUIT BREAKER IN EXISTING 480/277-VOLT SWITCHBOARD TO SERVE NEW FEEDER AS INDICATED ON PLANS. PROVIDE NEW ENGRAVED LABEL ON EXISTING SWITCHBOARD IDENTIFYING LOAD SERVED BY NEW CIRCUIT BREAKER.

8. SAFETY SWITCHES: FURNISH AND INSTALL HEAVY-DUTY FUSIBLE TYPE SAFETY SWITCHES WHERE ILLUSTRATED ON DRAWINGS. SAFETY SWITCHES SHALL BE HEAVY DUTY, HORSEPOWER RATED, QUICK MAKE, QUICK BREAK WITH ARC SHIELD, WITH ENCLOSED CONSTRUCTION. UTILIZE NEMA 3R ENCLOSURES FOR OUTDOOR SAFETY SWITCHES. WHERE SAFETY SWITCHES ARE REQUIRED TO BE INSTALLED AWAY FROM WALLS, A SUITABLE SUPPORT WILL BE PROVIDED BY ELECTRICAL CONTRACTOR TO ALLOW THE SWITCH TO BE IN A POSITION OF APPROXIMATELY 4' ABOVE FLOOR OR ROOF LEVEL. SWITCHES MAY BE MOUNTED ON EQUIPMENT WHERE SPECIFIC APPROVAL IS PROVIDED BY EQUIPMENT SUPPLIER.

9. MANUAL MOTOR STARTERS: FURNISH AND INSTALL MANUAL MOTOR STARTERS FOR FRACTIONAL HORSEPOWER EQUIPMENT AS INDICATED ON DRAWINGS. NEW MOTOR STARTERS SHALL BE SIMILAR AND EQUAL TO SQUARE D COMPANY 2510 SERIES, CATALOG NO. FF-1P OR FF-2P, DEPENDING UPON SINGLE-POLE OR DOUBLE-POLE APPLICATIONS. INSTALL IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

10. WIRING DEVICES: FURNISH AND INSTALL NEW DUPLEX PLUG RECEPTACLES, GFCI DUPLEX PLUG RECEPTACLES, WALL SWITCHES, ETC., AS INDICATED ON DRAWINGS. NEW WIRING DEVICES SHALL BE TAMPER RESISTANT WITH MINIMUM RATING OF 20-AMPERES. PROVIDE STAINLESS STEEL COVERPLATES. COLOR OF DEVICES SHALL BE IVORY, WHITE, OR GRAY AS DIRECTED BY ARCHITECT.

11. SURFACE NON-METALLIC RACEWAY SYSTEM: FURNISH AND INSTALL SURFACE NON-METALLIC RACEWAY FOR NEW WIRING REQUIRED ON EXISTING WALLS IN THE BUILDING AS ILLUSTRATED ON DRAWINGS. WHERE TWO-COMPARTMENT RACEWAY IS SHOWN, SURFACE NON-METALLIC RACEWAY SHALL HAVE A BUILT-IN DIVIDER FOR SEPARATION OF POWER AND COMMUNICATIONS WIRING. UTILIZE PANDUIT COMPANY T-70 SERIES WITH BUILT-IN DIVIDER OR EQUAL BY WIREMOLD OR HUBBELL IN THESE APPLICATIONS. THESE RACEWAYS SHALL BE 4-3/4" WIDE BY 1-1/4" DEEP. PROVIDE PLUG RECEPTACLES AND PROVISIONS FOR DATA OUTLETS IN RACEWAY AS INDICATED ON DRAWINGS. PROVIDE ALL NECESSARY ACCESSORIES INCLUDING DEVICE FACEPLATES, BOXES, T-CONNECTIONS, SUPPORT BRACKETS, ETC., FOR COMPLETE INSTALLATION. ELSEWHERE, WHERE NEW WIRING IS SHOWN ON EXISTING WALLS, PROVIDE SURFACE NON-METALLIC RACEWAY, SIMILAR AND EQUAL TO PANDUIT LDP SERIES. PROVIDE ALL NECESSARY ACCESSORIES INCLUDING SURFACE MOUNTED BOXES AND COVERS FOR COMPLETE INSTALLATION. INSTALLATION OF TWO-COMPARTMENT RACEWAYS AND SMALLER LDP RACEWAYS SHALL BE PERFORMED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. FURNISH AND INSTALL THE NECESSARY FITTINGS, ACCESSORIES, COUPLINGS, WIRE CLIPS, TRANSITION ELEMENTS, ETC., NECESSARY FOR AND REASONABLY INCIDENTAL TO THE PROPER INSTALLATION OF THE RACEWAY SYSTEM. CONFIRM EXACT ROUTING IN FIELD SO AS TO AVOID EXISTING OBSTRUCTIONS.

12. FIRE ALARM SYSTEM: EXPAND THE EXISTING BUILDING FIRE ALARM SYSTEM INTO RENOVATION AREA AS REQUIRED. ALL NEW EQUIPMENT SHALL BE COMPATIBLE WITH THE EXISTING BUILDING FIRE ALARM SYSTEM AND SHALL BE OF THE MAKE/MODEL RECOMMENDED FOR USE BY EXISTING SYSTEM MANUFACTURER. NO SUBSTITUTIONS WILL BE PERMITTED. TEST SYSTEM AT CONCLUSION OF JOB TO INSURE PROPER OPERATION IN ACCORDANCE WITH NFPA 72 AND REQUIREMENTS OF LOCAL AHJ. INCLUDE TEST REPORTS AS PART OF PROJECT CLOSE-OUT DATA.

13. INTERCOM SYSTEM EXPANSION: EXPAND EXISTING BUILDING INTERCOM SYSTEM INTO RENOVATION AREA AS INDICATED ON DRAWINGS AND AS CALLED FOR HEREINAFTER. FURNISH AND INSTALL NEW CEILING RECESSED INTERCOM LOUDSPEAKERS, WIRING, AND ALL REQUIRED MODIFICATIONS, RE-PROGRAMMING, ETC. AT EXISTING MAIN OFFICE INTERCOM SYSTEM SO AS TO INCORPORATE NEW DEVICES, EQUIPMENT, WIRING SERVING NEW DEVICES, EQUIPMENT WIRING SERVING NEW DIGITAL ARTS CLASSROOM INTO EXISTING INTERCOM SYSTEM. ALL NEW EQUIPMENT SHALL BE AS RECOMMENDED BY AUTHORIZED VENDOR OF EXISTING INTERCOM SYSTEM. NO SUBSTITUTES WILL BE PERMITTED. EXISTING SYSTEM UTILIZES A NORTEL PHONE SYSTEM. ALL NEW EQUIPMENT SHALL BE COMPATIBLE WITH THIS EXISTING SYSTEM AND INSTALLED BY AUTHORIZED VENDOR OF THIS SYSTEM.

14. GROUNDING: FURNISH AND INSTALL GROUNDING IN ACCORDANCE WITH NATIONAL ELECTRICAL CODE. PROVIDE A SEPARATE CODE-SIZED EQUIPMENT GROUNDING CONDUCTOR IN ALL NEW BRANCH CIRCUIT WIRING RUNS. SEPARATE GROUNDING CONDUCTOR IS GENERALLY NOT ILLUSTRATED ON THE DRAWINGS BUT SHALL BE REQUIRED. GROUND EQUIPMENT AND LIGHTING FIXTURES IN ACCORDANCE WITH CODE. GROUND DRT-TYPE TRANSFORMER IN ACCORDANCE WITH CODE, SEE DETAIL ON DRAWINGS.

15. SITE VISITATION: VISIT THE SITE SO AS TO HAVE A FULL UNDERSTANDING OF WORK REQUIRED IN THE EXISTING BUILDING. MAKE DUE ALLOWANCE FOR SAME IN BID PRICE. PRIOR TO COMMENCEMENT OF ANY DEMOLITION WORK, CONTRACTOR SHALL CONFIRM THAT INFORMATION SHOWN ON DRAWINGS REGARDING EXISTING ELECTRICAL ARRANGEMENT IS ACCURATE. CALL ANY DISCREPANCIES THAT ARE DISCOVERED TO THE IMMEDIATE ATTENTION OF THE ARCHITECT PRIOR TO PROCEEDING WITH WORK.

16. SUBMITTALS: PROVIDE SUBMITTALS FOR REVIEW BY ARCHITECT AND ENGINEER. SUBMITTALS SHALL BE PROVIDED IN ELECTRONIC PDF FILE FORMAT WITH DESCRIPTIVE FILENAMES AND ALL MANUFACTURER'S CUT SHEETS APPROPRIATELY HIGHLIGHTED TO CLEARLY NOTE THE SPECIFIC EQUIPMENT BEING PROPOSED FOR USE ON THIS PROJECT. SUBMITTALS ON THIS PROJECT SHALL INCLUDE WIRING DEVICES, SWITCHGEAR, FIRE ALARM, INTERCOM, AND SURFACE NON-METALLIC RACEWAY SYSTEM.

17. GUARANTY: GUARANTEE ALL WORK TO BE FREE FROM DEFECTS IN MATERIAL AND WORKMANSHIP FOR A PERIOD OF ONE YEAR AFTER FINAL ACCEPTANCE OF JOB. MAKE ALL REPAIRS/REPLACEMENT OF DEFECTIVE PARTS/LABOR DURING WARRANTY PERIOD AT NO ADDITIONAL COST TO THE OWNER.

PANEL H1 — MAINS: 200A; MAIN BREAKER: NO; FEEDER SIZE: #3/0; VOLTAGE/PHASE: 480/277V,3Φ; SHORT CKT. CAPACITY: 40,000; FED FROM: EXISTING SWITCHBOARD; MOUNTING: SURFACE; ENTRY: TOP; BUS: COPPER

CKT. NO.	SERVES	LOAD (kVA) ΦA	ΦB	ΦC	BREAKER TRIP	POLE	BREAKER POLE	TRIP	LOAD (kVA) ΦA	ΦB	ΦC	SERVES	CKT. NO.
1	RTU-1	8.4			60	3	3	70	15.0			TRANSFORMER "L1"	2
3			8.4		|	|	|	|		15.0			4
5				8.4	|	|	|	|			15.0		6
7	SPACE ONLY				60	3	3	60				SPACE ONLY	8
9					|	|	|	|					10
11					|	|	|	|					12
13	SPACE ONLY				20	1	1	20				SPACE ONLY	14
15	SPACE ONLY				20	1	1	20				SPACE ONLY	16
17	SPACE ONLY				20	1	1	20				SPACE ONLY	18
19	SPACE ONLY				20	1	1	20				SPACE ONLY	20
21	SPACE ONLY				20	1	1	20				SPACE ONLY	22
23	SPACE ONLY				20	1	1	20				SPACE ONLY	24
SUB TOTAL CONNECTED		8.4	8.4	8.4					15.0	15.0	15.0	SUB TOTAL CONNECTED	

SUB TOTAL CONNECTED ΦA: 23.4 — SUB TOTAL CONNECTED ΦB: 23.4 — SUB TOTAL CONNECTED ΦC: 23.4 — TOTAL CONNECTED: 70.2

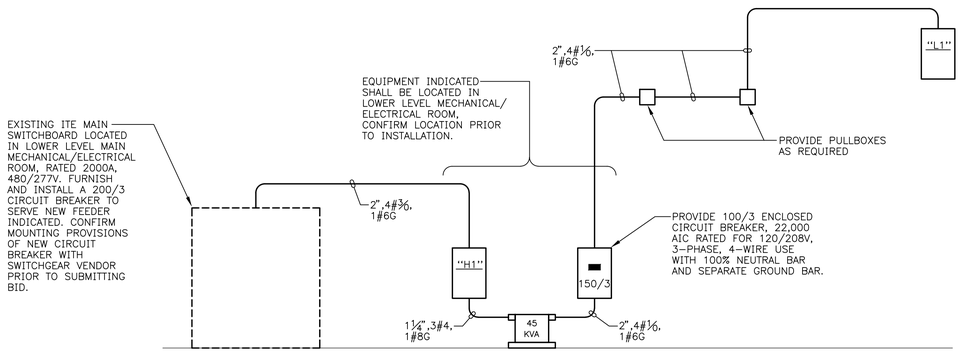
NOTES:
- –
- –

PANEL L1 — MAINS: 150A; MAIN BREAKER: NO; FEEDER SIZE: #1/0; VOLTAGE/PHASE: 120/208V,3Φ,4W; SHORT CKT. CAPACITY: 10,000; FED FROM: H1 (VIA TRANSFORMER); MOUNTING: SURFACE; ENTRY: TOP; BUS: COPPER

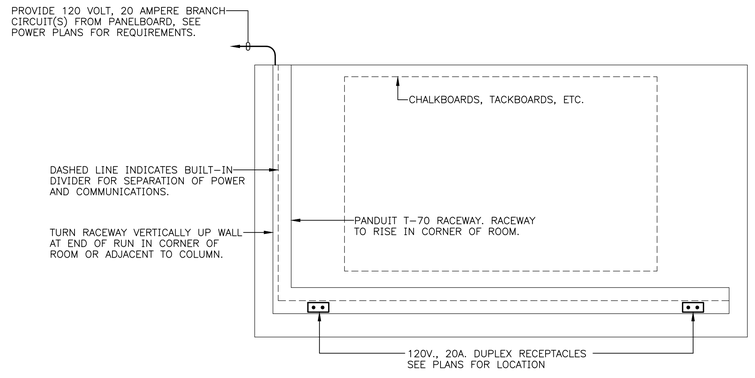
CKT. NO.	SERVES	LOAD (kVA) ΦA	ΦB	ΦC	BREAKER TRIP	POLE	BREAKER POLE	TRIP	LOAD (kVA) ΦA	ΦB	ΦC	SERVES	CKT. NO.
1	RECEPTACLES	0.4			20	1	1	20	1.0			RECEPTACLES	2
3	RECEPTACLES		0.6		20	1	1	20		0.4		RECEPTACLES	4
5	RECEPTACLES			0.4	20	1	1	20			0.4	RECEPTACLES	6
7	RECEPTACLES	0.4			20	1	1	20	0.4			RECEPTACLES	8
9	RECEPTACLES		0.4		20	1	1	20		0.4		RECEPTACLES	10
11	LIGHITNG			1.0	20	1	1	20			0.5	RTU'S RECEPTACLES	12
13	SPARE				20	1	1	20	1.0			RECEPTACLES	14
15	SPARE				20	1	1	20		1.0		RECEPTACLES	16
17	SPARE				20	1	1	20				SPARE	18
19	SPARE				20	1	1	20				SPARE	20
21	SPARE				20	1	1	20				SPARE	22
23	SPARE				20	1	1	20				SPARE	24
25	SPARE				20	1	1	20				SPARE	26
27	SPARE				20	1	1	20				SPARE	28
29	SPARE				20	1	1	20				SPARE	30
31	SPARE				20	1	1	20				SPARE	32
33	SPARE				20	1	1	20				SPARE	34
35	SPARE				20	1	1	20				SPARE	36
37	SPARE				20	1	1	20				SPARE	38
39	SPARE				20	1	1	20				SPARE	40
41	SPARE				20	1	1	20				SPARE	42
43	SPACE ONLY				20	1	1	20				SPACE ONLY	44
45	SPACE ONLY				20	1	1	20				SPACE ONLY	46
47	SPACE ONLY				20	1	1	20				SPACE ONLY	48
49	SPACE ONLY				20	1	1	20				SPACE ONLY	50
51	SPACE ONLY				20	1	1	20				SPACE ONLY	52
53	SPACE ONLY				20	1	1	20				SPACE ONLY	54
SUB TOTAL CONNECTED		0.8	1.0	1.4					2.4	1.8	0.9	SUB TOTAL CONNECTED	

SUB TOTAL CONNECTED ΦA: 3.2 — SUB TOTAL CONNECTED ΦB: 2.8 — SUB TOTAL CONNECTED ΦC: 2.3 — TOTAL CONNECTED: 8.3

NOTES:
1. PROVIDE 6"x20" SINGLE-SECTION PANEL.



FEEDER DIAGRAM
N.T.S.



TYPICAL SURFACE NON-METALLIC RACEWAY DETAIL
N.T.S.

NOTE:
1. COMMUNICATIONS COMPARTMENT SHOWN SHALL BE EMPTY FOR FUTURE USE.

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no.	date	rev. description
1	10/19/23	SFMO COMMENT RESPONSES

HAROLD E. DAMRON — REGISTERED ENGINEER — AGRICULTURE — 1-15-24 — NO. 022989 — STATE OF TENNESSEE

issued	15 JAN 2024
checked	HED
drawn	VEI
project no.	202336

PANELBOARD SCHEDULES AND FEEDER DIAGRAM

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