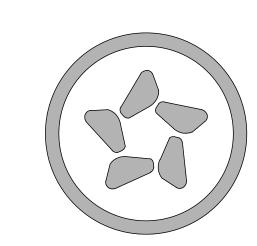


SMILE DOCTORS LONGMONT, COLORADO



TENANT IMPROVEMENT





VICINITY MAP





GENERAL NOTES

- THE CONTRACTOR SHALL REPORT ANY DISCREPANCIES IN THE DRAWINGS OR AT THE JOB SITE TO THE ARCHITECT IMMEDIATELY UPON DISCOVERY OF SUCH INCONSISTENCIES TO DETERMINE A COURSE OF ACTION TO CORRECT ANY CONFLICTS BETWEEN THE CONTRACT DOCUMENTS AND EXISTING CONDITIONS AND DETERMINE COST RESPONSIBILITIES.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ALL EXISTING UTILITIES WHETHER SHOWN HEREON OR NOT \$ TO PROTECT THEM FROM DAMAGE. THE CONTRACTOR SHALL BEAR ALL EXPENSES OF REPAIR OR REPLACEMENT OF UTILITIES OR OTHER PROPERTY DAMAGED BY OPERATIONS IN CONJUNCTION WITH THE PERFORMANCE OF THE WORK
- . CITY AND LANDLORD APPROVED PLANS SHALL BE KEPT IN A SAFE PLACE \$ SHALL NOT BE USED BY WORKMEN. ALL CONSTRUCTION SETS SHALL REFLECT SAME INFORMATION. THE CONTRACTOR SHALL ALSO MAINTAIN IN GOOD CONDITION ONE COMPLETE SET OF PLANS WITH ALL REVISIONS, ADDENDA \$ CHANGE ORDERS ON THE PREMISES AT ALL TIMES. THESE ARE TO BE UNDER THE CARE OF THE JOB SUPERINTENDENT AND TO BE TURNED OVER AT THE END OF THE JOB.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETE SECURITY OF THE SITE WHILE THE JOB IS IN PROGRESS \$ UNTIL THE JOB IS COMPLETED.
- . ALL DEBRIS BY GENERAL CONTRACTOR \$ OWNER MATERIALS SHALL BE REMOVED FROM THE PREMISES BY THE GENERAL CONTRACTOR OR RESPONSIBLE CONTRACTOR \$ ALL AREAS SHALL BE LEFT IN A CLEAN (BROOM) CONDITION AT ALL TIMES.
- . CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO ENSURE THE SAFETY OF THE OCCUPANTS \$WORKERS AT ALL TIMES.
- ALL DIMENSIONS ARE TO FACE OF GYPSUM BOARD UNLESS NOTED OTHERWISE. DIMENSIONS TAKE PRECEDENCE OVER DRAWING, DO NOT SCALE DRAWINGS TO DETERMINE ANY LOCATIONS. THE ARCHITECT SHALL BE NOTIFIED OF ANY DISCREPANCY PRIOR TO CONTINUING WITH WORK.
- 3. ALL CONSTRUCTION SHALL COMPLY WITH ALL LOCAL GOVERNING BUILDING CODES \$ ORDINANCES.
- . THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS \$ SHALL MAINTAIN THE STRUCTURAL INTEGRITY OF ANY CONSTRUCTION UNTIL ALL FINISH LOAD CARRYING SYSTEMS ARE COMPLETE.
- heta. The contractor shall be responsible for \$ shall replace or remedy any faulty, improper OR INFERIOR MATERIALS OR WORKMANSHIP OR ANY DAMAGE WHICH SHALL APPEAR WITHIN ONE (1) YEAR AFTER THE COMPLETION \$ ACCEPTANCE OF THE WORK UNDER THIS CONTRACT.
- ALL EXIT DOORS TO BE OPERABLE FROM THE INSIDE WITH A SINGLE EFFORT WITHOUT THE USE OF A KEY OR SPECIAL KNOWLEDGE.
- 2. MAXIMUM OCCUPANCY SIGN TO BE POSTED IF REQUIRED BY LOCAL CODE. FURNISHED \$ INSTALLED BY OWNER. "MAXIMUM LOAD -- " CONTRASTING LETTERS TO BACKGROUND.
- 3. COORDINATE LOCATIONS OF THE FIRE EXTINGUISHERS WITH THE LOCAL FIRE MARSHALL OR AUTHORITY AND OWNER'S CONSTRUCTION REPRESENTATIVE. FIRE EXTINGUISHERS TO BE PLACED WITHIN THE BUILDING SO MAXIMUM TRAVEL DISTANCE TO ANY FIRE EXTINGUISHER DOES NOT EXCEED 15'-0". FINAL LOCATIONS TO BE COORDINATED WITH FIRE MARSHALL.

SMILE DOCTORS REPRESENTATIVE SMILE DOCTORS LLC 295 SE INNER LOOP, SUITE 102 GEORGETOWN, TX 18626

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MECHANICAL/PLUMBING/ELECTRICAL

EMANUELSON-PODAS 1105 BUSH LAKE ROAD EDINA, MN 55439

MIDWEST COMMERCIAL CONSTRUCTION, LLC

CONTACT: JON HOLLAND JON@MWCC.BIZ

PH: 810-721-1933

PROJECT TEAM

CONTACT: SHANE LYNCH

REPRISE DESIGN

SUITE 100

CONTACT: NICK DECKER

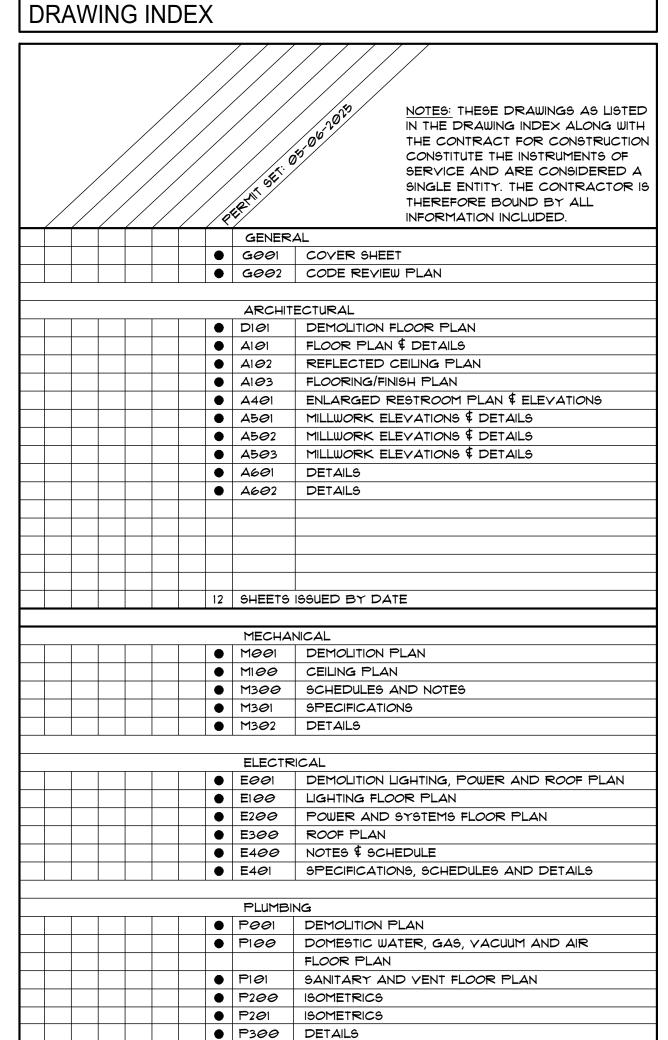
FAX: 952-252-4043

CONTACT: WENDY WENBORG WWENBORG@EPINC.COM PH: 952-930-0050

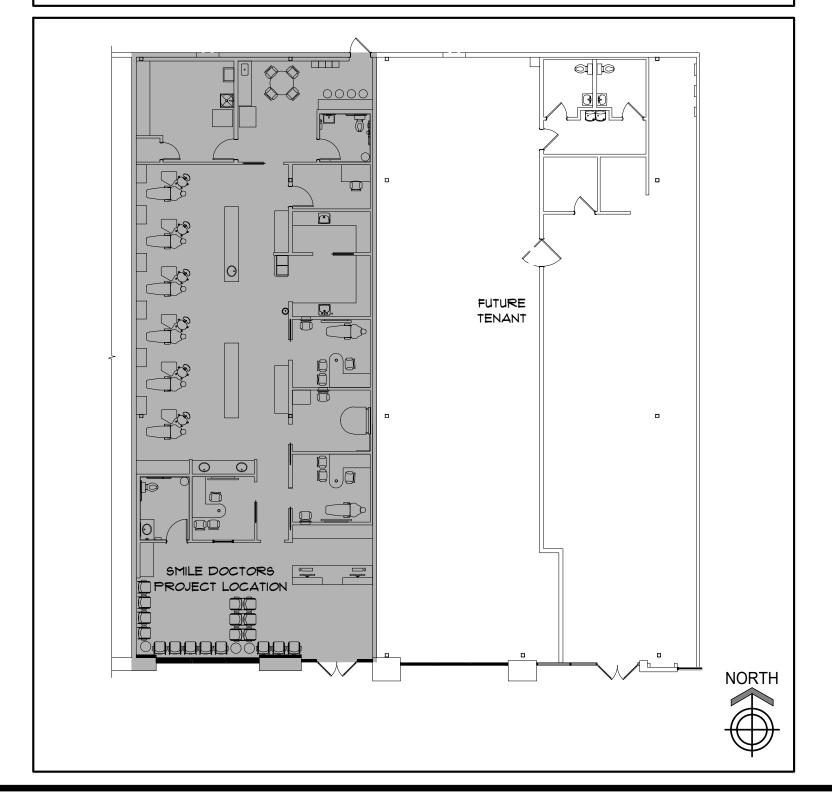
GENERAL CONTRACTOR

115 E CAPAC ROAD IMLAY CITY, MI 48444

CELL: 810-304-1741



KEY PLAN



DRAFTING SYMBOLS

CYMBOL	DECEDIBIION	CYMBO	DECEDIBLION
SYMBOL	DESCRIPTION	SYMB <i>O</i> L	DESCRIPTION
NORTH		-	DETAIL
		-	REFERENCE BUBBLE
	NORTH ARROW	<u> </u>	ELEVATION
		V -	REFERENCE
'		<u> </u>	PARTITION TYPE
0FFICE	ROOM NAME ROOM NUMBER		REFERENCE
		-	KEYNOTE REFERENCE
	SECTION		WINDOW TYPE
-	REFERENCE	A	REFERENCE
		\setminus	REVISION
-	ELEVATION REFERENCE	<u> </u>	REFERENCE
	NET EINEINGE		

| ● | P400 | NOTES

19 SHEETS ISSUED BY DATE

31 TOTAL SHEETS ISSUED BY DATE

P401 | SPECIFICATIONS AND SCHEDULES







CHECKED BY

CODE DATA

APPLICABLE CODES

-2021 INTERNATIONAL BUILDING CODE -2021 EXISTING BUILDING CODE

-2021 INTERNATIONAL FUEL \$ GAS CODE

-2021 INTERNATIONAL FIRE CODE -2021 INTERNATIONAL ENERGY CONSERVATION CODE

-2021 INTERNATIONAL PLUMBING CODE

-2021 INTERNATIONAL MECHANICAL CODE -2021 INTERNATIONAL PROPERTY AND MAINTENANCE CODE

-2017 ICC/ANSI A117.1 ACCESSIBILITY CODE -2020 NATIONAL ELECTRICAL CODE

PROJECT SUMMARY

BUILDING SUMMARY: NEW TENANT IMPROVEMENT PROJECT IN AN EXISTING MULTI-TENANT

BUILDING BUILDING USE: B (EXISTING)

BUILDING CONSTRUCTION TYPE: IIB, SPRINKLERED (EXISTING) TOTAL PROJECT SQUARE FOOTAGE, TENANT SPACE: 3,238 GSF

CHAPTER 3: OCCUPANCY CLASSIFICATION

GROUP	SECTION	DESCRIPTION
В	304	BUSINESS

CONSTRUCTION TYPE	IIB (EXISTING)	OCCUPANCY	B
STORIES	I (EXISTING)	SPRINKLER	YE9

PROPOSED AREA (GROSS) FOR OUR TENANT SPACE 3,238 GSF (LEASE SPACE) - EXISTING

CHAPTER 6: CONSTRUCTION TYPES / REQUIREMENTS

TABLE 601: FIRE RESISTIVE RATING REQUIREMENTS FOR BUILDING ELEMENTS IN HOURS

GROUP	CONSTRUCTION TYPE	BUILDING ELEMENT	RATING (HOURS)
		STRUCTURAL FRAME	Ø-EXISTING
		BEARING WALLS - EXTERIOR	@-EXISTING
		BEARING WALLS - INTERIOR	@-EXISTING
_		NONBEARING WALLS - EXTERIOR	@-EXISTING
B	IIB	NONBEARING WALLS - INTERIOR	@-EXISTING
		FLOOR CONSTRUCTION	@-EXISTING
		ROOF CONSTRUCTION	@-EXISTING

CHAPTER 10: MEANS OF EGRESS / OCCUPANT LOADS

USE / FUNCTION AREAS	AREAS TOTAL S.F.	OCCUPANT LOAD FACTOR TABLE 1004.5	9Q FT TYPE	ACTUAL OCCUPANT LOAD
BUSINESS	3,238 S F	150	GR <i>0</i> 99	22
SECTION 1005: MEA	ANS OF EGRESS SIZ	ING		
	ACTUAL OCCUPANT LOAD	WIDTH / OCCUPANT	TOTAL WIDTH REQUIRED	TOTAL WIDTH PROVIDED

	OCCUPANT LOAD	WIDTH / OCCUPANT	REQUIRED	PROVIDED
TOTAL	22	Ø.2"	4.4"	72″
SECTION 1007: EXIT	AND EXIT ACCESS	DOORWAY CONFIGU	RATION	

SECTION 1007: EXIT	AND EXIT ACCESS	5 DOORWAY CONFIGU	IRATION	
MAXIMUM DIAGONAL	6PRINKLERED?	MULTIPLIER PER 1007.1.1	MINIMUM EXIT SEPARATION REQUIRED	EXIT SEPARATIO PROVIDED
94'-7"	YES (EXISTING)	1/3	31'-6"	89'-1"

NOTES / EXCEPTIONS:

1006.2.1 NUMBER OF EXITS REQUIRED = 2, EXITS PROVIDED = 2 (EXISTING - UNCHANGED)

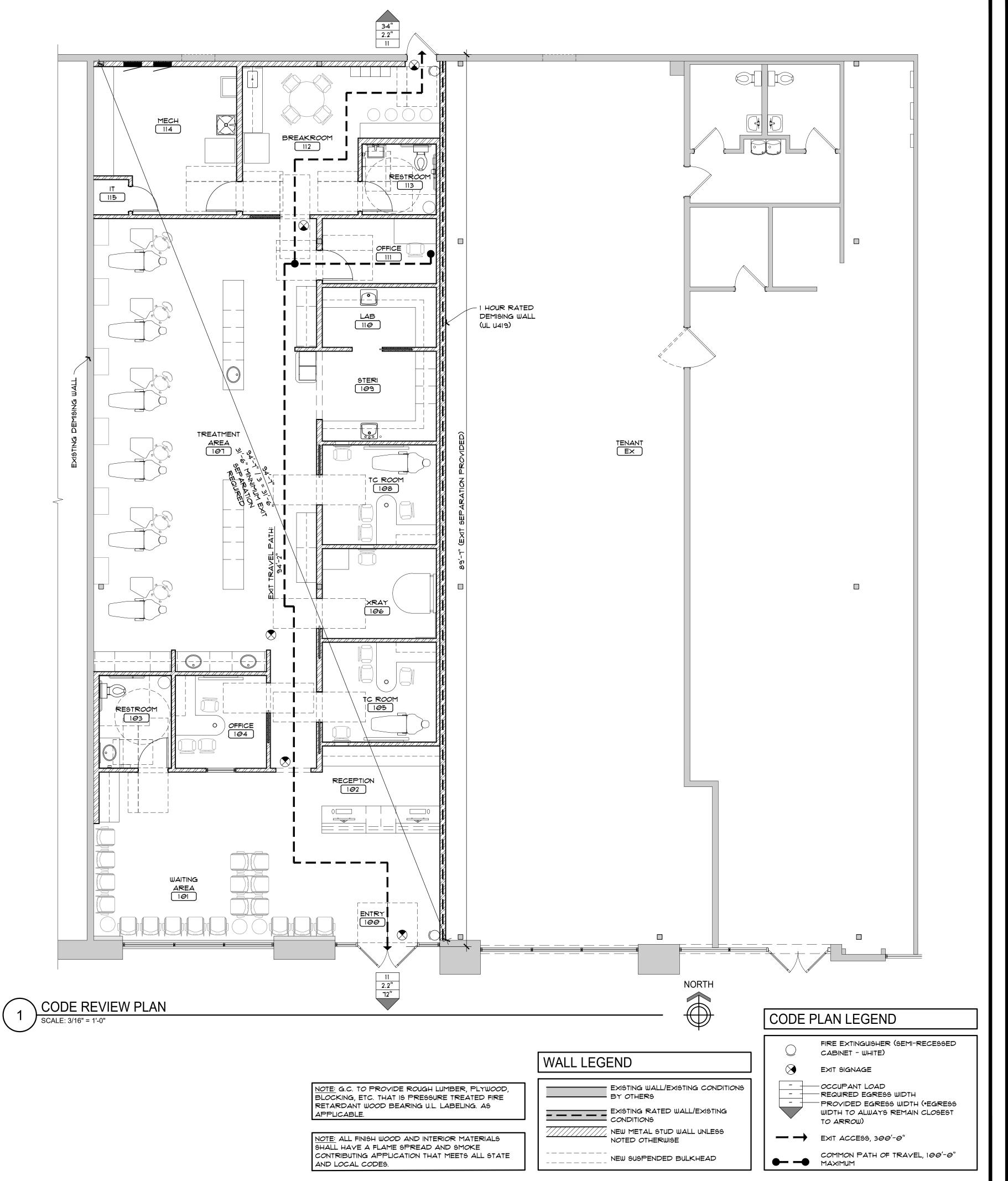
1006.2.1 MAX. COMMON PATH OF EGRESS TRAVEL = 100' (MAINTAINED)

1007.1.1 WHERE TWO EXITS ARE REQUIRED, EXITS MUST BE PLACED A DISTANCE APART NOT LESS THAN ONE-HALF THE MAXIMUM DIAGONAL DIMENSION OF THE AREA SERVED EXCEPTION 2: EXITS MUST BE PLACED A DISTANCE APART NOT LESS THAN ONE-THIRD THE MAXIMUM DIAGONAL DIMENSION OF THE AREA SERVED IN A BUILDING EQUIPPED THROUGHOUT WITH AN AUTOMATIC SPRINKLER SYSTEM (EXISTING SPRINKLER SYSTEM PROVIDED)

1017.2 EXIT ACCESS TRAVEL DISTANCE = 300' IN SPRINKLERED BUILDING FOR 'B'

OCCUPANCY (EXISTING SPRINKLER SYSTEM PROVIDED)

CHAPTER 29: PL	UMBING FIXTUI	RES REQUIR	RED		
SECTION:		TA	BLE 2902.1		
OCCUPANT GROUP:	ACTUAL OCCUPANT LOAD:	W.C. SINGLE USE	LAVS SINGLE USE	SERVICE SINK	DRINKING FOUNTAINS
В	22	-	-	-	-
TOTAL REG	UIRED	1	1	1	1*
TOTAL PRO	PVIDED	2	2	1	1*
FACTOR FROM (TABLE	29@2.1)				•
*BEVERAGE STATION U	UITH WATER LINE TO	O BE PROVIDE	D		
OCCUPANT	TOILETS	LA	Y S	DRINKING	FOUNTAINS
В	1 PER 25 FOR THE FIRST 50	1 PER 40 FOR	THE FIRST 80	1 PE	R 100







REVIEW Smile

DATE ISSUED PERMIT 05-06-2025 ND/BD/NN DRAWN BY CHECKED BY 25007 JOB NO.

DEMOLITION KEY NOTES

- REMOVE PORTION OF EXISTING FLOOR FOR NEW DENTAL CHAIR FLOOR BOX. VERIFY
 EXACT SIZE \$ LOCATION
- REMOVE EXISTING FLOORING, BASE TRIM OR BASE TILE, ADHESIVE \$ TRANSITION STRIPS AND DISCARD WASTE. REPAIR FLOOR AS REQUIRED FOR NEW FINISHES
- (3) REMOVE EXISTING WALL TO EXTENTS SHOWN AND DISCARD WASTE.
- (4) REMOVE EXISTING ELECTRICAL
- REMOVE EXISTING LIGHTING, CAP OR TERMINATE AS REQUIRED PER GOVERNING CODES AND DISCARD WASTE. SEE ELECTRICAL DRAWINGS FOR MORE INFO
- (6) REMOVE EXISTING CEILING GRID \$ CEILING TILES AND DISCARD WASTE
- REMOVE EXISTING HVAC, CAP OR TERMINATE AS REQUIRED PER GOVERNING CODES
 AND DISCARD WASTE. SEE MECHANICAL DRAWINGS FOR MORE INFO
- (8) EXISTING COLUMN TO REMAIN
- (9) REMOVE EXISTING FIRE EXTINGUISHER
- (10) REMOVE EXISTING FIRE EXIT SIGNAGE INCLUDING EMERGENCY LIGHTING

WALL LEGEND

EXISTING WALL/EXISTING CONDITIONS
BY OTHERS TO REMAIN

----- EXISTING CONDITION TO BE DEMO'D

DEMOLITION REQUIREMENTS

IS APPLICABLE.

1. CONTRACTOR TO NOTIFY ARCHITECT OF ANY MAJOR DISCREPANCIES REGARDING EXISTING CONDITIONS.

2. SHADED AREAS REPRESENT EXISTING WALLS TO REMAIN, SEE DEMOLITION NOTES FOR ADDITIONAL INFORMATION.

3. BEFORE SAW CUTTING THE EXISTING CONCRETE FLOOR IF REQUIRED, THE G.C. SHALL LOCATE \$ MARK LOCATIONS OF EXISTING UNDER FLOOR ELECTRICAL \$ PLUMBING SERVICES TO ENSURE THOSE ITEMS DO NOT GET DISTURBED OR DAMAGED.

4. COORDINATE REMOVAL OF ANY EXISTING EQUIPMENT AS REQUIRED.

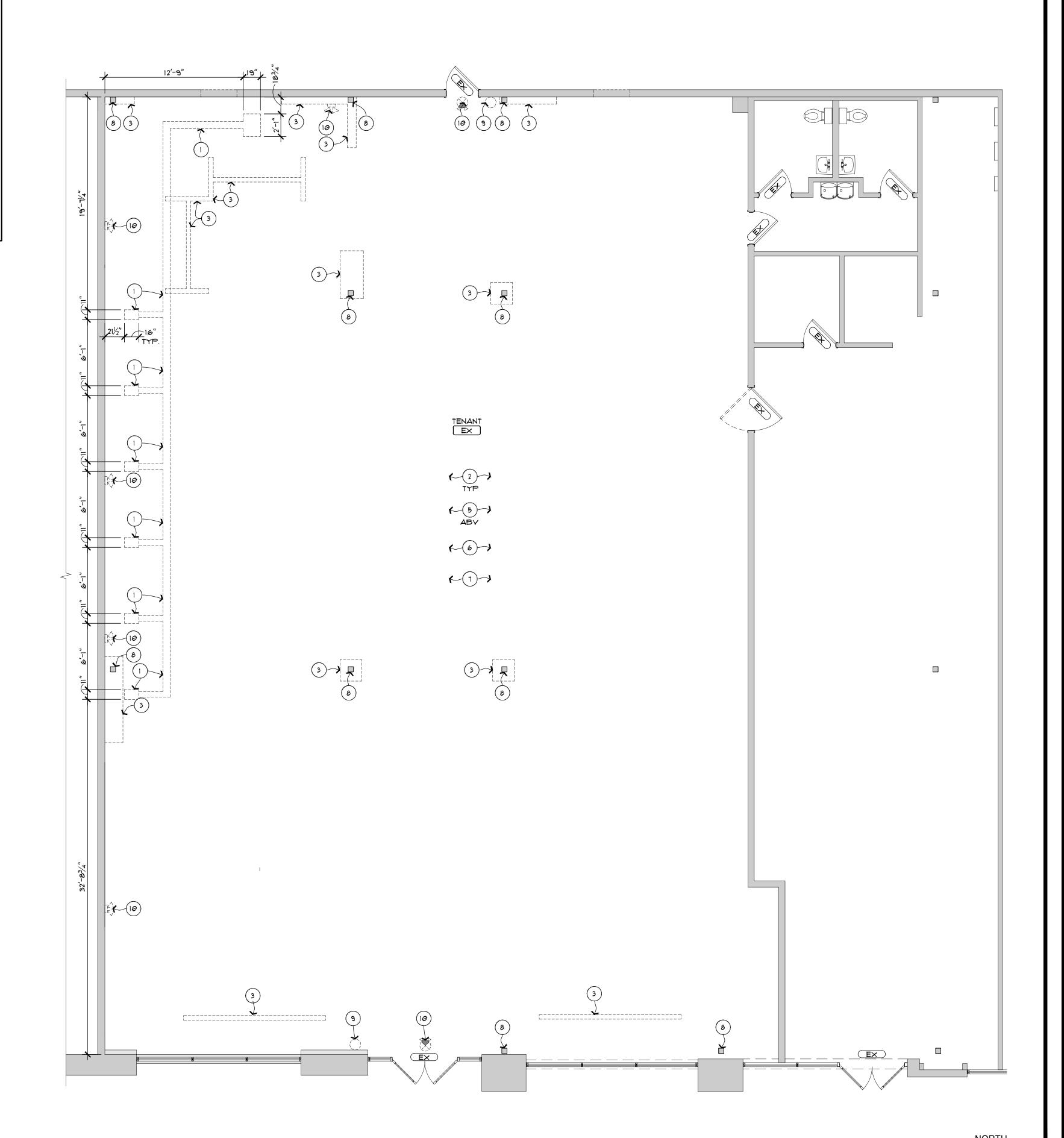
5. VERIFY EXTENT OF REMOVAL OF EXISTING MECHANICAL, ELECTRICAL, \$ PLUMBING ELEMENTS WITH OWNER, ARCHITECT, MECHANICAL \$ ELECTRICAL ENGINEERS.

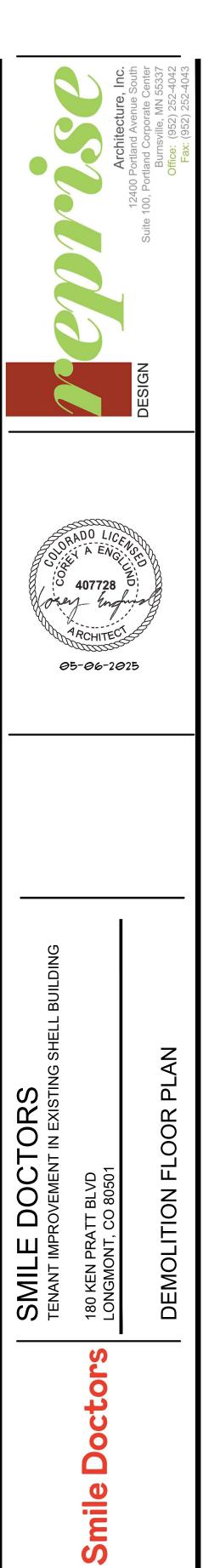
6. GENERAL CONTRACTOR TO COORDINATE WITH PLUMBING CONTRACTOR AS TO EXTENT OF EXISTING CONCRETE SLAB TO BE REMOVED RELATIVE TO NEW RESTROOM LAYOUTS (IF APPLICABLE).

1. GENERAL CONTRACTOR TO VERIFY DISPOSAL/SALVAGE OF ALL MISCELLANEOUS ITEMS WITH OWNER.

8. PROVIDE TEMPORARY ENCLOSURE TO BUILDING INTERIOR IN AREAS WHERE DEMOLITION OCCURS EXPOSING BUILDING INTERIOR TO THE ELEMENTS (IF APPLICABLE).

9. VERIFY ALL EXISTING STRUCTURAL CONDITIONS PRIOR TO ANY DEMOLITION AND CONSTRUCTION. PROVIDE TEMPORARY STRUCTURAL SHORING WHERE REQUIRED AS





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GENERAL NOTES

DO NOT SCALE THIS DRAWING IF THERE ARE ANY DISCREPANCIES CONTACT THE ARCHITECT PRIOR TO COMMENCING WORK

- G.C. TO VERIFY ALL DIMENSIONS AND NOTIFY ARCHITECT OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.
- IF EXISTING EXTERIOR THRESHOLD EXCEEDS ADA MAXIMUM HEIGHT OF 1/2" REMOVE AND REPLACE WITH ACCESSIBLE THRESHOLD. RAISED THRESHOLDS AND FLOOR LEVEL CHANGES AT ACCESSIBLE DOORWAYS TO BE BEVELED WITH A SLOPE NO GREATER THAN 1:12
- G.C. TO PROVIDE ALL WALL BLOCKING AND BACKING. VERIFY LOCATIONS WITH OWNER.
- G.C. TO PROVIDE AND INSTALL NON COMBUSTIBLE WOOD BACKING WHEN REQUIRED BY CODE.
- PAINTING OF ALL WALL SURFACES TO BE COMPLETED PRIOR TO THE INSTALLATION OF ANY WALL TRIM OR PANELING.
- G.C. SHALL DOCUMENT AS-BUILT INSTALLATION / CONDITIONS AND PROVIDE OWNER WITH AS-BUILT DRAWINGS AT PROJECT COMPLETION. ALL GYPSUM BOARD TO BE PREPARED TO <u>LEVEL 4</u> FINISH STANDARDS PER GYPSUM ASSOCIATION STANDARDS.
- ALL FIXTURES/FURNITURE IS OWNER SUPPLIED AND INSTALLED, UNLESS NOTED OTHERWISE.
- 10. ALL FINISH WOOD AND INTERIOR MATERIALS SHALL HAVE A FLAME SPREAD AND SMOKE CONTRIBUTING APPLICATION THAT MEETSALL STATE
- FACE OF DOOR FRAMES TO BE 2" FROM FACE OF WALL U.N.O.

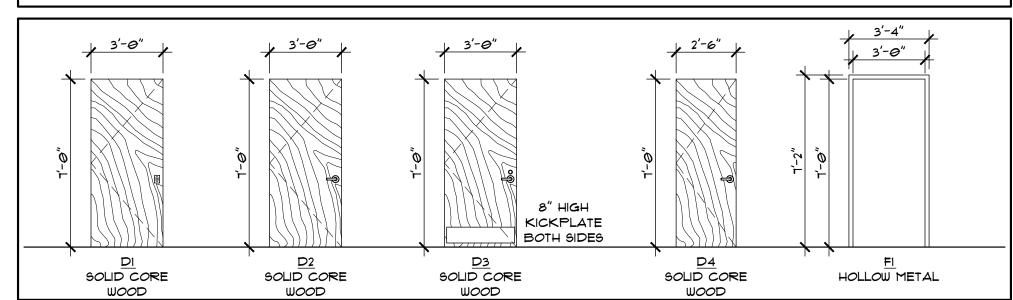
KEY NOTES

- NEW BOYD INDUSTRIES M300X DENTAL CHAIR. FIELD VERIFY FINAL LOCATION \$ COORDINATE W/ TENANT
- NEW BOYD INDUSTRIES I-DELIVERY STATION. FIELD VERIFY FINAL LOCATION \$ COORDINATE W/ TENANT
- NEW FURNITURE BY TENANT
- NEW RECEPTION CABINET/MILLWORK. SEE DETAIL 1, 2 \$ 3/A501, 7/A502 FOR MORE INFO
- 5 | NEW LED_LC D2436 ANYTHING DISPLAY LED SURFACE MOUNTED LIGHT BOX. SEE DETAIL 2/A101. COORDINATE W/ ELECTRICAL.
- 6 NEW BEVERAGE COUNTER/MILLWORK. SEE DETAIL 4/A501 FOR MORE INFO
- NEW BRUSH STATION CABINET/MILLWORK. SEE DETAIL 5/A501 FOR MORE INFO
- 8 NEW TREATMENT AREA CABINET/MILLWORK. SEE DETAIL 1, 8, 9 \$ 10/4501 FOR MORE INFO
- 9 NEW LAB/STERI AREA CABINET/MILLWORK. SEE DETAILS 11 \$ 12/A501 \$ 1, 2, 3 \$ 4/A502 FOR MORE INFO
- 10 ICAT XRAY MACHINE. SEE DETAIL 6/A502 FOR MORE INFO. COORDINATE W/ ELECTRICAL
- NEW DR. PERCH CABINET/MILLWORK. SEE DETAIL 6/A501 FOR MORE INFO
- 2 NEW REFRIGERATOR BY TENANT
- 13 NEW XRAY CABINET/MILLWORK. SEE DETAIL 6/A502 FOR MORE INFO
- 14 NEW TV/MONITOR BY TENANT. ADD RECESSED CABLE MANAGEMENT BOX BEHIND TV/MONITOR
- 15 NEW OFFICE AND TO ROOM DESK/CABINETS, SEE DETAIL 1 \$ 8/A503 FOR MORE INFO
- 16 NEW MOP SINK. SEE PLUMBING FOR MORE INFORMATION
- 1 NEW I.T. EQUIPMENT BY TENANT. SEE DETAIL 2/A602 FOR BLOCKING INFO. COORDINATE W/ ELECTRICAL
- NEW RHEEM ESSOA WATER HEATER ON SHELF AT 48" AFF. GC TO COORDINATE PLATFORM DESIGN WITH MANUFACTURER'S SPECIFICATIONS. NOTE - ARCHITECT IS NOT RESPONSIBLE FOR PLATFORM DESIGN. SEE DETAIL 3/P300 \$ MEP DRAWINGS FOR MORE INFO
- 19 NEW RAMVAC AIR COMPRESSOR, OSPREY MODEL. SEE MEP DRAWINGS FOR MORE INFO
- | 20 NEW RAMVAC VACUUM SYSTEM, BULLDOG MODEL. SEE DETAIL 1/A602 \$ MEP DRAWINGS FOR MORE INFO
- 21 GC TO PROVIDE 1/32" LEAD-LINED GYP. BD.
- 22 3'-6" × 9'-0" GYP OPENING
- 23 NEW STACKED WASHER/DRYER
- 24 NEW BREAKROOM COUNTER TOP/MILLWORK. SEE 5/A502 \$ 4/A503 FOR MORE INFO
- 25 FULL HEIGHT CABINETS. VERIFY WITH OWNER

DOOR SCHEDULE

NO.	ROOM	DOOR SIZE	DOOR TYPE	DOOR MATERIAL	FRAME TYPE	FRAME MATERIAL	HEAD \$ JAMB	REMARK9
103	RESTROOM	3'-0" × 1'-0" × 1-3/4"	D3	SOLID CORE WOOD	TIMELY	STEEL/ ALUMINUM*	3/A101 4/A101	DOOR HARDWARE BY TENANT. TIMELY CLASSIC FRAME, *G.C. TO VERIFY
104	OFFICE	3'-0" × 1'-0" × 1-3/4"	DI	SOLID CORE WOOD	-	WOOD	-	DOOR HARDWARE BY TENANT
105	TC ROOM	3'-0" × 1'-0" × 1-3/4"	DI	SOLID CORE WOOD	-	WOOD	-	DOOR HARDWARE BY TENANT
106	XRAY	3'-0" × 1'-0" × 1-3/4"	DI	SOLID CORE WOOD	-	WOOD	-	DOOR HARDWARE BY TENANT
108	TC ROOM	3'-0" × 1'-0" × 1-3/4"	DI	SOLID CORE WOOD	-	WOOD	-	DOOR HARDWARE BY TENANT
110	LAB	3'-0" × 1'-0" × 1-3/4"	DI	SOLID CORE WOOD	-	WOOD	-	DOOR HARDWARE BY TENANT
111	OFFICE	3'-0" × 1'-0" × 1-3/4"	D2	SOLID CORE WOOD	TIMELY	STEEL/ ALUMINUM*	3/AIØI 4/AIØI	DOOR HARDWARE BY TENANT. TIMELY CLASSIC FRAME, *G.C. TO VERIFY
112	BREAKROOM	3'-0" × 1'-0" × 1-3/4"	DI	SOLID CORE WOOD	-	WOOD	-	DOOR HARDWARE BY TENANT
113	RESTROOM	3'-0" × 1'-0" × 1-3/4"	D3	SOLID CORE WOOD	TIMELY	STEEL/ ALUMINUM*	3/AIØI 4/AIØI	DOOR HARDWARE BY TENANT. TIMELY CLASSIC FRAME, *G.C. TO VERIFY
114	MECH	3'-@" × 1'-@" × 1-3/4"	D3	SOLID CORE WOOD	TIMELY	STEEL/ ALUMINUM*	3/AIØI 4/AIØI	DOOR HARDWARE BY TENANT. TIMELY CLASSIC FRAME, *G.C. TO VERIFY
115	IT ROOM	2'-6" × 1'-@" × 1-3/4"	D4	SOLID CORE	TIMELY	STEEL/ ALUMINUM*	3/A1 <i>0</i> 1 4/A1 <i>0</i> 1	DOOR HARDWARE BY TENANT. TIMELY CLASSIC FRAME, *G.C. TO VERIFY

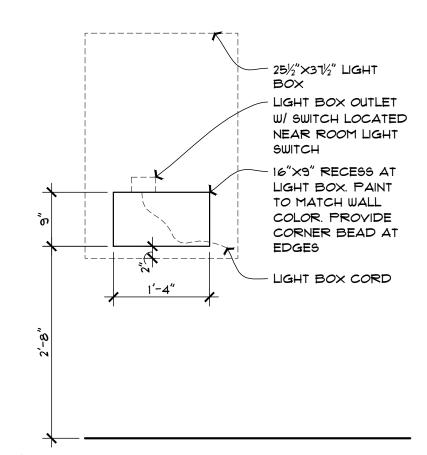
DOOR & FRAME TYPES



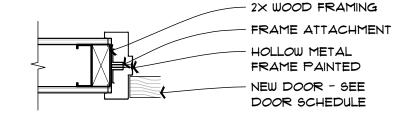
DOORS TO BE PAINT GRADE OR STAIN GRADE. VERIFY WITH OWNER.

DOORS TO BE PRIMED \$ PAINTED (2-FINISH COATS) OR STAINED WITH FINISH (2 TOP COATS), VERIFY FINISH TYPE \$ COLOR WITH OWNER.

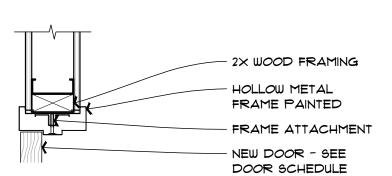
HOLLOW METAL DOOR FRAMES TO BE PRIMED \$ PAINTED (2-COATS) VERIFY COLOR WITH OWNER



LIGHT BOX DETAIL SCALE: 3/4" = 1'-0"







\ HEAD DETAIL SCALE: 1-1/2" = 1'-0"

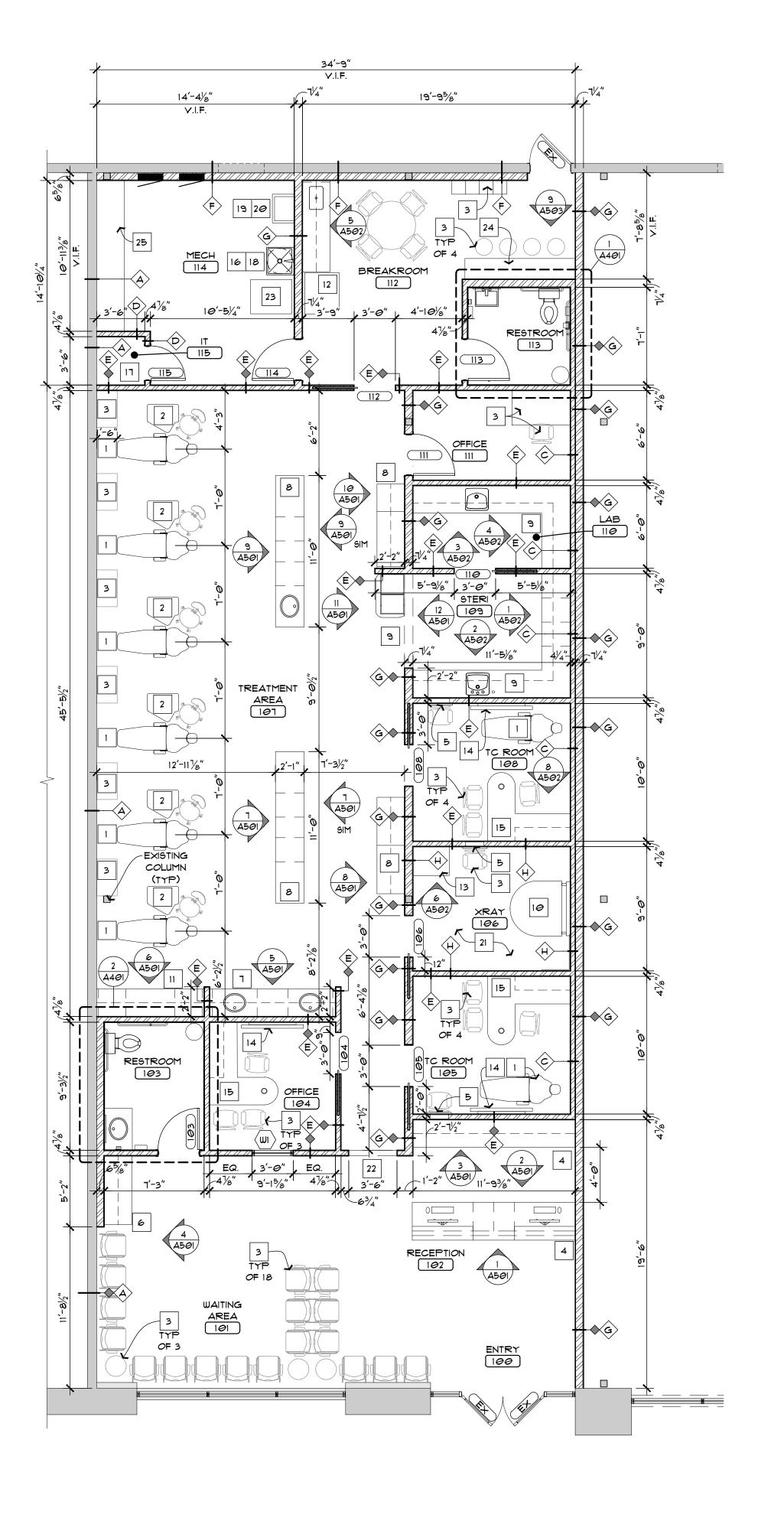
WALL TYPES

SEE SHEET A103.

V V /	TEL TITLO	
(A)		EXISTING WALL TO REMAIN. PATCH AND REPAIR AS REQUIRED AND PREP FOR NEW FINISHES.
B	34	EXISTING WALL WITH 3-5/8" 20 GAUGE METAL STUDS @ 16" O.C. W/ *5/8" SUBSTRATE FROM FLOOR TO 6" ABOVE CEILING
⟨c⟩	44 F	3-5/8" 20 GAUGE METAL STUD @ 16" O.C. W/ *5/8" SUBSTRATE FROM FLOOR TO 6" ABOVE CEILING, ONE SIDE
(D)	18/2	3-5/8" 20 GAUGE METAL STUD @ 16" O.C. W/ *5/8" SUBSTRATE FROM FLOOR TO 6" ABOVE CEILING, BOTH SIDES
(E)	**************************************	3-5/8" 20 GAUGE METAL STUD @ 16" O.C. W/ *5/8" SUBSTRATE FROM FLOOR TO 6" ABOVE CEILING, BOTH SIDES. PROVIDE SOUND BATT INSULATION
(F)		6" 20 GAUGE METAL STUD @ 16" O.C. W/ *5/8" SUBSTRATE FROM FLOOR TO 6" ABOVE CEILING, ONE SIDE.
Ġ	2	6" 20 GAUGE METAL STUD @ 16" O.C. W/ *5/8" SUBSTRATE FROM FLOOR TO 6" ABOVE CEILING, BOTH SIDES. PROVIDE SOUND BATT INSULATION
(H)	\	WALL TYPE 'C', 'E' OR 'G' ABOVE W/ 1/32" LEAD LINED GYP. BD. ON INTERIOR XRAY ROOM SIDE OF WALL
WAI	LL TAG KEY:	
_		IALL AND SUBSTRATE TO 6" ABOVE FINISHED CEILING
-		TUD TO STRUCT ABOVE, SUBSTRATE TO STRUCT ABOVE OR 6" ABOVE CEILING (AS APPLICABLE)

PARTIAL HEIGHT WALL, SEE PLAN FOR HEIGHT

*5/8" SUBSTRATE TO BE GYP. BD. UNLESS NOTED OTHERWISE ON FINISH SCHEDULE,







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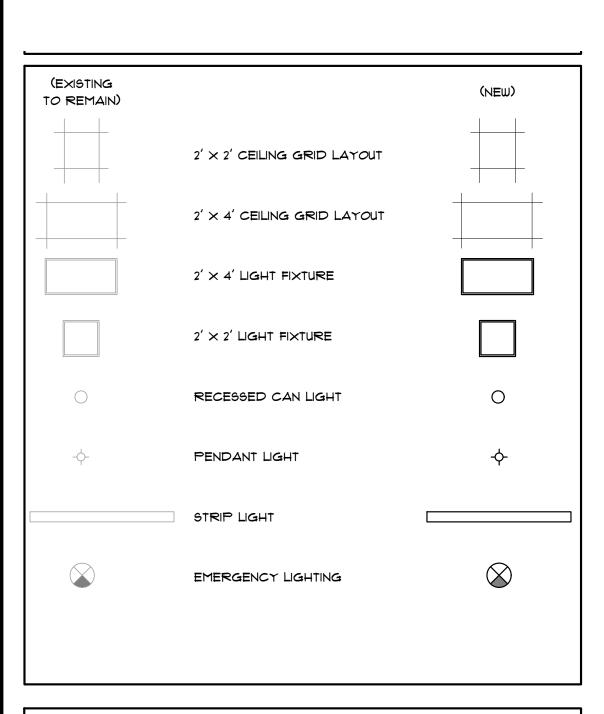
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CEILING PLAN GENERAL NOTES

1. SEE ELECTRICAL DRAWINGS FOR LIGHTING SCHEDULE AND MORE INFORMATION.

2. ALL DIMENSIONS ARE TO CENTERLINE OF LIGHT FIXTURE AND OR FACE OF FINISHED WALL UNLESS NOTED OTHERWISE.

3. DIFFUSERS, GRILLES AND REGISTERS TO BE PAINTED TO MATCH CEILING. VERIFY FINISHES OF EXISTING DIFFUSERS.

4. IT IS THE RESPONSIBILITY OF THE G.C. TO ADJUST LIGHTING MOUNTING HEIGHTS AS REQUIRED TO MATCH THE PLAN.

5. DO NOT SCALE THIS DRAWING IF THERE ARE ANY DISCREPANCIES CONTACT THE ARCHITECT - PRIOR TO COMMENCING WORK.

6. GENERAL CONTRACTOR TO VERIFY ALL DIMENSIONS AND NOTIFY OWNER'S CONSTRUCTION MANAGER OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.

1. EXIT AND EMERGENCY EGRESS LIGHTING TO COMPLY WITH CURRENT JURISDICTIONAL CODE.

8. PROVIDE ADDITIONAL LIGHTING IF REQUIRED BY CODE. ADDITIONAL LIGHTING TO BE COORDINATED BY GC AND ELECTRICAL SUBCONTRACTOR AND OWNER'S

LIGHTING CONSULTANT.

9. FINAL PLACEMENT LOCATIONS OF EXIT AND EMERGENCY EGRESS LIGHTING AND EXIT SIGNAGE SHOULD BE VERIFIED WITH THE JURISDICTIONAL FIRE MARSHAL PRIOR TO INSTALLING.

10. LIGHTING PROVIDED AND INSTALLED BY GC.

WALL LEGEND

EXISTING WALL/EXISTING CONDITIONS BY OTHERS TO REMAIN

///////// NEW FULL HEIGHT METAL STUD WALL

REFLECTED CEILING PLAN KEY NOTES

SEE ELECTRICAL DRAWINGS FOR NEW LIGHTING, SCHEDULE \$ ADDITIONAL INFORMATION

2 SEE MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION (TYPICAL)

DRAWINGS FOR ADDITIONAL INFORMATION

CEILING MOUNTED EXIT SIGNS/EMERGENCY LIGHTING. SEE ELECTRICAL

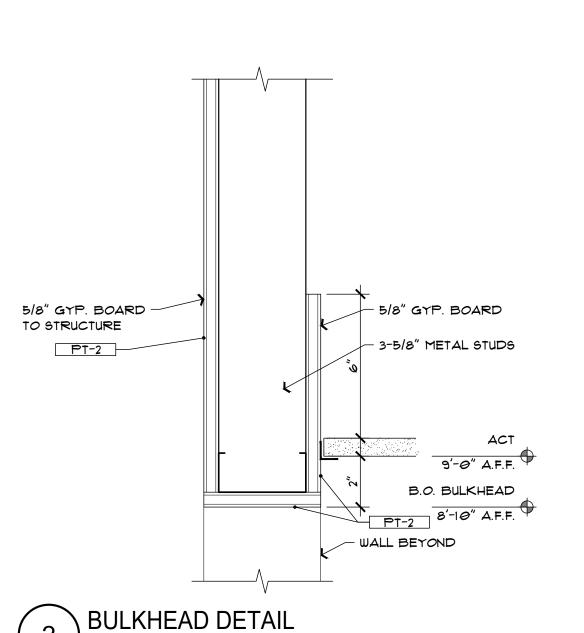
NEW USG OLYMPIA MICRO CLIMAPLUS #4752-SLT WHITE CEILING TILES \perp THROUGHOUT ENTIRE OFFICE, 24" imes 24" imes 3/4"

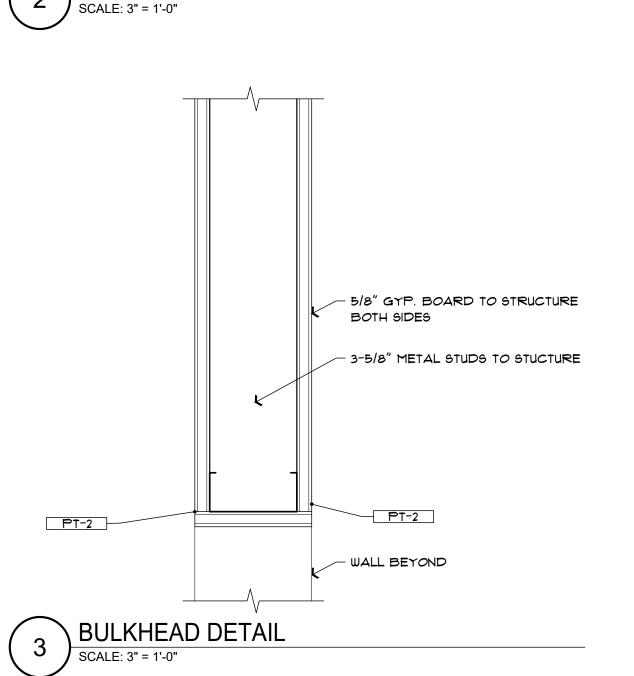
5 USG DX/DXL WHITE ACOUSTICAL GRID

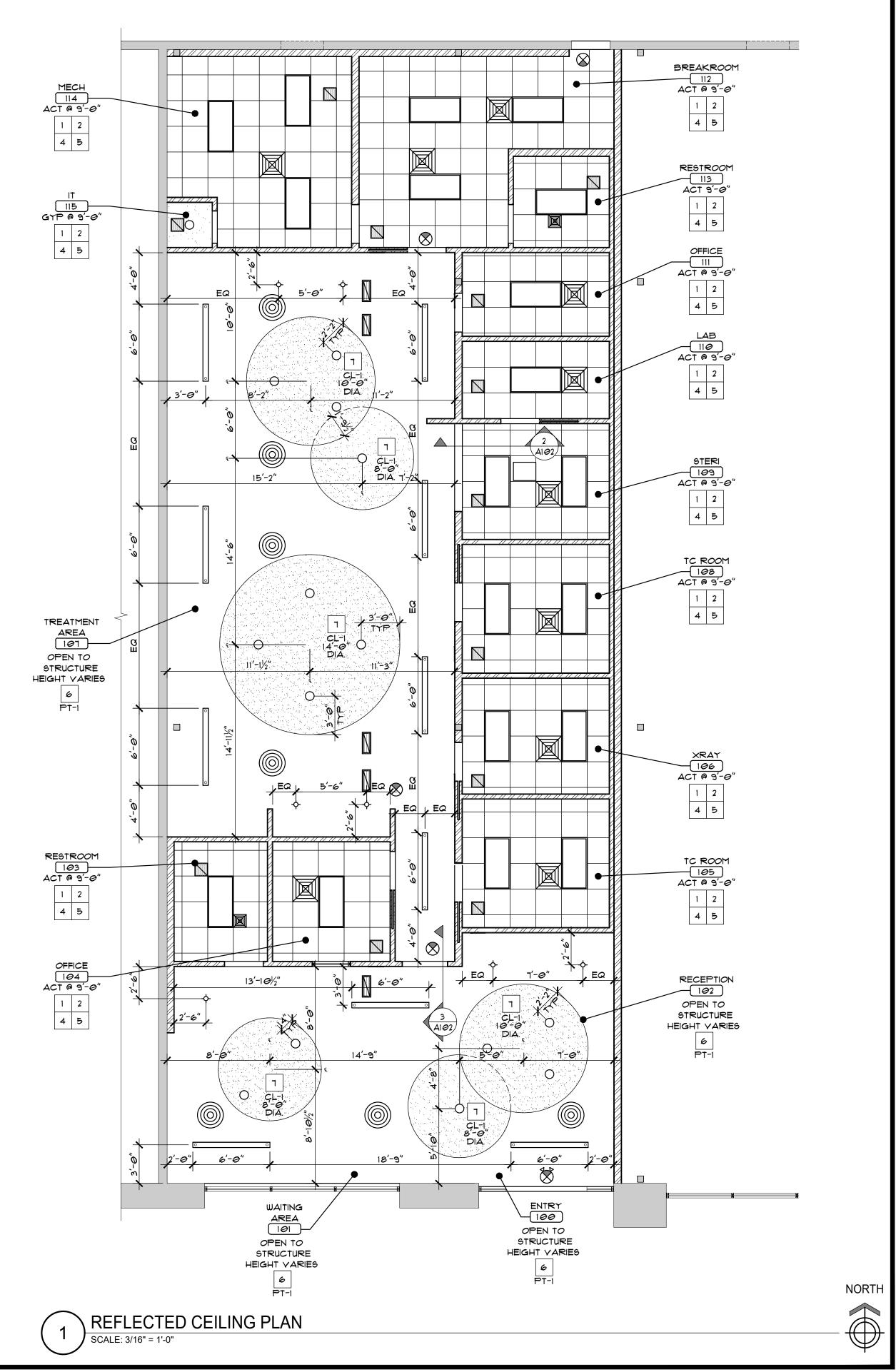
7 PAINT ALL EXPOSED STEEL/METAL STRUCTURE INCLUDING ALL MEP: PIPING, LONDUIT, WIRING, HVAC EXPOSED DUCTWORK. SEE SHEET A103 FOR COLOR

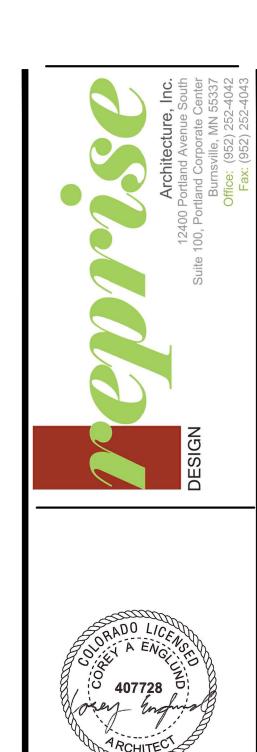
ACOUFELT SUSPENDED ROUND ACOUSTICAL CEILING CLOUD. - VERIFY SIZES, COLOR, MOUNTING HEIGHTS \$ LOCATIONS WITH OWNER.

- LED SLIM LIGHT(S) TO BE INSTALLED IN CLOUD. - SEE ELEC. FOR ADD'L INFO.











Smile

DATE ISSUED PERMIT 05-06-2025 ND/BD/NN DRAWN BY

25007

CHECKED BY

JOB NO.

CL-1 CIRCLE CI CPT-1 CA CPT-1A (OF CPT-2 CA VWC-1 WALLO VWC-2 WALLO VWC-3 WALLO T-1 RUBBER T-2 RUBBER T-2 RUBBER PT-1 GENER PT-2 CEILIN PT-3 ACCE PT-4A ACCE PT-5A ACCE CT-4 COV CT-5 WAL CT-5 WAL CT-5 WAL CT-5 WAL CT-6 CA	NG PAINT	ACOUFELT EF CONTRACT MANNINGTON EF CONTRACT DETROIT WALLPAPER COMPANY DETROIT WALLPAPER COMPANY DIAMPER COMPANY DIAMPE	OLYMPIA MICRO CLIMAPLUS #4152-9LT 9IZE: 24" × 24" × 3/4" SIZING PER PLAN ALLIANCE - TALL 9IZE: 18" × 36" PATTERN: HERRINGBONE VISABLE LIGHT 9IZE: 18" × 36" PATTERN: ASHLAR DEPARTMENT WALK-OFF TDEP QUARTER TURN 9IZE: 24" × 24" DUNCAN 3 COLOR OMBRE 9IZE: 48" WIDE ROLL PROVIDE WALL DIMENSIONS WHEN ORDERING: DOT GAIN T.B.D. 5LIM LINE TRANSITION SLT 63-A WHEEL TRAFFIC TRANSITION CTA 63-N QUADEC Q 100 AE SATIN FINISH 9W 1004 NOT USED SW 6968 9W 6590	CUSTOM TO MATCH PURPLE OMBRE (SIMILAR TO LILAC) 50DA POP T.B.D. 63 BURNT UMBER 63 BURNT UMBER	WITH NEW DX/ DXL WHITE ACOUSTICAL GRID SEE SHEET AI@2 FOR SIZING OF EACH ELEMEN PROVIDE ALTERNATE BID FOR THIS OPTION VERIFY WITH OWNER REFER TO PLAN FOR DIRECTION LOBBY ACCENT PROVIDE ALTERNATE BID FOR THIS OPTION VERIFY WITH OWNER STASH \$ CO. CHRYSTIE WAGNER PH: 612-815-3308 E: CHRYSTIE@5TASHANDCO.COM RESTROOM WALLS EXCEPT TILE WALL BEHIND SINK AND TOILET PROVIDE ALTERNATE BID FOR THIS OPTION. VERIFY WITH OWNER. STASH \$ CO. CHRYSTIE WAGNER PH: 612-815-3308 E: CHRYSTIE@5TASHANDCO.COM TREATMENT AREA WALL ACCENT PROVIDE ALTERNATE BID FOR THIS OPTION VERIFY WITH OWNER CARPET TO PLANK VINYL/VCT CARPET TO PLANK VINYL/VCT CARPET TO RESTROOM TILE RESTROOM WALLS ONLY GENERAL WALL COLOR THROUGHOUT AND FOR EXPOSED STRUCTURE
CPT-1	ARPET ARPET PTION) ARPET COVERING PTION)	EF CONTRACT MANNINGTON EF CONTRACT DETROIT WALLPAPER COMPANY DETROIT WALLPAPER COMPANY DL COUCH T.B.D. JOHNSONITE JOHNSONITE SCHLUTER SHERWIN WILLIAMS NOT USED SHERWIN WILLIAMS	ALLIANCE - TALL SIZE: 18" × 36" PATTERN: HERRINGBONE VISABLE LIGHT SIZE: 18" × 36" PATTERN: ASHLAR DEPARTMENT WALK-OFF TDEP QUARTER TURN SIZE: 24" × 24" DUNCAN 3 COLOR OMBRE SIZE: 48" WIDE ROLL. PROVIDE WALL DIMENSIONS WHEN ORDERING: DOT GAIN T.B.D. SLIM LINE TRANSITION SLT 63-A WHEEL TRAFFIC TRANSITION CTA 63-N QUADEC Q 100 AE SATIN FINISH 9W 1004 NOT USED SW 6968	ALL51 GREY TONE AURA 24181 PEWTER DEP51 FOUNDATION CUSTOM TO MATCH PURPLE OMBRE (SIMILAR TO LILAC) 50DA POP T.B.D. 63 BURNT UMBER 63 BURNT UMBER 63 BURNT UMBER 63 BURNT UMBER 61 BURNT UMBER	PROVIDE ALTERNATE BID FOR THIS OPTION VERIFY WITH OWNER REFER TO PLAN FOR DIRECTION LOBBY ACCENT PROVIDE ALTERNATE BID FOR THIS OPTION VERIFY WITH OWNER STASH \$ CO. CHRYSTIE WAGNER PH: 612-815-3308 E: CHRYSTIE@STASHANDCO.COM RESTROOM WALLS EXCEPT TILE WALL BEHIND SINK AND TOILET PROVIDE ALTERNATE BID FOR THIS OPTION. VERIFY WITH OWNER. STASH \$ CO. CHRYSTIE WAGNER PH: 612-815-3308 E: CHRYSTIE@STASHANDCO.COM TREATMENT AREA WALL ACCENT PROVIDE ALTERNATE BID FOR THIS OPTION VERIFY WITH OWNER CARPET TO PLANK VINYL/VCT CARPET TO RESTROOM TILE RESTROOM WALLS ONLY GENERAL WALL COLOR THROUGHOUT AND FO EXPOSED STRUCTURE
CPT-1A	ARPET PTION) ARPET COVERING PTION)	MANNINGTON EF CONTRACT DETROIT WALLPAPER COMPANY DETROIT WALLPAPER COMPANY DL COUCH T.B.D. JOHNSONITE JOHNSONITE SCHLUTER SHERWIN WILLIAMS NOT USED SHERWIN WILLIAMS	9IZE: 18" × 36" PATTERN: HERRINGBONE VISABLE LIGHT SIZE: 18" × 36" PATTERN: ASHLAR DEPARTMENT WALK-OFF TDEP QUARTER TURN SIZE: 24" × 24" DUNCAN 3 COLOR OMBRE SIZE: 48" WIDE ROLL. PROVIDE WALL DIMENSIONS WHEN ORDERING: T.B.D. 5LIM LINE TRANSITION SLT 63-A WHEEL TRAFFIC TRANSITION CTA 63-N QUADEC Q 100 AE SATIN FINISH SW 1004 NOT USED SW 6968	TONE AURA 24181 PEWTER DEP51 FOUNDATION CUSTOM TO MATCH PURPLE OMBRE (SIMILAR TO LILAC) SODA POP T.B.D. 63 BURNT UMBER 63 BURNT UMBER 63 BURNT UMBER SNOW BOUND NOT USED	REFER TO PLAN FOR DIRECTION LOBBY ACCENT PROVIDE ALTERNATE BID FOR THIS OPTION VERIFY WITH OWNER STASH \$ CO. CHRYSTIE WAGNER PH: 612-875-3308 E: CHRYSTIE09TASHANDCO.COM RESTROOM WALLS EXCEPT TILE WALL BEHIND SINK AND TOILET PROVIDE ALTERNATE BID FOR THIS OPTION. VERIFY WITH OWNER. STASH \$ CO. CHRYSTIE WAGNER PH: 612-875-3308 E: CHRYSTIE0STASHANDCO.COM TREATMENT AREA WALL ACCENT PROVIDE ALTERNATE BID FOR THIS OPTION VERIFY WITH OWNER CARPET TO PLANK VINYL/VCT CARPET TO RESTROOM TILE RESTROOM WALLS ONLY GENERAL WALL COLOR THROUGHOUT AND FO EXPOSED STRUCTURE
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VWC-3 (of VWC-4 WALLOW T-1 RUBBER T-2 RUBBER T-3 TRANSI PT-1 GENER PT-2 CEILIN PT-3 ACCE PT-4A ACCE PT-5A ACCE CT-1 * CER CT-2 * CER CT-4 COV CT-5 WAL	PTION) COVERING PTION) TRANSITION OTRIP TRANSITION OTRIP TION STRIP RAL PAINT NG PAINT ENT PAINT	T.B.D. JOHNSONITE JOHNSONITE SCHLUTER SHERWIN WILLIAMS NOT USED SHERWIN WILLIAMS SHERWIN WILLIAMS	T.B.D. SLIM LINE TRANSITION SLT 63-A WHEEL TRAFFIC TRANSITION CTA 63-N QUADEC Q 100 AE SATIN FINISH SW 1004 NOT USED SW 6968	T.B.D. 63 BURNT UMBER 63 BURNT UMBER SNOW BOUND NOT USED	SINK AND TOILET PROVIDE ALTERNATE BID FOR THIS OPTION. VERIFY WITH OWNER. STASH \$ CO. CHRYSTIE WAGNER PH: 612-875-3308 E: CHRYSTIE@STASHANDCO.COM TREATMENT AREA WALL ACCENT PROVIDE ALTERNATE BID FOR THIS OPTION VERIFY WITH OWNER CARPET TO PLANK VINYL/VCT CARPET TO RESTROOM TILE RESTROOM WALLS ONLY GENERAL WALL COLOR THROUGHOUT AND FO EXPOSED STRUCTURE
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T-2 S T-3 TRANSI PT-1 GENER PT-2 CEILIN PT-3 ACCE PT-4A ACCE PT-5A ACCE CT-1 * CER CT-2 * CER CT-4 COV CT-5 WAL	TION STRIP TION STRIP RAL PAINT NG PAINT ENT PAINT ENT PAINT	SCHLUTER SHERWIN WILLIAMS NOT USED SHERWIN WILLIAMS SHERWIN WILLIAMS	63-N QUADEC Q 100 AE SATIN FINISH SW 1004 NOT USED SW 6968	SNOW BOUND NOT USED	RESTROOM WALLS ONLY GENERAL WALL COLOR THROUGHOUT AND FOEXPOSED STRUCTURE
PT-I GENER PT-2 CEILIN PT-3 ACCE PT-4A ACCE PT-5A ACCE CT-I * CER CT-2 * CER CT-4 COV CT-5 WAL	RAL PAINT NG PAINT ENT PAINT ENT PAINT	SHERWIN WILLIAMS NOT USED SHERWIN WILLIAMS SHERWIN WILLIAMS	9W 7004 NOT USED 9W 6968	SNOW BOUND	GENERAL WALL COLOR THROUGHOUT AND FOEXPOSED STRUCTURE
PT-2 CEILIN PT-3 ACCE PT-4A ACCE PT-5A ACCE CT-1 * CER CT-2 * CER CT-4 COV CT-5 WAL	NG PAINT	NOT USED SHERWIN WILLIAMS SHERWIN WILLIAMS	NOT USED SW 6968	NOT USED	EXPOSED STRUCTURE
PT-3 ACCE PT-4A ACCE PT-5A ACCE CT-1 * CER CT-2 * CER CT-4 COV CT-5 WAL	ENT PAINT	SHERWIN WILLIAMS SHERWIN WILLIAMS	8969 WE		ACCENT WALL
PT-4A ACCE PT-5A ACCE CT-1 * CER CT-2 * CER CT-4 COV CT-5 WAL	ENT PAINT	SHERWIN WILLIAMS		HYACINTH	ACCENT WALL
PT-5A ACCE CT-1 * CER CT-2 * CER CT-4 COV CT-5 WAL			SW 659 <i>0</i>	TINT	
CT-1 * CER CT-2 * CER CT-4 COV CT-5 WAL	ENT PAINT	SHERWIN WILLIAMS		LOVEABLE	ACCENT WALL
CT-4 COV	AMIC TILE	A-D TILE	SW 6836 ELEGANZA LOFT MODEME 12" × 24" PATTERN: VERIFY WITH OWNER	NOVEL LILAC PERLA	RESTROOM FLOORS, WALL WAINSCOT \$ BASE * WALL TILE ON 5/8" CEMENT BOARD SUBSTR. STASH \$ CO. CHRYSTIE WAGNER PH: 612-875-33-08
CT-5 WAL	AMIC TILE	A-D TILE	MARKET 3" × 9" PATTERN: VERIFY WITH OWNER	ALICE	E: CHRYSTIE@STASHANDCO.COM RESTROOM ACCENT WALL, FULL WALL BEHIND TOILET AND SINK (UPGRADE) * WALL TILE ON 5/8" CEMENT BOARD SUBSTRATE STASH \$ CO. CHRYSTIE WAGNER PH: 612-875-33-08 E: CHRYSTIE@STASHANDCO.COM
	E BASE	PROINTER AL	AA ANODIZED SILVER ALUMINUM	SILVER	RESTROOMS: COVE
GR-3 G	L CAP	PROTERMINAL	BRUSHED POLISHED SILVER ALUMINUM	SILVER	RESTROOMS: WALL CAP
_, _ J	ROUT	LATICRETE	UNSANDED, IF JOINTS ARE LESS THAN 1/8"	99 SMOKE GRAY	RESTROOMS ONLY. VERIFY JOINT SIZE AND COLOR WITH OWNER
PL-1 .	PRESSURE MINATE	FORMICA	1197-58 MATTE FINISH	DOVER WHITE	FRONT DESK, VERTICAL CABINET
PI-2A HIGH F	PRESSURE MINATE	FORMICA	8576-PG PURE GRAIN FINISH	BLONDE CEDAR	FRONT DESK, VERTICAL ACCENT \$ B.O.H. VERTICAL
PI -2B HIGH F	PRESSURE MINATE	WILSONART	D379-60 MATTE FINISH	INDIGO	YENTICAL
PI -3 HIGH F	PRESSURE MINATE	FORMICA	9685-58 MATTE FINISH	BLACK RECYCLED	
PI -4	PRESSURE MINATE	FORMICA	6698A-58 MATTE FINISH	PALOMA POLAR	B.O.H. CABINETS HORIZONTAL
	COUNTERTOP	WILSONART		NIWA Q1002	BRUSH ROOM, BREAKROOM, RESTROOMS \$ TREATMENT ISLAND COUNTERTOPS. VERIFY WOWNER
55-1	SURFACE TERIAL	WILSONART	9196R5	YUKON RIVERSTONE	COUNTER TOPS
SOLID	SURFACE TERIAL	CORIAN		GLACIER WHITE	
	VINYL TILE	EF CONTRACT	PLATEAU 5 EFCP5 SIZE: 18" × 36" 5MM PATTERN: ASHLAR	ACIER 001	В.О.Н.
\/T-1 /\	Y VINYL TILE PTION)	MANNINGTON	ACCE99 91ZE: 6" × 40" 5MM	FR05TED OAK 5×5W5020	B.O.H. PROVIDE ALTERNATE BID FOR THIS OPTION.
	ER BASE	JOHNSONITE	PATTERN: ASHLAR 4" COVED	63 BURNT UMBER	THROUGHOUT SPACE
WP-2 WOOT			CM69346	MAPLE	DESK/LOBBY ACCENT STASH \$ CO. CHRYSTIE WAGNER

WALL LEGEND

EXISTING WALL/EXISTING CONDITIONS BY OTHERS TO REMAIN NEW FULL HEIGHT METAL STUD WALL

BLOCKING LEGEND

--- WOOD BLOCKING (VERIFY LOCATION W/ CABINETS)

FINISH PLAN KEY NOTES

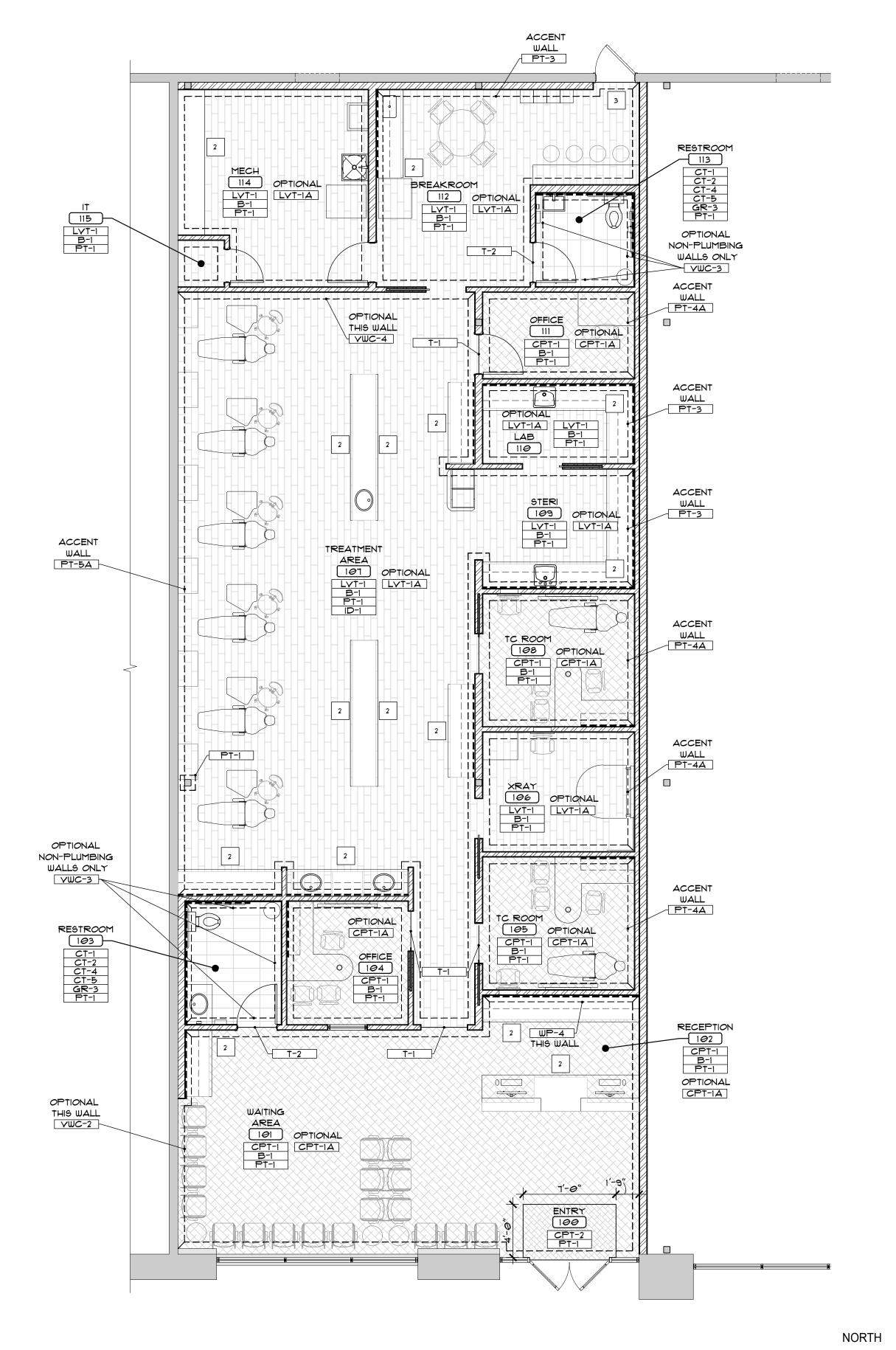
- ENSURE DOOR THRESHOLD MEETS ACCESSIBILITY
- EXTEND NEW FLOORING TO MILLWORK BASE OR EQUIPMENT BASE.
- EXISTING DOOR AND FRAME TO BE PAINTED. VERIFY COLOR '∐ W/ TENANT

GENERAL NOTES

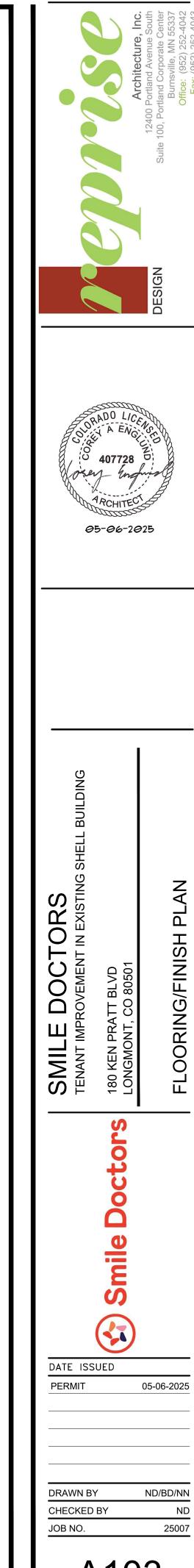
____ STANDARDS.

I. GENERAL CONTRACTOR TO VERIFY ALL DIMENSIONS AND NOTIFY OWNER'S CONSTRUCTION MANAGER OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.

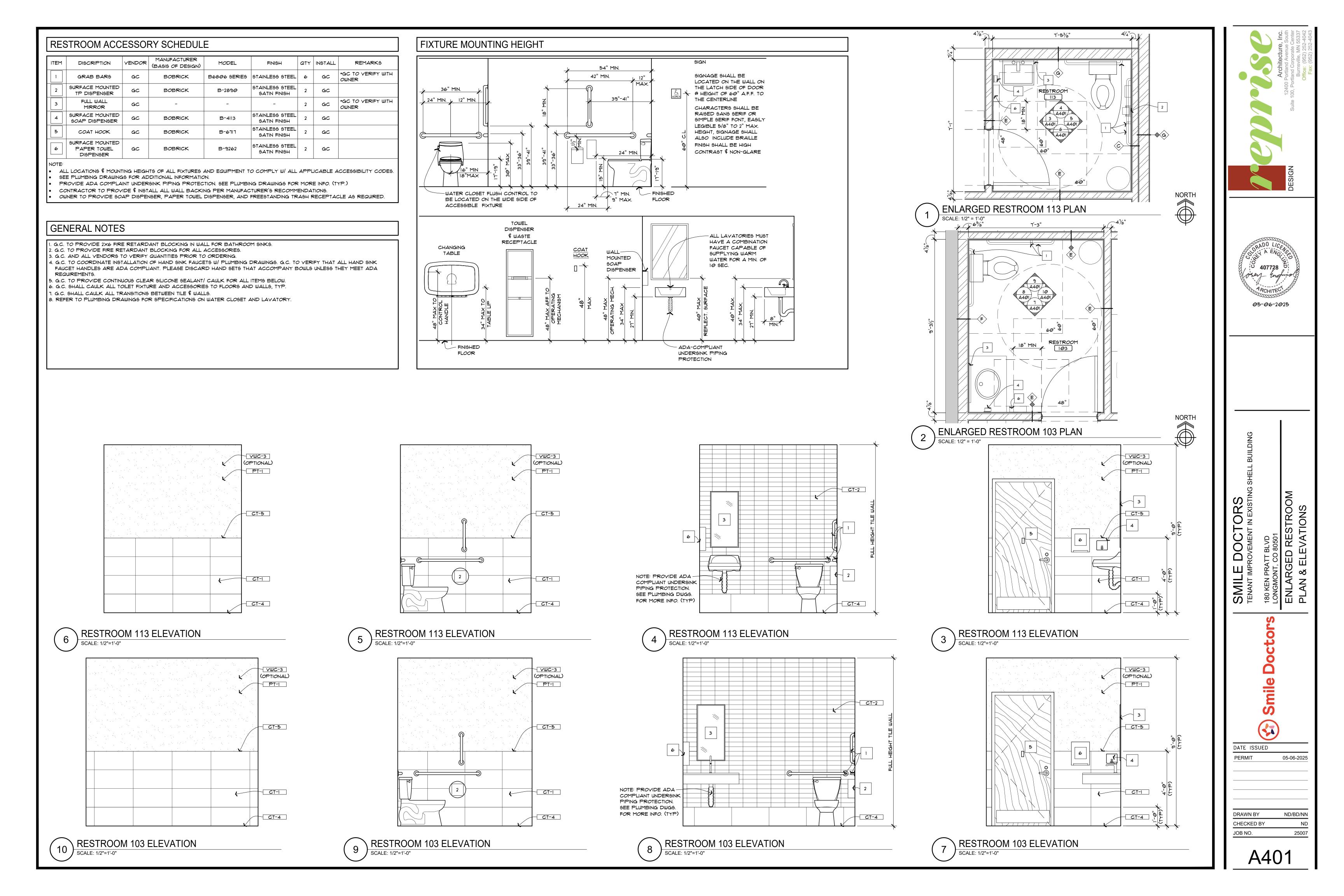
- 2. ALL TILE TO BE INSTALLED PER TILE COUNCIL OF AMERICA STANDARDS.
- 3. REMOVAL OF EXCESS GROUT WILL BE DONE WITH WATER, THE USE OF SULFURIC OR MURIATIC ACID IS PROHIBITED. IF THESE ACIDS ARE USED, THE INSTALLER WILL BE REQUIRED TO REMOVE THE ACID AND RESTORE THE GROUT AT THEIR EXPENSE.
- 4. ALL APPLIED INTERIOR FINISHES SHALL CONFORM WITH CHAPTER 8 OF THE 2021 IBC
- 5. DO NOT SAW CUT CONTROL JOINTS IN TILE

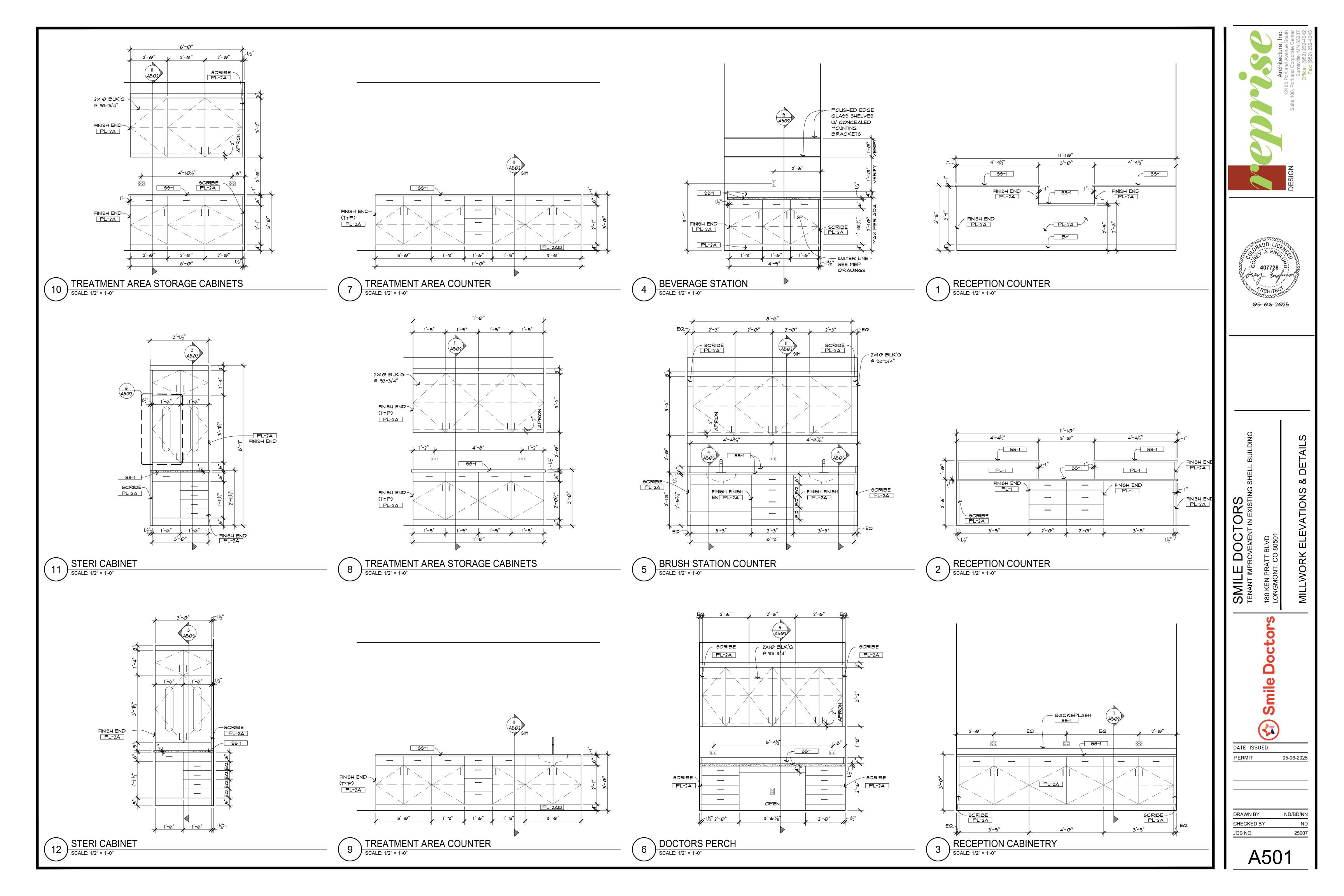


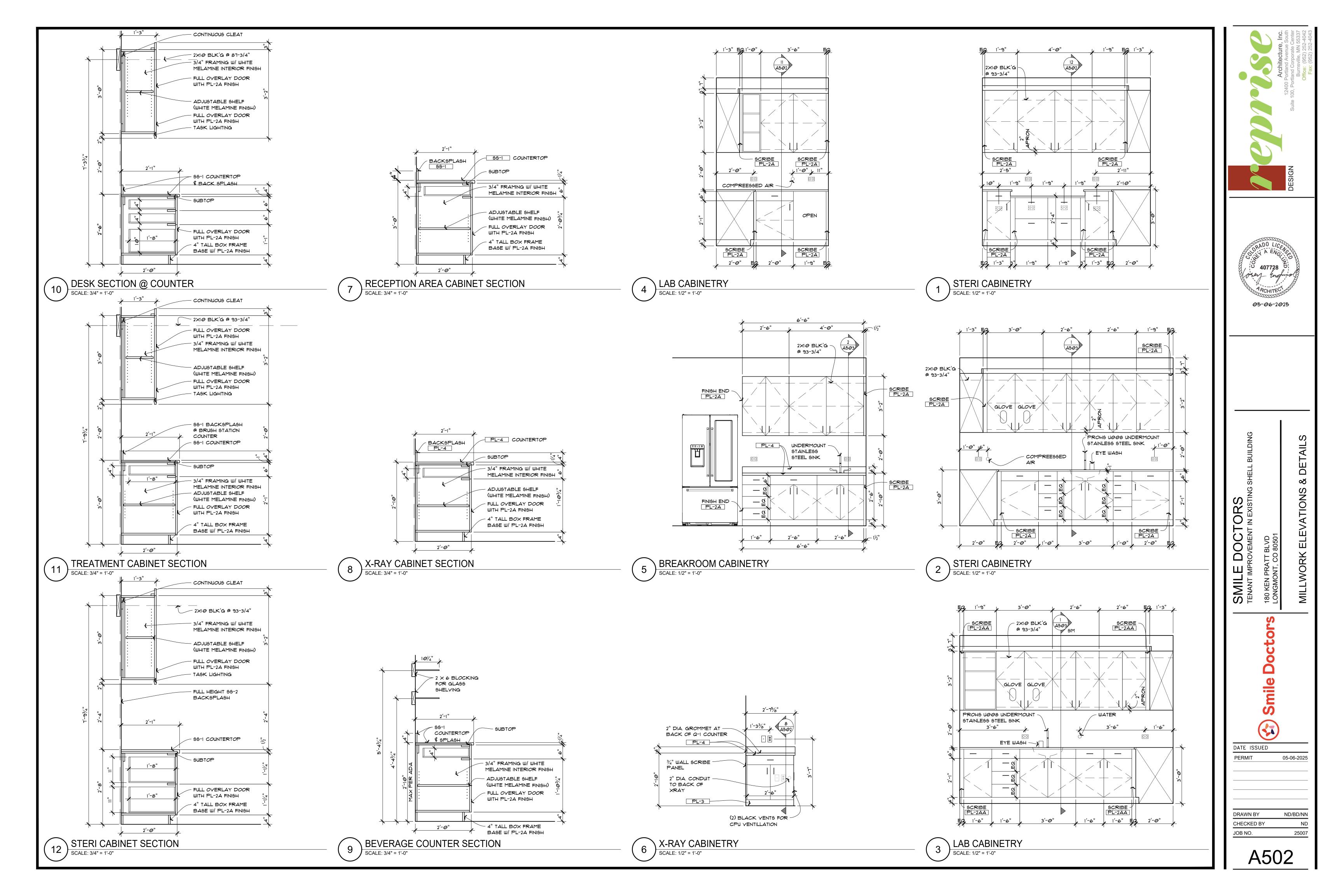


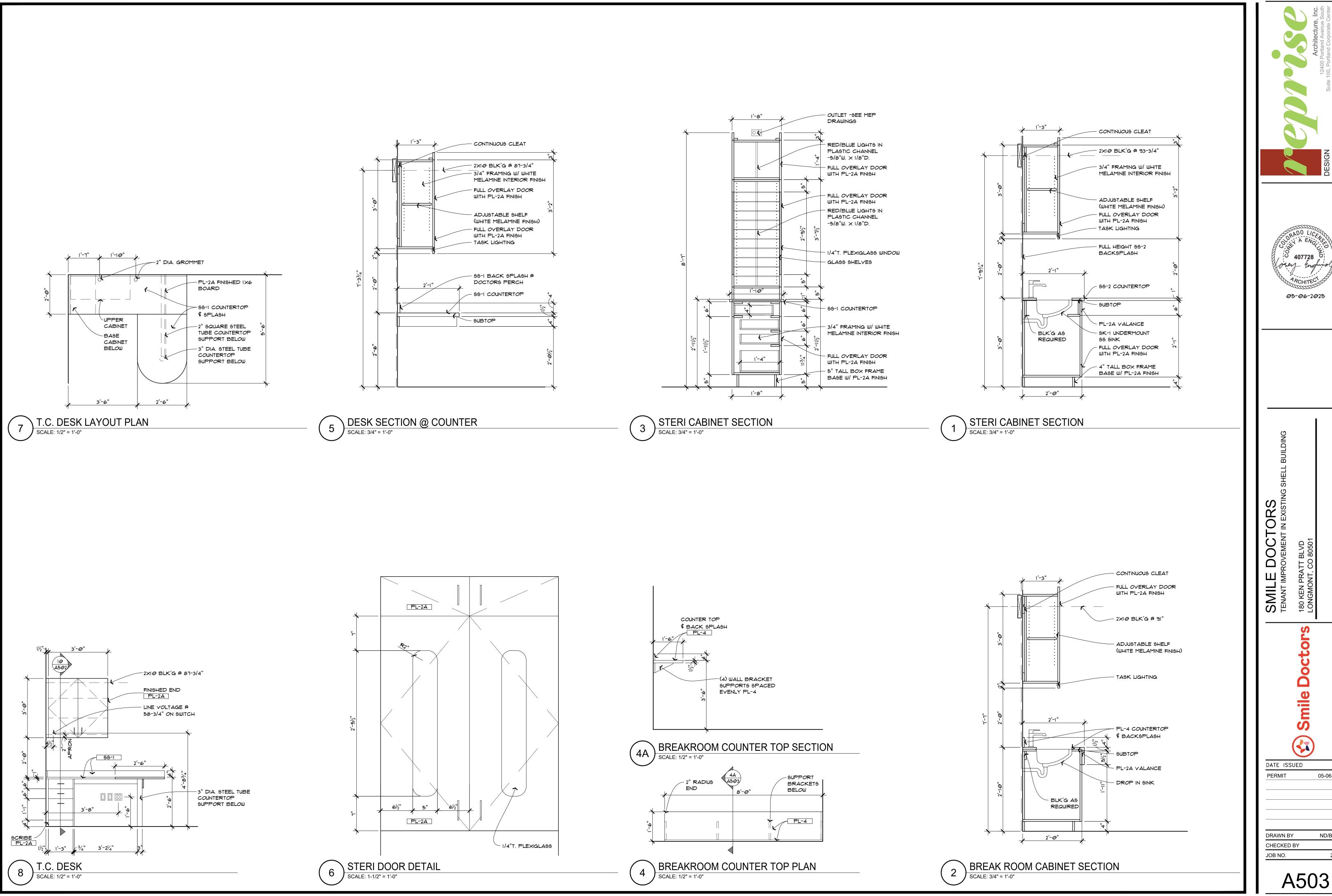


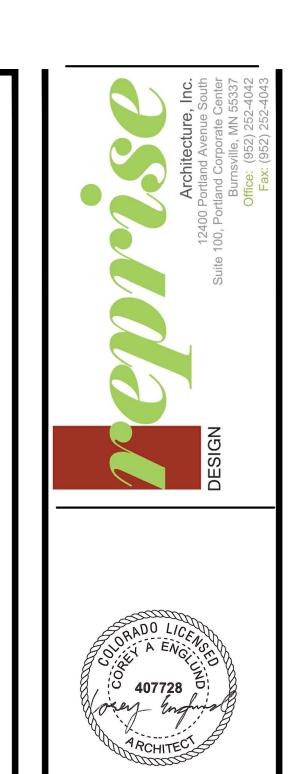
FLOORING/FINISH PLAN











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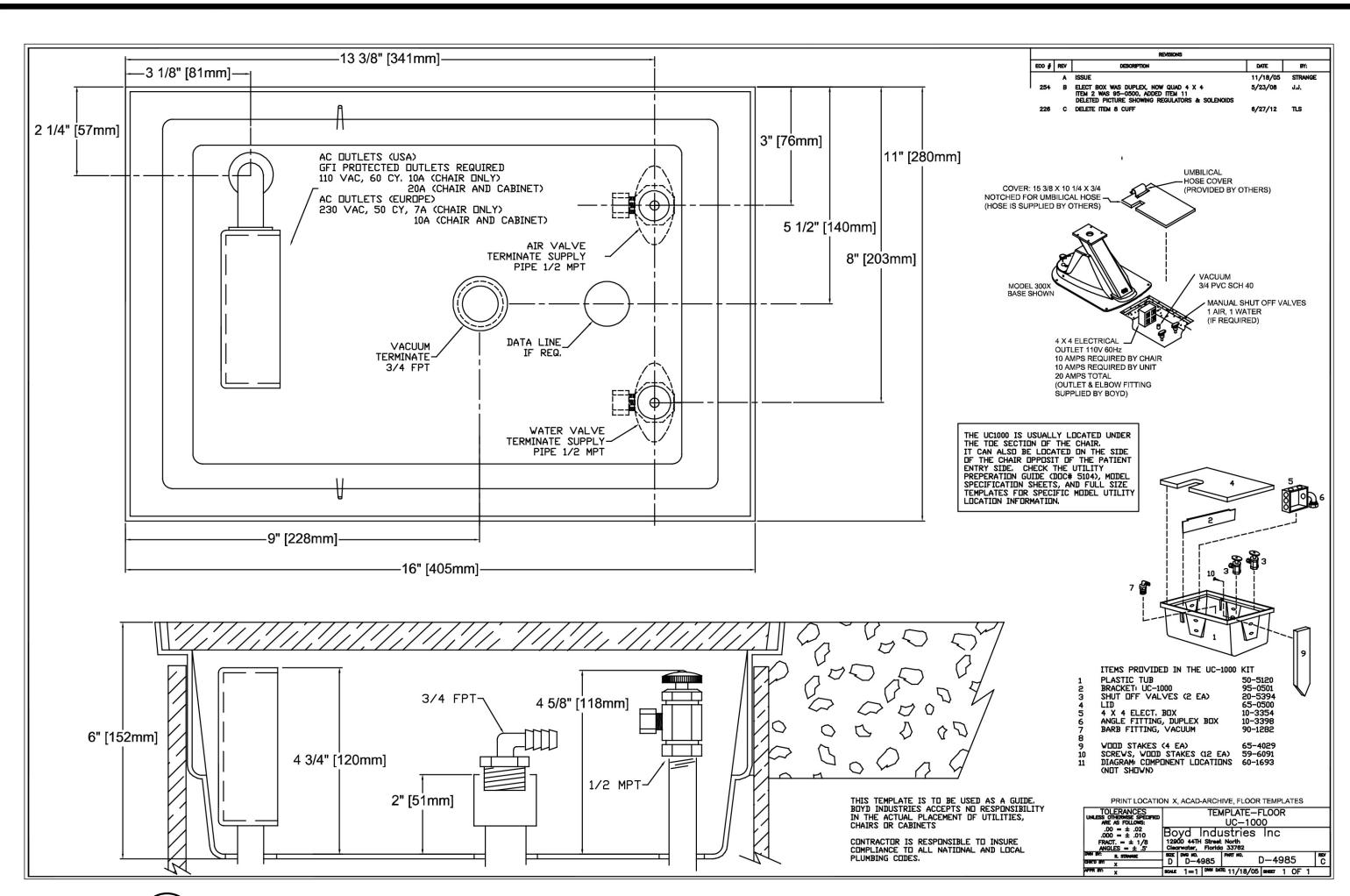
ELEVATIONS

MILLWORK

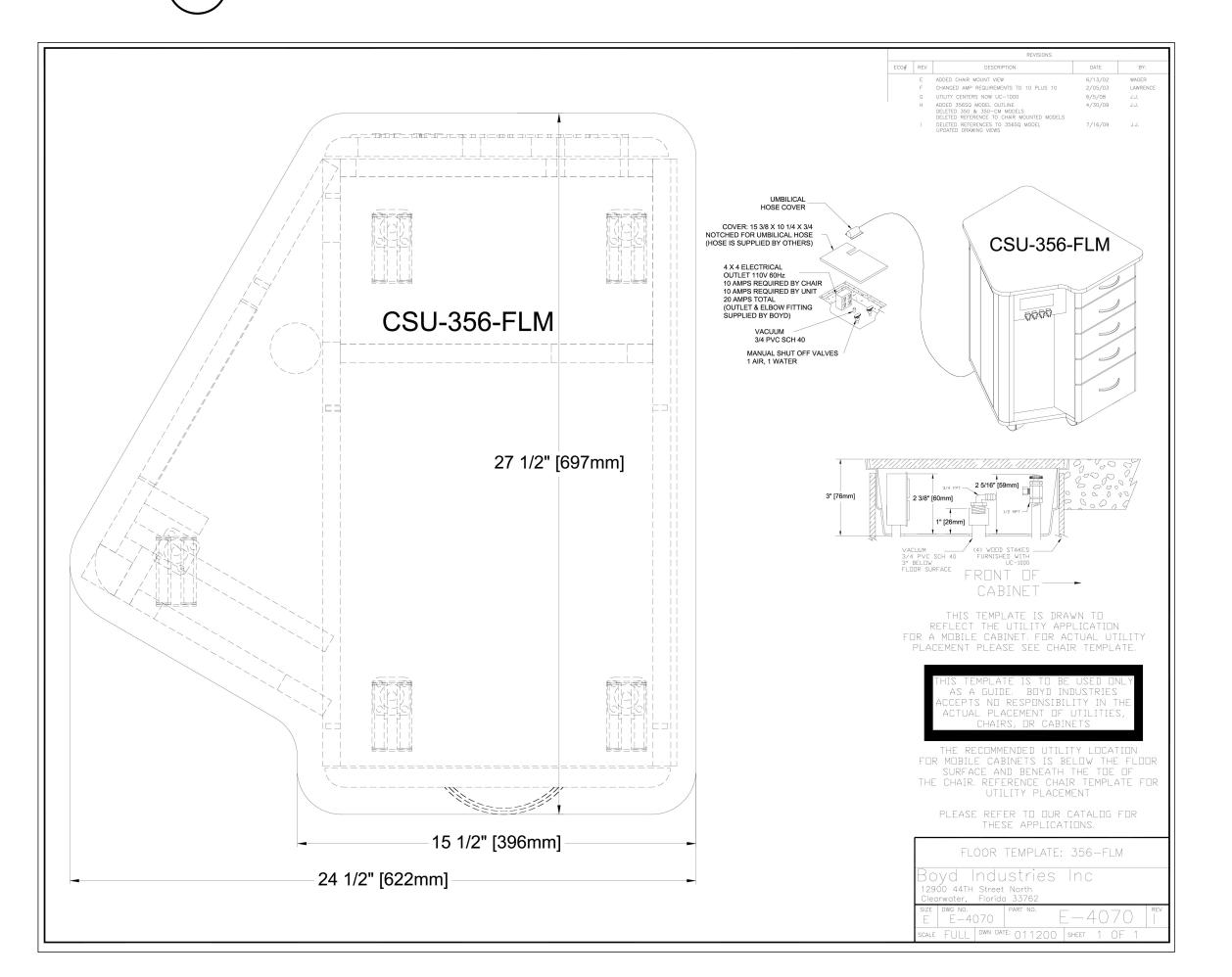
Smile Doctors

05-06-2025

ND/BD/NN

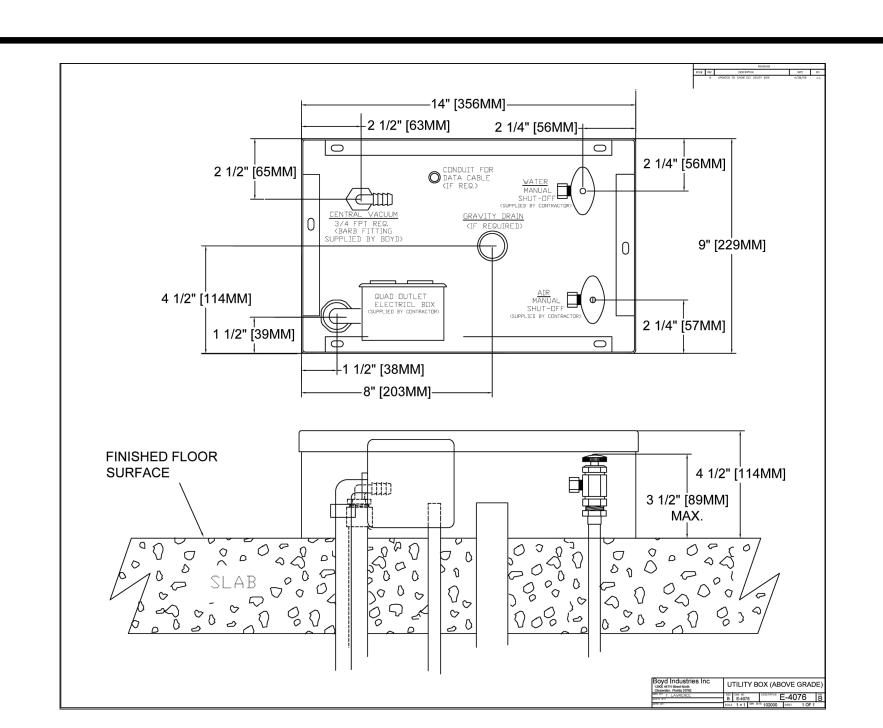


1 FLOOR BOX DETAIL-SIDE TABLE

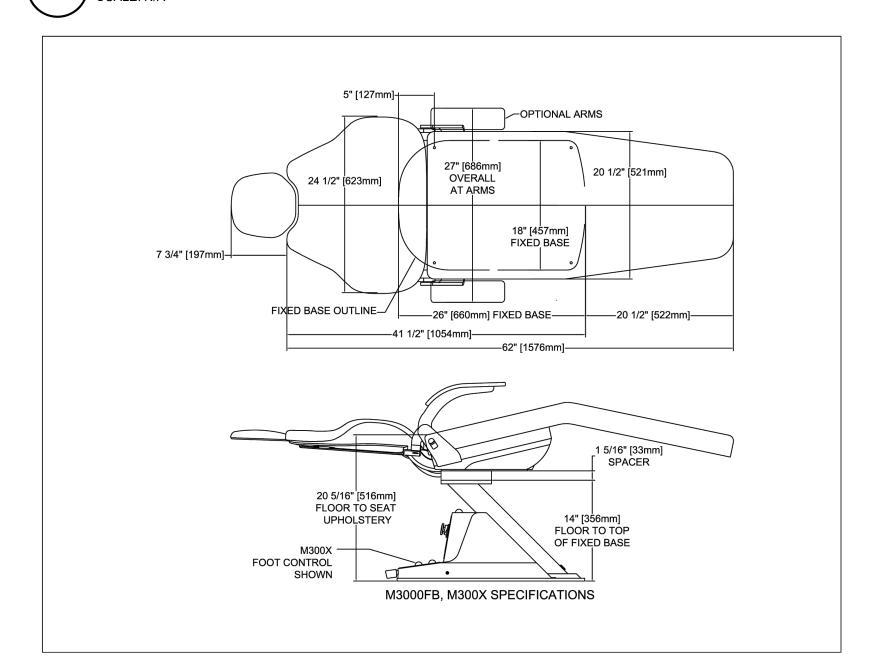


CABINET DETAIL

SCALE: N/A

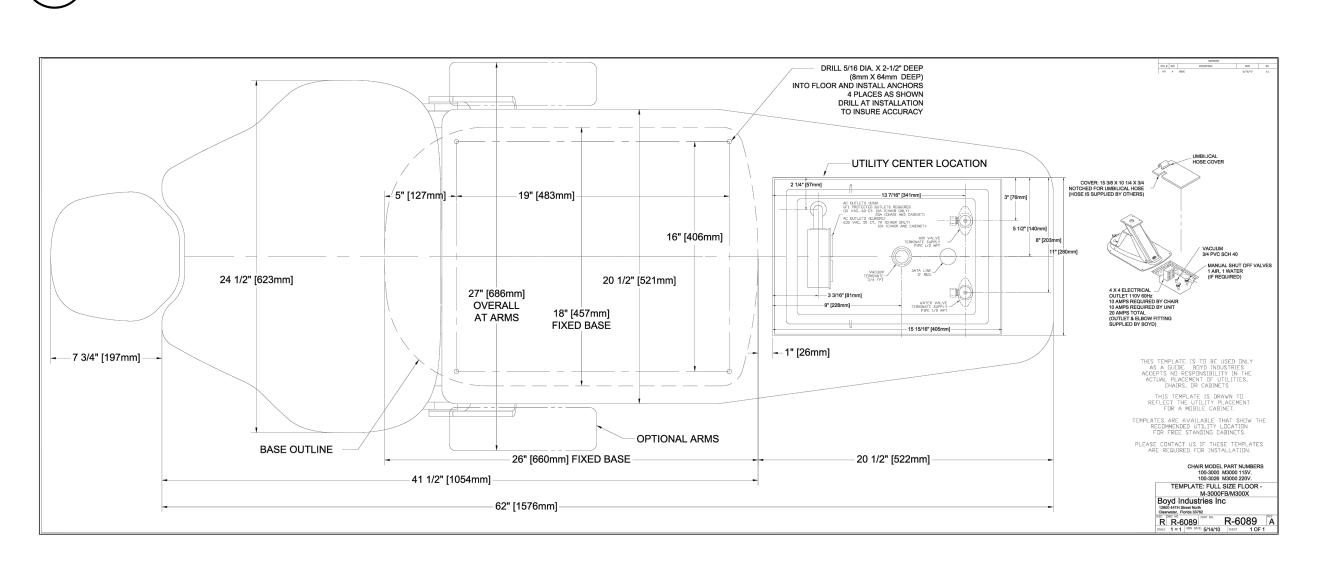


2 UTILITY BOX (ABOVE GRADE)
SCALE: N/A

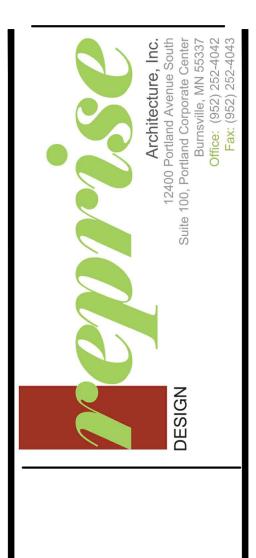


CHAIR DETAIL

SCALE: N/A



6 CHAIR DETAIL
SCALE: N/A





SMILE DOCTORS

TENANT IMPROVEMENT IN EXISTING SHELL BUILDING

TENANT IMPROVEMENT IN EXISTING SHELL BUILDING

180 KEN PRATT BLVD

LONGMONT, CO 80501

DETAILS

A601

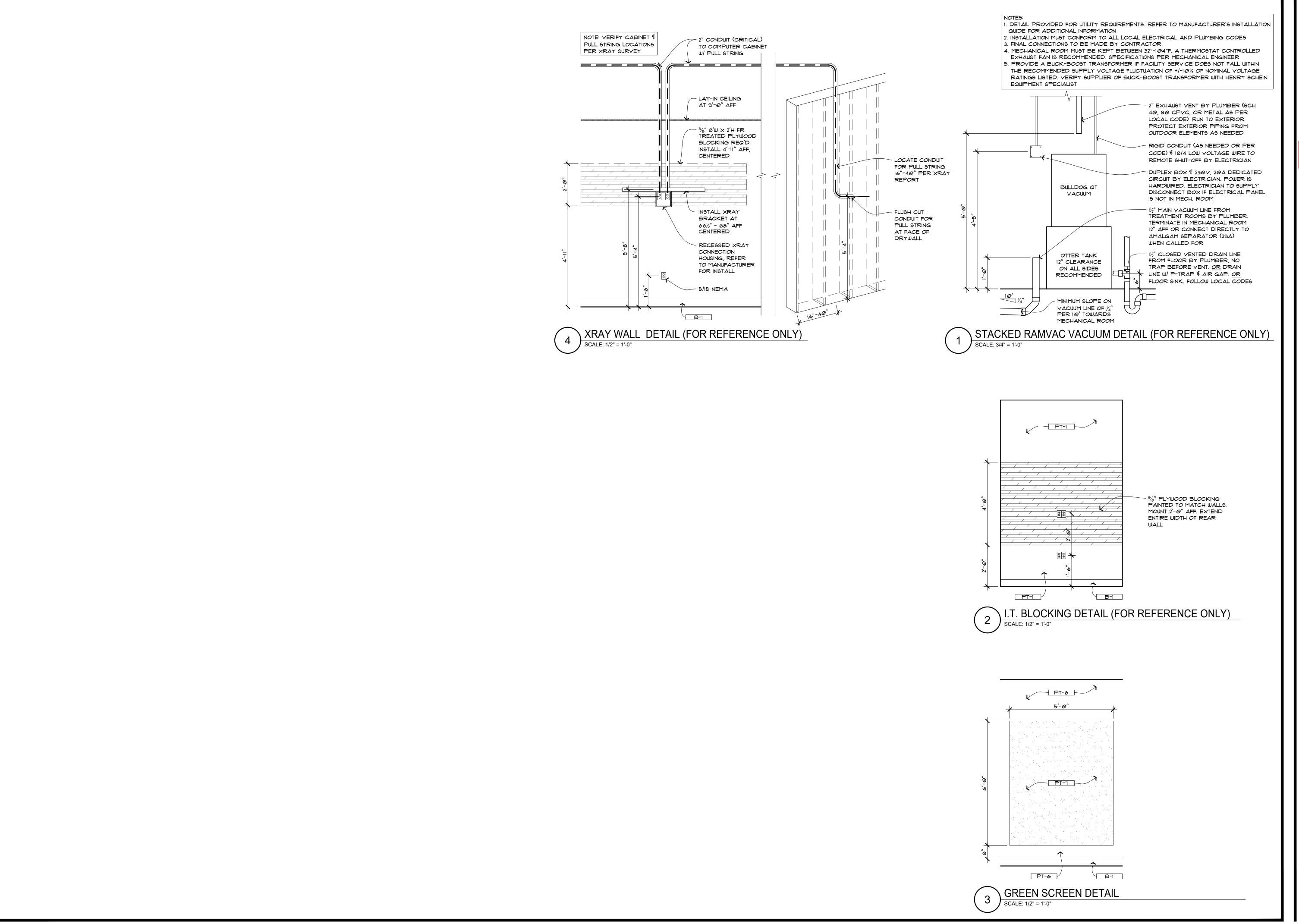
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JOB NO.

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SMILE DOCTORS
TENANT IMPROVEMENT IN EXISTING SHELL BUIL
180 KEN PRATT BLVD
LONGMONT, CO 80501

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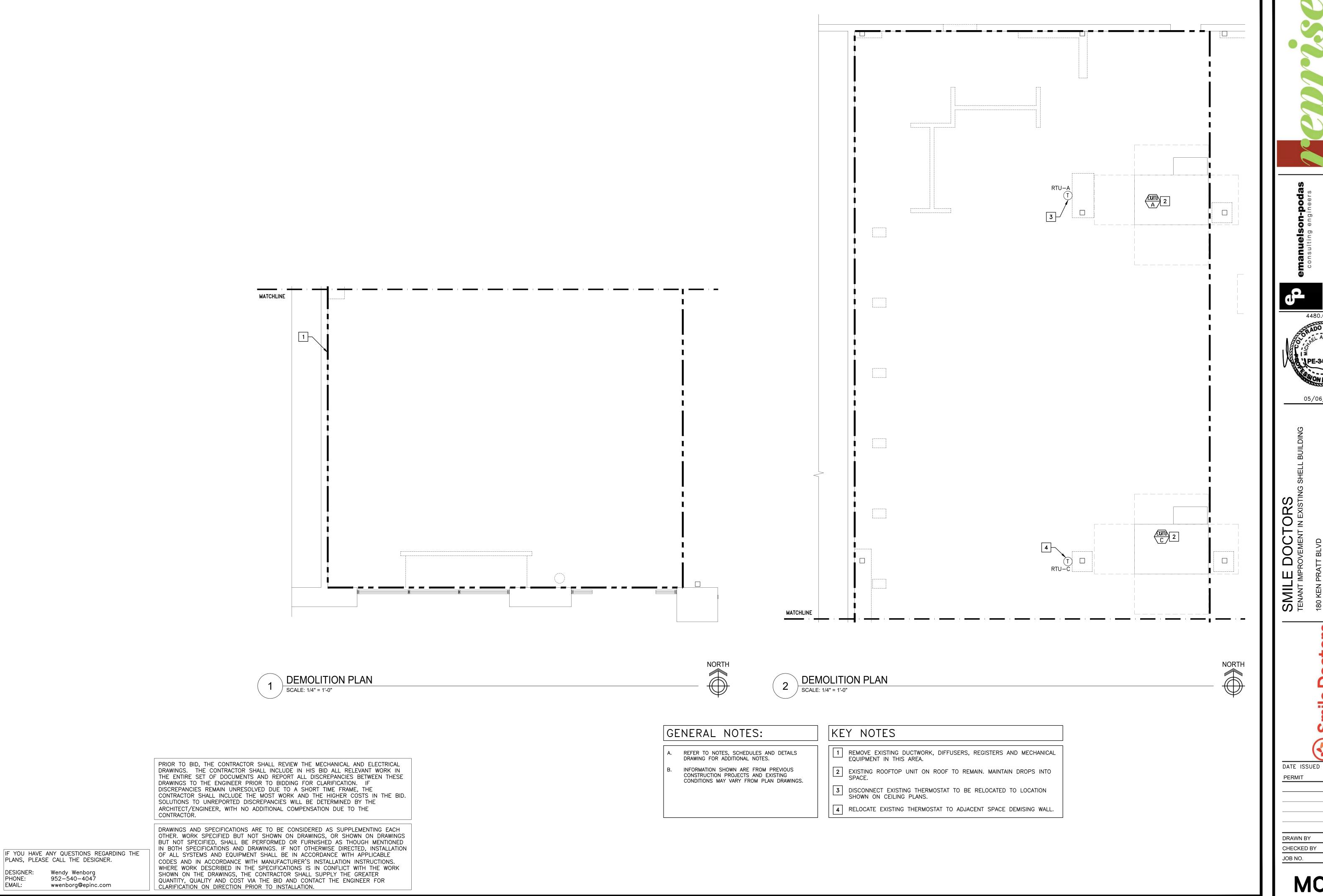
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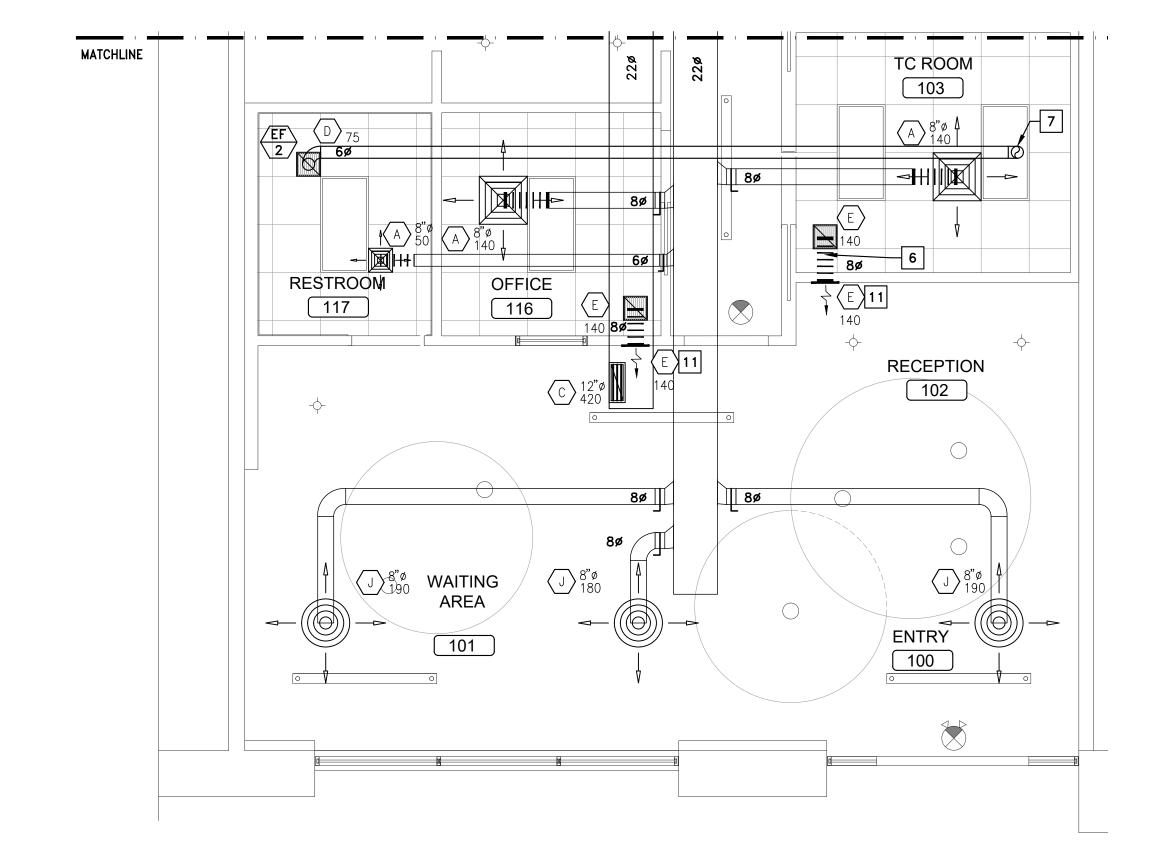
GENERAL NOTES:

- A. REFER TO NOTES, SCHEDULES AND DETAILS DRAWING FOR ADDITIONAL NOTES.
- B. REFER TO DRAWING M301 FOR ADDITIONAL NOTES.
- C. ALL DUCTWORK SHALL BE RUN BETWEEN OR THROUGH THE JOISTS WHEN POSSIBLE.
- D. ALL BENDS IN DUCTWORK SHALL HAVE TURNING VANES.
- . DUCT SIZES SHOWN ARE INTERNAL FREE AREA DIMENSIONS UNLESS NOTED OTHERWISE.
- F. ALL SHEET METAL DUCTWORK SHALL BE EXTERNALLY INSULATED. INSULATION IS NOT SHOWN FOR CLARITY. SEE MECHANICAL NOTES FOR INSULATION REQUIREMENTS.
- G. ALL INSTALLATIONS, EQUIPMENT AND MATERIAL SHALL COMPLY WITH ALL APPLICABLE LANDLORD REQUIREMENTS.
- CONTRACTOR IS RESPONSIBLE FOR HAVING A THOROUGH KNOWLEDGE OF ALL DRAWINGS, SPECIFICATIONS, EXISTING CONDITIONS AND LANDLORD CRITERIA FOR BIDDING PURPOSES. FAILURE TO ACQUAINT THEMSELVES WITH THIS KNOWLEDGE DOES NOT RELIEVE THE RESPONSIBILITY OF PERFORMING THEIR WORK PROPERLY.
- NOT ALL EXISTING EQUIPMENT, PIPING, DUCTWORK, ETC. IS SHOWN ON THE PLANS. ALL EXISTING EQUIPMENT AND PIPING SHOWN DOES NOT REFLECT ALL OFFSETS, LENGTHS AND LOCATIONS. CONTRACTOR SHALL FIELD VERIFY ALL EQUIPMENT AND PIPING TO BE REMOVED AND/OR CONNECTED TO PRIOR TO BID.
- NO FIBERGLASS DUCT BOARD SHALL BE ALLOWED. NO EXCEPTIONS.
- CONTRACTOR SHALL MAKE ALL NECESSARY CONNECTIONS TO THE LANDLORD'S BASE SYSTEMS. COORDINATE ALL SYSTEMS REQUIREMENTS IN THE FIELD AND ALL REQUIREMENTS WITH LANDLORD.
- ALL ROOF CUTTING, PATCHING AND FLASHING REQUIRED TO INSTALL THE HVAC SYSTEMS SHALL BE BY A LANDLORD APPROVED ROOFING CONTRACTOR. COORDINATE ROOF PENETRATION REQUIREMENTS WITH LANDLORD AND THE GENERAL CONTRACTOR. VERIFY SCOPE OF WORK WITH THE GENERAL CONTRACTOR PRIOR TO BID AND INCLUDE ALL COSTS IN BID AS DIRECTED BY THE GENERAL CONTRACTOR.
- THE HVAC CONTRACTOR SHALL COORDINATE WITH THE GENERAL CONTRACTOR ON ANY ADDITIONAL STRUCTURAL STEEL REQUIRED TO SUPPORT MECHANICAL EQUIPMENT PER LANDLORD'S STANDARD DETAILS. THIS CONTRACTOR SHALL COORDINATE LOCATIONS AND REQUIREMENTS WITH THE GENERAL CONTRACTOR AND LANDLORD. VERIFY SCOPE OF WORK WITH THE GENERAL CONTRACTOR PRIOR TO BID AND INCLUDE ALL COSTS IN BID AS DIRECTED BY THE GENERAL CONTRACTOR.
- N. HVAC CONTRACTOR SHALL PROVIDE TWO (2) COPIES OF A CERTIFIED AIR BALANCE REPORT WITH AIR TEMPERATURES AND PRESSURES TO TENANT AT TIME OF FINAL PUNCH FOR APPROVAL AS REQUIRED BY MECHANICAL INSPECTOR, LANDLORD AND OWNER'S REPRESENTATIVE.
- O. CEILING CONTRACTOR MUST PROVIDE ACCESS IN CEILING AT DIFFUSERS AND DAMPERS FOR AIR BALANCING.
- P. HVAC CONTRACTOR SHALL ENSURE THAT ALL EQUIPMENT, PIPING AND DUCTWORK, NOT BEING USED IS FULLY REMOVED AND NOT ABANDONED. COORDINATE REQUIREMENTS WITH THE GENERAL CONTRACTOR AND LANDLORD. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION. VERIFY SCOPE OF WORK WITH THE GENERAL CONTRACTOR PRIOR TO BID AND INCLUDE ALL COSTS IN BID AS DIRECTED BY THE GENERAL CONTRACTOR.
- ROOF CURB ADAPTORS MAY BE ALLOWED AS PERMITTED BY LANDLORD. VERIFY REQUIREMENTS AND CONDITIONS PRIOR TO BID AND COORDINATE WITH UNIT SUPPLIER.
- R. MATERIAL EXPOSED WITHIN RETURN AIR PLENUM CEILINGS SHALL COMPLY WITH IMC SECTION 602.2.
- S. HVAC SUBCONTRACTOR SHALL BE RESPONSIBLE FOR TESTED & RATED FIRE STOP SYSTEMS FOR ALL THRU-PENETRATION OF WALLS, FLOORS & ROOF ASSEMBLIES RESULTING FROM PIPING & OTHER WORK UNDER HIS CONTRACT. REFER TO FIRESTOPPING SPEC SECTION FOR
- SEAL DUCT SEALER PER SMACNA REQUIREMENTS AS INDICATED IN SPECIFICATIONS.

KEY NOTES

- EXISTING ROOFTOP UNIT (ON ROOF). BALANCE TO CFM'S LISTED ON PLAN & SCHEDULE. EXISTING SMOKE DETECTORS SHALL REMAIN IN OPERATION. VERIFY THAT OPERATION MEETS ALL LANDLORD & LOCAL JURISDICTION REQUIREMENTS. ALSO, PROVIDE FIRE RATED DAMPER AT ROOF PENETRATION IF REQUIRED.
- 2 CONNECT NEW DUCTWORK, SUPPLY AND RETURN TO EXISTING (RTU) ROOFTOP UNIT DUCTWORK (VERIFY SIZE OF EXISTING DUCT WORK FROM UNIT) WITH TRANSITION TAKE—OFF WITH VOLUME DAMPER, TYPICAL.
- 3 CONNECT TO DUCTWORK WITH CONICAL BELL MOUTH SPIN-IN TAKE-OFF WITH VOLUME DAMPER, TYPICAL.
- 4 NEW LOCATION OF EXISTING PROGRAMMABLE THERMOSTAT. RUN NEW CONTROL WIRING FROM THERMOSTAT TO UNIT.
- 5 FURNISH AND INSTALL NEW EXHAUST FAN WITH BACKDRAFT DAMPER. HANG FROM CEILING WITH RUBBER-IN-SHEAR VIBRATION ISOLATORS AND FLEXIBLE DUCT CONNECTIONS.
- 6 TRANSFER AIR SLEEVE AS HIGH AS POSSIBLE. TYPICAL.
- PROVIDE NEW VENT THRU ROOF. MAINTAIN MINIMUM 10' CLEARANCE FROM ANY FRESH AIR INTAKES.

 COORDINATE LOCATION WITH EXISTING ROOF EQUIPMENT AND PIPING.
- 8 WALL MOUNTED DOOR GRILLE.
- 9 EXTEND EXISTING MAINS TO ADJACENT SPACE AND CAP OFF EXISTING RTU FOR FUTURE TENANT.
- PROVIDE 3" ROUND DRYER EXHAUST VENT. RUN FROM DRYER THRU ROOF. PROVIDE GOOSENECK WITH BIRDSCREEN. COORDINATE LOCATION & REQUIREMENTS IN FIELD AND WITH ROOF CONTRACTOR.
- 11 WALL MOUNTED TRANSFER GRILL. PAINT TO MATCH WALL COLOR.
- 12 NEW LOCATION FOR ADJACENT SPACE THERMOSTAT CONNECT TO EXISTING RTU FOR FUTURE TENANT.

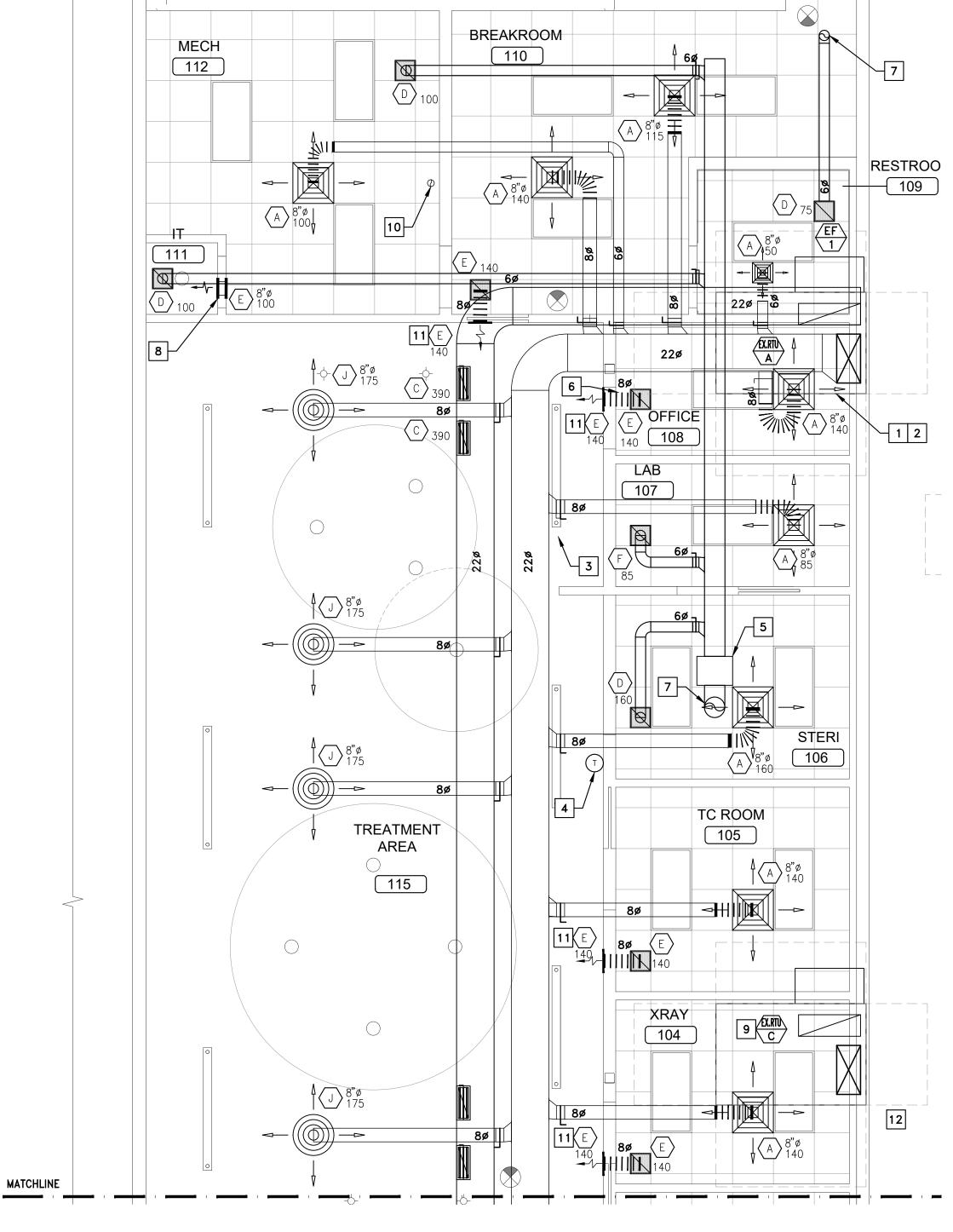


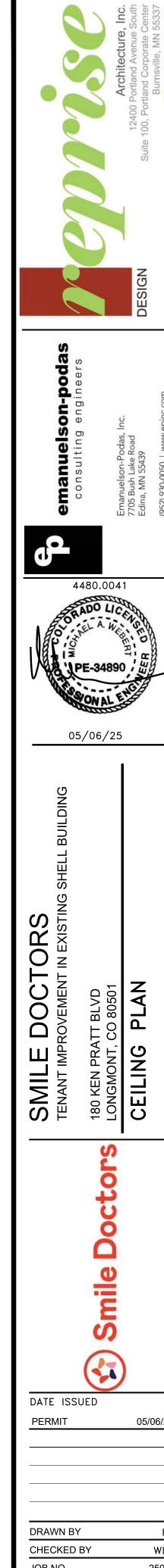




CEILING PLAN
SCALE: 1/4" = 1'-0"

NORTH





M100

NORTH

	ROOFTOP UNIT SCHEDULE																						
		GENERAL				AIRFLO	W			COOLING(MBH)		HEATING (MBH)		ARI RATING		ARI RATING MOTO		OTOR ELECTRICAL		AL			
TAG	MFR.	MODEL	WEIGHT (LBS)	S.A.	E.S.P.	R.A.	0.A.	M.A.(S)	M.A.(W)	TOTAL	SENS	LAT	INPUT	OUTPUT	SEER	EER	IEER	HP	RPM	٧	Ph H	Iz MC/	MOCF
EX RTU-A	CARRIER	48TCFD08A2A5A0A0A0	EX	2,660	EX	1,995	665	EX	EX	88.3	64.6	23.7	224.0	184.0	EX	EX	EX	EX	EX	208	3 6	0 42	50
FX RTU-C	CARRIER	48TCFD08A2A5A0A0A0	FX	0	FX	0	0	FX	FX	88.3	64.6	23.7	224.0	184.0	FX	FX	FX	FX	FX	208	3 6	0 42	50

					FAN DATA				MOTOR DATA				ELECTRICAL					
UNIT	LOCATION	MANUFACTURER	MODEL	SERVES	AIRFLOW (CFM)	ESP (IN WC)	SPEED (RPM)	SONES	DRIVE TYPE	HP	WATTS	CONTROL	٧	Ph	Hz	МСА	моср	NOTES
EF-1	CEILING	GREENHECK	SP-B80	RESTROOM	75	0.13	900	0.6	DIRECT	-	18.0	SWITCH	115	1	60	0.16	15	1-3
EF-2	CEILING	GREENHECK	SP-B80	RESTROOM	75	0.13	900	0.6	DIRECT	-	18.0	SWITCH	115	1	60	0.16	15	1-3
EF-3	INLINE	GREENHECK	SQ-90-VG	LAB/STERI./MECH/IT	445	0.23	1,725	8.7	DIRECT	1/10	=	SWITCH	115	1	60	1.38	15	1,3,4

NOTES:

- . FAN PROVIDED AND INSTALLED BY CONTRACTOR.
- WIRE PARALLEL WITH ROOM LIGHT SWITCH, PROVIDE TRANSFORMER IF REQUIRED.
 PROVIDE WITH ROOF CURB, BIRD SCREEN, GRAVITY BACKDRAFT DAMPER, AND SOLID STATE SPEED CONTROL.
- 4. INTERLOCK WITH TIMECLOCK.

	DIFFUSER, REGISTER & GRILLE SCHEDULE														
MARK	MANUFACTURER	ANUFACTURER LOCATION AIR TYPE MODEL		SIZE	DAMPER	MAX STATIC P.D. (IN WG)	MAX NC	MATERIAL	FINISH	NOTES					
Α	PRICE	CEILING	SUPPLY	DIFFUSER	ASCD	24"×24"	OBC	0.1	13	ALUMINUM	WHITE	1, 2, 3			
С	PRICE	CEILING	RETURN	GRILLE	SDGR	18"×6"	OBC	0.2	14	ALUMINUM	WHITE	1, 4			
D	PRICE	CEILING	EXHAUST	GRILLE	81	12"×12"	OBC	0.5	14	ALUMINUM	WHITE	1, 4			
E	PRICE	CEILING	TRANSFER	GRILLE	635	12"×12"	OBC	0.2	14	ALUMINUM	WHITE	1, 2, 4			
J	TITUS	FREE	SUPPLY	DIFFUSER	TMRA	12"	OBC	0.2	14	ALUMINUM	WHITE	1, 2, 4			
NOTES	S:									19.					

- 1. CONTR. IS RESPONSIBLE TO VERIFY LOCATIONS, QUANTITIES, & INSTALLATION METHODS PRIOR TO ORDERING MATERIALS
- 2. VERIFY FRAME TYPE, LAY-IN, GYP BOARD, OR SURFACE MOUNT
- 3. 3 CONES, FULLY ADJUSTABLE
- J. J CONES, FULLI ADJUSTABLE
- 4. 3/4" BLADE SPACING, PROVIDE WITH 1" FRAME APPROVED EQUAL: TITUS, KRUEGER, TUTTLE & BAILEY

	AIR	BALANG	CE SCHE	DULE	
UNIT	SUPPLY AIR	RETURN AIR	OUTDOOR AIR	EXHAUST AIR	PRESSUR
EX. RTU-A	2,660	1,995	665		665
EF-1				75	-75
EF-2				75	-75
EF-3				445	-445
TOTALS	2660	1995	665	595	70
NOTES:	OUTDOOR AIR	2: 0% TO +1	RE AS FOLLOWS 0% DIFFUSERS: -1		

2 BALANCE HVAC UNIT SUPPLY AND RETURN AIR PRIOR TO TURNING

TOILET EXHAUST AIR: -10% TO +10%

ON EXHAUST FANS.

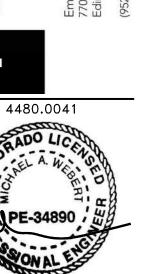
GENERAL NOTES

- Work to be accomplished on these Drawings and the accompanying specifications includes the furnishing of all labor, materials, equipment, and services necessary for the proper completion of all mechanical work.
- 2. Before submitting a proposal on the work contemplated on these drawings and accompanying specifications, each bidder shall examine the site, check as to the means of making connections to services, and shall become familiar with all the existing conditions and limitations. Mechanical equipment and systems shown as existing on the plans have been based on existing drawings. No extras will be allowed because of the contractor's misunderstanding as to the amount of work involved or his lack of knowledge of any site conditions which may affect his work. Any apparent variance of the plan or specification from existing conditions at the site shall be called to the attention of the Engineer during the bid period so clarification can be made by addendum.
- 3. Existence of any wires, conduits, pipes, ducts, or other facilities are shown in a general way only. It will be the duty of the contractor to visit the site and make exact determination of the existence of any such facilities prior to the submission of his bid. It is understood that he will be responsible for making the exact determination of the location and condition of such facilities.
- 4. All required fees, permits, and inspections shall be obtained and/or arranged for by the contractor under the section of the Specifications for which they are required.
- 5. Regular inspections shall be arranged by the contractor as required by any and all regulations. All charges from regulating agencies for inspections of installations or review of plans and Specifications shall be paid by the contractor.
- 6. Certificate of Final Inspection. Under each applicable section of the Specifications, contractor shall, upon completion of the work under that section, furnish a Certificate of Final Inspection to the Engineer from the inspection department having jurisdiction.
- 7. All materials and workmanship shall comply with all current and applicable codes, specifications, ordinances, laws, regulations, industry standards, and utility company regulations.
- 8. In case of difference among building codes, specifications, state laws, local ordinances, industry standards, and utility company regulations and the Contract Documents, the most stringent shall govern. Contractor shall promptly notify the Engineer in writing of any such difference.
- 9. All applicable federal, state, and local laws and ordinances shall be adhered to throughout the construction project.
- 10. Non—Compliance. Should the contractor perform any work that does not comply with the requirements of the applicable building codes, state laws, local ordinances, industry standards, and utility company regulations, he shall bear all costs arising to correct the deficiencies.
- 11. Contractor shall initiate, maintain, and supervise all safety pre—cautions required for his work, including regulations of the Occupational Safety and Health Administration (OSHA).
- 12. Drawings are to scale as noted, but the contractor shall refer to Architectural and Structural Drawings for exact location of partitions, walls, beams, shafts, equipment, etc.
- 13. Each trade shall obtain drawings and specifications of all other trades and coordinate his work with all other
- 14. Drawings show the general arrangement of ductwork, piping, equipment, and appurtenances and shall be followed as closely as actual building construction and work of other trades will permit. Mechanical work shall conform to the requirements shown on all of the drawings. Architectural and Structural Drawings shall take precedence over Mechanical Drawings. Because of the small scale of the Mechanical Drawings, it is not possible to indicate all offsets, fittings, and accessories that may be required.
- 15. Discrepancies discovered before or after work has started shall be brought to the attention of the Engineer immediately, and the Engineer reserves the right to require minor changes in the work of any contractor to eliminate such discrepancies with no change in contract cost.
- 16. Plans and specifications are complementary, and what is called for in either one shall be as binding as if
- 17. Where a disagreement exists between the plans and specifications, the item or arrangement of better quality, greater quality, or higher cost shall be included in the bid.
- 18. Access panels shall be furnished by the trade requiring them and delivered to the general contractor for installation.
- 19. All materials and equipment shall be stored in such a place and in such a manner that a minimum of congestion will result. the placing of such materials and equipment shall be subject to the approval of the
- 20. Contractor shall thoroughly examine the existing building with regard to what temporary measures he must take in order to permit the owner to occupy specific areas of the building during the various construction phases. refer to architectural specification section for construction sequencing schedule. in general, systems must remain in use in those designated areas to permit the owner to function in a pre-construction manner.
- 21. Each contractor shall coordinate work with other trades in the installation of equipment, piping, conduit, and ductwork.
- 22. HVAC/sheet—metal contractor shall initiate the coordination process by providing reproducible plan drawings showing ductwork and equipment.
- 23. Drawings will be forwarded to the piping contractor and electrical contractor for inclusion of their systems work.
- 24. Contractors shall solve all coordination conflicts among themselves when possible. engineer will arbitrate when necessary, and his judgment will stand, with no additional cost to the owner.
- 25. Normal use of the facility shall not be disturbed, except within the immediate construction area.

- all walks, driveways, and entrances shall be kept clear and free of all contractor's equipment, material, and debris at all times.
- 26. Access panels shall be as manufactured by milcor, or approved equal, and of type that compatible with construction and finish of the wall and/or ceiling
- 27. Each trade shall perform all cutting and patching necessary in order to perform the work, unless such work has been delegated to the general contractor/another trade. however, special permission shall be obtained from the engineer before cutting structural members or finished materials. all patching shall be performed in such manner as to leave no visible trace and to return the part affected to the condition of undisturbed work. patching work shall be performed by persons experienced, skilled, and licensed for the particular type of work involved. inferior work will not be accepted. all holes in masonry shall be drilled with rotary drills. impact tools shall not be used.
- 28. Each trade shall bear the expense of all cutting, patching, repairing, or replacing of the work of other trades required because of his fault, error, or tardiness or because of any damage done by
- 29. Each trade shall provide all holes and openings required for his work, unless such holes and openings are shown to be provided on the architectural or structural drawings.
- 30. Each trade shall remove existing work that is shown, specified, or obviously necessary for completion of his work. owner shall have the option of retaining any item or material removed under this contract. items or materials not retained by owner shall become the property of the trade and shall be removed from the premises.
- 31. Each trade shall periodically clear away all debris, surplus materials, etc., resulting from his work or operations, leaving the job and the equipment furnished under any or all contracts in a clean condition.
- 32. Each trade shall test the equipment provided and/or installed under the specification and shall demonstrate its proper operation to the owner's operating engineer.
- 33. Each trade shall furnish, without additional expense to the owner, the services of competent instructors, who will give full instruction in the care, adjustment, and operation and maintenance of all parts of the equipment to the owner's permanent employees who are to have charge of the equipment.
- 34. Each subcontractor shall be responsible for tested & rated fire stop systems for all thru—penetration of walls, floors & roof assemblies resulting from piping & other work under his contract. refer to specification section for fire stopping for requirements.
- 35. All wood nailers and other lumber which is installed in contact with metal, concrete, or masonry shall be pressure treated against decay (unless otherwise noted).
- 36. Provide only products from manufacturers with local representation that can provide complete coverage, service, parts and labor of their products in a timely manner.
- 37. Material exposed within return air plenum ceilings shall comply with current mechanical code.
- 38. HVAC contractor shall line the inside of all return/relief/exhaust plenum boxes per specifications. If no lining is required, HVAC contractor shall paint the inside flat black.
- 39. All duct sizes are internal dimensions. Contractor shall increase sheet metal size if duct receives internal liner. See specifications for insulation requirements.
- 40. Duct roof penetration sizes to rooftop units are same as duct main, unless noted otherwise.

 Transition to unit connection sizes within roof curbs.
- 41. Locations of orifices/L—vents for fabric ducts are oriented when facing the direction of airflow.
- 42. HVAC equipment shall be no closer to roof edge than 10'-6" at all times.
- 43. Maintain a minimum of 15'-0" horizontal distance from any intake to exhaust outlet.
- 44. Coordinate underground piping with general contractor to ensure proper footing depth clearance.
- 45. Plans do not include all offsets for coordination with duct, lighting, and structural systems. Provide allowances for required offsets.
- 46. Provide all materials and equipment and perform all labor required to install complete and operable plumbing system as indicated on the drawings, as specified, and as required by code.
- 47. Elevations shown are to the invert of all piping based on architectural finished floor elevation (FFE) of 100'-0", unless noted otherwise.
- 48. Make connections to equipment and controls.
- 49. Fire caulk all floor penetrations and where piping penetrates rated walls.





05/06/25

SHELL BUILDING

0 L F C

N PRATT BLVD IONT, CO 80501 EDULES AND

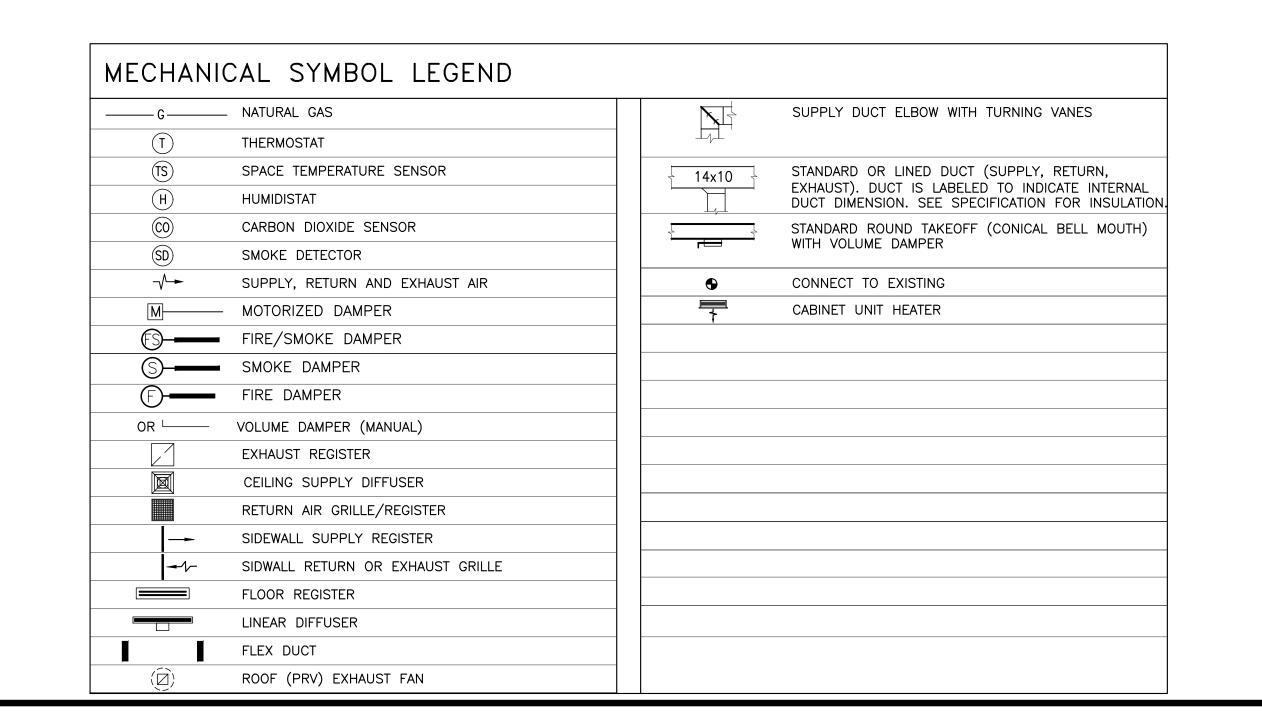
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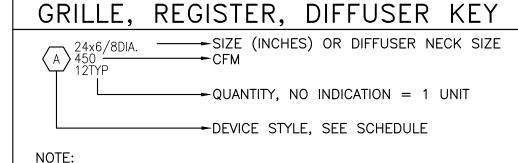
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M300



MECHANICAL ABREVIATIONS

AFF	ABOVE FINISHED FLOOR	ISO	ISOLATOR (ISOLATION)
AP	ACCESS PANEL	LAT	LEAVING AIR TEMPERATURE
BFP	BACK FLOW PREVENTER	LF	LINEAR FEET
BHP	BRAKE HORSEPOWER	LVR	LOUVER
BLW BWV	BELOW BACK WATER VALVE	LWT	LEAVING WATER TEMPERATURE
CD	CONDENSATE DRAIN	MAU	MAKE-UP AIR UNIT
CHW	CIRCULATING HOT WATER	MEZZ MXA	MEZZANINE MIXED AIR
CLG	CEILING	N	NECK
CO	CLEANOUT	NC	NORMALLY CLOSED
CONN	CONNECTION	NO	NORMALLY OPEN
CONSTR	CONSTRUCTION	OA	OUTSIDE AIR
CONT	CONTINUOUS OR CONTINUED	OPNG	OPENING
CU	CONDENSING UNIT	OPR	OPERATING
CW	COLD WATER	PD	PRESSURE DROP
DF	DRINKING FOUNTAIN	PG	PRESSURE GAUGE
DIFF	DIFFUSER	PLBG	PLUMBING
DMPR	DAMPER	PRV	POWER ROOF VENTILATOR
DN	DOWN	RA	RETURN AIR
EA	EXHAUST AIR	RADN	RADIATION
EAT	ENTERING AIR TEMPERATURE	RD	ROOF DRAIN
EF	EXHAUST FAN	RECIRC	RECIRCULATE
EHC	ELECTRIC HEATING COIL	RE RF	RELOCATED RETURN FAN
EL	ELEVATION	RHC	REHEAT COIL
ESP	EXTERNAL STATIC PRESSURE	RPZ-BFP	REDUCED PRESS. ZONE B.F. PREVENTER
EUH	ELECTRIC UNIT HEATER	RTU	ROOFTOP UNIT
EWC	ELECTRIC WATER COOLER	RWL	RAINWATER LEADER
EWH	ELECTRIC WATER HEATER	SA	SUPPLY AIR
EX	EXISTING	SAN	SANITARY
EXH	EXHAUST	SCW	SOFTENED COLD WATER
FCO	FLOOR CLEANOUT	SD	STORM DRAIN
FCU	FAN COIL UNIT	SF	SUPPLY FAN
FD	FLOOR DRAIN	SL	STORM LEADER
FDC	FIRE DEPARTMENT CONNECTION	SLV	SLEEVE
FHC	FIRE HOSE CABINET	SP	STATIC PRESSURE
FILT	FILTER	SP	SUMP PUMP
FIXT	FIXTURE	SPKLR	SPRINKLER
FP FPM	FIRE PROTECTION FEET PER MINUTE	STM	STEAM
FSV	FIRE SERVICE VALVE	STR	STORM
FSW	FLOW SWITCH	SU	SUPPLY UNIT
FU	FURNACE	SW	SANITARY WASTE
G	GAS	T	THERMOSTAT
GPH	GALLONS PER HOUR	TRANS	TRANSFER
GW	GREASE WASTE	TSP UG	TOTAL STATIC PRESSURE UNDERGROUND
HB HDCP	HOSE BIBB HANDICAPPED	UH	UNIT HEATER
HSTAT	HUMIDISTAT	VD	VOLUME DAMPER
HTG	HEATING	VFD	VARIABLE FREQUENTLY DRIVE
HW	HOT WATER		
ID	INDIRECT DRAIN	VTR WC	VENT THRU ROOF
INSUL	INSULATION	WG WH	WATER GAUGE WALL HYDRANT
INV EL	INVERT ELEVATION	WH WPD	WALL HYDRANI WATER PRESSURE DROP
IRR	IRRIGATION WATER	VVFD	WAILN FINESSORE DINOF
			COLOTED DIEFLICED IVEN



BRANCH DUCT RUNOUTS TO DIFFUSERS/GRILLES SHALL BE SAME SIZE DIFFUSER/GRILLE NECK UNLESS OTHERWISE NOTED (UON).

EQUIPMENT KEY

EQUIPMENT TYPE EQUIPMENT NUMBER <u>DIVISION 15000 - MECHANICAL</u>

SECTION 15001 - BASIC MECHANICAL REQUIREMENTS

GENERAL CONDITIONS

- 1. THE DRAWINGS AND GENERAL CONDITIONS, INCLUDING SUPPLEMENTARY GENERAL CONDITIONS SHALL APPLY TO ALL WORK IN DIVISION 15000.
- 2. THE CONTRACTOR FOR THIS DIVISION SHALL REVIEW THE DRAWINGS AND ACCOMPANYING SPECIFICATIONS, EXAMINE THE SITE, CHECK AS TO THE MEANS OF MAKING CONNECTIONS TO SERVICES, AND SHALL BECOME FAMILIAR WITH ALL THE EXISTING CONDITIONS AND LIMITATIONS BEFORE SUBMITTING A PROPOSAL. ANY APPARENT VARIANCES OF THE PLAN OR SPECIFICATION FROM THE EXISTING CONDITIONS AT THE SITE SHALL BE CALLED TO THE ATTENTION OF THE ENGINEER DURING THE BID PERIOD SO THAT CLARIFICATION CAN BE MADE BY ADDENDUM. ITEMS KNOWN TO BE INCONSISTENT WITH THE BID DOCUMENTS INTENT MUST BE LISTED AND QUALIFIED ON THE CONTRACTORS BID FORM. NO EXTRAS WILL BE ALLOWED BECAUSE OF THE CONTRACTORS MISUNDERSTANDING AS TO THE AMOUNT OF WORK INVOLVED OR HIS LACK OF KNOWLEDGE OF ANY SITE CONDITIONS WHICH MAY AFFECT HIS WORK.
- COORDINATION OF SCHEDULING FOR COMPLETION AND ALL INSPECTIONS OF THEIR WORK AND WORK OF SUBCONTRACTORS IS THE RESPONSIBILITY OF THIS CONTRACTOR.
- BEFORE SUBMITTING A PROPOSAL ON THE WORK CONTEMPLATED ON THESE DRAWINGS AND ACCOMPANYING SPECIFICATIONS, EACH BIDDER SHALL EXAMINE THE SITE, CHECK AS TO THE MEANS OF MAKING CONNECTIONS TO SERVICES, AND SHALL BECOME FAMILIAR WITH ALL THE EXISTING CONDITIONS AND LIMITATIONS. MECHANICAL EQUIPMENT AND SYSTEMS SHOWN AS EXISTING ON THE PLANS HAVE BEEN BASED ON EXISTING DRAWINGS. NO EXTRAS WILL BE ALLOWED BECAUSE OF THE CONTRACTOR'S MISUNDERSTANDING AS TO THE AMOUNT OF WORK INVOLVED OR HIS LACK OF KNOWLEDGE OF ANY SITE CONDITIONS WHICH MAY AFFECT HIS WORK. ANY APPARENT VARIANCE OF THE PLAN OR SPECIFICATION FROM EXISTING CONDITIONS AT THE SITE SHALL BE CALLED TO THE ATTENTION OF THE ENGINEER DURING THE BID PERIOD SO CLARIFICATION CAN BE MADE BY ADDENDUM.

SECTION 15002 - GENERAL REQUIREMENTS

- WORK TO BE ACCOMPLISHED ON THESE DRAWINGS AND SPECIFICATIONS INCLUDES FURNISHING ALL LABOR, MATERIAL, EQUIPMENT AND SERVICES FOR THE COMPLETION OF ALL MECHANICAL WORK. ALL MECHANICAL WORK UNLESS NOTED TO BE SPECIFICALLY BY THE LANDLORD IS THE RESPONSIBILITY OF THIS CONTRACTOR.
- 2. THIS CONTRACTOR AND THEIR SUB CONTRACTORS SHALL WORK CLOSELY WITH THE TENANT PROJECT MANAGER FOR COORDINATION OF TRADES AND COMPLETION OF THE PROJECT.
- PLANS AND SPECIFICATIONS ARE COMPLEMENTARY AND WHAT IS CALLED FOR IN EITHER ONE SHALL BE AS RINDING AS IF CALLED FOR IN BOTH ANY ITEM OR LABOR THAT IS NECESSARY TO COMPLETE THE WORK AND IS TYPICALLY INCLUDED IN SIMILAR WORK SCOPE SHALL BE FURNISHED AND INSTALLED AS PART OF THE CONTRACT WHETHER OR NOT IT IS SHOWN ON THE PLANS OR IN THE SPECIFICATIONS.
- 4. WHEN THE INCLUDED DRAWINGS AND/OR SPECIFICATIONS CALL OF ITEMS WHICH EXCEED THE LANDLORDS TENANT CRITERIA OR EXCEED CODE. IT'S THE RESPONSIBILITY OF THE CONTRACTOR TO INSTALL THE MORE STRINGENT REQUIREMENTS NOTED ON THE PLANS AND/OR SPECIFICATIONS. IF THE PLANS AND SPECIFICATIONS HAVE DISCREPANCIES BETWEEN THEM. THE CONTRACTOR SHALL ASSUME IN THEIR BID THAT THE MORE STRINGENT ITEM IS REQUIRED AT NO ADDITIONAL COST.
- 5. ALL PIPING. DUCTWORK AND EQUIPMENT SHALL BE FURNISHED AND INSTALLED TO PRESENT A NEAT AND CLEAN APPEARANCE USING GOOD CONSTRUCTION PRACTICES. EQUIPMENT SHALL BE INSTALLED FOR PROPER ACCESS TO OPERATE, SERVICE AND MAINTAIN THE EQUIPMENT WITHOUT HAVING TO MOVE OTHER EQUIPMENT FOR ACCESS. ANY MECHANICAL EQUIPMENT (OR EXISTING EQUIPMENT TO REMAIN) THAT REQUIRES ACCESS PANELS SHALL HAVE THOSE PANELS FURNISHED AND INSTALLED BY THE MECHANICAL CONTRACTOR.
- UNLESS SPECIFICALLY NOTED ON THE PLANS/SPECIFICATIONS ALL MATERIALS AND EQUIPMENT SHALL BE NEW AND BEST QUALITY TO CONFORM TO THE REQUIREMENTS OF THE LANDLORDS TENANT CRITERIA. LOCAL AND STATE CODES GOVERNING THE WORK INVOLVED AND BE MADE BY NATIONALLY RECOGNIZED MANUFACTURES WITH UL LISTINGS AND LABELS.

SECTION 15003 - CODES

ALL WORK SHALL BE INSTALLED IN CONFORMITY OF THE LANDLORDS TENANT CRITERIA, AND APPLICABLE LOCAL CODES AND ORDINANCES AND STATE STATUTES. ALL REQUIREMENTS OF THE CURRENT PLUMBING CODES, HEATING AND VENTILATION CODES, HEALTH AND SAFETY CODES, NFPA CODES AND ENERGY CODES MUST BE MET. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INQUIRE INTO AND COMPLY WITH ALL LOCAL ORDINANCES AND INCLUDE ANY ADDITIONAL ITEMS NOT NOTED IN THE PLANS/SPECIFICATIONS IN THEIR BID. ANY CHANGES TO THE MECHANICAL SYSTEM AS REQUIRED BY LOCAL, STATE OR TENANT CRITERIA THAT ARE NOT QUALIFIED ON THE CONTRACTORS BID FORM ARE ASSUMED TO BE INCLUDED IN THE ORIGINAL BID AND ADDITIONAL COSTS WILL NOT BE DUE TO COMPLETE THOSE ITEMS AFTER THE CONTRACT IS ISSUED.

SECTION 15004 - LICENSES, PERMITS, INSPECTIONS & FEES THIS CONTRACTOR IS RESPONSIBLE FOR ALL FEES, CHARGES AND OBLIGATIONS FOR OBTAINING PERMITS AND INSPECTIONS FOR PLUMBING, HEATING AND VENTILATION AND FIRE EXTINGUISHING

2. ALL CERTIFICATES OF INSPECTION AND FINAL INSPECTIONS SHALL BE TURNED OVER TO THE TENANT'S PROJECT MANAGER AT THE COMPLETION OF THE PROJECT.

SECTION 15005 - TRADE NAMES, MANUFACTURERS AND SHOP DRAWINGS

- 1. IN ANY CASE WHERE A SPECIFIC NAME OF EQUIPMENT OR MATERIAL IS MENTIONED ON THE DRAWINGS OR SPECIFICATIONS THE EXACT EQUIPMENT SHALL BE USED FOR THE BASE BID. EQUIPMENT OF EQUAL GRADE AND QUALITY WILL BE SUBJECT TO PRIOR APPROVAL BY THE TENANT'S PROJECT MANAGER AND THE ENGINEER IN WRITING THRU THE SHOP DRAWING SUBMITTAL PROCESS. ANY EQUIPMENT INSTALLED WITHOUT WRITTEN APPROVAL WILL BE CHANGED OUT TO THE SPECIFIED EQUIPMENT AT THE CONTRACTORS EXPENSE.
- MECHANICAL CONTRACTOR SHALL SUBMIT 3 COPIES OF SHOP DRAWINGS TO THE TENANT'S PROJECT MANAGER FOR APPROVAL. IF APPROVED, COPIES WILL BE STAMPED "NO EXCEPTIONS" OR "APPROVED AS NOTED" AND WILL BE RETURNED TO THE CONTRACTOR. IF NOTATIONS AND MARKS INDICATE THAT REVISED INFORMATION IS REQUIRED, THEN CORRECTED INFORMATION SHALL BE SUBMITTED.

SECTION 15006 - GUARANTEE

- THIS CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR AND DEFECTS WHICH MAY DEVELOP IN ANY PART OF THE SYSTEMS CAUSED BY FAULTY WORKMANSHIP, MATERIAL OR EQUIPMENT, AND AGREES TO REPLACE ANY SUCH FAULTY WORKMANSHIP, MATERIAL OR EQUIPMENT DURING A PERIOD OF 12 MONTHS FROM THE DATE OF FINAL ACCEPTANCE WITHOUT ANY COST TO THE OWNER. ANY EXTENDED WARRANTIES (LONGER THAN 12 MONTHS) FOR EQUIPMENT WILL BE NOTED ON THE SCHEDULES, PLANS OR SPECIFICATIONS.
- 2. EACH PIECE OF EQUIPMENT FURNISHED BY THE CONTRACTOR SHALL HAVE A 12 MONTH WARRANTY FOR MATERIAL AND LABOR AT STARTS UPON THE DATE OF FINAL ACCEPTANCE AS DESIGNATED BY THE TENANT'S PROJECT MANAGER. ALL COSTS FOR THE WARRANTY (MATERIAL AND LABOR) SHALL BE INCLUDED IN THE ORIGINAL BID.

SECTION 15007 - RECORD DRAWINGS

- THIS CONTRACTOR SHALL MAINTAIN AT THE JOB SITE A SET OF DRAWINGS TO BE USED SPECIFICALLY FOR RECORDING CHANGES FROM THE CONTRACT DOCUMENTS. THE INFORMATION SUCH AS VALVES, DUCT AND PIPE DEVIATIONS SHOULD BE DIMENSIONED FROM EASILY RECOGNIZABLE REFERENCE POINTS INDICATING BOTH HORIZONTAL AND VERTICAL DISTANCES.
- 2. THE CONTRACTOR SHALL SUBMIT A FINAL SIGNED SET OF AS-BUILT DRAWINGS TO THE TENANTS PROJECT MANAGER AT THE COMPLETION OF THE PROJECT.
- 3. THE CONTRACTOR SHALL SUBMIT TO THE TENANTS PROJECT MANAGER AT THE END OF THE PROJECT (2) COMPLETE HARD BOUND SET OF CATALOG DATA, MANUFACTURES LITERATURE, DETAIL MANUALS COVERING THE OPERATION AND MAINTENANCE OF ALL EQUIPMENT SPECIFIED.

SECTION 15008 - DISCREPANCIES IN DOCUMENTS

1. THE DRAWINGS OF PIPING AND DUCTWORK SYSTEMS SHALL BE INSTALLED SUBSTANTIALLY AS SHOWN ON THE PLANS. THE EXACT POSITION OF EACH AND EVERY PIPE, DUCT, OFFSET AND TRANSITION CANNOT BE GIVEN BY SCALING THE DRAWINGS BUT SHALL IN EVERY CASE BE PLACED SO AS TO AVOID INTERFERENCE WITH OTHER WORK. ALL NECESSARY CHANGES IN THE LOCATION OF PIPE OR DUCTWORK FOR ITS PROPER INSTALLATION AND TO AVOID CONFLICT WITH OTHER TRADES SHALL BE DONE BY THE CONTRACTOR AT NO ADDITIONAL CHARGE.

SECTION 15009 DEMOLITION

- THIS CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF THE DEMOLITION OF EXISTING WORK AND THE DEMOLITION PROVIDED BY THE GENERAL CONTRACTOR. COORDINATE WITH THE GENERAL CONTRACTOR ANY EXISTING FOUIPMENT REQUIRED TO BE LEFT INTACT.
- 2. EACH CONTRACTOR SHALL VERIFY SCOPE OF WORK WITH THE GENERAL CONTRACTOR FOR THE REMOVAL OF ALL EXISTING FIRE PROTECTION. PLUMBING FIXTURES, PIPING, HVAC UNITS, REFRIGERANT RECAPTURE, EXHAUST FANS, ETC. AND ASSOCIATED ROOF CURBS NOT BEING REUSED ON THIS PROJECT, UNLESS SPECIFICALLY NOTED
- CONTRACTOR MUST VERIFY WITH THE LANDLORD ALL PRESUMED ABANDONED EQUIPMENT, PIPES, DUCTWORK, AND EQUIPMENT PRIOR TO REMOVAL. ROOF CURBS SHALL BE REMOVED AND THE ROOF PATCHED. ALL EXTRANEOUS ITEMS IN THE SPACE OR ON THE ROOF NOT APPLICABLE TO THE NEW WORK MUST BE REMOVED AND ROOF/WALL/FLOOR PATCHED/REPAIRED TO MATCH EXISTING STRUCTURE.
- EXISTING ABANDONED PIPES, DUCTS, OR EQUIPMENT IN THE FLOOR, EMBEDDED IN CONCRETE, OR OTHERWISE INACCESSIBLE ARE TO BE CUT OFF AND SEALED BELOW OR WITHIN FLOOR OR WALL LEVEL WHEN THEY ARE NOT TO BE REUSED IN THIS PROJECT.
- 5. IF REQUIRED BY LANDLORD OR CODES, ABANDONED PIPING AND/OR DUCTWORK MUST BE REMOVED TO POINT OF ORIGIN. CONFIRM THE EXTENT OF DEMOLITION WITH THE GENERAL CONTRACTOR AND TENANT PRIOR TO BID AND INCLUDE IN BID PROPOSAL AS DIRECTED BY THE GENERAL CONTRACTOR AND TENANT.

SECTION 15010 - CUTTING AND PATCHING

- THIS CONTRACTOR SHALL PROVIDE ALL CUTTING AND PATCHING REQUIRED FOR THE INSTALLATION OF HIS EQUIPMENT IN THE BUILDING WALLS, PARTITIONS, FLOORS, CEILINGS, ETC., UNLESS OTHERWISE NOTED. ALL CUTTING AND PATCHING SHALL BE SUBJECT TO THE DIRECTION OF THE LANDLORD, ARCHITECT OR ENGINEER.
- THIS CONTRACTOR SHALL NOT ENDANGER THE STABILITY OF THE STRUCTURE BY CUTTING, DIGGING OR OTHERWISE ALTERING THE STRUCTURE AND SHALL NOT AT ANY TIME CUT OR ALTER WORK OF ANY OTHER CONTRACTOR.
- PATCHING OF WALLS, FLOORS AND ROOF SHALL BE OF SAME MATERIAL AND WORKMANSHIP OF THE SURROUNDING MATERIAL WITH FINISHED SURFACE APPEARING THE SAME AS THE SURROUNDING AREAS. ALL PATCHING SHALL BE PERFORMED BY WORKMEN SKILLED IN THAT PARTICULAR TRADE.
- 4. DAMAGE CAUSED BY THE CONTRACTOR SHALL BE REPAIRED AT THE EXPENSE OF THE CONTRACTOR IN A SUITABLE MANNER ACCEPTABLE TO THE LANDLORD AND TENANT'S PROJECT MANAGERS.

SECTION 15011 - SLEEVES

- THIS CONTRACTOR SHALL INSTALL SLEEVES IN CONNECTION WITH ALL PIPES PASSING THROUGH ALL WALLS, PARTITIONS AND FLOORS. SLEEVES SHALL EXTEND THROUGH FULL THICKNESS OF WALLS AND FLOORS AND SHALL BE CUT FLUSH WITH THE FINISHED SURFACES. SLEEVES IN SLABS SHALL BE CUT 2" ABOVE THE FLOOR SURFACE.
- 2. ALL SLEEVES SHALL BE 22 GAUGE GALVANIZED STEEL MINIMUM FINISHED WITH A SMOOTH EDGE AND PROPERLY SUPPORTED.
- 3. CORE DRILLING FLOORS AND WALLS MUST BE COORDINATED WITH THE LANDLORD AND THE TENANT'S PROJECT MANAGER.
- 4. THIS CONTRACTOR SHALL FURNISH AND INSTALL FIRE STOPPING AT ALL PENETRATIONS THRU RATED FLOORS TO MAINTAIN THE FIRE RATING. 3M FIRE BARRIER SYSTEMS, FLAME SAFE FIRE RETARDANT SYSTEMS, DOW CORNING, SPECSEAL OR EQUAL. THE CONTRACTOR MUST PRESENT UL LISTING DATA SHEETS TO THE TENANT'S PROJECT MANAGER AND LANDLORD TO SHOW THAT THE PENETRATIONS MAINTAIN THE FIRE RATING.

SECTION 15012 - HANGERS

- FURNISH AND INSTALL BRACKETS, BRACES OR REINFORCING ANGLES AS REQUIRED FOR ALL PARTITIONS NOT SUFFICIENT IN THEMSELVES TO SUPPORT PLUMBING FIXTURES OR OTHER
- 2. PIPING SHALL BE SUSPENDED FROM CONSTRUCTION ABOVE WITH ANGLE IRON, CLAMPS, UNISTRUT, OR HANGER RODS. NO PIPING SHALL BE HUNG FROM OTHER PIPING EXISTING OR NEW.
- CONTRACTOR SHALL COORDINATE WITH LANDLORD CRITERIA AND ALL CODES. ALL PIPES WHICH ARE SPECIFIED TO BE INSULATED SHALL HAVE PREFABRICATED INSULATED METAL SADDLES SIZED FOR THE INSULATION THICKNESS AND CONTINUOUS INSULATION THROUGH THE HANGER. ALL DISSIMILAR METALS MUST BE SEPARATED WITH DIELECTRIC MATERIAL.

<u>DIVISION 15300 — FIRE PROTECTION (IF APPLICABLE)</u>

SECTION 15301 - SUMMARY OF WORK

- 1. THE CONTRACTOR IS REQUIRED TO FURNISH AND INSTALL ALL NECESSARY MATERIAL, EQUIPMENT AND LABOR FOR A WET SPRINKLER SYSTEM TO MEET THE LANDLORDS TENANT CRITERIA AND LOCAL CODES. THE CONTRACTOR SHALL BE REQUIRED TO HAVE DESIGN DRAWINGS COMPLETED BY A CERTIFIED FIRE SPRINKLER DESIGNER AND COPIES OF THE HYDRAULIC CALCULATIONS AND PLANS ALONG WITH SHOP DRAWINGS OF THE HEADS. SHALL BE SUBMITTED TO THE STATE FIRE MARSHALS OFFICE OR LOCAL AUTHORITY HAVING JURISDICTION FOR PLAN REVIEW AND APPROVAL. ON OR BEFORE THE TIME THE PLANS AND CALCULATIONS ARE SUBMITTED TO THE STATE FOR APPROVAL, THEY SHOULD BE SUBMITTED TO THE TENANT'S PROJECT MANAGER AND ENGINEER FOR
- 2. THE EXISTING WET SPRINKLER SYSTEM SHALL BE REVISED MEET NFPA-13, LOCAL AUTHORITY AND LANDLORDS TENANT CRITERIA
- CONTRACTOR IS RESPONSIBLE FOR ALL FEES RELATED PERMITS AND TESTS AND INSPECTIONS. SECTION 15302 - MATERIALS

SPRINKLER HEADS:

- 1. ALL SPRINKLER HEADS SHALL BE NEW U.L., F.M. LISTED AND APPROVED AUTOMATIC SPRAY TYPE AS MANUFACTURED BY GRINNELL, RELIABLE, STAR, OR VIKING.
- 2. ALL SPRINKLER HEADS SHALL BE QUICK RESPONSE RATED FOR 165'F UNLESS INDICATED OTHERWISE ON DRAWINGS OR REQUIRED BY LOCAL CODES. VERIFY HEAD TYPES AND COLORS WITH TENANT AND SUBMIT WITH SPRINKLER DRAWINGS FOR PERMIT.
- LOCATIONS OF ALL HEADS SHOULD BE APPROVED BY TENANT AND THE LOCAL FIRE PROTECTION OFFICIAL BEFORE INSTALLATION.
- TOILET ROOMS HARD LID CEILING CONCEALED HEADS WITH COVERPLATES TO MATCH GYP BOARD FINISH.
- 5. LAY-IN CEILING WHITE SEMI-RECESSED HEADS WITH WHITE TRIM IN ACT CEILING.
- 6. STOCKROOM OPEN CEILING ROUGH BRONZE UPRIGHT HEAD.
- 7. LAY-IN CEILING WHITE SEMI-RECESSED HEADS WITH WHITE TRIM IN ACT CEILING.
- 8. LAY-IN CEILING WHITE SEMI-RECESSED HEADS WITH WHITE TRIM IN ACT CEILING.

- SCHEDULE 40, BLACK STEEL PIPE, ASTM A-53 FOR FERROUS PIPING, WELDED AND SEAMLESS, ANSI B-36-10-70 FOR WROUGHT STEEL PIPE.
- 2. CAST IRON OR MALLEABLE IRON SCREWED FITTINGS FOR PIPES 2 INCHES AND SMALLER. SCREWED OR CAST IRON FLANGED JOINTS FOR PIPES LARGER THAN 2 INCHES.
- GALVANIZED OR BLACK MALLEABLE IRON WITH BRASS SEAT SCREWED UNIONS FOR PIPES 2 INCHES
- VICTAULIC TYPE COUPLINGS ARE ACCEPTABLE, WHERE APPROVED BY CODE AND THE LANDLORD.
- HANGERS SHALL COMPLY WITH LANDLORD AND CODE REQUIREMENTS.
- 6. ALL SPRINKLER LINES SHALL BE INSTALLED CONCEALED, AVOIDING INTERFERENCE WITH OTHER TRADES.
- WHERE POSSIBLE, REWORK THE EXISTING SPRINKLER SYSTEM TO MEET THE NEW REQUIREMENTS OF THIS DESIGN AND INCLUDE ALL COSTS TO RAISE OR RELOCATE EXISTING PIPING TO OBTAIN CEILING HEIGHTS SHOWN ON DRAWINGS. IN NEW CONSTRUCTION THE LANDLORD MAY PROVIDE ONLY A STUB-IN TO THE SPACE. THE CONTRACTOR SHALL CONNECT AND EXTEND NEW PIPING AS REQUIRED. VERIFY ALL

REQUIREMENTS PRIOR TO BID.

- PROVIDE AND INSTALL A VALVE TEST CONNECTION IN AN ACCESSIBLE LOCATION FOR THE SPRINKLER SYSTEM AS REQUIRED OR REQUESTED BY THE LOCAL INSPECTOR, OR TENANT'S INSURANCE CARRIER.
- 2. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE CAUSED BY LEAKS IN ANY OF THE EQUIPMENT INSTALLED BY THEM. ALL REPAIRS OR REPLACEMENT OF DAMAGES SHALL BE AT THIS CONTRACTOR'S EXPENSE.

3. PROPERLY COMPLETED AND SIGNED "SPRINKLER CONTRACTOR'S MATERIAL AND TEST CERTIFICATES" SHALL BE FURNISHED TO THE LANDLORD, AND AUTHORITIES HAVING JURISDICTION.

<u>DIVISION 15500 - HEATING, VENTILATING, AIR CONDITIONING</u>

SECTION 15501 - SUMMARY OF WORK

- 1. THIS CONTRACTOR SHALL FURNISH, INSTALL, TEST AND BALANCE ALL NECESSARY EQUIPMENT FOR A COMPLETE WORKING SYSTEM. SEE PLAN FOR DUCTWORK AND SCHEDULES.
- A. VERIFY COMPLETE OPERATION OF ALL MODES: HEAT, COOL, ECONOMIZER, OCCUPIED, UNOCCUPIED, ETC. CONTRACTOR SHALL PROVIDE FULLY FUNCTIONAL SYSTEM AS APPROVED BY TENANT. ASSIST IN ANY NECESSARY TRAINING AND/OR PROGRAMMING PER TENANTS REQUIREMENTS.
- COORDINATE CONTROL REQUIREMENTS AND SETTINGS WITH LANDLORD REQUIREMENTS PRIOR TO BID. IF REQUIRED PROVIDE ALL EQUIPMENT TO TIE INTO LANDLORD SYSTEMS.

<u>SECTION 15502 - MATERIALS</u>

- SEE PLANS FOR SCHEDULES OF EQUIPMENT. ALL EQUIPMENT SHALL BE INSTALLED ACCORDING TO THE MANUFACTURER INSTALLATION INSTRUCTIONS.
- 2. THIS CONTRACTOR SHALL PROVIDE ALL NECESSARY PARTS AND LABOR INCLUDING BUT NOT LIMITED TO FANS, BELTS, PULLEYS, BEARINGS, DAMPERS, COILS AND MOTORS AS REQUIRED TO OBTAIN A FULLY OPERATIONAL UNIT THAT MEETS OR EXCEEDS THE DESIGN QUANTITIES SET FORTH IN THESE DOCUMENTS INCLUDING BUT NOT LIMITED TO CAPACITY. CFM AND EXTERNAL STATIC PRESSURE.
- 3. TENANT REQUIRES ALL EQUIPMENT TO BE LABELED. CONTRACTOR SHALL USE 2-3 INCH BLACK STICK-ON LETTERS (UNLESS LANDLORD CRITERIA REQUIRES OTHERWISE): NEW EQUIPMENT: LABEL EQUIPMENT WITH EQUIPMENT DESIGNATION, CLIENT NAME AND SPACE NUMBER OR AS REQUIRED BY
 - EXISTING EQUIPMENT: LABEL EQUIPMENT WITH EQUIPMENT DESIGNATION. REPLACE EXISTING CLIENT NAME AND SPACE NUMBER AS NECESSARY - OR AS REQUIRED BY LANDLORD.
- 4. DUCTWORK FIBERGLASS DUCT BOARD IS NOT APPROVED
- 6. ALL SUPPLY, RETURN, EXHAUST AND RELIEF DUCTWORK SHALL BE GALVANIZED STEEL SHALL BE MANUFACTURED (GAUGES, REINFORCEMENT AND CONNECTIONS), AND INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF SMACNA "HVAC DUCT CONSTRUCTION STANDARDS".
- 7. ALL ELBOWS SHALL HAVE A MINIMUM THROAT RADIUS OF ONE HALF THE DUCT WIDTH OR SHALL BE PROVIDED WITH TURNING VANES.
- 8. HANG DUCTWORK FROM STRUCTURE ACCORDING TO SMACNA STANDARDS. CONTRACTOR SHALL BE REQUIRED TO INSTALL SEISMIC BRACING AS REQUIRED BY LANDLORD CRITERIA AND/OR LOCAL
- 9. ALL DUCT JOINTS AND LONGITUDINAL SEAMS SHALL BE SEALED WITH A WATER BASED DUCT SEALER, DURO DYNE "DUROSEAL" OR APPROVED EQUAL.
- 10. PROVIDE FLEXIBLE DUCT CONNECTIONS CONSTRUCTED OF NEOPRENE-COATED FLAMEPROOF FABRIC AT EQUIPMENT INLET AND OUTLET TO ISOLATE VIBRATION.
- 11. THE FINAL 4' OF DUCTWORK TO THE AIR DEVISE MAY BE FLEXIBLE CLASS 1 DUCT WITH R-5 INSULATION AND FOIL VAPOR BARRIER. DUCTWORK MUST MEET LOCAL REQUIREMENTS AND
- 12. ALL SUPPLY TAKE-OFFS SHALL HAVE AIR SCOOP AND MANUAL VOLUME DAMPER WITH QUADRANT LOCKING HANDLE FOR BALANCING. WHERE DUCTWORK IS LOCATED ABOVE A GYPSUM BOARD CEILING, A CABLE CONTROLLED DAMPER OPERATOR SHALL BE FURNISHED, YOUNG REGULATOR COMPANY OR EQUAL.

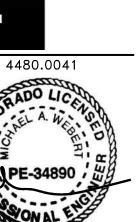
TESTING, ADJUSTING, AND BALANCING

LANDLORDS CRITERIA.

- 1. THE ADJUSTING AND BALANCING OF THE AIR FLOW THROUGHOUT THE FACILITY SHALL BE PERFORMED BY AN NEBB OR AABC CERTIFIED AIR BALANCER AS HIRED BY THE MECHANICAL CONTRACTOR. THE BALANCING SHALL TAKE PLACE AFTER THE FINAL PUNCH LIST. THE BALANCING CONTRACTOR SHALL VERIFY THAT ITEMS ON THE PUNCH LIST EFFECTING THE AIR BALANCE REPORT ARE COMPLETED PRIOR TO STARTING THE AIR BALANCE. THE MECHANICAL CONTRACTOR SHALL PROVIDE ASSISTANCE TO THE TESTING AND BALANCING CONTRACTOR BY MAKING ADJUSTMENTS TO THE SYSTEM AND SYSTEM COMPONENTS REQUIRED FOR ACHIEVING DESIGN PERFORMANCE.
- CONTRACTOR SHALL SUBMIT COPIES OF BALANCE/TEST REPORT TO TENANT FOR REVIEW PRIOR TO COMPLETION OF PROJECT. IF A CERTIFIED TEST AND BALANCE REPORT IS REQUIRED BY LANDLORD. CONTRACTOR SHALL COORDINATE ALL REQUIREMENTS WITH LANDLORD AND LOCAL AUTHORITY HAVING JURISDICTION, CONTRACT DIRECTLY WITH AN APPROVED TESTING A AND BALANCING AGENCY, AND PROVIDE COMPLETE REPORT TO OWNER AND LANDLORD.
- 3. THE BALANCE REPORT SHALL BE ON THE AABC NATIONAL STANDARD REPORT FORMS OR THE NEBB CERTIFIED REPORT FORMS AS PUBLISHED IN THEIR MOST CURRENT EDITIONS AND SHALL INCLUDE AS A MINIMUM THE FOLLOWING INFORMATION:
- CERTIFICATION NUMBER OF THE AIR BALANCER.
- CALIBRATION DATES AND INFORMATION ON THE EQUIPMENT USED FOR BALANCING. ITEM BEING TESTED WITH MAKE, MODEL AND SERIAL NUMBERS
- AIR CFM AT INLET AND OUTLET OF SUPPLY UNIT (PRELIMINARY READING, FIRST ADJUSTMENT SECOND ADJUSTMENT) AIR CFM AT DISTRIBUTION POINT (PRELIMINARY READING, FIRST ADJUSTMENT, SECOND
- ADJUSTMENT). EACH GRILLE, REGISTER, DIFFUSER SHALL BE LABELED ON A MASTER PLAN THAT SHOULD BE INCLUDED IN THE FINAL REPORT.
- MOTOR AMP READINGS AFTER EACH ADJUSTMENT. MOTOR AND FAN RPM READINGS AFTER FACH ADJUSTMENT.
- STATIC PRESSURE AT UNIT INCLUDING, INLET, OUTLET AND TOTAL.
- OUTSIDE AIR CFM.
- SUBMIT (4) COPIES OF THE AIR BALANCE REPORT TO THE TENANT'S PROJECT MANAGER.







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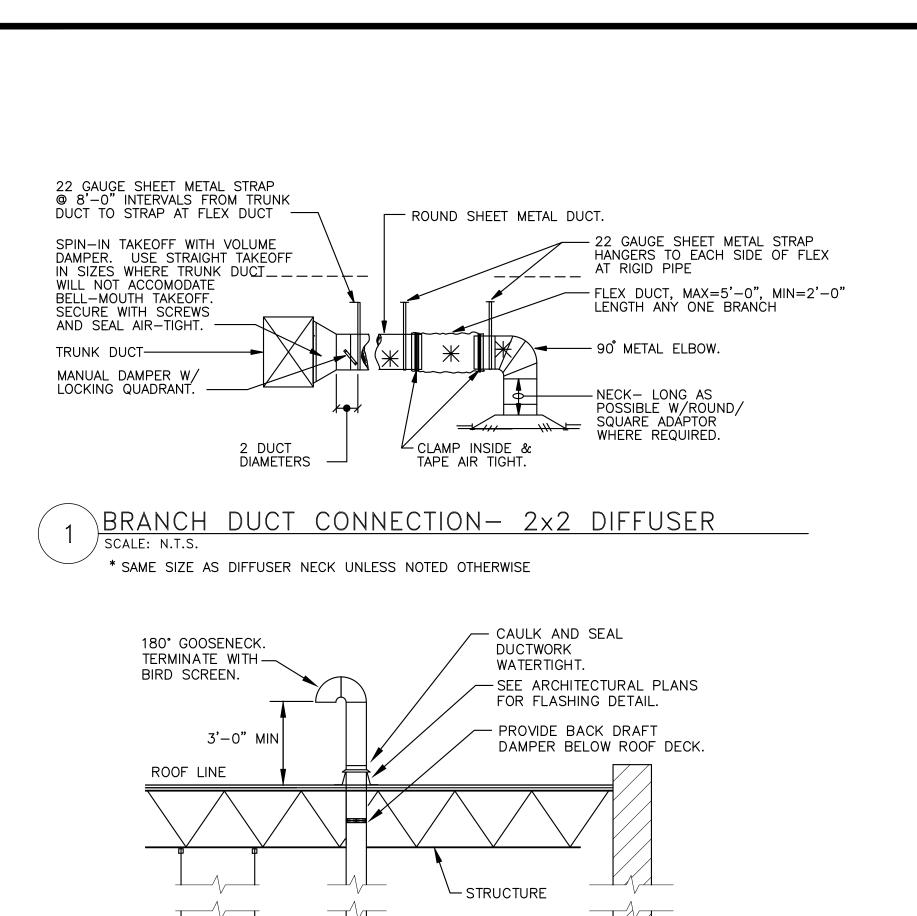
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► EXHAUST DUCT

- MOUNT FAN FROM STRUCTURE

WITH THREADED ROD AND

VIBRATION ISOLATORS.

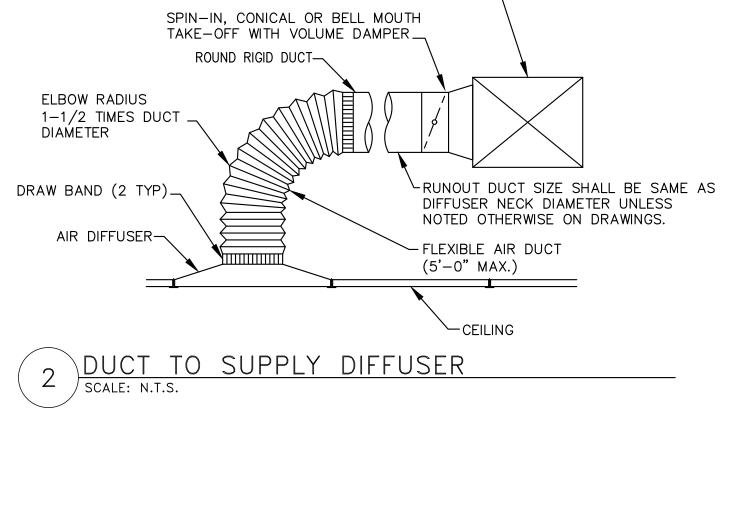
RESTROOM EXH/GOOSENECK DETAIL SCALE: N.T.S.

CEILING CABINET

PROVIDED

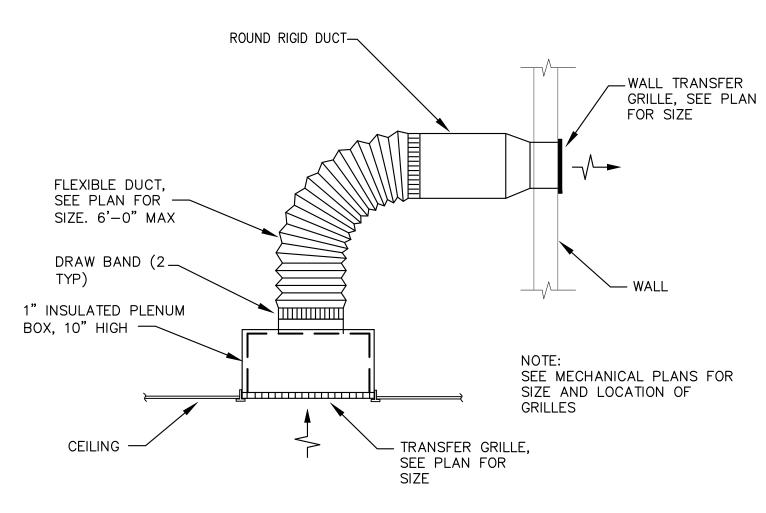
FAN, WITH GRILLE

—CEILING

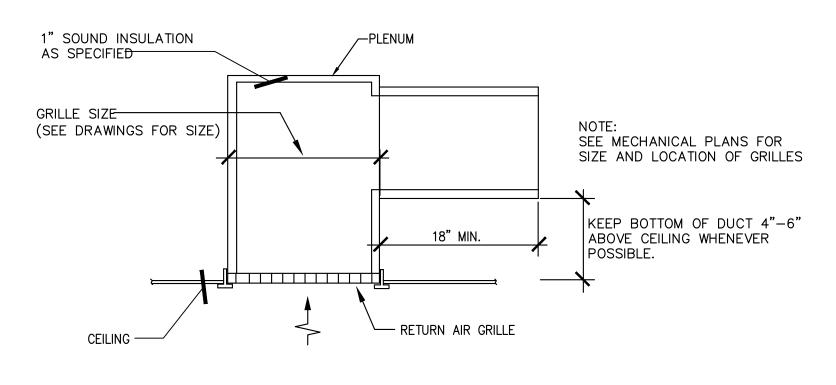


RECTANGULAR OR ROUND

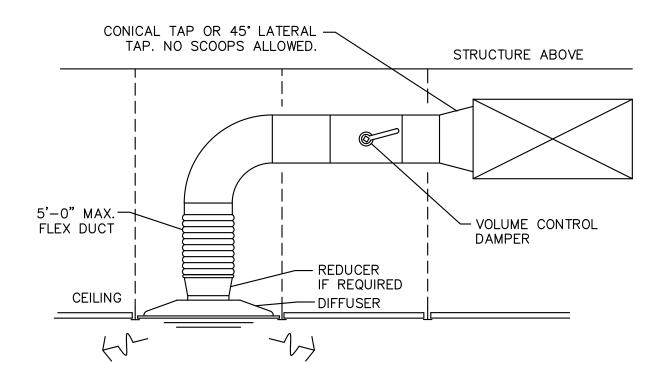
SUPPLY AIR DUCT



TRANSFER GRILLE DETAIL



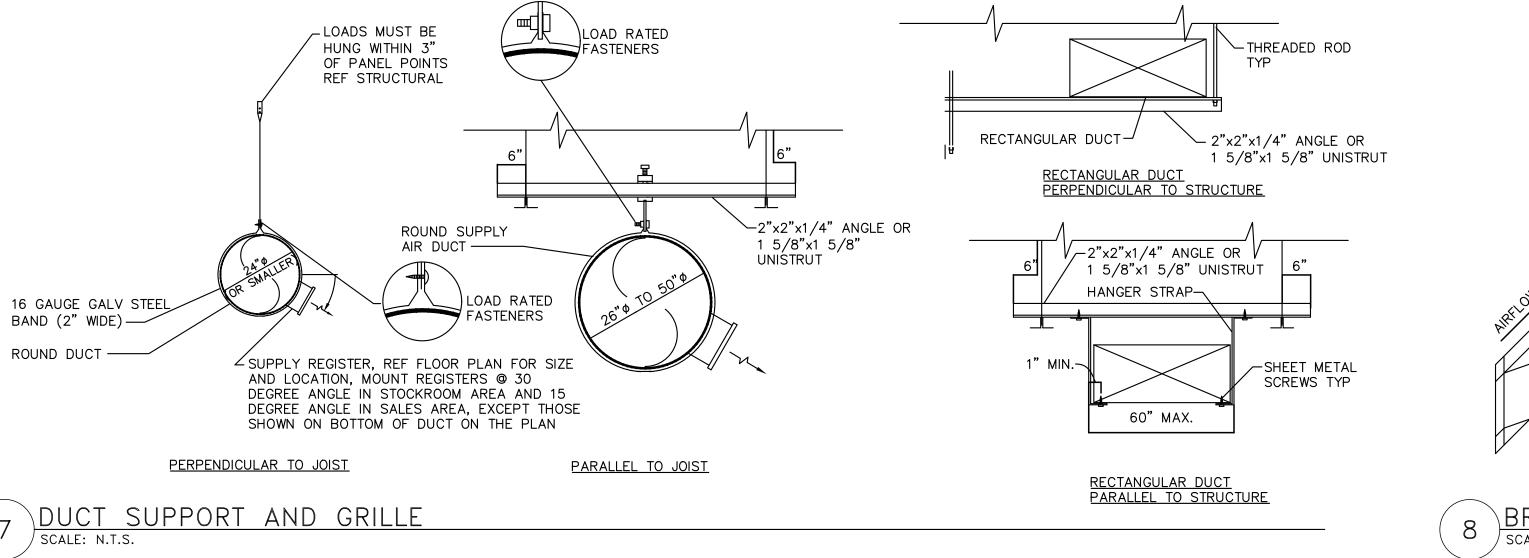


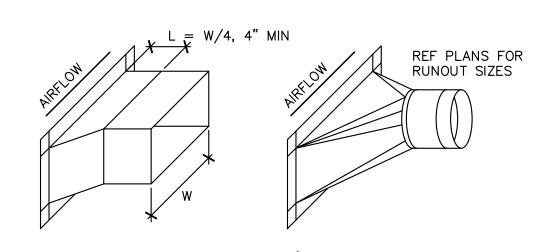


1. USE IN VERTICAL ARRANGEMENT WHERE POSSIBLE. IF BENDING IS NECESSARY, SUPPORT FLEX DUCT TO MAXIMIZE BEND RADIUS AND TURN NO MORE THAN A TOTAL OF 90 DEGREES.

- 2. PROVIDE AIRTIGHT CONNECTIONS TO RIGID ROUND DUCT AND AIR DEVICE.
- 3. USE ONLY IN AREAS WITH A FINISHED CEILING.







SPIN-IN FITTINGS W/SCOOPS ARE NOT ACCEPTABLE
45° LEAD IN
BRANCH DUCT FITTING

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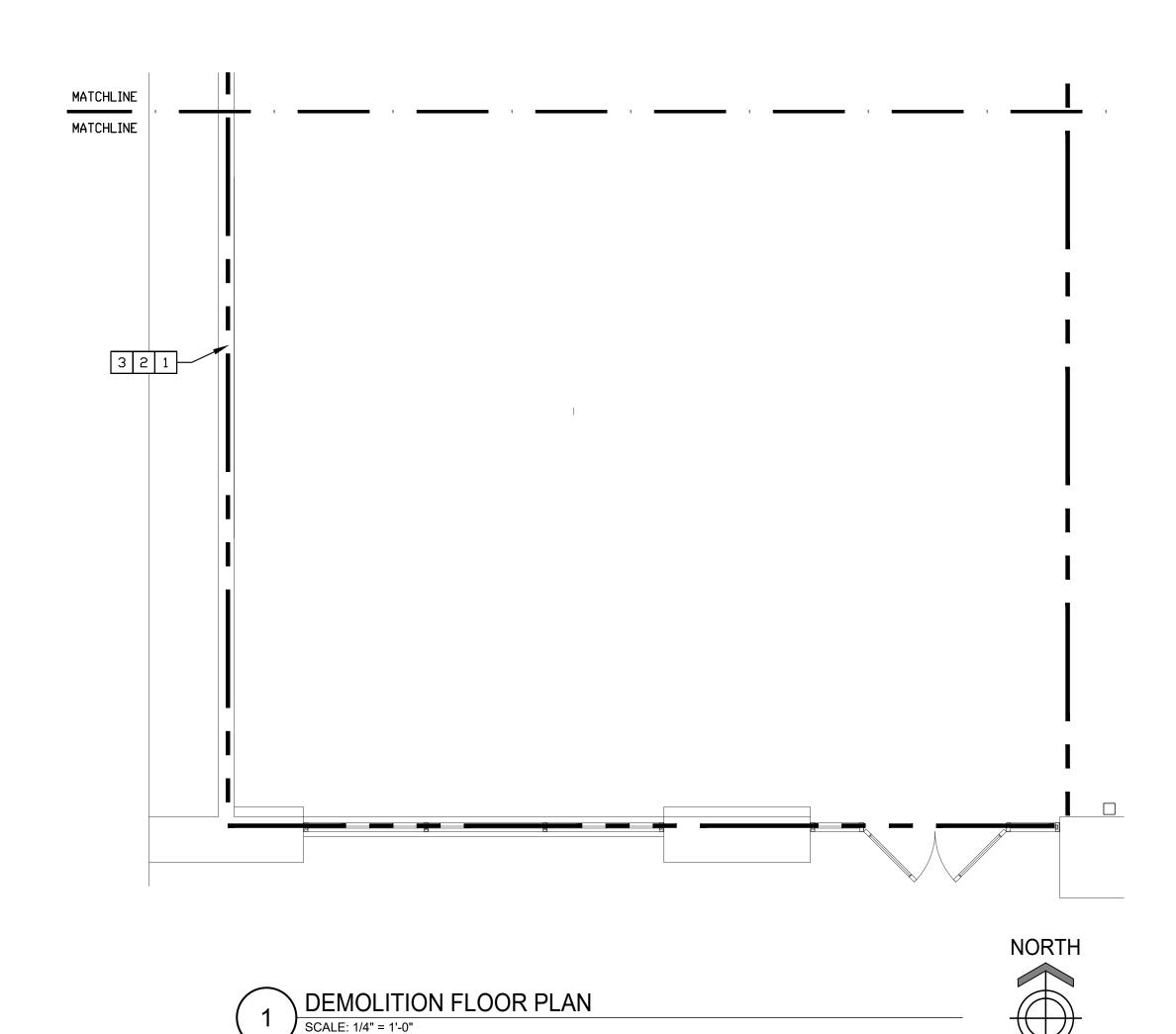
M302

GENERAL NOTES:

- A. REFER TO NOTES, SCHEDULES AND DETAILS DRAWING FOR ADDITIONAL NOTES.
- B. DEVICES AND WIRING SHOWN ARE FROM PREVIOUS CONSTRUCTION PROJECTS AND EXISTING CONDITIONS MAY VARY FROM PLAN DRAWINGS.
- C. EXISTING EXIT AND EMERGENCY LIGHTS ARE TO REMAIN, UNLESS NOTED OTHERWISE.
- D. ITEMS SHOWN DASHED ARE TO BE REMOVED.

KEY NOTES

- DISCONNECT AND REMOVE EXISTING LIGHTING FIXTURES. SHOWN DASHED REMOVE ALL UNUSED CONDUIT, WIRE AND SWITCHES BACK TO SOURCE.
- 2 DISCONNECT AND REMOVE ALL DEVICES ON ALL DEMOLISHED WALLS. MAINTAIN THE CONTINUITY TO DOWNSTREAM DEVICES.
- 3 EXISTING MECHANICAL EQUIPMENT TO REMAIN.



_____ [----] 3 2 1 ¦ 🗆 MATCHLINE MATCHLINE NORTH DEMOLITION FLOOR PLAN

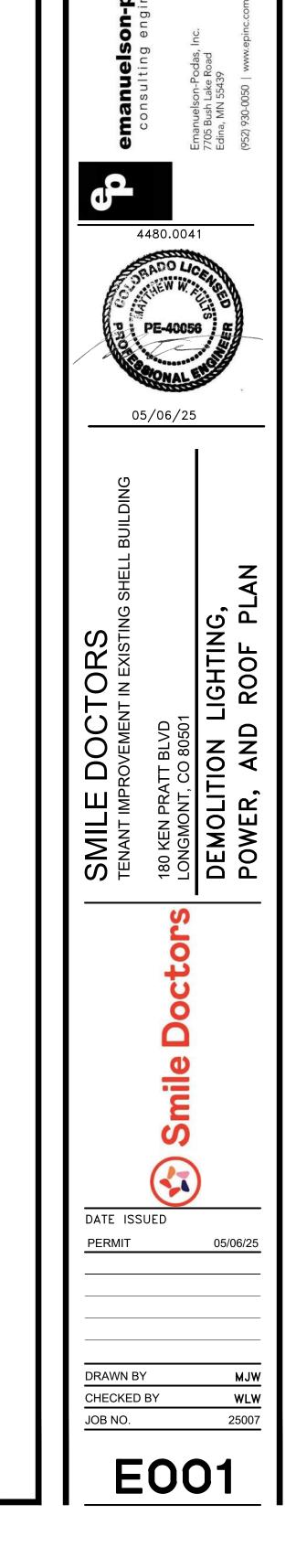
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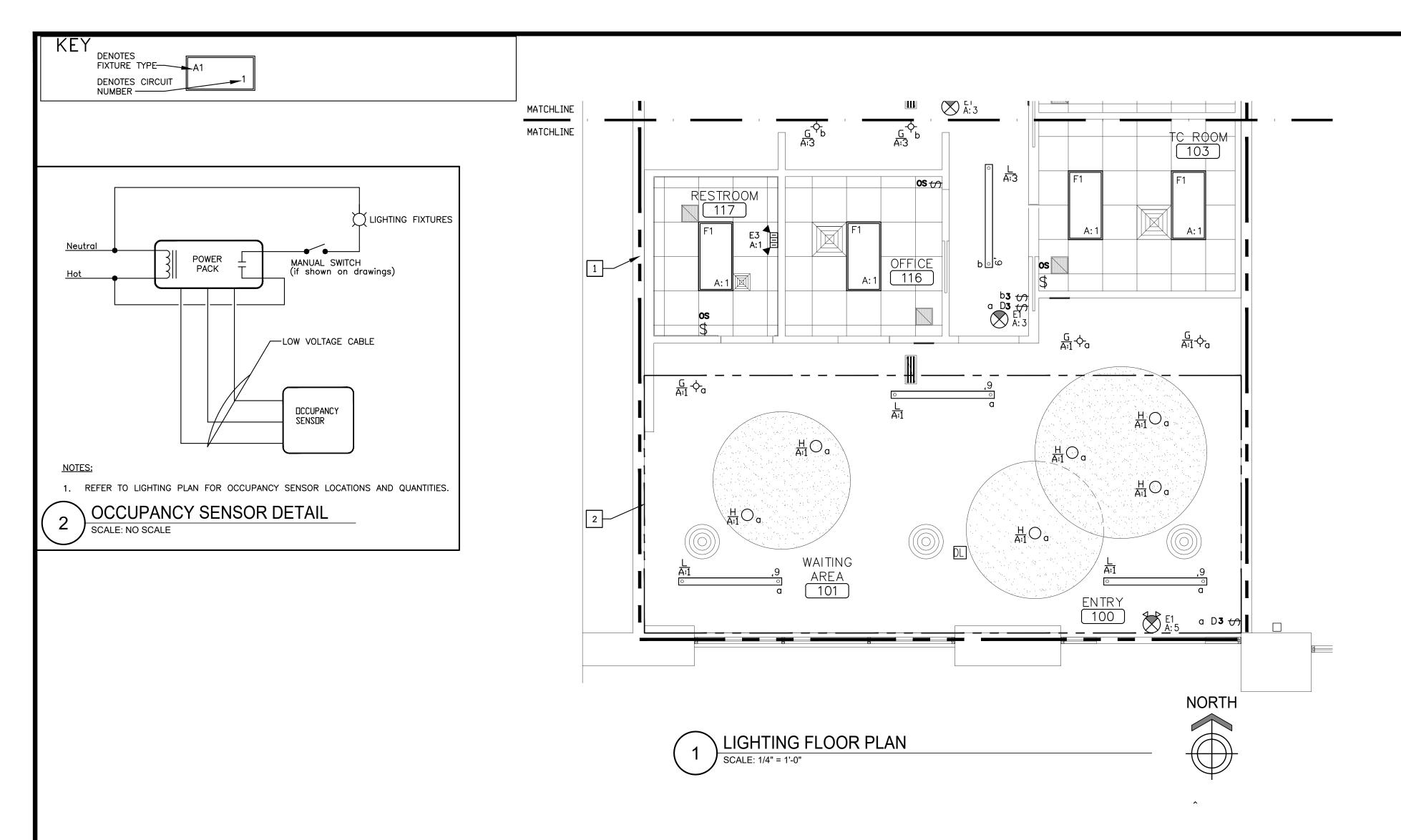
PRIOR TO BID, THE CONTRACTOR SHALL REVIEW THE MECHANICAL AND ELECTRICAL DRAWINGS. THE CONTRACTOR SHALL INCLUDE IN HIS BID ALL RELEVANT WORK IN THE ENTIRE SET OF DOCUMENTS AND REPORT ALL DISCREPANCIES BETWEEN THESE DRAWINGS TO THE ENGINEER PRIOR TO BIDDING FOR CLARIFICATION. IF DISCREPANCIES REMAIN UNRESOLVED DUE TO A SHORT TIME FRAME, THE CONTRACTOR SHALL INCLUDE THE MOST WORK AND THE HIGHER COSTS IN THE BID. SOLUTIONS TO UNREPORTED DISCREPANCIES WILL BE DETERMINED BY THE ARCHITECT/ENGINEER, WITH NO ADDITIONAL COMPENSATION DUE TO THE CONTRACTOR. SCALES AS STATED HEREON ARE VALID ON THE ORIGINAL DRAWING ONLY. CONTRACTORS SHALL NOT SCALE OFF OF ANY DRAWINGS. IF DIMENSION IS NOT PROVIDED AND IS REQUIRED, CONTACT ARCHITECT TO HAVE THE DIMENSION CONFIRMED.

DRAWINGS AND SPECIFICATIONS ARE TO BE CONSIDERED AS SUPPLEMENTING EACH OTHER. WORK SPECIFIED BUT NOT SHOWN ON DRAWINGS, OR SHOWN ON DRAWINGS BUT NOT SPECIFIED, SHALL BE PERFORMED OR FURNISHED AS THOUGH MENTIONED IN BOTH SPECIFICATIONS AND DRAWINGS. IF NOT OTHERWISE DIRECTED, INSTALLATION OF ALL SYSTEMS AND EQUIPMENT SHALL BE IN ACCORDANCE WITH APPLICABLE CODES AND IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS. WHERE WORK DESCRIBED IN THE SPECIFICATIONS IS IN CONFLICT WITH THE WORK SHOWN ON THE DRAWINGS, THE CONTRACTOR SHALL SUPPLY THE GREATER QUANTITY, QUALITY AND COST VIA THE BID AND CONTACT THE ENGINEER FOR CLARIFICATION ON DIRECTION PRIOR TO INSTALLATION.

IF YOU HAVE ANY QUESTIONS REGARDING THE PLANS, PLEASE CALL THE DESIGNER.

DESIGNER: Wendy Wenborg
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EMAIL: wwenborg@epinc.com



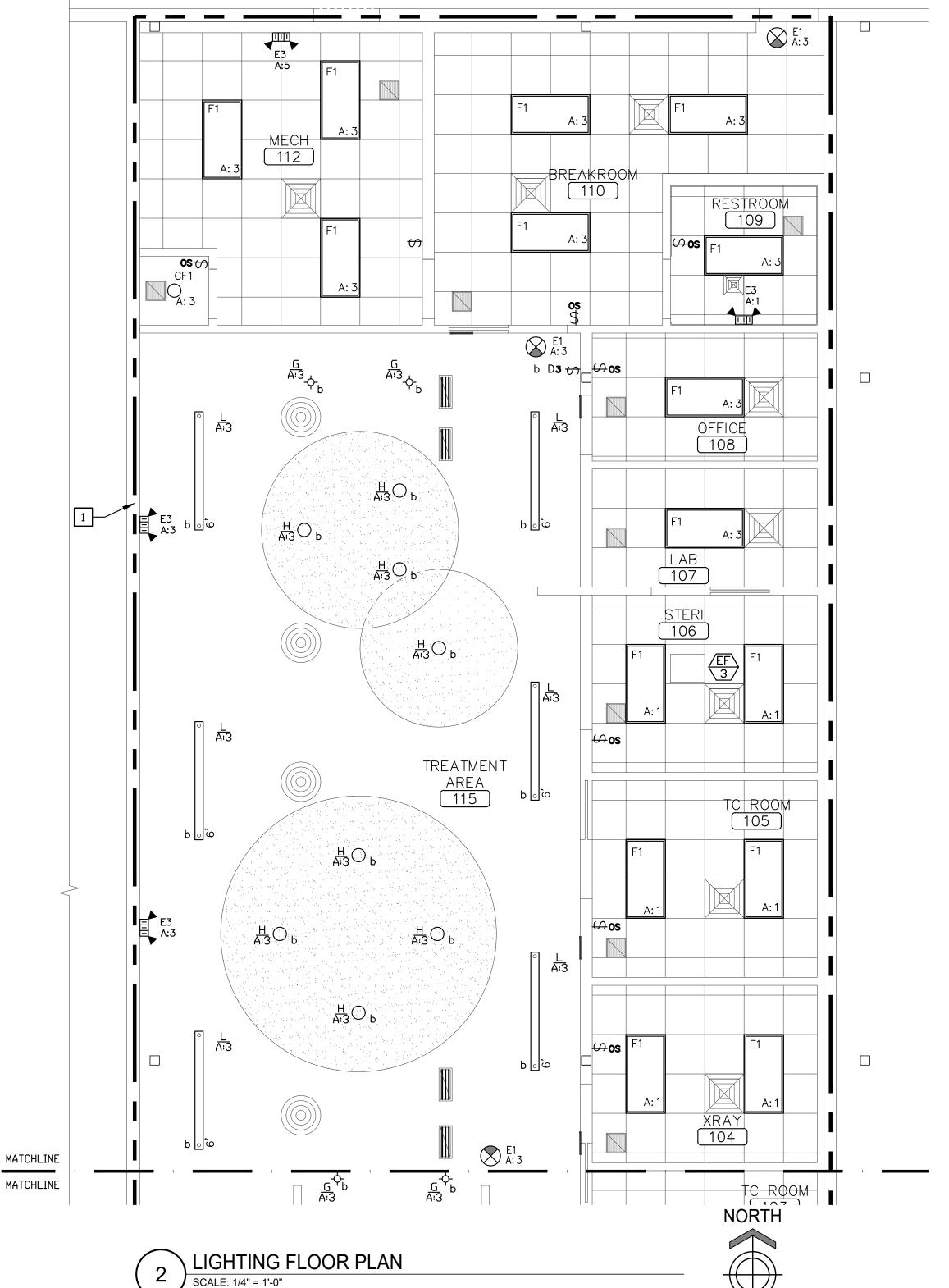


		LIG	HTIN	G FIXTURE	ESC	CHEDULE	
FIXTURE	MANUFACTURER CATALOG NUMBER	DESCRIPTION		LAMP TYPE		MOUNTING	LENS\LOUVER\FINISH
TYPE	WANDIACIONEN CATALOG NOWBEN	SEE NOTES	NO.	VOLTS	W	WOONTING	REMARKS
E1	SURE-LITES	EXIT SIGN		INTEGRAL LED		PER PLAN	WHITE THERMOPLASTIC, UNIVERSAL FACE, RED LETTERS
Li	APCH7R	NOTE: 1	-	MVOLT	-		HIGH OUTPUT NICKEL CADMIUM BATTERY FOR EMERG. HEADS
E3	SURE-LITES	BATTERY WITH HEAD		INTEGRAL LED		WALL @ 7'-6" AFF	BATTERY WITH 2 EMERGENCY HEADS
	APELH2		2	MVOLT	-	UNO	VERIFY COLOR WITH ARCHITECT
F1	NUVO	2'X4' LED TROFFER		INTEGRAL LED		RECESSED	CENTER BASKET TROFFER
1.1	65-431	NOTE: 2	-	120V	44		
F1N	NUVO	2'X2' LED TROFFER		INTEGRAL LED		RECESSED	CENTER BASKET TROFFER
1 114	65-690	NOTE: 2	-	120V	33		WITH TRIMKIT
L3	SATCO	5" DOWNLIGHT		INTEGRAL LED		RECESSED	S9540 FOR NEW CONSTRUCTION
	S9540 / S29742		-	120V	16		S9541 FOR REMODEL
	ALIGHTS	ROUND		INTEGRAL LED		PENDANT	-
	ALT2-48-ILS-DLS-35K-80-120-S-B-1-D		-	120V	39		-
	LUMENWERX	VIA 2 PENDANT		INTEGRAL LED		PENDANT	-
L	VIA4P-DI-WDO-FH-WA12-SW-80CRI-1000LMF- 1000LMF-35K-6'-UNV-D1-2-ACS-W		-	120V	14		ORDER ONE WITH NL OPTION

- PROVIDE ALL NECESSARY COMPONENTS (CABLING, POWER SUPPLIER, DRIVERS, CONTROLS, ACCESSORIES, ETC.) AS REQUIRED FOR A COMPLETE INSTALLATION.
- VERIFY CEILING TYPES AND CONDITIONS FOR COMPATIBILITY WITH FIXTURE MOUNTING HARDWARE. VERIFY CLEARANCES FOR ALL RECESSED FIXTURES PRIOR TO ORDERING LIGHTING FIXTURES.
- VERIFY ALL COLOR, FINISHES, LENSES, BEAM SPREADS WITH ARCHITECT PRIOR TO ORDERING.
- ALL FIXTURES SHALL BE SUPPORTED BY BUILDING STRUCTURE. NOT ALL FIXTURES MAY BE USED

ELECTRICAL NOTES:

- PROVIDE FIXTURES WITH ARROWS AS SHOWN ON PLAN.
- PROVIDE WITH 0-10v DIMMING DRIVER
- MOUNTED IN 45 DEGREE ANGLED CHANNEL. PROVIDE QUANTITY OF TAPE LIGHT, DRIVERS, CHANNELING AND CONNECTORS FOR REQUIRED LENGTH TO EXPAND THE ENTIRE LENGTH OF CABINETRY AS INDICATED ON PLAN. INSTALL DRIVER(S) WITHING CABINETRY
- MOUNT BATTERY ABOVE ACCESSIBLE CEILING SPACE.



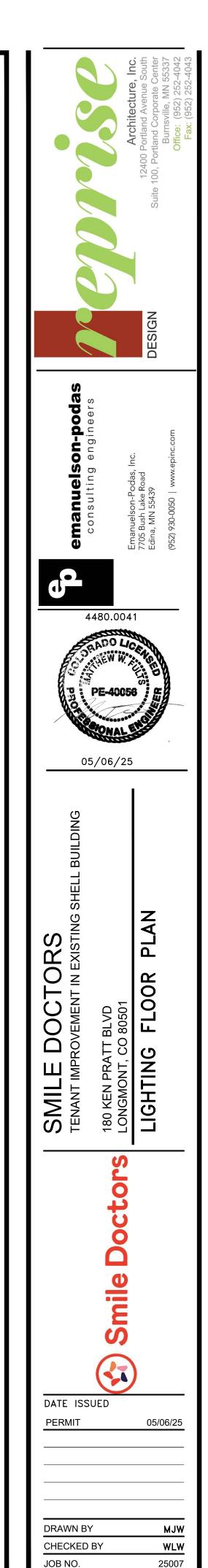
GENERAL NOTES:

- A. REFER TO NOTES, SCHEDULES AND DETAILS DRAWING FOR ADDITIONAL NOTES.
- B. CIRCUIT NUMBERS SHOWN ARE FOR DESIGN INTENT
- CIRCUIT EXTERIOR EMERGENCY EGRESS FIXTURE TO SAME CIRCUIT AS EXTERIOR LIGHTING IN AREA. BYPASS ALL SWITCHING.
- CONNECT NEW FIXTURES TO EXISTING LIGHTING CONTROLS. FOR ALL CIRCUITS WITH UPDATED LED LIGHTING AND EXISTING CONTROLS ARE DIMMERS REPLACE WITH NEW LED DIMMERS COMPATIBLE WITH NEW FIXTURES.

KEY NOTES

NOT OVERLOAD CIRCUIT.

- LIGHTING PLAN FOR THIS AREA PROVIDED BY ARCHITECT REFER TO THE ARCHITECT DRAWINGS FOR LOCATIONS. CIRCUIT NEW LIGHTING IN THIS ROOM TO ROOM LIGHTING CIRCUIT AND SWITCHING AS SHOWN. VERIFY CIRCUIT LOAD TO
- RECONNECT EXISTING EXIT SIGNS AND EMERGENCY LIGHTING SAVED FROM DEMOLITION. PROVIDE NEW AS SHOWN TO COMPLY WITH CURRENT CODE. CIRCUIT EMERGENCY LIGHTING AND EXIT SIGN ONTO SAME CIRCUIT AS LIGHTING IN SAME ROOM. DO NOT OVERLOAD CIRCUIT. (TYP.)
- 3 ALL SOFFIT LOCATIONS, LIGHTING, SHALL BE COORDINATED WITH ARCHITECT DRAWING PRIOR TO INSTALLATION.
- 4 EXISTING LIGHT FIXTURES TO REMAIN. VERIFY THAT THEY ARE IN GOOD WORKING ORDER. REPAIR AS NECESSARY.
- 5 CIRCUIT TO PANEL A, UNLESS NOTED.
- LIGHTING IN THIS AREA TO MEET DAYLIGHT DIMMING REQUIREMENT. PROVIDE PHOTO SENSOR LUTRON #EC-DIR-WH TO CONTROL ONLY LUMINARIES IN EACH DAYLIGHT AREA. PHOTOCELL TO CONTINUOUSLY DIM FROM FULL BRIGHTNESS DOWN TO 15% AND BE CAPABLE OF COMPLETE SHUT-OFF PER ENERGY CODE. INCLUDE POWER PACKS, LOW VOLTAGE WIRING, ETC. FOR A COMPLETE SYSTE



GENERAL NOTES: REFER TO NOTES, SCHEDULES AND DETAILS DRAWING FOR ADDITIONAL NOTES. CIRCUIT NUMBERS SHOWN ARE FOR REFERENCE SEE ELECTRICAL SCHEDULE FOR PANEL & CIRCUIT BREAKER ASSIGNMENT, VOLT/PH, FLA, BREAKER SIZE, COND/WIRE, RECEPTACLE TYPE, HEIGHT ABOVE FINISHED FLOOR, REQUIREMENTS & REMARKS FOR ALL ELECTRICAL EQUIPMENT. BRANCH CIRCUIT HOMERUNS SHALL BE SIZED FOR VOLTAGE DROP BASED UPON THE FOLLOWING FOR 120V, 10, 20A LOADS: #12 – 0'–70' #10 - 71 '-110' #8 - 111 ' - 175' #6 - 1 76'—280' PROVIDE APPROPRIATE HARDWARE TERMINATION FOR ASSOCIATED WIRE SIZE. BRANCH CIRCUITS SHALL NOT EXCEED 3% VOLTAGE DROP. UPSIZE WIRE AS REQUIRED. SEE ARCHITECTURAL DRAWINGS FOR EXACT DEVICE LOCATIONS AND MOUNTING HEIGHTS PRIOR TO ROUGH-IN. ALL ELECTRICAL SHALL BE COORDINATED USING ELECTRICAL AND PLUMBING DRAWINGS AND

MILLWORK (BOYD) DRAWINGS TO ENSURE PROPER

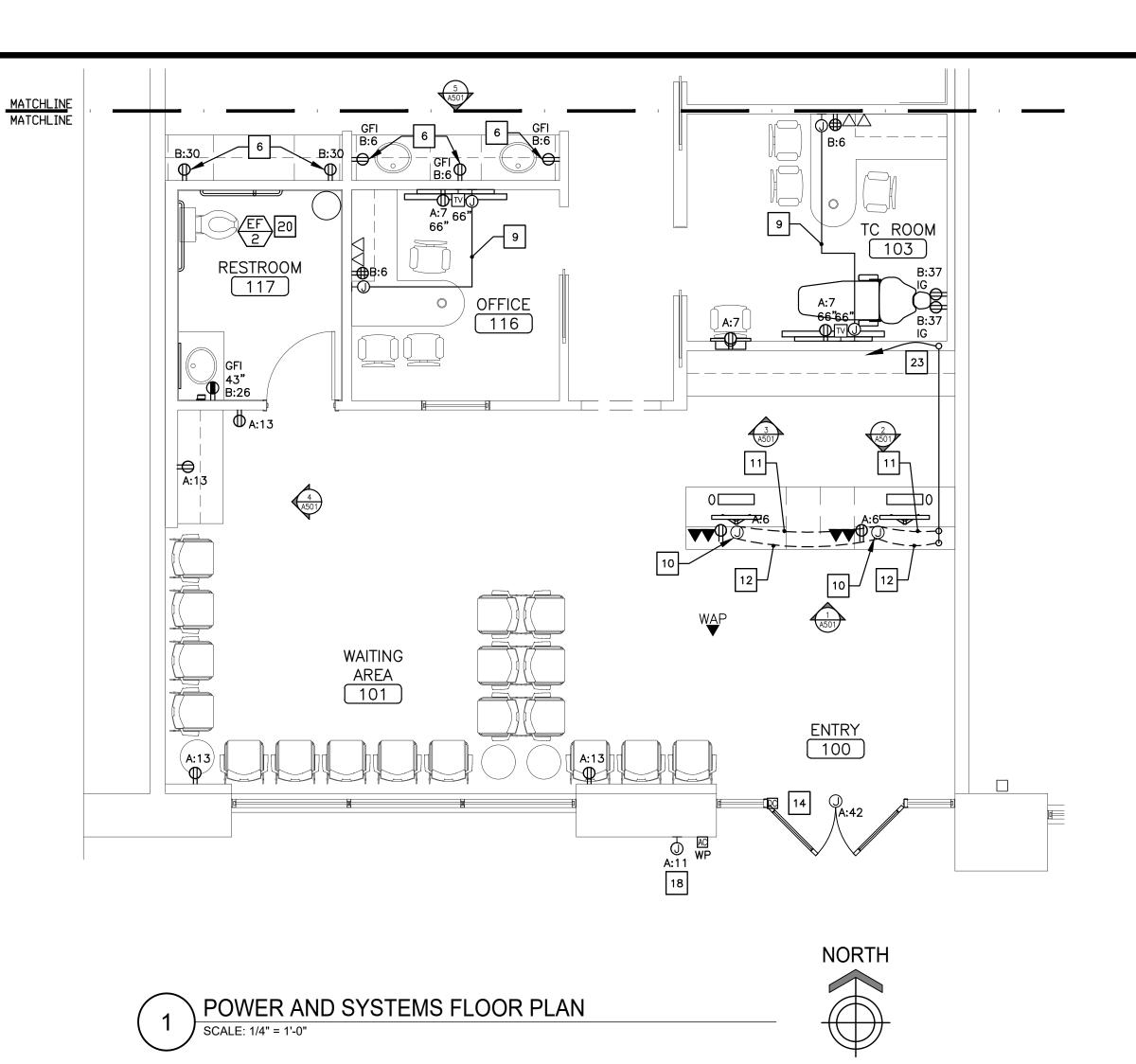
PROVIDE REDUNDANT GROUNDING IN PATIENT CARE AREAS AND FOR DENTIST CHAIR. NEC 517.13.

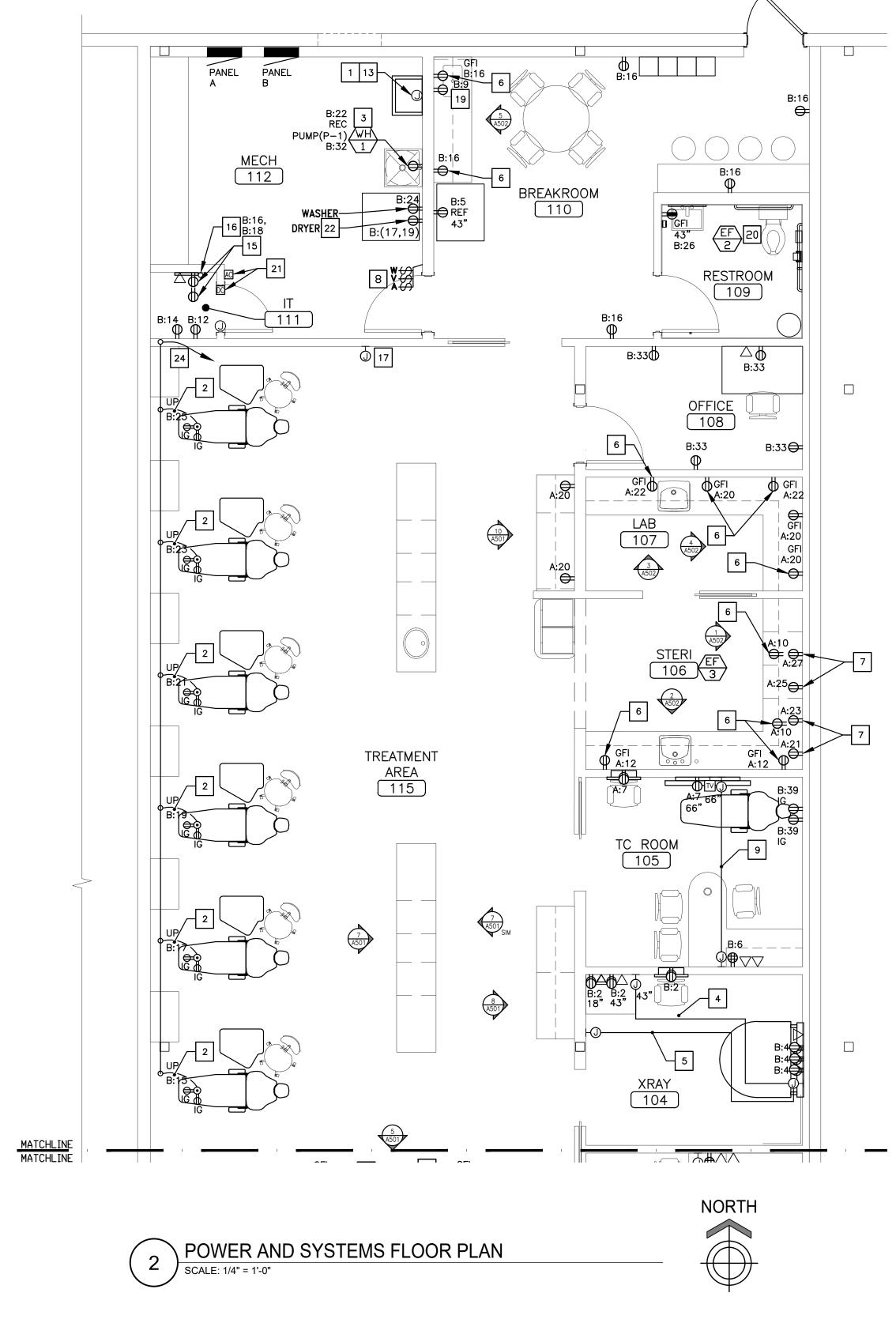
PLACEMENT OF REQUIRED WATERLINES, RECEPTACLES, LOW-VOLTAGE, AND SWITCHES

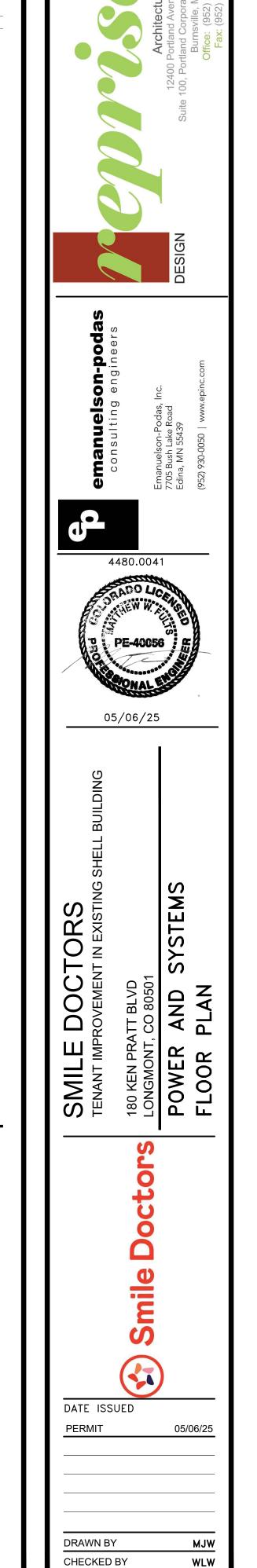
PROVIDE GFI RECEPTACLE OR GFI BREAKER AT RECEPTACLES WITHIN 6 FT OF SINKS. NEC 210.8. KEY NOTES 1 INSTALL PER MANUFACTURERS RECOMMENDATIONS. 2 RACEWAY FOR ELECTRICAL CIRCUIT TO TREATMENT CHAIR, ROUTE THROUGH TRENCH TO WALL THEN UP TO CEILING SPACE AND TO PANEL. PROVIDE 1" CONDUIT/RACEWAY TO EACH CHAIR FOR LOW VOLTAGE. 3 PROVIDE DISCONNECT SWITCH FOR WATER HEATER, PROVIDE 2 #6 & 1 #10(G) IN 3/4"R BRANCH CIRCUIT TO A:16,18,20. RECIRCULATION PUMP B:12. 4 PROVIDE 4"C WITH PULLSTRING BETWEEN J-BOXES MOUNTED IN WALLS AT 18"AFF AT X-RAY MACHINE AND ABOVE COUNTER AT DESK. 5 PROVIDE 2"R WITH PULLSTRING BETWEEN J-BOXES MOUNTED IN WALLS AT 64" AFF AT X-RAY MACHINE AND AT 64" AFF AT WALL OUTSIDE OF ROOM. 6 RECEPTACLE SHALL BE MOUNTED HORIZONTAL. 7 PROVIDE DEDICATED CIRCUIT FOR NEMA 6-15R FOR STERILIZER. PROVIDE THREE BUTTON SWITCH. SWITCH 1 WILL BE FOR THE AIR. SWITCH 2 WILL FOR THE VACUUM. SWITCH 3 WILL USED FOR THE WATER SOLENOID VALVE. 9 | PROVIDE 2'C WITH PULLSTRING BETWEEN J-BOXES MOUNTED IN WALLS AT 64" AFF AT DESK AND LEVEL WITH TV OUTLET. PROVIDE J-BOX IN FLOOR WITH BARRIER FOR SEPARATION OF POWER AND DATA WIRING/CABLING. CONNECT CIRCUIT INDICATED TO RECEPTACLES WITHIN RECEPTACLE STAND. PROVIDE 3/4"R WITH PULLSTRING TO J-BOXES FOR DATA OUTLETS WITHIN RECEPTACLE STAND. 11 RACEWAY FOR ELECTRICAL CIRCUIT TO RECEPTION STANDS. 12 1"R WITH PULLSTRING FOR DATA TO RECEPTION STANDS. 13 FOR VACUUM PUMP 240V-1PH, 6.7A. PROVIDE 2 #12 & 1 #12(G) IN 3/4"R BRANCH CIRCUIT TO A:37,39. 14 FOR ELECTRONIC DOOR STRIKE. PROVIDE TELEPHONE BACKBOARD, GROUNDING BUSBAR, AND GROUNDING AS PER SPECIFICATIONS. VERIFY EXACT LOCATION WITH ARCHITECT PRIOR TO ROUGH-IN. PROVIDE 2"R WITH PULLSTRING TO NEW TELECOM SERVICE CABINET. COORDINATE ROUTING OF RACEWAY WITH ARCHITECT/LANDLORD. 17 VISUAL COMPRESSOR ALARM LOCATE ABOVE ELECTRICAL ROOM DOOR. CONTRACTOR SHALL PROVIDE RACEWAY AND CABLING PER MANUFACTURER'S FOR EXTERIOR SIGNAGE. VERIFY EXACT LOCATION WITH ARCHITECT/SIGNAGE PROVIDER. for garbage disposal. Coordinate exact location with architect/owner PRIOR TO ROUGH—IN. 20 COORDINATE WITH MECHANICAL FOR EXHAUST FAN CONTROL REQUIREMENTS. PROVIDE RECESSED OUTLET BOX W/3/4"R STUBBED UP ABOVE ACCESSIBLE CEILING. 22 WIRING SHALL BE INSTALLED PER MANUFACTURER'S INSTRUCTIONS. ROUTE ELECTRICAL TRENCH TOWARD RECEPTION AND TO ROOM. THEN TRENCH

VERTICAL UP TO MECHANICAL ROOM.

24 ROUTE ELECTRICAL TRENCH VERTICAL UP TO MECHANICAL ROOM.





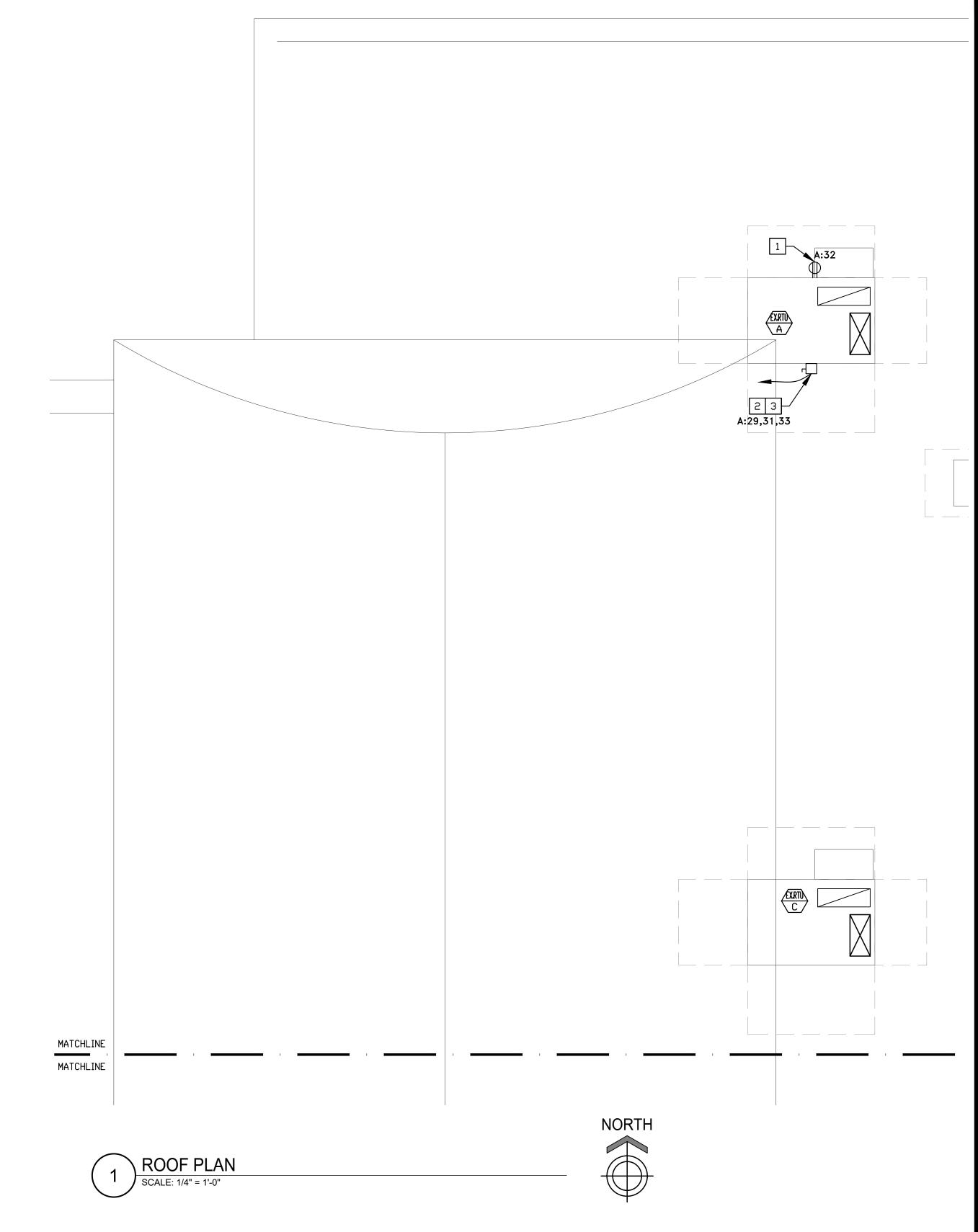


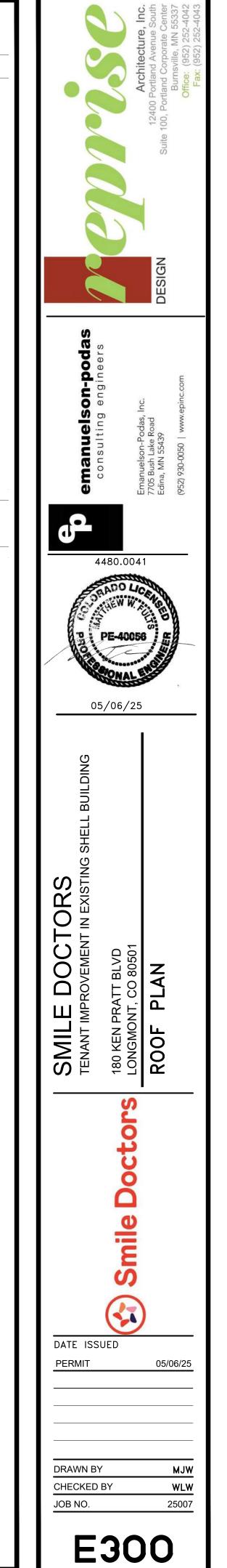
GENERAL NOTES:

- A. REFER TO NOTES, SCHEDULES AND DETAILS DRAWING FOR ADDITIONAL NOTES.
- B. CIRCUIT NUMBERS SHOWN ARE FOR REFERENCE ONLY.

KEY NOTES

- IF NOT PRESENT THAN PROVIDE WEATHER PROOF RECEPTACLES WITH GFCI PROTECTION LOCATIONS PER NEC ARTICLE 210.63. CIRCUIT SHALL EMANATE FROM PANEL A:25.(TYPICAL).
- 2 REFER TO SHEET E400 FOR CONDUIT AND WIRE SIZE.(TYPICAL)
- PROVIDE NEMA 3R DISCONNECT WITH CURRENT LIMITING FUSES TO COMPLY WITH NEC 110 AND 440. ELECTRICAL CONTRACTOR SHALL STUB UP THRU RACEWAY IN CURB TO ELIMINATE CONDUIT PENETRATION OF ROOFING. (TYPICAL)





GENERAL ELECTRICAL NOTES:

SPECIFICATIONS.

MANUFACTURER'S LETTER OF WARRANTY.

<u>GENERAL</u>

- THE WORD "PROVIDE", RELATIVE TO ELECTRICAL WORK, SHALL HEREAFTER BE INTERPRETED AS "FURNISH, INSTALL AND CONNECT".
- THE WORD "ACCEPTABLE" MEANS IN COMPLETE WORKING CONDITION AND PER THE
- THE "GENERAL CONDITIONS OF THE CONTRACT" CURRENT EDITION PUBLISHED IN STANDARD FORM
- BY THE AMERICAN INSTITUTE OF ARCHITECTS SHALL BE PART OF THIS CONTRACT. UNLESS NOTED OTHERWISE, ALL EQUIPMENT FURNISHED BY THE CONTRACTOR SHALL BE NEW AND A MANUFACTURER'S DOCUMENT SHALL ACCOMPANY EACH MAJOR COMPONENT. PROVIDE EQUIPMENT
- CONTRACTOR SHALL PROVIDE COMPLETE AND WORKABLE SYSTEMS. ELECTRICAL DRAWINGS SERVE AS WORKING DRAWINGS FOR GENERAL LAYOUT OF VARIOUS ITEMS OF EQUIPMENT; HOWEVER, LAYOUT OF THE EQUIPMENT, ACCESSORIES, SPECIALTIES, DEVICES, AND OTHER TRADES ARE DIAGRAMMATIC UNLESS SPECIFICALLY DIMENSIONED. ELECTRICAL DRAWINGS DO NOT NECESSARILY INDICATE EVERY REQUIRED ITEM.
- THE WORK COVERED BY THE CONSTRUCTION DOCUMENTS AND THE PROJECT SPECIFICATIONS CONSISTS OF FURNISHING THE LABOR. MATERIAL, AND EQUIPMENT IN PERFORMING THE OPERATIONS NECESSARY FOR THE INSTALLATION OF THE ELECTRICAL SYSTEMS INDICATED ON THE DRAWINGS AND/OR DESCRIBED IN THE SPECIFICATIONS. ANY INCIDENTAL WORK NOT SHOWN OR SPECIFIED, BUT WHICH IS BELONGING TO OR NECESSARY FOR THE SATISFACTORY COMPLETION AND OPERATION OF THE VARIOUS SYSTEMS, SHALL BE INCLUDED. THE WORK COVERED UNDER THESE DOCUMENTS AND SPECIFICATIONS SHALL BE COORDINATED WITH THE REQUIREMENTS OF THE OTHER DIVISIONS AND WITH THE DRAWINGS FOR THE ENTIRE PROJECT. THE WORK SHALL BE ACCOMPLISHED ON SUCH A SCHEDULE AND IN SUCH A MANNER AS TO NOT DELAY OR INTERFERE WITH OTHER CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE THE ELECTRICAL EQUIPMENT AND MATERIALS AS REQUIRED FOR COMPLETE AND OPERATIONAL SYSTEMS. REFER TO THE PROJECT SPECIFICATIONS FOR SUBMITTAL AND SHOP DRAWING REQUIREMENTS.
- WORK AND MATERIALS SHALL BE IN FULL ACCORDANCE WITH THE CURRENT NATIONAL ELECTRIC CODE AND STATE AND LOCAL CODES THAT APPLY.
- THE CONTRACTOR SHALL TAKE OUT PERMITS, PROCURE CERTIFICATES, AND PAY FEES AS REQUIRED TO PERFORM THE PROJECT ELECTRICAL WORK.
- BIDDERS SHALL BE REQUIRED TO VISIT THE PROJECT SITE AND BECOME FAMILIAR WITH EXISTING CONDITIONS SURROUNDING THE PROJECT PRIOR TO BIDDING.
- 10. THE CONTRACTOR SHALL TOUCH—UP OR REFINISH THE FACTORY FINISH OF EQUIPMENT MARRED DURING SHIPMENT OR INSTALLATION.
- 11. THE CONTRACTOR SHALL BE A LICENSED ELECTRICIAN OF THE STATE IN WHICH THE WORK IS TO
- NO INTERRUPTION OF THE BUILDING FUNCTIONS OR ELECTRIC SERVICE SHALL BE PERMITTED
- WITHOUT APPROVAL OF THE TENANT. AT THE COMPLETION OF THE WORK, THE CONTRACTOR SHALL REMOVE RUBBISH AND DEBRIS
- CAUSED BY THE CONTRACTOR AND SHALL THOROUGHLY CLEAN ALL ELECTRICAL EQUIPMENT AND COMPONENTS.
- 14. ELECTRICAL EQUIPMENT SHALL BE SPECIFICATION GRADE, UNLESS NOTED OTHERWISE.
- 15 ELECTRICAL ROOM EQUIPMENT LAYOUT IS CONCEPTUAL AND IS BASED ON DIMENSIONS OF INDUSTRY STANDARD EQUIPMENT. ELECTRICAL CONTRACTOR IS RESPONSIBLE TO PROVIDE EQUIPMENT LAYOUT PER NEC ARTICLE 110 AND SIZED TO MEET THE ROOM DIMENSIONS. ELECTRICAL CONTRACTOR SHALL ADJUST THE EQUIPMENT LAYOUT IN THE FIELD AS NEEDED PER THE SUCCESSFUL MANUFACTURER'S EQUIPMENT DIMENSIONS(TYPICAL FOR ALL ELECTRICAL EQUIPMENT ROOMS). PRIOR TO ROUGH-IN AND RACEWAY INSTALLATION, ELECTRICAL CONTRACTOR SHALL SUBMIT DIMENSIONED LAYOUT OF EQUIPMENT ROOMS AND ELECTRICAL ROOMS UTILIZING DIMENSIONS OF EQUIPMENT TO BE INSTALLED. SUBMIT FOR REVIEW PRIOR TO ANY FIELD WORK.
- DATA PRESENTED ON THESE DRAWINGS ARE AS SURVEYS AND PLANNING CAN DETERMINE, BUT ABSOLUTE ACCURACY IS NOT GUARANTEED. FIELD VERIFICATION OF THE PLANS IS RESPONSIBILITY OF THE CONTRACTOR SINCE FINAL DISTANCES; LOCATIONS AND HEIGHTS WILL BE GOVERNED BY ACTUAL FIELD CONDITIONS. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS IN AREAS TO BE RENOVATED PRIOR TO BID IN ORDER TO PROVIDE AN ACCURATE BID AND BE AWARE OF CONSTRUCTION METHODS NEEDED TO PROVIDE THE FINISHED PRODUCT AS SHOWN ON THE PLANS. DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER IN WITTING.
- FOUIPMENT. FINISHES. AND ACCESSORIES TO BE PROVIDED SHALL COMPLY WITH ANSI A117.1, AMERICANS WITH DISABILITIES ACT AND OTHER SPECIFIC STANDARDS, CODES AND REGULATIONS ESTABLISHED BY LOCAL AUTHORITIES HAVING JURISDICTION
- CUTTING AND PATCHING: THE CONTRACTOR SHALL PERFORM WHERE REQUIRED TO FACILITATE CONSTRUCTION. THE CONTRACTOR SHALL PATCH AND REPAIR SUCH OPENINGS TO THE ORIGINAL STATE. HOWEVER, STRUCTURAL ELEMENTS SHALL NOT BE CUT WITHOUT THE WRITTEN APPROVAL OE THE ARCHITECT OR HIS REPRESENTATIVE.
- 19. THE CONTRACTOR SHALL PROTECT HIS WORK DONE UNDER THIS CONTRACT FROM INJURY DURING CONSTRUCTION AND PROTECT HIS EQUIPMENT FROM DAMAGE.
- 20. HE CONTRACTOR SHALL NOTIFY THE ELECTRIC AND TELEPHONE UTILITY COMPANIES OF NEW WORK FOR THIS PROJECT. THE CONTRACTOR SHALL ARRANGE WITH THE ELECTRIC AND TELEPHONE UTILITY COMPANIES TO PROVIDE SERVICE AND EQUIPMENT PER UTILITIES REQUIREMENTS. INCLUDE COSTS IN THE BASE BID.
- 21. THE OWNER SHALL MAKE APPLICATION TO THE LOCAL TELEPHONE COMPANY FOR TELEPHONE
- 22. ELECTRICAL WORK SHALL COMPLY WITH THE FOLLOWING: A.) UNDERWRITER'S LABORATORIES, INC. - U.L. B.) NATIONAL EIRE PROTECTION ASSOCIATION -NFPA C.) NATIONAL ELECTRICAL MANUFACTURER'S ASSOC. - NEMA D.) NATIONAL ELECTRICAL CODE - NEC
- 23. HE CONTRACTOR SHALL BE RESPONSIBLE EOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES, AND EOR SAFETY PRECAUTIONS AND PROGRAM
- 24. HE CONTRACTOR SHALL FURNISH A WRITTEN, SIGNED WARRANTY STATING: A.) THAT WORK EXECUTED UNDER THIS CONTRACT SHALL BE FREE OF DEFECTS IN WORKMANSHIP AND MATERIAL FOR A PERIOD OF ONE (1) YEAR FROM DAY OF FINAL ACCEPTANCE. B.) THAT THE ELECTRICAL CONTRACTOR WILL AT HIS OWN EXPENSE REPAIR OR REPLACE DEFECTIVE WORK AND MATERIALS AND OTHER WORK DAMAGED THEREBY. WHICH BECOMES DEFECTIVE DURING THE TERM OF THE GUARANTEE-WARRANTY.

COORDINATION WITH OTHER TRADES

- THE CONTRACTOR IS REFERRED TO ARCHITECTURAL, STRUCTURAL, MECHANICAL, AND PLUMBING PLANS AND SPECIFICATIONS (AS APPLICABLE) FOR ADDITIONAL INFORMATION AND ELECTRICAL WORK THAT MAY NOT BE INDICATED ON THESE DRAWINGS.
- THESE DRAWINGS ARE DIAGRAMMATIC AND INTENDED TO SHOW APPROXIMATE LOCATIONS AND GENERAL ARRANGEMENTS ONLY. ADJUST ROUTING AND LOCATIONS FOR FIELD CONDITIONS, COORDINATE WORK AND INSTALLATION WITH OTHER TRADES. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS, LOCATIONS, AND MOUNTING HEIGHTS
- ELECTRICAL WORK SHALL NOT INTERFERE WITH CLEARANCES REQUIRED FOR GENERAL, MECHANICAL AND PLUMBING CONSTRUCTION. SHOULD ELECTRICAL WORK BE INSTALLED WHICH INTERFERES WITH WORK OF OTHER CONTRACTORS, SUCH WORK SHALL BE CHANGED AT NO ADDITIONAL COST TO THE OWNER.
- COORDINATE WITH MECHANICAL, PLUMBING AND GENERAL CONDITIONS FOR FINAL LOCATIONS OF HVAC EQUIPMENT, WATER HEATERS, PUMPS, EXHAUST FANS, FIRE/SMOKE DAMPERS, CONTROL DEVICES, EMS CONTROL EQUIPMENT, AND EQUIPMENT BY ANY OTHER TRADES. THE CONTRACTOR SHALL REVIEW THE APPROVED MECHANICAL AND PLUMBING SHOP DRAWINGS TO DETERMINE AND VERIFY ELECTRICAL ROUGH-IN REQUIREMENTS, POINT OF CONNECTION(S), AND EQUIPMENT AMPERAGE/VOLTAGE/PHASE. WHEN THE EQUIPMENT HAS BEEN DELIVERED TO THE PROJECT SITE, THE CONTRACTOR SHALL VERIFY WITH THE EQUIPMENT NAMEPLATE FOR THE ELECTRICAL CHARACTERISTICS AND REQUIREMENTS FOR EACH PIECE OF EQUIPMENT. FUSE SIZE ADJUSTMENTS MAY BE REQUIRED, AND THE FUSE TYPE SHALL BE DUAL ELEMENT-TIME DELAY, CLASS RK-5. PROVIDE CONDUCTORS, CONDUIT, BREAKERS, CONNECTIONS, AND APPURTENANCES REQUIRED FOR A COMPLETE AND OPERATIONAL SYSTEM.

- FOR EACH MECHANICAL OR PLUMBING DEVICE THAT REQUIRES ELECTRICAL POWER CONNECTION, RESPONSIBILITY FOR COORDINATION BETWEEN THE MECHANICAL OR PLUMBING EQUIPMENT ELECTRICAL CHARACTERISTICS AND THE ELECTRICAL SERVICES REMAINS WITH ALL INVOLVED CONTRACTORS (ELECTRICAL AND MECHANICAL, PLUMBING, ETC.). COORDINATE AND VERIFY IN FIELD PRIOR TO ROUGH—IN AND EQUIPMENT ORDERING. PROVIDE AND ADJUST ELECTRICAL SERVICES AS REQUIRED. CONTRACTOR SHALL COORDINATE IN FIELD, VERIFY, AND PROVIDE THE ELECTRICAL SERVICES AND RATINGS OF MECHANICAL OR PLUMBING EQUIPMENT AS INDICATED IN THE APPROVED MECHANICAL OR PLUMBING SHOP DRAWINGS AND AS SUCH EQUIPMENT ARRIVES AT THE JOB SITE. CONTRACTOR SHALL PROVIDE ELECTRICAL SERVICES, CIRCUIT BREAKERS, CONDUIT, CONDUCTORS, CONNECTIONS, AND APPURTENANCES REQUIRED FOR A COMPLETE AND OPERATIONAL SYSTEM. CONTRACTOR SHALL INCLUDE SUCH COSTS IN THE BASE BID.
- 6. CONTRACTOR SHALL COORDINATE CONSTRUCTION PHASING WITH OWNER AND OTHER TRADES.
- CONTRACTOR SHALL COORDINATE THE INSTALLATION OF PLUMBING, PIPING, AND DUCT WORK ADJACENT TO ELECTRICAL PANELS; ELECTRICAL PANELS SHALL HAVE CLEARANCE FROM FLOOR TO CEILING STRUCTURE. NO MECHANICAL OR PLUMBING DEVICES SHALL CROSS OR PENETRATE PANEL CLEARANCE
- WHEN ELECTRICALLY DRIVEN EQUIPMENT FURNISHED UNDER THIS CONTRACT MATERIALLY DIFFERS FROM THE DESIGN, THE CONTRACTOR SHALL MAKE THE NECESSARY ADJUSTMENTS TO THE CONDUCTORS, DISCONNECT DEVICES, CIRCUIT BREAKERS, FUSES, CONTROLLERS. OVERLOAD PROTECTION, ETC. TO ACCOMMODATE THE EQUIPMENT ACTUALLY INSTALLED.
- PROVIDE CONNECTION OF ELECTRICAL EQUIPMENT MENTIONED IN THIS SECTION OR NOTED ON THE DRAWINGS, WHETHER FURNISHED BY THE CONTRACTOR OR BY OTHERS. REFER TO CONSTRUCTION DOCUMENTS OF OTHER TRADES FOR THIS PROJECT.

- 1. ALL PROJECT GROUNDING SHALL COMPLY WITH THE NATIONAL ELECTRIC CODE.
- PROVIDE A COMPLETE GROUNDING SYSTEM, GROUND CONDUCTOR, GROUND ELECTRODES. GROUND BUS, AND GROUND ROD TO EFFECTIVELY PROVIDE SERVICE GROUND, GROUND PANELS, WIREWAYS, CONDUITS. LIGHT FIXTURES, RECEPTACLES, AND EQUIPMENT IN ACCORDANCE WITH THE NEC. VERIFY GROUNDING
- 3. GROUND CONDUCTORS SHALL BE PROVIDED IN FEEDERS AND BRANCH CIRCUIT RACEWAYS. EQUIPMENT GROUND WIRES SHALL BE COPPER AND SIZED AS PER NEC

RACEWAYS. BOXES. AND CONDUCTORS

- 1. WIRING INCLUDING LOW VOLTAGE SHALL BE IN CONDUIT WHERE REQUIRED BY THE AUTHORITY HAVING JURISDICTION.
- 2. PROVIDE PULL BUSHINGS ON COMMUNICATIONS RACEWAYS.
- 3. USE ONLY APPROVED LUBRICANT FOR WIRE PULLING PURPOSES.
- WHERE RACEWAYS AND CABLE PASS THROUGH CONCRETE OR CONCRETE BLOCK WALLS, PROVIDE CORE DRILLING AS REQUIRED.
- ITEMS OF ELECTRICAL EQUIPMENT ASSOCIATED WITH THE CONTROL OF ELECTRICAL APPARATUSES SHALL BE IDENTIFIED. IN UNFINISHED AREAS PAINT STENCIL SHALL BE ACCEPTABLE, FOR OTHER AREAS AN ENGRAVED PLATE SHALL BE USED TO IDENTIFY ASSOCIATED EQUIPMENT.
- NOMINAL MOUNTING HEIGHT OF DEVICES IN EXPOSED CONCRETE BLOCK, TILE, OR BRICK WALLS SHALL OCCUR WITHIN A SINGLE COURSE. A MINIMUM AMOUNT OF BLOCK, TILE, OR BRICK SHALL BE CUT.
- 7. CONTRACTOR SHALL RUN RACEWAY CONCEALED WHEN POSSIBLE, CONCEALED RACEWAYS SHALL BE RUN IN AS DIRECT A LINE AS POSSIBLE WITH LONG BENDS. EXPOSED RACEWAYS SHALL BE RUN PARALLEL TO OR AT RIGHT ANGLES TO THE LINES OF THE BUILDING. RACEWAY SHALL BE SUPPORTED FROM THE BUILDING SUPPORTING MEMBERS; ABOVE SUSPENDED CEILINGS. SUPPORT FROM MECHANICAL SYSTEM PIPING, DUCTS, AND OTHER TRADES ARE NOT ACCEPTABLE.
- PROVIDE LIQUID-TIGHT FLEXIBLE CONDUIT FOR CONNECTION OF MOTORS AND FOR OTHER ELECTRICAL EQUIPMENT WHERE SUBJECT TO MOVEMENT, VIBRATION, AND ALSO WHERE SUBJECT TO ANY OF THE FOLLOWING: EXTERIOR, MOISTURE, CORROSIVE ATMOSPHERE.
- SHEET METAL BOXES SHALL BE STANDARD TYPE WITH KNOCKOUTS, MADE OF HOT DIPPED GALVANIZED STEEL AS MANUFACTURED BY STEEL CITY, RACO, OR APPROVED EQUIVALENT
- 10. CIRCUIT CONDUCTORS SHALL BE 2 #12 & 1 #12 EQUIPMENT GROUND, UNLESS NOTED OTHERWISE.
- 11. CONDUCTORS SHALL BE CONTINUOUS FROM DEVICE TO DEVICE. AVOID UNNECESSARY SPLICING.
- 12. NUMBER OF WIRES FOR EACH CIRCUIT MAY NOT BE INDICATED ON DRAWINGS. THE CONTRACTOR SHALL PROVIDE WIRES NECESSARY FOR PROPER FUNCTION OF THE SYSTEM WHETHER INDICATED ON PLANS
- 13. SINGLE-PHASE BRANCH CIRCUITS, 120 VOLT LIGHTING, RECEPTACLES, AND MOTORS SHALL CONSIST OF PHASE, NEUTRAL, AND GROUND CONDUCTORS.
- 14. JUNCTION BOXES AND ELECTRICAL EQUIPMENT EXPOSED TO THE ELEMENTS SHALL BE WEATHERPROOF

<u>PANELBOARDS</u>

- PANELBOARDS SHALL CONSIST OF COMPLETE DEAD FRONT ASSEMBLIES INCLUDING BACK CAN, BUS BAR, SHEET METAL CABINET, SWITCHING AND OVER CURRENT DEVICES, TRIMS, DOOR AND LOCK, PANELBOARDS SHALL BE SQUARE "D". G.E., SIEMENS OR APPROVED EQUIVALENT.
- WHEN ORDERING PANELBOARDS, THE CONTRACTOR SHALL DETERMINE THE NUMBER OF SERVICE ENTRANCE CONDUCTORS, SIZE AND MATERIAL TYPE, AND SHALL PROVIDE THIS INFORMATION TO THE PANELBOARD SUPPLIER SO THAT THE APPROPRIATE LUGS CAN BE PROVIDED FROM THE FACTORY.
- 3. THE CONTRACTOR SHALL INSTALL PANELS AND ELECTRICAL EQUIPMENT PER NEC ARTICLE 110 CLEARANCE REQUIREMENTS.
- PROVIDE DEDICATED CIRCUIT(S) AND "LOCK OUT" BREAKER(S) FOR NIGHT LIGHTING, EXIT LIGHTS, AND EMERGENCY LIGHTS, OUTLET(S) AT TELEPHONE BACKBOARD, AND FIRE ALARM DEVICE CIRCUITS. PROVIDE "RED" COLOR CIRCUIT BREAKER.
- CIRCUIT NUMBERS ARE FOR IDENTIFICATION ONLY. THE CONTRACTOR WILL BE RESPONSIBLE FOR CORRECTLY PHASING THE CIRCUITS IN THE PANELS. HOMERUNS OF SIMILAR SINGLE-PHASE CIRCUITS MAY BE COMBINED IN ANY ONE RACEWAY WITH A COMMON NEUTRAL. UNLESS NOTED OTHERWISE, ONLY THREE (3) SINGLE- PHASE CIRCUITS MAY BE COMBINED IN ANY ONE RACEWAY. ON COMPLETION OF THE SPACE, THE ELECTRICAL CONTRACTOR SHALL BALANCE THE PANEL PHASE LOADS TO WITHIN TEN PERCENT.

WIRING DEVICES

- 1. THE CONTRACTOR SHALL PROVIDE GFCI. WEATHERPROOF-WHILE-IN-USE RECEPTACLE(S) WITHIN 25 FEET OF ALL HVAC EQUIPMENT ON GROUNDS.
- 2. EXTERIOR RECEPTACLES EXPOSED TO THE ELEMENTS SHALL BE GFCI, WEATHERPROOF-WHILE-IN-USE RECEPTACLES.
- 3. PLATES FOR UNFINISHED AREAS SHALL BE SHEET STEEL OR CAST METAL.
- PROVIDE ENGRAVED PLASTIC IDENTIFICATION PLATE FOR EACH PANELBOARD, INSTALL A TYPEWRITTEN DIRECTORY IN DOOR OF EACH PANEL. CIRCUIT DIRECTORIES SHALL BE NEATLY TYPED TO REFLECT INSTALLED CONDITIONS UNDER THIS CONTRACT. CIRCUITS SHALL BE NUMBERED ALTERNATELY (I.E. 1, 3, 5 AND 2, 4, 6 ETC).
- SAFETY SWITCHES SHALL BE INSTALLED WHERE INDICATED ON PLANS OR WHERE OTHERWISE REQUIRED BY CODE ENFORCING AUTHORITIES. THEY SHALL BE INSTALLED WITH ADEQUATE HAND ACCESS TO AND CLEARANCE FOR OPERATION AND FUSE REPLACEMENT. EACH SWITCH SHALL HAVE ENGRAVED PLASTIC NAMEPLATES INSTALLED, IDENTIFYING THE EQUIPMENT IT IS SERVING.
- 6. EXHAUST FANS SHALL HAVE DISCONNECT SWITCHES. COORDINATE WITH MECHANICAL DRAWINGS FOR INSTALLATION OF THERMOSTATS.
- 7. REMOTE POWERED EQUIPMENT ON GROUNDS SHALL BE PROVIDED BY CONTRACTOR WITH A NEMA 3R DISCONNECT SWITCH AT EACH PIECE OF EQUIPMENT (UNLESS NOTED OTHERWISE).
- LOCATE OUTLETS AS INDICATED ON PLANS WITH MOUNTING HEIGHTS AS SHOWN. COORDINATE INSTALLATION WITH OTHER EQUIPMENT AND ARCHITECTURAL MILLWORK ELEVATIONS. SECURE OUTLETS TO STRUCTURE.

- LIGHT FIXTURE LOCATIONS SHALL BE ADJUSTED IN FIELD AS REQUIRED TO ACCOMMODATE DUCTWORK, PIPING AND OTHER TRADES. CONTRACTOR SHALL VERIFY APPROPRIATE LIGHTING LEVELS WHERE LIGHT FIXTURES ARE ADJUSTED FROM LOCATIONS SHOWN ON FLOOR PLAN.
- SUPPORT OF LIGHT FIXTURES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. LAY- IN LIGHT FIXTURES SHALL NOT BE SUPPORTED ENTIRELY BY CEILING GRID SYSTEM. THEY SHALL HAVE STEEL WIRE SUPPORT TIED TO THE STRUCTURE ABOVE FROM AT LEAST TWO POINTS ON THE FIXTURE

- 3. PROVIDE A COMPLETE LIGHTING SYSTEM. PROVIDE FIXTURES, LAMPS, ACCESSORIES AND SUPPORT AS SPECIFIED AND SHOWN. CEILING GRID LAYOUTS ON PLANS ARE FOR CONVENIENCE ONLY. THE ELECTRICAL CONTRACTOR SHALL COORDINATE THE LIGHT FIXTURE LAYOUT WITH (AS APPLICABLE): ARCHITECT, REFLECTED CEILING PLANS, GENERAL CONTRACTOR, MECHANICAL CONTRACTOR, EIRE PROTECTION CONTRACTOR, EIRE ALARM CONTRACTOR, LOW-VOLTAGE CONTRACTOR(S) AND OWNER
- LIGHT FIXTURES SHALL BE FURNISHED AS SPECIFIED IN THE LIGHTING FIXTURE SCHEDULE ON THE LIGHTING PLANS OR APPROVED EQUIVALENT. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY CEILING TYPES, CLEARANCES, MOUNTING HARDWARE, ETC., AND PROVIDE AS REQUIRED TO INSTALL THE LIGHT FIXTURES.

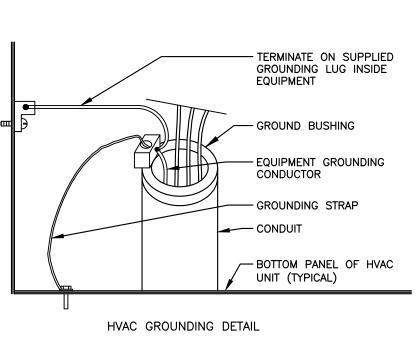
<u>SUBMITTALS</u>

- PROVIDE COMPLETE SHOP DRAWINGS, RISER DIAGRAMS, AND SUBMITTALS. THE CONTRACTOR SHALL PURCHASE NO EQUIPMENT FOR THE SYSTEM SPECIFIED HEREIN UNTIL THE OWNER HAS REVIEWED THE PROJECT SHOP DRAWINGS AND SUBMITTALS IN THEIR ENTIRETY AND HAS RETURNED THEM TO THIS CONTRACTOR. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MEET THE ENTIRE INTENT AND FUNCTIONAL PERFORMANCE DETAILED IN THESE PLANS AND SPECIFICATIONS. REVIEWED SUBMITTALS SHALL ONLY ALLOW THE CONTRACTOR TO PROCEED WITH THE INSTALLATION AND SHALL NOT BE CONSTRUED TO MEAN THAT THIS CONTRACTOR HAS SATISFIED THE REQUIREMENTS OF SPECIFICATIONS. THE CONTRACTOR SHALL SUBMIT THREE (3) COMPLETE SETS OF DOCUMENTATION WITHIN 30 CALENDAR DAYS AFTER AWARD OF PROJECT
- 2. EACH SUBMITTAL SHALL INCLUDE A COVER LETTER PROVIDING A LIST OF EACH VARIATION THAT THE SUBMITTAL MAY HAVE FROM THE REQUIREMENTS OE THE CONTRACT DOCUMENTS. IN ADDITION THIS CONTRACTOR SHALL PROVIDE SPECIFIC NOTATION ON EACH SHOP DRAWING, SAMPLE, CATALOG CUT, DATA SHEET, INSTALLATION MANUAL, ETC.
- 3. SUBMITTED FOR REVIEW AND APPROVAL OF EACH SUCH VARIATION.
- 4. SHOP DRAWINGS AND DIAGRAMS SHALL INCLUDE THE CONTRACTOR'S TITLE BLOCK, COMPLETE WITH DRAWING TITLE, CONTRACTOR'S NAME, ADDRESS, DATE INCLUDING REVISIONS, AND REPAIRER'S AND REVIEWER'S INITIALS.

$\overline{\square}$	FLUORESCENT FIXTURE RECESSED MOUNTED	CEILING	FACP	FIRE ALARM CONTROL PANEL	
	FLUORESCENT FIXTURE SURFACE MOUNTED	CEILING	Ē.	FIRE ALARM STROBE	90"
	Strip type light fixture	CEILING	¥	FIRE ALARM HORN/STROBE	90"
<u> </u>	CEILING MOUNTED STRIP TYPE LIGHT FIXTURE	CEILING	\$	FIRE ALARM SPEAKER/STROBE	90"
<u></u>	WALL MOUNTED STRIP TYPE LIGHT FIXTURE	CEILING	日	FIRE ALARM CEILING HORN	CEILI
0	ROUND DOWN LIGHT TYPE LIGHT FIXTURE	CEILING	<u> </u>	FIRE ALARM CEILING STROBE	CEILIN
Ю	WALL MOUNT SCONCE			FIRE ALARM CEILING HORN/STROBE	CEILIN
<u> </u>	TRACK LIGHTING WITH HEADS SPACED AS INDICATED		6—	FIRE/SMOKE DAMPER	
$\overrightarrow{lacktriangle}$	EXIT LIGHT FACE/DIRECTION ARROWS AS INDICATED			FIRE ALARM ADDRESSABLE MODULE	
▶ ⊘ ₁	EXIT LIGHT FACE/DIRECTION ARROWS AS INDICATED		<u> </u>	FIRE ALARM PULL STATION	42'
	LIGHT FIXTURE ON EMERGENCY CIRCUIT		©	FIRE ALARM SMOKE DETECTOR — PHOTOELECTRIC	CEILI
1	EMERGENCY BUGEYE LIGHT FIXTURE	CEILING	6 —	FIRE ALARM DUCT DECTECTOR	
	EMERGENCY DOWNLIGHT TYPE LIGHT FIXTURE	02121110	<u>M</u>	METER	
	SINGLE POLE SWITCH — LETTER INDICATES SWITCHING	46"		PANEL SURFACE (BRANCH)	
\$ ² \$ ³ \$ ⁴	DOUBLE POLE, 3-WAY AND 4-WAY SWITCHES	46"		PANEL FLUSH (BRANCH)	
\$ PL	PILOT LIGHT SWITCH	46"		TRANSFORMER	
**************************************	KEY OPERATED SWITCH	46"	но	PUSHBUTTON — SINGLE	
<u>'</u>	WALL BOX DIMMER SWITCH WITH TYPE AS INDICATED	40	\$ ***	TOGGLE SWITCH - MOTOR RATED	
<u>⊢D</u> –x		40"			
TC	TIME CLOCK	46"	O D	MOTOR	
<u> </u>	CONTACTOR		<u> </u>	FUSED DISCONNECT	
os ———	OCCUPANCY SENSOR CEILING MOUNTED	CEILING	V	TELEPHONE	18"
\$ °S	OCCUPANCY SENSOR WALL SWITCH BOX MOUNTED	46"	#	TELEPHONE - WALL HUNG	
$\frac{2}{2}$	CONDUIT RUN EXPOSED			TELEPHONE — CABINET SIZE AS INDICATED	
<u> </u>	CONDUIT RUN IN OR BELOW FLOOR, OR UNDER GROUND (UG)			COMMUNICATIONS BOARD SIZE AS INDICATED	
	HOME RUN		▽	DATA OUTLET	
P wa	DUPLEX RECEPTACLE		▼	COMBINATION PHONE/DATA OUTLET	
SS CP DW	WP INDICATES WEATHERPROOF SS INDICATES STAINLESS STEEL FACEPLATE CP INDICATES CHILDPROOF RECEPTACLE	18 "	<u></u>	SPEAKER — WALL MOUNTED	
GD MICRO	DW INDICATES DISHWASHER GD INDICATES GARBAGE DISPOSAL (SWITCHED)		S	SPEAKER — CEILING MOUNTED	
	MICRO INDICATES MICROWAVE OVEN		¥	VOLUME CONTROL	
#	FOURPLEX RECEPTACLE	18"		BUZZER	
Ф	CEILING MOUNT DUPLEX RECEPTACLE		ů	BELL	
Ф	GFI RECEPTACLE	18"	型	TV OUTLET — WALL MOUNTED	
Ø	ABOVE COUNTER RECEPTACLE		0	CEILING JUNCTION BOX RECESSED	CEILI
#	ABOVE COUNTER GFI RECEPTACLE		Ю	WALL RECESSED JUNCTION BOX	
©	SPECIAL PURPOSE RECEPTACLE WALL TYPE AS NOTED	18"	•	FLOOR BOX WITH DEVICES INDICATED	FLOO
DL	DAYLIGHT SENSOR			ссту	CEILI
AC	ACCESS CONTROL		WAP	WIFI ACCESS POINT	CEILI
DC	DOOR CONCACT				

LOCATION	208V.	480V.	LOW ENERGY
EXPOSED			
INDOORS	< 1" EMT COMPRESS. FTGS >1.25" IMC THREADED FTGS	IMC THREADED FTGS	EMT COMPR. FTGS
CONCEALED			
WALLS	<2" EMT SET SCREW FTGS >2.5" IMC THREADED FTGS	<2" EMT SET SCREW. FTGS >2.5" IMC THREADED FTGS	EMT 1/2"- 2" SET SCREW FTGS 2.5" - 4" COMPR. FTGS
AIR HANDLING CEILING/ SPACE	<2" EMT COMPR. FTGS >2.5" IMC THREADED. FTGS	2" EMT COMPR. FTGS < >2.5" IMC THREADED. FTGS	EMT COMPR. FTGS
NON AIR HANDLNG CEILING/ SPACE	<2" EMT SET SCREW FTGS >2.5" IMC THREADED. FTGS	<2" EMT COMPR. FTGS >2.5" IMC THREADED. FTGS	EMT 1/2" - 2" SET SCREW FTGS 2.5"- 4" COMPR. FTGS
BELOW GRADE			
INTERIOR	IMC THREADED FTGS OR SCHEDULE 40 OR 80 PVC	IMC THREADED FTGS	IMC THREADED FTGS SCHEDULE 40 OR 80 PVC
	CONDUIT,	WIRE SIZE AND GROUNDING FOR HVAC	UNITS

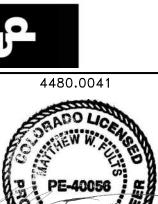
HACR BRKR SIZE	CONDUIT & WIRE SIZE
40A	1"C-3#8
45A	1"C-3#6
50A	1"C-3#6
60A	1"C-3#6
70A	1-1/4"C-3#4
80A	1-1/4"C-3#3
90A	1-1/4"C-3#3
100A	1-1/4"C-3#2
125A	1-1/2"C-3#1
150A	1-1/2"C-3#1/0
175A	2"C-3#2/0
200A	2"C-3#3/0
225A	2"C-3#4/0



MOUNTING HEIGHTS ARE TO CENTERLINE OF DEVICE, UNLESS INDICATED OTHERWISE.

CU GROUND SHALL BE SIZED FOR EQUIPMENT PER NEC SECTION 250.122 | <u><15A | <20A | <60A | <100A | <200A | <300A | </u> 2-1/2°C-3#250 14 CU 12 CU 10 CU 10 CU 16 CU 14 CU

THE CONTRACTOR SHALL BE RESPONSIBLE FOR FINAL COORDINATION OF ALL ELECTRICAL FEEDERS AND CIRCUIT BREAKERS WITH THE MANUFACTURER'S WRITTEN DATA FOR EACH MECHANICAL DEVICE PRIOR TO SUBMITTAL OF ANY ELECTRICAL EQUIPMENT FOR REVIEW, NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR ANY CHANGES TO ELECTRICAL FEEDERS OR CIRCUIT BREAKERS REQUIRED FOR ANY MECHANICAL DEVICES.



05/06/25

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DATE ISSUED

DRAWN BY CHECKED BY WLW 25007 JOB NO.

ELECTRICAL SPECIFICATIONS:

FINISHES.

WATERPROOF GROUT.

GENERAL

- ELECTRICAL WORK SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE 2014. STATE AND CITY REGULATIONS AND ORDINANCES.
- UNLESS INDICATED OTHERWISE, WORK INDICATED IN THE CONSTRUCTION DOCUMENTS SHALL BE PERFORMED BY THE CONTRACTOR.
- MATERIALS SHALL BE NEW AND APPROVED BY A NATIONALLY RECOGNIZED TESTING LABORATORY (NRTL) TO UNDERWRITERS LABORATORIES (UL) STANDARDS, EXCEPT
- CONTRACTOR SHALL APPLY FOR PERMITS AND PAY INSPECTION FEES.

UNLESS APPROVED BY LOCAL INSPECTOR, NO WORK SHALL BE CONCEALED.

- UPON COMPLETION, FURNISH CERTIFICATE OF APPROVAL FROM DIVISION OF REGULATORY INSPECTION AS APPLICABLE.
- CUTTING SHALL BE DONE BY CONTRACTOR. NO CUTTING OF STRUCTURAL
- MEMBERS SHALL BE DONE WITHOUT PERMISSION OF THE ARCHITECT. PATCH AND REFINISH ANY HOLES CUT. FINISH SHALL MATCH OTHER EXISTING
- PATCH, FLASH, AND COMPLETELY WATERPROOF ANY HOLES CUT IN EXTERIOR WALLS. PROVIDE GROUTING AROUND RACEWAY PENETRATIONS THROUGH CONCRETE FLOORS EQUAL TO THE FIRE RATING OF THE FLOOR USING NON-SHRINKING
- 10. PATCH AND/OR REPAIR WALLS, CEILINGS, AND FLOORS WHERE EXISTING EQUIPMENT IS REMOVED. ANY DAMAGE TO FINISHED SURFACES SHALL BE REPAIRED BY CONTRACTOR AT HIS/HER OWN EXPENSE.
- THE BIDDER SHALL VISIT THE SITE OF PROPOSED WORK SO THAT HE MAY UNDERSTAND THE FACILITIES, DIFFICULTIES AND RESTRICTIONS ATTENDING THE EXECUTION OF THE CONTRACT. HE WILL BE ALLOWED NO ADDITIONAL COMPENSATION FOR FAILURE TO BE SO INFORMED.
- 12. WITHIN 30 DAYS AFTER AWARD OF CONTRACT, CONTRACTOR SHALL SUBMIT FOR REVIEW DESCRIPTIVE LITERATURE OR SHOP DRAWINGS FOR WIRING DEVICES AND PLATES, CONDUCTORS AND WIRING, FUSES, SAFETY SWITCHES, LUMINARIES, AND
- 13. CONTRACTOR SHALL ARRANGE WITH UTILITY COMPANY TO PROVIDE 1 PHASE, 3 WIRE, 240/120V SERVICE AS INDICATED. CONTRACTOR SHALL INSTALL ALL METERING EQUIPMENT IN ACCORDANCE WITH REQUIREMENTS OF THE POWER COMPANY AND SHALL BE RESPONSIBLE FOR ALL WORK FROM THE POINT WHERE THE POWER COMPANY TERMINATES ITS WORK. CONTRACTOR SHALL INDICATE ALL FEES REQUIRED BY UTILITY AS SEPARATE LINE ITEM IN BID.
- 14. CONTRACTOR SHALL ARRANGE WITH UTILITY COMPANY TO PROVIDE COMMUNICATIONS SERVICE AS INDICATED. CONTRACTOR SHALL INSTALL ALL CONDUITS AND COMMUNICATIONS BACKBOARD AS REQUIRED. CONTRACTOR SHALL INDICATE ALL FEES REQUIRED BY UTILITY AS SEPARATE LINE ITEM IN BID.

- REFER TO LUMINAIRE SCHEDULE FOR REQUIREMENTS.
- LUMINAIRE SUBSTITUTIONS SHALL BE ALLOWED IF LUMINAIRES ARE DEEMED EQUAL IN INPUT WATTS, LUMEN OUTPUT, RATED LIFE, LIGHT DISTRIBUTION, AND QUALITY OF CONSTRUCTION. SUBSTITUTIONS SHALL BE SUBMITTED FOR REVIEW. FOR EXTERIOR LUMINAIRES SUBMIT A FOOT CANDLE PLOT INDICATING LUMINAIRE SCHEDULE, LLF, MOUNTING HEIGHT. SUBMITTALS SHALL BE MADE TO THE ENGINEER FOR APPROVAL.
- DRIVERS FOR LED FIXTURES SHALL BE HIGH POWER FACTOR TYPE.
- BATTERY BACKUP EQUIPMENT SHALL PROVIDE REQUIRED FOOTCANDLES PER NFPA FOR 1-1/2 HOURS.
- PROVIDE EQUIPMENT AND STRUCTURE NECESSARY TO MOUNT AND SECURE LUMINAIRES AS INDICATED ON DRAWINGS. REFER TO LUMINAIRE MANUFACTURER RECOMMENDATIONS FOR MOUNTING REQUIREMENTS.
- PROVIDE A MINIMUM OF ONE OUTLET BOX FOR EVERY T\'/O RECESSED LUMINAIRES. PROVIDE A 6-FOOT LONG 1/2" FLEXIBLE METAL CONDUIT CONNECTION (WITH \$12 CONDUCTORS) FOR EACH RECESSED LUMINAIRE.

LIGHTING CONTROL SYSTEM

- OCCUPANCY SENSORS SHALL BE WATT-STOPPER, HUBBELL, DOUGLAS LIGHTING CONTROLS, OR EQUAL. PROVIDE BOXES AND RACEWAYS TO MOUNT DEVICES AND POWER/RELAY PACKS AS NECESSARY.
- CEILING MOUNTED OCCUPANCY SENSORS SHALL BE DUAL-TECHNOLOGY UNLESS NOTED OTHERWISE.
- WALL MOUNTED SWITCH/OCCUPANCY SENSOR SHALL BE DUAL TECHNOLOGY TYPE.
- CONTRACTOR SHALL COORDINATE LAYOUT WITH MANUFACTURER TO ENSURE COVERAGE. ADDITIONAL SENSORS THAN INDICATED ON DRAWINGS MAY BE REQUIRED AND SHALL BE INCLUDED IN BASE BID.
- CONTRACTOR SHALL COORDINATE WITH OWNER TO PROGRAM SWITCHING GROUPS. CONTRACTOR SHALL PROVIDE MANUALS AND TRAINING TO OWNER FOR FUTURE RE- PROGRAMMING.

CONDUCTORS AND CABLES

- CONDUCTORS SHALL BE COPPER MATERIAL, TYPE SOUTHWIRE, ROME, AMERICAN OR APPROVED EQUIVALENT, AWG #12 AND LARGER, CLASS "B", STRANDED THHN OR THWN, 600 VOLT, MINIMUM SIZE #12. CONDUCTORS #6 AND LARGER SHALL BE IDENTIFIED WITH COLOR CODING.
- UNLESS OTHERWISE NOTED, SERVICE CONDUCTORS SHALL BE COPPER WITH XHHW INSULATION. OTHER CONDUCTORS SHALL HAVE TYPE THHN/THWN-2 INSULATION.
- CONDUCTORS SMALLER THAN #1 SHALL BE COPPER, CONDUCTORS #1 AND LARGER MAY BE ALUMINUM OR COPPER.
- ALUMINUM CONDUCTORS SHALL BE SERIES AA-8000.
- TYPE MC CABLE SHALL BE ALLOWED IN APPLICATIONS ALLOWED PER NEC AND WHERE CONCEALED. MC CABLE SHALL BE LISTED FOR USE IN HEALTH CARE FACILITIES PER NEC 517.
- WIRING METHODS SHALL COMPLY WITH NEC 517.
- WHERE USING MC CABLE FOR SWITCHES, PROVIDE GROUNDED NEUTRAL CONDUCTOR (NEUTRAL) TO SWITCH.
- WHERE ALUMINUM CONDUCTORS ARE USED, CONTRACTOR SHALL VERIFY THAT SPLICES AND TERMINATIONS ARE APPROVED FOR THE USE OF ALUMINUM
- CONDUCTOR SIZES INDICATED ON DRAWINGS ARE PER COPPER CONDUCTOR RATINGS. IF CONTRACTOR ELECTS TO USE ALUMINUM CONDUCTORS, CONTRACT SHALL RESIZE CONDUITS TO ACCOMMODATE ALUMINUM CONDUCTORS.
- DRAWINGS INDICATE CIRCUITS BY NAMING PANEL AND CIRCUIT NUMBER NEXT TO DEVICE. PROVIDE WIRING AND RACEWAY AS NECESSARY TO CONNECT SUCH DEVICES TO EACH CIRCUIT.

RACEWAYS AND BOXES

- WIRING SHALL BE CONTAINED IN ELECTRIC METALLIC TUBING WITH STEEL COMPRESSION FITTINGS OR SET SCREW CONNECTORS, UNLESS INDICATED OTHERWISE.
- 2. RACEWAYS SHALL BE CONCEALED UNLESS INDICATED OTHERWISE
- WIRING INSTALLED EXPOSED OUTDOORS SHALL BE CONTAINED IN RIGID GALVANIZED HEAVY WALL CONDUIT.
- WIRING INSTALLED UNDERGROUND OR IN FILL BENEATH BUILDING SLABS SHALL BE CONTAINED IN PVC SCHEDULE 40 RACEWAYS.
- 5. UP TO FIVE CONDUCTORS AND ONE DEVICE WILL BE PERMITTED IN A STANDARD (3"H x 2"W x 2 3/4"D) SWITCH BOX. WHERE MORE CONDUCTORS ARE SHOWN AND FOR VOICE/DATA OUTLETS, USE A 4" SQUARE x 1 1/2" DEEP, OR LARGER BOX WITH RAISED DEVICE COVER. CEILING BOXES SHALL BE 4" OCTAGONAL x 1 1/2" DEEP OR LARGER. BOXES IN WALLS SHALL NOT BE INSTALLED BACK-TO-BACK.
- 6. IN GENERAL, RECEPTACLES AND TELEPHONE OUTLETS SHALL BE INSTALLED AT 18" AFF AND SWITCHES SHALL BE INSTALLED AT 48" A.F.F., UNLESS NOTED
- 7. PROVIDE ADDITIONAL BOXES IN RACEWAYS AS NECESSARY. LOCATIONS SHALL MEET THE ARCHITECT'S APPROVAL.
- 8. USE MULTI-GANG PLATES WHERE SWITCHES, RECEPTACLES, AND/OR DEVICES ARE GROUPED. PROVIDE ENGRAVING OF PLATES TO INDICATE FUNCTIONS (NAMES TO BE APPROVED BY ARCHITECT).
- 9. COMMUNICATION OUTLETS SHALL CONSIST OF OUTLET BOX AS INDICATED ABOVE WITH SINGLE GANG RAISED DEVICE COVER AND BLANK PLATE.
- 10. PROVIDE LIQUID-TIGHT FLEXIBLE CONDUIT FOR CONNECTION OF MOTORS AND FOR OTHER ELECTRICAL EQUIPMENT WHERE SUBJECT TO MOVEMENT, VIBRATION, AND ALSO WHERE SUBJECT TO ANY OF THE FOLLOWING: EXTERIOR, MOISTURE, CORROSIVE ATMOSPHERE.
- 11. RACEWAYS SHALL BE A MINIMUM OF 3/4" DIAMETER UNLESS OTHERWISE NOTED.

GROUNDING AND BONDING

- 1. THE METALLIC RACEWAY SYSTEM AND THE NEUTRAL CONDUCTOR OF THE WIRING SYSTEM SHALL BE GROUNDED AT THE SERVICE EQUIPMENT. THE INSULATED COPPER SERVICE GROUNDING ELECTRODE CONDUCTOR SHALL BE EXTENDED WITH NO SPLICES IN RACEWAY FROM THE SERVICE TO WITHIN 5 FEET OF THE POINT OF ENTRANCE OF THE METAL UNDERGROUND WATER SERVICE PIPE THAT IS ELECTRICALLY CONTINUOUS AND IS IN DIRECT CONTACT WITH THE EARTH FOR AT LEAST 10 FEET. WHERE THE RACEWAY ROUTING IS VIA FINISHED AREAS, IT SHALL BE RUN CONCEALED. GROUND CONNECTION SHALL BE VISIBLE, AND CONNECTION OF RACEWAY AND CONDUCTOR TO THE WATER PIPE SHALL BE MADE WITH AN APPROVED GROUND CONNECTOR SIMILAR TO T A B CONDUIT HUB AND WATER PIPE CLAMP. ALSO, SEE ARTICLE 250.50, GROUNDING ELECTRODE SYSTEM AND GROUNDING ELECTRODE CONDUCTOR OF THE NATIONAL ELECTRICAL CODE FOR BONDING REQUIREMENTS TO OTHER ITEMS TO FORM THE GROUNDING ELECTRODE SYSTEM (THIS INCLUDES BONDING TO METAL FRAME OF BUILDING). THESE REQUIREMENTS SHALL BE SUPPLEMENTED BY GROUNDING TO A SET OF 2-3/4"DIAMETER BY 10' LONG COPPER CLAD GROUND RODS SPACED 10' APART.
- 2. CONTRACTOR MAY USE EXISTING GROUND ROD SYSTEM IF IT COMPLIES WITH NEC AND IEEE. PROVIDE MEASUREMENTS TO VERIFY.
- PROVIDE BONDING AROUND CONCENTRIC AND ECCENTRIC KNOCKOUTS ON EQUIPMENT.
- 4. EACH BRANCH CIRCUIT AND FEEDER SHALL BE PROVIDED WITH A GROUND CONDUCTOR INSTALLED WITH THE CIRCUIT CONDUCTORS. EACH GROUND CONDUCTOR SHALL BE A GREEN INSULATED COPPER CONDUCTOR, SIZED IN ACCORDANCE WITH TABLE 250-122 OF THE NATIONAL ELECTRICAL CODE NFPA-70. THESE GROUNDING CONDUCTORS MAY NOT BE SHOWN ON THE DRAWINGS.
- 5. PROVIDE GROUNDING BUS BAR AT EACH MDF AND IDF. PROVIDE GEC (MINIMUM #6 AWG OR AS RECOMMENDED BY MANUFACTURER) FROM DATA RACK TO GROUNDING BUS BAR AND FROM BUS BAR TO GROUNDING SYSTEM.
- 6. FOLLOW BICSI STANDARDS AND TELECOM EQUIPMENT MANUFACTURER GROUNDING RECOMMENDED PRACTICES.

POWER DISTRIBUTION

- 1. PANELBOARDS SHALL BE SQUARE D, GENERAL ELECTRIC, SIEMENS, OR EQUAL WITH BOLT-ON BREAKERS, COPPER OR ALUMINUM BUS, COPPER GROUND BUS, DOOR WITH FLUSH LATCH, CONCEALED TRIM CLAMPS, CIRCUIT DIRECTORY, 20" WIDE BACKBOX, AND PHENOLIC NAMEPLATE (WHITE WITH BLACK-CUT LETTERS) ATTACHED WITH TYYO SCREWS TO INDICATE PANELBOARD DESIGNATION.
- 2. AFTER COMPLETION OF BRANCH CIRCUIT WORK, NEW CORRECTED TYPEWRITTEN DIRECTORIES SHALL BE PROVIDED IN PANELBOARDS SERVING THE AREA.
- 3. SAFETY SWITCHES SHALL BE SQUARE D, GENERAL ELECTRIC, SIEMENS, OR EQUAL, GENERAL DUTY FOR 208-240 VOLT NON-FUSED SWITCHES, AND HEAW DUTY FOR 208-240 VOLT FUSIBLE SWITCHES. SAFETY SWITCHES SHALL HAVE VISIBLE BLADES, AND FUSIBLE SWITCHES SHALL HAVE CLASS R REJECTION FEATURE. EACH SHALL HAVE A PHENOLIC NAMEPLATE (WHITE WITH BLACK-CUT LETTERS) ATTACHED WITH TWO SCREWS TO IDENTIFY THE LOAD SERVED.
- 4. FUSES SHALL BE BUSS LOW-PEAK TYPE RK-1, CURRENT LIMITING AND TIME DELAY, REJECTION TYPE.
- CIRCUIT BREAKERS: MOLDED CASE, THERMAL— MAGNETIC QUICK— MAKE, QUICK— BREAK TYPE WITH TRIP- FREE HANDLE, MULTI-POLE TYPE WITH INTERNAL COMMON TRIP BAR. CIRCUIT BREAKERS SHALL BE SWITCH RATED AND BOLT-ON
- CIRCUIT BREAKERS FOR HVAC UNITS SHALL BE UL 489 LISTED OR BE HACR TYPE PER NEC.
- CONNECTION TO MOTORS SHALL BE MADE WITH A SHORT PIECE OF FLEXIBLE METAL CONDUIT BETWEEN RIGID CONDUIT SYSTEM AND MOTOR TERMINAL BOX. A SEPARATE COPPER CONDUCTOR SHALL BE CONNECTED BET\/YEEN MOTOR FRAME AND RIGID CONDUIT SYSTEM.
- 8. ON PANELBOARDS, PROVIDE ARC FLASH WARNING LABEL PER NEC.

WIRING DEVICES

- WIRING DEVICES SHALL BE SPECIFICATION GRADE OF THE SAME MANUFACTURER. WALL SWITCHES SHALL BE 20A, 120/277V; DUPLEX RECEPTACLES SHALL BE 2P, 3W, GROUNDING TYPE, 20A, 125V.
- 2. SINGLE POLE SWITCHES SHALL BE HUBBELL {HBL1221 OR EQUAL.
- 3. DUPLEX RECEPTACLES SHALL BE HUBBELL \$BR20 OR EQUAL.
- 4. GFCI DUPLEX RECEPTACLES SHALL BE HUBBELL §GFRST20 OR EQUAL.
- 5. MANUAL STARTERS SHALL BE SQUARE D OR ALLEN- BRADLEY MANUAL RESET TYPE WITH THERMAL OVERLOAD ELEMENTS. MANUAL STARTERS AND SWITCHES USED FOR MOTORIZED EQUIPMENT OR APPLIANCES SHALL BE PROVIDED WITH AN ENGRAVED NAMEPLATE TO IDENTIFY THE LOAD SERVED.

- DOUBLE POLE—SINGLE THROW SWITCHES SHALL BE HUBBELL #HBL3002 OR EQUAL.
- 7. DEVICE PLATES SHALL BE NYLON (IN KITCHENS WITH STAINLESS STEEL COUNTERS DEVICE PLATES SHALL BE #302 (NON-MAGNETIC) STAINLESS STEEL). THE COLOR OF THE DEVICES AND COVER PLATES SHALL BE AS DIRECTED BY ARCHITECT.
- 8. EXTERIOR DUPLEX RECEPTACLES SHALL BE WEATHER -- RESISTANT GFI, HUBBELL #GFSTWR20T OR

EQUAL WITH T&B RED DOT CODE-KEEPER OR EQUAL COVER (U.L. LISTED FOR WET LOCATION WHILE IN

- 9. COMMUNICATION DATA OUTLETS SHALL CONSIST OF OUTLET BOX AS INDICATED PREVIOUSLY WITH SINGLE GANG RAISED DEVICE COVER AND BLANK PLATE.
- 10. FLOOR BOXES SHALL BE HUBBELL SERIES S1R6 OR EQUAL.

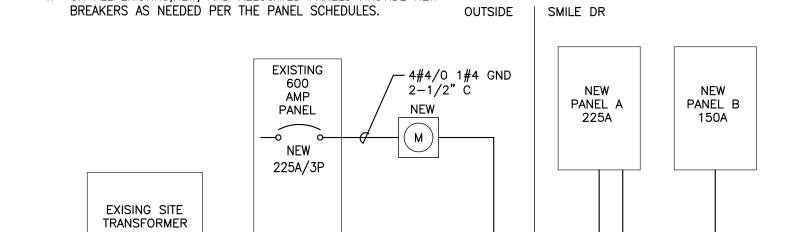
SPECIAL SYSTEMS

1. TELEPHONE BACKBOARD SHALL BE 4' HIGH X 4' WIDE AND 3/4" THICK FIRE TREATED PLYWOOD.

GENERAL ONE-LINE DIAGRAM NOTES:

EXISTING -

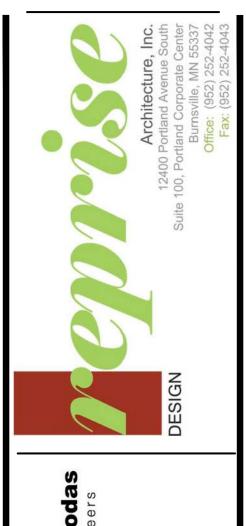
- 1. COORDINATE ALL WORK WITH LANDLORD/OWNER. 2. FIELD VERIFY EXISTING CONDITIONS PRIOR TO BID.
- 3. VERIFY AVAILABLE FAULT CURRENT AND PROVIDE EQUIPMENT WITH
- SUFFICIENT AIC RATING. 4. ON ALL EXISTING, NEW, AND RELOCATED PANELS PROVIDE NEW



ELECTRICAL ONE LINE SCALE: NO SCALE

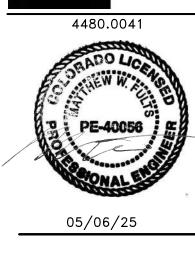
MCB, N	OUNTIN	G: SURFA	CE NEMA 1		P	ANEL	A (NEV	V)		225A, 208Y/120 VAC, 3PH, 4W, CB TYPE: BL or BLH					
	WATTS			BRKR	TRP	CCT	CCT	TRIP	BRKR			WATTS			
Α	В	С	DESCRIPTION	REQ	PLS	NO.	NO.	PLS	REQ	DESCRIPTION	Α	В	С		
733			LTG		20A-1	1	2	20A-1		RCPT - Office	720				
	1314		LTG		20A-1	3	4	20A-1		RCPT - Sterilizer Room		360			
		0	SPARE		20A-1	5	6	20A-1		RCPT - Front Desk			1000		
0			SPARE		20A-1	7	8	20A-1		RCPT - Smile Front Desk Signage	1000				
	0		SPARE		20A-1	9	10	20A-1		RCPT - Sterilizer Room		360			
		1000	Exterior Signage		20A-1	11	12	20A-1		RCPT - Sterilizer Room			360		
720			RCPT - Waiting Area		20A-1	13	14	20A-1		RCPT - Hall/ Desk Hall	540				
	720		RCPT - Waiting Area		20A-1	15	16	20A-1		RCPT - Beverage Counters		180			
		0	Spare		20A-1	17	18	20A-1		RCPT - Restroom, General			1080		
360			RCPT - Sterilizer Room		20A-1	19	20	20A-1		RCPT - Mini Lab	180				
	1200		Sterilizer - Sterilizer Room		20A-1	21	22	20A-1		RCPT - Mini Lab		180			
		1200	Sterilizer - Sterilizer Room		20A-1	23	24	20A-1		RCPT - Mini Lab			180		
1200			Sterilizer - Sterilizer Room		20A-1	25	26	20A-1		RCPT - Mini Lab	180				
	1200		Sterilizer - Sterilizer Room		20A-1	27	28	20A-1		RCPT - Hall/ Desk Hall		900			
		5520	RTU-1	HACR	500A-3	29	30	20A-1		EF-3 and EF-4			360		
5520			1	1	1	31	32	20A-1		ROOF REC	240				
	5520		1	1		33	34	30A-2		SPARE		0			
		0	SPARE		20A-1	35	36	150A -3		Panel B			11580		
0			SPARE		20A-1	37	38	1		l	10364		,		
	0		SPARE		20A-1	39	40	1		L		13092			
		360	RCPT - Sterilizer Room		20A-1	41	42	20A-1		Door Strikes			120		
										Total Connect	21757	25026	22760		
										Connect Amps		193	Amps		
										Demand Amps	÷	199	Amps		

MLO, N	OUNTIN	G: SURF	ACE NEMA 1		P	anel E	(NEW	'))		150A, 208Y/120 VAC, 3PH, 4W, CB TYPE: BL or BLH			
	WATTS			BRKR	TRP	CCT	CCT	TRIP	BRKR			WATTS	
Α	В	С	DESCRIPTION	REQ	PLS	NO.	NO.	PLS	REQ	DESCRIPTION	Α	В	С
500			RCPT - TV - Break Room		20A-1	1	2	20A-1		RCPT - XRAY - XRAY Room B2	1000		
	720		RCPT - Break Room		20A-1	3	4	20A-1		RCPT - TV, light box - XRAY RoomB4		540	
		1000	RCPT - Break Room - Fridge		20A-1	5	6	20A-1		RCPT - TC Room 107			1260
360			RCPT - Break Room - Counter		20A-1	7	8	20A-1		RCPT - TC Room 106	1260		
	500	RCPT - Break Room- Disposa			20A-1	9	10	20A-1		SPARE		0	2
		720	RCPT - Office 109		20A-1	11	12	20A-1		RCPT - IT Room 110			1260
540		RCPT - Storage, Genenal			20A-1	13	14	20A-1		RCPT - IT Room 110	1500		
	1200		RCPT - Chair - Private		20A-1	15	16	20A-1		RCPT - IT Room - Telephone Rack		360	
		1200	RCPT - Chair - Private		20A-1	17	18	20A-1		RCPT - IT Room - Telephone Rack			360
1200			RCPT - Chair - Private		20A-1	19	20	20A-1		RCPT - IT Room & Mech Room	360		
	1200		RCPT - Chair - Private		20A-1	21	22	20A-1	GFCI	Recirculation Pump		500	
		1200	RCPT - Chair - Private		20A-1	23	24	20A-1	GFCI	Washer			1920
1200			RCPT - Chair - Private		20A-1	25	26	20A-1	GFCI	Hall Rec	900		
	900		RCPT - Isles- Treatment Area		20A-1	27	28	20A-1	GFCI	Hall WC		372	
		1000	RCPT - LTG Party Pack - Treatment Area		20A-1	29	30	20A-1		Treatment Center			540
720			Dr. Perch Office		20A-1	31	32	20A-1		WATER HEATER	840	6	8
	480		RECT - Office 104		20A-1	33	34	30A-1	GFCI	DRYER		2392	0
		240	Treatment Area		20A-1	35	36	1	1	k			2392
1200			RCPT - Chair - Private		20A-1	37	38	20A-1		Spare	0		
	1200		RCPT - Chair - Private		20A-1	39	40	20A-1		Spare		0	
		0	Spare		20A-1	41	42	20A-1		Spare		·	0
										Total Connect	11580	10364	13092
										Connect Amps		97	Amps
										Demand Amps		97	Amps



- 4#1/0 1#6 GND





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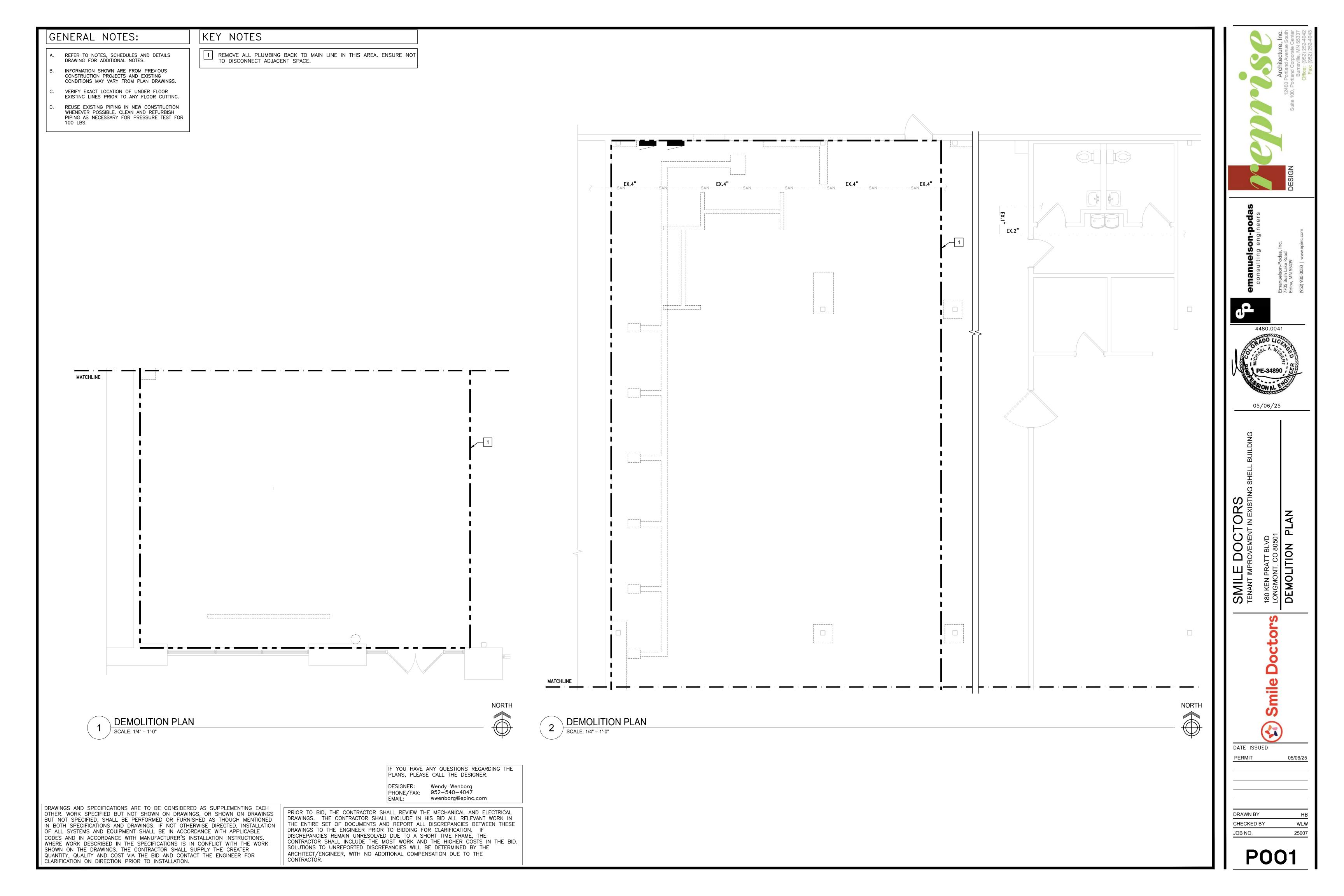
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- REFER TO NOTES, SCHEDULES AND DETAILS DRAWING FOR ADDITIONAL NOTES.
- INFORMATION SHOWN ARE FROM PREVIOUS CONSTRUCTION PROJECTS AND EXISTING
- VERIFY EXACT LOCATION OF UNDER FLOOR EXISTING LINES PRIOR TO ANY FLOOR CUTTING.
- REUSE EXISTING PIPING IN NEW CONSTRUCTION WHENEVER POSSIBLE. CLEAN AND REFURBISH PIPING AS NECESSARY FOR PRESSURE TEST FOR

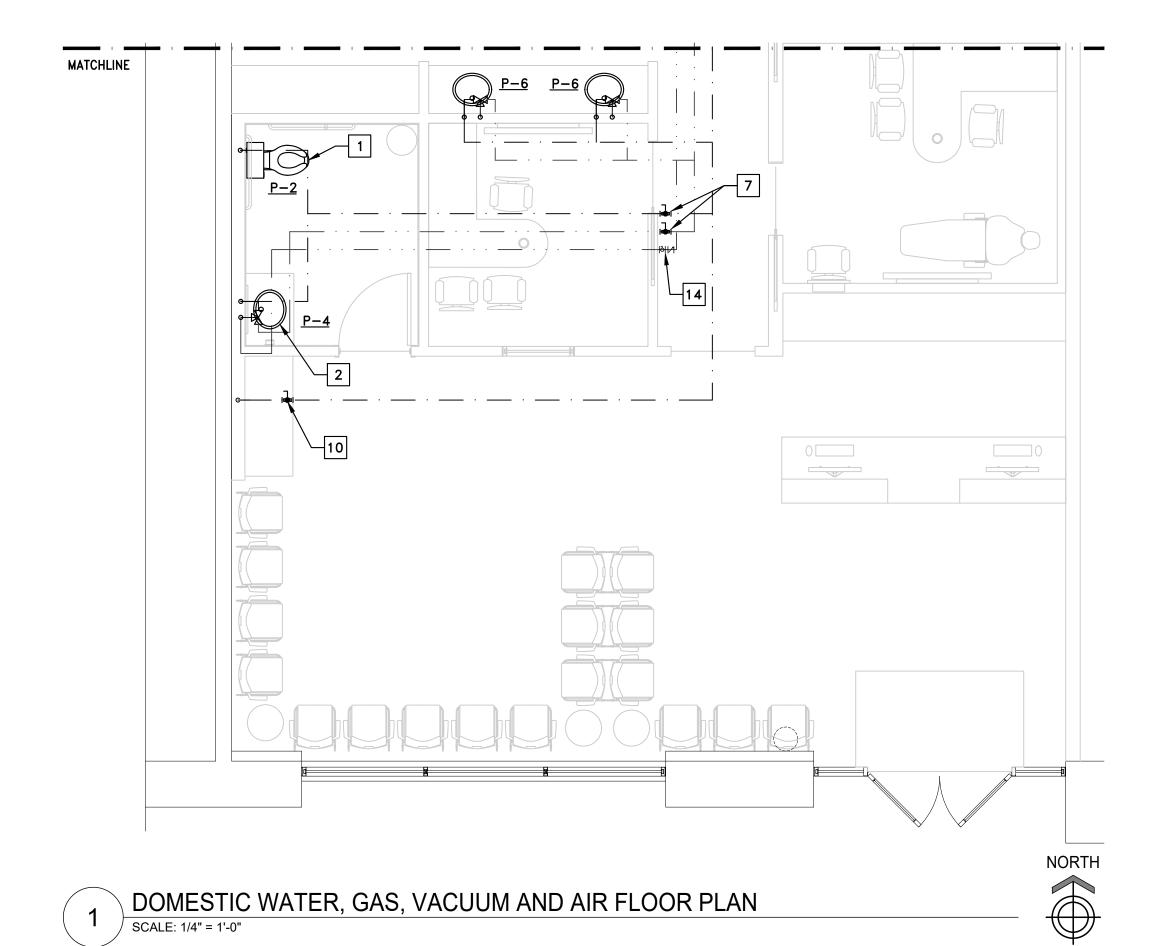
CONDITIONS MAY VARY FROM PLAN DRAWINGS.

KEY NOTES

- | | 1 | INSTALL NEW PLUMBING FIXTURE. ROUTE CW PIPING TO SERVE NEW PLUMBING FIXTURE LOCATION AS SHOWN. FIELD VERIFY LOCATION OF EXISTING CW PIPING.
- 2 INSTALL NEW SINK FIXTURE. ROUTE CW & HW PIPING TO SERVE NEW SINK LOCATION AS SHOWN. FIELD VERIFY LOCATION OF EXISTING.
- | 3 | INSTALL NEW DENTAL CHAIR I DELIVERY SYSTEM. ROUTE AIR AND VACUUM PIPING TO SERVE CHAIR AS SHOWN. ROUTE NEW PIPING TO
- 4 COORDINATE VACUUM SYSTEM WITH VACUUM EQUIPMENT SUPPLIER

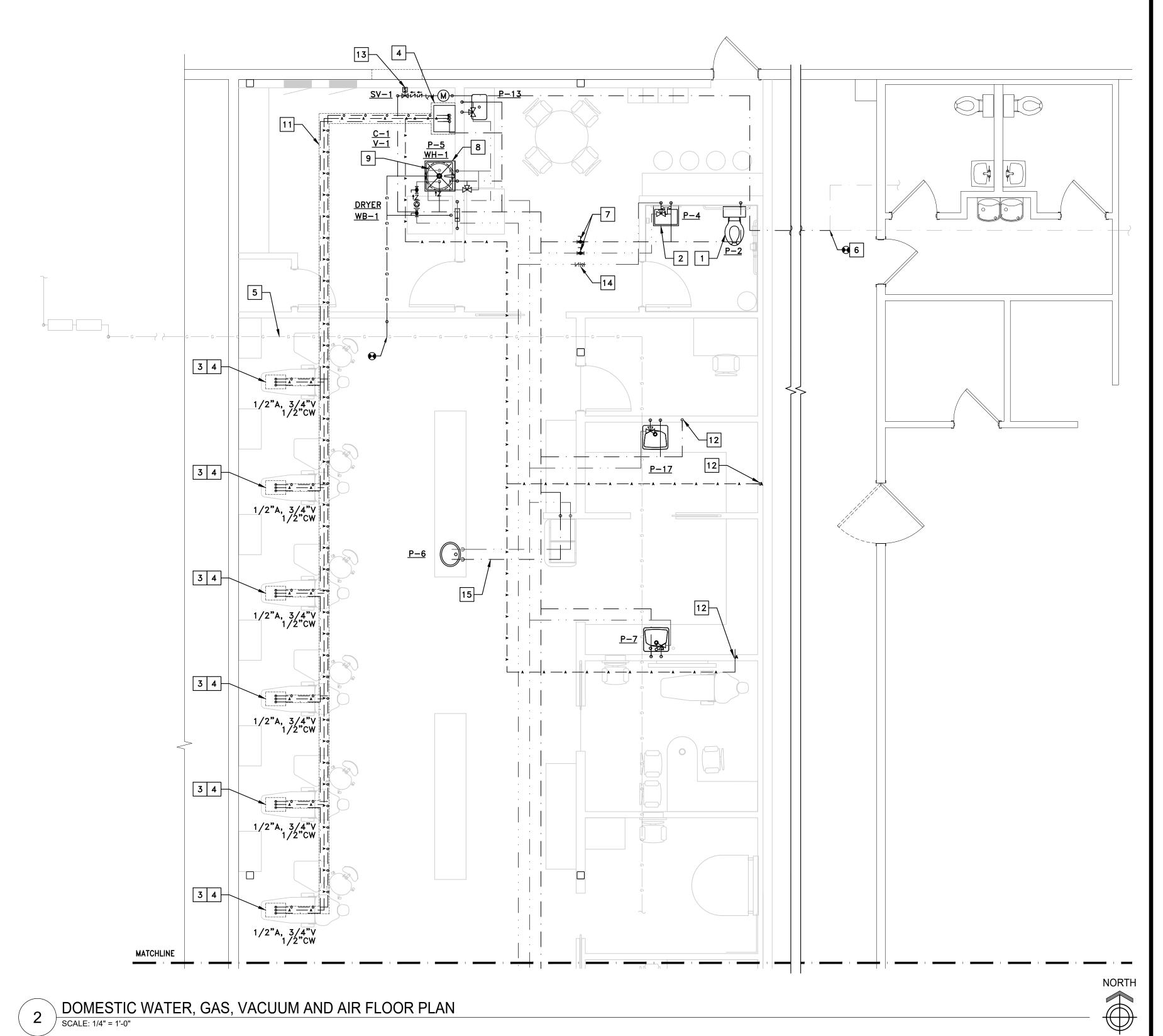
EXISTING PIPING MAINS. COORDINATE EXACT LOCATION IN FIELD.

- APPROXIMATE LOCATION OF EXISTING 2" N.G. PIPING ON ROOF. INSPECT EXISTING GAS LINE FOR PROPER WORKING ORDER AND SIZE. IF NOT IN GOOD WORKING ORDER OR CORRECT SIZE REPLACE WITH NEW 1-1/2" MINIMUM GAS SERVICE.
- | 6 | MAKE FINAL CONNECTION TO EXISTING PLUMBING SYSTEM SAME SIZE OR |
- | 7 | SHUT-OFF VALVE FOR RESTROOM ISOLATION. SEE VALVE SCHEDULE. ALL SHUT-OFF VALVES SHALL BE LOCATED OVER SUSPENDED CEILINGS FOR ACCESSIBILITY. DO NOT LOCATE IN AREAS WITH DRYWALL CEILINGS.
- 8 INSTALL NEW MOP SINK FIXTURE. ROUTE CW & HW PIPING TO SERVE NEW MOP SINK LOCATION AS SHOWN. FIELD VERIFY LOCATION OF EXISTING CW & HW PIPING. FIELD VERIFY LOCATION OF EXISTING.
- 9 INSTALL WATER HEATER. ROUTE CW & HW PIPING TO SERVE WATER HEATER LOCATION AS SHOWN. FIELD VERIFY LOCATION OF EXISTING CW & HW PIPING.
- 10 PROVIDE WATER AND SHUT-OFF VALVE FOR BEVERAGE STATION ISOLATION. SEE VALVE SCHEDULE. ALL SHUT-OFF VALVES SHALL BE LOCATED OVER SUSPENDED CEILINGS FOR ACCESSIBILITY. DO NOT LOCATE IN AREAS WITH DRYWALL CEILINGS.
- 111 PROVIDE TRENCH FOR WATER, AIR AND VACUUM PIPING. BACK FILL, COMPACT AND PATCH CONCRETE TO MATCH. G.C. SHALL PROVIDE FINAL FLOOR FINISHES I.E. CERAMIC TILE, ETC. AND PATCH WALL AS REQUIRED.
- 12 APPROXIMATE LOCATION OF WATER AND AIR CONNECTIONS AT SINK. SEE DETAILS ON SHEET A501 FOR LOCATIONS AND ELEVATIONS.
- | 13 | PROVIDE 1" SOLENOID VALVE SV-1 ON WATER MAIN.
- 14 PROVIDE CHECK VALVE AND CIRCUIT SETTER SET TO 1 GPM.
- 15 ROUTE CW AND HW PIPING UNDER FLOOR TO SINK.



DOMESTIC WATER, GAS, VACUUM AND AIR FLOOR PLAN

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



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DOMESTIC WATER, GAS, VACUUM AND AIR FLOOR PLAN

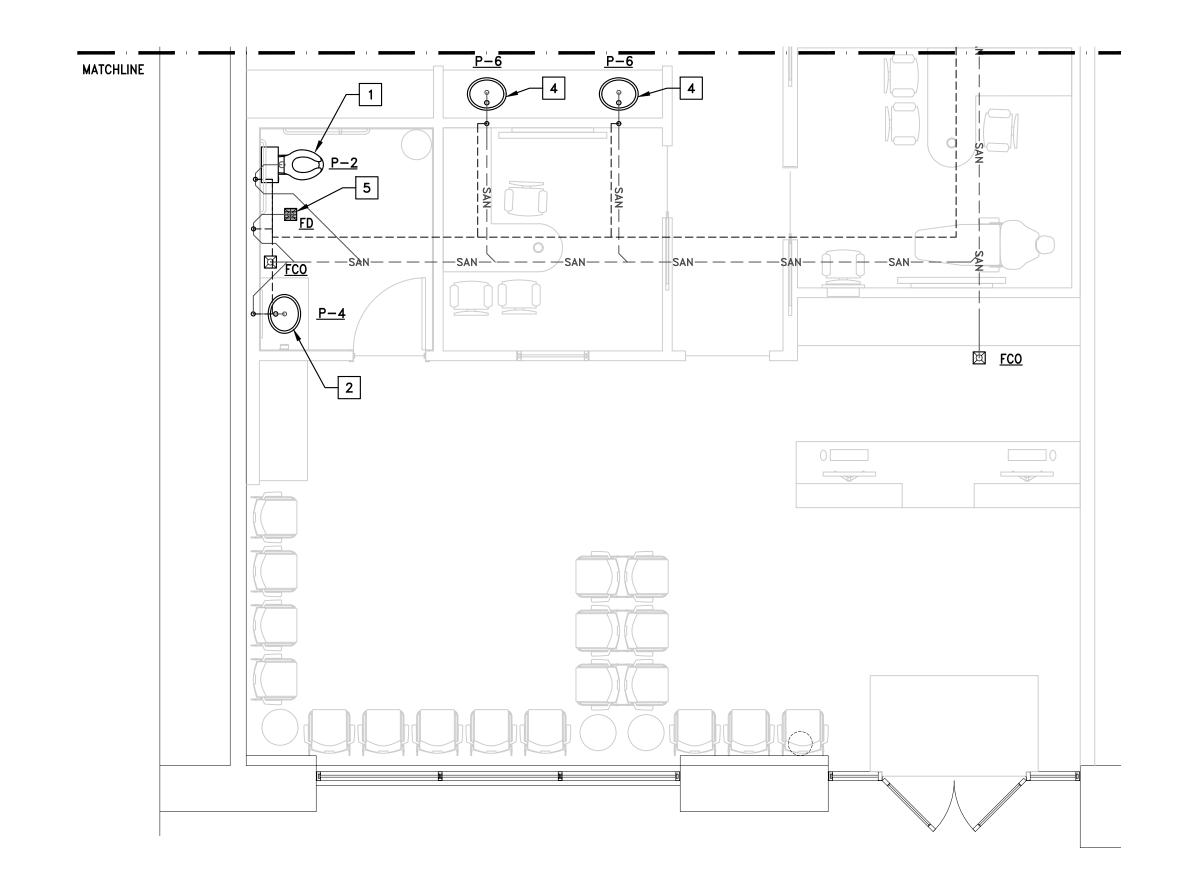
SCALE: 1/4" = 1'-0"

GENERAL NOTES:

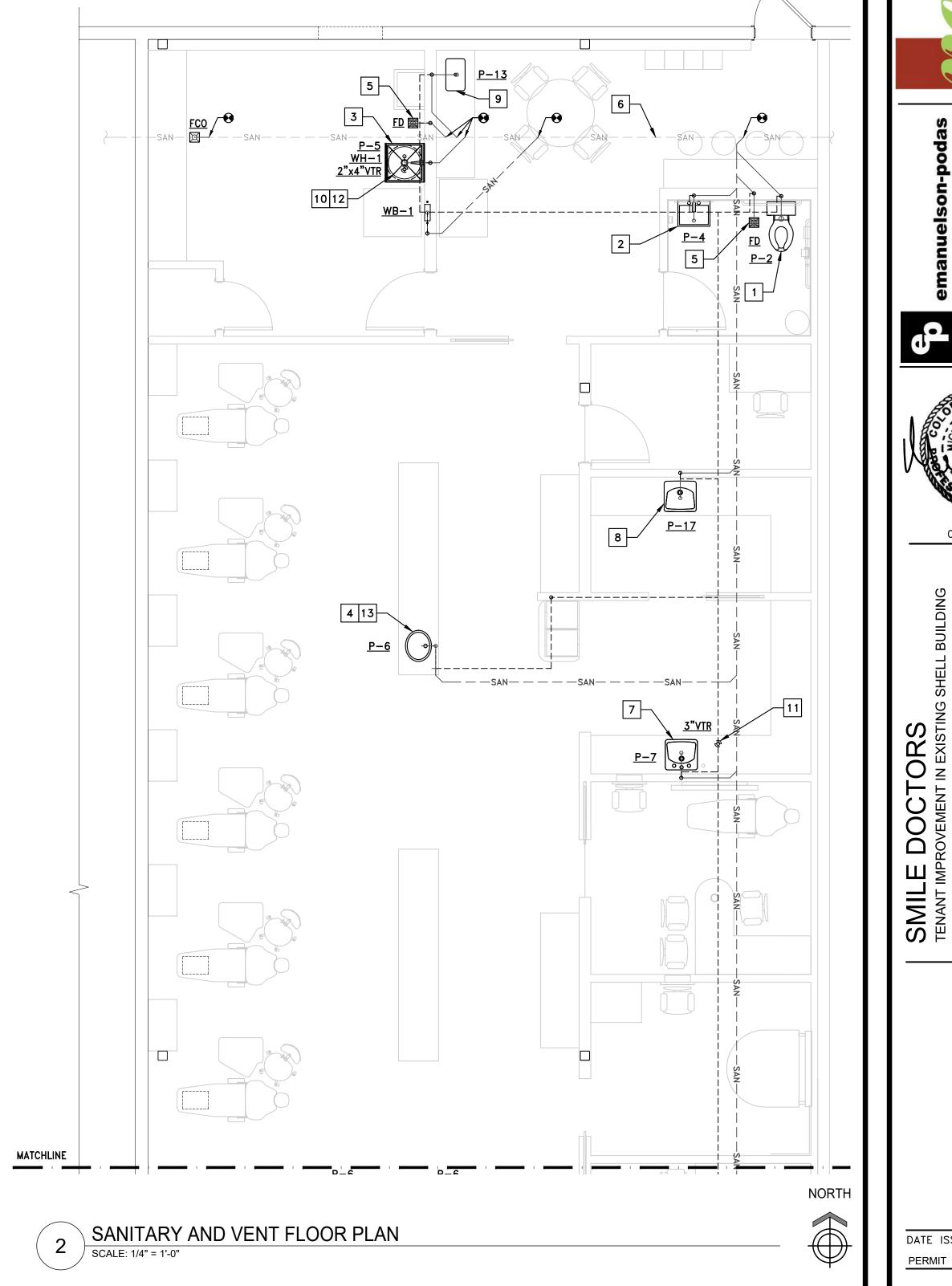
- REFER TO NOTES, SCHEDULES AND DETAILS DRAWING FOR ADDITIONAL NOTES.
- INFORMATION SHOWN ARE FROM PREVIOUS CONSTRUCTION PROJECTS AND EXISTING CONDITIONS MAY VARY FROM PLAN DRAWINGS.
- VERIFY EXACT LOCATION OF UNDER FLOOR EXISTING LINES PRIOR TO ANY FLOOR CUTTING.
- REUSE EXISTING PIPING IN NEW CONSTRUCTION WHENEVER POSSIBLE. CLEAN AND REFURBISH PIPING AS NECESSARY FOR PRESSURE TEST FOR

KEY NOTES

- 1 INSTALL NEW PLUMBING FIXTURE. INSTALL NEW SANITARY WASTE AND CONCEALED VENT PIPING.
- 2 INSTALL NEW LAVATORY SINK FIXTURE. INSTALL NEW SANITARY WASTE AND CONCEALED VENT PIPING.
- 3 INSTALL NEW MOP SINK FIXTURE. INSTALL NEW SANITARY WASTE AND CONCEALED VENT PIPING.
- 4 INSTALL NEW BRUSH SINK. PROVIDE NEW STOP VALVES AND "P" TRAP AS REQUIRED. INSTALL NEW SANITARY WASTE AND CONCEALED VENT
- 5 | INSTALL NEW FS OR FD. INSTALL NEW SANITARY WASTE AND CONCEALED VENT PIPING.
- 6 VERIFY SIZE LOCATION OF EXISTING SANITARY BEFORE ANY FLOOR CUTTING. MAKE FINAL CONNECTION TO EXISTING PLUMBING SYSTEM SAME SIZE OR LARGER.
- 7 | INSTALL NEW STERI-CENTER SINK. PROVIDE NEW STOP VALVES AND "P" TRAP AS REQUIRED. INSTALL NEW SANITARY WASTE AND CONCEALED VENT PIPING.
- 8 INSTALL NEW MINI-LAB SINK. PROVIDE NEW STOP VALVES AND "P" TRAP AS REQUIRED. INSTALL NEW SANITARY WASTE AND CONCEALED VENT
- 9 INSTALL NEW BREAK ROOM SINK. PROVIDE NEW STOP VALVES AND "P" TRAP AS REQUIRED. INSTALL NEW SANITARY WASTE AND CONCEALED VENT PIPING.
- 10 INSTALL NEW GAS HOT WATER HEATER ON SHELF. EXTEND CONDENSATE AND T&P RELIEF VALVE SEPARATELY TO MOP SINK. SEE DETAIL
- 11 PROVIDE NEW VENT THRU ROOF. MAINTAIN 10' CLEARANCE FROM ALL FRESH AIR INTAKES. COORDINATE LOCATION WITH EXISTING ROOF EQUIPMENT AND PIPING.
- 12 PROVIDE NEW CONCENTRIC VENT THRU ROOF FOR WATER HEATER VENT AND FLUE. MAINTAIN 10' CLEARANCE FROM ALL FRESH AIR INTAKES. COORDINATE LOCATION WITH EXISTING ROOF EQUIPMENT AND PIPING.
- $|\hspace{.06cm}\overline{\hspace{.06cm}}\hspace{.06cm}\overline{\hspace{.06cm}}\hspace{.06cm}$ Provide island vent for sink. Route vent as high as possible in $|\hspace{.06cm}\overline{\hspace{.06cm}}\hspace{.06cm}$ MILLWORK. SEE DETAIL 7/P300.







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GAS LOAD SCHEDULE							
EQUIPMENT	INPUT (BTU/HR)	GAS FLOW (1,000 BTU/CF) (CF/HR)					
ROOFTOP UNIT (RTU-A)	224,000	224					
WATER HEATER (WH-1)	130,000	130					
DRYER	40,000	40					
TOTAL	354,000	354					

NOTES:

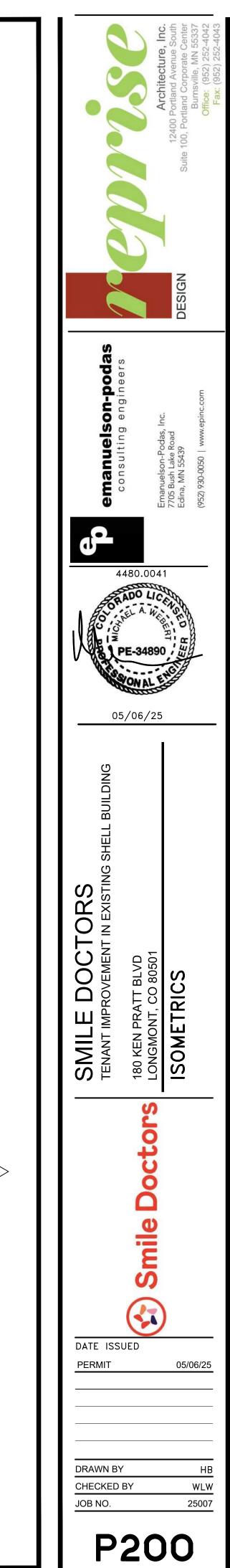
1. GAS PIPING SIZED USING 2018 IFGC TABLE 402.4(1); LESS THAN 2 PSI INCOMING WTH 0.3 IN. WC DROP AND EQUIVALENT LENGTH OF 90 FT. CONTRACTOR TO VERIFY SIZING IN FIELD. IF PRESSURE DOES NOT MATCH PLANS, CONTACT ENGINEER FOR RE-SIZING.

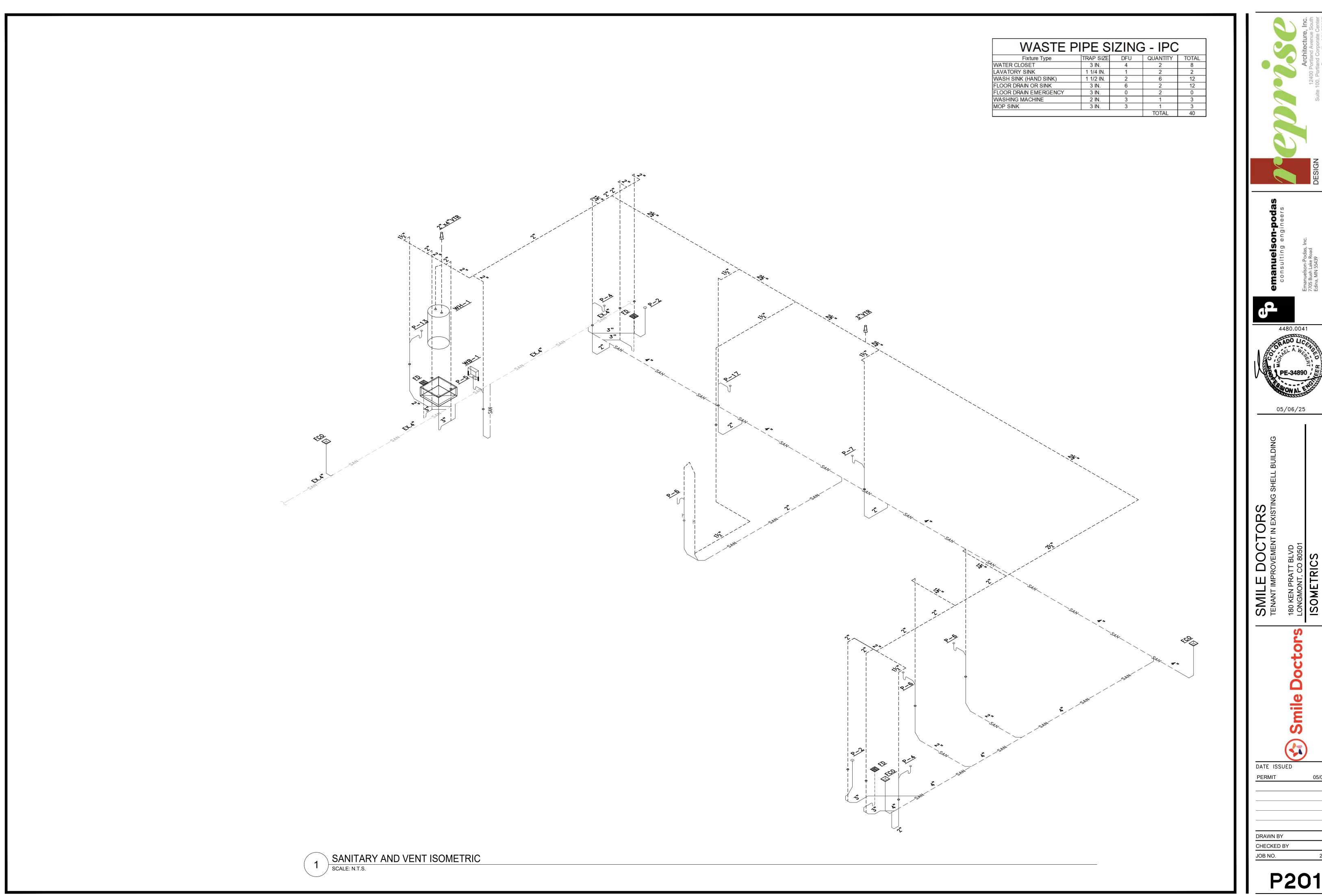
2. GAS PRESSURE AT EACH APPLIANCE SHALL BE ACCORDING TO WORKING PRESSURE 402.4(1) TABLE. CONTRACTOR TO INSTALL GAS BOOSTER AND/OR PRESSURE REDUCER AS NECESSARY. FINAL INSTALLATION SHALL BE DETERMINED WITH FINAL UTILITY DELIVERY PRESSURE

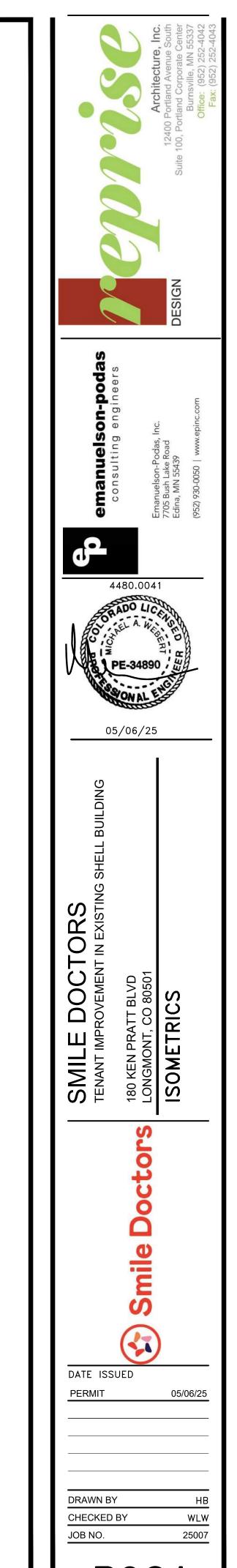
3. PLUMBING CONTRACTOR SHALL INSTALL GAS SHUT OFF VALVES AND UNIONS FOR ALL GAS APPLIANCES.

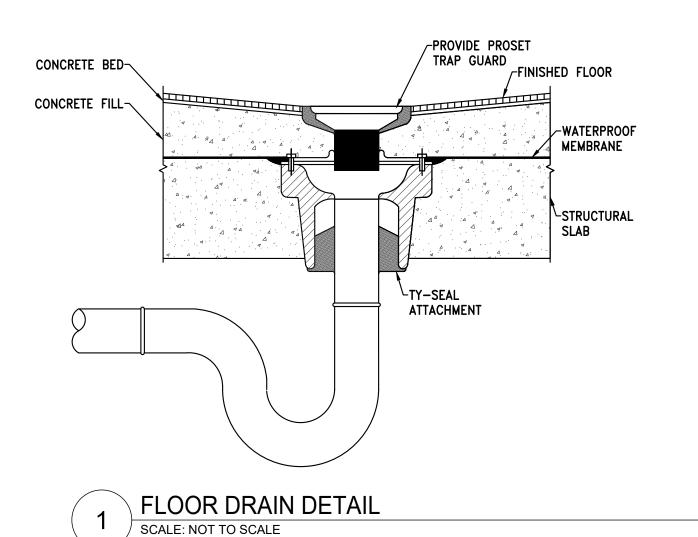
4. CONTRACTOR SHALL VERIFY EXISTING GAS METER CAPACITY. CONTRACTOR RESPONSIBLE FOR INCREASING NATURAL GAS SERVICE INCREASE AND REPLACING THE EXISTING METER WITH A SUITABLE REPLACEMENT IF EXISTING SERVICE AND METER ARE NOT ADEQUATE.

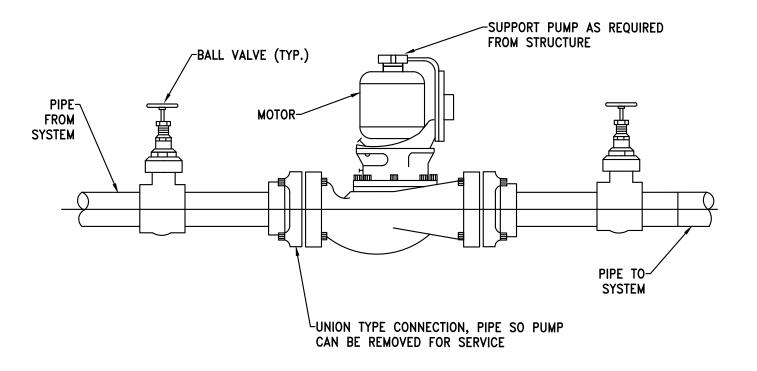
SUPPLY PIPE SIZING - IPC Fixture Type SIZE SUPPLY HW SUPPLY CW QUANTITY TOTAL URINAL 1 IN. 0 5 0 0 WATER CLOSET 1 IN. 0 5 2 10 LAVATORY SINK 1/2 IN. 1.5 1.5 2 6 WASH SINK (HAND SINK) 1/2 IN. 1.5 1.5 6 18 MOP SINK 3/4 IN. 1.5 1.5 1 3 WASHING MACHINE 3/4 IN. 2.25 2.25 1 4.5 WATER FILTATION SYSTEM 3/4 IN. 0 1 7 7 TOTAL 48.5	Three was
	WE TO SERVICE OF THE PARTY OF T
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DOMESTIC WATER, GAS, VACUUM AND AIR ISOMETRIC scale: N.T.S.	The state of the s



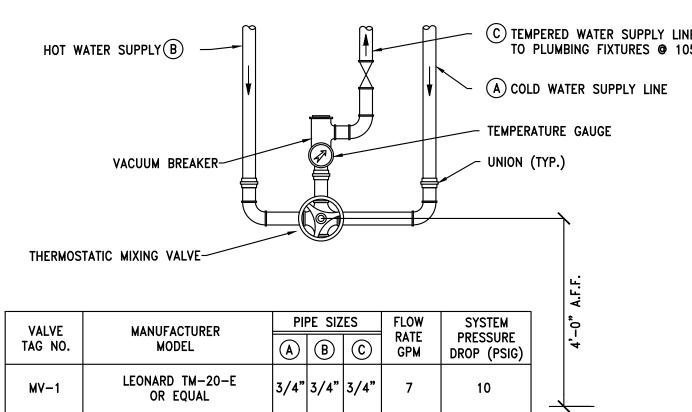


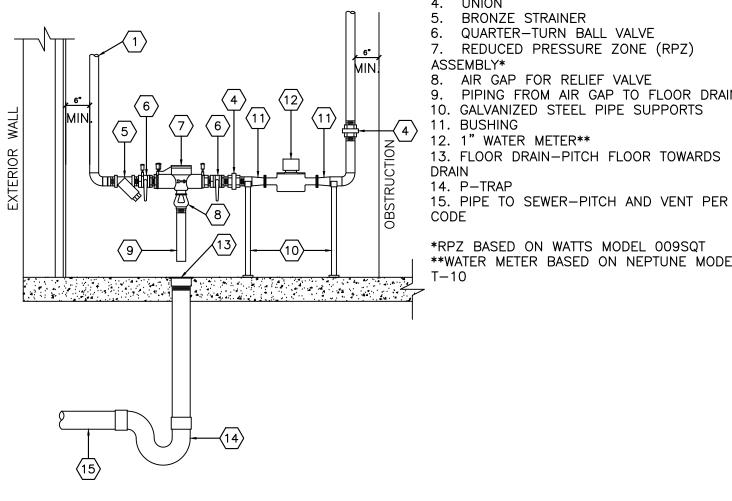




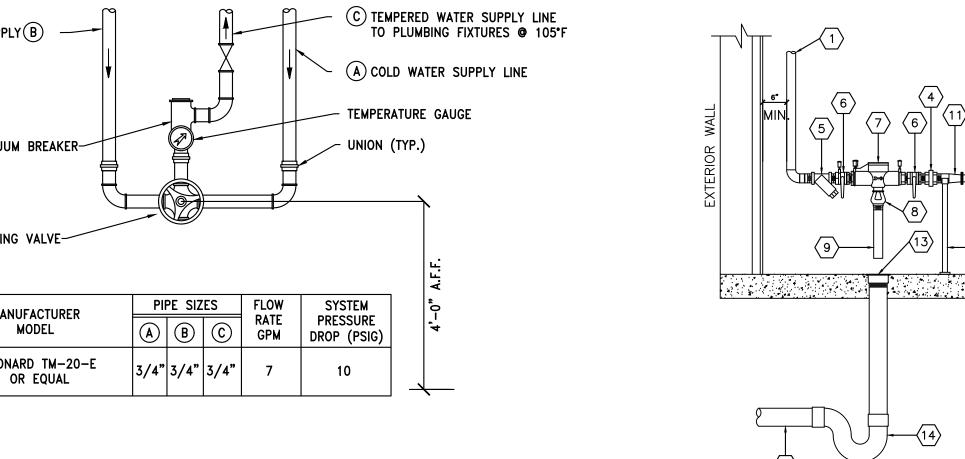


HOT WATER RECIRCULATING PUMP DETAIL SCALE: NOT TO SCALE

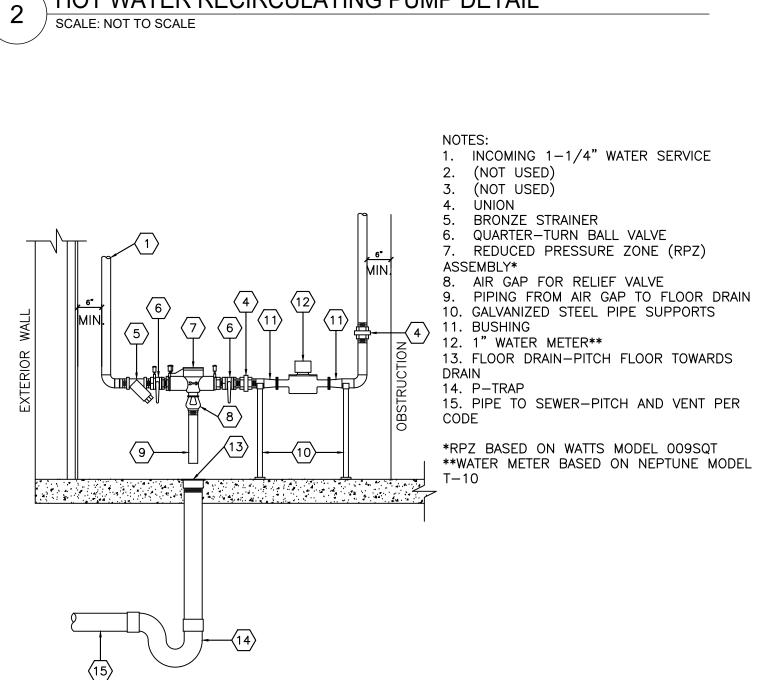


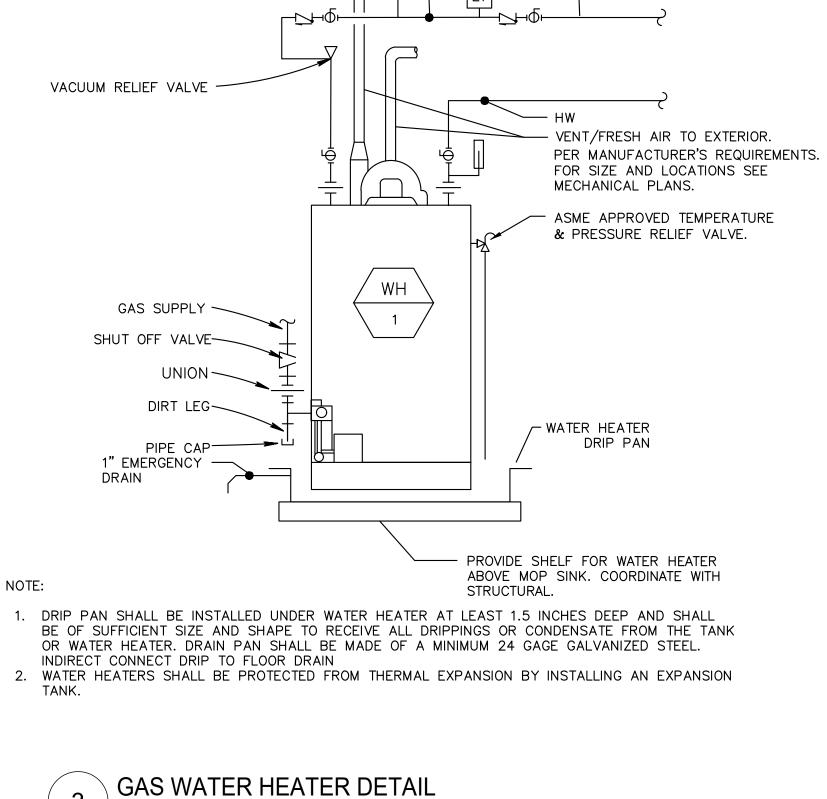












HOT WATER RECIRCULATION -

FIXTURE SCHEDULE ON

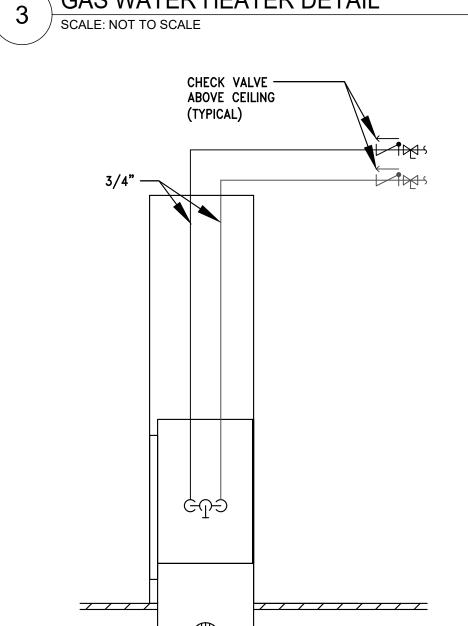
P-401.

PUMP P-1. SEE PLUMBING

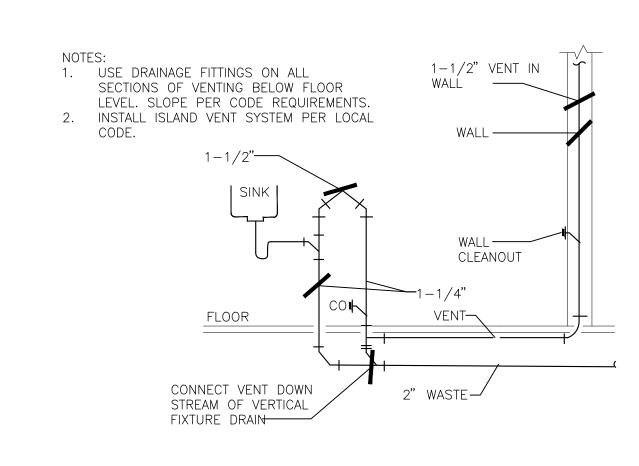
— HOT WATER RECIRCULATION

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SPACE

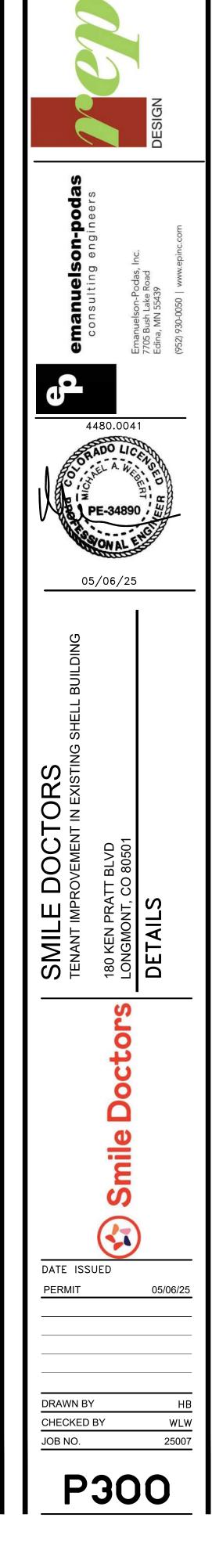


MOP SINK DETAIL SCALE: NOT TO SCALE



MIXING VALVE DETAIL
SCALE: NOT TO SCALE





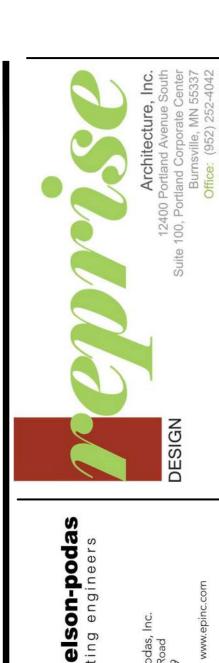
GENERAL NOTES

- 1. WORK TO BE ACCOMPLISHED ON THESE DRAWINGS AND THE ACCOMPANYING SPECIFICATIONS INCLUDES THE FURNISHING OF ALL LABOR, MATERIALS, EQUIPMENT, AND SERVICES NECESSARY FOR THE PROPER COMPLETION OF ALL MECHANICAL WORK.
- 2. BEFORE SUBMITTING A PROPOSAL ON THE WORK CONTEMPLATED ON THESE DRAWINGS AND ACCOMPANYING SPECIFICATIONS, EACH BIDDER SHALL EXAMINE THE SITE, CHECK AS TO THE MEANS OF MAKING CONNECTIONS TO SERVICES, AND SHALL BECOME FAMILIAR WITH ALL THE EXISTING CONDITIONS AND LIMITATIONS. MECHANICAL EQUIPMENT AND SYSTEMS SHOWN AS EXISTING ON THE PLANS HAVE BEEN BASED ON EXISTING DRAWINGS. NO EXTRAS WILL BE ALLOWED BECAUSE OF THE CONTRACTOR'S MISUNDERSTANDING AS TO THE AMOUNT OF WORK INVOLVED OR HIS LACK OF KNOWLEDGE OF ANY SITE CONDITIONS WHICH MAY AFFECT HIS WORK. ANY APPARENT VARIANCE OF THE PLAN OR SPECIFICATION FROM EXISTING CONDITIONS AT THE SITE SHALL BE CALLED TO THE 41. FIRE CAULK ALL FLOOR PENETRATIONS AND WHERE PIPING PENETRATES RATED WALLS. ATTENTION OF THE ENGINEER DURING THE BID PERIOD SO CLARIFICATION CAN BE MADE BY ADDENDUM.
- 3. EXISTENCE OF ANY WIRES, CONDUITS, PIPES, DUCTS, OR OTHER FACILITIES ARE SHOWN IN A GENERAL WAY ONLY. IT WILL BE THE DUTY OF THE CONTRACTOR TO VISIT THE SITE AND MAKE EXACT DETERMINATION OF THE EXISTENCE OF ANY SUCH FACILITIES PRIOR TO THE SUBMISSION OF HIS BID. IT IS UNDERSTOOD THAT HE WILL BE RESPONSIBLE FOR MAKING THE EXACT DETERMINATION OF THE LOCATION AND CONDITION OF SUCH FACILITIES.
- 4. ALL REQUIRED FEES, PERMITS, AND INSPECTIONS SHALL BE OBTAINED AND/OR ARRANGED FOR BY THE CONTRACTOR UNDER THE SECTION OF THE SPECIFICATIONS FOR WHICH THEY ARE REQUIRED.
- 5. REGULAR INSPECTIONS SHALL BE ARRANGED BY THE CONTRACTOR AS REQUIRED BY ANY AND ALL REGULATIONS. ALL CHARGES FROM REGULATING AGENCIES FOR INSPECTIONS OF INSTALLATIONS OR REVIEW OF PLANS AND SPECIFICATIONS SHALL BE PAID BY THE CONTRACTOR.
- 6. CERTIFICATE OF FINAL INSPECTION. UNDER EACH APPLICABLE SECTION OF THE SPECIFICATIONS, CONTRACTOR SHALL, UPON COMPLETION OF THE WORK UNDER THAT SECTION, FURNISH A CERTIFICATE OF FINAL INSPECTION TO THE ENGINEER FROM THE INSPECTION DEPARTMENT HAVING JURISDICTION.
- 7. ALL MATERIALS AND WORKMANSHIP SHALL COMPLY WITH ALL CURRENT AND APPLICABLE CODES, SPECIFICATIONS, ORDINANCES, LAWS, REGULATIONS, INDUSTRY STANDARDS, AND UTILITY COMPANY
- 8. IN CASE OF DIFFERENCE AMONG BUILDING CODES, SPECIFICATIONS, STATE LAWS, LOCAL ORDINANCES, INDUSTRY STANDARDS, AND UTILITY COMPANY REGULATIONS AND THE CONTRACT DOCUMENTS, THE MOST STRINGENT SHALL GOVERN. CONTRACTOR SHALL PROMPTLY NOTIFY THE ENGINEER IN WRITING OF ANY SUCH DIFFERENCE.
- 9. ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS AND ORDINANCES SHALL BE ADHERED TO THROUGHOUT THE CONSTRUCTION PROJECT.
- 10. NON-COMPLIANCE. SHOULD THE CONTRACTOR PERFORM ANY WORK THAT DOES NOT COMPLY WITH THE REQUIREMENTS OF THE APPLICABLE BUILDING CODES, STATE LAWS, LOCAL ORDINANCES, INDUSTRY STANDARDS, AND UTILITY COMPANY REGULATIONS, HE SHALL BEAR ALL COSTS ARISING TO CORRECT THE DEFICIENCIES.
- 11. CONTRACTOR SHALL INITIATE, MAINTAIN, AND SUPERVISE ALL SAFETY PRE-CAUTIONS REQUIRED FOR HIS WORK, INCLUDING REGULATIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA).
- 12. DRAWINGS ARE TO SCALE AS NOTED, BUT THE CONTRACTOR SHALL REFER TO ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR EXACT LOCATION OF PARTITIONS, WALLS, BEAMS, SHAFTS, EQUIPMENT, ETC.
- 13. EACH TRADE SHALL OBTAIN DRAWINGS AND SPECIFICATIONS OF ALL OTHER TRADES AND COORDINATE HIS WORK
- 14. DRAWINGS SHOW THE GENERAL ARRANGEMENT OF DUCTWORK, PIPING, EQUIPMENT, AND APPURTENANCES AND SHALL BE FOLLOWED AS CLOSELY AS ACTUAL BUILDING CONSTRUCTION AND WORK OF OTHER TRADES WILL PERMIT. MECHANICAL WORK SHALL CONFORM TO THE REQUIREMENTS SHOWN ON ALL OF THE DRAWINGS. ARCHITECTURAL AND STRUCTURAL DRAWINGS SHALL TAKE PRECEDENCE OVER MECHANICAL DRAWINGS. BECAUSE OF THE SMALL SCALE OF THE MECHANICAL DRAWINGS, IT IS NOT POSSIBLE TO INDICATE ALL OFFSETS, FITTINGS, AND ACCESSORIES THAT MAY BE REQUIRED.
- 15. DISCREPANCIES DISCOVERED BEFORE OR AFTER WORK HAS STARTED SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY, AND THE ENGINEER RESERVES THE RIGHT TO REQUIRE MINOR CHANGES IN THE WORK OF ANY CONTRACTOR TO ELIMINATE SUCH DISCREPANCIES WITH NO CHANGE IN CONTRACT COST.
- 16. PLANS AND SPECIFICATIONS ARE COMPLEMENTARY, AND WHAT IS CALLED FOR IN EITHER ONE SHALL BE AS BINDING AS IF CALLED FOR IN BOTH.
- 17. WHERE A DISAGREEMENT EXISTS BETWEEN THE PLANS AND SPECIFICATIONS, THE ITEM OR ARRANGEMENT OF BETTER QUALITY, GREATER QUALITY, OR HIGHER COST SHALL BE INCLUDED IN THE BID.
- 18. ACCESS PANELS SHALL BE FURNISHED BY THE TRADE REQUIRING THEM AND DELIVERED TO THE GENERAL CONTRACTOR FOR INSTALLATION.
- 19. ALL MATERIALS AND EQUIPMENT SHALL BE STORED IN SUCH A PLACE AND IN SUCH A MANNER THAT A MINIMUM OF CONGESTION WILL RESULT. THE PLACING OF SUCH MATERIALS AND EQUIPMENT SHALL BE SUBJECT TO THE APPROVAL OF THE OWNER.
- 20. CONTRACTOR SHALL THOROUGHLY EXAMINE THE EXISTING BUILDING WITH REGARD TO WHAT TEMPORARY MEASURES HE MUST TAKE IN ORDER TO PERMIT THE OWNER TO OCCUPY SPECIFIC AREAS OF THE BUILDING DURING THE VARIOUS CONSTRUCTION PHASES. REFER TO ARCHITECTURAL SPECIFICATION SECTION FOR CONSTRUCTION SEQUENCING SCHEDULE. IN GENERAL, SYSTEMS MUST REMAIN IN USE IN THOSE DESIGNATED AREAS TO PERMIT THE OWNER TO FUNCTION IN A PRE-CONSTRUCTION MANNER.
- 21. EACH CONTRACTOR SHALL COORDINATE WORK WITH OTHER TRADES IN THE INSTALLATION OF EQUIPMENT, PIPING, CONDUIT, AND DUCTWORK.
- 22. DRAWINGS WILL BE FORWARDED TO THE PIPING CONTRACTOR AND ELECTRICAL CONTRACTOR FOR INCLUSION OF THEIR SYSTEMS WORK.
- 23. CONTRACTORS SHALL SOLVE ALL COORDINATION CONFLICTS AMONG THEMSELVES WHEN POSSIBLE. ENGINEER WILL ARBITRATE WHEN NECESSARY, AND HIS JUDGMENT WILL STAND, WITH NO ADDITIONAL COST TO THE OWNER.
- 24. NORMAL USE OF THE FACILITY SHALL NOT BE DISTURBED, EXCEPT WITHIN THE IMMEDIATE CONSTRUCTION AREA. ALL WALKS, DRIVEWAYS, AND ENTRANCES SHALL BE KEPT CLEAR AND FREE OF ALL CONTRACTOR'S EQUIPMENT, MATERIAL, AND DEBRIS AT ALL TIMES.
- 25. ACCESS PANELS SHALL BE AS MANUFACTURED BY MILCOR, OR APPROVED EQUAL, AND OF TYPE THAT COMPATIBLE WITH CONSTRUCTION AND FINISH OF THE WALL AND/OR CEILING
- 26. EACH TRADE SHALL PERFORM ALL CUTTING AND PATCHING NECESSARY IN ORDER TO PERFORM THE WORK, UNLESS SUCH WORK HAS BEEN DELEGATED TO THE GENERAL CONTRACTOR/ANOTHER TRADE. HOWEVER, SPECIAL PERMISSION SHALL BE OBTAINED FROM THE ENGINEER BEFORE CUTTING STRUCTURAL MEMBERS OR FINISHED MATERIALS. ALL PATCHING SHALL BE PERFORMED IN SUCH MANNER AS TO LEAVE NO VISIBLE TRACE AND TO RETURN THE PART AFFECTED TO THE CONDITION OF UNDISTURBED WORK. PATCHING WORK SHALL BE PERFORMED BY PERSONS EXPERIENCED, SKILLED, AND LICENSED FOR THE PARTICULAR TYPE OF WORK INVOLVED. INFERIOR WORK WILL NOT BE ACCEPTED. ALL HOLES IN MASONRY SHALL BE DRILLED WITH ROTARY DRILLS. IMPACT TOOLS SHALL NOT BE USED.
- 27. EACH TRADE SHALL BEAR THE EXPENSE OF ALL CUTTING, PATCHING, REPAIRING, OR REPLACING OF THE WORK OF OTHER TRADES REQUIRED BECAUSE OF HIS FAULT, ERROR, OR TARDINESS OR BECAUSE OF ANY DAMAGE DONE BY HIM.
- 28. EACH TRADE SHALL PROVIDE ALL HOLES AND OPENINGS REQUIRED FOR HIS WORK, UNLESS SUCH HOLES AND OPENINGS ARE SHOWN TO BE PROVIDED ON THE ARCHITECTURAL OR STRUCTURAL
- 29. EACH TRADE SHALL REMOVE EXISTING WORK THAT IS SHOWN, SPECIFIED, OR OBVIOUSLY NECESSARY FOR COMPLETION OF HIS WORK. OWNER SHALL HAVE THE OPTION OF RETAINING ANY ITEM OR MATERIAL REMOVED UNDER THIS CONTRACT. ITEMS OR MATERIALS NOT RETAINED BY OWNER SHALL BECOME THE PROPERTY OF THE TRADE AND SHALL BE REMOVED FROM THE PREMISES.
- 30. EACH TRADE SHALL PERIODICALLY CLEAR AWAY ALL DEBRIS, SURPLUS MATERIALS, ETC., RESULTING FROM HIS WORK OR OPERATIONS, LEAVING THE JOB AND THE EQUIPMENT FURNISHED UNDER ANY OR ALL CONTRACTS IN A CLEAN CONDITION.
- 31. EACH TRADE SHALL TEST THE EQUIPMENT PROVIDED AND/OR INSTALLED UNDER THE SPECIFICATION AND SHALL DEMONSTRATE ITS PROPER OPERATION TO THE OWNER'S OPERATING ENGINEER.
- 32. EACH TRADE SHALL FURNISH, WITHOUT ADDITIONAL EXPENSE TO THE OWNER, THE SERVICES OF COMPETENT INSTRUCTORS, WHO WILL GIVE FULL INSTRUCTION IN THE CARE, ADJUSTMENT, AND OPERATION AND MAINTENANCE OF ALL PARTS OF THE EQUIPMENT TO THE OWNER'S PERMANENT EMPLOYEES WHO ARE TO HAVE CHARGE OF THE EQUIPMENT.
- 33. EACH SUBCONTRACTOR SHALL BE RESPONSIBLE FOR TESTED & RATED FIRE STOP SYSTEMS FOR ALL THRU-PENETRATION OF WALLS, FLOORS & ROOF ASSEMBLIES RESULTING FROM PIPING & OTHER WORK UNDER HIS CONTRACT. REFER TO SPECIFICATION SECTION FOR FIRE STOPPING FOR REQUIREMENTS.
- 34. ALL WOOD NAILERS AND OTHER LUMBER WHICH IS INSTALLED IN CONTACT WITH METAL, CONCRETE, OR MASONRY SHALL BE PRESSURE TREATED AGAINST DECAY (UNLESS OTHERWISE NOTED).
- 35. PROVIDE ONLY PRODUCTS FROM MANUFACTURERS WITH LOCAL REPRESENTATION THAT CAN PROVIDE COMPLETE COVERAGE, SERVICE, PARTS AND LABOR OF THEIR PRODUCTS IN A TIMELY MANNER.
- 36. MATERIAL EXPOSED WITHIN RETURN AIR PLENUM CEILINGS SHALL COMPLY WITH CURRENT MECHANICAL

- 37. COORDINATE UNDERGROUND PIPING WITH GENERAL CONTRACTOR TO ENSURE PROPER FOOTING DEPTH CLEARANCE.
- 38. PROVIDE ALL MATERIALS AND EQUIPMENT AND PERFORM ALL LABOR REQUIRED TO INSTALL COMPLETE AND OPERABLE PLUMBING SYSTEM AS INDICATED ON THE DRAWINGS, AS SPECIFIED, AND AS
- 39. ELEVATIONS SHOWN ARE TO THE INVERT OF ALL PIPING BASED ON ARCHITECTURAL FINISHED FLOOR ELEVATION (FFE) OF 100'-0", UNLESS NOTED OTHERWISE.
- 40. MAKE CONNECTIONS TO EQUIPMENT AND CONTROLS.

	LEGEND
	AIR PIPING
	COLD WATER PIPING
	HOT WATER PIPING (110°F)
	HOT WATER PIPING (140°F)
c c c c	GAS PIPING
	RECIRCULATED HOT WATER PIPING (110°)
	RECIRCULATED HOT WATER PIPING (140°)
— — — SAN— — — — SAN— — —	UNDERGROUND WASTE PIPING
o o o	VACUUM PIPING
	VENT PIPING
	FLOOR DRAIN
	CLEAN-OUT (FLOOR OR YARD)
	FLOOR SINK
•	CONNECT TO EXISTING
M	WATER METER
	CIRCUIT SETTER VALVE AND CHECK VALVE
	SOLENOID VALVE
14	QUARTER-TURN BALL VALVE
→ ₩₩	RPZ BACKFLOW PREVENTER
12	CHECK VALVE

校 12 12 12 12 12 12 12	SOLENOID VALVE QUARTER-TURN BALL VALVE RPZ BACKFLOW PREVENTER CHECK VALVE					
ABBI	REVIATIONS					
ACM	AREA CONSTRUCTION MANAGE					
AVB	ATMOSPHERIC VACUUM BREAKER					
со	CLEAN-OUT					
сw	COLD WATER					
FCO	FLOOR CLEAN-OUT					
FD	FLOOR DRAIN					
FPC	FIRE PROTECTION CONTRACTO					
FS	FLOOR SINK					
нw	HOT WATER					
HWR	HOT WATER RECIRCULATION					
GC	GENERAL CONTRACTOR					
GPF	GALLONS PER FLUSH					
GPM	GALLONS PER MINUTE					
МС	MECHANICAL CONTRACTOR					
NPS	NATIONAL PIPE THREAD STANDARD					
NPT	NATIONAL PIPE THREAD TAPERED					
ОН	OVERHEAD					
PC	PLUMBING CONTRACTOR					
RC	REFRIGERATION CONTRACTOR					
RPZ	REDUCED PRESSURE PRINCIP BACKFLOW PREVENTER					
SS	SANITARY SEWER					
ST	STORM SEWER					
SVB	ANTI-SIPHON, SPILL RESISTAI VACUUM BREAKER					
UG	UNDERGROUND					





05/06/25

DATE ISSUED 05/06/25 DRAWN BY CHECKED BY

JOB NO.

DIVISION 15000 - MECHANICAL

SECTION 15001 - BASIC MECHANICAL REQUIREMENTS

GENERAL CONDITIONS

- THE DRAWINGS AND GENERAL CONDITIONS, INCLUDING SUPPLEMENTARY GENERAL CONDITIONS SHALL APPLY TO ALL WORK IN DIVISION 15000.
- THE CONTRACTOR FOR THIS DIVISION SHALL REVIEW THE DRAWINGS AND ACCOMPANYING SPECIFICATIONS, EXAMINE THE SITE, CHECK AS TO THE MEANS OF MAKING CONNECTIONS TO SERVICES, AND SHALL BECOME FAMILIAR WITH ALL THE EXISTING CONDITIONS AND LIMITATIONS BEFORE SUBMITTING A PROPOSAL. ANY APPARENT VARIANCES OF THE PLAN OR SPECIFICATION FROM THE EXISTING CONDITIONS AT THE SITE SHALL BE CALLED TO THE ATTENTION OF THE ENGINEER DURING THE BID PERIOD SO THAT CLARIFICATION CAN BE MADE BY ADDENDUM. ITEMS KNOWN TO BE INCONSISTENT WITH THE BID DOCUMENTS INTENT MUST BE LISTED AND QUALIFIED ON THE CONTRACTORS BID FORM. NO EXTRAS WILL BE ALLOWED BECAUSE OF THE CONTRACTORS MISUNDERSTANDING AS TO THE AMOUNT OF WORK INVOLVED OR HIS LACK OF KNOWLEDGE OF ANY SITE CONDITIONS WHICH MAY AFFECT HIS WORK.
- COORDINATION OF SCHEDULING FOR COMPLETION AND ALL INSPECTIONS OF THEIR WORK AND WORK OF SUBCONTRACTORS IS THE RESPONSIBILITY OF THIS CONTRACTOR.
- BEFORE SUBMITTING A PROPOSAL ON THE WORK CONTEMPLATED ON THESE DRAWINGS AND ACCOMPANYING SPECIFICATIONS, EACH BIDDER SHALL EXAMINE THE SITE, CHECK AS TO THE MEANS OF MAKING CONNECTIONS TO SERVICES, AND SHALL BECOME FAMILIAR WITH ALL THE EXISTING CONDITIONS AND LIMITATIONS. MECHANICAL EQUIPMENT AND SYSTEMS SHOWN AS EXISTING ON THE PLANS HAVE BEEN BASED ON EXISTING DRAWINGS. NO EXTRAS WILL BE ALLOWED BECAUSE OF THE CONTRACTOR'S MISUNDERSTANDING AS TO THE AMOUNT OF WORK INVOLVED OR HIS LACK OF KNOWLEDGE OF ANY SITE CONDITIONS WHICH MAY AFFECT HIS WORK. ANY APPARENT VARIANCE OF THE PLAN OR SPECIFICATION FROM EXISTING CONDITIONS AT THE SITE SHALL BE CALLED TO THE ATTENTION OF THE ENGINEER DURING THE BID PERIOD SO CLARIFICATION CAN BE MADE BY ADDENDUM.

SECTION 15002 - GENERAL REQUIREMENTS

- WORK TO BE ACCOMPLISHED ON THESE DRAWINGS AND SPECIFICATIONS INCLUDES FURNISHING ALL LABOR. MATERIAL. EQUIPMENT AND SERVICES FOR THE COMPLETION OF ALL MECHANICAL WORK. ALL MECHANICAL WORK UNLESS NOTED TO BE SPECIFICALLY BY THE LANDLORD IS THE RESPONSIBILITY OF THIS CONTRACTOR.
- THIS CONTRACTOR AND THEIR SUB CONTRACTORS SHALL WORK CLOSELY WITH THE TENANT PROJECT MANAGER FOR COORDINATION OF TRADES AND COMPLETION OF THE PROJECT. PLANS AND SPECIFICATIONS ARE COMPLEMENTARY AND WHAT IS CALLED FOR IN EITHER ONE SHALL BE AS BINDING AS IF CALLED FOR IN BOTH. ANY ITEM OR LABOR THAT IS NECESSARY TO COMPLETE THE WORK AND IS TYPICALLY INCLUDED IN SIMILAR WORK SCOPE SHALL BE FURNISHED AND INSTALLED AS PART OF THE CONTRACT WHETHER OR NOT IT IS SHOWN ON THE PLANS OR IN THE SPECIFICATIONS.
- WHEN THE INCLUDED DRAWINGS AND/OR SPECIFICATIONS CALL OF ITEMS WHICH EXCEED THE LANDLORDS TENANT CRITERIA OR EXCEED CODE, IT'S THE RESPONSIBILITY OF THE CONTRACTOR TO INSTALL THE MORE STRINGENT REQUIREMENTS NOTED ON THE PLANS AND/OR SPECIFICATIONS. IF THE PLANS AND SPECIFICATIONS HAVE DISCREPANCIES BETWEEN THEM. THE CONTRACTOR SHALL ASSUME IN THEIR BID THAT THE MORE STRINGENT ITEM IS REQUIRED AT NO ADDITIONAL COST.
- ALL PIPING, DUCTWORK AND EQUIPMENT SHALL BE FURNISHED AND INSTALLED TO PRESENT A NEAT AND CLEAN APPEARANCE USING GOOD CONSTRUCTION PRACTICES. EQUIPMENT SHALL BE INSTALLED FOR PROPER ACCESS TO OPERATE, SERVICE AND MAINTAIN THE EQUIPMENT WITHOUT HAVING TO MOVE OTHER EQUIPMENT FOR ACCESS. ANY MECHANICAL EQUIPMENT (OR EXISTING EQUIPMENT TO REMAIN) THAT REQUIRES ACCESS PANELS SHALL HAVE THOSE PANELS FURNISHED AND INSTALLED BY THE MECHANICAL CONTRACTOR.
- UNLESS SPECIFICALLY NOTED ON THE PLANS/SPECIFICATIONS ALL MATERIALS AND EQUIPMENT SHALL BE NEW AND BEST QUALITY TO CONFORM TO THE REQUIREMENTS OF THE LANDLORDS TENANT CRITERIA, LOCAL AND STATE CODES GOVERNING THE WORK INVOLVED AND BE MADE BY NATIONALLY RECOGNIZED MANUFACTURES WITH UL LISTINGS AND LABELS.

SECTION 15003 - CODES

ALL WORK SHALL BE INSTALLED IN CONFORMITY OF THE LANDLORDS TENANT CRITERIA, AND APPLICABLE LOCAL CODES AND ORDINANCES AND STATE STATUTES. ALL REQUIREMENTS OF THE CURRENT PLUMBING CODES, HEATING AND VENTILATION CODES, HEALTH AND SAFETY CODES, NFPA CODES AND ENERGY CODES MUST BE MET. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INQUIRE INTO AND COMPLY WITH ALL LOCAL ORDINANCES AND INCLUDE ANY ADDITIONAL ITEMS NOT NOTED IN THE PLANS/SPECIFICATIONS IN THEIR BID. ANY CHANGES TO THE MECHANICAL SYSTEM AS REQUIRED BY LOCAL. STATE OR TENANT CRITERIA THAT ARE NOT QUALIFIED ON THE CONTRACTORS BID FORM ARE ASSUMED TO BE INCLUDED IN THE ORIGINAL BID AND ADDITIONAL COSTS WILL NOT BE DUE TO COMPLETE THOSE ITEMS AFTER THE CONTRACT IS ISSUED.

SECTION 15004 - LICENSES, PERMITS, INSPECTIONS & FEES THIS CONTRACTOR IS RESPONSIBLE FOR ALL FEES, CHARGES AND OBLIGATIONS FOR OBTAINING PERMITS AND INSPECTIONS FOR PLUMBING, HEATING AND VENTILATION AND FIRE EXTINGUISHING

ALL CERTIFICATES OF INSPECTION AND FINAL INSPECTIONS SHALL BE TURNED OVER TO THE TENANT'S PROJECT MANAGER AT THE COMPLETION OF THE PROJECT.

SECTION 15005 - TRADE NAMES, MANUFACTURERS AND SHOP DRAWINGS

IN ANY CASE WHERE A SPECIFIC NAME OF EQUIPMENT OR MATERIAL IS MENTIONED ON THE DRAWINGS OR SPECIFICATIONS THE EXACT EQUIPMENT SHALL BE USED FOR THE BASE BID. EQUIPMENT OF EQUAL GRADE AND QUALITY WILL BE SUBJECT TO PRIOR APPROVAL BY THE TENANT'S PROJECT MANAGER AND THE ENGINEER IN WRITING THRU THE SHOP DRAWING SUBMITTAL PROCESS. ANY EQUIPMENT INSTALLED WITHOUT WRITTEN APPROVAL WILL BE CHANGED OUT TO THE SPECIFIED EQUIPMENT AT THE CONTRACTORS EXPENSE.

MECHANICAL CONTRACTOR SHALL SUBMIT 3 COPIES OF SHOP DRAWINGS TO THE TENANT'S PROJECT MANAGER FOR APPROVAL. IF APPROVED, COPIES WILL BE STAMPED "NO EXCEPTIONS" OR "APPROVED AS NOTED" AND WILL BE RETURNED TO THE CONTRACTOR. IF NOTATIONS AND MARKS INDICATE THAT REVISED INFORMATION IS REQUIRED, THEN CORRECTED INFORMATION SHALL BE SUBMITTED.

<u>SECTION 15006 - GUARANTEE</u>

- THIS CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR AND DEFECTS WHICH MAY DEVELOP IN ANY PART OF THE SYSTEMS CAUSED BY FAULTY WORKMANSHIP, MATERIAL OR EQUIPMENT, AND AGREES TO REPLACE ANY SUCH FAULTY WORKMANSHIP, MATERIAL OR EQUIPMENT DURING A PERIOD OF 12 MONTHS FROM THE DATE OF FINAL ACCEPTANCE WITHOUT ANY COST TO THE OWNER. ANY EXTENDED WARRANTIES (LONGER THAN 12 MONTHS) FOR EQUIPMENT WILL BE NOTED ON THE SCHEDULES, PLANS OR SPECIFICATIONS.
- EACH PIECE OF EQUIPMENT FURNISHED BY THE CONTRACTOR SHALL HAVE A 12 MONTH WARRANTY FOR MATERIAL AND LABOR AT STARTS UPON THE DATE OF FINAL ACCEPTANCE AS DESIGNATED BY THE TENANT'S PROJECT MANAGER. ALL COSTS FOR THE WARRANTY (MATERIAL AND LABOR) SHALL BE INCLUDED IN THE ORIGINAL BID.

SECTION 15007 - RECORD DRAWINGS

- THIS CONTRACTOR SHALL MAINTAIN AT THE JOB SITE A SET OF DRAWINGS TO BE USED SPECIFICALLY FOR RECORDING CHANGES FROM THE CONTRACT DOCUMENTS. THE INFORMATION SUCH AS VALVES. DUCT AND PIPE DEVIATIONS SHOULD BE DIMENSIONED FROM EASILY RECOGNIZABLE REFERENCE POINTS INDICATING BOTH HORIZONTAL AND VERTICAL DISTANCES.
- THE CONTRACTOR SHALL SUBMIT A FINAL SIGNED SET OF AS-BUILT DRAWINGS TO THE TENANTS PROJECT MANAGER AT THE COMPLETION OF THE PROJECT.
- THE CONTRACTOR SHALL SUBMIT TO THE TENANTS PROJECT MANAGER AT THE END OF THE PROJECT (2) COMPLETE HARD BOUND SET OF CATALOG DATA, MANUFACTURES LITERATURE, DETAIL MANUALS COVERING THE OPERATION AND MAINTENANCE OF ALL EQUIPMENT SPECIFIED.

SECTION 15008 - DISCREPANCIES IN DOCUMENTS

THE DRAWINGS OF PIPING AND DUCTWORK SYSTEMS SHALL BE INSTALLED SUBSTANTIALLY AS SHOWN ON THE PLANS. THE EXACT POSITION OF EACH AND EVERY PIPE, DUCT, OFFSET AND TRANSITION CANNOT BE GIVEN BY SCALING THE DRAWINGS BUT SHALL IN EVERY CASE BE PLACED SO AS TO AVOID INTERFERENCE WITH OTHER WORK. ALL NECESSARY CHANGES IN THE LOCATION OF PIPE OR DUCTWORK FOR ITS PROPER INSTALLATION AND TO AVOID CONFLICT WITH OTHER TRADES SHALL BE DONE BY THE CONTRACTOR AT NO ADDITIONAL CHARGE.

SECTION 15009 DEMOLITION

- THIS CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF THE DEMOLITION OF EXISTING WORK AND THE DEMOLITION PROVIDED BY THE GENERAL CONTRACTOR. COORDINATE WITH THE GENERAL CONTRACTOR ANY EXISTING
- 2. EACH CONTRACTOR SHALL VERIFY SCOPE OF WORK WITH THE GENERAL CONTRACTOR FOR THE REMOVAL OF ALL EXISTING FIRE PROTECTION, PLUMBING FIXTURES, PIPING, HVAC UNITS, REFRIGERANT RECAPTURE, EXHAUST FANS, ETC. AND ASSOCIATED ROOF CURBS NOT BEING REUSED ON THIS PROJECT, UNLESS SPECIFICALLY NOTED OTHERWISE.
- CONTRACTOR MUST VERIFY WITH THE LANDLORD ALL PRESUMED ABANDONED EQUIPMENT, PIPES, DUCTWORK, AND EQUIPMENT PRIOR TO REMOVAL. ROOF CURBS SHALL BE REMOVED AND THE ROOF PATCHED. ALL EXTRANEOUS ITEMS IN THE SPACE OR ON THE ROOF NOT APPLICABLE TO THE NEW WORK MUST BE REMOVED AND ROOF/WALL/FLOOR PATCHED/REPAIRED TO MATCH EXISTING STRUCTURE.
- EXISTING ABANDONED PIPES, DUCTS, OR EQUIPMENT IN THE FLOOR, EMBEDDED IN CONCRETE, OR OTHERWISE INACCESSIBLE ARE TO BE CUT OFF AND SEALED BELOW OR WITHIN FLOOR OR WALL LEVEL WHEN THEY ARE NOT TO
- IF REQUIRED BY LANDLORD OR CODES, ABANDONED PIPING AND/OR DUCTWORK MUST BE REMOVED TO POINT OF ORIGIN. CONFIRM THE EXTENT OF DEMOLITION WITH THE GENERAL CONTRACTOR AND TENANT PRIOR TO BID AND INCLUDE IN BID PROPOSAL AS DIRECTED BY THE GENERAL CONTRACTOR AND TENANT.

SECTION 15010 - CUTTING AND PATCHING

- THIS CONTRACTOR SHALL PROVIDE ALL CUTTING AND PATCHING REQUIRED FOR THE INSTALLATION OF HIS EQUIPMENT IN THE BUILDING WALLS, PARTITIONS, FLOORS, CEILINGS, ETC., UNLESS OTHERWISE NOTED. ALL CUTTING AND PATCHING SHALL BE SUBJECT TO THE DIRECTION OF THE LANDLORD, ARCHITECT OR ENGINEER.
- THIS CONTRACTOR SHALL NOT ENDANGER THE STABILITY OF THE STRUCTURE BY CUTTING, DIGGING OR OTHERWISE ALTERING THE STRUCTURE AND SHALL NOT AT ANY TIME CUT OR ALTER WORK OF ANY OTHER CONTRACTOR.
- PATCHING OF WALLS, FLOORS AND ROOF SHALL BE OF SAME MATERIAL AND WORKMANSHIP OF THE SURROUNDING MATERIAL WITH FINISHED SURFACE APPEARING THE SAME AS THE SURROUNDING AREAS. ALL PATCHING SHALL BE PERFORMED BY WORKMEN SKILLED IN THAT PARTICULAR TRADE.
- 4. DAMAGE CAUSED BY THE CONTRACTOR SHALL BE REPAIRED AT THE EXPENSE OF THE CONTRACTOR IN A SUITABLE MANNER ACCEPTABLE TO THE LANDLORD AND TENANT'S PROJECT MANAGERS.

SECTION 15011 - SLEEVES

- THIS CONTRACTOR SHALL INSTALL SLEEVES IN CONNECTION WITH ALL PIPES PASSING THROUGH ALL WALLS, PARTITIONS AND FLOORS. SLEEVES SHALL EXTEND THROUGH FULL THICKNESS OF WALLS AND FLOORS AND SHALL BE CUT FLUSH WITH THE FINISHED SURFACES. SLEEVES IN SLABS SHALL BE CUT 2" ABOVE THE FLOOR SURFACE.
- 2. ALL SLEEVES SHALL BE 22 GAUGE GALVANIZED STEEL MINIMUM FINISHED WITH A SMOOTH EDGE AND
- CORE DRILLING FLOORS AND WALLS MUST BE COORDINATED WITH THE LANDLORD AND THE TENANT'S PROJECT MANAGER.
- 4. THIS CONTRACTOR SHALL FURNISH AND INSTALL FIRE STOPPING AT ALL PENETRATIONS THRU RATED FLOORS TO MAINTAIN THE FIRE RATING. 3M FIRE BARRIER SYSTEMS, FLAME SAFE FIRE RETARDANT SYSTEMS, DOW CORNING, SPECSEAL OR EQUAL. THE CONTRACTOR MUST PRESENT UL LISTING DATA SHEETS TO THE TENANT'S PROJECT MANAGER AND LANDLORD TO SHOW THAT THE PENETRATIONS MAINTAIN THE FIRE RATING.

SECTION 15012 - HANGERS

- FURNISH AND INSTALL BRACKETS, BRACES OR REINFORCING ANGLES AS REQUIRED FOR ALL PARTITIONS NOT SUFFICIENT IN THEMSELVES TO SUPPORT PLUMBING FIXTURES OR OTHER EQUIPMENT.
- PIPING SHALL BE SUSPENDED FROM CONSTRUCTION ABOVE WITH ANGLE IRON, CLAMPS, UNISTRUT, OR HANGER RODS. NO PIPING SHALL BE HUNG FROM OTHER PIPING EXISTING OR NEW. CONTRACTOR
- SHALL COORDINATE WITH LANDLORD CRITERIA AND ALL CODES. ALL PIPES WHICH ARE SPECIFIED TO BE INSULATED SHALL HAVE PREFABRICATED INSULATED METAL SADDLES SIZED FOR THE INSULATION THICKNESS AND CONTINUOUS INSULATION THROUGH THE HANGER. ALL DISSIMILAR METALS MUST BE SEPARATED WITH DIELECTRIC MATERIAL.

<u>DIVISION 15300 - FIRE PROTECTION (IF APPLICABLE)</u>

SECTION 15301 - SUMMARY OF WORK

- 1. THE CONTRACTOR IS REQUIRED TO FURNISH AND INSTALL ALL NECESSARY MATERIAL, EQUIPMENT AND LABOR FOR A WET SPRINKLER SYSTEM TO MEET THE LANDLORDS TENANT CRITERIA AND LOCAL CODES. THE CONTRACTOR SHALL BE REQUIRED TO HAVE DESIGN DRAWINGS COMPLETED BY A CERTIFIED FIRE SPRINKLER DESIGNER AND COPIES OF THE HYDRAULIC CALCULATIONS AND PLANS ALONG WITH SHOP DRAWINGS OF THE HEADS. SHALL BE SUBMITTED TO THE STATE FIRE MARSHALS OFFICE OR LOCAL AUTHORITY HAVING JURISDICTION FOR PLAN REVIEW AND APPROVAL. ON OR BEFORE THE TIME THE PLANS AND CALCULATIONS ARE SUBMITTED TO THE STATE FOR APPROVAL, THEY SHOULD BE SUBMITTED TO THE TENANT'S PROJECT MANAGER AND ENGINEER FOR REVIEW.
- 2. THE EXISTING WET SPRINKLER SYSTEM SHALL BE REVISED MEET NFPA-13, LOCAL AUTHORITY AND
- 3. CONTRACTOR IS RESPONSIBLE FOR ALL FEES RELATED PERMITS AND TESTS AND INSPECTIONS.

DIVISION 15400 - PLUMBING

SECTION 15401 - SUMMARY OF WORK

THIS CONTRACTOR SHALL FURNISH, INSTALL AND TEST ALL NECESSARY MATERIAL FOR A COMPLETE OPERATING PLUMBING SYSTEM. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE LOCATION OF THE EXISTING WATER, VENT AND DRAIN LINES TO MAKE CONNECTIONS IN ORDER TO COMPLETE THE WORK AS SHOWN ON THE PLANS. ALL MATERIAL SHALL BE NEW AND SHALL BE INSTALLED FOR PROPER ACCESS FOR SERVINGS. ANY ACCESS PANELS NECESSARY FOR SERVING EQUIPMENT SHALL BE FURNISHED AND INSTALLED BY THIS

SECTION 15402 MATERIALS

- THE PLUMBING FIXTURE SCHEDULE IS SHOWN ON PLANS. ALL EQUIPMENT SHALL BE INSTALLED ACCORDING TO THE MANUFACTURES INSTALLATION INSTRUCTIONS.
- SANITARY PIPING
- ALL WASTE AND DRAIN PIPING BELOW GRADE SHALL BE SCHEDULE 40 PVC SOCKET FITTINGS, SOLVENT CEMENT AND ADHESIVE PRIMER. SCHEDULE 40 PVC PIPING SHALL NOT BE INSTALLED IN RETURN AIR PLENUM CEILING PER THE MECHANICAL CODE.
- ALL WASTE, VENT AND DRAIN PIPING ABOVE GRADE SHALL BE CPVC SCHEDULE 40 PVC PIPING AS ALLOWED BY LOCAL CODE. NO HUB CONNECTIONS SHALL BE USED ABOVE GROUND. SCHEDULE 40 PVC PIPING SHALL NOT BE INSTALLED IN RETURN AIR PLENUM CEILING PER THE MECHANICAL CODE
- C. ALL WASTE PIPING LOCATED IN THE CEILING OF TENANT SPACES BELOW SHALL BE INSULATED WITH 1" INSULATION WRAP AND ASJ COVERING FOR SOUND INSULATION.
- D. CONDENSATE PIPING SHALL BE TYPE "L" HARD DRAWN COPPER
- E. INSULATE CONDENSATE PIPING WITH 1" INSULATION WRAP AND ASJ COVERING.
- POTABLE WATER PIPING
- A. ALL BELOW GRADE PIPING SHALL BE A SINGLE SECTION "K" SOFT COPPER WITH NO JOISTS BELOW GRADE. ALL PIPING CONNECTIONS WITH DISSIMILAR METALS SHALL HAVE DI-ELECTRIC CONNECTIONS.
- B. ALL ABOVE GRADE PIPING SHALL BE TYPE 'L' HARD DRAWN COPPER TUBE WITH SWEAT JOINTS. ALL PIPING CONNECTIONS WITH DISSIMILAR METALS SHALL HAVE DI-ELECTRIC CONNECTIONS.
- INSULATE ALL HOT WATER, COLD WATER AND INTERIOR CONDENSATE PIPING WITH 1" THICK (K=0.23 @ 75 F) PIPE INSULATION WITH AN ALL SERVICE JACKET TO MEET LOCAL CODES AND UL FLAME SPREAD AND SMOKE DEVELOPED RATINGS. OWENS-CORNING OR EQUAL.
- TRUEBRO MODEL 102W WHITE INSULATION KIT SHALL BE INSTALLED ON ALL TRAPS AND SUPPLY LINES BELOW LAVATORIES TO MEET ADA.
- 6. SIOUX CHIEF 650 SERIES ALL STAINLESS STEEL, OR J.R. SMITH HYDROTROLS SHOCK ABSORBERS SHALL BE INSTALLED IN BOTH HOT AND COLD LINES OF PIPING SYSTEM TO PREVENT NOISE AND DAMAGE DUE TO WATER SHOCK ABSORBERS SHALL BE INSTALLED ACCORDING TO THE MANUFACTURES INSTALLATION INSTRUCTIONS.
- 7. THE CONTRACTOR SHALL PROVIDE BALL VALVES IN THE SUPPLY PIPING TO EVERY FIXTURE FOR SERVICING. CONTRACTOR SHALL FURNISH AND INSTALL ACCESS PANELS WHERE NECESSARY FOR PROPER SERVICING.
- MAXIMUM PIPE SUPPORT SPACING OF 5 FEET. CONTRACTOR SHALL PROVIDE NECESSARY SEISMIC BRACING WHERE REQUIRED BY LANDLORD CRITERIA, CODE AND LOCAL AUTHORITIES.
- 9. THE CONTRACTOR SHALL STERILIZE NEW AND EXISTING WATER SYSTEM AS REQUIRED BY LOCAL CODES. CONTRACTOR SHALL INSTALL ANY ADDITIONAL SERVICE VALVES NEEDED IN ORDER TO ISOLATE SYSTEM FOR STERILIZING THE WATER SYSTEM.
- 10. FLOOR DRAINS WITH DEEP SEAL TRAPS REQUIRED. INSTALL TRAP PRIMERS IN ALL FLOOR DRAINS. LOCATE CLEAN-OUTS IN WALLS AND FLOORS AS REQUIRED TO MEET LOCAL CODES
- 11. CONTRACTOR SHALL PERFORM ALL PIPING PRESSURE/LEAK TESTS BE AS REQUIRED BY LOCAL CODES.
- 12. ALL ROOF FLASHING SHALL BE SEALED WATERTIGHT AND PERFORMED IN ACCORDANCE TO THE LANDLORD'S CRITERIA. ANY ROOF WORK MUST BE DONE BY THE LANDLORDS APPROVED ROOFING CONTRACTOR IN ORDER TO MAINTAIN THE ROOF WARRANTEE. ALL COSTS FOR ROOF WORK MUST BE INCLUDED IN THE BID.

	CO	MPRE:	SSOR S	CHE	DULE	
			TANK SIZE		ELECTRICA	L DATA
UNIT	MANUFACTURER	MODEL	(GAL)	FLA	PHASE	VOLT
C-1	RAMVAC	0SP28	30	32	1	208
		VACIII	IM SCHI	EDIII	F	
		VACUL	JM SCHI	EDUL		LDATA
UNIT	MANUFACTURER	VACUL	JM SCHI TANK SIZE (GAL)	EDUL	ELECTRICA PHASE	L DATA VOLT

VALVE SCHEDULE								
T4.0		14005	TEMP.	LIOTING	050/50	NOTEO		
TAG	MANUFACTURER	MODEL	SETTING	LISTING	SERVES	NOTES		
SV-1	GC VALVE	NS211YF02C7	-	_	SOLENOID VALVE MAIN SHUT OFF	1-3		
_	WATTS	LFMMV	104°F	ASSE 1017,1069,1070	LAVS & HAND SINKS MIXING	_		
_	B & G	CB-1/2	_	_	RECIRC. SYSTEM BALANCING VALVE	_		
_	NIBCO	S-FP-600A-LF	_	_	RESTROOM SHUT-OFF	-		

STAINLESS STEEL BODY, NORMALLY CLOSED. ELECTRICAL: 120VAC, 60HZ, 8W. SIZE AS SHOWN ON PLANS.

						PLUMBING FIXTURE SCHEDULE
MARK	DESCRIPTION	WASTE PIPE	VENTPIPE	COLD WATER	HOT WATER	- 100 CO
		IN	IN	IN	IN	
со	CLEANOUT	3	_	-	-	JAY R SMITH 4040 SERIES
FD	FLOOR DRAIN	3	1-1/2	2	_	JAY R SMITH 2005 SERIES WITH NICKEL BRONZE STRAINER. PROVIDE PROSET TRAP GUARD FOR ALL FLOOR DRAINS
WB-1	WALL BOX	2"	-	-	_	SIOUX CHIEF 696-2313 HAMMER ARRESTORS INCLUDED WITH BOX
P-2	WATER CLOSET	3	2	1/2	-	AMERICAN STANDARD CADET RIGHT HEIGHT PRESSURE ASSISTED TOILET BOWL, WITH 3483.01 BOWL, 4142.016 TANK, 1.6 GPF, ADA COMPLIANT, WITH 5901.100 TOILET SEAT, AY MCDONALDS 5421-235 NO-LEAD 1/4 TURN ANGLE STOPS JONES STEPHENS S04217 FLEXIBLE STAINLESS STEEL HOSE SUPPLY, DEARBORN BRASS 1099B FLANGE
P-4	LAVATORY	2	1-1/2	1/2	1/2	AMERICAN STANDARD LUCERNE 0355.012.020 WALL MOUNT LAVATORY, ADA COMPLIANT, VITREOUS CHINA, WHITE, WITH DELTA ARA 567LF-MPU FAUCET, ESCUTCHEON, 1.2 GPM, CHROME FINISH, RP26533 METAL POP-UP DRAIN, WATTS LFUSG-B-M2 THERMOSTATIC MIXING VALVE, DEARBORN 701-1 17 GAUGE BRASS P-TRAP, AY MCDONALD 5421-235 NO LEAD 1/4 TURN ANGLE STOPS, JONES STEPHENS S04-201 FLEXIBLE STAINLESS STEEL HOSE SUPPLY, DEARBORN BRASS 1099B FLANGE, PLUMBEREX 2003W P-TRAP AND SUPPLY COVERS
P-5	MOP SERVICE BASIN	3	1-1/2	1/2		MUSTEE 63M 24X24X10 MOP SERVICE BASIN, WHITE, WITH 67.2424 WALL GUARDS, 65.600 MOP HANGER, 65.700 HOSE AND HOSE HOLDER, AND T&S BRASS B-0665-BSTR 8" WALL MOUNT MIXING FAUCET, ROUGH CHROME FINISH, WITH LEVER HANDLES, UPPER SUPPORT ROD, VACUUM BREAKER, PAIL HOOK, AND GARDEN HOSE MALE OUTLET
P-6	BRUSH SINK	2	1-1/2	1/2	1/2	KOHLER VERTICYL K-2882 UNDERMOUNT BATHROOM SINK, WHITE, WITH DELTA ARA 567LF-MPU FAUCET, ESCUTCHEON, 1.2 GPM, CHROME FINISH, RP26533 METAL POP-UP DRAIN. WATTS LFUSG-B-M2 THERMOSTATIC MIXING VALVE, DEARBORN BRASS 704-1 17 GAUGE P-TRAP, AY MCDONALDS 5421-235 NO LEAD 1/4 TURN ANGLE STOPS, JONES STEPHENS S04-201 FLEXIBLE STAINLESS STEEL HOSE SUPPLY, AND DEARBORN BRASS 1099B FLANGE
P-7	STERI CENTER SINK	2	1-1/2	1/2	1/2	PROHS U008 SINGLE BOWL STAINLESS STEEL SINK, UNDERMOUNT, 16 GAUGE. CENTER DRAINS, WITH SINGLE HANDLE FAUCET, CHROME FINISH, SWIVEL SPOUT, SINGLE CONTROL LEVER HANDLE, 1.5 GPM AERATOR, DEARBORN BRASS 14T LOCKING SINK BASKET STRAINER WITH 4" CHROME PLATED TAILPIECE, WATTS LFUSG-B-M2 THERMOSTATIC MIXING VALVE, DEARBORN 701-1 17 GAUGE BRASS P-TRAP, AY MCDONALD 5421-235 NO LEAD 1/4 TURN ANGLE STOPS, JONES STEPHENS S04-201 FLEXIBLE STAINLESS STEEL HOSE SUPPLY, DEARBORN BRASS 1099B FLANGE, BRADLEY S19-465EFW DECK MOUNT HAND HELD SPRAY WITH DUAL ANGLED SPRAY HEADS, BRADLEY S19-2000 THERMOSTATIC MIXING VALVE FOR EYEWASH
P-13	BREAKROOM SINK	2	1-1/2	1/2	1/2	ELKAY DAYTON DSE23322 DOUBLE BOWL STAINLESS STEEL SINK, DROP IN, 20 GAUGE, CENTER DRAINS, WITH AMERICAN STANDARD 7074.000 CENTERSET KITCHEN FAUCET, CHROME FINISH, 1.5 GPM AERATOR, SINGLE CONTROL HANDLE, DEARBORN BRASS 14T LOCKING SINK BASKET STRAINER WITH 4" CHROME PLATED TAILPIECE, WATTS LSUSG-B-M2 THERMOSTATIC MIXING VALVE, DEARBORN 701-1 17 GAUGE BRASS P-TRAP, AY MCDONALD 5421-235 NO LEAD 1/4 TURN ANGLE STOPS, JONES STEPHENS S04-201 FLEXIBLE STEEL HOSE SUPPLY, DEARBORN BRASS 1099B FLANGE
P-17	MINILAB SINK	2	1-1/2	1/2	1/2	PROHS U008 SINGLE BOWL STAINLESS STEEL SINK, UNDERMOUNT, 16 GAUGE CENTER DRAINS, WITH SINGLE HANDLE FAUCET, CHROME FINISH, SWIVEL SPOUT, SINGLE CONTROL LEVER HANDLE, 1.5 GPM AERATOR, DEARBORN BRASS 14T LOCKING SINK BASKET STRAINER WITH 4" CHROME PLATED TAILPIECE, WATTS LFUSG-B-M2 THERMOSTATIC MIXING VALVE, DEARBORN 701-1 17 GAUGE BRASS P-TRAP, AY MCDONALD 5421-235 NO LEAD 1/4 TURN ANGLE STOPS, JONES STEPHENS S04-201 FLEXIBLE STAINLESS STEEL HOSE SUPPLY, DEARBORN BRASS 1099B FLANGE, BRADLEY S19-465EFW DECK MOUNT HAND HELD SPRAY WITH DUAL ANGLED SPRAY HEADS, BRADLEY S19-2000 THERMOSTATIC MIXING VALVE FOR EYE WASH, BUFFALO DENTAL 62100 3.5 GALLON TRAP-EZE DISPOSABLE PLASTER TRAP, COMPLETE KIT, WITH TRAP BUCKET, LID, FLEXIBLE HOSES, AND FLEXIBLE ADAPTER FITTING OR SEWER TAILPIPE. PLASTER TRAP FURNISHED BY OWNER, INSTALLED BY CONTRACTOR.

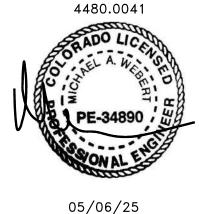
NOTE: SINKS AND FAUCETS FOR ITEMS P-6, P-7, P-13, AND P-17 ARE FURNISHED BY OWNER AND INSTALLED BY CONTRACTOR. ALL OTHER ITEMS AND ASSOCIATED COMPONENTS, AS WELL AS COMPONENTS OTHER THAN SINKS FOR P-6. P-7. P-13, AND P-17, ARE TO BE FURNISHED AND INSTALLED BY CONTRACTOR UNLESS NOTED OTHERWISE

UNIT		MODEL	SIZE/GAL.	RECOVERY @ 90°F	RECOVERY RELIEF		HEAT	ELEC DATA		
	MANUFACTURER				VALVE SETTING	ВТИ/Н	CONN.	FLA	PHASE	VOLT
				GPH	PSI/G	SIZE (IN.)	SIZE (IN.)	FLA	PHASE	VOLI
VH-1	AO SMITH	BSS 130	34	165	150	130,000	1/2	7	1	120

2. PROVIDE WATTS PLT-5-M1 2.1 GALLON POTABLE WATER EXPANSION TANK

PROVIDE CONCENTRIC VENT KIT





CO □



DRAWN BY

WLW 25007

CHECKED BY

JOB NO