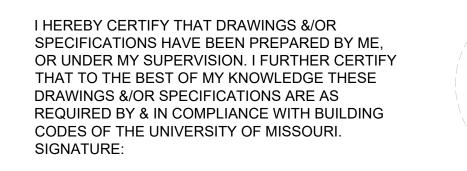
SCHWEITZER HALL RENOVATE LAB 213 PROJECT NUMBER: CP211261

AT: UNIVERSITY OF MISSOURI - COLUMBIA, MISSOURI FOR: THE CURATORS OF THE UNIVERSITY OF MISSOURI



I HEREBY CERTIFY THAT DRAWINGS &/OR SPECIFICATIONS HAVE BEEN PREPARED BY ME. OR UNDER MY SUPERVISION. I FURTHER CERTIFY THAT TO THE BEST OF MY KNOWLEDGE THESE DRAWINGS &/OR SPECIFICATIONS ARE AS REQUIRED BY & IN COMPLIANCE WITH BUILDING CODES OF THE UNIVERSITY OF MISSOURI. SIGNATURE:

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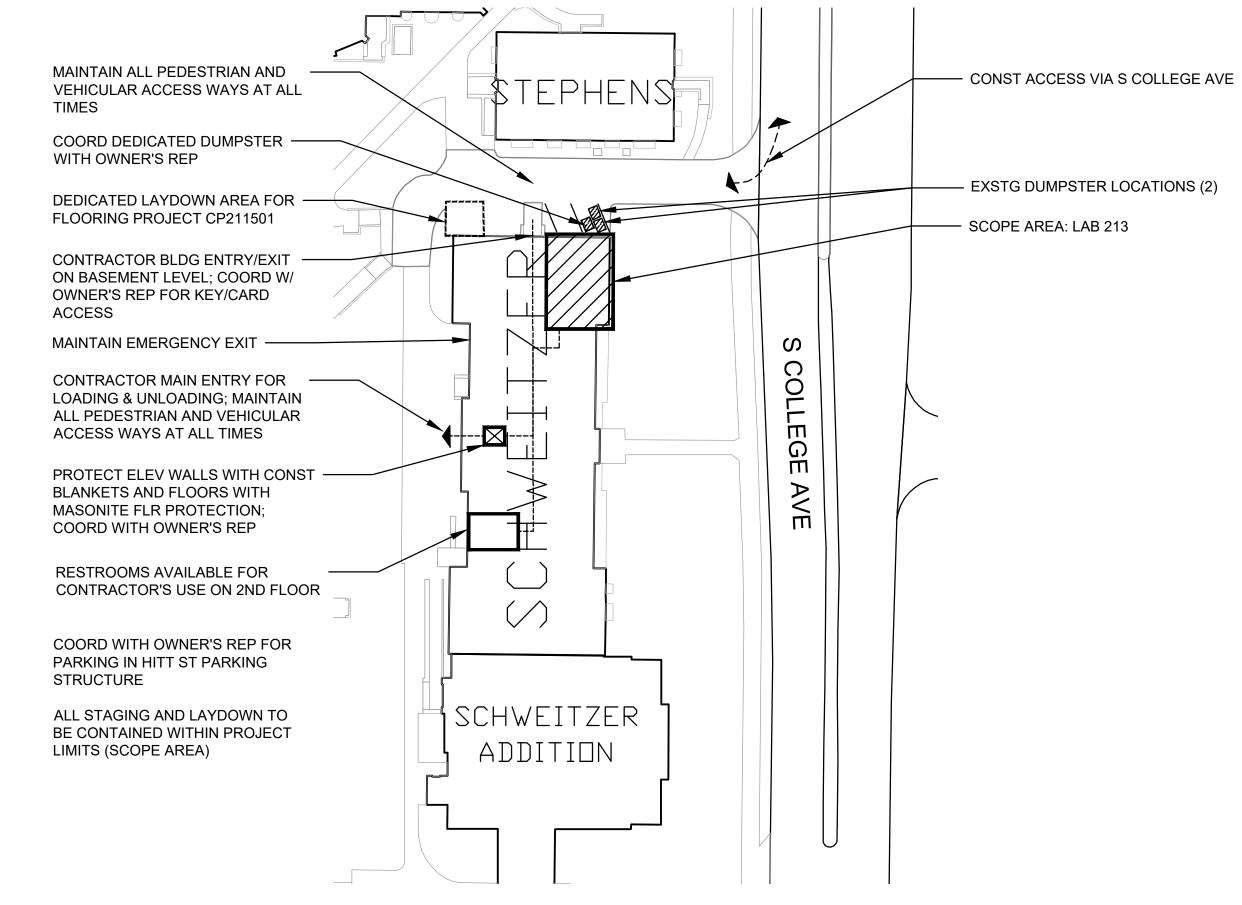


ARCHITECTURAL, MECHANICAL & ELECTRICAL

DESIGN SERVICES GENERAL SERVICES BUILDING 900 E STADIUM BLVD COLUMBIA, MO 65211 573-882-6800

OWNER'S REPRESENTATIVE

JASON MOLLET GENERAL SERVICES BUILDING 900 E STADIUM BLVD COLUMBIA, MO 65211 (573) 200-3459



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	REVISION DELTA #		1	2	3	4	5	
SHEET NUMBER	SHEET TITLE	09/13/21 ISSUED FOR CONSTURCTION						
G001	COVER: DRAWING INDEX & PROJECT NOTES	Δ						
G002	ABBREVIATIONS, SYMBOLS & ADAAG	Δ						
G003	CODE PLAN & ANALYSIS	Δ						
A101	FLOOR PLANS	Δ						
A401	INTERIOR ELEVATIONS, DETAILS & SCHEDULES	Δ						
A501	REFERENCE PHOTOS	Δ						
F101	FIRE SPRINKLER RENOVATION PLAN	Δ						
MP101	MECHANICAL & PLUMBING RENOVATION PLANS	Δ						
MP601	MECH & PLUMBING DETAILS & SCHEDULES	Δ						
M701	MECHANICAL CONTROL DETAILS	Δ						
E101	ELECTRICAL AND LIGHTING PLANS	Δ						
E501	ELECTRICAL DETAILS & SCHEDULES	Δ						

SITE PLAN & CONSTRUCTION ACCESS

CODES &

STANDARDS UM CONSULTANT PROCEDURES & DESIGN GUIDELINES: **CURRENT EDITION** 2018 2018 2018 2018 2018 IFGC 2018 NEC: 2017 NFPA 13: 2016 NFPA 14: NFPA 20: NFPA 45: 2015 NFPA 72: 2016 NFPA 90A: NFPA 96: 2017 NFPA 101: 2015 NFPA 110: 2016 ASHRAE 90.1: 2016

ASME A17.1S: 2005

2010

ADAAG:

PROJECT NOTES:

- 1. ANY OPERATION WHERE HIGH LEVELS OF NOISE ARE EXPECTED ON THE CONSTRUCTION SITE SHALL BE COORDINATED & APPROVED WITH THE OWNER'S REPRESENTATIVE AT LEAST 48 HOURS PRIOR TO THE WORK BEING INITIATED.
- 2. DISCONNECTION OR INTERRUPTION OF ANY BUILDING SYSTEMS OR SERVICES MUST BE COORDINATED WITH OWNER'S REPRESENTATIVE AT LEAST 72 HOURS PRIOR TO WORK BEING PERFORMED. CONTRACTOR'S WORK SHALL BE CONTINUOUS UNTIL UTILITY IS RESTORED.
- AREAS NOT UNDER CONSTRUCTION SHALL BE MAINTAINED FOR PUBLIC ACCESS & CIRCULATION. CONTRACTOR SHALL PROVIDE TEMPORARY LIGHTS & MAINTAIN TEMPERATURE & HUMIDITY CONTROL WITHIN THE WORK AREA DURING THE CONSTRUCTION OF THE PROJECT AS DIRECTED BY OWNER'S REPRESENTATIVE & AS REQUIRED FOR THE SAFETY & SECURITY OF THE PUBLIC.
- 4. CONTRACTOR SHALL MAINTAIN & KEEP ALL EXISTING MEANS OF EGRESS BARRIER-FREE.
- CONTRACTOR SHALL MAINTAIN & PROTECT THE EXISTING CONDITIONS IN THE WORK AREA UNLESS OTHERWISE NOTED. THE CONTRACTOR SHALL TAKE PHOTOGRAPHS OF INTERIOR & EXTERIOR AREAS DOCUMENTING EXISTING CONDITIONS BEFORE PROCEEDING WITH THE WORK. ANY DAMAGE DONE TO EXISTING CONDITIONS DURING CONSTRUCTION SHALL BE REPAIRED TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE WITHOUT ADDITIONAL COST TO THE OWNER.
- 6. EVERY DIMENSION THAT IS DIRECTLY OR INDIRECTLY RELATED TO EXISTING CONDITIONS OR CONSTRUCTION SHALL BE CAREFULLY MEASURED & COORDINATED WITH ADJACENT CONDITIONS, CONTRACTOR SHALL REPORT DISCREPANCIES **EXISTING CONDITIONS & THE CONTRACT DOCUMENTS TO THE** OWNER'S REPRESENTATIVE &/OR ARCHITECT PRIOR TO BEGINNING THE WORK.
- CONTRACTOR SHALL CONTAIN ALL CONSTRUCTION ACTIVITY, INCLUDING STORAGE OF MATERIAL & EQUIPMENT, WITHIN THE CONSTRUCTION LIMITS.

- CONTRACTOR SHALL PROVIDE TEMPORARY DIRECTIONAL SIGNAGE AS WELL AS CONSTRUCTION SIGNAGE NOTIFYING THE PUBLIC OF CONSTRUCTION LIMITS, AS NEEDED.
- 9. CONTRACTOR SHALL SECURE & PROTECT THE WORK AREA AT THE END OF EACH DAY.
- 10. CONTRACTOR SHALL MAKE ALLOWANCES FOR AMPLE EXPANSION & CONTRACTION FOR ELECTRICAL, STRUCTURAL, & OTHER BUILDING COMPONENTS SUBJECT TO SUCH MOVEMENT, INSTALL SLEEVES, RECESSES & OPENINGS IN THE WORK TO RECEIVE MATERIALS INSTALLED BY OTHER TRADES.
- 11. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE MEANS, METHODS & SEQUENCES OF CONSTRUCTION & THE SAFETY OF CONSTRUCTION PERSONNEL & AUTHORIZED VISITORS.
- 12. KEYNOTES ARE PROVIDED THROUGHOUT THE DRAWINGS TO INDICATE WHERE MORE INFORMATION IS DEFINED ON SPECIFIC COMPONENTS, FINISHES, EQUIPMENT, &/OR ASSOCIATED ASSEMBLIES. KEYNOTES DO NOT INDICATE OR LIMIT A SPECIFIC TRADES SCOPE OF WORK, NOR DO THEY RELIEVE ANY REQUIREMENTS TO REVIEW THE ENTIRE SET OF CONTRACT DOCUMENTS FOR PERTINENT INFORMATION TO THE WORK BEING PERFORMED.
- 13. DETAILS MARKED "TYP" SHALL APPLY IN ALL CASES U.N.O. WHERE NO SPECIFIC DETAIL IS SHOWN, THE FRAMING OR CONST SHALL BE IDENTICAL OR SIMILAR TO THAT INDICATED FOR LIKE CASES OF CONSTRUCTION.
- 14. IN NO CASES SHALL DIMS BE SCALED FROM PLANS, SECTIONS, OR DETAILS ON THE DRAWINGS. DIMS SHOWN ON DRAWINGS ARE TO FACE OF STUD.
- 15. WHERE AN ITEM IS IDENTIFIED BY A TRADE NAME, THE SUFFIX "OR APPROVED EQUAL" SHALL BE IMPLIED.

LANDSCAPE NOTES:

- VEHICLES ARE TO USE DESIGNATED CONSTRUCTION ENTRANCES AS INDICATED ON DRAWINGS OR CONSTRUCTION DOCUMENTS. IF NO CONSTRUCTION ROUTE IS INDICATED CONSULT WITH OWNER'S REPRESENTATIVE. ALL CONSTRUCTION EQUIPMENT &/OR VEHICLES SHALL VERIFY THE WEIGHT LIMIT & RESTRICTION ON PAVEMENT PRIOR TO CONSTRUCTION & NOTIFY OWNER'S REPRESENTATIVE OF THE PLANNED ROUTE.
- THERE SHALL BE NO VEHICLE MOVEMENT IN ANY LANDSCAPED, SHRUB OR PERENNIAL AREAS, MULCH BED &/OR TREE CANOPY DRIP & ROOT ZONES WITHOUT PRIOR NOTIFICATION & APPROVAL FROM LANDSCAPE SERVICES. LANDSCAPE SERVICES REQUIRES ONE WEEK NOTICE PRIOR TO ANY VEHICLE MOVEMENT IN THESE AREAS.
- WHERE ACCESS TO BUILDING REQUIRES CROSSING TURF, MULCH AREAS, TREE ROOT SYSTEMS, TREE CANOPY ZONES, OR IRRIGATION SYSTEMS, THE CONTRACTOR SHALL USE ALTURNAMATS BY DICA OR APPROVED EQUAL.
- 4. VEHICLE ACCESS SHALL NOT BREAK OR RUB TREE BRANCHES. OWNER WILL PRUNE TREE BRANCHES TO PROVIDE CLEARANCE AROUND BUILDING ENTRANCE. OWNER REQUIRES ONE WEEK'S NOTICE FOR THIS WORK TO BE DONE.
- DO NOT COMPACT GRADE WITHIN THE DRIP LINE OF TREES PROVIDE APPROVED FENCING TO PREVENT DRIVING OR EQUIPMENT PARKING WITHIN DRIP LINE OF TREES, PRIOR TO CONSTRUCTION OR WORK IN THE PROJECT AREA. MU'S CAMPUS STANDARD 6' CHAIN LINK FENCE & POSTS SHALL BE USED UNLESS OTHERWISE NOTED &/OR APPROVED BY LANDSCAPE SERVICES.

ASBESTOS WARNING & UNIVERSAL WASTE:

2. FLOORING REPLACEMENT

3. TOP TIER OF REAGENT SHELVING

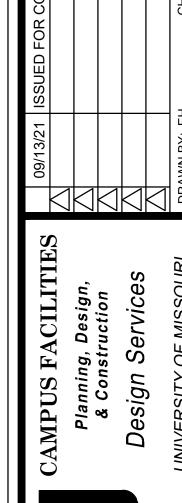
4. HVAC REPLACEMENT (BCU, DUCTWORK & DIFFUSERS)

★ TAN/BROWN CAULKING ON HVAC DUCT SECTIONS AND APPROX 3.5 SQ. FT. OF 9" BROWN FLOOR TILE HAVE TESTED POSITIVE FOR THE PRESENCE OF ASBESTOS. REFER TO HAZARDOUS MATERIALS REPORT DATED 6/03/2021 FOR FULL HAZARDOUS MATERIALS SURVEY & ABATEMENT INFORMATION.

LEAD BASED PAINT WAS DETECTED BEHIND THE EXSTG WHITE PAINT AND PLASTER REPAIR SECTION ALONG THE WEST WALL & DETERIORATING LEAD-BASED PAINT IS ALSO PRESENT ON THE BACKS OF CEILING TILES WITHIN ROOM 213. REFER TO LEAD PAINT SURVEY DATED 06/03/2021 FOR ADDITIONAL INFORMATION.

THE ITEMS LISTED BELOW MAY BECOME HAZARDOUS WASTES AS A RESULT OF THIS PROJECT. THEY REMAIN PROPERTY OF THE UNIVERSITY OF MISSOURI & SHALL NOT BE DISPOSED BY THE CONTRACTOR. THE CONTRACTOR SHALL PLACE THESE ITEMS INTO CONTAINERS PROVIDED BY THE OWNER'S REPRESENTATIVE. THE CONTRACTOR SHALL ENSURE COLLECTED ITEMS ARE STORED SECURELY & OUT OF THE ELEMENTS WHILE THEY ARE AWAITING PICK UP. PRIOR TO REMOVING OR OTHERWISE DISTURBING THE ITEMS LISTED BELOW. THE CONTRACTOR SHALL REQUEST & OBTAIN THE APPROPRIATE CONTAINERS FROM THE OWNER'S REPRESENTATIVE. THE CONTRACTOR IS NOT PERMITTED TO MIX TWO DIFFERENT WASTE MATERIALS IN A SINGLE CONTAINER. IF THERE ARE QUESTIONS ABOUT ANY OF THESE ITEMS, CONTACT THE OWNER'S REPRESENTATIVE FOR DIRECTION.

TWENTY (20) FLUORESCENT LIGHT BULBS & EIGHT (8) BALLASTS

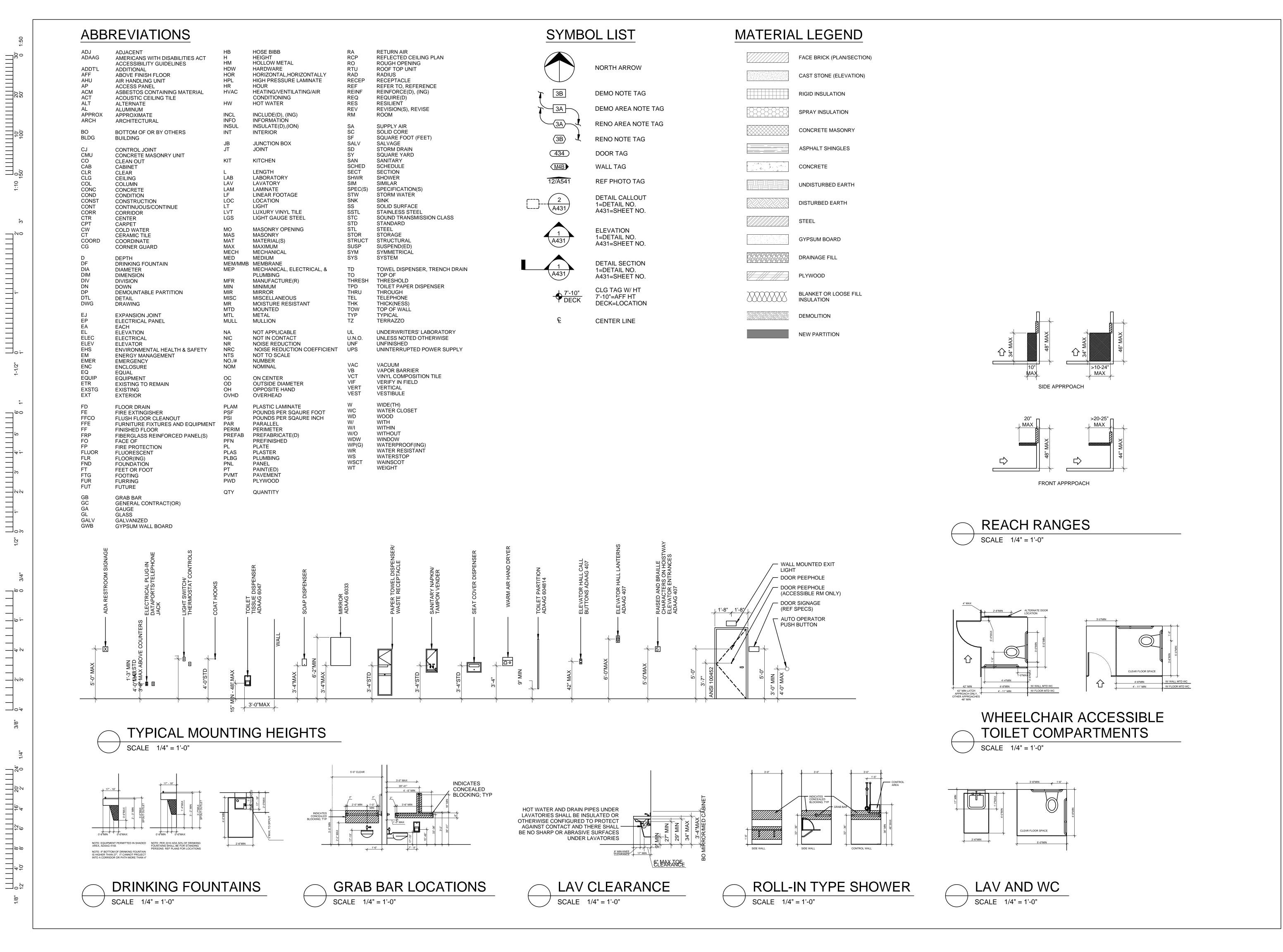


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PROJECT NUMBER

G001

CP211261



ARCHITECT -EMILY M. JOHNSON

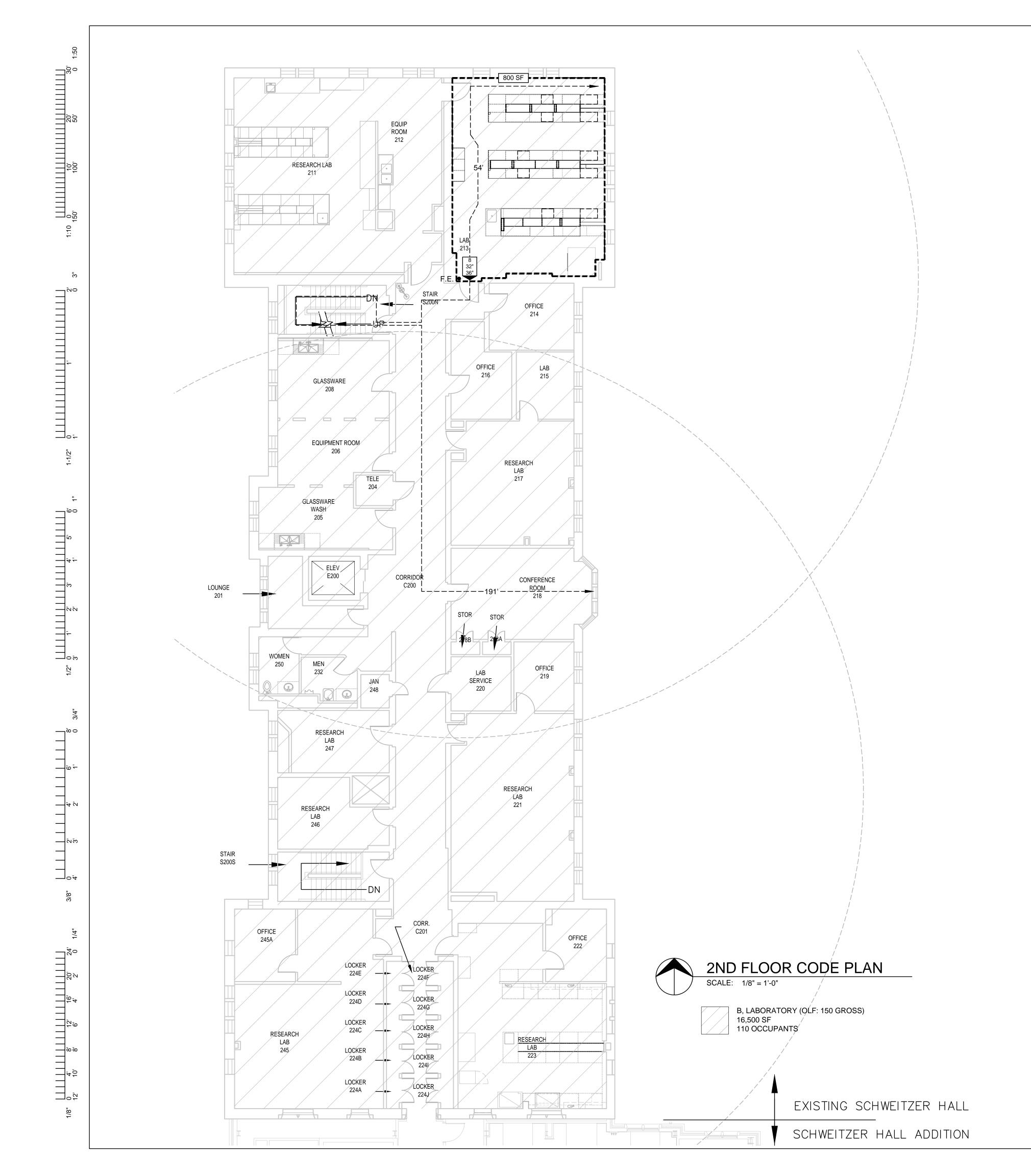
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SCHWEITZER I 300NE COUNTY RENOVATE LAI

PROJECT NUMBER CP211261

G002



CP211261 SCHWEITZER HALL LAB 213 RENOVATION

IEBC 2018 ALTERATION LEVEL II

ALL NEW CONSTRUCTION WITHIN THE WORK AREA WILL COMPLY WITH THE 2018 INTERNATIONAL BUILDING CODE

REFERENC

RECORD DRAWINGS - MU PROJECT NUMBER CP050371 SHEET A001.

PROJECT SCOPE DESCRIPT

THE PROJECT WORK AREA ENCOMPASSES ROUGHLY 800 SQUARE FEET ON THE SECOND FLOOR SCHWEITZER HALL BUILDING. RENOVATIONS INCLUDE FLOORING, LAB BENCH MODIFICATIONS, CEILINGS, LIGHTING, HVAC, AND FIRE SPRINKLERS, PLUMBING, FIRE ALARM, AND ELECTRICAL SYSTEMS FOR LABORATORY 213.

EXISTING BUILDING & FLOOR DESCRIPTION:

SCHWEITZER HALL IS A THREE-STORY HIGHER EDUCATION USE BUILDING WITH THE SCHWEITZER HALL ADDITION ATTACHED. THE TOTAL FLOOR AREA IS

APPROXIMATELY 52,739 SQUARE FEET. SCHWEITZER HALL AND THE ADDITION ARE CONSIDERED A SINGLE BUILDING FROM A CODE STANDPOINT. THE CURRENT

OCCUPANCY CLASSIFICATION OF B FOR THE BUILDING WILL REMAIN UNCHANGED AFTER THE WORK IS COMPLETE. THE TOTAL FLOOR AREA OF THE SECOND LEVEL
FLOOR IS APPROXIMATELY 16,500 SQUARE FEET.

CODE APPROAC

EXISTING BUILDING CONDITIONS: THE STRUCTURAL SYSTEM OF THE BUILDING CONSISTS OF LOAD-BEARING BRICK MASONRY WALLS, CONCRETE FLOOR AND SUPPLEMENTAL STRUCTURAL STEEL BEAMS. THE ROOF IS WOOD FRAMED. THE BUILDING IS FULLY SPRINKLED. TYPE V-B CONSTRUCTION TYPE ALLOWS FOR TWO FLOORS OF CONSTRUCTION, BUT A THIRD IS ALLOWED DUE TO THE "FULLY SPRINKLERED" PROVISION. IN ADDITION, THE TOTAL PER FLOOR AREA OF 9,000 IS INCREASED PER CODE ALLOWANCES FOR THE FIRE SPRINKLER AND THE FRONTAGE INCREASE. THUS, THE PER FLOOR ALLOWABLE FLOOR ARE IS ROUGHLY 30,325 SQUARE FEET AND THE EXISTING PER FLOOR AREA IS ROUGHLY 22,450 SQUARE FEET.

THE ALTERATION OF THIS SUITE IS APPROXIMATELY 1.5% OF THE BUILDING AREA THUS FALLING WELL BELOW THE VALUE THAT WOULD REQUIRE APPLICATION OF CHAPTER 9 OF THE IEBC. THE OCCUPANT LOAD IS NOT INCREASING THUS, PLUMBING FIXTURES FOR THE STORY ARE NOT TO BE ALTERED.

USE AND OCCUPANCY CLASSIFICATION:

WORK AREA FLOOR AREA:

CONSTRUCTION TYPE:

TOTAL BUILDING OCCUPANT LOAD:

WORK AREA OCCUPANT LOAD:

WORK AREA OCCUPANT LOAD:

B HIGHER EDUCATION LABORATORY SPACE

800 SF [1.5% OF THE BUILDING FLOOR AREA]

EXISTING CONSTRUCTION V-B, FULLY SPRINKLED

317 (EQUALLY DISTRIBUTED)

TOTAL 8 OCCUPANTS [EXISTING CONDITIONS HAVE

ACCOMMODATED AN EQUIVALENT NUMBER OF OCCUPANTS]

B; OLF 100 GROSS = 800 SF THEREFORE 8 OCCUPANTS

RISK CATEGORY [IBC T1604.5]:

FLOORS, ROOF:

FIRE RESISTANCE RATINGS FOR BUILDING ELEMENTS [IBC T601]:

EXTERIOR BEARING WALLS:

INTERIOR BEARING WALLS:

COLUMNS, GIRDERS, BEAMS:

0 HOUR

SHAFTS & HOISTWAYS: 2 HOUR @ SCHWEITZER, 1 HOUR @ SCHWEITZER ADDITION EXIT STAIR ENCLOSURES: 2 HOUR @ SCHWEITZER, 1 HOUR @ SCHWEITZER ADDITION CORRIDORS, ELEVATOR LOBBY: 0 HOUR

FIRE PROTECTION SYSTEM REQUIREMENT PORTABLE FIRE EXTINGUISHERS

PORTABLE FIRE EXTINGUISHERS ARE REQUIRED IN ACCORDANCE WITH NFPA 10.

FOR LIGHT [LOW] HAZARD OCCUPANCIES, ONE 2-A RATED EXTINGUISHER SHALL BE PROVIDED IN CONSPICUOUS LOCATIONS FOR EACH 3,000 SF MAXIMUM UNIT

OF A, EACH 11,250 SF MAXIMUM OF FLOOR AREA, AND WITH A 75' MAXIMUM TRAVEL DISTANCE TO EACH EXTINGUISHER

FIRE SEPARATIONS [IBC T508.4]: NO SEPARATION REQUIREMENT.

CORRIDOR FIRE-RESISTANCE RATING [IBC T1020.1]: 0 HOUR WITH SPRINKLER SYSTEM

MEANS OF EGRESS [IEBC 805.1]: THE REQUIREMENTS OF THIS SECTION SHALL BE LIMITED TO WORK AREAS THAT INCLUDE EXITS OR CORRIDORS SHARED BY MORE THAN ONE TENANT WITHIN THE WORK AREA IN WHICH LEVEL 2 ALTERATIONS ARE BEING PERFORMED, AND WHERE SPECIFIED THEY SHALL APPLY THROUGHOUT THE FLOOR ON WHICH THE WORK AREAS ARE LOCATED OR OTHERWISE BEYOND THE WORK AREA.

[IEBC 801.3]: NEW CONSTRUCTION ELEMENTS, COMPONENTS, SYSTEMS, AND SPACES SHALL COMPLY WITH THE REQUIREMENTS OF THE INTERNATIONAL BUILDING CODE.

MINIMUM EGRESS WIDTHS [IBC 1005.3]: OCCUPANT LOAD REMAINS UNCHANGED, MODIFICATIONS ARE NOT REQUIRED

EXIT AND EXIT ACCESS DOORS [IBC 1010.1.1]: 32" MIN. CLEAR WIDTH; ALL DOORS ARE IN COMPLIANCE MINIMUM CORRIDOR WIDTH [IBC T1020.2]: 36" MIN.; ALL CORRIDORS ARE IN COMPLIANCE

MINIMUM NUMBER OF EXITS [IBC T1026.3.2, IEBC 805.3]: OCCUPANT LOAD REMAINS UNCHANGED, MODIFICATIONS ARE NOT REQUIRED

MAXIMUM COMMON PATH OF TRAVEL [IBC T1006.2.1]: 100' [IEBC 805.4.1.1]: 75'; IN COMPLIANCE

MAXIMUM TRAVEL DISTANCE TO EXIT [IBC T1017.2, IEBC 805]: 300' MODIFICATIONS ARE NOT REQUIRED MAXIMUM DEAD ENDS, SPRINKLERED [IBC 1020.4, IEBC 805.6]: NOT APPLICABLE WITHIN THE WORK AREA

ACCESSIBLE MEANS OF EGRESS [IBC 1009]: NOT MODIFIED, IN COMPLIANCE

ALL ACCESSIBLE SPACES SHALL BE PROVIDED WITH NOT LESS THAN ONE (1) ACCESSIBLE MEANS OF EGRESS. WHERE MORE THAN ONE MEANS OF EGRESS ARE REQUIRED FROM AN ACCESSIBLE SPACE OR FLOOR, EACH SPACE OR FLOOR SHALL BE SERVICED BY NOT LESS THAN TWO (2) ACCESSIBLE MEANS OF EGRESS, CONTINUOUS TO THE PUBLIC WAY.

ACCESSIBILITY [IEBC SECTION 305.6]: A FACILITY THAT IS ALTERED SHALL COMPLY WITH THE APPLICABLE PROVISIONS IN CHAPTER 11 OF THE INTERNATIONAL BUILDING CODE, UNLESS TECHNICALLY INFEASIBLE. WHERE COMPLIANCE WITH THIS SECTION IS TECHNICALLY INFEASIBLE, THE ALTERATION SHALL PROVIDE ACCESS TO THE MAXIMUM EXTENT TECHNICALLY FEASIBLE.

ACCESSIBLE ENTRANCES [IBC 1105]: NOT MODIFIED; IN COMPLIANCE

[IBC 105.1]: 60% OF ALL PUBLIC ENTRANCES SHALL BE ACCESSIBLE; IN COMPLIANCE [IBC 1105.1.6]: AT LEAST ONE ACCESSIBLE ENTRANCE SHALL BE PROVIDED TO EACH TENANT IN A FACILITY; IN COMPLIANCE

EXIT SIGNS [IBC 1013.1 EXCEPTION 1]: EXIT SIGNS ARE NOT REQUIRED IN ROOMS OR AREAS THAT REQUIRE ONLY ONE EXIT OR EXIT ACCESS.

IN ORDER TO MAINTAIN THE HORIZONTAL ASSEMBLY, TYP.

B. PROVIDE APPROVED FIRE STOPPING SYSTEM AT RATED WALL OR FLOOR PENETRATIONS.

PLUMBING FIXTURE COUNT [IBC CHAPTER 29, IEBC 809.1]: IBEC 809.1, THE OCCUPANT LOAD IS NOT INCREASED BY MORE THAN 20%, THUS ADDITIONAL FIXTURES ARE

SPECIAL INSPECTIONS [IBC CHAPTER 17]: NOT REQUIRED WITH THE SCOPE OF WORK.

DELEGATED DESIGN: FIRE SPRINKLER AND FIRE ALARM SYSTEMS ARE REQUIRED TO BE PREPARED BY A FIRE PROTECTION ENGINEER LICENSED IN THE STATE OF MISSOURI AND PROVIDED FOR THE MU DESIGN ENGINEER REVIEW AND APPROVAL.

SYMBOL	DESCRIPTION	NOTES
	LEVEL 1 ALTERATIONS (IEBC, CH 6)	
■ (SF) = ■	LEVEL 2 ALTERATIONS (IEBC, CH 7)	
	NO SCOPE	
+	EXIT (INTERIOR)	
F.E. (E) ●	FIRE EXTINGUISHER (EXSTG)	
/	FIRE EXTINGUISHER SPACING (RADIUS)	
_2 _2 _2	2 HOUR EXIT ENCLOSURE (VERTICAL)	
	1 HOUR FIRE BARRIER	
	2 HOUR FIRE BARRIER	
_1_1_1_	1 HOUR SHAFT (2 OR MORE FLOORS [IEBC 802.2.1])	
OCC W" W"	ACCUMULATED EXIT WIDTH AT REQUIRED EXIT (CLEAR WIDTH)	OCCUPANTS REQUIRED WIDTH PROVIDED WIDTH
\$	EXIT SIGN	

ARCHITECT -EMILY M. JOHNSON MO# A-2020011136

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Planning, Design, & Construction Design Services



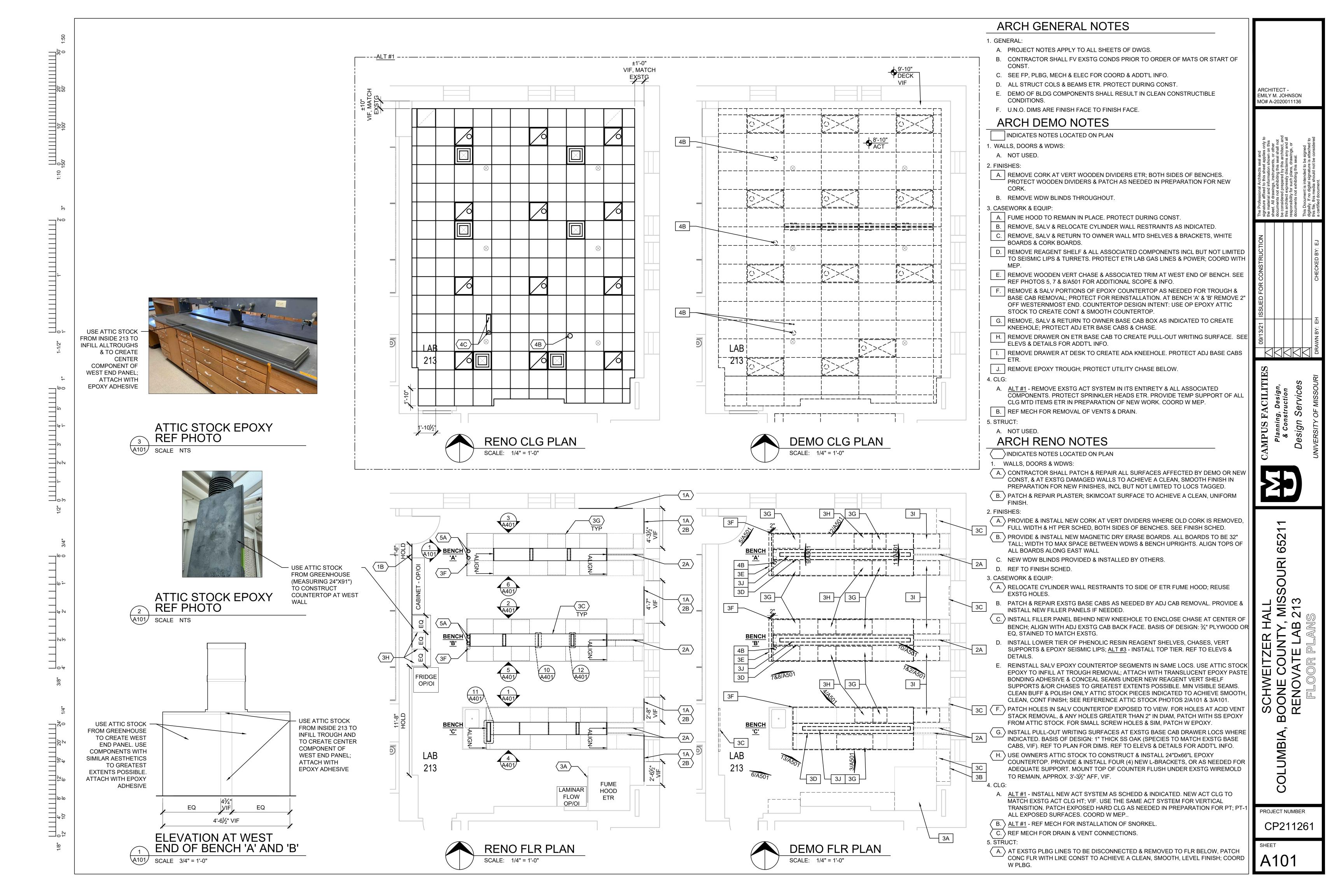
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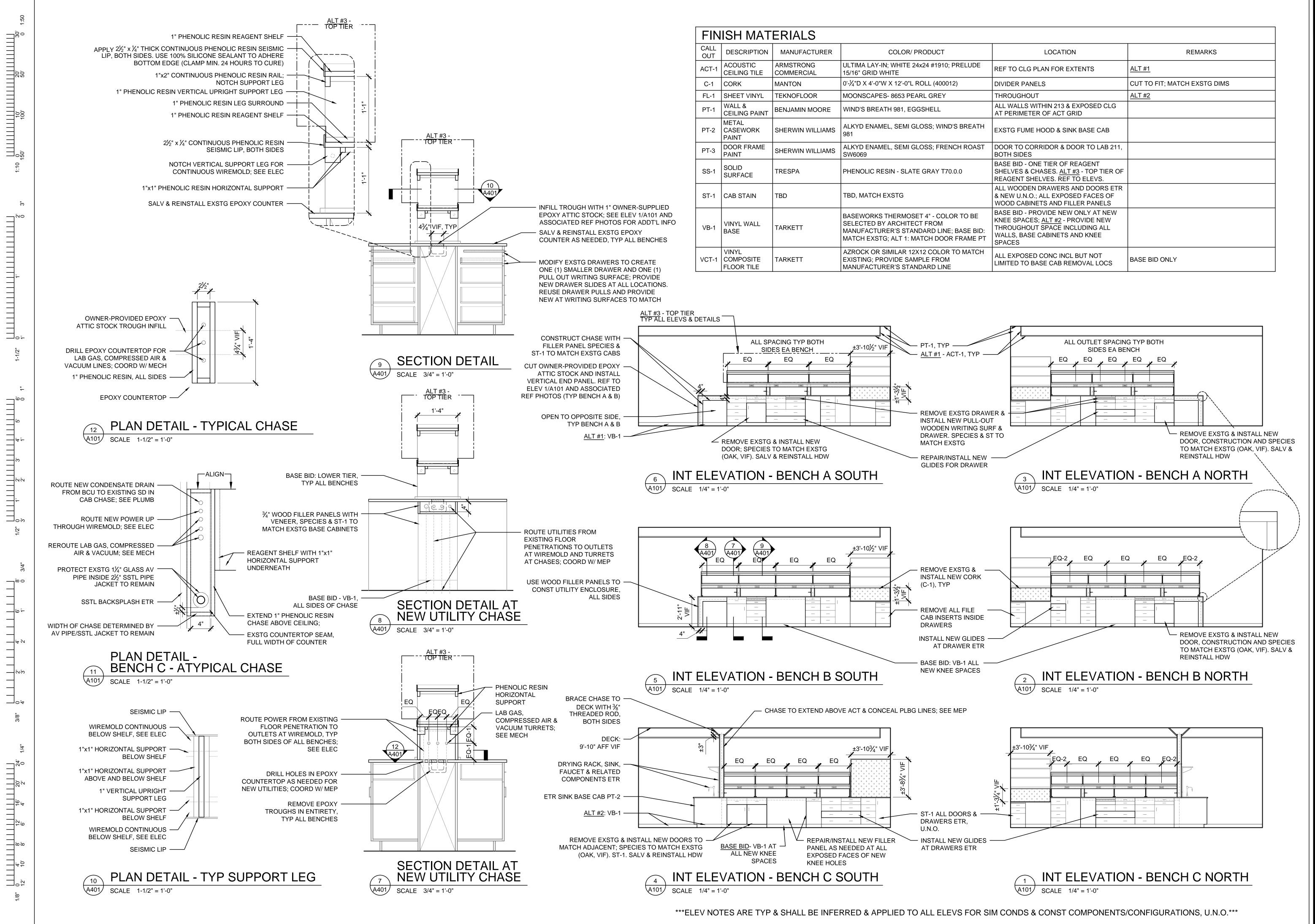
SCHWEITZER HALL
BOONE COUNTY, MISS
RENOVATE LAB 213

PROJECT NUMBER

CP211261

G003





ARCHITECT -EMILY M. JOHNSON MO# A-2020011136 The sign the sign the doc doc this res ign

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PROJECT NUMBER CP211261

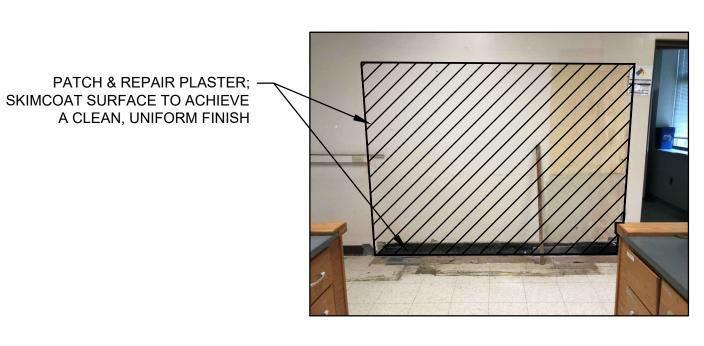
SHEET A401

CAB TO CREATE PULL-OUT

INDICATED TO CREATE

WRITING SURFACE AND DRAWER

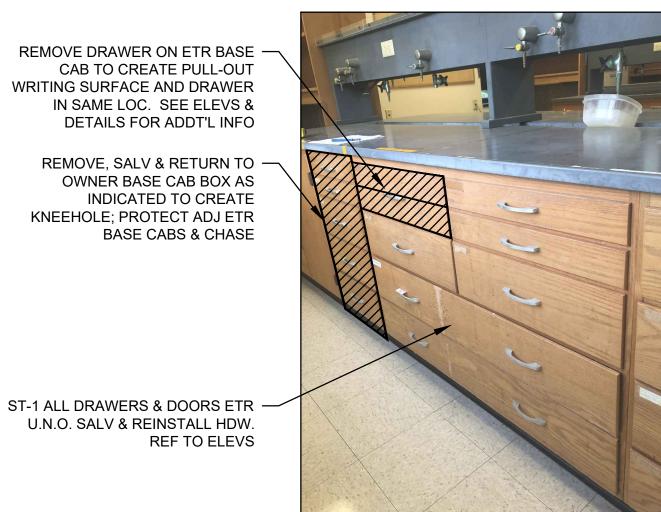
U.N.O. SALV & REINSTALL HDW.



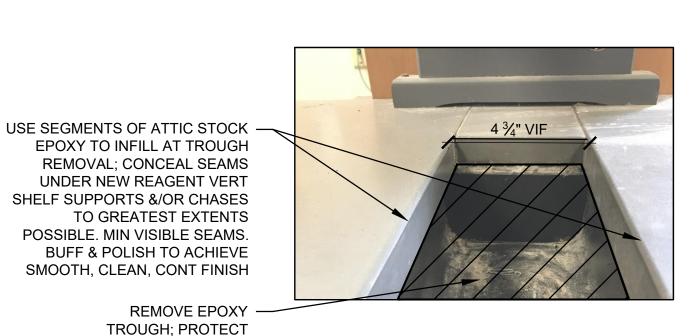
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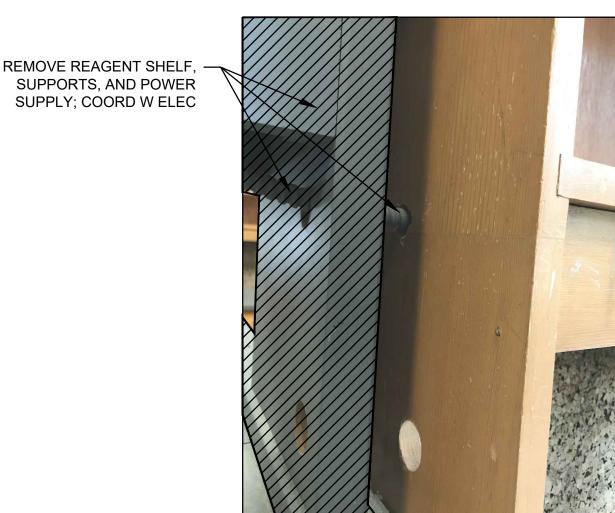
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REF PHOTO A501 SCALE NTS



UTILITY CHASE BELOW. **REF PHOTO**



REF PHOTO

REMOVE EPOXY

UTILITY CHASE

DEMOLITION

PROTECT ACTIVE

COORD W MEP

PLMB & ELEC LINES;

REMOVE ABANONDED

PROTECT ACTIVE

PENETRATING

PLMB & ELEC LINES

ACID VENT LINES; GLASS

PIPES ENCLOSED BY SS

JACKET; COORD W MECH

COUNTERTOP; COORD W

TROUGH; PROTECT ETR

REMOVE & REINSTALL AS

NEEDED FOR BASE CAB

REMOVE ABANDONED &

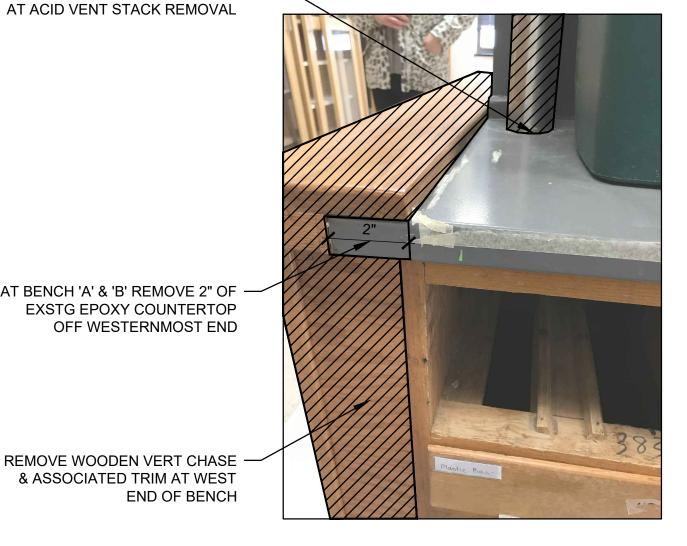
RETAIN CAB BRACING · INSIDE UTILITY CHASE;

AT BENCH 'A' & 'B' REMOVE 2" OF EXSTG EPOXY COUNTERTOP OFF WESTERNMOST END

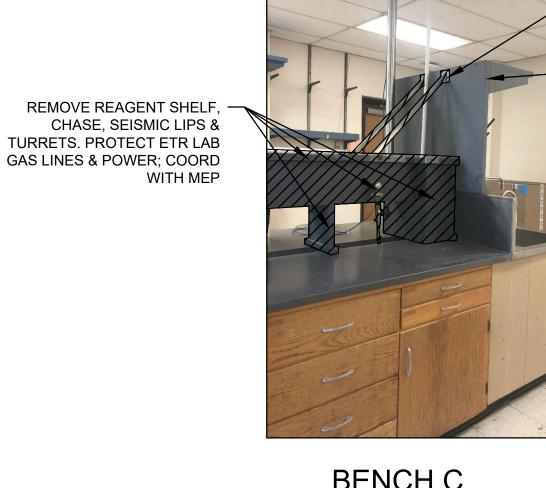
> REMOVE WOODEN VERT CHASE & ASSOCIATED TRIM AT WEST END OF BENCH

USE EPOXY ATTIC STOCK TO —

PATCH HOLES IN COUNTERTOP



BENCH A/B REF PHOTO SCALE NTS



REMOVE BRACING & **TEMPORARILY SUPPORT** ETR DRYING RACK; PATCH HOLES IN EPOXY AS NEEDED

> - DRYING RACK ETR; PROTECT

REMOVE, SALV & RETURN TO OWNER WALL MTDED WHITE BOARD; PATCH &

ARCHITECT -

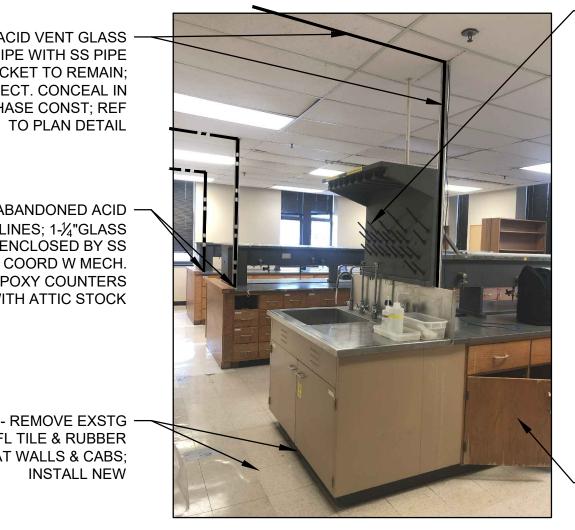
EMILY M. JOHNSON MO# A-2020011136

- WIREMOLD ETR; DO NOT PT

PT WALL

 SINK BASE CAB ETR; PT-2 ALKYD ENAMEL

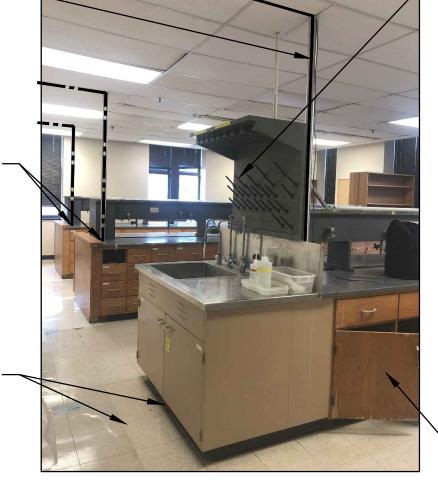
BENCH C REF PHOTO



INSTALL CP/CI PEGS AT **EXSTG ACID VENT GLASS** (4) OPENINGS PIPE WITH SS PIPE JACKET TO REMAIN; PROTECT. CONCEAL IN NEW CHASE CONST; REF REMOVE ABANDONED WIRE

REMOVE ABANDONED ACID VENT LINES; 1-1/4"GLASS PIPES ENCLOSED BY SS JACKET; COORD W MECH. PATCH EPOXY COUNTERS WITH ATTIC STOCK

ALT #2 - REMOVE EXSTG -VINYL FL TILE & RUBBER BASE AT WALLS & CABS; **INSTALL NEW**



REF PHOTO

REMOVE EXSTG & INSTALL — NEW CORK AT DIVIDERS

ALT #1 - APPROX LOC OF NEW -

EXHAUST ARM WITH MTDING

BRACKET. CONNECT TO NEW

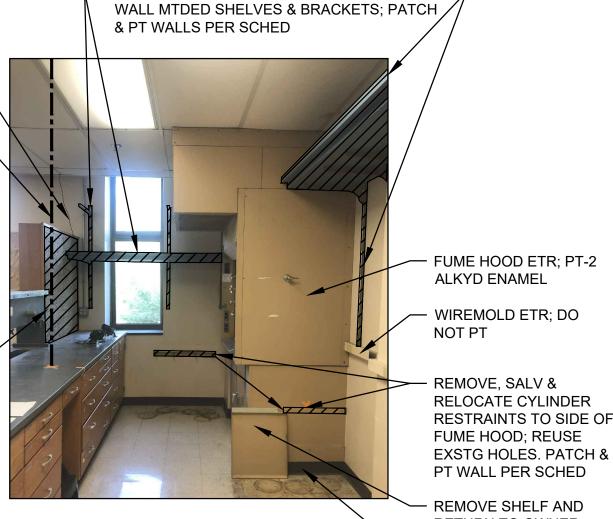
EXHAUST DUCT ABOVE ACT;

CLG MTDED LOCAL CP/CI

COORD W MECH

DRYING RACK ETR -

REMOVE EXSTG & **INSTALL NEW DOORS AT** LOCS WHERE VENEER IS PEELING (TYP 5 LOCS); SPECIES TO MATCH EXSTG (OAK, VIF). SALV & REINSTALL HDW



REMOVE, SALV & RETURN TO OWNER ALL

REMOVE, SALV & RELOCATE CYLINDER RESTRAINTS TO SIDE OF FUME HOOD; REUSE

PT WALL PER SCHED REMOVE SHELF AND RETURN TO OWNER

ALT #2 - REMOVE EXSTG VINYL FL TILE & RUBBER WALL BASE & INSTALL **NEW PER SCHED**

COORD W ELEC FOR

REMOVAL OF EXSTG LIGHT



REF PHOTO A501 SCALE NTS

REF PHOTO



DESK TO CREATE ADA COMPLIANT KNEEHOLE; PROTECT ADJ BASE CAB ETR.

AT DRAWER REMOVAL

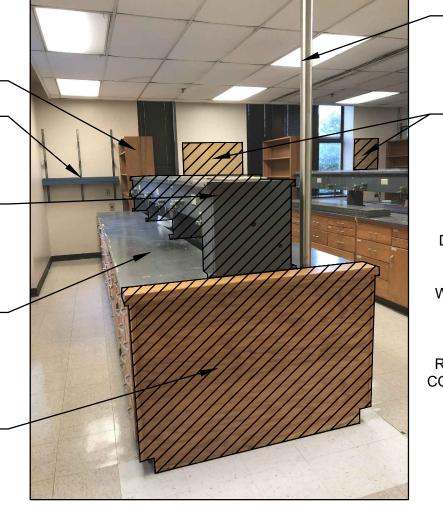
SHELVES ETR; PROTECT —

REMOVE, SALV & RETURN TO — OWNER ALL WALL MTDED SHELVES & BRACKETS; PATCH & PT WALLS PER SCHED

REMOVE REAGENT SHELF, CHASE, SEISMIC LIPS & TURRETS. PROTECT ETR LAB GAS LINES & POWER; COORD WITH MEP

REMOVE & SALV PORTIONS OF **EPOXY COUNTERTOP AS** NEEDED FOR TROUGH & BASE CAB REMOVAL; PROTECT FOR REINSTALLATION

REMOVE WOODEN VERT CHASE & ASSOCIATED TRIM AT WEST END OF BENCH



REMOVE ABANDONED ACID VENT LINES; GLASS PIPES ENCLOSED BY SS JACKET; COORD W MECH

> REMOVE, SALV & RETURN TO OWNER WALL MTDED CORK BOARDS; PATCH & PT

DEMO: REMOVE CORK AT VERT WOODEN DIVIDERS ETR; BOTH SIDES OF BENCHES. PROTECT WOODEN DIVIDERS & PATCH AS NEEDED IN PREPARATION FOR **NEW CORK**

RENO: PROVIDE & INSTALL NEW CORK AT VERT DIVIDERS WHERE OLD CORK IS REMOVED, FULL WIDTH & HT PER SCHED



PATCH &/OR REPAIR BASE CABINETS ETR AND FILLER PANEL (ALL SIDES) AS NEEDED

REF PHOTO

BENCH A/B UNDER COUNTER REF PHOTO

REF PHOTO - BENCH A/B UTILITY CHASE

SCALE NTS

SCALE NTS

BENCH A REF PHOTO SCALE NTS

SCHWEIT SOONE CC RENOVAT

ALL MIS 213

PROJECT NUMBER CP211261

SHEET A501 SCOPE: (FOR ALT #1 ONLY) ADJUST FIRE SPRINKLER SYSTEM TO ACCOMMODATE NEW CONCEALED SPRINKLER HEADS IN PLACE OF EXISTING EXPOSED SPRINKLER HEADS.

APPROX. 805 Sq. Ft. ORDINARY HAZARD, GROUP 1

CONCEALED HEADS - FOR LAY-IN CEILINGS. (TYP. OF THIS ROOM).

RENOVATION NOTES

GENERAL:

A. FIELD VERIFY ALL PIPE CONNECTION POINTS SHOWN. IF CONNECTIONS CANNOT BE MADE AS SHOWN NOTIFY OWNER'S REPRESENTATIVE TO APPROVE VARIATIONS.

>INDICATES NOTES LOCATED ON PLAN

- B. NEW PIPING SHALL NOT INTERFERE WITH OR RESTRICT (INCLUDING BUT NOT LIMITED TO) LIGHTING, AIR FLOWS, NECESSARY ACCESS TO ELECTRICAL, HVAC AND PIPING ELEMENTS, ETC.
- 2. EQUIPMENT:
- A. NOT USED
- DUCTWORK:
- A. NOT USED
- 4. PIPING:
- A. COORDINATE INSTALLATION OF PIPING WITH OTHER DISCIPLINES IN AREAS OF SHARED SPACE.
- 5. CONTROLS:
- A. NOT USED
- 6. MISCELLANEOUS:
- A. NOT USED
- 7. SPRINKLERS:
- A. SPRINKLER SHUT DOWN MUST BE COORDINATED WITH THE OWNER'S REP. WHO SHALL BE NOTIFIED AT LEAST 48 HOURS IN ADVANCE OF SERVICE INTERRUPTION.
- B. ALL FIRE PROTECTION SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH THE INTERNATIONAL FIRE CODE AND APPLICABLE NFPA STANDARDS.
- C. AUTOMATIC WET PIPE FIRE EXTINGUISHING SPRINKLER SYSTEMS SHALL BE DESIGNED IN ACCORDANCE WITH THE REQUIRED AND ADVISORY PROVISIONS OF NFPA 13 BY HYDRAULIC CALCULATIONS FOR UNIFORM DISTRIBUTION OF WATER OVER THE DESIGN AREA.
- D. DISCHARGE FROM INDIVIDUAL HEADS IN THE HYDRAULICALLY MOST REMOTE AREA SHALL BE BETWEEN 100 PERCENT AND 120 PERCENT OF THE SPECIFIED DENSITY.
- E. LOCATE SPRINKLER HEADS IN A CONSISTENT PATTERN WITH CEILING GRID, LIGHTS, AND AIR SUPPLY DIFFUSERS. HEADS IN RELATION TO THE CEILING AND THE SPACING OF SPRINKLER HEADS SHALL NOT EXCEED THAT PERMITTED BY NFPA 13 FOR THE INDICATED HAZARD OCCUPANCY.
- F. CALCULATE LOSSES IN PIPING IN ACCORDANCE WITH THE HAZEN-WILLIAMS FORMULA WITH 'C' VALUE OF 120 FOR STEEL
- G. PREPARE MINIMUM 24 BY 36 INCH DETAIL WORKING DRAWINGS OF SPRINKLER HEADS AND PIPING SYSTEM LAYOUT IN ACCORDANCE WITH NFPA 13, "WORKING DRAWINGS (PLANS)." SHOW DATA ESSENTIAL FOR PROPER INSTALLATION OF EACH SYSTEM. SHOW DETAILS, PLAN VIEW, ELEVATIONS, AND SECTIONS OF THE SYSTEMS SUPPLY AND PIPING. SHOW PIPING SCHEMATIC OF SYSTEMS SUPPLY, DEVICES, VALVES, PIPE, AND FITTINGS. SHOW POINT TO POINT ELECTRICAL WIRING DIAGRAMS. SUBMIT DRAWINGS INCLUDING THE HYDRAULIC CALCULATIONS SIGNED AND STAMPED BY A REGISTERED FIRE PROTECTION ENGINEER.
- H. FIRE SPRINKLER SHOP DRAWINGS SHALL BE SUBMITTED FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION. THE PLANS WILL BE REVIEWED BY:

AUTHORITY HAVING JURISDICTION MAINTENANCE ENGINEER /FIRE PROTECTION SHOP DESIGN ENGINEER

- I. ALL SPRINKLER HEADS IN A BUILDING SHALL BE OF THE SAME MANUFACTURER.
- J. ONLY NEW EQUIPMENT AND PIPE SHALL BE USED. ALL EQUIPMENT SHALL BE UL LISTED AND FM APPROVED.
- K. PIPE MATERIAL SHALL BE ASTM A53, SCHEDULE 40 TYPE ERW STEEL PIPE.
- L. PIPE FITTINGS SHALL BE CAST IRON, MALLEABLE IRON OR STEEL.
- M. PIPE JOINTS MAY BE WELDED, THREADED, OR MECHANICALLY COUPLED.
- N. WELDER AND WELD PROCEDURE QUALIFICATIONS SHALL BE SUBMITTED WITH THE SPRINKLER SHOP DRAWINGS. ALL WELDERS AND WELDING PROCEDURES SHALL MEET OR EXCEED AWS STANDARD D10.9, LEVEL AR-3.
- O. GROOVED JOINT FITTINGS ARE ACCEPTABLE, EXCEPT TEE FITTINGS SERVING SMALL BRANCHES OR SINGLE SPRINKLER HEADS SHALL BE SECURED WITH A 2 BOLT, CAST IRON STRAP. BRANCH FITTINGS SECURED WITH WIRE STRAPS ARE NOT PERMITTED.
- P. HYDRAULIC DESIGN INFORMATION SHALL BE POSTED PER NFPA 13 NEAR THE WATER SERVICE ENTRANCE..
- Q. CONTRACTOR SHALL PERFORM PRESSURE TESTING AS REQUIRED BY NFPA 13 AND PROVIDE RESULTS ON STANDARD NFPA FORMS FOR ANY/ALL FIRE SPRINKLER MODIFICATIONS PERFORMED AS PART OF THE WORK.
- R. STRAPLESS OUTLETS ARE NOT PERMITTED.

Service esign



S O R

PROJECT NUMBER CP211261

SHEET

FIRE SPRINKLER PLAN - PROPOSED LAYOUT - ALT #1 SCALE: 1/4" = 1'-0"

3/4" CA

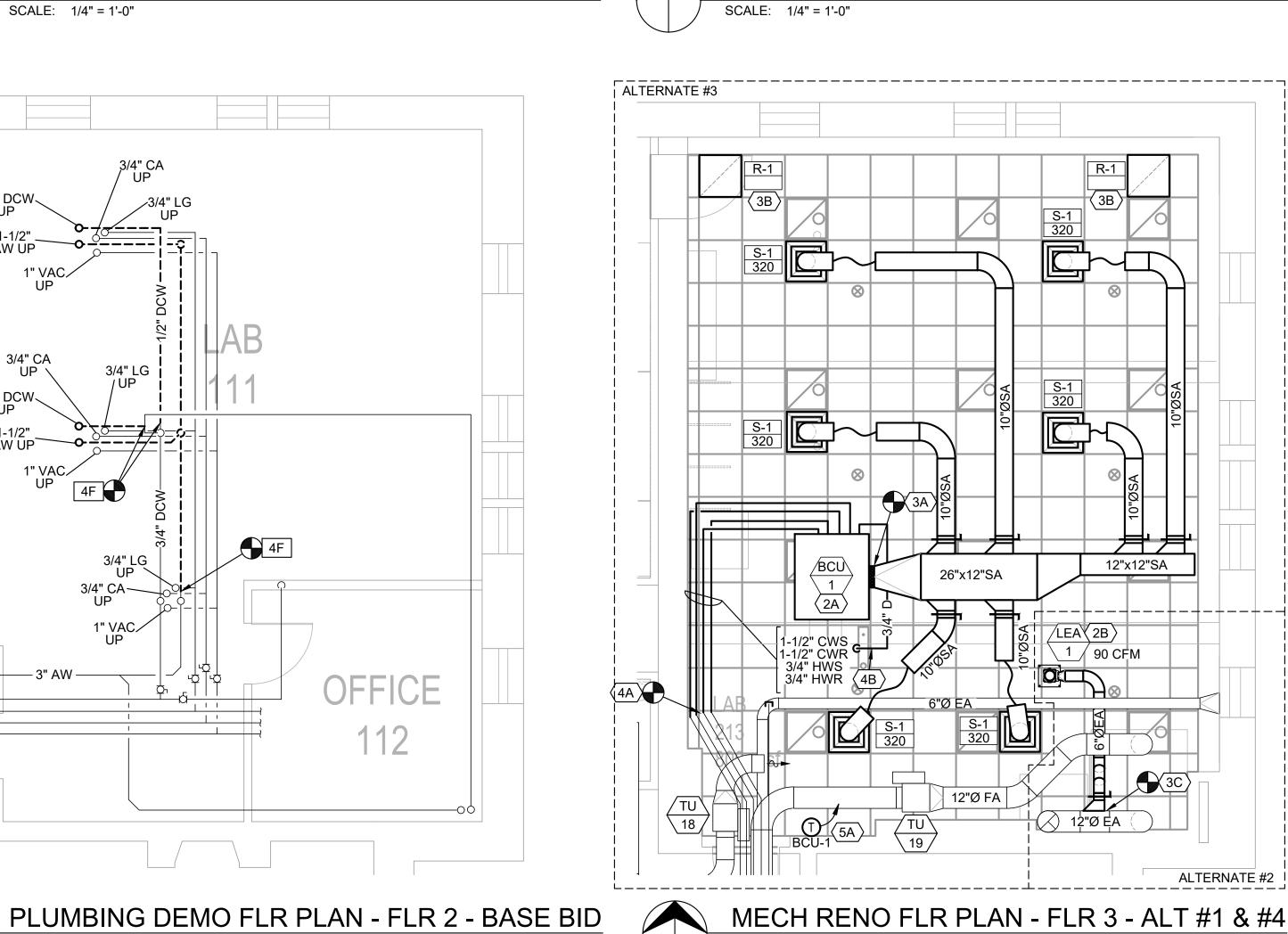
1" VAC / UP

3/4" LG

3/4" CA— UP

1" VAC UP

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



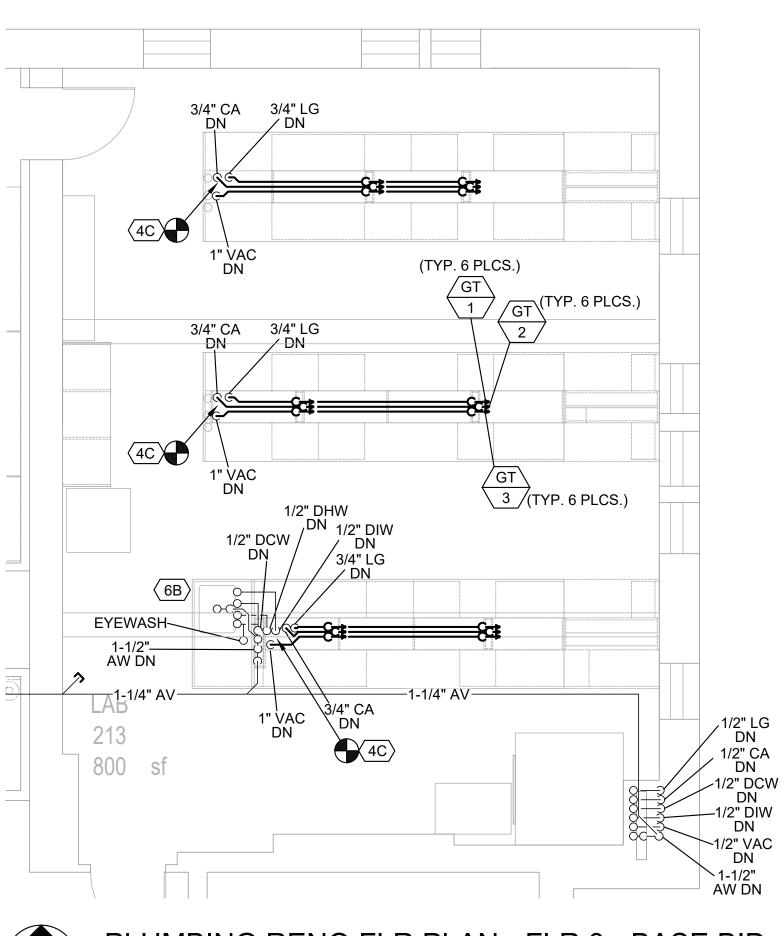
/BCU

1-1/2" CWR 3/4" HWS

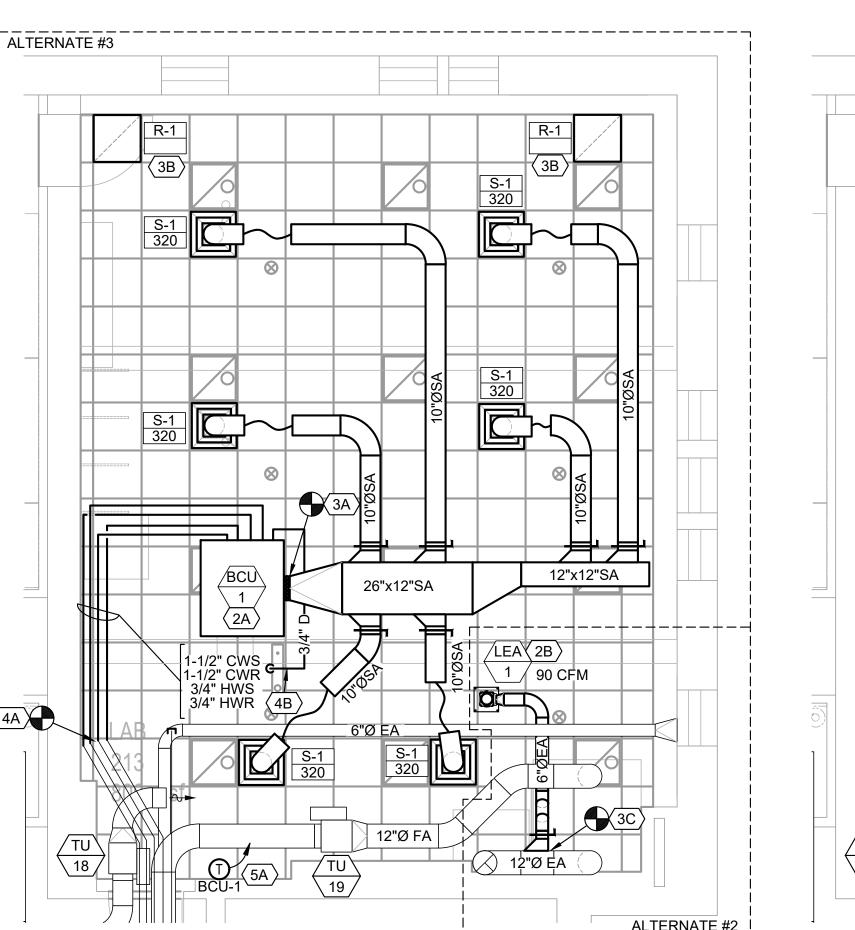
12"Ø FA

3/4" HWR

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







1/2" DCW

____/

| 4E |

4D

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

EXST/

لــ 1-1/2" CWS الــ

3/4" HWR 👨

1-1/2" CWR 3/4" HWS

4B

4B

PLUMBING DEMO FLR PLAN - FLR 3 - BASE BID

24"x14"

12"Ø EA

114"x14"l

4G

MECH DEMO FLR PLAN - FLR 3 - ALT #4 SCALE: 1/4" = 1'-0"

12"Ø FA

MECH/PLUMB DEMOLITION NOTES

INDICATES NOTES LOCATED ON PLAN

1. GENERAL:

A. ALL PIPING SHALL BE TESTED PRIOR TO OPENING TO ATMOSPHERE FOR PRESENCE OF FLUID (WATER, GAS, ETC.) THIS DRAWING DOES NOT SEEK TO ENSURE/DISPROVE LIVE CONNECTIONS.

2. EQUIPMENT: A. ALT #4 - DISCONNECT AND REMOVE EXST. FCU AND DRAIN PAN.

3. DUCTWORK:

A. ALT #4 - DISCONNECT FROM EXISTING FAN COIL UNIT OUTLET AND REMOVE EXISTING SA DUCT.

4. PIPING:

A. ALT #4 - DISCONNECT FROM EXISTING HWS, HWR, CWS, CWR, AND DRAIN PIPE AND REMOVE TO EXISTING FAN COIL UNIT. CAP REMAINING DRAIN PIPE.

B. DISCONNECT FROM EXISTING DCW, CA, LG, AND VAC PIPES IN CABINET PIPE CHASE AND REMOVE PIPE AND SUPPLY TURRETS FROM EXISTING CABINET UPPERS. REMOVE DCW TO FLOOR BELOW AND CAP.

- C. PIPING TO SINK, FAUCETS, AND EEW TO REMAIN.
- D. REMOVE ABANDONED AV PIPE AND CAP AT MAIN. AV PIPE IS GLASS AND IS COVERED BY SS SHEATHING UNDER CEILING.
- E. REMOVE EXISTING AW FROM CABINET TRENCH DRAIN TO FLOOR [⊥] BELOW.
- F. DISCONNECT FROM EXISTING AW AND DCW PIPE AND REMOVE TO FLOOR ABOVE. CAP REMAINING PIPE.
- G. DISCONNECT FROM EXISTING DCW, CA, LG, AND VAC PIPES ABOVE FLOOR LEVEL AND REMOVE FROM BENCH UPPERS TO SUPPLY TURRETS. CAP REMAINING DCW BENCH TOP BRANCH. REMAINING GAS SERVICES TO BE RE-USED IN NEW WORK.

5. CONTROLS:

A. CONTACT MU ENERGY MANAGEMENT PRIOR TO DEMOLITION WORK FOR REMOVAL / SALVAGE OF EXISTING CONTROLLERS. ALL CONTROL WIRING, SENSORS, AND PNEUMATICS TO BE REMOVED BY CONTRACTOR. PNEUMATICS SHALL BE CAPPED BACK AT MAIN, NOT PINCHED. REMOVE EXISTING THERMOSTAT

MECH/PLUMB RENOVATION NOTES

INDICATES NOTES LOCATED ON PLAN

1. GENERAL:

- A. FIELD VERIFY ALL DUCT AND PIPE CONNECTION POINTS SHOWN. IF CONNECTIONS CANNOT BE MADE AS SHOWN NOTIFY OWNER'S REPRESENTATIVE TO APPROVE VARIATIONS.
- B. NEW DUCT AND PIPING SHALL NOT INTERFERE WITH OR RESTRICT (INCLUDING BUT NOT LIMITED TO) LIGHTING, AIR FLOWS, NECESSARY ACCESS TO ELECTRICAL, HVAC AND PIPING ELEMENTS, ETC.
- C. COORDINATE INSTALLATION OF DUCTWORK AND PIPING WITH OTHER DISCIPLINES IN AREAS OF SHARED SPACE.
- E. ALL DUCTWORK SIZES SHOWN MAYBE ROUND OR EQUIVALENT RECTANGULAR, EXCEPT INLETS TO VAV BOXES.
- F. ALL SUPPLY AIR AND OUTSIDE AIR DUCT TO BE INSULATED WITH NOMINAL 1-1/2" THICK FIBERGLASS WRAP INSULATION: ASTM C553, MINIMUM DENSITY OF ONE LB/CU. FT., WITH FOIL SKRIM KRAFT JACKET. FLEXIBLE DUCT MAY BE EXTENDED OVER RIGID DUCT AND SECURED WITH BAND INSTEAD OF DUCT WRAP.
- G. ALL DUCTWORK WHICH HAD INSULATION REMOVED MUST BE REINSULATED.
- H. EXTREME CARE SHALL BE TAKEN TO OMIT KINKS IN FLEXIBLE DUCTWORK SO THAT MAXIMUM AIR FLOW REACHES THE SPACES SERVED. USE SHEET METAL ELBOWS FOR ALL 90° BENDS. REMOVE EXCESS FLEXIBLE DUCT WHERE NEEDED, DO NOT LOOP OR SNAKE FLEXIBLE DUCT. SUPPORT FLEXIBLE DUCT AS NECESSARY TO PREVENT SAGGING WHICH MAY RESTRICT AIR FLOW.
- J. INSTALL MANUAL AIR VENTS AT ALL HIGH POINTS ON CHILLED WATER SUPPLY AND RETURN LINES, AND HEATING HOT WATER SUPPLY AND RETURN LINES (TYPICAL).
- K. INSULATE ALL CHILLED WATER, DOMESTIC COLD WATER, AND DOMESTIC HOT WATER PIPES WITH PREFORMED FLEXIBLE ELASTOMERIC CELLULAR RUBBER INSULATION.
- L. INSULATE ALL HEATING WATER SUPPLY AND HEATING WATER RETURN PIPES WITH PREFORMED FIBERGLASS WITH FACTORY APPLIED ASJ JACKET.
- M. ALL PIPING WHICH HAD INSULATION REMOVED MUST BE REINSULATED AS DESCRIBED IN 1J AND 1K ABOVE.

2. EQUIPMENT:

- (A.) ALT #4 FURNISH AND INSTALL NEW BCU AND CONNECT TO NEW DUCT AND PIPING. SEE BCU SCHEDULE ON SHEET M601.
- \langle B. \rangle <u>ALT #1</u> PROVIDE NEW LOCAL EXHAUST ARM WITH MOUNTING BRACKET AND CONNECT TO NEW EXHAUST DUCT.
- 3. DUCTWORK:
- (A.) <u>ALT #4</u> CONNECT TO NEW BCU OUTLET AND ROUTE NEW DUCT TO NEW DIFFUSERS. SEE DIFFUSER SCHEDULE ON SHEET M601.
- \langle B. angle ALT #4 PROVIDE NEW RETURN GRILLE. $\overline{\langle \,\,\,\,\,\,\,\,\,\,\,}$ C. $\overline{\rangle}$ ALT #1 - CONNECT TO EXISTING EXHAUST DUCT AND ROUTE
- NEW DUCT TO NEW LOCAL EXHAUST ARM 4. PIPING:

- (A.) ALT #4 CONNECT TO EXISTING CWS, CWR, HWS, AND HWR PIPES AND ROUTE NEW PIPES TO NEW BCU COILS. SEE COIL PIPING DETAIL ON SHEET M601
- (B.) ALT #4 ROUTE NEW COIL DRAIN FROM BCU TO EXISTING AW/AV IN NEW CABINET UPPER CHASE AND CONNECT.
- $\langle \,\,$ C. angle CONNECT TO EXISTING CA, LG, AND VAC PIPES AND ROUTE NEW PIPE TO NEW GAS TURRETS IN NEW CABINET UPPERS. SEE PIPING DETAIL ON SHEET M601.

5. CONTROLS:

 \langle A. \rangle ALT #4 - INSTALL NEW THERMOSTAT AT 48" A.F.F. WIRING AND CONDUIT BY CONTRACTOR. FINAL TERMINATIONS AND PROGRAMMING BY MU ENERGY MANAGEMENT

6. MISCELLANEOUS:

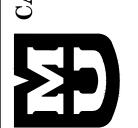
A. ALT #4- TESTING AND BALANCING BY MU ENERGY MANAGEMENT.

 \langle B. angleCLEAN / REFURBISH EXISTING SINK AND FAUCETS.

ENGINEER -JAMES LEE WYRICK MO# - 2018021277

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PROJECT NUMBER

CP211261

SHEET

DN

DN

ROUTE PIPING JUST UNDER COUNTER TOP

BLOW	ER COIL UN	NIT SCHE	EDUL	.E																														
				FAN				COOLING COIL							REHEAT COIL																			
MARK	MFR. & MODEL NO. (OR EQUAL)	AHU TYPE	TOTAL CFM	TSP/ESP (in. wc)	RPM	HP/VOLTS /PHASE	MIN OA (CFM)	COIL TYPE	COIL CFM	MAX. FACE VEL. (fpm)	APD (in. wc)	TOTAL MBH	SENSIBLE MBH	EAT (°F) DB/WB	LAT (°F) BDB/WB	WT LW7	WATEF ΔP (ft.)	R FLOW (gpm)	COIL TYPE	COIL CFM	MAX. FACE VEL. (fpm)	APD (in. wc)	TOTAL MBH	EAT (°F) DB	LAT EV	VT LWT F) (°F)	WATER ΔP (ft.)	FLOW (gpm)	FILTER LOCATION	FILTER TYPE	MAX. FAC VEL. (fpn	DEPTH (in.)	ΔP (in. water) CLEAN/DIRTY	REMARKS
BCU-1	TRANE: BCHD072	DRAW THROUGH	1920	1.467/0.75	1000	1/208/3	0	CHILLED WATER	1920	395	.483	47.5	44.25	75/62	53/53	46 60	2.32	6.75	HEATING WATER	1920	395	.091	70.94	55	90 16	100	.13	2.37	PRE - FILTER	PLEATED MERV 13	338	2	.1 / .6	NEW TRANE BCHD BLOWER COIL UNIT, AIR TERMINAL DEVICE.

1. BCU MUST INCLUDE DIRECT DRIVE, VARIABLE SPEED FANS.

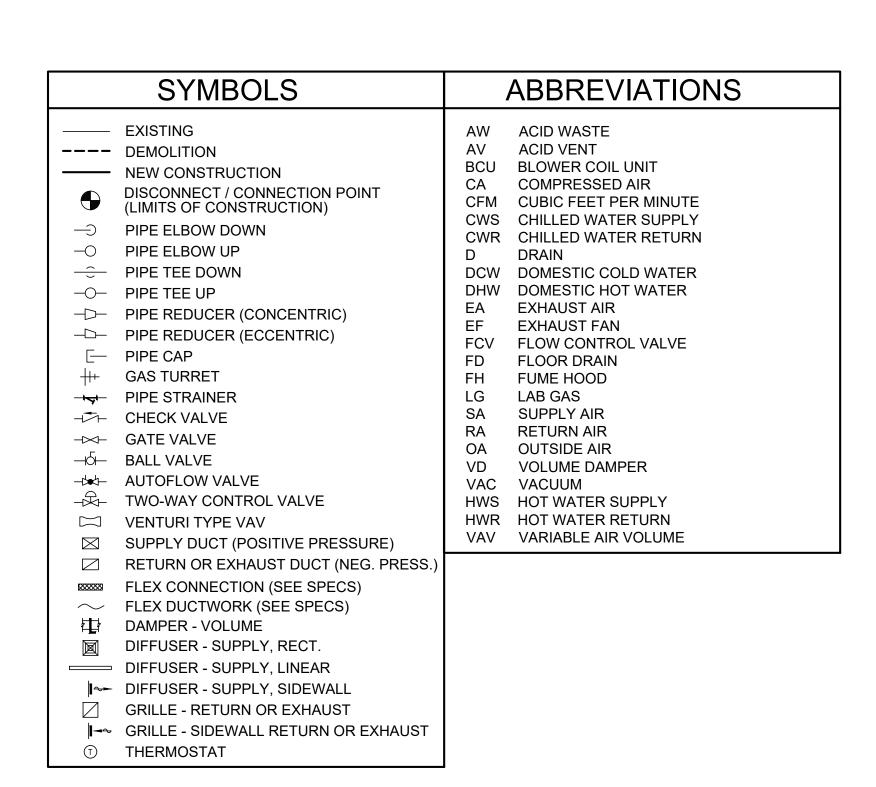
2. PROVIDE EC FAN MOTORS. 3. 6 ROW, HIGH CAPACITY COOLING COIL. 4. 2 ROW HEATING COIL

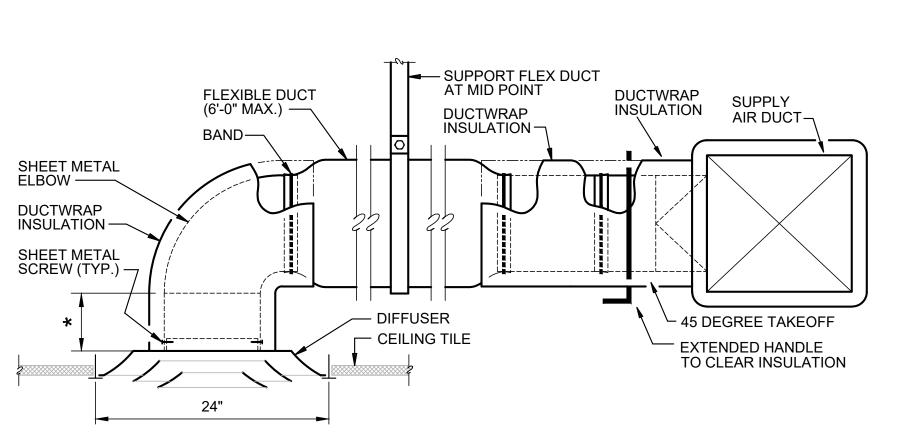
PLUMBING EQUIPMENT SCHEDULE												
MARK	DESCRIPTION											
GT-1	GAS TURRET - LAB GAS; CHICAGO FAUCETS, MODEL LGB1-11C-55 OR EQUAL, SINGLE SERVICE, HORIZONTAL, WALL MOUNT W/ WALL FLANGE AND SHANK, STRAIGHT PATTERN BALL VALVE, STRAIGHT SERRATED NOZZLE, SOLID BRASS CONSTRUCTION, BLUE WITH WHITE LETTERS INDEX BUTTON.											
GT-2	GAS TURRET - COMPRESSED AIR; CHICAGO FAUCETS, MODEL LGB1-11A-55 OR EQUAL, SINGLE SERVICE, HORIZONTAL, WALL MOUNT W/ FLANGE AND SHANK, STRAIGHT PATTERN BALL VALVE, STRAIGHT SERRATED NOZZLE, SOLID BRASS CONSTRUCTION, ORANGE WITH BLACK LETTERS INDEX BUTTON.											
GT-3	GAS TURRET - VACUUM; CHICAGO FAUCETS, MODEL LGB1-11B-55 OR EQUAL, SINGLE SERVICE, HORIZONTAL, WALL MOUNT W/ FLANGE AND SHANK, STRAIGHT PATTERN BALL VALVE, STRAIGHT SERRATED NOZZLE, SOLID BRASS CONSTRUCTION, YELLOW WITH BLACK LETTERS INDEX BUTTON.											

LOCAL EXHAUST ARM SCHEDULE											
MARK	DESCRIPTION										
LEA-1	LOCAL EXHAUST ARM: MOVEX, MODEL MET 2000-75, 3"Ø, 90 CFM, 65" ARM LENGTH, POWDER COATED ALUMINUM, POLYPROPYLENE JOINTS. MOUNTING BRACKET: MOVEX, MODEL MTI 1000 + MTI CT, 40" LONG, WITH CEILING ESCUTCHEON PLATE. DOME HOOD: MOVEX, MODEL MEM 250-75, 10" DOME, 3" OUTLET.										

CON	CONTROL VALVE SCHEDULE														
MARK	MFR. & MODEL NO. (OR EQUAL)	SERVICE	DESIGN FLOW (gpm/pph)	MAX FLOW (gpm/pph)	Δ P (psig)	CV MIN.	SIZE (in. Ø)	CLASS (#)	VALVE POSITION	OPERATOR TYPE	REMARKS				
CV-1	BELIMO: Z2075QPT-G +CQB24-SR-LR	CHILLED WATER	6.75	9.0	< 5	-1-	3/4	150	NC / FC	0-10 VDC	PRESSURE INDEPENDENT ZONE CONTROL VALVE				
CV-2	BELIMO: Z2050QPT-F +CQKB24-SR-L	HEATING WATER	2.37	4.3	< 5		1/2	150	NO / FAIL IN PLACE	0-10 VDC	PRESSURE INDEPENDENT ZONE CONTROL VALVE				

DIF	DIFFUSER SCHEDULE														
MARK	MFR. & MODEL NO. (OR EQUAL)	INLET SIZE (in.)		MODULE SIZE (in.)	FINISH	PATTERN	NC	REMARKS							
S-1	TITUS TMS	10	24 X 24	24 X 24	WHITE	360°	< 25	3 CONE, STEEL CONSTRUCTION, CEILING LAY-IN T-BAR MOUNTING							
R-1	TITUS 50F	N/A	24 X 24	24 X 24	WHITE	EGG CRATE	 < 1/	CEILING LAY-IN T-BAR MOUNTING, ALUMINUM CONSTRUCTION, EGGCRATE PATTERN 1/2"x1/2"x1/2" STANDARD CORE.							

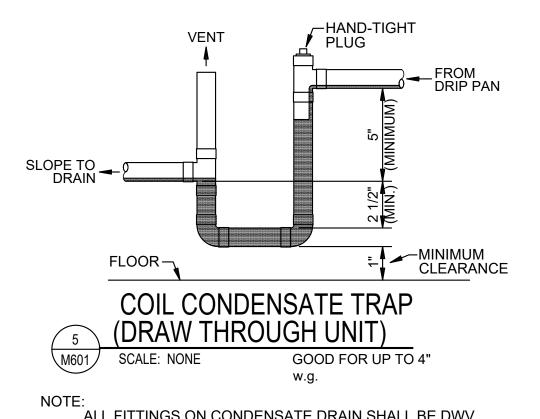




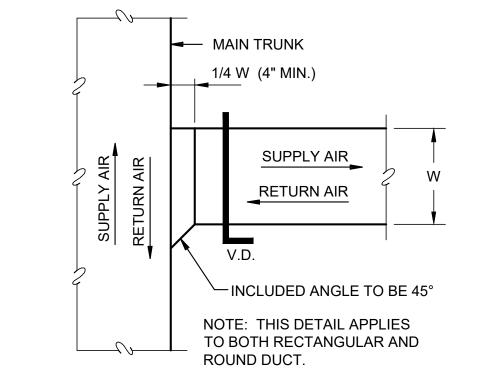
LENGTH AS NECESSARY TO RAISE CENTER LINE OF ELBOW TO SAME ELEVATION AS CENTER LINE OF BRANCH DUCT

NOTE: FLEXIBLE DUCT MAY BE EXTENDED OVER RIGID DUCT AND SECURED WITH BAND INSTEAD OF DUCT WRAP. EXTEND HANDLE OF VOLUME DAMPERS THROUGH INSULATION.

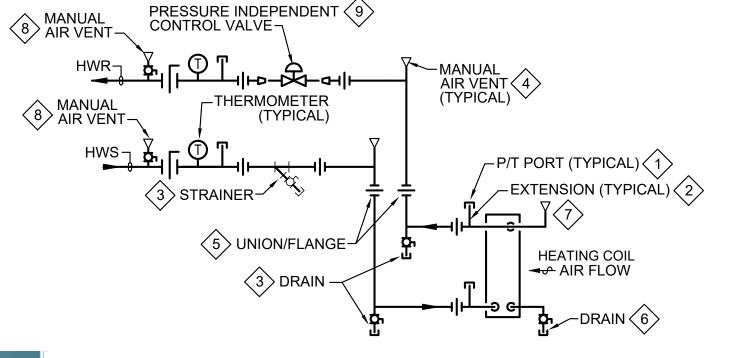




ALL FITTINGS ON CONDENSATE DRAIN SHALL BE DWV



BRANCH / RUNOUT CONNECTION





1) FOR P/T PORT, USE PRESSURE TAP PROVIDED BY MANUFACTURER AT COIL IF AVAILABLE.

(2) INSTALL EXTENSION AT PRESSURE TAP SO P/T PORT IS AT LEVEL OF INSULATION.

(3) 3/4 INCH THREADED HOSE CONNECTION AND CAP. THESE DRAINS ARE NOT REQUIRED IF A COIL DRAIN IS INSTALLED THAT IS LOWER THAN THE EXTERNAL PIPE TO THE COIL.

PROVIDE MANUAL AIR VENTS AND SHUT-OFF/ISOLATION VALVES AT ANY HIGH POINT IN SUPPLY AND RETURN BETWEEN COIL AND SHUT-OFF/ISOLATION VALVE.

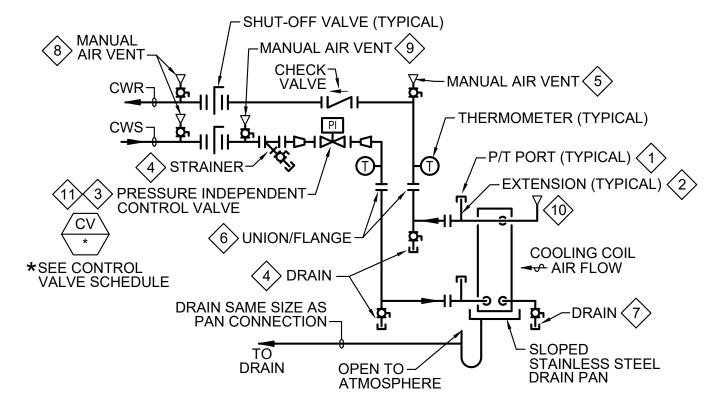
5 LOCATE SHUT-OFF VALVES, UNIONS AND FLANGES TO ALLOW CLEAR SPACE FOR REMOVAL OF COIL.

6 INSTALL DRAIN, SHUT-OFF VALVE, THREADED PIPE AND CAP. PIPE DRAIN TO OUTSIDE OF CABINET AND SEAL PENETRATION. THE DRAIN IS ONLY REQUIRED IF BOTTOM OF COIL IS LOWER THAN EXTERNAL PIPE CONNECTION TO THE COIL HEADER.

7 INSTALL MANUAL AIR VENT, SHUT-OFF VALVE, THREADED PIPE AND CAP. PIPE VENT TO OUTSIDE OF CABINET AND SEAL PENETRATION. THIS VENT IS ONLY REQUIRED IF THE TOP OF THE COIL IS HIGHER THAN THE EXTERNAL PIPE CONNECTION TO THE COIL HEADER.

(8) PROVIDE MANUAL AIR VENTS AT ANY HIGH POINTS IN SUPPLY AND RETURN BETWEEN COIL SHUT OFF VALVE AND MAIN. 3/4 INCH THREADED HOSE CONNECTION AND CAP.

(9) PROVIDE WITH FLOW RATING TO MATCH THE COIL SUBMITTAL FLOWRATE, OR THE NEXT AVAILABLE FLOWRATE GREATER THAN THE COIL SUBMITTAL FLOWRATE.



AHU CHILLED WATER COIL PIPING

1 FOR P/T PORT, USE PRESSURE TAP PROVIDED BY MANUFACTURER AT COIL IF AVAILABLE.

 $raket{2}$ install extension at pressure tap so P/T port is at level of insulation $raket{3}$ INSTALL P/T PORT UPSTREAM AND DOWNSTREAM OF CONTROL VALVE IF PORTS NOT ON VALVE.

3/4 INCH THREADED HOSE CONNECTION AND CAP. THESE DRAINS ARE NOT REQUIRED IF A COIL DRAIN IS INSTALLED THAT IS LOWER THAN THE EXTERNAL PIPE

5 PROVIDE A MANUAL AIR VENT AT THE HIGH POINT BETWEEN THE COIL AND CHECK VALVE ON THE RETURN PIPING. 3/4 INCH THREADED HOSE CONNECTION AND CAP.

6 LOCATE SHUT-OFF VALVES, UNIONS AND FLANGES TO ALLOW CLEAR SPACE FOR REMOVAL OF COIL.

7 INSTALL DRAIN, SHUT-OFF VALVE, THREADED PIPE AND CAP. PIPE DRAIN TO OUTSIDE OF CABINET AND SEAL PENETRATION. THIS DRAIN REQUIRED ONLY IF BOTTOM OF COIL IS LOWER THAN EXTERNAL PIPE CONNECTION TO COIL HEADER.

PROVIDE MANUAL AIR VENTS AT ANY HIGH POINTS IN SUPPLY AND RETURN BETWEEN COIL SHUT OFF VALVE AND MAIN. 3/4 INCH THREADED HOSE CONNECTION AND CAP.

9 PROVIDE A MANUAL AIR VENT AT THE HIGH POINT BETWEEN THE SHUT OFF VALVE AND STRAINER ON THE SUPPLY PIPING. 3/4 INCH THREADED HOSE CONNECTION

(10) INSTALL MANUAL AIR VENT, SHUT-OFF VALVE, THREADED PIPE AND CAP. PIPE TO OUTSIDE OF CABINET AND SEAL PENETRATION. THIS VENT ONLY REQUIRED IF THE TOP OF THE COIL IS HIGHER THAN THE EXTERNAL PIPE CONNECTION TO THE COIL HEADER.

PROVIDE WITH FLOW RATING TO MATCH THE COIL SUBMITTAL FLOWRATE, OR THE NEXT AVAILABLE FLOWRATE GREATER THAN THE COIL SUBMITTAL FLOWRATE.



ENGINEER -

JAMES LEE WYRICK

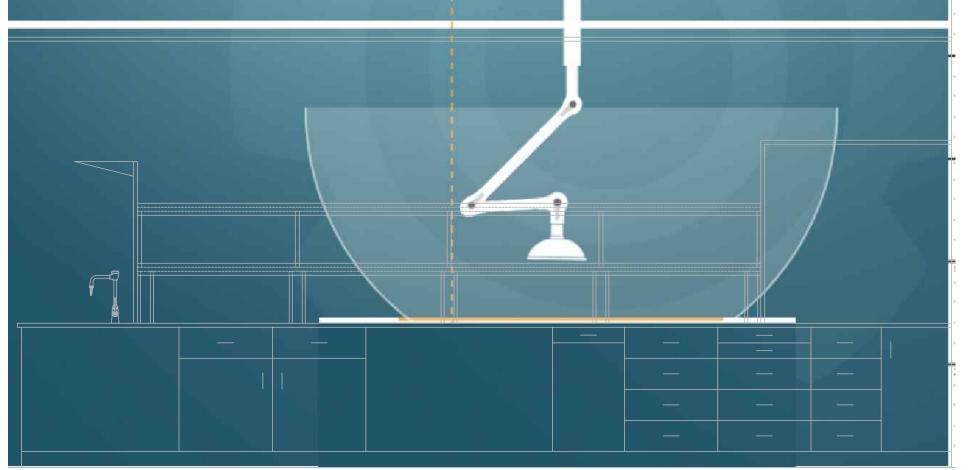
sign

MO# - 2018021277

PROJECT NUMBER CP211261

SHEET MP601







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ENGINEER -JAMES LEE WYRICK MO# - 2018021277

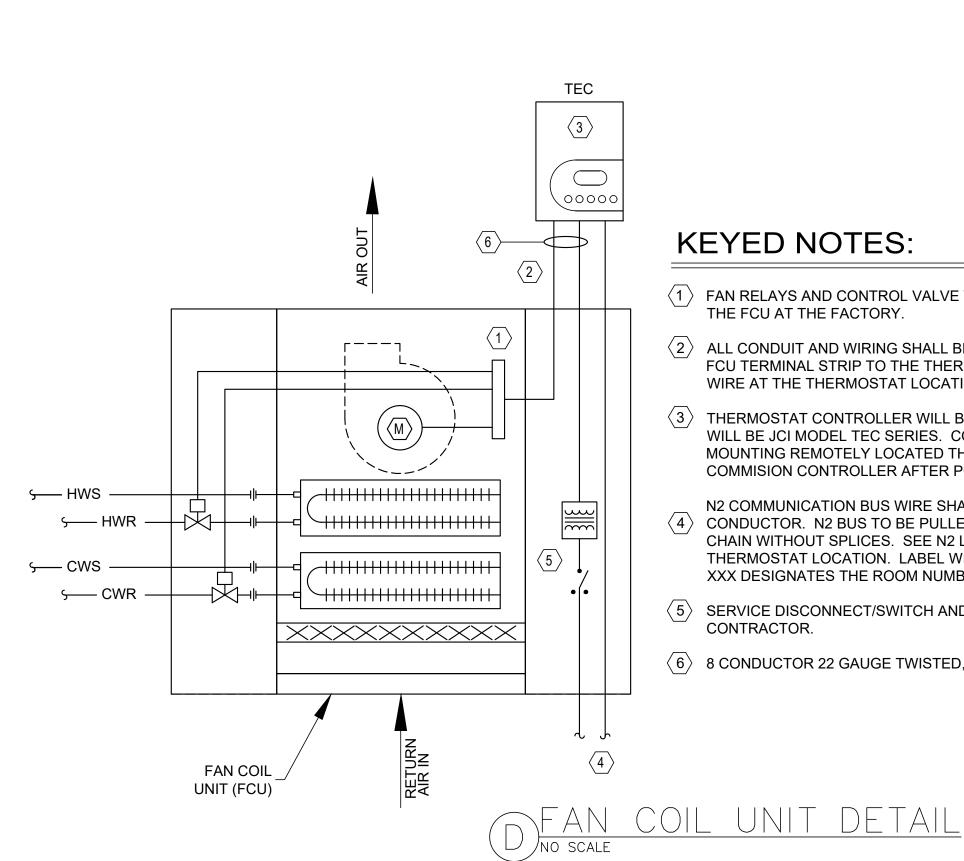
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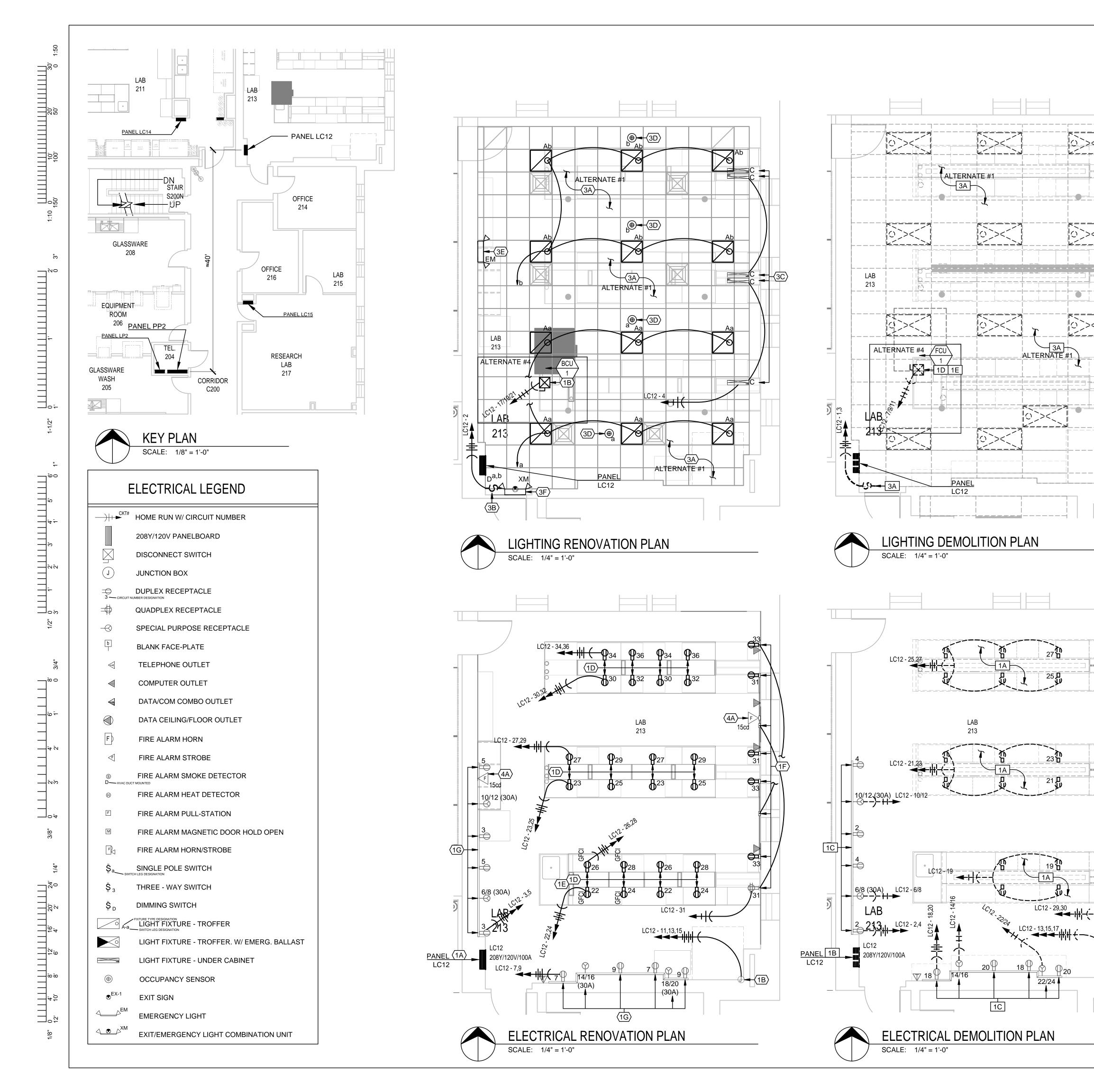
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KEYED NOTES:

- FAN RELAYS AND CONTROL VALVE WIRING SHALL BE CONNNECTED TO A TERMINAL STRIP IN THE FCU AT THE FACTORY.
- 2 ALL CONDUIT AND WIRING SHALL BE BY CONTRACTOR. WIRING SHALL BE PROVIDED FROM FCU TERMINAL STRIP TO THE THERMOSTAT LOCATION WITH AN EXTRA 3-FOOT LENGTH OF WIRE AT THE THERMOSTAT LOCATION.
- 3 THERMOSTAT CONTROLLER WILL BE FURNISHED AND INSTALLED BY OWNER. CONTROLLER WILL BE JCI MODEL TEC SERIES. CONTRACTOR SHALL ROUGH-IN CONDUIT AND BOX FOR MOUNTING REMOTELY LOCATED THERMOSTATS. OWNER WILL TERMINATE, PROGRAM, AND COMMISION CONTROLLER AFTER POWER IS ENERGIZED TO FCU.
- N2 COMMUNICATION BUS WIRE SHALL BE 18 AWG PLENUM RATED, TWISTED SHIELDED, 3 (4) CONDUCTOR. N2 BUS TO BE PULLED BY CONTRACTOR AND SHALL BE CONTINUOUS DAISY CHAIN WITHOUT SPLICES. SEE N2 LAYOUT DETAIL. LEAVE EXTRA 4-FOOT OF WIRE AT THERMOSTAT LOCATION. LABEL WIRES WITH "IN FROM XXX" OR "OUT FROM XXX", WHERE XXX DESIGNATES THE ROOM NUMBER
- (5) SERVICE DISCONNECT/SWITCH AND TRANSFORMER PROVIDED AND INSTALLED BY CONTRACTOR.
- 6 8 CONDUCTOR 22 GAUGE TWISTED, SHIELDED, STRANDED WIRE



GENERAL ELECTRICAL NOTES

1. GENERAL

- A. EXISTING CIRCUITS AND EQUIPMENT LOCATIONS SHALL BE FIELD VERIFIED. REPORT ANY AND ALL DISCREPANCIES TO ENGINEER PRIOR TO PROCEEDING.
- B. ALL FUSES SHALL BE CLASS R1 UNLESS OTHERWISE NOTED. C. EACH CIRCUIT SHALL HAVE A DEDICATED NEUTRAL. SHARED NEUTRALS SHALL
- NOT BE USED UNLESS OTHERWISE NOTED. D. ALL CONDUIT INSTALLED SHALL BE 3/4" OR LARGER UNLESS OTHERWISE NOTED.
- DATA/TELEPHONE AND LOW VOLTAGE CONDUCTORS SHALL NOT BE RUN IN THE
- SAME RACEWAY COMPARTMENT WITH POWER CIRCUITS. F. ALL CONDUCTORS, WIRE, AND CABLE SHALL BE INSTALLED IN A RACEWAY
- G. CONTRACTOR SHALL INSTALL RACEWAY TO ALL POWER, DATA, AND TELEPHONE BOXES INSTALLED FOR FUTURE USE.
- H. INSTALL PULL STRINGS IN ALL EMPTY CONDUITS INSTALLED UNDER THIS
- J. ALL SWITCH AND RECEPTACLE COVER PLATES SHALL BE ABUSE RESISTANT NYLON UNLESS OTHERWISE NOTED.
- K. PAINT ALL EXPOSED RACEWAY TO MATCH ADJACENT SURFACES.
- CONTRACTOR SHALL PROVIDE A TYPED CIRCUIT IDENTIFICATION CARD SHOWING ALL CIRCUIT ADDITIONS AND MODIFICATIONS FOR EACH PANELBOARD AFFECTED UNDER THIS PROJECT.

ELECTRICAL DEMOLITION NOTES

INDICATES NOTES LOCATED ON PLAN

1. POWER:

- A. REMOVE RECEPTACLES ASSOCIATED WITH CASEWORK SCHEDULED TO BE REMOVED. REMOVE ASSOCIATED CONDUCTORS BACK TO PANEL. RETAIN CONDUIT FOR REUSE.
- B. REMOVE PANEL AND ASSOCIATED FEEDER CONDUCTORS BACK TO DISTRIBUTION PANEL PP2. RETAIN CONDUIT FOR REUSE. RETAIN AND RETURN
- C. | REMOVE CONDUCTORS FROM RECEPTACLES, WIREMOLD, AND FUME HOOD BACK TO PANEL. RETAIN WIREMOLD, JUNCTION BOXES AND CONDUIT FOR
- D. REMOVE CONDUCTORS FROM FCU DISCONNECT BACK TO PANEL AS PART OF BASE BASE BID. RETAIN DISCONNECT FOR REUSE.
- E. REMOVE DISCONNECT AND CONDUCTORS FROM FCU SCHEDULED FOR ALT #4 REMOVAL BACK TO PANEL AS PART OF ALTERNATE #4.

2. DATA & TELEPHONE:

A. RETAIN EXISTING DATA FOR REUSE, UNLESS OTHERWISE INDICATED.

3. LIGHTING:

REMOVE LIGHT FIXTURES ASSOCIATED SWITCHES, CONDUCTORS, AND ACCESSIBLE CONDUIT BACK TO PANEL. RETAIN CONCEALED CONDUIT AND SWITCH BOX FOR REUSE.

4. FIRE ALARM:

ELECTRICAL RENOVATION NOTES

INDICATES NOTES LOCATED ON PLAN

1. POWER:

- (A.) INSTALL PANEL "LC12" AT LOCATION SHOWN. INSTALL AMPERE INTERRUPTING CAPACITY (AIC) RATING NAMEPLATE (SEE PANELBOARD SCHEDULE) ON FACE OF PANEL. INSTALL NEW FEEDER CIRCUIT, THREE #1 AWG CONDUCTORS, ONE #2 AWG NEUTRAL, AND ONE #8 AWG GROUND IN CONDUIT RETAINED FROM PANEL PP2 TO NEW PANEL LC12.
- \langle B. angle RECONNECT EXISTING FUME HOOD WITH ALL CIRCUITS NECESSARY FOR FUME HOOD, RECEPTACLES AND LIGHTS AS SHOWN. REUSE SALVAGED CONDUIT SERVICING FUME HOOD.
- \langle C. angle CONNECT NEW BLOWER COIL UNIT (BCU-12), PROVIDE 20 AMP DISCONNECT ALT #4 SWITCH AND ROUTE NEW CIRCUIT IN SALVAGED CONDUIT AS PART OF ALTERNATE #4.
- 〈 D. 〉INSTALL ALUMINUM SURFACE MOUNTED RACEWAY ON BOTH SIDES OF ISLAND BENCH REAGENT SHELF AND FASTEN TO UNDER SIDE OF SHELF WITH #8 SCREWS. USE WIREMOLD ALA3800 SERIES ALUMINUM RACEWAY SYSTEM, OR APPROVED EQUAL. INSTALL EQUALLY SPACED DUPLEX RECEPTACLES IN RACEWAY AS SHOWN. PROVIDE AND INSTALL ALL NECESSARY RACEWAY SYSTEM COMPONENTS TO ENSURE A COMPLETE INSTALLATION. REFER TO ARCHITECTURAL ELEVATION SHEET FOR ADDITIONAL INFORMATION.
- \langle E. \rangle INSTALL GFCI PROTECTED RECEPTACLE AT WEST END OF BENCH WITHIN SIX FEET OF SINK.
- \langle F. angle SURFACE MOUNT RECEPTACLES AT APPROXIMATELY 36" AFF TO FIT BELOW WINDOW SILL ALONG EAST WALL AS SHOWN TO INCLUDE EXISTING RECEPTACLE PREVIOUSLY RETAINED AND TWO (2) CIRCUITS DIVIDED AS INDICATED.
- $\langle \,\,\,$ G. angle RECONNECT RETAINED RECEPTACLES IN SURFACE MOUNTED RACEWAY ON WEST WALL AND SOUTH WALL TO INCLUDE TWO (2) 20 AMP CIRCUITS IN EACH RACEWAY AND TWO (2) 30 AMP 208 VOLT CIRCUITS.
- H. LABEL ALL RECEPTACLES USING WHITE ADHESIVE LABELING TAPE WITH 1/4" BLACK LETTERING SHOWING THE PANEL NAME AND BREAKER NUMBER PROVIDING POWER TO THE RECEPTACLES (FOR EXAMPLE LC12-24).

2. DATA & TELEPHONE:

A. NOT USED.

3. LIGHTING:

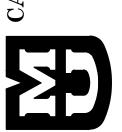
- \langle A. \rangle INSTALL LIGHT FIXTURE (MARK 'A') IN RENOVATED CEILING GRID AS SHOWN. AS PART OF ALTERNATE #1. SEE LIGHT FIXTURE SCHEDULE FOR FIXTURE DATA.
- (B.) INSTALL 0-10 VOLT DIMMING LIGHT SWITCH TO CONTROL LIGHTS AS SHOWN. AS ALT #1 PART OF ALTERNATE #2. REUSE SALVAGED SWITCH BOX AND CONCEALED
- \langle C. angle INSTALL UNDER CABINET LIGHT FIXTURE (MARK 'C') UNDER CABINET AS SHOWN. SEE LIGHT FIXTURE SCHEDULE FOR FIXTURE DATA.
- $\langle \,\,$ D. angle INSTALL OCCUPANCY SENSOR ON CEILING AT LOCATION SHOWN TO CONTROL LIGHTING ONLY. USE WATT STOPPER, CAT. NO. DT-300, OR APPROVED EQUAL. INCLUDE ONE POWER PACK BZ-50.
- \langle E. angleINSTALL EMERGENCY LIGHT FIXTURE AT 8'-6" AFF IN LOCATION SHOWN.
- \langle F. \rangle INSTALL EXIT SIGN/EMERGENCY LIGHT FIXTURE CENTERED ABOVE DOOR AS

4. FIRE ALARM:

22/24

- \langle A. \rangle INSTALL FIRE ALARM STROBE AT 86" (TO CENTER) AFF IN LOCATION SHOWN. CONNECT TO NEAREST EXISTING NOTIFICATION CIRCUIT (NAC 1) LOCATED IN ROOM 211. PROVIDE FCI 7200 ADDRESSABLE FIRE ALARM SYSTEM, WHEELOCK DEVICES TO MATCH EXISTING FIRE ALARM SYSTEM.
- LABEL THE BOTTOM OF FIRE ALARM DEVICES USING WHITE ADHESIVE LABELING TAPE WITH 3/8" BLACK LETTERING SHOWING THE NOTIFICATION ALARM CIRCUIT NUMBER (FOR EXAMPLE NAC-4).

ENGINEER -JAMES L. DOVE MO.# E-2002016644



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PROJECT NUMBER

SHEET

CP211261

E101

LP1B

MSWB BUS

PARTIAL RISER DIAGRAM

LC5

0 10' 20' 30' 50' 30' 50' 0

0 4' 8' 12' 16' 20' 24' 12' 10' 8' 6' 4' 2' 0

LPN-600A

E501 SCALE NTS

NOTES/COMMENTS/DESCRIPTION PT - 22 - L26/835 - RA - DIM - UNV SHALLOW PLENUM LED TROFFER USED AS PART OF ALTERNATE #2 1SF - 2 - L12/835 - AF12125 - WRS/120 - DRV - UNV SOLID FRONT UNDER CABINET LED LIGHT EMER/LED - WHT - HL - D LED EMERGENCY LIGHT WITH TWO (2) HIGH LUMEN HEADS EXIT/EM/LED - R - WHT - D LED EXIT AND LED EMERGENCY LIGHT CCT = COLOR CORRELATED TEMPERATURE

ALTERNATE #4 SHOWN, BASE BID WOULD BE FAN COIL UNIT (FCU).

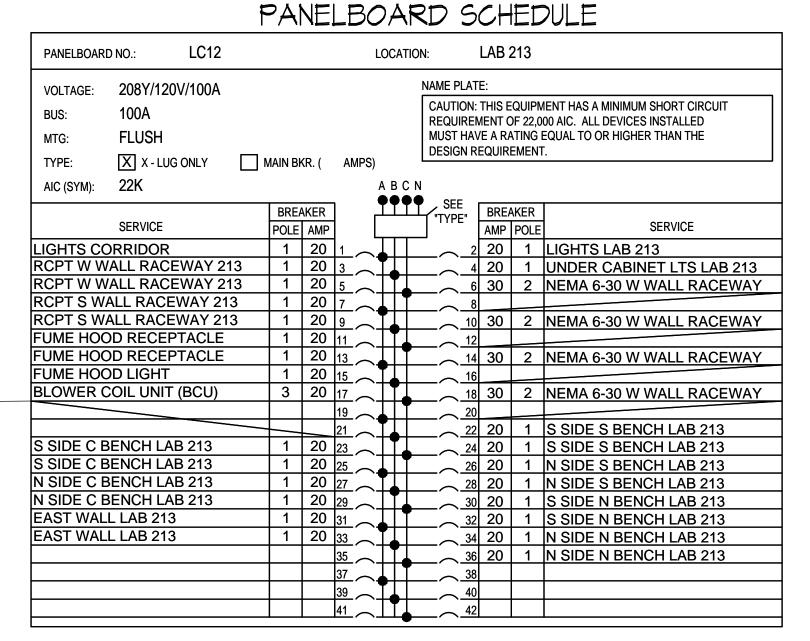
__1/2" DIA. FLEXIBLE CONDUIT

#12 AWG CONDUCTORS AND 1 #12 GND. MIN.

- CONDUIT TO PANELBOARD OR OTHER FIXTURES

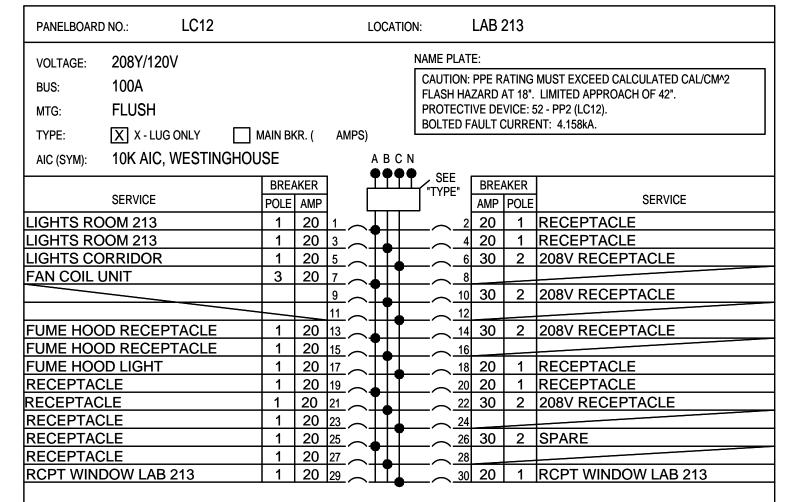
- LIGHT FIXTURE

EACH 6' LONG MAX W/2

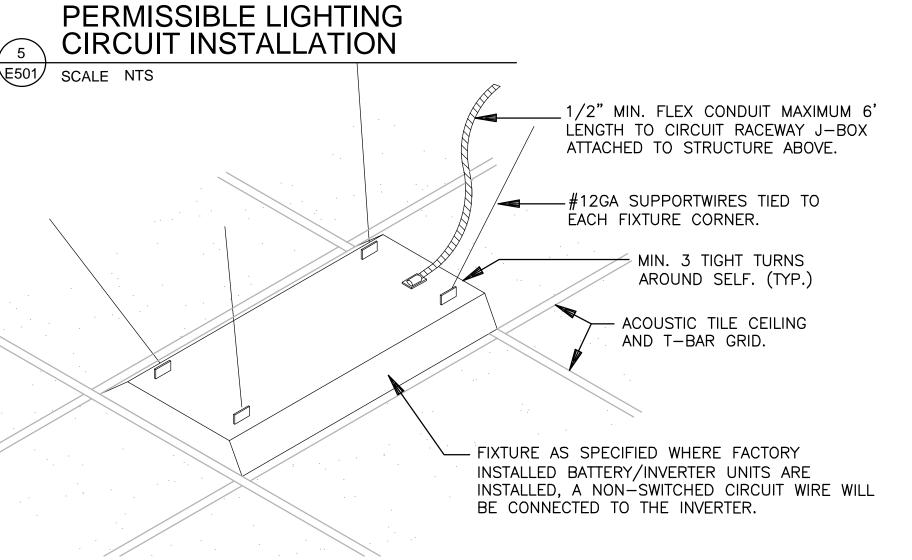


RENOVATION PANELBOARD SCHEDULE E501/ SCALE NTS

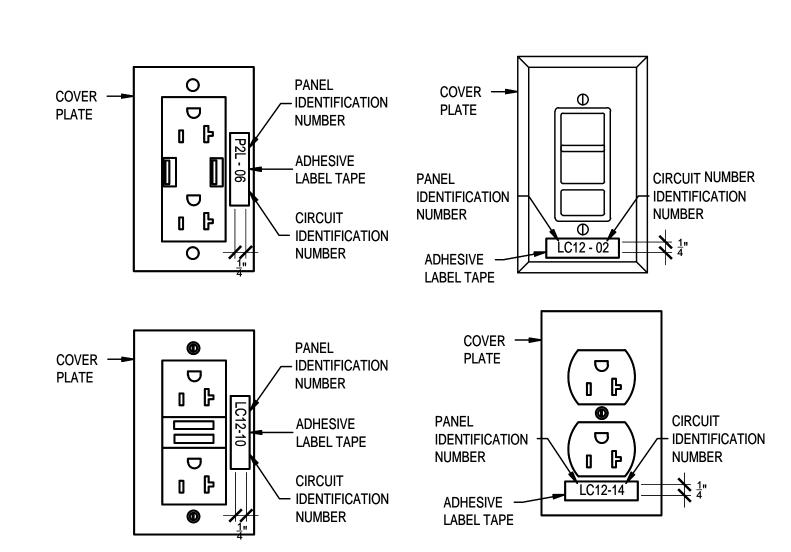
PANELBOARD SCHEDULE



DEMOLITION PANELBOARD SCHEDULE SCALE NTS



LIGHT FIXTURE MOUNTING AND BRACING DETAIL SCALE NTS



COVER PLATE LABEL (FOR EXAMPLE ONLY) SCALE NTS

PROJECT NUMBER CP211261

ENGINEER -

JAMES L. DOVE

MO.# E-2002016644

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Services

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SCHWEITZER I 300NE COUNTY RENOVATE LAI

SHEET E501