

St Mary's University

NANOMATERIALS LAB RENOVATION

ISSUE FOR CONSTRUCTION

MARCH 28, 2018



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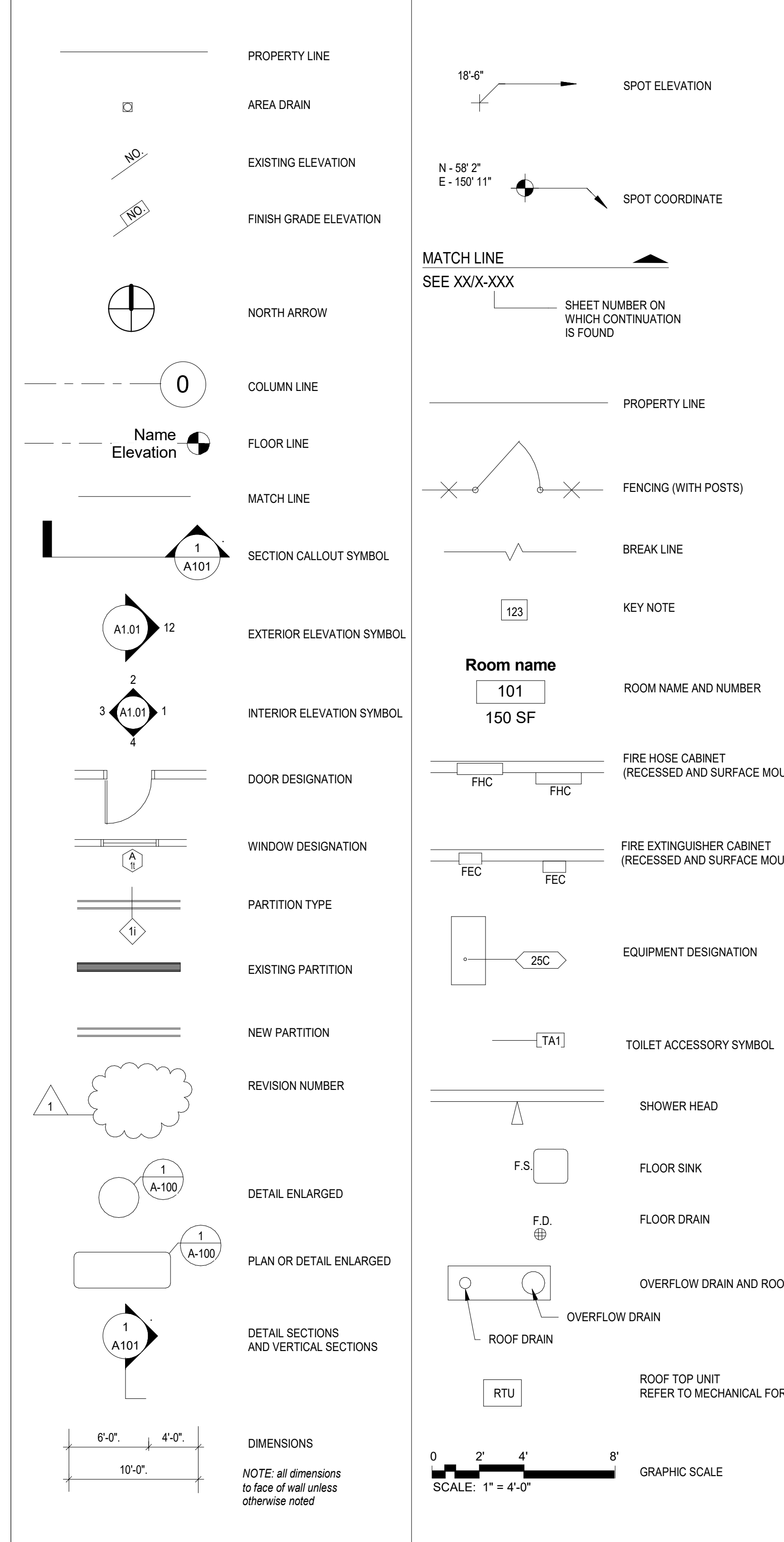
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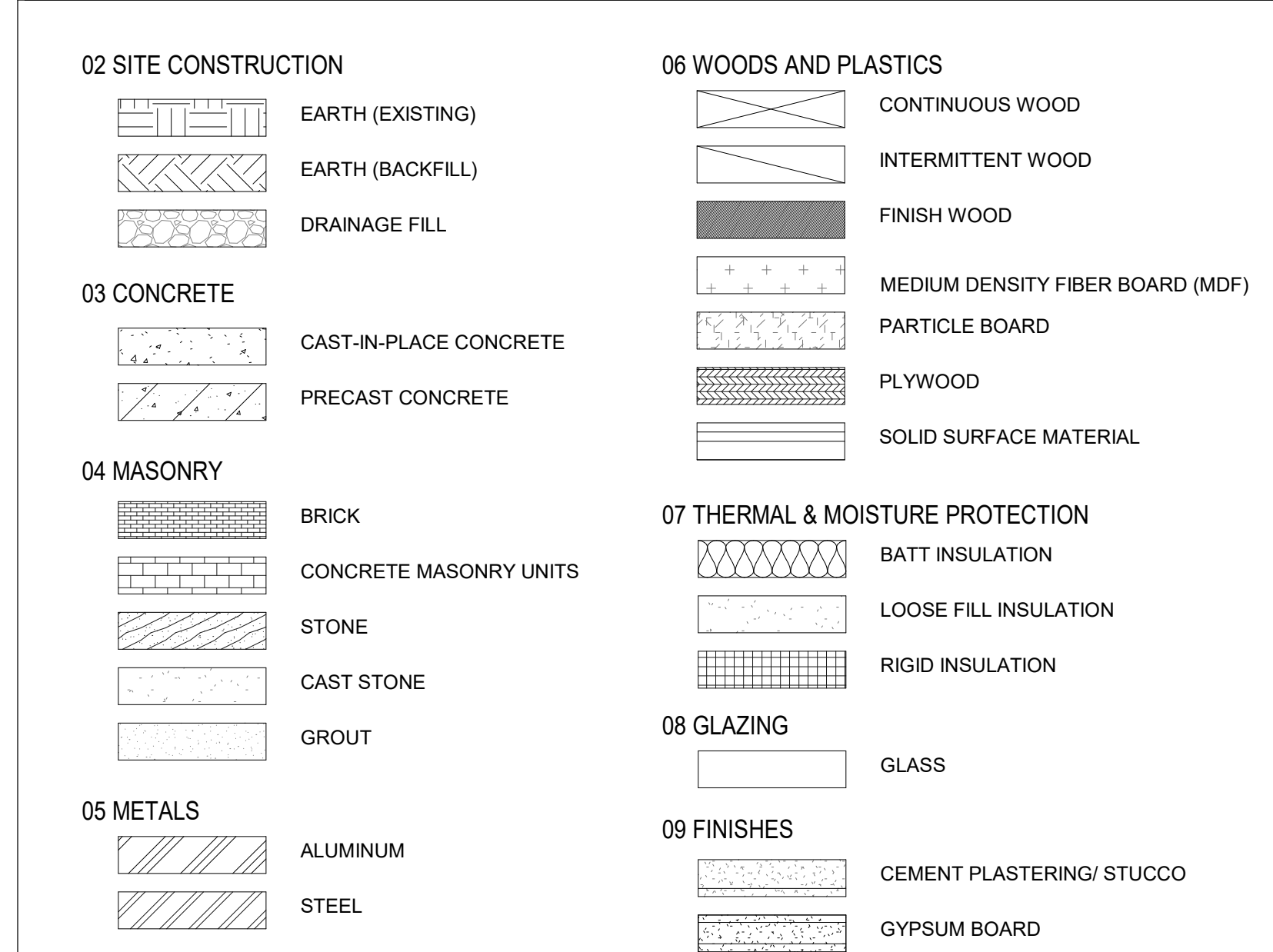
ABBREVIATIONS

A.D.	AREA DRAIN	MAX.	MAXIMUM
A.D.A.	AMERICANS WITH DISABILITIES ACT	MB.	MARKER BOARD
A.D.A.	2010 ADA STANDARDS FOR ACCESSIBLE DESIGN	MECH	MECHANICAL
A.D.A.A.G.	AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES	MEM	MEMBRANE
A.F.F.	ABOVE FINISH FLOOR	MEM. WP.	MEMBRANE WATERPROOFING
A.F.G.	ABOVE FINISH GRADE	MEP	MECHANICAL, ELECTRICAL, PLUMBING
A.H.J.	AUTHORITY HAVING JURISDICTION	MEPT	MECHANICAL, ELECTRICAL, PLUMBING, TECHNOLOGY
AC	AIR CONDITIONING	MEZZ	MEZZANINE
ACP.	ACOUSTICAL PANEL	MFR./MANUF.	MANUFACTURE (R)
ACT.	ACOUSTICAL TILE	MH.	MANHOLE
ADJ.	ADJUSTABLE	MIN.	MINIMUM
ALT.	ALTERNATE	MISC.	MISCELLANEOUS
ALUM.	ALUMINUM	MOD	MODULAR
ASPH.	ASPHALT	MTL	METAL
∠	ANGLE	MTP.	METAL TOILET PARTITION
B.O.D.	BOTTOM OF DECK	N.D.	NAPKIN DISPOSAL
B.U.R.	BUILT-UP ROOF	N.I.C.	NOT IN CONTRACT
BD.	BOARD	N.T.S.	NOT TO SCALE
BLDG.	BUILDING	N.V.	NAPKIN VENDOR
BLK.	BLOCK	NO.	NUMBER
BM.	BEAM	O.C.	ON CENTER (S)
C	CHANNEL	O.C.E.W.	ON CENTER EACH WAY
C.J.	CONTR. JOINT	O.D.	OUTSIDE DIAMETER
C.M.U.	CONCRETE MASONRY UNIT	O.F.C.I.	OWNER FURNISHED, CONTRACTOR INSTALLED
C.W.	COLD WATER	O.H.	OPPOSITE HAND
CAB. CABT	CABINET	OPNG.	OPENING
CMF	COLD FORMED METAL FRAMING	OPP.	OPPOSITE
CL	CENTERLINE	P. LAM./ PLAM	PLASTIC LAMINATE
CLG.	CEILING	P.C.	PRECAST
COL.	COLUMN	P.H.	PAPER HOLDER
COMP.	COMPRESSIBLE	P.L.	PROPERTY LINE
CONC.	CONCRETE	P.P.	POWER POLE
COND.	CONDITION	P.W.B.	PREFINISHED WALL BOARD
CONT.	CONTINUOUS	PL.	PLATE
CORR.	CORRIDOR	PLUMB.	PLUMBING
CPT.	CARPET (ED)	PLYWD.	PLYWOOD
CT.	CERAMIC TILE	POL.	POLISHED
CTSK.	COUNTER SINK	PR.	PAIR
D	DRYER	PREFIN.	PRE-FINISHED
D.F.	DRINKING FOUNTAIN	PT.	PRESSURE-TREATED
D.P.	DAMP PROOFING	PT.	POINT
D.S.	DOWN SPOUT	PTD.	PAINTED
DIA.	DIAMETER	Q.T.	QUARRY TILE
DIM.	DIMENSION	R/ RAD	RADIUS
DTL.	DETAIL	RD	ROOF DRAIN
DWG.	DRAWING	RE. REF.	REFER TO / REFERENCE / SEE
E.J.	EXPANSION JOINT	RECP.	RECEPTACLE
E.Q.	EQUAL	REINF.	REINFORCE (D), (ING)
EA.	EACH	REQD.	REQUIRED
EDF.	ELECTRIC DRINKING FOUNTAIN	RES.	RESILIENT
EL.	ELEVATION (HEIGHT)	REV.	REVISION (S), REVISED
ELEC.	ELECTRICAL	RF	RECREATIONAL RESILIENT FLOORING
ELECT.	ELECTRICAL (DRAWING)	RPG.	RELOCATABLE PAINTED GYPSUM BOARD
ELEV.	ELEVATION	RSS.	ROD STOCK AND SEALANT
EQUIP.	EQUIPMENT	S.C.	SEALED CONCRETE
EXIST.	EXISTING	S.D.	SOAP DISPENSER
EXP.	EXPANSION	S.N.D.	SANITARY NAPKIN DISPOSAL
EXT.	EXTERIOR	SCHED	SCHEDULE
F.E.	FIRE EXTINGUISHER	SCPL	SOLID CORE PLASTIC LAMINATE
F.E.C.	FIRE EXTINGUISHER CABINET	SECT	SECTION
F.H.C.	FIRE HOSE CABINET	SHT	SHEET
FB.	FACE BRICK	SM	SIMILAR
FD.	FLOOR DRAIN	SPC	SPECIAL COATING SYSTEM
FIN.	FINISH (ED)	SPEC	SPECIFICATION (S)
FIXT.	FIXTURE	SQ.	SQUARE
FLR.	FLOOR (ING)	SS/ SS. STL.	STAINLESS STEEL
FLSHG.	FLASHING	STL.	STEEL
FLUOR.	FLUORESCENT	STRUC/ STRUCT.	STRUCTURAL
FRP.	FIBER REINFORCED PLASTIC	SUSP.	SUSPENDED
G.B.	GRAB BAR	SVD.	SHEET VINYL DANCE FLOORING
G.I.	GALVANIZED IRON	SVF.	SHEET VINYL FLOORING
GA.	GAUGE	T.A.S.	TEXAS ACCESSIBILITY STANDARDS
GALV.	GALVANIZED	T.B.	TACK BOARD
GCMU.	GLAZED CONCRETE MASONRY UNIT	T.D.R.	TOWEL DISPENSER AND RECEPTAC.
GEN.	GENERAL	T.O.	TOP OF
GEN.	GENERAL	T.O.B.	TOP OF (WOOD) BLOCKING
GL.	GLASS / GLAZING	T.O.M.	TOP OF MASONRY
GL.	GLASS	T.O.P.	TOP OF PARAPET
GR.	GRADE	T.O.S.	TOP OF STEEL
GTP.	GLAZED TILE PAVER	T.T.D.	TOILET TISSUE DISPENSER
GYP.	GYPSUM DRYWALL	TEL.	TELEPHONE
H.W.	HOT WATER	TERR.	TERRAZZO
HC	HANDICAPPED ACCESSIBLE	THK.	THICK (NESS)
HM.	HOLLOW METAL FRAME	TYP.	TYPICAL
HORIZ.	HORIZONTAL	U.N.O.	UNLESS NOTED OTHERWISE
HT.	HEIGHT	UR.	URINAL
I.D.	INSIDE DIAMETER	V	VENT
I.P.S.	IRON PIPE SIZE	V.C.T.	VINYL COMPOSITION TILE
INSUL.	INSULATE (ED), (ON)	V.I.F.	VERIFY IN FIELD
INT.	INTERIOR	VENT.	VENTILATING, VENTILATED
JT.	JOINT	VER.	VERIFY
L.P.	LIGHT POLE	VERT.	VERTICAL
LAM.	LAMINATE (D)	VFB.	(PREFINISHED) VINYL CLAD GYPSUM BOARD
LAV.	LAVATORY	VWC.	VINYL WALL COVERING
LT.	LIGHT	W	WASHING MACHINE
LT. WT.	LIGHTWEIGHT	W.P.	WATER PROOFING
M.O.	MASONRY OPENING	W.S.	WEATHERSTRIP
MAS.	MASONRY	W.W.	WATER WELL
MATL.	MATERIAL (S)	W.W.F.	WELDED WIRE FABRIC
		W.W.M.	WELDED WIRE MESH
		W	WITH
		WC	WATER CLOSET
		WD	WOOD
		WDW	WINDOW
		WT	WEIGHT

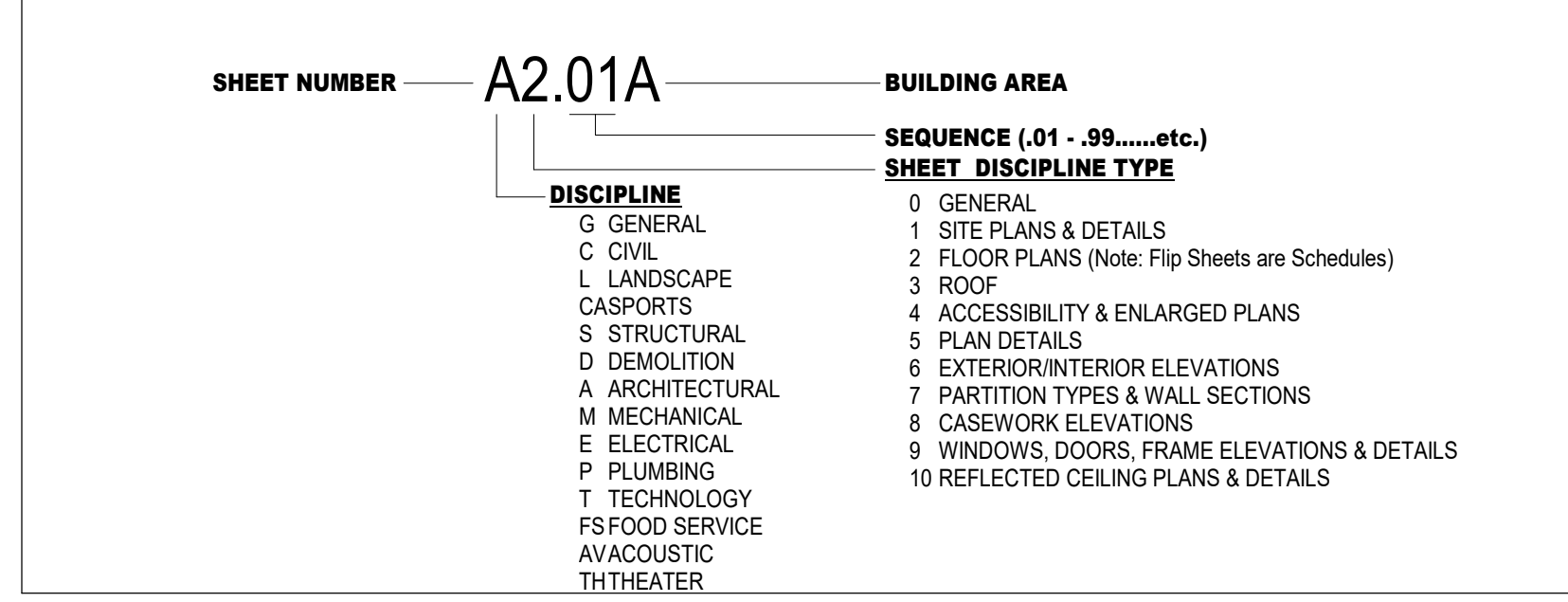
DRAWING CONVENTIONS



MATERIALS CONVENTIONS



SHEET NUMBERING



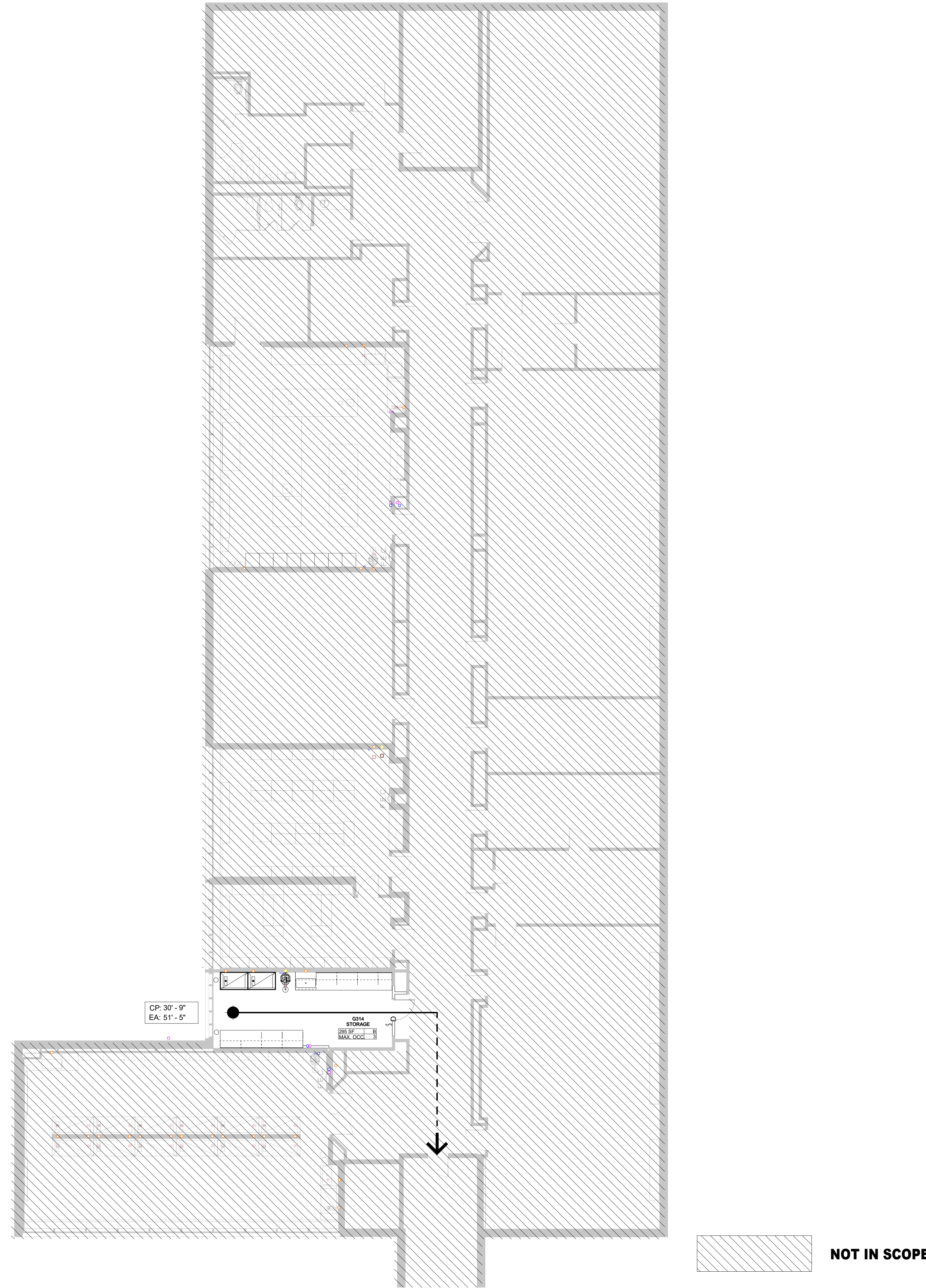
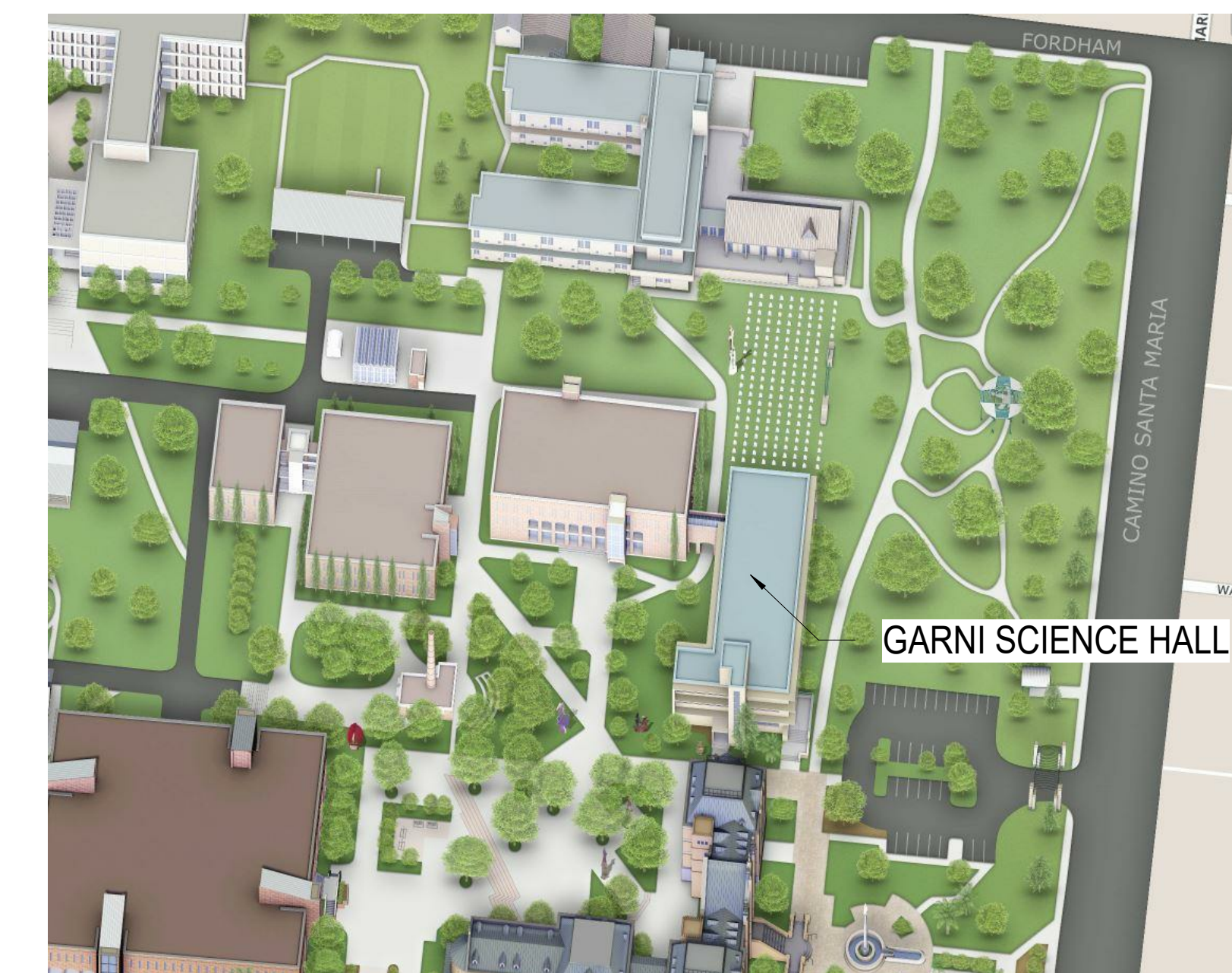
No.	Description	Date

PROJECT GENERAL INFORMATION	
NAME OF PROJECT	GARNI MATERIALS LAB RENOVATION
BUILDING FACILITY NAME	GARNI HALL
LOCATION ADDRESS	ONE CAMINO SANTA MARIA, SAN ANTONIO, TEXAS 78228
COUNTY, STATE	SAN ANTONIO, TEXAS
DESCRIPTION OF PROJECT	RENOVATE EXISTING ROOM FOR MATERIALS LAB. MINIMAL EQUIPMENT CASEWORK ADDED.
APPLICABLE BUILDING CODES	IBC 2015
ACCESSIBILITY	TAS 2012
OVERALL TYPE OF CONSTRUCTION	IBB
MIXED TYPE OF CONSTRUCTION	NO
OCCUPANCY CLASSIFICATION(S)	B
OVERALL USE OF BUILDING	EDUCATION ABOVE HIGH SCHOOL
HIGH RISE BUILDING	NO
AUTOMATIC FIRE SPRINKLER SYSTEM	EXISTING CONDITION
TYPE OF AUTOMATIC FIRE SPRINKLER SYSTEM	EXISTING CONDITION
STANDPIPE SYSTEM	EXISTING CONDITION
ACTIVE FIRE SAFETY SYSTEMS	EXISTING CONDITION
MAXIMUM COMMON PATH (Occupancy w/ w/o sprinkler)	30' 0"
MAXIMUM EXIT DISTANCE (Occupancy w/ w/o sprinkler)	51' 5"
CORRIDOR FIRE RESISTANCE RATING	EXISTING CONDITION
CORRIDOR WIDTH	EXISTING CONDITION

CAMPUS MAP



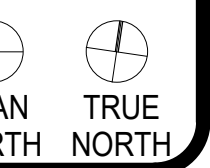
CAMPUS MAP



LIFE SAFETY SYMBOLS LEGEND	
	MEANS OF EGRESS - PATH OF TRAVEL
	MEANS OF EGRESS - COMMON PATH OF TRAVEL
	EXIT
	EXIT DISCHARGE
	1-HR FIRE RATED
	2-HR FIRE RATED
	3-HR FIRE RATED
	FIRE EXTINGUISHER CABINET
	COMMON PATH OF TRAVEL/ EXIT ACCESS TRAVEL DISTANCE

2 OCCUPANCY LEGEND
 1/8" = 1'-0"

1 LIFE SAFETY PLAN
 1/8" = 1'-0"



CLIENT
 St Mary's University

PROJECT NUMBER
 1816

DATE: MARCH 28, 2018
 DRAWN BY: L. BURDEN
 CHECKED BY: J. B. SOLIZ

No.	Description	Date

ISSUE FOR CONSTRUCTION

ACCESSIBILITY GUIDELINES

GO.03G

DESCRIPTION	AGES 13 - ADULT (GRADES 8 AND ABOVE)
WATER CLOSET: To Top of Seat	17" - 19"
Grab Bar Height	33" - 36"
Flush Control Height (Max)	44"
URINAL: Max. To Rim of Basin	17"
Flush Control Height (Max)	44"
LAVATORIES: Front Approach	
Knee Clearance (Min)	27"
To Top (Max)	34"
To Faucet (Max)	29"
FIXED OR BUILT-IN: Height of Tables or Counter	28" - 34"
Knee Clearance (Max)	27"
SHELVES, DISPENSERS: Max. Height to Control Device	
Front Approach (Max)	48"
Side Approach (Max)	48"
DRINKING FOUNTAINS: To Spout (Max)	36"
Knee Clearance (Min)	27"
SWITCHES AND CONTROLS: Frontal Approach (Max)	48"
Side Approach (Max)	48"
MIRRORS: Max. Height to Bottom of Reflective Surface	
At Lavatories and Counter Tops	40"
Full Length	35"
MIRRORS: Min. Height to Top of Reflective Surface	
Full Length	74"
TOILET PAPER DISPENSER: Height to Center of Roll (Max)	19"
PAPER TOWEL DISPENSER: Height to Operating Mechanism	48"
SHOWER: Top of Seat	17" - 19"
Grab Bar	33" - 36"
MARKER BOARDS / TACKBOARDS	COORD. MOUNTING HEIGHT WITH OWNER PRIOR TO INSTALLATION

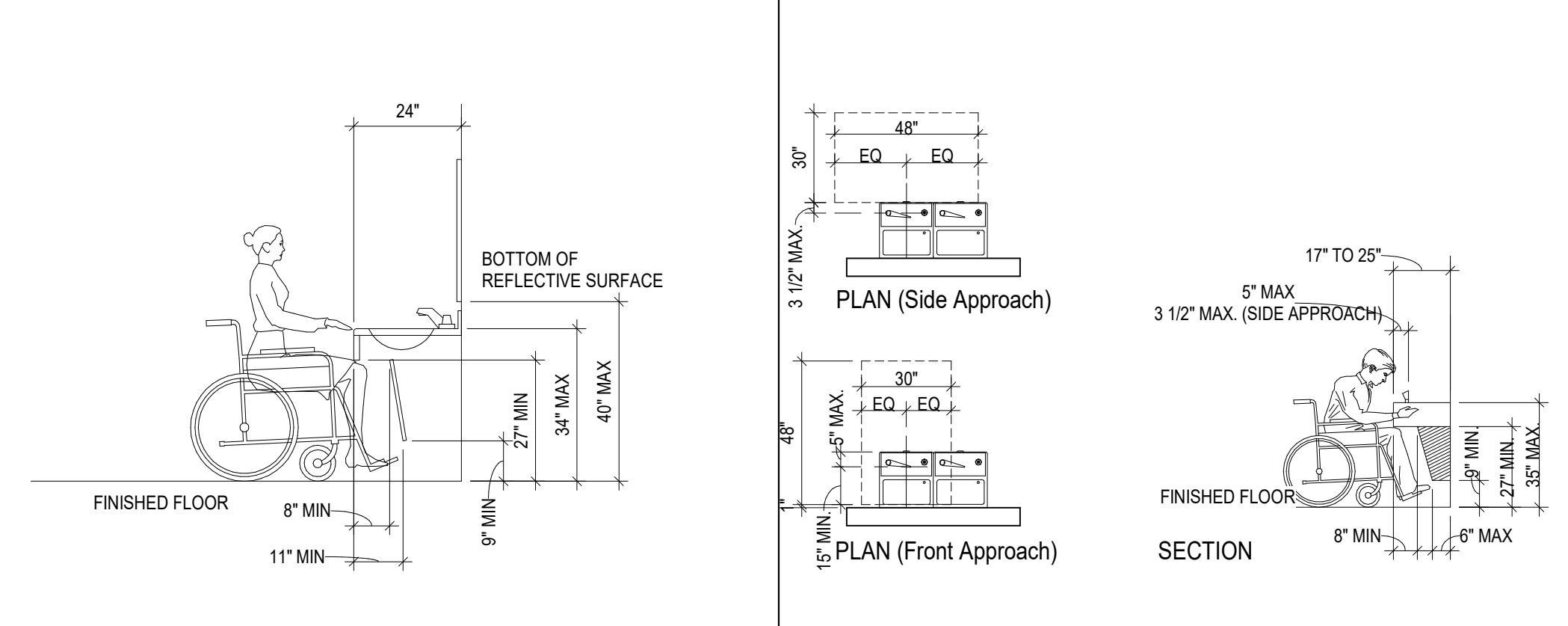
7 ACCESSIBLE MOUNTING HEIGHTS
 1/4" = 1'-0"

TOILET ACCESSORIES

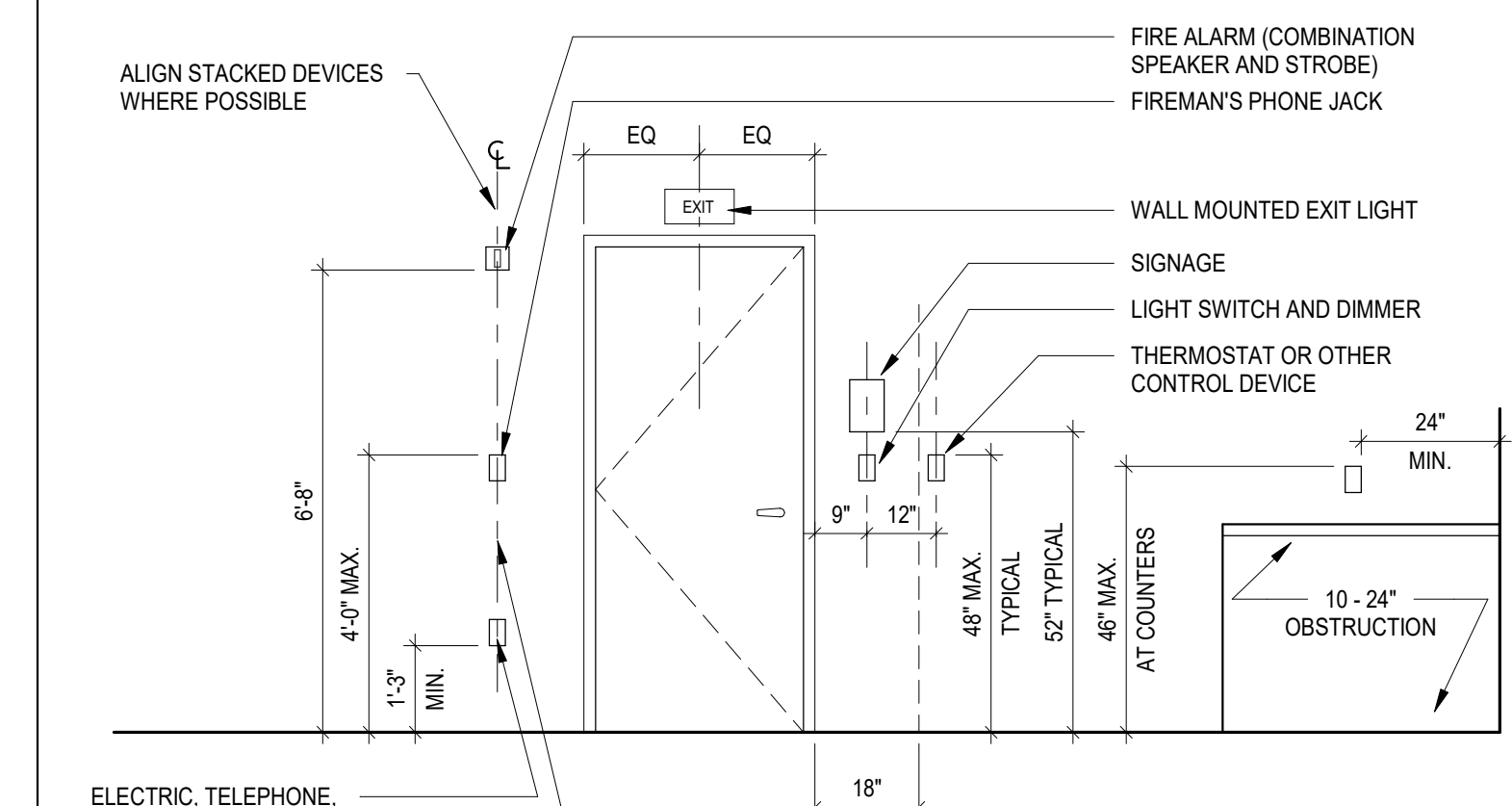
LABEL	DESCRIPTION	REMARKS
TA-1	SOAP DISPENSER	
TA-2	MIRROR	
TA-3	TOILET PAPER DISPENSER	
TA-4	PAPER TOWEL DISPENSER	
TA-5	GRAB BARS (AT TYPICAL ACCESSIBLE TOILET STALL)	
TA-6	SANITARY NAPKIN DISPENSER	
TA-7	SANITARY NAPKIN DISPOSAL	
TA-8	MOP AND BROOM HOLDER	
TA-9	GRAB BARS (AT ACCESSIBLE SHOWER)	
TA-10	FOLDING SHOWER BENCH	
TA-11	CLOTHES HOOK	
TA-12	SHOWER CURTAIN, ROD AND HOOKS	
TA-13	ELECTRIC HAND DRYER	
TA-14	PAPER TOWEL DISPENSER AND TRASH RECEPTACLE	
TA-15	GRAB BARS (AT AMBULATORY ACCESSIBLE TOILET STALL)	
TA-16	DIAPER CHANGING STATION	
TA-17	TRASH RECEPTACLE	
TA-18	TOILET COVER DISPENSER	
TA-19	VERT. GRAB BAR (AT ACCESSIBLE ICC A117.1 TOILET STALL)	

NOTE: ALL TOILET ACCESSORIES SHALL BE CONTRACTOR FURNISHED AND CONTRACTOR INSTALLED UNLESS NOTED OTHERWISE
 1. COORDINATE FINAL LOCATIONS WITH ARCHITECT PRIOR TO INSTALLATION.
 2. CONTRACTOR IS TO VERIFY ALL HEIGHTS OF ACCESSORIES TO COMPLY WITH ALL APPLICABLE ACCESSIBILITY REQUIREMENTS.
 3. REFER TO ALL FINISHES AND COLORS IN FINISH SCHEDULE, VERIFY ALL PATTERNS WITH ARCHITECT.
 4. ALIGN MIRROR ON CENTER OF LAVATORY.
 5. ONE (1) HOOK SHALL BE INSTALLED INSIDE DOOR AT EACH TOILET PARTITION. ONE HOOK INSIDE DOOR AT SINGLE TOILET ROOMS AND ONE HOOK AT EACH SHOWER.

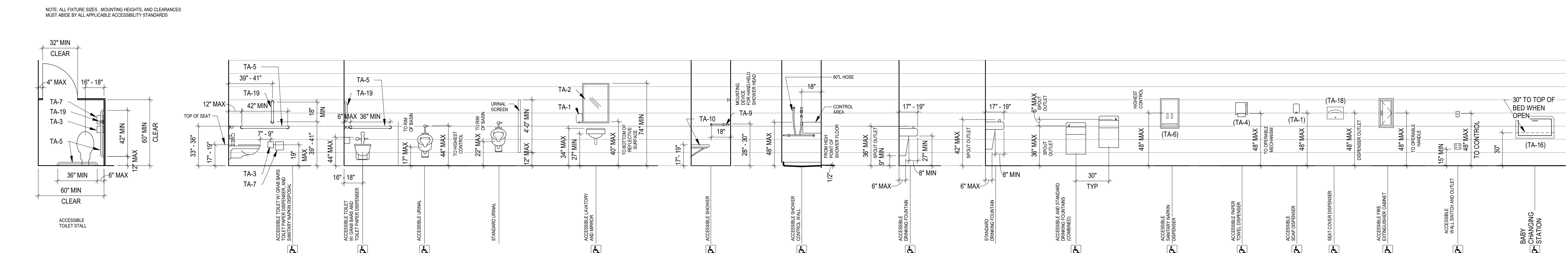
8 DRINKING FOUNTAIN GUIDELINE
 1/4" = 1'-0"



9 ACCESSIBLE VANITY
 3/8" = 1'-0"



10 MISC MOUNTING HEIGHTS
 3/8" = 1'-0"



6 ACCESSIBILITY STANDARDS - AGES 13 THRU ADULT (GRADES 8 AND ABOVE)
 1/4" = 1'-0"

GENERAL DEMOLITION NOTES

1. DEMOLITION PLANS INDICATE SOME OF THE SCOPE-OF-WORK INVOLVED FOR THE DEMOLITION PHASE OF THIS PROJECT. CONTRACTOR SHALL REVIEW ALL SHEETS FOR ADDITIONAL DEMOLITION SCOPE.
2. CONTRACTOR SHALL VERIFY EXISTING SITE AND BUILDING CONDITIONS AND DIMENSIONS IN THE FIELD PRIOR TO DEMOLITION ACTIVITIES AND WORK.
3. CONTRACTOR SHALL NOTIFY ARCHITECT OF ANY DISCREPANCIES IN WRITING.
4. CONTRACTOR SHALL NOTIFY ARCHITECT AND OWNER OF ANY POSSIBLE ASBESTOS CONTAINING MATERIALS DISCOVERED BEFORE PROCEEDING WITH WORK. PROTECT INTERIOR CONSTRUCTION TO REMAIN DURING DEMOLITION AND CONSTRUCTION.
5. CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS BEFORE COMMENCING WORK.
6. AFTER AWARD OF THE CONTRACT, CHANGE ORDER REQUESTS FOR ADDITIONAL MONEY WILL NOT BE APPROVED IF THE WORK COULD HAVE BEEN ANTICIPATED DURING A SITE VISIT BY THE CONTRACTOR.
7. CONTRACTOR SHALL NOT SCALE DRAWINGS.
8. CONTRACTOR SHALL PROVIDE ALL NECESSARY SHORING FOR PROTECTION OF EXISTING CONSTRUCTION TO REMAIN.
9. CONTRACTOR SHALL REPAIR, REPLACE, OR PATCH EXISTING BUILDINGS, DRIVEWAYS, SIDEWALKS, CANOPIES, AND/OR PARKING AREAS DAMAGED, MODIFIED, AND/OR DISTURBED BY DEMOLITION WORK.
10. CONTRACTOR SHALL REGRADE AND HYDROMULCH AREAS AFFECTED BY DEMOLITION.
11. ALL FURNITURE WILL BE REMOVED OR RELOCATED BY THE OWNER AS NECESSARY PRIOR TO THE DEMOLITION WORK OF THIS PROJECT. CONTRACTOR SHALL COORDINATE WITH OWNER AS REQUIRED.
12. REMOVE EXISTING CONSTRUCTION TO THE EXTENT INDICATED ON THE DRAWINGS. SHOULD ANY DAMAGE OCCUR TO ANY EXISTING CONSTRUCTION TO REMAIN, THE CONTRACTOR SHALL REPAIR THE DAMAGE TO MATCH EXISTING AND/OR ADJACENT CONSTRUCTION.
13. CONTRACTOR IS TO VERIFY THE EXACT LOCATION OF ALL EXISTING UTILITIES PRIOR TO DEMOLITION ACTIVITIES AND WORK.
14. CONTRACTOR SHALL REMOVE DEBRIS REGULARLY AS NECESSARY TO ELIMINATE INTERFERENCE WITH ROADS, STREET WALKS, AND ALL OTHER ADJACENT FACILITIES.
15. CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTION OF TEMPORARY DUST AND/OR SOUND PARTITION BETWEEN CONSTRUCTION AREA AND AREAS NOT IN SCOPE AS NECESSARY. DEMOLITION ACTIVITIES SHALL BE PERFORMED SO AS TO PRODUCE MINIMAL DISTURBANCE TO EXISTING FACILITY AND OCCUPANTS (I.E. MINIMIZE EXCESSIVE AND PROLONGED NOISE LEVELS AND DUST).
16. NOTIFY THE BUILDING OWNER OF ANY MATERIALS, FIXTURES, ETC. TO BE REMOVED THAT ARE DEEMED SALVAGEABLE. TURN OVER ANY REQUESTED ITEMS TO THE BUILDING OWNER IN GOOD CONDITION.
17. THE CONTRACTOR SHALL REMOVE ALL TRASH AND DEBRIS FROM THE SITE ON A DAILY BASIS.
18. MAINTAIN ANY AND ALL EXISTING FIRE-RATED ASSEMBLIES THAT ARE TO REMAIN, AND THEIR ASSOCIATED FIRE-RATINGS, INCLUDING BUT NOT LIMITED TO ALL ASSOCIATED EXISTING FIRE-RATED OPENINGS, ALL ASSOCIATED EXISTING FIRE-RATED PENETRATIONS, AND ALL ASSOCIATED EXISTING FIRE-RATED FIRESTOPPING CONDITIONS.
19. WHEN UNANTICIPATED MECHANICAL, ELECTRICAL, OR STRUCTURAL ELEMENTS THAT CONFLICT WITH THE INTENDED FUNCTION OR DESIGN ARE ENCOUNTERED, DETERMINE THE NATURE AND EXTENT OF THE CONFLICT AND NOTIFY THE ARCHITECT IMMEDIATELY FOR RESOLUTION.
20. PROTECT EXISTING SITE IMPROVEMENTS AND LANDSCAPING TO REMAIN. PROTECTION SHALL INCLUDE BUT NOT BE LIMITED TO EXISTING TREES AND OTHER VEGETATION INDICATED TO REMAIN IN PLACE AGAINST UNNECESSARY CUTTING, BREAKING, OR SKINNING OF ROOTS, SKINNING OR BRUISING OF BARK, SMOTHERING OF TREES BY STOCKPILING CONSTRUCTION MATERIAL OR EXCAVATED MATERIAL WITHIN DRIP LINES.
21. CONTRACTOR SHALL PROVIDE TRAFFIC HANDLING MEASURES TO PROTECT THE GENERAL PUBLIC AT ALL TIMES, AS NECESSARY AND AS REQUIRED BY AUTHORITIES HAVING JURISDICTION.
22. DO NOT INTERRUPT EXISTING UTILITIES, EXCEPT WHEN AUTHORIZED IN WRITING BY AUTHORITIES HAVING JURISDICTION. PROVIDE TEMPORARY SERVICES DURING INTERRUPTIONS TO EXISTING UTILITIES, AS ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION.
23. WHEN UTILITY SERVICES ARE REQUIRED TO BE REMOVED, RELOCATED, OR ABANDONED, PROVIDE BYPASS CONNECTIONS TO MAINTAIN CONTINUITY OF SERVICE BEFORE PROCEEDING WITH DEMOLITION.
24. CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES INCLUDING BUT NOT LIMITED TO THE FOLLOWING: ELECTRIC, GAS, WATER, TELEPHONE, STORM SEWER, AND SANITARY SEWER FOR FIELD LOCATION OF ALL UNDERGROUND AND OVERHEAD UTILITY LINES. PRIOR TO COMMENCEMENT OF ANY DEMOLITION WORK, CONTRACTOR SHALL IDENTIFY ALL ELECTRICAL CIRCUITS SERVING THE AREA INVOLVED WITH THIS DEMOLITION. THOSE CIRCUITS SHALL THEN BE LOCKED OUT AND TAGGED OUT IF THEY DO NOT SERVICE ANY OF THE REMAINING BUILDING. THOSE CIRCUITS WHICH ARE IDENTIFIED TO SERVICE BOTH THE AREA TO BE DEMOLISHED AND THE REMAINING BUILDING SHALL BE SPLIT SO AS TO KILL ALL ELECTRICAL POWER TO THE AREA TO BE DEMOLISHED WHILE MAINTAINING POWER TO THE REMAINDER OF THE BUILDING.
25. CONTRACTOR SHALL RE-LOCATE UTILITIES AND EQUIPMENT AS REQUIRED TO ACCOMMODATE NEW HVAC, ELECTRICAL, PLUMBING, AND TECHNOLOGY REQUIREMENTS FOR NEW WORK.
26. SAW-CUT AND REMOVE EXISTING FLOOR FINISHES AND FLOOR SLAB AS REQUIRED TO INSTALL NEW FIXTURES, ITEMS, AND/OR DEVICES FOR ALL SCOPE-OF-WORK PERTAINING TO NEW MECHANICAL WORK, NEW PLUMBING UTILITIES, NEW PLUMBING WORK, NEW ELECTRICAL WORK, AND NEW TECHNOLOGY WORK. SPLICE NEW REINFORCING BARS DOWELLED INTO EXISTING CONCRETE AND PROVIDE NEW VAPOR RETARDER AND NEW CONTINUOUS WATERSTOPS AT JOINT BETWEEN NEW CONCRETE FLOOR SLAB AND EXISTING CONCRETE FLOOR SLAB. PATCH WITH NEW 3,500 PSI MINIMUM CONCRETE AND PREPARE FLOOR, INCLUDING NEW CONCRETE, TO RECEIVE NEW FLOOR FINISHES. COORDINATE WITH STRUCTURAL.
27. EXISTING WALLS (OR PORTIONS OF WALLS) TO BE REMOVED SHALL BE CUT FLUSH WHERE INTERSECTING WITH WALLS TO REMAIN. REMAINING WALLS TO BE PATCHED AND FINISHED SMOOTH.
28. NEW OPENING TO BE CUT IN EXISTING WALLS SHALL BE SAW-CUT AT LOCATIONS INDICATED TO THE HEIGHT AND WIDTH INDICATED. NEW LINTELS SHALL BE INSTALLED TO SUPPORT EXISTING WALL CONSTRUCTION ABOVE AS INDICATED ON THE DRAWINGS, OR IF NOT INDICATED, AS REQUIRED FOR NEW WALL CONSTRUCTION PER STRUCTURAL DRAWINGS.
29. WHERE EXISTING INTERIOR WALLS ARE REPLACED OR REMOVED, REMOVE MEPT SYSTEMS BACK TO PANEL OR MECHANICAL ROOM OR FARTHEST POSSIBLE POINT WITHOUT DISTURBING EXISTING CONSTRUCTION. REMOVE EXISTING MECHANICAL EQUIPMENT, RELOCATE POWER PER MEPT DRAWINGS.
30. REFER TO MEPT DRAWINGS FOR DEMOLITION OF MEPT SYSTEMS. IDENTIFY WORK REQUIRED BY THIS CONTRACTOR WHICH MAY AFFECT DEMOLITION AND REPAIRS OF ARCHITECTURAL ELEMENTS. COORDINATE WITH RELATED SUB CONTRACTORS THE EXTENT OF ALL DEMOLITION WORK.
31. PATCH FLOORS, WALLS AND CEILINGS WHICH REMAIN AT LOCATIONS WHERE PIPES, CONDUITS, ETC. ARE REMOVED AS REQUIRED TO MATCH EXISTING CONDITIONS OR TO RECEIVE NEW FINISHES.
32. WHERE EXISTING FINISH FLOOR IS REMOVED, PREPARE FLOOR SURFACE TO RECEIVE NEW FLOORING.
33. ALL DASHED LINES ARE DEMOLITION LINES UNLESS NOTED OTHERWISE.



NOT IN SCOPE

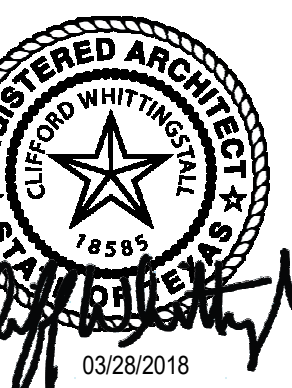
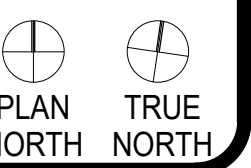
KEYNOTE LEGEND	
KEYNOTE	DESCRIPTION
3	Sim

ARCHITECTURE
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NANOMATERIALS LAB RENOVATION
 One Camino Santa Maria, San Antonio, Texas 78228
ISSUE FOR CONSTRUCTION



CLIENT
 St Mary's University
PROJECT NUMBER
 1816
DATE: MARCH 28, 2018
DRAWN BY: L. BURDEN
CHECKED BY: J. B. SOLIZ

REVISIONS		
No.	Description	Date
1	Addendum 1	04/05/2017

ISSUE FOR CONSTRUCTION
DEMOLITION FLOOR PLAN - GARNI - THIRD FLOOR

D1.01G

GENERAL DEMOLITION NOTES

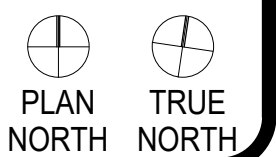
- DEMOLITION PLANS INDICATE SOME OF THE SCOPE-OF-WORK INVOLVED FOR THE DEMOLITION PHASE OF THIS PROJECT. CONTRACTOR SHALL REVIEW ALL SHEETS FOR ADDITIONAL DEMOLITION SCOPE.
- CONTRACTOR SHALL VERIFY EXISTING SITE AND BUILDING CONDITIONS AND DIMENSIONS IN THE FIELD PRIOR TO DEMOLITION ACTIVITIES AND WORK.
- CONTRACTOR SHALL NOTIFY ARCHITECT OF ANY DISCREPANCIES IN WRITING.
- CONTRACTOR SHALL NOTIFY ARCHITECT AND OWNER OF ANY POSSIBLE ASBESTOS CONTAINING MATERIALS DISCOVERED BEFORE PROCEEDING WITH WORK. PROTECT INTERIOR CONSTRUCTION TO REMAIN DURING DEMOLITION AND CONSTRUCTION.
- CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS BEFORE COMMENCING WORK.
- AFTER AWARD OF THE CONTRACT, CHANGE ORDER REQUESTS FOR ADDITIONAL MONEY WILL NOT BE APPROVED IF THE WORK COULD HAVE BEEN ANTICIPATED DURING A SITE VISIT BY THE CONTRACTOR.
- CONTRACTOR SHALL NOT SCALE DRAWINGS.
- CONTRACTOR SHALL PROVIDE ALL NECESSARY SHORING FOR PROTECTION OF EXISTING CONSTRUCTION TO REMAIN.
- CONTRACTOR SHALL REPAIR, REPLACE, OR PATCH EXISTING BUILDINGS, DRIVEWAYS, SIDEWALKS, CANOPIES, AND/OR PARKING AREAS DAMAGED, MODIFIED, AND/OR DISTURBED BY DEMOLITION WORK.
- CONTRACTOR SHALL REGRADE AND HYDROMULCH AREAS AFFECTED BY DEMOLITION.
- ALL FURNITURE WILL BE REMOVED OR RELOCATED BY THE OWNER AS NECESSARY PRIOR TO THE DEMOLITION WORK OF THIS PROJECT. CONTRACTOR SHALL COORDINATE WITH OWNER AS REQUIRED.
- REMOVE EXISTING CONSTRUCTION TO THE EXTENT INDICATED ON THE DRAWINGS. SHOULD ANY DAMAGE OCCUR TO ANY EXISTING CONSTRUCTION TO REMAIN, THE CONTRACTOR SHALL REPAIR THE DAMAGE TO MATCH EXISTING AND/OR ADJACENT CONSTRUCTION.
- CONTRACTOR IS TO VERIFY THE EXACT LOCATION OF ALL EXISTING UTILITIES PRIOR TO DEMOLITION ACTIVITIES AND WORK.
- CONTRACTOR SHALL REMOVE DEBRIS REGULARLY AS NECESSARY TO ELIMINATED INTERFERENCE WITH ROADS, STREET, WALKS, AND ALL OTHER ADJACENT FACILITIES.
- CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTION OF TEMPORARY DUST AND/OR SOUND PARTITION BETWEEN CONSTRUCTION AREA AND AREAS NOT IN SCOPE AS NECESSARY. DEMOLITION ACTIVITIES SHALL BE PERFORMED SO AS TO PRODUCE MINIMAL DISTURBANCE TO EXISTING FACILITY AND OCCUPANTS (IE. MINIMIZE EXCESSIVE AND PROLONGED NOISE LEVELS AND DUST).
- NOTIFY THE BUILDING OWNER OF ANY MATERIALS, FIXTURES, ETC. TO BE REMOVED THAT ARE DEEMED SALVAGEABLE. TURN OVER ANY REQUESTED ITEMS TO THE BUILDING OWNER IN GOOD CONDITION.
- THE CONTRACTOR SHALL REMOVE ALL TRASH AND DEBRIS FROM THE SITE ON A DAILY BASIS.
- MAINTAIN ANY AND ALL EXISTING FIRE-RATED ASSEMBLIES THAT ARE TO REMAIN, AND THEIR ASSOCIATED FIRE-RATINGS, INCLUDING BUT NOT LIMITED TO ALL ASSOCIATED EXISTING FIRE-RATED OPENINGS, ALL ASSOCIATED EXISTING FIRE-RATED PENETRATIONS, AND ALL ASSOCIATED EXISTING FIRE-RATED FIRESTOPPING CONDITIONS.
- WHEN UNANTICIPATED MECHANICAL, ELECTRICAL, OR STRUCTURAL ELEMENTS THAT CONFLICT WITH THE INTENDED FUNCTION OR DESIGN ARE ENCOUNTERED, DETERMINE THE NATURE AND EXTENT OF THE CONFLICT AND NOTIFY THE ARCHITECT IMMEDIATELY FOR RESOLUTION.
- PROTECT EXISTING SITE IMPROVEMENTS AND LANDSCAPING TO REMAIN. PROTECTION SHALL INCLUDE BUT NOT BE LIMITED TO EXISTING TREES AND OTHER VEGETATION INDICATED TO REMAIN IN PLACE AGAINST UNNECESSARY CUTTING, BREAKING, OR SKINNING OF ROOTS, SKINNING OR BRUISING OF BARK, SMOTHERING OF TREES BY STOCKPILING CONSTRUCTION MATERIAL OR EXCAVATED MATERIAL WITHIN DRIP LINES.
- CONTRACTOR SHALL PROVIDE TRAFFIC HANDLING MEASURES TO PROTECT THE GENERAL PUBLIC AT ALL TIMES, AS NECESSARY AND AS REQUIRED BY AUTHORITIES HAVING JURISDICTION.
- DO NOT INTERRUPT EXISTING UTILITIES, EXCEPT WHEN AUTHORIZED IN WRITING BY AUTHORITIES HAVING JURISDICTION. PROVIDE TEMPORARY SERVICES DURING INTERRUPTIONS TO EXISTING UTILITIES, AS ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION.
- WHEN UTILITY SERVICES ARE REQUIRED TO BE REMOVED, RELOCATED, OR ABANDONED, PROVIDE BYPASS CONNECTIONS TO MAINTAIN CONTINUITY OF SERVICE BEFORE PROCEEDING WITH DEMOLITION.
- CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES INCLUDING BUT NOT LIMITED TO THE FOLLOWING: ELECTRIC, GAS, WATER, TELEPHONE, STORM SEWER, AND SANITARY SEWER FOR FIELD LOCATION OF ALL UNDERGROUND AND OVERHEAD UTILITY LINES. PRIOR TO COMMENCEMENT OF ANY DEMOLITION WORK, CONTRACTOR SHALL IDENTIFY ALL ELECTRICAL CIRCUITS SERVING THE AREA INVOLVED WITH THIS DEMOLITION. THOSE CIRCUITS SHALL THEN BE LOCKED OUT AND TAGGED OUT IF THEY DO NOT SERVICE ANY OF THE REMAINING BUILDING. THOSE CIRCUITS WHICH ARE IDENTIFIED TO SERVICE BOTH THE AREA TO BE DEMOLISHED AND THE REMAINING BUILDING SHALL BE SPLIT SO AS TO KILL ALL ELECTRICAL POWER TO THE AREA TO BE DEMOLISHED WHILE MAINTAINING POWER TO THE REMAINDER OF THE BUILDING.
- CONTRACTOR SHALL RELOCATE UTILITIES AND EQUIPMENT AS REQUIRED TO ACCOMMODATE NEW HVAC, ELECTRICAL, PLUMBING, AND TECHNOLOGY REQUIREMENTS FOR NEW WORK.
- SAW-CUT AND REMOVE EXISTING FLOOR FINISHES AND FLOOR SLABS AS REQUIRED TO INSTALL NEW FIXTURES, ITEMS, AND/OR DEVICES FOR ALL SCOPE-OF-WORK PERTAINING TO NEW MECHANICAL WORK, NEW PLUMBING UTILITIES, NEW PLUMBING WORK, NEW ELECTRICAL WORK, AND NEW TECHNOLOGY WORK. SPLICE NEW REINFORCING BARS DOWELED INTO EXISTING CONCRETE AND PROVIDE NEW VAPOR RETARDER AND NEW CONTINUOUS WATERSTOPS AT JOINT BETWEEN NEW CONCRETE FLOOR SLAB AND EXISTING CONCRETE FLOOR SLAB. PATCH WITH NEW 3,500 PSI MINIMUM CONCRETE AND PREPARE FLOOR, INCLUDING NEW CONCRETE, TO RECEIVE NEW FLOOR FINISHES. COORDINATE WITH STRUCTURAL.
- EXISTING WALLS (OR PORTIONS OF WALLS) TO BE REMOVED SHALL BE CUT FLUSH WHERE INTERSECTING WITH WALLS TO REMAIN. REMAINING WALLS TO BE PATCHED AND FINISHED SMOOTH.
- NEW OPENING TO BE CUT IN EXISTING WALLS SHALL BE SAW-CUT AT LOCATIONS INDICATED TO THE HEIGHT AND WIDTH INDICATED. NEW LINTELS SHALL BE INSTALLED TO SUPPORT EXISTING WALL CONSTRUCTION ABOVE AS INDICATED ON THE DRAWINGS, OR IF NOT INDICATED, AS REQUIRED FOR NEW WALL CONSTRUCTION PER STRUCTURAL DRAWINGS.
- WHERE EXISTING INTERIOR WALLS ARE REPLACED OR REMOVED, REMOVE MEPT SYSTEMS BACK TO PANEL, OR MECHANICAL ROOM, OR FARTHEST POSSIBLE POINT WITHOUT DISTURBING EXISTING CONSTRUCTION. REMOVE EXISTING MECHANICAL EQUIPMENT, RELOCATE POWER PER MEPT DRAWINGS.
- REFER TO MEPT DRAWINGS FOR DEMOLITION OF MEPT SYSTEMS. IDENTIFY WORK REQUIRED BY THIS CONTRACTOR WHICH MAY AFFECT DEMOLITION AND/OR REPAIRS OF ARCHITECTURAL ELEMENTS. COORDINATE WITH RELATED SUB CONTRACTORS THE EXTENT OF ALL DEMOLITION WORK.
- PATCH FLOORS, WALLS CEILING WHICH REMAIN AT LOCATIONS WHERE PIPES, CONDUITS, ETC. ARE REMOVED AS REQUIRED TO MATCH EXISTING CONDITIONS OR TO RECEIVE NEW FINISHES.
- WHERE EXISTING FINISH FLOOR IS REMOVED, PREPARE FLOOR SURFACE TO RECEIVE NEW FLOORING.
- ALL DASHED LINES ARE DEMOLITION LINES UNLESS NOTED OTHERWISE.

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NANOMATERIALS LAB RENOVATION
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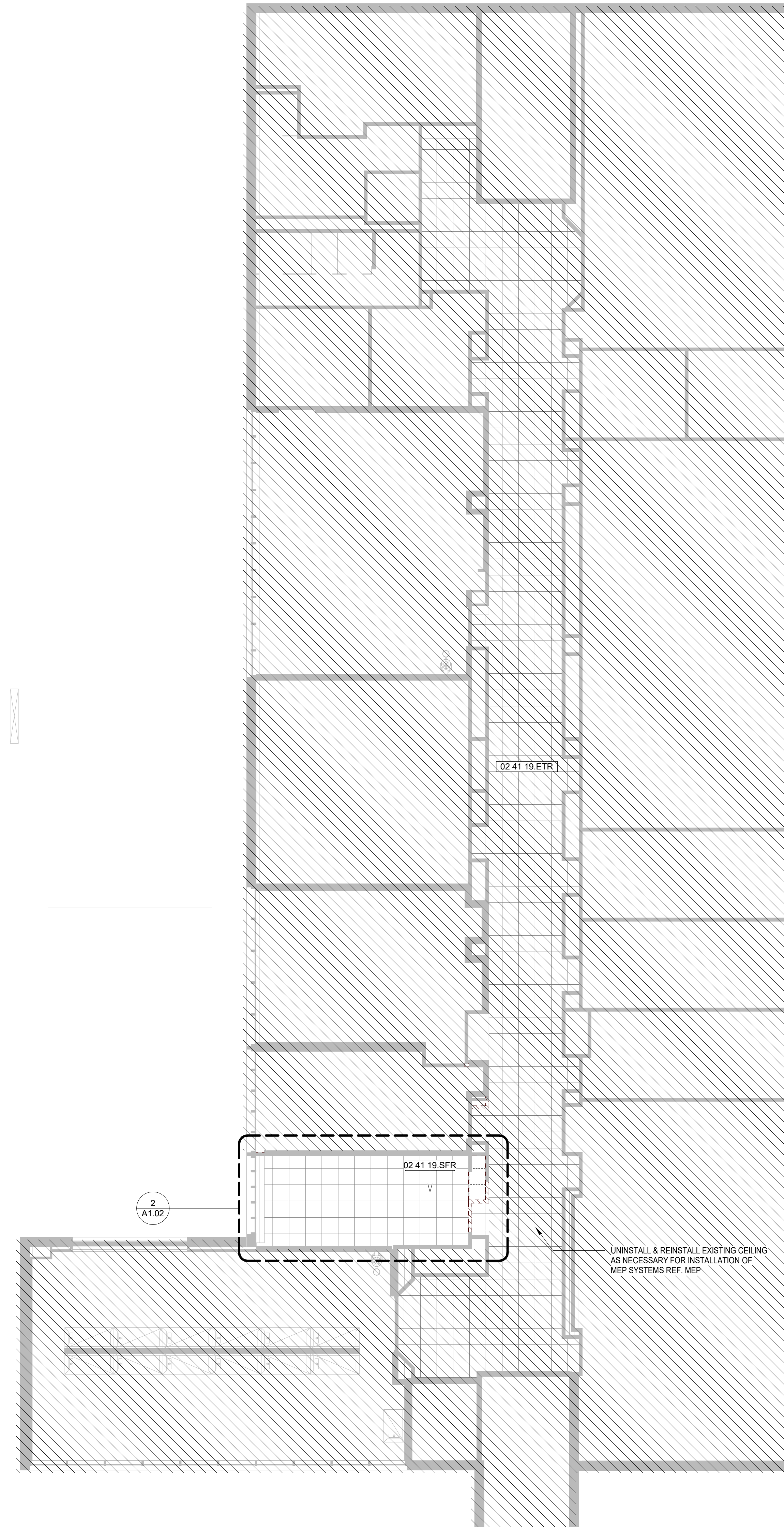
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PROJECT NUMBER
1816
DATE: MARCH 28, 2018
DRAWN BY: L. BURDEN
CHECKED BY: J. B. SOLIZ

No.	Description	Date

ISSUE FOR CONSTRUCTION

DEMOLITION RCP
PLAN - GARNI -
THIRD FLOOR

D2.01G



NOT IN SCOPE

KEYNOTE LEGEND	
KEYNOTE	DESCRIPTION
02 41 19 ETR	EXISTING TO REMAIN
02 41 19 SFR	SALVAGE FOR REUSE

GENERAL NOTES

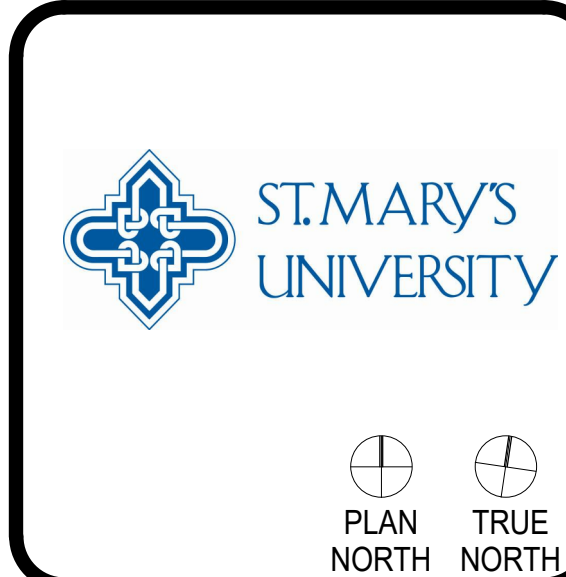
1. VERIFY DIMENSIONS AND EXISTING CONDITIONS BEFORE COMMENCING WORK. REPORT DISCREPANCIES TO THE ARCHITECT PRIOR TO PROCEEDING WITH AFFECTED WORK.
2. REFLECTED CEILING PLAN DIMENSIONS ARE REFERENCED FROM FINISHED SURFACES UNLESS NOTED OTHERWISE. CEILING HEIGHTS ARE DIMENSIONED FROM FLOOR TO FINISHED CEILING HEIGHT.
3. DIMENSIONS NOTED AS "FIELD VERIFY" SHALL BE CHECKED AT THE SITE BY THE CONTRACTOR AND REVIEWED WITH THE ARCHITECT BEFORE INCORPORATING INTO THE WORK.
4. DO NOT SCALE DRAWING. WRITTEN DIMENSIONS TAKE PRECEDENCE. IF CLARIFICATION IS REQUIRED IN ORDER TO DETERMINE THE INTENT OF THE CONTRACT DOCUMENTS, CONTACT THE ARCHITECT.
5. NOTES OR DIMENSIONS LABELED "TYPICAL" SHALL APPLY TO SITUATIONS THAT ARE THE SAME OR SIMILAR.
6. ALL INTERIOR PARTITIONS SHALL BE KEYS AS \circ - REFERENCE SHEET SERIES AT 30' FOR INTERIOR PARTITION TYPES.
7. WALLS TO BE FURRED WITH INTERIOR PARTITION TYPE "F2" UNLESS NOTED OTHERWISE.
8. ALL DIMENSIONS ARE TO FACE OF FINISHED WALL, U.N.O.
9. ALL SPACES WITH FLOOR DRAINS TO HAVE FINISHED FLOORS SLOPED TO DRAIN NOT TO EXCEED ONE IN FIFTY.
10. ALL FLOOR FINISH CHANGES SHALL OCCUR AT THE CENTERLINE OF DOORS UNLESS NOTED OTHERWISE. ALL FLOOR FINISH CHANGES SHALL HAVE THRESHOLDS OR REDUCER STRIPS.
11. FOR TYPICAL TACKBOARD / MARKERBOARD ELEVATION REFER TO INTERIOR ELEVATIONS.
12. PROVIDE VINYL REDUCER AT ALL DISSIMILAR FLOOR MATERIALS U.N.O.
13. U.N.O. ALL ELECTRICAL AND MECHANICAL OPERABLE DEVICES SHALL BE MOUNTED WITH THE HIGHEST OPERABLE CONTROL AT MAXIMUM OF 42" AFF LIMITED TO ALL COUNTERTOPS, ALL PLUMBING FIXTURES, INCLUDING ALL DRINKING FOUNTAINS, ALL LAVATORIES, ALL URINALS, AND ALL TOILETS SHALL BE STRICTLY ENFORCED.

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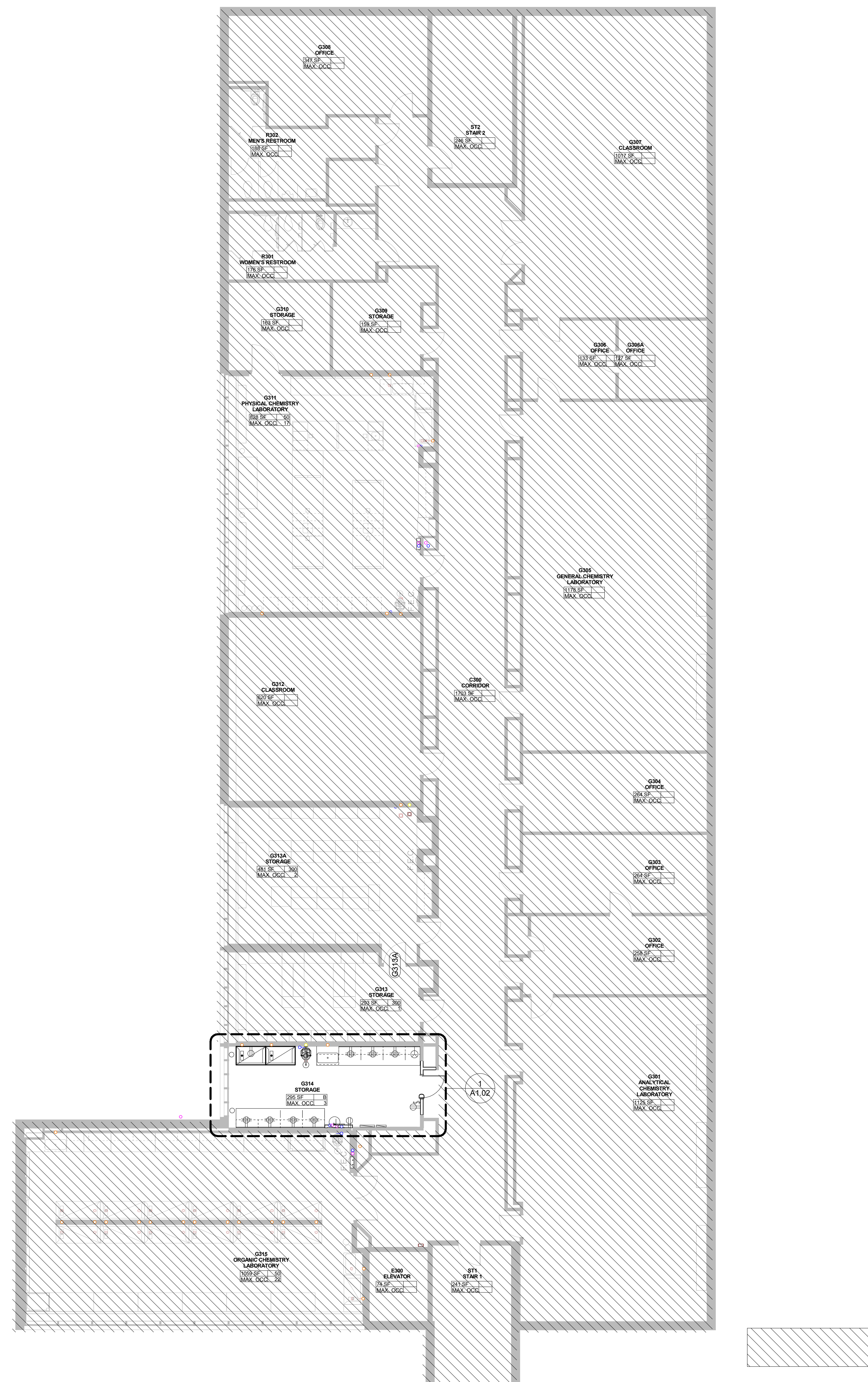
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 DRAWN BY: Author
 CHECKED BY: J. B. SOLIZ

REVISIONS

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ISSUE FOR CONSTRUCTION
COMPOSITE PLAN - GARNI - THIRD FLOOR

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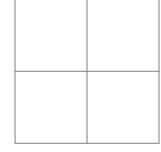





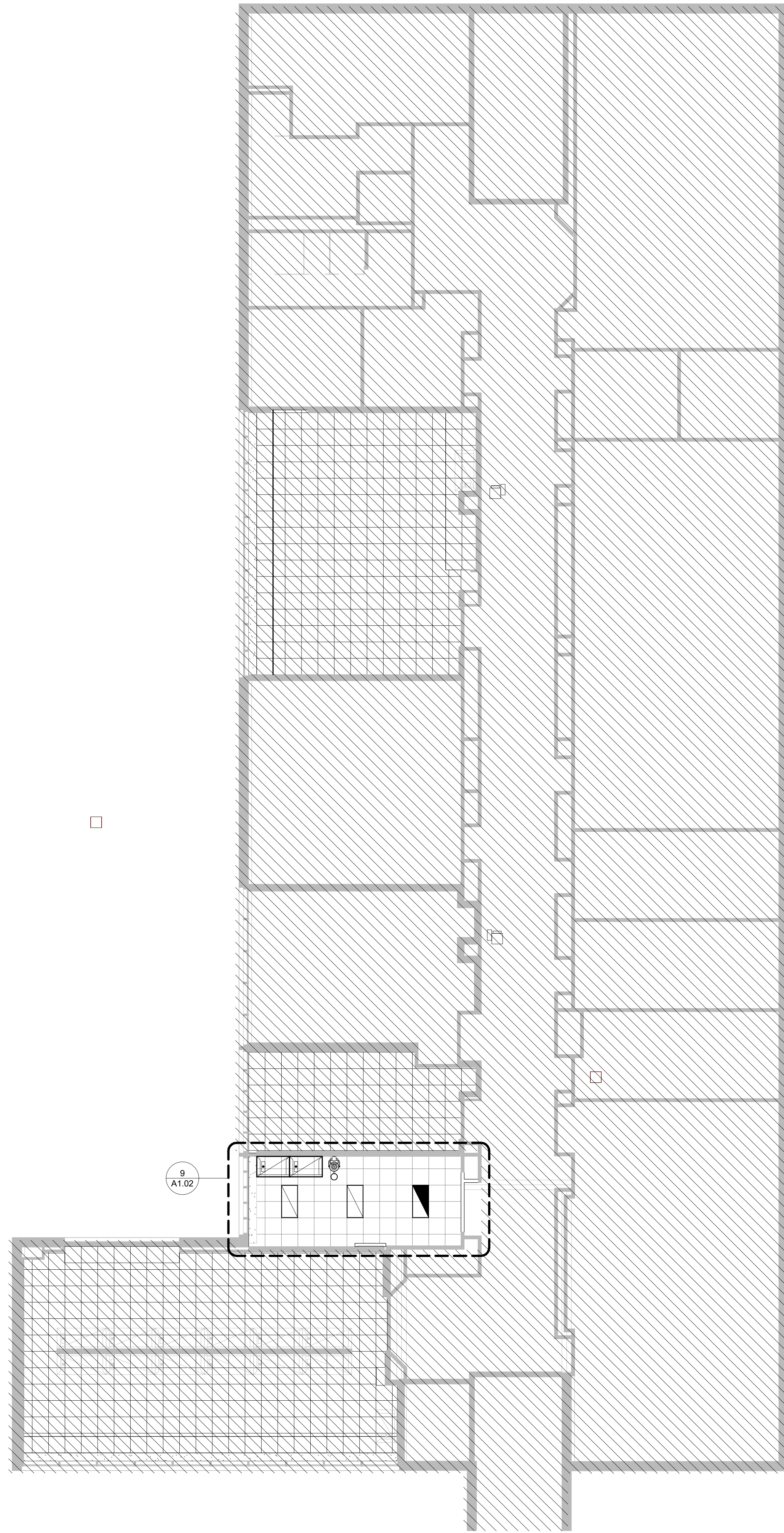
REVISIONS		
No.	Description	Date

GENERAL CEILING PLAN NOTES

1. REFER TO AND COORD. WITH ROOM FINISH SCHEDULES FOR SPECIFIC CEILING TYPES.
2. ALL SCHEDULED CEILING HEIGHTS ARE FROM THE MAIN FLOOR LEVEL WITHIN THE ROOM AND OR SPACE, AND ARE NOT FROM AN ELEVATED FLOOR LEVEL, AND ARE NOT FROM A RECESSED FLOOR LEVEL.
3. REFER TO INTERIOR ELEVATIONS FOR FURTHER INFORMATION ON WALL MOUNTED FIXTURES. REFER TO MEPT DOCUMENTS FOR ADDITIONAL INFORMATION CONCERNING CEILING MOUNTED FIXTURES AND OR WALL MOUNTED FIXTURES. CEILING MOUNTED LIGHT FIXTURES ARE SHOWN FOR LOCATION PURPOSES ONLY. COORD. WITH ELEC. DOCUMENTS FOR LIGHT FIXTURE DESIGNATIONS.
4. VERIFY LOCATIONS OF ALL CEILING ACCESS PANELS WITH MEPT DOCUMENTS. COORD. LOCATIONS OF CEILING ACCESS PANELS WITH ARCH. PRIOR TO INSTALLATION. CEILING ACCESS PANEL FIRE RATINGS SHALL MATCH CEILING ASSEMBLY FIRE RATINGS.
5. PAINT EXPOSED CEILING.
6. MANUAL ROLLER WINDOW SHADES AT ALL WINDOWS. ALTERNATE MOTORIZED.

CEILING MATERIALS LEGEND

-  2' x 2' ACOUSTIC CEILING TILE
-  2' x 4' RECESSED CEILING LIGHT; REFER TO MEP
-  2' x 2' AIR TERMINALS & DIFFUSERS; REFER TO MEP
-  2' x 4' RECESSED EMERGENCY CEILING LIGHT; REFER TO MEP





PLAN NORTH
 TRUE NORTH



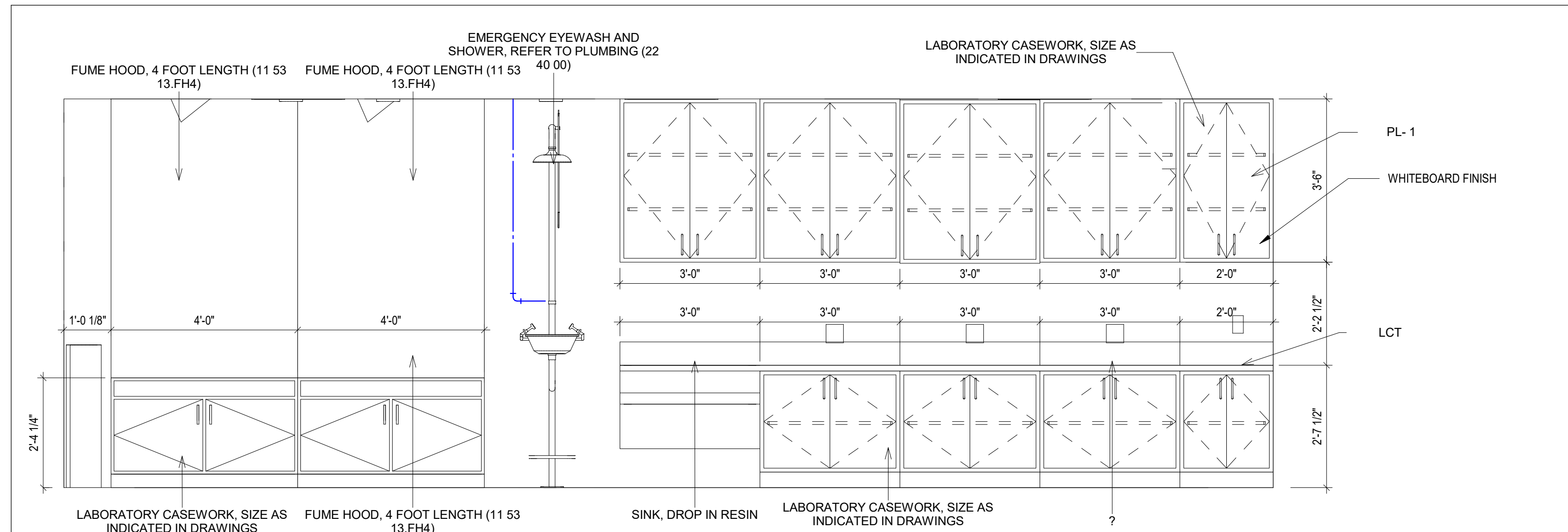
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ISSUE FOR CONSTRUCTION
NANOMATERIALS LAB

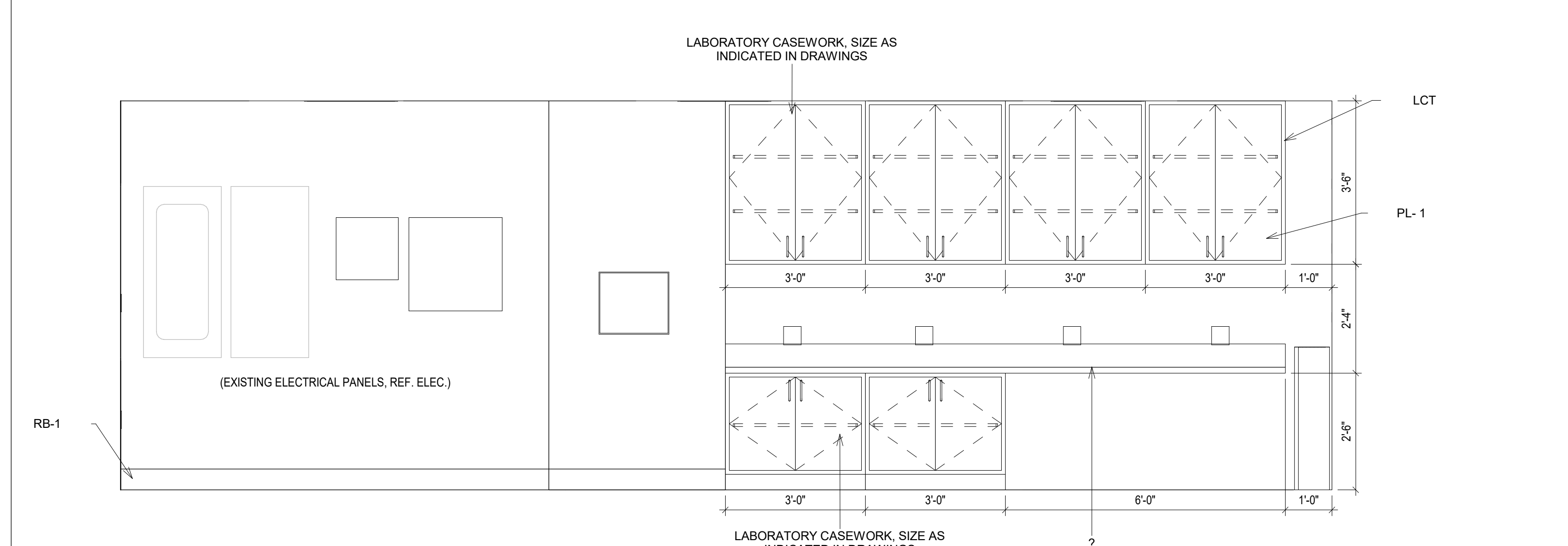
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FINISH LEGEND						
Key Name	FINISH DESCRIPTION	MANUFACTURER	MODEL	SERIES	COLOR	SIZE
ACT-1	ACOUSTICAL CEILING TILE, TYPE 1	ARMSTRONG	CORTEGA	CERTAINTED	WHITE	2'x2'
FS-1	FABRIC SHADE, TYPE 1	DRAPER	PW4400	--	GRAYSTONE	
LC	LABORATORY CASEWORK	KEWALINEE SCIENTIFIC CORPORATION			NO. 208 WINCHESTER MAPLE	VARIABLES
LCT	LABORATORY COUNTER TOP	DURCON	EB101-590-96	CHEMICAL RESISTANT SPC	BLACK	
PC-1	PAINT, COLOR	SHERWIN WILLIAMS	256-C4	--	INCREDIBLE WHITE SW7028	--
PL-1	PLASTIC LAMINATE, TYPE 1	CHEMMETAL MAGNETIC DRY ERASE	--	--	152 WHITE GLOSS	--
RB-1	RUBBER BASE, TYPE 1	ROPPE	--	PINNACLE	148 STEEL GRAY	4"
VCT-1	VINYL COMPOSITION TILE	ARMSTRONG	RAFFIA	--	55800 SNOWDRIFT	12" X 24"

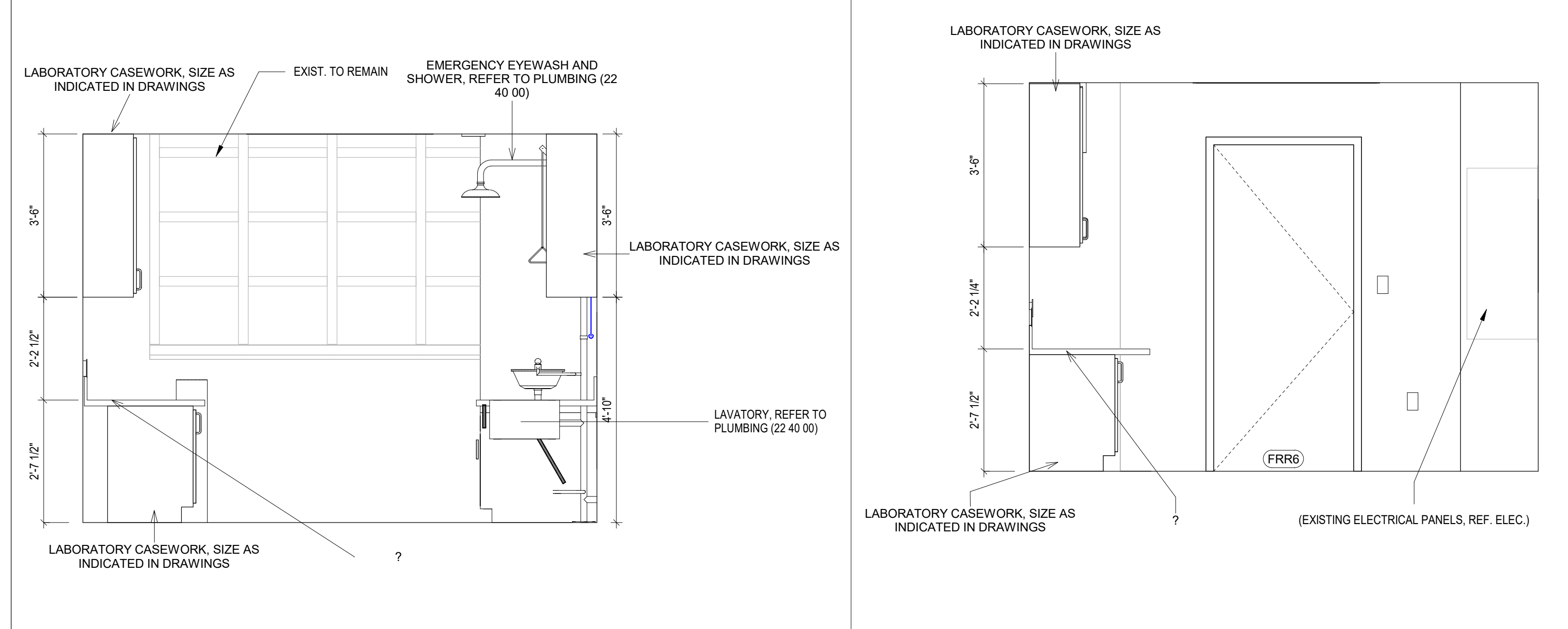
FINISH SCHEDULE - ALL									
ROOM NUMBER	ROOM NAME	FLOOR	BASE	WALL FINISH				CEILING FINISH	REMARKS
				NORTH WALL	EAST WALL	SOUTH WALL	WEST WALL		
G314	STORAGE	VCT-1	RB-1	PC-1	PC-1	PC-1	PC-1	ACT-1	



5 NANO MATERIAL LAB - NORTH
 1/2" = 1'-0"

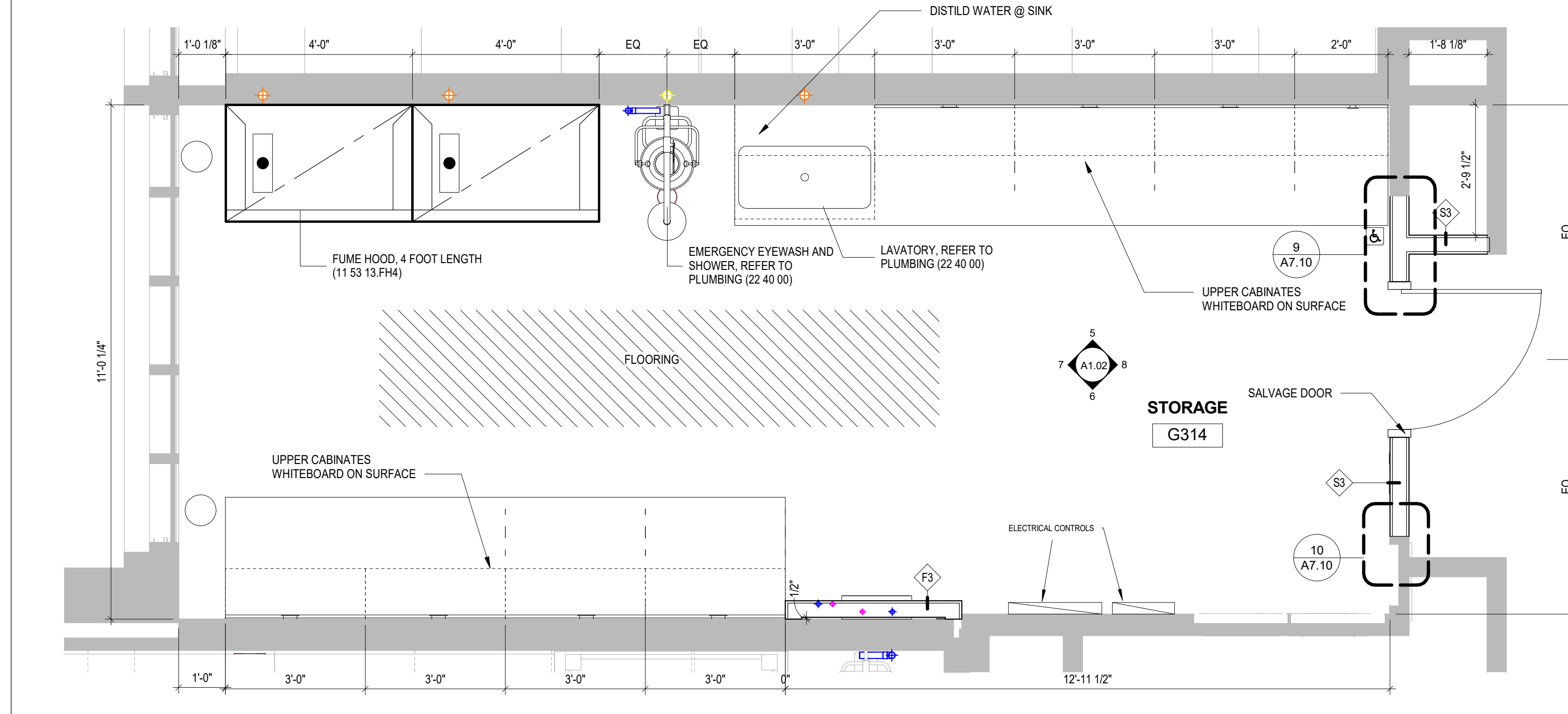


6 NANOMATERIAL LAB - SOUTH
 1/2" = 1'-0"

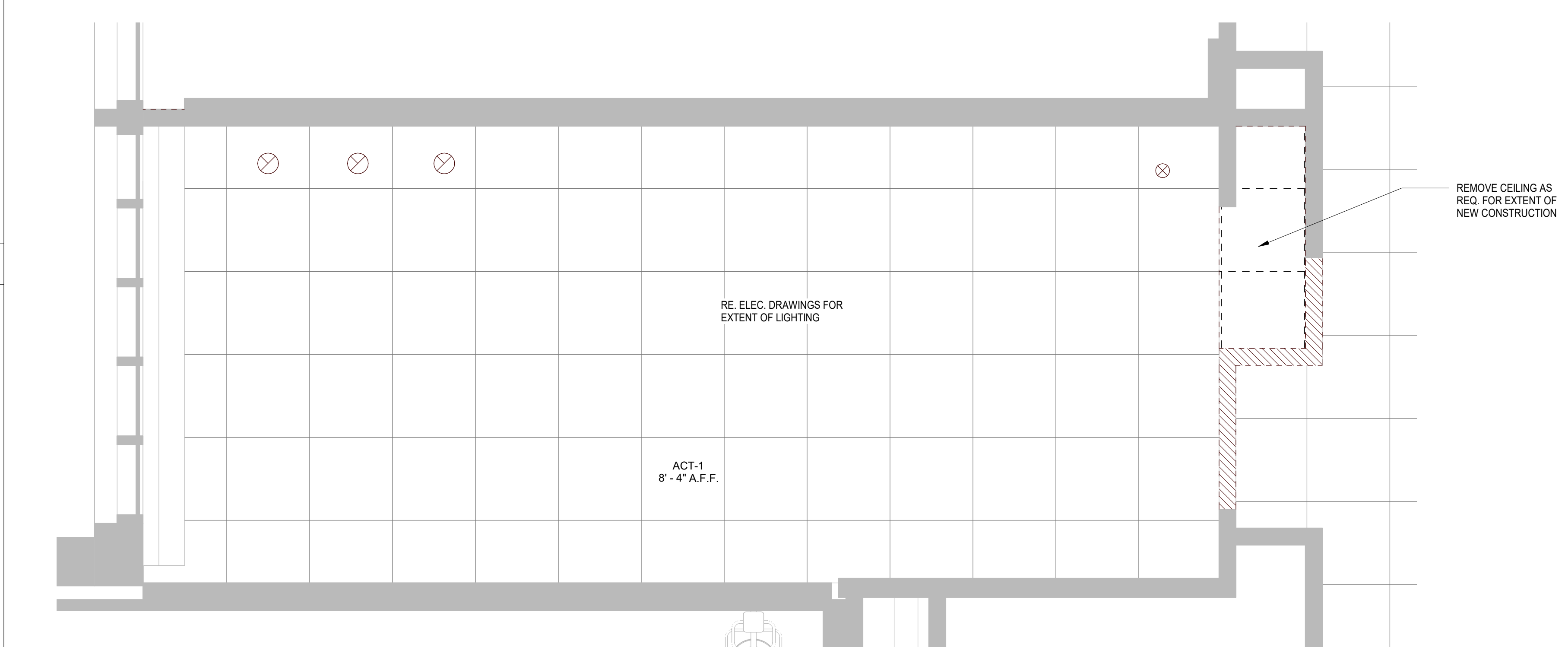


7 NANO MATERIAL LAB - WEST
 1/2" = 1'-0"

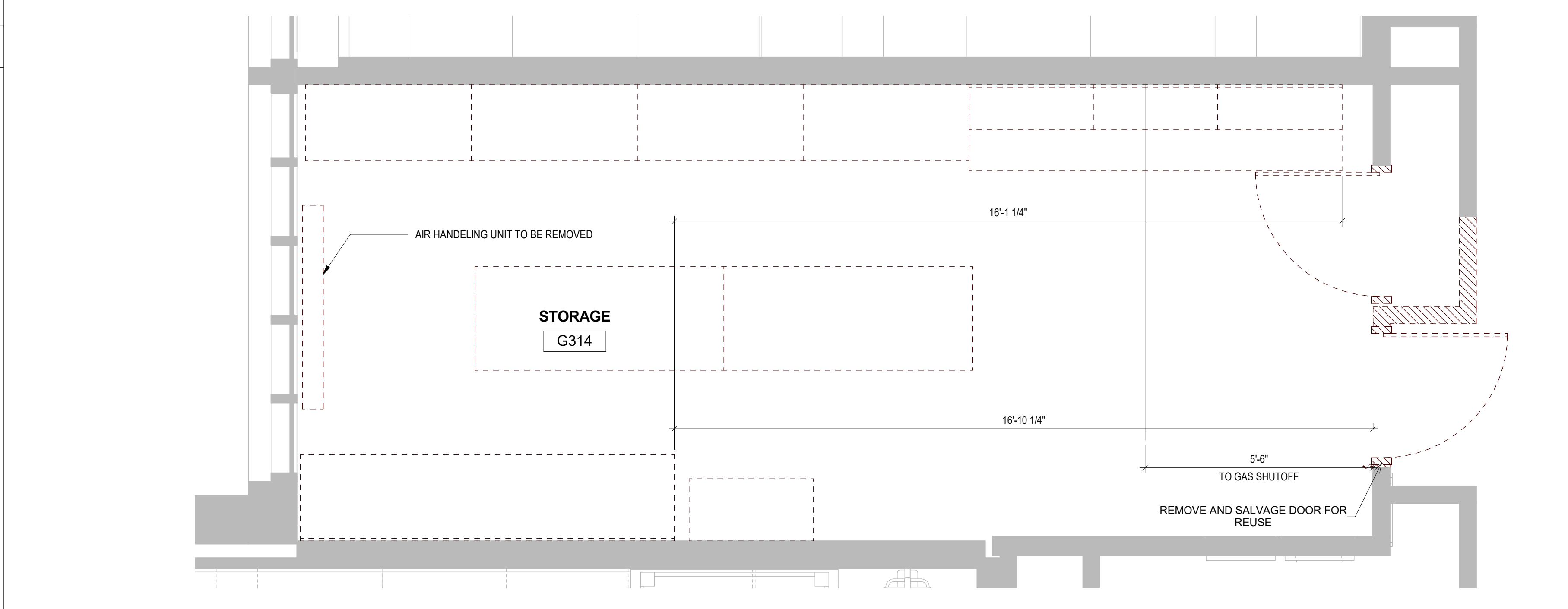
8 NANOMATERIAL LAB - EAST
 1/2" = 1'-0"



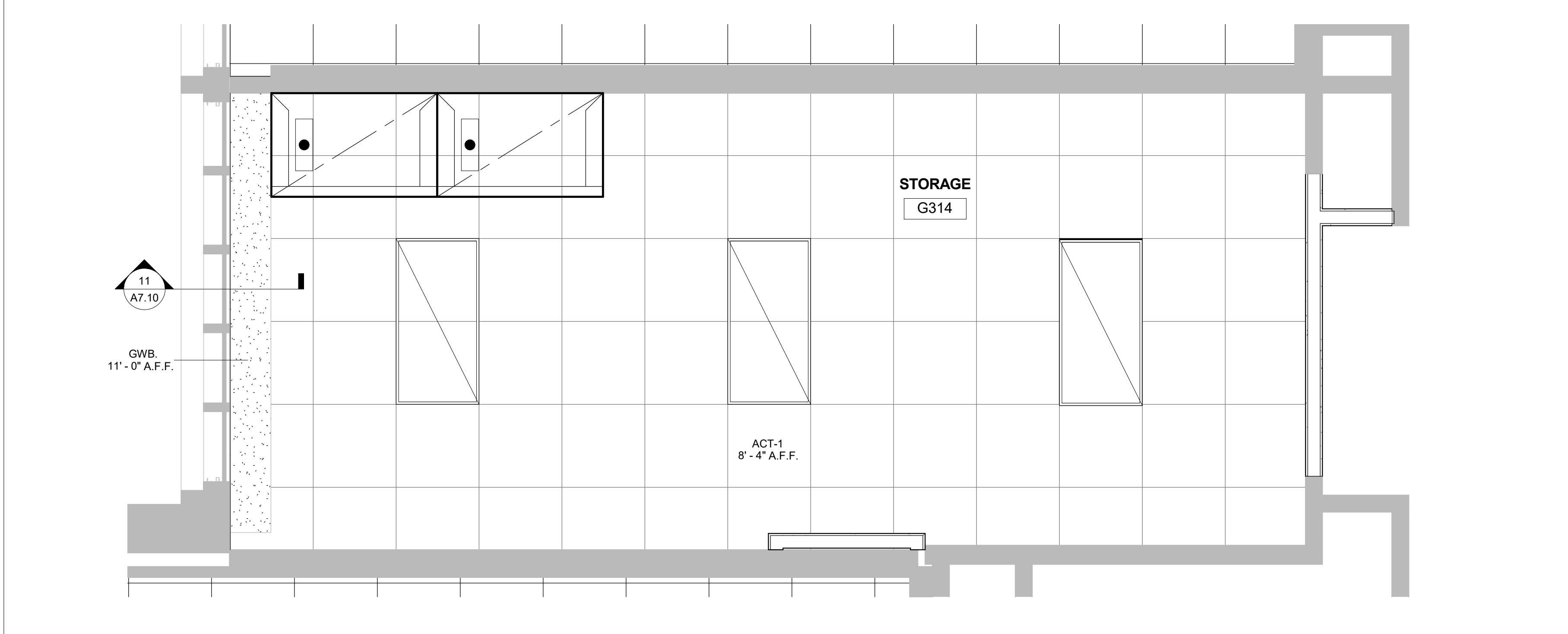
1 A-FPAP-03A-(GARNI) - NANOMATERIALS LAB
 1/2" = 1'-0"



2 DEMOLITION RCP GARNI - Callout 1
 1/2" = 1'-0"



3 DEMOLITION PLAN-THIRD FLOOR - NANOMATERIALS LAB
 1/2" = 1'-0"



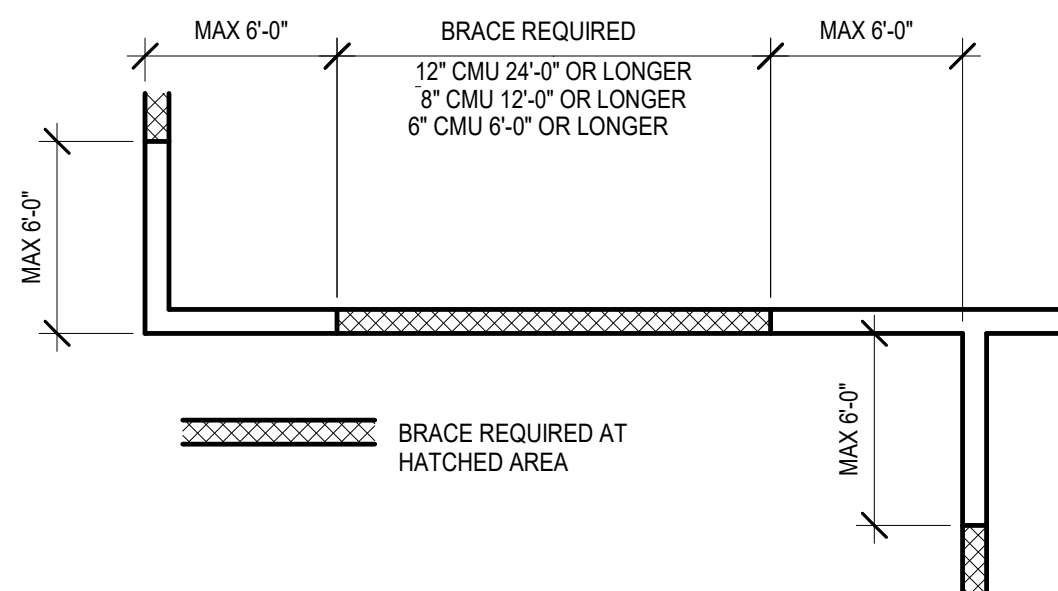
9 RCP - THIRD FLOOR - NANOMATERIALS LAB
 1/2" = 1'-0"

BRACE FRAMING FOR 3 5/8" STUDS				
STUD TYPE	STUD PROP.	SPACING	MAX. LENGTH	MISCELLANEOUS
SJ 20 (40 KS) (20 GA.)	1x = 0.541 N ⁴	4'-0" O.C.	14'-0"	BRACE AT MID-POINT FOR LENGTHS OVER 14'-0"
	rx = 1.429 IN			
	A = 0.2136 N ²			
	Sx = 0.273 N ³			

BRACE FRAMING FOR 6" STUDS				
STUD TYPE	STUD PROP.	SPACING	MAX. LENGTH	MISCELLANEOUS
SJ 20 (40 KS) (20 GA.)	1x = 1.787 N ⁴	4'-0" O.C.	20'-0"	BRACE AT MID-POINT FOR LENGTHS OVER 20'-0"
	rx = 2.253 IN			
	A = 0.2148 N ²			
	Sx = 0.539 N ³			

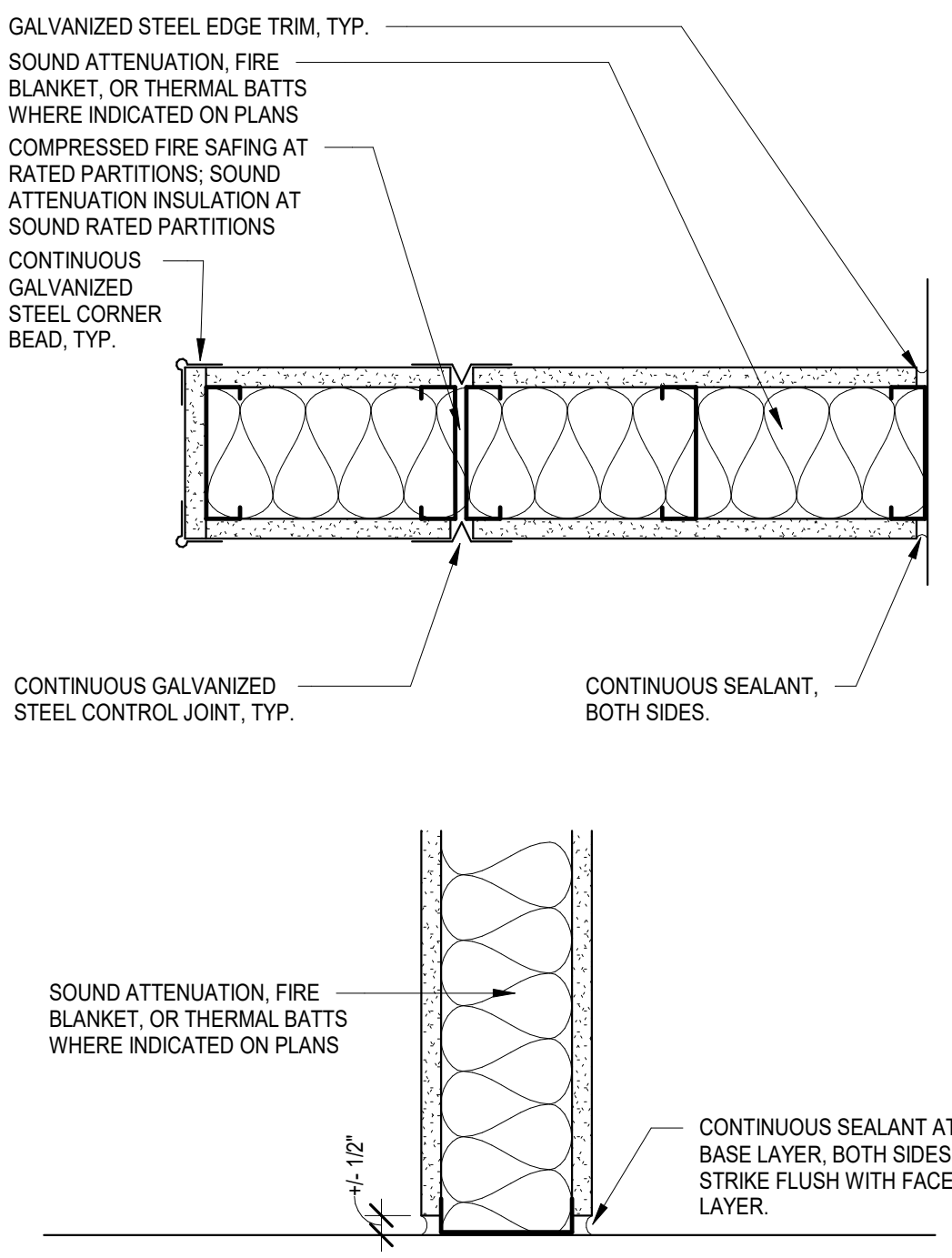
LIMITING HEIGHT OF METAL STUDS				
STUD TYPE	STUD PROP.	SPACING	MAX. LENGTH	MISCELLANEOUS

13 PARTITION TYPES-BRACING CHART
 1/2" = 1'-0"

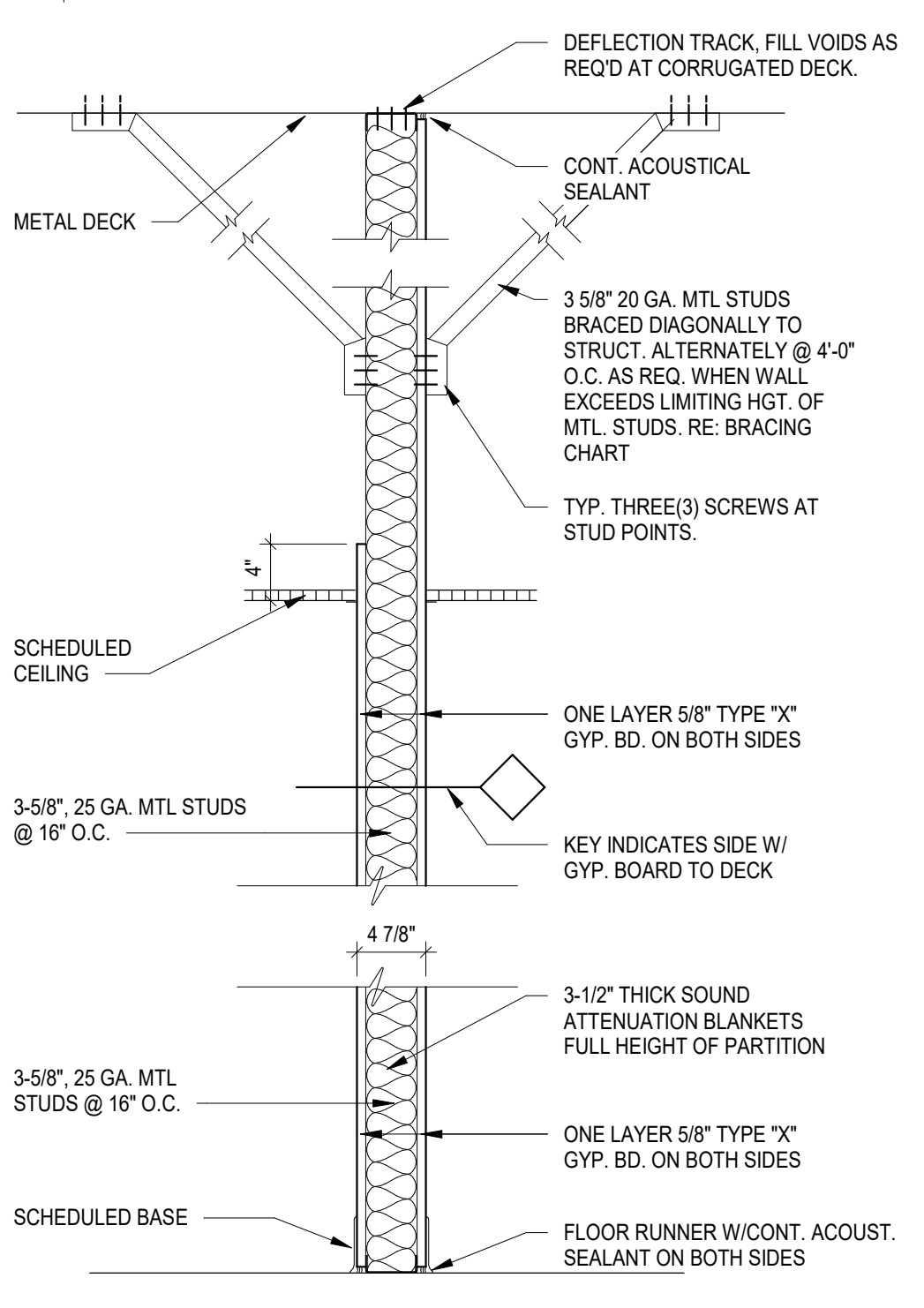


12 PARTITION TYPES-TYP. CMU WALL BRACING
 1/2" = 1'-0"

- BRACING NOTES:**
- AT WALLS THAT TERMINATE ABOVE CEILING, CONTRACTOR MAY CONTINUE METAL STUD FRAMED WALLS TO UNDERSIDE OF METAL DECK AND OMIT BRACING IF HEIGHT DOES NOT EXCEED LIMITING HEIGHT OF METAL STUD AS INDICATED ON CHART BELOW.
 - PROVIDE INTERMEDIATE BRACING AT ALL PARTITIONS THAT EXCEED LIMITING HEIGHT OF METAL STUDS AS INDICATED ON CHART BELOW.
 - ALL BRACING SHALL BE AT STUD POINTS.
 - HERE BRACING METHODS BETWEEN THIS SHEET AND STRUCTURE CONFLICT, STRUCTURE SHALL OVERRIDE, NOTIFY ARCHITECT.
- TERMINATION NOTES:**
- AT ALL RATED PARTITIONS, FILL VOIDS IN METAL DECK AT TOP OF PARTITIONS WITH FIRESAFING.
- GYPSUM WALLBOARD PARTITION NOTES:**
- ALL METAL STUD PARTITIONS ARE 25 GAUGE METAL STUDS AT 16" O.C. UNLESS NOTED OTHERWISE. IF THE LIMITING HEIGHT FOR A PARTITION IS EXCEEDED, INCREASE GAUGE OF STUDS AS INDICATED ON "LIMITING HEIGHT OF METAL STUDS" TABLE BELOW. NOTIFY ARCHITECT PRIOR TO INSTALLATION.
 - PROVIDE 20 GAUGE METAL STUDS IN LIEU OF 25 GAUGE METAL STUDS AT STUD WALL CERAMIC TILE LOCATIONS.
 - SET ALL FLOOR TRACKS ON A CONTINUOUS RIBBON OF SEALANT.
 - AT PARTITIONS DESIGNATED TO HAVE SOUND ATTENUATION BLANKETS:



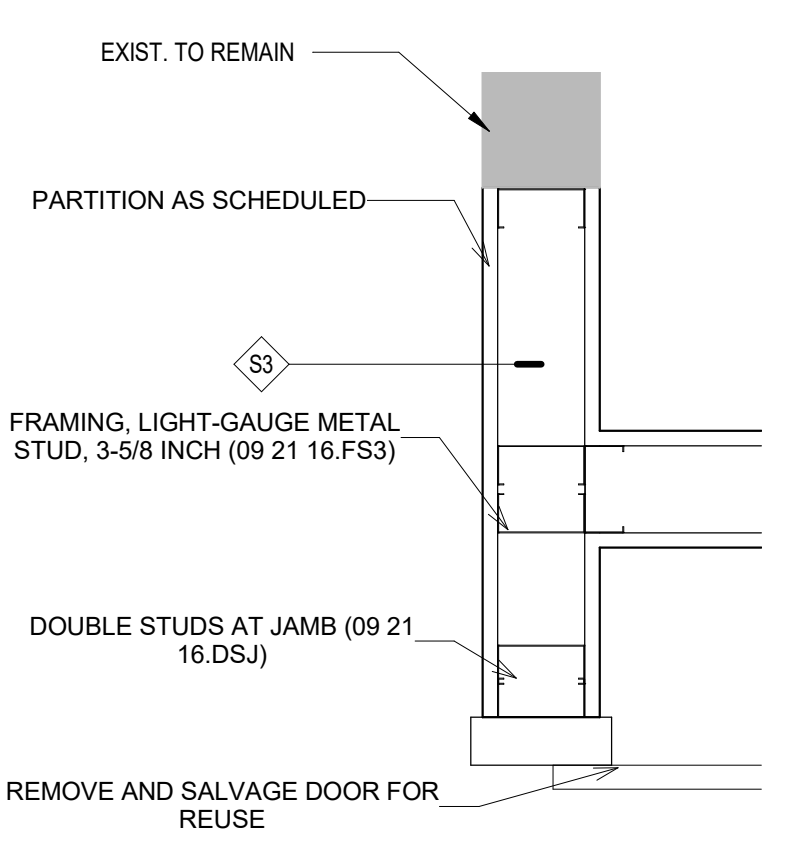
8 PARTITION TYPES-TYPICAL DETAILS
 1/2" = 1'-0"



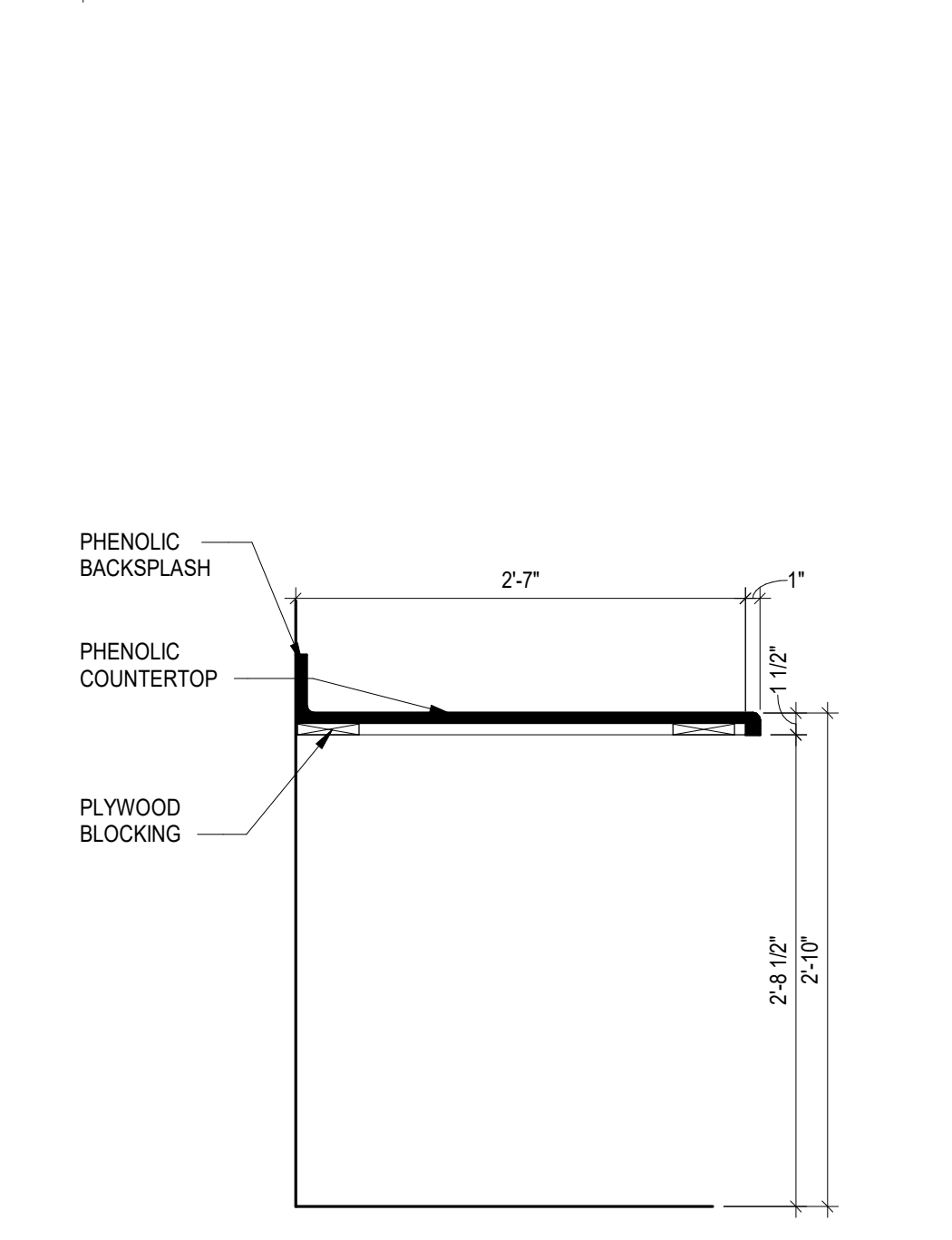
TYPE	FIRE RATG	DESCRIPTION
S3	NONE	3-5/8" METAL STUDS TO DECK
SSA	ONE HOUR	3-5/8" METAL STUDS TO DECK WITH FIRE RATED CEILING

1 PARTITION TYPES-TYPICAL NOTES
 1/2" = 1'-0"

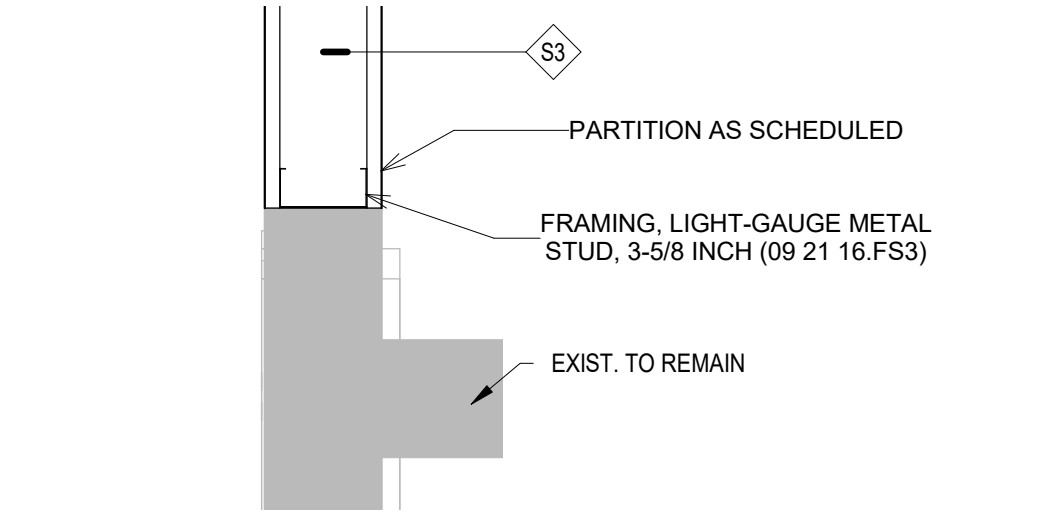
- NOT EVERY PARTITION TYPE SHOWN IS NECESSARILY INTENDED FOR THE USE ON THIS PROJECT. REFER TO FLOOR PLANS FOR REFERENCE MARKS INDICATING APPLICABLE PARTITION TYPES.
- REFER TO BRACING DETAILS FOR SUPPORT OF THE TOP OF EACH PARTITION TYPE AND BRACING OF PARTITIONS THAT EXCEED LIMITING HEIGHT OF PARTITION TYPES.
- REFER TO FINISH SCHEDULES FOR APPLIED FINISHES TO BOTH SIDES OF WALLS.
- COORDINATE BURNISHED AND SPLIT FACE CMU BLOCK BASED ON FINISH SCHEDULES, SECTIONS AND DETAILS.
- COORDINATE TOPS OF FINISHED WALLS WITH ADJACENT CEILING HEIGHTS PER SCHEDULES, SECTIONS AND/OR DETAILS.
- CONSULT ARCHITECT FOR ANY DISCREPANCIES OR QUESTIONS REGARDING PARTITIONS PRIOR TO INSTALLATION.



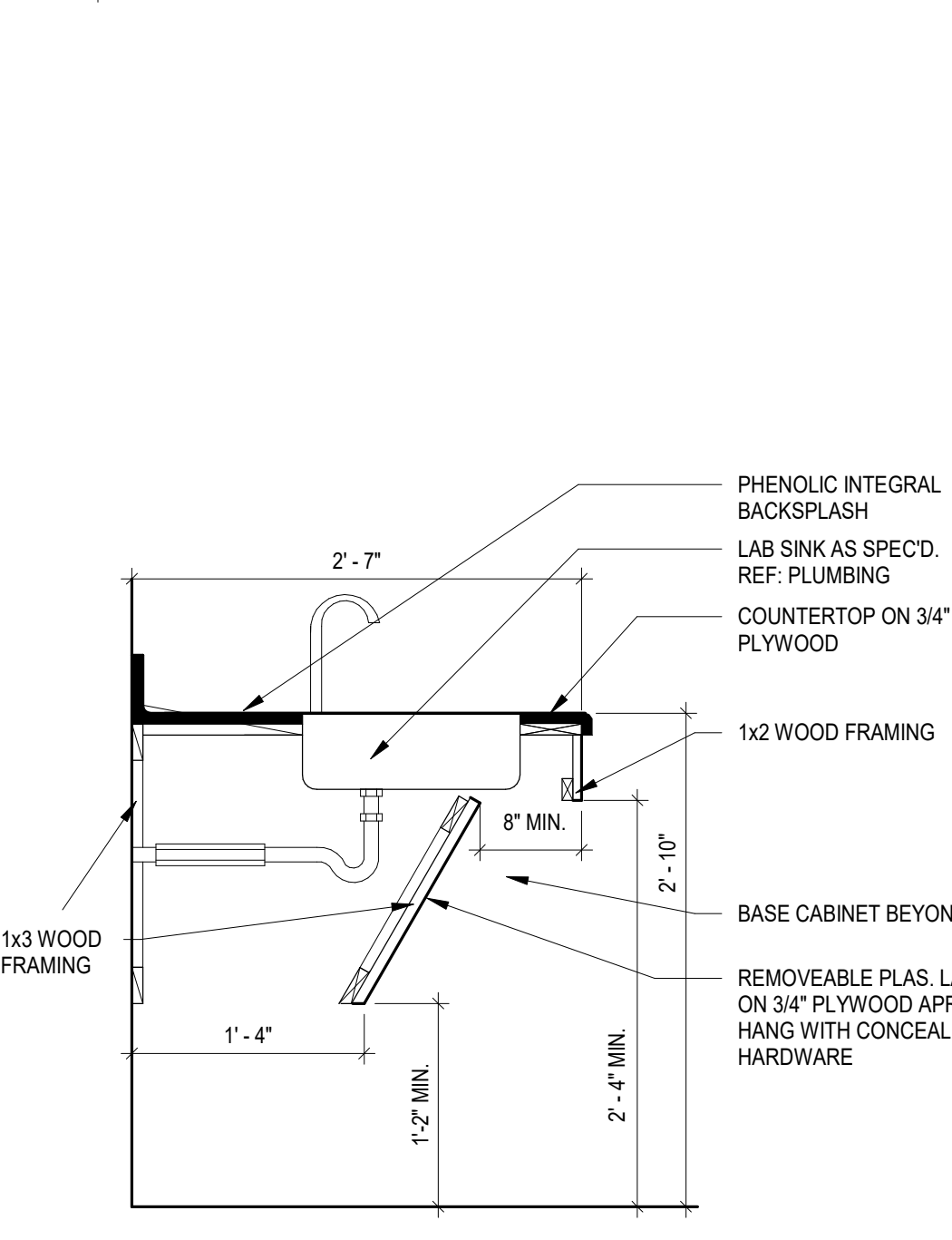
9 PLAN DETAIL - DOOR JAMB
 1/12" = 1'-0"



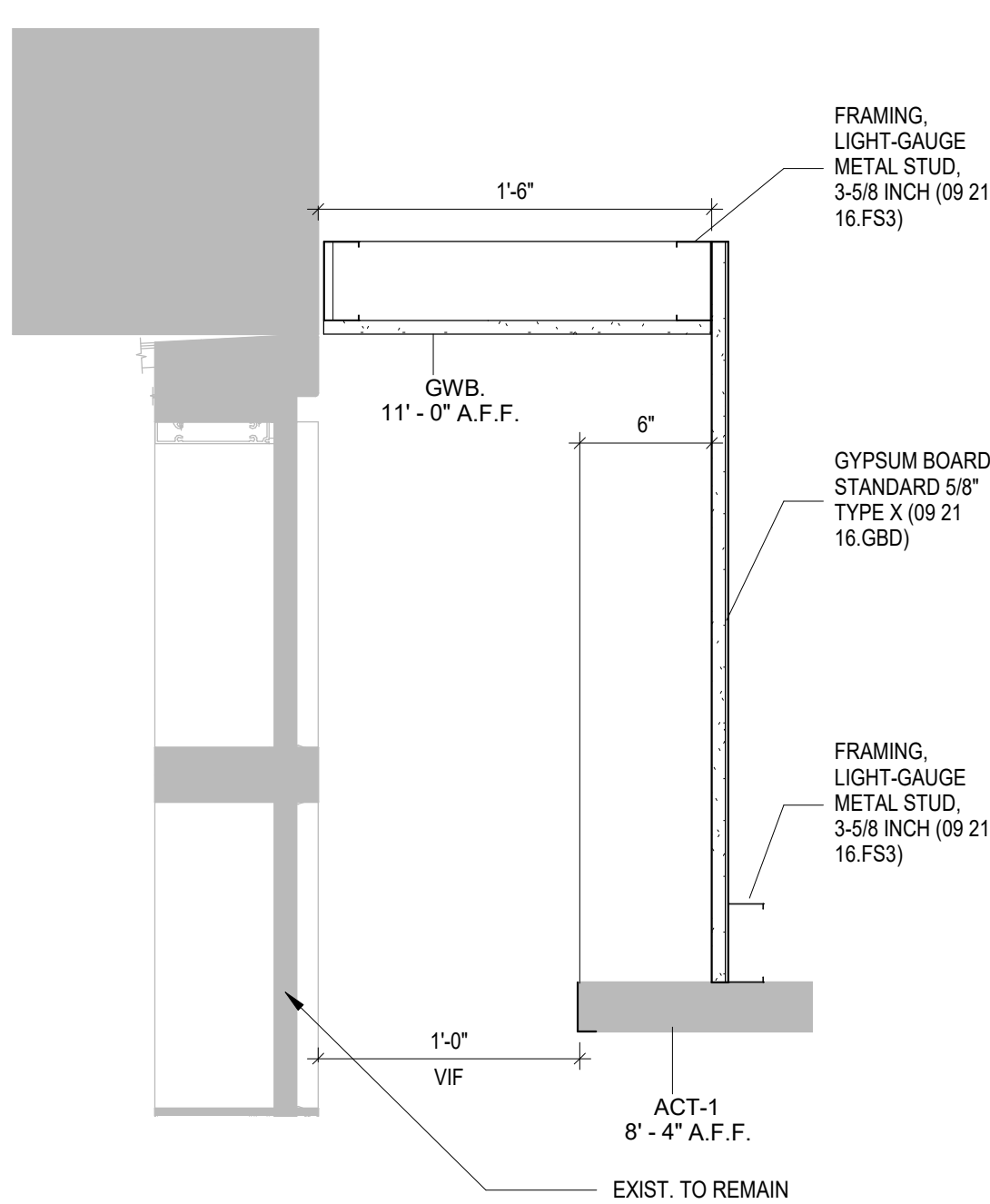
3 CASEWORK - COUNTER
 1" = 1'-0"



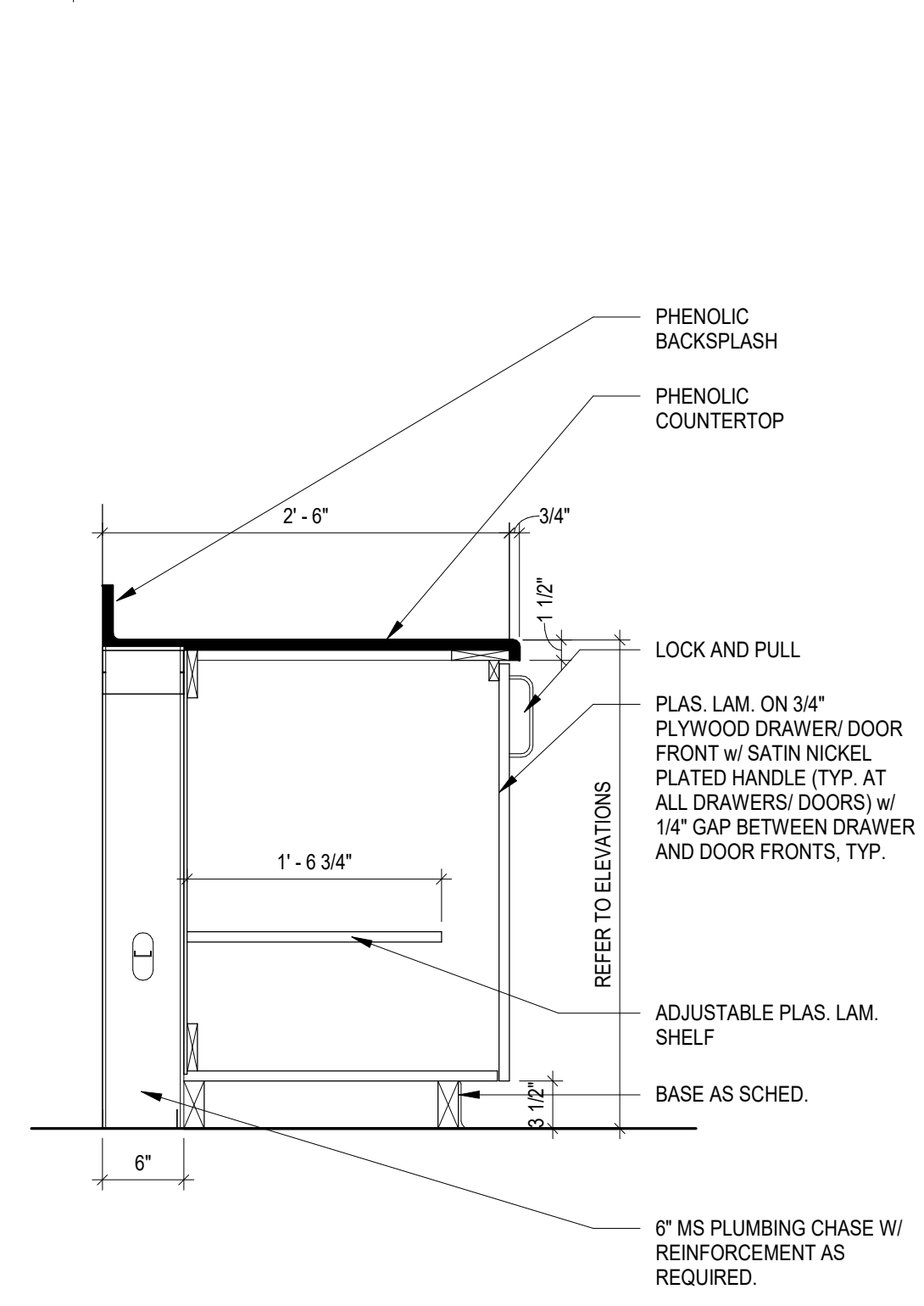
10 PLAN DETAIL - PARTITION TRANSITION
 1/12" = 1'-0"



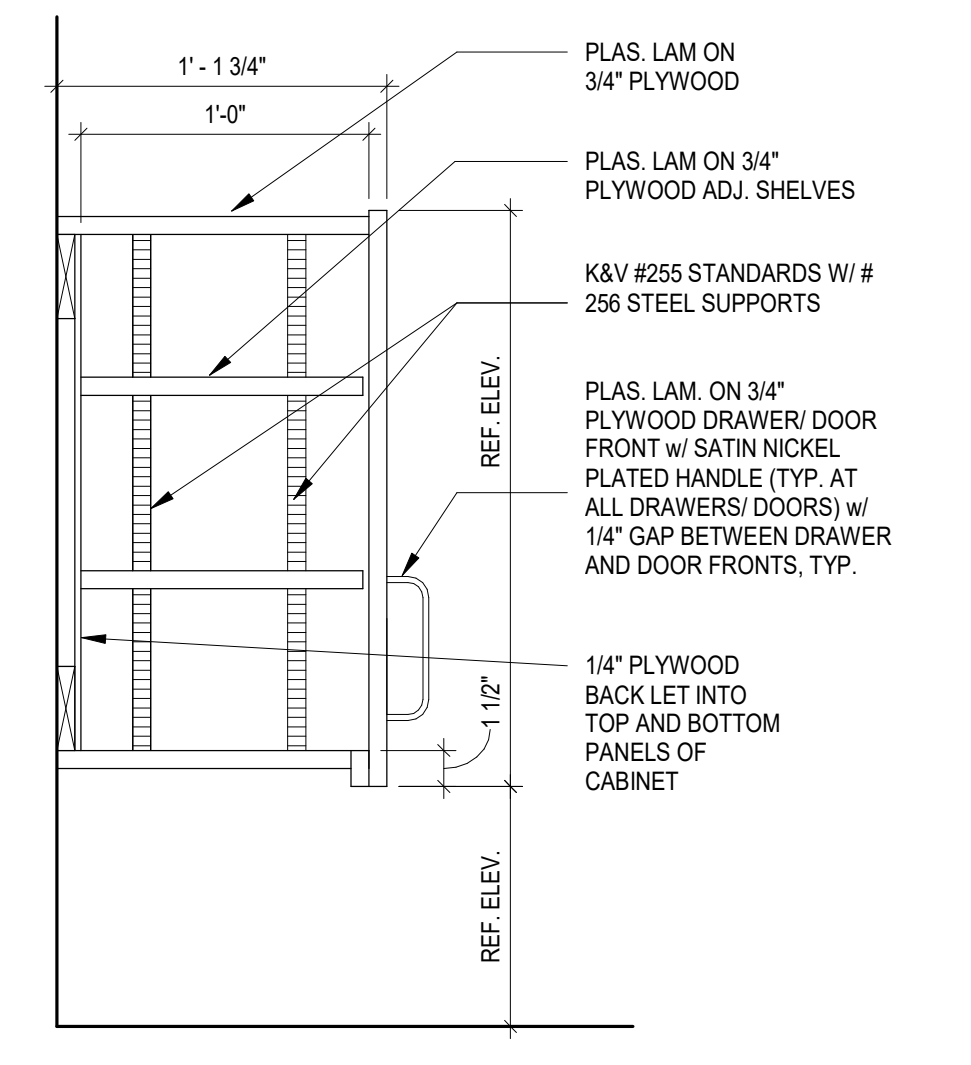
4 ADA SINK SKIRT
 1" = 1'-0"



11 CEILING DETAIL
 1/12" = 1'-0"



5 CASEWORK DOOR BASE
 1" = 1'-0"



6 CASEWORK UPPER SECTION
 1/12" = 1'-0"

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St Mary's University		
PROJECT NUMBER 1816		
DATE:	MARCH 28, 2018	
DRAWN BY:	Author	
CHECKED BY:	J. B. SOLIZ	
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No.	Description	Date

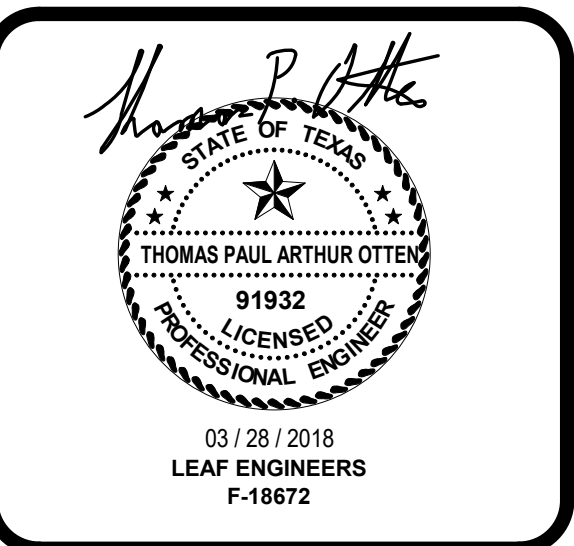
ISSUE FOR CONSTRUCTION

PLAN, RCP, & CASEWORK DETAILS, AND PARTITION TYPES

A7.10

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
(CC)	CARBON DIOXIDE SENSOR		GATE VALVE
(SD)	SMOKE DAMPER		CHECK VALVE
(FS)	COMBINATION FIRE / SMOKE DAMPER		GLOBE VALVE
(FD)	FIRE DAMPER		PLUG VALVE
(F)	FIRESTAT		BUTTERFLY VALVE
(H)	HUMIDISTAT		STRAINER
(T)	THERMOSTAT		GATE VALVE WITH HOSE CONNECTION
(P)	FREEZESTAT		3-WAY CONTROL VALVE
(VD)	VOLUME DAMPER		STRAIGHT THROUGH CONTROL VALVE
(S)	SMOKE DETECTOR		BALL VALVE
(M)	MOTORIZED DAMPER		TEST PLUG
(OBD)	OPPOSED BLADE DAMPER		GAUGE STATION WITH COCK
(BD)	BACKDRAFT DAMPER		THERMOMETER
(BC)	BAROMETRIC DAMPER		THERMOMETER WELL
07M-3	INDICATES REFERENCE TO VIEW 07, SHEET M-3		PRESSURE RELIEF VALVE
	FILTER SECTION		PRESSURE REDUCING VALVE
	FLEXIBLE CONNECTION		FLOW SWITCH
	MECHANICAL EQUIPMENT		AIR VENT
	SUPPLY AIR TERMINAL		FLOW METER
	RETURN AIR TERMINAL		UNION
	NEW DUCTWORK		FLOW CONTROL VALVE
	EXISTING DUCTWORK TO REMAIN		CHILLED WATER SUPPLY
	EXISTING DUCTWORK TO BE REMOVED		CHILLED WATER RETURN
	INDICATES REFERENCE TO SECTION VIEW 01, SHEET M-3		HOT WATER SUPPLY
			HOT WATER RETURN
			CONDENSER WATER SUPPLY
			CONDENSER WATER RETURN
			CONDENSATE DRAIN
			REFRIGERANT SUCTION
			REFRIGERANT GAS
			REFRIGERANT LIQUID
			STEAM CONDENSATE RETURN
			HIGH PRESSURE STEAM
			LOW PRESSURE STEAM

A	AMPERES	DFA	DOWN FROM ABOVE	HOA	HAND OFF AUTOMATIC SWITCH	SPF	STAIRWELL PRESSURIZATION FAN
ACC	AIR COOLED CHILLER	DR	RETURN DUCT SMOKE DETECTOR	HP	HORSEPOWER	TEF	TOILET EXHAUST FAN
ACCU	AIR COOLED CONDENSING UNIT	DS	SUPPLY DUCT SMOKE DETECTOR	HWP	HEATING WATER PUMP	UG	UNDERGROUND
ACU	AIR CONDITIONING UNIT	DY	DRYER	IV	ISOLATION VALVE	UL	UNDERWRITERS LABORATORIES
AFF	ABOVE FINISHED FLOOR	E.C.	ELECTRICAL CONTRACTOR	KEF	KITCHEN EXHAUST FAN	U.N.O.	UNLESS NOTED OTHERWISE
AFR	ABOVE FINISHED ROOF	EDH	ELECTRIC DUCT HEATER	KSU	KITCHEN SUPPLY UNIT	VAV	VARIABLE AIR VOLUME
AHAP	AS HIGH AS POSSIBLE	EF	EXHAUST FAN	KW	KILOWATTS	WP	WEATHERPROOF
AHU	AIR HANDLING UNIT	EX	EXISTING	MCC	MOTOR CONTROL CENTER	XT	EXPANSION TANK
AP	ACCESS PANEL	FIXT	FIXTURE	MD	MANUAL BALANCING DAMPER		
AS	AIR SEPARATOR	FA	FIRE ALARM	MTD	MOUNTED		
ASHRAE	AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR-CONDITIONING ENGINEERS	FAAP	FIRE ALARM ANNUNCIATOR PANEL	NIC	NOT IN CONTRACT		
B	BOILER	FACP	FIRE ALARM CONTROL PANEL	OFOI	OWNER FURNISHED / OWNER INSTALLED		
BCP	BUILDING CONTROL POWER	FCU	FAN COIL UNIT	OA	OUTSIDE AIR		
BFF	BELOW FINISHED FLOOR	FD	FIRE DAMPER	PCHP	PRIMARY CHILLED WATER PUMP		
BFG	BELOW FINISHED GRADE	FPB	FAN POWERED TERMINAL BOX	PRV	PRESSURE REDUCING VALVE		
C	CHILLER	FSD	COMBINATION FIRE / SMOKE DAMPER	PVC	POLYVINYL CHLORIDE		
CHP	CHILLED WATER PUMP	G	PROTECTIVE GUARD	RA	RETURN AIR		
CP	CONDENSER WATER PUMP	GBD	GRAVITY BACKDRAFT DAMPER	RF	RELIEF FAN		
CT	COOLING TOWER	GC	GENERAL CONTRACTOR	SCHP	SECONDARY CHILLED WATER PUMP		
CU	CONDENSING UNIT	GHP	GEO THERMAL HEAT PUMP	SD	SMOKE DAMPER		
CV	CONTROL VALVE	GSHP	GROUND SOURCE HEAT PUMP	SEF	SMOKE EXHAUST FAN		
DEF	DISHWASHER EXHAUST FAN	GV	GRAVITY VENTILATOR	SPEC	SPECIFICATION		



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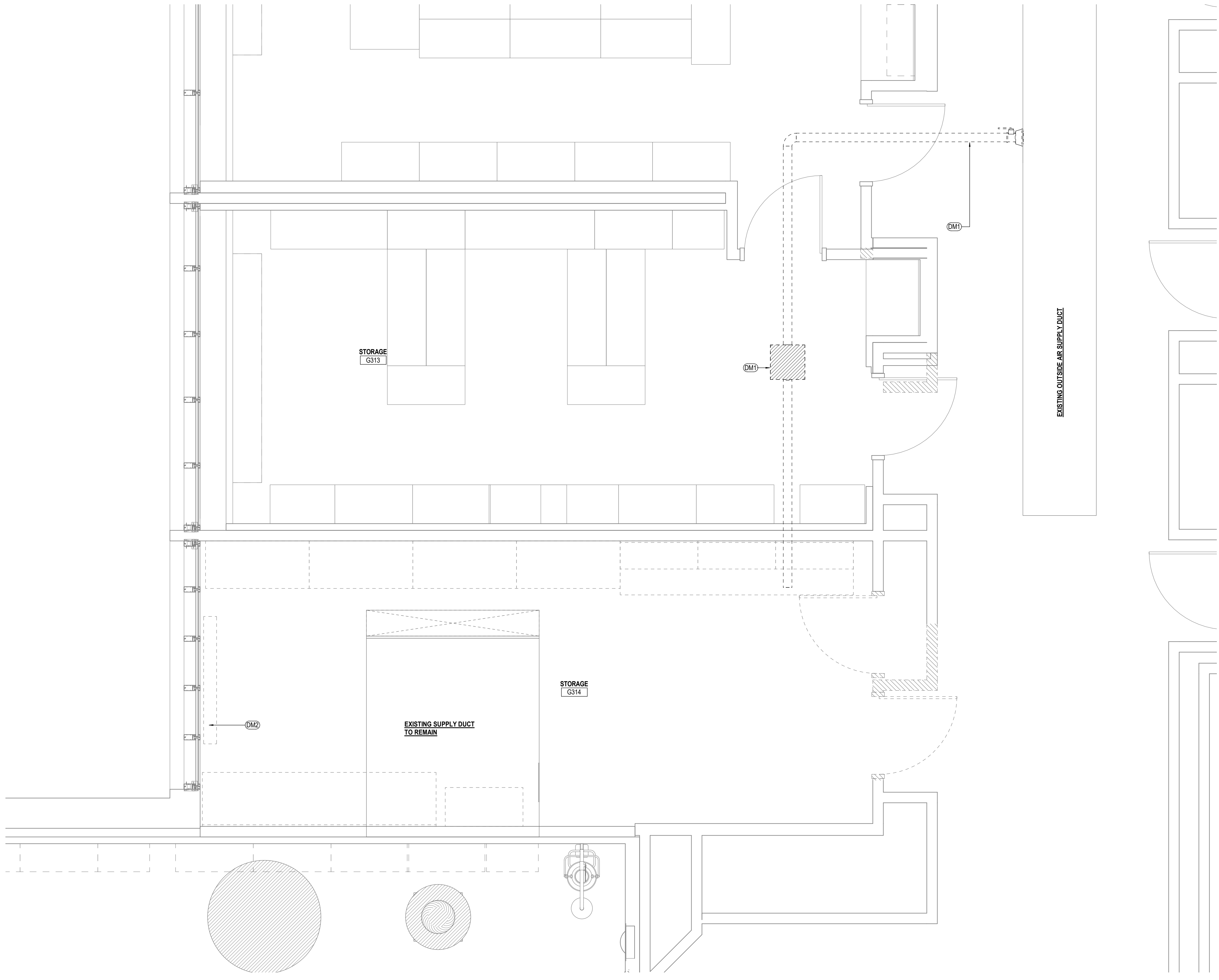
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MECHANICAL SYMBOLS AND ABBREVIATIONS

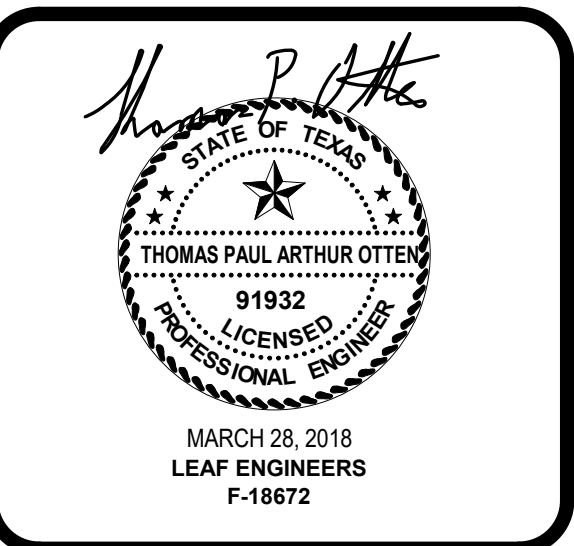
M0.01

GENERAL NOTES - MECHANICAL DEMOLITION PLAN
 1. DEMOLISHED ITEMS ARE PROPERTY OF THE OWNER. OWNER RETAINS SALVAGE RIGHTS TO DEMOLISHED ITEMS.

KEYED NOTES - MECHANICAL DEMOLITION PLAN
 DM1 REMOVE OUTSIDE AIR SUPPLY DUCT AND DAMPER SERVING ROOM.
 DM2 COMPLETELY REMOVE EXISTING LOW WALL MOUNTED AIR CONDITIONING UNIT. CAP CHILLED WATER AND HOT WATER LINES IN WALL.



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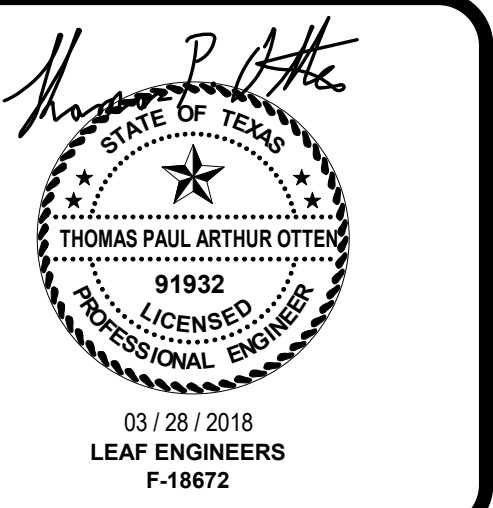
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MECHANICAL DEMOLITION SITE PLAN - AREA A

MD1.01

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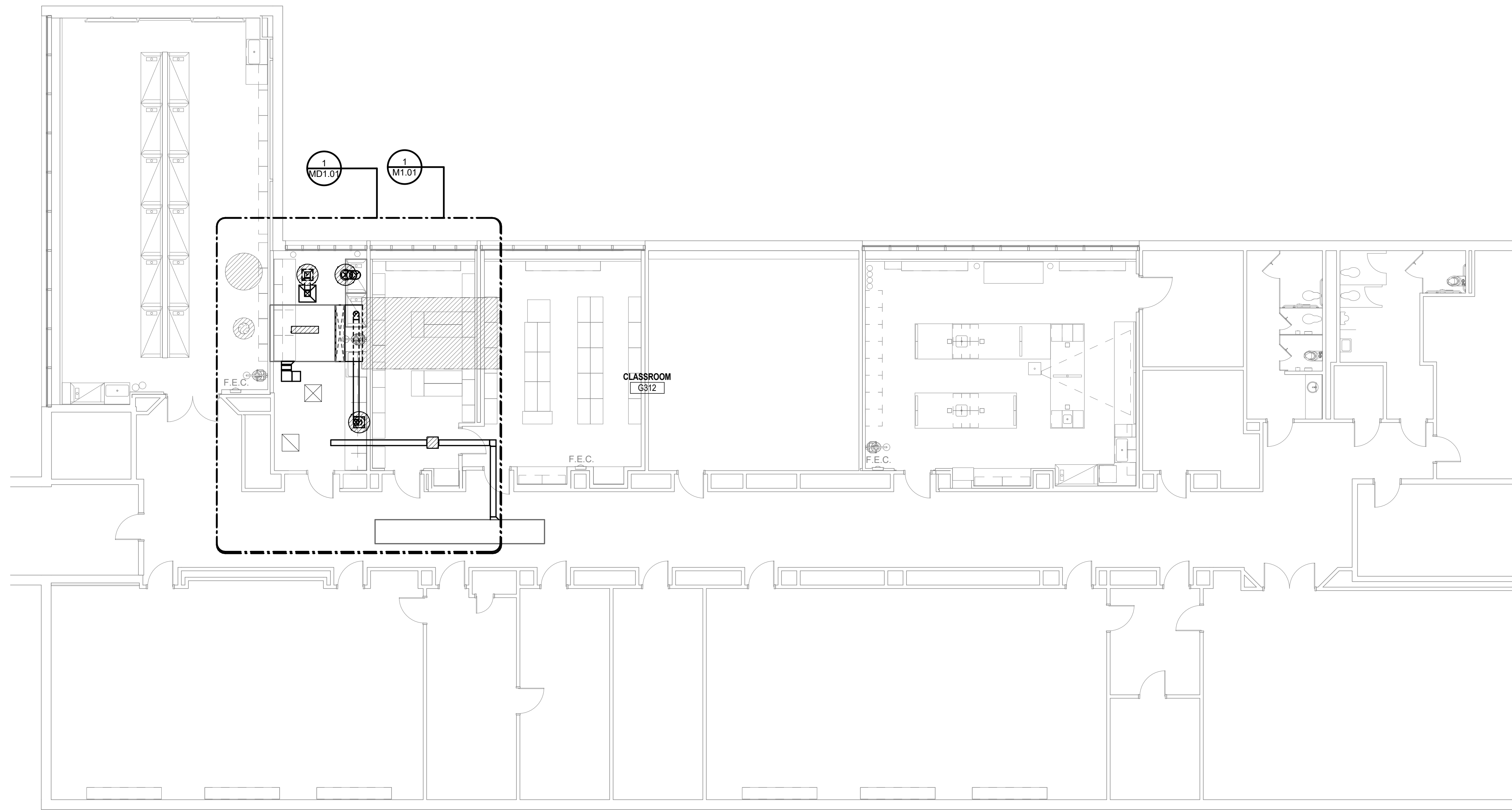
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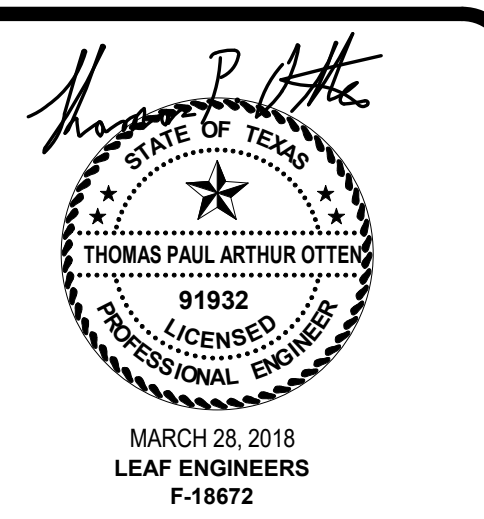
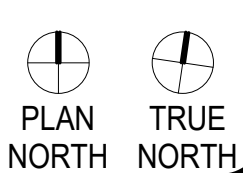
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MECHANICAL OVERALL PLAN

M1.00



601 N.W. LOOP 410, SUITE 400
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 TX Firm: F-18672



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THIRD FLOOR - MECHANICAL PLANS

M1.01

GENERAL NOTES - MECHANICAL PLAN

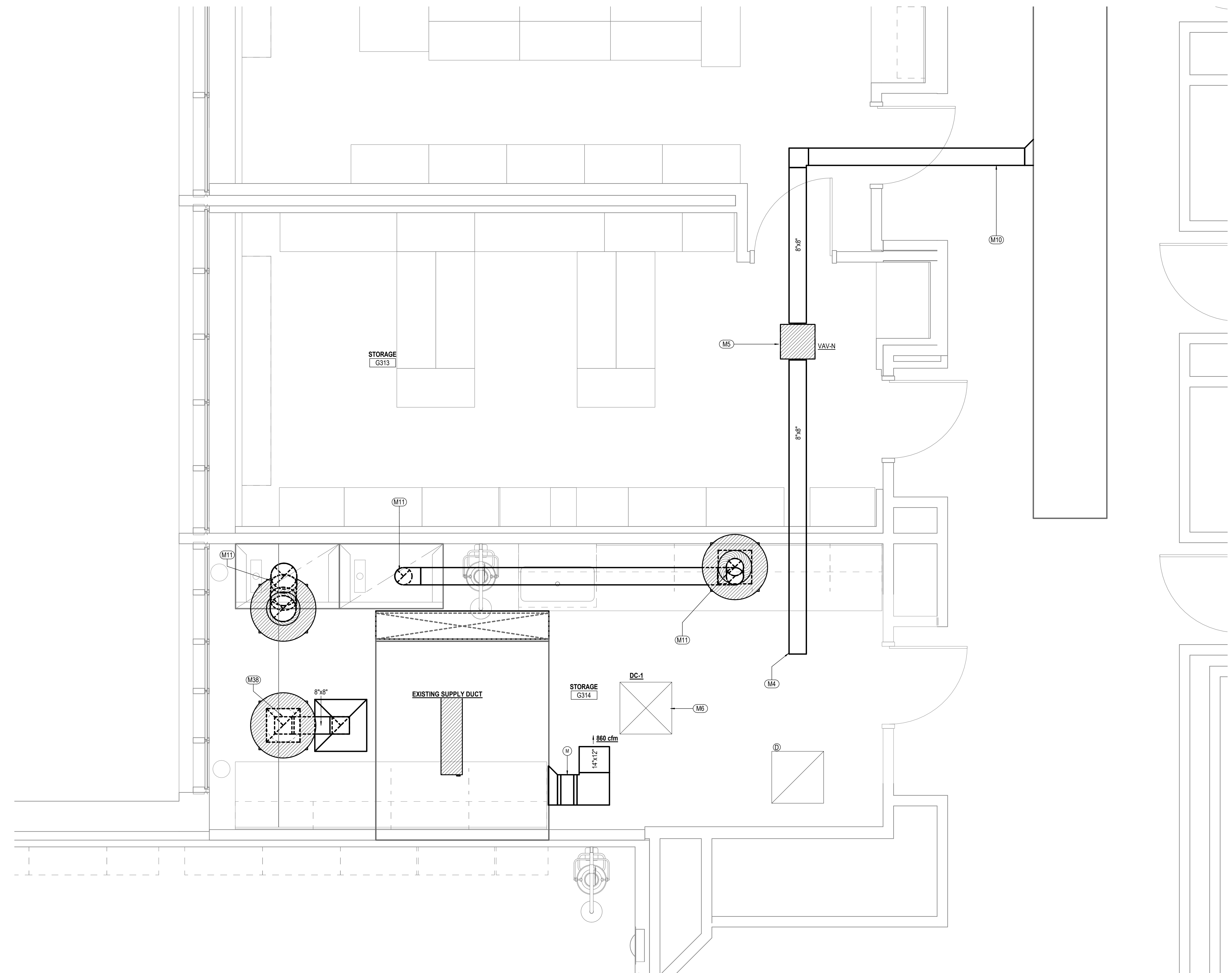
1. THE DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL LOCATION OF EQUIPMENT, DUCTS, AND GRILLES ETC. IT IS THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS THAT COMPLETE MECHANICAL SYSTEMS BE FURNISHED, INSTALLED, TESTED AND READY FOR OPERATION WHETHER OR NOT EVERY ITEM OF EQUIPMENT, ACCESSORY, DEVICE, ETC. IS SHOWN. REFERENCE SHALL BE MADE TO THE FULL DRAWING PACKAGE INCLUDING ARCHITECTURAL, STRUCTURAL, ELECTRICAL, AND PLUMBING DRAWINGS FOR COORDINATION AND POTENTIAL CONFLICTS. THE MECHANICAL SUBCONTRACTOR SHALL, WITHOUT EXTRA CHARGE, MAKE REASONABLE MODIFICATIONS IN THE LAYOUT AS NEEDED TO PREVENT CONFLICTS WITH OTHER TRADES, OR FOR PROPER EXECUTION OF THE WORK. FIELD VERIFY ALL DIMENSIONS BEFORE FABRICATING DUCTWORK.
2. DUCT DIMENSIONS INDICATED ON DRAWINGS ARE CLEAR INSIDE AIR STREAM DIMENSIONS.
3. ALL NEW A/C EQUIPMENT SHALL BE CLEANED AFTER THE FINISHING OF DRYWALL AND PRIOR TO THE RELEASE OF BUILDING TO OWNER. MECHANICAL CONTRACTOR TO PROVIDE DOCUMENTATION WITH DATE AND TIME OF UNIT CLEANING.
4. FLEX DUCT SHALL NOT EXCEED 6 FEET, NO EXCEPTIONS.
5. ALL WALL MOUNTED TEMPERATURE AND HUMIDITY SENSORS SHALL BE MOUNTED 48 INCHES AFF.

KEYED NOTES - MECHANICAL PLAN

- M4 ROUTE DUCT ABOVE CEILING AND DISCHARGE INTO CEILING.
- M5 PROVIDE NEW VAV BOX. SEE OWNERS VAV SCHEDULE FOR AIR FLOW VOLUMES FOR ALL OTHER EXISTING VAV BOXES ON THIS FLOOR AND REBALANCE.
- M6 PROVIDE NEW CEILING MOUNTED DUCTLESS CASSETTE UNIT. ROUTE REFRIGERANT LINES TO CORRESPONDING ROOF TOP HEAT PUMP UNIT. TRANSITION AS NECESSARY.
- M10 CONNECT NEW DUCT BRANCH TO MAIN.
- M11 ROUTE 12" ROUND DUCT UP THROUGH ROOF TO NEW EXHAUST FAN. BALANCE EXHAUST FAN ON ROOF FOR 105-FPM OF AIR THROUGH FULLY OPEN SASH. CONNECT TO FUME HOOD.
- M38 ROUTE 14X14 DUCT UP TO ROOF MOUNTED EXHAUST FAN EF-1. TRANSITION AS NECESSARY.

SEQUENCE OF OPERATION

1. THE GENERAL EXHAUST FAN IS RUNNING CONTINUOUSLY IN LOW SPEED MODE WHEN THE BUILDING IS IN OCCUPIED MODE.
2. TURNING ON EITHER ONE OR BOTH OF THE TWO HOODS WILL ENERGIZE THE MAKEUP AIR UNIT IF IT IS NOT ALREADY ON (THE MAKEUP AIR UNIT IS ALSO EXISTING TRIGGERED TO START WHEN ANY OF THE HOODS IN ROOM G311, NEXT DOOR, ARE TURNED ON). THE MOTORIZED DAMPER WILL OPEN TO INTRODUCE MAKEUP AIR INTO THE ROOM THROUGH THE PLENUM SPACE.
3. WHEN EITHER ONE OR BOTH OF THE TWO HOOD IS ON, THE GENERAL EXHAUST FAN WILL TURN OFF.
4. THE MAKEUP AIR UNIT WILL TURN OFF IF NO HOODS ARE ON IN EITHER ROOM.
5. GENERAL EXHAUST WILL TURN BACK ON IF NEITHER OF THE TWO HOODS IN THIS ROOM ARE ON.
6. THE GENERAL EXHAUST WILL GO INTO HIGH SPEED MODE WHEN PURGE IS ACTIVATED, IRRESPECTIVE IF THE HOODS ARE ON OR OFF.



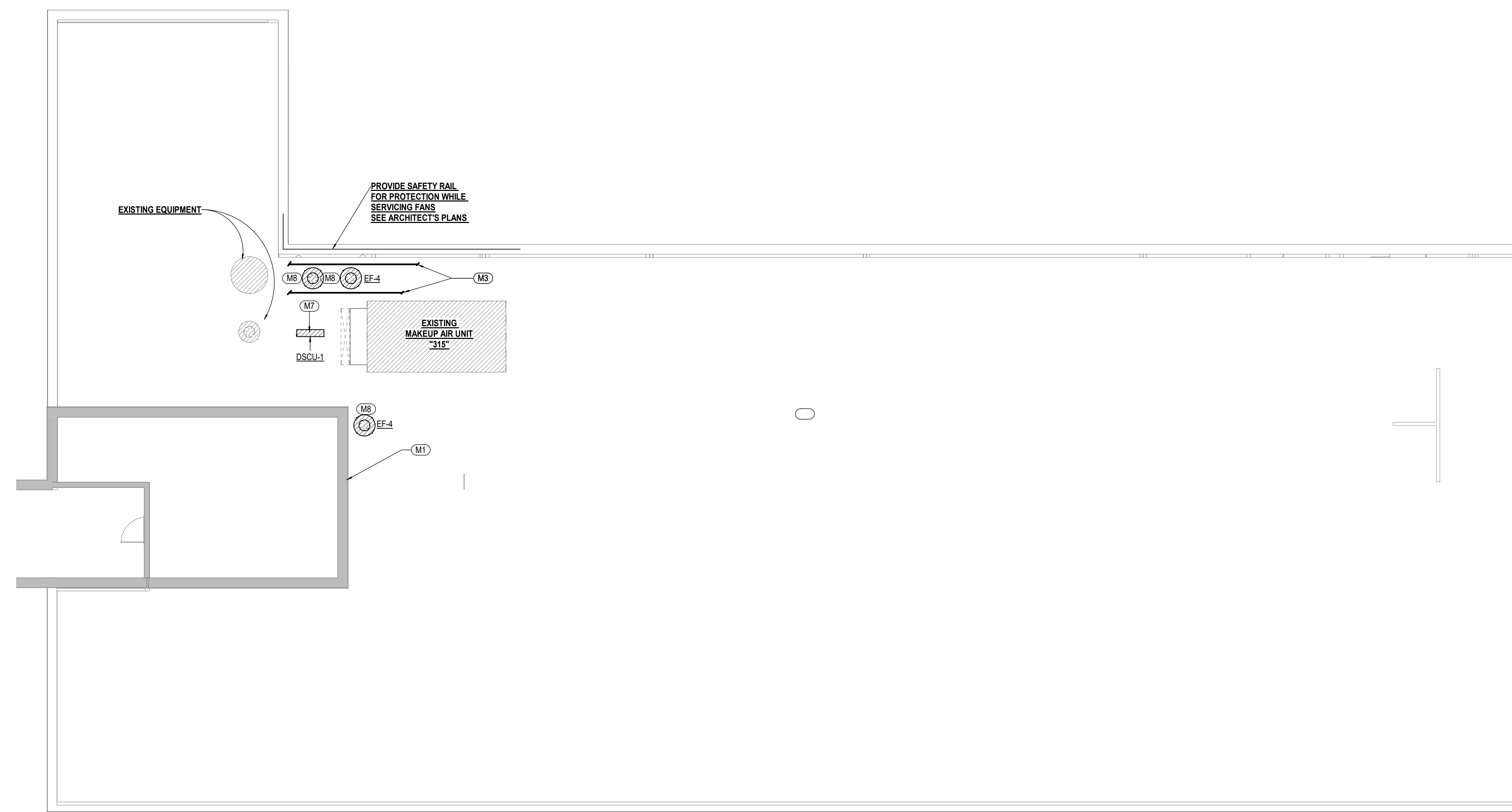
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SAN ANTONIO, TX 78216
210-638-7200
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GENERAL NOTES - MECHANICAL PLAN

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4. FLEX DUCT SHALL NOT EXCEED 6 FEET, NO EXCEPTIONS.
5. ALL WALL MOUNTED TEMPERATURE AND HUMIDITY SENSORS SHALL BE MOUNTED 48 INCHES AFF.

KEYED NOTES - MECHANICAL PLAN

- M1 WINDOWS THAT ARE WITHIN 10' OF THE EXHAUST FAN, MEASURED HORIZONTALLY, ARE TO BE MODIFIED AS TO BE FIXED SHUT AND IMPROPERABLE. SEE ARCHITECT'S PLANS.
- M3 PROTECT GAS LINE AND ELECTRICAL CONDUIT DURING INSTALLATION.
- M7 PROVIDE NEW MINI-SPLIT HEAT PUMP UNIT.
- M8 PROVIDE NEW EXHAUST FAN AND CURB AS SCHEDULED, MAINTAIN 10' FROM OUTSIDE AIR INTAKES.



DUCTLESS HEAT PUMP SPLIT SYSTEM SCHEDULE			
MARK	DS-1		
SERVES	NANO MATERIALS		
TYPE	RECESSED CEILING CASSETTE		
AIRFLOW (CFM)	810		
TOTAL COOLING (MBH)	24		
HEATING (KW)	-		
VOLTS/PHASE/HERTZ	208 / 230V, 1 / 60		
MCA	1		
MOCP	15		
MANUFACTURER	MITSUBISHI		
MODEL NUMBER	PLA-A24EA7		
INDOOR UNIT			
MARK	DSCU-1		
VOLTS/PHASE/HERTZ	120/1/60		
MCA	19		
MOCP	26		
MANUFACTURER	MITSUBISHI		
MODEL NUMBER	PUZA24NH47		
OUTDOOR UNIT			
NOTES: 1, 2, 3, 4			
NOTES:			
1. PROVIDE REFRIGERANT PIPING IN ACCORDANCE WITH MFR'S RECOMMENDATIONS.			
2. PROVIDE FULL SIZE CONDENSATE DRAIN TO NEAREST RECEPTACLE.			
3. PROVIDE WALL MOUNTED THERMOSTAT.			
4. PROVIDE INDOOR UNIT FRONT GRILLE.			

SINGLE DUCT VARIABLE VOLUME TERMINAL UNIT SCHEDULE					
TAG	DUCT SIZE (WXH)	CFM	Press Drop (in. W.G.)	MFR	MODEL
VAV-N	8X8	200	0.30	KRUEGER	SVE-C

- NOTES FOR ALL VAV'S:
1. INTEGRATE WITH BUILDING AUTOMATION SYSTEM.
 2. LOCATE TERMINAL TO ALLOW 36" MIN. CLEARANCE IN FRONT OF CONTROLS PANEL.
 3. FURNISH WITH 120/24V TRANSFORMER.
 4. FACTORY MOUNT DAMPER ACTUATOR TO BE PROVIDED BY CONTROLS CONTRACTOR.

FAN SCHEDULE		
	EF-1	EF-4
SERVES	NANOMATERIALS GENERAL EXHAUST	NANOMATERIALS - 4' HOOD
CFM	280 normal / 420 purge	480
E.S.P. (IN. W.G.)	0.375	0.774
TYPE	Roof Mounted Upblast	Centrifugal, High Plume
DIRECT/BELT DRIVE	DIRECT	BELT
FAN RPM	1134 / 1469	2,051
FAN BRAKE HORSEPOWER	0.08	0.57
MOTOR HORSEPOWER	1/3	3/4
VOLTS/PHASE/HERTZ	115/1/60	115/1/60
SONES	7.5	67 dB
MANUFACTURER	LOREN COOK	Cook
MODEL NO.	165RX17D (V/F)	TON-BLE
QUANTITY	1	1
NOTES	1,2,3,4,5,6	
NOTES:		
1. FACTORY MOUNTED AND INSTALLED WEATHERPROOF DISCONNECT SWITCH FOR FAN		
2. PROVIDE WITH PRE-MANUFACTURED ROOF CURB (MINIMUM 12"), BACKDRAFT DAMPER, AND FAN MOUNTED SPEED CONTROLLER.		
3. PROVIDE BIRD SCREEN		
4. PROVIDE GALVANIZED STEEL ROOF CURB WITH DAMPER TRAY, LINED WITH 3LB. DENSITY THERMAL AND ACOUSTICAL INSULATION		
5. FAN TO RUN DURING OCCUPIED SCHEDULE		
6. INTERLOCK WITH EMERGENCY PUSH BUTTON FOR EMERGENCY EXHAUST OPERATION. 2 SPEED FAN. NORMAL SPEED FOR OPERATION DURING OCCUPANCY		
7. INTERLOCK WITH EXISTING MAKEUP AIR UNIT 515		
8. PROVIDE WITH PRE-MANUFACTURED ROOF CURB (MINIMUM 12"). OVERALL SYSTEM TO STAND MIN. 10' IN HEIGHT. FAN MANUFACTURED TO MEET A/MCA TYPE 'W' SPARK RESISTANT CONSTRUCTION. INCLUDE BYPASS AIR PLUMBING FOR CONSTANT VOLUME FAN OPERATION. INCLUDE INTAKE BIRD SCREEN AND WEATHERHOOD OPTION		
9. PROVIDE 6" DIAMETER HIGH VELOCITY DISCHARGE NOZZLE (MINIMUM 3,000 FPM). UNIT TO PERFORM WITH EFFECTIVE PLUME HEIGHT OF 16' OR GREATER.		

AIR DEVICE SCHEDULE			
DESIGNATION	MODEL NUMBER	NOISE CRITERIA (NC)	DESCRIPTION
B	TITUS PAR-AA	25	24x24 MODULE SIZE, LAY-IN BORDER TYPE, NECK SIZE AS INDICATED PLANS. PROVIDE OPPOSED BLADE DAMPER, ALL ALUMINUM CONSTRUCTION.
1. ALL DIFFUSER DESIGNATIONS MAY NOT BE USED ON PROJECT. 2. PROVIDE ROTO-TWIST CABLE OPERATED DAMPERS IN GYP BOARD CEILINGS. 3. PROVIDE FRAME FOR MOUNTING AIR DEVICE IN LA-IN GRID CEILING UNLESS REFLECTED CEILING PLAN INDICATES HARD CEILING. IN AREAS WITH HARD CEILINGS, PROVIDE FRAMES FOR SURFACE MOUNTING. 4. UNLESS OTHERWISE NOTED, BRANCH DUCTS SERVING AIR DEVICES SHALL BE SAME SIZE AS AIR DEVICE.			



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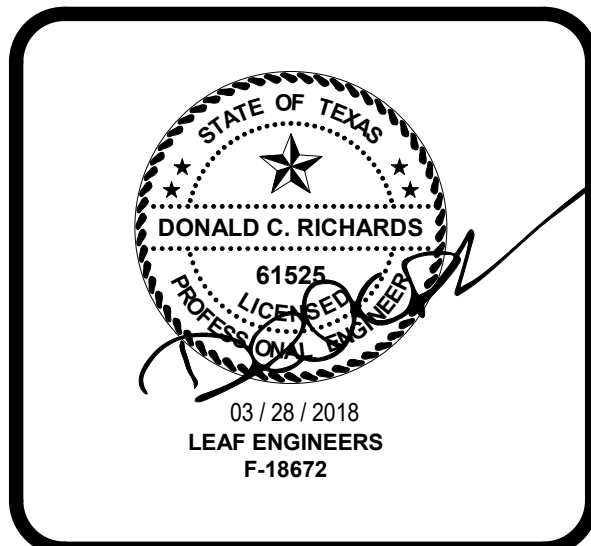
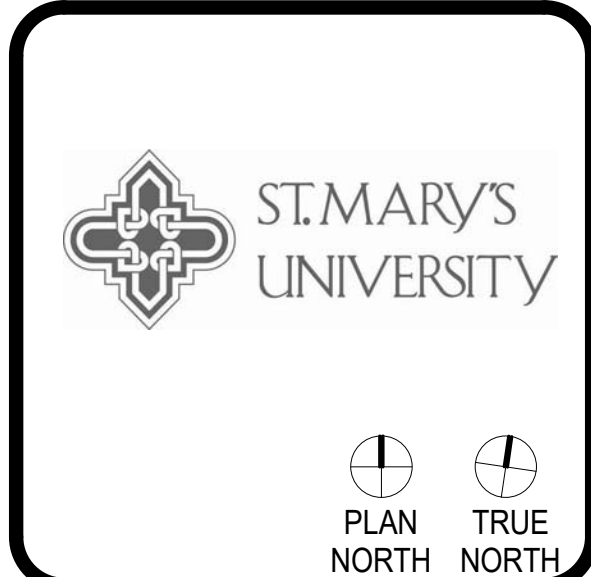
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MECHANICAL SCHEDULES

M6.01



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DATE:	03 / 28 / 2018	
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CHECKED BY:	DON RICHARDS	
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**ELECTRICAL
 SYMBOLS AND
 ABBREVIATIONS**

E0.01

A	AMPERE	FCU	FAN COIL UNIT	NTS	NOT TO SCALE
AFF	ABOVE FINISHED FLOOR	GEN	GENERATOR	PNL	PANELBOARD
AFG	ABOVE FINISHED GRADE	GFI	GROUND FAULT INTERRUPTER	RECP	RECEPTACLE
AHU	AIR HANDLING UNIT	GND	GROUND	RECD	REQUIRED
ATS	AUTOMATIC TRANSFER SWITCH	GRS	GALVANIZED RIGID STEEL	RTU	ROOFTOP UNIT
C	CONDUIT	HID	HIGH INTENSITY DISCHARGE	TEL	TELEPHONE
CB	CIRCUIT BREAKER	HP	HORSEPOWER OR HEAT PUMP	TRT	TRIPLE TUBE CF LAMP
CCTV	CLOSED CIRCUIT TELEVISION	HPS	HIGH PRESSURE SODIUM	TT	TWIN TUBE CF LAMP
CKT	CIRCUIT	IF	INSIDE FROSTED	TV	TELEVISION
CLK	CLOCK	KAIC	THOUSAND AMPERE INTERRUPTING CAPACITY	UH	UNIT HEATER
CTS	CIRCUIT TRANSFORMERS	KMIL	THOUSAND CIRCULAR MILIMETER	UNON	UNLESS OTHERWISE NOTED
CU	CONDENSING UNIT	KVA	THOUSAND VOLT AMPERE	V	VOLT
DS	DISCONNECT SWITCH	MCB	MAIN CIRCUIT BREAKER	VA	VOLT AMPERE
EDF	ELECTRIC DRINKING FOUNTAIN	MH	METAL HALIDE	WP	VOLT AMPERE
EF	EXHAUST FAN	MLO	MAIN LUGS ONLY	XFMR	TRANSFORMER
ELEC	ELECTRICAL	MCC	MOTOR CONTROL CENTER		
EPO	EMERGENCY POWER OFF	NC	NORMALLY CLOSED		
EQUIP	EQUIPMENT	NEC	NATIONAL ELECTRICAL CODE		
EWI	ELECTRIC WATER HEATER	NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASS'N		
EXIST	EXISTING	NIC	NOT IN CONTRACT		
FACP	FIRE ALARM CONTROL PANEL	NL	NIGHT LIGHT		
FANN	FIRE ALARM ANNUNCIATOR PANEL	NO	NUMBER OR NORMALLY OPEN		

NOTES:

- EVERY SYMBOL SHOWN MAY NOT APPEAR ON DRAWINGS.
- DASHED ELECTRICAL EQUIPMENT GENERALLY INDICATES EXISTING EQUIPMENT.
- LONG-SHORT-SHORT-LONG DASHING GENERALLY INDICATES MATCHLINE OR DEFINES AREA FOR SPECIAL NOTE.

CIRCUIT RELATED:	POWER OUTLETS:
<p>↖ LIGHTING OR POWER CIRCUIT(S). ARROW INDICATES HOME RUN, LONGER TICK(S) INDICATE NEUTRAL WIRE(S), SHORTER STRAIGHT TICK(S) INDICATE PHASE WIRE(S), SLANTED SHORTER TICK(S) INDICATE SWITCH LEG(S), DOT(S) INDICATE GROUNDING CONDUCTOR(S), DASHED WIRING (LONG-SHORT-LONG DASHES) INDICATES WIRING BELOW SLAB OR GRADE, DASHED WIRING (SERIES OF SHORT DASHES) INDICATES EXISTING WIRING, SLASH THROUGH ARROW INDICATES PARTIAL CIRCUIT. "P" ON HOMERUN ARROW INDICATES DEDICATED CIRCUIT. PROVIDE A SEPARATE NEUTRAL FOR EACH PHASE CONDUCTOR FOR ENTIRE LENGTH OF CIRCUIT FROM PANEL TO OUTLET. COUNT EACH NEUTRAL AS CURRENT-CARRYING AND GROUP A MAXIMUM OF SIX THINWIRE CONDUCTORS IN A SINGLE RACEWAY. GROUNDING CONDUCTOR IS NOT COUNTED. TELEPHONE CONDUIT SYSTEM. DASHED WIRING (LONG-SHORT-LONG DASHES) INDICATES WIRING IN OR BELOW SLAB OR GRADE, DASHED WIRING (SERIES OF SHORT DASHES) INDICATES EXISTING WIRING.</p> <p>⊙ JUNCTION BOX. "J" MAY BE OMITTED IF BOX IS WITHIN OR ATTACHED TO FLOURESCENT LIGHT FIXTURE SYMBOL ON PLANS.</p> <p>• POINT OF BRANCH CIRCUIT TAP FOR SEPARATELY SWITCHED FIXTURE GROUP. REFERENCE CATEGORY "B" LIGHTING SYMBOLS FOR FURTHER INFORMATION.</p> <p>⊕ GROUNDING ELECTRODE</p>	<p>⊕ 15A-125V DUPLEX RECEPTACLE. 20A WHEN INDICATED OR IF BRANCH CIRCUIT SERVES ONLY SINGLE DUPLEX. "GF" INDICATES GROUND FAULT CIRCUIT INTERRUPTER RECEPTACLE.</p> <p>⊕ 15A-125V FOURPLEX RECEPTACLE. 20A WHEN INDICATED.</p> <p>⊕ SPECIAL PURPOSE SINGLE POWER RECEPTACLE. RATED AS INDICATED (IF NO RATING INDICATED, RECEPTACLE RATING SHALL MATCH BRANCH CIRCUIT OVERCURRENT PROTECTIVE DEVICE SIZE AND SHALL MEET REQUIREMENTS OF EQUIPMENT BEING CONNECTED). "C" INDICATES CLOCK OUTLET.</p> <p>⊕ 15A-125V FLUSH FLOOR DUPLEX RECEPTACLE. 20A WHEN INDICATED OR IF BRANCH CIRCUIT SERVES ONLY SINGLE DUPLEX. PROVIDE CARPET FLANGE WHERE APPLICABLE.</p> <p>⊕ 15A-125V SURFACE FLOOR DUPLEX RECEPTACLE. 20A WHEN INDICATED OR IF BRANCH CIRCUIT SERVES ONLY SINGLE DUPLEX. "T" INDICATES TWO DUPLEX RECEPTABLES IN ONE BOX. PROVIDE CARPET FLANGE WHERE APPLICABLE.</p> <p>⊕ SAME AS DUPLEX RECEPTACLE EXCEPT ISOLATED GROUND TYPE RECEPTACLE.</p> <p>⊕ SAME AS FOURPLEX RECEPTACLE EXCEPT ISOLATED GROUND TYPE RECEPTACLE.</p> <p>AC INDICATES RECEPTACLE SHALL BE MOUNTED ABOVE COUNTER TOP. REFER TO ARCHITECT FOR EXACT HEIGHT ABOVE COUNTER.</p> <p>LC1-X CIRCUIT DESIGNATION NEXT TO RECEPTACLE DEVICES INDICATES BRANCH CIRCUIT NUMBER. RE: PANEL SCHEDULES FOR INFORMATION.</p> <p>WP "WP" INDICATES WEATHER PROOF DEVICE.</p>
LIGHTING:	TELEPHONE / DATA:
<p>□ FLUORESCENT LIGHTING FIXTURE. LETTER INDICATES TYPE, SMALL LETTER INDICATES SWITCH CONTROL, NUMBER INDICATES CIRCUIT. CROSS HATCHING INDICATES FIXTURE ON EMERGENCY SYSTEM. FOR SOLID CIRCLE WITHIN FIXTURE REFERENCE APPROPRIATE CATEGORY "A" CIRCUIT RELATED SYMBOL.</p> <p>— STRIP TYPE FLUORESCENT LIGHTING FIXTURE. LETTER INDICATES TYPE, SMALL LETTER INDICATES SWITCH CONTROL, NUMBER INDICATES CIRCUIT. FOR SOLID CIRCLE ATTACHED TO FIXTURE REFERENCE APPROPRIATE CATEGORY "A" CIRCUIT RELATED SYMBOL.</p> <p>○ INCANDESCENT OR HID LIGHTING FIXTURE. LETTER INDICATES TYPE, SMALL LETTER INDICATES SWITCH CONTROL, NUMBER INDICATES CIRCUIT. FOR SOLID CIRCLE REFERENCE APPROPRIATE CATEGORY "A" CIRCUIT RELATED SYMBOL.</p> <p>⊕ DESIGNATES FIXTURE ON EMERGENCY POWER. RE: LIGHTING PLAN NOTES AND FIXTURE SCHEDULE NOTES FOR ADDITIONAL INFORMATION.</p> <p>⊙ WALL OR BRACKET MOUNTED FIXTURE OR "REPE"</p> <p>☑ EXIT LIGHT FIXTURE. LETTER INDICATES TYPE, NUMBER INDICATES CIRCUIT, NUMBER AND LOCATION OF SHADED TRIANGLE SECTIONS INDICATES NUMBER OF EXIT SIGN FACES AND DIRECTION OF EACH FACE. PROVIDE CHEVRON DIRECTIONAL INDICATORS AS SHOWN ON DRAWINGS.</p>	<p>▲ WALL TELEPHONE OUTLET. "P" INDICATES PAY TYPE. "W" INDICATES WALL MOUNTED PHONE. PROVIDE NEMA 5-15R OUTLET FOR EACH TTY, TDD OR OTHER SCREEN OR CARD-ACCESS TELEPHONE.</p> <p>⊕ FLUSH FLOOR TELEPHONE OUTLET WITH CARPET FLANGE WHERE APPLICABLE.</p> <p>⊕ SURFACE FLOOR TELEPHONE OUTLET. "T" INDICATES TWO OUTLETS IN ONE BOX. PROVIDE CARPET FLANGE WHERE APPLICABLE.</p> <p>△ WALL COMMUNICATIONS OR DATA OUTLET. REFER TO TECHNOLOGY DRAWINGS FOR EXACT BOX/CONDUIT REQUIREMENTS.</p> <p>⊕ FLUSH FLOOR COMMUNICATIONS OR DATA OUTLET. REFER TO TECHNOLOGY DRAWINGS FOR EXACT BOX/CONDUIT REQUIREMENTS. PROVIDE CARPET FLANGE WHERE APPLICABLE.</p> <p>⊕ SURFACE FLOOR COMMUNICATIONS OR DATA OUTLET. REFER TO TECHNOLOGY DRAWINGS FOR EXACT BOX/CONDUIT REQUIREMENTS. PROVIDE CARPET FLANGE WHERE APPLICABLE.</p>
CONTROL:	EQUIPMENT:
<p>⊕ SWITCH. SMALL LETTER INDICATES FIXTURES CONTROLLED. "P" INDICATES PILOT LIGHT, "WP" INDICATES WEATHERPROOF, "K" INDICATES KEY OPERATED, "MC" INDICATES SPOT MOMENTARY CONTACT, "Z" INDICATES DPDT, "P" INDICATES 3-WAY, "W" INDICATES AWAY, "M" INDICATES MANUAL MOTOR STARTER, CIRCUIT DESIGNATION NEXT TO SWITCH INDICATES</p> <p>⊕ WALL BOX DIMMER SWITCH. "MARK" INDICATES WATTAGE IF OTHER THAN 600. "3P" INDICATES 3-WAY DIMMER.</p> <p>⊕ MULTILEVEL SWITCH. CIRCUIT DESIGNATION NEXT TO SWITCH INDICATES BRANCH CIRCUIT NUMBER.</p> <p>⊕ DIGITAL TIME SWITCH</p> <p>⊕ PHOTOELECTRIC CONTROL</p> <p>⊕ EMERGENCY POWER OFF (EPO) PUSHBUTTON.</p> <p>⊕ PUSH BUTTON.</p> <p>⊕ WALL MOUNT OCCUPANCY SENSOR.</p> <p>⊕ DUAL TECHNOLOGY CEILING MOUNTED OCCUPANCY SENSOR.</p> <p>⊕ CEILING MOUNTED RESTROOM OCCUPANCY SENSOR.</p> <p>⊕ CEILING MOUNTED CORRIDOR OCCUPANCY SENSOR.</p> <p>⊕ CEILING MOUNTED HIGH CEILING OCCUPANCY SENSOR.</p>	<p>+42" A NOTATION INDICATING THE MOUNTING HEIGHT OF A DEVICE AS MEASURED FROM FINISHED FLOOR OR GRADE TO CENTER LINE OF DEVICE.</p> <p>⊕ MOTOR.</p> <p>⊕ DISCONNECT SWITCH. FRAME SIZE/FUSE SIZE/POLES AS INDICATED. "NF" INDICATES NON-FUSIBLE. NEMA 1 ENCLOSURE UNLESS OTHERWISE NOTED. PROVIDE FUSED BUSWAY PLUG WHEN SWITCH IS INDICATED ON BUSWAY. ALL DISCONNECT SWITCHES SHALL BE 30NF0 UNLESS OTHERWISE NOTED.</p> <p>⊕ SINGLE CIRCUIT BREAKER IN INDIVIDUAL ENCLOSURE.</p> <p>⊕ MAGNETIC MOTOR CONTROLLER. NUMBER INDICATES NEMA SIZE. STARTER NEMA SIZE SHALL BE "NEMA 1" UNLESS OTHERWISE NOTED.</p> <p>⊕ COMBINATION DISCONNECT SWITCH/MOTOR CONTROLLER.</p> <p>⊕ CONTACTOR</p> <p>⊕ PANELBOARD SWITCHBOARD/DP</p> <p>⊕ TRANSFORMER</p> <p>⊕ GROUNDING CONNECTION TO GROUNDING ELECTRODE AS DEFINED IN NEC ARTICLE 250.</p> <p>⊕ BELL. "WP" INDICATES OUTDOOR RATED.</p>



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GENERAL NOTES - ELECTRICAL DEMOLITION PLAN

1. DEMOLISHED ITEMS ARE PROPERTY OF THE OWNER. OWNER RETAINS SALVAGE RIGHTS TO DEMOLISHED ITEMS.

KEYED NOTES - ELECTRICAL DEMOLITION PLAN

- DE1 REMOVE ALL EXISTING LIGHTING AND CONTROLS IN SPACE IN THEIR ENTIRETY. REMOVE CONDUIT BACK TO NEAREST POINT OF CONNECTION ABOVE CEILING. REMOVE ALL ASSOCIATED BRANCH CIRCUIT WIRING IN ITS ENTIRETY BACK TO SOURCE. CONTRACTOR SHALL IDENTIFY EXISTING CIRCUIT SERVING LIGHTING. EXISTING CIRCUIT TO BE RE-USED TO SERVE NEW LIGHTING IN SPACE.
- DE2 REMOVE ALL ELECTRICAL OUTLETS ON WALL IN THEIR ENTIRETY. REMOVE EXISTING CONDUIT BACK TO NEAREST POINT OF CONNECTION. REMOVE ALL ASSOCIATED BRANCH CIRCUIT WIRING IN ITS ENTIRETY BACK TO SOURCE. CONTRACTOR SHALL IDENTIFY EXISTING CIRCUITS SERVING OUTLETS. CIRCUITS SHALL BE RE-USED TO NEW OUTLETS IN SPACE.
- DE3 EXISTING ELECTRICAL PANELS TO REMAIN.
- DE4 UNIT VENTILATOR TO BE REMOVED. REMOVE ALL ASSOCIATED CONDUIT TO GREATEST EXTENT POSSIBLE. REMOVE ALL ASSOCIATED BRANCH CIRCUIT WIRING IN ITS ENTIRETY BACK TO SOURCE. EXISTING CIRCUIT(S) TO BE RELABELLED AS SPARE. CONTRACTOR SHALL IDENTIFY EXISTING CIRCUIT PRIOR TO THE START OF CONSTRUCTION.

GENERAL NOTES - POWER PLAN

- 1. INSTALL ALL EXTERIOR RECEPTACLES WITH NON-ATTENDED "IN-USE" TYPE METAL COVERS. COORDINATE EXACT ROUGH-IN LOCATION WITH ARCHITECT PRIOR TO INSTALLATION.
- 2. REFER TO "T" AND "TS" SERIES DRAWINGS FOR ADDITIONAL ELECTRICAL REQUIREMENTS AND ROUGH-IN LOCATIONS TO BE INSTALLED BY DIV. 26 CONTRACTOR.
- 3. COORDINATE EXACT ROUGH-IN REQUIREMENTS AND LOCATIONS FOR SECURITY SYSTEM DEVICES AND EQUIPMENT WITH TECHNOLOGY DRAWINGS AND OWNER PRIOR TO THE START OF CONSTRUCTION.
- 4. INSTALL ALL RECEPTACLES 18" AFF. UON.
- 5. COORDINATE ROUGH-IN LOCATION OF DEVICES WITH ARCHITECTURAL ELEVATIONS, DETAILS AND PLANS. INSTALL DEVICE BOXES FLUSH WITH FINISHED SURFACE.
- 6. INSTALL A DEDICATED NEUTRAL FOR EACH 120V OR 277V BRANCH CIRCUIT.

KEYED NOTES - POWER PLAN

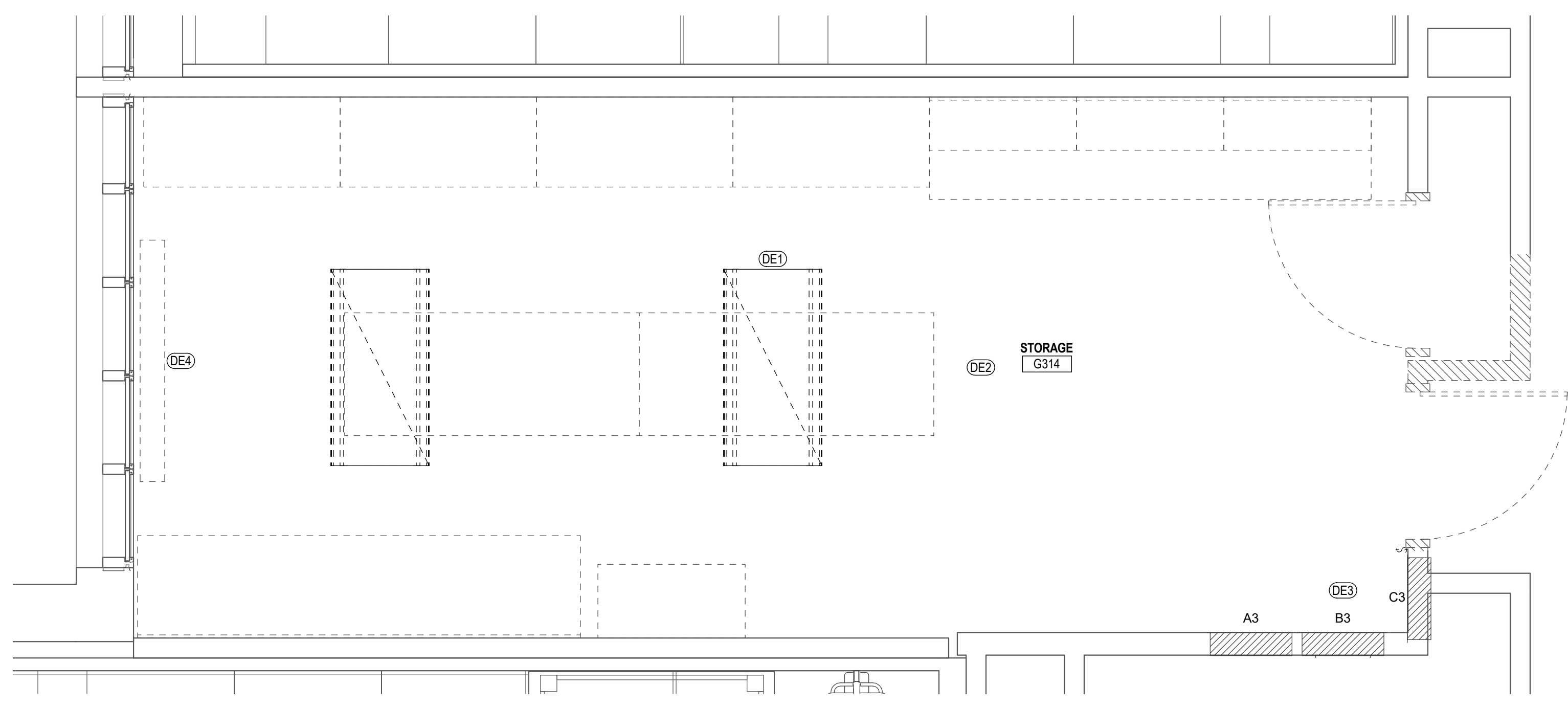
- EP1 CONNECTION FOR FUME HOOD. COORDINATE EXACT ROUGH-IN LOCATION AND REQUIREMENTS WITH EQUIPMENT MANUFACTURER PRIOR TO THE START OF CONSTRUCTION. CONTRACTOR TO EXTEND 3/4" CONDUIT WITH PULLING LINE FROM HOOD MOUNTED SWITCH TO FUME HOOD EXHAUST FAN FOR CONTROLS.
- EP2 EXISTING ELECTRICAL PANELS TO REMAIN.
- EP4 CONNECTION FOR LAB SAFETY SYSTEMS SOLENOID VALVE/UTILITY CONTROLLER. COORDINATE EXACT ROUGH-IN LOCATION WITH ALL OTHER DISCIPLINES PRIOR TO INSTALLATION.
- EP5 EXISTING HVAC CONTROLS CABINET.
- EP6 EXISTING LAB SAFETY E-CONTROLLER.
- EP7 SERVE FUME HOODS FROM EXISTING 20A1P CIRCUIT BREAKER LABELED AS SPARE IN EXISTING PANEL "A3". CONTRACTOR SHALL VERIFY SPARE CAPACITY OF PANEL PRIOR TO THE START OF CONSTRUCTION.
- EP8 NEMA 6-20 OUTLET FOR LAB EQUIPMENT. CONTRACTOR TO COORDINATE EXACT PLUG CONFIGURATION WITH OWNER PROVIDED EQUIPMENT PRIOR TO THE START OF CONSTRUCTION.
- EP13 CONNECTION FOR CEILING MOUNTED AIR CONDITIONING UNIT. PROVIDE 3/12, #12GND, 3/4". COORDINATE EXACT ROUGH-IN LOCATION WITH MECHANICAL DRAWINGS.
- EP14 REPLACE TWO 20A1P CIRCUIT BREAKERS IN SPACES 22, 24 IN EXISTING PANEL A3 WITH NEW 15A3P CIRCUIT BREAKER. NEW BREAKER SHALL BE OF THE SAME MANUFACTURER AND COMPATIBLE WITH THE EXISTING PANEL AND SHALL HAVE AN AIC RATING TO MATCH.

GENERAL NOTES - LIGHTING PLAN

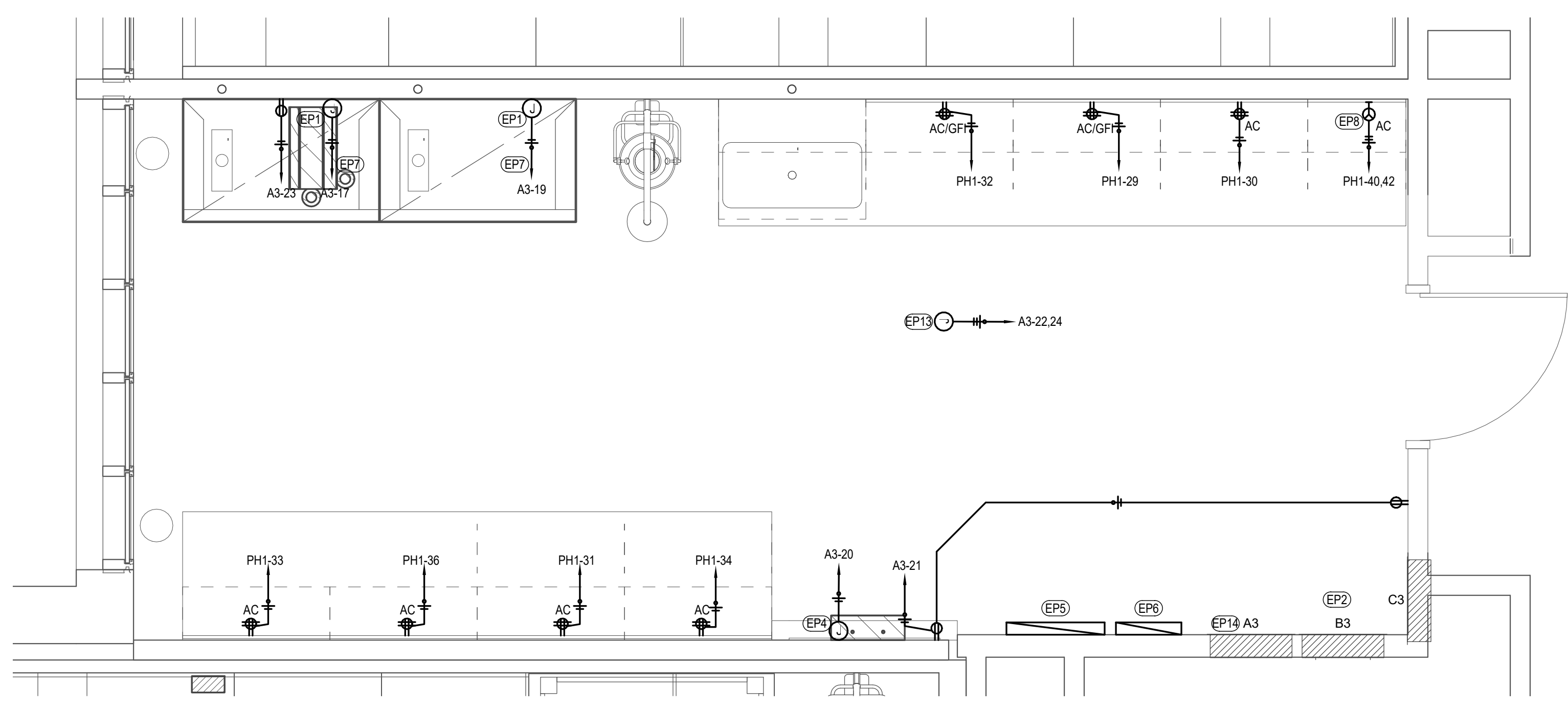
- 1. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN (RCP) FOR EXACT LOCATION OF LIGHT FIXTURES. WHERE DISCREPANCIES EXIST THE LIGHTING SHOWN ON THIS PLAN SHALL GOVERN. FURNISH FIXTURES WITH TRIM COMPATIBLE WITH THE TYPE OF CEILING AS INDICATED ON THE RCP.
- 2. COORDINATE PLACEMENT OF FIXTURES WITH ACTUAL INSTALLATION OF MECHANICAL EQUIPMENT AND DUCTWORK.
- 3. INSTALL A DEDICATED NEUTRAL FOR EACH 120V OR 277V BRANCH CIRCUIT.
- 4. ALL EXIT LIGHTS SHALL BE CONNECTED TO THE UN-SWITCHED PHASE CONDUCTOR (CONSTANT HOT) OF THE CIRCUIT SERVING THE LIGHTING FIXTURES WITHIN THE SPACE. TAP UNSWITCHED HOT LEG AHEAD OF LIGHTING CONTROL PANEL.
- 5. CONNECT EMERGENCY BATTERY UNITS IN LIGHTING FIXTURES TO THE UN-SWITCHED PHASE CONDUCTOR (CONSTANT HOT) OF THE CIRCUIT SERVING THE FIXTURES. TAP UNSWITCHED HOT LEG AHEAD OF LIGHTING CONTROL PANEL.
- 6. WHERE TWO LIGHT SWITCHES ARE SHOWN ADJACENT TO EACH OTHER, THE SWITCH NEAREST THE DOOR CONTROLS THE OUTER LAMPS IN ALL THE FIXTURES IN THE SPACE AND THE OTHER SWITCH CONTROLS THE INNER LAMPS IN ALL THE FIXTURES IN THE SPACE.
- 7. ALL LIGHT SWITCHES AND WALL SWITCH OCCUPANCY SENSORS SHALL BE INSTALLED ON THE STRIKE SIDE OF DOOR. COORDINATE EXACT LOCATION WITH ARCHITECTURAL DRAWINGS PRIOR TO START OF CONSTRUCTION AND FINAL DOOR LOCATIONS IN FIELD.
- 8. CONTRACTOR SHALL COORDINATE EXACT LOCATIONS, MOUNTING HEIGHTS OF THE EXIT SIGNS AND THE DIRECTIONAL CHEVRONS WITH THE ARCHITECT'S EGRESS PLAN PRIOR TO INSTALLATION.
- 9. IN EXPOSED STRUCTURE AREAS, ROUTE FEEDER AND BRANCH CIRCUIT RACEWAYS PARALLEL AND PERPENDICULAR TO STRUCTURE.

KEYED NOTES - LIGHTING PLAN

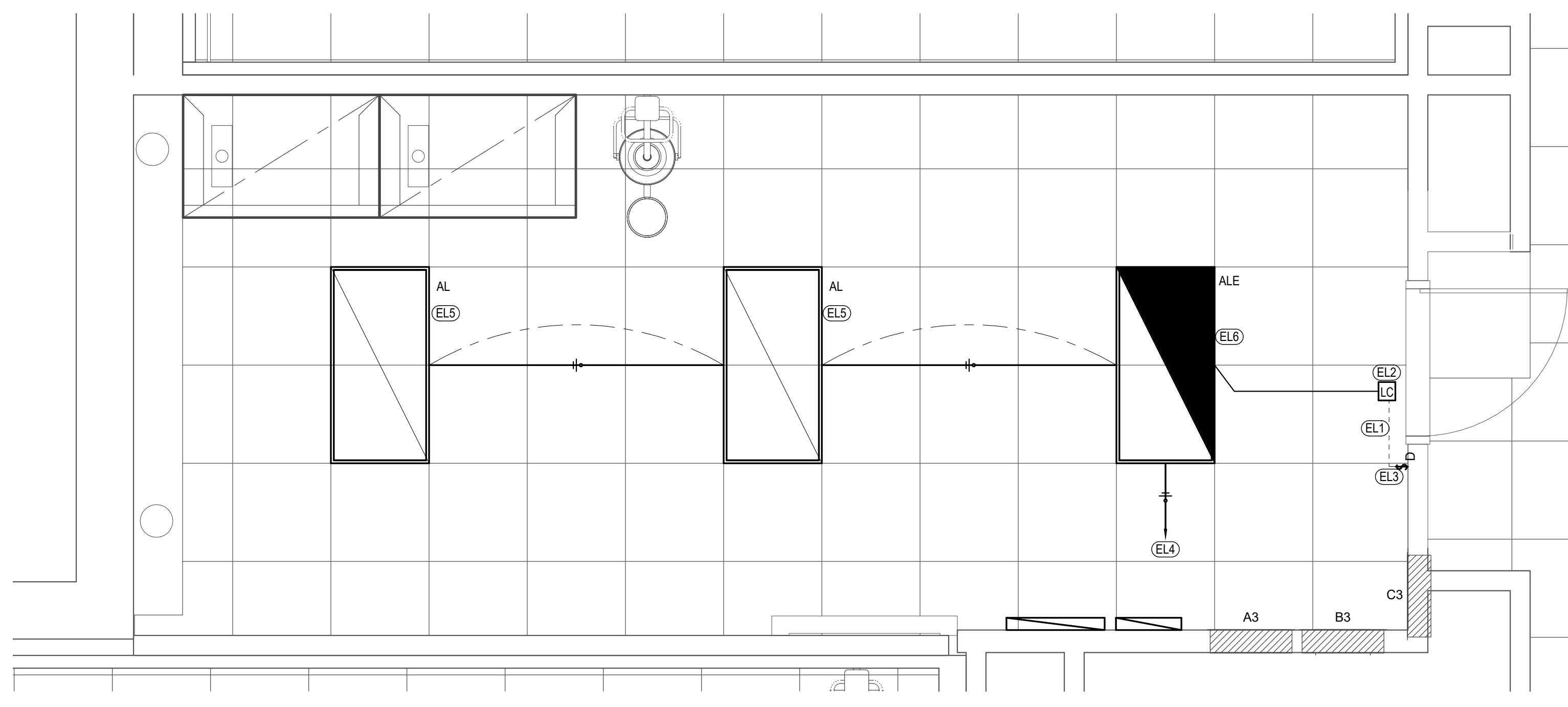
- EL1 CLASS 2, CAT 5E CABLING FROM AREA LIGHTING CONTROLLER TO NETWORK BRIDGE AND WALL CONTROLLER. SEE DETAILS AND SPECIFICATIONS 26.09.43.
- EL2 ROOM LIGHTING CONTROLLER MOUNTED ABOVE ACCESSIBLE CEILING. SEE ELECTRICAL DETAILS AND SPECIFICATION SECTION 26.09.43.
- EL3 WALL MOUNTED, LOW VOLTAGE DIMMER SWITCH. SEE ELECTRICAL DETAILS AND SPECIFICATION SECTION 26.09.43.
- EL4 SERVE NEW LIGHTING FROM SAME CIRCUIT SERVING EXISTING LIGHTING REMOVED DURING DEMOLITION.
- EL5 INSTALL NEW LITHONIA MODEL #2GT14G60LMVOLTZ1LP840 OR APPROVED EQUIVALENT.
- EL6 INSTALL NEW LITHONIA MODEL #2GT14G60LMVOLTZ1LP840E114L OR APPROVED EQUIVALENT.



1 THIRD FLOOR - ELECTRICAL DEMOLITION PLAN
 SCALE: 1/2" = 1'-0"



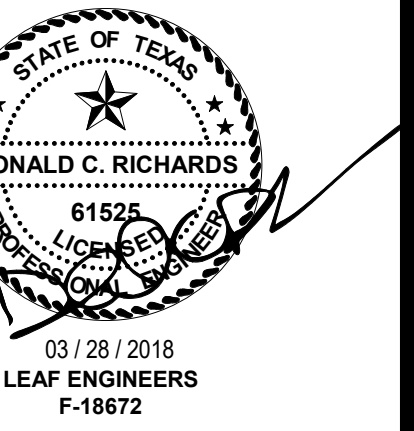
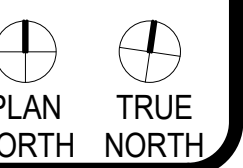
2 THIRD FLOOR - POWER PLAN
 SCALE: 1/2" = 1'-0"



3 THIRD FLOOR - LIGHTING PLAN
 SCALE: 1/2" = 1'-0"

NANOMATERIALS LAB RENOVATION
 One Camino Santa Maria, San Antonio, Texas 78228

Schematic Design



CLIENT
 St Mary's University

PROJECT NUMBER
 1816

DATE: 03 / 28 / 2018

DRAWN BY: LARRY A. SCHAFFER

CHECKED BY: DON RICHARDS

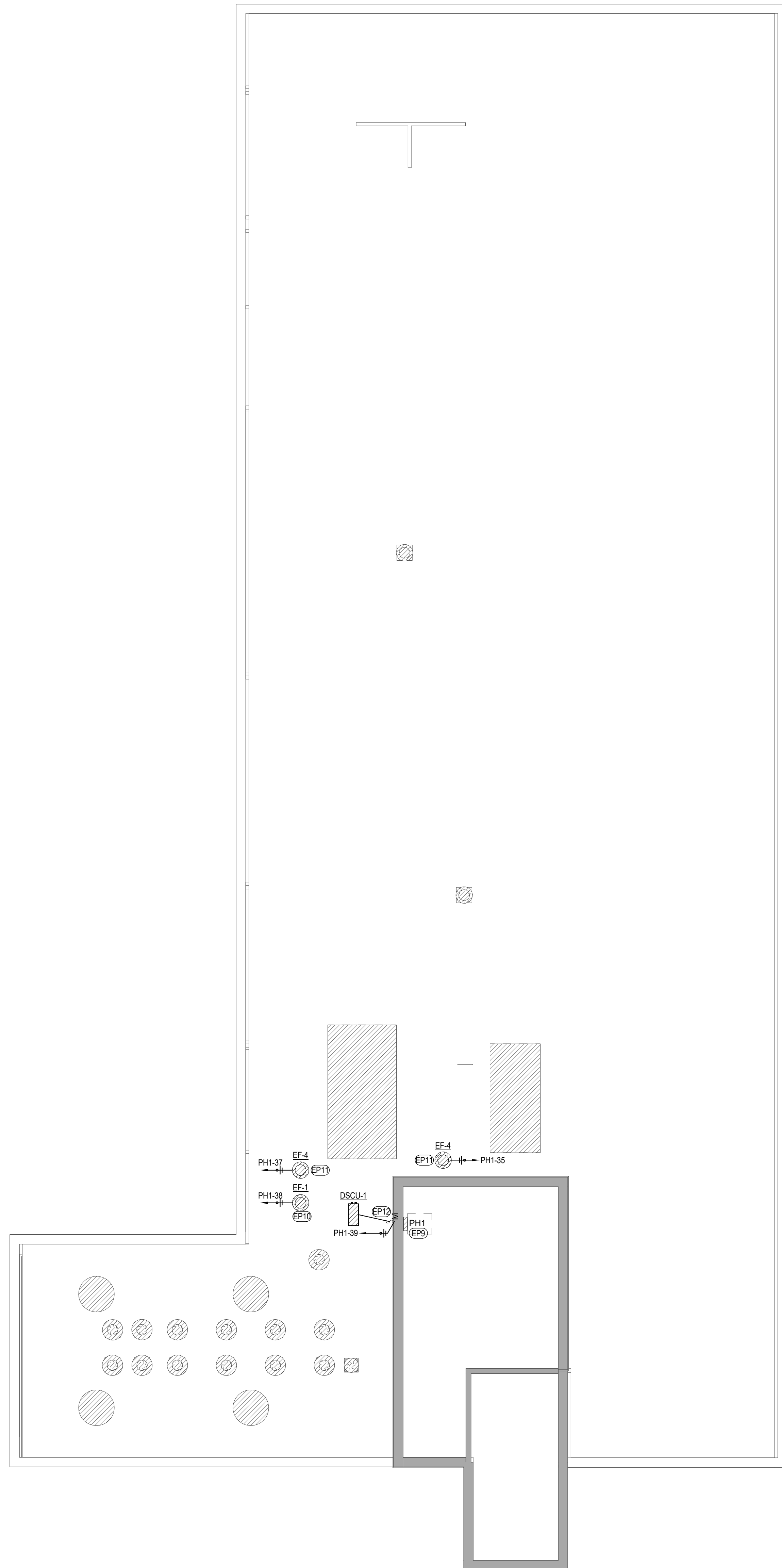
REVISIONS

No.	Description	Date

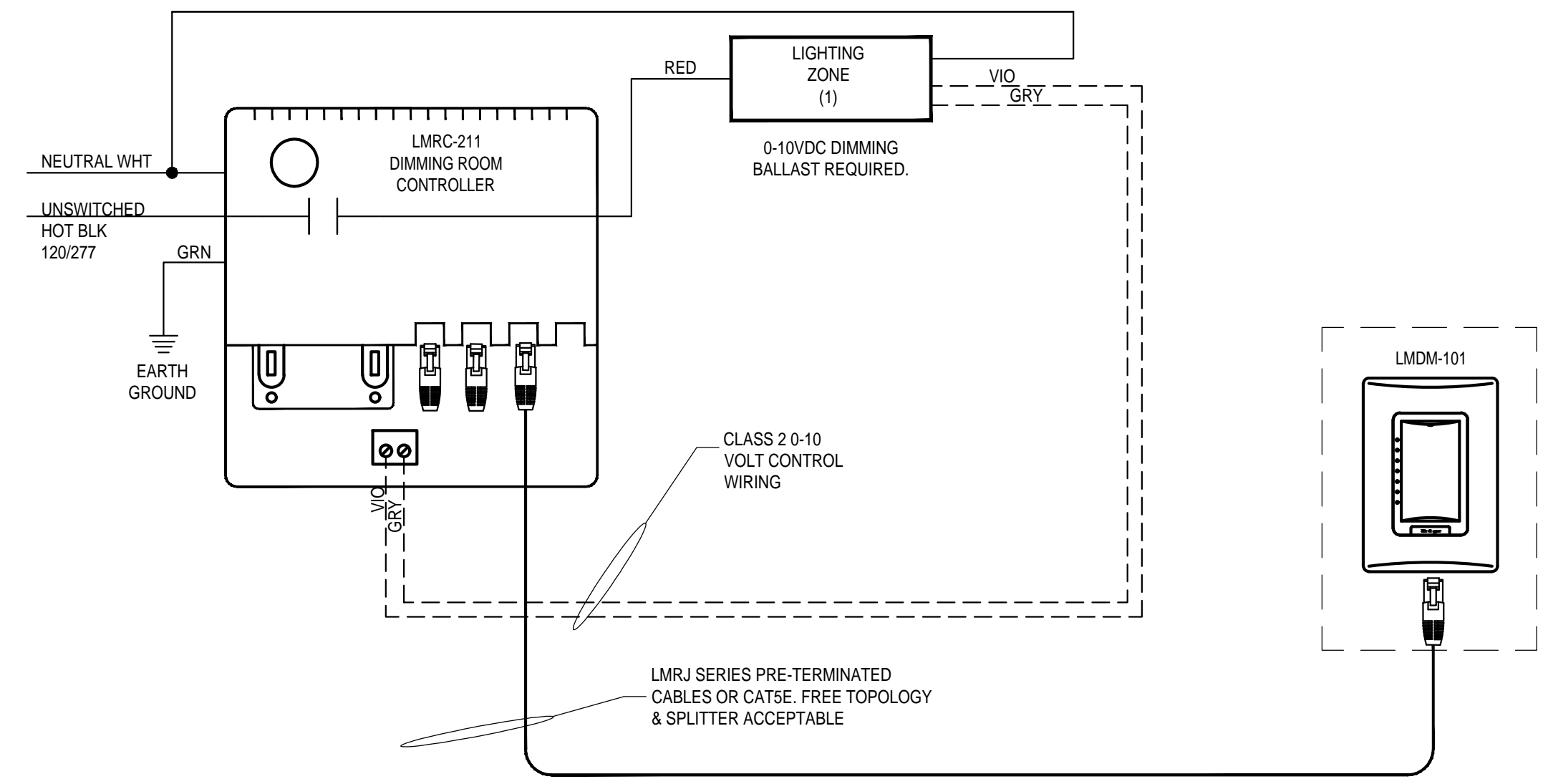
Schematic Design

ROOF - ELECTRICAL PLAN

E3.01



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1 SCIENCE LAB DIGITAL LIGHTING CONTROL DIAGRAM
 SCALE: NONE

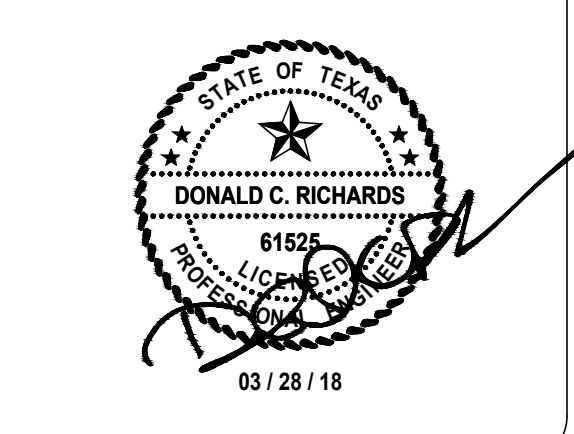
EXISTING PANELBOARD PH1

VOLTAGE: 208Y/120 VOLT 3 PHASE 4 WIRE LOCATION: PENT HOUSE
 225A MAIN BREAKER MOUNTING SURFACE
 BUSES: MAIN - 225 A, NEUTRAL - 100%, EQUIPMENT GROUND ISc = 10,000 A RMS SYM-AVAILABLE

VAL.	VAR.	VA/O	LOAD	BKR	CKT	CKT	BKR	LOAD	VAL.	VAR.	VA/O
0	0	1200	ICE MACHINE	201	1	A	2	800 RTU-315	0	0	5644
0	0	800	DOOR LOCKS	201	3	B	4	-	0	0	5644
0	0	696	EF-2	151	5	C	6	-	0	0	5644
0	0	864	EF-1	151	7	A	8	201 ROOF RECEPTACLES	0	0	540
0	0	1656	EF-4	251	9	B	10	251 EF-3	0	0	1656
0	0	1656	EF-3	251	11	C	12	251 EF-3	0	0	1656
0	0	1656	EF-3	251	13	A	14	251 EF-3	0	0	1656
0	0	1656	EF-3	251	15	B	16	251 EF-3	0	0	1656
0	0	1656	EF-3	251	17	C	18	251 EF-3	0	0	1656
0	0	1656	EF-3	251	19	A	20	251 EF-3	0	0	1656
0	0	1656	EF-3	251	21	B	22	251 EF-6	0	0	1656
0	0	224	RH-1	151	23	C	24	201 RECEPTACLES	0	0	180
0	0	720	RECEPTACLES	201	25	A	26	201 RECEPTACLES	0	0	180
0	0	720	RECEPTACLES	201	27	B	28	201 RECEPTACLES	0	0	720
0	0	360	RECEPTACLES	201	29	C	30	201 RECEPTACLES	0	0	360
0	0	360	RECEPTACLES	201	31	A	32	201 RECEPTACLES	0	0	360
0	0	360	RECEPTACLES	201	33	B	34	201 RECEPTACLES	0	0	360
0	0	1656	EF-4	251	35	C	36	201 RECEPTACLES	0	0	360
0	0	1656	EF-4	251	37	A	38	151 EF-1	0	0	864
0	0	2200	DSCU-1	301	39	B	40	202 LAB EQUIPMENT OUTLET	0	0	1200
0	0		SPACE	201	41	C	42	-	0	0	1200

VAL (LIGHTING)	0	CONNECTED VA	0	DEMAND VA
VAR (RECEPTACLES)	5760	CONNECTED VA	5760	DEMAND VA
VA/O (OTHER)	52676	CONNECTED VA	52676	DEMAND VA
VA TOTAL	58436	CONNECTED VA	58436	DEMAND VA
AMPS TOTAL	162	CONNECTED AMPS	162	DEMAND AMPS

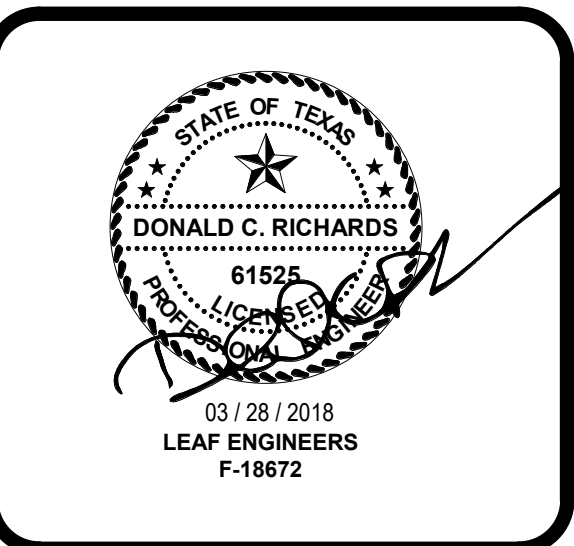
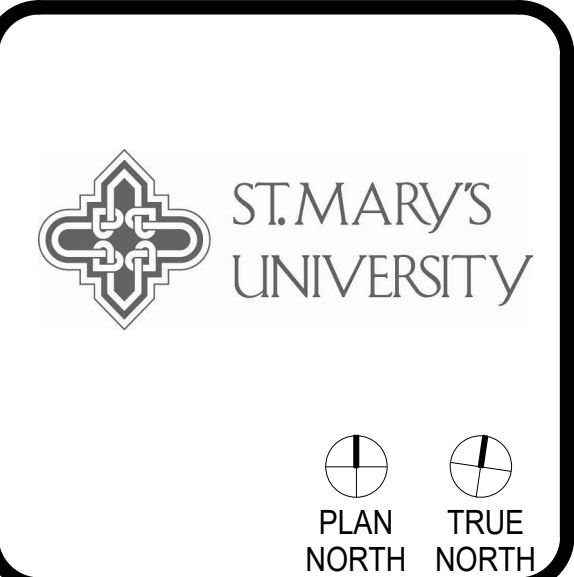
L	R	O	VA CONNECTED TO A PHASE	19012	VA =	158	AMPS CONNECTED TO A PHASE @ 120 VOLTS
0	2160	18552	VA CONNECTED TO B PHASE	22120	VA =	184	AMPS CONNECTED TO B PHASE @ 120 VOLTS
0	2340	19780	VA CONNECTED TO C PHASE	17304	VA =	144	AMPS CONNECTED TO C PHASE @ 120 VOLTS
0	1260	18044	TOTAL	58436	VA		
0	5760	52676					



CLIENT St Mary's University		
PROJECT NUMBER 1816		
DATE:	DATE:	
DRAWN BY: LARRY A. SCHAFER		
CHECKED BY: DON RICHARDS		
REVISIONS		
No.	Description	Date

100% Construction Documents
ELECTRICAL SCHEDULES

E6.01



CLIENT
 St Mary's University
 PROJECT NUMBER
 1816
 DATE: 03 / 28 / 2018
 DRAWN BY: MATTHEW TREVINO
 CHECKED BY: DON RICHARDS

REVISIONS

No.	Description	Date

100% CONSTRUCTION DOCUMENTS

THIRD FLOOR - PLUMBING OVERALL PLAN

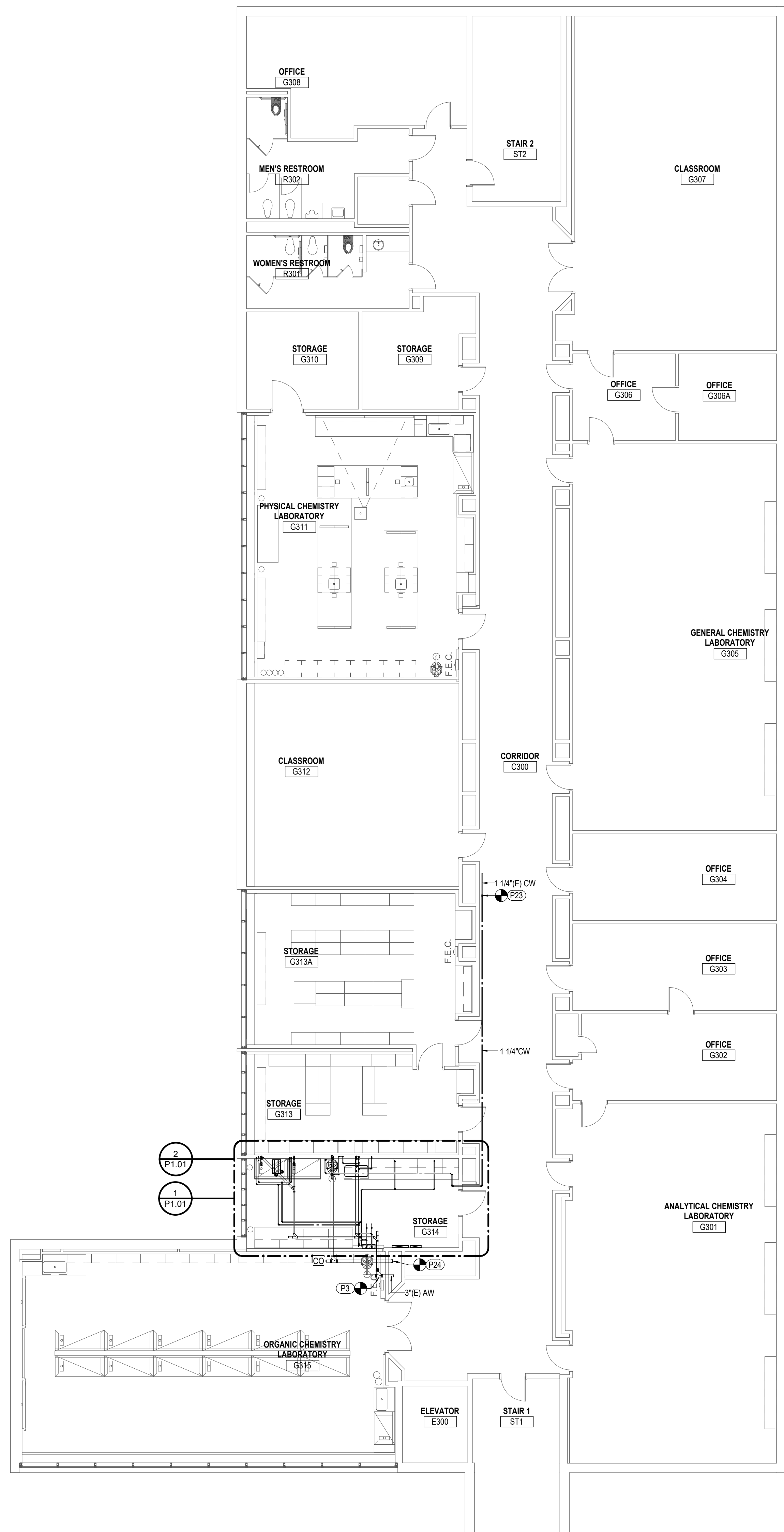
P1.00

GENERAL NOTES - PLUMBING PLAN

1. THE CONTRACTOR SHALL COMPLY WITH ALL AUTHORITIES HAVING JURISDICTION.
2. ALL FINAL CONNECTIONS TO FIXTURES AND EQUIPMENT SHALL BE MADE BY THE PLUMBING CONTRACTOR.
3. ALL PLUMBING PIPING SHALL BE COORDINATED WITH ALL OTHER TRADES PRIOR TO ANY INSTALLATION OF ALL PLUMBING FIXTURES AND EQUIPMENT BY THE PLUMBING CONTRACTOR.
4. ALL FLOOR DRAINS AND FLOOR SINKS SHOWN ON THIS DRAWING SHALL BE COORDINATED WITH ALL OTHER TRADES PRIOR TO INSTALLATION.
5. REFER TO ARCHITECTURAL DRAWING FOR EXACT LOCATIONS OF FIXTURES, EQUIPMENT, ETC. DO NOT SCALE FROM PLUMBING DRAWINGS.
6. ALL WALL CLEAN-OUTS SHALL BE ACCESSIBLE BY AN ACCESS PANEL.
7. PROVIDE A DOUBLE EXTERIOR CLEAN-OUT (DFCO) ON ALL SANITARY LINES EXITING THE BUILDING.
8. ALL FLOOR DRAINS AND FLOOR SINKS SHALL BE PROVIDED WITH A TRAP PRIMER.
9. FIXTURES DESIGNATED AS ADA ACCESSIBLE BY ARCHITECT SHALL BE INSTALLED AT ADA ACCESSIBLE HEIGHT PER ARCHITECTURAL DETAILS.
10. ALL DOMESTIC COLD AND HOT WATER TAKE-OFFS SHALL HAVE AN ISOLATION SHUT-OFF VALVE.
11. FLOOR DRAINS AND FLOOR SINKS IN MECHANICAL ROOMS SHALL BE SET NOT LESS THAN 6" FROM HOUSEKEEPING PADS. RE MECHANICAL DRAWINGS: DO NOT PLACE ON, OR IN, HOUSEKEEPING PAD, OR UNDERNEATH EQUIPMENT.
12. CONTRACTOR SHALL DEWATER ANY AREA AT OR BELOW GRADE PRIOR TO SETTING EQUIPMENT.
13. CONTRACTOR SHALL PLACE A TRAP PRIMER, TP-1, AND A HOSE BIBB, HB-2, IN ALL MECHANICAL ROOMS.
14. PROVIDE A HOSE-BIBB WITH WHEEL HANDLE IN ALL MECHANICAL ROOMS, HB-2.
15. ANY AND ALL WATER PIPING EXPOSED TO OUTSIDE ELEMENTS SHALL BE INSULATED AND HEAT TRACED TO PREVENT FREEZING.
16. ALL SANITARY 3" OR ABOVE SHALL BE INSPECTED BY A CAMERA PRIOR TO SUBSTANTIAL COMPLETION.

KEYED NOTES - PLUMBING PLAN

- P3 CONNECT NEW ACID WASTE PIPING TO EXISTING ACID WASTE PIPING IN SECOND FLOOR CEILING SPACE. CONTRACTOR TO FIELD VERIFY SIZE AND LOCATION PRIOR TO ANY CONSTRUCTION.
- P23 CONNECT NEW 1-1/4" COLD WATER PIPING TO EXISTING COLD WATER PIPING ABOVE CEILING IN THIS VICINITY. CONTRACTOR TO FIELD VERIFY SIZE AND LOCATION PRIOR TO ANY CONSTRUCTION.
- P24 CONNECT NEW 3" WASTE PIPING TO EXISTING WASTE STACK IN SECOND FLOOR CEILING SPACE. CONTRACTOR TO FIELD VERIFY SIZE AND LOCATION OF EXISTING WASTE STACK PRIOR TO ANY CONSTRUCTION.



GENERAL NOTES - PLUMBING DEMOLITION PLAN

- DEMOLISHED ITEMS ARE PROPERTY OF THE OWNER. OWNER RETAINS SALVAGE RIGHTS TO DEMOLISHED ITEMS.

KEYED NOTES - PLUMBING DEMOLITION PLAN

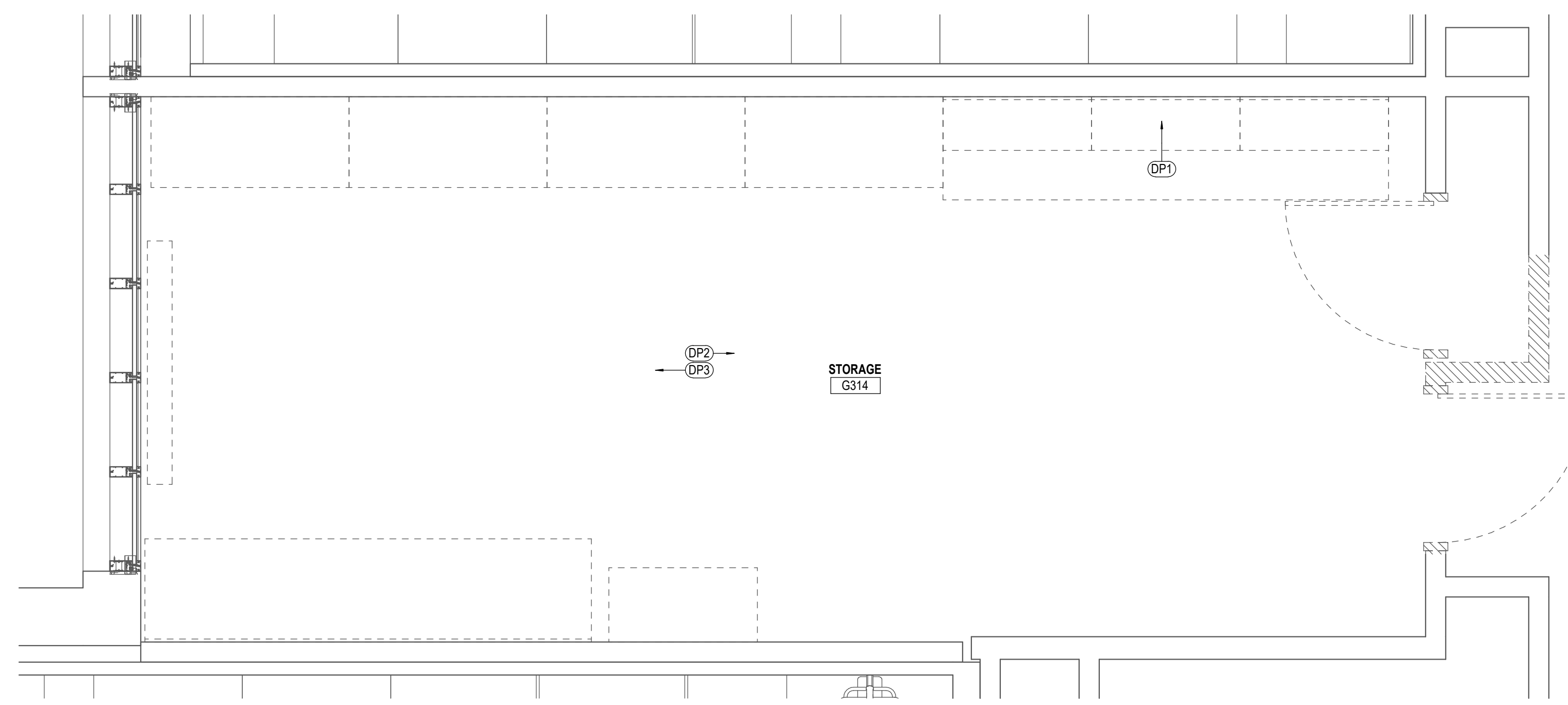
- DP1 EXISTING GAS PIPING TO BE REMOVED AND CAPPED BELOW FLOOR IN 2ND FLOOR CEILING SPACE.
- DP2 EXISTING WATER, WASTE, GAS, AND VENT PIPING TO BE CAPPED BELOW FLOOR IN 2ND FLOOR CEILING SPACE.
- DP3 REMOVE EXISTING GAS TURRET.

GENERAL NOTES - PLUMBING PLAN

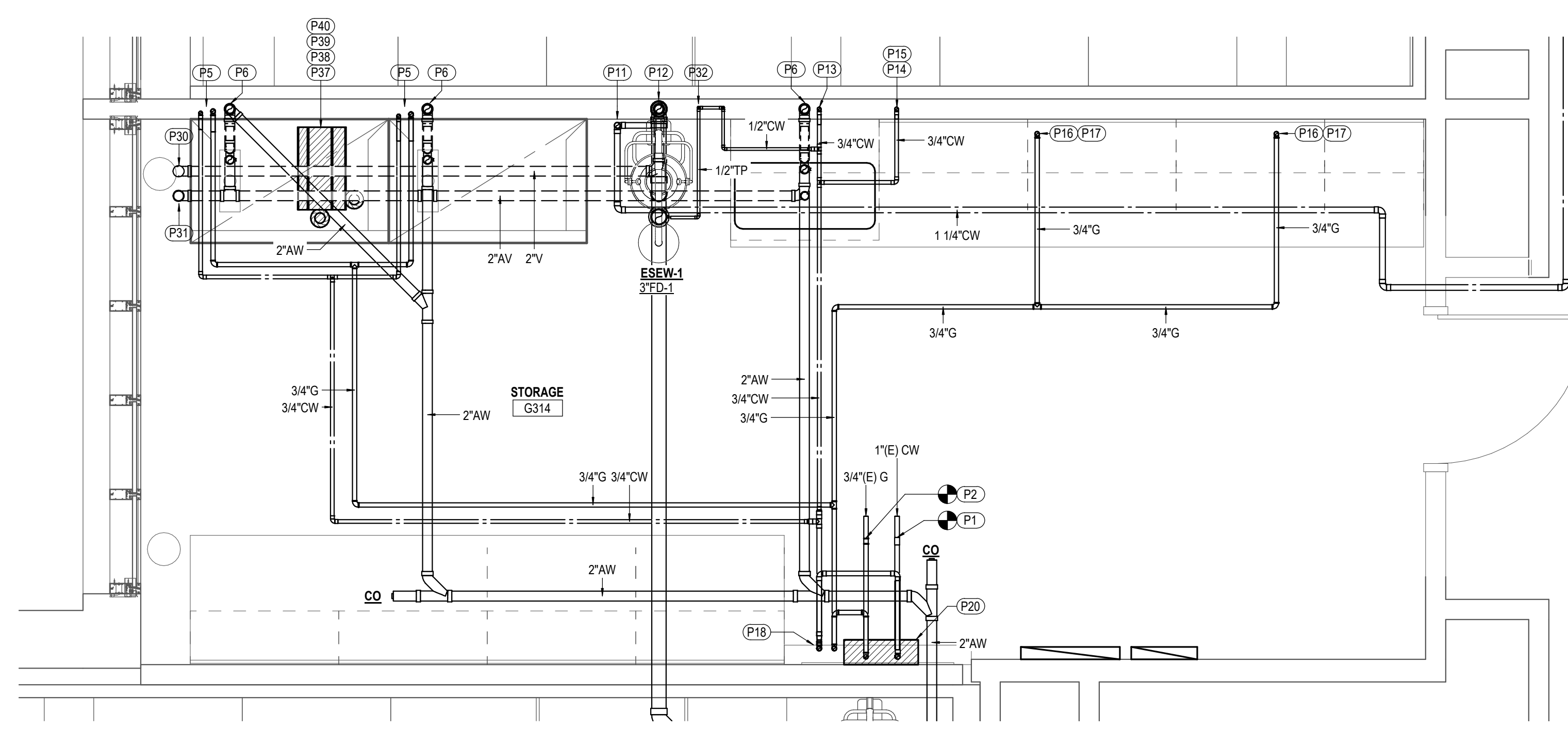
- THE CONTRACTOR SHALL COMPLY WITH ALL AUTHORITIES HAVING JURISDICTION.
- ALL FINAL CONNECTIONS TO FIXTURES AND EQUIPMENT SHALL BE MADE BY THE PLUMBING CONTRACTOR.
- ALL PLUMBING PIPING SHALL BE COORDINATED WITH ALL OTHER TRADES PRIOR TO ANY INSTALLATION OF ALL PLUMBING FIXTURES AND EQUIPMENT BY THE PLUMBING CONTRACTOR.
- ALL FLOOR DRAINS AND FLOOR SINKS SHOWN ON THIS DRAWING SHALL BE COORDINATED WITH ALL OTHER TRADES PRIOR TO INSTALLATION.
- REFER TO ARCHITECTURAL DRAWING FOR EXACT LOCATIONS OF FIXTURES, EQUIPMENT, ETC. DO NOT SCALE FROM PLUMBING DRAWINGS.
- ALL WALL CLEAN-OUTS SHALL BE ACCESSIBLE BY AN ACCESS PANEL.
- PROVIDE A DOUBLE EXTERIOR CLEAN-OUT (DFCO) ON ALL SANITARY LINES EXITING THE BUILDING.
- ALL FLOOR DRAINS AND FLOOR SINKS SHALL BE PROVIDED WITH A TRAP PRIMER.
- FIXTURES DESIGNATED AS ADA ACCESSIBLE BY ARCHITECT SHALL BE INSTALLED AT ADA ACCESSIBLE HEIGHT PER ARCHITECTURAL DETAILS.
- ALL DOMESTIC COLD AND HOT WATER TAKE-OFFS SHALL HAVE AN ISOLATION SHUT-OFF VALVE.
- FLOOR DRAINS AND FLOOR SINKS IN MECHANICAL ROOMS SHALL BE SET NOT LESS THAN 6" FROM HOUSEKEEPING PADS. RE: MECHANICAL DRAWINGS. DO NOT PLACE ON, OR IN, HOUSEKEEPING PAD, OR UNDERNEATH EQUIPMENT.
- CONTRACTOR SHALL DEWATER ANY AREA AT OR BELOW GRADE PRIOR TO SETTING EQUIPMENT.
- CONTRACTOR SHALL PLACE A TRAP PRIMER, TP-1, AND A HOSE BIBB, HB-2, IN ALL MECHANICAL ROOMS.
- PROVIDE A HOSE-BIBB WITH WHEEL HANDLE IN ALL MECHANICAL ROOMS, HB-2.
- ANY AND ALL WATER PIPING EXPOSED TO OUTSIDE ELEMENTS SHALL BE INSULATED AND HEAT TRACED TO PREVENT FREEZING.
- ALL SANITARY 3" OR ABOVE SHALL BE INSPECTED BY A CAMERA PRIOR TO SUBSTANTIAL COMPLETION.

KEYED NOTES - PLUMBING PLAN

- P1 CONNECT NEW 1" COLD WATER PIPING IN THIS VICINITY IN SECOND FLOOR CEILING SPACE. CONTRACTOR TO FIELD VERIFY SIZE AND LOCATION PRIOR TO ANY CONSTRUCTION.
- P2 CONNECT NEW 3/4" GAS PIPING IN THIS VICINITY IN SECOND FLOOR CEILING SPACE. CONTRACTOR TO FIELD VERIFY SIZE AND LOCATION PRIOR TO ANY CONSTRUCTION.
- P5 3/4"CW, 3/4"G UP FROM FLOOR BELOW TO FUME HOOD.
- P6 2"AW UP AND 2"AW DOWN.
- P11 1 1/2" COLD WATER UP FROM BELOW TO ESEW-1
- P12 2" VENT UP AND 3" WASTE DOWN.
- P13 3/4"CW UP TO LAB SINK.
- P14 3/4"CW UP TO POINT OF USE OF DI WATER UNIT.
- P15 PROVIDE DI WATER UNIT MODEL XXXX
- P16 3/4"G PIPING UP TO GAS TURRET.
- P17 PROVIDE DUAL GAS TURRET MODEL 288200 AND LABORATORY VALVE 280018 MANUFACTURED BY ZURN.
- P18 1"CW AND 3/4"G DOWN TO BELOW FLOOR.
- P20 PROVIDE UTILITY CONTROLLER VALVE PANEL BY LAB AUTOMATION CONTROL SYSTEM MODEL LSCP-2-G-C-1-1-B-E-S-IS.
- P30 2" VENT PIPING UP THRU ROOF.
- P31 2" ACID VENT PIPING UP THRU ROOF.
- P32 1/2" COLD WATER UP TO TRAP PRIMER TP-1. PROVIDE WITH ACCESS PANEL. ROUTE TRAP PRIMER TO FLOOR DRAIN AS INDICATED.
- P37 PROVIDE VACUUM PUMP MODEL PG 3012 NT VARIO MANUFACTURED BY VACUUBRAND.
- P38 VACUUM TUBING TO BE TUBING 108 MM PTFE MANUFACTURED BY VACUUBRAND.
- P39 VACUUM FITTINGS TO BE 108 MM PVDF MANUFACTURED BY VACUUBRAND.
- P40 PROVIDE VACUUM OUTLET AT FUME HOODS MODEL VCL AR AS/GP/V/B/C/S AT MANUFACTURED BY VACUUBRAND.



1 THIRD FLOOR - PLUMBING DEMOLITION PLAN
 SCALE: 1/2" = 1'-0"



2 THIRD FLOOR - PLUMBING PLAN
 SCALE: 1/2" = 1'-0"

GENERAL NOTES - PLUMBING PLAN

1. THE CONTRACTOR SHALL COMPLY WITH ALL AUTHORITIES HAVING JURISDICTION.
2. ALL FINAL CONNECTIONS TO FIXTURES AND EQUIPMENT SHALL BE MADE BY THE PLUMBING CONTRACTOR.
3. ALL PLUMBING PIPING SHALL BE COORDINATED WITH ALL OTHER TRADES PRIOR TO ANY INSTALLATION OF ALL PLUMBING FIXTURES AND EQUIPMENT BY THE PLUMBING CONTRACTOR.
4. ALL FLOOR DRAINS AND FLOOR SINKS SHOWN ON THIS DRAWING SHALL BE COORDINATED WITH ALL OTHER TRADES PRIOR TO INSTALLATION.
5. REFER TO ARCHITECTURAL DRAWING FOR EXACT LOCATIONS OF FIXTURES, EQUIPMENT, ETC. DO NOT SCALE FROM PLUMBING DRAWINGS.
6. ALL WALL CLEAN-OUTS SHALL BE ACCESSIBLE BY AN ACCESS PANEL.
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14. PROVIDE A HOSE-BIBB WITH WHEEL HANDLE IN ALL MECHANICAL ROOMS, HB-2.
15. ANY AND ALL WATER PIPING EXPOSED TO OUTSIDE ELEMENTS SHALL BE INSULATED AND HEAT TRACED TO PREVENT FREEZING.
16. ALL SANITARY 3" OR ABOVE SHALL BE INSPECTED BY A CAMERA PRIOR TO SUBSTANTIAL COMPLETION.

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 601 NW Loop 410, Suite 400
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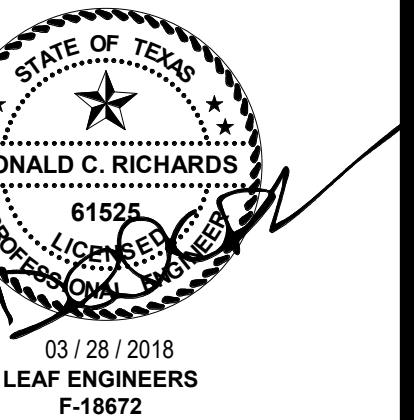
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 210-638-7200

NANOMATERIALS LAB RENOVATION
 One Camino Santa Maria, San Antonio, Texas 78228

100% CONSTRUCTION DOCUMENTS



PLAN NORTH
 TRUE NORTH

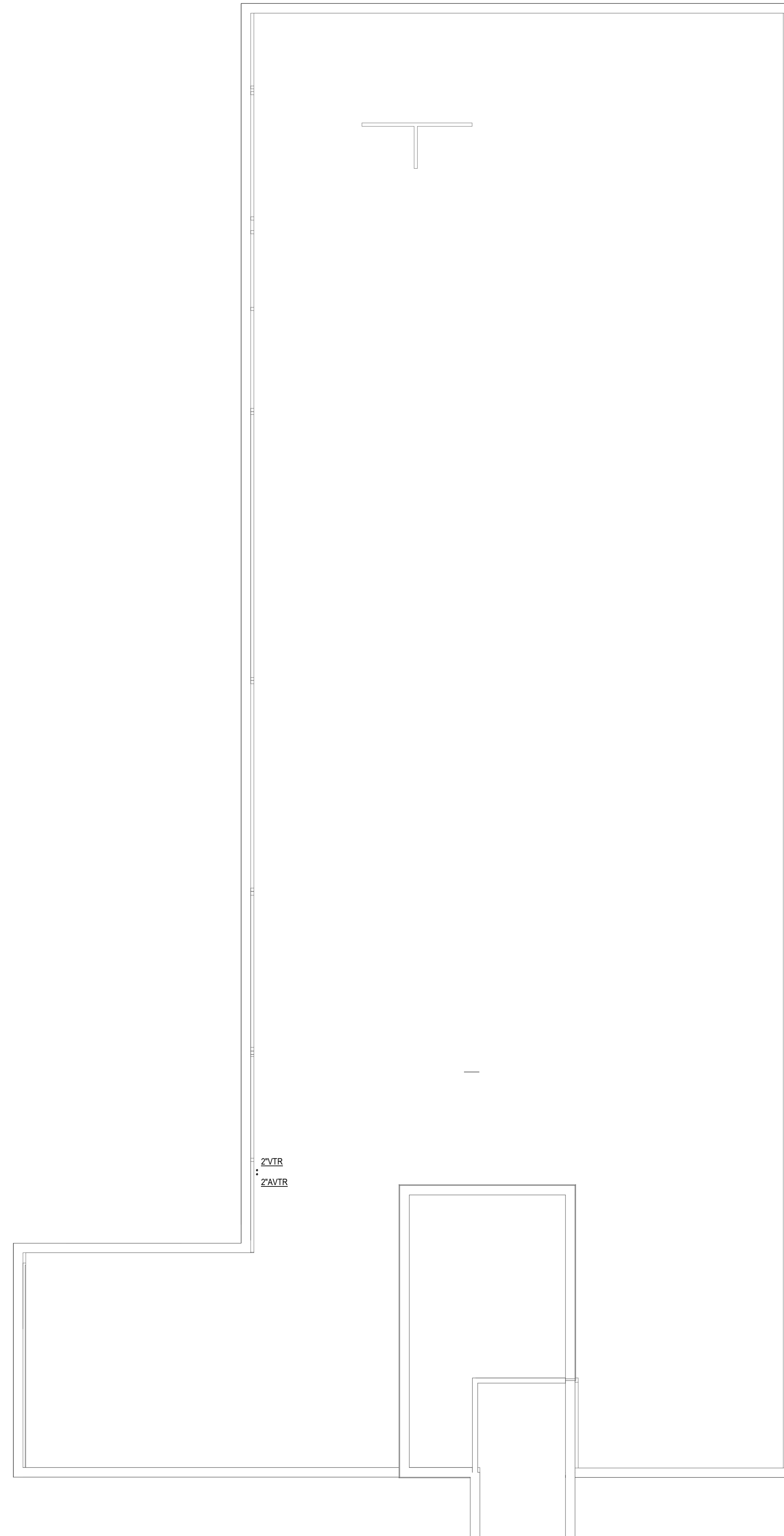


CLIENT		
St Mary's University		
PROJECT NUMBER		
1816		
DATE		
03 / 28 / 2018		
DRAWN BY		
MATTHEW TREVINO		
CHECKED BY		
DON RICHARDS		
REVISIONS		
No.	Description	Date

100% CONSTRUCTION DOCUMENTS

ROOF - PLUMBING PLAN

P3.01



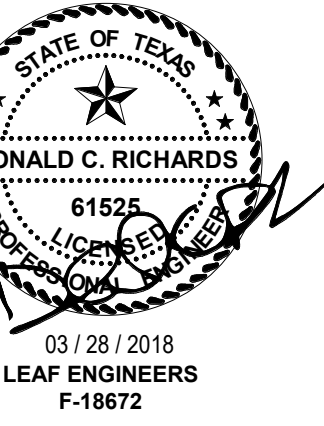
601 N.W. LOOP 410, SUITE 400
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 210-638-7200
 TX Firm: F-18672

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 One Camino Santa Maria, San Antonio, Texas 78228

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PLAN NORTH
 TRUE NORTH

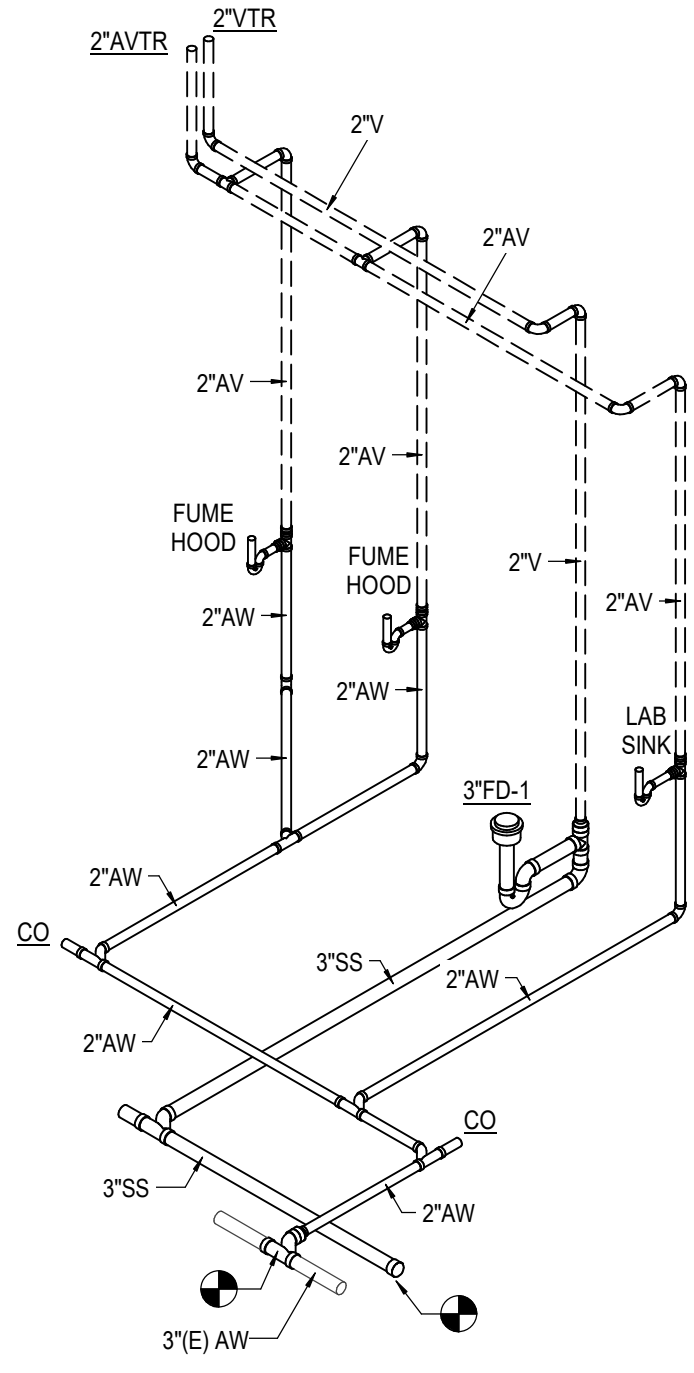


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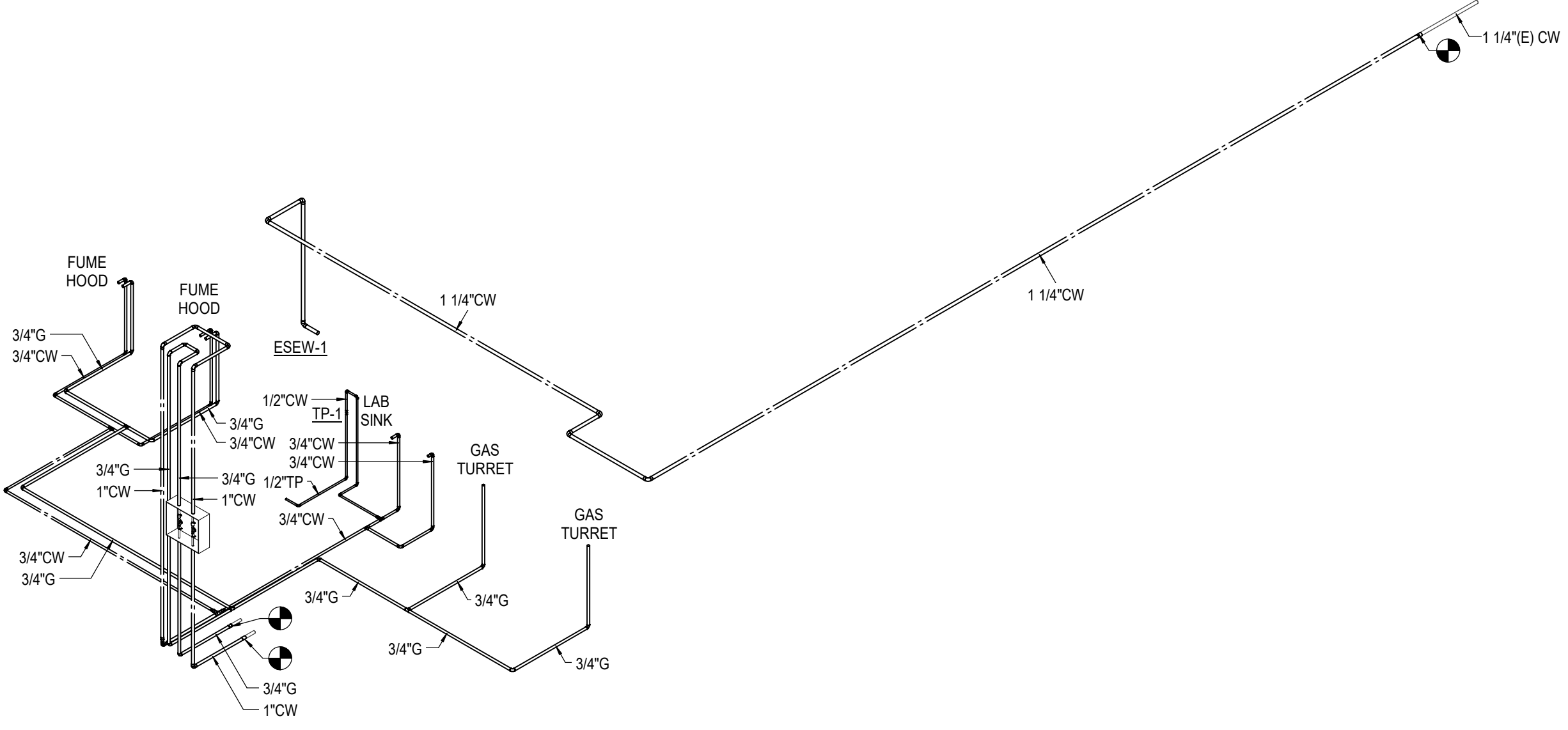
REVISIONS		
No.	Description	Date

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PLUMBING RISER DIAGRAMS



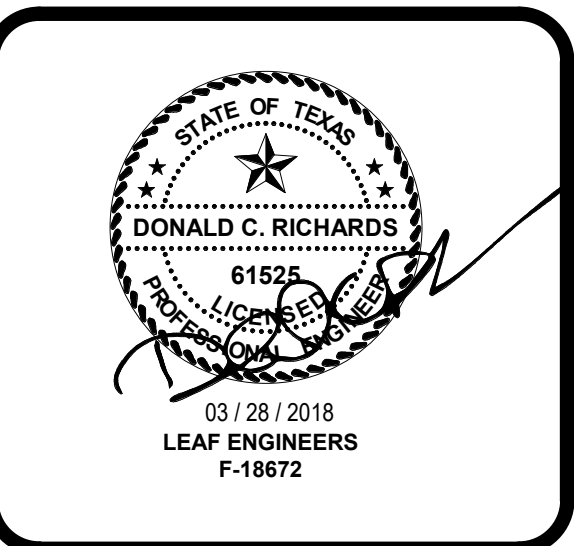
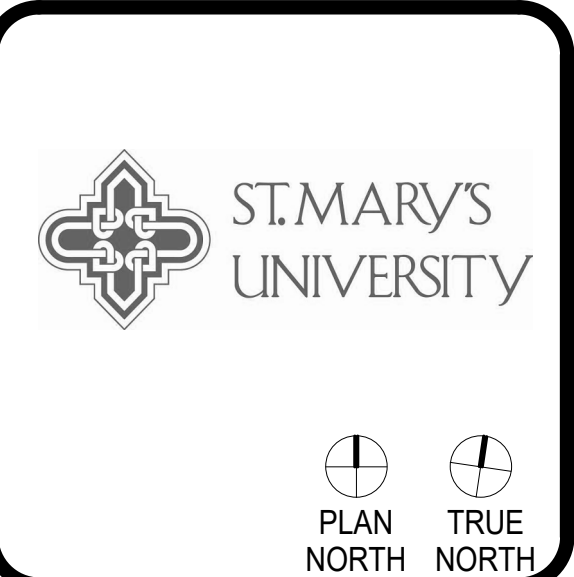
1 3D - PLUMBING RISER DIAGRAM - WASTE AND VENT
 SCALE:



2 3D - PLUMBING RISER DIAGRAM - DOMESTIC WATER AND GAS
 SCALE:



601 N.W. LOOP 410, SUITE 400
 SAN ANTONIO, TX 78216
 210-638-7200
 TX Firm: F-19672



CLIENT		
St Mary's University		
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REVISIONS		
No.	Description	Date

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PLUMBING SCHEDULES

P6.01



601 N.W. LOOP 410, SUITE 400
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210-638-7200
TX Firm: F-19672

PLUMBING FIXTURE SCHEDULE

SYMBOL	DESCRIPTION	CONNECTION SIZE				REMARKS
		WASTE	VENT	C.W.	HW	
SK-1	SIMMONS SGL10 SINGLE BOWL, TYPE EPOXY RESIN SINK WITH ZURN FAUCET Z82581-XL, W/ LEVER HANDLE AND 1.5 GPM, ZURN Z-8746-CP OFFSET GRID DRAIN, ZURN Z-8802LR-CP ANGLE STOPS WITH 3/8" OD TUBING, DEARBORN 701-1 17 GA. PROTAP AND TRUBRO 105W OFFSET INSULATION KIT. INSULATION KIT NOT REQUIRED IF CABINET APRON IS INSTALLED, ADA, LEAD-FREE.	2	2	3/4"	-	
SK-2	SIMMONS SVL15 SINGLE BOWL, TYPE EPOXY RESIN SINK WITH ZURN FAUCET Z82581-XL, W/ LEVER HANDLE AND 0.5 GPM, ZURN Z-8746-CP OFFSET GRID DRAIN, ZURN Z-8802LR-CP ANGLE STOPS WITH 3/8" OD TUBING, DEARBORN 701-1 17 GA. PROTAP AND TRUBRO 105W OFFSET INSULATION KIT. INSULATION KIT NOT REQUIRED IF CABINET APRON IS INSTALLED, ADA, LEAD-FREE.	2	2	3/4"	-	
SK-3	SIMMONS SGL10 SINGLE BOWL, TYPE EPOXY RESIN SINK WITH ZURN FAUCET Z82581-XL, W/ LEVER HANDLE AND 0.5 GPM, ZURN Z-8746-CP OFFSET GRID DRAIN, ZURN Z-8802LR-CP ANGLE STOPS WITH 3/8" OD TUBING, DEARBORN 701-1 17 GA. PROTAP AND TRUBRO 105W OFFSET INSULATION KIT. INSULATION KIT NOT REQUIRED IF CABINET APRON IS INSTALLED, ADA, LEAD-FREE.	2	2	3/4"	-	
FD-1	J.R. SMITH FIG 2010C-NB-U-P050, 6" DIAMETER NICKEL BRONZE STRAINER, VANDAL PROOF SCREWS, TRAP PRIMER CONNECTION WITH CAST IRON BODY FLOOR DRAIN. PUSH ON GASKET OUTLET OR NO HUB OUTLET.	SEE PLANS				PROVIDE TRAP PRIMER TP-1 (AS INDICATED)
FD-2	J.R. SMITH FIG 2010C-NB-U-P050, WITH FUNNEL STRAINER, VANDAL PROOF SCREWS, TRAP PRIMER CONNECTION WITH CAST IRON BODY FLOOR DRAIN, PUSH ON GASKET OUTLET OR NO HUB OUTLET.	SEE PLANS				PROVIDE TRAP PRIMER TP-1 (AS INDICATED)
ESEW-1	GUARDIAN GBF1009 BARRIER-FREE STATION WITH WIDE AREA EYE/FACE WASH, PLASTIC SHOWER HEAD, 10" DIA SHOWER HEAD 1" CHROME PLATED BRASS STAY-UPUT BALL VALVE, FOUR SS-PLIES SPRAY HEADS, FLIP TOP DUST COVER, INTERNAL FLOW CONTROL, 11-1/2" STAINLESS STEEL EYE/FACE BOWL.	1-1/4"	-	1-1/2"	-	
ESDH-1	GUARDIAN G5022BP DUAL PURPOSE EYEWASH / DRENCH HOSE FOR DECK MOUNTING. UNIT TO MEET ANSI Z358.1-2014 WITH 8" REINFORCED PVC HOSE. 300 PSI MAXIMUM WORK PRESSURE. IN-LINE DUAL CHECK BACKFLOW PREVENTER 3/8" NPT MALE SWIVEL TYPE INLET.	-	-	1/2"	-	

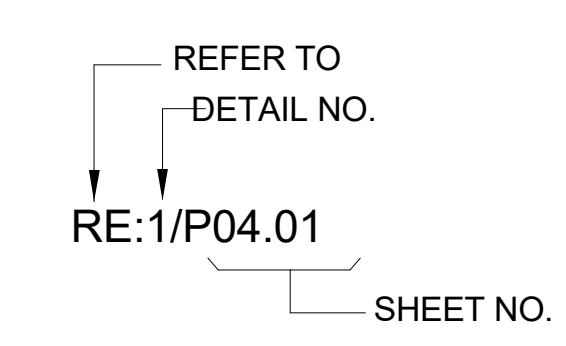
- NOTES:
- ROUGH-IN SUPPLY WASTE AND VENT PIPE SIZES INDICATED ARE MINIMUM SIZES SHOWN FOR ROUGH-IN ONLY.
 - COORDINATE WITH PLUMBING FIXTURE MANUFACTURER'S INSTALLATION DRAWINGS FOR PROPER INSTALLATION OF ALL FIXTURES.
 - ALL PLUMBING FIXTURES SHALL BE COMPLETELY ROUGH IN BY THE PLUMBING CONTRACTOR AND SHALL MEET ALL CODES HAVING JURISDICTION.
 - ALL FIXTURES TO BE COMMERCIAL GRADE UNLESS OTHERWISE NOTED.
 - PROVIDE A WATER HAMMER ARRESTOR IN PIPING TO ALL FIXTURES AND/OR FIXTURE BANKS.

PLUMBING SYMBOLS LEGEND

NOTES: 1. ALL SYMBOLS MAY NOT BE USED ON THESE DRAWINGS.

SYMBOL	ABV.	DESCRIPTION
AW	AW	ACID WASTE
AV	AV	ACID VENT
B		BUTANE
CDWR		CHILLED DRINKING WATER RETURN
CDWS		CHILLED DRINKING WATER SUPPLY
D		DRAIN PIPING
DSP		DRY SPRINKLER PIPE
F	F	FIRE LINE
FOR	FOR	FUEL OIL RETURN
FOS	FOS	FUEL OIL SUPPLY
FOV	FOV	FUEL OIL VENT
G	G	NATURAL GAS PIPING
GW	GW	GREASE WASTE ABOVE SLAB
GW	GW	GREASE WASTE BELOW SLAB
OSD		STORM OVER FLOW DRAIN
P		PROPANE GAS PIPING
PSS	PSS	PUMPED SANITARY SEWER
PSD	PSD	PUMPED STORM SEWER
SD	SD	STORM DRAIN ABOVE SLAB
SD	SD	STORM DRAIN BELOW SLAB
SP	SP	SPRINKLER LINE
SS	SS	SANITARY SEWER ABOVE SLAB
SS	SS	SANITARY SEWER BELOW SLAB
SV	SV	SANITARY VENT
CW		COLD WATER
HW		HOT WATER
HWR		HOT WATER RETURN
		DIRECTION OF FLOW
		DIRECTION OF SLOPE DOWN
		DROP IN PIPE
		RISE IN PIPE
		GATE VALVE
		BALL VALVE
		CHECK VALVE
		SUPERVISED VALVE WITH FLOW SWITCH
		SUPERVISED VALVE IN VERTICAL
		PLUG VALVE / GAS COCK
		BUTTERFLY VALVE
		BALANCING VALVE
		PIPE UNION
		PRESSURE CONTROL VALVE
		3-WAY VALVE
		SOLENOID VALVE
		FLOW SWITCH
		PRESSURE GAUGE WITH GAUGE COCK
		THERMOMETER
		ROOF DRAIN / OVERFLOW DRAIN
		FLOOR DRAIN
		FLOOR SINK
		T & P RELIEF VALVE
		STRAINER
CO	CO	END OF LINE CLEANOUT
FCC	FCC	FLOOR CLEANOUT
WCO	WCO	WALL CLEANOUT
		CAP
		FLEXIBLE CONNECTION
(E)		NEW CONNECTION TO EXISTING
		EXISTING RISER

DRAWING REFERENCE KEY



PLUMBING PIPING MATERIAL SCHEDULE

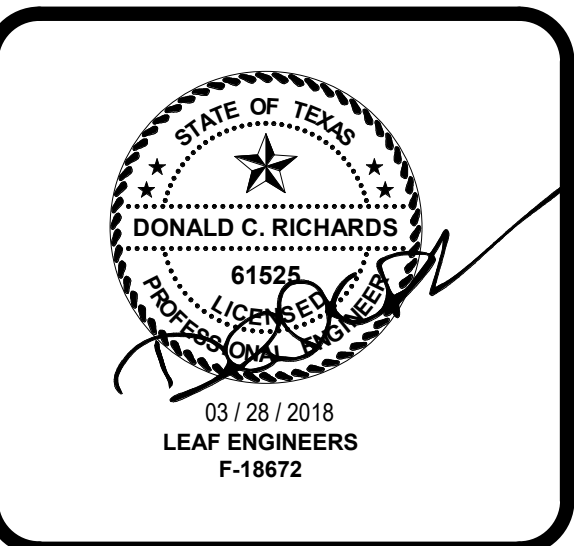
SYSTEM	BELOW GRADE	ABOVE GRADE
SANITARY WATER PIPING	-	CAST IRON
DOMESTIC WATER PIPING	-	TYPE L COPPER
NATURAL GAS PIPING	-	SCH 40 BLACK STEEL
ACID WASTE PIPING	-	SCH 40 BLACK STEEL

PLUMBING ABBREVIATION SCHEDULE

NOTES: 1. ALL ABBREVIATIONS MAY NOT BE USED ON THESE DRAWINGS.

AAP	AREA ALARM PANEL
AAV	AUTOMATIC AIR VENT
A.F.F.	ABOVE FINISHED FLOOR
AP	ACCESS PANEL
B.F.F.	BELOW FINISHED FLOOR
BFP	BACKFLOW PREVENTER
BOB	BOTTOM OF BEAM
BOP	BOTTOM OF PIPE
BTUH	BRITISH THERMAL UNITS PER HOUR
C/C	CUT AND CAP
CFH	CUBIC FEET PER HOUR
CFS	CUBIC FEET PER SECOND
CI	CAST IRON
CLG	CEILING
CO	CLEANOUT
CONN	CONNECTION
CONT.	CONTINUATION
DF	DRINKING FOUNTAIN
DPV	DRY PIPE VALVE
DWG.	DRAWING
EA	EACH
EDF	ELECTRIC DRINKING FOUNTAIN
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
FDV	FIRE DEPARTMENT VALVE
F.F.	FINISHED FLOOR
FHC	FIRE HOSE CABINET
F.L.	FLOW LINE
FS	FLOOR SINK
FT	FEET
FU	FIXTURE UNITS
GC	GENERAL CONTRACTOR
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
HB	HOSE BIBB
HP	HORSEPOWER
I.E.	INVERT ELEVATION
KW	KILOWATTS
LAV	LAVATORY
MAP	MASTER ALARM PANEL
MECH	MECHANICAL
MH	MANHOLE
MS	MOP SINK
N.C.	NORMALLY CLOSED
NIC	NOT IN CONTRACT
N.O.	NORMALLY OPEN
O.F./C.I.	OWNER FURNISHED/CONTRACTOR INSTALLED
O.F./O.I.	OWNER FURNISHED/OWNER INSTALLED
OFD	OVERFLOW DRAIN
PH	PHASE
PIV	POST INDICATOR VALVE
PRV	PRESSURE REDUCING VALVE
RD	ROOF DRAIN
RE:	REFER TO
R.I.C.	ROUGH-IN AND CONNECT
RO	REVERSE OSMOSIS
RPBFP	REDUCED PRESSURE BACKFLOW PREVENTER
RPM	REVOLUTIONS PER MINUTE
RVB	REFRIGERATOR VALVE BOX
SD	STORM DRAIN
S.F.	SQUARE FEET
SIA	SIAMESE
SK	SINK
T.O.P.	TOP OF PIPE
TP	TRAP PRIMER
TYP	TYPICAL
U	URINAL
UIF	UNDERFLOOR
UIS	UNDERSLAB
VAC. BRKR.	VACUUM BREAKER
VCT	VITRIFIED CLAY TILE
VTR	VENT THRU ROOF
WC	WATER CLOSET
WCO	WALL CLEANOUT
WH	WALL HYDRANT
WMB	WASHING MACHINE BOX
YH	YARD HYDRANT
ZV	ZONE VALVE
(A)	ITEM NOTED TO BE ABANDONED
(D)	ITEM NOTED TO BE DEMOLISHED
(E)	EXISTING ITEM
(N)	NEW ITEM
(R)	ITEM NOTED TO BE RELOCATED

<p>TRAP PRIMER DETAIL N.T.S. 01</p>	<p>UNINSULATED PIPE PENETRATION THROUGH WALL DETAIL N.T.S. 02</p>	<p>INSULATED PIPE PENETRATION THROUGH WALL DETAIL N.T.S. 03</p>	<p>WALL CLEANOUT DETAIL N.T.S. 04</p>	<p>SHOCK ARRESTOR DETAIL N.T.S. 05</p>																																																																																																																																						
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DON RICHARDS		
REVISIONS		
No.	Description	Date

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