selene

3501 OLYMPUS BLVD
5TH FLOOR
DALLAS, TX 75019

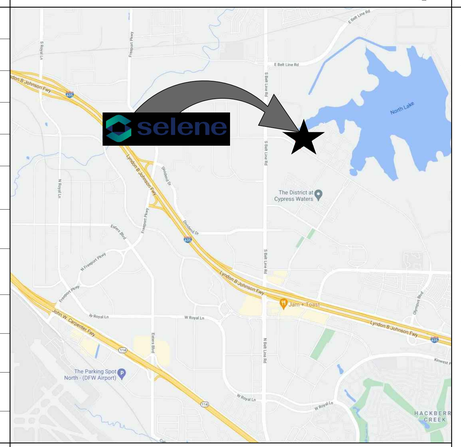
SYMBOL LEGEND

ROOM NAME 000	ROOM MARK		ALIGN TO MULLION CENTERLINE
01	DOOR MARK	GRID NO. OR LETTER	GRID LINE REFERENCE
01	WINDOW MARK	REVISION NUMBER	REVISION REFERENCE
X	KEYNOTE REFERENCE	ALIGN	ALIGN FINISH TO EXISTING
XX-XX	FINISH MARK	X	DIMENSION
X	WALL MARK - REF. SHEET A8.0 FOR WALL TYPES	MATCH LINE REFER TO SHEET NO.	MATCH LINE
XXX.X	ELEVATION REFERENCE	ELEVATION IN RELATIONSHIP TO MAIN FLOOR OR STATED DATUM	DATUM OR FLOOR ELEVATION
XXX.X	SECTION REFERENCE	06/A6-1	ENLARGED PLAN DETAIL REFERENCE
1 4 (XX) 2 3	ELEVATION REFERENCE	X/A5.0	BUILDING SECTION REFERENCE
	WATERLINE WITH SHUT OFF VALVE, U.N.O.	X'-X" CLR.	CLEAR DIMENSION TO BE MAINTAINED
FEC	FIRE EXTINGUISHER CABINET, U.N.O.		

ABBREVIATIONS

A	AMPERE	HT	HEIGHT
A.D.A.	AMERICANS WITH DISABILITIES ACT	HVAC	HEATING, VENTILATION & AIR CONDITIONING
A.F.F.	ABOVE FINISHED FLOOR	MAX.	MAXIMUM
A.H.J.	AUTHORITIES HAVING JURISDICTION	M.D.F.	MEDIUM DENSITY FIBER BOARD
ADN'L	ADDITIONAL	MIN.	MINIMUM
BD.	BOARD	MFR.	MANUFACTURER
BLKG.	BLOCKING	N.I.C.	NOT IN CONTRACT
CAB.	CABINET	N.T.S.	NOT TO SCALE
CLG.	CEILING	O.C.	ON CENTER
CLR.	CLEAR OPENING	OPG.	OPENING
COL.	COLUMNS	PART.	PARTICLE
CONTR.	CONTRACTOR	PR.	PAIR
DWGS.	DRAWINGS	PREFAB.	PREFABRICATED
E.C.	EXISTING TO BE CAPPED	P.T.L.	PRESSURE TREATED LUMBER
ELEC.	ELECTRICAL	REF.	REFERENCE
EQ.	EQUAL	REQ'D	REQUIRED
F.E.	FIRE EXTINGUISHER	SIM	SIMILAR
FEC	FIRE EXTINGUISHER CABINET	S.S.	STAINLESS STEEL
FHC	FIRE HOSE CABINET	STD.	STANDARD
FLUOR.	FLUORESCENT	T.B.D.	TO BE DETERMINED
F.R.F.	FIRE RETARDANT TREATED	TYP.	TYPICAL
FRP	FIBERGLASS REINFORCED PLASTIC	U.O.N.	UNLESS OTHERWISE NOTED
GA.	GAUGE	V	VOLTS
G.C.	GENERAL CONTRACTOR	VCT	VINYL COMPOSITION TILE
GWBX	TYPE "X" GYPSUM BOARD	V.I.F.	VERIFY IN FIELD
GYP. BD.	GYPSUM BOARD	W/	WITH
H.M.	HOLLOW METAL	W/O	WITHOUT
HDWR	HARDWARE	WH	WATER HEATER

VICINITY MAP



SITE PLAN

PROJECT SUMMARY

- PROJECT DESCRIPTION

THE SCOPE OF THIS PROJECT IS A NON-STRUCTURAL INTERIOR FINISH-OUT IN AN EXISTING SINGLE FLOOR SUITE FOR THE ABOVE NAMED TENANT. SCOPE INCLUDES HVAC, ELECTRICAL, PLUMBING.

- APPLICABLE BUILDING CODES

JURISDICTION CITY OF DALLAS

BUILDING	2015 INTERNATIONAL BUILDING CODE	CODES
FIRE	2015 INTERNATIONAL FIRE CODE	
PLUMBING	2015 INTERNATIONAL PLUMBING CODE	
MECHANICAL	2015 INTERNATIONAL MECHANICAL CODE	
ELECTRICAL	2017 NATIONAL ELECTRICAL CODE	
ACCESSIBILITY	TEXAS ACCESSIBILITY STANDARDS	
ENERGY	2015 INTERNATIONAL ENERGY CONSERVATION CODE	
FUEL/GAS	2015 INTERNATIONAL FUEL GAS CODE	
OTHER	2015 GREEN CONSTRUCTION CODE WITH DALLAS AMENDMENTS	

- PROJECT DATA - SUITE 500

STORIES:	5
SPRINKLER SYSTEM:	YES
OCCUPANCY GROUP:	B
USABLE SQ. FOOTAGE:	30,386
	CONFERENCE AREA: 1,223/15 = 82 OCC.
	BREAK ROOM AREA: 558/15 = 37 OCC.
	OFFICE AREA: 28,605/100 = 286 OCC.
OCCUPANT LOAD:	405
NUMBER OF EXITS REQ'D:	2 REQUIRED / 3 PROVIDED
LONGEST DIAGONAL:	351'-11"
EXIT SEPARATION:	68'-0" MINIMUM REQUIRED / 102'-0" PROVIDED
DEAD END CORRIDOR:	N/A
COMMON PATH OF TRAVEL:	100' MAX / 35'-6" PROVIDED
TRAVEL DISTANCE:	300' MAX / 116'-4" PROVIDED

- PROJECT DATA - SUITE 510

STORIES:	5
SPRINKLER SYSTEM:	YES
OCCUPANCY GROUP:	B
USABLE SQ. FOOTAGE:	2,568
	CONFERENCE AREA: 172/15 = 11 OCC.
	OFFICE AREA: 2,396/100 = 24 OCC.
OCCUPANT LOAD:	35
NUMBER OF EXITS REQ'D:	1 REQUIRED / 1 PROVIDED
LONGEST DIAGONAL:	74'-8"
EXIT SEPARATION:	N/A
DEAD END CORRIDOR:	N/A
COMMON PATH OF TRAVEL:	100' MAX / 73'-5" PROVIDED
TRAVEL DISTANCE:	300' MAX / 126'-0" PROVIDED

- PROJECT DATA - SUITE 520

STORIES:	5
SPRINKLER SYSTEM:	YES
OCCUPANCY GROUP:	B
USABLE SQ. FOOTAGE:	1,403
	CONFERENCE AREA: 236/15 = 16 OCC.
	OFFICE AREA: 1,167/100 = 12 OCC.
OCCUPANT LOAD:	28
NUMBER OF EXITS REQ'D:	1 REQUIRED / 1 PROVIDED
LONGEST DIAGONAL:	61'-0"
EXIT SEPARATION:	N/A
DEAD END CORRIDOR:	N/A
COMMON PATH OF TRAVEL:	100' MAX / 55'-10" PROVIDED
TRAVEL DISTANCE:	300' MAX / 81'-0" PROVIDED

- PROJECT DATA - SUITE 530

STORIES:	5
SPRINKLER SYSTEM:	YES
OCCUPANCY GROUP:	B
USABLE SQ. FOOTAGE:	3,008
	CONFERENCE AREA: 238/15 = 16 OCC.
	OFFICE AREA: 2,770/100 = 28 OCC.
OCCUPANT LOAD:	44
NUMBER OF EXITS REQ'D:	1 REQUIRED / 1 PROVIDED
LONGEST DIAGONAL:	82'-1"
EXIT SEPARATION:	N/A
DEAD END CORRIDOR:	N/A
COMMON PATH OF TRAVEL:	100' MAX / 85'-7" PROVIDED
TRAVEL DISTANCE:	300' MAX / 103'-0" PROVIDED

LANDLORD NOTES

1. IF THIS PLAN IS TO BE CONSTRUCTED, AND IF THE AMOUNT OF CONSTRUCTION IS OVER $50,000.00, THE OWNER IS TO NOTIFY THE idGROUP IMMEDIATELY, AND CONSTRUCTION DOCUMENTS WILL BE REQUIRED TO BE SUBMITTED FOR T.A.S. REVIEW. THE BUILDING OWNER IS RESPONSIBLE FOR COMPLETE BUILDING CODE AND TEXAS ACCESSIBILITY STANDARDS' COMPLIANCE THROUGHOUT THE BUILDING.

2. AS A REGISTERED INTERIOR DESIGNER IN THE STATE OF TEXAS, WE ARE REQUIRED BY LAW (TEXAS GOVERNMENT CODE #469.101 AND 102) TO SUBMIT DOCUMENT SETS INTENDED FOR CONSTRUCTION AND/OR RENOVATION FOR TAS COMPLIANCE REVIEW UPON ISSUE. AS THE BUILDING OR FACILITY OWNER, YOU ARE ALSO REQUIRED BY THE SAME LAW TO DISALLOW CONSTRUCTION, RENOVATION OR MODIFICATIONS AND/OR APPLICATION FOR BUILDING PERMITS WITHOUT FIRST SUBMITTING PLANS AND SPECIFICATIONS FOR TAS COMPLIANCE REVIEW. SHOULD WORK COMMENCE PER DOCUMENTATION EXPRESSLY PREPARED FOR BID OR PRICING, ALL LIABILITY FOR TAS AND BUILDING CODE COMPLIANCE SHALL FALL UPON THE BUILDING AND/OR FACILITY OWNER.

3. idGROUP HAS PRODUCED THE ATTACHED SET OF DRAWINGS, INTENDED FOR CONSTRUCTION. IF LANDLORD ELECTS NOT TO HAVE A CONSTRUCTION DOCUMENT REVIEW MEETING WITH TENANT TO REVIEW ALL DESIGN ASPECTS OF THESE DRAWINGS, AND RECEIVE AN APPROVAL SIGNATURE FROM SAID TENANT, idGROUP WILL NOT BE RESPONSIBLE FOR MISUNDERSTANDINGS, ERRORS, AND/OR OMISSIONS IN THESE DRAWINGS REGARDLESS OF PREVIOUS CONVERSATIONS AND/OR MEETINGS. LIKEWISE, IF idGROUP IS NOT RETAINED FOR CONSTRUCTION ADMINISTRATION DURING THE CONSTRUCTION PROCESS, WE WILL NOT BE HELD LIABLE FOR DISCREPANCIES OR PROBLEMS DISCOVERED IN THE FIELD, AND SUBSEQUENT DECISIONS MADE WITHOUT OUR KNOWLEDGE.

PROJECT DIRECTORY

- LANDLORD CONTACT:

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1722 ROUTH STREET
DALLAS, TX 75201
TEL: 214-270-0942
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- INTERIOR DESIGNER:

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- MEP CONSULTANT:

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SUITE 3000
DALLAS, TX 75248
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CONTACT: TODD JOHNSON
Tjohnson@Purdy-McGuire.com

DEFERRED SUBMITTALS

EXTERIOR SIGNAGE: SIGN VENDOR SHALL BE RESPONSIBLE FOR PREPARING DRAWINGS AND OBTAINING SEPARATE SIGNAGE PERMITS AS REQUIRED BY LOCAL JURISDICTION.

FIRE ALARM SYSTEM: DESIGN/BUILT. G.C. SHALL BE RESPONSIBLE FOR PREPARING DRAWINGS AND OBTAINING ALL BUILDING PERMITS AS REQUIRED BY LOCAL JURISDICTION.

FIRE SPRINKLER SYSTEM: DESIGN/BUILT. G.C. SHALL BE RESPONSIBLE FOR PREPARING DRAWINGS AND OBTAINING ALL BUILDING PERMITS AS REQUIRED BY LOCAL JURISDICTION.

LANDLORD/TENANT APPROVAL

I HAVE REVIEWED THESE DRAWINGS AND BY EXECUTION, I HAVE ACCEPTED ALL INFORMATION, SPECIFICATIONS, DIMENSIONS, AND DESIGN ELEMENTS AS INDICATED IN THESE DRAWINGS. NO CHANGES WILL BE MADE WITHOUT WRITTEN NOTIFICATION TO LANDLORD'S REPRESENTATIVE. I ASSUME FULL RESPONSIBILITY FOR ALL ASSOCIATED COSTS OF MATERIALS, LABOR, AND ADDITIONAL DESIGN FEES FOR ANY CHANGES TO THE SCOPE OF WORK OUTLINED IN THESE DRAWINGS.

___ APPROVED ___ APPROVED AS NOTED

DATE:_____

TENANT:_____

LANDLORD:_____

REVISION LOG

REV	DATE	DESCRIPTION

ALTERNATES

A#	DESCRIPTION	SHEETS	ACCEPT/ DECLINE
A1	IN LIEU OF DOOR TYPE Ba, PROVIDE AND INSTALL Dj AT ALL TYPE Ba LOCATIONS.	I1.0	
A2	**IN CONJUNCTION WITH A1:** IN LIEU OF SCHEDULED WINDOW/SIDELIGHT, PROVIDE WINDOW TYPE 2 AT ALL TYPE 1 SCHEDULED LOCATIONS.	I1.0	
A3	IN LIEU OF DOOR TYPE Ba, PROVIDE AND INSTALL Da AT ALL CONFERENCE ROOM LOCATIONS ONLY.	I1.0	
A4	**IN CONJUNCTION WITH A3:** IN LIEU OF SCHEDULED WINDOW/SIDELIGHT, PROVIDE WINDOW TYPE 2 AT ALL CONFERENCE ROOM LOCATIONS ONLY.	I1.0	

SHEET INDEX

REV.		
	ARCHITECTURAL	
	G0.0	COVER SHEET & INDEX
	G0.1	GENERAL NOTES
	G0.2	ACCESSIBILITY STANDARDS
	G0.3	ACCESSIBILITY STANDARDS
	G0.4	KEYPLAN
	I1.0	CONSTRUCTION PLAN
	I1.1	POWER & COMMUNICATION PLAN
	I1.2	REFLECTED CEILING PLAN
	I1.2 - 2	REFLECTED CEILING PLAN - DIMENSIONS
	I1.3	FINISH PLAN
	I2.0	INTERIOR ELEVATIONS
	I2.1	INTERIOR ELEVATIONS - ELEVATOR LOBBY
	I3.0	SECTIONS & DETAILS
	I4.0	PARTITION TYPES & DOOR TYPES
	MECHANICAL	
	M0.01	MECHANICAL NOTES & SYMBOLS
	M2.05	LEVEL 05 MECHANICAL PLAN
	M2.15	LEVEL 05 MECHANICAL REFRIGERATION PLAN
	M3.01	MECHANICAL DETAILS
	ELECTRICAL	
	E0.01	ELECTRICAL NOTES & SYMBOLS
	E1.01	ELECTRICAL SPECIFICATIONS 1 OF 2
	E1.02	ELECTRICAL SPECIFICATIONS 2 OF 2
	E2.05	LEVEL 05 ELECTRICAL PLAN
	E3.05	LEVEL 05 LIGHTING PLAN
	E4.01	ELECTRICAL RISERS
	PLUMBING	
	P0.01	PLUMBING NOTES & SYMBOLS
	P1.01	PLUMBING SPECIFICATIONS
	P2.05	LEVEL 05 PLUMBING PLAN

idGROUP
2641 IRVING BLVD.
DALLAS, TEXAS 75207
TEL: 214-638-6800 FAX: 214-689-0301

REGISTERED INTERIOR DESIGNER MEGAN WARD 7167 STATE OF TEXAS

05/27/21

PROJECT NO.: 581-009
DRAWN BY: TM
CHECKED BY: MW
R.S.F.: 41,852

BILLINGSLEY COMPANY

3501 OLYMPUS
SELENE

3501 OLYMPUS BLVD
5TH FLOOR
DALLAS, TX 75019

NO.	ISSUED FOR:	DATE:

LANDLORD/CLIENT REVIEW ISSUE DATE: 05/27/21
BID ISSUE DATE: 05/27/21
CONSTRUCTION ISSUE DATE: 05/27/21

DRAWING TITLE:
COVER SHEET & INDEX

DRAWING NUMBER:
G0.0

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GENERAL NOTES

A. GENERAL

1. THE GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION, A.I.A. STANDARD FORM A201 - CURRENT EDITION, ARE HEREBY INCORPORATED INTO THIS DOCUMENT EXCEPT AS SPECIFICALLY MODIFIED BELOW.

2. THE CONTRACTOR SHALL SECURE AND PAY FOR THE BUILDING PERMIT AND OTHER PERMITS AND GOVERNMENTAL FEES, LICENSES AND INSPECTIONS NECESSARY FOR PROPER EXECUTION AND COMPLETION OF THE WORK. SCHEDULING OF APPROVALS AND INSPECTIONS BY AUTHORITIES HAVING JURISDICTION OVER THE WORK IS THE RESPONSIBILITY OF THE CONTRACTOR.

3. THE CONTRACT DOCUMENTS CONVEY DESIGN INTENT AND THE GENERAL TYPE OF CONSTRUCTION DESIRED ARE INTENDED TO APPLY TO THE FINEST QUALITY OF CONSTRUCTION, MATERIAL AND WORKMANSHIP THROUGHOUT.

4. THE idGROUP IS NOT RESPONSIBLE FOR ENGINEERING THESE DOCUMENTS. FOR CONSTRUCTION SETS WITHOUT ENGINEERING DOCUMENTS, THE CONTRACTOR SHALL PROVIDE SHOP DRAWINGS PRIOR TO CONSTRUCTION AND AS-BUILTS UPON COMPLETION FOR ELECTRICAL AND MECHANICAL TRADES TO THE LANDLORD.

5. PRIOR TO SUBMITTING A PROPOSAL OR COMMENCEMENT OF WORK, THE CONTRACTOR SHALL VISIT THE PROJECT SITE TO COMPARE THE SCOPE OF WORK AS OUTLINED IN THESE DOCUMENTS WITH EXISTING CONDITIONS. PROMPTLY REPORT ANY ERRORS, OMISSIONS, INCONSISTENCIES OR OTHER DETRIMENTAL CONDITIONS TO THE idGROUP. IF THE CONTRACTOR FAILS TO PERFORM THIS OBLIGATION, THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL COSTS AND DAMAGES ASSOCIATED WITH ACTIONS REQUIRED TO CORRECT UNREPORTED CONDITIONS THAT OTHERWISE COULD HAVE BEEN AVOIDED.

6. IN THE EVENT THAT DISCREPANCIES ARE FOUND BETWEEN DRAWINGS AND/OR SPECIFICATIONS, THE CONTRACTOR SHALL REQUEST A CLARIFICATION FROM THE idGROUP IN WRITING. THE idGROUPS RESPONSE TO THE CONTRACTOR'S REQUEST FOR INFORMATION SHALL NOT BE CAUSE FOR A CHANGE IN THE CONTRACT AMOUNT UNLESS IT IS AGREED THAT THE ORIGINAL SCOPE OF WORK HAS BEEN ALTERED BY THE RESPONSE.

7. THE CONTRACTOR SHALL CONTACT THE BUILDING MANAGEMENT TO DETERMINE ANY SPECIAL REQUIREMENTS AND RULES / REGULATIONS GOVERNING ALL PHASES OF WORK ON THE PREMISES.

8. PRIOR TO BEGINNING WORK, THE CONTRACTOR SHALL FURNISH A CONSTRUCTION SCHEDULE SHOWING THE CHRONOLOGICAL PHASES OF WORK, SCHEDULE OF VALUES, AND INSURANCE CERTIFICATE. THIS SCHEDULE SHALL INDICATE ORDERING LEAD TIMES, A BEGINNING AND END DATE FOR EACH PHASE AND A PROJECTED COMPLETION DATE FOR THE ENTIRE PROJECT.

9. THE CONTRACTOR IS WHOLLY RESPONSIBLE FOR THE COORDINATION AND SCHEDULING OF THE WORK EFFORTS FOR ALL ENGINEERS, SUBCONTRACTORS, CRAFTSMEN AND TRADESMEN REQUIRED TO COMPLETE THE JOB AND SHALL BE RESPONSIBLE FOR PROVIDING THEM WITH FULL SETS OF CURRENT DRAWINGS, ADDENDUM, AND OTHER SUPPLEMENTAL INFORMATION PERTINENT TO THE COMPLETION OF THE WORK.

10. THE CONTRACTOR SHALL PROVIDE TEMPORARY LIGHTING AND ELECTRICAL SERVICE FOR TRADES.

11. UNLESS OTHERWISE STIPULATED IN THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROVISION, STORAGE AND PAYMENT OF ALL LABOR, MATERIALS, TAXES, EQUIPMENT, TOOLS, CONSTRUCTION EQUIPMENT, MACHINERY, TRANSPORTATION AND OTHER FACILITIES NECESSARY FOR PROPER EXECUTION AND COMPLETION OF THE WORK WHETHER OR NOT IT IS SPECIFICALLY CALLED OUT OR DETAILED ON THE DRAWINGS.

12. THE CONTRACTOR WARRANTS TO THE OWNER THAT MATERIALS AND EQUIPMENT FURNISHED UNDER THE CONTRACT WILL MEET INDUSTRY STANDARDS AND BE NEW AND OF GOOD QUALITY UNLESS OTHERWISE PERMITTED BY THE CONTRACT DOCUMENTS. THE WORK WILL BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS, FREE FROM DEFECTS AND WILL BE COMPLETED IN A NEAT AND WORKMANLIKE MANNER ACCEPTABLE TO THE OWNER.

13. THE CONTRACTOR SHALL PROMPTLY CORRECT IN A PROFESSIONAL MANNER, AT NO COST TO THE OWNER AND WITHOUT CHANGE IN CONTRACT TIME, ALL NON-CONFORMING OR DEFECTIVE WORK AND DAMAGES CAUSED BY HIS WORK OR WORKMEN WHETHER DISCOVERED BEFORE OR AFTER SUBSTANTIAL COMPLETION.

14. THE CONTRACTOR SHALL INSPECT ALL EQUIPMENT AND SYSTEMS FOR PROPER OPERATIONS UPON SUBSTANTIAL COMPLETION OF PROJECT.

15. THE CONTRACTOR SHALL THOROUGHLY CLEAN THE ENTIRE PROJECT SITE AND ADJACENT AFFECTED SPACES TO THE SATISFACTION OF THE OWNER.

B. DRAWING CONVENTIONS

1. DIMENSIONS TAKE PRECEDENCE OVER SCALE ON THE CONSTRUCTION DRAWINGS. NOTIFY THE idGROUP OF DISCREPANCIES BETWEEN DRAWING DIMENSIONS AND FIELD CONDITIONS.

2. DIMENSIONS ARE GIVEN TO FACE OF FINISHED MATERIAL UNLESS OTHERWISE NOTED.

3. PARTITION THICKNESS IS DERIVED FROM DESCRIPTION OF THE PARTITION CONSTRUCTION AND/OR DESIGNATED DETAIL.

4. PARTITIONS THAT INTERSECT INTERIOR OR EXTERIOR GLAZED WALLS ARE TO BE CENTERED ON MULLIIONS AND PERPENDICULAR TO EXTERIOR WALL UNLESS DETAILED OTHERWISE.

5. UNLESS OTHERWISE NOTED, PARTITIONS AND OTHER ELEMENTS ON THE DRAWING THAT ARE DRAWN AT AN OBLIQUE ANGLE ARE TO BE CONSTRUCTED AT A 45-DEGREE ANGLE TO THE MAIN GRID.

6. WALLS SHOWN ALIGNED WITH BASE BUILDING STRUCTURE SHALL BE FLUSH AND SMOOTH WITH BASE BUILDING STRUCTURE UNLESS OTHERWISE NOTED.

7. UNLESS DIMENSIONED OTHERWISE, DEPTH OF FURRING ON COLUMNS AND OTHER ELEMENTS IS TO BE HELD TO THE MINIMUM THICKNESS REQUIRED TO CONCEAL MECHANICAL, PLUMBING OR ELECTRICAL COMPONENTS.

8. UNLESS OTHERWISE INDICATED, POSITION DOOR JAMBS 6" OFF THE FACE OF ADJACENT INTERSECTING PARTITIONS OR CENTER ON PARTITION.

9. OUTLETS THAT OCCUR ON OPPOSITE SIDES OF THE SAME PARTITION ARE TO BE STAGGERED HORIZONTALLY A MINIMUM OF 12" TO MINIMIZE SOUND TRANSMISSION.

C. DEMOLITION, CUTTING, AND PATCHING

1. THE CONTRACTOR SHALL INSPECT THE SITE AND CALL ATTENTION TO ENVIRONMENTAL HAZARDS WITH BUILDING MANAGEMENT. SAID HAZARDS ARE TO BE REMOVED AT THE BUILDING'S EXPENSE. REMOVAL TO ADHERE TO THE ENVIRONMENTAL PROTECTION AGENCY'S GUIDELINES.

2. THE CONTRACTOR IS RESPONSIBLE FOR ALL DEMOLITION, CUTTING AND PATCHING REQUIRED TO FACILITATE COMPLETION OF THE WORK.

3. PRIOR TO STARTING WORK, ERECT TEMPORARY BARRIERS AROUND THE PERIMETER OF THE PROJECT AND BASE BUILDING TOILET FACILITIES TO PREVENT THE SPREAD OF DUST AND OTHER CONTAMINANTS TO ADJACENT AREAS OF THE BUILDING. MAINTAIN DUST PROOF AND SOUND BARRIERS THROUGHOUT THE COURSE OF CONSTRUCTION OR UNTIL NO LONGER REQUIRED. REMOVE BARRIERS AND REPAIR ANY DAMAGE CAUSED BY THEIR INSTALLATION TO MATCH ADJACENT SURFACES.

4. DEMOLITION WORK SHALL BE COORDINATED WITH THE OWNER TO MINIMIZE DISRUPTION AND INCONVENIENCE TO OTHER TENANTS IN OCCUPIED BUILDINGS. MAINTAIN SAFE MEANS OF ACCESS AND EGRESS TO OCCUPIED TENANT SPACES.

5. UNLESS NOTED OTHERWISE, ALL DEMOLISHED DEBRIS, MATERIAL, EQUIPMENT AND FIXTURES BECOME THE PROPERTY OF THE CONTRACTOR WHO IS RESPONSIBLE FOR ITS SAFE REMOVAL FROM THE SITE. DISPOSAL OF DEMOLISHED MATERIAL SHALL BE IN ACCORDANCE WITH APPLICABLE RULES, REGULATIONS AND ORDINANCES OF AUTHORITIES HAVING JURISDICTION. COORDINATE WITH BUILDING MANAGEMENT.

6. THE CONTRACTOR SHALL FURNISH BUILDING MANAGEMENT WITH A COMPLETE INVENTORY LIST OF ITEMS THAT CAN BE REUSED AND/OR STORED IN BUILDING STOCK. CAREFULLY REMOVE MATERIAL, EQUIPMENT AND FIXTURES DESIGNATED TO BE SALVAGED AND DELIVER THEM TO BUILDING MANAGEMENT.

7. MAINTAIN THE FUNCTION AND INTEGRITY OF EXISTING FIRE, LIFE/SAFETY AND SECURITY SYSTEMS.

8. MAINTAIN THE INTEGRITY OF RATED PARTITIONS AND OTHER FIRE RATED ASSEMBLIES. REPAIR OR REPLACE DAMAGED PORTIONS WITH NEW CONSTRUCTION TO MATCH EXISTING AND HAVE REPAIR WORK APPROVED BY THE BUILDING INSPECTOR.

9. NEW PIPE, CONDUIT AND DUCT PENETRATIONS OF FIRE RATED ASSEMBLIES ARE TO BE CONSTRUCTED IN ACCORDANCE WITH AN UNDERWRITERS LABORATORY TESTED DESIGN.

10. IN BUILDINGS CONSTRUCTED WITH POST-TENSIONED CONCRETE, LOCATE P-T TENDONS BY X-RAY DETECTION PRIOR TO STARTING OF ANY CUTTING OR DRILLING. COORDINATE ALL SUCH ACTIVITIES WITH BUILDING MANAGEMENT.

11. PATCH ALL EXISTING OR NEWLY DAMAGED AREAS TO MATCH ADJACENT SURFACES IN QUALITY, TEXTURE AND COLOR.

12. EXISTING CIRCUITS NOT BEING USED ARE TO BE REMOVED TO THE PANEL. BREAKERS SHALL BE LABELED "SPARE" AND LEFT IN THE OPEN POSITION.

13. PLUMBING TO BE ABANDONED SHALL BE CAPPED BEHIND EXISTING FINISHED SURFACES. EXISTING SURFACES SHALL BE PATCHED TO MATCH EXISTING ADJACENT FINISHES.

D. GENERAL CONSTRUCTION

1. THE CONTRACTOR SHALL FIRMLY ANCHOR PARTITIONS PER JURISDICTION AND INDUSTRY STANDARDS AND USE METAL TRIM ACCESSORIES AT EXPOSED CORNERS, EDGES AND ENDS IN PLASTER AND DRYWALL PARTITIONS.

2. THE CONTRACTOR SHALL PROVIDE ACCESS PANELS REQUIRED FOR MECHANICAL, ELECTRICAL AND PLUMBING INSTALLATIONS PER LOCAL BUILDING CODES. LOCATIONS SHALL BE COORDINATED WITH BUILDING MANAGEMENT PRIOR TO INSTALLATION.

3. CEILING JOINTS IN THE FIELD SHALL BE SQUARE, LEVEL AND PERFECTLY ALIGNED WITH EACH OTHER AND WITH THE RECESSED LIGHT FIXTURES. ALL RECESSED FIXTURES SHALL BE SET FLUSH INTO CEILING.

4. COMMUNICATION, DATA, SECURITY AND SIMILAR SYSTEMS WILL BE FURNISHED AND INSTALLED BY THE TENANT UNLESS OTHERWISE NOTED IN THE CONTRACT DOCUMENTS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH THE TENANT'S VENDORS AND PROVIDE CONDUIT, BOXES AND OTHER ROUGH-IN REQUIREMENTS TO FACILITATE FINAL WIRING INSTALLATION.

5. COORDINATE AND FIELD VERIFY THE ROUGH-IN LOCATION OF ELECTRICAL, COMMUNICATION AND DATA CONNECTIONS TO TENANT SUPPLIED FURNITURE SYSTEM.

6. WIRING AND CONDUIT IS TO BE CONCEALED IN BOTH NEW AND EXISTING PARTITIONS WITH ALL OUTLETS, SWITCHES AND SIMILAR DEVICES MOUNTED IN RECESSED JUNCTION BOXES WITH FLUSH COVER PLATES. SURFACE MOUNTED CONDUIT, WIREMOLD, OUTLETS, ETC. WILL NOT BE PERMITTED UNLESS OTHERWISE NOTED.

7. THE CONTRACTOR SHALL PROVIDE RETURN AIR OPENINGS IN PARTITIONS TO DECK AND ABOVE CEILINGS TO MATCH AREA CALCULATION REQUIREMENTS AS SHOWN ON ENGINEERING DRAWINGS. OPENINGS IN DEMISING AND SOUND ATTENUATED WALLS TO HAVE SOUND BOOTS. OPENINGS IN FIRE RATED WALLS SHALL HAVE FIRE OR SMOKE DAMPERS AS REQUIRED BY CODE. OPENINGS SHALL BE SUFFICIENTLY FRAMED FOR VIBRATION.

8. DUCTWORK SHALL BE INSULATED FOR THERMAL AND ACOUSTIC CONSIDERATIONS.

9. WOOD CASEWORK SHALL CONFORM TO ARCHITECTURAL WOODWORK INSTITUTE (AWI) "PREMIUM GRADE" QUALITY STANDARDS AND SHALL BE "FLUSH OVERLAY" CONSTRUCTION UNLESS DETAILED OTHERWISE ON THE DRAWINGS.

10. PLASTIC LAMINATE CASEWORK SHALL CONFORM TO ARCHITECTURAL WOODWORK INSTITUTE (AWI) "CUSTOM GRADE" QUALITY STANDARDS AND SHALL BE "FLUSH OVERLAY" CONSTRUCTION UNLESS DETAILED OTHERWISE ON THE DRAWINGS.

11. CASEWORK SHALL BE SCRIBED TO WALL OR CEILING. CONTRACTOR SHALL COORDINATE WITH OTHER INVOLVED TRADES.

12. LOCKSETS SHALL BE "KEYED" IN ACCORDANCE WITH BUILDING MANAGEMENT'S REQUIREMENTS. "KEYS" ARE TO BE PROPERLY TESTED AND DELIVERED TO BUILDING MANAGEMENT. THE NUMBER OF MASTER AND PASS KEYS SHALL BE COORDINATED WITH BUILDING MANAGEMENT.

13. WOOD SHELVING AND PAINTED DOORS SHALL RECEIVE PRIMING, SANDING AND (2) FULL COATS OF SEMI-GLOSS ENAMEL, FREE OF BRUSH STROKES.

14. GRIND, SAND, LEVEL OR FLOAT FLOOR AND WALL SURFACES AS NECESSARY TO ACHIEVE A LEVEL, SMOOTH SUBSTRATE ACCEPTABLE FOR INSTALLATION OF THE SPECIFIED FINISH MATERIAL.

15. PREPARE WALL AND FLOOR SURFACES TO MEET STANDARD SMOOTHNESS AND LEVELING MATERIAL REQUIREMENTS AS SPECIFIED BY THE MANUFACTURER AND CONTRACT DOCUMENTS PRIOR TO INSTALLATION OF NEW BUILDING FINISHES.

D. GENERAL CONSTRUCTION (CONT.)

16. EXISTING APPURTENANCES NOT BEING REMOVED SHALL BE REFURBISHED, LOOSE ITEMS TIGHTENED AND MISSING OR BROKEN PARTS REPLACED TO ACHIEVE A FINISHED FIRST CLASS INSTALLATION AND "LIKE-NEW" APPEARANCE.

17. THE CONTRACTOR SHALL REMOVE SWITCH PLATES, OUTLET PLATES, SURFACE HARDWARE, ETC. PRIOR TO PAINTING. REPLACE SAME WHEN PAINTING HAS BEEN COMPLETED. REMOVE PAINT SPLATTERS FROM ADJACENT SURFACES - I.E. MULLIONS, CEILING GRID, ETC.

18. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH LOCAL V.O.C. REGULATIONS FOR MATERIALS USED IN CONSTRUCTION.

19. TILE SHALL BE LAID IN SQUARE PATTERN PARALLEL TO WALLS UNLESS OTHERWISE NOTED.

20. ALL VARYING FLOOR MATERIAL SHALL BE INSTALLED FLUSH TO EACH OTHER. TRANSITIONS SHALL BE CENTERED ON DOOR UNLESS OTHERWISE NOTED.

21. SPACES BEING SURFACED SHALL BE CLOSED TO TRAFFIC AND OTHER WORK DURING THE LAYING OF FLOORING, STONE, WOOD, OR OTHER MATERIAL. FINISHED FLOORS SHALL BE COVERED AFTER INSTALLATION FOR PROTECTION.

E. REQUIRED APPROVALS AND SUBMITTALS

1. WHERE THE TERMS "APPROVED EQUAL", "OTHER APPROVED", "EQUAL TO", "ACCEPTABLE" OR OTHER GENERAL QUALIFYING TERMS ARE USED, IT SHALL BE UNDERSTOOD THAT REFERENCE IS MADE TO THE RULING AND JUDGMENT OF BUILDING MANAGEMENT AND MUST BE SUBMITTED FOR APPROVAL PRIOR TO PURCHASE OR USE.

2. THE CONTRACTOR SHALL HAVE (10) WORKING DAYS FROM AWARD OF THE CONTRACT TO SUBMIT SUBSTITUTIONS OF SPECIFIED PRODUCTS OR WORK FOR REVIEW BY BUILDING MANAGEMENT AND SHALL INCLUDE CUT SHEETS WITH SPECIFICATIONS AND REASONS FOR SUBSTITUTION. NO SUBSTITUTIONS SHALL BE ACCEPTED AFTER THE INITIAL TIME LIMIT HAS EXPIRED.

3. WHERE REQUIRED BY BUILDING MANAGEMENT, THE CONTRACTOR SHALL REVIEW, SIGN, DATE AND SUBMIT A MINIMUM OF (3) SETS OF COMPLETE AND DETAILED SHOP DRAWINGS, FINISHES, FIXTURE AND EQUIPMENT CUT SHEETS TO idGROUP FOR REVIEW. THE idGROUP SHALL HAVE (10) WORKING DAYS TURNAROUND TIME FROM RECEIPT OF SUBMITTAL. ALL SHOP DRAWINGS AND CUT SHEETS SIGNED "REVIEWED" SHALL SUPERSEDE ORIGINAL DRAWINGS IN DESIGN APPEARANCE ONLY. CONTRACTORS SHALL ASSUME RESPONSIBILITY FOR ERRORS IN THEIR DRAWINGS.

4. IN THE EVENT THAT THE AFOREMENTIONED DRAWINGS, SPECIFICATIONS, ETC. ARE NOT SUBMITTED FOR REVIEW AND APPROVAL, THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR THE REPLACEMENT, CORRECTION OR ACQUISITION OF PRODUCTS TO COMPLY WITH OWNER'S SPECIFICATION AND APPROVAL.

5. THE CONTRACTOR SHALL PROVIDE CHALK LINES ON THE SLAB OF PARTITIONS FOR APPROVAL PRIOR TO FRAMING AND SHALL NOTIFY idGROUP OF ANY DEVIATION FROM CONSTRUCTION DIMENSIONS OR CLEARANCES AS DESIGNATED ON THE DRAWINGS OR OF APPARENT CONSTRUCTION CONFLICTS.

6. BUILDING MECHANICAL AND ELECTRICAL SERVICE SHUT DOWN REQUIRED FOR THIS PROJECT SHALL BE SUBMITTED IN WRITING TO BUILDING MANAGEMENT BY THE CONTRACTOR A MINIMUM OF (72) HOURS IN ADVANCE OF THE SHUT DOWN. THE CONTRACTOR SHALL OBTAIN APPROVAL FROM AUTHORITIES HAVING JURISDICTION PRIOR TO SHUT DOWN AND SHALL NOT OVERLY INCONVENIENCE BUILDING OCCUPANTS.

7. UPON SUBSTANTIAL COMPLETION OF WORK, THE HVAC SYSTEM SHALL BE BALANCED BY A QUALIFIED ENGINEER AND A WRITTEN REPORT SHALL BE SUBMITTED TO BUILDING MANAGEMENT.

8. UPON SUBMISSION OF THE "FINAL APPLICATION FOR PAYMENT", THE CONTRACTOR SHALL PROVIDE BUILDING MANAGEMENT WITH (1) SET OF AS-BUILT DOCUMENTATION INCLUDING DRAWINGS, SPECIFICATIONS, ADDENDA, CHANGE ORDERS, PRODUCT DATA, EQUIPMENT WARRANTIES AND MANUALS, FINISH SAMPLES AND OTHER REQUIRED SUBMITTALS. THE CONTRACTOR SHALL PROVIDE BUILDING MANAGEMENT WITH A WRITTEN WARRANTY COVERING ALL WORK PERFORMED UNDER THE CONTRACT. WARRANTY SHALL BE FOR A PERIOD OF ONE YEAR COMMENCING ON THE DATE OF SUBSTANTIAL COMPLETION AND SHALL BE INCLUDED WITH THIS SUBMITTAL.

9. THE CONTRACTOR SHALL SUPPLY LIEN WAIVERS RELATING TO ALL WORK WITH THE "FINAL APPLICATION FOR PAYMENT" TO BE REVIEWED FOR "FINAL CERTIFICATE OF PAYMENT".

F. CHANGES IN WORK

1. THE TENANT WITHOUT INVALIDATING THE CONTRACT, MAY ORDER EXTRA WORK OR MAKE CHANGES BY ALTERING, ADDING TO OR DEDUCTING FROM THE WORK - THE CONTRACT SUM BEING ADJUSTED ACCORDINGLY. SUCH WORK SHALL BE EXECUTED UNDER THE CONDITIONS OF THE ORIGINAL CONTRACT EXCEPT THAT ANY CLAIM FOR EXTENSIONS OF TIME CAUSED THEREBY SHALL BE INDICATED ON THE CHANGE ORDER.

2. CLAIMS FOR ADDITIONAL WORK WILL BE SUBMITTED IN WRITING FOR REVIEW BY BUILDING MANAGEMENT AND SHOULD INCLUDE A COMPLETE DESCRIPTION OF THE WORK, MATERIALS BEING USED, THE ROOM NUMBER OR AREA AFFECTED, AND THE AUTHORIZATION UNDER WHICH THE WORK IS BEING PERFORMED.

PROJECT NOTES

1. THE SUBMISSION OF A PROPOSAL SHALL BE CONSTRUED AS EVIDENCE THAT SUCH AN EXAMINATION HAS BEEN MADE AND LATER CLAIMS FOR LABOR, EQUIPMENT, OR MATERIAL REQUIRED FOR DIFFICULTIES ENCOUNTERED, WHICH COULD HAVE BEEN FORESEEN HAD SUCH AN EXAMINATION BEEN MADE, WILL NOT BE RECOGNIZED. idGROUP IS NOT COMMISSIONED TO VERIFY EVERY EXISTING CONDITION, VISIBLE OR OTHERWISE, THEREFORE IT IS THE GENERAL CONTRACTOR'S OBLIGATION TO ASSUME ALL RESPONSIBILITY FOR MODIFYING ANY AND ALL EXISTING CONDITIONS TO MEET THE DESIGN INTENT OF THESE DRAWINGS.

2. BULLETED NOTES ARE GENERAL CONDITIONS REQUIRED FOR THE PLAN. NUMBERED NOTATIONS REFERENCE SPECIFIC LOCATIONS ON THE DRAWINGS.

3. THE BUILDING ENVELOPE, MECHANICAL, ELECTRICAL, SERVICE-WATER HEATING AND ILLUMINATION SYSTEMS, AND EQUIPMENT SHALL COMPLY WITH THE MOST CURRENT APPLICABLE INTERNATIONAL ENERGY CONSERVATION CODE, AS RECOGNIZED BY THE MUNICIPALITY GOVERNING THIS PROJECT.

4. ITEMS NOTED TO BE "TOUCHED-UP" ARE TO BE BROUGHT TO AN ACCEPTABLE INDUSTRY STANDARD LEVEL OF REFURBISHMENT. IF AN ENTIRE WALL(S) REQUIRES REPAINTING IN ORDER TO ACHIEVE AN ACCEPTABLE FINISH, INCLUDE NECESSARY FEES IN BID TO DO SO.

5. RETURN REUSABLE MATERIALS TO BUILDING STOCK. VERIFY ACCEPTABILITY OF MATERIALS WITH BUILDING MANAGER.

6. REUSE AS MANY EXISTING MATERIALS FROM LEASE AS POSSIBLE, TOUCH UP. VERIFY AVAILABILITY OF MATERIALS TO BE USED FROM BUILDING STOCK WITH BUILDING MANAGER.

7. CONTRACTOR TO PROTECT PUBLIC CORRIDOR, ADJACENT SPACES, AND MATERIALS DURING CONSTRUCTION FROM DUST, DIRT, NOISE, AND HARM.

8. ALL CONSTRUCTION MATERIALS TO BE ASBESTOS FREE. idGROUP SHALL HAVE NO RESPONSIBILITY FOR THE DISCOVERY, PRESENCE, HANDLING, REMOVAL OR DISPOSAL OF, OR EXPOSURE TO HAZARDOUS MATERIALS IN ANY FORM AT THE PROJECT SITE, INCLUDING BUT NOT LIMITED TO ASBESTOS PRODUCTS, POLYCHLORINATED BIPHENYL (PCB), OR OTHER TOXIC SUBSTANCES.

9. EXISTING PUBLIC RESTROOMS ARE NOT INCLUDED IN THIS SCOPE OF WORK. IF APPLICABLE, COORDINATE WITH BUILDING MANAGEMENT FOR ANY NEW CONSTRUCTION REQUIRED IN RESTROOMS TO ENSURE ADA/TAS COMPLIANCE.

10. CONFIRM ALL BUILDING STANDARD SPECIFICATIONS WITH BUILDING MANAGER.

11. COORDINATE WITH BUILDING MANAGEMENT FOR ALL DEMOLISHED MATERIALS FOR PROPER STORAGE OR DISPOSAL.

12. REMOVE ALL DOORS SHOWN TO BE DEMOLISHED AND SALVAGE FOR POSSIBLE RE-USE IN NEW CONSTRUCTION. CONTRACTOR TO VERIFY QUANTITY, QUALITY, AND CORRECT DOOR SWINGS OF EXISTING DOORS AVAILABLE TO RE-USE.

13. REMOVE NAILS AND SCREWS FROM EXISTING WALLS. REPAIR HOLES AND SCRATCHES. PREPARE ALL WALL SURFACES FOR NEW SCHEDULED FINISHES.

14. PROVIDE NEW BULDING STANDARD DOOR STOPS AT ALL NEW DOOR LOCATIONS. REPLACE IF DAMAGED OR MISSING AT ALL EXISTING DOOR LOCATIONS.

15. IF NOT ALREADY EXISTING, PROVIDE MINIMUM REQUIRED GYPSUM BOARD FURRING AT FIRE RATED CORE WALLS FOR MILLWORK, MILLWORK STANDARDS, PLUMBING, LIGHT SWITCHES AND/OR ELECTRICAL/TELEPHONE OUTLETS. DO NOT PENETRATE FIRE-RATED PARTITIONS.

16. PATCH AND REPAIR WALLS WHERE DEMOLITION, DAMAGE, OR INCOMPLETE WORK HAS OCCURRED. PREPARE SURFACES FOR NEW SCHEDULED FINISHES AND TEXTURES.

17. PROVIDE FIRE RETARDANT TREATED WOOD BLOCKING WITHIN WALL TO SUPPORT MILLWORK, STANDARDS, AND WALL HUNG EQUIPMENT.

18. ALL NEW MILLWORK TO MEET ADA/TAS REQUIREMENTS.

19. PROVIDE FIRE EXTINGUISHERS IN TENANTS LEASE PER CODE. NOT TO EXCEED 75 FEET.

20. PROVIDE NEW SWITCH & OUTLETS COVER PLATES WHERE MISSING OR DAMAGED TO MATCH EXISTING.

21. CONTRACTOR TO UPDATE ALL PANEL SCHEDULES TO REFLECT CORRECT BREAKER ASSIGNMENTS. PROVIDE DIAGRAM TO BUILDING ENGINEER.

22. NEW OUTLETS TO BE MOUNTED AT 17" AF.F. OUTLETS ABOVE STANDARD MILLWORK TO BE MOUNTED HORIZONTALLY AT 42" A.F.F., ON CENTER, U.N.O.

23. SECURITY, TELEPHONE, AND COMPUTER CABLING WORK TO BE COMPLETED BY TENANT'S PROVIDER. GC TO PROVIDE PATHWAY, RING, AND STRING ONLY AT INDICATED LOCATIONS.

24. REMOVE EXCESS WIRING RESULTING FROM DEMOLITION.

25. EXISTING ELECTRICAL OUTLETS LOCATED ON PARTITIONS TO BE DEMOLISHED ARE NOT SHOWN AND ARE TO BE REMOVED, INCLUDING CONDUIT AND WIRING, BACK TO THEIR RESPECTIVE ELECTRICAL PANELS.

26. VERIFY THE AVAILABILITY OF CIRCUITRY ON EXISTING ELECTRICAL PANELS. RECIRCUIT OUTLETS LEFT ON INCOMPLETE CIRCUITS INTO NEW CONSTRUCTION.

27. WHERE ELECTRICAL OUTLETS ARE REQUIRED WITHIN (3) FEET OF A SINK, PROVIDE GFI CIRCUITS AS REQUIRED BY CODE.

28. EXISTING SWITCHES NOT NOTED ON PLAN AND THAT ARE NOT LOCATED ADJACENT TO LATCH SIDE OF DOORS ARE TO BE REMOVED AND WALL PATCHED TO MATCH ADJACENT WALL CONSTRUCTION.

29. PROVIDE EITHER DUAL SWITCHING OR MOTION SENSORS AT ALL ROOMS SWITCHED WITH MORE THAN ONE LIGHT FIXTURE AND IN ROOMS THAT ARE 250 SQ. FT. OR MORE. PROVIDE WATTSTOPPER MOTION SENSORS AND/OR ULTRASONIC DEVICES FOR ROOMS THAT ARE 250 SQ. FT OR MORE, IN ALL AREAS INCLUDED IN IECC CALCULATIONS.

30. SWITCHES INDICATE LOCATION ONLY. SUBSCRIPT LETTERS INDICATE DESIRED SWITCHING. GENERAL CONTRACTOR TO VERIFY QUANTITY OF LIGHT FIXTURES PER CIRCUIT AND QUANTITY OF SWITCHES REQUIRED. ALL NEW SWITCHES TO BE MOUNTED 48" A.F.F. TO CENTERLINE OF SWITCH.

31. CLEAN SUPPLY AND RETURN GRILLS THROUGHOUT, U.N.O.

32. SURFACE MOUNTED FIRE SAFETY DEVICES TO BE PLACED AWAY FROM CENTERS OF ALL WALLS. PLACEMENT TO COMPLY WITH ALL CODES. WHERE POSSIBLE, COORDINATE WITH TENANT FOR DESIRED LOCATIONS

33. FIRE PROTECTION CONTRACTOR TO VERIFY REQUIREMENTS AND QUANTITY OF FIRE PROTECTION DEVICES. INCLUDE SMOKE DETECTORS, FIRE ALARMS, SPEAKERS, STROBES, ETC. INCLUDE COSTS TO THE SUCH DEVICES INTO BUILDING PANEL. LIFE SAFETY INSTALLATIONS TO MEET ADA/TAS REQUIREMENTS. SUBMIT CITY APPROVED FIRE PROTECTION PLAN FOR SPRINKLER LOCATIONS TO BUILDING MANAGER FOR APPROVAL.

34. ALL PAINTED WALLS SHALL RECEIVE TWO COATS OF LATEX PAINT IN BUILDING STANDARD FINISH.

35. TOUCH-UP OR REPAINT ALL WALLS AS NEEDED AFTER COMPLETION OF TENANT LEASE SPACE.

36. EXISTING WINDOW COVERINGS TO REMAIN, U.N.O. CLEAN AND REPAIR THROUGHOUT. REPLACE TO MATCH EXISTING, IF MISSING OR DAMAGED BEYOND REPAIR.

37. CLEAN ALL EXISTING LIGHT FIXTURES THROUGHOUT, U.N.O.

idGROUP

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REGISTERED INTERIOR DESIGNER
NCIDQ
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21417
05/27/21

PROJECT NO.: 581-009
DRAWN BY: TM
CHECKED BY: MW
R.S.F.: 41,852

BILLINGSLEY COMPANY

3501 OLYMPUS
SELENE

3501 OLYMPUS BLVD
5TH FLOOR
DALLAS, TX 75019

NO.	ISSUED FOR:	DATE:
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LANDLORD/CLIENT REVIEW ISSUE DATE: 05/27/21
BID ISSUE DATE: 05/27/21
CONSTRUCTION ISSUE DATE: 05/27/21

DRAWING TITLE:

GENERAL NOTES

DRAWING NUMBER:

G0.1

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CHAPTER 3: BUILDING BLOCKS

302 FLOOR OR GROUND SURFACES
302.2 CARPET. CARPET OR CARPET TILE SHALL BE SECURELY ATTACHED AND SHALL HAVE A FIRM CUSHION, PAD, OR BACKING OR NO CUSHION OR PAD. CARPET OR CARPET TILE SHALL HAVE A LEVEL LOOP, TEXTURED LOOP, LEVEL CUT PILE, OR LEVEL CUT/UNCUT PILE TEXTURE. PILE HEIGHT SHALL BE 1/2 INCH (13 MM) MAXIMUM. EXPOSED EDGES OF CARPET SHALL BE FASTENED TO FLOOR SURFACES AND SHALL HAVE TRIM ON THE ENTIRE LENGTH OF THE EXPOSED EDGE. CARPET EDGE TRIM SHALL COMPLY WITH 303.
302.3 OPENINGS. OPENINGS IN FLOOR OR GROUND SURFACES SHALL NOT ALLOW PASSAGE OF A SPHERE MORE THAN 1/2 INCH (13 MM) DIAMETER EXCEPT AS ALLOWED IN 407.4.3, 409.4.3, 410.4, 810.5.3 AND 810.10. ELONGATED OPENINGS SHALL BE PLACED SO THAT THE LONG DIMENSION IS PERPENDICULAR TO THE DOMINANT DIRECTION OF TRAVEL.
303 CHANGES IN LEVEL
303.2 VERTICAL. CHANGES IN LEVEL OF 1/4 INCH (6.4 MM) HIGH MAXIMUM SHALL BE PERMITTED TO BE VERTICAL.
303.3 BEVELED. CHANGES IN LEVEL BETWEEN 1/4 INCH (6.4 MM) HIGH MINIMUM AND 1/2 INCH (13 MM) HIGH MAXIMUM SHALL BE BEVELED WITH A SLOPE NOT STEEPER THAN 1:2.
303.4 RAMPS. CHANGES IN LEVEL GREATER THAN 1/2 INCH (13 MM) HIGH SHALL BE RAMPED, AND SHALL COMPLY WITH 405 OR 406.
304 TURNING SPACE
304.3.1 CIRCULAR SPACE. THE TURNING SPACE SHALL BE A SPACE OF 60 INCHES (1525 MM) DIAMETER MINIMUM. THE SPACE SHALL BE PERMITTED TO INCLUDE KNEE AND TOE CLEARANCE COMPLYING WITH 306.
304.3.2 T-SHAPED SPACE. THE TURNING SPACE SHALL BE A T-SHAPED SPACE WITHIN A 60 INCH (1525 MM) SQUARE MINIMUM WITH ARMS AND BASE 36 INCHES (915 MM) WIDE MINIMUM. EACH ARM OF THE T SHALL BE CLEAR OF OBSTRUCTIONS 12 INCHES (305 MM) MINIMUM IN EACH DIRECTION AND THE BASE SHALL BE CLEAR OF OBSTRUCTIONS 24 INCHES (610 MM) MINIMUM. THE SPACE SHALL BE PERMITTED TO INCLUDE KNEE AND TOE CLEARANCE COMPLYING WITH 306 ONLY AT THE END OF EITHER THE BASE OR ONE ARM.

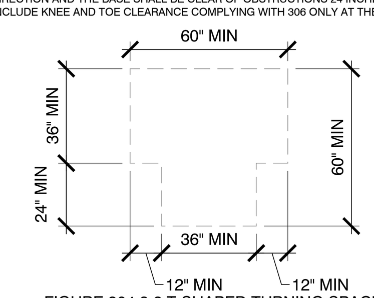


FIGURE 304.3.2 T-SHAPED TURNING SPACE

304.4 DOOR SWING. DOORS SHALL BE PERMITTED TO SWING INTO TURNING SPACES.
305 CLEAR FLOOR OR GROUND SPACE
305.3 SIZE. THE CLEAR FLOOR OR GROUND SPACE SHALL BE 30 INCHES (760 MM) MINIMUM BY 48 INCHES (1220 MM) MINIMUM.
305.4 KNEE AND TOE CLEARANCE. UNLESS OTHERWISE SPECIFIED, CLEAR FLOOR OR GROUND SPACE SHALL BE PERMITTED TO INCLUDE KNEE AND TOE CLEARANCE COMPLYING WITH 306.
305.5 POSITION. UNLESS OTHERWISE SPECIFIED, CLEAR FLOOR OR GROUND SPACE SHALL BE POSITIONED FOR EITHER FORWARD OR PARALLEL APPROACH TO AN ELEMENT.

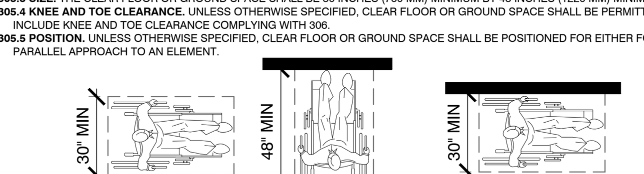


FIGURE 305.3 CLEAR FLOOR SPACE (a) (b) FIGURE 305.5(a) FORWARD APPROACH

305.6 APPROACH. ONE FULL UNOBSTRUCTED SIDE OF THE CLEAR FLOOR OR GROUND SPACE SHALL ADJOIN AN ACCESSIBLE ROUTE OR ADJOIN ANOTHER CLEAR FLOOR OR GROUND SPACE.
305.7 MANEUVERING CLEARANCE. WHERE A CLEAR FLOOR OR GROUND SPACE IS LOCATED IN AN ALCOVE OR OTHERWISE CONFINED ON ALL OR PART OF THREE SIDES, ADDITIONAL MANEUVERING CLEARANCE SHALL BE PROVIDED IN ACCORDANCE WITH 305.7.1 AND 305.7.2
305.7.1 FORWARD APPROACH. ALCOVES SHALL BE 36 INCHES (915 MM)WIDE MINIMUM WHERE THE DEPTH EXCEEDS 24 INCHES (610 MM).

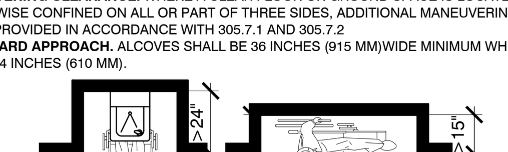


FIGURE 305.7.1 CLEARANCE IN AN ALCOVES, FORWARD APPROACH
FIGURE 305.7.2 CLEARANCE IN AN ALCOVES, PARALLEL APPROACH

306 KNEE AND TOE CLEARANCE
306.2 TOE CLEARANCE
306.2.2 MAXIMUM DEPTH. TOE CLEARANCE SHALL EXTEND 25 INCHES (635 MM) MAXIMUM UNDER AN ELEMENT.
306.2.3 MINIMUM REQUIRED DEPTH. WHERE TOE CLEARANCE IS REQUIRED AT AN ELEMENT AS PART OF A CLEAR FLOOR SPACE, THE TOE CLEARANCE SHALL EXTEND 17 INCHES (430 MM) MINIMUM UNDER THE ELEMENT.
306.2.4 ADDITIONAL CLEARANCE. SPACE EXTENDING GREATER THAN 6 INCHES (150 MM) BEYOND THE AVAILABLE KNEE CLEARANCE AT 9 INCHES (230 MM) ABOVE THE FINISH FLOOR OR GROUND SHALL NOT BE CONSIDERED TOE CLEARANCE.
306.2.5 WIDTH. TOE CLEARANCE SHALL BE 30 INCHES (760 MM) WIDE MINIMUM.

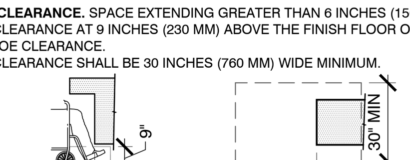
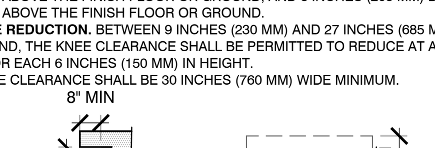


FIGURE 306.2 TOE CLEARANCES FIGURE 306.2 TOE CLEARANCES

306.3 KNEE CLEARANCE
306.3.2 MAXIMUM DEPTH. KNEE CLEARANCE SHALL EXTEND 25 INCHES (635 MM) MAXIMUM UNDER AN ELEMENT AT 9 INCHES (230 MM) ABOVE THE FINISH FLOOR OR GROUND.
306.3.3 MINIMUM REQUIRED DEPTH. WHERE KNEE CLEARANCE IS REQUIRED UNDER AN ELEMENT AS PART OF A CLEAR FLOOR SPACE, THE KNEE CLEARANCE SHALL BE 11 INCHES (280 MM) DEEP MINIMUM AT 9 INCHES (230 MM) ABOVE THE FINISH FLOOR OR GROUND, AND 8 INCHES (205 MM) DEEP MINIMUM AT 27 INCHES (685 MM) ABOVE THE FINISH FLOOR OR GROUND.
306.3.4 CLEARANCE REDUCTION. BETWEEN 9 INCHES (230 MM) AND 27 INCHES (685 MM) ABOVE THE FINISH FLOOR OR GROUND, THE KNEE CLEARANCE SHALL BE PERMITTED TO REDUCE AT A RATE OF 1 INCH (25 MM) IN DEPTH FOR EACH 6 INCHES (150 MM) IN HEIGHT.
306.3.5 WIDTH. KNEE CLEARANCE SHALL BE 30 INCHES (760 MM) WIDE MINIMUM.



(a) (b)
FIGURE 306.3 KNEE CLEARANCES

307 PROTRUDING OBJECTS
307.2 PROTRUSION LIMITS. OBJECTS WITH LEADING EDGES MORE THAN 27 INCHES (685 MM) AND NOT MORE THAN 80 INCHES (2030 MM) ABOVE THE FINISH FLOOR OR GROUND SHALL PROTRUDE 4 INCHES (100 MM) MAXIMUM HORIZONTALLY INTO THE CIRCULATION PATH.
EXCEPTION: HANDRAILS SHALL BE PERMITTED TO PROTRUDE 4 1/2 INCHES (115 MM) MAXIMUM.

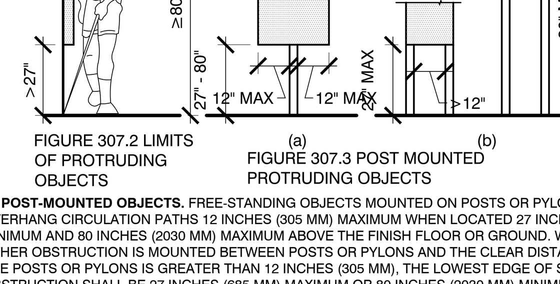


FIGURE 307.2 LIMITS OF PROTRUDING OBJECTS
(a) (b) FIGURE 307.3 POST MOUNTED PROTRUDING OBJECTS

307.3 POST-MOUNTED OBJECTS. FREE-STANDING OBJECTS MOUNTED ON POSTS OR PYLONS SHALL OVERHANG CIRCULATION PATHS 12 INCHES (305 MM) MAXIMUM WHEN LOCATED 27 INCHES (685 MM) MINIMUM AND 80 INCHES (2030 MM) MAXIMUM ABOVE THE FINISH FLOOR OR GROUND. WHERE A SIGN OR OTHER OBSTRUCTION IS MOUNTED BETWEEN POSTS OR PYLONS AND THE CLEAR DISTANCE BETWEEN THE POSTS OR PYLONS IS GREATER THAN 12 INCHES (305 MM), THE LOWEST EDGE OF SUCH SIGN OR OBSTRUCTION SHALL BE 27 INCHES (685 MM) MAXIMUM OR 80 INCHES (2030 MM) MINIMUM ABOVE THE FINISH FLOOR OR GROUND.
EXCEPTION: THE SLOPING PORTIONS OF HANDRAILS SERVING STAIRS AND RAMPS SHALL NOT BE REQUIRED TO COMPLY WITH 307.3.
307.4 VERTICAL CLEARANCE. VERTICAL CLEARANCE SHALL BE 80 INCHES (2030 MM) HIGH MINIMUM. GUARDRAILS OR OTHER BARRIERS SHALL BE PROVIDED WHERE THE VERTICAL CLEARANCE IS LESS THAN 80 INCHES (2030 MM) HIGH. THE LEADING EDGE OF SUCH GUARDRAIL OR BARRIER SHALL BE LOCATED 27 INCHES (685 MM) MAXIMUM ABOVE THE FINISH FLOOR OR GROUND.
EXCEPTION: DOOR CLOSERS AND DOOR STOPS SHALL BE PERMITTED TO BE 78 INCHES (1980 MM) MINIMUM ABOVE THE FINISH FLOOR OR GROUND.
307.5 REQUIRED CLEAR WIDTH. PROTRUDING OBJECTS SHALL NOT REDUCE THE CLEAR WIDTH REQUIRED FOR ACCESSIBLE ROUTES.
308 REACH RANGES
ADVISORY 308.1 GENERAL. REFER TO ACCESSIBILITY STANDARDS FOR DETAILED CHILDREN'S REACH RANGE REQUIREMENTS.
308.2 FORWARD REACH
308.2.1 UNOBSTRUCTED. WHERE A FORWARD REACH IS UNOBSTRUCTED, THE HIGH FORWARD REACH SHALL BE 48 INCHES (1220 MM) MAXIMUM AND THE LOW FORWARD REACH SHALL BE 15 INCHES (380 MM) MINIMUM ABOVE THE FINISH FLOOR OR GROUND.
308.2.2 OBSTRUCTED HIGH REACH. WHERE A HIGH FORWARD REACH IS OVER AN OBSTRUCTION, THE CLEAR FLOOR SPACE SHALL EXTEND BENEATH THE ELEMENT FOR A DISTANCE NOT LESS THAN THE REQUIRED REACH DEPTH OVER THE OBSTRUCTION. THE HIGH FORWARD REACH SHALL BE 48 INCHES (1220 MM) MAXIMUM WHERE THE REACH DEPTH IS 20 INCHES (510 MM) MAXIMUM. WHERE THE REACH DEPTH EXCEEDS 20 INCHES (510 MM), THE HIGH FORWARD REACH SHALL BE 44 INCHES (1120 MM) MAXIMUM AND THE REACH DEPTH SHALL BE 25 INCHES (635 MM) MAXIMUM.

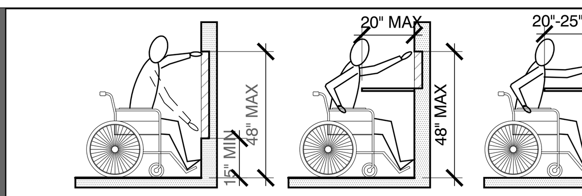


FIGURE 308.2.1UNOBSTRUCTED FORWARD REACH
(a) (b) FIGURE 308.2.2 OBSTRUCTED HIGH FORWARD REACH

308.3 SIDE REACH.
308.3.1 UNOBSTRUCTED. WHERE A CLEAR FLOOR OR GROUND SPACE ALLOWS A PARALLEL APPROACH TO AN ELEMENT AND THE SIDE REACH IS UNOBSTRUCTED, THE HIGH SIDE REACH SHALL BE 48 INCHES (1220 MM) MAXIMUM AND THE LOW SIDE REACH SHALL BE 15 INCHES (380 MM) MINIMUM ABOVE THE FINISH FLOOR OR GROUND.
EXCEPTIONS:
1. AN OBSTRUCTION SHALL BE PERMITTED BETWEEN THE CLEAR FLOOR OR GROUND SPACE AND THE ELEMENT WHERE THE DEPTH OF THE OBSTRUCTION IS 10 INCHES (255 MM) MAXIMUM.
2. OPERABLE PARTS OF FUEL DISPENSERS SHALL BE PERMITTED TO BE 54 INCHES (1370 MM) MAXIMUM MEASURED FROM THE SURFACE OF THE VEHICULAR WAY WHERE FUEL DISPENSERS ARE INSTALLED ON EXISTING CURBS.

308.3.2 OBSTRUCTED HIGH REACH. WHERE A CLEAR FLOOR OR GROUND SPACE ALLOWS A PARALLEL APPROACH TO AN ELEMENT AND THE HIGH SIDE REACH IS OVER AN OBSTRUCTION, THE HEIGHT OF THE OBSTRUCTION SHALL BE 34 INCHES (865 MM) MAXIMUM AND THE DEPTH OF THE OBSTRUCTION SHALL BE 24 INCHES (610 MM) MAXIMUM. THE HIGH SIDE REACH SHALL BE 48 INCHES (1220 MM) MAXIMUM FOR A REACH DEPTH OF 10 INCHES (255 MM) MAXIMUM. WHERE THE REACH DEPTH EXCEEDS 10 INCHES (255 MM), THE HIGH SIDE REACH SHALL BE 46 INCHES (1170 MM) MAXIMUM FOR A REACH DEPTH OF 24 INCHES (610 MM) MAXIMUM.
EXCEPTIONS:
1. THE TOP OF WASHING MACHINES AND CLOTHES DRYERS SHALL BE PERMITTED TO BE 36 INCHES (915 MM) MAXIMUM ABOVE THE FINISH FLOOR.
2. OPERABLE PARTS OF FUEL DISPENSERS SHALL BE PERMITTED TO BE 54 INCHES (1370 MM) MAXIMUM MEASURED FROM THE SURFACE OF THE VEHICULAR WAY WHERE FUEL DISPENSERS ARE INSTALLED ON EXISTING CURBS.

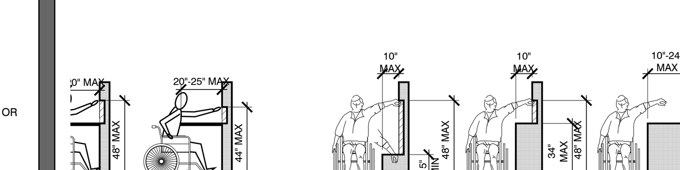


FIGURE 308.2.2 OBSTRUCTED HIGH FORWARD REACH (b)
FIGURE 308.3.1 OBSTRUCTED SIDE REACH
(a) (b) FIGURE 308.3.2 OBSTRUCTED HIGH SIDE REACH

309 OPERABLE PARTS
309.2 CLEAR FLOOR SPACE. A CLEAR FLOOR OR GROUND SPACE COMPLYING WITH 305 SHALL BE PROVIDED.
309.3 HEIGHT. OPERABLE PARTS SHALL BE PLACED WITHIN ONE OR MORE OF THE REACH RANGES SPECIFIED IN 308.
309.4 OPERATION. OPERABLE PARTS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST. THE FORCE REQUIRED TO ACTIVATE OPERABLE PARTS SHALL BE 5 POUNDS (22.2 N) MAXIMUM.
EXCEPTION: GAS PUMP NOZZLES SHALL NOT BE REQUIRED TO PROVIDE OPERABLE PARTS THAT HAVE AN ACTIVATING FORCE OF 5 POUNDS (22.2 N) MAXIMUM.

CHAPTER 4: ACCESSIBLE ROUTES

402 ACCESSIBLE ROUTES
402.2 COMPONENTS. ACCESSIBLE ROUTES SHALL CONSIST OF ONE OR MORE OF THE FOLLOWING COMPONENTS: WALKING SURFACES WITH A RUNNING SLOPE NOT STEEPER THAN 1:20, DOORWAYS, RAMPS, CURB RAMPS EXCLUDING THE FLARED SIDES, ELEVATORS, AND PLATFORM LIFTS. ALL COMPONENTS OF AN ACCESSIBLE ROUTE SHALL COMPLY WITH THE APPLICABLE REQUIREMENTS OF CHAPTER 4.
ADVISORY 402.2 COMPONENTS. WALKING SURFACES MUST HAVE RUNNING SLOPES NOT STEEPER THAN 1:20, SEE 403.3. OTHER COMPONENTS OF ACCESSIBLE ROUTES, SUCH AS RAMPS (405) AND CURB RAMPS (406), ARE PERMITTED TO BE MORE STEEPLY SLOPED.
403 WALKING SURFACES
403.2 FLOOR OR GROUND SURFACE. FLOOR OR GROUND SURFACES SHALL COMPLY WITH 302.
403.3 SLOPE. THE RUNNING SLOPE OF WALKING SURFACES SHALL NOT BE STEEPER THAN 1:20. THE CROSS SLOPE OF WALKING SURFACES SHALL NOT BE STEEPER THAN 1:48.
403.4 CHANGES IN LEVEL. CHANGES IN LEVEL SHALL COMPLY WITH 303.
403.5 CLEARANCES. WALKING SURFACES SHALL PROVIDE CLEARANCES COMPLYING WITH 403.5.
EXCEPTION: WITHIN EMPLOYEE WORK AREAS, CLEARANCES ON COMMON USE CIRCULATION PATHS SHALL BE PERMITTED TO BE DECREASED BY WORK AREA EQUIPMENT PROVIDED THAT THE DECREASE IS ESSENTIAL TO THE FUNCTION OF THE WORK BEING PERFORMED.
403.5.1 CLEAR WIDTH. EXCEPT AS PROVIDED IN 403.5.2 AND 403.5.3, THE CLEAR WIDTH OF WALKING SURFACES SHALL BE 36 INCHES (915 MM) MINIMUM.
EXCEPTION: THE CLEAR WIDTH SHALL BE PERMITTED TO BE REDUCED TO 32 INCHES (815 MM) MINIMUM FOR A LENGTH OF 24 INCHES (610 MM) MAXIMUM PROVIDED THAT REDUCED WIDTH SEGMENTS ARE SEPARATED BY SEGMENTS THAT ARE 48 INCHES (1220 MM) LONG MINIMUM AND 36 INCHES (915 MM) WIDE MINIMUM.

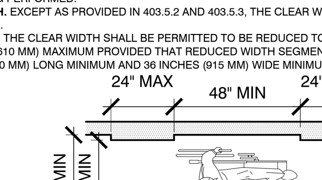
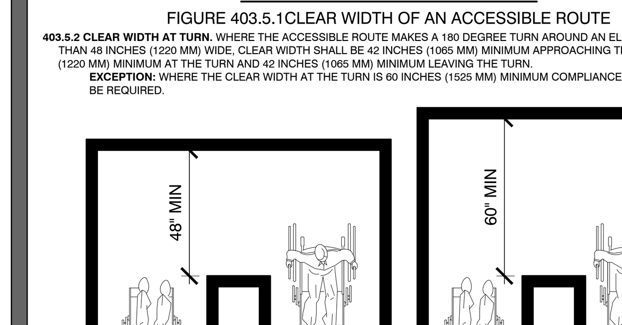


FIGURE 403.5.1CLEAR WIDTH OF AN ACCESSIBLE ROUTE

403.5.2 CLEAR WIDTH AT TURN. WHERE THE ACCESSIBLE ROUTE MAKES A 180 DEGREE TURN AROUND AN ELEMENT WHICH IS LESS THAN 48 INCHES (1220 MM) WIDE, CLEAR WIDTH SHALL BE 42 INCHES (1065 MM) MINIMUM APPROACHING THE TURN, 48 INCHES (1220 MM) MINIMUM AT THE TURN AND 42 INCHES (1065 MM) MINIMUM LEAVING THE TURN.
EXCEPTION: WHERE THE CLEAR WIDTH AT THE TURN IS 60 INCHES (1525 MM) MINIMUM COMPLIANCE WITH 403.5.2 SHALL NOT BE REQUIRED.



(a) (b)
FIGURE 403.5.2 CLEAR WIDTH AT TURN (180 DEGREES)

403.5.3 PASSING SPACES. AN ACCESSIBLE ROUTE WITH A CLEAR WIDTH LESS THAN 60 INCHES (1525 MM) SHALL PROVIDE PASSING SPACES AT INTERVALS OF 200 FEET (61 M) MAXIMUM. PASSING SPACES SHALL BE EITHER: A SPACE 60 INCHES (1525 MM) MINIMUM BY 60 INCHES (1525 MM) MINIMUM; OR, AN INTERSECTION OF TWO WALKING SURFACES PROVIDING A T-SHAPED SPACE COMPLYING WITH 304.3.2 WHERE THE BASE AND ARMS OF THE T-SHAPED SPACE EXTEND 48 INCHES (1220 MM) MINIMUM BEYOND THE INTERSECTION.
403.6 HANDRAILS. WHERE HANDRAILS ARE PROVIDED ALONG WALKING SURFACES WITH RUNNING SLOPES NOT STEEPER THAN 1:20 THEY SHALL COMPLY WITH 505.
404 DOORS, DOORWAYS, AND GATES
404.2.3 CLEAR WIDTH. DOOR OPENINGS SHALL PROVIDE A CLEAR WIDTH OF 32 INCHES (815 MM) MINIMUM. CLEAR OPENINGS OF DOORWAYS WITH SWINGING DOORS SHALL BE MEASURED BETWEEN THE FACE OF THE DOOR AND THE STOP, WITH THE DOOR OPEN 90 DEGREES. OPENINGS MORE THAN 24 INCHES (610 MM) DEEP SHALL PROVIDE A CLEAR OPENING OF 36 INCHES (915 MM) MINIMUM. THERE SHALL BE NO PROJECTIONS INTO THE REQUIRED CLEAR OPENING WIDTH LOWER THAN 34 INCHES (865 MM) ABOVE THE FINISH FLOOR OR GROUND. PROJECTIONS INTO THE CLEAR OPENING WIDTH BETWEEN 34 INCHES (865 MM) AND 80 INCHES (2030 MM) ABOVE THE FINISH FLOOR OR GROUND SHALL NOT EXCEED 4 INCHES (100 MM).
EXCEPTIONS:
1. IN ALTERATIONS, A PROJECTION OF 5/8 INCH (16 MM) MAXIMUM INTO THE REQUIRED CLEAR WIDTH SHALL BE PERMITTED FOR THE LATCH SIDE STOP.
2. DOOR CLOSERS AND DOOR STOPS SHALL BE PERMITTED TO BE 78 INCHES (1980 MM) MINIMUM ABOVE THE FINISH FLOOR OR GROUND.

404.2.4 MANEUVERING CLEARANCES. MINIMUM MANEUVERING CLEARANCES AT DOORS AND GATES SHALL COMPLY WITH 404.2.4. MANEUVERING CLEARANCES SHALL EXTEND THE FULL WIDTH OF THE DOORWAY AND THE REQUIRED LATCH SIDE OR HINGE SIDE CLEARANCE.
EXCEPTION: ENTRY DOORS TO HOSPITAL PATIENT ROOMS SHALL NOT BE REQUIRED TO PROVIDE THE CLEARANCE BEYOND THE LATCH SIDE OF THE DOOR.
404.2.4.1 SWINGING DOORS AND GATES. SWINGING DOORS AND GATES SHALL HAVE MANEUVERING CLEARANCES COMPLYING WITH TABLE 404.2.4.1

TABLE 404.2.4.1 MANEUVERING CLEARANCE AT MANUAL SWINGING DOORS AND GATE

TYPE OF USE		MINIMUM MANEUVERING CLEARANCE	
APPROACH DIRECTION	DOOR OR GATE SIDE	PERPENDICULAR TO DOORWAY	PARALLEL TO DOORWAY (BEYOND LATCH SIDE UNLESS NOTED)
FROM FRONT	PULL	60 INCHES (1525 MM)	18 INCHES (455 MM)
FROM FRONT	PUSH	48 INCHES (1220 MM)	0 INCHES (0 MM)[1]
FROM HINGE SIDE	PULL	60 INCHES (1525 MM)	36 INCHES (915 MM)
FROM HINGE SIDE	PULL	54 INCHES (1370 MM)	42 INCHES (1065 MM)
FROM HINGE SIDE	PUSH	42 INCHES (1065 MM)[2]	22 INCHES (560 MM)[3]
FROM LATCH SIDE	PULL	48 INCHES (1220 MM)[4]	24 INCHES (610 MM)
FROM LATCH SIDE	PUSH	42 INCHES (1065 MM)[4]	24 INCHES (610 MM)

1. ADD 12 INCHES (305 MM) IF CLOSER AND LATCH ARE PROVIEDED.
2. ADD 6 INCHES (150 MM) IF CLOSER AND LATCH ARE PROVIDED.
3. BEYOND HINGE SIDE.
4. ADD 6 INCHES (150 MM) IF CLOSER IS PROVIDED.

404.2.4.2 DOORWAYS WITHOUT DOORS OR GATES, SLIDING DOORS, AND FOLDING DOORS. DOORWAYS LESS THAN 36 INCHES (915 MM) WIDE WITHOUT DOORS OR GATES, SLIDING DOORS, OR FOLDING DOORS SHALL HAVE MANEUVERING CLEARANCES COMPLYING WITH TABLE 404.2.4.2.

TABLE 404.2.4.2 MANEUVERING CLEARANCE AT DOORWAYS WITHOUT DOORS OR GATES, MANUAL SLIDE DOORS AND MANUAL FOLDING DOORS

	MINIMUM MANEUVERING CLEARANCE	
APPROACH DIRECTION	PERPENDICULAR TO DOORWAY	PARALLEL TO DOORWAY (BEYOND STOP/LATCH SIDE UNLESS NOTED)
FROM FRONT	48 INCHES (1220 MM)	0 INCHES (0 MM)
FROM SIDE[1]	42 INCHES (1065 MM)	0 INCHES (0 MM)
FROM POCKET/HINGE SIDE	42 INCHES (1065 MM)	22 INCHES (560 MM)[2]
FROM STOP/LATCH SIDE	42 INCHES (1065 MM)	24 INCHES (610 MM)

1. DOORWAY WITH NO DOOR ONLY.
2. BEYOND POCKET/HINGE SIDE.

404.2.4.3 RECESSED DOORS AND GATES. MANEUVERING CLEARANCES FOR FORWARD APPROACH SHALL BE PROVIDED WHEN ANY OBSTRUCTION WITHIN 18 INCHES (455 MM) OF THE LATCH SIDE OF A DOORWAY PROJECTS MORE THAN 8 INCHES (205 MM) BEYOND THE FACE OF THE DOOR, MEASURED PERPENDICULAR TO THE FACE OF THE DOOR OR GATE.
ADVISORY 404.2.4.3 RECESSED DOORS AND GATES. A DOOR CAN BE RECESSED DUE TO WALL THICKNESS OR BECAUSE OF THE PLACEMENT OF CASEWORK AND OTHER FIXED ELEMENTS ADJACENT TO THE DOORWAY. THIS PROVISION MUST BE APPLIED WHEREVER DOORS ARE RECESSED.

404.2.4.4 FLOOR OR GROUND SURFACE. FLOOR OR GROUND SURFACE WITHIN REQUIRED MANEUVERING CLEARANCES SHALL COMPLY WITH 302. CHANGES IN LEVEL ARE NOT PERMITTED.
EXCEPTIONS:
1. SLOPES NOT STEEPER THAN 1:48 SHALL BE PERMITTED.
2. CHANGES IN LEVEL AT THRESHOLDS COMPLYING WITH 404.2.5 SHALL BE PERMITTED.

404.2.5 THRESHOLDS. THRESHOLDS, IF PROVIDED AT DOORWAYS, SHALL BE 1/2 INCH (13 MM) HIGH MAXIMUM. RAISED THRESHOLDS AND CHANGES IN LEVEL AT DOORWAYS SHALL COMPLY WITH 302 AND 303.
EXCEPTION: EXISTING OR ALTERED THRESHOLDS 3/4 INCH (19 MM) HIGH MAXIMUM THAT HAVE A BEVELED EDGE ON EACH SIDE WITH A SLOPE NOT STEEPER THAN 1:2 SHALL NOT BE REQUIRED TO COMPLY WITH 404.2.5.
404.2.6 DOORS IN SERIES AND GATES IN SERIES. THE DISTANCE BETWEEN TWO HINGED OR PIVOTED DOORS IN SERIES AND GATES IN SERIES SHALL BE 48 INCHES (1220 MM) MINIMUM PLUS THE WIDTH OF DOORS OR GATES SWINGING INTO THE SPACE.
404.2.7 DOOR AND GATE HARDWARE. HANDLES, PULLS, LATCHES, LOCKS, AND OTHER OPERABLE PARTS ON DOORS AND GATES SHALL COMPLY WITH 309.4. OPERABLE PARTS OF SUCH HARDWARE SHALL BE 34 INCHES (865 MM) MINIMUM AND 48 INCHES (1220 MM) MAXIMUM ABOVE THE FINISH FLOOR OR GROUND. WHERE SLIDING DOORS ARE IN THE FULLY OPEN POSITION, OPERATING HARDWARE SHALL BE EXPOSED AND USABLE FROM BOTH SIDES.
EXCEPTIONS:
1. EXISTING LOCKS SHALL BE PERMITTED IN ANY LOCATION AT EXISTING GLAZED DOORS WITHOUT STILES, EXISTING OVERHEAD ROLLING DOORS OR GRILLES, AND SIMILAR EXISTING DOORS OR GRILLES THAT ARE DESIGNED WITH LOCKS THAT ARE ACTIVATED ONLY AT THE TOP OR BOTTOM RAIL.
2. ACCESS GATES IN BARRIER WALLS AND FENCES PROTECTING POOLS, SPAS, AND HOT TUBS SHALL BE PERMITTED TO HAVE OPERABLE PARTS OF THE RELEASE OF LATCH ON SELF-LATCHING DEVICES AT 54 INCHES (1370 MM) MAXIMUM ABOVE THE FINISH FLOOR OR GROUND PROVIDED THE SELF-LATCHING DEVICES ARE NOT ALSO SELF-LOCKING DEVICES AND OPERATED BY MEANS OF A KEY, ELECTRONIC OPENER, OR INTEGRAL COMBINATION LOCK.

404.2.8.1 DOOR CLOSERS AND GATE CLOSERS. DOOR CLOSERS AND GATE CLOSERS SHALL BE ADJUSTED SO THAT FROM AN OPEN POSITION OF 90 DEGREES, THE TIME REQUIRED TO MOVE THE DOOR TO A POSITION OF 12 DEGREES FROM THE LATCH IS 5 SECONDS MINIMUM.
404.2.8.2 SPRING HINGES. DOOR AND GATE SPRING HINGES SHALL BE ADJUSTED SO THAT FROM THE OPEN POSITION OF 70 DEGREES, THE DOOR OR GATE SHALL MOVE TO THE CLOSED POSITION IN 1.5 SECONDS MINIMUM.
404.2.9 DOOR AND GATE OPENING FORCE. FIRE DOORS SHALL HAVE A MINIMUM OPENING FORCE ALLOWABLE BY THE APPROPRIATE ADMINISTRATIVE AUTHORITY. THE FORCE FOR PUSHING OR PULLING OPEN A DOOR OR GATE OTHER THAN FIRE DOORS SHALL BE AS FOLLOWS:
1. INTERIOR HINGED DOORS AND GATES: 5 POUNDS (22.2 N) MAXIMUM.
2. SLIDING OR FOLDING DOORS: 5 POUNDS (22.2 N) MAXIMUM.

THESE FORCES DO NOT APPLY TO THE FORCE REQUIRED TO RETRACT LATCH BOLTS OR DISENGAGE OTHER DEVICES THAT HOLD THE DOOR OR GATE IN A CLOSED POSITION.
404.2.10 DOOR AND GATE SURFACES. SWINGING DOOR AND GATE SURFACES WITHIN 10 INCHES (255 MM) OF THE FINISH FLOOR OR GROUND MEASURED VERTICALLY SHALL HAVE A SMOOTH SURFACE ON THE PUSH SIDE EXTENDING THE FULL WIDTH OF THE DOOR OR GATE. PARTS CREATING HORIZONTAL OR VERTICAL JOINTS IN THESE SURFACES SHALL BE WITHIN 1/16 INCH (1.6 MM) OF THE SAME PLANE AS THE OTHER. CAVITIES CREATED BY ADDED KICK PLATES SHALL BE CAPPED.
EXCEPTIONS:
1. SLIDING DOORS SHALL NOT BE REQUIRED TO COMPLY WITH 404.2.10.
2. TEMPERED GLASS DOORS WITHOUT STILES AND HAVING A BOTTOM RAIL OR SHOE WITH THE TOP LEADING EDGE TAPERED AT 60 DEGREES MINIMUM FROM THE HORIZONTAL SHALL NOT BE REQUIRED TO MEET THE 10 INCH (255 MM) BOTTOM SMOOTH SURFACE HEIGHT REQUIREMENT.
3. DOORS AND GATES THAT DO NOT EXTEND TO WITHIN 10 INCHES (255 MM) OF THE FINISH FLOOR OR GROUND SHALL NOT BE REQUIRED TO COMPLY WITH 404.2.10.
4. EXISTING DOORS AND GATES WITHOUT SMOOTH SURFACES WITHIN 10 INCHES (255 MM) OF THE FINISH FLOOR OR GROUND SHALL NOT BE REQUIRED TO PROVIDE SMOOTH SURFACES COMPLYING WITH 404.2.10 PROVIDED THAT IF ADDED KICK PLATES ARE INSTALLED, CAVITIES CREATED BY SUCH KICK PLATES ARE CAPPED.

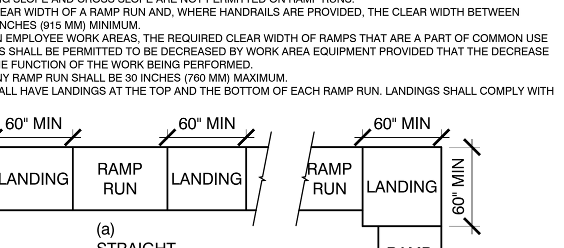
404.2.11 VISION LIGHTS. DOORS, GATES, AND SIDE LIGHTS ADJACENT TO DOORS OR GATES, CONTAINING ONE OR MORE GLAZING PANELS THAT PERMIT VIEWING THROUGH THE PANELS SHALL HAVE THE BOTTOM OF AT LEAST ONE GLAZED PANEL LOCATED 43 INCHES (1090 MM) MAXIMUM ABOVE THE FINISH FLOOR.
405 RAMPS
405.2 SLOPE. RAMP RUNS SHALL HAVE A RUNNING SLOPE NOT STEEPER THAN 1:12.
EXCEPTION: IN EXISTING SITES, BUILDINGS, AND FACILITIES, RAMPS SHALL BE PERMITTED TO HAVE RUNNING SLOPES STEEPER THAN 1:12 COMPLYING WITH TABLE 405.2 WHERE SUCH SLOPES ARE NECESSARY DUE TO SPACE LIMITATIONS.

TABLE 405.2 MAXIMUM RAMP SLOPE AND RISE FOR EXISTING SITE, BUILDINGS, AND FACILITIES

SLOPE[1]	MAXIMUM RISE
STEEPER THAN 1:10 BUT NOT STEEPER THAN 1:8	3 INCHES (75 MM)
STEEPER THAN 1:12 BUT NOT STEEPER THAN 1:10	6 INCHES (150 MM)

1. A SLOPE STEEPER THAN 1:8 IS PROHIBITED.

ADVISORY 405.2 SLOPE. TO ACCOMMODATE THE WIDEST RANGE OF USERS, PROVIDE RAMPS WITH THE LEAST POSSIBLE RUNNING SLOPE AND, WHEREVER POSSIBLE, ACCOMPANY RAMPS WITH STAIRS FOR USE BY THOSE INDIVIDUALS FOR WHOM DISTANCE PRESENTS A GREATER BARRIER THAN STEPS, E.G. PEOPLE WITH HEART DISEASE OR LIMITED STAMINA.
405.3 CROSS SLOPE. CROSS SLOPE OF RAMP RUNS SHALL NOT BE STEEPER THAN 1:48.
405.4 FLOOR OR GROUND SURFACES. FLOOR OR GROUND SURFACES OF RAMP RUNS SHALL COMPLY WITH 302. CHANGES IN LEVEL OTHER THAN THE RUNNING SLOPE AND CROSS SLOPE ARE NOT PERMITTED ON RAMP RUNS.
405.5 CLEAR WIDTH. THE CLEAR WIDTH OF A RAMP RUN AND, WHERE HANDRAILS ARE PROVIDED, THE CLEAR WIDTH BETWEEN HANDRAILS SHALL BE 36 INCHES (915 MM) MINIMUM.
EXCEPTION: WITHIN EMPLOYEE WORK AREAS, THE REQUIRED CLEAR WIDTH OF RAMPS THAT ARE A PART OF COMMON USE CIRCULATION PATHS SHALL BE PERMITTED TO BE DECREASED BY WORK AREA EQUIPMENT PROVIDED THAT THE DECREASE IS ESSENTIAL TO THE FUNCTION OF THE WORK BEING PERFORMED.
405.6 RISE. THE RISE FOR ANY RAMP RUN SHALL BE 30 INCHES (760 MM) MAXIMUM.
405.7 LANDINGS. RAMPS SHALL HAVE LANDINGS AT THE TOP AND THE BOTTOM OF EACH RAMP RUN. LANDINGS SHALL COMPLY WITH 405.7.



(a) STRAIGHT
FIGURE 405.7 RAMP LANDINGS (b) CHANGE IN DIRECTION

405.7.1 SLOPE. LANDINGS SHALL COMPLY WITH 302. CHANGES IN LEVEL ARE NOT PERMITTED.
EXCEPTION: SLOPES NOT STEEPER THAN 1:48 SHALL BE PERMITTED.
405.7.2 WIDTH. THE LANDING CLEAR WIDTH SHALL BE AT LEAST AS WIDE AS THE WIDEST RAMP RUN LEADING TO THE LANDING.
405.7.3 LENGTH. THE LANDING CLEAR LENGTH SHALL BE 60 INCHES (1525 MM) LONG MINIMUM.
405.7.4 CHANGE IN DIRECTION. RAMPS THAT CHANGE DIRECTION BETWEEN RUNS AT LANDINGS SHALL HAVE A CLEAR LANDING 60 INCHES (1525 MM) MINIMUM BY 60 INCHES (1525 MM) MINIMUM.
405.7.5 DOORWAYS. WHERE DOORWAYS ARE LOCATED ADJACENT TO A RAMP LANDING, MANEUVERING CLEARANCES REQUIRED BY 404.2.4 AND 404.3.2 SHALL BE PERMITTED TO OVERLAP THE REQUIRED LANDING AREA.
405.8 HANDRAILS. RAMP RUNS WITH A RISE GREATER THAN 6 INCHES (150 MM) SHALL HAVE HANDRAILS COMPLYING WITH 505.
EXCEPTION: WITHIN EMPLOYEE WORK AREAS, HANDRAILS SHALL NOT BE REQUIRED WHERE RAMPS THAT ARE PART OF COMMON USE CIRCULATION PATHS ARE DESIGNED TO PERMIT THE INSTALLATION OF HANDRAILS COMPLYING WITH 505. RAMPS NOT SUBJECT TO THE EXCEPTION TO 405.5 SHALL BE DESIGNED TO MAINTAIN A 36 INCH (915 MM) MINIMUM CLEAR WIDTH WHEN HANDRAILS ARE INSTALLED.
405.9 EDGE PROTECTION. EDGE PROTECTION COMPLYING WITH 405.9.1 OR 405.9.2 SHALL BE PROVIDED ON EACH SIDE OF RAMP RUNS AND AT EACH SIDE OF RAMP LANDINGS.
EXCEPTIONS:
1. EDGE PROTECTION SHALL NOT BE REQUIRED ON RAMPS THAT ARE NOT REQUIRED TO HAVE HANDRAILS AND HAVE SIDES COMPLYING WITH 406.3.
2. EDGE PROTECTION SHALL NOT BE REQUIRED ON THE SIDES OF RAMP LANDINGS SERVING AN ADJOINING RAMP RUN OR STAIRWAY.
3. EDGE PROTECTION SHALL NOT BE REQUIRED ON THE SIDES OF RAMP LANDINGS HAVING A VERTICAL DROP-OFF OF 1/2 INCH (13 MM) MAXIMUM WITHIN 10 INCHES (255 MM) HORIZONTALLY OF THE MINIMUM LANDING AREA SPECIFIED IN 405.7.

405.9.1 EXTENDED FLOOR OR GROUND SURFACE. THE FLOOR OR GROUND SURFACE OF THE RAMP RUN OR LANDING SHALL EXTEND 12 INCHES (305 MM) MINIMUM BEYOND THE INSIDE FACE OF A HANDRAIL COMPLYING WITH 505.
405.9.2 CURB OR BARRIER. A CURB OR BARRIER SHALL BE PROVIDED THAT PREVENTS THE PASSAGE OF A 4 INCH (100 MM) DIAMETER SPHERE, WHERE ANY PORTION OF THE SPHERE IS WITHIN 4 INCHES (100 MM) OF THE FINISH FLOOR OR GROUND SURFACE.

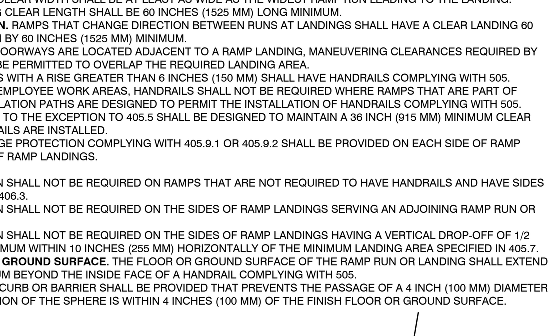
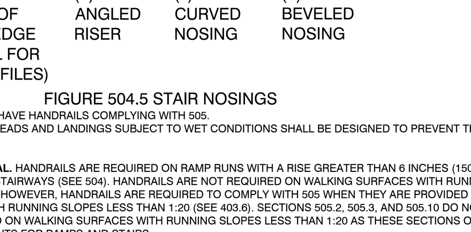


FIGURE 405.9.1 EXTENDED FLOOR OR GROUND SURFACE EDGE PROTECTION
FIGURE 405.9.2 CURB OR BARRIER EDGE PROTECTION

405.10 WET CONDITIONS. LANDINGS SUBJECT TO WET CONDITIONS SHALL BE DESIGNED TO PREVENT THE ACCUMULATION OF WATER.
406 CURB RAMPS - REFER TO ACCESSIBILITY STANDARDS FOR DETAILED REQUIREMENTS
407 ELEVATORS - REFER TO ACCESSIBILITY STANDARDS FOR DETAILED REQUIREMENTS
408 LIMITED-USE/LIMITED-APPLICATION ELEVATORS - REFER TO ACCESSIBILITY STANDARDS FOR DETAILED REQUIREMENTS
409 PRIVATE RESIDENCE ELEVATORS - REFER TO ACCESSIBILITY STANDARDS FOR DETAILED REQUIREMENTS
410 PLATFORM LIFTS - REFER TO ACCESSIBILITY STANDARDS FOR DETAILED REQUIREMENTS

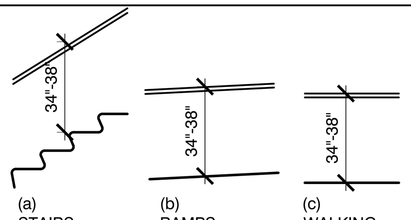
CHAPTER 5: GENERAL SITE AND BUILDING ELEMENTS

502 PARKING SPACES - REFER TO ACCESSIBILITY STANDARDS FOR DETAILED REQUIREMENTS
503 PASSENGER LOADING ZONES - REFER TO ACCESSIBILITY STANDARDS FOR DETAILED REQUIREMENTS
504 STAIRWAYS
504.2 TREADS AND RISERS. ALL STEPS ON A FLIGHT OF STAIRS SHALL HAVE UNIFORM RISER HEIGHTS AND UNIFORM TREAD DEPTHS. RISERS SHALL BE 4 INCHES (100 MM) HIGH MINIMUM AND 7 INCHES (180 MM) HIGH MAXIMUM. TREADS SHALL BE 11 INCHES (280 MM) DEEP MINIMUM.
504.3 OPEN RISERS. OPEN RISERS ARE NOT PERMITTED.
504.4 TREAD SURFACE. STAIR TREADS SHALL COMPLY WITH 302. CHANGES IN LEVEL ARE NOT PERMITTED.
EXCEPTION: TREADS SHALL BE PERMITTED TO HAVE A SLOPE NOT STEEPER THAN 1:48.
ADVISORY 504.4 TREAD SURFACE. CONSIDER PROVIDING VISUAL CONTRAST ON TREAD NOSINGS, OR AT THE LEADING EDGES OF TREADS WITHOUT NOSINGS, SO THAT STAIR TREADS ARE MORE VISIBLE FOR PEOPLE WITH LOW VISION.
504.5 NOSINGS. THE RADIUS OF CURVATURE AT THE LEADING EDGE OF THE TREAD SHALL BE 1/2 INCH (13 MM) MAXIMUM. NOSINGS THAT PROJECT BEYOND RISERS SHALL HAVE THE UNDERSIDE OF THE LEADING EDGE CURVED OR BEVELED. RISERS SHALL BE PERMITTED TO SLOPE UNDER THE TREAD AT AN ANGLE OF 30 DEGREES MAXIMUM FROM VERTICAL. THE PERMITTED PROJECTION OF THE NOSING SHALL EXTEND 1 1/2 INCHES (38 MM) MAXIMUM OVER THE TREAD BELOW.



(a) RADIUS OF TREAD EDGE (TYPICAL FOR ALL PROFILES)
(b) ANGLED RISER
(c) CURVED NOSING
(d) BEVELED NOSING
FIGURE 504.5 STAIR NOSINGS

504.6 HANDRAILS. STAIRS SHALL HAVE HANDRAILS COMPLYING WITH 505.
504.7 WET CONDITIONS. STAIR TREADS AND LANDINGS SUBJECT TO WET CONDITIONS SHALL BE DESIGNED TO PREVENT THE ACCUMULATION OF WATER.
505 HANDRAILS
ADVISORY 505.1 GENERAL. HANDRAILS ARE REQUIRED ON RAMP RUNS WITH A RISE GREATER THAN 6 INCHES (150 MM) (SEE 405.8) AND ON CERTAIN STAIRWAYS (SEE 504). HANDRAILS ARE NOT REQUIRED ON WALKING SURFACES WITH RUNNING SLOPES LESS THAN 1:20. HOWEVER, HANDRAILS ARE REQUIRED TO COMPLY WITH 505 WHEN THEY ARE PROVIDED ON WALKING SURFACES WITH RUNNING SLOPES LESS THAN 1:20 (SEE 403.6). SECTIONS 505.2, 505.3, AND 505.10 DO NOT APPLY TO HANDRAILS PROVIDED ON WALKING SURFACES WITH RUNNING SLOPES LESS THAN 1:20 AS THESE SECTIONS ONLY REFERENCE REQUIREMENTS FOR RAMPS AND STAIRS.
505.2 WHERE REQUIRED. HANDRAILS SHALL BE PROVIDED ON BOTH SIDES OF STAIRS AND RAMPS.
EXCEPTION: IN ASSEMBLY AREAS, HANDRAILS SHALL NOT BE REQUIRED ON BOTH SIDES OF AISLE RAMPS WHERE A HANDRAIL IS PROVIDED AT EITHER SIDE OR WITHIN THE AISLE WIDTH.
505.3 CONTINUITY. HANDRAILS SHALL BE CONTINUOUS WITHIN THE FULL LENGTH OF EACH STAIR FLIGHT OR RAMP RUN. INSIDE HANDRAILS ON SWITCHBACK OR DOGLEG STAIRS AND RAMPS SHALL BE CONTINUOUS BETWEEN FLIGHTS OR RUNS.
EXCEPTION: IN ASSEMBLY AREAS, HANDRAILS ON RAMPS SHALL NOT BE REQUIRED TO BE CONTINUOUS IN AISLES SERVING SEATING.
505.4 HEIGHT. TOP OF GRIPPING SURFACES OF HANDRAILS SHALL BE 34 INCHES (865 MM) MINIMUM AND 38 INCHES (965 MM) MAXIMUM VERTICALLY ABOVE WALKING SURFACES, STAIR NOSINGS, AND RAMP SURFACES. HANDRAILS SHALL BE AT A CONSISTENT HEIGHT ABOVE WALKING SURFACES, STAIR NOSINGS, AND RAMP SURFACES.
ADVISORY 505.4 HEIGHT. THE REQUIREMENTS FOR STAIR AND RAMP HANDRAILS IN THIS DOCUMENT ARE FOR ADULTS. WHEN CHILDREN ARE THE PRINCIPAL USERS IN A BUILDING OR FACILITY (E.G., ELEMENTARY SCHOOLS), A SECOND SET OF HANDRAILS AT AN APPROPRIATE HEIGHT CAN ASSIST THEM AND AID IN PREVENTING ACCIDENTS. A MAXIMUM HEIGHT OF 28 INCHES (710 MM) MEASURED TO THE TOP OF THE GRIPPING SURFACE FROM THE RAMP SURFACE OR STAIR NOSING IS RECOMMENDED FOR HANDRAILS DESIGNED FOR CHILDREN. SUFFICIENT VERTICAL CLEARANCE BETWEEN UPPER AND LOWER HANDRAILS, 9 INCHES (230 MM) MINIMUM, SHOULD BE PROVIDED TO HELP PREVENT ENTRAPMENT.



(a) STAIRS (b) RAMPS (c) WALKING SURFACES
FIGURE 505.4 HANDRAIL HEIGHT

505.5 CLEARANCE. CLEARANCE BETWEEN HANDRAIL GRIPPING SURFACES AND ADJACENT SURFACES SHALL BE 1 1/2 INCHES (38 MM) MINIMUM.
505.6 GRIPPING SURFACE. HANDRAIL GRIPPING SURFACES SHALL BE CONTINUOUS ALONG THEIR LENGTH AND SHALL NOT BE OBSTRUCTED ALONG THEIR TOPS OR SIDES. THE BOTTOMS OF HANDRAIL GRIPPING SURFACES SHALL NOT BE OBSTRUCTED FOR MORE THAN 20 PERCENT OF THEIR LENGTH. WHERE PROVIDED, HORIZONTAL PROJECTIONS SHALL OCCUR 1 1/2 INCHES (38 MM) MINIMUM BELOW THE BOTTOM OF THE HANDRAIL GRIPPING SURFACE.
EXCEPTIONS:
1. WHERE HANDRAILS ARE PROVIDED ALONG WALKING SURFACES WITH SLOPES NOT STEEPER THAN 1:20, THE BOTTOMS OF HANDRAIL GRIPPING SURFACES SHALL BE PERMITTED TO BE OBSTRUCTED ALONG THEIR ENTIRE LENGTH WHERE THEY ARE INTEGRAL TO CRASH RAILS OR BUMPER GUARDS.
2. THE DISTANCE BETWEEN HORIZONTAL PROJECTIONS AND THE BOTTOM OF THE GRIPPING SURFACE SHALL BE PERMITTED TO BE REDUCED BY 1/8 INCH (3.2 MM) FOR EACH 1/2 INCH (13 MM) OF ADDITIONAL HANDRAIL PERIMETER DIMENSION THAT EXCEEDS 4 INCHES (100 MM).

ADVISORY 505.6 GRIPPING SURFACE. PEOPLE WITH DISABILITIES, OLDER PEOPLE, AND OTHERS BENEFIT FROM CONTINUOUS GRIPPING SURFACES THAT PERMIT USERS TO REACH THE FINGERS OUTWARD OR DOWNWARD TO GRASP THE HANDRAIL, PARTICULARLY AS THE USER SENSES A LOSS OF EQUILIBRIUM OR BEGINS TO FALL.

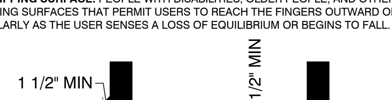


FIGURE 505.5 HANDRAIL CLEARANCE
FIGURE 505.6 HORIZONTAL PROJECTIONS BELOW GRIPPING SURFACE

505.7 CROSS SECTION. HANDRAIL GRIPPING SURFACES SHALL HAVE A CROSS SECTION COMPLYING WITH 505.7.1 OR 505.7.2.
505.7.1 CIRCULAR CROSS SECTION. HANDRAIL GRIPPING SURFACES WITH A CIRCULAR CROSS SECTION SHALL HAVE AN OUTSIDE DIAMETER OF 1 1/4 INCHES (32 MM) MINIMUM AND 2 INCHES (51 MM) MAXIMUM.
505.7.2 NON-CIRCULAR CROSS SECTIONS. HANDRAIL GRIPPING SURFACES WITH A NON-CIRCULAR CROSS SECTION SHALL HAVE A PERIMETER DIMENSION OF 4 INCHES (100 MM) MINIMUM AND 6 1/4 INCHES (160 MM) MAXIMUM, AND A CROSS-SECTION DIMENSION OF 2 1/4 INCHES (57 MM) MAXIMUM.
505.8 SURFACES. HANDRAIL GRIPPING SURFACES AND ANY SURFACES ADJACENT TO THEM SHALL BE FREE OF SHARP OR ABRASIVE ELEMENTS AND SHALL HAVE ROUNDED EDGES.
505.9 FITTINGS. HANDRAILS SHALL NOT ROTATE WITHIN THEIR FITTINGS.
505.10 HANDRAIL EXTENSIONS. HANDRAIL GRIPPING SURFACES SHALL EXTEND BEYOND AND IN THE SAME DIRECTION OF STAIR FLIGHTS AND RAMP RUNS IN ACCORDANCE WITH 505.10.
EXCEPTIONS:
1. EXTENSIONS SHALL NOT BE REQUIRED FOR CONTINUOUS HANDRAILS AT THE INSIDE TURN OF SWITCHBACK OR DOGLEG STAIRS AND RAMPS.
2. IN ASSEMBLY AREAS, EXTENSIONS SHALL NOT BE REQUIRED FOR RAMP HANDRAILS IN AISLES SERVING SEATING WHERE THE HANDRAILS ARE DISCONTINUOUS TO PROVIDE ACCESS TO SEATING AND TO PERMIT CROSSOVERS WITHIN AISLES.
3. IN ALTERATIONS, FULL EXTENSIONS OF HANDRAILS SHALL NOT BE REQUIRED WHERE SUCH EXTENSIONS WOULD BE HAZARDOUS DUE TO PLAN CONFIGURATION.

505.10.1 TOP AND BOTTOM EXTENSION AT RAMPS. RAMP HANDRAILS SHALL EXTEND HORIZONTALLY ABOVE THE LANDING FOR 12 INCHES (305 MM) MINIMUM BEYOND THE TOP AND BOTTOM OF RAMP RUNS. EXTENSIONS SHALL RETURN TO A WALL, GUARD, OR THE LANDING SURFACE, OR SHALL BE CONTINUOUS TO THE HANDRAIL OF AN ADJACENT RAMP RUN.
505.10.2 TOP EXTENSION AT STAIRS. AT THE TOP OF A STAIR FLIGHT, HANDRAILS SHALL EXTEND HORIZONTALLY ABOVE THE LANDING FOR 12 INCHES (305 MM) MINIMUM BEGINNING DIRECTLY ABOVE THE FIRST RISER NOSING. EXTENSIONS SHALL RETURN TO A WALL, GUARD, OR THE LANDING SURFACE, OR SHALL BE CONTINUOUS TO THE HANDRAIL OF AN ADJACENT STAIR FLIGHT.
505.10.3 BOTTOM EXTENSION AT STAIRS. AT THE BOTTOM OF A STAIR FLIGHT, HANDRAILS SHALL EXTEND AT THE SLOPE OF THE STAIR FLIGHT FOR A HORIZONTAL DISTANCE AT LEAST EQUAL TO ONE TREAD DEPTH BEYOND THE LAST RISER NOSING. EXTENSION SHALL RETURN TO A WALL, GUARD, OR THE LANDING SURFACE, OR SHALL BE CONTINUOUS TO THE HANDRAIL OF AN ADJACENT STAIR FLIGHT.

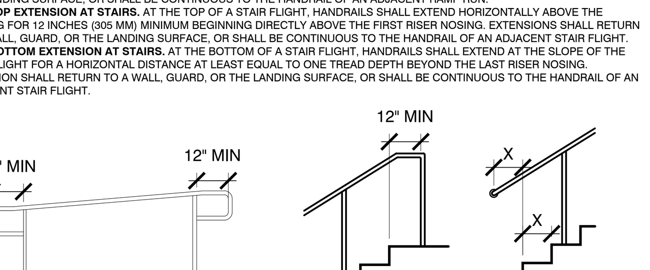


FIGURE 505.10.1 TOP AND BOTTOM HANDRAIL EXTENSION AT RAMPS
FIGURE 505.10.2 TOP HANDRAIL EXTENSION AT STAIRS
FIGURE 505.10.3 BOTTOM HANDRAIL EXTENSION AT STAIRS

CHAPTER 6: PLUMBING ELEMENTS AND FACILITIES

602 DRINKING FOUNTAINS
602.2 CLEAR FLOOR SPACE. UNITS SHALL HAVE A CLEAR FLOOR OR GROUND SPACE COMPLYING WITH 305 POSITIONED FOR A FORWARD APPROACH AND CENTERED ON THE UNIT. KNEE AND TOE CLEARANCE COMPLYING WITH 306 SHALL BE PROVIDED.
EXCEPTION: A PARALLEL APPROACH COMPLYING WITH 305 SHALL BE PERMITTED AT UNITS FOR CHILDREN'S USE WHERE THE SPOUT IS 30 INCHES (760 MM) MAXIMUM ABOVE THE FINISH FLOOR OR GROUND AND IS 3 1/2 INCHES (90 MM) MAXIMUM FROM THE FRONT EDGE OF THE UNIT, INCLUDING BUMPERS.
602.3 OPERABLE PARTS. OPERABLE PARTS SHALL COMPLY WITH 309.
602.4 SPOUT HEIGHT. SPOUT OUTLETS SHALL BE 36 INCHES (915 MM) MAXIMUM ABOVE THE FINISH FLOOR OR GROUND.
602.5 SPOUT LOCATION. THE SPOUT SHALL BE LOCATED 15 INCHES (380 MM) MINIMUM FROM THE VERTICAL SUPPORT AND 5 INCHES (125 MM) MAXIMUM FROM THE FRONT EDGE OF THE UNIT, INCLUDING BUMPERS.

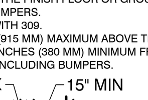
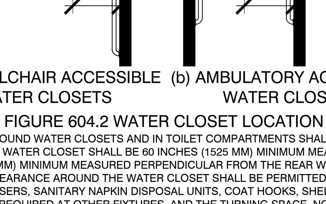


FIGURE 602.5 DRINKING FOUNTAIN SPOUT LOCATION

602.6 WATER FLOW. THE SPOUT SHALL PROVIDE A FLOW OF WATER 4 INCHES (100 MM) HIGH MINIMUM AND SHALL BE LOCATED 5 INCHES (125 MM) MAXIMUM FROM THE FRONT OF THE UNIT. THE ANGLE OF THE WATER STREAM SHALL BE MEASURED HORIZONTALLY RELATIVE TO THE FRONT FACE OF THE UNIT. WHERE SPOUTS ARE LOCATED LESS THAN 3 INCHES (75 MM) OF THE FRONT OF THE UNIT, THE ANGLE OF THE WATER STREAM SHALL BE 30 DEGREES MAXIMUM. WHERE SPOUTS ARE LOCATED BETWEEN 3 INCHES (75 MM) AND 5 INCHES (125 MM) MAXIMUM FROM THE FRONT OF THE UNIT, THE ANGLE OF THE WATER STREAM SHALL BE 15 DEGREES MAXIMUM.
ADVISORY 602.6 WATER FLOW. THE PURPOSE OF REQUIRING THE DRINKING FOUNTAIN SPOUT TO PRODUCE A FLOW OF WATER 4 INCHES (100 MM) HIGH MINIMUM IS SO THAT A CUP CAN BE INSERTED UNDER THE FLOW OF WATER TO PROVIDE A DRINK OF WATER FOR AN INDIVIDUAL WHO, BECAUSE OF A DISABILITY, WOULD OTHERWISE BE INCAPABLE OF USING THE DRINKING FOUNTAIN.
602.7 DRINKING FOUNTAINS FOR STANDING PERSONS. SPOUT OUTLETS OF DRINKING FOUNTAINS FOR STANDING PERSONS SHALL BE 38 INCHES (965 MM) MINIMUM AND 43 INCHES (1090 MM) MAXIMUM ABOVE THE FINISH FLOOR OR GROUND.
603 TOILET AND BATHING ROOMS
603.2.1 TURNING SPACE. TURNING SPACE COMPLYING WITH 304 SHALL BE PROVIDED WITHIN THE ROOM.
603.2.2 OVERLAP. REQUIRED CLEAR FLOOR SPACES, CLEARANCE AT FIXTURES, AND TURNING SPACE SHALL BE PERMITTED TO OVERLAP.
603.2.3 DOOR SWING. DOORS SHALL NOT SWING INTO THE CLEAR FLOOR SPACE OR CLEARANCE REQUIRED FOR ANY FIXTURE. DOORS SHALL BE PERMITTED TO SWING INTO THE REQUIRED TURNING SPACE.
EXCEPTIONS:
1. DOORS TO A TOILET ROOM OR BATHING ROOM FOR A SINGLE OCCUPANT ACCESSED ONLY THROUGH A PRIVATE OFFICE AND NOT FOR COMMON USE OR PUBLIC USE SHALL BE PERMITTED TO SWING INTO THE CLEAR FLOOR SPACE OR CLEARANCE PROVIDED THE SWING OF THE DOOR CAN BE REVERSED TO COMPLY WITH 603.2.3.
2. WHERE THE TOILET ROOM OR BATHING ROOM IS FOR INDIVIDUAL USE AND A CLEAR FLOOR SPACE COMPLYING WITH 305.3 IS PROVIDED WITHIN THE ROOM BEYOND THE ARC OF THE DOOR SWING, DOORS SHALL BE PERMITTED TO SWING INTO THE CLEAR FLOOR SPACE OR CLEARANCE REQUIRED FOR ANY FIXTURE.

ADVISORY 603.2.3 DOOR SWING EXCEPTION 1. AT THE TIME THE DOOR IS INSTALLED, AND IF THE DOOR SWING IS REVERSED IN THE FUTURE, THE DOOR MUST MEET ALL THE REQUIREMENTS SPECIFIED IN 404. ADDITIONALLY, THE DOOR SWING CANNOT REDUCE THE REQUIRED WIDTH OF AN ACCESSIBLE ROUTE. ALSO, AVOID VIOLATING OTHER BUILDING OR LIFE SAFETY CODES WHEN THE DOOR SWING IS REVERSED.
603.3 MIRRORS. MIRRORS LOCATED ABOVE LAVATORIES OR COUNTERTOPS SHALL BE INSTALLED WITH THE BOTTOM EDGE OF THE REFLECTING SURFACE 40 INCHES (1015 MM) MAXIMUM ABOVE THE FINISH FLOOR OR GROUND. MIRRORS NOT LOCATED ABOVE LAVATORIES OR COUNTERTOPS SHALL BE INSTALLED WITH THE BOTTOM EDGE OF THE REFLECTING SURFACE 35 INCHES (890 MM) MAXIMUM ABOVE THE FINISH FLOOR OR GROUND.
ADVISORY 603.3 MIRRORS. A SINGLE FULL-LENGTH MIRROR CAN ACCOMMODATE A GREATER NUMBER OF PEOPLE, INCLUDING CHILDREN. IN ORDER FOR MIRRORS TO BE USABLE BY PEOPLE WHO ARE AMBULATORY AND PEOPLE WHO USE WHEELCHAIRS, THE TOP EDGE OF MIRRORS SHOULD BE 74 INCHES (1880 MM) MINIMUM FROM THE FLOOR OR GROUND.
603.4 COAT HOOKS AND SHELVES. COAT HOOKS SHALL BE LOCATED WITHIN ONE OF THE REACH RANGES SPECIFIED IN 308. SHELVES SHALL BE LOCATED 40 INCHES (1015 MM) MINIMUM AND 48 INCHES (1220 MM) MAXIMUM ABOVE THE FINISH FLOOR.
604 WATER CLOSETS AND TOILET COMPARTMENTS
604.2 LOCATION. THE WATER CLOSET SHALL BE POSITIONED WITH A WALL OR PARTITION TO THE REAR AND TO ONE SIDE. THE CENTERLINE OF THE WATER CLOSET SHALL BE 16 INCHES (405 MM) MINIMUM TO 18 INCHES (455 MM) MAXIMUM FROM THE SIDE WALL OR PARTITION, EXCEPT THAT THE WATER CLOSET SHALL BE 17 INCHES (430 MM) MINIMUM AND 19 INCHES (485 MM) MAXIMUM FROM THE SIDE WALL OR PARTITION IN THE AMBULATORY ACCESSIBLE TOILET COMPARTMENT SPECIFIED IN 604.8.2. WATER CLOSETS SHALL BE ARRANGED FOR A LEFT-HAND OR RIGHT-HAND APPROACH.



(a) WHEELCHAIR ACCESSIBLE WATER CLOSETS (b) AMBULATORY ACCESSIBLE WATER CLOSETS
FIGURE 604.2 WATER CLOSET LOCATION

604.3 CLEARANCE. CLEARANCES AROUND WATER CLOSETS AND IN TOILET COMPARTMENTS SHALL COMPLY WITH 604.3.
604.3.1 SIZE. CLEARANCE AROUND A WATER CLOSET SHALL BE 60 INCHES (1525 MM) MINIMUM MEASURED PERPENDICULAR FROM THE SIDE WALL AND 56 INCHES (1420 MM) MINIMUM MEASURED PERPENDICULAR FROM THE REAR WALL.
604.3.2 OVERLAP. THE REQUIRED CLEARANCE AROUND THE WATER CLOSET SHALL BE PERMITTED TO OVERLAP THE WATER CLOSET, ASSOCIATED GRAB BARS, DISPENSERS, SANITARY NAPKIN DISPOSAL UNITS, COAT HOOKS, SHELVES, ACCESSIBLE ROUTES, CLEAR FLOOR SPACE AND CLEARANCES REQUIRED AT OTHER FIXTURES, AND THE TURNING SPACE. NO OTHER FIXTURES OR OBSTRUCTIONS SHALL BE LOCATED WITHIN THE REQUIRED WATER CLOSET CLEARANCE.
EXCEPTION: IN RESIDENTIAL DWELLING UNITS, A LAVATORY COMPLYING WITH 606 SHALL BE PERMITTED ON THE REAR WALL 18 INCHES (455 MM) MINIMUM FROM THE WATER CLOSET CENTERLINE WHERE THE CLEARANCE AT THE WATER CLOSET IS 66 INCHES (1675 MM) MINIMUM MEASURED PERPENDICULAR FROM THE REAR WALL.
ADVISORY 604.3.2 OVERLAP. WHEN THE DOOR TO THE TOILET ROOM IS PLACED DIRECTLY IN FRONT OF THE WATER CLOSET, THE WATER CLOSET CANNOT OVERLAP THE REQUIRED MANEUVERING CLEARANCE FOR THE DOOR INSIDE THE ROOM.

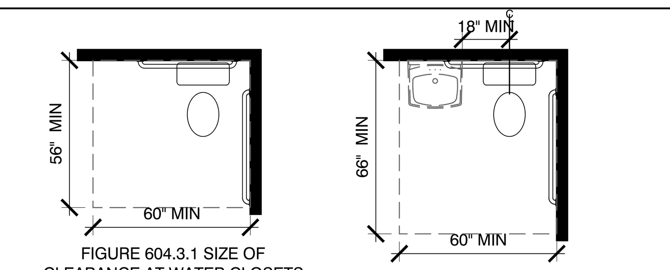


FIGURE 604.3.1 SIZE OF CLEARANCE AT WATER CLOSETS
FIGURE 604.3.2 (EXCEPTION) OVERLAP OF WATER CLOSET CLEARANCE IN RESIDENTIAL DWELLING UNITS

604.4 SEATS. THE SEAT HEIGHT OF A WATER CLOSET ABOVE THE FINISH FLOOR SHALL BE 17 INCHES (430 MM) MINIMUM AND 19 INCHES (485 MM) MAXIMUM MEASURED TO THE TOP OF THE SEAT. SEATS SHALL NOT BE SPRUNG TO RETURN TO A LIFTED POSITION.
EXCEPTIONS:
1. A WATER CLOSET IN A TOILET ROOM FOR A SINGLE OCCUPANT ACCESSED ONLY THROUGH A PRIVATE OFFICE AND NOT FOR COMMON USE OR PUBLIC USE SHALL NOT BE REQUIRED TO COMPLY WITH 604.4.
2. IN RESIDENTIAL DWELLING UNITS, THE HEIGHT OF WATER CLOSETS SHALL BE PERMITTED TO BE 15 INCHES (380 MM) MINIMUM AND 19 INCHES (485 MM) MAXIMUM ABOVE THE FINISH FLOOR MEASURED TO THE TOP OF THE SEAT.

604.5 GRAB BARS. GRAB BARS FOR WATER CLOSETS SHALL COMPLY WITH 609. GRAB BARS SHALL BE PROVIDED ON THE SIDE WALL CLOSEST TO THE WATER CLOSET AND ON THE REAR WALL.
EXCEPTIONS:
1. GRAB BARS SHALL NOT BE REQUIRED TO BE INSTALLED IN A TOILET ROOM FOR A SINGLE OCCUPANT ACCESSED ONLY THROUGH A PRIVATE OFFICE AND NOT FOR COMMON USE OR PUBLIC USE PROVIDED THAT REINFORCEMENT HAS BEEN INSTALLED IN WALLS AND LOCATED SO AS TO PERMIT THE INSTALLATION OF GRAB BARS COMPLYING WITH 604.5.
2. IN RESIDENTIAL DWELLING UNITS, GRAB BARS SHALL NOT BE REQUIRED TO BE INSTALLED IN TOILET OR BATHROOMS PROVIDED THAT REINFORCEMENT HAS BEEN INSTALLED IN WALLS AND LOCATED SO AS TO PERMIT THE INSTALLATION OF GRAB BARS COMPLYING WITH 604.5.
3. IN DETENTION OR CORRECTION FACILITIES, GRAB BARS SHALL NOT BE REQUIRED TO BE INSTALLED IN HOUSING OR HOLDING CELLS THAT ARE SPECIALLY DESIGNED WITHOUT PROTRUSIONS FOR PURPOSES OF SUICIDE PREVENTION.

ADVISORY 604.5 GRAB BARS EXCEPTION 2. REINFORCEMENT MUST BE SUFFICIENT TO PERMIT THE INSTALLATION OF REAR AND SIDE WALL GRAB BARS THAT FULLY MEET ALL ACCESSIBILITY REQUIREMENTS INCLUDING, BUT NOT LIMITED TO, REQUIRED LENGTH, INSTALLATION HEIGHT, AND STRUCTURAL STRENGTH.
604.5.1 SIDE WALL. THE SIDE WALL GRAB BAR SHALL BE 42 INCHES (1065 MM) LONG MINIMUM, LOCATED 12 INCHES (305 MM) MAXIMUM FROM THE REAR WALL AND EXTENDING 54 INCHES (1370 MM) MINIMUM FROM THE REAR WALL.
604.5.2 REAR WALL. THE REAR WALL GRAB BAR SHALL BE 36 INCHES (915 MM) LONG MINIMUM AND EXTEND FROM THE CENTERLINE OF THE WATER CLOSET 12 INCHES (305 MM) MINIMUM ON ONE SIDE AND 24 INCHES (610 MM) MINIMUM ON THE OTHER SIDE.
EXCEPTIONS:
1. THE REAR GRAB BAR SHALL BE PERMITTED TO BE 24 INCHES (610 MM) LONG MINIMUM, CENTERED ON THE WATER CLOSET, WHERE WALL SPACE DOES NOT PERMIT A LENGTH OF 36 INCHES (915 MM) MINIMUM DUE TO THE LOCATION OF A RECESSED FIXTURE ADJACENT TO THE WATER CLOSET.
2. WHERE AN ADMINISTRATIVE AUTHORITY REQUIRES FLUSH CONTROLS FOR FLUSH VALVES TO BE LOCATED IN A POSITION THAT CONFLICTS WITH THE LOCATION OF THE REAR GRAB BAR, THEN THE REAR GRAB BAR SHALL BE PERMITTED TO BE SPLIT OR SHIFTED TO THE OPEN SIDE OF THE TOILET AREA.

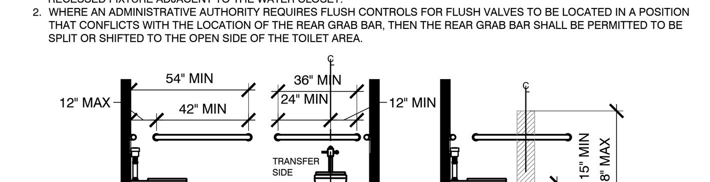
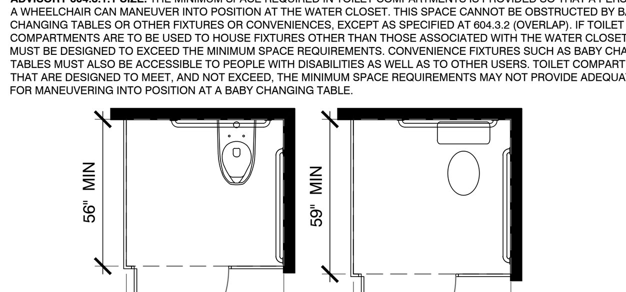


FIGURE 604.5.1 SIDE WALL GRAB BAR AT WATER CLOSETS
FIGURE 604.5.2 REAR WALL GRAB BAR AT WATER CLOSETS
FIGURE 604.7 DISPENSER OUTLET LOCATION

604.6 FLUSH CONTROLS. FLUSH CONTROLS SHALL BE HAND OPERATED OR AUTOMATIC. HAND OPERATED FLUSH CONTROLS SHALL COMPLY WITH 309. FLUSH CONTROLS SHALL BE LOCATED ON THE OPEN SIDE OF THE WATER CLOSET EXCEPT IN AMBULATORY ACCESSIBLE COMPARTMENTS COMPLYING WITH 604.8.2.
ADVISORY 604.6 FLUSH CONTROLS. IF PLUMBING VALVES ARE LOCATED DIRECTLY BEHIND THE TOILET SEAT, FLUSH VALVES AND RELATED PLUMBING CAN CAUSE INJURY OR IMBALANCE WHEN A PERSON LEANS BACK AGAINST THEM. TO PREVENT CAUSING INJURY OR IMBALANCE, THE PLUMBING CAN BE LOCATED BEHIND WALLS OR TO THE SIDE OF THE TOILET; OR IF APPROVED BY THE LOCAL AUTHORITY HAVING JURISDICTION, PROVIDE A TOILET SEAT LID.
604.7 DISPENSERS. TOILET PAPER DISPENSERS SHALL COMPLY WITH 309.4 AND SHALL BE 7 INCHES (180 MM) MINIMUM AND 9 INCHES (230 MM) MAXIMUM IN FRONT OF THE WATER CLOSET MEASURED TO THE CENTERLINE OF THE DISPENSER. THE OUTLET OF THE DISPENSER SHALL BE 15 INCHES (380 MM) MINIMUM AND 48 INCHES (1220 MM) MAXIMUM ABOVE THE FINISH FLOOR AND SHALL NOT BE LOCATED BEHIND GRAB BARS. DISPENSERS SHALL NOT BE OF A TYPE THAT CONTROLS DELIVERY OR THAT DOES NOT ALLOW CONTINUOUS PAPER FLOW.
ADVISORY 604.7 DISPENSERS. IF TOILET PAPER DISPENSERS ARE INSTALLED ABOVE THE SIDE WALL GRAB BAR, THE OUTLET OF THE TOILET PAPER DISPENSER MUST BE 48 INCHES (1220 MM) MAXIMUM ABOVE THE FINISH FLOOR AND THE TOP OF THE GRIPPING SURFACE OF THE GRAB BAR MUST BE 33 INCHES (840 MM) MINIMUM AND 36 INCHES (915 MM) MAXIMUM ABOVE THE FINISH FLOOR.
604.8 TOILET COMPARTMENTS. WHEELCHAIR ACCESSIBLE TOILET COMPARTMENTS SHALL MEET THE REQUIREMENTS OF 604.8.1 AND 604.8.3. COMPARTMENTS CONTAINING MORE THAN ONE PLUMBING FIXTURE SHALL COMPLY WITH 603. AMBULATORY ACCESSIBLE COMPARTMENTS SHALL COMPLY WITH 604.8.2 AND 604.8.3.
604.8.1 WHEELCHAIR ACCESSIBLE COMPARTMENTS. WHEELCHAIR ACCESSIBLE COMPARTMENTS SHALL COMPLY WITH 604.8.1.
604.8.1.1 SIZE. WHEELCHAIR ACCESSIBLE COMPARTMENTS SHALL BE 60 INCHES (1525 MM) WIDE MINIMUM MEASURED PERPENDICULAR TO THE SIDE WALL, AND 56 INCHES (1420 MM) DEEP MINIMUM FOR WALL HUNG WATER CLOSETS AND 59 INCHES (1500 MM) DEEP MINIMUM FOR FLOOR MOUNTED WATER CLOSETS MEASURED PERPENDICULAR TO THE REAR WALL. WHEELCHAIR ACCESSIBLE COMPARTMENTS FOR CHILDREN'S USE SHALL BE 60 INCHES (1525 MM) WIDE MINIMUM MEASURED PERPENDICULAR TO THE SIDE WALL, AND 59 INCHES (1500 MM) DEEP MINIMUM FOR WALL HUNG AND FLOOR MOUNTED WATER CLOSETS MEASURED PERPENDICULAR TO THE REAR WALL.
ADVISORY 604.8.1.1 SIZE. THE MINIMUM SPACE REQUIRED IN TOILET COMPARTMENTS IS PROVIDED SO THAT A PERSON USING A WHEELCHAIR CAN MANEUVER INTO POSITION AT THE WATER CLOSET. THIS SPACE CANNOT BE OBSTRUCTED BY BABY CHANGING TABLES OR OTHER FIXTURES OR CONVENIENCES, EXCEPT AS SPECIFIED AT 604.3.2 (OVERLAP). IF TOILET COMPARTMENTS ARE TO BE USED TO HOUSE FIXTURES OTHER THAN THOSE ASSOCIATED WITH THE WATER CLOSET, THEY MUST BE DESIGNED TO EXCEED THE MINIMUM SPACE REQUIREMENTS. CONVENIENCE FIXTURES SUCH AS BABY CHANGING TABLES MUST ALSO BE ACCESSIBLE TO PEOPLE WITH DISABILITIES AS WELL AS TO OTHER USERS. TOILET COMPARTMENTS THAT ARE DESIGNED TO MEET, AND NOT EXCEED, THE MINIMUM SPACE REQUIREMENTS MAY NOT PROVIDE ADEQUATE SPACE FOR MANEUVERING INTO POSITION AT A BABY CHANGING TABLE.

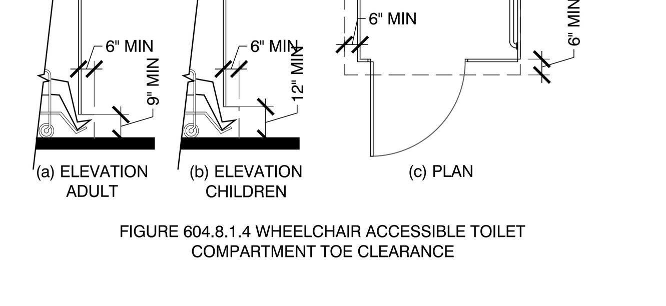


(a) ADULT WALL HUNG WATER CLOSET
(b) ADULT FLOOR MOUNTED WATER CLOSET AND CHILDREN'S WATER CLOSET
FIGURE 604.8.1.1 SIZE OF WHEELCHAIR ACCESSIBLE TOILET COMPARTMENT

604.8.1.2 DOORS. TOILET COMPARTMENT DOORS, INCLUDING DOOR HARDWARE, SHALL COMPLY WITH 404 EXCEPT THAT IF THE APPROACH IS TO THE LATCH SIDE OF THE COMPARTMENT DOOR, CLEARANCE BETWEEN THE DOOR SIDE OF THE COMPARTMENT AND ANY OBSTRUCTION SHALL BE 42 INCHES (1065 MM) MINIMUM. DOORS SHALL BE LOCATED IN THE FRONT PARTITION OR IN THE SIDE WALL OR PARTITION FARTHEST FROM THE WATER CLOSET. WHERE LOCATED IN THE FRONT PARTITION, THE DOOR OPENING SHALL BE 4 INCHES (100 MM) MAXIMUM FROM THE SIDE WALL OR PARTITION FARTHEST FROM THE WATER CLOSET. WHERE LOCATED IN THE SIDE WALL OR PARTITION, THE DOOR OPENING SHALL BE 4 INCHES (100 MM) MAXIMUM FROM THE FRONT PARTITION. THE DOOR SHALL BE SELF-CLOSING. A DOOR PULL COMPLYING WITH 404.2.7 SHALL BE PLACED ON BOTH SIDES OF THE DOOR NEAR THE LATCH. TOILET COMPARTMENT DOORS SHALL NOT SWING INTO THE MINIMUM REQUIRED COMPARTMENT AREA.

FIGURE 604.8.1.2 WHEELCHAIR ACCESSIBLE TOILET COMPARTMENT DOORS

604.8.1.3 APPROACH. COMPARTMENTS SHALL BE ARRANGED FOR LEFT-HAND OR RIGHT-HAND APPROACH TO THE WATER CLOSET.
604.8.1.4 TOE CLEARANCE. THE FRONT PARTITION AND AT LEAST ONE SIDE PARTITION SHALL PROVIDE A TOE CLEARANCE OF 9 INCHES (230 MM) MINIMUM ABOVE THE FINISH FLOOR AND 6 INCHES (150 MM) DEEP MINIMUM BEYOND THE COMPARTMENT-SIDE FACE OF THE PARTITION, EXCLUSIVE OF PARTITION SUPPORT MEMBERS. COMPARTMENTS FOR CHILDREN'S USE SHALL PROVIDE A TOE CLEARANCE OF 12 INCHES (305 MM) MINIMUM ABOVE THE FINISH FLOOR.
EXCEPTION: TOE CLEARANCE AT THE FRONT PARTITION IS NOT REQUIRED IN A COMPARTMENT GREATER THAN 62 INCHES (1575 MM) DEEP WITH A WALL-HUNG WATER CLOSET OR 65 INCHES (1650 MM) DEEP WITH A FLOOR-MOUNTED WATER CLOSET. TOE CLEARANCE AT THE SIDE PARTITION IS NOT REQUIRED IN A COMPARTMENT GREATER THAN 66 INCHES (1675 MM) WIDE. TOE CLEARANCE AT THE FRONT PARTITION IS NOT REQUIRED IN A COMPARTMENT FOR CHILDREN'S USE THAT IS GREATER THAN 65 INCHES (1650 MM) DEEP.



(a) ELEVATION ADULT (b) ELEVATION CHILDREN (c) PLAN
FIGURE 604.8.1.4 WHEELCHAIR ACCESSIBLE TOILET COMPARTMENT TOE CLEARANCE

idGROUP
2641 IRVING BLVD.
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604.8.1.5 GRAB BARS. GRAB BARS SHALL COMPLY WITH 609. A SIDE-WALL GRAB BAR COMPLYING WITH 604.5.1 SHALL BE PROVIDED AND SHALL BE LOCATED ON THE WALL CLOSEST TO THE WATER CLOSET. IN ADDITION, A REAR-WALL GRAB BAR COMPLYING WITH 604.5.2 SHALL BE PROVIDED.
604.8.2 AMBULATORY ACCESSIBLE COMPARTMENTS. AMBULATORY ACCESSIBLE COMPARTMENTS SHALL COMPLY WITH 604.8.2.
604.8.2.1 SIZE. AMBULATORY ACCESSIBLE COMPARTMENTS SHALL HAVE A DEPTH OF 60 INCHES (1525 MM) MINIMUM AND A WIDTH OF 35 INCHES (890 MM) MINIMUM AND 37 INCHES (940 MM) MAXIMUM.
604.8.2.2 DOORS. TOILET COMPARTMENT DOORS, INCLUDING DOOR HARDWARE, SHALL COMPLY WITH 404, EXCEPT THAT IF THE APPROACH IS TO THE LATCH SIDE OF THE COMPARTMENT DOOR, CLEARANCE BETWEEN THE DOOR SIDE OF THE COMPARTMENT AND ANY OBSTRUCTION SHALL BE 42 INCHES (1065 MM) MINIMUM. THE DOOR SHALL BE SELF-CLOSING. A DOOR PULL COMPLYING WITH 404.2.7 SHALL BE PLACED ON BOTH SIDES OF THE DOOR NEAR THE LATCH. TOILET COMPARTMENT DOORS SHALL NOT SWING INTO THE MINIMUM REQUIRED COMPARTMENT AREA.
604.8.2.3 GRAB BARS. GRAB BARS SHALL COMPLY WITH 609. A SIDE-WALL GRAB BAR COMPLYING WITH 604.5.1 SHALL BE PROVIDED ON BOTH SIDES OF THE COMPARTMENT.

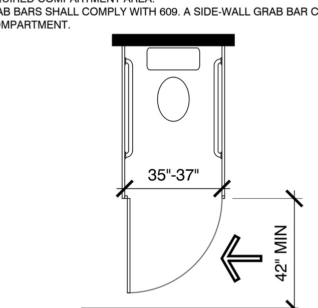


FIGURE 604.8.2
AMBULATORY ACCESSIBLE
TOILET COMPARTMENT

604.8.3 COAT HOOKS AND SHELVES. COAT HOOKS SHALL BE LOCATED WITHIN ONE OF THE REACH RANGES SPECIFIED IN 308. SHELVES SHALL BE LOCATED 40 INCHES (1015 MM) MINIMUM AND 48 INCHES (1220 MM) MAXIMUM ABOVE THE FINISH FLOOR.
604.9 WATER CLOSETS AND TOILET COMPARTMENTS FOR CHILDREN'S USE. WATER CLOSETS AND TOILET COMPARTMENTS FOR CHILDREN'S USE SHALL COMPLY WITH 604.9.
ADVISORY 604.9 WATER CLOSETS AND TOILET COMPARTMENTS FOR CHILDREN'S USE. THE REQUIREMENTS IN 604.9 ARE TO BE FOLLOWED WHERE THE EXCEPTION FOR CHILDREN'S WATER CLOSETS IN 604.1 IS USED. THE FOLLOWING TABLE PROVIDES ADDITIONAL GUIDANCE IN APPLYING THE SPECIFICATIONS FOR WATER CLOSETS FOR CHILDREN ACCORDING TO THE AGE GROUP SERVED AND REFLECTS THE DIFFERENCES IN THE SIZE, STATURE, AND REACH RANGES OF CHILDREN AGES 3 THROUGH 12. THE SPECIFICATIONS CHOSEN SHOULD CORRESPOND TO THE AGE OF THE PRIMARY USER GROUP. THE SPECIFICATIONS OF ONE AGE GROUP SHOULD BE APPLIED CONSISTENTLY IN THE INSTALLATION OF A WATER CLOSET AND RELATED ELEMENTS.

ADVISORY SPECIFICATIONS FOR WATER CLOSETS SERVING CHILDREN AGES 3 THROUGH 12

	AGES 3-4	AGES 5-8	AGES 9-12
WATER CLOSET CENTERLINE	12 INCHES (305 MM)	12-15 INCHES (305-380 MM)	15-18 INCHES (380-455 MM)
TOILET SEAT HEIGHT	11-12 INCHES (280-305 MM)	12-15 INCHES (305-380 MM)	15-17 INCHES (380-430 MM)
GRAB BAR HEIGHT	18-20 INCHES (455-510 MM)	20-25 INCHES (510-635 MM)	25-27 INCHES (635-685 MM)
DISPENSER HEIGHT	14 INCHES (355 MM)	14-17 INCHES (355-430 MM)	17-19 INCHES (430-485 MM)

604.9.1 LOCATION. THE WATER CLOSET SHALL BE LOCATED WITH A WALL OR PARTITION TO THE REAR AND TO ONE SIDE. THE CENTERLINE OF THE WATER CLOSET SHALL BE 12 INCHES (305 MM) MINIMUM AND 18 INCHES (455 MM) MAXIMUM FROM THE SIDE WALL OR PARTITION, EXCEPT THAT THE WATER CLOSET SHALL BE 17 INCHES (430 MM) MINIMUM AND 19 INCHES (485 MM) MAXIMUM FROM THE SIDE WALL OR PARTITION IN THE AMBULATORY ACCESSIBLE TOILET COMPARTMENT SPECIFIED IN 604.8.2. COMPARTMENTS SHALL BE ARRANGED FOR LEFT-HAND OR RIGHT-HAND APPROACH TO THE WATER CLOSET.
604.9.2 CLEARANCE. CLEARANCE AROUND A WATER CLOSET SHALL COMPLY WITH 604.3.
604.9.3 HEIGHT. THE HEIGHT OF WATER CLOSETS SHALL BE 11 INCHES (280 MM) MINIMUM AND 17 INCHES (430 MM) MAXIMUM MEASURED TO THE TOP OF THE SEAT. SEATS SHALL NOT BE SPRUNG TO RETURN TO A LIFTED POSITION.
604.9.4 GRAB BARS. GRAB BARS FOR WATER CLOSETS SHALL COMPLY WITH 604.5.
604.9.5 FLUSH CONTROLS. FLUSH CONTROLS SHALL BE HAND OPERATED OR AUTOMATIC. HAND OPERATED FLUSH CONTROLS SHALL COMPLY WITH 309.2 AND 309.4 AND SHALL BE INSTALLED 36 INCHES (915 MM) MAXIMUM ABOVE THE FINISH FLOOR. FLUSH CONTROLS SHALL BE LOCATED ON THE OPEN SIDE OF THE WATER CLOSET EXCEPT IN AMBULATORY ACCESSIBLE COMPARTMENTS COMPLYING WITH 604.8.2.
604.9.6 DISPENSERS. TOILET PAPER DISPENSERS SHALL COMPLY WITH 309.4 AND SHALL BE 7 INCHES (180 MM) MINIMUM AND 9 INCHES (230 MM) MAXIMUM IN FRONT OF THE WATER CLOSET MEASURED TO THE CENTERLINE OF THE DISPENSER. THE OUTLET OF THE DISPENSER SHALL BE 14 INCHES (355 MM) MINIMUM AND 19 INCHES (485 MM) MAXIMUM ABOVE THE FINISH FLOOR. THERE SHALL BE A CLEARANCE OF 1 1/2 INCHES (38 MM) MINIMUM BELOW THE GRAB BAR. DISPENSERS SHALL NOT BE **OF A TYPE THAT CONTROLS DELIVERY OR THAT DOES NOT ALLOW CONTINUOUS PAPER FLOW.**
604.9.7 TOILET COMPARTMENTS. TOILET COMPARTMENTS SHALL COMPLY WITH 604.8.
605 URINALS
605.1 GENERAL. URINALS SHALL COMPLY WITH 605.
ADVISORY 605.1 GENERAL. STALL-TYPE URINALS PROVIDE GREATER ACCESSIBILITY FOR A BROADER RANGE OF PERSONS, INCLUDING PEOPLE OF SHORT STATURE.
605.2 HEIGHT AND DEPTH. URINALS SHALL BE THE STALL-TYPE OR THE WALL-HUNG TYPE WITH THE RIM 17 INCHES (430 MM) MAXIMUM ABOVE THE FINISH FLOOR OR GROUND. URINALS SHALL BE 13 1/2 INCHES (345 MM) DEEP MINIMUM MEASURED FROM THE OUTER FACE OF THE URINAL RIM TO THE BACK OF THE FIXTURE.

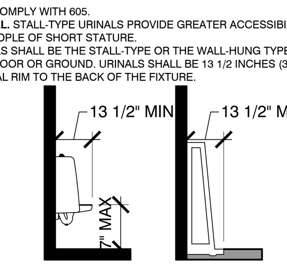
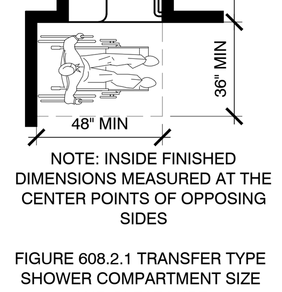


FIGURE 605.2 HEIGHT AND DEPTH OF URINALS

605.3 CLEAR FLOOR SPACE. A CLEAR FLOOR OR GROUND SPACE COMPLYING WITH 305 POSITIONED FOR FORWARD APPROACH SHALL BE PROVIDED.
605.4 FLUSH CONTROLS. FLUSH CONTROLS SHALL BE HAND OPERATED OR AUTOMATIC. HAND OPERATED FLUSH CONTROLS SHALL COMPLY WITH 309.
606 LAVATORIES AND SINKS
ADVISORY 606.1 GENERAL. IF SOAP AND TOWEL DISPENSERS ARE PROVIDED, THEY MUST BE LOCATED WITHIN THE REACH RANGES SPECIFIED IN 308. LOCATE SOAP AND TOWEL DISPENSERS SO THAT THEY ARE CONVENIENTLY USABLE BY A PERSON AT THE ACCESSIBLE LAVATORY.
606.2 CLEAR FLOOR SPACE. A CLEAR FLOOR SPACE COMPLYING WITH 305, POSITIONED FOR A FORWARD APPROACH, AND KNEE AND TOE CLEARANCE COMPLYING WITH 306 SHALL BE PROVIDED.
EXCEPTIONS:
1. A PARALLEL APPROACH COMPLYING WITH 305 SHALL BE PERMITTED TO A KITCHEN SINK IN A SPACE WHERE A COOK TOP OR CONVENTIONAL RANGE IS NOT PROVIDED AND TO WET BARS.
2. A LAVATORY IN A TOILET ROOM OR BATHING FACILITY FOR A SINGLE OCCUPANT ACCESSED ONLY THROUGH A PRIVATE OFFICE AND NOT FOR COMMON USE OR PUBLIC USE SHALL NOT BE REQUIRED TO PROVIDE KNEE AND TOE CLEARANCE COMPLYING WITH 306.
3. IN RESIDENTIAL DWELLING UNITS, CABINETRY SHALL BE PERMITTED UNDER LAVATORIES AND KITCHEN SINKS PROVIDED THAT ALL OF THE FOLLOWING CONDITIONS ARE MET:
   (A) THE CABINETRY CAN BE REMOVED WITHOUT REMOVAL OR REPLACEMENT OF THE FIXTURE;
   (B) THE FINISH FLOOR EXTENDS UNDER THE CABINETRY; AND
   (C) THE WALLS BEHIND AND SURROUNDING THE CABINETRY ARE FINISHED.
4. A KNEE CLEARANCE OF 24 INCHES (610 MM) MINIMUM ABOVE THE FINISH FLOOR OR GROUND SHALL BE PERMITTED AT LAVATORIES AND SINKS USED PRIMARILY BY CHILDREN 6 THROUGH 12 YEARS WHERE THE RIM OR COUNTER SURFACE IS 31 INCHES (785 MM) MAXIMUM ABOVE THE FINISH FLOOR OR GROUND.
5. A PARALLEL APPROACH COMPLYING WITH 305 SHALL BE PERMITTED TO LAVATORIES AND SINKS USED PRIMARILY BY CHILDREN 5 YEARS AND YOUNGER.
6. THE DIP OF THE OVERFLOW SHALL NOT BE CONSIDERED IN DETERMINING KNEE AND TOE CLEARANCES.
7. NO MORE THAN ONE BOWL OF A MULTI-BOWL SINK SHALL BE REQUIRED TO PROVIDE KNEE AND TOE CLEARANCE COMPLYING WITH 306.

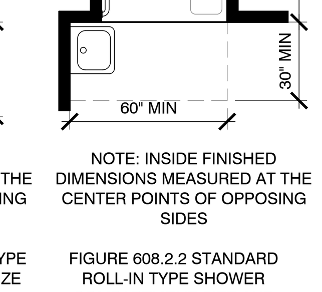
606.3 HEIGHT. LAVATORIES AND SINKS SHALL BE INSTALLED WITH THE FRONT OF THE HIGHER OF THE RIM OR COUNTER SURFACE 34 INCHES (865 MM) MAXIMUM ABOVE THE FINISH FLOOR OR GROUND.
EXCEPTIONS:
1. A LAVATORY IN A TOILET OR BATHING FACILITY FOR A SINGLE OCCUPANT ACCESSED ONLY THROUGH A PRIVATE OFFICE AND NOT FOR COMMON USE OR PUBLIC USE SHALL NOT BE REQUIRED TO COMPLY WITH 606.3.
2. IN RESIDENTIAL DWELLING UNIT KITCHENS, SINKS THAT ARE ADJUSTABLE TO VARIABLE HEIGHTS, 29 INCHES (735 MM) MINIMUM AND 36 INCHES (915 MM) MAXIMUM, SHALL BE PERMITTED WHERE ROUGH-IN PLUMBING PERMITS CONNECTIONS OF SUPPLY AND DRAIN PIPES FOR SINKS MOUNTED AT THE HEIGHT OF 29 INCHES (735 MM).

606.4 FAUCETS. CONTROLS FOR FAUCETS SHALL COMPLY WITH 309. HAND-OPERATED METERING FAUCETS SHALL REMAIN OPEN FOR 10 SECONDS MINIMUM.
606.5 EXPOSED PIPES AND SURFACES. WATER SUPPLY AND DRAIN PIPES UNDER LAVATORIES AND SINKS SHALL BE INSULATED OR OTHERWISE CONFIGURED TO PROTECT AGAINST CONTACT. THERE SHALL BE NO SHARP OR ABRASIVE SURFACES UNDER LAVATORIES AND SINKS
607 BATHTUBS - REFER TO ACCESSIBILITY STANDARDS FOR DETAILED REQUIREMENTS
608 SHOWER COMPARTMENTS
ADVISORY 608.1 GENERAL. SHOWER STALLS THAT ARE 60 INCHES (1525 MM) WIDE AND HAVE NO CURB MAY INCREASE THE USABILITY OF A BATHROOM BECAUSE THE SHOWER AREA PROVIDES ADDITIONAL MANEUVERING SPACE.
608.2 SIZE AND CLEARANCES FOR SHOWER COMPARTMENTS. SHOWER COMPARTMENTS SHALL HAVE SIZES AND CLEARANCES COMPLYING WITH 608.2.
608.2.1 TRANSFER TYPE SHOWER COMPARTMENTS. TRANSFER TYPE SHOWER COMPARTMENTS SHALL BE 36 INCHES (915 MM) BY 36 INCHES (915 MM) CLEAR INSIDE DIMENSIONS MEASURED AT THE CENTER POINTS OF OPPOSING SIDES AND SHALL HAVE A 36 INCH (915 MM) WIDE MINIMUM ENTRY ON THE FACE OF THE SHOWER COMPARTMENT. CLEARANCE OF 36 INCHES (915 MM) WIDE MINIMUM BY 48 INCHES (1220 MM) LONG MINIMUM MEASURED FROM THE CONTROL WALL SHALL BE PROVIDED.



NOTE: INSIDE FINISHED DIMENSIONS MEASURED AT THE CENTER POINTS OF OPPOSING SIDES

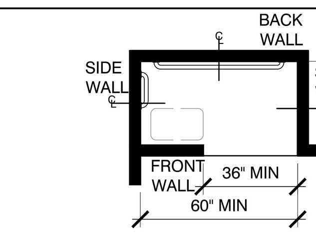
FIGURE 608.2.1 TRANSFER TYPE SHOWER COMPARTMENT SIZE AND CLEARANCE



NOTE: INSIDE FINISHED DIMENSIONS MEASURED AT THE CENTER POINTS OF OPPOSING SIDES

FIGURE 608.2.2 STANDARD ROLL-IN TYPE SHOWER COMPARTMENT SIZE AND CLEARANCE

608.2.2 STANDARD ROLL-IN TYPE SHOWER COMPARTMENTS. STANDARD ROLL-IN TYPE SHOWER COMPARTMENTS SHALL BE 30 INCHES (760 MM) WIDE MINIMUM BY 60 INCHES (1525 MM) DEEP MINIMUM CLEAR INSIDE DIMENSIONS MEASURED AT CENTER POINTS OF OPPOSING SIDES AND SHALL HAVE A 60 INCHES (1525 MM) WIDE MINIMUM ENTRY ON THE FACE OF THE SHOWER COMPARTMENT.
608.2.2.1 CLEARANCE. A 30 INCH (760 MM) WIDE MINIMUM BY 60 INCH (1525 MM) LONG MINIMUM CLEARANCE SHALL BE PROVIDED ADJACENT TO THE OPEN FACE OF THE SHOWER COMPARTMENT.
EXCEPTION: A LAVATORY COMPLYING WITH 606 SHALL BE PERMITTED ON ONE 30 INCH (760 MM) WIDE MINIMUM SIDE OF THE CLEARANCE PROVIDED THAT IT IS NOT ON THE SIDE OF THE CLEARANCE ADJACENT TO THE CONTROLS OR, WHERE PROVIDED, NOT ON THE SIDE OF THE CLEARANCE ADJACENT TO THE SHOWER SEAT.
608.2.3 ALTERNATE ROLL-IN TYPE SHOWER COMPARTMENTS. ALTERNATE ROLL-IN TYPE SHOWER COMPARTMENTS SHALL BE 36 INCHES (915 MM) WIDE AND 60 INCHES (1525 MM) DEEP MINIMUM CLEAR INSIDE DIMENSIONS MEASURED AT CENTER POINTS OF OPPOSING SIDES. A 36 INCH (915 MM) WIDE MINIMUM ENTRY SHALL BE PROVIDED AT ONE END OF THE LONG SIDE OF THE COMPARTMENT.



NOTE: INSIDE FINISHED DIMENSIONS MEASURED AT THE CENTER POINTS OF OPPOSING SIDES

FIGURE 608.2.3 ALTERNATE ROLL-IN TYPE SHOWER COMPARTMENT SIZE AND CLEARANCE

608.3 GRAB BARS. GRAB BARS SHALL COMPLY WITH 609 AND SHALL BE PROVIDED IN ACCORDANCE WITH 608.3. WHERE MULTIPLE GRAB BARS ARE USED, REQUIRED HORIZONTAL GRAB BARS SHALL BE INSTALLED AT THE SAME HEIGHT ABOVE THE FINISH FLOOR.
EXCEPTIONS:
1. GRAB BARS SHALL NOT BE REQUIRED TO BE INSTALLED IN A SHOWER LOCATED IN A BATHING FACILITY FOR A SINGLE OCCUPANT ACCESSED ONLY THROUGH A PRIVATE OFFICE, AND NOT FOR COMMON USE OR PUBLIC USE PROVIDED THAT REINFORCEMENT HAS BEEN INSTALLED IN WALLS AND LOCATED SO AS TO PERMIT THE INSTALLATION OF GRAB BARS COMPLYING WITH 608.3.
2. IN RESIDENTIAL DWELLING UNITS, GRAB BARS SHALL NOT BE REQUIRED TO BE INSTALLED IN SHOWERS LOCATED IN BATHING FACILITIES PROVIDED THAT REINFORCEMENT HAS BEEN INSTALLED IN WALLS AND LOCATED SO AS TO PERMIT THE INSTALLATION OF GRAB BARS COMPLYING WITH 608.3.

608.3.1 TRANSFER TYPE SHOWER COMPARTMENTS. IN TRANSFER TYPE COMPARTMENTS, GRAB BARS SHALL BE PROVIDED ACROSS THE CONTROL WALL AND BACK WALL TO A POINT 18 INCHES (455 MM) FROM THE CONTROL WALL.

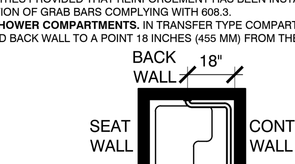


FIGURE 608.3.1 GRAB BARS FOR TRANSFER TYPE SHOWERS

608.3.2 STANDARD ROLL-IN TYPE SHOWER COMPARTMENTS. WHERE A SEAT IS PROVIDED IN STANDARD ROLL-IN TYPE SHOWER COMPARTMENTS, GRAB BARS SHALL BE PROVIDED ON THE BACK WALL AND THE SIDE WALL OPPOSITE THE SEAT. GRAB BARS SHALL NOT BE PROVIDED ABOVE THE SEAT. WHERE A SEAT IS NOT PROVIDED IN STANDARD ROLL-IN TYPE SHOWER COMPARTMENTS, GRAB BARS SHALL BE PROVIDED ON THREE WALLS. GRAB BARS SHALL BE INSTALLED 6 INCHES (150 MM) MAXIMUM FROM ADJACENT WALLS.
608.3.3 ALTERNATE ROLL-IN TYPE SHOWER COMPARTMENTS. IN ALTERNATE ROLL-IN TYPE SHOWER COMPARTMENTS, GRAB BARS SHALL BE PROVIDED ON THE BACK WALL AND THE SIDE WALL FARTHEST FROM THE COMPARTMENT ENTRY. GRAB BARS SHALL NOT BE PROVIDED ABOVE THE SEAT. GRAB BARS SHALL BE INSTALLED 6 INCHES (150 MM) MAXIMUM FROM ADJACENT WALLS.

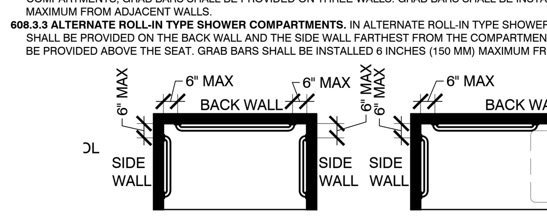


FIGURE 608.3.2 GRAB BARS FOR STANDARD ROLL-IN TYPE SHOWERS

608.4 SEATS. A FOLDING OR NON-FOLDING SEAT SHALL BE PROVIDED IN TRANSFER TYPE SHOWER COMPARTMENTS. A FOLDING SEAT SHALL BE PROVIDED IN ROLL-IN TYPE SHOWERS REQUIRED IN TRANSIENT LODGING GUEST ROOMS WITH MOBILITY FEATURES COMPLYING WITH 806.2. SEATS SHALL COMPLY WITH 610.
EXCEPTION: IN RESIDENTIAL DWELLING UNITS, SEATS SHALL NOT BE REQUIRED IN TRANSFER TYPE SHOWER COMPARTMENTS PROVIDED THAT REINFORCEMENT HAS BEEN INSTALLED IN WALLS SO AS TO PERMIT THE INSTALLATION OF SEATS COMPLYING WITH 608.4.
608.5 CONTROLS. CONTROLS, FAUCETS, AND SHOWER SPRAY UNITS SHALL COMPLY WITH 309.4.
608.5.1 TRANSFER TYPE SHOWER COMPARTMENTS. IN TRANSFER TYPE SHOWER COMPARTMENTS, THE CONTROLS, FAUCETS, AND SHOWER SPRAY UNIT SHALL BE INSTALLED ON THE SIDE WALL OPPOSITE THE SEAT 38 INCHES (965 MM) MINIMUM AND 48 INCHES (1220 MM) MAXIMUM ABOVE THE SHOWER FLOOR AND SHALL BE LOCATED ON THE CONTROL WALL 15 INCHES (380 MM) MAXIMUM FROM THE CENTERLINE OF THE SEAT TOWARD THE SHOWER OPENING.
608.5.2 STANDARD ROLL-IN TYPE SHOWER COMPARTMENTS. IN STANDARD ROLL-IN TYPE SHOWER COMPARTMENTS, THE CONTROLS, FAUCETS, AND SHOWER SPRAY UNIT SHALL BE LOCATED ABOVE THE GRAB BAR, BUT NO HIGHER THAN 48 INCHES (1220 MM) ABOVE THE SHOWER FLOOR. WHERE A SEAT IS PROVIDED, THE CONTROLS, FAUCETS, AND SHOWER SPRAY UNIT SHALL BE INSTALLED ON THE BACK WALL ADJACENT TO THE SEAT WALL AND SHALL BE LOCATED 27 INCHES (685 MM) MAXIMUM FROM THE SEAT WALL.
ADVISORY 608.5.2 STANDARD ROLL-IN TYPE SHOWER COMPARTMENTS. IN STANDARD ROLL-IN TYPE SHOWERS WITHOUT SEATS, THE SHOWER HEAD AND OPERABLE PARTS CAN BE LOCATED ON ANY OF THE THREE WALLS OF THE SHOWER WITHOUT ADVERSELY AFFECTING ACCESSIBILITY.

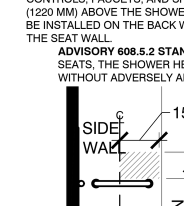


FIGURE 608.5.1 TRANSFER TYPE SHOWER COMPARTMENT CONTROL LOCATION

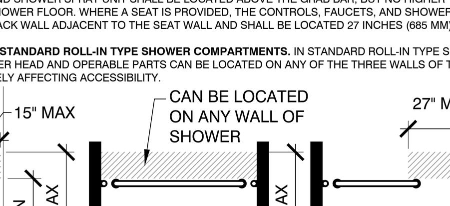


FIGURE 608.5.2 STANDARD ROLL-IN TYPE SHOWER COMPARTMENT CONTROL LOCATION

608.5.3 ALTERNATE ROLL-IN TYPE SHOWER COMPARTMENTS. IN ALTERNATE ROLL-IN TYPE SHOWER COMPARTMENTS, THE CONTROLS, FAUCETS, AND SHOWER SPRAY UNIT SHALL BE LOCATED ABOVE THE GRAB BAR, BUT NO HIGHER THAN 48 INCHES (1220 MM) ABOVE THE SHOWER FLOOR. WHERE A SEAT IS PROVIDED, THE CONTROLS, FAUCETS, AND SHOWER SPRAY UNIT SHALL BE LOCATED ON THE SIDE WALL ADJACENT TO THE SEAT 27 INCHES (685 MM) MAXIMUM FROM THE SIDE WALL BEHIND THE SEAT OR SHALL BE LOCATED ON THE BACK WALL OPPOSITE THE SEAT 15 INCHES (380 MM) MAXIMUM, LEFT OR RIGHT, OF THE CENTERLINE OF THE SEAT. WHERE A SEAT IS NOT PROVIDED, THE CONTROLS, FAUCETS, AND SHOWER SPRAY UNIT SHALL BE INSTALLED ON THE SIDE WALL FARTHEST FROM THE COMPARTMENT ENTRY.

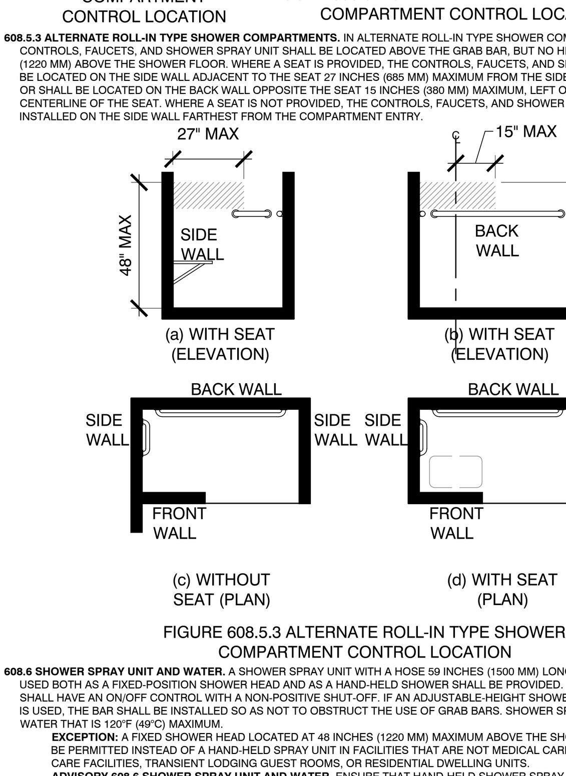


FIGURE 608.5.3 ALTERNATE ROLL-IN TYPE SHOWER COMPARTMENT CONTROL LOCATION

608.6 SHOWER SPRAY UNIT AND WATER. A SHOWER SPRAY UNIT WITH A HOSE 59 INCHES (1500 MM) LONG MINIMUM THAT CAN BE USED BOTH AS A FIXED-POSITION SHOWER HEAD AND AS A HAND-HELD SHOWER SHALL BE PROVIDED. THE SHOWER SPRAY UNIT SHALL HAVE AN ON/OFF CONTROL WITH A NON-POSITIVE SHUT-OFF. IF AN ADJUSTABLE-HEIGHT SHOWER HEAD ON A VERTICAL BAR IS USED, THE BAR SHALL BE INSTALLED SO AS NOT TO OBSTRUCT THE USE OF GRAB BARS. SHOWER SPRAY UNITS SHALL DELIVER WATER THAT IS 120°F (49°C) MAXIMUM.
EXCEPTION: A FIXED SHOWER HEAD LOCATED AT 48 INCHES (1220 MM) MAXIMUM ABOVE THE SHOWER FINISH FLOOR SHALL BE PERMITTED INSTEAD OF A HAND-HELD SPRAY UNIT IN FACILITIES THAT ARE NOT MEDICAL CARE FACILITIES, LONG-TERM CARE FACILITIES, TRANSIENT LODGING GUEST ROOMS, OR RESIDENTIAL DWELLING UNITS.
ADVISORY 608.6 SHOWER SPRAY UNIT AND WATER. ENSURE THAT HAND-HELD SHOWER SPRAY UNITS ARE CAPABLE OF DELIVERING WATER PRESSURE SUBSTANTIALLY EQUIVALENT TO FIXED SHOWER HEADS.
608.7 THRESHOLDS. THRESHOLDS IN ROLL-IN TYPE SHOWER COMPARTMENTS SHALL BE 1/2 INCH (13 MM) HIGH MAXIMUM IN ACCORDANCE WITH 303. IN TRANSFER TYPE SHOWER COMPARTMENTS, THRESHOLDS 1/2 INCH (13 MM) HIGH MAXIMUM SHALL BE BEVELED, ROUNDED, OR VERTICAL.
EXCEPTION: A THRESHOLD 2 INCHES (51 MM) HIGH MAXIMUM SHALL BE PERMITTED IN TRANSFER TYPE SHOWER COMPARTMENTS IN EXISTING FACILITIES WHERE PROVISION OF A 1/2 INCH (13 MM) HIGH THRESHOLD WOULD DISTURB THE STRUCTURAL REINFORCEMENT OF THE FLOOR SLAB.
608.8 SHOWER ENCLOSURES. ENCLOSURES FOR SHOWER COMPARTMENTS SHALL NOT OBSTRUCT CONTROLS, FAUCETS, AND SHOWER SPRAY UNITS OR OBSTRUCT TRANSFER FROM WHEELCHAIRS ONTO SHOWER SEATS.
609 GRAB BARS
609.2 CROSS SECTION. GRAB BARS SHALL HAVE A CROSS SECTION COMPLYING WITH 609.2.1 OR 609.2.2.
609.2.1 CIRCULAR CROSS SECTION. GRAB BARS WITH CIRCULAR CROSS SECTIONS SHALL HAVE AN OUTSIDE DIAMETER OF 1 1/4 INCHES (32 MM) MINIMUM AND 2 INCHES (51 MM) MAXIMUM.
609.2.2 NON-CIRCULAR CROSS SECTION. GRAB BARS WITH NON-CIRCULAR CROSS SECTIONS SHALL HAVE A CROSS-SECTION DIMENSION OF 2 INCHES (51 MM) MAXIMUM AND A PERIMETER DIMENSION OF 4 INCHES (100 MM) MINIMUM AND 4.8 INCHES (120 MM) MAXIMUM.
609.3 SPACING. THE SPACE BETWEEN THE WALL AND THE GRAB BAR SHALL BE 1 1/2 INCHES (38 MM). THE SPACE BETWEEN THE GRAB BAR AND PROJECTING OBJECTS BELOW AND AT THE ENDS SHALL BE 1 1/2 INCHES (38 MM) MINIMUM. THE SPACE BETWEEN THE GRAB BAR AND PROJECTING OBJECTS ABOVE SHALL BE 12 INCHES (305 MM) MINIMUM.
EXCEPTION: THE SPACE BETWEEN THE GRAB BARS AND SHOWER CONTROLS, SHOWER FITTINGS, AND OTHER GRAB BARS ABOVE SHALL BE PERMITTED TO BE 1 1/2 INCHES (38 MM) MINIMUM.

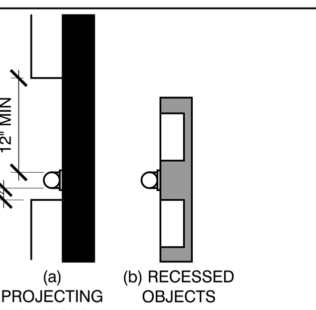


FIGURE 609.3 SPACING OF GRAB BARS

609.4 POSITION OF GRAB BARS. GRAB BARS SHALL BE INSTALLED IN A HORIZONTAL POSITION, 33 INCHES (840 MM) MINIMUM AND 36 INCHES (915 MM) MAXIMUM ABOVE THE FINISH FLOOR MEASURED TO THE TOP OF THE GRIPPING SURFACE, EXCEPT THAT AT WATER CLOSETS FOR CHILDREN'S USE COMPLYING WITH 604.9, GRAB BARS SHALL BE INSTALLED IN A HORIZONTAL POSITION 18 INCHES (455 MM) MINIMUM AND 27 INCHES (685 MM) MAXIMUM ABOVE THE FINISH FLOOR MEASURED TO THE TOP OF THE GRIPPING SURFACE. THE HEIGHT OF THE LOWER GRAB BAR ON THE BACK WALL OF A BATHTUB SHALL COMPLY WITH 607.4.1.1 OR 607.4.2.1.
609.5 SURFACE HAZARDS. GRAB BARS AND ANY WALL OR OTHER SURFACES ADJACENT TO GRAB BARS SHALL BE FREE OF SHARP OR ABRASIVE ELEMENTS AND SHALL HAVE ROUNDED EDGES.
609.6 FITTINGS. GRAB BARS SHALL NOT ROTATE WITHIN THEIR FITTINGS.
609.7 INSTALLATION. GRAB BARS SHALL BE INSTALLED IN ANY MANNER THAT PROVIDES A GRIPPING SURFACE AT THE SPECIFIED LOCATIONS AND THAT DOES NOT OBSTRUCT THE REQUIRED CLEAR FLOOR SPACE.
609.8 STRUCTURAL STRENGTH. ALLOWABLE STRESSES SHALL NOT BE EXCEEDED FOR MATERIALS USED WHEN A VERTICAL OR HORIZONTAL FORCE OF 250 POUNDS (1112 N) IS APPLIED AT ANY POINT ON THE GRAB BAR, FASTENER, MOUNTING DEVICE, OR SUPPORTING STRUCTURE.
610 SEATS
610.2 BATHTUB SEATS - REFER TO ACCESSIBILITY STANDARDS FOR DETAILED REQUIREMENTS
610.3 SHOWER COMPARTMENT SEATS. WHERE A SEAT IS PROVIDED IN A STANDARD ROLL-IN SHOWER COMPARTMENT, IT SHALL BE A FOLDING TYPE, SHALL BE INSTALLED ON THE SIDE WALL ADJACENT TO THE CONTROLS, AND SHALL EXTEND FROM THE BACK WALL TO A POINT WITHIN 3 INCHES (75 MM) OF THE COMPARTMENT ENTRY. WHERE A SEAT IS PROVIDED IN AN ALTERNATE ROLL-IN TYPE SHOWER COMPARTMENT, IT SHALL BE A FOLDING TYPE, SHALL BE INSTALLED ON THE FRONT WALL OPPOSITE THE BACK WALL, AND SHALL EXTEND FROM THE ADJACENT SIDE WALL TO A POINT WITHIN 3 INCHES (75 MM) OF THE COMPARTMENT ENTRY. IN TRANSFER-TYPE SHOWERS, THE SEAT SHALL EXTEND FROM THE BACK WALL TO A POINT WITHIN 3 INCHES (75 MM) OF THE COMPARTMENT ENTRY. THE TOP OF THE SEAT SHALL BE 17 INCHES (430 MM) MINIMUM AND 19 INCHES (485 MM) MAXIMUM ABOVE THE BATHROOM FINISH FLOOR. SEATS SHALL COMPLY WITH 610.3.1 OR 610.3.2.
610.3.1 RECTANGULAR SEATS. THE REAR EDGE OF A RECTANGULAR SEAT SHALL BE 2 1/2 INCHES (64 MM) MAXIMUM AND THE FRONT EDGE 15 INCHES (380 MM) MINIMUM AND 16 INCHES (405 MM) MAXIMUM FROM THE SEAT WALL. THE SIDE EDGE OF THE SEAT SHALL BE 1 1/2 INCHES (38 MM) MAXIMUM FROM THE ADJACENT WALL.
610.3.2 L-SHAPED SEATS. THE REAR EDGE OF AN L-SHAPED SEAT SHALL BE 2 1/2 INCHES (64 MM) MAXIMUM AND THE FRONT EDGE 15 INCHES (380 MM) MINIMUM AND 16 INCHES (405 MM) MAXIMUM FROM THE SEAT WALL. THE REAR EDGE OF THE "L" PORTION OF THE SEAT SHALL BE 1 1/2 INCHES (38 MM) MAXIMUM FROM THE WALL AND THE FRONT EDGE SHALL BE 14 INCHES (355 MM) MINIMUM AND 15 INCHES (380 MM) MAXIMUM FROM THE WALL. THE END OF THE "L" SHALL BE 22 INCHES (560 MM) MINIMUM AND 23 INCHES MAXIMUM (585 MM) FROM THE MAIN SEAT WALL.

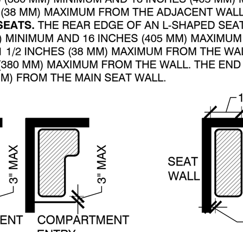


FIGURE 610.3 EXTENT OF SEAT

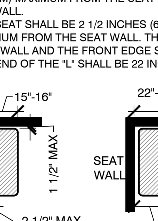


FIGURE 610.3.1 RECTANGULAR SHOWER SEAT

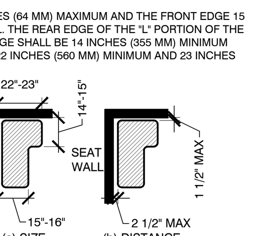


FIGURE 610.3.2 L-SHAPED SHOWER SEAT

610.4 STRUCTURAL STRENGTH. ALLOWABLE STRESSES SHALL NOT BE EXCEEDED FOR MATERIALS USED WHEN A VERTICAL OR HORIZONTAL FORCE OF 250 POUNDS (1112 N) IS APPLIED AT ANY POINT ON THE SEAT, FASTENER, MOUNTING DEVICE, OR SUPPORTING STRUCTURE.
611 WASHING MACHINES AND CLOTHES DRYERS - REFER TO ACCESSIBILITY STANDARDS FOR DETAILED REQUIREMENTS
612 SAUNAS AND STEAM ROOMS - REFER TO ACCESSIBILITY STANDARDS FOR DETAILED REQUIREMENTS

CHAPTER 7: COMMUNICATION ELEMENTS AND FEATURES

702 FIRE ALARM SYSTEMS
702.1 GENERAL. FIRE ALARM SYSTEMS SHALL HAVE PERMANENTLY INSTALLED AUDIBLE AND VISIBLE ALARMS COMPLYING WITH NFPA 72 (1999 OR 2002 EDITION) (INCORPORATED BY REFERENCE, SEE "REFERENCED STANDARDS" IN CHAPTER 1), EXCEPT THAT THE MAXIMUM ALLOWABLE SOUND LEVEL OF AUDIBLE NOTIFICATION APPLIANCES COMPLYING WITH SECTION 4-3.2.1 OF NFPA 72 (1999 EDITION) SHALL HAVE A SOUND LEVEL NO MORE THAN 110 DB AT THE MINIMUM HEARING DISTANCE FROM THE AUDIBLE APPLIANCE. IN ADDITION, ALARMS IN GUEST ROOMS REQUIRED TO PROVIDE COMMUNICATION FEATURES SHALL COMPLY WITH SECTIONS 4-3 AND 4-4 OF NFPA 72 (1999 EDITION) OR SECTIONS 7.4 AND 7.5 OF NFPA 72 (2002 EDITION).
EXCEPTION: FIRE ALARM SYSTEMS IN MEDICAL CARE FACILITIES SHALL BE PERMITTED TO BE PROVIDED IN ACCORDANCE WITH INDUSTRY PRACTICE.
703 SIGNS
703.1 GENERAL. SIGNS SHALL COMPLY WITH 703. WHERE BOTH VISUAL AND TACTILE CHARACTERS ARE REQUIRED, EITHER ONE SIGN WITH BOTH VISUAL AND TACTILE CHARACTERS, OR TWO SEPARATE SIGNS, ONE WITH VISUAL, AND ONE WITH TACTILE CHARACTERS, SHALL BE PROVIDED.
703.2 RAISED CHARACTERS. RAISED CHARACTERS SHALL COMPLY WITH 703.2 AND SHALL BE DUPLICATED IN BRAILLE COMPLYING WITH 703.3. RAISED CHARACTERS SHALL BE INSTALLED IN ACCORDANCE WITH 703.4.
ADVISORY 703.2 RAISED CHARACTERS. SIGNS THAT ARE DESIGNED TO BE READ BY TOUCH SHOULD NOT HAVE SHARP OR ABRASIVE EDGES.
703.2.1 DEPTH. RAISED CHARACTERS SHALL BE 1/32 INCH (0.8 MM) MINIMUM ABOVE THEIR BACKGROUND.
703.2.2 CASE. CHARACTERS SHALL BE UPPERCASE.
703.2.3 STYLE. CHARACTERS SHALL BE SANS SERIF. CHARACTERS SHALL NOT BE ITALIC, OBLIQUE, SCRIPT, HIGHLY DECORATIVE, OR OF OTHER UNUSUAL FORMS.
703.2.4 CHARACTER PROPORTIONS. CHARACTERS SHALL BE SELECTED FROM FONTS WHERE THE WIDTH OF THE UPPERCASE LETTER "O" IS 55 PERCENT MINIMUM AND 110 PERCENT MAXIMUM OF THE HEIGHT OF THE UPPERCASE LETTER "I".
703.2.5 CHARACTER HEIGHT. CHARACTER HEIGHT MEASURED VERTICALLY FROM THE BASELINE OF THE CHARACTER SHALL BE 5/8 INCH (16 MM) MINIMUM AND 2 INCHES (51 MM) MAXIMUM BASED ON THE HEIGHT OF THE UPPERCASE LETTER "I".
EXCEPTION: WHERE SEPARATE RAISED AND VISUAL CHARACTERS WITH THE SAME INFORMATION ARE PROVIDED, RAISED CHARACTER HEIGHT SHALL BE PERMITTED TO BE 1/2 INCH (13 MM) MINIMUM.

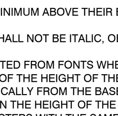


FIGURE 703.2.5 HEIGHT OF RAISED CHARACTERS

703.2.6 STROKE THICKNESS. STROKE THICKNESS OF THE UPPERCASE LETTER "I" SHALL BE 15 PERCENT MAXIMUM OF THE HEIGHT OF THE CHARACTER.
703.2.7 CHARACTER SPACING. CHARACTER SPACING SHALL BE MEASURED BETWEEN THE TWO CLOSEST POINTS OF ADJACENT RAISED CHARACTERS WITHIN A MESSAGE, EXCLUDING WORD SPACES. WHERE CHARACTERS HAVE RECTANGULAR CROSS SECTIONS, SPACING BETWEEN INDIVIDUAL RAISED CHARACTERS SHALL BE 1/8 INCH (3.2 MM) MINIMUM AND 4 TIMES THE RAISED CHARACTER STROKE WIDTH MAXIMUM. WHERE CHARACTERS HAVE OTHER CROSS SECTIONS, SPACING BETWEEN INDIVIDUAL RAISED CHARACTERS SHALL BE 1/16 INCH (1.6 MM) MINIMUM AND 4 TIMES THE RAISED CHARACTER STROKE WIDTH MAXIMUM AT THE BASE OF THE CROSS SECTIONS, AND 1/8 INCH (3.2 MM) MINIMUM AND 4 TIMES THE RAISED CHARACTER STROKE WIDTH MAXIMUM AT THE TOP OF THE CROSS SECTIONS. CHARACTERS SHALL BE SEPARATED FROM RAISED BORDERS AND DECORATIVE ELEMENTS 3/8 INCH (9.5 MM) MINIMUM.
703.2.8 LINE SPACING. SPACING BETWEEN THE BASELINES OF SEPARATE LINES OF RAISED CHARACTERS WITHIN A MESSAGE SHALL BE 135 PERCENT MINIMUM AND 170 PERCENT MAXIMUM OF THE RAISED CHARACTER HEIGHT.
703.3 BRAILLE - REFER TO ACCESSIBILITY STANDARDS FOR DETAILED REQUIREMENTS
703.4 INSTALLATION HEIGHT AND LOCATION. SIGNS WITH TACTILE CHARACTERS SHALL COMPLY WITH 703.4.
703.4.1 HEIGHT ABOVE FINISH FLOOR OR GROUND. TACTILE CHARACTERS ON SIGNS SHALL BE LOCATED 48 INCHES (1220 MM) MINIMUM ABOVE THE FINISH FLOOR OR GROUND SURFACE, MEASURED FROM THE BASELINE OF THE LOWEST TACTILE CHARACTER AND 60 INCHES (1525 MM) MAXIMUM ABOVE THE FINISH FLOOR OR GROUND SURFACE, MEASURED FROM THE BASELINE OF THE HIGHEST TACTILE CHARACTER.
EXCEPTION: TACTILE CHARACTERS FOR ELEVATOR CAR CONTROLS SHALL NOT BE REQUIRED TO COMPLY WITH 703.4.1.

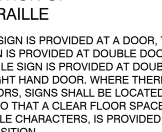


FIGURE 703.3.2 POSITION OF BRAILLE

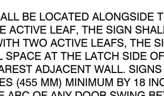


FIGURE 703.4.1 HEIGHT OF TACTILE CHARACTERS ABOVE FINISH FLOOR OR GROUND

703.4.2 LOCATION. WHERE A TACTILE SIGN IS PROVIDED AT A DOOR, THE SIGN SHALL BE LOCATED ALONGSIDE THE DOOR AT THE LATCH SIDE. WHERE A TACTILE SIGN IS PROVIDED AT DOUBLE DOORS WITH ONE ACTIVE LEAF, THE SIGN SHALL BE LOCATED ON THE INACTIVE LEAF. WHERE A TACTILE SIGN IS PROVIDED AT DOUBLE DOORS WITH TWO ACTIVE LEAFS, THE SIGN SHALL BE LOCATED TO THE RIGHT OF THE RIGHT HAND DOOR. WHERE THERE IS NO WALL SPACE AT THE LATCH SIDE OF A SINGLE DOOR OR AT THE RIGHT SIDE OF DOUBLE DOORS, SIGNS SHALL BE LOCATED ON THE NEAREST ADJACENT WALL. SIGNS CONTAINING TACTILE CHARACTERS SHALL BE LOCATED SO THAT A CLEAR FLOOR SPACE OF 18 INCHES (455 MM) MINIMUM BY 18 INCHES (455 MM) MINIMUM, CENTERED ON THE TACTILE CHARACTERS, IS PROVIDED BEYOND THE ARC OF ANY DOOR SWING BETWEEN THE CLOSED POSITION AND 45 DEGREE OPEN POSITION.
EXCEPTION: SIGNS WITH TACTILE CHARACTERS SHALL BE PERMITTED ON THE PUSH SIDE OF DOORS WITH CLOSERS AND WITHOUT HOLD-OPEN DEVICES.
703.5 VISUAL CHARACTERS - REFER TO ACCESSIBILITY STANDARDS FOR DETAILED REQUIREMENTS
703.5.6 HEIGHT FROM FINISH FLOOR OR GROUND. VISUAL CHARACTERS SHALL BE 40 INCHES (1015 MM) MINIMUM ABOVE THE FINISH FLOOR OR GROUND.
EXCEPTION: VISUAL CHARACTERS INDICATING ELEVATOR CAR CONTROLS SHALL NOT BE REQUIRED TO COMPLY WITH 703.5.6.
703.5.7 STROKE THICKNESS - REFER TO ACCESSIBILITY STANDARDS FOR DETAILED REQUIREMENTS
703.6 PICTOGRAMS. PICTOGRAMS SHALL COMPLY WITH 703.6.
703.6.1 PICTOGRAM FIELD. PICTOGRAMS SHALL HAVE A FIELD HEIGHT OF 6 INCHES (150 MM) MINIMUM. CHARACTERS AND BRAILLE SHALL NOT BE LOCATED IN THE PICTOGRAM FIELD.

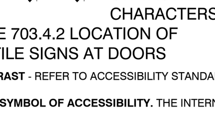


FIGURE 703.4.2 LOCATION OF TACTILE SIGNS AT DOORS

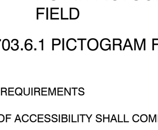


FIGURE 703.6.1 PICTOGRAM FIELD

703.6.2 FINISH AND CONTRAST - REFER TO ACCESSIBILITY STANDARDS FOR DETAILED REQUIREMENTS
703.7.2 SYMBOLS.
703.7.2.1 INTERNATIONAL SYMBOL OF ACCESSIBILITY. THE INTERNATIONAL SYMBOL OF ACCESSIBILITY SHALL COMPLY WITH FIGURE 703.7.2.1.
703.7.2.2 INTERNATIONAL SYMBOL OF TTY. THE INTERNATIONAL SYMBOL OF TTY SHALL COMPLY WITH FIGURE 703.7.2.2.
703.7.2.3 VOLUME CONTROL TELEPHONES. TELEPHONES WITH A VOLUME CONTROL SHALL BE IDENTIFIED BY A PICTOGRAM OF A TELEPHONE HANDSET WITH RADIATING SOUND WAVES ON A SQUARE FIELD SUCH AS SHOWN IN FIGURE 703.7.2.3.
703.7.2.4 ASSISTIVE LISTENING SYSTEMS. ASSISTIVE LISTENING SYSTEMS SHALL BE IDENTIFIED BY THE INTERNATIONAL SYMBOL OF ACCESS FOR HEARING LOSS COMPLYING WITH FIGURE 703.7.2.4.

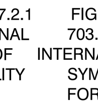


FIGURE 703.7.2.1 INTERNATIONAL SYMBOL OF ACCESSIBILITY

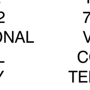


FIGURE 703.7.2.2 INTERNATIONAL SYMBOL FOR TTY

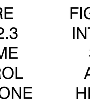


FIGURE 703.7.2.3 VOLUME CONTROL TELEPHONE

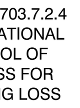


FIGURE 703.7.2.4 INTERNATIONAL SYMBOL OF ACCESS FOR HEARING LOSS

704 TELEPHONES - REFER TO ACCESSIBILITY STANDARDS FOR DETAILED REQUIREMENTS
705 DETECTABLE WARNINGS
705.1.1 DOME SIZE. TRUNCATED DOMES IN A DETECTABLE WARNING SURFACE SHALL HAVE A BASE DIAMETER OF 0.9 INCH (23 MM) MINIMUM AND 1.4 INCHES (36 MM) MAXIMUM, A TOP DIAMETER OF 50 PERCENT OF THE BASE DIAMETER MINIMUM TO 65 PERCENT OF THE BASE DIAMETER MAXIMUM, AND A HEIGHT OF 0.2 INCH (5.1 MM).
705.1.2 DOME SPACING. TRUNCATED DOMES IN A DETECTABLE WARNING SURFACE SHALL HAVE A CENTER-TO-CENTER SPACING OF 1.6 INCHES (41 MM) MINIMUM AND 2.4 INCHES (61 MM) MAXIMUM, AND A BASE-TO-BASE SPACING OF 0.65 INCH (17 MM) MINIMUM, MEASURED BETWEEN THE MOST ADJACENT DOMES ON A SQUARE GRID.

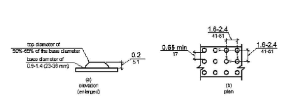


FIGURE 705.1 SIZE AND SPACING OF TRUNCATED DOMES

705.1.3 CONTRAST. DETECTABLE WARNING SURFACES SHALL CONTRAST VISUALLY WITH ADJACENT WALKING SURFACES EITHER LIGHT-ON-DARK, OR DARK-ON-LIGHT.
705.2 PLATFORM EDGES. DETECTABLE WARNING SURFACES AT PLATFORM BOARDING EDGES SHALL BE 24 INCHES (610 MM) WIDE AND SHALL EXTEND THE FULL LENGTH OF THE PUBLIC USE AREAS OF THE PLATFORM.
706 ASSISTIVE LISTENING SYSTEMS - REFER TO ACCESSIBILITY STANDARDS FOR DETAILED REQUIREMENTS
707 AUTOMATIC TELLER MACHINES AND FARE MACHINES - REFER TO ACCESSIBILITY STANDARDS FOR DETAILED REQUIREMENTS
708 TWO-WAY COMMUNICATION SYSTEMS - REFER TO ACCESSIBILITY STANDARDS FOR DETAILED REQUIREMENTS

CHAPTER 8: SPECIAL ROOMS, SPACES AND ELEMENTS

801 GENERAL
801.1 SCOPE. THE PROVISIONS OF CHAPTER 8 SHALL APPLY WHERE REQUIRED BY CHAPTER 2 OR WHERE REFERENCED BY A REQUIREMENT IN THIS DOCUMENT.
ADVISORY 801.1 SCOPE. FACILITIES COVERED BY THESE REQUIREMENTS ARE ALSO SUBJECT TO THE REQUIREMENTS OF THE OTHER CHAPTERS. FOR EXAMPLE, 806 ADDRESSES GUEST ROOMS IN TRANSIENT LODGING FACILITIES WHILE 902 CONTAINS THE TECHNICAL SPECIFICATIONS FOR DINING SURFACES. IF A TRANSIENT LODGING FACILITY CONTAINS A RESTAURANT, THE RESTAURANT MUST COMPLY WITH REQUIREMENTS IN OTHER CHAPTERS SUCH AS THOSE APPLICABLE TO CERTAIN DINING SURFACES.
802 WHEELCHAIR SPACES, COMPANION SEATS, AND DESIGNATED AISLE SEATS
802.1 WHEELCHAIR SPACES. WHEELCHAIR SPACES SHALL COMPLY WITH 802.1.
802.1.1 FLOOR OR GROUND SURFACE. THE FLOOR OR GROUND SURFACE OF WHEELCHAIR SPACES SHALL COMPLY WITH 302. CHANGES IN LEVEL ARE NOT PERMITTED.
EXCEPTION: SLOPES NOT STEEPER THAN 1:48 SHALL BE PERMITTED.
802.1.2 WIDTH. A SINGLE WHEELCHAIR SPACE SHALL BE 36 INCHES (915 MM) WIDE MINIMUM WHERE TWO ADJACENT WHEELCHAIR SPACES ARE PROVIDED, EACH WHEELCHAIR SPACE SHALL BE 33 INCHES (840 MM) WIDE MINIMUM.
802.1.3 DEPTH. WHERE A WHEELCHAIR SPACE CAN BE ENTERED FROM THE FRONT OR REAR, THE WHEELCHAIR SPACE SHALL BE 48 INCHES (1220 MM) DEEP MINIMUM. WHERE A WHEELCHAIR SPACE CAN BE ENTERED ONLY FROM THE SIDE, THE WHEELCHAIR SPACE SHALL BE 60 INCHES (1525 MM) DEEP MINIMUM.
802.1.4 APPROACH. WHEELCHAIR SPACES SHALL ADJOIN ACCESSIBLE ROUTES. ACCESSIBLE ROUTES SHALL NOT OVERLAP WHEELCHAIR SPACES.
ADVISORY 802.1.4 APPROACH. BECAUSE ACCESSIBLE ROUTES SERVING WHEELCHAIR SPACES ARE NOT PERMITTED TO OVERLAP THE CLEAR FLOOR SPACE AT WHEELCHAIR SPACES, ACCESS TO ANY WHEELCHAIR SPACE CANNOT BE THROUGH ANOTHER WHEELCHAIR SPACE.
802.1.5 OVERLAP. WHEELCHAIR SPACES SHALL NOT OVERLAP CIRCULATION PATHS.
ADVISORY 802.1.5 OVERLAP. THE TERM "CIRCULATION PATHS" USED IN SECTION 802.1.5 MEANS AISLE WIDTH REQUIRED BY APPLICABLE BUILDING OR LIFE SAFETY CODES FOR THE SPECIFIC ASSEMBLY OCCUPANCY. WHERE THE CIRCULATION PATH PROVIDED IS WIDER THAN THE REQUIRED AISLE WIDTH, THE WHEELCHAIR SPACE MAY INTRUDE INTO THAT PORTION OF THE CIRCULATION PATH THAT IS PROVIDED IN EXCESS OF THE REQUIRED AISLE WIDTH.
802.2 LINES OF SIGHT. LINES OF SIGHT TO THE SCREEN, PERFORMANCE AREA, OR PLAYING FIELD FOR SPECTATORS IN WHEELCHAIR SPACES SHALL COMPLY WITH 802.2.
802.2.1 LINES OF SIGHT OVER SEATED SPECTATORS. WHERE SPECTATORS ARE EXPECTED TO REMAIN SEATED DURING EVENTS, SPECTATORS IN WHEELCHAIR SPACES SHALL BE AFFORDED LINES OF SIGHT COMPLYING WITH 802.2.1.
802.2.1.1 LINES OF SIGHT OVER HEADS. WHERE SPECTATORS ARE PROVIDED LINES OF SIGHT OVER THE HEADS OF SPECTATORS SEATED IN THE FIRST ROW IN FRONT OF THEIR SEATS, SPECTATORS SEATED IN WHEELCHAIR SPACES SHALL BE AFFORDED LINES OF SIGHT OVER THE HEADS OF SEATED SPECTATORS IN THE FIRST ROW IN FRONT OF WHEELCHAIR SPACES.
803 DRESSING, FITTING, AND LOCKER ROOMS
ADVISORY 803.1 GENERAL. PARTITIONS AND DOORS SHOULD BE DESIGNED TO ENSURE PEOPLE USING ACCESSIBLE DRESSING AND FITTING ROOMS PRIVACY EQUIVALENT TO THAT AFFORDED OTHER USERS OF THE FACILITY. SECTION 903.5 REQUIRES DRESSING ROOM BENCH SEATS TO BE INSTALLED SO THAT THEY ARE AT THE SAME HEIGHT AS A TYPICAL WHEELCHAIR SEAT, 17 INCHES (430 MM) TO 19 INCHES (485 MM). HOWEVER, WHEELCHAIR SEATS CAN BE LOWER THAN DRESSING ROOM BENCHES FOR PEOPLE OF SHORT STATURE OR CHILDREN USING WHEELCHAIRS.
803.2 TURNING SPACE. TURNING SPACE COMPLYING WITH 304 SHALL BE PROVIDED WITHIN THE ROOM.
803.3 DOOR SWING. DOORS SHALL NOT SWING INTO THE ROOM UNLESS A CLEAR FLOOR OR GROUND SPACE COMPLYING WITH 305.3 IS PROVIDED BEYOND THE ARC OF THE DOOR SWING.
803.4 BENCHES. A BENCH COMPLYING WITH 903 SHALL BE PROVIDED WITHIN THE ROOM.
803.5 COAT HOOKS AND SHELVES. COAT HOOKS PROVIDED WITHIN THE ROOM SHALL BE LOCATED WITHIN ONE OF THE REACH RANGES SPECIFIED IN 308. SHELVES SHALL BE 40 INCHES (1015 MM) MINIMUM AND 48 INCHES (1220 MM) MAXIMUM ABOVE THE FINISH FLOOR OR GROUND.
804 KITCHENS AND KITCHENETTES
804.2 CLEARANCE. WHERE A PASS THROUGH KITCHEN IS PROVIDED, CLEARANCES SHALL COMPLY WITH 804.2.1. WHERE A U-SHAPED KITCHEN IS PROVIDED, CLEARANCES SHALL COMPLY WITH 804.2.2.
EXCEPTION: SPACES THAT DO NOT PROVIDE A COOKTOP OR CONVENTIONAL RANGE SHALL NOT BE REQUIRED TO COMPLY WITH 804.2.
ADVISORY 804.2 CLEARANCE. CLEARANCES ARE MEASURED FROM THE FURTHEST PROJECTING FACE OF ALL OPPOSING BASE CABINETS, COUNTER TOPS, APPLIANCES, OR WALLS, EXCLUDING HARDWARE.
804.2.1 PASS THROUGH KITCHEN. IN PASS THROUGH KITCHENS WHERE COUNTERS, APPLIANCES OR CABINETS ARE ON TWO OPPOSING SIDES, OR WHERE COUNTERS, APPLIANCES OR CABINETS ARE OPPOSITE A PARALLEL WALL, CLEARANCE BETWEEN ALL OPPOSING BASE CABINETS, COUNTER TOPS, APPLIANCES, OR WALLS WITHIN KITCHEN WORK AREAS SHALL BE 40 INCHES (1015 MM) MINIMUM. PASS THROUGH KITCHENS SHALL HAVE TWO ENTRIES.

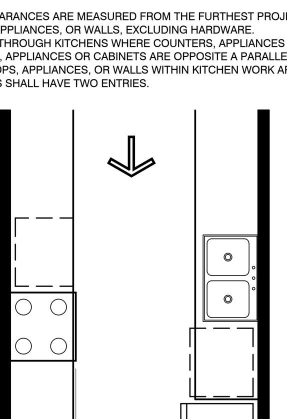


FIGURE 804.2.1 PASS THROUGH KITCHENS

804.2.2 U-SHAPED. IN U-SHAPED KITCHENS ENCLOSED ON THREE CONTIGUOUS SIDES, CLEARANCE BETWEEN ALL OPPOSING BASE CABINETS, COUNTER TOPS, APPLIANCES, OR WALLS WITHIN KITCHEN WORK AREAS SHALL BE 60 INCHES (1525 MM) MINIMUM.

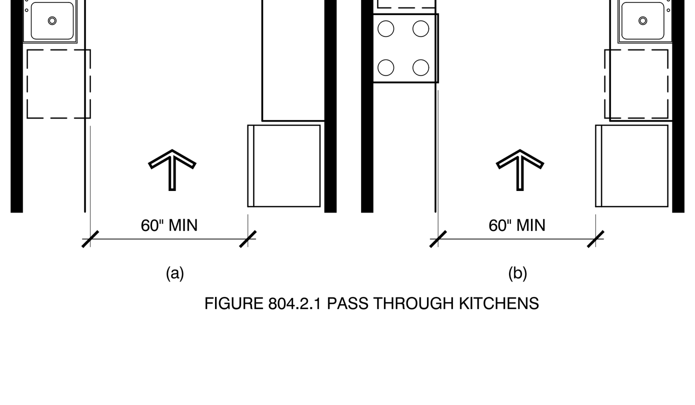


FIGURE 804.2.1 PASS THROUGH KITCHENS

804.3 KITCHEN WORK SURFACE. IN RESIDENTIAL DWELLING UNITS REQUIRED TO COMPLY WITH 809, AT LEAST ONE 30 INCHES (760 MM) WIDE MINIMUM SECTION OF COUNTER SHALL PROVIDE A KITCHEN WORK SURFACE THAT COMPLIES WITH 804.3.
804.3.1 CLEAR FLOOR OR GROUND SPACE. A CLEAR FLOOR SPACE COMPLYING WITH 305 POSITIONED FOR A FORWARD APPROACH SHALL BE PROVIDED. THE CLEAR FLOOR OR GROUND SPACE SHALL BE CENTERED ON THE KITCHEN WORK SURFACE AND SHALL PROVIDE KNEE AND TOE CLEARANCE COMPLYING WITH 306.
EXCEPTION: CABINETRY SHALL BE PERMITTED UNDER THE KITCHEN WORK SURFACE PROVIDED THAT ALL OF THE FOLLOWING CONDITIONS ARE MET:
(A) THE CABINETRY CAN BE REMOVED WITHOUT REMOVAL OR REPLACEMENT OF THE KITCHEN WORK SURFACE;
(B) THE FINISH FLOOR EXTENDS UNDER THE CABINETRY; AND
(C) THE WALLS BEHIND AND SURROUNDING THE CABINETRY ARE FINISHED.
804.3.2 HEIGHT. THE KITCHEN WORK SURFACE SHALL BE 34 INCHES (865 MM) MAXIMUM ABOVE THE FINISH FLOOR OR GROUND.
EXCEPTION: A COUNTER THAT IS ADJUSTABLE TO PROVIDE A KITCHEN WORK SURFACE AT VARIABLE HEIGHTS, 29 INCHES (735 MM) MINIMUM AND 36 INCHES (915 MM) MAXIMUM SHALL BE PERMITTED.
804.3.3 EXPOSED SURFACES. THERE SHALL BE NO SHARP OR ABRASIVE SURFACES UNDER THE WORK SURFACE COUNTERS.
804.4 SINKS. SINKS SHALL COMPLY WITH 606.
804.5 STORAGE. AT LEAST 50 PERCENT OF SHELF SPACE IN STORAGE FACILITIES SHALL COMPLY WITH 811.
804.6 APPLIANCES. WHERE PROVIDED, KITCHEN APPLIANCES SHALL COMPLY WITH 804.6.
804.6.1 CLEAR FLOOR OR GROUND SPACE. A CLEAR FLOOR OR GROUND SPACE COMPLYING WITH 305 SHALL BE PROVIDED AT EACH KITCHEN APPLIANCE. CLEAR FLOOR OR GROUND SPACES SHALL BE PERMITTED TO OVERLAP.
804.6.2 OPERABLE PARTS. ALL APPLIANCE CONTROLS SHALL COMPLY WITH 309.
EXCEPTIONS:
1. APPLIANCE DOORS AND DOOR LATCHING DEVICES SHALL NOT BE REQUIRED TO COMPLY WITH 309.4.
2. BOTTOM-HINGED APPLIANCE DOORS, WHEN IN THE OPEN POSITION, SHALL NOT BE REQUIRED TO COMPLY WITH 309.3.

804.6.3 DISHWASHER. CLEAR FLOOR OR GROUND SPACE SHALL BE POSITIONED ADJACENT TO THE DISHWASHER DOOR. THE DISHWASHER DOOR, IN THE OPEN POSITION, SHALL NOT OBSTRUCT THE CLEAR FLOOR OR GROUND SPACE FOR THE DISHWASHER OR THE SINK.
804.6.4 RANGE OR COOKTOP. WHERE A FORWARD APPROACH IS PROVIDED, THE CLEAR FLOOR OR GROUND SPACE SHALL PROVIDE KNEE AND TOE CLEARANCE COMPLYING WITH 306. WHERE KNEE AND TOE SPACE IS PROVIDED, THE UNDERSIDE OF THE RANGE OR COOKTOP SHALL BE INSULATED OR OTHERWISE CONFIGURED TO PREVENT BURNS, ABRASIONS, OR ELECTRICAL SHOCK. THE LOCATION OF CONTROLS SHALL NOT REQUIRE REACHING ACROSS BURNERS.
804.6.5 OVEN. OVENS SHALL COMPLY WITH 804.6.5.
804.6.5.1 SIDE-HINGED DOOR OVENS. SIDE-HINGED DOOR OVENS SHALL HAVE THE WORK SURFACE REQUIRED BY 804.3 POSITIONED ADJACENT TO THE LATCH SIDE OF THE OVEN DOOR.
804.6.5.2 BOTTOM-HINGED DOOR OVENS. BOTTOM-HINGED DOOR OVENS SHALL HAVE THE WORK SURFACE REQUIRED BY 804.3 POSITIONED ADJACENT TO ONE SIDE OF THE DOOR.
804.6.5.3 CONTROLS. OVENS SHALL HAVE CONTROLS ON FRONT PANELS.
804.6.6 REFRIGERATOR/FREEZER. COMBINATION REFRIGERATORS AND FREEZERS SHALL HAVE AT LEAST 50 PERCENT OF THE FREEZER SPACE 54 INCHES (1370 MM) MAXIMUM ABOVE THE FINISH FLOOR OR GROUND. THE CLEAR FLOOR OR GROUND SPACE SHALL BE POSITIONED FOR A PARALLEL APPROACH TO THE SPACE DEDICATED TO A REFRIGERATOR/FREEZER WITH THE CENTERLINE OF THE CLEAR FLOOR OR GROUND SPACE OFFSET 24 INCHES (610 MM) MAXIMUM FROM THE CENTERLINE OF THE DEDICATED SPACE.
805 MEDICAL CARE AND LONG-TERM CARE FACILITIES - REFER TO ACCESSIBILITY STANDARDS FOR DETAILED REQUIREMENTS
806 TRANSIENT LODGING GUEST ROOMS - REFER TO ACCESSIBILITY STANDARDS FOR DETAILED REQUIREMENTS
807 HOLDING CELLS AND HOUSING CELLS - REFER TO ACCESSIBILITY STANDARDS FOR DETAILED REQUIREMENTS
808 COURTROOMS - REFER TO ACCESSIBILITY STANDARDS FOR DETAILED REQUIREMENTS
809 RESIDENTIAL DWELLING UNITS - REFER TO ACCESSIBILITY STANDARDS FOR DETAILED REQUIREMENTS
810 TRANSPORTATION FACILITIES - REFER TO ACCESSIBILITY STANDARDS FOR DETAILED REQUIREMENTS
811 STORAGE
811.2 CLEAR FLOOR OR GROUND SPACE. A CLEAR FLOOR OR GROUND SPACE COMPLYING WITH 305 SHALL BE PROVIDED.
811.3 HEIGHT. STORAGE ELEMENTS SHALL COMPLY WITH AT LEAST ONE OF THE REACH RANGES SPECIFIED IN 308.
811.4 OPERABLE PARTS. OPERABLE PARTS SHALL COMPLY WITH 309.

CHAPTER 9: BUILT-IN ELEMENTS

901 GENERAL
901.1 SCOPE. THE PROVISIONS OF CHAPTER 9 SHALL APPLY WHERE REQUIRED BY CHAPTER 2 OR WHERE REFERENCED BY A REQUIREMENT IN THIS DOCUMENT.
902 DINING SURFACES AND WORK SURFACES
EXCEPTION: DINING SURFACES AND WORK SURFACES FOR CHILDREN'S USE SHALL BE PERMITTED TO COMPLY WITH 902.4.
ADVISORY 902.1 GENERAL. DINING SURFACES INCLUDE, BUT ARE NOT LIMITED TO, BARS, TABLES, LUNCH COUNTERS, AND BOOTHS. EXAMPLES OF WORK SURFACES INCLUDE WRITING SURFACES, STUDY CARRELS, STUDENT LABORATORY STATIONS, BABY CHANGING AND OTHER TABLES OR FIXTURES FOR PERSONAL GROOMING, COUPON COUNTERS, AND WHERE COVERED BY THE ABA SCOPING PROVISIONS, EMPLOYEE WORK STATIONS.
902.2 CLEAR FLOOR OR GROUND SPACE. A CLEAR FLOOR SPACE COMPLYING WITH 305 POSITIONED FOR A FORWARD APPROACH SHALL BE PROVIDED. KNEE AND TOE CLEARANCE COMPLYING WITH 306 SHALL BE PROVIDED.
902.3 HEIGHT. THE TOPS OF DINING SURFACES AND WORK SURFACES SHALL BE 28 INCHES (710 MM) MINIMUM AND 34 INCHES (865 MM) MAXIMUM ABOVE THE FINISH FLOOR OR GROUND.
902.4 DINING SURFACES AND WORK SURFACES FOR CHILDREN'S USE. ACCESSIBLE DINING SURFACES AND WORK SURFACES FOR CHILDREN'S USE SHALL COMPLY WITH 902.4.
EXCEPTION: DINING SURFACES AND WORK SURFACES THAT ARE USED PRIMARILY BY CHILDREN 5 YEARS AND YOUNGER SHALL NOT BE REQUIRED TO COMPLY WITH 902.4 WHERE A CLEAR FLOOR OR GROUND SPACE COMPLYING WITH 305 POSITIONED FOR A PARALLEL APPROACH IS PROVIDED.
902.4.1 CLEAR FLOOR OR GROUND SPACE. A CLEAR FLOOR SPACE COMPLYING WITH 305 POSITIONED FOR FORWARD APPROACH SHALL BE PROVIDED. KNEE AND TOE CLEARANCE COMPLYING WITH 306 SHALL BE PROVIDED, EXCEPT THAT KNEE CLEARANCE 24 INCHES (610 MM) MINIMUM ABOVE THE FINISH FLOOR OR GROUND SHALL BE PERMITTED.
902.4.2 HEIGHT. THE TOPS OF TABLES AND COUNTERS SHALL BE 26 INCHES (660 MM) MINIMUM AND 30 INCHES (760 MM) MAXIMUM ABOVE THE FINISH FLOOR OR GROUND.
903 BENCHES
903.2 CLEAR FLOOR OR GROUND SPACE. CLEAR FLOOR OR GROUND SPACE COMPLYING WITH 305 SHALL BE PROVIDED AND SHALL BE POSITIONED AT THE END OF THE BENCH SEAT AND PARALLEL TO THE SHORT AXIS OF THE BENCH.
903.3 SIZE. BENCHES SHALL HAVE SEATS THAT ARE 42 INCHES (1065 MM) LONG MINIMUM AND 20 INCHES (510 MM) DEEP MINIMUM AND 24 INCHES (610 MM) DEEP MAXIMUM.
903.4 BACK SUPPORT. THE BENCH SHALL PROVIDE FOR BACK SUPPORT OR SHALL BE AFFIXED TO A WALL. BACK SUPPORT SHALL BE 42 INCHES (1065 MM) LONG MINIMUM AND SHALL EXTEND FROM A POINT 2 INCHES (51 MM) MAXIMUM ABOVE THE SEAT SURFACE TO A POINT 18 INCHES (455 MM) MINIMUM ABOVE THE SEAT SURFACE. BACK SUPPORT SHALL BE 2 1/2 INCHES (64 MM) MAXIMUM FROM THE REAR EDGE OF THE SEAT MEASURED HORIZONTALLY.
ADVISORY 903.4 BACK SUPPORT. TO ASSIST IN TRANSFERRING TO THE BENCH, CONSIDER PROVIDING GRAB BARS ON A WALL ADJACENT TO THE BENCH, BUT NOT ON THE SEAT BACK. IF PROVIDED, GRAB BARS CANNOT OBSTRUCT TRANSFER TO THE BENCH.

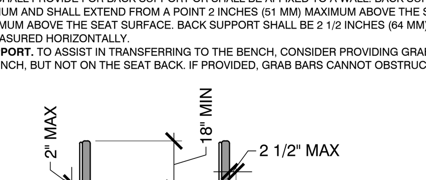


FIGURE 903.4 BENCH BACK SUPPORT

903.5 HEIGHT. THE TOP OF THE BENCH SEAT SURFACE SHALL BE 17 INCHES (430 MM) MINIMUM AND 19 INCHES (485 MM) MAXIMUM ABOVE THE FINISH FLOOR OR GROUND.
903.6 STRUCTURAL STRENGTH. ALLOWABLE STRESSES SHALL NOT BE EXCEEDED FOR MATERIALS USED WHEN A VERTICAL OR HORIZONTAL FORCE OF 250 POUNDS (1112 N) IS APPLIED AT ANY POINT ON THE SEAT, FASTENER, MOUNTING DEVICE, OR SUPPORTING STRUCTURE.
903.7 WET LOCATIONS. WHERE INSTALLED IN WET LOCATIONS, THE SURFACE OF THE SEAT SHALL BE SLIP RESISTANT AND SHALL NOT ACCUMULATE WATER.
904 CHECK-OUT AISLES AND SALES AND SERVICE COUNTERS
904.1 GENERAL. CHECK-OUT AISLES AND SALES AND SERVICE COUNTERS SHALL COMPLY WITH THE APPLICABLE REQUIREMENTS OF 904.
904.2 APPROACH. ALL PORTIONS OF COUNTERS REQUIRED TO COMPLY WITH 904 SHALL BE LOCATED ADJACENT TO A WALKING SURFACE COMPLYING WITH 403.
ADVISORY 904.2 APPROACH. IF A CASH REGISTER IS PROVIDED AT THE SALES OR SERVICE COUNTER, LOCATE THE ACCESSIBLE COUNTER CLOSE TO THE CASH REGISTER SO THAT A PERSON USING A WHEELCHAIR IS VISIBLE TO SALES OR SERVICE PERSONNEL AND TO MINIMIZE THE REACH FOR A PERSON WITH A DISABILITY.
904.3 CHECK-OUT AISLES. CHECK-OUT AISLES SHALL COMPLY WITH 904.3.
904.3.1 AISLE. AISLES SHALL COMPLY WITH 403.
904.3.2 COUNTER. THE COUNTER SURFACE HEIGHT SHALL BE 38 INCHES (965 MM) MAXIMUM ABOVE THE FINISH FLOOR OR GROUND. THE TOP OF THE COUNTER EDGE PROTECTION SHALL BE 2 INCHES (51 MM) MAXIMUM ABOVE THE TOP OF THE COUNTER SURFACE ON THE AISLE SIDE OF THE CHECK-OUT COUNTER.
904.3.3 CHECK WRITING SURFACES. WHERE PROVIDED, CHECK WRITING SURFACES SHALL COMPLY WITH 902.3.
904.4 SALES AND SERVICE COUNTERS. SALES COUNTERS AND SERVICE COUNTERS SHALL COMPLY WITH 904.4.1 OR 904.4.2. THE ACCESSIBLE PORTION OF THE COUNTER TOP SHALL EXTEND THE SAME DEPTH AS THE SALES OR SERVICE COUNTER TOP.
EXCEPTION: IN ALTERATIONS, WHEN THE PROVISION OF A COUNTER COMPLYING WITH 904.4 WOULD RESULT IN A REDUCTION OF THE NUMBER OF EXISTING COUNTERS AT WORK STATIONS OR A REDUCTION OF THE NUMBER OF EXISTING MAIL BOXES, THE COUNTER SHALL BE PERMITTED TO HAVE A PORTION WHICH IS 24 INCHES (610 MM) LONG MINIMUM COMPLYING WITH 904.4.1 PROVIDED THAT THE REQUIRED CLEAR FLOOR OR GROUND SPACE IS CENTERED ON THE ACCESSIBLE LENGTH OF THE COUNTER.

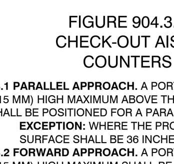


FIGURE 904.3.2 CHECK-OUT AISLE COUNTERS

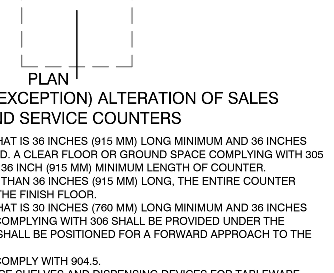


FIGURE 904.4 (EXCEPTION) ALTERATION OF SALES AND SERVICE COUNTERS

904.4.1 PARALLEL APPROACH. A PORTION OF THE COUNTER SURFACE THAT IS 36 INCHES (915 MM) LONG MINIMUM AND 36 INCHES (915 MM) HIGH MAXIMUM ABOVE THE FINISH FLOOR SHALL BE PROVIDED. A CLEAR FLOOR OR GROUND SPACE COMPLYING WITH 305 SHALL BE POSITIONED FOR A PARALLEL APPROACH ADJACENT TO THE 36 INCH (915 MM) MINIMUM LENGTH OF COUNTER.
EXCEPTION: WHERE THE PROVIDED COUNTER SURFACE IS LESS THAN 36 INCHES (915 MM) LONG, THE ENTIRE COUNTER SURFACE SHALL BE 36 INCHES (915 MM) HIGH MAXIMUM ABOVE THE FINISH FLOOR.
904.4.2 FORWARD APPROACH. A PORTION OF THE COUNTER SURFACE THAT IS 30 INCHES (760 MM) LONG MINIMUM AND 36 INCHES (915 MM) HIGH MAXIMUM SHALL BE PROVIDED. KNEE AND TOE SPACE COMPLYING WITH 306 SHALL BE PROVIDED UNDER THE COUNTER. A CLEAR FLOOR OR GROUND SPACE COMPLYING WITH 305 SHALL BE POSITIONED FOR A FORWARD APPROACH TO THE COUNTER.
904.5 FOOD SERVICE LINES. COUNTERS IN FOOD SERVICE LINES SHALL COMPLY WITH 904.5.
904.5.1 SELF-SERVICE SHELVES AND DISPENSING DEVICES. SELF-SERVICE SHELVES AND DISPENSING DEVICES FOR TABLEWARE, DISHWARE, CONDIMENTS, FOOD AND BEVERAGES SHALL COMPLY WITH 308.
904.5.2 TRAY SLIDES. THE TOPS OF TRAY SLIDES SHALL BE 28 INCHES (710 MM) MINIMUM AND 34 INCHES (865 MM) MAXIMUM ABOVE THE FINISH FLOOR OR GROUND.
904.6 SECURITY GLAZING. WHERE COUNTERS OR TELLER WINDOWS HAVE SECURITY GLAZING TO SEPARATE PERSONNEL FROM THE PUBLIC, A METHOD TO FACILITATE VOICE COMMUNICATION SHALL BE PROVIDED. TELEPHONE HANDSET DEVICES, IF PROVIDED, SHALL COMPLY WITH 704.3.
ADVISORY 904.6 SECURITY GLAZING. ASSISTIVE LISTENING DEVICES COMPLYING WITH 706 CAN FACILITATE VOICE COMMUNICATION AT COUNTERS OR TELLER WINDOWS WHERE THERE IS SECURITY GLAZING WHICH PROMOTES DISTORTION IN AUDIBLE INFORMATION. WHERE ASSISTIVE LISTENING DEVICES ARE INSTALLED, PLACE SIGNS COMPLYING WITH 703.7.2.4 TO IDENTIFY THOSE FACILITIES WHICH ARE SO EQUIPPED. OTHER VOICE COMMUNICATION METHODS INCLUDE, BUT ARE NOT LIMITED TO, GRILLES, SLATS, TALK-THROUGH BAFFLES, INTERCOMS, OR TELEPHONE HANDSET DEVICES.

CHAPTER 10: RECREATION FACILITIES - REFER TO ACCESSIBILITY STANDARDS FOR DETAILED REQUIREMENTS

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REGISTERED INTERIOR DESIGNER · MEGAN WARD · 11413 · STATE OF TEXAS
05/27/21

PROJECT NO.: 581-009
DRAWN BY: TM
CHECKED BY: MW
R.S.F.: 41,852

BILLINGSLEY COMPANY

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SELENE

3501 OLYMPUS BLVD
5TH FLOOR
DALLAS, TX 75019

NO.	ISSUED FOR:	DATE:
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LANDLORD/CLIENT REVIEW ISSUE DATE: 05/27/21
BID ISSUE DATE: 05/27/21
CONSTRUCTION ISSUE DATE: 05/27/21

DRAWING TITLE:
TEXAS ACCESSIBILITY STANDARDS

DRAWING NUMBER:
G0.3

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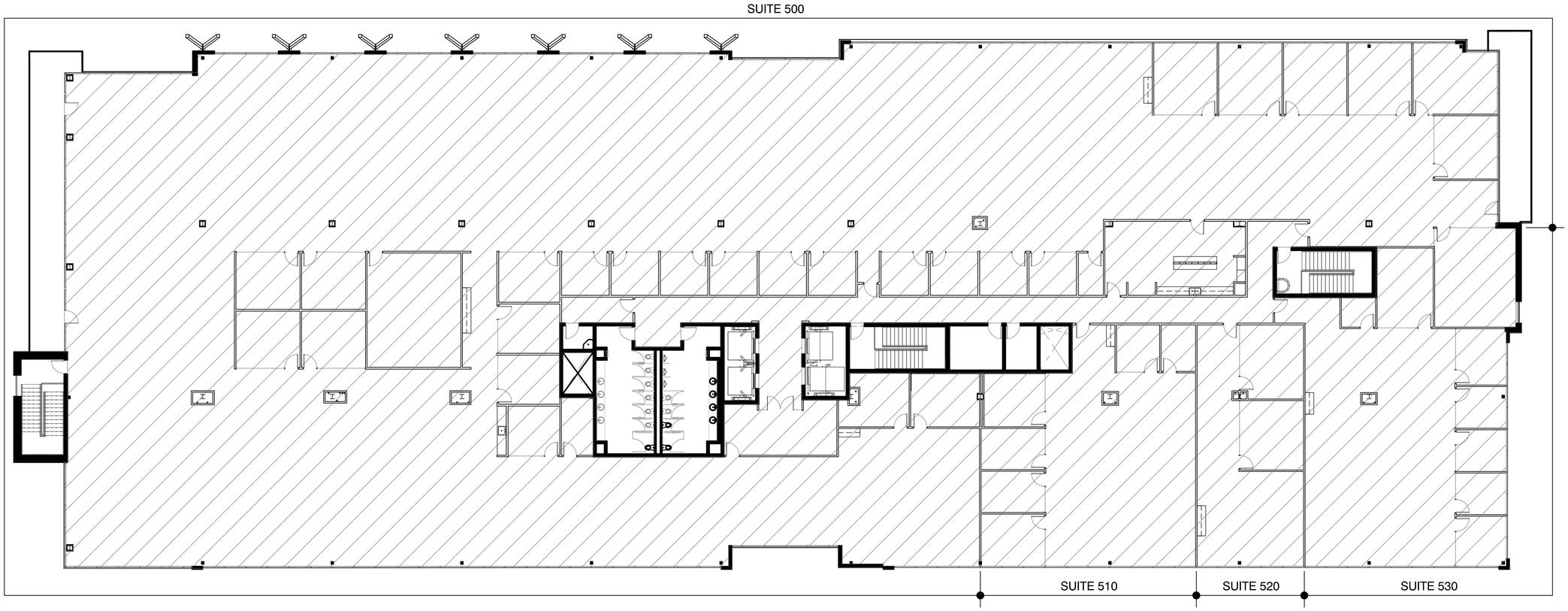

01 KEY PLAN
SCALE: 3/32" = 1'-0"

NORTH

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LANDLORD/CLIENT REVIEW ISSUE DATE: 05/27/21
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CONSTRUCTION ISSUE DATE: 05/27/21

DRAWING TITLE:
KEY PLAN

DRAWING NUMBER:
G0.4

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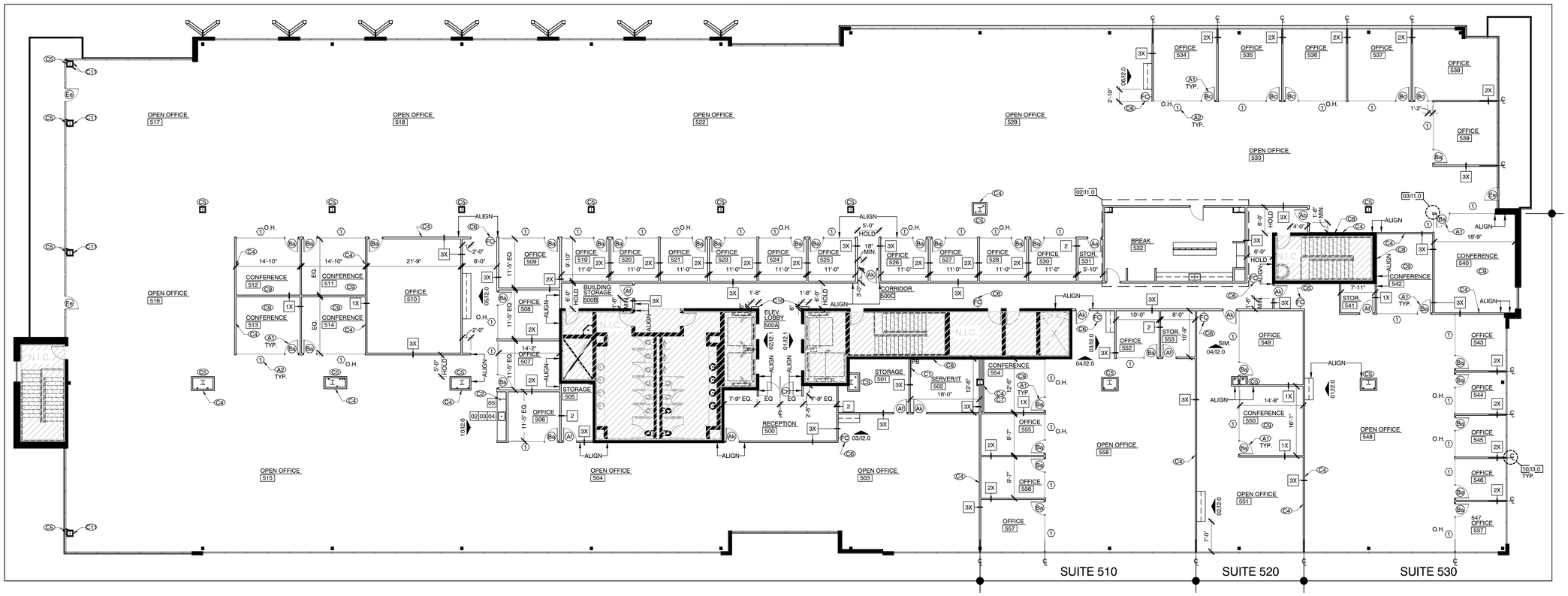


01 CONSTRUCTION PLAN

SCALE: 3/32" = 1'-0"

CONSTRUCTION NOTES:

• KEYING UNDER GC CONTRACT BY ARMORED LOCK. CONTACT: JAMI WOLFENBERGER, 972.880.9245; armoredlock@gmail.com.

• BCO TO PREFORM ASBESTOS REPORT.

• PROVIDE AND INSTALL MECHOSHADE, MANUAL ROLLER BY SOL PURCHASED BY TENANT THROUGH LANDLORD.

• BULLETED NOTES ARE GENERAL CONDITIONS REQUIRED FOR THE PLAN. NUMBERED NOTATIONS REFERENCE SPECIFIC LOCATIONS ON THE DRAWINGS.

• REFERENCE SHEET I4.0 FOR PARTITION AND DOOR TYPE INFORMATION.

• PROVIDE 6" CLEAR DIMENSION AT ALL DOOR RETURN LOCATIONS, U.N.O. ALL DOORS TO BE UNDERCUT ¾", U.N.O. ALL DOOR CLOSERS TO BE ADJUSTED TO MEET ADA/TAS REQUIREMENTS.

• CENTER NEW PARTITIONS AT EXTERIOR MULLIONS, U.N.O.

• PROVIDE AND INSTALL PLUMBING FIXTURES AND APPLIANCES AS INDICATED ON PLAN. REFERENCE PLUMBING AND APPLIANCE SCHEDULES.

• SEE BUILDING MANAGER FOR LIST OF BUILDING STANDARDS FOR SPECIFICATIONS OF TYPICAL PUBLIC CORRIDOR AND DEMISING PARTITIONS. IF REQUIRED, UPGRADE EXISTING CORRIDOR AND DEMISING PARTITIONS TO BUILDING STANDARD.

• TYPICAL PARTITION TO BE TYPE 4X CONSTRUCTION, U.N.O.

• PROVIDE COPOLYMER STRIPS AT ALL BUTT-JOINT GLASS SEAMS.

CONSTRUCTION KEYNOTES:

C1. PROVIDE 4'-0" X 4'-0", 3/4" FIRERATED PLYWOOD PHONE BOARD MOUNTED HORIZONTALLY TIGHT TO CEILING. PAINT TO MATCH ADJACENT WALL. DO NOT PAINT OVER FIRE RATING LABEL.

C2. PROVIDE ¾" COLD WATER LINE FOR ICE MAKER.

C3. PROVIDE ¾" COPPER WATER LINE FOR TENANT SUPPLIED COFFEE SERVICE.

C4. PROVIDE BLOCKING IN WALL FOR TENANT PROVIDED TELEVISION. VERIFY EXACT LOCATION WITH TENANT.

C5. PROVIDE MINIMUM FURRING AT EXPOSED COLUMN.

C6. PROVIDE AND INSTALL NEW SEMI-RECESSED FIRE EXTINGUISHER CABINET WITH FIRE EXTINGUISHER. SPEC: LARSEN'S ARCHITECTURAL SERIES AL2408-R3 VERTICAL DUO ROUNDED TRIM, CLEAR ANODIZED ALUMINUM, OR APPROVED EQUAL REFERENCE 08/I3.0.

C7. FURR-OUT WALL AS REQUIRED AT COLUMN AT ROOM 513 TO ENSURE FLUSH SURFACE ACROSS FOR TENANT PROVIDED TELEVISION.

C8. FURR-OUT STAIRWELL WALL AS REQUIRED FOR NEW SCHEDULED ELECTRICAL. COORDINATE WITH SHEET I1.1.

C9. PROVIDE SOUND BATT INSULATION ACROSS ENTIRE CEILING AT CONFERENCE ROOMS INDICATED.

C10. FURR OUT WALL AS REQUIRED AND PREPARE FOR NEW SCHEDULED FINISHES.

C11. FURR OUT WALL/COLUMN INDICATED TO ALIGN WITH HEADER ABOVE. REFERENCE I1.2.

CONSTRUCTION PLAN LEGEND

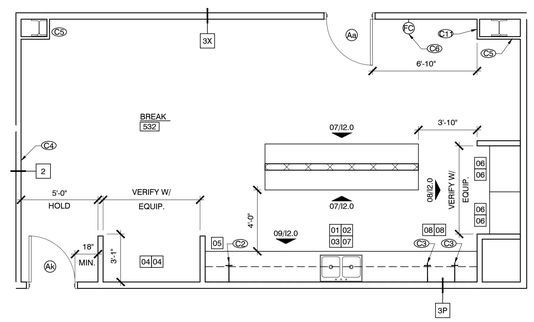
SYMBOL	DESCRIPTION
NAME 000	ROOM NAME/NUMBER
	EXISTING PARTITION TO REMAIN
	NEW DRYWALL PARTITION
	NEW DRYWALL PARTITION
	FRAMED GLAZING, U.N.O.
	FRAMELESS GLAZING, U.N.O.
XX	DOOR AND FRAME WITH DOOR TYPE/HARDWARE SYMBOL
X	WALL TYPE SYMBOL
	WATERLINE WITH SHUT OFF VALVE, U.N.O.
PB	EXISTING PHONE BOARD, U.N.O.
FC	SEMI RECESSED FIRE EXTINGUISHER CABINET, U.N.O.
X	NOTE REFERENCE
X/XX.X	ELEVATION REFERENCE
X/XX.X	DETAIL REFERENCE
X/XX.X	SECTION REFERENCE
ALIGN	ALIGN TO FACE FINISH
X-X"	DIMENSION TO INTERIOR FINISH FACE
X-X" CLR.	CLEAR DIMENSION TO BE MAINTAINED
ALL SYMBOLS NOT NECESSARILY USED	

PLUMBING SCHEDULE

KEY: XX	ITEM	MRF.	MODEL	COLOR/FIN.	DESCRIPTION
01	DOUBLE SINK	ELKAY	ELUHAD311855PD LUSTERSTONE	STAINLESS STEEL	UNDER MOUNT SINK WITH PERFECT DRAIN 30.75" X 18.5" x 5 3/8"
02	FAUCET	AMERICAN STANDARD	EDGEWATER 4932.300.075	POLISHED CHROME	SINGLE HOLE, FAUCET MOUNT
03	WATER HEATER	BUILDING STANDARD			INSTA-HOT, SIZED TO MATCH USE. 277V. MINIMUM 2 YEAR WARRANTY
04	SINGLE SINK	ELKAY	ELUHAD211555 LUSTERTONE	STAINLESS STEEL	UNDER MOUNT SINK WITH PERFECT DRAIN 23.5" X 18.25" x 5 3/8"

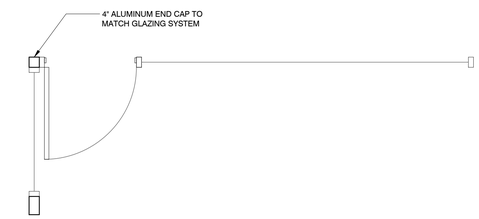
APPLIANCE SCHEDULE

KEY: XX	ITEM	MRF.	MODEL	COLOR/FIN.	DESCRIPTION
04	REFRIGERATOR	GENERAL ELECTRIC	GSS25GSHSS	STAINLESS STEEL	FULL-HEIGHT, SIDE-BY-SIDE W/ICE MAKER 69-1/2"H X 35-1/4"D X 35-3/4"W
05	ICEMAKER				TENANT PROVIDED, GC INSTALLED GC TO CONFIRM SCHEDULED MILLWORK WILL ACCOMMODATE DIMENSIONS
06	MICROWAVE	GENERAL ELECTRIC	PEB9159SJSS	STAINLESS STEEL	13"H X 16"D X 21 3/4"W WITH TRIM KIT: JX9152SJ (19 1/8"H X 27 7/8"W)
07	GARBAGE DISPOSAL	GENERAL ELECTRIC	GFC320V		PROVIDE WALL SWITCH ABOVE COUNTER AND ELECTRICAL OUTLET BELOW SINK. PROVIDE DEDICATED POWER REQUIREMENTS. 1/3HP NON CORDED-PROVIDED ACCESSORY POWER CORD KIT GE#WC12X10002
08	COFFEE MAKER	TENANT PROVIDED			GC TO CONFIRM SCHEDULED MILLWORK WILL ACCOMMODATE DIMENSIONS



02 ENLARGED BREAK ROOM

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



03 ENLARGED CORNER VIEW

SCALE: 1/2" = 1'-0"

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PROJECT NO.: 581-009
DRAWN BY: TM
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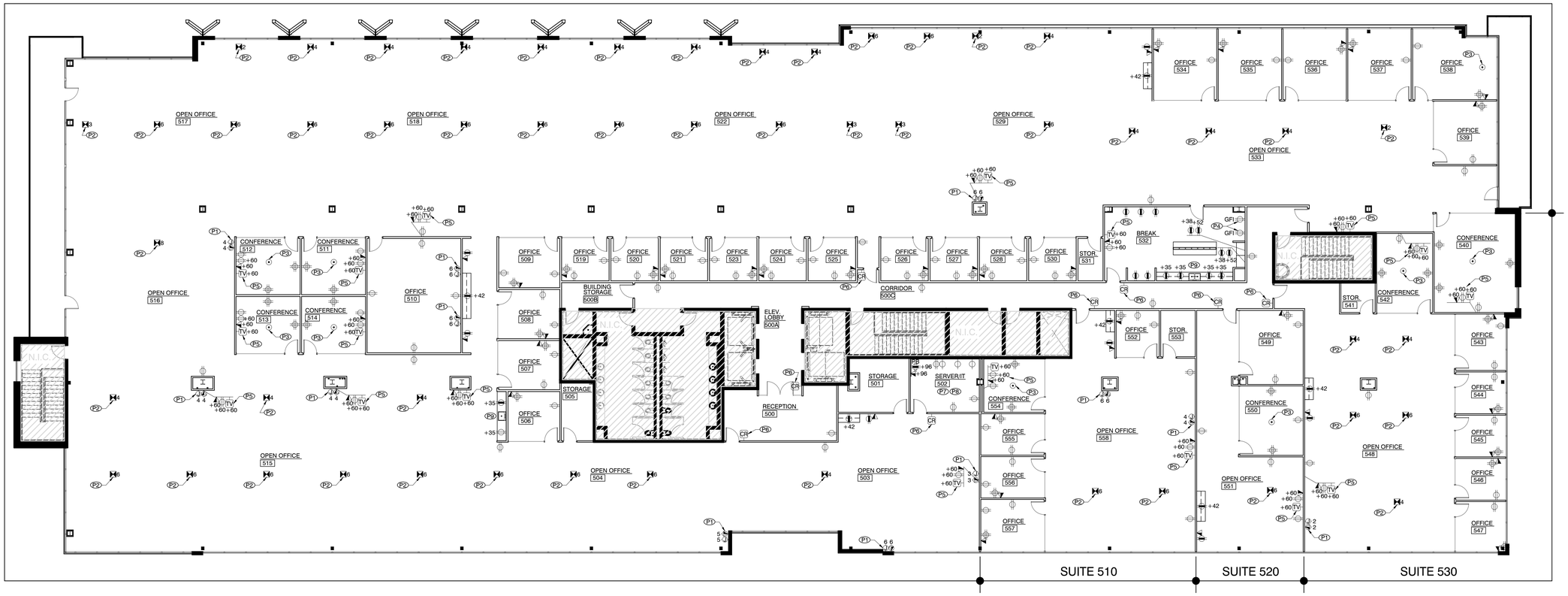

01 POWER & COMMUNICATION PLAN

SCALE: 3/32" = 1'-0"

POWER / COMMUNICATION NOTES:

• BULLETED NOTES ARE GENERAL CONDITIONS REQUIRED FOR THE PLAN. NUMBERED NOTATIONS REFERENCE SPECIFIC LOCATIONS ON THE DRAWINGS.

• VERIFY ALL FLOOR CORING/TRENCHING WITH THE TENANT, STRUCTURAL ENGINEER, FURNITURE VENDOR AND LANDLORD PRIOR TO INSTALLATION. ALL LOCATIONS TO BE IDENTIFIED AND APPROVED BY TENANT PRIOR TO INSTALLATION. ALL CORING/TRENCHING TO BE SEALED PER APPLICABLE CODE.

• IF REQUIRED, CONTRACTOR TO X-RAY SLAB TO DETECT LOCATIONS OF EXISTING STRUCTURAL AND ELECTRICAL SYSTEMS BEFORE ALL CORING WORK. VERIFY WITH BUILDING MANAGEMENT.

• CONTRACTOR TO PROVIDE ELECTRICAL FOR ALL INSTALLED APPLIANCES.

• ALL LOW VOLTAGE NETWORK/AV CABLING IS THE RESPONSIBILITY OF THE TENANT.

• ALL OUTLETS ABOVE COUNTER TOP AT BREAK ARE FOR DEDICATED USE AND ARE NOT CONVENIENCE OUTLETS.

• ALL WIRING SERVING FLOOR CORES FROM BELOW MUST BE HOUSED IN CONDUIT. (IF DECK EXPOSED ON FLOOR BELOW)

POWER / COMMUNICATION NOTES:

P1. PROVIDE WALL-MOUNTED J-BOXES FOR TELEPHONE, DATA, AND ELECTRICAL, TO BE HARDWIRED TO TENANT PROVIDED PANEL SYSTEM. SUBSCRIPT INDICATES NUMBER OF STATIONS BEING SERVED. VERIFY NUMBER OF TELEPHONE, DATA, AND ELECTRICAL OUTLETS REQUIRED AT EACH WORK STATION WITH TENANT. VERIFY EXACT LOCATION WITH TENANT/TENANT'S FURNITURE VENDOR. ELECTRICAL CONTRACTOR TO BE RESPONSIBLE FOR CONNECTION TO TENANT'S PANEL SYSTEM.

P2. PROVIDE RECESSED FLOOR-MOUNTED POKE THROUGH DEVICE FOR TELEPHONE, DATA, AND ELECTRICAL, TO BE HARDWIRED TO TENANT PROVIDED PANEL SYSTEM. SUBSCRIPT INDICATES NUMBER OF STATIONS BEING SERVED. VERIFY NUMBER OF TELEPHONE, DATA, AND ELECTRICAL OUTLETS REQUIRED AT EACH WORK STATION WITH TENANT. VERIFY EXACT LOCATION WITH TENANT/TENANT'S FURNITURE VENDOR. ELECTRICAL CONTRACTOR TO BE RESPONSIBLE FOR CONNECTION TO TENANT'S PANEL SYSTEM.

P3. PROVIDE FLOOR-MOUNTED CORE DRILL AT CONFERENCE ROOMS INDICATED. FLOOR CORE TO CONTAIN (1) DUPLEX OUTLET AND (1) VOICE/DATA OUTLET. COORDINATE EXACT LOCATIONS WITH TENANT AND BUILDING ENGINEER. PROVIDE ADDITIONAL CORE IN SLAB AT PHONE BOARD LOCATION AS REQUIRED.

P4. PROVIDE G.F.I. OUTLETS AT ALL VENDING MACHINE LOCATIONS. OUTLETS MUST BE EASILY ACCESSIBLE.

P5. PROVIDE ELECTRICAL OUTLET, DATA OUTLET AND CONDUIT FOR HDMI CONNECTION FOR TENANT PROVIDED TELEVISION. COORDINATE WITH TENANT FOR EXACT LOCATIONS. RECEPTACLES TO BE RECESSED. ENSURE TV AND BRACKET TOGETHER DON'T EXCEED 4" TO MEET ACCESSIBILITY CODE REQUIREMENTS. CONFIRM WITH TENANT IF EACH LOCATION NEEDS HDMI.

P6. PROVIDE LOW VOLTAGE WIRING FOR TENANT CARD READER ACCESS SYSTEM. VERIFY EXACT LOCATION WITH TENANT. COORDINATE WITH TENANT'S SECURITY VENDOR.

P7. COORDINATE EXACT ELECTRICAL REQUIREMENTS AND LOCATIONS OF RECEPTACLES AT SERVER 502 WITH TENANT'S EQUIPMENT.

P8. PROVIDE SUBPANEL FOR SERVER 502. VERIFY EXACT LOCATION WITH TENANT AND BUILDING MANAGEMENT.

P9. ALL ABOVE COUNTER OUTLETS TO BE MOUNTED HORIZONTALLY WITHIN 3" BACKSPLASH. REFERENCE ELEVATION 09/I2.0 AND 10/I2.0.

POWER / COMMUNICATION ALTERNATES:

AP1. PROVIDE UPS SYSTEM WITH DEDICATED BATTERY BACK UP TO SUPPLY CALL CENTER WORKSTATIONS IN PLAN SOUTHWEST CORNER. APPROXIMATELY 50 STATIONS.

POWER & COMMUNICATION LEGEND

SYMB.	DESCRIPTION
NAME / 000	ROOM NAME/NUMBER
N D	NEW ITEM EXISTING ITEM TO BE REMOVED ALL OTHERS ARE EXISTING TO REMAIN
	WALL MOUNTED DUPLEX ELECTRICAL CIRCUIT
	WALL MOUNTED QUADRADUPLEX ELECTRICAL CIRCUIT
	WALL MOUNTED DEDICATED DUPLEX ELECTRICAL CIRCUIT
	WALL MOUNTED DEDICATED QUADRADUPLEX ELECTRICAL CIRCUIT
	30 AMP/240 VOLT ELECTRICAL OUTLET
	WALL-MOUNTED VOICE/DATA OUTLET
TV	HDMI CONNECTION
CR	TENANT-PROVIDED CARD READER TO BE TIED INTO BUILDING FIRE ALARM SYSTEM
	RECESSED FLOOR-MOUNTED POKE-THRU DEVICE FOR TELEPHONE, DATA, ELECTRICAL - HARDWIRED TO TENANT PROVIDED FURNITURE. SUBSCRIPT INDICATES NUMBER OF STATIONS SERVED.
	WALL-MOUNTED FURNITURE FEED FOR ELECTRICAL - HARDWIRED TO TENANT PROVIDED FURNITURE. SUBSCRIPT INDICATES NUMBER OF STATIONS SERVED.
	WALL-MOUNTED FURNITURE FEED FOR VOICE/DATA - HARDWIRED TO TENANT PROVIDED FURNITURE. SUBSCRIPT INDICATES NUMBER OF STATIONS SERVED.
	RECESSED FLOOR-MOUNTED ELECTRICAL, VOICE/DATA OUTLET
+XX	INDICATES MOUNTING HEIGHT IN INCHES
GFI	INDICATES GROUND FAULT INTERRUPTOR
IG	ISOLATED GROUND OUTLET
X	NOTE REFERENCE
ALL SYMBOLS NOT NECESSARILY USED	

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05/27/21

PROJECT NO.: 581-009
DRAWN BY: TM
CHECKED BY: MW
R.S.F.: 41,852

BILLINGSLEY COMPANY

3501 OLYMPUS
SELENE

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5TH FLOOR
DALLAS, TX 75019

NO.	ISSUED FOR:	DATE:
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LANDLORD/CLIENT REVIEW ISSUE DATE: 05/27/21
BID ISSUE DATE: 05/27/21
CONSTRUCTION ISSUE DATE: 05/27/21

DRAWING TITLE:
POWER & COMMUNICATION PLAN

DRAWING NUMBER:
E1.1

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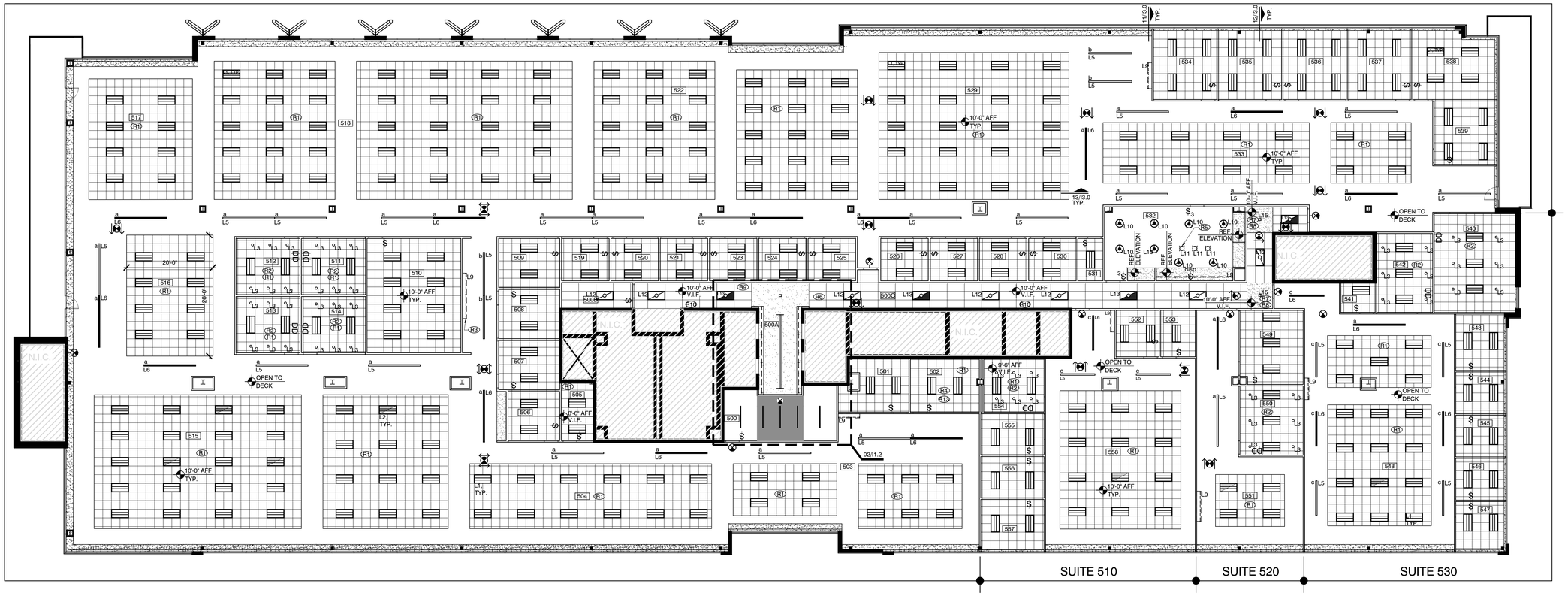


01 REFLECTED CEILING PLAN

SCALE: 3/32" = 1'-0"

REFLECTED CEILING NOTES:

• PROVIDE NEW BUILDING STANDARD GRID AND CEILING TILE. SPECIFICATION:
GRID - ARMSTRONG 15/16", WHITE
2X2 CEILING TILE - ARMSTRONG, 1774 DUNE, TEGULAR 15/16"
VERIFY EXACT SPECIFICATION WITH BUILDING MANAGEMENT.

• PROVIDE NEW WOOD SLAT CEILING AT RECEPTION 500. SPECIFICATION:
ARMSTRONG WOODWORKS GRILLE, MAPLE FINISH BACKER ONLY, PRODUCT #7263BO

• EXISTING LIGHT FIXTURES TO BE REMOVED. COORDINATE STORAGE OR DISPOSAL WITH BUILDING MANAGEMENT. PROVIDE NEW BUILDING STANDARD FIXTURES THROUGHOUT:

• THERMOSTATS TO BE PLACED AWAY FROM CENTERS OF ALL WALLS. PLACEMENT TO COMPLY WITH ALL CODES. WHERE POSSIBLE, COORDINATE WITH TENANT FOR DESIRED LOCATIONS.

• ALL THERMOSTATS LOCATED ON EXTERIOR WALLS TO HAVE HARD CONDUIT RUN FOR CONTROL WIRING, U.O.N.

• ALL LIGHTING RECONFIGURATIONS TO MEET MOST CURRENT INTERNATIONAL ENERGY CONSERVATION CODE AND ANY OF ITS AMENDMENTS. SQUARE FOOTAGE USED FOR ENERGY CALCULATIONS IS 37,476.

• PROVIDE EXIT SIGNS AND 24 HOUR LIGHTS ON EMERGENCY CIRCUITS.
SPECIFICATION: EXIT SIGN CLEAR LUCITE, GREEN LETTERS INTERNALLY LIT

• ALL DUCTWORK AT EXPOSED CEILING TO BE INSULATED SPIRAL METAL. DUCTWORK TO BE PAINTED PT-4. BOTTOM OF DUCTWORK TO BE AS HIGH AS POSSIBLE. COORDINATE WITH ENGINEER IF REQUIRED.

•VERIFY ALL LISTED SUSPENDED PENDANT FIXTURE MOUNTING HEIGHTS WITH TENANT.

•CONTRACTOR TO VERIFY ALL SWITCH LOCATIONS DO NOT FALL BEHIND DOOR SWINGS.

•24 HOUR LIGHT FIXTURES MUST BE ON EMERGENCY CIRCUITS

•REWORK SPRINKLER HEADS AS REQUIRED. EXACT SPRINKLER LOCATIONS SHALL BE DETERMINED BY A STATE LICENSED SPRINKLER CONTRACTOR TO COMPLY WITH LOCAL BUILDING AND FIRE CODES. IF REQUIRED, CONTRACTOR TO REVISE EXISTING LAYOUT TO CONFORM TO NFPA.

•CEILING HEIGHT TO BE 10'-0" U.N.O.

• ALL LIGHT SWITCHES TO BE LABELED WITH CIRCUIT NUMBERS. SWITCHES TO BE NUMBERED ON BACK OF PLATES.

• ALL J-BOXES IN CEILING REQUIRE FLAGGING OF THE MC CABLE WITH LABELING OF THE PANEL WITH CIRCUIT NUMBER INCLUDED.

• WHERE APPLICABLE, PROVIDE DRYWALL "POCKET" AT EXTERIOR OF BUILDING WHERE GLASS EXTENDS TO DECK ABOVE, FOR LAY-IN CEILING (AT DESIRED HEIGHT OF APPROX. 10-0") TO DIE INTO. REFERENCE I3.0 FOR MORE INFORMATION.

REFLECTED CEILING NOTES:

• REPLACE EXISTING EXIT SIGNS THROUGHOUT WITH NEW BUILDING STANDARD CLEAR LUCITE EDGE-LIT EXIT SIGNS WITH GREEN LETTERS INTERNALLY LIT AND BATTERY BACK-UP.

• GC REQUIRED TO RETAIN A TEST AND BALANCE REPORT FROM NATIONAL TAB.

• GC IS REQUIRED TO CONTRACT WITH CLIMATEC FOR HVAC CONTROL VENDOR.

• LIGHT SWITCH LOCATIONS ARE FOR DESIGN INTENT ONLY. ALL SWITCH LOCATIONS AND LOAD TO BE VERIFIED BY ENGINEER AND ELECTRICIAN.

REFLECTED CEILING KEYNOTES:

R1. CENTER NEW CEILING GRID IN CLOUD/ROOM INDICATED.

R2. PROVIDE SOUND BATT INSULATION ACROSS ENTIRE CEILING AT CONFERENCE ROOMS INDICATED.

R3. NOT USED.

R4. PROVIDE (2) 24-HOUR AIR SPLIT SYSTEMS ON SEPARATE ZONE AT ROOM 502 TO BE CONTROLLED INDEPENDENTLY OF EACH OTHER. PERIMETER WALLS TO GO TO DECK. SIZE OF SYSTEM AND REQUIRED ELECTRICAL TO BE SPECIFIED BY MEP ENGINEER.

R5. PENDANT LIGHT FIXTURES TO BE CENTERED OVER MILLWORK PIECE AT BREAK 532. VERIFY EXACT LOCATIONS IN FIELD.

R6. COORDINATE WITH BUILDING MANAGEMENT FOR DESIRED LOCATION OF SWITCH IN PUBLIC CORRIDOR.

R7. PAINT GYPSUM BOARD CEILING TO MATCH ADJACENT GRID AND CEILING. VERIFY EXACT PAINT COLOR WITH BUILDING MANAGEMENT.

R8. NEW LIGHT FIXTURE TO BE CENTERED IN GYPSUM CEILING WHERE INDICATED.

R9. INSTALL FULL CEILING TILE CENTERED AT CORRIDOR.

R10. INSTALL CEILING GRID AS HIGH AS POSSIBLE TO ALLOW PROPER CLEARANCE FOR SCHEDULED FIXTURES. ADJUST NOTED HEIGHT AS REQUIRED.

R11. INSTALL GYPSUM CEILING AS HIGH AS POSSIBLE TO ALLOW PROPER CLEARANCE FOR SCHEDULED FIXTURE. ADJUST NOTED HEIGHT AS REQUIRED.

R12. ADJUST CEILING HEIGHT AS REQUIRED TO REMAIN FLUSH WITH NEW CEILING GRID. REFERENCE KEYNOTE R10.

R13. PROVIDE HUMIDITY ALARM AT SERVER ROOM 502.

R14. EXISTING J-BOX TO BE RELOCATED ABOVE CEILING GRID FOR ACCESS.

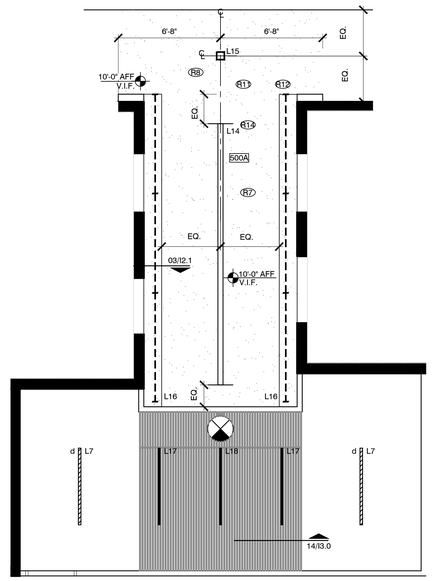
R15. EXISTING J-BOX TO BE RELOCATED ABOVE CEILING GRID FOR ACCESS.

REFLECTED CEILING PLAN LEGEND

SYMBOL	DESCRIPTION
NAME 000	ROOM NUMBER
E D	EXISTING ITEM TO REMAIN EXISTING TO BE REMOVED OR RELOCATED ALL OTHERS ARE NEW
	NEW 2' X 2' CEILING GRID, U.N.O.
	NEW 2' X 4' CEILING GRID, U.N.O.
	5/8" GYPSUM BOARD CEILING/SOFFIT
	EXPOSED CEILING/OPEN TO DECK
	NEW CEILING-MOUNTED WOOD SLAT CEILING, EXPOSED DECK ABOVE. SPECIFICATION: ARMSTRONG, WOODWORKS GRILLE 7265 BO
	LIGHT SWITCH 'R' INDICATES REMOVE AND PATCH WALL
	DIMMER SWITCH, LOWER CASE LETTER INDICATES CIRCUIT
$_{3x}$	3-WAY SWITCH, LOWER CASE LETTER INDICATES CIRCUIT
	BLDG. STANDARD EXIT SIGN
(X1.0) (X1.0)	CEILING TRANSITION
	BLDG. STANDARD EXHAUST FAN WITH SWITCH AS REQUIRED BY CODE - WHITE
X'-X" AFF	CEILING HEIGHT INDICATOR
X	NOTE REFERENCE
	ALL SYMBOLS NOT NECESSARILY USED

LIGHTING SCHEDULE

SYMBOL	DESCRIPTION
L1	NEW LED BLDG. STD, 2' X 4' LIGHT FIXTURE, LOWER CASE LETTER INDICATES CIRCUIT MFR: LITHONIA LIGHTING, BLT SERIES LED 2X4 LED, 2BLT4-40L-ADP-LP835
L2	NEW LED BLDG. STD, 2' X 4' EMERGENCY LIGHT FIXTURE, LOWER CASE LETTER INDICATES CIRCUIT MFR: LITHONIA LIGHTING, BLT SERIES LED 2X4 LED, 2BLT4-40L-ADP-LP835
L3	LED DOWNLIGHT: MFR: LIGHTOLIER, PRODUCT #: C6L15-35-MZ10U-C6RDL FINISH: WHITE, CENTERED IN TILE, U.N.O.
L4	LED EMERGENCY DOWNLIGHT, LIGHTOLIER, PRODUCT #: C6L15-35-MZ10U-C6RDL FINISH: WHITE, CENTERED IN TILE, U.N.O.
L5	DIRECT/INDIRECT LED LINEAR PENDANT SPEC: FINELITE HP-2 PENDANT, REFERENCE PLAN FOR SPECIFIED LENGTHS. a: 12'-0", b: 10'-0"; c: 8'-0", d: 6'-0" #:HP-2-P-ID-XX-S-H-835-TG-BG-96LG-277-SC-FC-10%-FA50-C1-FE-SW BOTTOM OF FIXTURE MOUNTED AT 10'-0" AFF.
L6	DIRECT INDIRECT EMERGENCY LED LINEAR PENDANT SPEC: FINELITE HP-2 PENDANT, REFERENCE PLAN FOR SPECIFIED LENGTHS. a: 12'-0", c: 8'-0" #:HP-2-P-ID-XX-S-S-835-F-F-96LG-277-SC-FC-10%-FA50-C1-FE-SW-FACCHO BOTTOM OF FIXTURE MOUNTED AT 10'-0" AFF.
L7	DIRECT LED RECESSED LINEAR FIXTURE SPEC: FINELITE HP-2 RECESSED PENDANT, REFERENCE PLAN FOR SPECIFIED LENGTHS. d: 5'-0" #:HP-2-R-D-XX-S-835-F-96LG-277-SC-FC-10%-SF-FE-SW
L9	UNDER CABINET LED TAPE LIGHT AT TENANT SUITE: MFR: LEDI INSPIRE V4 NANOSKIN, PRODUCT #: 4V-NSKN-35B-BLK-100 WITH ZUES CON. AND EXTENTS. LAMP COLOR: 3500K
L10	LED PENDANT: MFR: LIGHTOLOGY, KUZCO LIGHTING, CRADLE PENDANT ITEM #: KZC813270, WHITE FINISH, 22" W X 32" H
L11	LED PENDANT: MFR: LIGHTOLOGY, SECTO DESIGN, SECTO 4200 PENDANT ITEM #: SEC75647, NATURAL BIRCH FINISH, 11.75" W X 23.5" H
L15	NEW LED BLDG. STD, 2' X 4' LIGHT FIXTURE, LOWER CASE LETTER INDICATES CIRCUIT MFR: COOPER LIGHTING, METALUX, MTO, 24SR-LD2-48-C-UNV-L835-CD1
L17	NEW LED BLDG. STD, 2' X 4' EMERGENCY LIGHT FIXTURE, FIXTURE TO REMAIN ON 24/7 LOWER CASE LETTER INDICATES CIRCUIT MFR: COOPER LIGHTING, METALUX, MTO, 24SR-LD2-48-C-UNV-EL14W-L835-CD1
L14	NEW LINEAR LED RECESSED FIXTURE AT ELEVATOR LOBBY: MFR: FOCAL PINT, SEEM 4 LED, FSM4L-FL-1000F-35K-1C-UNV-LD1-XFF-WH-17'-0"
L15	NEW BLDG. STD SQUARE LED DOWNLIGHT: MFR: LITHONIA, LDN6SQ-35/20-L56AR-LSS-MVOLT-GZ1
L16	NEW LED TAPE LIGHT AT ELEVATOR LOBBY: MFR: ACOLYTE, CH-AC2-F-S2-90-IP20-24-3-35-X-ND-20'-3" VERIFY EXACT LENGTH IN FIELD
L17	JLC TECH - TBAR LED C TBSL-MW-5-24-D-C-W.001
L18	JLC TECH - TBAR LED C TBSL-MW-5-24-D-C-W.001



02 ENLARGED PLAN

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

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DALLAS, TEXAS 75207
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05/27/21

PROJECT NO.: 581-009
DRAWN BY: TM
CHECKED BY: MW
R.S.F.: 41,852

BILLINGSLEY COMPANY

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SELENE

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NO.	ISSUED FOR:	DATE:

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DRAWING TITLE:
REFLECTED CEILING PLAN

DRAWING NUMBER:
I1.2

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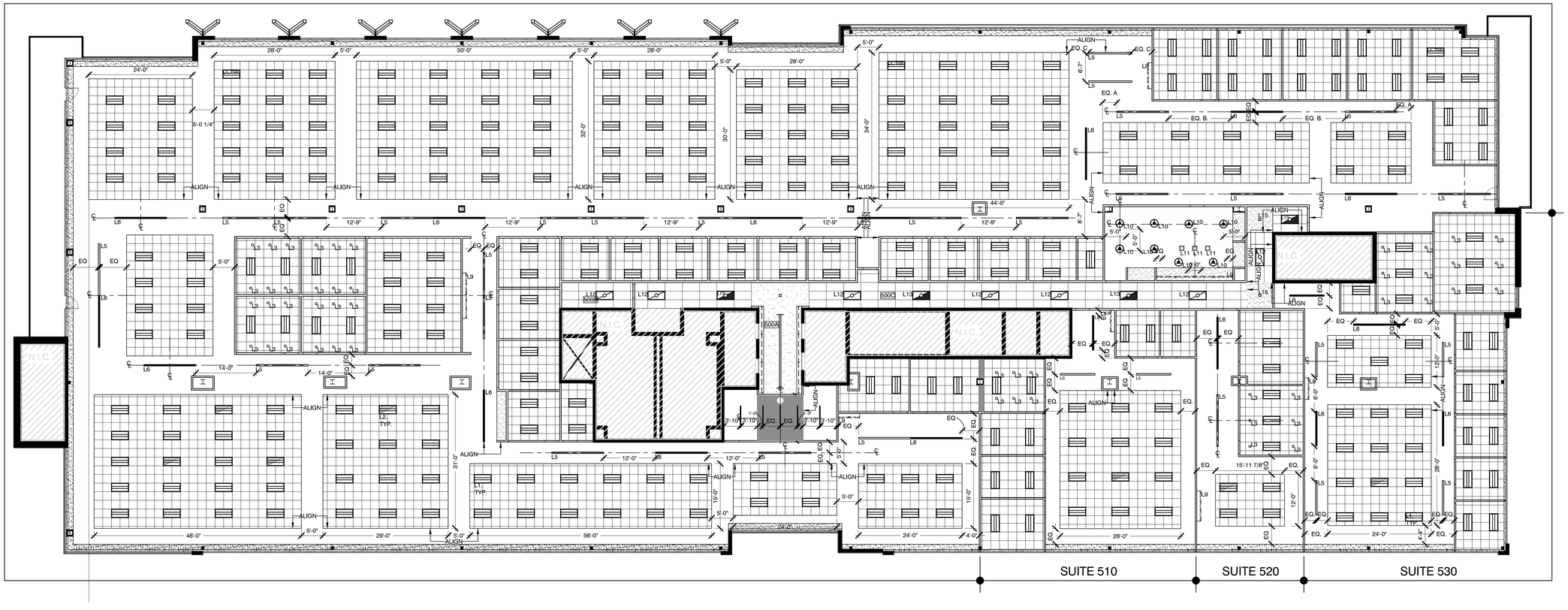

01 REFLECTED CEILING PLAN - DIMENSIONS

SCALE: 3/32" = 1'-0"

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05/27/21

PROJECT NO.: 581-009
DRAWN BY: TM
CHECKED BY: MW
R.S.F.: 41,852

BILLINGSLEY COMPANY

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NO.	ISSUED FOR:	DATE:

LANDLORD/CLIENT REVIEW ISSUE DATE: 05/27/21
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DRAWING TITLE:
REFLECTED CEILING PLAN - DIMENSIONS

DRAWING NUMBER:
I1.2-2

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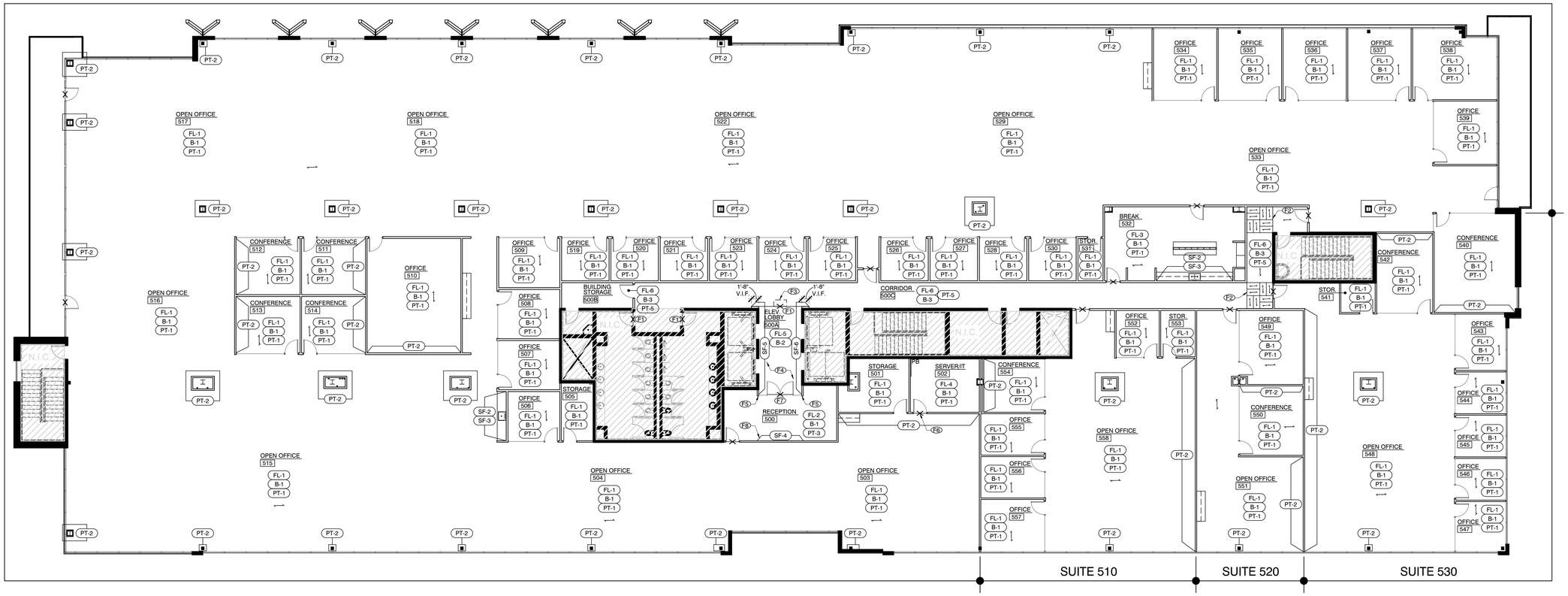
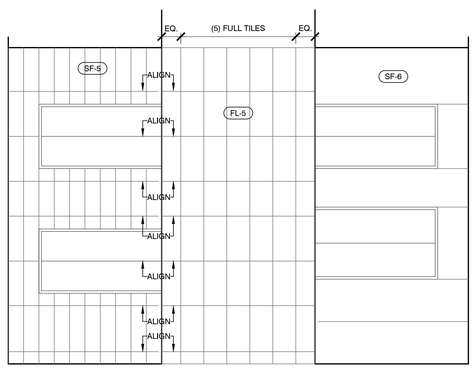


01 FINISH PLAN

SCALE: 1/8" = 1'-0"



02 FL-5 TILE INSTALLATION

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

FINISH NOTES:

• WHERE REQUIRED AT AREAS OF CONSTRUCTION, FURNISH AND INSTALL BUILDING STANDARD FINISHES IN COMMON AREAS. COORDINATE WITH LANDLORD FOR SPECIFICATIONS.

• EXISTING FINISHES NOT AFFECTED BY DEMOLITION AND/OR NEW CONSTRUCTION TO REMAIN THROUGHOUT, U.N.O. WHERE DAMAGED OR MISSING, BRING FINISHES BACK TO AN INDUSTRY STANDARD LEVEL OF REFURBISHMENT.

• FLOAT AND SCRAPE FLOOR TO BE LEVEL AND PREPARE FOR NEW SCHEDULED FINISH.

• CONTRACTOR TO RESERVE SPECIFIED FLOORING AND BASE UPON BEING AWARDED THE JOB TO ENSURE AVAILABILITY AND TIMELY INSTALLATION. SUBSTITUTIONS ARE NOT PERMITTED UNLESS APPROVED BY TENANT, AND/OR LANDLORD.

• CONTRACTOR MUST SUBMIT CARPET SEAMING DIAGRAM TO BUILDING MANAGEMENT FOR SIGNED APPROVAL PRIOR TO CARPET INSTALLATION.

• PROVIDE BUILDING STANDARD TEXTURE AND PAINT THROUGHOUT, U.N.O.

•ALL PAINTED WALLS SHALL RECEIVE TWO COATS OF LATEX PAINT IN BUILDING STANDARD FINISH. TOUCH-UP OR RE-PAINT ALL WALLS AS NEEDED AFTER COMPLETION OF TENANT LEASE SPACE.

•EXISTING WINDOW COVERINGS TO REMAIN, U.N.O. CLEAN AND REPAIR THROUGHOUT. REPLACE TO MATCH EXISTING, IF MISSING OR DAMAGED BEYOND REPAIR.

• PROVIDE SCHLUTER TRIM PIECE AT ALL EXPOSED TILE EDGES ON VERTICAL SURFACES.

• TOUCH UP DOORS AT COMMON AREAS AS REQUIRED. ENSURE LIKE NEW CONDITION.

• REFLOAT ALL EXISTING WALLS DUE TO DEMOLITION AS REQUIRED FOR NEW SCHEDULED FINISH.

• CONFIRM ALL CORRIDOR FINISH SELECTIONS WITH BUILDING MANAGEMENT PRIOR TO PURCHASING.

• GC TO PROVIDE CONTROL PAINT SAMPLE FOR ALL SELECTIONS FOR TENANT APPROVAL PRIOR TO FULL PAINT.

FINISH KEYNOTES:

F1. PROVIDE TRANSITION STRIPS AT ALL CARPET TO TILE TRANSITIONS. ENSURE ALL CARPET THREADS ARE TRIMMED CLOSELY. SPECIFICATION: SCHLUTER - SCHIENE (STAINLESS STEEL).

F2. INSTALL SCHEDULED CARPET TILE IN BASKETWEAVE PATTERN AT CORRIDOR INTERSECTION.

F3. START CARPET TILE INSTALLATION CENTERED ON ELEVATOR LOBBY.

F4. GC TO PROVIDE STAINLESS STEEL SCHLUTER-INDEC EDGE AT ALL EXPOSED TILE EDGES AROUND ELEVATOR DOORS AND ABOVE STEEL BASE, TYPICAL.

F5. GC TO PROVIDE STAINLESS STEEL SCHLUTER-QUADEC EDGE AT EXPOSED TILE CORNERS.

F6. PROVIDE TRANSITION STRIPS AT ALL CARPET TO CONCRETE TRANSITIONS. ENSURE ALL CARPET THREADS ARE TRIMMED CLOSELY. SPECIFICATION: TARKETT, RUBBER REDUCER, CRS-63-A.

F7. PROVIDE TRANSITION STRIP AT TILE TO VINYL TRANSITIONS. SPECIFICATION: SCHLUTER - SCHIENE (STAINLESS STEEL).

F8. SF-4 TO ALIGN WITH SPECIFIED WOOD CEILING ABOVE.

FINISH SCHEDULE

FLOORING SCHEDULE

FL-#	MATERIAL	MRF.	PATTERN/#	COLOR	REMARKS
FL-1	CARPET TILE **(12X36)**	MOHAWK	ANGLED PERCEPTION BT496	979 METAL GRAY	THROUGHOUT, U.N.O. INSTALLATION: BRICK ASHLAR FOR PREFERRED PRICING CONTACT: DAVID GRANT, 214-725-9974, david_grant@mohawkind.com
FL-2	LVT (36X36)	MOHAWK	BOLDER	925 PEBBLE	AT RECEPTION INSTALLATION: MONOLITHIC STRAIGHT STACK FOR PREFERRED PRICING CONTACT: DAVID GRANT, 214-725-9974, david_grant@mohawkind.com
FL-3	LVT (6X48)	SHAW	SOUNDSCAPE 4065V	LATTE 63720	AT BREAK INSTALLATION: ASHLAR FOR PREFERRED PRICING CONTACT: KATHLEEN GRIEF, 972-207-3818, kathleen.grief@shawcontract.com
FL-4	SEALED CONCRETE	EXISTING TO REMAIN	EXISTING TO REMAIN	EXISTING TO REMAIN	AT SERVER/IT EXISTING TO REMAIN. CLEAN AND SEAL WITH CLEAR COAT.

BASE SCHEDULE

B-#	MATERIAL	MRF.	MFR. #	COLOR	REMARKS
B-1	RUBBER	JOHNSONITE	63	BURNT UMBER	4" STRAIGHT BASE AT THROUGHOUT CONTINUOUS ROLL, CUTS AT CORNERS ONLY, ENSURE SEAMLESS TRANSITION.

PAINT SCHEDULE

PT-#	MATERIAL	MRF.	MFR. #	COLOR	REMARKS
PT-1	LATEX	SHERWIN WILLIAMS	SW7022	ALPACA	GENERAL PAINT THROUGHOUT, U.N.O. BUILDING STANDARD FINISH
PT-2	LATEX	SHERWIN WILLIAMS	S7604	SMOKY BLUE	ACCENT PAINT BUILDING STANDARD FINISH
PT-3	LATEX	SHERWIN WILLIAMS	SW7004	SNOWBOUND	PAINT AT RECEPTION BUILDING STANDARD FINISH
PT-4	DRYFALL	SHERWIN WILLAIMS	SW7019	GAUNTLET GREY	PAINT AT DECK AND EXPOSED EQUIPMENT BUILDING STANDARD FINISH

PLASTIC LAMINATE SCHEDULE

PL-#	MATERIAL	MRF.	PATTERN/#	COLOR	REMARKS
PL-1	PLASTIC LAMINATE	FORMICA	5883-58	PECAN WOODLINE	AT BASE AND UPPER CABINETS AT COPY AREAS
PL-2	PLASTIC LAMINATE	WLSONART	D90-60	NORTH SEA	AT COUNTERTOP AND BACKSPLASH AT COPY AREAS
PL-3	PLASTIC LAMINATE	NEVEMAR	S-6054T	WROUGHT IRON	AT BASE AND UPPER CABINETS AT BREAK ROOM

SPECIALTY FINISH SCHEDULE

SF-1	MATERIAL	MRF.	MFR. #	COLOR	REMARKS
SF-1	QUARTZ	CAESARSTONE	-	EMPIRA WHITE	AT BREAK COUNTERTOPS
SF-2	CERAMIC TILE	CERAMIC TECHNICS LTD	NY MOSAIC HEXAGONO - PIRAMIDAL 6X6'	GRAFITO MATTE	AT BREAK GROUT: MAPEI, 47 CHARCOAL, 1/32" THICK
SF-3	CERAMIC TILE	CERAMIC TECHNICS LTD	NY MOSAIC HEXAGONO - PIRAMIDAL 6X6'	BLANCO MATTE	AT BREAK GROUT: MAPEI, 47 CHARCOAL, 1/32" THICK
SF-4	WOOD	ARMSTRONG	WOODWORKS GRILLE 7265	CUSTOM	AT RECEPTION 500 FOCAL WALL BACKER ONLY: 12 X 96 X 2 3/4" FINISH: CUSTOM FINISH TO MATCH FORMICA, NATURAL ASH 8843-58

CORRIDOR FINISH SCHEDULE

FLOORING SCHEDULE

FL-#	MATERIAL	MRF.	PATTERN/#	COLOR	REMARKS
FL-5	PORCELAIN TILE (18X36)	CONCEPT SURFACES	BOTTEGA	BLACK	AT ELEVATOR LOBBY. REFERENCE 02/I1.3 FOR LAYOUT. FINISH: SEMI-POLISHED GROUT: MAPEI, IRON 107 FOR PREFERRED PRICING CONTACT: KELLY FITCHETT, CONCEPT SURFACES 214.927.9985; kellyf@conceptsurfaces.com
FL-6	CARPET TILE (18 X 36)	SHAW	BEYOND THE FOLD 5T058 ANGLE TILE	GRIT 59530	COMMON CORRIDOR, U.N.O. FOR PREFERRED PRICING CONTACT: KATHLEEN GRIEF, SHAW CONTRACT 972.207.3818; kathleen.grief@shawinc.com

BASE SCHEDULE

B-#	MATERIAL	MRF.	MFR. #	COLOR	REMARKS
B-2	METAL	-	-	-	2" PROFILE VERIFY FINISH WITH LANDLORD
B-3	RUBBER	JOHNSONITE/ TARKETT	MANDALAY PROFILE 4.5	WHITE	STRAIGHT BASE AT CARPET, CONTINUOUS ROLL, CUTS AT CORNERS ONLY. ENSURE SEAMLESS TRANSITION. FOR PREFERRED PRICING CONTACT: CHRISTIE HOOD, 501.607.2044; christie.hood@tarkett.com

PAINT SCHEDULE

PT-#	MATERIAL	MRF.	MFR. #	COLOR	REMARKS
PT-5	LATEX	PRATT LAMBERT	2314-FB	SEED PEARL WHITE	GENERAL PAINT THROUGHOUT, U.N.O. BUILDING STANDARD FINISH

SPECIALTY FINISH SCHEDULE

SF-1	MATERIAL	MRF.	PATTERN/#	COLOR	REMARKS
SF-5	PORCELAIN TILE (60X120)	CONCEPT SURFACES	VIRTUOSO	STATUARIO WHITE	FINISH: POLISHED INSTALLATION: STACK BOND GROUT: MAPEI, WARM GRAY 93 FOR PREFERRED PRICING CONTACT: KELLY FITCHETT, CONCEPT SURFACES 214.927.9985; kellyf@conceptsurfaces.com
SF-6	PORCELAIN TILE (13X40)	PORCELANOSA	PARK LINEAL ACERO	-	INSTALLATION: STACK BOND CUT ALL TILES PER SIZE ON PLAN - REFERENCE SHEET I2.2. GROUT: MAPEI, WARM GRAY 93 FOR PREFERRED PRICING CONTACT: KELLI COLBERT, PORCELANOSA TEXAS 469.310.2870 *2970; kcolbert@porcelanosa-usa.com

FINISH PLAN LEGEND

SYMBOL	DESCRIPTION
NAME 000	ROOM NAME/NUMBER
XX.X	FINISH SPECIFICATION
WC-X	WALL FINISH SPECIFICATION
	FLOOR FINISH TRANSITION, 'E' INDICATES EXISTING TO REMAIN
	FLOORING DIRECTION
X	NOTE REFERENCE

ALL SYMBOLS NOT NECESSARILY USED

idGROUP
2641 IRVING BLVD.
DALLAS, TEXAS 75207
TEL: 214-638-6800 FAX: 214-689-0301

05/27/21

PROJECT NO.: 581-009
DRAWN BY: TM
CHECKED BY: MW
R.S.F.: 41,852

BILLINGSLEY COMPANY

3501 OLYMPUS
SELENE

3501 OLYMPUS BLVD
5TH FLOOR
DALLAS, TX 75019

NO.	ISSUED FOR:	DATE:
1		
2		
3		
4		
5		
6		
7		
8		

LANDLORD/CLIENT REVIEW ISSUE DATE: 05/27/21
BID ISSUE DATE: 05/27/21
CONSTRUCTION ISSUE DATE: 05/27/21

DRAWING TITLE:
FINISH PLAN

DRAWING NUMBER:
I1.3

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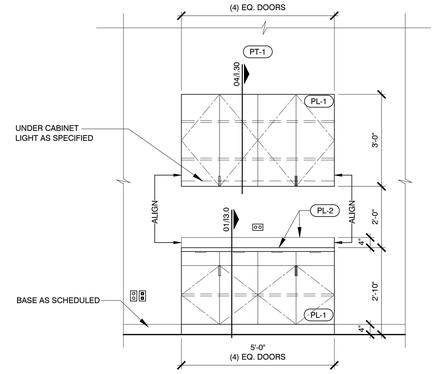
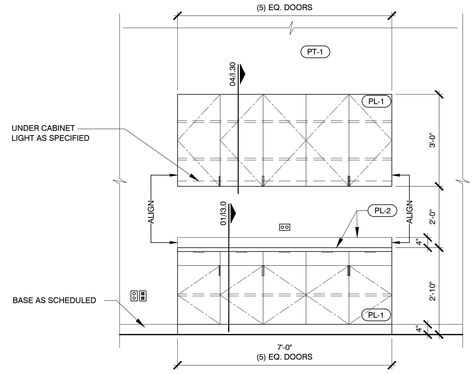
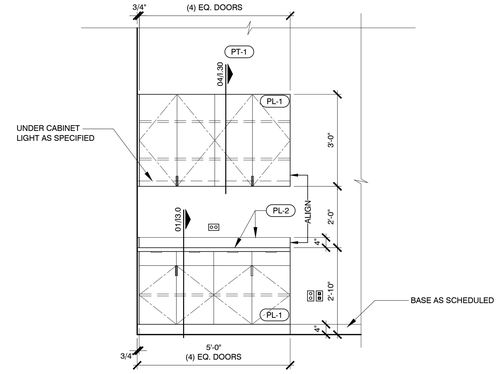


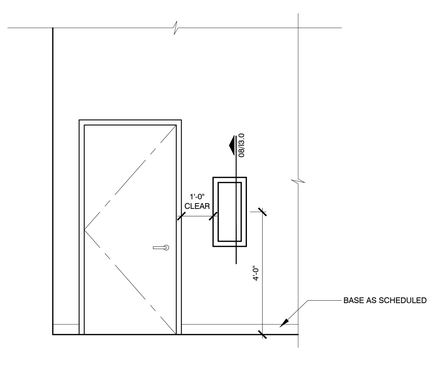
01 ELEVATION @ OPEN OFFICE 548
SCALE: 1/2" = 1'-0"



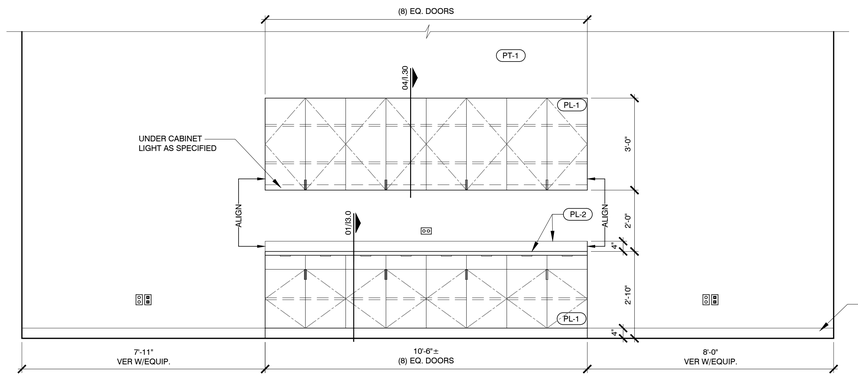
02 ELEVATION @ OPEN OFFICE 551
SCALE: 1/2" = 1'-0"



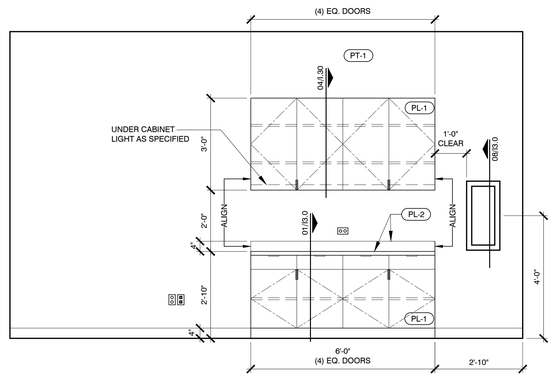
03 ELEVATION @ OPEN OFFICE 503 & 558
SCALE: 1/2" = 1'-0"



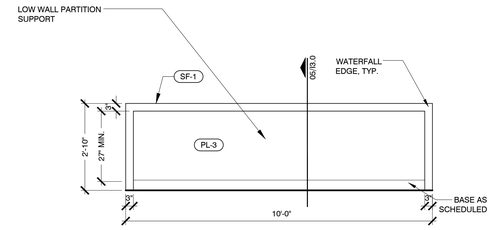
04 ELEVATION @ FEC
SCALE: 1/2" = 1'-0"



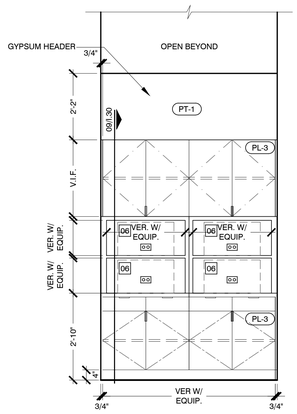
05 ELEVATION @ COPY AREA
SCALE: 1/2" = 1'-0"



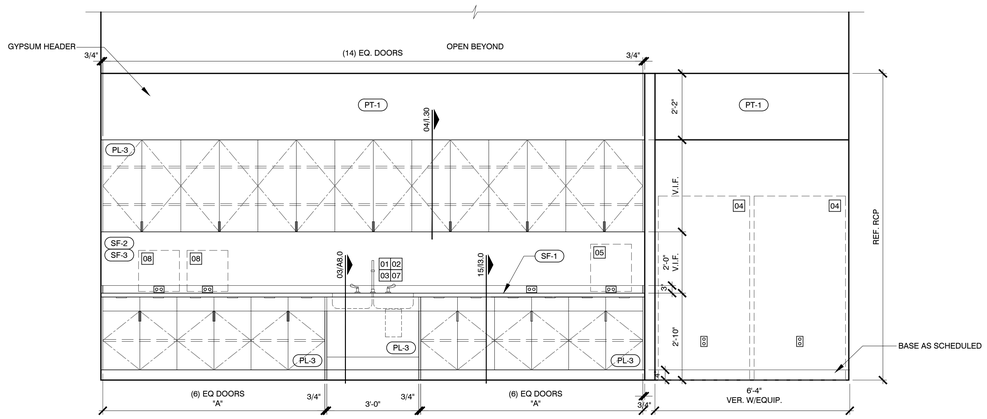
06 ELEVATION @ OPEN OFFICE 529
SCALE: 1/2" = 1'-0"



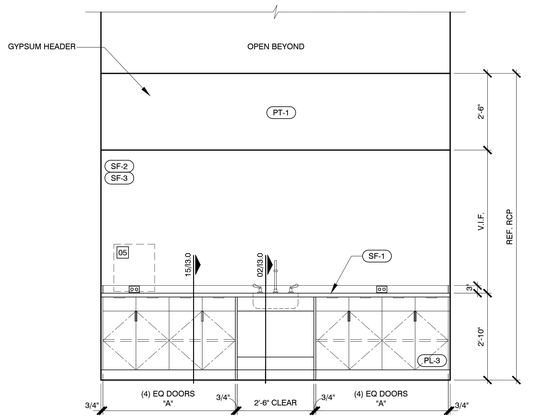
07 ELEVATION @ ISLAND
SCALE: 1/2" = 1'-0"



08 ELEVATION @ MICROWAVE TOWER
SCALE: 1/2" = 1'-0"



09 ELEVATION @ BREAK 532
SCALE: 1/2" = 1'-0"



10 ELEVATION @ OPEN OFFICE 515
SCALE: 1/2" = 1'-0"

idGROUP
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TEL: 214-638-6800 FAX: 214-689-0301

REGISTERED INTERIOR DESIGNER
MEGAN WEBB
11615
05/27/21

PROJECT NO.: 581-009
DRAWN BY: TM
CHECKED BY: MW
R.S.F.: 41,852

BILLINGSLEY
COMPANY

3501 OLYMPUS
SELENE

3501 OLYMPUS BLVD
5TH FLOOR
DALLAS, TX 75019

NO.	ISSUED FOR:	DATE:

LANDLORD/CLIENT REVIEW ISSUE DATE: 05/27/21
BID ISSUE DATE: 05/27/21
CONSTRUCTION ISSUE DATE: 05/27/21

DRAWING TITLE:
INTERIOR ELEVATIONS

DRAWING NUMBER:
I2.0

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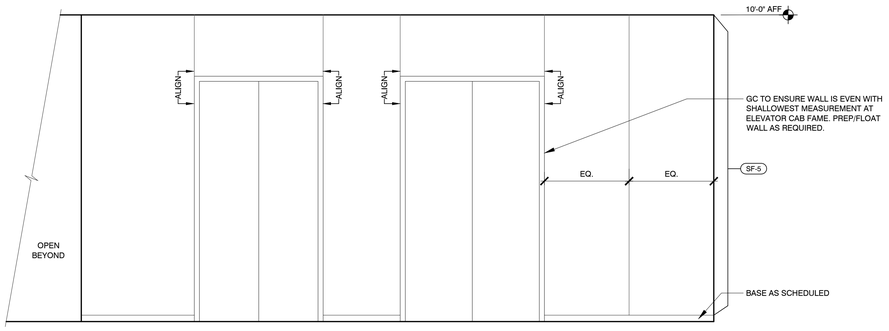
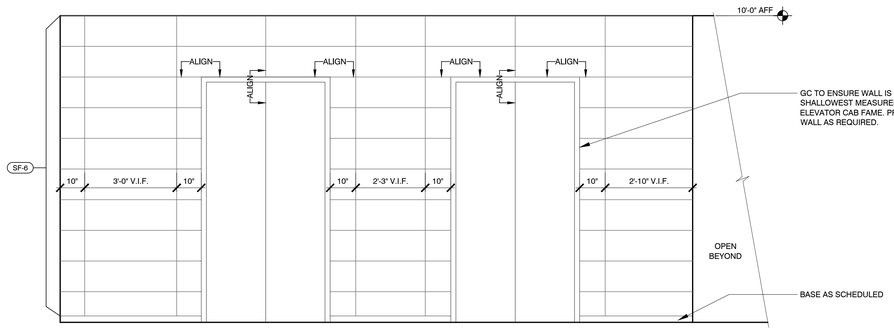


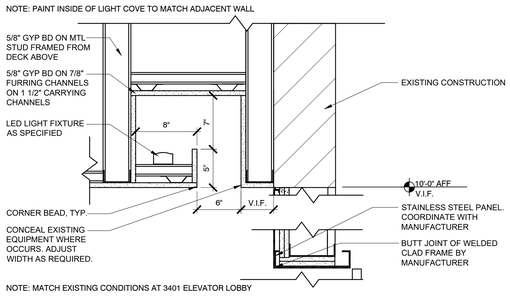
01 ELEVATION @ ELEVATOR LOBBY

SCALE: 1/2" = 1'-0"



02 ELEVATION @ ELEVATOR LOBBY

SCALE: 1/2" = 1'-0"



03 SECTION

SCALE: 1-1/2" = 1'-0"

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DALLAS, TEXAS 75207
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05/27/21

PROJECT NO.: 581-009
DRAWN BY: TM
CHECKED BY: MW
R.S.F.: 41,852

BILLINGSLEY COMPANY

3501 OLYMPUS SELENE

3501 OLYMPUS BLVD
5TH FLOOR
DALLAS, TX 75019

NO.	ISSUED FOR:	DATE:

LANDLORD/CLIENT REVIEW ISSUE DATE: 05/27/21
BID ISSUE DATE: 05/27/21
CONSTRUCTION ISSUE DATE: 05/27/21

DRAWING TITLE:
ELEVATOR LOBBY
INTERIOR ELEVATIONS -

DRAWING NUMBER:

I2.1

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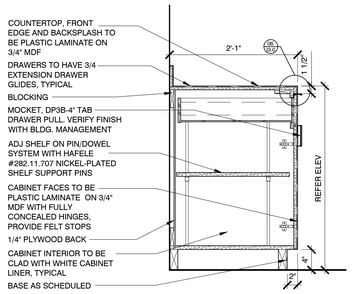

01 BASE CAB. SECTION
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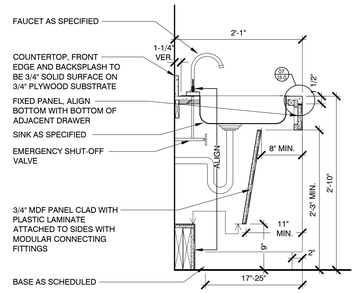
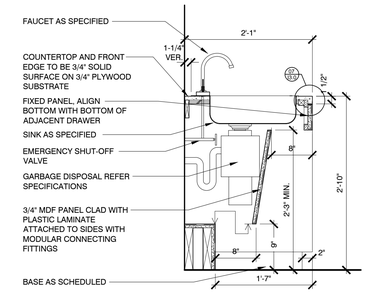


02 SINK SECTION
SCALE: 1" = 1'-0"



03 SINK SECTION
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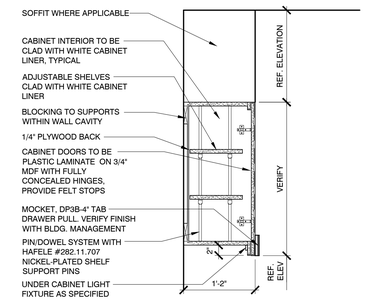
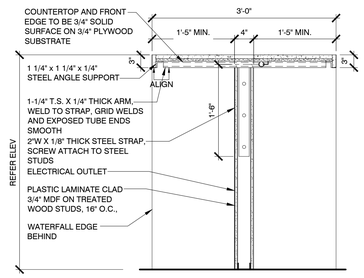
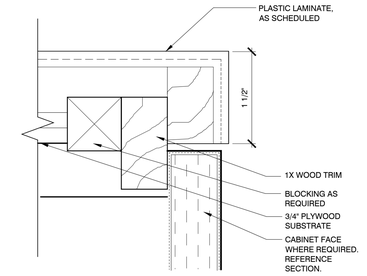


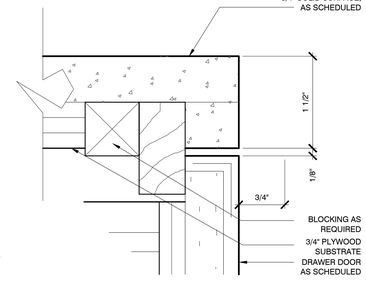
04 UPPER CAB. SECTION
SCALE: 1" = 1'-0"



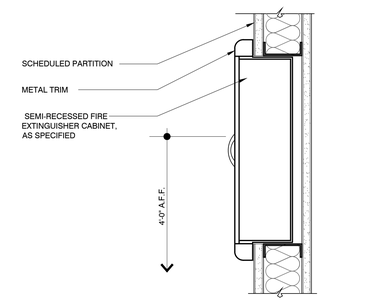
05 ISLAND SECTION
SCALE: 1" = 1'-0"



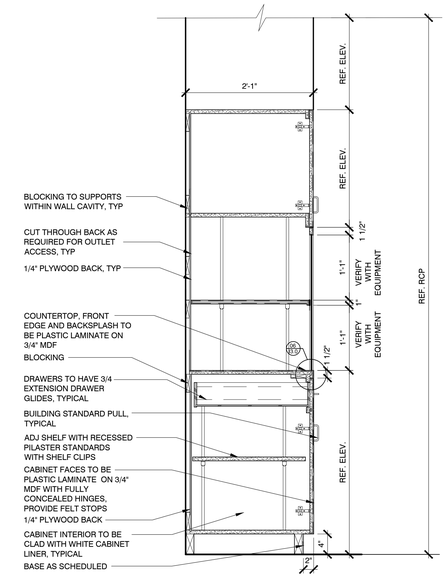
06 P. LAM DETAIL
SCALE: 1'-0" = 1'-0"



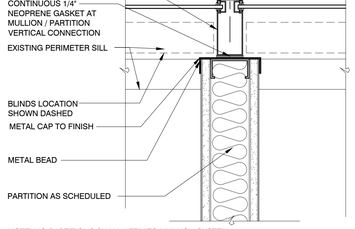
07 SOLID SURFACE DETAIL
SCALE: 1'-0" = 1'-0"



08 F.E.C. SECTION
SCALE: 3" = 1'-0"

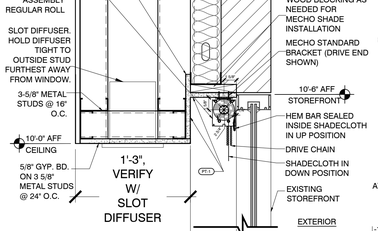


09 UPPER CAB. SECTION
SCALE: 1" = 1'-0"

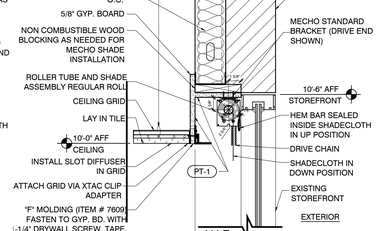


NOTE: NO PARTITIONS SHALL AFFIX TO MULLION SYSTEM.

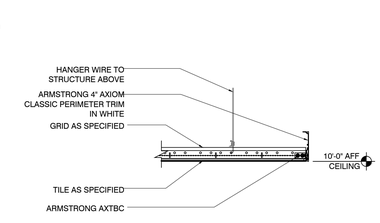
10 MULLION DETAIL
SCALE: 3" = 1'-0"



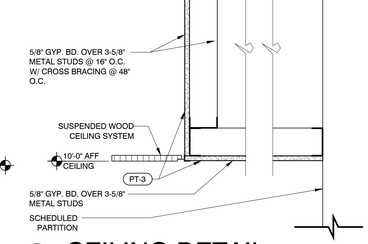
11 CEILING DETAIL
SCALE: 1 1/2" = 1'-0"



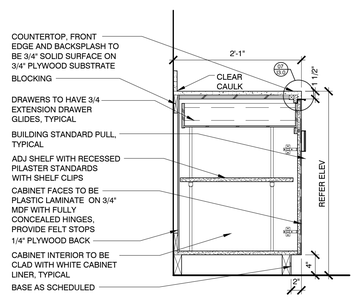
12 CEILING DETAIL
SCALE: 1 1/2" = 1'-0"



13 CEILING DETAIL
SCALE: 1 1/2" = 1'-0"



14 CEILING DETAIL
SCALE: 1 1/2" = 1'-0"



15 BASE CAB. SECTION
SCALE: 1" = 1'-0"

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DALLAS, TEXAS 75207
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05/27/21

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R.S.F.: 41,852

BILLINGSLEY COMPANY

3501 OLYMPUS

SELENE

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5TH FLOOR
DALLAS, TX 75019

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DRAWING TITLE:
SECTIONS & DETAILS

DRAWING NUMBER:
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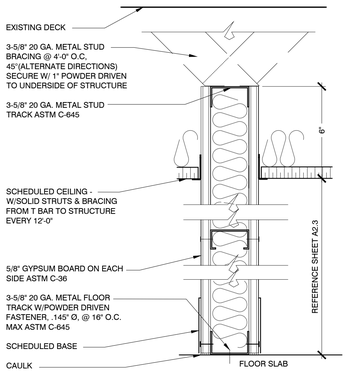
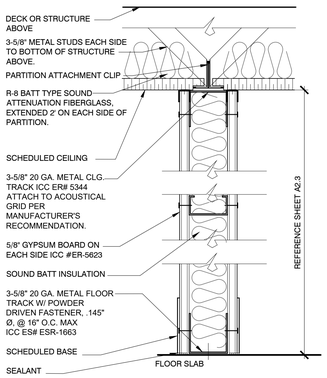


1 — 3-5/8" x 20 GA. METAL STUD @ 16" O.C., U.O.N., PARTITION FROM SLAB TO CEILING. BRACE TO DECK. FACE WITH 5/8" GYPSUM BOARD TO CEILING. FINISH AS SCHEDULED.

1X — AT WALL TYPE 1 PROVIDE BATT INSULATION WHERE INDICATED WITH AN "X".

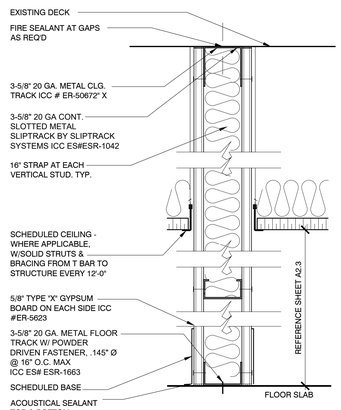
01 WALL TYPE 1
SCALE: 3" = 1'-0"



2 — 3-5/8" x 20 GA. METAL STUD @ 16" O.C., BUILDING STANDARD, U.O.N., PARTITION FROM SLAB TO UNDERSIDE OF CEILING. FACE WITH 5/8" GYPSUM BOARD, EACH SIDE, TO CEILING. FINISH AS SCHEDULED.

2X — AT WALL TYPE 2, PROVIDE SOUND BATT INSULATION WHERE INDICATED WITH AN "X".

02 WALL TYPE 2
SCALE: 3" = 1'-0"



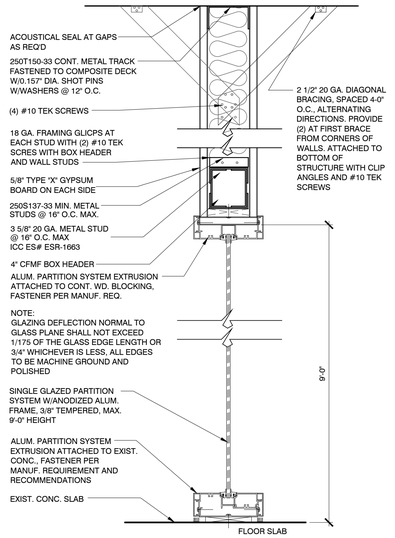
3 — 3-5/8" x 20 GA. METAL STUD @ 16" O.C., U.O.N., PARTITION FROM SLAB TO DECK. FACE WITH 5/8" TYPE 'X' GYPSUM BOARD. FINISH AS SCHEDULED.

3X — AT WALL TYPE 3 WHERE INDICATED WITH AN "X", PROVIDE SOUND BATT INSULATION.

3F — 1 HOUR FIRE RATED AT WALL TYPE 3, WHERE INDICATED WITH AN "F", PROVIDE SOUND BATT INSULATION AND FIRE SEALANT AT GAPS (UL419).

3P — SAME AS WALL TYPE "3X" WITH 6" STUDS.

03 WALL TYPE 3
SCALE: 3" = 1'-0"



4 — TEMPERED GLASS PARTITION FROM SLAB TO DECK. FINISH AS SCHEDULED.

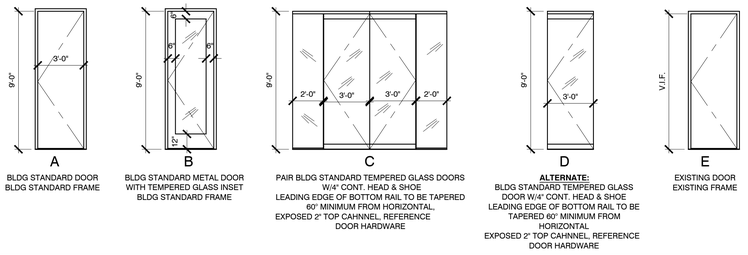
4X — AT WALL TYPE 9 WHERE INDICATED WITH AN "X", PROVIDE SOUND BATT INSULATION.

04 WALL TYPE 4
SCALE: 3" = 1'-0"

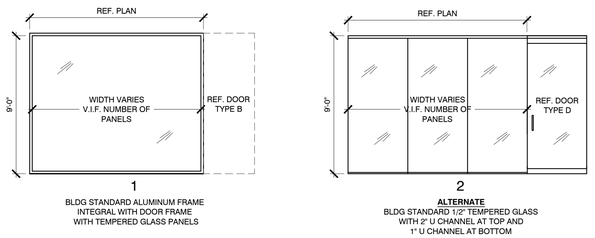
GENERAL PARTITION TYPE NOTES

1. CONTRACTOR TO VERIFY STUD GAUGE REQUIRED.
2. CONTRACTOR TO VERIFY BUILDING STANDARD STUD WIDTH WITH BUILDING MANAGEMENT.

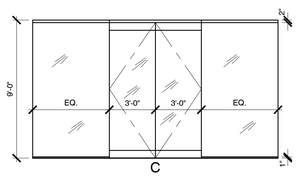
DOOR TYPES:



WINDOW TYPES:



PAIR BLDG STANDARD TEMPERED GLASS DOORS
W/4" CONT. HEAD & SHOE
LEADING EDGE OF BOTTOM RAIL TO BE TAPERED
60° MINIMUM FROM HORIZONTAL
SIDELIGHTS IN EXPOSED U-CHANNELS



GENERAL DOOR/HARDWARE NOTES:

1. HARDWARE TO BE BUILDING STANDARD "LEVER" TYPE ADA/TAS COMPLIANT, U.N.O. COORDINATE WITH BUILDING MANAGEMENT.

2. CLOSERS TO BE ADJUSTED TO MEET ADA/TAS STANDARDS. DOORS SHALL CLOSE FROM AN OPEN POSITION OF 70 DEGREES TO A POINT 3° FROM LATCH IN A MINIMUM OF (3) THREE SECONDS AND SHALL REQUIRE A MAXIMUM OF (5) POUNDS OF FORCE (lbf) TO OPEN.

3. KEYS: LOCKSETS TO ALL ROOMS TO BE KEYED TO MASTER. CONTRACTOR TO COORDINATE WITH BLDG. MGMT. FOR QUANTITY OF MASTER SETS TO BE PROVIDED.

4. KEYWAY: COORDINATE WITH BUILDING MANAGEMENT FOR MASTER KEY AND GRANDMASTER KEY SYSTEM COMPLIANCE.

5. ALL ELECTRICAL DOOR HARDWARE AND ACCESSORIES FOR INFORMATION ONLY. COORDINATE WITH SECURITY CONSULTANT AND BLDG. MGMT. FOR FINAL SELECTION.

6. ALL DOOR HARDWARE AND ACCESSORIES TO MATCH BUILDING STANDARDS, U.N.O.

7. PROVIDE DOOR FINISH SAMPLE TO BLDG. MGMT. FOR REVIEW AND APPROVAL PRIOR TO ORDERING.

8. ALL GLASS THICKNESS TO BE TO CODE AND DETERMINED BY GLASS VENDOR

9. REFERENCE PLAN FOR DOOR SWING DIRECTIONS. DOOR TYPES ARE FOR VISUAL PURPOSES ONLY.

10. SPECIFICATIONS FOR DOORS AND FRAMES:

DOOR FRAMES: RACO "CLASSIC PRESTIGE," OR APPROVED EQUAL, CLEAR ALUMINUM.

DOORS" 3'-0" X 9'-0" X 1-3/4" FIVE PLY SOLID CORE, FLUSH SLAB STAINED VENEER, WHITE OAK. STAIN FINISH: CLEAR CL18. VERIFY WITH LANDLORD FOR EXACT SPECIFICATIONS.

MORTISE SETS: SARGENT 8200 SERIES, LN ROSE TRIM, A LEVER, US26D SATIN CHROME PLATED.

KEYWAY:YALE INTERCHANGEABLE 6-PIN LARGE FORMAT KEYWAY. CORES MUST BE PROVIDED AND KEYED BY ARMORED LOCK.
CONTACT: JAMI WOLFENBERGER, 972.880.9245, armoredlock@gmail.com

HINGES: HAGER, MCKINNEY, OR STANLEY 4-1/2" X 4-1/2", 5-KNUCKLE, NON REMOVABLE PIN AT CORRIDORS.
4-1/2" X 4-1/2", 5-KNUCKLE, NON-RISING PIN AT CORRIDORS. US26, SATIN CHROME.

STOPS:FLOOR MOUNTED STOPS IN POLISHED OR SATIN STAINLESS STEEL.

DOOR HARDWARE SCHEDULE

a	PASSAGE SET
b	PASSAGE SET WITH CLOSER
c	OFFICE LOCKSET
d	OFFICE LOCKSET WITH CLOSER
e	EXISTING HARDWARE TO REMAIN
f	STOREROOM LOCKSET
g	PRIVACY LOCKSET WITH CLOSER
h	MAG LOCK W/ CONCEALED CLOSER AND EXPOSED HEADER, PUSH BUTTON RELEASE & POWER SOURCE FOR TENANT-PROVIDED SECURITY SYSTEM. 36" LADDER PULL (EACH SIDE)
k	ELECTRIC STRIKE W/ LOCKSET & CLOSER, PUSH BUTTON RELEASE & POWER SOURCE FOR TENANT-PROVIDED SECURITY SYSTEM
j	24" LADDER PULL BOTH SIDES, CONCEALED CLOSER, EXPOSED HEADER
ALL SYMBOLS NOT NECESSARILY USED	

GENERAL WINDOW NOTES:

1. INDIVIDUAL PANEL WIDTH NOT TO EXCEED 4'-0".

2. PROVIDE COPOLYMER STRIPS AT ALL BUTT-JOINT GLASS SEAMS.

3. GLASS THICKNESS TO BE DETERMINED BY VENDOR.

idGROUP
2641 IRVING BLVD.
DALLAS, TEXAS 75207
TEL: 214-638-6800 FAX: 214-689-0301

REGISTERED INTERIOR DESIGNER — NCIDQ — 31417 — STATE OF TEXAS

05/27/21

PROJECT NO.: 581-009
DRAWN BY: TM
CHECKED BY: MW
R.S.F.: 41,852

BILLINGSLEY COMPANY

3501 OLYMPUS
SELENE

3501 OLYMPUS BLVD
5TH FLOOR
DALLAS, TX 75019

NO.	ISSUED FOR:	DATE:
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LANDLORD/CLIENT REVIEW ISSUE DATE: 05/27/21
BID ISSUE DATE: 05/27/21
CONSTRUCTION ISSUE DATE: 05/27/21

DRAWING TITLE:
PARTITION & DOOR TYPES

DRAWING NUMBER:
I4.0

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GRILLES - REGISTERS - DIFFUSERS

DESIG.	DUTY	TYPE	MOUNTING LOCATION	MATERIAL	VOLUME CONTROL	FINISH	AIR PATTERN CONTROL	METHOD OF SUPPORT	EQUAL TO MANUFACTURER AND MODEL NO.	REMARKS
A	SUPPLY	PLAQUE	LAY-IN CLG	STEEL	YES	OFF WHITE	YES	T-BAR	TITUS OMNI 24X24 FACE	SEE NOTE 1,2
B	RETURN	PERFORATED	LAY-IN CLG	STEEL	NO	OFF WHITE	NO	T-BAR	TITUS PAR 24X24 FACE	SEE NOTE 2
B1	RETURN	PERFORATED	LAY-IN CLG	STEEL	NO	OFF WHITE	NO	T-BAR	TITUS PAR 24X12 FACE	SEE NOTE 2
C	SUPPLY	SLOT	LAY-IN CLG	STEEL	NO	BLACK	YES	T-BAR	TITUS TBD80 (1)1-1/2" SLOT	SEE NOTE 1,2,3,5
D	SUPPLY	ADUSTABLE	DUCT	ALUMINUM	NO	PRIMER	YES	SURFACE	TITUS S300FS	SEE NOTE 4
E	RETURN	FIXED	SIDEWALL	ALUMINUM	NO	PRIMER	NO	SURFACE	TITUS 350FL	SEE NOTE 4
F	SUPPLY	VERTICAL VANES	SIDEWALL	ALUMINUM	YES	PRIMER	YES	SURFACE	TITUS 300FS	SEE NOTE 4
G	SUPPLY	LINEAR SLOT	GYP BD CLG	ALUMINUM	NO	OFF WHITE	YES	SURFACE	TITUS FL-10-HT	SEE NOTE 6
H	RETURN	LINEAR SLOT	GYP BD CLG	ALUMINUM	NO	OFF WHITE	YES	SURFACE	TITUS FL-10-HT	SEE NOTE 7

NOTES:
1) NECK SIZES AS FOLLOWS:

DESIGNATION "A" CFM RANGE	NECK SIZE	DESIGNATION "C" CFM RANGE	NECK SIZE	LENGTH
000-300	8"RD	000-130	8"RD	2'-0"
305-435	10"RD	135-260	10"RD	4'-0"
530-600	15X15			
605-700	18X18			

2) NOTIFY ENGINEER OF ANY DISCREPENCIES BETWEEN NEW MODEL NUMBER AND EXISTING NUMBER PRIOR TO PURCHASE.
3) COORDINATE NEW INACTIVE SECTIONS NEXT TO SLOT DIFFUSER WITH ARCHITECT PRIOR TO BIDDING.
4) REFER TO DRAWINGS FOR GRILLE/NECK SIZES.
5) INACTIVE SECTIONS OF SLOT DIFFUSERS SHALL HAVE SHEET METAL LIGHTPROOF SIGHT GUARDS AND SHALL BE USED FOR RETURN AIR.
6) CONTINUOUS GRILLE; PROVIDE REQUIRED MP-39 PLENUMS AS NEEDED.
7) INSTALL GRILLE AND PROVIDE BLACK SHEET METAL LIGHTSHIELD FOR CONTINUOUS LOOK. COORDINATE EXACT LENGTH OF SLOT WITH ARCHITECT. COORDINATE BORDER TYPE WITH ARCHITEC
8) APPROVED MANUFACTURERS: PRICE, TITUS, NAILOR, & KRUEGER.

VRF DX - FAN COIL UNIT

DESIG.	SERVES	DESIGN COOLING CFM	OUTSIDE AIR CFM	NOMINAL COOLING CAPCITY BTUH	NOMINAL HEATING CAPCITY	VOLTAGE	HERTZ	MCA	MOCP	EQUAL TO MANUFACTURER	MODEL NO.
FCU-5-3	OPEN OFFICE 516	1140	185	36000	40000	208/1	60	3.50	15	MITSUBISHI	TPEFYP036MA143A
FCU-5-4	OPEN OFFICE 517	1075	40	36000	40000	208/1	60	3.50	15	MITSUBISHI	TPEFYP036MA143A
FCU-5-5	OPEN OFFICE 517	860	65	24000	27000	208/1	60	2.73	15	MITSUBISHI	TPEFYP024MA143A
FCU-5-6	OPEN OFFICE 518	1140	75	36000	40000	208/1	60	3.50	15	MITSUBISHI	TPEFYP036MA143A
FCU-5-7	OPEN OFFICE 518	1140	90	36000	40000	208/1	60	3.50	15	MITSUBISHI	TPEFYP036MA143A
FCU-5-8	OPEN OFFICE 522	1140	90	36000	40000	208/1	60	3.50	15	MITSUBISHI	TPEFYP036MA143A
FCU-5-9	OPEN OFFICE 522	880	65	27000	30000	208/1	60	2.73	15	MITSUBISHI	TPEFYP027MA143A
FCU-5-10	OPEN OFFICE 529	1320	105	48000	54000	208/1	60	3.51	15	MITSUBISHI	TPEFYP048MA143A
FCU-5-11	OPEN OFFICE 529	1320	70	48000	54000	208/1	60	3.51	15	MITSUBISHI	TPEFYP048MA143A
FCU-5-12	OFFICES 534-535	880	45	24000	27000	208/1	60	2.73	15	MITSUBISHI	TPEFYP024MA143A
FCU-5-13	OFFICES 536-537	880	45	24000	27000	208/1	60	2.73	15	MITSUBISHI	TPEFYP024MA143A
FCU-5-14	OFFICE 538	840	40	24000	27000	208/1	60	2.73	15	MITSUBISHI	TPEFYP024MA143A
FCU-5-15	OFFICE 539/OPEN OFF 533	600	35	18000	20000	208/1	60	1.56	15	MITSUBISHI	TPEFYP018MA143A
FCU-5-16	CONFERENCE 540	490	95	15000	17000	208/1	60	1.45	15	MITSUBISHI	TPEFYP015MA143A
FCU-5-17	OPEN OFFICE 533	1140	195	36000	40000	208/1	60	3.50	15	MITSUBISHI	TPEFYP036MA143A
FCU-5-18	BREAK 532	280	55	8000	9000	208/1	60	1.05	15	MITSUBISHI	TPEFYP008MA143A
FCU-5-19	OFFICES 526-531	300	55	8000	9000	208/1	60	1.05	15	MITSUBISHI	TPEFYP008MA143A
FCU-5-20	OPEN OFFICE 529	1140	200	36000	40000	208/1	60	3.50	15	MITSUBISHI	TPEFYP036MA143A
FCU-5-21	OFFICES 500; 519-525	880	175	24000	27000	208/1	60	2.73	15	MITSUBISHI	TPEFYP024MA143A
FCU-5-22	OPEN OFFICE 522	1400	255	48000	54000	208/1	60	3.51	15	MITSUBISHI	TPEFYP048MA143A
FCU-5-23	OFFICES 505-509	370	75	12000	13500	208/1	60	1.20	15	MITSUBISHI	TPEFYP012MA143A
FCU-5-24	OPEN OFFICE 518	1400	240	48000	54000	208/1	60	3.51	15	MITSUBISHI	TPEFYP048MA143A
FCU-5-25	OFFICE 510/HALL	880	110	24000	27000	208/1	60	2.73	15	MITSUBISHI	TPEFYP024MA143A
FCU-5-26	CONFERENCE 511	150	45	6000	6700	208/1	60	1.05	15	MITSUBISHI	TPEFYP006MA143A
FCU-5-27	CONFERENCE 512	150	45	6000	6700	208/1	60	1.05	15	MITSUBISHI	TPEFYP006MA143A
FCU-5-28	OPEN OFFICE 516	1150	55	36000	40000	208/1	60	3.50	15	MITSUBISHI	TPEFYP048MA143A
FCU-5-29	OPEN OFFICE 515	880	35	24000	27000	208/1	60	2.73	15	MITSUBISHI	TPEFYP024MA143A
FCU-5-30	OPEN OFFICE 515	1150	70	36000	40000	208/1	60	3.50	15	MITSUBISHI	TPEFYP036MA143A
FCU-5-31	OPEN OFFICE 515	870	110	24000	27000	208/1	60	2.73	15	MITSUBISHI	TPEFYP024MA143A
FCU-5-32	CONFERENCE 513	150	45	6000	6700	208/1	60	1.05	15	MITSUBISHI	TPEFYP006MA143A
FCU-5-33	CONFERENCE 514	150	45	6000	6700	208/1	60	1.05	15	MITSUBISHI	TPEFYP006MA143A
FCU-5-34	OPEN OFFICE 515	1160	210	36000	40000	208/1	60	3.50	15	MITSUBISHI	TPEFYP036MA143A
FCU-5-35	OPEN OFFICE 515	1150	100	48000	54000	208/1	60	3.51	15	MITSUBISHI	TPEFYP048MA143A
FCU-5-36	OPEN OFFICE 504	1150	100	48000	54000	208/1	60	3.51	15	MITSUBISHI	TPEFYP048MA143A
FCU-5-37	OPEN OFFICE 504	1150	115	48000	54000	208/1	60	3.51	15	MITSUBISHI	TPEFYP048MA143A
FCU-5-38	OPEN OFFICE 503	900	100	24000	27000	208/1	60	2.73	15	MITSUBISHI	TPEFYP024MA143A
FCU-5-39	OPEN OFFICE 503	1160	100	36000	40000	208/1	60	3.50	15	MITSUBISHI	TPEFYP036MA143A
FCU-5-40	OPEN OFFICE 503	600	125	18000	20000	208/1	60	1.56	15	MITSUBISHI	TPEFYP018MA143A
FCU-5-41	CONFERENCE 554	145	45	6000	6700	208/1	60	1.05	15	MITSUBISHI	TPEFYP006MA143A
FCU-5-42	OPEN OFFICE 550/OFFICES	1155	180	36000	40000	208/1	60	3.50	15	MITSUBISHI	TPEFYP036MA143A
FCU-5-43	OPEN OFFICE 550	1140	95	36000	40000	208/1	60	3.50	15	MITSUBISHI	TPEFYP036MA143A
FCU-5-44	OPEN OFFICE 551	880	55	27000	30000	208/1	60	2.73	15	MITSUBISHI	TPEFYP027MA143A
FCU-5-45	OPEN OFFICE 548	1150	65	36000	40000	208/1	60	3.50	15	MITSUBISHI	TPEFYP036MA143A
FCU-5-46	OFFICE 547	460	15	15000	17000	208/1	60	1.45	15	MITSUBISHI	TPEFYP015MA143A
FCU-5-47	OFFICES 543-546	880	55	30000	34000	208/1	60	2.73	15	MITSUBISHI	TPEFYP030MA143A
FCU-5-48	OPEN OFFICE 548	1160	195	36000	40000	208/1	60	3.50	15	MITSUBISHI	TPEFYP036MA143A
FCU-5-49	CONFERENCE 550	170	50	6000	6700	208/1	60	1.05	15	MITSUBISHI	TPEFYP006MA143A
FCU-5-50	OFFICE 549/STOR 541	250	50	8000	9000	208/1	60	1.05	15	MITSUBISHI	TPEFYP008MA143A
FCU-5-51	CONFERENCE 542	165	45	6000	6700	208/1	60	1.05	15	MITSUBISHI	TPEFYP006MA143A

NOTES: (APPLICABLE TO ALL BOXES)
1) Refer to specifications for additional requirements.
2) Nominal cooling capacities are based on indoor coil EAT of 80/67°F (DB/WB), outdoor of 95°F (DB)
3) Nominal heating capacities are based on indoor coil EAT of 70°F (DB), outdoor of 43°F (WB)
4) See schematic piping/control diagram for indication of required indoor unit remote controllers, system

NOTES:
1) NOMINAL COOLING CAPACITIES ARE BASED ON INDOOR COIL EAT OF 80/67 F (DB/WB), OUTDOOR OF 95 DEGREES F (DB).
2) NOMINAL HEATING CAPACITIES ARE BASED ON INDOOR COIL EAT OF 70 DEGREES F (DB), OUTDOOR OF 43 DEGREES F (WB)
3) SEE OUTDOOR UNIT SCHEDULE FOR OUTDOOR AMBIENT CONDITIONS, CONNECTED CAPACITY, AND OTHER FACTORS ASSOCIATED WITH CORRECTED CAPACITIES.
4) FULL DEMAND CORRECTED CAPACITY INCLUDES DE-RATE ASSOCIATED WITH INDOOR VS OUTDOOR CONNECTED CAPACITY INDICATED ON OUTDOOR UNIT SCHEDULE FOR ASSOCIATED SYSTEM. PARTIAL CORRECTED CAPACITY ASSUMES SUFFICIENT DIVERSITY EXISTS SUCH THAT THE CONNECTED CAPACITY DE-RATE
5) CONTROLS TO BE CLIMATEC DDC CONTROLS. REFER TO SEQUENCE OF OPERATION FOR VRF CONTROLS AND CONNECTION TO BMS.
6) APPROVED MANUFACTURER'S ARE: MITSUBISHI, SAMSUNG, CARRIER, DAIKIN, TRANE AND LG.
7) PROVIDE ADD ALTERNATE FOR BI-POLAR IONIZATION AT EACH UNIT WITH SENSORS FOR OPERATIONAL FEEDBACK.

DX COMPUTER ROOM AIR CONDITIONING

INDOOR EVAPORATOR UNIT									OUTDOOR CONDENSING UNIT @ 105 DEF F AMBIENT				
		COOLING			ELECTRIC			EQUAL TO MANUF &		ELECTRICAL			EQUAL TO MANUF. &
DESIG.	CFM	DB/WB	TOTAL MBH	SENS. MBH	FLA	OPD	VOLT/PH	MODEL NUMBER	DESIG.	MCA	OPD	VOLT/PH	MODEL NUMBER
AHU-5-1	2000	80/67	61.2	51.3	43.2	60	208/3	LIEBERT MMD60E	CU-5-1	24.2	50	208/3	LIEBERT PFH067A
*AHU-5-2	2000	80/67	61.2	51.3	43.2	60	208/3	LIEBERT MMD60E	CU-5-2	24.2	50	208/3	LIEBERT PFH067A

NOTES:
1) REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
2) PROVIDE CONDENSATE PUMP EQUAL TO LITTLE GIANT MODEL EC-OP-K
3) ROUTE CONDENSATE PIPING, COPPER TYPE K, TO NEAREST MOP SINK VIA APPROVED AIR GAP.
4) PROVIDE SMOKE DETECTOR IN ALL UNITS 2000 CFM AND ABOVE
5) APPROVED MANUFACTURER'S: LIEBERT, AAON, DATA-AIRE, MCQUAY.
6) FOR AHU-5-1 AND 5-2, PROVIDE LIEBERT ICOM CMS CONTROLLER, NON-LOCKING DISCONNECT SWITCH, CONDENSATE PUMP FOR PRIMARY AND SECONDARY CONDENSATE DRAINS, SMOKE DETECTORS, SUPPLY PLENUM, AND LEAK DETECTION KIT.
7) * FOR AHU-5-1 AND 5-2, PROVIDE LIEBERT AC4 CONTROLS FOR AUTO CHANGE-OVER LEAD/LAG WITH N+1 REDUNDANCY. ONE UNIT WILL BE BACKUP FOR MAXIMUM OF 1 WEEK PERIOD.
8) APPROVED MANUFACTURER'S FOR CRAC 1-2 AND 1-3 ARE: LIEBERT, DATA-AIRE, STULZ
9) ALL SUBSTITUTIONS SHALL BE APPROVED IN WRITING PRIOR TO BID.
* PROVIDE ALTERNATE BID FOR UNIT.

DALLAS GREEN BUILDING RQMTS.

SECTION 802.1 SCOPE. TO FACILITATE THE OPERATION AND MAINTENANCE OF THE COMPLETED BUILDING, THE BUILDING AND ITS SYSTEMS SHALL COMPLY WITH THE REQUIREMENTS OF SECTIONS 802.2 AND 802.3.

802.2 AIR HANDLING SYSTEM ACCESS: THE ARRANGEMENT AND LOCATION OF AIR HANDLING SYSTEM COMPONENTS, INCLUDING, BUT NOT LIMITED TO, DUCTS, AIR HANDLING UNITS, FANS, COILS, AND CONDENSATE PANS, SHALL ALLOW ACCESS FOR CLEANING AND REPAIR OF AIR HANDLING SURFACES OF SUCH COMPONENTS ACCESS PORTS SHALL BE INSTALLED IN THE AIR HANDLING SYSTEM TO PERMIT SUCH CLEANING AND REPAIRS. PIPING, CONDUITS, AND OTHER BUILDING COMPONENTS SHALL NOT BE LOCATED SO AS TO OBSTRUCT THE REQUIRED ACCESS PORTS.

802.3 AIR HANDLING SYSTEM FILTRATION AND BYPASS PATHWAYS: AIR HANDLING EQUIPMENT AND HVAC EQUIPMENT SHALL BE DESIGNED AND INSTALLED TO LIMIT THE AMOUNT OF AIRFLOW THAT BY PASSES THE AIR FILTERS AND SHALL COMPLY WITH THE FOLLOWING:
1. CHANNELS, RACKS AND OTHER FILTER–RETAINING CONSTRUCTIONS THAT DO NOT SEAL TIGHTLY TO THE FILTER FRAME BY MEANS OF FRICTION FIT SHALL BE PROVIDED WITH A MEANS TO SEAL THE FILTER FRAME TO THE FILTER–HOLDING CONSTRUCTION.
2. WHERE STANDARD SIZE FILTERS ARE INSTALLED IN BANKS OF MULTIPLE FILTERS, GASKETS SHALL SEAL THE GAP BETWEEN THE FRAMES OF ADJACENT FILTERS.
3. AS AN ALTERNATIVE TO GASKETS, THE FRAMES OF ADJACENT FILTERS SHALL BE COMPRESSED TIGHTLY TOGETHER BY MEANS OF SPRING ELEMENTS THAT ARE BUILT INTO THE FILTER RETAINING CONSTRUCTION.
4. CHANNELS, RACKS AND OTHER FILTER–RETAINING CONSTRUCTIONS SHALL BE SEALED TO THE DUCT OR HOUSING OF THE HVAC EQUIPMENT SERVED BY THE FILTERS.
5. FILTER ACCESS DOORS IN DUCTS AND HVAC EQUIPMENT SHALL BE DESIGNED TO LIMIT THE AMOUNT OF AIRFLOW THAT BYPASSES THE FILTERS.
6. FIELD OR SHOP–FABRICATED SPACERS SHALL NOT BE INSTALLED FOR THE PURPOSE OF REPLACING THE INTENDED SIZE FILTER WITH A SMALLER SIZE FILTER.
7. GASKETS AND SEALS SHALL BE ACCESSIBLE FOR REPAIR, MAINTENANCE AND REPLACEMENT.

803.1 CONSTRUCTION PHASE REQUIREMENTS. THE VENTILATION OF BUILDINGS DURING THE CONSTRUCTION PHASE SHALL BE IN ACCORDANCE WITH SECTIONS 803.1.1 THROUGH 803.1.3.

803.1.1 DUCT OPENINGS. DUCT AND OTHER RELATED AIR DISTRIBUTION COMPONENT OPENINGS SHALL BE COVERED WITH TAPE, PLASTIC, SHEET METAL, OR SHALL BE CLOSED BY AN APPROVED METHOD TO REDUCE THE AMOUNT OF DUST AND DEBRIS THAT COLLECTS IN THE SYSTEM FROM THE TIME OF ROUGH–IN INSTALLATION AND UNTIL STARTUP OF THE HEATING AND COOLING EQUIPMENT. DUST AND DEBRIS SHALL BE CLEANED FROM DUCT OPENINGS PRIOR TO SYSTEM FLUSH OUT AND BUILDING OCCUPANCY.

8031.2 INDOOR AIR QUALITY DURING CONSTRUCTION. TEMPORARY VENTILATION DURING CONSTRUCTION SHALL BE PROVIDED IN ACCORDANCE WITH SECTION 803.1.2.1 THROUGH 803.1.2.3.

803.1.2.1 VENTILATION. VENTILATION DURING CONSTRUCTION SHALL BE ACHIEVED THROUGH OPENINGS IN THE BUILDING ENVELOPE USING ONE OR MORE OF THE FOLLOWING METHODS:
1. NATURAL VENTILATION IN ACCORDANCE WITH THE PROVISIONS OF THE INTERNATIONAL BUILDING CODE OR THE INTERNATIONAL MECHANICAL CODE.
2. FANS THAT PRODUCE A MINIMUM OF THREE AIR CHANGES PER HOUR.
3. EXHAUST IN THE WORK AREA AT A RATE OF NOT LESS THAN 0.05 CFM/FT2 (0.24 L/S/IN2) AND NOT LESS THAN 10 PERCENT GREATER THAN THE SUPPLY AIR RATE SO AS TO MAINTAIN NEGATIVE PRESSURIZATION OF THE SPACE.

803.1.2.2 PROTECTION OF HVAC SYSTEM OPENINGS. HVAC SUPPLY AND RETURN DUCT AND EQUIPMENT OPENINGS SHALL BE PROTECTED DURING DUST–PRODUCING OPERATIONS.

803.1.2.3 RETURN AIR FILTERS. WHERE A FORCED AIR HVAC SYSTEM IS USED DURING CONSTRUCTION, NEW RETURN AIR FILTERS SHALL BE INSTALLED PRIOR TO SYSTEM FLUSH OUT AND BUILDING OCCUPANCY.

803.1.3 CONSTRUCTION PHASE DUCTLESS SYSTEM OR FILTER. WHERE SPACES ARE CONDITIONED DURING THE CONSTRUCTION PHASE, SPACE CONDITIONING SYSTEMS SHALL BE OF THE DUCTLESS VARIETY, OR FILTERS FOR THE DUCTED SYSTEMS SHALL BE RATED AT MERV 8 O R HIGHER IN ACCORDANCE WITH ASHRAE 52.2, AND SYSTEM EQUIPMENT SHALL BE DESIGNED TO BE COMPATIBLE, DUCT SYSTEM DESIGN SHALL ACCOUNT FOR PRESSURE DROP ACROSS THE FILTER.

803.2 THERMAL ENVIRONMENTAL CONDITIONS FOR HUMAN OCCUPANCY. BUILDING SHALL BE DESIGNED IN COMPLIANCE WITH ASHRAE 55, SECTIONS 6.1, "DESIGN" AND 6.2, "DOCUMENTATION."

EXCEPTION: SPACES WITH SPECIAL REQUIREMENTS FOR PROCESSES, ACTIVITITES, OR CONTENTS THAT REQUIRE A THERMAL ENVIRONMENT OUTSIDE OF THAT WHICH HUMANS FIND THERMALLY ACCEPTABLE, SUCH AS FOOD STORAGE, NATATORIUMS, SHOWER ROOMS, SAUNAS AND DRYING ROOMS.

803.3 ISOLATION OF POLLUTANT SOURCES. THE ISOLATION OF POLLUTANT SOURCES RELATED TO PRINT, COPY AND JANITORIAL ROOMS, GARAGES AND HANGERS SHALL BE IN ACCORDANCE WITH SECTION 803.3.1.

803.3.1 PRINTER, COPIER AND JANITORIAL ROOMS. ENCLOSED ROOMS OR SPACES THAT ARE OVER 100 SQUARE FEET (9.3 M2) IN AREA AND THAT ARE USED PRIMARILY AS A PRINT OR COPY FACILITY CONTAINING FIVE OR MORE PRINTERS, COPY MACHINES, SCANNERS, FACSIMILE MACHINES OR SIMILAR MACHINES IN ANY COMBINATION, AND ROOMS USED PRIMARILY AS JANITORIAL ROOMS OR CLOSETS WHERE THE USE OR STORAGE OF CHEMICALS OCCURS, SHALL COMPLY WITH ALL OF THE FOLLOWING:

1. THE ENCLOSING WALLS SHALL EXTEND FROM THE FLOOR SURFACE TO THE UNDERSIDE OF THE FLOOR, ROOF DECK OR SOLID CEILING ABOVE AND SHALL BE CONSTRUCTED TO RESIST THE PASSAGE OF AIRBORNE CHEMICAL POLLUTANTS AND SHALL BE CONSTRUCTED AND SEALED AS REQUIRED FOR 1–HOUR FIRE–RESISTANCE–RATED CONSTRUCTION ASSEMBLIES. ALTERNATIVELY, FOR JANITORIAL ROOMS AND CLOSETS, ALL CHEMICALS SHALL BE STORED IN APPROVED CHEMICAL SAFETY STORAGE CABINETS.
2. DOORS IN THE ENCLOSING WALLS SHALL BE AUTOMATIC OR SELF–CLOSING.
3. AN HVAC SYSTEM SHALL BE PROVIDED THAT: PROVIDES SEPARATE EXHAUST AIRFLOW TO THE OUTDOORS AT A RATE OF NOT LESS THAN 0.50 CFM PER SQUARE FOOT (2.4 L/S/M2); THAT MAINTAINS A NEGATIVE PRESSURE OF NOT LESS THAN 7 PA WITHIN THE ROOM; AND THAT PROHIBITS THE RE–CIRCULATION OF AIR FROM THE ROOM TO OTHER PORTIONS OF THE BUILDINGS.

803.4 FILTERS. FILTERS FOR AIR CONDITIONING SYSTEMS THAT SERVE OCCUPIED SPACES SHALL BE RATED AT MERV 11 OR HIGHER, IN ACCORDANCE WITH ASHRAE STANDARD 52.2, AND SYSTEM EQUIPMENT SHALL BE DESIGNED TO BE COMPATIBLE. THE AIR HANDLING SYSTEM DESIGN SHALL ACCOUNT FOR PRESSURE DROP ACROSS THE FILTER. THE PRESSURE DROP ACROSS CLEAN MERV 11 FILTERS SHALL BE NOT GREATER THAN 0.45 IN. W.C. AT 500 FPM (412 PA AT 2.54 M/S) FILTER FACE VELOCITY. FILTER PERFORMANCE SHALL BE SHOWN ON THE FILTER MANUFACTURER'S DATA SHEET.

EXCEPTION: FILTERS FOR AIR CONDITIONING SYSTEMS THAT SERVE OCCUPIED SPACES IN MUTI–FAMILY RESIDENTIAL UNITS OR LIGHT COMMERCIAL SPACES SHALL BE RATED AT MERV 6 FOR SYSTEMS RATED AT 30,000 BTU/H OR LESS AND MERV 8 FOR SYSTEMS RATED OVER 30,000 BTU/H BUT NO GREATER THAN 60,000 BTU/H.

COORDINATION WITH SHELL INSTALLATION
1. **TENANT CONTRACTOR TO RELEASE THE 250PSI NITROGEN HOLDING PRESSURE**
2. **TENANT CONTRACTOR TO TEST ALL PIPING WITHIN INSTALLATION.**
3. **TENANT CONTRACTOR TO VACUUM AFFECTED SYSTEMS DOWN TO LESS THAN 500MICRONS ON THE CENTRAL SYSTEM**
4. **TENANT CONTRACTOR SHALL PROVIDE REFRIGERATE AS REQUIRED FOR A COMPLETE SYSTEM.**
5. **TENANT CONTRACTOR SHALL PROVIDE WARRANTEE FROM ODU TO AC UNIT.**
6. **FINAL LINE LENGTHS TO BE REPORTED BACK TO TRANE TO UPDATE MITSUBISHI FOR FINAL REFRIGERANT CHARGES.**

GENERAL NOTES:

A. ALL WORK SHALL COMPLY WITH APPLICABLE NATIONAL, STATE AND LOCAL CODES, RULES, REGULATIONS AND REQUIREMENTS.

B. ALL WORK SHALL COMPLY WITH THE BUILDING TENANT CONSTRUCTION GUIDE. COORDINATE WITH BUILDING MANAGEMENT/OWNER FOR ACCESS TO ANY TENANT LEASE SPACES THAT MIGHT BE REQUIRED FOR THE INSTALLATION. . UNLESS DIRECTED BY LANDLORD ALL EQUIPMENT AND WORKMANSHIP SHALL BE GUARANTEED FOR 1 YEAR.

C. EXISTING CONDITIONS ARE BASED ON INFORMATION PROVIDED BY SITE SURVEY AND PREVIOUS RECORD DRAWINGS. HOWEVER, IT IS NOT INTENDED TO BE A TRUE REPRESENTATION OF ACTUAL CONDITIONS. CONTRACTOR SHALL VISIT JOB SITE PRIOR TO BIDDING TO ASCERTAIN EXISTING CONDITIONS AND SHALL NOTIFY ARCHITECT OF ANY DISCREPANCIES PRIOR TO BID.

D. CONTRACTOR SHALL ENGAGE AN INDEPENDENT AIR BALANCING COMPANY TO OBTAIN AIR QUANTITIES SHOWN ON DRAWING. AT COMPLETION OF AIR BALANCE, BALANCING DAMPER SHALL BE TIGHTENED AND PROPERLY SEALED WITH FOIL TAPE.

E. ALL MEDIUM AND LOW PRESSURE DUCTWORK SHALL BE GALVANIZED SHEET METAL, FABRICATED. INSTALL AND SEAL MEDIUM PRESSURE DUCTWORK FOR 3"W.G. AND LOW PRESSURE DUCTWORK FOR 1"W.G. IN ACCORDANCE WITH SMACNA STANDARD. DUCTWORK SHALL BE INSULATED WITH FIBERGLASS BLANKET WITH FOIL FACED VAPOR BARRIER TO MEET IECC REQUIREMENT (MIN R5 VALUE).

F. ALL SUPPLY AND RETURN DUCT SIZES ARE FREE AREAS.

G. INDIVIDUAL DUCT RUN–OUTS TO EACH DIFFUSER SHALL BE SIZED IN ACCORDANCE TO THE DIFFUSER NECK SIZE FOUND IN THE GRILLES–REGISTERS–DIFFUSERS SCHEDULE UNLESS NOTED OTHERWISE

H. OFFSET DUCTS INTO JOIST SPACE FOR CLEARANCE WHERE SPACE ABOVE CEILING IS NOT SUFFICIENT FOR DUCTS TO CROSS OTHER DUCTS OR WORK OF OTHER TRADES.

I. INSULATED FLEX DUCT IN THE LOW PRESSURE SYSTEM SHALL BE LIMITED TO AN OVERALL LENGTH OF SIX (6) FEET WITH A MAXIMUM OF A 90 DEGREE CHANGE IN DIRECTION. SUPPORTS SHALL BE SADDLE BANDED TO STRUCTURE. SUPPORTING FROM FIRE PROTECTION PIPING, ELECTRICAL CONDUIT OR CEILING SUPPORT WIRES IS NOT ACCEPTABLE.

J. ENSURE NEC CLEARANCES ARE MAINTAINED INCLUDING 36" IN FRONT OF 0–208V POWER AND 42" IN FRONT OF 277/480V POWER.

K. ALL ENCLOSED ROOMS (INTERIOR AND PERIMETER) SHALL HAVE RETURN AIR PATH. ROOMS WITH ALL WALLS TO DECK SHALL HAVE LINED SHEET METAL RETURN AIR BOOTS PLACED IN WALL ABOVE CEILING SIZED FOR 500 FPM MAXIMUM. FIRE RATED WALLS SHALL HAVE FIRE DAMPERS WITHIN THE DUCT PER LOCAL CODE REQUIREMENTS. FIRE DAMPERS AND FIRE–SMOKE DAMPERS SHALL BE FREE AREA/OUT OF AIRSTREAM TYPE. ALL MOTORIZED DAMPERS SHALL BE FREE AREA/OUT OF AIRSTREAM TYPE.

L. PIPES AND DUCTS TO BE COORDINATED ON JOB WITH BUILDING STRUCTURE AND WORK OF OTHER CONTRACTORS. ROUTE AS HIGH AS PHYSICALLY POSSIBLE.

M. COORDINATE CEILING DIFFUSERS AND GRILLES WITH LIGHTING FIXTURES. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN.

N. THERMOSTATS TO BE MOUNTED 48" ABOVE FINISHED FLOOR LEVEL UNLESS NOTED OTHERWISE ON THE PLANS. CONTRACTOR SHALL COORDINATE LOCATION OF THERMOSTATS WITH ARCHITECT IN FIELD

O. REPAIR AND PATCH CONSTRUCTION DAMAGED DUE TO THE DEMOLITION OF THIS PROJECT, USING SAME METHODS AND MATERIALS TO MATCH EXISTING.

P. EVAPORATORS SHALL HAVE A PRIMARY INSULATED CONDENSATE DRAIN LINE SLOPED 1/8"/FT, EXTENDED TO NEAREST FLOOR DRAIN IN MECHANICAL ROOM OR MOP SINK. GALVANIZED SHEET METAL SECONDARY DRAIN PANS SHALL HAVE LEAK DETECTION TAPE IN PAN AND ROUTE THE PAN'S INSULATED CONDENSATE DRAIN LINE SLOPED 1/8"/FT NEXT TO BUT INDEPENDENT OF PRIMARY DRAIN LINES.

Q. PROVIDE TEMPORARY HIGH EFFICIENCY FILTER MEDIA ON MAIN RETURN AIR AND EXHAUST FROM FLOOR AT BEGINNING OF PROJECT AND REPLACED AT TWO (2) WEEK INTERVALS UNTIL PROJECT COMPLETION AT WHICH TIME THE FILTER MEDIA SHALL BE REMOVED.

R. FLEXIBLE DUCTS SHALL BE SIMILAR AND EQUAL TO THERMOFLEX: TYPE M–KE. FLEXIBLE DUCTS SHALL COMPLY WITH APPLICABLE REQUIREMENTS OF UL–181, NFPA 90–A AND OTHER GOVERNING AUTHORITIES.

S. FLEXIBLE DUCT BETWEEN DUCT AND AC UNITS AND EXHAUST FANS SHALL BE EQUAL TO VENTFABRICS "VENTGLAS",

T. AIR CONDITIONING COOLING CONDENSATE PIPING TO BE ONE–HALF INCH THICK ARMAFLEX. FITTINGS SHALL BE PRE–MOLDED OF THE SAME MATERIAL. INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

U. DUCTLINER SHALL BE 1–INCH ACOUSTICAL DUCT LINING IN ACCORDANCE WITH SMACNA STANDARDS. DUCT LINING SHALL BE OWENS–CORNING FIBERGLAS "AEROFLEX" NO. 200 OR EQUAL.

V. ALL EXISTING DUCTWORK SHALL BE FIELD VERIFIED TO BE INSULATED AND IN GOOD CONDITION, ANY TORN, DAMAGED OR MISSING INSULATION WILL BE REPLACED. EXISTING CONTROLS SHALL BE CONFIRMED TO BE IN WORKING CONDITION.

HVAC SYMBOLS

SYMBOL	DESCRIPTION
150	REDISTRIBUTE AIR TO EXISTING DIFFUSER AS INDICATED ON PLAN
10X10 100,A	INDICATES SIZE, CFM, AND DIFFUSER TYPE
	NEW CEILING SUPPLY DIFFUSER
	NEW RETURN AIR/EXHAUST GRILLE
	EXISTING RETURN AIR/EXHAUST GRILLE
	NEW SLOT DIFFUSER
	POINT OF CONNECTION BETWEEN NEW AND EXISTING WORK
E	EXISTING TO REMAIN
----	REMOVE EXISTING AS INDICATED
	CAP EXISTING DUCT
	MANUAL VOLUME CONTROL DAMPER
	DUCT TRANSITION
FD	FIRE (SMOKE) DAMPER (24V ACTUATOR)
T	NEW OR RELOCATED THERMOSTAT
T	EXISTING THERMOSTAT
	FLEXIBLE DUCT CONNECTION
	INDICATES A WALL TO DECK (FOR COORDINATION PURPOSE ONLY–REFER TO ARCHITECTS PLANS FOR REQUIREMENTS)

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www.purdy–mcguire.com

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PMI JOB NO. 21006.005
PROJECT MGR. TODD JOHNSON

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NORTH

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STATE OF TEXAS
TODD M. JOHNSON
86955
LICENSED
PROFESSIONAL ENGINEER
5/25/21

PROJECT NO.: 581-009
DRAWN BY: TM
CHECKED BY: MW
R.S.F.: 41,852

BILLINGSLEY COMPANY

3501 OLYMPUS
SELENE

3501 OLYMPUS BLVD
5TH FLOOR
DALLAS, TX 75019

NO.	ISSUED FOR:	DATE:
	FOR CONSTRUCTION	05-25-21

DRAWING TITLE:
MECHANICAL NOTES & SYMBOLS

DRAWING NUMBER:
M0.01

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ALTERNATE BID:

ALTERNATE BID #1:

A. PROVIDE NEW AHU-5-2 AND ROOF MOUNTED CONDENSING UNIT. INSTALL CONTROL WIRING, THERMOSTAT, MOTORIZED DAMPERS AND DUCT WORK INDICATED BY DASHED LINES AS SHOWN ON DRAWINGS.

B. AHU TO BE SUSPENDED FROM STRUCTURE WITH ISOLATION SPRINGS. REFER TO REFRIGERANT PIPING SHEET FOR FOR REFRIGERANT AND WATER REQUIREMENTS. PROVIDE A GALVANIZED SHEET METAL SECONDARY DRAIN PAN THAT IS A MINIMUM OF 3" LARGER (ON EACH SIDE) THAN ANY DIMENSION OF THE UNIT AND MUST EXTENDS UNDER THE CONDENSATE PUMPS.

C. INSTALL CONDENSING UNIT ON SUPPORTS IN ACCORDANCE WITH BUILDING STANDARD ROOF MOUNTED EQUIPMENT. VERIFY EXACT LOCATION WITH ARCHITECT AND BUILDING REPRESENTATIVE. REFER TO REFRIGERANT PIPING PLAN ON SHEET M2.15 FOR REFRIGERANT PIPING, DOMESTIC COLD WATER PIPING AND CONDENSATE PIPING WORK.

D. SEQUENCE OF OPERATIONAHU-5-1 (PRIMARY) SHALL RUN DURING OPERATING HOURS. DAMPER AHU-5-1 SHALL BE OPEN. AHU-5-2 (SECONDARY) UNIT'S COMPRESSOR AND FAN SHALL BE OFF. DAMPER AHU-5-2 SHALL BE CLOSED. AHU-5-2 UNIT SHALL BE ACTIVATED BY FAILURE OF AHU-5-1 VIA LIEBERT AC4 CONTROLLER. DAMPER AHU-5-1 SHALL CLOSE AND DAMPER AHU-5-2 SHALL OPEN. ONCE ROOM AHU-5-1 IS OPERATIONAL, AHU-5-2'S FAN AND COMPRESSOR SHALL CEASE TO OPERATE. DAMPER AHU-5-1 SHALL OPEN AND DAMPER AHU-5-2 SHALL CLOSE. AC4 CONTROL PANEL SHALL PROVIDE LEAD/LAG CAPABILITY SO PRIMARY AND SECNDARY UNITS CAN ROTATE AT A CONSISTANCE TIME PERIOD.

ALTERNATE BID #2:

A. ENSURE ALL EXISTING EXPOSED RECTANGULAR DUCT INSULATION IS IN GOOD CONDITION. REPLACE ANY TORN INSULATION AND PROVIDE SHEET METAL AROUND ALL EXPOSED RECTANGULAR DUCT AND COAT WITH TWO COATS OF PRIMER.

SHEET NOTES:

A. EXISTING BRANCH CONTROLLERS SUSPENDED FROM STRUCTURE WITH ISOLATION SPRINGS SHALL REMAIN.

B. EXTEND FULL SIZED RETURN PLENUM FROM NEW FAN COIL UNITS AS SHOWN ON DRAWINGS. PROVIDE RETURN AIR GRILLE AT OPENING. CONNECT OUTSIDE AIR DUCT WITH BALANCING DAMPER AS SHOWN ON DETAIL LOCATED ON SHEET M3.01.

C. ALL ROUND DUCT SHALL BE 1" INTERNALLY LINED SPIRAL DUCT. DUCT SHALL BE LINED WITH MICROBIOLOGICAL TREATMENT AND PRIMED FOR PAINTING MOUNTED SUCH THAT GRILLES ARE AT SAME HEIGHT AS LIGHT FIXTURES. COORDINATE HEIGHT WITH ARCHITECT PRIOR TO INSTALLATION.

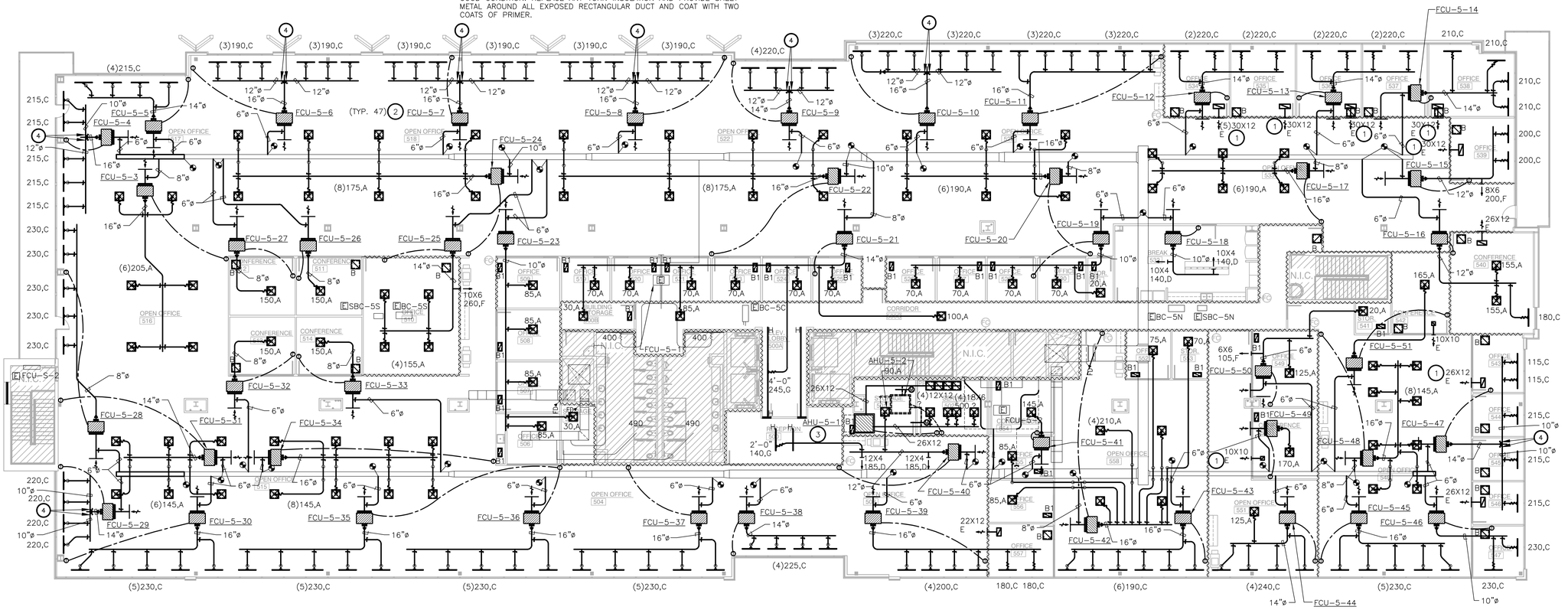
OUTSIDE AIR TAPS:

PROVIDE SQUARE TO ROUND TRANSITIONS AT EXISTING OUTSIDE AIR SUPPLY DUCT AS FOLLOWS:

6"X24" SQUARE TO 12"ø.
6"X16" SQUARE TO 10"ø.
6"X10" SQUARE TO 8"ø.

NOTES BY SYMBOL ⓧ:

1. PROVIDE ACOUSTICALLY LINED RETURN AIR BOOT THRU WALL TO DECK AS HIGH AS POSSIBLE ABOVE CEILING WITH 90° ELBOW FACING UPWARD. SIZE PER PLANS. REFER TO DETAIL M0.01 FOR MORE INFORMATION.
2. FC UNIT TO BE SUSPENDED FROM STRUCTURE. EXTEND FULL SIZED RETURN AIR PLENUM AS INDICATED ON DRAWINGS. PROVIDE MANUAL DAMPER AT OUTSIDE AIR DUCT CONNECTION TO PLENUM.
3. AHU TO BE SUSPENDED FROM STRUCTURE WITH ISOLATION SPRINGS. REFER TO PLUMBING SHEET FOR WATER REQUIREMENTS. PROVIDE A GALVANIZED SHEET METAL SECONDARY DRAIN PAN THAT IS A MINIMUM OF 3" LARGER (ON EACH SIDE) THAN ANY DIMENSION OF THE UNIT AND MUST EXTENDS UNDER THE CONDENSATE PUMPS.
4. PROVIDE EXPANDED TAP AT LOCATION SHOWN ON DRAWINGS. REFER TO DETAIL LOCATED ON SHEET M00.01.



1 LEVEL 05 MECHANICAL PLAN
SCALE: 3/32"=1'-0"

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STATE OF TEXAS
TODD M. JOHNSON
86955
LICENSED
PROFESSIONAL ENGINEER
6/25/21

PROJECT NO.: 581-009
DRAWN BY: TM
CHECKED BY: MW
R.S.F.: 41,852

BILLINGSLEY COMPANY

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SELENE

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DALLAS, TX 75019

NO.	ISSUED FOR:	DATE:
1	FOR CONSTRUCTION	05-25-21

DRAWING TITLE:
LEVEL 05 MECHANICAL PLAN

DRAWING NUMBER:
M2.05

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ALTERNATE BID:

A. PROVIDE NEW AHU-5-2 AND ROOF MOUNTED CONDENSING UNIT. INSTALL CONTROL WIRING, THERMOSTAT, MOTORIZED DAMPERS AND DUCT WORK INDICATED BY DASHED LINES AS SHOWN ON DRAWINGS.

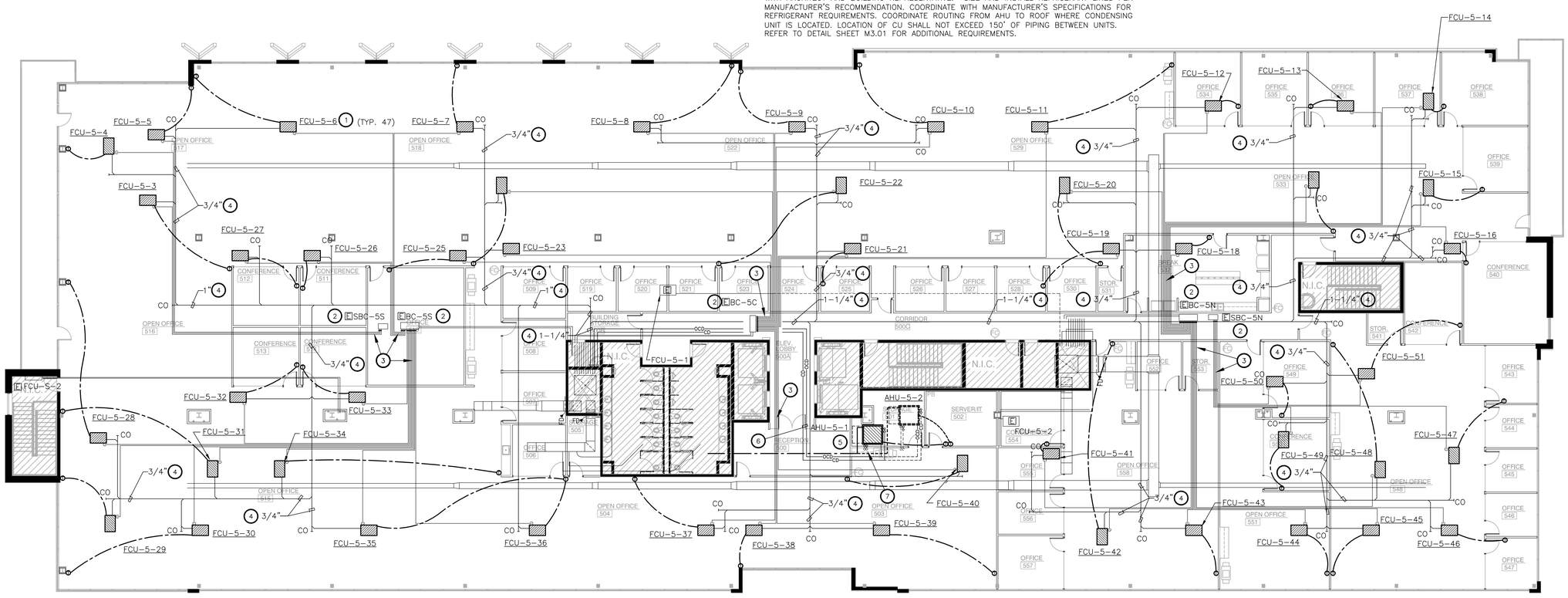
B. AHU TO BE SUSPENDED FROM STRUCTURE WITH ISOLATION SPRINGS. REFER TO REFRIGERANT PIPING SHEET FOR FOR REFRIGERANT AND WATER REQUIREMENTS. PROVIDE A GALVANIZED SHEET METAL SECONDARY DRAIN PAN THAT IS A MINIMUM OF 3" LARGER (ON EACH SIDE) THAN ANY DIMENSION OF THE UNIT AND MUST EXTENDS UNDER THE CONDENSATE PUMPS.

C. INSTALL CONDENSING UNIT ON SUPPORTS IN ACCORDANCE WITH BUILDING STANDARD ROOF MOUNTED EQUIPMENT. VERIFY EXACT LOCATION WITH ARCHITECT AND BUILDING REPRESENTATIVE. REFER TO DETAIL ON SHEET M3.01 FOR ADDITIONAL REQUIREMENTS.

D. SEQUENCE OF OPERATION: UPON LEAK DETECTION ALARM, SIGNAL SHALL ALARM AND CLOSE A LINE SIZE 2-POSITION SOLENOID VALVE IN HUMIDIFIER SUPPLY LINE DOWNSTREAM OF SUPPLY LINE SHUTOFF VALVE.

NOTES BY SYMBOL (X):

1. FC UNIT TO BE SUSPENDED FROM STRUCTURE USING ALTHREAD HANGER RODS.
2. EXISTING BRANCH CONTROLLER SUSPENDED FROM STRUCTURE WITH ISOLATION SPRINGS.
3. COORDINATE WITH MANUFACTURER'S SPECIFICATIONS FOR REFRIGERANT REQUIREMENTS. COORDINATE ROUTING FROM FC UNIT TO BRANCH CONTROLLER. LOCATION OF FCU SHALL NOT EXCEED 150' OF PIPING BETWEEN UNITS.
4. PROVIDE AN INSULATED CONDENSATE DRAIN ABOVE CEILING. EXTEND AND DISCHARGE TO NEAREST JANITORS MOP SINK. ALL PIPING SHALL BE INSTALLED AS HIGH AS POSSIBLE, AND SLOPED AT 1/8" PER FOOT TOWARDS FLOOR DRAIN. PROVIDE CONDENSATE PUMP CAPABLE OF A MINIMUM OF 10' OF HEAD PRESSURE WITH UNIT IF REQUIRED SLOPE IS UNATTAINABLE.
5. AHU TO BE SUSPENDED FROM STRUCTURE WITH ISOLATION SPRINGS. FOR CONNECTION TO HUMIDIFIER, PROVIDE 1/2" COLD WATER WITH SHUTOFF AND SOLENOID VALVE AND EXTEND 1/4" COPPER TUBING TO AHU. PROVIDE REDUCED PRESSURE ZONE ASSEMBLY (RPZ) EQUAL TO WATTS 009 SERIES. EXTEND WATER LINE TO NEAREST DOMESTIC COLD WATER LINE 3/4" OR LARGER. VERIFY ROUTING AT JOB SITE PRIOR TO ROUGH-IN.). PROVIDE A GALVANIZED SHEET METAL SECONDARY DRAIN PAN THAT IS A MINIMUM OF 3" LARGER (ON EACH SIDE) THAN ANY DIMENSION OF THE UNIT AND MUST EXTENDS UNDER THE CONDENSATE PUMPS.
6. PROVIDE A 3/4" INSULATED CONDENSATE DRAIN AND OVERFLOW PIPING ABOVE CEILING. EXTEND AND DISCHARGE TO NEAREST JANITORS MOP SINK. ALL PIPING SHALL BE INSTALLED AS HIGH AS POSSIBLE, AND SLOPED AT 1/8" PER FOOT TOWARDS MOP SINK. PROVIDE CONDENSATE PUMP CAPABLE OF A MINIMUM OF 10' OF HEAD PRESSURE WITH UNIT IF REQUIRED SLOPE IS UNATTAINABLE.
7. EXTEND REFRIGERANT PIPING AND CONTROLS CONDUIT UP TO REMOTE CONDENSING UNIT LOCATED ON ROOF. COORDINATE ROUTING OF ALL PIPING AND LOCATION OF REMOTE CONDENSING UNIT ON ROOF WITH BUILDING MANAGEMENT. INSTALL CONDENSING UNIT ON SUPPORTS IN ACCORDANCE WITH BUILDING STANDARD FOR ROOF EQUIPMENT AND EXTEND REFRIGERANT PIPING AND CONTROL WIRING UP TO CONDENSING UNIT. VERIFY EXACT LOCATION WITH ARCHITECT AND BUILDING REPRESENTATIVE. SIZE AND INSTALL REFRIGERANT LINES PER MANUFACTURER'S RECOMMENDATION. COORDINATE WITH MANUFACTURER'S SPECIFICATIONS FOR REFRIGERANT REQUIREMENTS. COORDINATE ROUTING FROM AHU TO ROOF WHERE CONDENSING UNIT IS LOCATED. LOCATION OF CU SHALL NOT EXCEED 150' OF PIPING BETWEEN UNITS. REFER TO DETAIL SHEET M3.01 FOR ADDITIONAL REQUIREMENTS.



1 LEVEL 05 MECHANICAL REFRIGERATION PLAN

SCALE: 3/32"=1'-0"

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LICENSED
PROFESSIONAL ENGINEER
5/25/21

PROJECT NO.: 581-009
DRAWN BY: TM
CHECKED BY: MW
R.S.F.: 41,852

BILLINGSLEY COMPANY

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NO.	ISSUED FOR:	DATE:
1	FOR CONSTRUCTION	05-25-21

DRAWING TITLE:
LEVEL 05 MECHANICAL REFRIGERATION PLAN

DRAWING NUMBER:
M2.15

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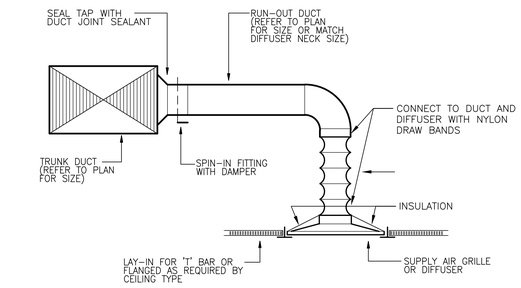

1 DIFFUSER CONNECTION DETAIL
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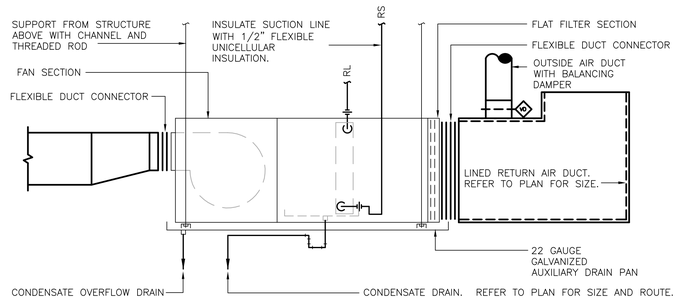
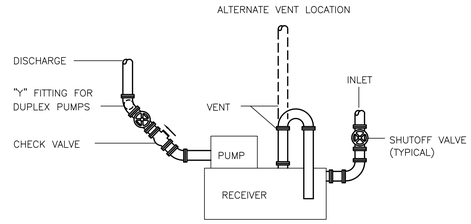
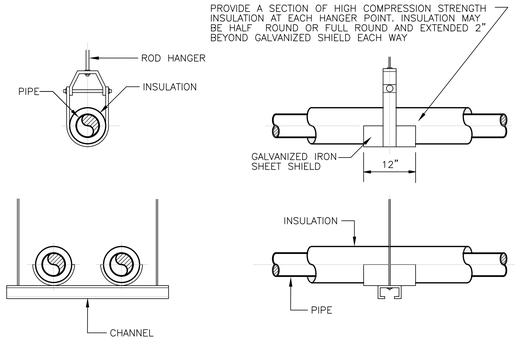


NOTE: REFER TO COIL PIPING DETAILS FOR ADDITIONAL REQUIREMENTS.

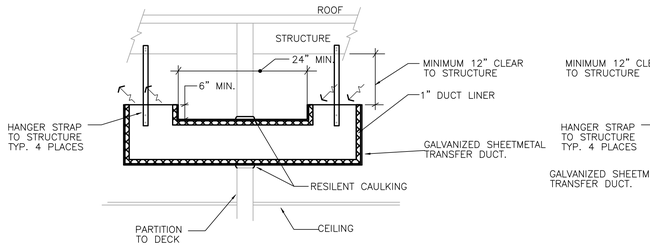
2 VFR UNIT INSTALLATION DETAILS
SCALE: NOT TO SCALE



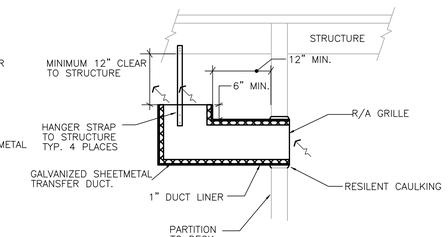
3 CONDENSATE PUMP DETAIL
SCALE: NOT TO SCALE



4 PIPE HANGING SUPPORT DETAILS
SCALE: NOT TO SCALE



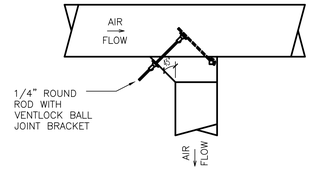
FROM R/A GRILLE ACROSS SOUND PARTITION



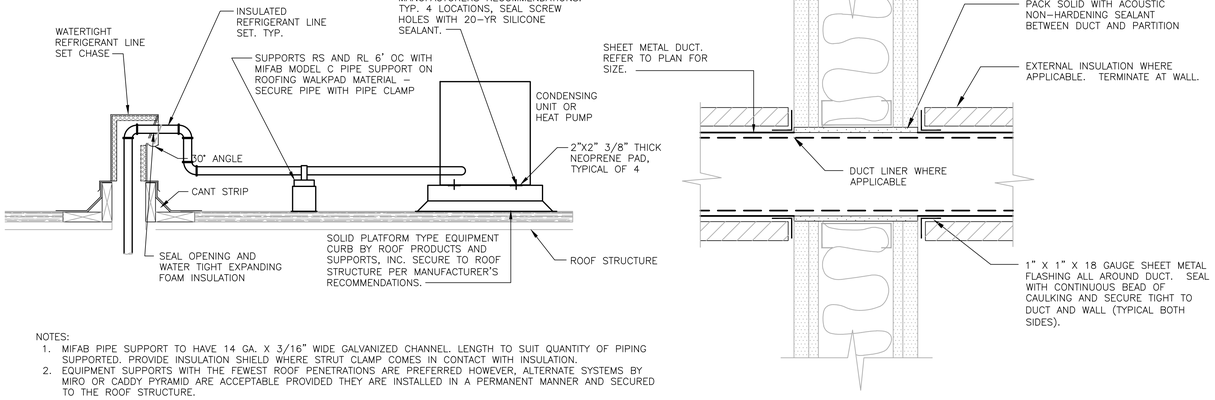
IN CEILING PLENUM ACROSS WALL TO DECK

TRANSFER DUCT SIZING
(ALL SIZES ARE FREE AREA)
THRU 225 CFM: 8X8
THRU 350 CFM: 10X10
THRU 500 CFM: 12X12
THRU 750 CFM: 18X12
OVER 750 CFM: (SIZED FOR 500FPM)

5 RA TRANSFER BOOT DETAIL
SCALE: NOT TO SCALE

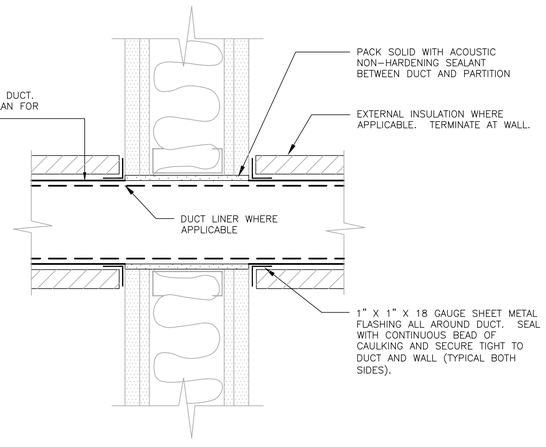


6 EXPANDED TAP DETA
SCALE: NOT TO SCALE

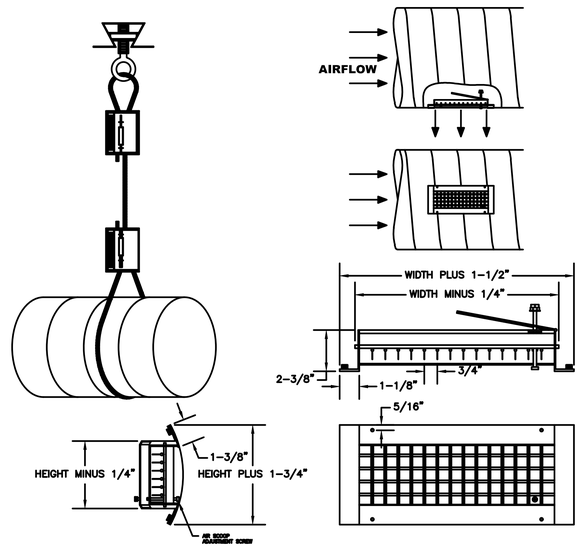


NOTES:
1. MIFAB PIPE SUPPORT TO HAVE 14 GA. X 3/16" WIDE GALVANIZED CHANNEL. LENGTH TO SUIT QUANTITY OF PIPING SUPPORTED. PROVIDE INSULATION SHIELD WHERE STRUT CLAMP COMES IN CONTACT WITH INSULATION.
2. EQUIPMENT SUPPORTS WITH THE FEWEST ROOF PENETRATIONS ARE PREFERRED HOWEVER, ALTERNATE SYSTEMS BY MIRO OR CADDY PYRAMID ARE ACCEPTABLE PROVIDED THEY ARE INSTALLED IN A PERMANENT MANNER AND SECURED TO THE ROOF STRUCTURE.

7 CONDENSING UNIT ON ROOF
SCALE: NOT TO SCALE



8 DUCT PENETRATION AT SOUND WALL
SCALE: NOT TO SCALE



9 SPIRAL GRILLE DETAIL
SCALE: NTS

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TODD M. JOHNSON 86955 LICENSED PROFESSIONAL ENGINEER 6/25/21

PROJECT NO.: 581-009
DRAWN BY: TM
CHECKED BY: MW
R.S.F.: 41,852

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1	FOR CONSTRUCTION	05-25-21

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MECHANICAL DETAILS

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POWER GENERAL NOTES:

A. ALL CIRCUITS SHALL BE 120V, 20A CIRCUITS WITH 2#12, #12G, IN 3/4"C UNLESS NOTED OTHERWISE.

B. ALL CONDUCTORS GREATER THAN 60' IN LENGTH SHALL BE SIZED FOR A MAXIMUM VOLTAGE DROP OF 3% OVER THE TOTAL LENGTH OF THE CIRCUIT CALCULATED AT 80% OF FULL LOAD OF THE OVERCURRENT DEVICE PROTECTING THE CONDUCTOR. CONTRACTOR SHALL PROVIDE PIG-TAIL OR ENCLOSED TERMINATION BLOCKS AS REQUIRED TO LAND CIRCUITS ON THE DEVICES OR EQUIPMENT.

C. CONTRACTOR MAY COMBINE THREE (3) CIRCUITS PER NEUTRAL AND GROUND WIRE EXCEPT AS OTHERWISE NOTED. COMBINED NEUTRAL CIRCUITS SHALL MEET NEC REQUIREMENTS WITH TIE HANDLES AND COMPLIANCE LABELING.

D. ALL EXISTING CIRCUITS WITHIN THE SCOPE OF WORK AREA THAT ARE NOT REUSED FOR THIS REMODEL SHALL BE REMOVED BACK TO THE PANELS AND THE PLACARDS SHALL INDICATE THE BREAKERS AS SPARES.

E. PANELBOARD DIRECTORIES SHALL BE COMPLETELY FILLED OUT TO ACCURATELY IDENTIFY EACH CIRCUIT (EXISTING AND NEW CIRCUITS) IN ALL PANELS WITHIN SCOPE OF WORK. OBTAIN BUILDING MANAGEMENT/OWNER'S APPROVAL OF IDENTIFICATION. DIRECTORIES SHALL BE TYPEWRITTEN.

F. JUNCTION BOXES AND/OR DEVICE BOXES SHALL NOT BE MOUNTED BACK TO BACK WHEN FLUSH MOUNTED IN A WALL. JUNCTION BOXES AND /OR DEVICE BOXES FLUSH MOUNTED ON OPPOSITE SIDES OF A WALL SHALL NOT BE INSTALLED IN THE SAME STUD SPACE.

G. ALL RECEPTACLES MOUNTED ABOVE OR BELOW KITCHEN/BREAK ROOM COUNTERS OR COUNTERS WITH A SINK OR ANY OTHER WATER DISPENSING MECHANISM SHALL BE GFCI PROTECTED. ALL RECEPTACLES INSTALLED IN AN OUTDOOR LOCATION OR INTENDED TO PROVIDE POWER FOR VENDING MACHINES SHALL BE GFCI TYPE DEVICES. IN LOCATIONS WHERE THE RECEPTACLES ARE BEHIND APPLIANCES, IF THE AUTHORITY HAVING JURISDICTION REQUIRES REMOTE RESET BUTTONS, CONTRACTOR SHALL COORDINATE THE BUTTON LOCATIONS WITH THE ARCHITECT PRIOR TO ROUGH-IN, OR PROVIDE GFCI CIRCUIT BREAKERS WHEN POSSIBLE.

H. ALL DEDICATED CIRCUITS (CIRCUITS SERVING A SINGLE DEVICE) SHALL HAVE SEPARATE NEUTRAL AND GROUND WIRES. THIS REQUIREMENT DOES NOT APPLY TO APPLIANCE CIRCUITS.

I. PROVIDE 3/4" CONDUIT AND PULLSTRING, FROM EACH WALL MOUNTED TELEPHONE/DATA OUTLET. ROUTE TO +4" ABOVE SUSPENDED CEILING. AT SYSTEMS FURNITURE FEEDS, CONDUIT SHALL BE 1-1/4".

J. ELECTRICAL CONTRACTOR SHALL PROVIDE A 4"x4"x2-5/8" STEEL JUNCTION BOX IN WALL WITH A SINGLE GANG MUD RING AND 3/4" METAL CONDUIT TO A MINIMUM OF 4" ABOVE FINISHED ACCESSIBLE CEILING FOR ALL THERMOSTATS AND HVAC SENSORS. COORDINATE EXACT LOCATIONS WITH MECHANICAL CONTRACTOR AND ARCHITECT. PROVIDE A PULL STRING INSTALLED FOR FUTURE USE. PULL STRING SHALL BE SECURED AT EACH END TO PREVENT ACCIDENTAL REMOVAL.

K. PROVIDE 3/4" CONDUIT AND PULLSTRING, FROM EACH FLOOR MOUNTED TELEPHONE/DATA OUTLET TO THE NEAREST WALL THEN ROUTE TO +4" ABOVE SUSPENDED CEILING. AT SYSTEMS FURNITURE FEEDS, CONDUIT SHALL BE 1-1/4".

L. LOW VOLTAGE CABLES (TELEPHONE, DATA, ETC.) INSTALLED IN CEILING SPACE USED FOR RETURN AIR PURPOSES SHALL BE PLENUM RATED CABLES OR INSTALLED IN CONDUIT.

M. ELECTRIC CONNECTIONS TO PANELBOARDS AND BUS DUCTS SHALL BE MADE ONLY WHEN PANELBOARD OR BUS DUCT HAS BEEN DE-ENERGIZED. SCHEDULE DOWN TIME WITH BUILDING MANAGEMENT/OWNER.

N. ELECTRICAL WIRING TO SYSTEMS FURNITURE SHALL BE 8-WIRE/4-CIRCUIT "2+2" CONSISTING OF 2-HOTS, 1-NEUTRAL, 1-COMMON GROUND FOR CONVENIENCE PLUS 2-HOT, 1-NEUTRAL, 1-ISOLATED GROUND FOR COMPUTERS.

O. UNDERLINED CIRCUIT NUMBERS ARE FOR COMPUTER USE AND SHALL EACH HAVE AN INDEPENDENT NEUTRAL AND SHARED ISOLATED GROUND WIRES (MAXIMUM 3 CIRCUITS PER GROUND WIRE, PHASES A/B/C). THE ISOLATED GROUND WIRE SHALL TERMINATE IN AN ISOLATED GROUND BUS IN THE ELECTRIC PANEL. IF THE IG BUS DOES NOT EXIST, CONTRACTOR SHALL PROVIDE NEW BUS WITH ONE (1) #1/0 WIRE IN 3/4" CONDUIT TO GROUNDING SOURCE OF ELECTRIC PANEL.

P. ALL NEW ELECTRICAL PANELS AND TRANSFORMERS SHALL HAVE PERMANENT ENGRAVED LABELS ON COVER INDICATING PANEL OR TRANSFORMER DESIGNATION.

Q. CONTRACTOR SHALL RELOCATE ELECTRICAL CONNECTIONS ASSOCIATED WITH ALL RELOCATED MECHANICAL EQUIPMENT. REFER TO HVAC AND PLUMBING PLANS AND COORDINATE FINAL LOCATIONS WITH MECHANICAL CONTRACTOR IN THE FIELD.

R. ELECTRICAL CONTRACTOR SHALL X-RAY SLAB PRIOR TO ANY CORE-DRILLING. COORDINATE WITH BUILDING MANAGEMENT FOR AFTER-HOURS ACCESS TO SPACE.

S. WHERE A CIRCUIT IS SHOWN TO ORIGINATE FROM AN EXISTING PANELBOARD, CONTRACTOR SHALL FIELD VERIFY WHETHER THE CIRCUIT BREAKER EXISTS AND, IF NOT, SHALL PROVIDE A NEW BREAKER AS PART OF THE BASE BID.

MECHANICAL EQUIPMENT POWER SCHEDULE

EQUIPMENT DESIGNATION	LOAD KW	LOAD HP	LOAD FLA	VOLTAGE/PHASE	CIRCUIT NUMBER	CIRCUIT BREAKER AMPS/POLES	DISCONNECT AMPS/POLES/FUSE	WIRE SIZING	REMARKS
WH5-1	8.31	-	-	277/1	5HA-13	30/1	30A 1PSW	2#10, 1#10G., 3/4" C.	SEE NOTE 1
WH5-2	8.31	-	-	277/1	5HA-15	30/1	30A 1PSW	2#10, 1#10G., 3/4" C.	SEE NOTE 1
FCU-5-3	-	-	3.50	208/1	5HB-1/3	20/2	BY MECHANICAL	2#12, 1#12G., 3/4" C.	SEE NOTE 1,5
FCU-5-4	-	-	3.50	208/1	-	20/2	BY MECHANICAL	2#12, 1#12G., 3/4" C.	SEE NOTE 1,5
FCU-5-5	-	-	2.73	208/1	-	20/2	BY MECHANICAL	2#12, 1#12G., 3/4" C.	SEE NOTE 1,5
FCU-5-6	-	-	3.50	208/1	5HB-5/7	20/2	BY MECHANICAL	2#12, 1#12G., 3/4" C.	SEE NOTE 1,6
FCU-5-7	-	-	3.50	208/1	-	20/2	BY MECHANICAL	2#12, 1#12G., 3/4" C.	SEE NOTE 1,6
FCU-5-8	-	-	3.50	208/1	-	20/2	BY MECHANICAL	2#12, 1#12G., 3/4" C.	SEE NOTE 1,6
FCU-5-9	-	-	2.73	208/1	5HB-9/11	20/2	BY MECHANICAL	2#12, 1#12G., 3/4" C.	SEE NOTE 1,7
FCU-5-10	-	-	3.51	208/1	-	20/2	BY MECHANICAL	2#12, 1#12G., 3/4" C.	SEE NOTE 1,7
FCU-5-11	-	-	3.51	208/1	-	20/2	BY MECHANICAL	2#12, 1#12G., 3/4" C.	SEE NOTE 1,7
FCU-5-12	-	-	2.73	208/1	5HB-13/15	20/2	BY MECHANICAL	2#12, 1#12G., 3/4" C.	SEE NOTE 1,8
FCU-5-13	-	-	2.73	208/1	-	20/2	BY MECHANICAL	2#12, 1#12G., 3/4" C.	SEE NOTE 1,8
FCU-5-14	-	-	2.73	208/1	-	20/2	BY MECHANICAL	2#12, 1#12G., 3/4" C.	SEE NOTE 1,8
FCU-5-15	-	-	1.56	208/1	5HB-17/19	20/2	BY MECHANICAL	2#12, 1#12G., 3/4" C.	SEE NOTE 1,9
FCU-5-16	-	-	1.45	208/1	-	20/2	BY MECHANICAL	2#12, 1#12G., 3/4" C.	SEE NOTE 1,9
FCU-5-17	-	-	3.50	208/1	-	20/2	BY MECHANICAL	2#12, 1#12G., 3/4" C.	SEE NOTE 1,9
FCU-5-18	-	-	1.05	208/1	5HB-21/23	20/2	BY MECHANICAL	2#12, 1#12G., 3/4" C.	SEE NOTE 1,10
FCU-5-19	-	-	1.05	208/1	-	20/2	BY MECHANICAL	2#12, 1#12G., 3/4" C.	SEE NOTE 1,10
FCU-5-20	-	-	3.50	208/1	-	20/2	BY MECHANICAL	2#12, 1#12G., 3/4" C.	SEE NOTE 1,10
FCU-5-21	-	-	2.73	208/1	5HB-25/27	20/2	BY MECHANICAL	2#12, 1#12G., 3/4" C.	SEE NOTE 1,11
FCU-5-22	-	-	3.51	208/1	-	20/2	BY MECHANICAL	2#12, 1#12G., 3/4" C.	SEE NOTE 1,11
FCU-5-23	-	-	1.20	208/1	-	20/2	BY MECHANICAL	2#12, 1#12G., 3/4" C.	SEE NOTE 1,11
FCU-5-24	-	-	3.51	208/1	5HB-29/31	20/2	BY MECHANICAL	2#12, 1#12G., 3/4" C.	SEE NOTE 1,12
FCU-5-25	-	-	2.73	208/1	-	20/2	BY MECHANICAL	2#12, 1#12G., 3/4" C.	SEE NOTE 1,12
FCU-5-26	-	-	1.05	208/1	-	20/2	BY MECHANICAL	2#12, 1#12G., 3/4" C.	SEE NOTE 1,12
FCU-5-27	-	-	1.05	208/1	5HB-33/35	20/2	BY MECHANICAL	2#12, 1#12G., 3/4" C.	SEE NOTE 1,13
FCU-5-28	-	-	3.50	208/1	-	20/2	BY MECHANICAL	2#12, 1#12G., 3/4" C.	SEE NOTE 1,13
FCU-5-29	-	-	2.73	208/1	-	20/2	BY MECHANICAL	2#12, 1#12G., 3/4" C.	SEE NOTE 1,13
FCU-5-30	-	-	3.50	208/1	5HB-37/39	20/2	BY MECHANICAL	2#12, 1#12G., 3/4" C.	SEE NOTE 1,14
FCU-5-31	-	-	2.73	208/1	-	20/2	BY MECHANICAL	2#12, 1#12G., 3/4" C.	SEE NOTE 1,14
FCU-5-32	-	-	1.05	208/1	-	20/2	BY MECHANICAL	2#12, 1#12G., 3/4" C.	SEE NOTE 1,14
FCU-5-33	-	-	1.05	208/1	5HB-2/4	20/2	BY MECHANICAL	2#12, 1#12G., 3/4" C.	SEE NOTE 1,15
FCU-5-34	-	-	3.50	208/1	-	20/2	BY MECHANICAL	2#12, 1#12G., 3/4" C.	SEE NOTE 1,15
FCU-5-35	-	-	3.51	208/1	-	20/2	BY MECHANICAL	2#12, 1#12G., 3/4" C.	SEE NOTE 1,15
FCU-5-36	-	-	3.51	208/1	5HB-6/8	20/2	BY MECHANICAL	2#12, 1#12G., 3/4" C.	SEE NOTE 1,16
FCU-5-37	-	-	3.51	208/1	-	20/2	BY MECHANICAL	2#12, 1#12G., 3/4" C.	SEE NOTE 1,16
FCU-5-38	-	-	2.73	208/1	-	20/2	BY MECHANICAL	2#12, 1#12G., 3/4" C.	SEE NOTE 1,16
FCU-5-39	-	-	3.50	208/1	5HB-10/12	20/2	BY MECHANICAL	2#12, 1#12G., 3/4" C.	SEE NOTE 1,17
FCU-5-40	-	-	1.56	208/1	-	20/2	BY MECHANICAL	2#12, 1#12G., 3/4" C.	SEE NOTE 1,17
FCU-5-41	-	-	1.05	208/1	-	20/2	BY MECHANICAL	2#12, 1#12G., 3/4" C.	SEE NOTE 1,17
FCU-5-42	-	-	3.50	208/1	5HB-14/16	20/2	BY MECHANICAL	2#12, 1#12G., 3/4" C.	SEE NOTE 1,18
FCU-5-43	-	-	3.50	208/1	-	20/2	BY MECHANICAL	2#12, 1#12G., 3/4" C.	SEE NOTE 1,18
FCU-5-44	-	-	2.73	208/1	-	20/2	BY MECHANICAL	2#12, 1#12G., 3/4" C.	SEE NOTE 1,18
FCU-5-45	-	-	3.50	208/1	5HB-18/20	20/2	BY MECHANICAL	2#12, 1#12G., 3/4" C.	SEE NOTE 1,19
FCU-5-46	-	-	1.45	208/1	-	20/2	BY MECHANICAL	2#12, 1#12G., 3/4" C.	SEE NOTE 1,19
FCU-5-47	-	-	2.73	208/1	-	20/2	BY MECHANICAL	2#12, 1#12G., 3/4" C.	SEE NOTE 1,19
FCU-5-48	-	-	3.50	208/1	5HB-22/24	20/2	BY MECHANICAL	2#12, 1#12G., 3/4" C.	SEE NOTE 1,20
FCU-5-49	-	-	1.05	208/1	-	20/2	BY MECHANICAL	2#12, 1#12G., 3/4" C.	SEE NOTE 1,20
FCU-5-50	-	-	1.05	208/1	5HB-26/28	20/2	BY MECHANICAL	2#12, 1#12G., 3/4" C.	SEE NOTE 1,21
FCU-5-51	-	-	1.05	208/1	-	20/2	BY MECHANICAL	2#12, 1#12G., 3/4" C.	SEE NOTE 1,21
AHU-5-1	-	-	43.2	208/3	5HA-17/19/21	60/3	BY MECHANICAL	3#4, 1#10G., 1-1/4"C.	SEE NOTE 1,2,3
CU-5-1	-	-	24.2	208/3	5HA-23/25/27	50/3	BY MECHANICAL	3#6, 1#10G., 1"C.	SEE NOTE 1,2,4
* AHU-5-2	-	-	43.2	208/3	5HB-30/32/34	60/3	BY MECHANICAL	3#4, 1#10G., 1-1/4"C.	SEE NOTE 1,2,3
* CU-5-2	-	-	24.2	208/3	5HB-36/38/40	50/3	BY MECHANICAL	3#6, 1#10G., 1"C.	SEE NOTE 1,2,4

NOTES:
1. REFER TO HVAC AND PLUMBING PLANS FOR LOCATIONS OF EQUIPMENT. COORDINATE FINAL LOCATIONS IN FIELD.
2. PROVIDE BUILDING STANDARD KWH METER. COORDINATE LOCATIONS WITH BUILDING ENGINEER.
3. PROVIDE 120V, 20A CIRCUIT TO CONDENSATE PUMP AND LEAK DETECTION SYSTEM FROM CIRCUIT 5LA1-46.
4. PROVIDE A 120V, 20A WP/GFIC DUPLEX AT UNIT FOR SERVICE USE, ON CIRCUIT 5LA1-48.
5. PROVIDE 120V, 20A CIRCUIT TO CONDENSATE PUMP AND LEAK DETECTION SYSTEM FROM CIRCUIT 5LA3-43. MAX. (3) PUMPS.
6. PROVIDE 120V, 20A CIRCUIT TO CONDENSATE PUMP AND LEAK DETECTION SYSTEM FROM CIRCUIT 5LA3-45. MAX. (3) PUMPS.
7. PROVIDE 120V, 20A CIRCUIT TO CONDENSATE PUMP AND LEAK DETECTION SYSTEM FROM CIRCUIT 5LA3-47. MAX. (3) PUMPS.
8. PROVIDE 120V, 20A CIRCUIT TO CONDENSATE PUMP AND LEAK DETECTION SYSTEM FROM CIRCUIT 5LA3-49. MAX. (3) PUMPS.
9. PROVIDE 120V, 20A CIRCUIT TO CONDENSATE PUMP AND LEAK DETECTION SYSTEM FROM CIRCUIT 5LA3-51. MAX. (3) PUMPS.
10. PROVIDE 120V, 20A CIRCUIT TO CONDENSATE PUMP AND LEAK DETECTION SYSTEM FROM CIRCUIT 5LA3-53. MAX. (3) PUMPS.
11. PROVIDE 120V, 20A CIRCUIT TO CONDENSATE PUMP AND LEAK DETECTION SYSTEM FROM CIRCUIT 5LA3-55. MAX. (3) PUMPS.
12. PROVIDE 120V, 20A CIRCUIT TO CONDENSATE PUMP AND LEAK DETECTION SYSTEM FROM CIRCUIT 5LA3-57. MAX. (3) PUMPS.
13. PROVIDE 120V, 20A CIRCUIT TO CONDENSATE PUMP AND LEAK DETECTION SYSTEM FROM CIRCUIT 5LA3-59. MAX. (3) PUMPS.
14. PROVIDE 120V, 20A CIRCUIT TO CONDENSATE PUMP AND LEAK DETECTION SYSTEM FROM CIRCUIT 5LA3-44. MAX. (3) PUMPS.
15. PROVIDE 120V, 20A CIRCUIT TO CONDENSATE PUMP AND LEAK DETECTION SYSTEM FROM CIRCUIT 5LA3-46. MAX. (3) PUMPS.
16. PROVIDE 120V, 20A CIRCUIT TO CONDENSATE PUMP AND LEAK DETECTION SYSTEM FROM CIRCUIT 5LA3-48. MAX. (3) PUMPS.
17. PROVIDE 120V, 20A CIRCUIT TO CONDENSATE PUMP AND LEAK DETECTION SYSTEM FROM CIRCUIT 5LA3-50. MAX. (3) PUMPS.
18. PROVIDE 120V, 20A CIRCUIT TO CONDENSATE PUMP AND LEAK DETECTION SYSTEM FROM CIRCUIT 5LA3-52. MAX. (3) PUMPS.
19. PROVIDE 120V, 20A CIRCUIT TO CONDENSATE PUMP AND LEAK DETECTION SYSTEM FROM CIRCUIT 5LA3-54. MAX. (3) PUMPS.
20. PROVIDE 120V, 20A CIRCUIT TO CONDENSATE PUMP AND LEAK DETECTION SYSTEM FROM CIRCUIT 5LA3-56. MAX. (3) PUMPS.
21. PROVIDE 120V, 20A CIRCUIT TO CONDENSATE PUMP AND LEAK DETECTION SYSTEM FROM CIRCUIT 5LA3-58. MAX. (3) PUMPS.

POWER SYMBOLS

SYMBOL	DESCRIPTION
	WALL MOUNTED DUPLEX RECEPTACLE (NEMA 5-20R)
	WALL MOUNTED QUADRAPLEX RECEPTACLE (NEMA 5-20R)
IG	WALL MOUNTED ISOLATED GROUND DUPLEX RECEPTACLE (NEMA 5-20RIG)
IG	WALL MOUNTED QUADRAPLEX RECEPTACLE WITH HALF ISOLATED GROUND (NEMA 5-20RIG) AND HALF NORMAL (NEMA 5-20R)
	WALL MOUNTED DEDICATED DUPLEX RECEPTACLE (NEMA 5-20R)
	WALL MOUNTED DEDICATED QUADRAPLEX RECEPTACLE (NEMA 5-20R)
	WALL MOUNTED SPECIAL OUTLET (SEE PLAN FOR NEMA CONFIGURATION)
	WALL MOUNTED COMMUNICATIONS OUTLET
J	JUNCTION BOX - CEILING MOUNTED
J	JUNCTION BOX - WALL MOUNTED
	FLUSH FLOOR POKE-THRU WITH DUPLEX POWER PLUS COMMUNICATIONS, WIREMOLD #RC3ATCBK + COM75.
	FLOOR MOUNTED POKE-THRU FOR POWER AND COMMUNICATIONS FEEDS TO SYSTEMS FURNITURE, WIREMOLD #4FFATC
	WALL MOUNTED POWER FEED TO SYSTEMS FURNITURE
	WALL MOUNTED COMMUNICATIONS FEED TO SYSTEMS FURNITURE
CR	CARD READER
TV	HDMI CONNECTION
	DISCONNECT SWITCH
	NEW SURFACE MOUNTED PANEL - 208V/120
	NEW SURFACE MOUNTED PANEL - 480V/277
	WALL MOUNTED GROUND BUS - SEE PLAN FOR NOTES
	EXISTING ELECTRIC PANEL TO REMAIN - 208V/120
	EXISTING ELECTRIC PANEL TO REMAIN - 480V/277
T	EXISTING DRY TYPE TRANSFORMER
	EXISTING WALL MOUNTED GROUND BUS

LIGHTING GENERAL NOTES:

A. GENERAL CONTRACTOR SHALL NOTIFY THE ARCHITECT IMMEDIATELY IF CONFLICTS OCCUR BETWEEN LIGHTING AND ANY OTHER TRADE. DO NOT PROCEED WITH INSTALLATION IN THAT AREA UNTIL CONFLICT HAS BEEN RESOLVED TO THE SATISFACTION OF THE ARCHITECT AND ENGINEER.

B. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATION AND MOUNTING INSTRUCTIONS FOR ALL LIGHT FIXTURES. NOTIFY THE ARCHITECT AND ENGINEER OF ANY DISCREPANCIES BETWEEN THESE PLANS AND THE ARCHITECTURAL PLANS RELATING TO QUANTITY, TYPE AND LOCATION OF DEVICES AND/OR FIXTURES.

C. WHEN SPECIFIC LIGHT FIXTURE TYPE HAS BEEN SPECIFIED IN THE FIXTURE INFORMATION, ELECTRICAL CONTRACTOR SHALL PROVIDE COMPLETE ASSEMBLY INCLUSIVE OF ALL PARTS AND HARDWARE.

D. ALL CIRCUITS SHOWN SHALL BE 277V, 20A CIRCUITS UNLESS NOTED OTHERWISE.

E. ALL 120V RUNS LONGER THAN 60' SHALL BE #10 AWG AND 277V RUNS LONGER THAN 150' SHALL BE #10 AWG UNLESS NOTED OTHERWISE ON PLANS.

F. MOUNT LIGHT SWITCHES AS INDICATED ON ARCHITECTURAL DRAWINGS (48" AFF UNLESS NOTED OTHERWISE).

G. ALL GANGED SWITCHES SHALL HAVE A COMMON SEAMLESS FACEPLATE. EACH MULTI-GANG BOX SHALL BE NO MORE THAN SIX (6) SWITCHES WIDE. WHERE MORE THAN SIX (6) SWITCHES ARE SHOWN AT ONE (1) LOCATION, ADDITIONAL MULTI-GANG BOXES SHALL BE STACKED VERTICALLY AND THE WIDTH OF THE MULTI-GANGS SHALL BE AS EVEN AS POSSIBLE.

H. EACH DIMMER SWITCH SHALL BE COMPATIBLE WITH THE FIXTURES BEING DIMMED (INCANDESCENT, FLUORESCENT, LED, LOW VOLTAGE, ETC). DIMMERS SHALL BE OF THE APPROPRIATE RATING PER THE MANUFACTURER BASED ON TOTAL FIXTURE LOAD AND ANY NECESSARY DERATING WHERE DIMMERS ARE GANGED TOGETHER. WHERE SWITCHES AND DIMMERS ARE SIDE-BY-SIDE, THEY SHALL BE GANGED TOGETHER.

I. WHERE NEW FLUORESCENT FIXTURES ARE SHOWN TO BE DIMMED, THE FIXTURES SHALL HAVE DIMMING TYPE BALLASTS WHICH ARE COMPATIBLE WITH THE SPECIFIED DIMMERS. WHERE EXISTING FLUORESCENT FIXTURES ARE SHOWN TO BE DIMMED, CONTRACTOR SHALL PROVIDE NEW DIMMING TYPE BALLASTS WHICH ARE COMPATIBLE WITH THE SPECIFIED DIMMERS.

J. ALL EMERGENCY LIGHT FIXTURES SHALL HAVE 90-MINUTE BATTERY BACK-UP UNLESS NOTED OTHERWISE.

K. ALL EXIT SIGNS SHALL HAVE 90-MINUTE BATTERY BACK-UP EXCEPT AS OTHERWISE NOTED.

L. ALL FLUORESCENT FIXTURES THAT UTILIZE DOUBLE-ENDED LAMPS AND CONTAIN BALLASTS SHALL BE PROVIDED WITH A DISCONNECTING MEANS IN ACCORDANCE WITH 2011 NEC 410.130(G).

M. LIGHTING CONTROL SENSORS AND SWITCHES SHALL BE WIRED DEVICES. NO WIRELESS DEVICES SHALL BE SUBMITTED WITHOUT PRIOR WRITTEN APPROVAL BY OWNER/BUILDING MANAGEMENT.

LIGHTING SYMBOLS

SYMBOL	DESCRIPTION
EM	INDICATES FIXTURE SHALL BE AN EMERGENCY/NIGHT LIGHT
●EM	INDICATES FIXTURE SHALL BE AN EMERGENCY/NIGHT LIGHT
	SINGLE FACE EXIT SIGNS - REFER TO PLAN FOR DIRECTIONAL ARROWS AND WALL OR CEILING MOUNTING
	DOUBLE FACE EXIT SIGNS - REFER TO PLAN FOR DIRECTIONAL ARROWS AND WALL OR CEILING MOUNTING
$	LOW VOLTAGE SWITCH ASSOCIATED WITH CEILING MOUNTED SENSORS
$_3	3-WAY SWITCH
	DIMMER SWITCH
OS	CEILING MOUNTED 360-DEGREE DUAL TECHNOLOGY OCCUPANCY SENSOR (AUTOMATIC ON AND OFF). PROVIDE ALL POWER PACKS AND ACCESSORIES AS REQUIRED TO CONTROL ALL LIGHTS IN ROOM. CONTRACTOR SHALL FOLLOW MANUFACTURER'S RECOMMENDED SENSOR SPACING.
VS	CEILING MOUNTED 360-DEGREE DUAL TECHNOLOGY VACANCY SENSOR (MANUAL ON AND AUTOMATIC OFF). PROVIDE ALL POWER PACKS AND ACCESSORIES AS REQUIRED TO CONTROL ALL LIGHTS IN ROOM. CONTRACTOR SHALL FOLLOW MANUFACTURER'S RECOMMENDED SENSOR SPACING.
$VS	DUAL TECHNOLOGY VACANCY SENSOR SWITCH (MANUAL ON AND AUTOMATIC OFF)
DS	CEILING MOUNTED DAYLIGHT SENSOR FOR CONTINUOUS DAYLIGHT RESPONSIVE DIMMING OF LIGHTING IN THE DAYLIGHT ZONE. PROVIDE ALL REQUIRED POWER PACKS, TRANSFORMERS, ACCESSORIES AND LOW VOLTAGE CABLING. REFER TO PLANS FOR THE ZONES THAT SHALL BE CONTROLLED VIA THIS SENSOR
K	LOW VOLTAGE LIGHTING CONTROL STATION FOR LOCAL ON/OFF/DIMMING CONTROL AND AFTER-HOURS OVERRIDE OF ZONES ON THE LIGHTING CONTROL PANEL. SEE PLANS FOR ZONE(S) THAT ARE TO BE CONTROLLED AT THIS LOCATION.

LEGEND NOTES:

1. CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL ACCESSORIES FOR PROPER MOUNTING OF FIXTURES IN SPECIFIC CEILING PER LOCATION OF FIXTURES.
2. CONTRACTOR SHALL PROVIDE SUBMITTALS TO THE ENGINEER OF ALL LIGHTING FIXTURES, (NEW OR SUBSTITUTES).

FIRE ALARM DEVICES

A FIRE ALARM CONTRACTOR LICENSED BY THE TEXAS DEPARTMENT OF INSURANCE SHALL MODIFY THE EXISTING FIRE ALARM DEVICE LAYOUT AS REQUIRED FOR THE NEW TENANT LAYOUT. SCOPE OF WORK SHALL BE FOR A COMPLETE TURN-KEY INSTALLATION INCLUDING, BUT NOT LIMITED TO, RELOCATION OF EXISTING DEVICES, REMOVAL OF EXISTING DEVICES, ADDITION OF NEW DEVICES, UTILIZATION OF EXISTING DEVICES IN PLACE AND UPGRADES/ADDITIONS TO PANELS/POWER SUPPLIES TO SUPPORT THE DEVICES. THE FIRE ALARM DESIGN SHALL BE APPROVED BY THE CITY AND STATE FIRE MARSHALS ON SHOP DRAWING CONSTRUCTION SET AND SHALL MEET ALL A.D.A., N.F.P.A., STATE AND LOCAL REQUIREMENTS. SYSTEMS SHALL INCLUDE DETECTION AND NOTIFICATION DEVICE COVERAGE IN ALL SPACES BY UTILIZING BUILDING STANDARD, WHITE CEILING MOUNTED AUDIBLE DEVICES, STROBES, AND COMBINATION AUDIBLE/STROBE DEVICES. PLANS MUST BE SUBMITTED TO THE FIRE DEPARTMENT FOR REVIEW, FINAL APPROVAL AND PERMIT PRIOR TO INSTALLATION, UNDER SEPARATE INSTRUMENT AND COVER. DEVICES SHALL BE WHITE UNLESS REQUIRED TO MATCH EXISTING TO REMAIN.
CONNECT NEW FAN POWERED BOX TO FIRE ALARM SYSTEM AND PROVIDE SHUT DOWN OF BOX UPON SMOKE DETECTION IN RETURN AIR PATH.

AVAILABLE CIRCUITS

CIRCUITS SHOWN ARE BASED ON BEST KNOWLEDGE OF EXISTING PANEL PLACARDS AND PREVIOUS CONTRACT DOCUMENTS AND DO NOT NECESSARILY INDICATE THE ACTUAL PANEL CIRCUIT NUMBERS FOR USE. IT IS INTENDED TO FIRST REUSE EXISTING LIGHTING CIRCUITS THAT ARE AVAILABLE IN THE SAME PANEL(S) AFTER DEMOLITION OF WALLS AND EQUIPMENT AND THEN USE AVAILABLE SPARES/SPACES FROM THE SAME PANEL(S) AS NEEDED. MAXIMUM OF 16 AMP LOAD PER 20A CIRCUIT. CONTRACTOR SHALL VERIFY ACTUAL CIRCUIT AVAILABILITY AFTER DEMOLITION AND NOTIFY ARCHITECT IMMEDIATELY IF THE QUANTITY OF AVAILABLE CIRCUITS IS INADEQUATE OR OBTAIN APPROVAL FOR ADD ALTERNATE SOLUTION. CONTRACTOR SHALL OBTAIN WRITTEN APPROVAL FROM PURDY-MCGUIRE PRIOR TO USING CIRCUITS FROM A DIFFERENT PANEL.

LIGHTING FIXTURES

TYPE	DESCRIPTION	MFR. & CAT. NO.	LAMPS	VOLT	INPUT WATTS	REMARKS
	2x4 LED	LITHONIA: 2BLT4-40L-ADP-EZ1-LP835	LED	277	32	
	2x4 LED - EMERGENCY	LITHONIA: 2BLT4-40L-ADP-EZ1-LP835-EL14L	LED	277	32	
	LED DOWN LIGHT	LIGHTOLIER: C6L15-35-MZ10U-C6RDL, WHITE	LED	277	15	
	LED DOWN LIGHT - EMERGENCY	LIGHTOLIER: C6L15-35-MZ10U-C6RDL, WHITE	LED	277	15	
	DIRECT/INDIRECT LED LINEAR PENDANT	FINELITE: HP-2-P-ID-XX-S-H-835-TG-BG-96LG-277-SC-FC-10%-FA50-C1-FE-SW	LED	277	10.4W/FT	
	DIRECT/INDIRECT LED LINEAR PENDANT - EMERGENCY	FINELITE: HP-2-P-ID-XX-S-H-835-TG-BG-96LG-277-SC-FC-10%-FA50-C1-FE-SW-FAC CHO	LED	277	10.4W/FT	
	DIRECT LED RECESSED LINEAR	FINELITE: HP-2-R-D-XX-S-835-F-96LG-277-SC-FC-10%-SF-FE-SW	LED	277	3.5W/FT	
	DIRECT LED RECESSED LINEAR - EMERGENCY	FINELITE: HP-2-R-D-XX-S-835-F-96LG-277-SC-FC-10%-SF-FE-SW-FAC CHO	LED	277	3.5W/FT	
	UNDER CABINET LED TAPE	LEDi INSPIRE: 4V-NSKN-35B-BLK-100 WITH ZUES CON. AND EXTENTS, 3500K	LED	120	4.2W/FT	
	LED PENDANT	LIGHTOLOGY: KUZCO LIGHTING, KZC813270, WHITE	(1) 8W LED LAMP	120	8	
	LED PENDANT	LIGHTOLOGY: SECTO 4200 PENDANT SEC75647, NATURAL BIRCH FINISH	LED	120	75 MAX.	
	2X4 LED - CORRIDOR	COOPER LIGHTING, METALUX, MTO: 24SR-LD2-48-C-UNV-L835-CD1	LED	UNV	38.2	
	2X4 LED - CORRIDOR - EMERGENCY	COOPER LIGHTING, METALUX, MTO: 24SR-LD2-48-C-UNV-EL14W-L835-CD1	LED	UNV	38.2	
	17'-10" RECESSED LINEAR LED - ELEVATOR LOBBY	FOCAL POINT, SEEM 4: FSM4L-FL-1000F-35K-1C-UNV-LD1-XFF-WH-17'-10"	LED	UNV	166.5	
	SQUARE LED DOWN LIGHT - BUILDING STANDARD	LITHONIA: LDN6SQ-35/20-LS6AR-LSS-MVOLT-GZ1	LED	MVOLT	22.5	
	LED TAPE - ELEVATOR LOBBY	ACOLYTE: CHAC2-F-S2-90-IP20-24-3-35-C-ND-20'-3"	LED	120	6W/FT	
	EXIT SIGNS	MATCH BUILDING STANDARD	-	-	4	ON EMERGENCY CIRCUITS

NOTES:
1. CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL ACCESSORIES FOR PROPER MOUNTING OF FIXTURES IN SPECIFIC CEILING PER LOCATION OF FIXTURES.
2. CONTRACTOR SHALL PROVIDE SUBMITTALS TO THE ENGINEER OF ALL LIGHTING FIXTURES (NEW OR SUBSTITUTES).

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PMI JOB NO. 21006.005
PROJECT MGR. TODD JOHNSON

THIS DRAWING SHALL NOT BE REPRODUCED FOR ANY PROJECT OTHER THAN THE PROJECT NOTED IN THE TITLE BLOCK, WITHOUT THE WRITTEN CONSENT OF PURDY-McGUIRE, INC. DALLAS, TX

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LICENSED
PROFESSIONAL ENGINEER
5/25/21

PROJECT NO.: 581-009
DRAWN BY: TM
CHECKED BY: MW
R.S.F.: 41,852

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NO.	ISSUED FOR:	DATE:
	FOR CONSTRUCTION	05-25-21

DRAWING TITLE:
ELECTRICAL NOTES & SYMBOLS

DRAWING NUMBER:
E0.01

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DIVISION 26 - ELECTRICAL

SECTION 260500 - COMMON WORK RESULTS
PART 1 - GENERAL
1.1 GENERAL NOTES
A. DRAWINGS AND GENERAL PROVISIONS OF THE CONTRACT, INCLUDING GENERAL AND SUPPLEMENTARY CONDITIONS AND ALL OTHER SPECIFICATION SECTIONS, APPLY TO THIS AND THE OTHER SECTIONS OF DIVISION 26.
B. THE CONTRACTOR FOR THIS DIVISION OF WORK IS REQUIRED TO OBTAIN A COMPLETE SET OF BID DOCUMENTS (DRAWINGS AND SPECIFICATIONS) AND FULLY REVIEW THEM. COORDINATE DIVISION 26 WORK WITH THAT OF ALL OTHER DIVISIONS OF WORK.
C. THE DRAWINGS AND SPECIFICATIONS ARE INTENDED TO SUPPLEMENT EACH OTHER. ANY LABOR OR MATERIAL CALLED FOR IN ONE SHALL BE FURNISHED AND INSTALLED EVEN THOUGH NOT SPECIFICALLY MENTIONED IN BOTH. ANY LABOR OR MATERIAL WHICH IS NEITHER SHOWN ON THE DRAWINGS OR CALLED FOR IN THE SPECIFICATIONS, BUT WHICH IS OBVIOUSLY REQUIRED TO COMPLETE THE WORK, AND WHICH IS NORMALLY INCLUDED IN WORK OF SIMILAR CHARACTER, SHALL BE FURNISHED AND INSTALLED AS PART OF THIS CONTRACT.
D. THE CONTRACTOR IS RESPONSIBLE FOR SCHEDULING THE COMPLETION AND INSPECTION OF THIS WORK TO COMPLY WITH THE OWNER'S SCHEDULE AND PROJECT COMPLETION DATE.
1.2 SCOPE OF WORK
A. THE DESCRIPTION OF GENERAL CONDITION WORK IN THIS DIVISION SHALL ALSO APPLY TO DIVISION 28.
B. THIS CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, EQUIPMENT, TOOLS, TRANSPORTATION, INCIDENTALS AND DETAILS NECESSARY TO PROVIDE A COMPLETE ELECTRICAL AND FIRE ALARM SYSTEM AS SHOWN ON THE DRAWINGS, CALLED FOR IN THE SPECIFICATIONS AND AS REQUIRED BY JOB CONDITIONS. WORK IS TO BE COMPLETE IN EVERY RESPECT, WHETHER SPECIFICALLY MENTIONED IN THE CONTRACT DOCUMENTS OR NOT.
C. ALL WORK NOT SPECIFICALLY NOTED AS BEING BY THE OWNER (BUILDING OWNER, LANDLORD OR TENANT), SHALL BE PROVIDED BY THIS CONTRACTOR.
D. THIS WORK, MATERIALS AND EQUIPMENT INCLUDES, BUT IS NOT LIMITED TO THE FOLLOWING ITEMS:
a. A COMPLETE ELECTRICAL DISTRIBUTION SYSTEM INCLUDING THE INSTALLATION OF ELECTRICAL PANELBOARDS, TRANSFORMERS, SAFETY AND DISCONNECT SWITCHES, MOTOR STARTERS, VFD'S AND LIGHTING. IT IS THE ELECTRICAL CONTRACTOR'S RESPONSIBILITY TO INCLUDE IN HIS BID FOR PROVIDING SERVICE EQUIPMENT NECESSARY FOR TIE-IN TO OWNER'S DISTRIBUTION EQUIPMENT. REFER TO ELECTRICAL RISER DIAGRAM FOR ADDITIONAL INFORMATION.
b. CONTRACTOR MUST ALSO INCLUDE IN BID ALL NECESSARY MATERIALS REQUIRED TO COMPLETE THE SYSTEM INCLUDING, BUT NOT LIMITED TO, FEEDERS, BRANCH CIRCUITS, JUNCTION BOXES, OUTLET BOXES, WIRING DEVICES, COVER PLATES, CONDUITS, ETC.
c. METERING REQUIRED PER DRAWING AND/OR OWNER.
d. THE WIRING OF MECHANICAL EQUIPMENT SHALL BE AS OUTLINED ON THE BID SET DRAWINGS AND IN THE SPECIFICATIONS. WORK SHALL INCLUDE WIRING OF ALL STARTERS, DISCONNECTS, VFD'S, AND POWER WIRING OF MECHANICAL EQUIPMENT EXCEPT AS SPECIFICALLY NOTED OTHERWISE. ALL LOW VOLTAGE (24 VOLT) EMS TEMPERATURE CONTROL WIRING SHALL BE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR UNLESS NOTED SPECIFICALLY ON DRAWING.
e. INSTALLATION OF LIGHT FIXTURES AND LAMPS AS SHOWN ON THE DRAWINGS INCLUDING ALL DEVICES, EQUIPMENT, ETC. REQUIRED FOR MOUNTING.
f. A COMPLETE CONDUIT SYSTEM FOR TELEPHONE/DATA INCLUDING BRANCH CONDUITS, OUTLET BOXES, PULL WIRES, GROUND CONDUCTORS, COVER PLATES, ETC. OR AS SPECIFICALLY NOTED OTHERWISE ON THE DRAWINGS.
g. A COMPLETE EMERGENCY AND EXIT LIGHTING SYSTEM AS SHOWN ON THE DRAWINGS.
h. TEMPORARY SERVICE AS REQUIRED FOR CONSTRUCTION, INCLUDING ITS REMOVAL.
i. SMOKE/FIRE ALARM WIRING, DEVICES AND CONDUIT, AS DESCRIBED ON DRAWINGS OR AS NECESSARY TO MEET OWNER, STATE, LOCAL, INSURANCE AND FIRE DEPARTMENT REQUIREMENTS.
j. INSTALLATION OF CONDUITS STUBBED TO ABOVE CEILING FOR HVAC CONTROLS AND FUTURE LOADS.
k. BALANCING LOADS.
E. WORK NOT INCLUDED - THE FOLLOWING ITEMS OF ELECTRICAL CONSTRUCTION ARE NOT INCLUDED IN THIS CONTRACT:
a. TELEPHONE INSTRUMENTS AND WIRING UNLESS NOTED OTHERWISE.
b. DATA CABLE WIRING UNLESS NOTED OTHERWISE.
1.3 CODES
A. ALL WORK SHALL CONFORM TO THE OWNER'S CRITERIA, STATE, COUNTY, CITY AND LOCAL CODES AND ORDINANCES, SAFETY AND HEALTH CODES, NFPA CODES, ENERGY CODES AND ALL OTHER APPLICABLE CODES AND REQUIREMENTS. THIS CONTRACTOR SHALL INQUIRE INTO AND COMPLY WITH ALL APPLICABLE CODES, ORDINANCES AND REGULATIONS. THIS CONTRACTOR SHALL INCLUDE ANY CHANGES REQUIRED BY CODES IN THE BID AND IF THESE CHANGES ARE NOT INCLUDED IN THE BID, THEY MUST BE QUALIFIED AS A SEPARATE LINE ITEM IN THE BID. AFTER CONTRACT IS AWARDED, CHANGE ORDERS FOR INCREASED COSTS DUE TO CODE ISSUES WILL NOT BE ACCEPTED UNLESS ALLOWANCES HAVE BEEN PREVIOUSLY AGREED UPON.
B. WHERE THE DRAWINGS AND SPECIFICATIONS CALL FOR ITEMS WHICH EXCEED CODE OR THE OWNER'S CRITERIA, THE CONTRACTOR IS RESPONSIBLE FOR FURNISHING AND INSTALLING THE SYSTEM WITH THE MORE STRINGENT REQUIREMENTS.
1.4 LICENSES, PERMITS, INSPECTION AND FEES
A. THIS CONTRACTOR SHALL OBTAIN AND PAY FOR ALL LICENSES, PERMITS, INSPECTIONS AND FEES REQUIRED OR RELATED TO THIS WORK. ALL COSTS ASSOCIATED WITH THESE SHALL BE PAID FOR BY THE CONTRACTOR AND INCLUDED AS PART OF THE BID.
B. FURNISH TO THE OWNER ALL CERTIFICATES OF INSPECTION AND FINAL INSPECTION APPROVAL AT THE COMPLETION OF THE PROJECT.
1.5 GUARANTEE
A. ALL MATERIALS, EQUIPMENT AND WORKMANSHIP SHALL BE GUARANTEED FOR PERIOD OF 1 YEAR FROM THE DATE OF ACCEPTANCE (OFFICIAL DATE IN WRITING) OF THE PROJECT. ALL WORK FOUND TO BE DEFECTIVE SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT NO COST TO THE OWNER.
B. WHERE SPECIFIC EQUIPMENT IS NOTED TO HAVE EXTENDED WARRANTIES, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER REGISTRATION SO THE OWNER CAN MAKE ALL APPROPRIATE CLAIMS.
1.6 RECORD DRAWINGS
A. THIS CONTRACTOR SHALL MAINTAIN ONE SET OF DRAWINGS ON THE JOBSITE, UPDATED WEEKLY, TO RECORD ALL DEVIATIONS FROM THE CONTRACT DOCUMENTS SUCH AS:
a. LOCATIONS OF CONCEALED CONDUITS
b. PANEL DESCRIPTIONS, CIRCUIT DIRECTORIES AND LABELS
c. REVISIONS, ADDENDUMS AND CHANGE ORDERS
d. SIGNIFICANT DEVIATIONS MADE NECESSARY BY FIELD CONDITIONS, APPROVED EQUIPMENT SUBSTITUTIONS, AND CONTRACTOR'S COORDINATION WITH OTHER TRADES.
B. DELIVER RECORD DRAWINGS TO THE OWNER AT PROJECT COMPLETION.
1.7 DEMOLITION
A. 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 ALL EXISTING EQUIPMENT REQUIRED TO BE LEFT INTACT.
B. THIS CONTRACTOR SHALL INCLUDE, AND WILL BE RESPONSIBLE FOR, THE REMOVAL OF ALL EXISTING CONDUIT, FIRE ALARM SYSTEM, SWITCH GEAR, AND EQUIPMENT, ETC. UNLESS SPECIFICALLY NOTED OTHERWISE. CONTRACTOR MUST VERIFY WITH THE OWNER ALL PRESUMED ABANDONED EQUIPMENT, CONDUIT AND SWITCH GEAR PRIOR TO REMOVAL. EXISTING ABANDONED CONDUIT 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. IF REQUIRED BY OWNER OR CODES, ABANDONED CONDUIT MUST BE REMOVED TO POINT OF ORIGIN. CONFIRM EXTENT OF DEMOLITION PRIOR TO BID AND INCLUDE PROPOSAL.
1.8 TEMPORARY LIGHT AND POWER
A. THIS CONTRACTOR SHALL FURNISH AND INSTALL ALL TEMPORARY WIRING AND RELATED GROUND FAULT INTERRUPTION PROTECTION FOR LIGHT AND POWER FOR ALL CONTRACTORS DURING CONSTRUCTION AND IS RESPONSIBLE FOR ITS REMOVAL.

PART 2 - PRODUCTS
2.1 MATERIALS
A. MATERIALS UTILIZED IN THE CONSTRUCTION OF THIS PROJECT SHALL BE NEW AND CARRY ALL UL LABELS WHERE APPLICABLE, UNLESS APPROVED BY THE OWNER.
B. ANY USED EQUIPMENT OR MATERIALS USED SHALL STILL CARRY THE SPECIFIED 1 YEAR GUARANTEE AND APPROVAL OF THE USE OF THIS EQUIPMENT OR MATERIALS DOES NOT RELIEVE THE CONTRACTOR FROM ENSURING EVERYTHING IS OPERATIONAL.
2.2 MANUFACTURERS
A. WHERE TRADE NAMES OR MANUFACTURERS ARE USED ON THE DRAWINGS OR IN THE SPECIFICATIONS, THE EXACT EQUIPMENT SHALL BE CONSIDERED THE BASIS OF DESIGN AND USED AS A MINIMUM FOR THE BASE BID. MANUFACTURERS CONSIDERED AS AN EQUAL OR BETTER IN ALL ASPECTS TO THAT SPECIFIED, WILL BE SUBJECT TO APPROVAL IN WRITING BY THE ENGINEER THROUGH THE SHOP DRAWING SUBMITTAL PROCESS, FOR ACCEPTANCE PRIOR TO INSTALLATION. THE USE OF ANY UNAUTHORIZED EQUIPMENT SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
2.3 SLEEVES
A. PROVIDE SLEEVES TO PROTECT EQUIPMENT OR FACILITIES IN THE INSTALLATION. EACH SLEEVE SHALL EXTEND THROUGH ITS RESPECTIVE FLOOR, WALL OR PARTITION AND SHALL BE CUT FLUSH WITH EACH SURFACE EXCEPT SLEEVES THAT PENETRATE THE FLOOR, WHICH SHALL EXTEND 2 INCHES ABOVE THE FLOOR.
B. CONTRACTOR SHALL COORDINATE THROUGH THE GENERAL CONTRACTOR AND OWNER ANY CORE DRILLING OR CUTTING OF OPENINGS IN MASONRY WALLS OR CONCRETE FLOORS.
C. ALL SLEEVES AND OPENINGS THROUGH FIRE RATED WALLS AND FLOORS SHALL BE FIRE SEALED. REFER TO "FIRE STOPPING".
D. SLEEVES IN BEARING AND MASONRY WALLS, FLOORS AND PARTITIONS SHALL BE STANDARD WEIGHT STEEL PIPE FINISHED WITH SMOOTH EDGES. FOR OTHER THAN MASONRY PARTITIONS, THROUGH SUSPENDED CEILINGS OR FOR CONCEALED VERTICAL PIPING, SLEEVES SHALL BE MINIMUM NO. 22 USG GALVANIZED STEEL.
2.4 FLAME SPREAD PROPERTIES OF MATERIALS
A. MATERIALS USED ON THIS PROJECT SHALL EACH HAVE A FLAME SPREAD RATING OF 25 OR LESS, AND A SMOKE DEVELOPED RATING OF 50 OR LESS, AS DETERMINED BY AN INDEPENDENT TESTING LABORATORY IN ACCORDANCE WITH NFPA-255.
2.5 FIRE STOPPING
A. PROVIDE FIRE STOPPING IN SEALING OF PENETRATIONS IN FIRE-RATED CONSTRUCTION, HORIZONTAL AND VERTICAL, INCLUDING THE FOLLOWING MATERIALS:
a. FOAM: DOW CORNING FIRESTOP SILICONE RTV FOAM, CAT #2001 LIQUID COMPONENT PART A (BLACK) AND LIQUID COMPONENT PART B (OFF-WHITE).
b. SEALANT: 3M 1000 NS AND 1003 SL SILICONE ADHESIVE SEALANT.
c. DAMMING MATERIALS: MINERAL FIBERBOARD, AS SELECTED BY THE APPLICATOR.
B. MIXES SHALL CONFORM TO THE MANUFACTURER'S DIRECTIONS.
2.6 FLOOR, CEILING AND WALL PLATES
A. PROVIDE CHROME-PLATED, ONE-PIECE, ESCUTCHEONS ON CONDUITS AND HANGER RODS PENETRATING THE WALLS, FLOORS, AND CEILINGS IN FINISHED AREAS OF THE BUILDING. SPLIT RING ESCUTCHEONS ARE NOT ACCEPTABLE.
2.7 EQUIPMENT FOUNDATIONS AND SUPPORTS
A. PROVIDE FOUNDATIONS AND SUPPORTS FOR ELECTRICAL EQUIPMENT AS REQUIRED. THESE SHALL INCLUDE REINFORCED CONCRETE HOUSEKEEPING PADS FOR ANY DISTRIBUTION EQUIPMENT INSTALLED INDOORS ON THE FLOOR. PADS SHALL EXTEND A MINIMUM OF 3 INCHES BEYOND EQUIPMENT IN ALL DIRECTIONS.
3.3 CONSTRUCTION REQUIREMENTS
A. THE DRAWINGS AND SPECIFICATIONS SHOW EQUIPMENT CONNECTIONS, CONDUIT, AND WIRE SIZE, GENERAL ROUTING AND LOCATION, AND DESCRIBE THE VARIOUS SYSTEMS. THESE DOCUMENTS DESCRIBE AND SIZE EQUIPMENT, ITS GENERAL LOCATION, USAGE, SUPPORT, AND AUXILIARY REQUIREMENTS. THEY DESCRIBE MOST, BUT NOT ALL OF THE MATERIALS AND THEIR USAGE FOR THIS PROJECT.
B. CONTRACT DOCUMENTS DO NOT DETAIL ALL JOB REQUIREMENTS. THEY DO NOT SHOW LAYOUTS, LOCATIONS, OR ELEVATIONS OF CONDUITS, ANCHORS, SLEEVES, HANGERS, JUNCTION BOXES, OR ACCESS DOORS. THEY DO NOT SHOW FINAL PRECISE LOCATIONS OF EQUIPMENT BY DIMENSIONS IN ALL INSTANCES.
C. THE EXACT LOCATION OF EACH ITEM SHALL BE DETERMINED BY REFERENCE TO THE PROJECT CONTRACT DRAWINGS, AND TO DETAILS, EQUIPMENT DRAWINGS, AND ROUGH-IN DRAWINGS, BY MEASUREMENTS AT THE BUILDING, AND IN COOPERATION WITH THE VARIOUS TRADES. MINOR RELOCATION NECESSITATED BY THE CONDITIONS AT THE SITE OR DIRECTED BY THE OWNER SHALL BE MADE WITHOUT ADDITIONAL COST TO THE OWNER. WHERE CONFLICTS OCCUR, WORK IN THE AREA INVOLVED.
3.4 EQUIPMENT FOUNDATIONS, HANGERS AND SUPPORTS
A. FOR FLOOR MOUNTED ELECTRICAL EQUIPMENT, PROVIDE CONCRETE HOUSEKEEPING PADS NOT LESS THAN 3-1/2 INCHES THICK REINFORCED WITH NO. 3 DOWELS AND NO. 3 BARS, 2 FEET-0 INCHES ON CENTER EACH WAY.
B. SUSPENDED EQUIPMENT SHALL HAVE SUPPORTS CONSISTING OF MANUFACTURED METAL FRAMING OR HANGERS CONFORMING TO SECTION 260529.
3.5 INSTRUCTIONS TO OWNER'S PERSONNEL
A. PROVIDE THE SERVICES OF COMPETENT ENGINEERS OR TECHNICIANS TO INSTRUCT REPRESENTATIVES OF THE OWNER IN COMPLETE AND DETAILED OPERATION AND MAINTENANCE OF EACH ITEM OF EQUIPMENT AND EACH SYSTEM.
B. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR PROPER MAINTENANCE OF EQUIPMENT AND SYSTEMS UNTIL THE INSTRUCTIONS HAVE BEEN GIVEN TO THE OWNER'S PERSONNEL AND THE LETTER OF RELEASE ACKNOWLEDGED.
C. PROVIDE OPERATION & MAINTENANCE MANUALS (3 COPIES), ALONG WITH AS-BUILT SET OF PRINTS PRIOR TO SUBSTANTIAL COMPLETION OF THE PROJECT.
3.6 ELECTRICAL WIRING OF MOTORS
A. THE ELECTRICAL CONTRACTOR SHALL FURNISH ALL DISCONNECT SWITCHES AND MOTOR CONTROLS AS REQUIRED FOR THE PROPER OPERATION OF THE EQUIPMENT, UNLESS SUCH EQUIPMENT IS SPECIFIED TO BE PROVIDED WITH FACTORY MOUNTED DISCONNECT SWITCHES, STARTERS, OR VFD'S. THE ELECTRICAL CONTRACTOR SHALL MAKE FINAL CONNECTIONS TO EQUIPMENT AS REQUIRED FOR A COMPLETE AND OPERATING SYSTEM.
B. THE MECHANICAL AND PLUMBING DESIGN AND DRAWINGS ARE BASED ON THE EQUIPMENT SCHEDULED AND SHOWN ON THE DRAWINGS, SHOULD ANY CONTRACTOR SUBMIT FOR APPROVAL EQUIPMENT REQUIRING CHANGES TO THE MECHANICAL AND PLUMBING DESIGN FOR WHICH THE MECHANICAL OR PLUMBING CONTRACTOR WILL REQUEST AN EXTRA, THIS EXTRA SHALL BE PAID BY THE CONTRACTOR PROVIDING THE ALTERNATE EQUIPMENT REQUIRING THE CHANGE.
C. ELECTRICAL CONTRACTOR SHALL REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL ELECTRICAL WORK TO BE INCLUDED IN HIS BID.
D. ELECTRICAL CONTRACTOR SHALL DO ALL POWER WIRING, LINE VOLTAGE WIRING, AND LINE VOLTAGE CONTROL WIRING INDICATED UNDER THE HEATING, VENTILATION AND AIR CONDITIONING, PLUMBING, AND FIRE PROTECTION SPECIFICATIONS AND DRAWINGS. THIS CONTRACTOR SHALL ALSO DO ALL INTERCONNECTING LINE VOLTAGE WIRING BETWEEN RELAYS AND SWITCHES AS REQUIRED.
E. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR FURNISHING AND INSTALLING CONDUIT FOR HVAC CONTROL WIRING WHERE REQUIRED BY CODE OR SHOWN ON PRINTS TO BE IN CONDUIT. REFER TO PLANS FOR REQUIREMENTS AND SIZES.
F. FIRE DAMPERS SHALL BE WIRED BY ELECTRICAL CONTRACTOR. COORDINATE WITH MECHANICAL CONTRACTOR FOR POWER REQUIREMENTS.
3.7 QUIET OPERATION
A. THIS WORK SHALL BE INSTALLED IN SUCH A MANNER THAT UNDER ALL CONDITIONS OF LOAD IT SHALL OPERATE WITHOUT SOUND OR VIBRATION, WHICH IS OBJECTIONABLE IN THE OCCUPIED SPACES IN THE OPINION OF THE OWNER. IN THE CASE OF MOVING MACHINERY, SOUND OR VIBRATION ANNOYINGLY NOTICEABLE INSIDE ITS OWN ROOM CAN BE CONSIDERED AS OBJECTIONABLE. IN ANY CASE, THE SITUATION SHALL BE REMEDIED AT NO COST TO THE OWNER.
3.8 CUTTING AND PATCHING
A. PROVIDE ALL CUTTING, CHASING AND CHANNELING REQUIRED FOR ANY WORK UNDER THIS DIVISION. CUTTING SHALL HAVE PRIOR APPROVAL FROM ARCHITECT AND OWNER.
B. ALL PATCHING SHALL BE BY THE GENERAL CONTRACTOR AND SHALL MATCH THE SURROUNDING SURFACES.
3.9 TESTS
A. THE CONTRACTOR INSTALLING THE ELECTRICAL SYSTEMS SHALL FOLLOW ALL TESTS AS REQUIRED TO PROVE COMPLIANCE WITH ALL LOCAL CODES.

END OF SECTION.

SECTION 260519 - CONDUCTORS
PART 1 - GENERAL
1.1 SCOPE OF WORK
A. REFER TO SECTION 260500.

PART 2 - PRODUCTS
2.1 SINGLE CONDUCTORS
A. CONDUCTORS FOR FEEDERS AND BRANCH CIRCUITS SHALL BE COPPER AND THE AWG SIZE AND TYPE AS SHOWN ON DRAWINGS. MINIMUM WIRE SIZE #12 UNLESS NOTED OTHERWISE ON PLAN OR IN GENERAL NOTES FOR VOLTAGE DROP. THE CONDUCTORS SHALL BE 600 VOLT INSULATION, TYPE THW, THWN OR THHN
B. CONDUCTORS MAY BE STRANDED FOR SIZES #10 AWG AND LARGER. CONDUCTOR SIZE #12 SHALL BE SOLID (NOT STRANDED).
C. ALUMINUM CONDUCTORS ARE NOT PERMITTED. CONTRACTOR MUST OBTAIN WRITTEN PERMISSION FROM GENERAL CONTRACTOR AND ENGINEER WHEN USED.
2.2 MULTICONDUCTOR CABLES
A. PROVIDE TYPE MC MULTICONDUCTOR CABLE IN COMPLIANCE WITH NEMA WC 70, WITH METAL CLAD AND GROUND WIRE.
2.3 CONNECTORS
A. WIRE CONNECTORS SHALL BE EQUAL TO "SCOTCH LOCK" FOR #8 AWG WIRE AND SMALLER. USE T&B "LOCKTIGHT" FOR #6 AWG WIRE AND LARGER.

PART 3 - EXECUTION
3.1 APPLICATIONS AND INSTALLATION
A. ALL WIRING SHALL BE IN CONDUIT, UNLESS NOTED OTHERWISE (IE-LOW VOLTAGE PLENUM RATED WIRE).
B. THE USE OF SHARED NEUTRALS IS REQUIRED FOR LIGHTING CIRCUITS AND ALLOWED PER DRAWING NOTES. IT SHALL BE INSTALLED IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE AND LOCAL CODES.
C. THE USE OF ROMEX, BX, ETC. IS NOT PERMITTED.
D. ALL WIRING TO BE COLOR-CODED AS FOLLOWS:

120/208 VOLT SYSTEM
NEUTRAL - WHITE
PHASE A OR L1 - BLACK
PHASE B OR L2 - RED
PHASE C OR L3 - BLUE
GROUND - GREEN
ISOLATED GROUND - GREEN WITH YELLOW TRACER

277/480 VOLT SYSTEM
NEUTRAL - GRAY
PHASE A OR L1 - BROWN
PHASE B OR L2 - ORANGE
PHASE C OR L3 - YELLOW
GROUND - GREEN WITH YELLOW TRACER

E. UNLESS NOTED OTHERWISE, MC CABLE IS ONLY ALLOWED WITHIN PARTITIONS OR MILLWORK AND LOCATIONS DESCRIBED IN SECTION 260533.

END OF SECTION.

SECTION 260526 - GROUNDING
PART 1 - GENERAL
1.1 SCOPE OF WORK
A. REFER TO SECTION 260500.

PART 2 - PRODUCTS
2.1 CONDUCTORS AND JUMPERS
A. ALL CONDUIT, INCLUDING FLEXIBLE CONDUIT, SHALL BE GROUNDED WITH A GREEN COPPER GROUNDING CONDUCTOR.
B. GROUNDING CONNECTIONS MADE TO THE WATER PIPING SYSTEM SHALL BE COORDINATED WITH THE PLUMBING CONTRACTOR AND A BONDING JUMPERS INSTALLED AROUND WATER METER PER CODES AND AS INDICATED ON DRAWING.
C. ALL DEVICES SHALL BE BONDED TO THE CONDUIT SYSTEM. USE A BONDING JUMPER BETWEEN THE OUTLET BOX AND THE DEVICE GROUNDING TERMINAL. METAL-TO-METAL CONTACT BETWEEN THE DEVICE YOKE AND THE OUTLET BOX IS NOT ACCEPTABLE AS A BOND FOR EITHER SURFACE MOUNTED BOXES OR FLUSH TYPE BOXES. ALL JUNCTION BOXES, OUTLET BOXES, AND PULL BOXES SHALL BE BONDED TO THE CONDUIT SYSTEM.

PART 3 - EXECUTION
3.1 INSTALLATION
A. RUN A SEPARATE ISOLATED GROUNDING CONDUCTOR, #12 AWG MINIMUM, IN EACH CONDUIT FEEDING ISOLATED GROUND RECEPTACLES AND OTHER COMPUTERIZED EQUIPMENT AS SHOWN ON DRAWINGS.
B. ALL ENCLOSURES AND NON-CURRENT CARRYING METAL PARTS ARE TO BE GROUNDED. CONDUIT SYSTEM IS TO BE ELECTRICALLY CONTINUOUS. ALL LOCKNUTS MUST CUT THROUGH ENAMELED OR PAINTED SURFACES ON CONDUIT SYSTEM, USE BONDING JUMPERS WITH APPROVED CLAMPS. ALL GROUND CLAMPS SHALL BE "PENN-UNION" OR EQUAL, SIMILAR TO "GPL" TYPE.

END OF SECTION.

SECTION 260529 - HANGERS AND SUPPORTS
PART 1 - GENERAL
1.1 SCOPE OF WORK
A. REFER TO SECTION 260500.

PART 2 - PRODUCTS
2.1 STEEL SLOTTED SUPPORTS
A. HOT-DIP GALVANIZED AFTER FABRICATION OF DIMENSIONS REQUIRED FOR THE SIZE OF SUPPORTED ITEMS AND ANTICIPATED LOAD.
B. RACEWAY AND CABLE SUPPORTS AS DESCRIBED IN NECA 1 AND 101.
C. USE STEEL HANGERS, CLAMPS AND ASSOCIATED FITTINGS, DESIGNED FOR TYPES AND SIZES OF RACEWAYS TO BE SUPPORTED.

PART 3 - EXECUTION
3.1 INSTALLATION
A. HANGERS SHALL INCLUDE ALL MISCELLANEOUS STEEL SUCH AS ANGLE IRON, BANDS, C-CLAMPS WITH RETAINING CLIPS, CHANNELS, HANGER RODS, ETC., NECESSARY FOR THE INSTALLATION OF WORK.
B. HANGERS SHALL BE FASTENED TO BUILDING STEEL, CONCRETE, OR MASONRY, BUT NOT TO PIPING. HANGING FROM METAL DECK IS NOT PERMITTED. HANGERS MUST BE ATTACHED TO UPPER CHORD OF BAR JOIST. WHERE INTERFERENCES OCCUR, AND IN ORDER TO SUPPORT CONDUIT, THE CONTRACTOR MUST INSTALL TRAPEZE TYPE HANGERS OR SUPPORTS WHICH SHALL BE LOCATED WHERE THEY DO NOT INTERFERE WITH ACCESS TO OTHER SYSTEMS AND EQUIPMENT. HANGER TYPES AND INSTALLATION METHODS ARE ALSO SUBJECT TO OWNER CRITERIA.
C. HANGERS AND PIPING OF DISSIMILAR METALS SHALL BE DI-ELECTRICALLY SEPARATED.

END OF SECTION.

SECTION 260533 - RACEWAYS AND BOXES
PART 1 - GENERAL
1.1 SCOPE OF WORK
A. REFER TO SECTION 260500.
B. THIS CONTRACTOR SHALL FURNISH AND INSTALL ALL CONDUITS SERVING ALL EQUIPMENT, INCLUDING BUT NOT LIMITED TO LIGHTING, RECEPTACLES, HEATING, AIR CONDITIONING, PLUMBING EQUIPMENT, TELEPHONE, DATA, AUDIO/VISUAL, SECURITY, AND ELECTRICAL EQUIPMENT.

PART 2 - PRODUCTS
2.1 RACEWAYS
A. ALL CONDUITS SHALL BE GALVANIZED IMC, EMT OR MC TYPE UNLESS OTHERWISE SPECIFIED IN SPECIFICATIONS OR ON DRAWINGS. ALL CONDUIT IS TO BE UL LABELED.
a. EMT CONNECTORS SHALL BE STEEL COMPRESSION TYPE.
b. CONDUIT UNDER SLAB ON GRADE SHALL BE RIGID STEEL, OR SCHEDULE 40 PVC WITH RIGID STEEL ELLS WHERE PERMITTED BY OWNER OR CODE.
B. MINIMUM SIZE OF CONDUIT SHALL BE:
a. 3/4 INCH FOR INDIVIDUAL LIGHTING FIXTURE CONNECTIONS OR TO INDIVIDUAL LIGHT SWITCHES AND 3/4 INCH FOR ALL OTHER LIGHTING AND POWER CIRCUITING.
b. IF HVAC CONTROL WIRING IS REQUIRED TO BE RUN IN CONDUIT, IT SHALL BE A MINIMUM OF 3/4 INCH, UNLESS NOTED OTHERWISE ON DRAWINGS.
C. ALL UNDER FLOOR CONDUIT SHALL BE OF MINIMUM 3/4 INCH SIZE.
2.2 OUTLET BOXES
A. ALL OUTLET BOXES SHALL BE GALVANIZED PRESSED STEEL OF THE STANDARD KNOCKOUT TYPE. NO ROUND OUTLET BOXES SHALL BE PERMITTED UNLESS INDICATED AND FOR LIGHTING THAT REQUIRE SUCH CONFIGURATION. CONCEALED BOXES SHALL NOT BE LESS THAN 4 INCH SQUARE AND 1-½ INCH DEEP, WITH PLASTER RINGS.
B. ALL KNOCKOUT BOXES, UPON WHICH LIGHTING FIXTURES ARE TO BE INSTALLED, SHALL BE EQUIPPED WITH 3/8 INCH FIXTURE STUDS.
2.3 JUNCTION AND PULL BOXES
A. BOXES AND COVERS SHALL BE GALVANIZED STEEL OF CODE GAUGE AND SIZE.

PART 3 - EXECUTION
3.1 INSTALLATION
A. SUPPORT ALL CONDUIT IN ACCORDANCE WITH THE NEC AND LOCAL CODES.
B. GENERALLY, ALL CONDUIT SHALL BE CONCEALED EXCEPT FOR UNFINISHED AREAS, SUCH AS EQUIPMENT ROOMS. EXPOSED CONDUIT SHALL BE ALLOWED ONLY AS NOTED ON PLAN AND AS APPROVED BY TENANT'S PROJECT MANAGER. PAINTING OF CONDUITS, NOTED ON DRAWINGS OR SPECIFICATIONS WILL BE BY GENERAL CONTRACTOR.
C. FLEXIBLE METAL CONDUIT OR MC TYPE CABLE FLEXIBLE CONDUIT OR MC TYPE CABLE SHALL ONLY BE USED FOR THE FOLLOWING APPLICATIONS:
a. FINAL CONNECTIONS TO MOTORS
b. FINAL CONNECTIONS INTO AND OUT OF THE TRANSFORMER
c. FINAL CONNECTIONS TO VIBRATING EQUIPMENT
d. INTER-CONNECTIONS BETWEEN ALL LIGHT FIXTURES
e. FINAL CONNECTIONS WHERE RIGID CONDUIT IS NOT PRACTICAL.
f. IN WALLS (FOR LIGHT SWITCHES AND 120 VOLT POWER RECEPTACLES AND HVAC CONTROL EQUIPMENT).
D. FLEXIBLE METAL CONDUIT MUST BE THE SAME SIZE AS THE IMC OR EMT CONDUIT TO WHICH IT IS CONNECTED. THE FLEXIBLE METAL CONDUIT AND ITS FITTINGS ARE TO BE LISTED FOR GROUNDING. A GREEN GROUNDING CONDUCTOR SHALL BE INSTALLED. ALL CONNECTORS ARE TO BE OF A NEMA APPROVED TYPE.
E. THE USE OF ROMEX, BX, ETC. IS NOT PERMITTED.
F. PROVIDE PULL-WIRE IN ALL EMPTY CONDUITS EXCEPT AS NOTED OTHERWISE ON DRAWINGS.
G. HOME RUNS AND MAIN CONDUIT RUNS ARE TO BE HELD TIGHT TO STRUCTURE ABOVE OR AS REQUIRED TO ALLOW PROPER SERVICE ACCESS AND OTHER TRADES WORK. CONDUIT MUST BE TRAPEZED TO ALLOW 3 FEET MINIMUM CLEARANCE ABOVE CEILING.
H. ALL CONDUITS MUST BE SIZED PER NEC AND LOCAL CODES.
I. INSTALL BOXES RIGIDLY FROM BUILDING STRUCTURE AND SUPPORT INDEPENDENTLY OF THE CONDUIT SYSTEM. ALSO PROVIDE SUITABLE BOX EXTENSIONS TO EXTEND BOXES TO FINISHED FACES OF FLOORS, CEILINGS, WALLS, ETC. ALL OUTLET BOXES TO BE PROVIDED WITH CADDY "QUICK-MOUNT BOX SUPPORT" TO MINIMIZE THE DEFLECTION THAT OCCURS WHEN PLUGGING/UNPLUGGING INTO THESE DEVICES.
J. UNLESS OTHERWISE NOTED ON DRAWINGS OR OTHERWISE REQUIRED BY THE NATIONAL ELECTRIC CODE, HANDICAP CODES OR LOCAL CODES, OUTLET HEIGHTS SHALL BE AS FOLLOWS:
a. SWITCH HEIGHT 48 INCHES FROM FINISHED FLOOR TO CENTERLINE OF OUTLET
b. CONVENIENCE OUTLETS: 18 INCHES FROM FINISHED FLOOR TO CENTERLINE OF OUTLET
c. TELEPHONE OUTLETS SHALL BE LOCATED AS NOTED ON DRAWINGS
K. ARRANGE CIRCUITS TO AVOID THE USE OF JUNCTION BOXES IN INACCESSIBLE LOCATIONS. THE USE OF JUNCTION BOXES ABOVE DRYWALL CEILINGS SHOULD BE LIMITED TO LOCATIONS NEAR ACCESS FRAMES USED FOR DIFFUSERS AND RETURN AIR GRILLES OR ACCESS PANELS AS LOCATED ON PLANS.
L. JUNCTION AND PULL BOXES MUST BE LABELED WITH CIRCUIT NUMBER IDENTIFICATION AND SYSTEM TYPE ON COVER.
M. JUNCTION AND PULL BOXES MUST BE ACCESSIBLE ACCORDING TO NEC 314.29. REFER TO ARCHITECTURAL SPECIFICATIONS FOR ACCESS PANEL SPECIFICATION IF NEEDED.
3.2 TELEPHONE DATA AND COMPUTER SYSTEM
A. FURNISH AND INSTALL A SYSTEM OF CONDUIT RACEWAYS, OUTLET BOXES AND PULL WIRES AS SHOWN ON THE DRAWINGS UNLESS OTHERWISE NOTED ON PLANS. TELEPHONE SWITCHING APPARATUS, CONDUCTORS, INSTRUMENTS, MISCELLANEOUS EQUIPMENT AND APPURTENANCES ARE NOT PART OF THIS CONTRACT
B. OUTLET BOXES ARE TO BE 4 INCH SQUARE MINIMUM WITH SINGLE DEVICE COVER AND TELEPHONE PLATE
C. ALL PULL WIRES ARE TO BE LABELED FOR PURPOSE DESIGNATED.

END OF SECTION.

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TODD M. JOHNSON
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LICENSED
PROFESSIONAL ENGINEER
5/25/21

PROJECT NO.: 581-009
DRAWN BY: TM
CHECKED BY: MW
R.S.F.: 41,852

BILLINGSLEY COMPANY

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SELENE

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5TH FLOOR
DALLAS, TX 75019

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DRAWING TITLE:
ELECTRICAL SPECIFICATIONS
1 OF 2

DRAWING NUMBER:
E1.01

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SECTION 260553 - IDENTIFICATION
PART 1 - GENERAL
1.1 SCOPE OF WORK
A. REFER TO SECTION 260500.

PART 2 - PRODUCTS
2.1 EQUIPMENT LABELS
A. MULTILAYER, MULTICOLOR PLASTIC LABELS WITH MECHANICAL ENGRAVING, FOR ATTACHMENT TO EQUIPMENT.
2.2 CONDUCTORS
A. REFER TO SECTION 260519
B. PROVIDE SELF-ADHESIVE VINYL LABELS THAT ARE PREPRINTED.

PART 3 - EXECUTION
3.1 LABELING
A. ALL EQUIPMENT (INCLUDING BUT NOT LIMITED TO PANELBOARDS, SWITCHBOARDS, DISTRIBUTION BOARDS, UPSS, PDU'S, MOTORS, TRANSFORMERS, DISCONNECT SWITCHES) SHALL BE LABELED INDICATING EQUIPMENT NAME AND FEEDER SIZE.
B. ALL BRANCH CIRCUIT WIRING DEVICES SHALL BE LABELED WITH CIRCUIT NUMBER.
C. ALL JUNCTION BOXES ABOVE CEILING AND BELOW RAISED FLOOR SHALL BE LABELED WITH CIRCUIT NUMBER.

END OF SECTION.

SECTION 260573 -OVERCURRENT PROTECTION DEVICE COORDINATION STUDY
PART 1 - GENERAL
1.1 SCOPE OF WORK
A. REFER TO SECTION 260500.
B. UTILIZING A COMPUTER-BASED SOFTWARE PROGRAM, MODEL THE PROPOSED DISTRIBUTION SYSTEM, CALCULATE THE MAXIMUM AVAILABLE SHORT CIRCUIT THROUGHOUT AND COORDINATE THE SELECTION OF OVERCURRENT PROTECTION DEVICES TO MEET IEEE.
C. SUBMIT A FULL REPORT FOR REVIEW AND APPROVAL.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION.

SECTION 262200 - TRANSFORMERS
PART 1 - GENERAL
1.1 SCOPE OF WORK
A. REFER TO SECTION 260500.

PART 2 - PRODUCTS
2.1 DRY TYPE TRANSFORMERS
A. PROVIDE TRANSFORMERS OF K RATINGS SHOWN ON THE DRAWINGS, WITH COPPER WINDINGS, VENTILATED ENCLOSURE, AND ELECTROSTATIC SHIELDING.
B. PROVIDE TWO, 2.5 PERCENT TAPS ABOVE AND TWO, 2.5 PERCENT TAPS BELOW FULL CAPACITY.

PART 3 - EXECUTION
3.1 INSTALLATION
A. TRANSFORMER SHALL BE PAD MOUNTED OR SHALL BE SECURELY MOUNTED FROM THE BUILDING STRUCTURE, REINFORCED WALLS OR AS NOTED ON DRAWINGS. USE ADDITIONAL VIBRATION ISOLATORS AT POINTS OF MOUNTING TO CUT VIBRATION NOISES. USE FLEXIBLE METALLIC CONDUIT WITH GROUNDING BUSHING FOR PRIMARY AND SECONDARY CONNECTIONS TO TRANSFORMER. TRANSFORMERS SHALL BE LOCATED, SET, MOUNTED AND CONNECTED IN SUCH A MANNER AS TO KEEP NOISE LEVELS WITHIN THE SURROUNDING AMBIENT NOISE LEVELS AND MAINTAIN ALL CODE REQUIRED CLEARANCES.

END OF SECTION.

SECTION 262416 - PANELBOARDS
PART 1 - GENERAL
1.1 SCOPE OF WORK
A. REFER TO SECTION 260500.

PART 2 - PRODUCTS
2.1 PANELBOARDS
A. ALL PANELBOARDS SHALL BE FACTORY ASSEMBLED OF THE BOLTED CIRCUIT BREAKER TYPE WITH SOLID COPPER BUSSING, FULL SIZED COPPER NEUTRAL, 100 PERCENT GROUND BUSSING, AND OVERALL HINGED/LOCKABLE DOOR. ALL CIRCUIT BREAKERS SHALL BE OF THE QUICK-MAKE AND QUICK-BREAK DESIGN, THERMAL-MAGNETIC TYPE, TRIP FREE AND TRIP-INDICATING. ALL PANELS SHALL BE DEAD FRONT AND FLUSH OR SURFACE MOUNTED AS SHOWN.
B. PANELBOARDS SHALL HAVE A MINIMUM SHORT CIRCUIT CURRENT RATING AND LUG CONNECTIONS AS REQUIRED BY A SHORT CIRCUIT STUDY.
C. ALL LUG CONNECTIONS TO BE 75 DEGREE C RATED.
D. PROVIDE ISOLATED GROUND BUS AND DOUBLE NEUTRAL BUS WHERE INDICATED ON THE DRAWINGS.

PART 3 - EXECUTION
3.1 INSTALLATION
A. REFER TO DRAWINGS FOR FLUSH OR SURFACE MOUNTING.

END OF SECTION.

SECTION 262726 - WIRING DEVICES
PART 1 - GENERAL
1.1 SCOPE OF WORK
A. REFER TO SECTION 260500.

PART 2 - PRODUCTS
2.1 SWITCHES AND RECEPTACLES
A. FURNISH AND INSTALL SWITCHES AND RECEPTACLES, UNLESS NOTED OTHERWISE, AS NECESSARY FOR A COMPLETE INSTALLATION. COLOR OF DEVICES AND PLATES SHALL BE SELECTED BY THE ARCHITECT.
B. THE DEVICES SHALL BE OF THE TYPES AND RATINGS LISTED, OR EQUALS BY PASS & SEYMOR, HUBBELL, OR LEVITON.
a. SINGLE POLE SWITCHES: 20AMP - 120-277V: LEVITON 'DECORA' #5621-X
b. THREE WAY SWITCHES: 20AMP - 120-277V: LEVITON 'DECORA' #5623-X
c. DUPLEX RECEPTACLES: 20AMP - 125V: LEVITON 'DECORA' #16352-X
d. ISOLATED GROUND RECEPTACLES: 20AMP - 125V: LEVITON 'DECORA' #16352-IG
e. GROUND FAULT CIRCUIT INTERRUPTING RECEPTACLES: 20AMP - 125V: LEVITON 'DECORA' #8899
C. ALL DEVICE COVER PLATES SHALL BE LEVITON 'DECORA' NYLON STYLE.
2.2 WALL-BOX DIMMERS
A. DIMMERS SHALL BE LEVITON 'MONET' OR LUTRON "NOVA-T-STAR'.
2.3 OCCUPANCY CONTROLS
A. WALL-SWITCH SENSORS SHALL BE OF THE PASSIVE INFARED TYPE DESCRIBED ON THE DRAWINGS WITH ADJUSTABLE TIME DELAY AND FIELD OF VIEW AND COVERAGE REQUIRED FOR THE INSTALLATION.
B. REFER TO THE DRAWINGS FOR PASSIVE INFARED, ULTRASONIC AND DUAL TECHNOLOGY OCCUPANCY SENSORS REQUIRED FOR LARGER SPACES. PROVIDE A COMPLETE SYSTEM INCLUDING SENSORS, POWER PACKS/RELAYS AND WALL OVERRIDE SWITCHES.
2.4 FLOOR BOXES
A. REFER TO THE DRAWINGS FOR DESCRIPTION OF REQUIRED FLOOR BOXES IN SLAB ON GRADE OR POKE-THRU INSTALLATIONS.

PART 3 - EXECUTION
3.1 INSTALLATION
A. INSTALL DEVICES PER THE MANUFACTURER'S RECOMMENDATIONS.
B. LABEL ALL RECEPTACLES INDICATING PANELBOARD AND CIRCUIT NUMBER. INSTALL CLEAR LABEL WITH BLACK TEXT ON THE FACE OF WALL PLATE.

END OF SECTION.

SECTION 262816 - ENCLOSED SWITCHES
PART 1 - GENERAL
1.1 SCOPE OF WORK
A. REFER TO SECTION 260500.

PART 2 - PRODUCTS
2.1 SAFETY SWITCHES
A. SAFETY AND DISCONNECT SWITCHES SHALL BE HEAVY DUTY TYPE, QUICK-MAKE, QUICK-BREAK FUSED OR NON-FUSIBLE WITH RATINGS AND SIZES AS NOTED ON PLANS AND REQUIRED BY CODES.
B. SWITCHES SHALL BE WEATHERPROOF IN OUTDOOR LOCATION OR AS REQUIRED BY LOCAL CODES.

PART 3 - EXECUTION
3.1 INSTALLATION
A. COORDINATE ALL CONTROL DEVICES WITH MECHANICAL CONTRACTOR. COMBINATION STARTER/DISCONNECT SWITCHES SHALL CONTAIN FUSIBLE SWITCHES AND ONLY USED WHERE INDICATED ON DRAWINGS.

END OF SECTION.

SECTION 262913 - MOTOR CONTROL
PART 1 - GENERAL
1.1 SCOPE OF WORK
A. REFER TO SECTION 260500.

PART 2 - PRODUCTS
2.1 MOTOR STARTERS
A. MAGNETIC MOTOR STARTERS SHALL BE FVNR AND PROVIDED WITH RESET TYPE OVERLOADS THAT CLOSELY MATCH MOTOR NAMEPLATE RATINGS, ELECTRICALLY HELD (MINIMUM SIZE #1 IN NEMA 1 ENCLOSURE) AND USED FOR ALL SINGLE PHASE AND THREE PHASE MOTORS RATED ABOVE 1/2 HP THAT REQUIRE AUXILIARY CONTROL. AS A MINIMUM PROVIDE TWO AUXILIARY CONTACTS AND H-O-A SWITCH. PROVIDE ADDITIONAL CONTROL DEVICES IN STARTERS AS REQUIRED FOR INTERLOCKS, OR STATED IN THE SEQUENCE OF CONTROL..
2.2 VARIABLE FREQUENCY DRIVES
A. PROVIDE PULSE WIDTH MODULATED VARIABLE FREQUENCY DRIVES IN MOTOR HORSEPOWER SIZES CALLED OUT ON THE DRAWINGS. UNITS SHALL HAVE DOOR MOUNTED STATUS LIGHTS OR READ OUT, MANUAL BY-PASS, DISCONNECTING MEANS AND OUTPUT SIGNAL INTERFACE TO BMS SYSTEM.

PART 3 - EXECUTION
3.1 INSTALLATION
A. MANUAL MOTOR STARTERS, LESS OVERLOAD PROTECTION HEATERS, ARE TO BE USED AS A DISCONNECTING MEANS ONLY WHERE INDICATED ON DRAWINGS FOR FRACTIONAL HORSEPOWER MOTORS ABOVE 1 1/2 HP AT 120 VOLTS AND 2 HP AT 240 VOLTS THAT DO NOT REQUIRE AUXILIARY CONTROL. MOTORS THAT ARE BELOW THE 1 1/2 HP AT 120 VOLTS AND 2 HP AT 240 VOLTS, WATER HEATER TO BE PROVIDED WITH HUBBELL "HBL-1221 OR 1222" AC SWITCH.

END OF SECTION.

SECTION 264313 - SURGE SUPPRESSION DEVICE
PART 1 - GENERAL
1.1 SCOPE OF WORK
A. REFER TO SECTION 260500.
B. ALL SPD'S MUST COMPLY WITH UL 1449 3RD ADDITION.

PART 2 - PRODUCTS
2.1 SERVICE ENTRANCES
A. PROVIDE CURRENT TECHNOLOGY "TRANSGUARD", OR EQUAL, WITH L-N, L-G, N-G, AND L-L PROTECTION. UNIT SHALL HAVE A SINGLE SURGE CURRENT CAPACITY PER MODE OF 200,000 AMPS, 400,000 AMPS PER PHASE, AND HAVE REPETITIVE SURGE CURRENT CAPACITY PER MODE OF 6,500 IMPULSES.
B. PROVIDE SEPARATE NEMA 1 ENCLOSURES FOR SURFACE MOUNTING NEXT TO MAIN SERVICE EQUIPMENT.
2.2 PANELBOARD PROTECTION
A. PROVIDE CURRENT TECHNOLOGY "TRANSGUARD", OR EQUAL, WITH L-N, L-G, N-G, AND L-L PROTECTION. UNIT SHALL HAVE A SINGLE SURGE CURRENT CAPACITY PER MODE OF 100,000 AMPS, 200,000 AMPS PER PHASE, AND HAVE REPETITIVE SURGE CURRENT CAPACITY PER MODE OF 4,500 IMPULSES.
B. PROVIDE SEPARATE NEMA 1 ENCLOSURES FOR SURFACE OR FLUSH MOUNTING NEXT TO MAIN SERVICE EQUIPMENT.

PART 3 - EXECUTION
3.1 INSTALLATION
A. INSTALL TVSS PER THE MANUFACTURER'S RECOMMENDATIONS USING LEADS AS SHORT AS POSSIBLE.

END OF SECTION.

SECTION 265100 - LIGHTING
PART 1 - GENERAL
1.1 SCOPE OF WORK
A. REFER TO SECTION 260500.

PART 2 - PRODUCTS
2.1 LIGHT FIXTURES
A. PROVIDE LIGHT FIXTURES, LAMPS AND DRIVERS AS SHOWN IN THE FIXTURE SCHEDULE ON THESE AND THE ARCHITECTURAL DRAWINGS.
B. LED FIXTURES SHALL COMPLY WITH UL 1598.
C. FIXTURES SHALL BE PAINTED AFTER FABRICATION.
2.2 DRIVERS FOR LED LUMEN PACKAGES/MODULES
ELECTRONIC, CONSTANT CURRENT, CLASS 1 DRIVER WITH THE FOLLOWING CHARACTERISTICS AND REQUIREMENTS:
A. NEMA SSL 1, UL 8759.
B. CLASS A SOUND RATING.
C. 85% MINIMUM EFFICIENCY AT FULL LOAD.
D. OUTPUT RATED CURRENT TO MATCH LED LUMEN PACKAGE/MODULE.
E. MINIMUM 0.95 POWER FACTOR AT MAX LOAD, OR 0.90 POWER FACTOR OVER FULL DIMMING RANGE
F. INTEGRAL SHORT CIRCUIT, OPEN CIRCUIT AND OVERLOAD PROTECTION
G. NO HIGHER THAN 20% TOTAL HARMONIC DISTORTION
H. COMPLY WITH FCC47 CFR PART 15
I. 0-10V DIMMABLE CONTROL, AS APPLICABLE
2.3 LED LUMEN PACKAGES/MODULES
LED LUMEN PACKAGES/MODULES SHALL HAVE THE FOLLOWING CHARACTERISTICS AND REQUIREMENTS:
A. 50,000 HOURS MINIMUM LIFE, USING AN L70 LUMEN MAINTENANCE VALUE, CALCULATED BY IES TM-21. IES LM-80 SPECIFIED DATA SHALL BE USED FOR THE MODULE/DRIVER COMBINED SYSTEM.
B. THE MODULES SHALL BE INSTALLED AS PART OF A LUMINAIRE THAT IS TESTED TO IES LM-79 AND LM-80 STANDARDS.
C. MINIMUM CRI 0F 80 AND APPROVED R9 REFERENCE SAMPLE.
D. CORRELATED COLOR TEMPERATURE AND LUMEN OUTPUT AS LISTED IN THE DRAWINGS' LIGHT FIXTURE SCHEDULES.
E. HIGH POWER, WHITE LIGHT OUTPUT UTILIZING PHOSPHOR CONVERSION PROCESS OR MIXED SYSTEM OF COLORED LEDS, TYPICALLY RED, GREEN AND BLUE.
F. COLOR CONSISTENCY UTILIZING A BINNING TOLERANCE WITH A 3-STEP McADAM ELLIPSE.\

PART 3 - EXECUTION
3.1 INSTALLATION
THIS CONTRACTOR SHALL FURNISH ADDITIONAL AUXILIARY SUPPORT STEEL HANGER WIRES ADEQUATELY SIZED TO SUPPORT THE WEIGHT OF THE FIXTURE FASTENED TO THE BUILDING STRUCTURE (MINIMUM TWO PER FIXTURE) FOR ALL FIXTURES IN LAY-IN CEILING AND OTHER FIXTURES AS REQUIRED BY THE OWNER AND LOCAL CODE OFFICIALS. FURNISH AND INSTALL APPLICABLE FIRE RATED DRYWALL BOXES OVER RECESSED FIXTURE IN FIRE RATED CEILINGS AS REQUIRED BY CODES. FIELD COORDINATE AS REQUIRED TO AVOID CONFLICTS.

END OF SECTION.

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89955
LICENSED
PROFESSIONAL ENGINEER
6/25/21

PROJECT NO.: 581-009
DRAWN BY: TM
CHECKED BY: MW
R.S.F.: 41,852

BILLINGSLEY COMPANY

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ELECTRICAL SPECIFICATIONS
2 OF 2

DRAWING NUMBER:
E1.02

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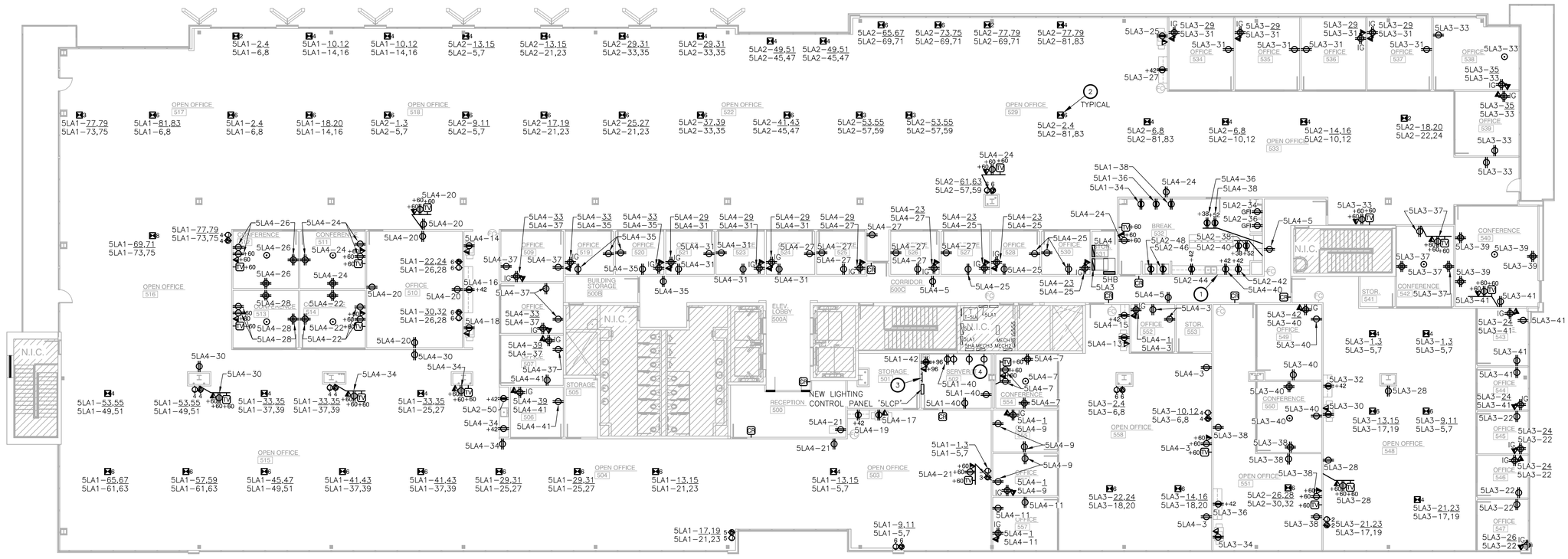

1 LEVEL 05 ELECTRICAL PLAN

SCALE: 3/32"=1'-0"

NOTES BY SYMBOL (X):

1. REFER TO MECHANICAL EQUIPMENT POWER SCHEDULE ON SHEET E0.01 FOR POWER TO WATER HEATER.
2. CONFIRM FURNITURE SYSTEM WIRING CONFIGURATION PRIOR TO INSTALLATION. CIRCUIT SHOWN FOR 2+2 ARE AN ASSUMPTION ONLY. NOTIFY ARCHITECT IF SUPPLIED WORKSTATIONS POWER CONFIGURATION IS NOT 2+2.
3. PROVIDE 12"X2"X1/4" COPPER GROUND BUS WALL MOUNTED WITH INSULATING STANDOFFS AT 48"AFF. EXTEND 1#6AWG IN 3/4"C FROM GROUND BUS TO BUILDING GROUND.
4. PROVIDE (3) NEMA L6-30R RECEPTACLES IN SERVER ROOM. FEED EACH RECEPTACLE FROM DEDICATED 2P,30A, 208V CIRCUITS IN NEW PANEL '5LA4'. USE 5LA4-2/4, 5LA4-6/8, 5LA4-10/12, USING 2#10, 1#10G., 3/4C. CONFIRM ALL REQUIREMENTS, COORDINATE MOUNTING LOCATIONS AND DETAILS WITH OWNER AND IT VENDOR PRIOR TO ROUGH-IN.

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LEVEL 05 ELECTRICAL PLAN

DRAWING NUMBER:
E2.05

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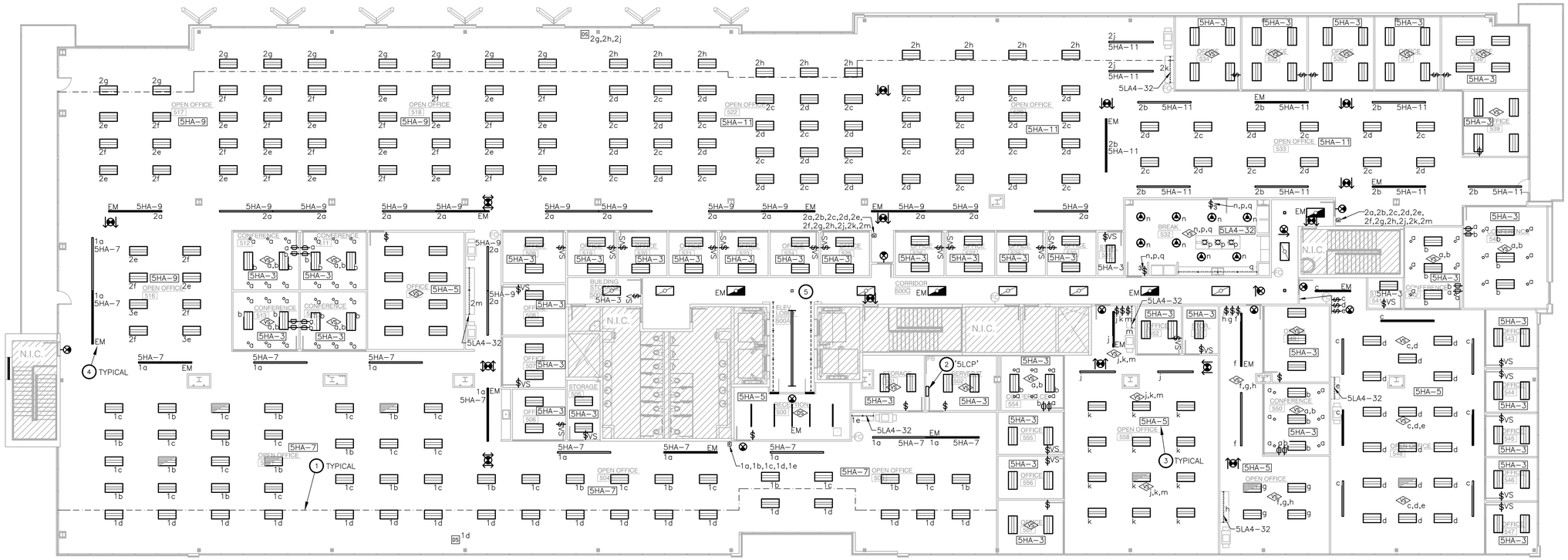

LIGHTING CONTROL PANEL '5LCP' - FLOOR 5

RELAY	ZONE	VOLT	PHASE	CIRCUIT	DESCRIPTION	LOCAL CONTROL
1	1a	277	1	5HA-5	ELEVATOR LOBBY	ON/OFF
2	1b	120	1	5LA4-32	ELEVATOR LOBBY	ON/OFF
3	1c	277	1	5HA-5	CORRIDOR 500C	ON/OFF
4	1d	277	1	5HA-5	CORRIDOR 500C	ON/OFF
5	2a	277	1	5HA-7	OPEN OFFICE WALKWAY	ON/OFF
6	2b	277	1	5HA-7	OPEN OFFICE	ON/OFF
7	2c	277	1	5HA-7	OPEN OFFICE	ON/OFF
8	2d	277	1	5HA-7	OPEN OFFICE - DAYLIGHT ZONE	ON/OFF, AUTO-DIMMING BY DAYLIGHT SENSOR
9	2e	120	1	5LA4-32	OPEN OFFICE UNDER-CABINET	ON/OFF
10	3a	277	1	5HA-9	OPEN OFFICE WALKWAY	ON/OFF
11	3b	277	1	5HA-11	OPEN OFFICE WALKWAY	ON/OFF
12	3c	277	1	5HA-11	OPEN OFFICE	ON/OFF
13	3d	277	1	5HA-11	OPEN OFFICE	ON/OFF
14	3e	277	1	5HA-9	OPEN OFFICE	ON/OFF
15	3f	277	1	5HA-9	OPEN OFFICE	ON/OFF
16	3g	277	1	5HA-9	OPEN OFFICE - DAYLIGHT ZONE	ON/OFF, AUTO-DIMMING BY DAYLIGHT SENSOR
17	3h	277	1	5HA-11	OPEN OFFICE - DAYLIGHT ZONE	ON/OFF, AUTO-DIMMING BY DAYLIGHT SENSOR
18	3j	277	1	5HA-11	OPEN OFFICE - DAYLIGHT ZONE	ON/OFF, AUTO-DIMMING BY DAYLIGHT SENSOR
19	3k	120	1	5LA4-32	OPEN OFFICE UNDER-CABINET	ON/OFF
20	3m	120	1	5LA4-32	OPEN OFFICE UNDER-CABINET	ON/OFF
21	-	-	-	-	SPARE	-
22	-	-	-	-	SPARE	-
23	-	-	-	-	SPARE	-
24	-	-	-	-	SPARE	-

NOTES:
1. REFERENCE LIGHTING PLANS FOR LOCATION OF CONTROL ZONES.
2. SYSTEM TO BE PROGRAMMABLE FOR TIME-OF-DAY SCHEDULING.

1 LEVEL 05 LIGHTING PLAN

SCALE: 3/32"=1'-0"

NOTES BY SYMBOL ⓧ:

1. LINE INDICATES LIMITS OF DAYLIGHT ZONE REQUIRING DAYLIGHT RESPONSIVE CONTROLS.
2. PROVIDE NEW LIGHTING CONTROL PANEL. COORDINATE LOCATION WITH ARCHITECT AND OWNER.
3. INDICATES ALL LIGHTING IN THE ROOM/AREA SHALL BE ON THIS CIRCUIT EXCEPT AS NOTED OTHERWISE.
4. LIGHT FIXTURES DENOTED WITH 'EM' ARE DESIGNATED EMERGENCY FIXTURES AND SHALL BE CONTROLLED WITH NORMAL LIGHTING IN THE SAME SPACE/CONTROL ZONE VIA UL924 DEVICE. LIGHT FIXTURE SHALL TRANSFER TO BATTERY BACK-UP UPON LOSS OF UTILITY POWER.
5. CORRIDOR AND ELEVATOR LOBBY LIGHTING CONTROLS SHALL GO BACK TO BUILDING SYSTEM SIMILAR TO OTHER FLOOR ELEVATOR LOBBY AND CORRIDOR CONTROL WITH NO LOCAL OVERRIDE. CONTRACTOR TO VERIFY SYSTEM. CONNECT TO EXISTING 5TH FLOOR CORE/SHELL LIGHTING CIRCUITS. NO MORE THAN 3500 WATTS PER 20A CIRCUIT.

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6/25/21

PROJECT NO.: 581-009
DRAWN BY: TM
CHECKED BY: MW
R.S.F.: 41,852

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1	FOR CONSTRUCTION	05-25-21

DRAWING TITLE:
LEVEL 05 LIGHTING PLAN

DRAWING NUMBER:
E3.05

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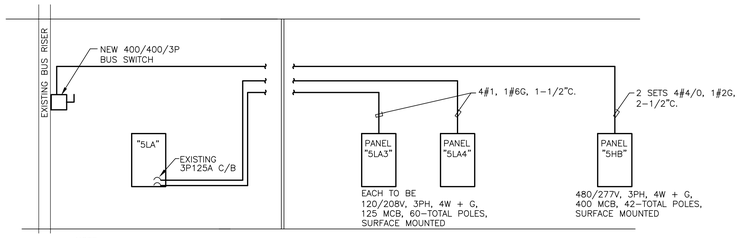


NOTE:

ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE SELECTION OF OVERCURRENT/SHORT CIRCUIT PROTECTIVE DEVICES BASED ON CALCULATED PROSPECTIVE FAULT ENERGY AT EACH PANELBOARD AND PROVIDE DEVICES MEETING REQUIRED SHORT CIRCUIT INTERRUPTING CAPACITIES (AIC); WHERE THERE ARE TWO (2) OR MORE DEVICES IN SERIES BETWEEN THE SOURCE AND THE LOAD, CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR DETERMINING THE TIME-CURRENT TRIPPING COORDINATION OF SAID DEVICES. THIS MAY BE DONE USING MANUAL METHODS FOR SIMPLE SYSTEMS; HOWEVER, THE USE OF RECOGNIZED COMPUTER PROGRAMS THAT HAVE BEEN VALIDATED SHOULD BE USED FOR LARGER SYSTEMS. THE RESULTS OF THESE COMPUTATIONS AND GRAPHICAL SOLUTIONS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL AT THE TIME THE PANELBOARDS AND OTHER RELATED DISTRIBUTION EQUIPMENT ARE SUBMITTED.

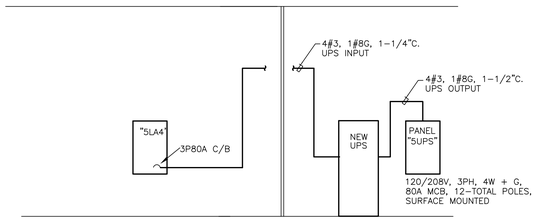
1 ELECTRICAL RISER DIAGRAM

SCALE: NO SCALE

ALTERNATE #1

IN LIEU OF OWNER PROVIDED RACK MOUNTED UPS AND CIRCUITS 5LA4-2 THRU 12, CONTRACTOR TO PROVIDE SINGLE UPS TO SERVE THE THREE RACKS IN SERVER/IT ROOM 502. PROVIDE NEW 100A C/B AT CIRCUIT 5LA4-2/4/6. THE THREE CIRCUIT TO RACKS TO BE SERVED BY '5UPS' PANEL.

UPS AND 5UPS MAY NEED A DEDICATED ROOM IF SERVER/IT ROOM IS NOT ADEQUATE.



PROVIDE NEW UPS: (1) APC GALAXY VS 15KVA WITH 3CB MBC BYPASS. 3 PHASE UPS WITH AT LEAST 20 MINUTES BACK UP AT FULL LOAD. 120/208V, 3-PH, 4W+G INPUT - 120/208V, 3-PH, 4W+G OUTPUT. OUTPUT TO BE HARDWIRED. COORDINATE C/B AND CONDUCTORS WITH SELECTED UPS. WEIGHT 1,544 LBS.

NOTE:

ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE SELECTION OF OVERCURRENT/SHORT CIRCUIT PROTECTIVE DEVICES BASED ON CALCULATED PROSPECTIVE FAULT ENERGY AT EACH PANELBOARD AND PROVIDE DEVICES MEETING REQUIRED SHORT CIRCUIT INTERRUPTING CAPACITIES (AIC); WHERE THERE ARE TWO (2) OR MORE DEVICES IN SERIES BETWEEN THE SOURCE AND THE LOAD, CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR DETERMINING THE TIME-CURRENT TRIPPING COORDINATION OF SAID DEVICES. THIS MAY BE DONE USING MANUAL METHODS FOR SIMPLE SYSTEMS; HOWEVER, THE USE OF RECOGNIZED COMPUTER PROGRAMS THAT HAVE BEEN VALIDATED SHOULD BE USED FOR LARGER SYSTEMS. THE RESULTS OF THESE COMPUTATIONS AND GRAPHICAL SOLUTIONS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL AT THE TIME THE PANELBOARDS AND OTHER RELATED DISTRIBUTION EQUIPMENT ARE SUBMITTED.

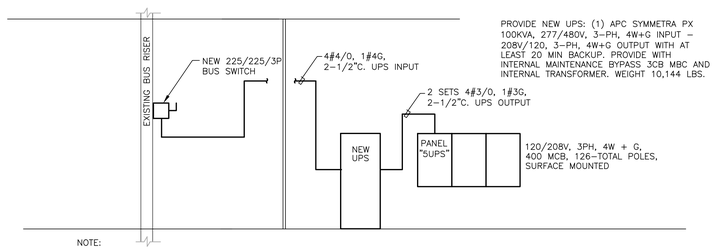
2 ELECTRICAL RISER DIAGRAM

SCALE: NO SCALE

ALTERNATE #2

IN LIEU OF OWNER PROVIDED RACK MOUNTED UPS, CIRCUITS 5LA4-2 THRU 12, AND NEW PANELS 5LA3 AND 5LA4, THE CONTRACTOR TO PROVIDE SINGLE UPS TO SERVE THE THREE RACKS IN SERVER/IT ROOM 502 PLUS ALL COMPUTERS AT WORKSTATIONS AND OFFICES. PROVIDE NEW 225A FUSED DISCONNECT AT BUS. THE THREE CIRCUIT TO RACKS AND ALL UNDERLINED IG CIRCUITS TO BE SERVED BY '5UPS'

NEW ELECTRICAL ROOM WOULD HAVE TO EXPAND TO INCORPORATE THE NEW UPS.



PROVIDE NEW UPS: (1) APC SYMMETRA PX 100KVA, 277/480V, 3-PH, 4W+G INPUT - 208V/120, 3-PH, 4W+G OUTPUT WITH AT LEAST 20 MIN BACKUP. PROVIDE WITH INTERNAL MAINTENANCE BYPASS 3CB MBC AND INTERNAL TRANSFORMER. WEIGHT 10,144 LBS.

NOTE:

ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE SELECTION OF OVERCURRENT/SHORT CIRCUIT PROTECTIVE DEVICES BASED ON CALCULATED PROSPECTIVE FAULT ENERGY AT EACH PANELBOARD AND PROVIDE DEVICES MEETING REQUIRED SHORT CIRCUIT INTERRUPTING CAPACITIES (AIC); WHERE THERE ARE TWO (2) OR MORE DEVICES IN SERIES BETWEEN THE SOURCE AND THE LOAD, CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR DETERMINING THE TIME-CURRENT TRIPPING COORDINATION OF SAID DEVICES. THIS MAY BE DONE USING MANUAL METHODS FOR SIMPLE SYSTEMS; HOWEVER, THE USE OF RECOGNIZED COMPUTER PROGRAMS THAT HAVE BEEN VALIDATED SHOULD BE USED FOR LARGER SYSTEMS. THE RESULTS OF THESE COMPUTATIONS AND GRAPHICAL SOLUTIONS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL AT THE TIME THE PANELBOARDS AND OTHER RELATED DISTRIBUTION EQUIPMENT ARE SUBMITTED.

3 ELECTRICAL RISER DIAGRAM

SCALE: NO SCALE

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DRAWING TITLE:

ELECTRICAL RISERS

DRAWING NUMBER:

E4.01

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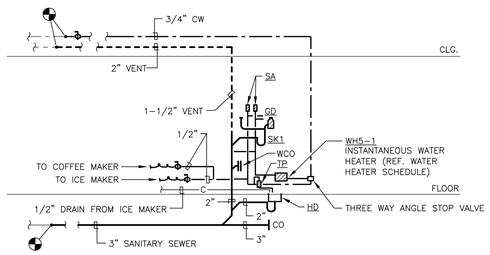
DALLAS GREEN BUILDING REQUIREMENTS:

702.7 HOT AND TEMPERED WATER DISTRIBUTION. WATER SUPPLY PIPING SHALL BE IN ACCORDANCE WITH SECTION 702.7 OR SECTION 702.7.2. THE FLOW RATE THROUGH 1/4–INCH (6.4 MM) TUBING SHALL NOT EXCEED 0.5 GPM (1.9 LPM). THE FLOW RATE THROUGH 5/16–INCH (7.9 MM) TUBING SHALL NOT EXCEED 1 GPM (3.8 LPM). THE FLOW RATE THROUGH 3/8–INCH (9.5 MM) TUBING SHALL NOT EXCEED 1.5 GPM (5.7LPM).

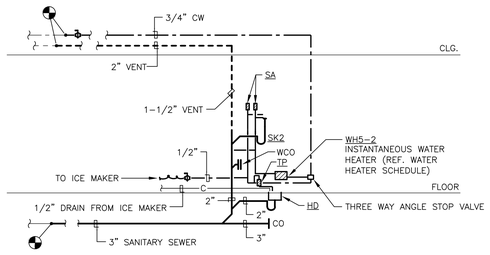
702.7.1 MAXIMUM ALLOWABLE PIPE LENGTH METHOD. THE MAXIMUM ALLOWABLE PIPE LENGTH FROM THE SOURCE OF HOT OR TEMPERED WATER TO THE TERMINATION OF THE FIXTURE SUPPLY PIPE SHALL BE IN ACCORDANCE WITH THE MAXIMUM PIPE LENGTH COLUMNS IN TABLES 7.02.7.2(2) THROUGH 702.7.2(10), AS APPROPRIATE FOR THE TYPE OF PIPE TO BE INSTALLED. WHERE THE TYPE OF PIPE TO BE INSTALLED IS UNKNOWN OR THE TYPE OF PIPE IS NOT COVERED BY TABLES 702.2(2) THROUGH 702.7.2(10), TABLE 702.7.2(1) SHALL BE USED FOR DESIGN PURPOSES. WHERE THE LENGTH CONTAINS MORE THAN ONE SIZE OF PIPE, THE LARGEST SIZE SHALL BE USED FOR DETERMINING THE MAXIMUM ALLOWABLE LENGTH OF THE PIPE IN THE TABLES.

702.7.2 MAXIMUM ALLOWABLE PIPE VOLUME METHOD. THE WATER VOLUME IN THE PIPING SHALL BE CALCULATED IN ACCORDANCE WITH SECTION 702.7.2.1. THE MAXIMUM VOLUME OF HOT OR TEMPERED WATER IN THE PIPING TO PUBLIC LAVATORY FAUCETS, METERING OR NONMETERING, SHALL BE 2 OUNCES (0.06 L). FOR FIXTURES OTHER THAN PUMBIC LAVATORY FAUCETS, THE MAXIMUM VOLUME SHALL BE 64 OUNCES (1.89 L) FOR HOT OR TEMPERED WATER FROM A WATER HEATER OR BOILER; AND 24 OUNCES (0.7 L) FOR HOT OR TEMPERED WATER FROM A CIRCULATION LOOP PIPE OR AN ELECTRICALL HEAT–TRACED PIPE. THE WATER VOLUME IN THE PIPING SHALL BE CALCULATED IN ACCORDANCE WITH SECTION 702.7.2.1.

702.7.2.1 WATER VOLUME DETERMINATION. THE VOLUME SHALL BE THE SUM OF THE INTERNAL VOLUMES OF PIPE, FITTINGS, VALVES, METERS AND MANIFOLDS BETWEEN THE SOURCE OF HOT WATER AND THE TERMINATION OF THE FIXTURE SUPPLY PIPE. THE VOLUME SHALL BE DETERMINED FROM THE LIQUID OUNCES PER FOOT COLUMN OF TABLES 702.7.2(2) THROUGH 702.7.2(10) AS APPROPRIATE FOR THE TYPE OF PIPE. WHERE THE TYPE OF PIPE IS UNKNOWN OR THE TYPE OF PIPE IS NOT COVERED BY TABLES 702.7.2(2) THROUGH 702.7.2(10), TABLE 702.7.2(1) SHALL BE USED TO DETERMINE THE VOLUME. THE VOLUME CONTAINED WITHIN FIXTURE SHUTOFF VALVES, FLEXIBLE WATER SUPPLY CONNECTORS TO A FIXTURE FITTING, OR WITHIN A FIXTURE FITTING SHALL NOT BE INCLUDED IN THE WATER VOLUME DETERMINATION. WHERE HOT OR TEMPERED WATER IS SUPPLIED BY A CIRCULATION LOOP PIPE OR AN ELECTRICALLY HEAT–TRACED PIPE, THE VOLUME SHALL INCLUDE THE PORTION OF THE FITTING ON THE SOURCE PIPE THAT SUPPLIES WATER TO THE FIXTURE.



1 PLUMBING RISER DIAGRAM
SCALE: NOT TO SCALE



2 PLUMBING RISER DIAGRAM
SCALE: NOT TO SCALE

FIRE PROTECTION SPECIFICATION:

MODIFY THE EXISTING WET PIPE FIRE SPRINKLER SYSTEM AS REQUIRED FOR THE NEW TENANT LAYOUT INCLUDING RELOCATING PIPING TO CLEAR NEW DUCTWORK, ADDING NEW HEADS, RELOCATING EXISTING HEADS, AND LEAVING CERTAIN EXISTING HEADS IN PLACE. THE SPRINKLER DESIGN SHALL COMPLY WITH NFPA 13, THE REQUIREMENTS OF THE LOCAL AUTHORITIES HAVING JURISDICTION AND THE REQUIREMENTS OF THE OWNER'S INSURANCE COMPANY. EXISTING SPRINKLER HEADS TO BE RELOCATED MAY BE REUSED. EXISTING PIPING WHICH IS REMOVED IN THE MODIFICATION WORK SHALL NOT BE REUSED. NEW SPRINKLER PIPING SHALL BE ROUTED AS REQUIRED TO CLEAR NEW DUCTWORK, EXISTING DUCTWORK TO REMAIN, LIGHT FIXTURES, STRUCTURAL INTERFERENCES, ETC. THE NEW SPRINKLER HEADS SHALL MATCH EXISTING SPRINKLER HEADS. ALL PIPING SHALL BE SCHEDULE 40 WITH USA FITTINGS.

IN ALL GYP. BOARD CEILING AREA, PROVIDE CONCEALED SPRINKLER HEADS WITH CAPS TO BE FACTORY PAINTED TO MATCH CEILING. ALL SPRINKLER HEADS IN LAY–IN CEILING SHALL BE LOCATED IN CENTER OF TILE AND ALIGNED WITH LIGHT FIXTURES.

SPRINKLER CONTRACTOR SHALL PROVIDE SHOP DRAWINGS OF CALCULATIONS AND SPRINKLER HEAD LOCATIONS FOR ARCHITECT TO REVIEW PRIOR TO ANY INSTALLATION. NO EXCEPTION TAKEN.

ALL SPRINKLER HEADS IN EXPOSED CEILING SHALL BE TURNED TO THE UPRIGHT POSITION AND REPLACE HEADS IF REQUIRED.

GENERAL NOTES:

A. ALL WORK SHALL COMPLY WITH APPLICABLE NATIONAL, STATE AND LOCAL CODES, RULES, REGULATIONS AND REQUIREMENTS.

B. ALL WORK SHALL COMPLY WITH THE BUILDING TENANT CONSTRUCTION GUIDE. COORDINATE WITH BUILDING MANAGEMENT/OWNER FOR ACCESS TO ANY TENANT LEASE SPACES THAT MIGHT BE REQUIRED FOR THE INSTALLATION. UNLESS DIRECTED BY LANDLORD ALL EQUIPMENT AND WORKMANSHIP SHALL BE GUARANTEED FOR 1 YEAR.

C. EXISTING CONDITIONS ARE BASED ON INFORMATION PROVIDED BY PREVIOUS RECORD DRAWINGS DATED 11/13/2019 HOWEVER, IT IS NOT INTENDED TO BE A TRUE REPRESENTATION OF ACTUAL CONDITIONS. CONTRACTOR SHALL VISIT JOB SITE PRIOR TO BIDDING TO ASCERTAIN EXISTING CONDITIONS AND SHALL NOTIFY ARCHITECT OF ANY DISCREPANCIES PRIOR TO BID.

D. PIPING LAYOUT IS SCHEMATIC, EXACT LOCATION OF PIPES TO BE COORDINATED WITH BUILDING STRUCTURE AND WORK OF OTHER CONTRACTORS.

E. CONTRACTOR SHALL COORDINATE PLUMBING ROUGH–IN WITH ARCHITECTURAL DRAWINGS TO PROVIDE EXACT PLUMBING LOCATION FOR FIXTURES.

F. COORDINATE EXACT LOCATION OF ALL WATER AND DRAIN CONNECTIONS FOR EQUIPMENT PROVIDED BY OTHERS.

G. COPPER COLD, HOT AND HOT WATER LINES SHALL BE INSULATED WITH RIGID FIBERGLASS WITH WHITE ALL–SERVICE JACKET AND VAPOR BARRIER. FITTINGS SHALL BE PRE–MOLDED OF THE SAME MATERIAL. REFER TO PLUMBING INSULATION SCHEDULE.

H. RUN ALL WATER LINES LEVEL.

I. THIS CONTRACTOR IS TO PROVIDE ALL ADDITIONAL STEEL, HANGER MATERIALS, RODS AND CLAMPS AS REQUIRED FOR COORDINATION WITH WORK OF OTHER TRADES.

J. SUPPORT CAST IRON SANITARY PIPING NOT IN EARTH, ON 5'–0" CENTERS, ALL STEEL PIPING ON 10'–0" CENTERS AND COPPER PIPING ON 8'–0" CENTERS.

K. THIS CONTRACTOR IS RESPONSIBLE FOR FIRESTOPPING AT ALL PLUMBING RELATED PENETRATIONS OF FIRE AND SMOKE RATED STRUCTURES, FLOORS AND PARTITIONS. REFER TO ARCHITECTURAL FLOOR PLANS FOR LOCATIONS OF ALL RATED STRUCTURES.

L. ALL FIXTURES TO BE EQUIPPED WITH STOP VALVES IN ACCESSIBLE LOCATION.

M. CONTRACTOR SHALL PROVIDE SHUT–OFF VALVE AT EACH BRANCH LINE CONNECTING TO THE MAIN. PROVIDE BRASS VALVE TAGS WITH DOCUMENTATION IN CLOSEOUT DOCUMENTS.

N. MAIN WATER SHUT–OFFS SHALL BE ACCESSIBLE.

O. PROVIDE ACCESSIBLE CLEANOUTS AT NOT MORE THAN 50 FEET APART IN HORIZONTAL SANITARY DRAINAGE LINES 4" SIZE OR LESS, AND NOT MORE THAN 100 FEET APART FOR LARGER PIPES.

P. PROVIDE ACCESSIBLE CLEANOUTS AT BASE OF ALL SANITARY STACKS AND OTHER PLACES AS REQUIRED BY CODE.

Q. WATER HEATER SHALL HAVE BOTH WATER AND ELECTRICAL SHUT–OFFS AT EASILY ACCESSIBLE LOCATIONS.

R. CONTRACTOR SHALL BE RESPONSIBLE FOR DEMOLITION AND REMOVAL OF ALL ABANDONED PLUMBING LINES.

S. ALL DOMESTIC WATER PIPING SHALL BE TYPE "L" HARD DRAWN SEAMLESS COPPER WATER TUBE CONFORMING TO ASTM B88. JOINED WITH WROUGHT COPPER SWEAT TYPE FITTINGS SHALL CONFORM TO ANSI B16.22. WHERE SOLDERED COPPER PIPING IS CONNECTED TO THREADED BRASS PIPING, A CAST BRASS ADAPTER SHALL BE USED. SOLDERED COPPER JOINTS SHALL BE SOLDERED WITH LEAD FREE ASTM B32 GRADE 95T TIN–ANTIMONY SOLDER. EXPOSED PIPING CONNECTED TO FIXTURES AND EQUIPMENT SHALL BE MADE WITH RED BRASS, GRADE "A". NO FERROUS PIPING OR MATERIALS WILL BE ALLOWED.

T. ALL SOIL WASTE AND VENT SANITARY DRAINAGE LINES SHALL BE CAST IRON SOIL PIPE AND FITTINGS. COATED INSIDE AND OUTSIDE. MANUFACTURED IN ACCORDANCE WITH ASTM A–74, AND SHALL BE LABELED WITH CAST IRON SOIL PIPE INSTITUTES "MARK OF QUALITY AND PERMANENCE." JOINTS SHALL BE FABRICATED BY THE USE OF "PUSH–ON" TYPE GASKETED JOINTS BELOW GRADE AND "NO–HUB" MECHANICAL JOINTS ABOVE GRADE. PIPING MAY BE PVC ONLY IF ALLOWED PER CODE. (WEIGHT OF PIPE SHALL BE AS REQUIRED BY CODE FOR LOCATION AND DUTY).

U. CONDENSATE DRAIN AND INDIRECT DRAIN PIPING SHALL BE TYPE "DWV" HARD DRAWN COPPER PIPE, WITH CAST OR WROUGHT COPPER DRAINAGE PATTERN FITTINGS. PIPING SHALL BE EXTENDED FROM UNIT OR FIXTURE TO DRAIN. ALL PIPING IN CEILING PLENUM SHALL BE INSULATED WITH 1/2" ARMAFLEX OR 1/2" FIBERGLASS WITH ALL SERVICE JACKET.

V. PLUMBING CONTRACTOR SHALL X–RAY SLAB PRIOR TO ANY CORE–DRILLING. COORDINATE WITH BUILDING MANAGEMENT FOR AFTER–HOURS ACCESS TO SPACE.

W. REFER TO PLUMBING RISER DIAGRAMS FOR PIPING SIZES NOT SHOWN ON PLAN.

PIPING AT EXPOSED STRUCTURE

AT ALL LOCATIONS WHERE THERE IS NO CEILING, ALL PIPES SHALL BE INSTALLED AS HIGH AS POSSIBLE IN A NEAT AND PROFESSIONAL MANNER, RUNNING LEVEL AND PARALLEL TO THE LINES OF THE BUILDING.

PLUMBING SYMBOLS

SYMBOL	DESCRIPTION
———	SANITARY SEWER
- - - -	VENT
—— ——	DOMESTIC COLD WATER
—— ——	DOMESTIC HOT WATER
—C—	DRAIN PIPING
CO	CLEAN OUT
	PIPING DOWN
	PIPING UP –OR– PIPING UP & DOWN
	CAP ON END OF PIPE
	DIRECTION OF FLOW
	ASME TEMPERATURE & PRESSURE RELIEF VALVE
	BALL VALVE
	UNION
	CONNECTION TO EXISTING

ELECTRICAL WATER HEATER SCHEDULE

WATER HEATER DESIGNATION	SERVES	INPUT	ELECTRICAL VOLTAGE	PHASE	FLA	STORAGE GALLONS	RECOVERY GPH/GPM	DEGREE °F RISE	WATER TEMP AVG °F	EQUAL TO MANUFACTURER	NOTES
WH5-1	BREAK	8310 WATTS	277	1	30.0	NA	1 GPM	57	---	CHRONOMITE INSTA-FLOW MICRO CM-30L	NOTE 1
WH5-2	OPEN OFFICE	8310 WATTS	277	1	30.0	NA	1 GPM	57	---	CHRONOMITE INSTA-FLOW MICRO CM-30L	NOTE 1

PLUMBING NOTES:

1.SUPPLY SET POINT TEMPERATURE SHALL BE 110°F WHICH SHALL BE PRESET AT FACTORY.

PLUMBING FIXTURE SCHEDULE

DESIGNATION	FIXTURE	MANUFACTURER AND MODEL NO.	DESCRIPTION, TRIM AND NOTES
SK1	DOUBLE SINK	ELKAY ELUHAD311855PD WITH AMERICAN STANDARD EDGEWATER 4932.300.75 FAUCET	DOUBLE COMPARTMENT UNDERMOUNT, LUSTERSTONE 18 GAUGE TYPE 304 STAINLESS STEEL,5-3/8" DEEP SINK WITH PERFECT DRAIN SYSTEM. PROVIDE SINGLE HANDLE SWIVEL AND PULL DOWN FAUCET PROVIDING 1.5 GPM. PROVIDE CHROME PLATED CAST P-TRAP WITH CLEANOUT, CHROME PLATED FLEX SUPPLIES, WALL STOPS AND WALL ESCUTCHEONS. PROVIDE TRUEBRO INSULATION KIT FOR ADA COMPLIANCE.
SK2	SINGLE SINK	ELKAY ELUHAD211555 WITH AMERICAN STANDARD EDGEWATER 7932.300.75 FAUCET	SINGLE COMPARTMENT UNDERMOUNT, LUSTERSTONE 18 GAUGE TYPE 304 STAINLESS STEEL,5-3/8" DEEP SINK WITH PERFECT DRAIN SYSTEM. PROVIDE SINGLE HANDLE SWIVEL AND PULL DOWN FAUCET PROVIDING 1.5 GPM. PROVIDE CHROME PLATED CAST P-TRAP WITH CLEANOUT, CHROME PLATED FLEX SUPPLIES, WALL STOPS AND WALL ESCUTCHEONS. PROVIDE TRUEBRO INSULATION KIT FOR ADA COMPLIANCE.
HD	HUB DRAIN	JOSAM SERIES 88600	OPEN CAST IRON DRAINAGE HUB.
GD	GARBAGE DISPOSAL	GE GFC320V	1/3HP NON CORDED - PROVIDED ACCESSORY POWER CORD KIT GE#WC12X10002
SA	SHOCK ARRESTOR	WATTS DRAINAGE SG SERIES	WROUGHT COPPER SHELL SIZE AND LOCATE IN ACCORDANCE WITH P.D.I. STANDARDS.
TP	TRAP PRIMER	PRECISION PLUMBING PRODUCTS	ALL BRASS WITH DISTRIBUTION UNIT WHERE REQUIRED.

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PLUMBING NOTES & SYMBOLS

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DIVISION 22 - PLUMBING

SECTION 220500 - COMMON WORK RESULTS

PART 1 - GENERAL

1.1 GENERAL NOTES

A. DRAWINGS AND GENERAL PROVISIONS OF THE CONTRACT, INCLUDING GENERAL AND SUPPLEMENTARY CONDITIONS AND ALL OTHER SPECIFICATION SECTIONS, APPLY TO THIS AND THE OTHER SECTIONS OF DIVISION 22.

B. THE CONTRACTOR FOR THIS DIVISION OF WORK IS REQUIRED TO OBTAIN A COMPLETE SET OF BID DOCUMENTS (DRAWINGS AND SPECIFICATIONS) AND FULLY REVIEW THEM. COORDINATE DIVISION 22 WORK WITH THAT OF ALL OTHER DIVISIONS OF WORK.

C. THE DRAWINGS AND SPECIFICATIONS ARE INTENDED TO SUPPLEMENT EACH OTHER. ANY LABOR OR MATERIAL CALLED FOR IN ONE SHALL BE FURNISHED AND INSTALLED EVEN THOUGH NOT SPECIFICALLY MENTIONED IN BOTH. ANY LABOR OR MATERIAL WHICH IS NEITHER SHOWN ON THE DRAWINGS OR CALLED FOR IN THE SPECIFICATIONS, BUT WHICH IS OBVIOUSLY REQUIRED TO COMPLETE THE WORK, AND WHICH IS NORMALLY INCLUDED IN WORK OF SIMILAR CHARACTER, SHALL BE FURNISHED AND INSTALLED AS PART OF THIS CONTRACT.

D. THE CONTRACTOR IS RESPONSIBLE FOR SCHEDULING THE COMPLETION AND INSPECTION OF THIS WORK TO COMPLY WITH THE OWNER'S SCHEDULE AND PROJECT COMPLETION DATE.

1.2 SCOPE OF WORK

A. THE DESCRIPTION OF GENERAL CONDITION WORK IN THIS DIVISION SHALL ALSO APPLY TO DIVISIONS 21 AND 23.

B. THIS CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, EQUIPMENT, TOOLS, TRANSPORTATION, INCIDENTALS AND DETAILS NECESSARY TO PROVIDE A COMPLETE FIRE PROTECTION, PLUMBING AND HVAC SYSTEM AS SHOWN ON THE DRAWINGS, CALLED FOR IN THE SPECIFICATIONS AND AS REQUIRED BY JOB CONDITIONS. WORK IS TO BE COMPLETE IN EVERY RESPECT, WHETHER SPECIFICALLY MENTIONED IN THE CONTRACT DOCUMENTS OR NOT.

C. ALL WORK NOT SPECIFICALLY NOTED AS BEING BY THE OWNER (BUILDING OWNER, LANDLORD OR TENANT), SHALL BE PROVIDED BY THIS CONTRACTOR.

D. THIS WORK, MATERIALS AND EQUIPMENT INCLUDES, BUT IS NOT LIMITED TO THE FOLLOWING ITEMS:

a. FIRE PROTECTION MODIFICATIONS AND ADDITIONS INCLUDING, BUT LIMITED TO PIPING, SPRINKLER HEADS AND CONTROL VALVES.

b. PLUMBING WORK INCLUDING, BUT NOT LIMITED TO WASTE AND VENT PIPING, DOMESTIC WATER SERVICE AND DISTRIBUTION, PLUMBING FIXTURES, WATER HEATERS AND ROUGH-IN/CONNECTION TO EQUIPMENT FURNISHED BY THE OWNER OR OTHER SECTIONS OF THE SPECIFICATIONS.

c. HEATING, VENTILATING AND AIR CONDITIONING SYSTEMS INCLUDING, BUT NOT LIMITED TO HEATING AND COOLING UNITS, VENTILATING SYSTEMS, COMPLETE DUCT SYSTEMS, GRILLES REGISTERS AND DIFFUSERS, INSULATION, ACCESSORIES AND TEMPERATURE CONTROL SYSTEMS.

1.3 CODES

A. ALL WORK SHALL CONFORM TO THE OWNER'S CRITERIA, STATE, COUNTY, CITY AND LOCAL CODES AND ORDINANCES, SAFETY AND HEALTH CODES, NFPA CODES, ENERGY CODES AND ALL OTHER APPLICABLE CODES AND REQUIREMENTS. THIS CONTRACTOR SHALL INQUIRE INTO AND COMPLY WITH ALL APPLICABLE CODES, ORDINANCES AND REGULATIONS. THIS CONTRACTOR SHALL INCLUDE ANY CHANGES REQUIRED BY CODES IN THE BID AND IF THESE CHANGES ARE NOT INCLUDED IN THE BID, THEY MUST BE QUALIFIED AS A SEPARATE LINE ITEM IN THE BID. AFTER CONTRACT IS AWARDED, CHANGE ORDERS FOR INCREASED COSTS DUE TO CODE ISSUES WILL NOT BE ACCEPTED UNLESS ALLOWANCES HAVE BEEN PREVIOUSLY AGREED UPON.

B. WHERE THE DRAWINGS AND SPECIFICATIONS CALL FOR ITEMS WHICH EXCEED CODE OR THE OWNER'S CRITERIA, THE CONTRACTOR IS RESPONSIBLE FOR FURNISHING AND INSTALLING THE SYSTEM WITH THE MORE STRINGENT REQUIREMENTS.

1.4 LICENSES, PERMITS, INSPECTIONS AND FEES

A. THIS CONTRACTOR SHALL OBTAIN AND PAY FOR ALL LICENSES, PERMITS, INSPECTIONS AND FEES REQUIRED OR RELATED TO THIS WORK. ALL COSTS ASSOCIATED WITH THESE SHALL BE PAID FOR BY THE CONTRACTOR AND INCLUDED AS PART OF THE BID.

B. FURNISH TO THE OWNER ALL CERTIFICATES OF INSPECTION AND FINAL INSPECTION APPROVAL AT THE COMPLETION OF THE PROJECT.

1.5 GUARANTEE

A. ALL MATERIALS, EQUIPMENT AND WORKMANSHIP SHALL BE GUARANTEED FOR A PERIOD OF 1 YEAR FROM THE DATE OF ACCEPTANCE (OFFICIAL DATE IN WRITING) OF THIS PROJECT. ALL WORK FOUND TO BE DEFECTIVE SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT NO COST TO THE OWNER.

B. WHERE SPECIFIC EQUIPMENT IS NOTED TO HAVE EXTENDED WARRANTIES, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER REGISTRATION SO THE OWNER CAN MAKE ALL APPROPRIATE CLAIMS.

1.6 RECORD DRAWINGS

A. THIS CONTRACTOR SHALL MAINTAIN ONE SET OF DRAWINGS ON THE JOBSITE, UPDATED WEEKLY, TO RECORD ALL DEVIATIONS FROM THE CONTRACT DOCUMENTS SUCH AS:

a. LOCATIONS OF CONCEALED PIPING AND DUCTS

b. REVISIONS, ADDENDUMS AND CHANGE ORDERS

c. SIGNIFICANT DEVIATIONS MADE NECESSARY BY FIELD CONDITIONS, APPROVED EQUIPMENT SUBSTITUTIONS, AND CONTRACTOR'S COORDINATION WITH OTHER TRADES.

B. DELIVER RECORD DRAWINGS TO THE OWNER AT PROJECT COMPLETION.

1.7 DEMOLITION

A. 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 ALL EXISTING EQUIPMENT REQUIRED TO BE LEFT INTACT.

B. THIS CONTRACTOR SHALL INCLUDE AND BE RESPONSIBLE FOR THE REMOVAL OF ALL FIRE PROTECTION, PLUMBING AND HVAC SYSTEMS NOTED ON THE DRAWINGS OR REQUIRED TO ACCOMPLISH THE STATED WORK.

PART 2 - PRODUCTS

2.1 MATERIALS

A. MATERIALS UTILIZED IN THE CONSTRUCTION OF THIS PROJECT SHALL BE NEW AND CARRY UL LABELS WHERE APPLICABLE, UNLESS APPROVED BY THE OWNER.

B. ANY USED EQUIPMENT OR MATERIALS USED SHALL STILL CARRY THE SPECIFIED 1 YEAR GUARANTEE AND APPROVAL OF THE USE OF THIS EQUIPMENT OR MATERIALS DOES NOT RELIEVE THE CONTRACTOR FROM ENSURING EVERYTHING IS OPERATIONAL.

2.2 MANUFACTURERS

A. WHERE TRADE NAMES OR MANUFACTURERS ARE USED ON THE DRAWINGS OR IN THE SPECIFICATIONS, THE EXACT EQUIPMENT SHALL BE CONSIDERED THE BASIS OF DESIGN AND USED AS A MINIMUM FOR THE BASE BID. MANUFACTURERS CONSIDERED AS AN EQUAL OR BETTER IN ALL ASPECTS TO THAT SPECIFIED, WILL BE SUBJECT TO APPROVAL IN WRITING BY THE ENGINEER THROUGH THE SHOP DRAWING SUBMITTAL PROCESS, FOR ACCEPTANCE PRIOR TO INSTALLATION. THE USE OF ANY UNAUTHORIZED EQUIPMENT SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

2.3 SLEEVES

A. PROVIDE SLEEVES TO PROTECT EQUIPMENT OR FACILITIES IN THE INSTALLATION. EACH SLEEVE SHALL EXTEND THROUGH ITS RESPECTIVE FLOOR, WALL OR PARTITION AND SHALL BE CUT FLUSH WITH EACH SURFACE EXCEPT SLEEVES THAT PENETRATE THE FLOOR, WHICH SHALL EXTEND 2 INCHES ABOVE THE FLOOR.

B. CONTRACTOR SHALL COORDINATE THROUGH THE GENERAL CONTRACTOR AND OWNER ANY CORE DRILLING OR CUTTING OF OPENINGS IN MASONRY WALLS OR CONCRETE FLOORS.

C. ALL SLEEVES AND OPENINGS THROUGH FIRE RATED WALLS AND FLOORS SHALL BE FIRED SEALED. REFER TO “FIRE STOPPING.”

D. SLEEVES IN BEARING AND MASONRY WALLS, FLOORS AND PARTITIONS SHALL BE STANDARD WEIGHT STEEL PIPE FINISHED WITH SMOOTH EDGES. FOR OTHER THAN MASONRY PARTITIONS , THROUGH SUSPENDED CEILINGS, OR FOR CONCEALED VERTICAL PIPING, SLEEVES SHALL BE MINIMUM NO. 22 USG GALVANIZED STEEL.

2.4 FLAME SPREAD PROPERTIES OF MATERIALS

A. MATERIALS USED ON THIS PROJECT SHALL EACH HAVE A FLAME SPREAD RATING OF 25 OR LESS, AND A SMOKE DEVELOPED RATING OF 50 OR LESS, AS DETERMINED BY AN INDEPENDENT TESTING LABORATORY IN ACCORDANCE WITH NFPA-255.

2.5 FIRE STOPPING

A. PROVIDE FIRE STOPPING IN SEALING OF PENETRATIONS IN FIRE-RATED CONSTRUCTION, HORIZONTAL AND VERTICAL, INCLUDING THE FOLLOWING MATERIALS:

a. FOAM: DOW CORNING FIRESTOP SILICONE RTV FOAM, CAT #2001 LIQUID COMPONENT PART A (BLACK) AND LIQUID COMPONENT PART B (OFF-WHITE).

b. SEALANT: 3M 1000 NS AND 1003 SL SILICONE ADHESIVE SEALANT.

c. DAMMING MATERIALS: MINERAL FIBERBOARD, MINERAL FIBER MATTING, MINERAL FIBER PUTTY, PLYWOOD OR PARTICLE BOARD, AS SELECTED BY THE APPLICATOR.

B. MIXES SHALL CONFORM TO THE MANUFACTURER'S DIRECTIONS.

2.6 FLOOR, CEILING AND WALL PLATES

A. PROVIDE CHROME-PLATED, ONE-PIECE, ESCUTCHEONS ON PIPES AND HANGER RODS PENETRATING WALLS, FLOORS AND CEILINGS IN FINISHED AREAS OF THE BUILDING. SPLIT RING ESCUTCHEONS ARE NOT ACCEPTABLE.

2.7 DIELECTRIC CONNECTIONS

A. CONNECTIONS BETWEEN FERROUS AND NON-FERROUS PIPING SYSTEMS, AND BETWEEN FERROUS PIPING SYSTEMS AND NON-FERROUS CONNECTIONS TO EQUIPMENT SHALL BE MADE BY THE USE OF DIELECTRIC UNIONS, COUPLINGS OR FLANGES.

2.8 EQUIPMENT FOUNDATIONS AND SUPPORTS

A. PROVIDE FOUNDATIONS AND SUPPORTS FOR MECHANICAL EQUIPMENT AS REQUIRED. THESE SHALL INCLUDE REINFORCED CONCRETE HOUSEKEEPING PADS FOR ANY PUMPS OR AIR HANDLING UNITS INSTALLED INDOORS ON THE FLOOR. PADS SHALL EXTEND A MINIMUM OF 3 INCHES BEYOND EQUIPMENT IN ALL DIRECTIONS.

PART 3 - EXECUTION

3.1 SPACE AND EQUIPMENT ARRANGEMENT

A. EACH CONTRACTOR SHALL BE RESPONSIBLE TO SEE THAT THEIR PURCHASED EQUIPMENT WILL FIT THE SPACES AVAILABLE. IN CERTAIN INSTANCES NOTE THAT THE EQUIPMENT IS MENTIONED BY NAME IN THE EQUIPMENT SCHEDULES. IN THESE CASES IT IS THAT EQUIPMENT WHOSE DIMENSIONS AND CONNECTION ARRANGEMENTS HAVE BEEN USED FOR THE PREPARATION OF THE LAYOUTS SHOWN ON THE WORKING DRAWINGS. SHOULD THE USE OF EQUIPMENT BY OTHER APPROVED MANUFACTURERS OR OF OTHER PHYSICAL SHAPE THAN THOSE SHOWN ON THE DRAWINGS BE PROPOSED, THE CONTRACTOR SHALL CONFIRM THE EQUIPMENT WILL FIT WITHIN THE ALLOTTED SPACE WITHOUT ARCHITECTURAL MODIFICATIONS OR IMPACT ON OTHER TRADES.

B. ALL WORK SHALL BE INSTALLED SO AS TO BE READILY ACCESSIBLE FOR OPERATING, SERVICING, MAINTAINING, AND REPAIRING. PROVIDE SUFFICIENT SERVICE ACCESS TO ALL EQUIPMENT.

C. BEFORE STARTING WORK THIS CONTRACTOR SHALL EXAMINE THE ARCHITECTURAL, STRUCTURAL, POWER, LIGHTING AND FIRE ALARM PLANS, SHOP DRAWINGS AND SPECIFICATIONS TO SEQUENCE, COORDINATE AND INTEGRATE THE VARIOUS ELEMENTS OF THE MECHANICAL SYSTEMS TO AVOID INTERFERENCES AND CONFLICTS.

3.2 MANUFACTURER'S DIRECTIONS

A. THE MANUFACTURER'S PUBLISHED DIRECTIONS SHALL BE FOLLOWED IN THE DELIVERY, STORAGE, PROTECTION, INSTALLATION, PIPING AND WIRING OF ALL EQUIPMENT AND MATERIAL. THE CONTRACTOR SHALL PROMPTLY NOTIFY THE OWNER IN WRITING OF ANY CONFLICT BETWEEN THE REQUIREMENTS OF THE CONTRACT DOCUMENTS AND THE MANUFACTURER'S DIRECTIONS, AND SHALL OBTAIN INSTRUCTIONS BEFORE PROCEEDING WITH THE WORK. SHOULD THE CONTRACTOR PERFORM ANY WORK BEFORE RECEIVING SUCH INSTRUCTIONS, HE SHALL BEAR ALL COSTS ARISING IN CONNECTION WITH THE DEFICIENCIES.

3.3 CONSTRUCTION REQUIREMENTS

A. THE DRAWINGS AND SPECIFICATIONS SHOW PIPE AND DUCT SIZES, GENERAL ROUTING AND LOCATION, AND DESCRIBE THE VARIOUS SYSTEMS. THESE DOCUMENTS DESCRIBE AND SIZE EQUIPMENT, ITS GENERAL LOCATION, USAGE, SUPPORT AND AUXILIARY REQUIREMENTS. THEY DESCRIBE MOST, BUT NOT ALL OF THE MATERIALS AND THEIR USAGE FOR THIS PROJECT.

B. CONTRACT DOCUMENTS DO NOT DETAIL ALL JOB REQUIREMENTS. THEY DO NOT SHOW LAYOUTS, LOCATIONS OR ELEVATIONS OF DUCTS, ANCHORS, SLEEVES, HANGERS, UNDERFLOOR DRAINS, OR ACCESS DOORS. THEY DO NOT SHOW FINAL PRECISE LOCATIONS OF EQUIPMENT BY DIMENSIONS IN ALL INSTANCES.

C. THE EXACT LOCATION OF EACH ITEM SHALL BE DETERMINED BY REFERENCE TO THE PROJECT CONTRACT DRAWINGS, AND TO DETAILS, EQUIPMENT DRAWINGS, AND ROUGH-IN DRAWINGS, BY MEASUREMENTS AT THE BUILDING, AND IN COOPERATION WITH THE VARIOUS TRADES. MINOR RELOCATION NECESSITATED BY THE CONDITIONS AT THE SITE OR DIRECTED BY THE OWNER SHALL BE MADE WITHOUT ADDITIONAL COST TO THE OWNER. WHERE CONFLICTS OCCUR, WORK WITH ALL INVOLVED TRADES AND RESOLVE THE CONFLICT PRIOR TO ERECTION OF ANY WORK IN THE AREA INVOLVED.

3.4 FABRICATION OF PIPE

A. PIPING SHALL FOLLOW AS CLOSELY AS POSSIBLE THE ROUTES SHOWN ON THE DRAWINGS, TAKING INTO CONSIDERATION CONDITIONS TO BE MET AT THE SITE.

B. SHOULD ANY UNFORESEEN CONDITIONS ARISE, PIPING SHALL BE CHANGED OR REROUTED AS REQUIRED AFTER PROPER APPROVAL HAS BEEN OBTAINED BY OWNER.

C. PIPING SHALL BE CLEANED WHEN IT IS INSTALLED. BEFORE INSTALLATION IT SHALL BE CHECKED, UP ENDED, SWABBED IF NECESSARY, AND ANY RUST AND DIRT REMOVED.

3.5 EQUIPMENT FOUNDATIONS, HANGERS AND SUPPORTS

A. FOR FLOOR MOUNTED MECHANICAL EQUIPMENT, PROVIDE CONCRETE HOUSEKEEPING PADS NOT LESS THAN 3-1/2 INCH THICK REINFORCED WITH NO. 3 DOWELS AND NO. 3 BARS, 2 FEET-0 INCHES ON CENTER EACH WAY.

B. SUSPENDED EQUIPMENT SHALL HAVE SUPPORTS CONSISTING OF MANUFACTURED METAL FRAMING OR HANGERS CONFORMING TO SECTION 220529.

3.6 INSTRUCTIONS OF OWNER'S PERSONNEL

A. PROVIDE THE SERVICES OF COMPETENT ENGINEERS OR TECHNICIANS TO INSTRUCT REPRESENTATIVES OF THE OWNER IN COMPLETE AND DETAILED OPERATION AND MAINTENANCE OF EACH ITEM OF EQUIPMENT AND EACH SYSTEM.

B. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR PROPER MAINTENANCE OF EQUIPMENT AND SYSTEMS UNTIL THE INSTRUCTIONS HAVE BEEN GIVEN TO THE OWNER'S PERSONNEL AND THE LETTER OF RELEASE ACKNOWLEDGED.

C. PROVIDE OPERATION & MAINTENANCE MANUALS (3 COPIES), ALONG WITH AS-BUILT SET OF PRINTS PRIOR TO SUBSTANTIAL COMPLETION OF THE PROJECT.

3.7 ELECTRIC WIRING OF MOTORS AND EQUIPMENT

A. LOW VOLTAGE HVAC CONTROL WIRING WILL BE INSTALLED BY THE HVAC CONTRACTOR WITH FINAL CONNECTION TO THE HVAC EQUIPMENT BY THE HVAC CONTRACTOR. THE ELECTRICAL CONTRACTOR SHALL FURNISH ALL DISCONNECT SWITCHES AS REQUIRED FOR THE PROPER OPERATION OF THE EQUIPMENT UNLESS SUCH EQUIPMENT IS SPECIFIED TO BE PROVIDED WITH FACTORY MOUNTED DISCONNECT SWITCHES.

B. THE ELECTRICAL DESIGN AND DRAWINGS ARE BASED ON THE EQUIPMENT SCHEDULED AND SHOWN ON THE DRAWINGS, SHOULD ANY CONTRACTOR SUBMIT FOR APPROVAL EQUIPMENT REQUIRING CHANGES TO THE ELECTRICAL DESIGN FOR WHICH THE ELECTRICAL CONTRACTOR WILL REQUEST AN EXTRA, THIS EXTRA SHALL BE PAID BY THE CONTRACTOR PROVIDING THE ALTERNATE EQUIPMENT REQUIRING THE CHANGE.

3.8 QUIET OPERATION

A. THIS WORK SHALL BE INSTALLED IN SUCH A MANNER THAT UNDER ALL CONDITIONS OF LOAD IT SHALL OPERATE WITHOUT SOUND OR VIBRATION, WHICH IS OBJECTIONABLE IN THE OCCUPIED SPACES IN THE OPINION OF THE OWNER. IN THE CASE OF MOVING MACHINERY, SOUND OR VIBRATION ANNOYINGLY NOTICEABLE INSIDE ITS OWN ROOM CAN BE CONSIDERED AS OBJECTIONABLE. IN ANY CASE, SITUATION SHALL BE REMEDIED AT NOT COST TO THE OWNER.

3.9 CUTTING AND PATCHING

A. PROVIDE ALL CUTTING, CHASING AND CHANNELING REQUIRED FOR ANY WORK UNDER THIS DIVISION. CUTTING SHALL HAVE PRIOR APPROVAL FROM ARCHITECT AND OWNER.

B. ALL PATCHING SHALL BE BY GENERAL CONTRACTOR AND SHALL MATCH THE SURROUNDING SURFACES.

3.10 TESTS

A. THE CONTRACTOR INSTALLING THE PLUMBING SYSTEMS SHALL FOLLOW ALL TESTS AS REQUIRED TO PROVE COMPLIANCE WITH ALL LOCAL CODES. TESTS PERFORMED SHALL BE EQUAL TO OR EXCEED THAT HEREINAFTER SPECIFIED. ALL PIPING SYSTEMS SHALL BE TESTED BEFORE THEY ARE COVERED OR MADE UNAVAILABLE FOR THE COMPLETE INSPECTION OF ALL JOINTS. IN ADDITION TO THE ABOVE, EACH AND EVERY SYSTEM TO BE INSULATED SHALL BE THOROUGHLY TESTED BEFORE THE INSTALLATION IS APPLIED.

B. DOMESTIC WATER PIPING SYSTEM: UPON COMPLETION OF A SECTION OF THE ENTIRE WATER SUPPLY SYSTEM, IT SHALL BE TESTED AND PROVED TIGHT UNDER A WATER PRESSURE OF 125 PSIG, BUT NOT LESS THAN 10 PERCENT IN EXCESS OF THE WORKING PRESSURE UNDER WHICH IT IS TO BE USED. THE WATER USED FOR TESTS SHALL BE OBTAINED FROM A POTABLE SOURCE OF SUPPLY.

C. SANITARY SYSTEMS: ALL SANITARY SEWER SYSTEMS SHALL BE TESTED EITHER IN SECTIONS OR IN THEIR ENTIRETY IN ACCORDANCE WITH ALL THE REQUIREMENTS OF THE LOCAL PLUMBING CODE AND TO THE SATISFACTION OF THE LOCAL PLUMBING INSPECTOR. THESE TESTS SHALL BE EXAMINED IF DESIRED BY THE ARCHITECT OR HIS REPRESENTATIVE DURING THE TEST PERIOD AND AMPLE NOTICE OF PERFORMANCE OF THESE TESTS SHALL BE GIVEN.

END OF SECTION.

SECTION 220523 - GENERAL DUTY VALVES

PART 1 - GENERAL

1.1 SCOPE OF WORK

A. REFER TO SECTION 220500.

PART 2 - PRODUCTS

2.1 WATER SYSTEM VALVES

A. DOMESTIC, CHILLED, HOT, AND CONDENSER WATER SYSTEMS: PROVIDE VALVES, WHERE SHOWN ON THE DRAWINGS AND ELSEWHERE AS SPECIFIED OR REQUIRED, TO PROVIDE ISOLATION OF EQUIPMENT AND FIXTURES AND TO PROVIDE DRAINAGE OF LOW POINTS IN WATER LINES. VALVES SHALL BE IN ACCORDANCE WITH THE FOLLOWING DETAILED SPECIFICATIONS:

a. SIZES 2 INCH AND SMALLER: BALL VALVE: NIBCO 585-70, FULL PORT, BRONZE BODY WITH STAINLESS STEEL TRIM.

b. SIZES 2 INCH AND SMALLER: CHECK VALVE: NIBCO S-433 CLASS 150, BRONZE.

c. SIZES 2-1/2 INCH AND LARGER: BUTTERFLY VALVE: NIBCO LC2000 LUG STYLE, CAST IRON, 200 PSIG WITH STAINLESS STEEL TRIM AND EPDM SEAT.

d. SIZES 2-1/2 INCH AND LARGER: CHECK VALVE: NIBCO F-918-B CAST IRON, FLANGED, 200 PSIG WITH BRONZE TRIM.

PART 3 - EXECUTION

3.1 INSTALLATION

A. VALVES SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS' RECOMMENDATIONS, AND IN SUCH MANNER AS TO PERMIT DISASSEMBLY, REMOVAL, REASSEMBLY AND REPLACEMENT.

END OF SECTION.

SECTION 220529 - HANGERS AND SUPPORTS

PART 1 - GENERAL

1.1 SCOPE OF WORK

A. REFER TO SECTION 220500.

PART 2 - PRODUCTS

2.1 GENERAL

A. PIPE HANGERS AND SUPPORTS SHALL CONFORM TO THE RECOMMENDATIONS OF ASHRAE, ASPE, ANSI AND MSS.

B. PROVIDE FACTORY-FABRICATED PIPE HANGERS AND SUPPORTS IN WHICH MATERIALS, DESIGN AND MANUFACTURE COMPLY WITH ANSI/MSS SP-58. SELECT AND APPLY PIPE HANGERS AND SUPPORTS IN COMPLIANCE WITH MSS SP-69, AND MANUFACTURER'S PUBLISHED PRODUCT INFORMATION. FABRICATE AND INSTALL PIPE HANGERS AND SUPPORTS IN COMPLIANCE WITH MSS SP-89.

C. USE ONLY ONE TYPE OF HANGER AND SUPPORT, BY ONE MANUFACTURER, FOR EACH PIPING SERVICE.

D. PROVIDE COPPER-PLATED HANGERS AND SUPPORTS FOR COPPER PIPING SYSTEMS WHERE HANGERS ARE IN CONTACT WITH BARE PIPE.

E. PROVIDE PROTECTIVE COATINGS ON HANGERS AND SUPPORTS WHEN LOCATED IN OUTDOOR AND/OR CORROSIVE ENVIRONMENTS. PROTECTIVE COATINGS SHALL BE AS RECOMMENDED BY THE COATING MANUFACTURER'S REQUIREMENTS.

2.2 HORIZONTAL PIPING HANGERS AND SUPPORTS

A. SELECT SIZE OF HANGERS AND SUPPORTS TO EXACTLY FIT PIPE SIZE FOR BARE PIPING, AND AROUND PIPING INSULATION WITH SADDLE OR SHIELD FOR INSULATED PIPING.

2.3 HANGER ROD ATTACHMENTS

A. SELECT SIZE OF HANGER ROD ATTACHMENTS TO SUIT HANGER RODS.

2.4 BUILDING ATTACHMENTS

A. SELECT SIZE AND TYPE OF BUILDING ATTACHMENTS TO SUIT HANGER RODS AND STRUCTURE.

2.5 PIPE INSULATION HANGER SHIELD INSERTS AND SHIELDS

A. THERMAL HANGER INSERTS SHALL BE DESIGNED TO PREVENT INSULATION FROM BEING CRUSHED BY THE WEIGHT OF THE PIPING AND CONTENTS.

B. SHIELDS SHALL BE FIELD OR FACTORY FABRICATED OF GALVANIZED SHEET METAL.

PART 3 - EXECUTION

3.1 PREPARATION

A. PROCEED WITH INSTALLATION OF HANGERS, SUPPORTS AND ANCHORS ONLY AFTER REQUIRED BUILDING STRUCTURAL WORK HAS BEEN COMPLETED IN AREAS WHERE THE WORK IS TO BE INSTALLED.

3.2 INSTALLATION OF BUILDING ATTACHMENTS

A. INSTALL BUILDING ATTACHMENTS AT REQUIRED LOCATIONS, ON STRUCTURE FOR PROPER SUPPORT. SPACE ATTACHMENTS WITHIN MAXIMUM PIPING SPAN LENGTH SPECIFIED IN THIS SECTION. INSTALL ADDITIONAL BUILDING ATTACHMENTS WHERE SUPPORT IS REQUIRED FOR ADDITIONAL CONCENTRATED LOADS, INCLUDING VALVES, FLANGES, GUIDES, STRAINERS AND EXPANSION JOINTS. ALSO PROVIDE ATTACHMENTS AT CHANGES IN DIRECTION OF PIPING AND WHERE REQUIRED BY A LIMITED CARRYING CAPACITY OF THE STRUCTURE.

3.3 INSTALLATION OF HANGERS AND SUPPORTS

A. INSTALL HANGERS, SUPPORTS, CLAMPS AND ATTACHMENTS TO SUPPORT PIPING PROPERLY FROM BUILDING STRUCTURE IN COMPLIANCE WITH MSS SP-69. ARRANGE THE GROUPING OF PARALLEL RUNS OF HORIZONTAL PIPING TO BE SUPPORTED TOGETHER IN TRAPEZE-TYPE HANGERS WHERE POSSIBLE. WHERE PIPING OF VARIOUS SIZES ARE TO BE SUPPORTED TOGETHER BY TRAPEZE HANGERS, SPACE HANGERS FOR SMALLEST PIPE SIZE OR INSTALL INTERMEDIATE SUPPORTS FOR SMALL DIAMETER PIPE. DO NOT USE WIRE OR PERFORATED METAL TO SUPPORT PIPING, AND DO NOT SUPPORT PIPING FROM OTHER PIPING.

B. INSTALL HANGER AND SUPPORTS COMPLETE WITH NECESSARY BOLTS, RODS, NUT WASHERS AND OTHER ACCESSORIES. EXCEPT AS OTHERWISE INDICATED FOR EXPOSED CONTINUOUS PIPE RUNS, INSTALL HANGERS AND SUPPORTS OF SAME TYPE AND STYLE AS INSTALLED FOR ADJACENT SIMILAR PIPING.

C. SUPPORT FIRE PROTECTION WATER PIPING INDEPENDENTLY OF OTHER PIPING.

3.4 PROVISIONS FOR MOVEMENT

A. INSTALL HANGERS AND SUPPORTS TO ALLOW MOVEMENT OF PIPING SYSTEMS AND TO PERMIT FREEDOM OF MOVEMENT BETWEEN PIPE ANCHORS, AND TO FACILITATE ACTION OF EXPANSION JOINTS, EXPANSION LOOPS, OFFSETS, EXPANSION BENDS AND SIMILAR UNITS.

B. INSTALL HANGERS AND SUPPORTS SO THAT PIPING, LOADING, AND STRESSES FROM MOVEMENT WILL NOT BE TRANSMITTED TO CONNECTED EQUIPMENT

3.5 INSULATED PIPING REQUIREMENTS

A. HANGERS FOR INSULATED COLD PIPING SHALL BE PLACED AROUND THE OUTSIDE OF THE INSULATION AND VAPOR BARRIER.

a. PROVIDE A 180 DEGREE THERMAL INSERT ON THE BOTTOM OF THE PIPE. EXTEND VAPOR BARRIER ON TOP OF INSERT AND INSULATION AND PROVIDE INSULATION SHIELD BETWEEN INSERT AND HANGER.

B. HANGERS FOR OTHER INSULATED PIPING MAY BE PLACED DIRECTLY AGAINST THE PIPING WITH INSULATION CARRIED COMPLETELY OVER AND AROUND HANGER AND ROD.

3.6 HANGER SPACING AND ROD SIZES

A. HANGERS SHALL BE SPACED SO AS TO SUPPORT PIPING PROPERLY. CAST IRON SOIL PIPES SHALL BE SUPPORTED ON HANGERS SPACED NOT MORE THAN PIPE LENGTH BEING EMPLOYED. HANGERS FOR ALL OTHER COPPER OR STEEL PIPING SHALL BE SPACED ACCORDING TO THE FOLLOWING SCHEDULE:

PIPE SIZE	MAXIMUM HANGER SPACING	MINIMUM ROD SIZE
1/2 INCH	5 FEET	3/8 INCH
3/4 INCH	5 FEET	3/8 INCH
1 INCH	6 FEET	3/8 INCH
1-1/4 INCH	6 FEET	3/8 INCH
1-1/2 INCH	8 FEET	3/8 INCH
2 INCH AND LARGER	8 FEET	1/2 INCH

C. AT NO TIME SHALL ANY SECTION OF PIPE HAVE LESS THAN TWO SUPPORTS.

END OF SECTION.

SECTION 220553 - IDENTIFICATION

PART 1 - GENERAL

1.1 SCOPE OF WORK

A. REFER TO SECTION 220500.

B. LABEL ALL NEW EQUIPMENT AND PIPING SYSTEMS.

PART 2 - PRODUCTS

2.1 PIPE LABELS

A. PRETENSION PIPE LABELS OF SEMI-RIGID PLASTIC FORMED TO COVER THE FULL CIRCUMFERENCE OF PIPE.

B. IDENTIFY THE SERVICE AND DIRECTION OF FLOW. LABELS SHALL CONTAIN AT LEAST ½ INCH HIGH LETTERING AND BE PLACED SO THEY ARE EASY TO READ.

2.2 VALVE TAGS

A. MULTILAYER, MULTICOLOR PLASTIC LABELS WITH MECHANICAL ENGRAVING AND CHAIN FOR ATTACHMENT TO VALVE.

2.3 EQUIPMENT LABELS

A. MULTILAYER, MULTICOLOR PLASTIC LABELS WITH MECHANICAL ENGRAVING AND HOLES FOR ATTACHMENT TO EQUIPMENT.

PART 3 - EXECUTION

3.1 PIPE LABELS

A. INSTALL PIPE LABELS WHERE PIPING IS EXPOSED OR ABOVE AN ACCESSIBLE CEILING AT MAXIMUM 20 FT. CENTERS.

3.2 VALVE TAGS

A. ATTACH TAGS TO VALVES USING CHAIN. PROVIDE A VALVE SCHEDULE FOR MOUNTING IN THE MECHANICAL ROOM.

3.3 EQUIPMENT LABELS

A. PERMANENTLY ATTACH LABELS TO EQUIPMENT. LOCATE WHERE LABEL CAN BE EASILY SEEN AND READ.

END OF SECTION.

SECTION 220700 - INSULATION

PART 1 - GENERAL

1.1 SCOPE OF WORK

A. REFER TO SECTION 220500.

PART 2 - PRODUCTS

2.1 INSULATION SCHEDULE AND INSTALLATION

A. ALL DOMESTIC HOT AND COLD WATER PIPING:
FOR PIPING 1-1/4 INCH AND SMALLER PROVIDE 1/2 INCH THICK RIGID FIBERGLASS, TYPE I, WITH WHITE ALL-SERVICE JACKET AND VAPOR BARRIER. PIPING 1-1/2 INCH AND GREATER REQUIRES 1 INCH THICK INSULATION. FITTINGS SHALL BE PRE-MOLDED OF THE SAME MATERIAL.

B. ALL CHILLED, HOT AND CONDENSER WATER PIPING: 1-1/2 INCH THICK RIGID FIBERGLASS, TYPE I, WITH WHITE ALL-SERVICE JACKET AND VAPOR BARRIER.

C. AIR CONDITIONING COOLING COIL CONDENSATE DRAINS: 1/2 INCH THICK ARMAFLEX WITH FITTINGS OF PRE-MOLDED MATERIAL.

D. REFRIGERANT SUCTION AND HOT-GAS LINES: 1-1/2 INCH THICK ARMAFLEX WITH FITTINGS OF PRE-MOLDED MATERIAL.

PART 3 - EXECUTION

3.1 INSTALLATION

A. INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

END OF SECTION.

SECTION 221116 - DOMESTIC WATER PIPING

PART 1 - GENERAL

1.1 SCOPE OF WORK

A. REFER TO SECTION 220500

PART 2 - PRODUCTS

2.1 COPPER PIPING

A. PROVIDE SOFT COPPER TUBE, TYPE “K”, WITH SOLDER-JOINT FITTINGS FOR UNDER SLAP INSTALLATIONS.

B. PROVIDE HARD COPPER TUBE, TYPE “L”, WITH SOLDER JOINT FITTINGS FOR ALL ABOVE GRADE INSTALLATIONS.

PART 3 - EXECUTION

3.1 INSTALLATION

A. CLEAN AND DISINFECT ALL NEW PIPING WITH WATER/CHLORINE SOLUTION.

B. INSTALL WATER PIPING LEVEL AND PLUMB. PROVIDE DRAIN VALVES AT ALL LOW POINTS.

C. PIPING BELOW SLAB SHALL BE INSTALLED WITHOUT JOINTS.

END OF SECTION.

SECTION 221316 - SANITARY WASTE AND VENT PIPING

PART 1 - GENERAL

1.1 SCOPE OF WORK

A. REFER TO SECTION 220500

PART 2 - PRODUCTS

2.1 EXISTING CONDITIONS

A. PROVIDE PIPING MATERIALS TO MATCH EXISTING IN ALL CASES.

2.2 CAST IRON PIPING

A. PROVIDE NO-HUB DWV PIPING FOR ALL ABOVE GRADE INSTALLATIONS WITH STANDARD COUPLINGS.

B. PROVIDE BELL AND SPIGOT CAST IRON PIPING BELOW GRADE WHERE REQUIRED TO MATCH EXISTING CONDITIONS.

2.3 PVC PIPING

A. WHERE ALLOWED BY CODE AND THE OWNER'S CRITERIA. PROVIDE SCHEDULE 40 PVC PIPING ABOVE GRADE WITH SOLVENT-CEMENTED JOINTS.

B. BELOW GRADE, PROVIDE SCHEDULE 40 PVC PIPING WITH SOLVENT-CEMENTED JOINTS.

PART 3 - EXECUTION

3.1 INSTALLATION

A. INSTALL WASTE PIPING AT 1/4 INCH PER FOOT SLOPE WHERE POSSIBLE. MINIMUM SLOPE SHALL BE 1/8 INCH PER FOOT.

B. PROVIDE CLEANOUTS AS INDICATED ON THE DRAWINGS, OR AS REQUIRED BY CODE.

END OF SECTION.

Purdy – McGuire
Mechanical – Electrical Engineers
17300 North Dallas Parkway
Suite 3000
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PMI JOB NO. 21006.005
PROJECT MGR. TODD JOHNSON

NORTH

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2641 IRVING BLVD.
DALLAS, TEXAS 75207
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PROJECT NO.: 581-009
DRAWN BY: TM
CHECKED BY: MW
R.S.F.: 41,852

BILLINGSLEY COMPANY

3501 OLYMPUS
SELENE

3501 OLYMPUS BLVD
5TH FLOOR
DALLAS, TX 75019

NO.	ISSUED FOR:	DATE:
	FOR CONSTRUCTION	05-25-21

DRAWING TITLE:
PLUMBING SPECIFICATIONS

DRAWING NUMBER:
P1.01

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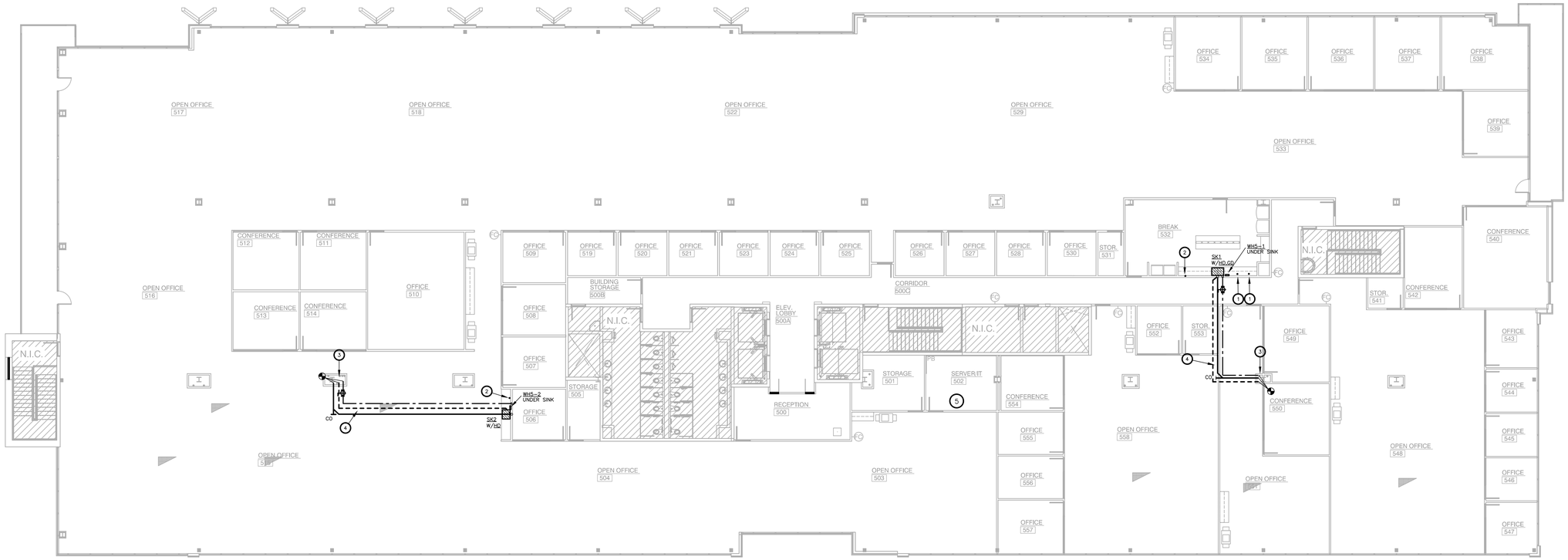
NOTES BY SYMBOL ⓧ:

1. PROVIDE COLD WATER WITH VALVE TO ASSE 1022 COMPLIANT BACKFLOW PREVENTER AND EXTEND 1/4" COPPER TUBING UP THRU COUNTER TOP TO COFFEE MAKER. VERIFY WITH ARCHITECT EXACT LOCATION OF COFFEE MAKER ON COUNTER.
2. PROVIDE COLD WATER WITH VALVE TO ASSE 1022 COMPLIANT BACKFLOW PREVENTER AND EXTEND 1/4" COPPER TUBING TO ICE MAKER. EXTEND CONDENSATE DRAIN LINE FROM ICE MAKER TO HUB DRAIN. PROVIDE PUMP AS REQUIRED.
3. LOCATION OF BUILDING WET STACK STUB-OUTS. VERIFY EXACT LOCATIONS, SIZE AND FIELD CONDITIONS AT WET STACK LOCATION FOR PROPER CONNECTION PRIOR TO ANY INSTALLATION.
4. RUN NEW PIPING TO INDICATED EXISTING LOCATION. VERIFY EXACT LOCATION AND ROUTING AT JOB SITE. PROVIDE SHUT-OFF VALVE IN THE NEW DOMESTIC WATER LINE FOR FUTURE CONNECTION.
5. PROVIDE 1/2" COLD WATER WITH SHUTOFF AND SOLENOID VALVE AND EXTEND 1/4" COPPER TUBING TO A/C UNIT. REFER TO MECHANICAL SHEET FOR LOCATION OF A/C UNIT AND COORDINATE WITH HVAC CONTRACTOR FOR EXACT CONNECTION REQUIREMENTS. PROVIDE REDUCED PRESSURE ZONE ASSEMBLY (RPZ) EQUAL TO WATTS 009 SERIES.



1 LEVEL 05 PLUMBING PLAN
SCALE: 3/32"=1'-0"

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STATE OF TEXAS
TODD M. JOHNSON
86955
LICENSED
PROFESSIONAL ENGINEER
6/25/21

PROJECT NO.: 581-009
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SELENE

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DALLAS, TX 75019

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DRAWING TITLE:
LEVEL 05 PLUMBING PLAN

DRAWING NUMBER:
P2.05

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