



Endeavor Health Services

463 William Street
Buffalo, NY

S.A. PROJECT # 17158.01
DATE: 05-22-2018

ARCHITECT:

SILVESTRI ARCHITECTS, P.C.

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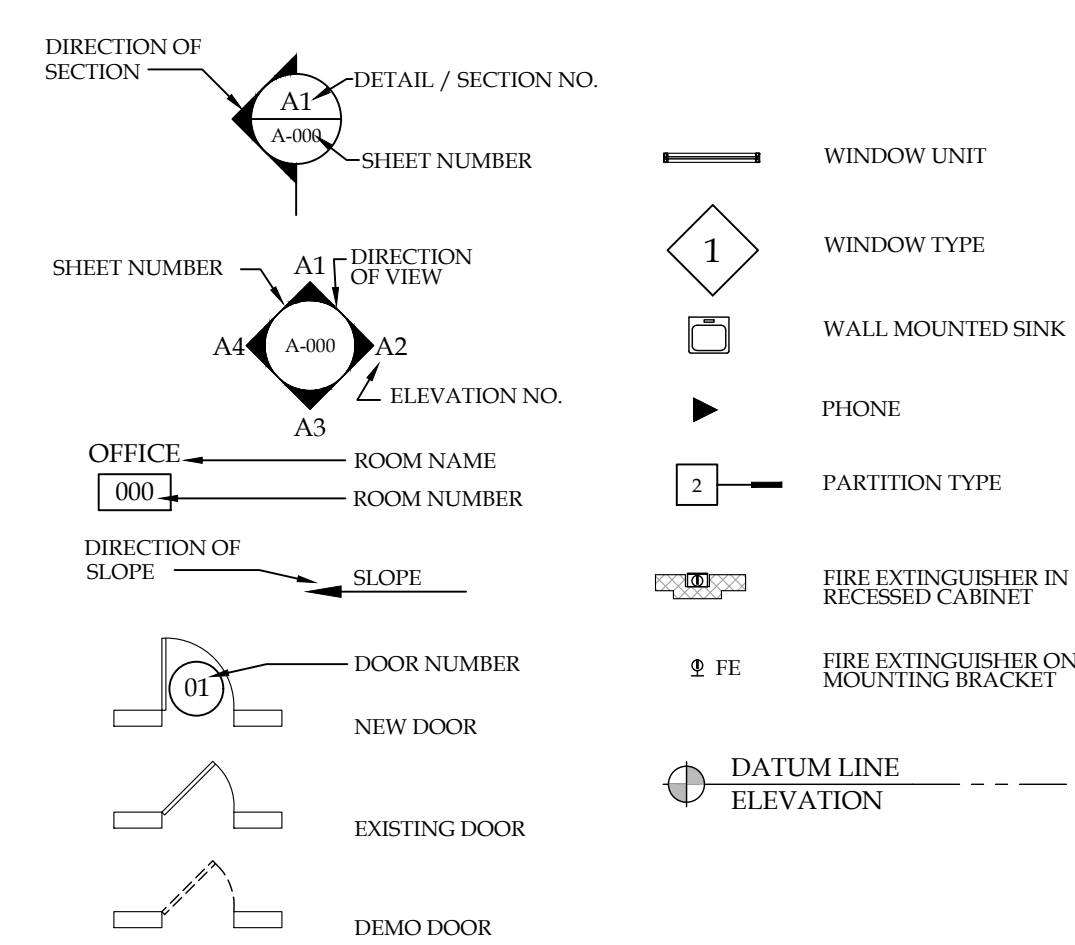
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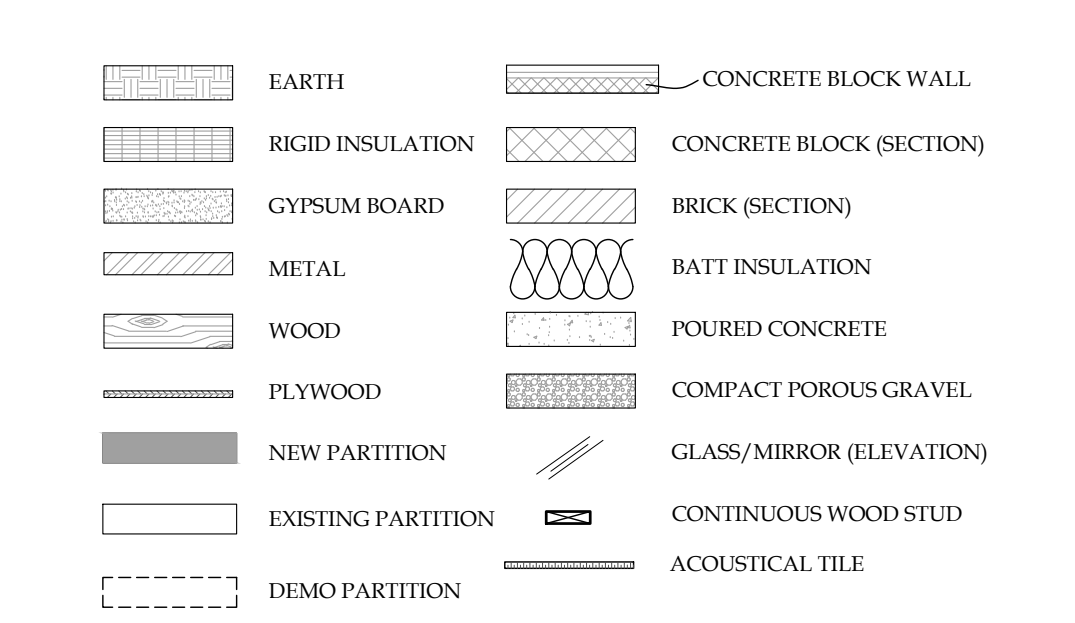
ABBREVIATIONS

| | | | |
|----------|--|-----------|---|
| A.F.F. | ABOVE FINISH FLOOR | N.I.C. | NOT IN CONTRACT |
| ACT. | ACOUSTICAL TILE | N.T.S. | NOT TO SCALE |
| A.C. | AIR CONDITION | NOM. | NOMINAL |
| ALT. | ALTERNATE | NO. | NUMBER |
| ALUM. | ALUMINUM | O.C. | ON CENTER |
| APPROX. | APPROXIMATE | OPNG | OPENING |
| ARCH. | ARCHITECTURAL | OPP. | OPPOSITE |
| AUTO. | AUTOMATIC | OPPH | OPPOSITE HAND |
| | | OH | OVERHEAD |
| BM. | BEAM | PMBC | PREENGINEERED METAL BUILDING CONTRACTOR |
| BRG. | BEARING | PNT | PANEL |
| B.M. | BENCH MARK | P.N.I. | PAPER TOWEL DISPENSER |
| BLK. | BLOCK | P.T.D. | PAPER TOWEL RECEPTOR |
| BLKG. | BLOCKING | P.T.R. | PAVEMENT |
| BD. | BOARD | PS. | PLYWOOD |
| BDT. | BOTTOMS | PS. BD. | PLASTER |
| BRK. | BRICK | PLAS. | PLASTIC LAMINATE |
| B.E.J. | BRICK EXPANSION JOINT | PL. | PLATE |
| B.C. | BRICK COURSE | PNL. | POLISHED |
| B.L.C. | BUILDING | PVD. | PLYWOOD |
| BUR. | BUILT-UP ROOFING | PT | POINT |
| | | P.LAM. | PLASTER |
| CLG. | CEILING | PL. | POLISHED |
| CAB. | CABINET | PVD. | PLYWOOD |
| CPT. | CARPET | PT | POINT |
| C.W. | CASEWORK | PSI | POUNDS PER SQ. INCH |
| C.B. | CATCH BASIN | PSF | POUNDS PER SQ. FOOT |
| CEM. | CEMENT | P.P. | PRE-FABRICATED |
| CT. | CERAMIC TILE | PRE. FAB. | PRE-FABRICATED |
| CHBD. | CHALK BOARD | PROJ. | PROJECTION |
| CLR. | CLEAR | PROJ. | PROJECTION |
| CLM. | COLUMN | PROJ. | PROJECTION |
| CONC. | CONCRETE | PROJ. | PROJECTION |
| CMU. | CONCRETE MASONRY UNIT | PROJ. | PROJECTION |
| CONTR. | CONTRACTOR | PROJ. | PROJECTION |
| CONTR. | CONTRACTOR | PROJ. | PROJECTION |
| CT. | CONTROL JOINT | PROJ. | PROJECTION |
| C.G. | CORNER GUARD | PROJ. | PROJECTION |
| CRS. | COURSE | PROJ. | PROJECTION |
| | | PROJ. | PROJECTION |
| DET. | DETAIL | QT | QUARRY TILE |
| DIA. | DIAMETER | RAD. | RADIUS |
| DIM. | DIMENSION | R.W.L. | RAIN WATER LEADER |
| DISP. | DISPENSER | RECT. | RECTANGLE, ELECTRIC |
| DN. | DOWN | REC. | RECESS |
| DS | DOWNSPOUT | REFR. | REFRIGERATOR |
| DWG. | DRAWING | REFR. | REFRIGERATOR |
| D.F. | DRINKING FOUNTAIN | REIN. | REINFORCE (D) (ING) |
| DIFF. | DIFUSER | REQD. | REQUIRED |
| | | RES. | RECESS (D) |
| EA | EACH | R.C.P. | REFLECTED CEILING PLAN |
| EHS | EXTERIOR INSULATION & FINISH SYSTEM | RET. | RETURN |
| ELEC. | ELECTRICAL | RA | RETURN AIR |
| EPNL. | ELECTRIC PANEL | RVS | REVERSE |
| EL. | ELEVATOR | REV. | REVISION |
| ELEV. | ELEVATION | RIE | RIGHT HAND |
| EQ. | EQUAL | ROW | RIGHT OF WAY |
| EX. E. | EXISTING | RBR. | ROOF DRAIN |
| EXST. | EXISTING | R.D. | ROOF DRAIN |
| EXP. JT. | EXPANSION JOINT | REG. | ROOFING |
| | | RND. | ROUND |
| | | RND. | ROUND |
| FB | FACE BRICK | SDL | SADDLE |
| FIN. | FINISH (ED) | STG. | SEATING |
| F.A. | FIRE ALARM | SHTH | SEATHING |
| F.H.C. | FIRE HOSE CABINET | SHT | SHEET |
| F.P. | FIRE PROOFING | SHR | SHOWER |
| FL. | FLOOR | SIM. | SIMILAR |
| F.D. | FLOOR DRAIN | SPKR | SPEAKER |
| FT. | FOOT | SPEC. | SPECIFICATIONS |
| F.W.C. | FACE WALL COVERING | SQ. | SQUARE |
| FTG. | FOOTING | SST | STAINLESS STEEL |
| FDIN | FOUNDATION | SP | STANDARD |
| FUR. | FURRING | STD | STANDARD |
| | | SD | STORM DRAIN |
| GAL. | GALLON | S.C.T. | STRUCTURAL GLAZED TILE |
| GA. | GAGE | STRUC. | STRUCTURAL |
| G.C. | GENERAL CONTRACTOR | SUSP. | SUSPENDED |
| GL. | GLASS | SW. | SWITCH |
| G.B. | GRAB BAR | SWB | SWITCH BOARD |
| C.W.B. | GYP-SUM WALL BOARD | SWBD | SWITCH BOARD |
| GYP. | GYP-SUM | SV | SHEET VINYL |
| | | | |
| HDW. | HARDWARE | T.B. | TACKBOARD |
| HD. WD. | HARDWOOD | TEL. | TELEPHONE |
| HVAC | HEATING, VENTILATING, & AIR CONDITIONING | TEMP. | TEMPERATURE |
| HT | HEIGHT | TEX. | TEXTURE |
| HC | HOLLOW CORE | THK. | THICK (NESS) |
| HM | HOLLOW METAL | THR | THRESHOLD |
| HORIZ. | HORIZONTAL | TP | TOILET PAPER HOLDER |
| HB | HOSE BIB | T/O | TOP OF |
| H.W. | HOT WATER | TB | TOWEL BAR |
| | | TP | TYPICAL |
| | | | |
| INSUL. | INSULATE (D) (ION) | U.C.L. | UNDER CABINET LIGHT |
| INS. GL. | INSULATED GLASS | U.C. | UNDER CUT |
| INVERT. | INVERT | UR | URNAL |
| JAN. | JANITOR | | |
| JT. | JOINT | | |
| | | | |
| KIT | KITCHEN | V.T.R. | VENT THRU ROOF |
| KN. | KNOCK OUT | VENT. | VENTILATOR |
| | | VERT. | VERTICAL |
| LAM. | LAMINATED | VEST. | VESTIBULE |
| LAV. | LAVATORY | V.C.T. | VINYL COMPOSITE TILE |
| LH. | LEFT HAND | V.F. | VERIFY IN FIELD |
| LGT. | LENGTH | V.W.C. | VINYL WALL COVERING |
| LI. | LENGTH | | |
| L.F. | LINEAR FEET | WSCT | WAINSCOT |
| LTL. | LINE | WS | WEATHER STRIP |
| LL | LINE LOAD | WT. | WEIGHT |
| LLH. | LONG LEG HORIZONTAL | WWF. | WELDED WIRE FABRIC |
| L.V. | LONG LEG VERTICAL | W.C.D.F. | WHEEL CHAIR DRINKING FOUNTAIN |
| L.M.F. | LIGHT GAUGE METAL FRAMING | W. | WITH |
| LVR. | LOW VENT | W/O | WITHOUT |
| L.P. | LOW POINT | WD | WOOD |
| | | | |
| MACH. | MACHINE | | |
| M.H. | MASHOLE | | |
| MFR. | MANUFACTURE | | |
| MAS. | MASONRY | | |
| M.O. | MASONRY OPENING | | |
| MATL. | MATERIAL | | |
| MAX. | MAXIMUM | | |
| MECH. | MECHANICAL | | |
| MEMB. | MEMBRANE | | |
| MET. | METAL | | |
| M.T.P. | METAL TOILET PARTITION | | |
| MIN. | MINIMUM | | |
| MISC. | MISCELLANEOUS | | |
| MULL. | MULLION | | |

DRAFTING SYMBOLS



MATERIAL SYMBOLS



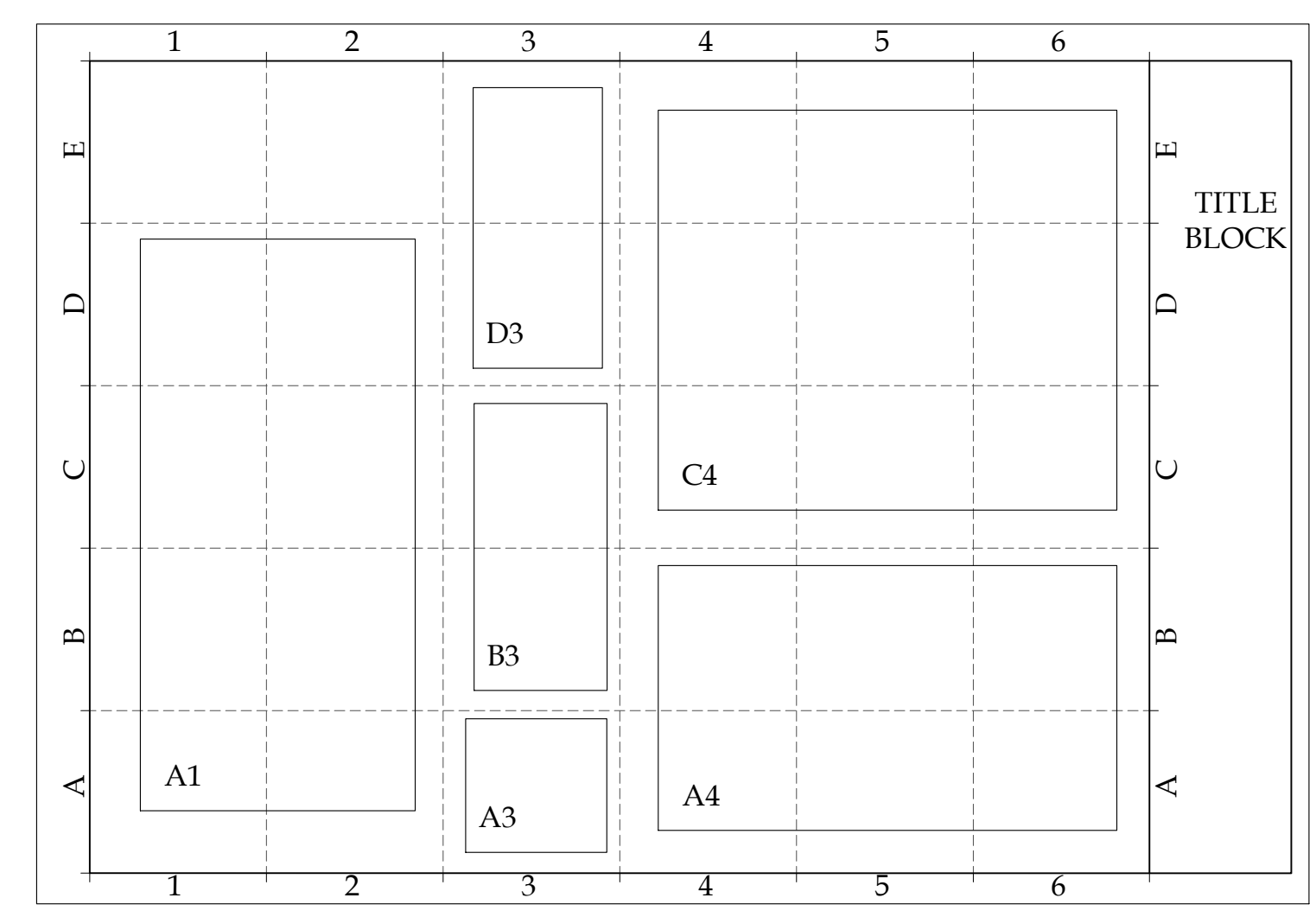
BUILDING DATA

OCCUPANCY CLASSIFICATION: B
CONSTRUCTION TYPE: IIB
TOTAL WORK AREA: 670 SF

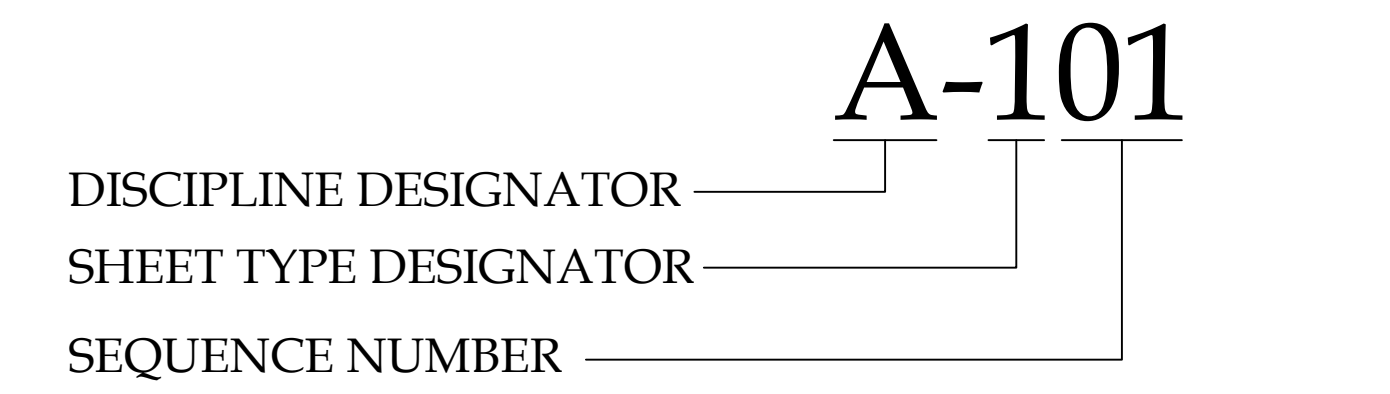
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DRAWING AREA LOGIC



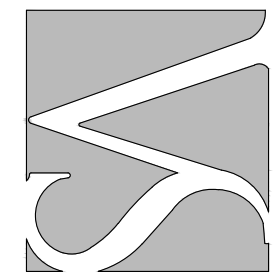
SHEET IDENTIFICATION LOGIC



| DISCIPLINE DESIGNATOR | SHEET TYPE DESIGNATOR |
|-----------------------|-----------------------|
| G | 0 |
| C | 1 |
| L | 2 |
| S | 3 |
| A | 4 |
| F | 5 |
| P | 6 |
| M | |
| E | |

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Buffalo, NY



S.A. PROJECT # 17158.01
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SA PROJECT TEAM: PRINCIPAL: P.Silvestri PROJ. ARCHITECT: S.Hunt DRAFTER: INTERIORS: N. Catruzza

GENERAL DEMOLITION NOTES

- IN GENERAL, ITEMS TO BE REMOVED ARE SHOWN DASHED. THE CONTRACTOR WILL BE REQUIRED TO REMOVE ALL ITEMS INDICATED, IMPLIED OR OTHERWISE NECESSARY TO ALLOW FOR NEW CONSTRUCTION. CONTRACTOR TO VERIFY IN FIELD ANY ADDITIONAL DEMOLITION REQUIRED TO PREPARE AREA FOR NEW CONSTRUCTION PER PLANS.
- COORDINATE ALL NEW OPENINGS WITH ARCHITECTURAL DRAWINGS.
- CONTRACTOR TO PROTECT ALL EXISTING FINISHES SCHEDULED TO REMAIN DURING CONSTRUCTION AND REPLACE DAMAGED FINISHES AS NECESSARY.
- THE CONTRACTOR IS TO VERIFY ALL EXISTING CONDITIONS PRIOR TO STARTING DEMOLITION OR CONSTRUCTION AND IS TO REPORT ANY DISCREPANCIES TO THE ARCHITECT PRIOR TO PROCEEDING.
- THE CONTRACTOR IS RESPONSIBLE FOR THE LEGAL DISPOSAL OF ALL DEMOLISHED ITEMS FROM THE SITE. ALL DEMOLISHED ITEMS TO BE DISPOSED OF IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL LAWS AND REGULATIONS.
- PATCH AND REPAIR EXISTING SURFACES DAMAGED BY DEMOLITION. ALL REPAIR WORK SHALL MATCH EXISTING ADJACENT MATERIALS AND METHODS.
- ALL EXISTING SURFACES LEFT EXPOSED AFTER DEMOLITION SHALL BE PROTECTED AND SAFEGUARDED FROM EXPOSURE FROM WEATHER AND OR DAMAGE FROM CONSTRUCTION DURING CONSTRUCTION.
- REMOVE AND DISPOSE OF EXISTING FLOOR FINISHES WHERE APPLICABLE. PREPARE UNDERLYING SURFACES TO ACCEPT NEW CONSTRUCTION AND FINISHES
- IF ANY WASTE MATERIALS ENCOUNTERED DURING THE DEMOLITION OR CONSTRUCTION PHASE ARE FOUND TO CONTAIN LEAD, ASBESTOS, POLYCHLORINATED BIPHENYL (PCBS) (SUCH AS FLUORESCENT LAMP BALLASTS), OR OTHER HARMFUL SUBSTANCES, THEY SHALL BE HANDLED AND REMOVED IN ACCORDANCE WITH FEDERAL AND STATE LAWS AND REQUIREMENTS CONCERNING HAZARDOUS WASTE.

DEMOLITION NOTES

1. REMOVE EXIST. WALL; PATCH/REPAIR ADJACENT WALL AS REQ'D. PREPARE ANY ELECTRICAL OUTLETS, EMERGENCY LIGHTING, THERMOSTATS, SWITCHES, ETC.... FOR RELOCATION OR TERMINATION AS REQ'D
2. REMOVE EXIST. DOOR/WINDOW, FRAME, & ASSOCIATED HARDWARE IN ITS ENTIRETY. COORDINATE ANY SALVAGE OF DOORS WITH OWNER.
3. REMOVE EXIST. FLOORING, BASE AND ANY ADHESIVES. PREP SUBFLOOR TO RECEIVE NEW FLOORING PER FINISH PLAN.
4. REMOVE EXISTING CEILING GRID AND ACOUSTICAL CEILING TILE. DISCONNECT & REMOVE ALL ELECTRICAL DEVICES INCLUDING SUSPENDED LIGHT FIXTURES & ITS ENTIRETY. COORDINATE SALVAGE WITH OWNER.
5. EXISTING COUNTER TO BE REMOVED.

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PROJ. ARCH. _____ DRAFTER _____
JOB CAPT. _____ INTERIORS _____

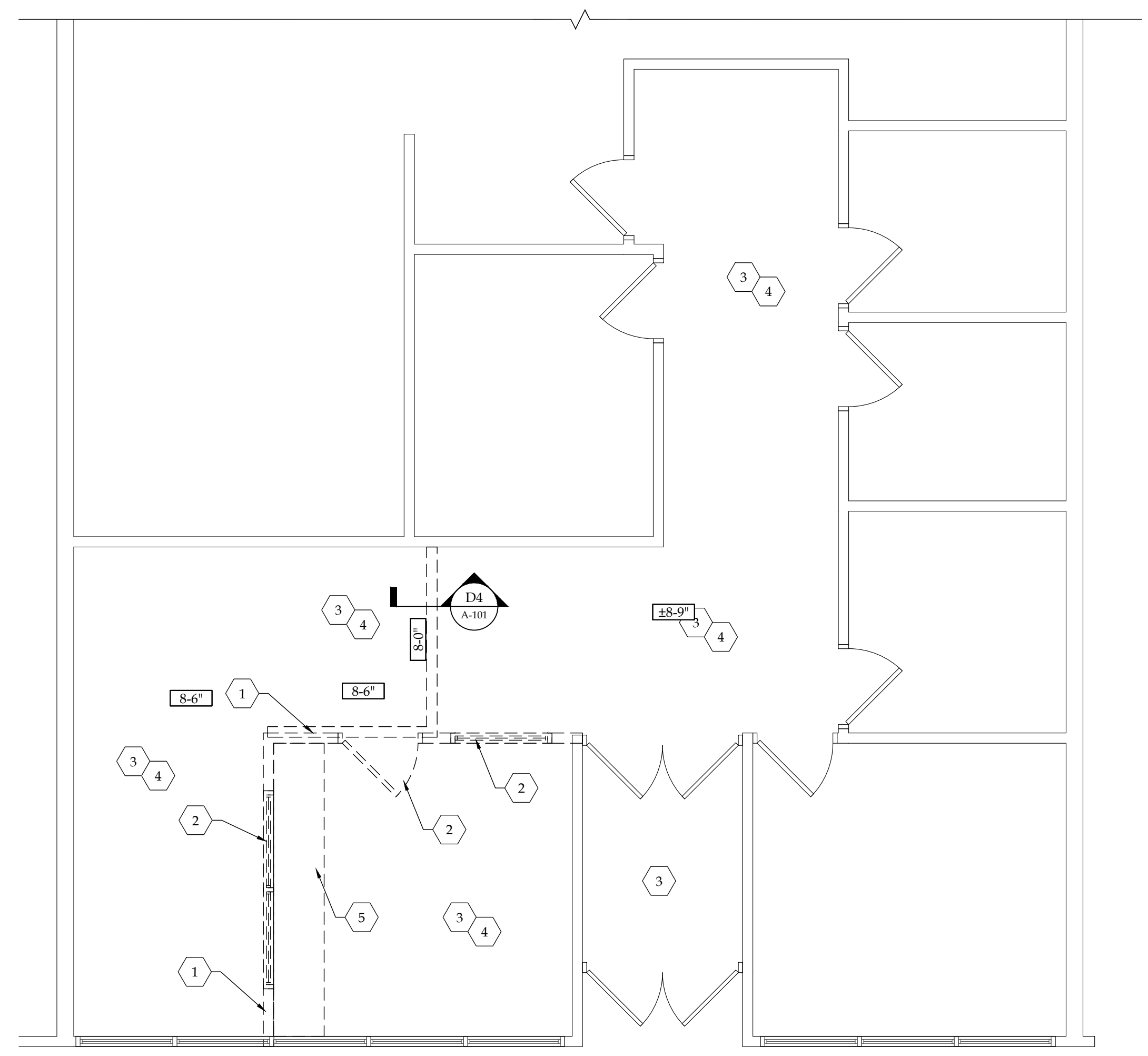
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TITLE:
DEMOLITION PLAN

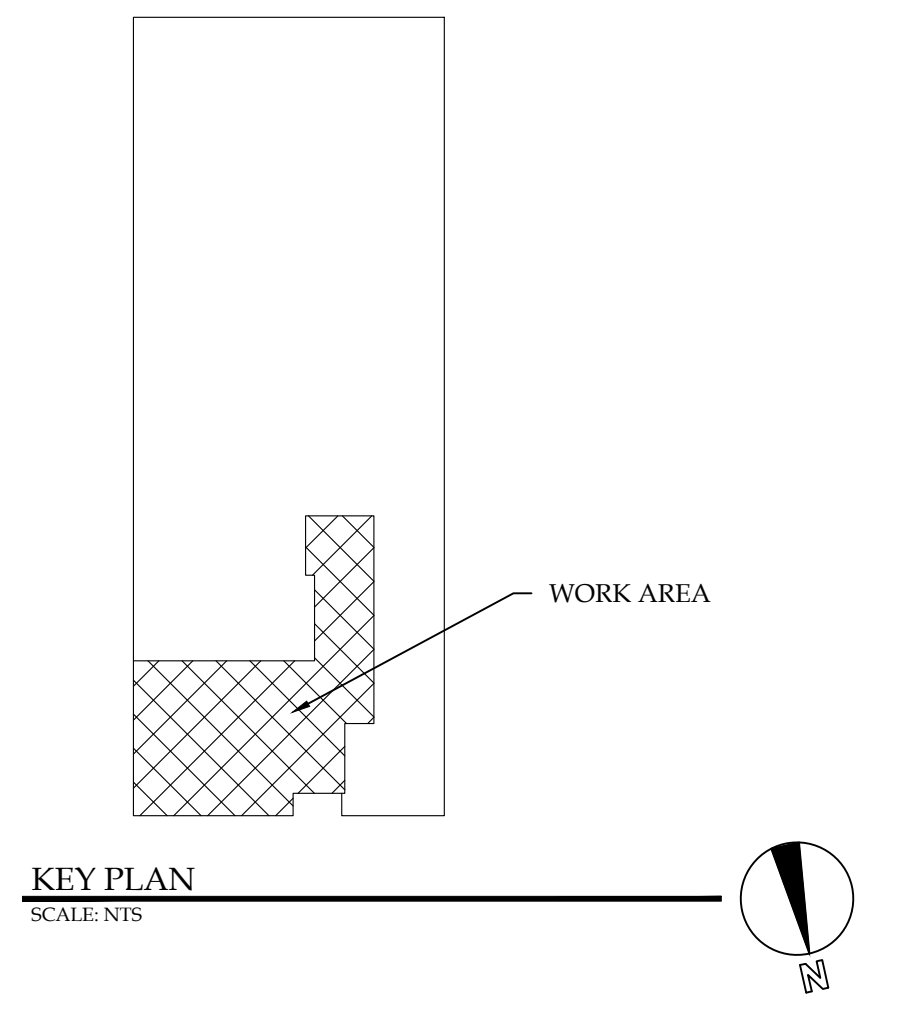


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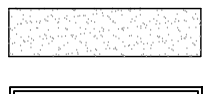
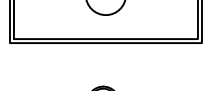



DRAWING #: AD-101



A1 FLOOR PLAN
SCALE: 1/4" = 1'-0"

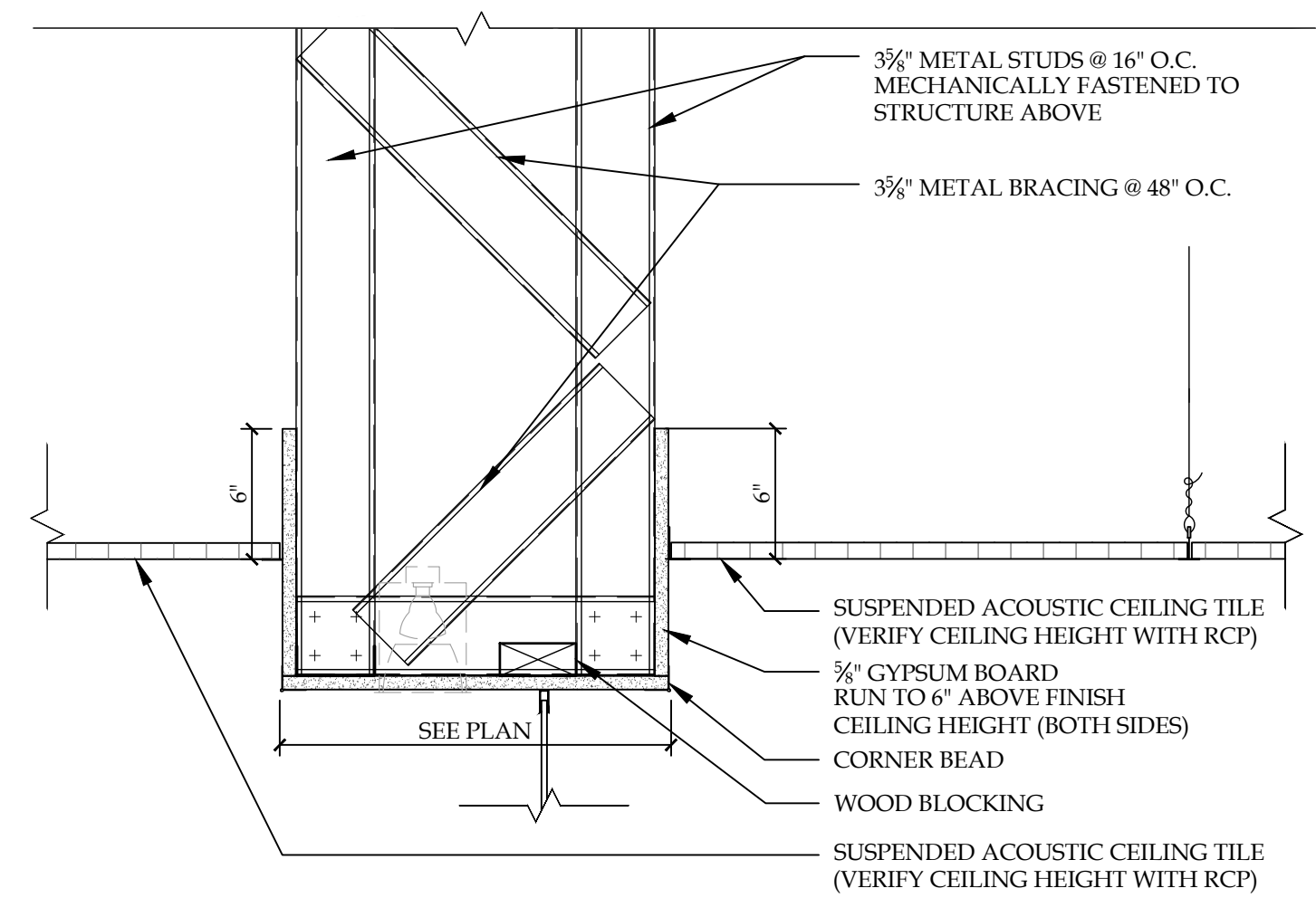


REFLECTED CEILING LEGEND

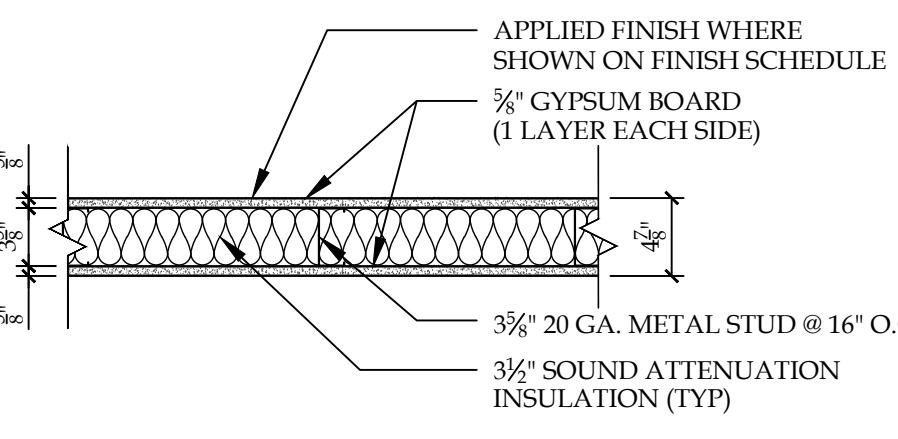
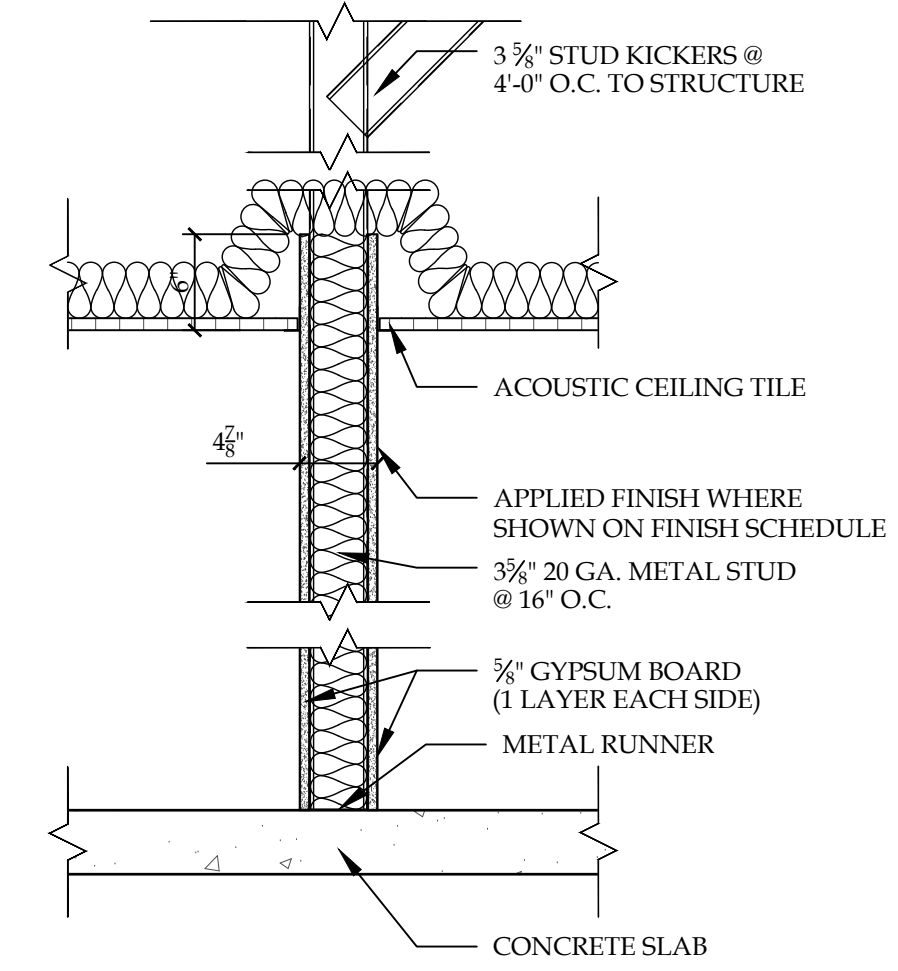
-  2X4' SUSPENDED ACOUSTIC TILE CEILING - SECOND LOOK
-  GYPSUM BOARD CEILING
-  2 X4' LIGHT FIXTURE - COORDINATE WITH ELECTRICAL DRAWINGS
-  6" RECESSED CAN LIGHT
-  EMERGENCY LIGHT
-  EXIT SIGN

GENERAL NOTES

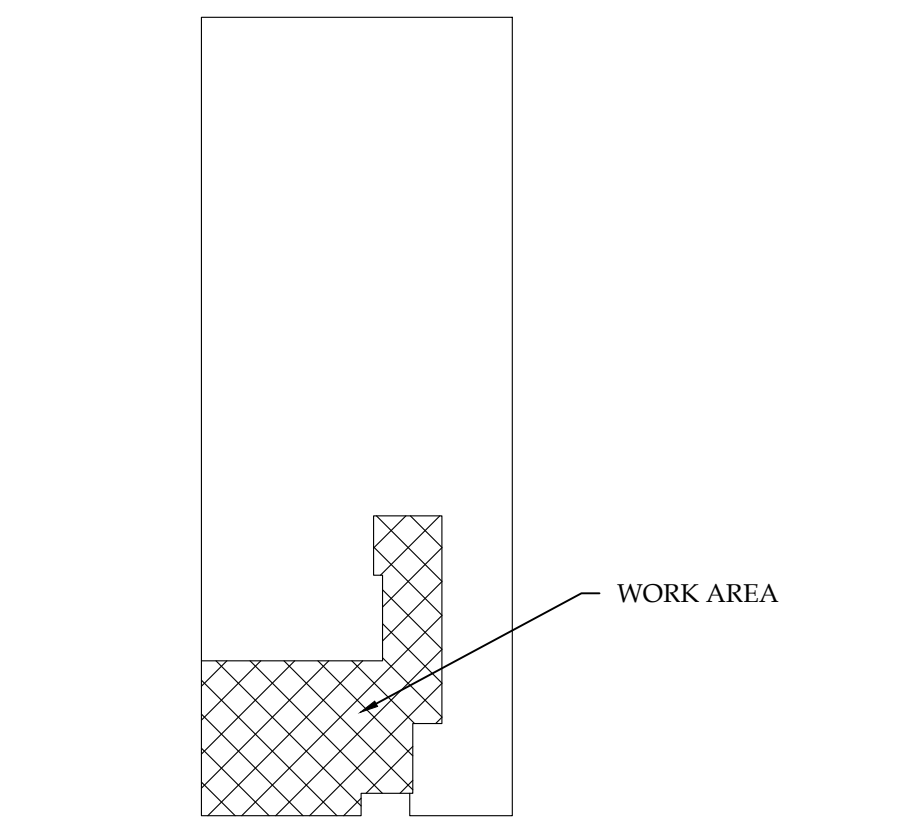
- ALL LIGHTING TO BE CENTERED WITH IN SPACE AS SHOWN.
- VERIFY EXISTING CEILING HEIGHTS IN FIELD. NEW CEILING HEIGHT TO MATCH EXISTING.



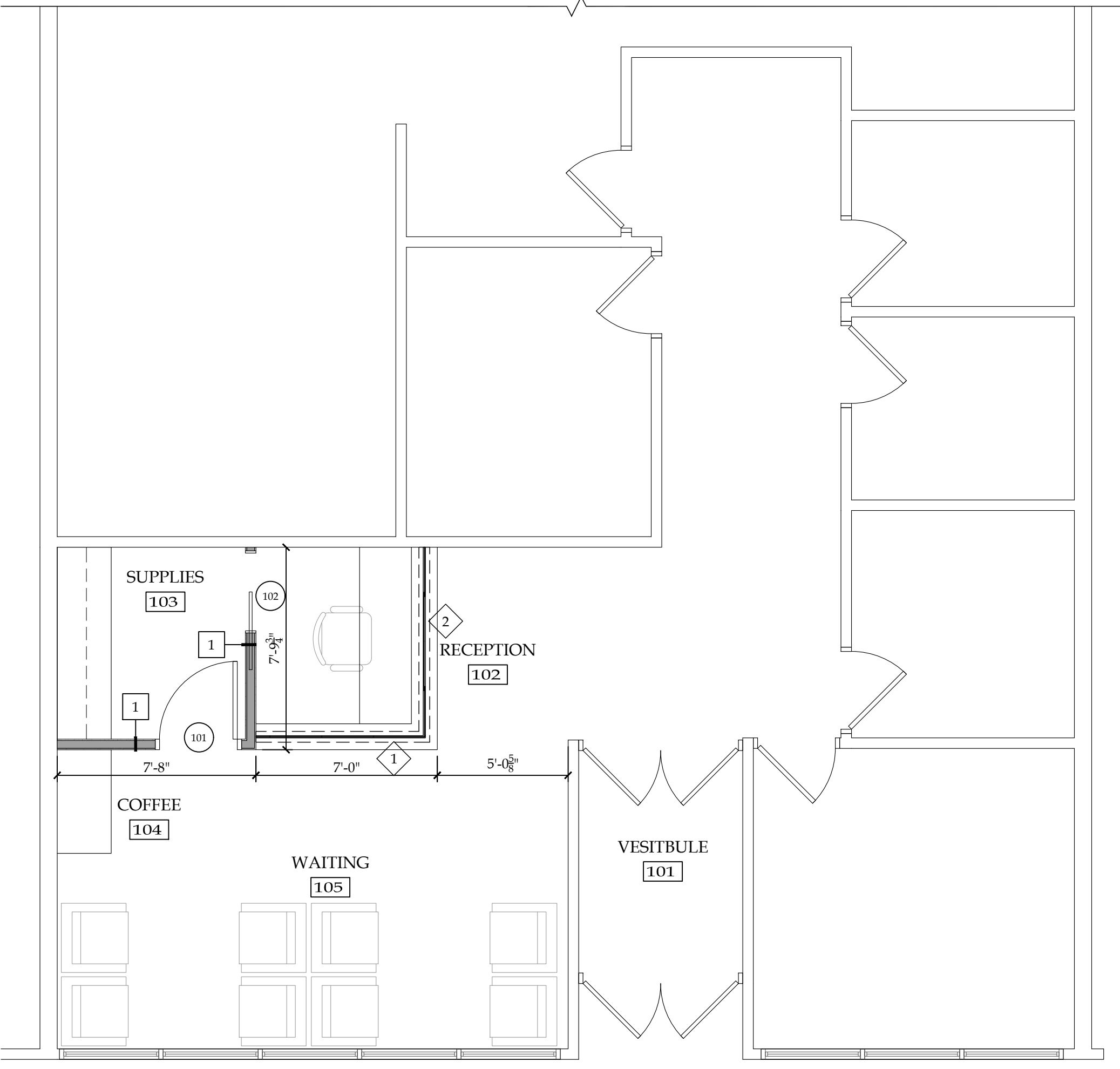
D4 SOFFIT DETAIL
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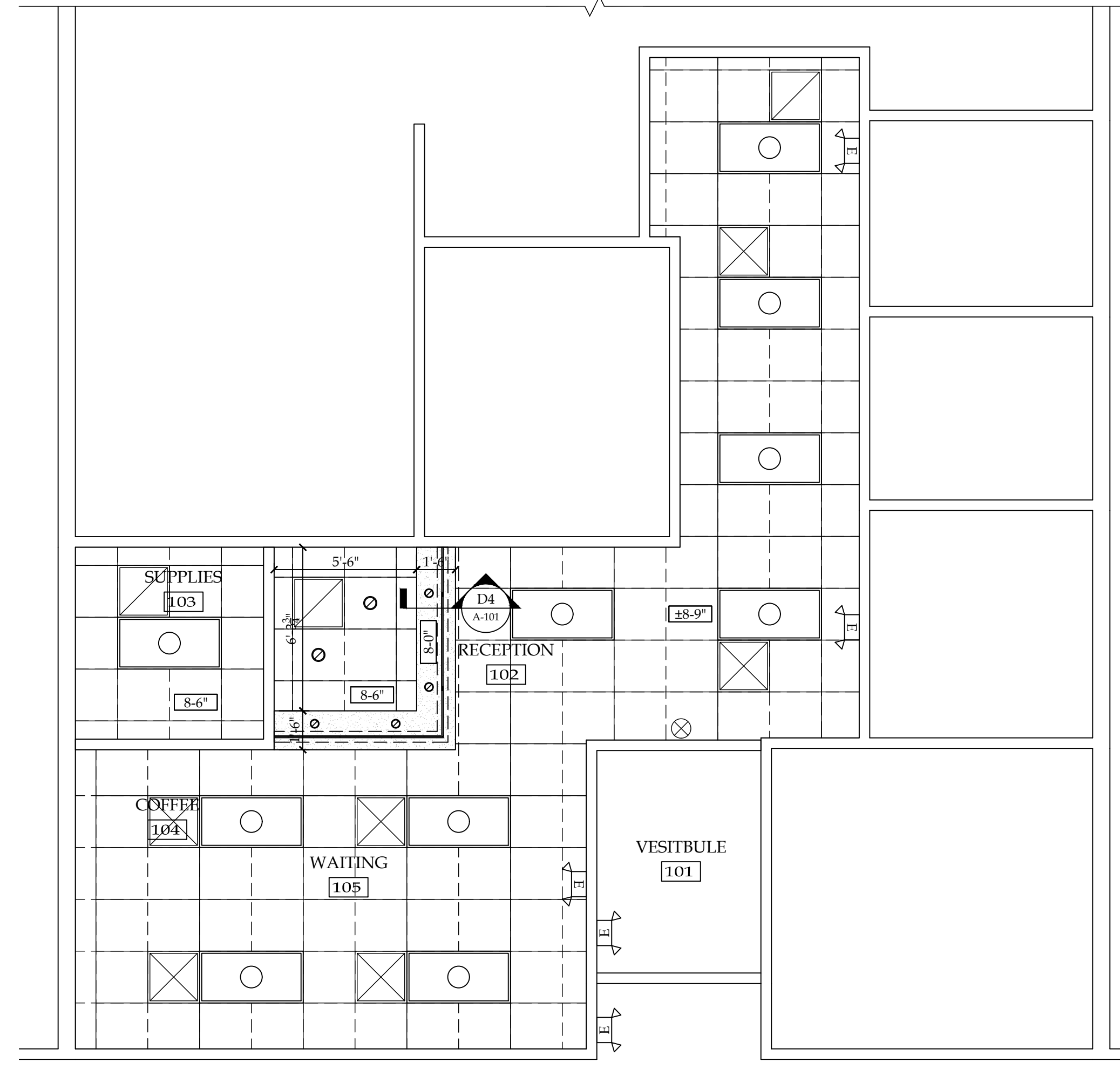
1 3/8" PARTITION
B6 PARTITION TYPES
SCALE: 1" = 1'-0"



KEY PLAN
SCALE: NTS



A1 FLOOR PLAN
SCALE: 1/4" = 1'-0"



A4 REFLECTED CEILING PLAN
SCALE: 1/4" = 1'-0"

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PROJ. ARCH. _____ DRAFTER _____
JOB CAPT. _____ INTERIORS _____

SEAL:

TITLE:
FLOOR PLAN & REFLECTED CEILING PLAN



SILVESTRI ARCHITECTS + PC
1321 MILLERSPORT HWY PH. 716.691.0900
AMHERST, NY 14221 FAX 716.691.4773

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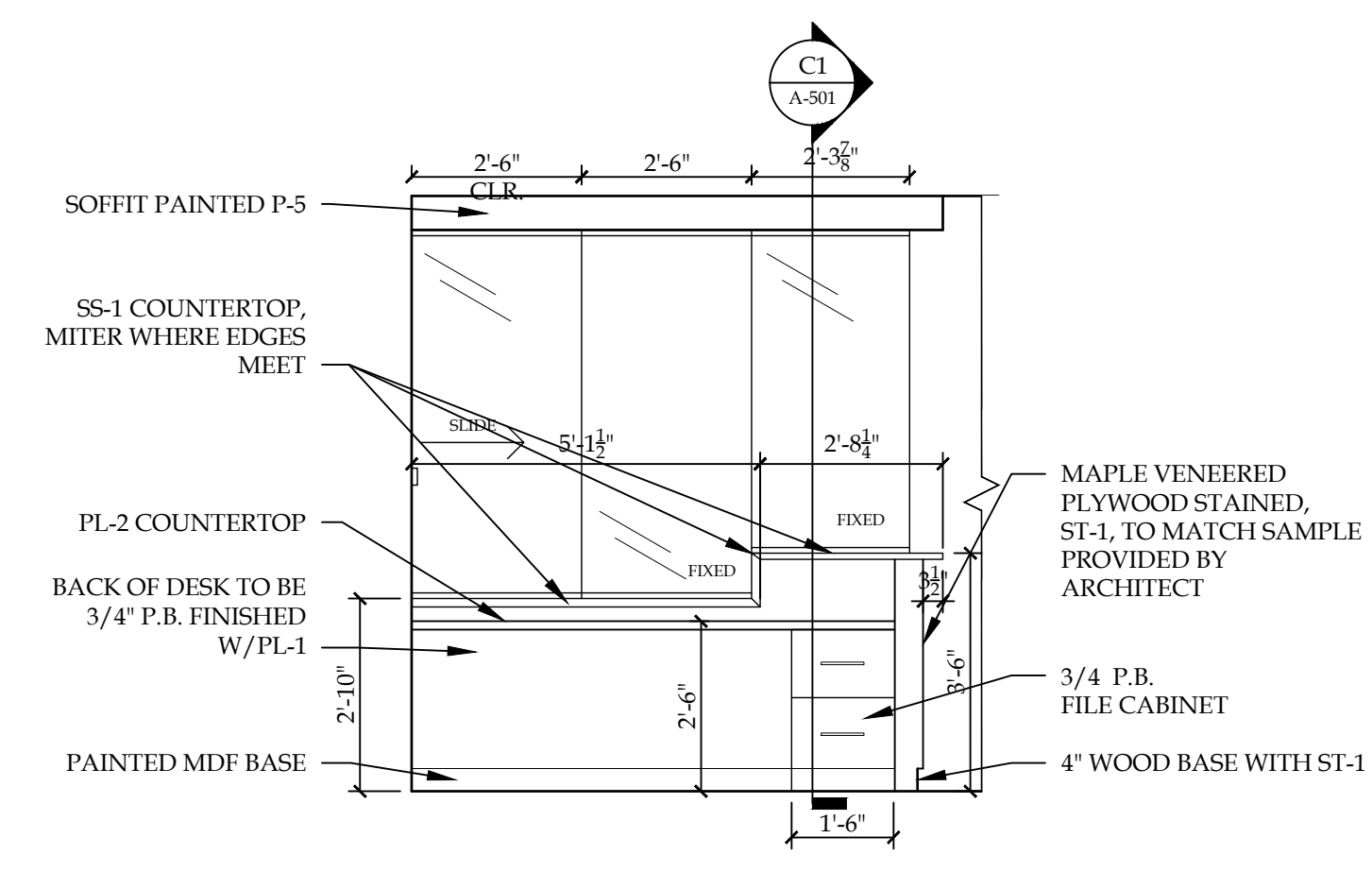
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ENLARGED PLANS & ELEVATIONS



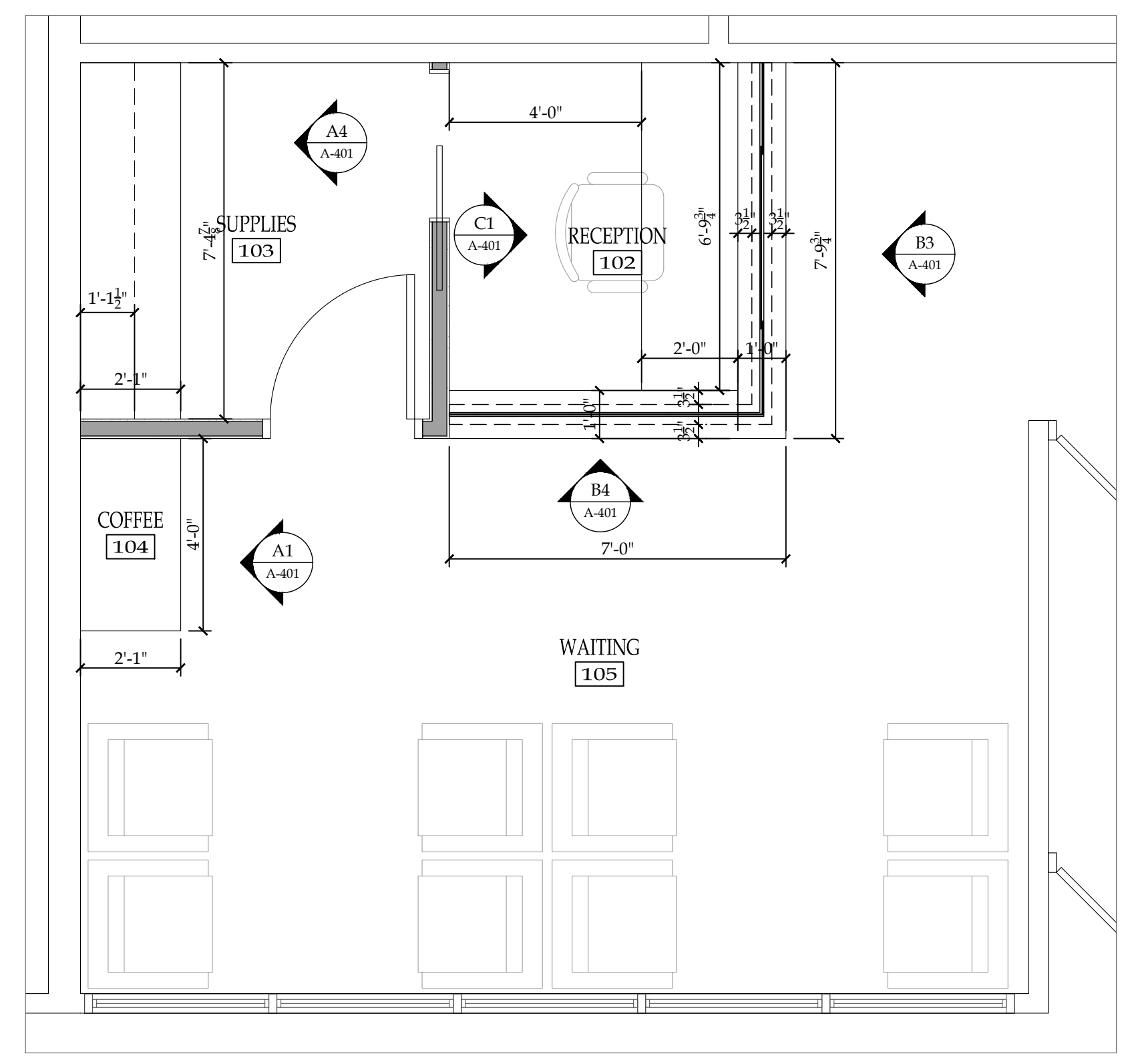
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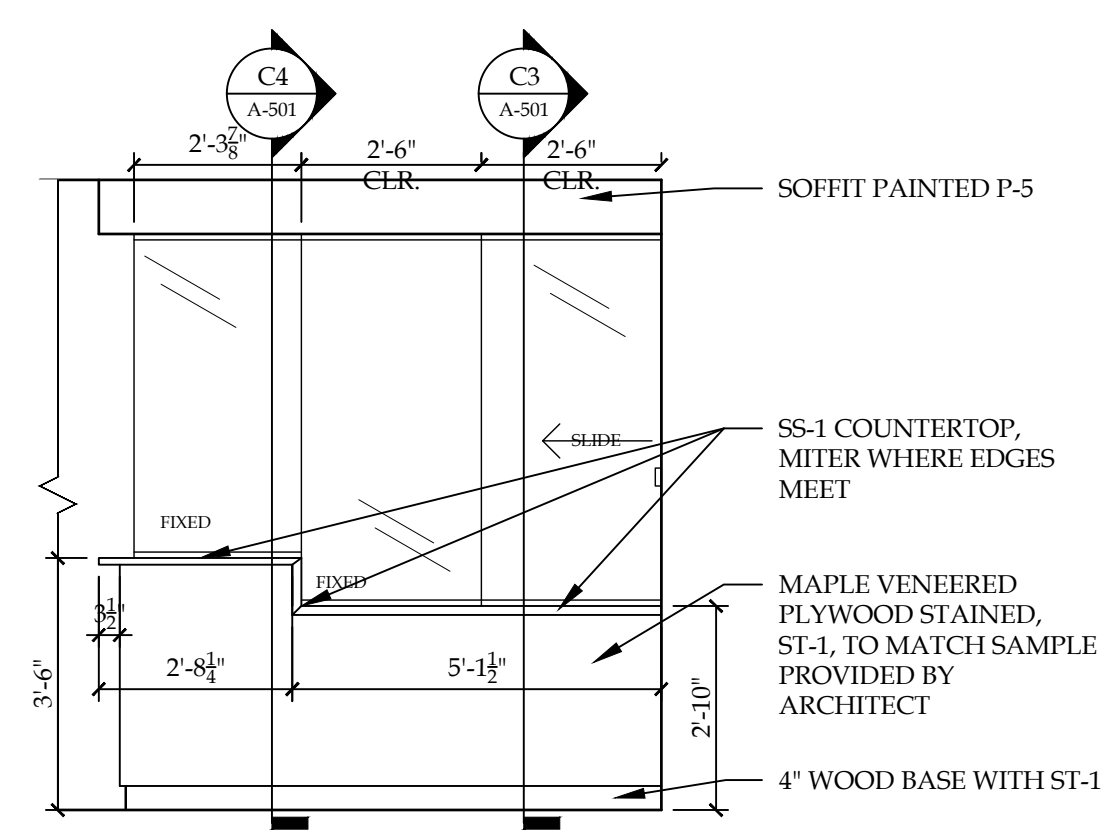
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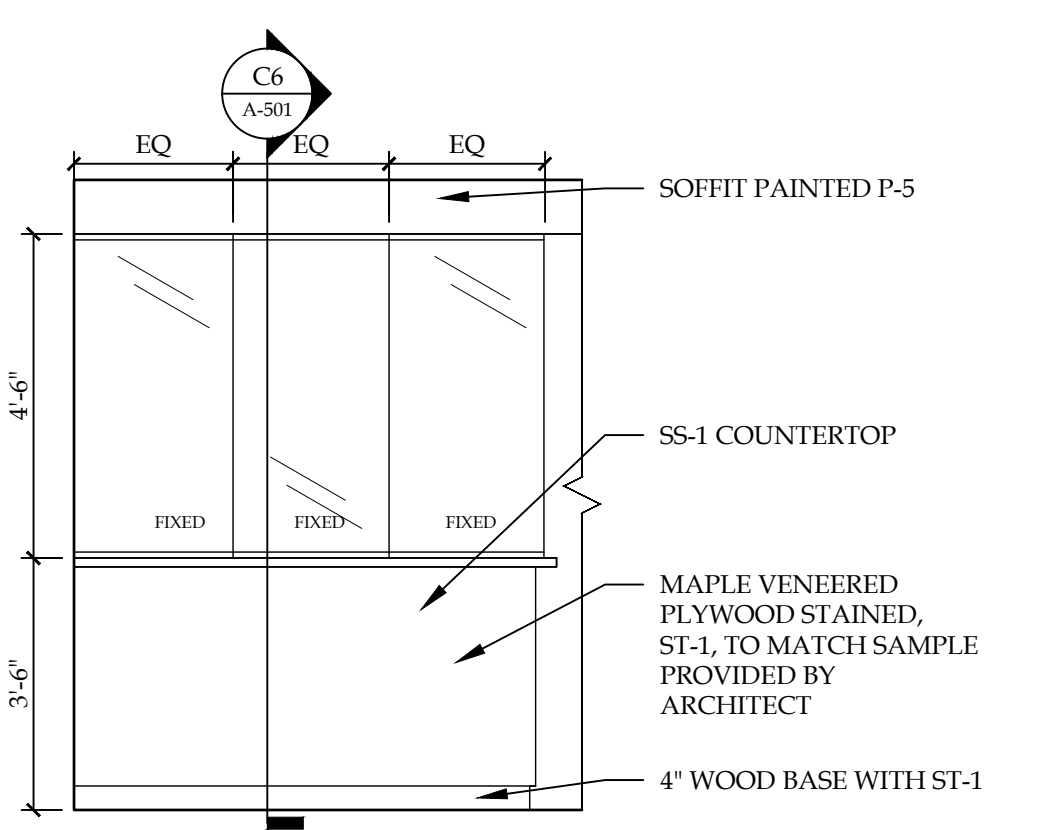
C1 ELEVATION - RECEPTION #102
 SCALE: 3/8"=1'-0"



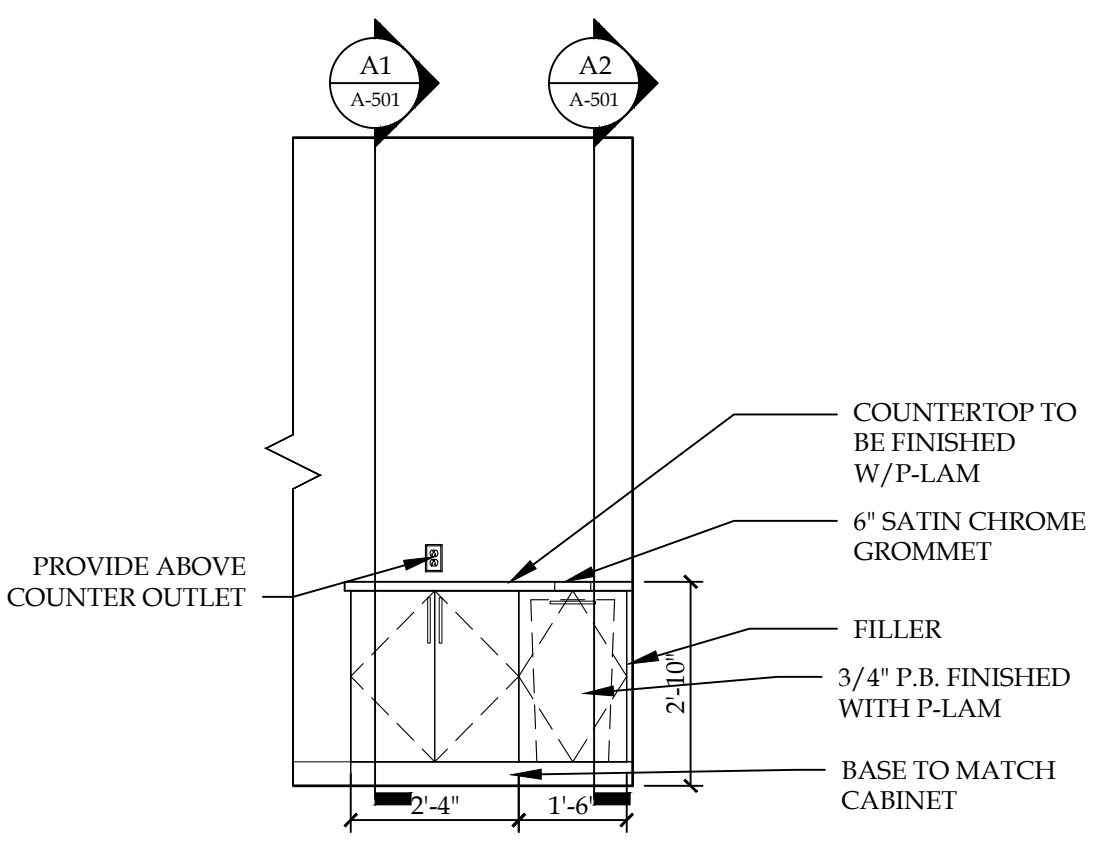
A1 ENLARGED PLAN - WAITING #105
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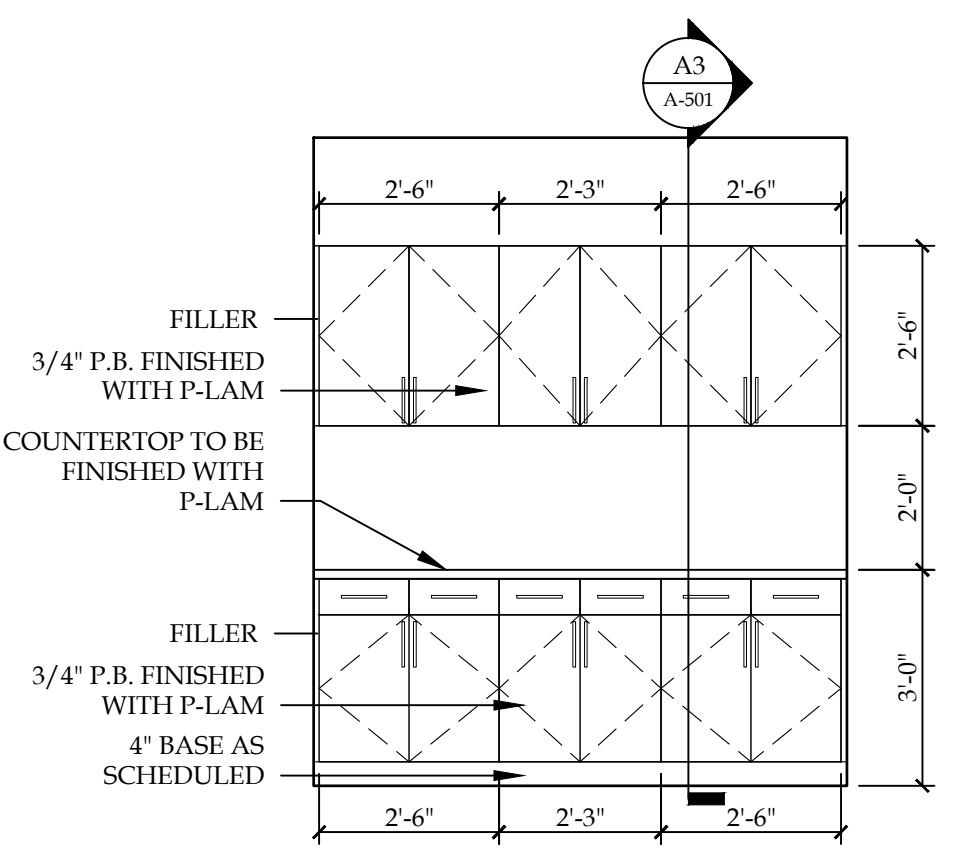
B3 ELEVATION - RECEPTION #102
 SCALE: 3/8"=1'-0"



B4 ELEVATION - RECEPTION #102
 SCALE: 3/8"=1'-0"



A3 ELEVATION - COFFEE #104
 SCALE: 3/8"=1'-0"



A4 ELEVATION - SUPPLIES #103
 SCALE: 3/8"=1'-0"

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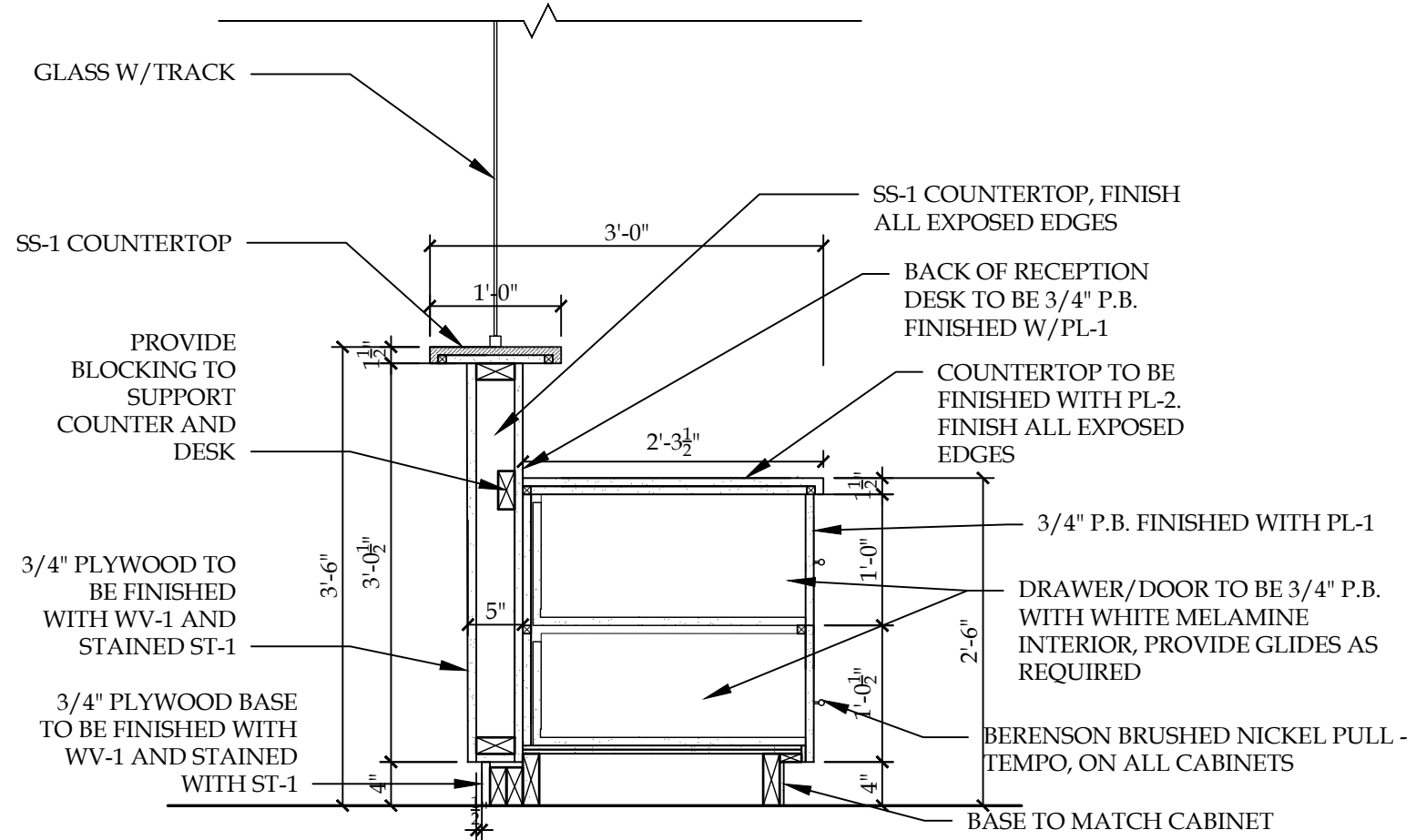
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TITLE:
MILLWORK SECTIONS

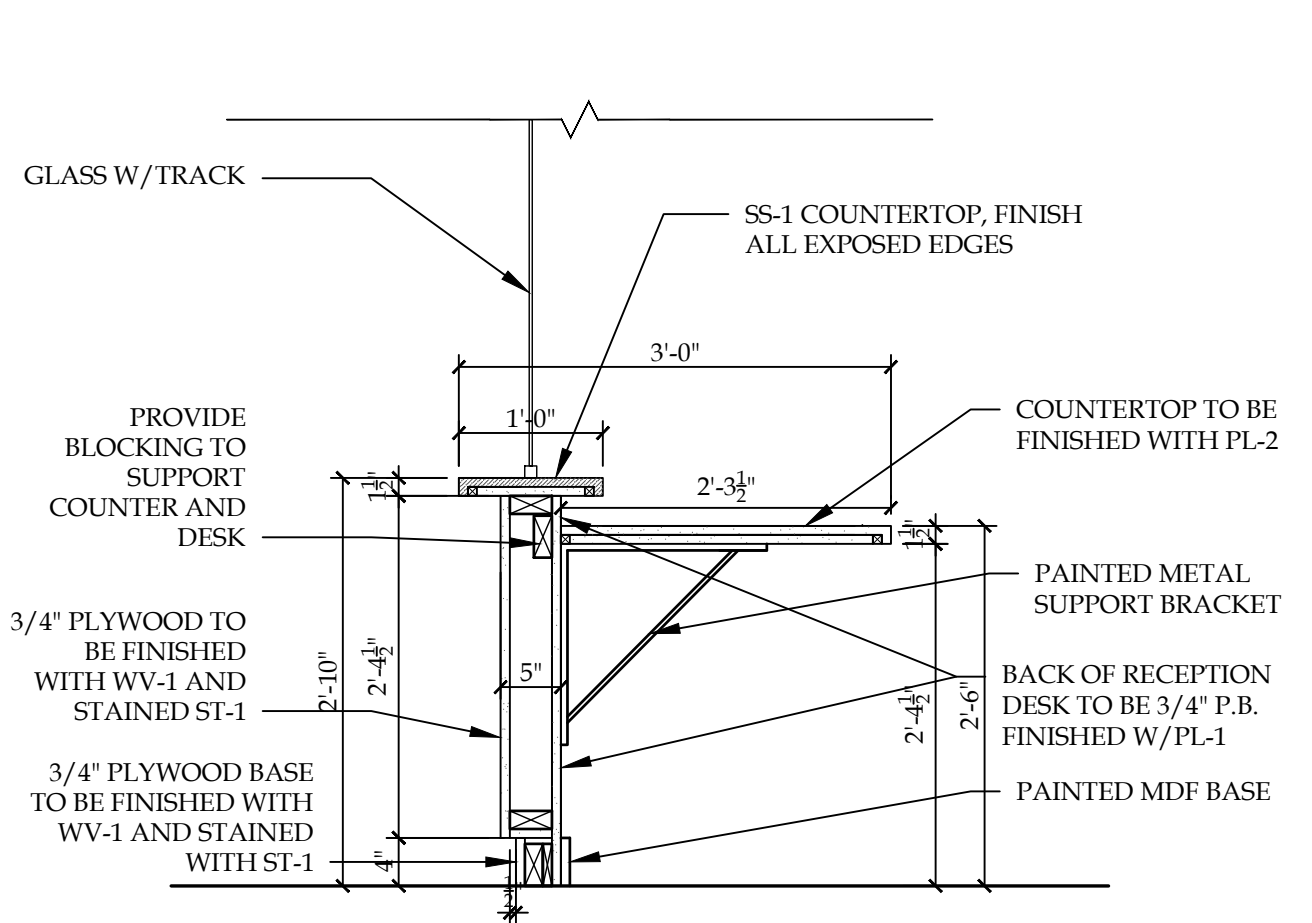


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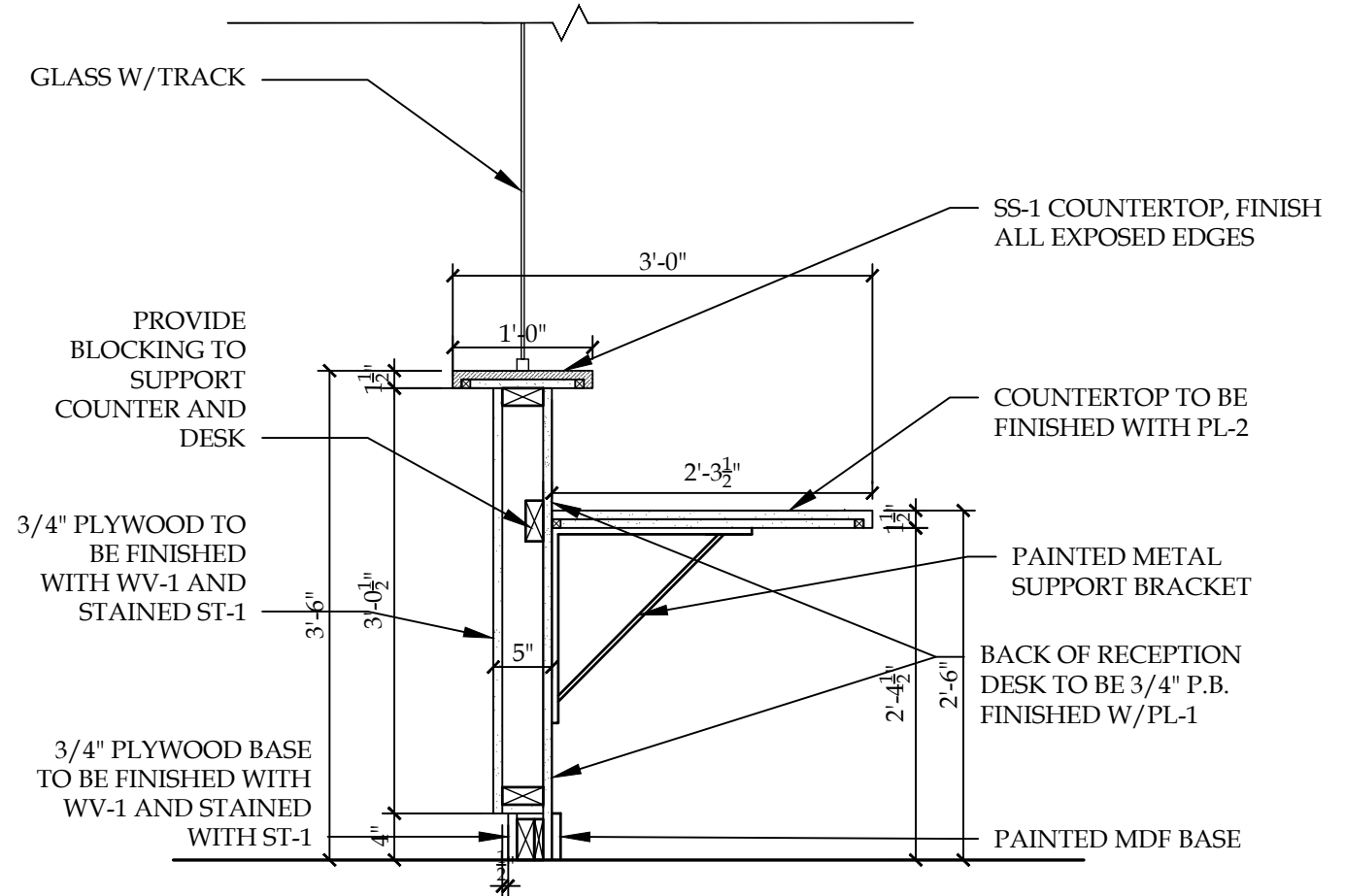
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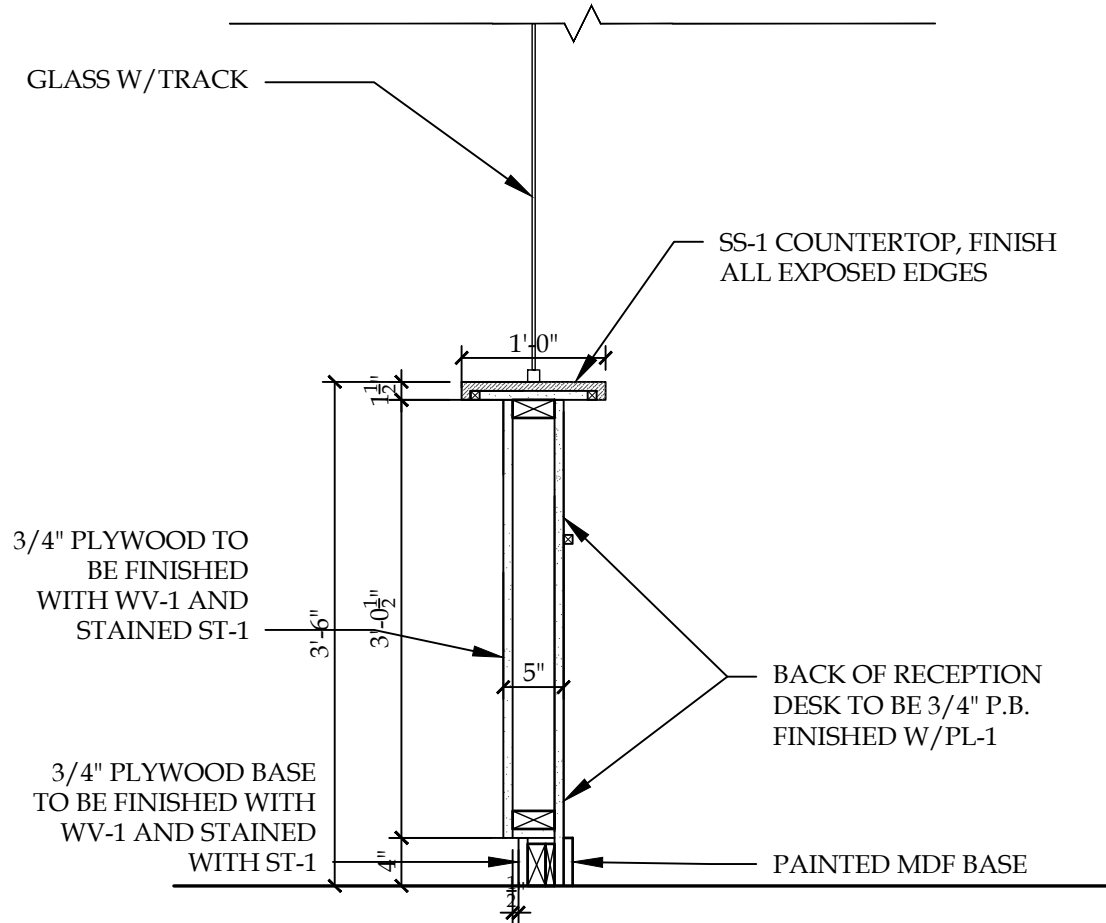
C1 SECTION - RECEPTION
 SCALE: 3/4"=1'-0"



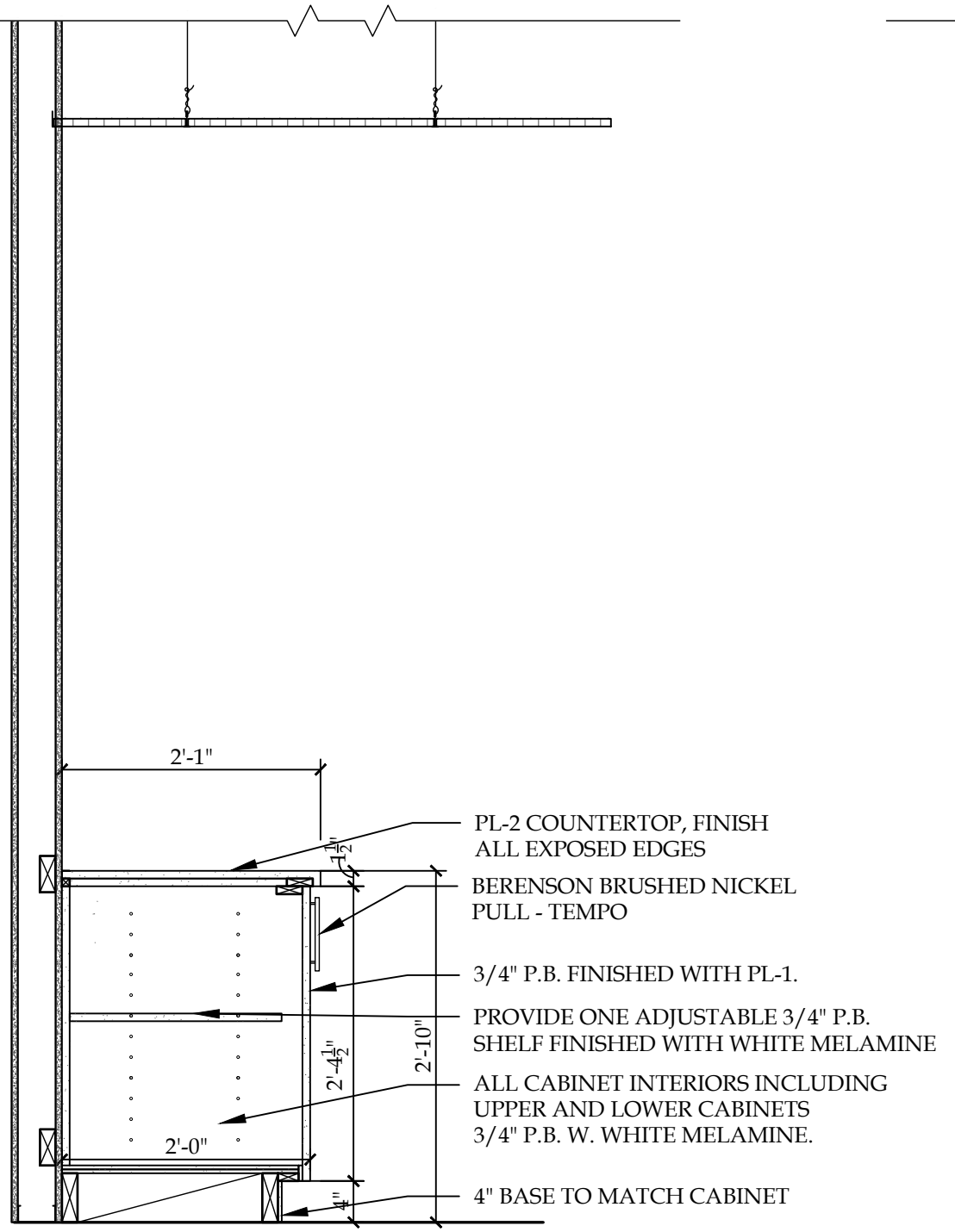
C3 SECTION - RECEPTION
 SCALE: 3/4"=1'-0"



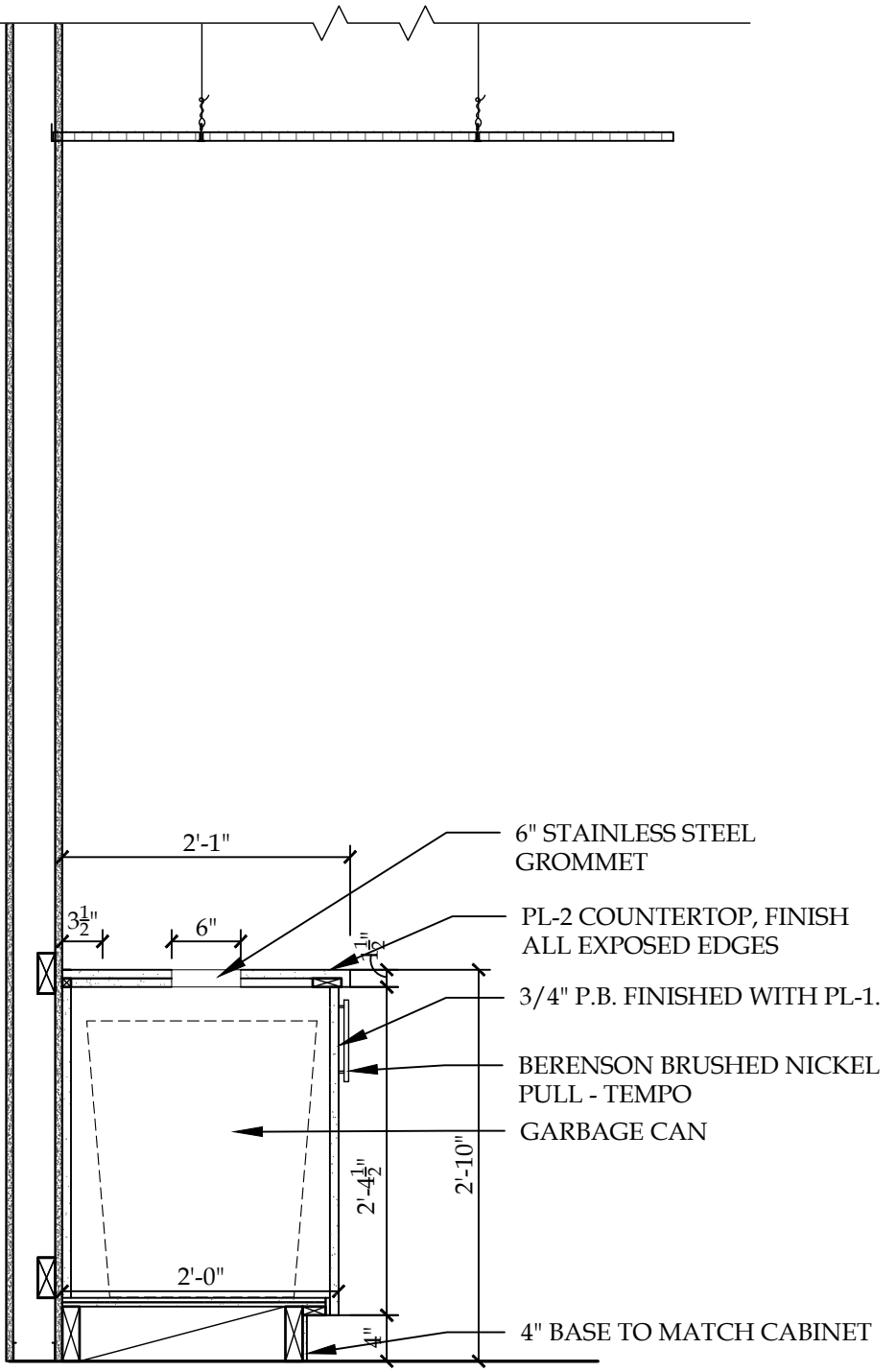
C4 SECTION - RECEPTION
 SCALE: 3/4"=1'-0"



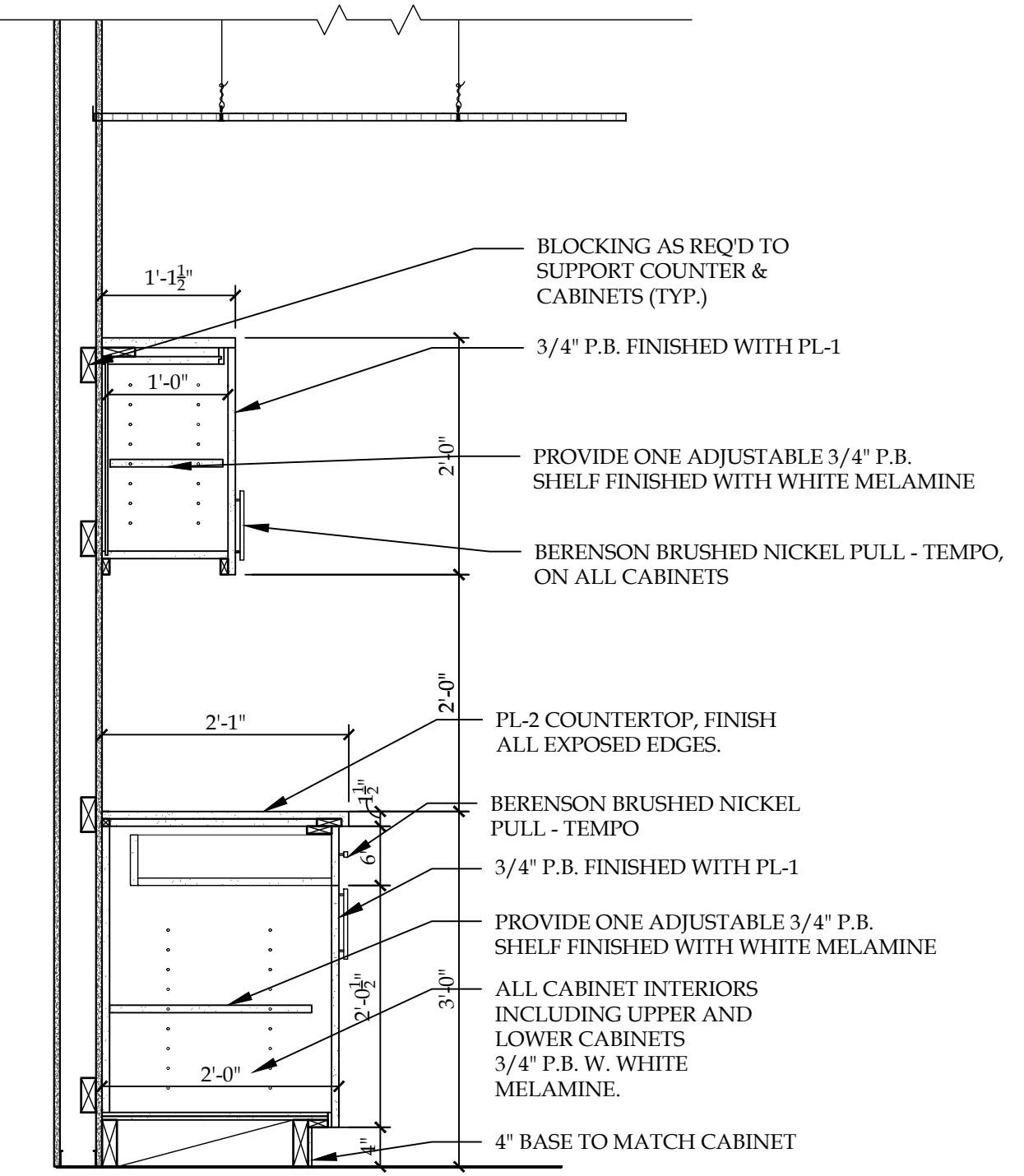
C6 SECTION - RECEPTION
 SCALE: 3/4"=1'-0"



A1 SECTION - COFFEE
 SCALE: 3/4"=1'-0"



A2 SECTION - COFFEE
 SCALE: 3/4"=1'-0"



A3 SECTION - SUPPLIES
 SCALE: 3/4"=1'-0"

| DOOR AND FRAME SCHEDULE | | | | | | | | | | | | | | |
|-------------------------|-----------|-------|-------|--------|------|-------|---------|------|------|-------------------|-----------------|-------|--------|------|
| MARK | LOCATION | DOOR | | | | FRAME | | | | FIRE RATING LABEL | HARDWARE SET NO | NOTES | | |
| | | SIZE | | | Type | MATL | GLAZING | TYPE | MATL | | | | DETAIL | |
| | | WD | HGT | THK | | | | | | | | | HEAD | JAMB |
| 101 | SUPPLIES | 3'-0" | 7'-0" | 1 3/4" | F | SCWD | -- | A | HM | H1 | J1 | -- | 1 | |
| 102 | RECEPTION | 3'-0" | 7'-0" | 1 3/4" | F | SCWD | -- | A | HM | H2 | J2 | -- | 2 | |

- NOTE:**
- VERIFY ALL ROUGH OPENING DIMENSIONS AS REQUIRED TO MATCH DOOR SIZES SHOWN.
 - ALL DOOR HARDWARE TO BE ADA COMPLIANT LEVER STYLE LOCKS AND LATCHES.
 - PROVIDE SOLID WOOD BLOCKING AT ALL WALL STOPS.
 - SCWD = SOLID CORE WOOD DOOR
HM = HOLLOW METAL
ALUM = ALUMINUM
T = 1/4" TEMPERED GLAZING
 - NEW DOORS ARE TO BE FINISHED TO MATCH EXISTING.
- HARDWARE SCHEDULE**
- * PROVIDE SOLID WOOD BLOCKING AT ALL WALL STOPS
* ALL HARDWARE TO BE ADA COMPLIANT
- HDW-1**
EACH DOOR TO HAVE:
3- HINGES
1- STOREROOM LOCKSET
1- ELECTRIC STRIKE
1- WALL STOP
1- CLOSER
3- DOOR SILENCERS
1- KEY FOB SYSTEM COORDINATE
W/ TENANT SECURITY VENDOR
- HDW-2**
EACH DOOR TO HAVE:
1- HEAVY DUTY POCKET DOOR KIT
1- KEYED LOCKSET
1- PULL SET

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Endeavor Health Services

463 William Street
Buffalo, NY

ISSUE:
05-22-18: ISSUED FOR BID/PERMIT

SA PROJECT TEAM: PRINCIPAL P. Silvestri
PROJ. ARCH. _____ DRAFTER _____
JOB CAPT. _____ INTERIORS _____

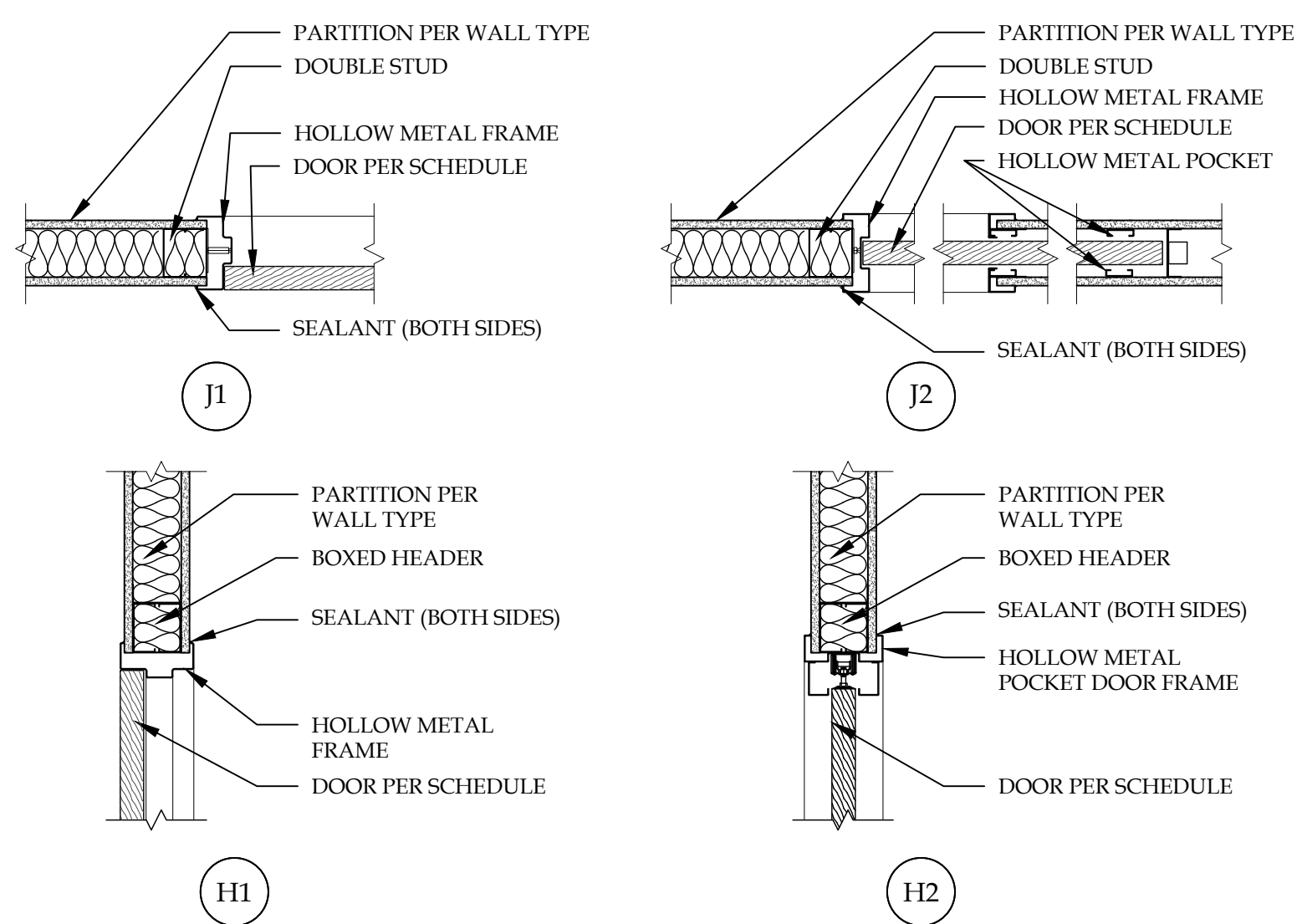
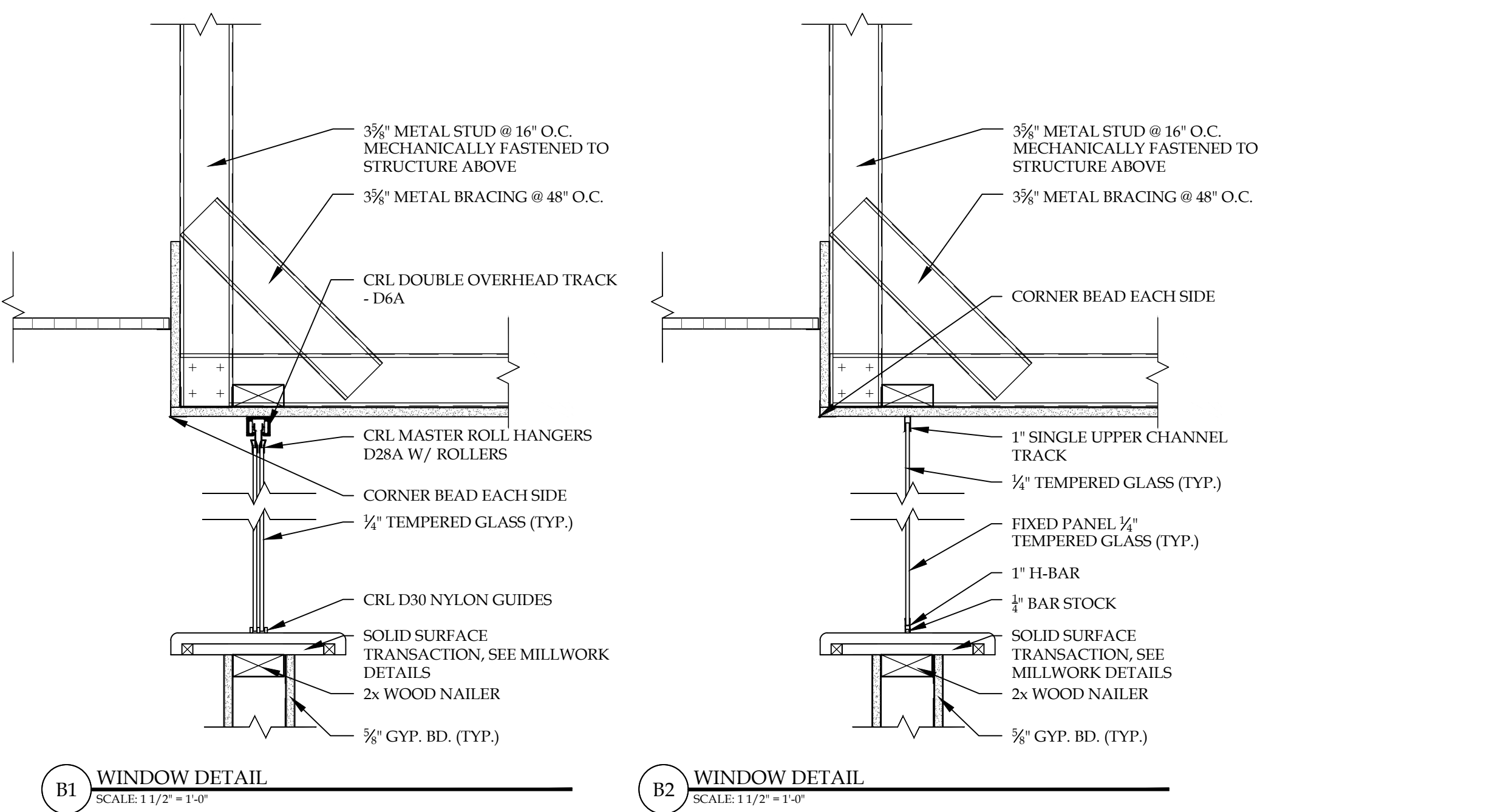
SEAL:

TITLE:
DOOR & WINDOW SCHEDULE, TYPES & DETAILS

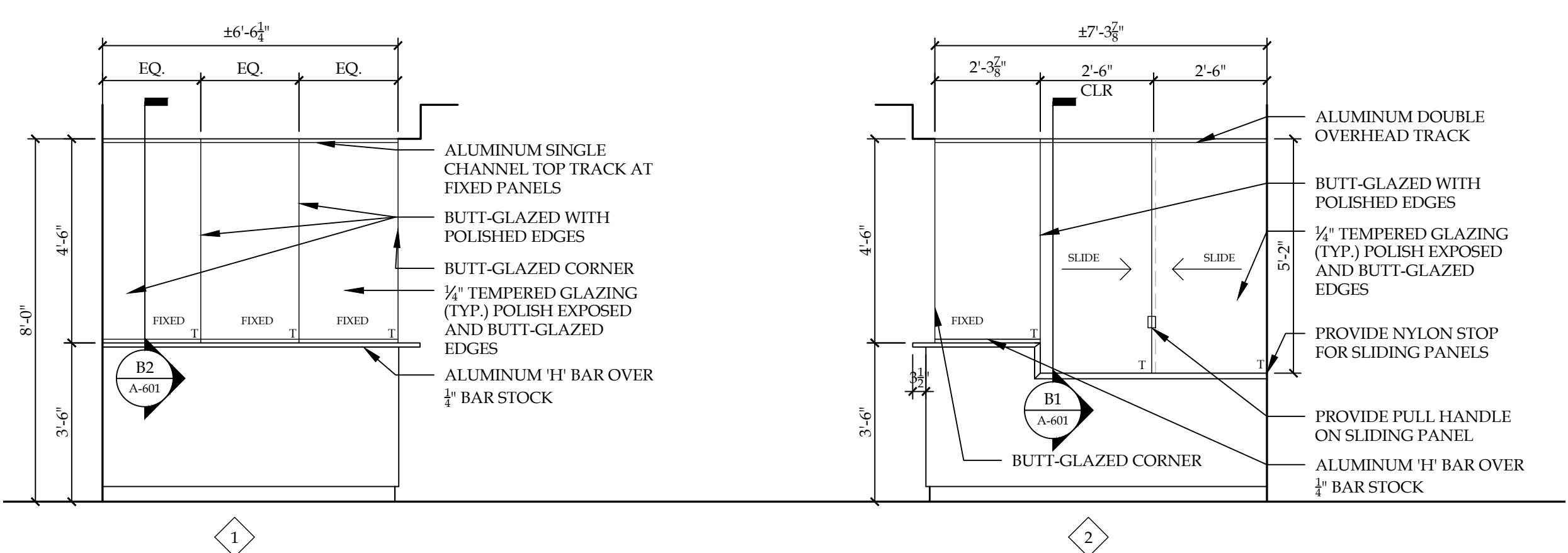


SA JOB #: 17158.01
DATE: 05-22-18

DRAWING #: **A-601**

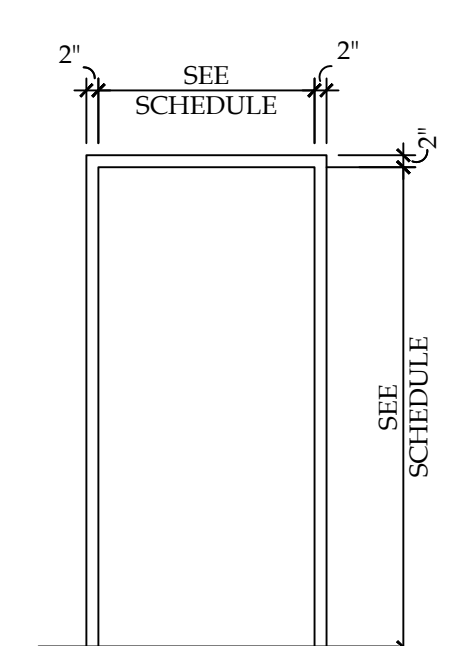


B4 DOOR HEAD & JAMB DETAILS
SCALE: 1" = 1'-0"



F FLUSH DOOR

A4 DOOR TYPES
SCALE: 3/8" = 1'-0"



A5 DOOR TYPES
SCALE: 3/8" = 1'-0"

E
D
C
B
A

| FINISH SELECTIONS | |
|---|-------------------------------|
| CARPET (CPT-X): | |
| (CPT-1) | INTERFACE |
| MANUFACTURER: | EVENSONG |
| COLLECTION: | SNOW MOON |
| STYLE: | NOON MOON |
| COLOR: | VERTICAL ASHLAR |
| INSTALLATION: | |
| (CPT-2) | INTERFACE |
| MANUFACTURER: | STEP REPEAT |
| COLLECTION: | SR699 |
| STYLE: | GRANITE |
| COLOR: | VESTIBULE |
| LOCATION: | |
| LUXURY VINYL TILE (LVT-X): | |
| (LVT-1) | INTERFACE |
| MANUFACTURER: | STUDIO SET |
| COLLECTION: | MUSHROOM |
| STYLE: | 12" X 12" |
| SIZE: | |
| TILE (T-X): | |
| (T-1) (TYPICAL) | OLYMPIA TILE |
| MANUFACTURER: | DOBKIN TILE |
| DISTRIBUTOR: | OIKOS |
| STYLE: | GRIGIO |
| COLOR: | 12"X24" |
| SIZE: | 1/3 BRICK LAY |
| INSTALLATION: | FLEXIBLE |
| GROUT: | |
| TILE BASE (TB-X): | |
| (TB-1) (TYPICAL) | OLYMPIA TILE |
| MANUFACTURER: | DOBKIN TILE |
| DISTRIBUTOR: | OIKOS |
| STYLE: | GRIGIO |
| COLOR: | 4" |
| SIZE: | TO BE USED WITH T-1 |
| NOTE: | |
| RUBBER BASE (RB-X): | |
| (RB-1) | JOHNSONITE |
| MANUFACTURER: | PEBBLE 32 |
| COLOR: | OFFICE AREAS |
| LOCATION: | |
| MEDIUM DENSITY FIBREBOARD (MDF-X): | |
| (MDF-1) (TYPICAL) | TBD |
| PROFILE: | 4" |
| HEIGHT: | P-3 |
| COLOR: | |
| PAINT (P-X): | |
| (P-1) (TYPICAL) | SHERWIN WILLIAMS |
| MANUFACTURER: | MINIFUL GRAY SW7016 |
| NOTE: | EGGSHELL |
| FINISH: | |
| (P-2) (ACCENT) | SHERWIN WILLIAMS |
| MANUFACTURER: | DOVETAIL SW7018 |
| COLOR: | EGGSHELL |
| FINISH: | |
| (P-3) (ACCENT) | SHERWIN WILLIAMS |
| MANUFACTURER: | GULFSTREAM SW6768 |
| COLOR: | EGGSHELL |
| FINISH: | |
| (P-4) (TRIM) | SHERWIN WILLIAMS |
| MANUFACTURER: | GAUNTLET GRAY SW7019 |
| COLOR: | SEMI-GLOSS |
| FINISH: | |
| (P-5) (CHECK IN/CHECK OUT SOFFT) | SHERWIN WILLIAMS |
| MANUFACTURER: | CRUSHED ICE SW7647 |
| COLOR: | FLAT |
| FINISH: | |
| STACKED STONE (STS-X): | |
| (STS-1) | CORONADO STONE |
| MANUFACTURER: | PROLEDGE |
| STYLE: | HURON |
| COLOR: | RECEPTION |
| LOCATION: | |
| WOOD VENEER (WV-X): | |
| (WV-1) | MAPLE |
| SPECIES: | ST-1 |
| STAIN: | RECEPTION DESK |
| LOCATION: | |
| STAIN (ST-X): | |
| (ST-1) | TO MATCH SAMPLE PROV. BY ARCH |
| STAIN: | |
| PLASTIC LAMINATE (PL-X): | |
| (PL-1) (TYPICAL) | NEVAMAR |
| MANUFACTURER: | GIANT GRAY BAMBOO WX1150-PV |
| COLOR: | |
| (PL-2) (TYPICAL COUNTERTOP) | NEVAMAR |
| MANUFACTURER: | EISKAFFE |
| COLOR: | |
| (PL-3) (RECEPTION WORK STATION) | NEVAMAR |
| MANUFACTURER: | KOPI SUSU LN6002T |
| COLOR: | |
| SOLID SURFACE (SS-X): | |
| (SS-1) | WILSONART |
| MANUFACTURER: | QUARTZ SELECT |
| COLLECTION: | PAPER LANTERN Q6001 |
| FINISH: | RECEPTION DESK TRANSACTION |
| LOCATION: | |
| DOORS (WD-X): | |
| (WD-1) | MASONITE |
| MANUFACTURER: | MAPLE |
| SPECIES: | STOUT |
| FINISH: | |

| FINISH SELECTIONS | |
|---|------------------------------|
| ACOUSTICAL CEILING TILE (ACT-X): | |
| (ACT-1) | USG |
| MANUFACTURER: | RADAR ILLUSION TWO/24 PANELS |
| STYLE: | 2742 |
| STYLE #: | 2' X 4' |
| SIZE: | SLIT |
| EDGE: | WHITE |
| COLOR: | USG DONN BRAND DX/DXL 15/16" |
| SUSPENSION SYS.: | |
| ROLLERSHADES (RS-X): | |
| (RS-1) | HUNTER DOUGLAS |
| MANUFACTURER: | E SCREEN 7510 |
| STYLE: | CHARCOAL/GRAY |
| COLOR: | |
| OPENNESS: | 10% |
| LOCATION: | ALL EXTERIOR WINDOWS |
| TRANSITION (TS-X): | |
| (TS-1) | SCHLUTER SYSTEMS |
| (GENERAL) | RENO-TK SIZE TO BE V.L.F. IN |
| MANUFACTURER: | ACCORDANCE WITH MATERIAL(S) |
| STYLE & SIZE: | THICKNESS |
| STYLE: | CLEAR SATIN ANODIZED |
| ALUMINUM | |
| LOCATION(S): | FLOORING MATERIAL CHANGES AS |
| | NECESSARY. |
| NOTE(S): | PLEASE SEE GENERAL NOTES RE: |
| | TRANSITIONS |
| MISCELLANEOUS (MISC-X): | |
| (MISC-1) (CHAIRRAIL) | MAPLE |
| SPECIES: | ST-1 |
| STAIN: | 4" |
| SIZE: | TO BE SELECTED BY ARCH. |
| PROFILE: | VERIFY W/TENANT |
| HEIGHT: | |
| (MISC-2) (3-FORM) | 3FORM |
| MANUFACTURER: | SPIDER |
| STYLE: | RECEPTION DESK FEATURES |
| LOCATION: | |

| ROOM FINISH SCHEDULE - FIRST FLOOR | | | | | | | | |
|------------------------------------|-----------|-------|-------------|---------------|----------------|-----------------------|----------------|---------|
| ROOM NUMBER | ROOM NAME | BASE | FLOOR | WALLS | MILLWORK | | CEILING HEIGHT | REMARKS |
| | | | | | CABINET/SHROUD | COUNTERTOP/BACKSPLASH | | |
| 101 | VESTIBULE | TB-1 | T-1/CPT-2 | P-1 | | | 10'-6" | 1 |
| 102 | RECEPTION | MDF-1 | LVT-1/CPT-1 | P-1/P-2/STS-1 | WV-1/PL-2 | SS-1/PL-3 | 10' | |
| 103 | SUPPLIES | RB-1 | CPT-1 | P-1 | PL-1 | PL-2 | 9'-0" | |
| 104 | COFFEE | MDF-1 | LVT-1/CPT-1 | P-1 | PL-1 | PL-2 | EXISTING | 2 |
| 105 | WAITING | MDF-1 | CPT-1 | P-1/P-3 | | | | |

| ROOM FINISH LEGEND | |
|---------------------------------|-----------------------|
| FLOORS | WALLS |
| CPT = CARPET | P = PAINT |
| T = TILE | WT = WALL TILE |
| LUXURY VINYL TILE = LVT | STS = STACKED STONE |
| BASE | MISCELLANEOUS |
| RB = RUBBER BASE | SS = SOLID SURFACE |
| TB = TILE BASE | PL = PLASTIC LAMINATE |
| RB = RUBBER BASE | TS = TRANSITION STRIP |
| MDF = MEDIUM DENSITY FIBREBOARD | RS = ROLLER SHADES |
| CEILING | ST = STAIN |
| ACT = ACOUSTIC CEILING TILE | WV = WOOD VENEER |
| GYP = GYPSUM BOARD | MISC = MISCELLANEOUS |
| DOORS | MATERIALS |
| WD = WOOD DOOR | P.B. = PARTICLE BOARD |
| | GYP. = GYPSUM BOARD |

| REMARKS |
|--|
| 1. REFER TO REFLECTED CEILING PLAN FOR EXACT DETAILS (MATERIALS, HEIGHTS, SIZES, ETC.) FOR CEILING LAYOUT. |
| 2. CONTACT ARCHITECT FOR CARPET PATTERN INSTALLATION GUIDE. |
| 3. ADD CHAIR RAIL WHERE SPECIFIED. CONFERENCE ROOM TO RECEIVE CHAIR RAIL ON ALL WALLS WITH THE EXCEPTION OF THE MILLWORK WALL. |
| 4. CHECK IN SIDE OF DESK TO RECEIVE WOOD BASE, NOT MDF. MDF TO BE USED BEHIND DESK AND THROUGHOUT WAITING #105. |
| 5. SOFFT AT CHECK IN/CHECK OUT TO BE PAINTED P-5. |
| 6. NO THRESHOLD NECESSARY AT CPT-1 INSET IN LVT-1. |

| GENERAL NOTES |
|---|
| <ul style="list-style-type: none"> ANY AND ALL FINISH SELECTIONS/ COLORS MUST BE SUBMITTED TO ARCHITECT FOR APPROVAL. ACCOUNTING FOR PROPER LEAD TIME. ANY FINISH THAT IS INSTALLED WITHOUT ARCHITECTS APPROVAL MAY BE REQUIRED TO BE REMOVED AND REPLACED BY THE GENERAL CONTRACTOR. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ORDER ALL MATERIALS AT THE APPROPRIATE TIME. ANY FEES INCURRED AS A RESULT OF FINISHES NOT BEING ORDERED ON TIME WILL BE THE RESPONSIBILITY OF THE CONTRACTOR. ANY DISCREPANCIES BETWEEN ARCHITECTURAL ELEVATION(S), PLAN(S), SCHEDULE(S) AND NOTES MUST BE BROUGHT TO ARCHITECTS ATTENTION. ARCHITECT MUST BE CONTACTED AND GIVE APPROVAL TO MOVE FORWARD WITH SPECIFIC DIRECTION PRIOR TO ANTICIPATED ACTION. ALL INTERIOR PRODUCTS TO MEET/ EXCEED FLAME SPREAD RATING PER CODE. ALL FLOOR FINISHES TO EXTEND BENEATH ALL MILLWORK. ALL ELECTRICAL PANEL COVERS AND/OR MECHANICAL EQUIPMENT AND/OR DUCTING TO BE PAINTED TO MATCH ADJOINING WALL. ANY CEILING HVAC SUPPLY/DIFFUSERS ETC. TO BE PAINTED TO MATCH SURROUNDING CEILING FINISH. ANY QUESTIONS OR CONCERN TO BE BROUGHT TO ARCHITECTS ATTENTION FOR FINAL DECISION PRIOR TO ORDER/INSTALL BY CONTRACTOR OR OTHER. |
| CEILING: |
| <ul style="list-style-type: none"> ALL GYPSUM BOARD CEILINGS TO BE PAINTED IN A FLAT WHITE FINISH UNLESS SPECIFIED. ALL EXPOSED MECHANICAL DUCT COVERS SHALL BE PAINTED TO MATCH THE SURROUNDING WALL/ CEILING COLOR. PRIME AS NECESSARY. |
| WALLS: |
| <ul style="list-style-type: none"> PROVIDE (1) COAT WALL PRIMER FOLLOWED BY (2) COATS WALL PAINT ON ALL INTERIOR WALL SURFACE UNLESS OTHERWISE NOTED IN SPECIFICATIONS. SEE SPEC FOR DETAILS. WHERE DARK PAINT COLORS ARE APPLIED, USE DEEP GRAY BASE PRIMER TO PREVENT BURNISHING. CHAIR RAIL HEIGHT TO BE DECIDED BY OWNER. STAIN ST-1 WHERE SPECIFIED ON A-603. |
| FLOORS: |
| <ul style="list-style-type: none"> NO CHANGES OR SUBSTITUTIONS WILL BE MADE TO THE FOLLOWING FINISHES UNLESS DIRECTED BY THE OWNER OR ARCHITECT. CONTRACTOR TO PROVIDE (TS-1) AT ALL FLOORING MATERIAL CHANGES NEEDING THRESHOLDS. NECESSARY SIZES TO BE DETERMINED BY CONTRACTOR AND V.L.F. BASED ON MATERIAL THICKNESS. NO THRESHOLD NECESSARY AT CPT-1 INSET IN LVT-1. |
| MILLWORK: |
| <ul style="list-style-type: none"> PROVIDE CLEAR BEAD OF SILICONE OR CLEAR CALK TO SEAL BETWEEN MILLWORK PIECES (IE: COUNTER TOP AND BACKSPLASH) AND MILLWORK AND WALL. (TYPICAL). ALL COLOR SELECTION OF PLASTIC LAMINATE SUPPORTS TO MATCH ADJACENT WALL. |
| BASE: |
| <ul style="list-style-type: none"> USE MDF-1 BASE AT WAITING ROOM. PLEASE SUBMIT PROFILE OPTIONS TO ARCHITECT FOR APPROVAL. |
| WINDOWS: |
| <ul style="list-style-type: none"> ALL GLAZING FACING EXTERIOR TO RECEIVE RS-1. ALL WINDOW SILLS TO BE PL-2. |
| DOORS: |
| <ul style="list-style-type: none"> ALL HOLLOW METAL DOOR FRAMES TO BE PAINTED WITH P-4. |
| OUTLETS: |
| <ul style="list-style-type: none"> ALL OUTLET SWITCHES AND COVERS TO BE WHITE. |
| SIGNAGE: |
| <ul style="list-style-type: none"> SIGNAGE LOCATIONS WILL NEED TO BE PROVIDED AND INSTALLED BY CONTRACTOR. TO BE SELECTED AND APPROVED BY ARCHITECT AND CLIENT PRIOR TO MANUFACTURER/PURCHASE TO BE PROVIDED BY TAKEFORM. |

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PROJ. ARCH. _____ DRAFTER _____
JOB CAPT. _____ INTERIORS _____

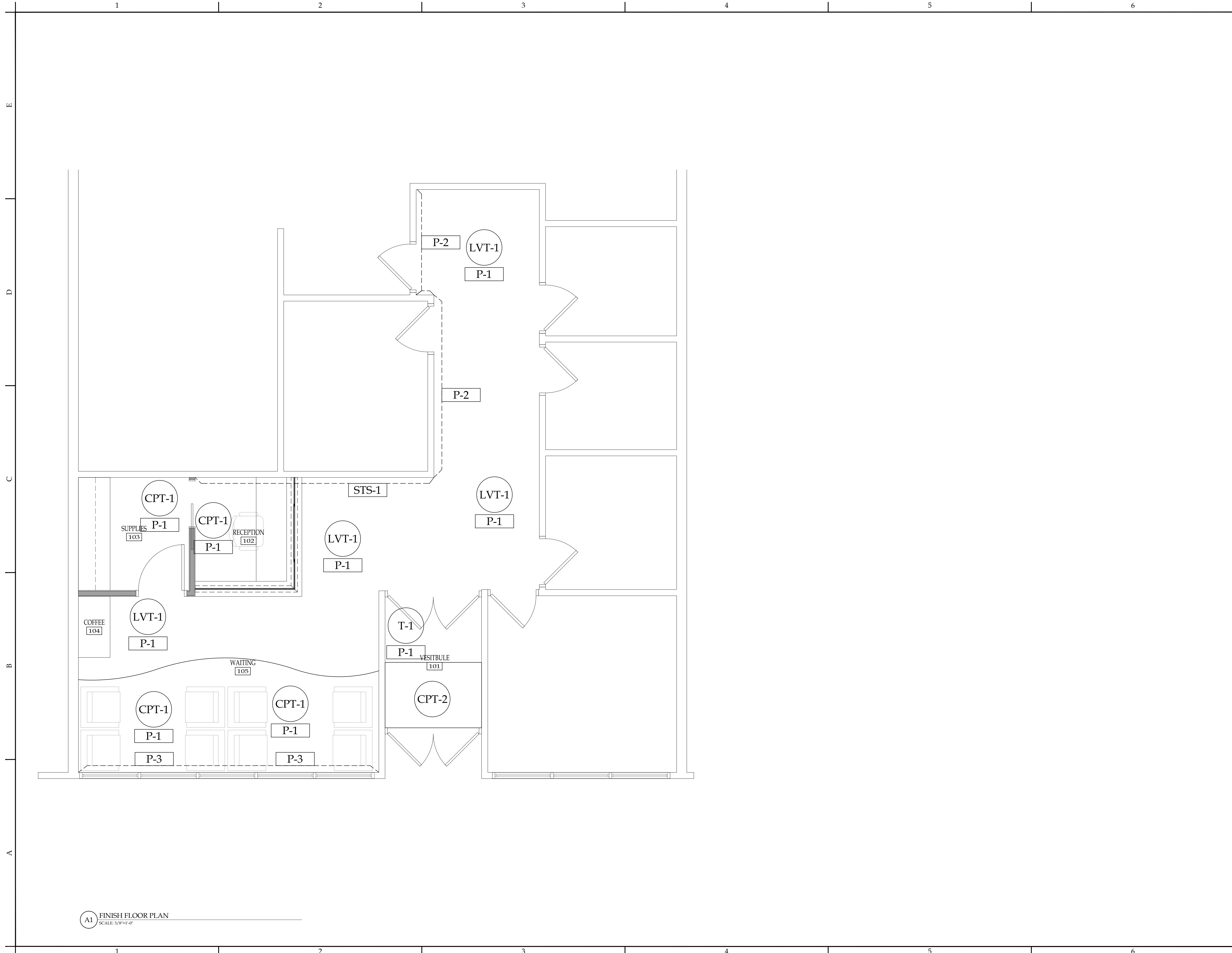
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TITLE:
ROOM FINISH SCHEDULE & GENERAL NOTES



SA JOB #: 17158.01
DATE: 05-22-18

DRAWING #: A-602



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SEAL:

TITLE:
FINISH FLOOR PLAN



SA JOB #: **17158.01** DATE: **05-22-18**

DRAWING #: **A-603**

A1 FINISH FLOOR PLAN
 SCALE: 3/8"=1'-0"

HVAC GENERAL NOTES

ARCHITECTURAL

- DO NOT SCALE DRAWINGS. REFER TO ARCHITECTURAL DRAWINGS AND REFLECTED CEILING PLANS FOR EXACT LOCATION OF DOORS, WINDOWS, CEILING DIFFUSERS, ETC.
- LIGHT FIXTURE LOCATIONS TAKE PRECEDENCE OVER DIFFUSER AND GRILLE LOCATIONS. LOCATE DIFFUSERS AND GRILLES TO ACCOMMODATE LIGHTING LAYOUT.
- REFER TO ARCHITECTURAL FLOOR PLANS FOR LOCATION AND RATING OF ALL FIRE WALLS.

GENERAL

- THE HVAC CONTRACTOR SHALL VISIT THE JOB SITE AND BE FAMILIAR WITH ALL PROJECT CONDITIONS PRIOR TO FABRICATING DUCTWORK, EQUIPMENT, ETC. NO ALLOWANCES WILL BE MADE FOR CONTRACTOR'S UNFAMILIARITY WITH PROJECT CONDITIONS.
- DUCTWORK ROUTING SHOWN IS SCHEMATIC. HVAC CONTRACTOR SHALL PROVIDE ANY ADDITIONAL OFFSETS AND FITTINGS, INCLUDING DIVIDED DUCTS, REQUIRED FOR PROPER INSTALLATION AND TO MAINTAIN CLEARANCES AS ENCOUNTERED IN THE FIELD.
- FURNISH ALL LABOR, MATERIAL AND EQUIPMENT REQUIRED FOR THE COMPLETE INSTALLATION AND OPERATION OF ALL SYSTEMS IN THIS SECTION OF WORK IN ACCORDANCE WITH ALL APPLICABLE CODES, ASHRAE, SMACNA, NFPA, EPA, ETC.
- PRIOR TO INSTALLATION OF ASSOCIATED WORK; INSTALLER SHALL MEET AT PROJECT SITE WITH GENERAL CONTRACTOR, INSTALLER OF EACH COMPONENT OF ASSOCIATED WORK, INSPECTION AND TESTING AGENCY REPRESENTATIVES (IF ANY), INSTALLERS OF OTHER WORK REQUIRING COORDINATION WITH WORK OF THIS SECTION AND ARCHITECT / OWNER FOR PURPOSE OF COORDINATING LOCATIONS OF PROPOSED SYSTEMS, REVIEWING MATERIAL SELECTIONS, AND PROCEDURES TO BE FOLLOWED IN PERFORMING THE WORK IN COMPLIANCE WITH REQUIREMENTS SPECIFIED.
- COORDINATE SCHEDULE FOR HOOK-UPS TO EXISTING SYSTEMS AND EQUIPMENT REMOVAL OR RELOCATIONS WITH THE OWNER AND PERFORM THIS WORK AT SUCH TIMES TO ENSURE THAT PERIODS OF SHUTDOWN WILL BE ACCEPTABLE TO THE OWNER.
- COORDINATE INSTALLATION AND LOCATIONS OF NEW DUCTWORK AND PIPING WITH BUILDING STRUCTURE, PLUMBING PIPING, ELECTRICAL CONDUIT, LIGHTING, ETC. PRIOR TO PURCHASING OR INSTALLING EQUIPMENT AND MATERIALS.
- VERIFY EXACT SIZES OF EXISTING DUCTWORK AND / OR PIPING IN FIELD PRIOR TO MAKING NEW CONNECTION.
- VERIFY EXACT LOCATION OF CONNECTION POINTS (NEW TO EXISTING) IN FIELD PRIOR TO CONSTRUCTION.
- RELOCATE EXISTING DUCTWORK AND / OR PIPING IN EXISTING CEILING SPACES TO ACCOMMODATE ALL RENOVATIONS AND ADDITIONS.
- ALL PIPING AND DUCTS EXTENDING THROUGH WALLS SHALL BE SEALED WITH AN APPROVED FIRESTOPPING MATERIAL.

EQUIPMENT

- FLEXIBLE CONNECTORS SHALL BE INSTALLED ON SUPPLY AIR DUCTS AT ALL EQUIPMENT CONNECTIONS.

DUCTWORK

- RUN ALL DUCTWORK AND PIPING AS TIGHT TO BOTTOM OF STEEL AS POSSIBLE.
- DUCTWORK SHALL NOT BE SUPPORTED FROM BRIDGING, CONDUIT, PIPING, ETC. OF ANY KIND. DO NOT USE FASTENERS THAT PENETRATE ROOF DECKS.
- ASPECT RATIO SHALL NOT EXCEED 3:1.
- ALL DUCTWORK INSTALLATION SHALL RUN CONTINUOUSLY THROUGH PARTITIONS.
- LOCATE ALL DUCT BALANCING DAMPERS, CONTROL DAMPERS AND FIRE DAMPERS ABOVE ACCESSIBLE CEILING OR PROVIDE ACCESS DOORS.
- PROVIDE VOLUME CONTROL DAMPERS WITH QUADRANT AND LOCK AND STANDOFF COLLAR AT ALL BRANCH DUCTS TO DIFFUSERS. INSTALL AT A MINIMUM OF TWO DUCT WIDTHS FROM BRANCH TAKEOFF.
- DUCTWORK SIZES INDICATED ON DRAWINGS ARE INSIDE, FREE AND CLEAR DIMENSIONS. INCREASE DUCT OUTSIDE DIMENSION SIZE BY TWO (2) TIME THE THICKNESS OF THE INSULATION.
- ALL DUCTWORK SHALL BE CONSTRUCTED AND INSTALLED IN ACCORDANCE WITH SMACNA STANDARDS.
- ALL DUCTWORK SHALL BE GALVANIZED SHEET METAL IN AREAS WITH FINISHED CEILING.
- WHERE RECTANGULAR DUCTWORK IS INDICATED, AND AT INSTALLERS OPTION, SPIRAL AND ROUND DUCTWORK MAY BE SUBSTITUTED FOR RECTANGULAR DUCTWORK PROVIDED THEY ARE EQUIVALENT TO THE RECTANGULAR DIMENSIONS INDICATED ON THE DRAWINGS (i.e. 8x4 = 8" x 4", 10x6 = 10" x 6").
- ALL CONCEALED SUPPLY AIR DUCTWORK SHALL BE EXTERNALLY INSULATED WITH MINIMUM 1-1/2" THICK, 0.75 LB DENSITY, FOIL-BACK INSULATION WITH VAPOR BARRIER AND A MINIMUM R-VALUE OF R-6, FLAME SPREAD RATING OF 25 OR LESS, AND SMOKE-DEVELOPED RATING OF 50 OR LESS.
- ALL RETURN AND TRANSFER AIR DUCTWORK SHALL BE INTERNALLY LINED.
- ALL DUCT LINERS SHALL BE MINIMUM 1-1/2" THICK, COATED TO PREVENT ELEMENTS FROM ENTERING THE AIRSTREAM (COATING SHALL MEET ASHRAE 62 - LATEST EDITION), AND ENVIRONMENTALLY FRIENDLY WITH A MINIMUM R-VALUE OF R-6. LINER SHALL BE BLACK IN COLOR SO IT IS NOT NOTICEABLE FROM THE INSIDE OF REGISTERS AND GRILLES.
- ALL SQUARE ELBOWS SHALL HAVE AIRFOIL TYPE TURNING VANES.
- MAXIMUM FLEXIBLE DUCT LENGTH SHALL BE 5'-0". ALL FLEXIBLE DUCT SHALL CONFORM TO THE REQUIREMENTS OF U.L. 181 FOR CLASS 1 FLEXIBLE AIR DUCTS, WITH A MINIMUM R-VALUE OF R-6. SUPPORT FLEXIBLE DUCT TO ELIMINATE KINKING AND SAGGING. (FLEXIBLE DUCT NOT PERMITTED IN EXPOSED AREAS).

CONTROLS

- ALL CONTROL WIRING AND CONDUIT SHALL COMPLY WITH THE NATIONAL ELECTRIC CODE (NEC) AND NFPA 70.
- ALL CONTROL WIRING AND POWER CONDUCTOR INSULATION SHALL BE PLENUM RATED.
- ALL EXPOSED CONTROL WIRING SHALL BE INSTALLED IN 3/4" EMT CONDUIT.

HVAC CONTROL SYMBOLS

| SYMBOL | DESCRIPTION |
|--------|---|
| | PROGRAMMABLE, 7-DAY, 24-HOUR THERMOSTAT |
| | CONTROL WIRING (PLENUM RATED) |

HVAC DUCTWORK SYMBOLS

| SYMBOL | DESCRIPTION |
|--------|--|
| | EXISTING DUCTWORK TO BE REMOVED |
| | EXISTING DUCTWORK TO REMAIN |
| | FLEXIBLE DUCT |
| | INTERNALLY LINED DUCTWORK |
| | MANUAL VOLUME DAMPERS |
| | POINT OF CONNECTION (NEW TO EXISTING) |
| | ROUND |
| | SUPPLY AIR DEVICE - FIRST NO. TYPE, SECOND NO. NECK SIZE, THIRD NO. CFM (REFER TO SCHEDULE FOR SIZE) |
| | RETURN AIR DEVICE - TYPE (REFER TO SCHEDULE FOR SIZE) |

HVAC ABBREVIATIONS

| | |
|------|--|
| CFM | CUBIC FEET PER MINUTE |
| DDC | DIRECT DIGITAL CONTROL |
| (E) | EXISTING |
| HVAC | HEATING, VENTILATING, AIR CONDITIONING |
| OA | OUTSIDE AIR |
| OED | OPEN-ENDED DUCTWORK |
| VD | VOLUME DAMPER |
| W/ | WITH |

AIR DISTRIBUTION DEVICE SCHEDULE

| SYMBOL | STYLE & DEVICE SIZE | MOUNTING | DESCRIPTION | MANUFACTURER | MODEL NO. |
|--------|------------------------|----------|--|--------------|-----------|
| SUPPLY | | | | | |
| | SD-1 24x24 or 18x18 | LAY-IN | LOUVERED FACE, STEEL CONSTRUCTION, OPPOSED BLADE VOLUME DAMPERS, PROVIDE 18"x18" BACKPAN (NECK SIZE AS SHOWN FOR FULL PANEL LAY-IN APPLICATION) WITH FULL FACE DIFFUSER, 4-WAY THROW, WHITE FINISH | TITUS | TDC |
| RETURN | | | | | |
| | RR-1 24x24 | LAY-IN | PERFORATED FACE, STEEL CONSTRUCTION, OPPOSED BLADE VOLUME DAMPERS, PROVIDE 22"x22" BACKPAN FOR FULL PANEL LAY-IN APPLICATION, WHITE FINISH | TITUS | PAR |

AIR DISTRIBUTION DEVICE NOTES:

- ALL DEVICES SHALL BE FROM A SINGLE MANUFACTURER.
- ALL DEVICES SHALL HAVE MATCHING MATTE, WHITE FINISH (UNLESS OTHERWISE NOTED IN DESCRIPTION ABOVE).
- MAXIMUM NC OF 20.
- ACCESSORIES:
 - OPERATING KEYS: TOOLS DESIGNED TO FIT THROUGH DIFFUSER FACE AND OPERATE VOLUME CONTROL DEVICE AND / OR PATTERN ADJUSTMENT
- ACCEPTABLE MANUFACTURER'S - TITUS AND PRICE.

ELECTRIC WALL HEATER SCHEDULE

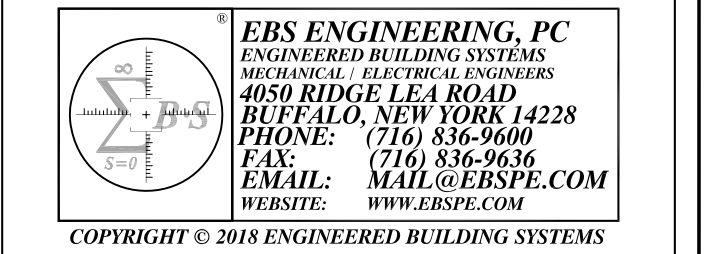
| MARK | AREA SERVED | MANUFACTURER | MODEL NO. | SERIES | TYPE | MBH | WATTS | AMPS | VOLTS / PH |
|------|----------------|--------------|-----------|-------------------------------------|------------------------|------|-------|------|------------|
| EWH | SECURITY-VEST. | MARKEL | F345JT | 3450 SERIES (HEAVY DUTY FAN FORCED) | SEMI-RECESSED MOUNTING | 10.2 | 3,000 | 14.4 | 208/1/60 |

ELECTRIC WALL HEATER NOTES:

- ELECTRIC WALL HEATERS SHALL CONTAIN AN INTEGRAL, TAMPERPROOF THERMOSTAT.
- ELECTRIC WALL HEATERS SHALL BE EQUIPPED WITH BUILT-IN THERMAL OVERLOAD PROTECTION.
- FURNISHED AND INSTALLED BY DIVISION 23.
 - WIRING BY DIVISION 26.
- FURNISH 2" SEMI-RECESSED MOUNTING FRAME #3450EX16 FOR EACH SEMI-RECESSED MOUNTED ELECTRIC WALL HEATER.
- COLOR, INCLUDING CUSTOM COLOR, AS SELECTED BY ARCHITECT.
- ACCEPTABLE MANUFACTURERS - MARKEL, Q'MARK, INDEECO.

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Endeavor Health Services

463 William Street
Buffalo, NY

ISSUE:
05-22-18: ISSUED FOR BID/PERMIT

SA PROJECT TEAM: PRINCIPAL P.Silvestri
PROJ. ARCH. _____ DRAFTER _____
JOB CAPT. _____ INTERIORS _____

SEAL:

TITLE:
MECHANICAL & PLUMBING SYMBOLS, ABBREV. & DETAILS

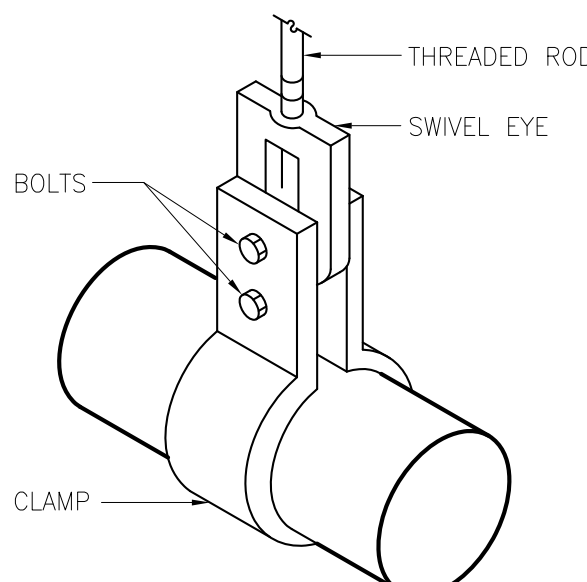
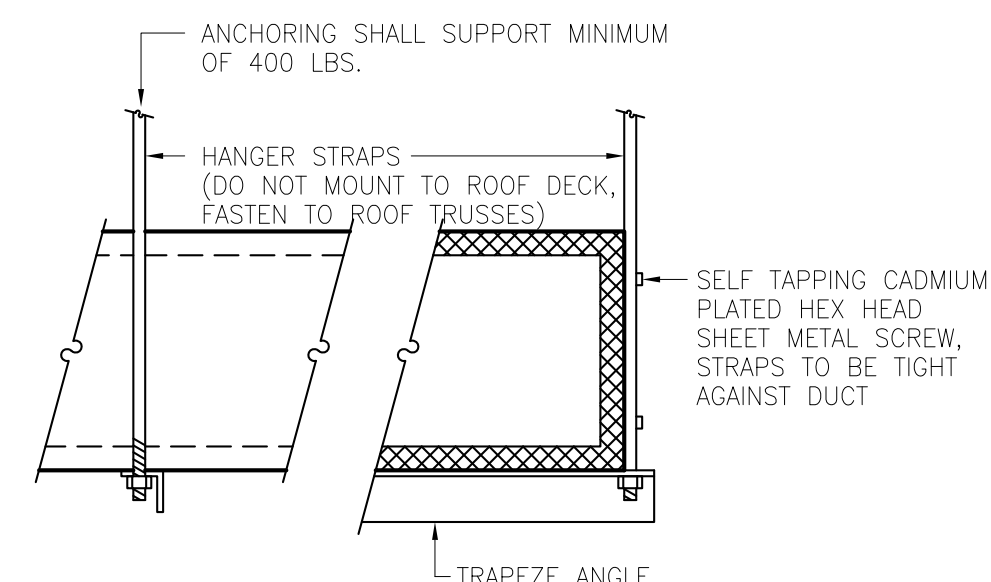


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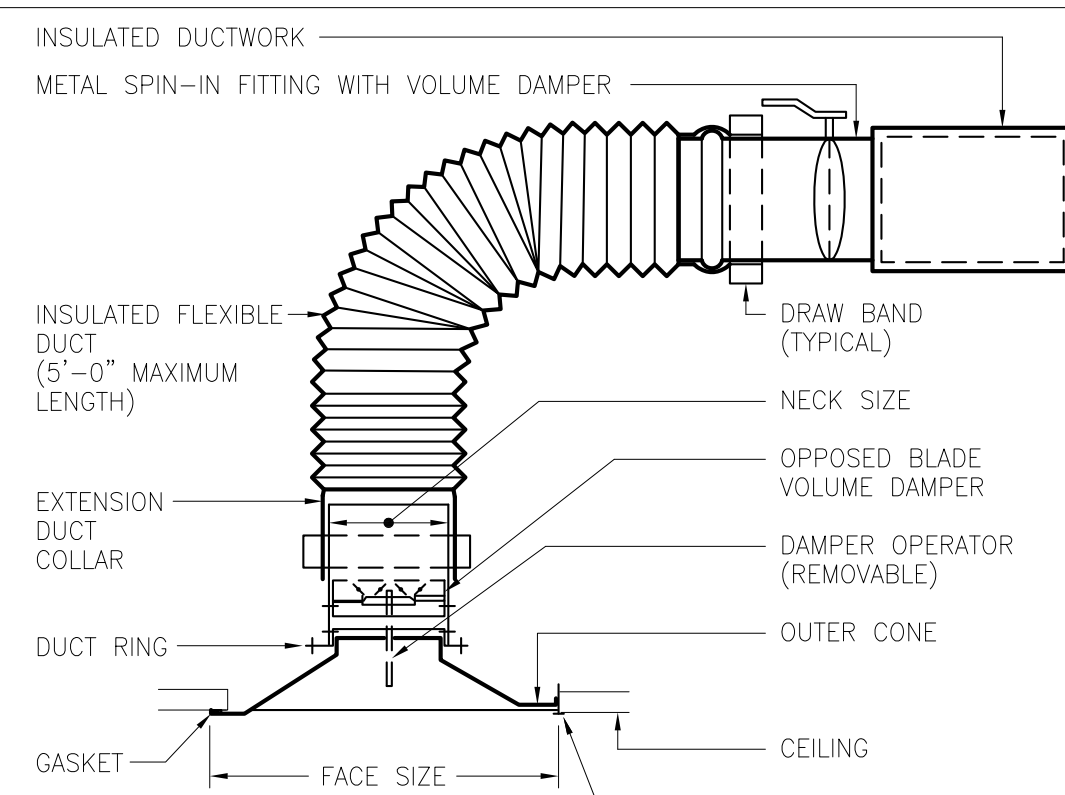
DRAWING #: MP-1



| HANGER SIZES FOR RECTANGULAR DUCT | | | | |
|-----------------------------------|---------------|---------------|----------------------|-----------------|
| LONGEST DIMENSION OF DUCT | ROUND HANGERS | STRAP HANGERS | TRAPEZE SHELF ANGLES | MAXIMUM SPACING |
| UP THRU 18" | 1/4" ROD | 1" x 16 GAUGE | 1" x 1" x 1/8" | 10'-0" |
| 19" THRU 30" | 1/4" ROD | 1" x 16 GAUGE | 1" x 1" x 1/8" | 10'-0" |

| HANGER SIZES FOR ROUND DUCT | | | | |
|-----------------------------|---------------|---------------|-----------------|-------------------|
| DUCT DIAMETER | ROUND HANGERS | STRAP HANGERS | MAXIMUM SPACING | NUMBER OF HANGERS |
| UP THRU 18" | 1/4" ROD | 1" x 16 GAUGE | 10'-0" | 1 |
| 19" THRU 36" | 3/8" ROD | 1" x 12 GAUGE | 10'-0" | 1 |

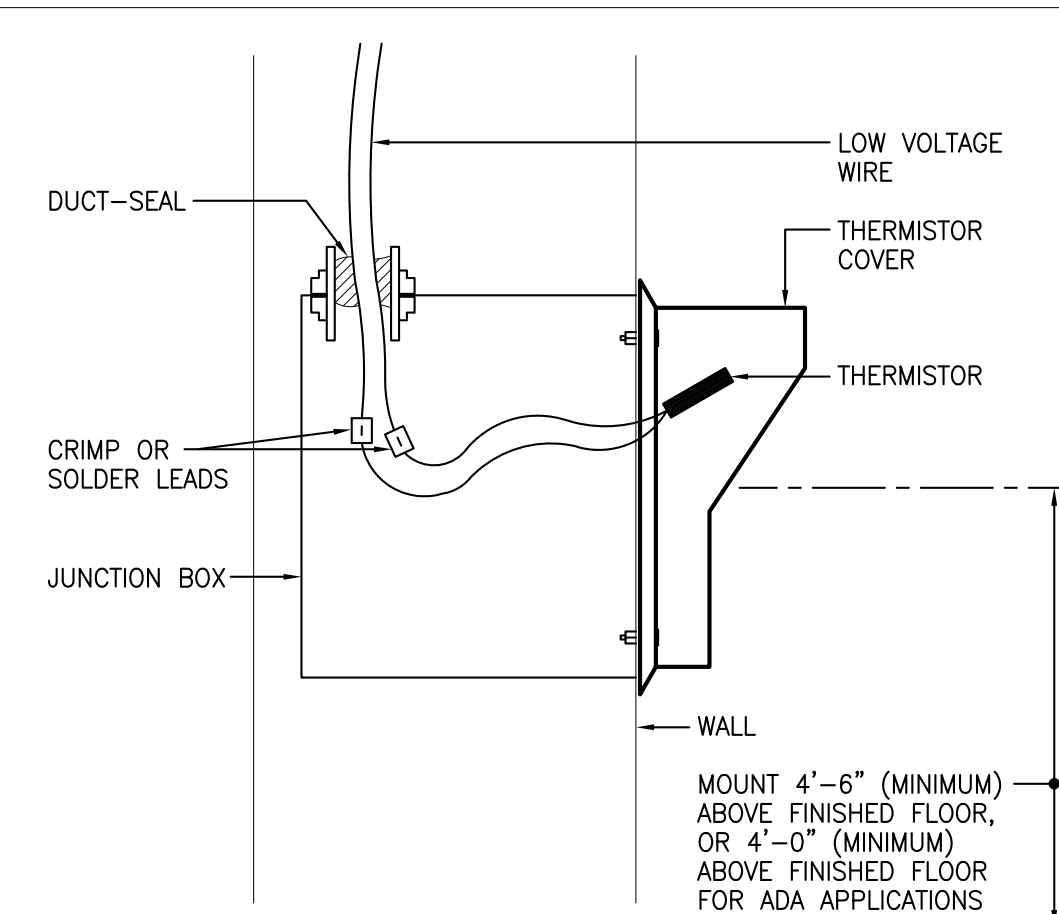
DUCT HANGER DETAIL



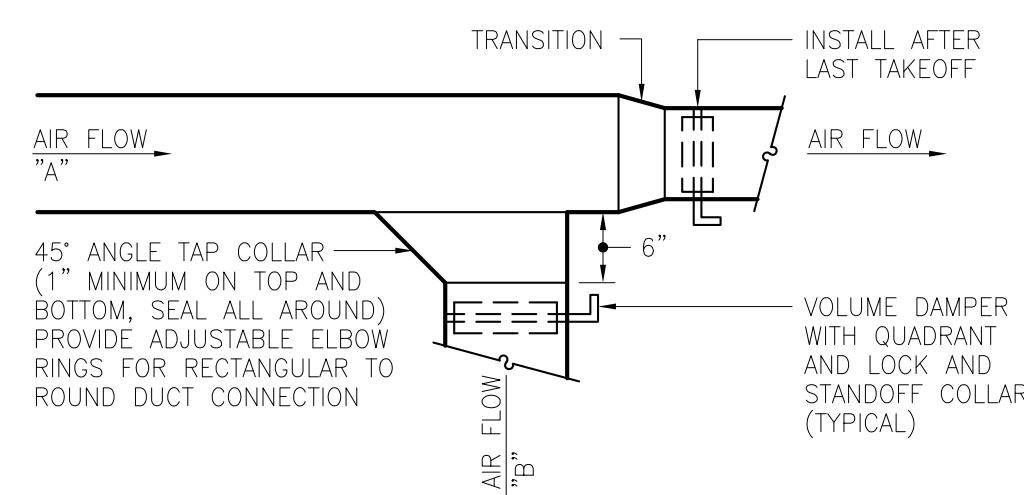
INSTALLATION NOTES:

- FASTEN DUCT RING TO EXTENSION DUCT COLLAR WITH SHEET METAL SCREWS.
- "TAP-OUT" EITHER SIDE OR BOTTOM OF DUCT; TOP "TAP-OUT" IS NOT ACCEPTABLE.

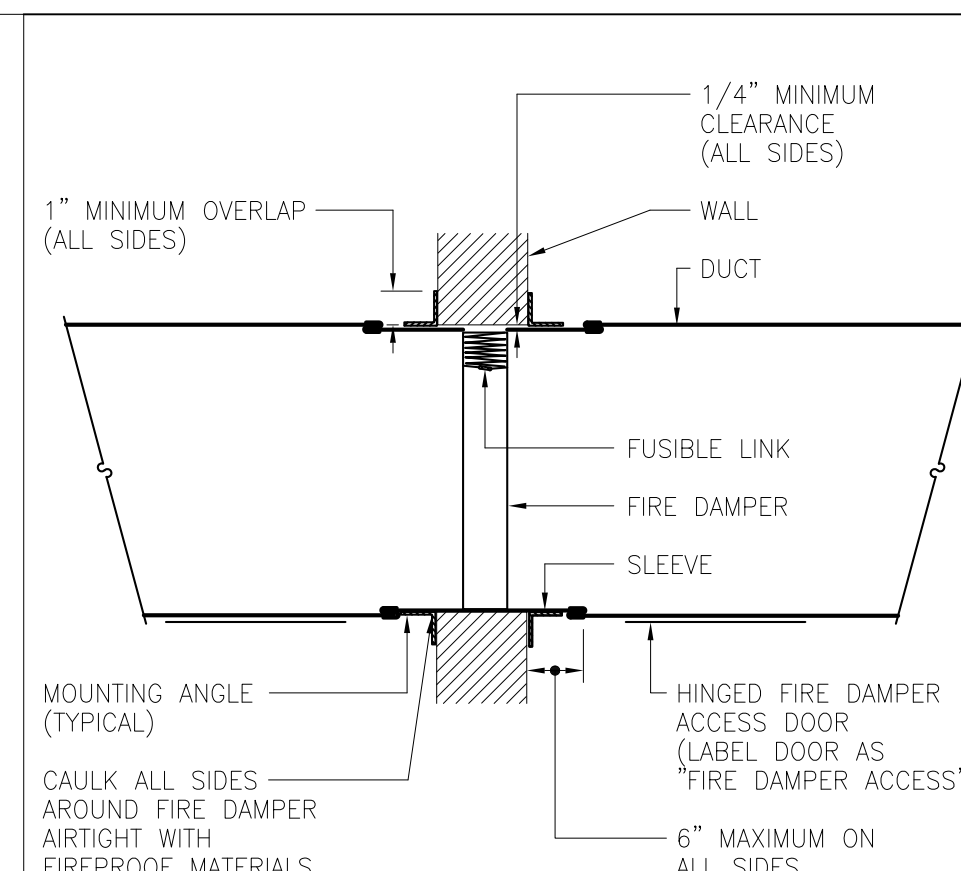
DIFFUSER INSTALLATION DETAIL



THERMOSTAT MOUNTING DETAIL



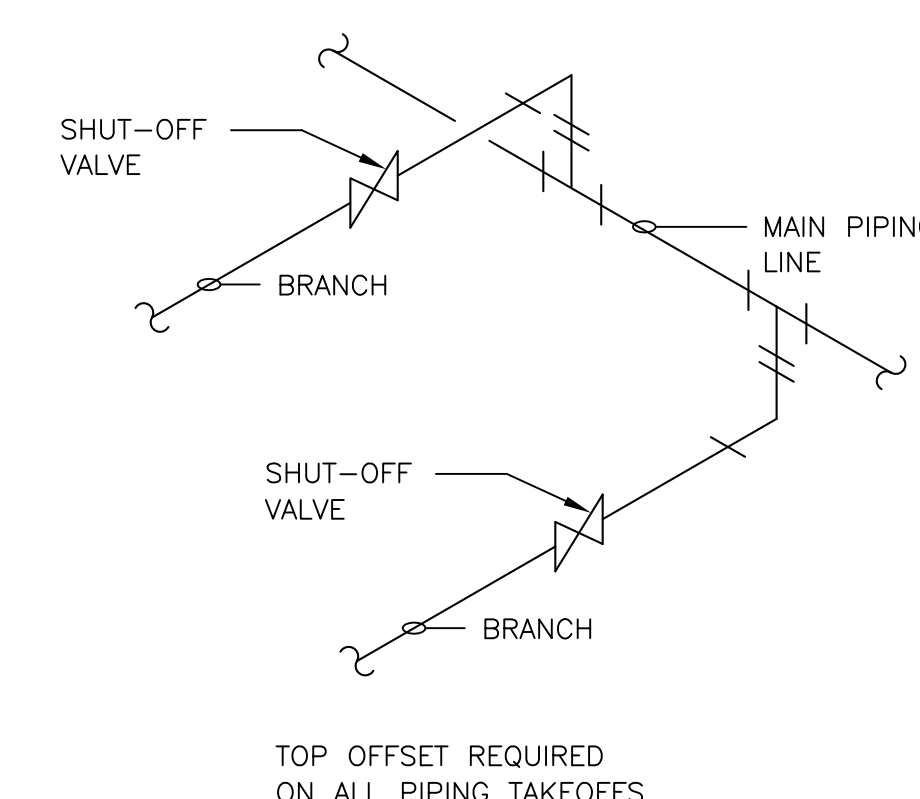
SUPPLY BRANCH TAKEOFF FITTING DETAIL



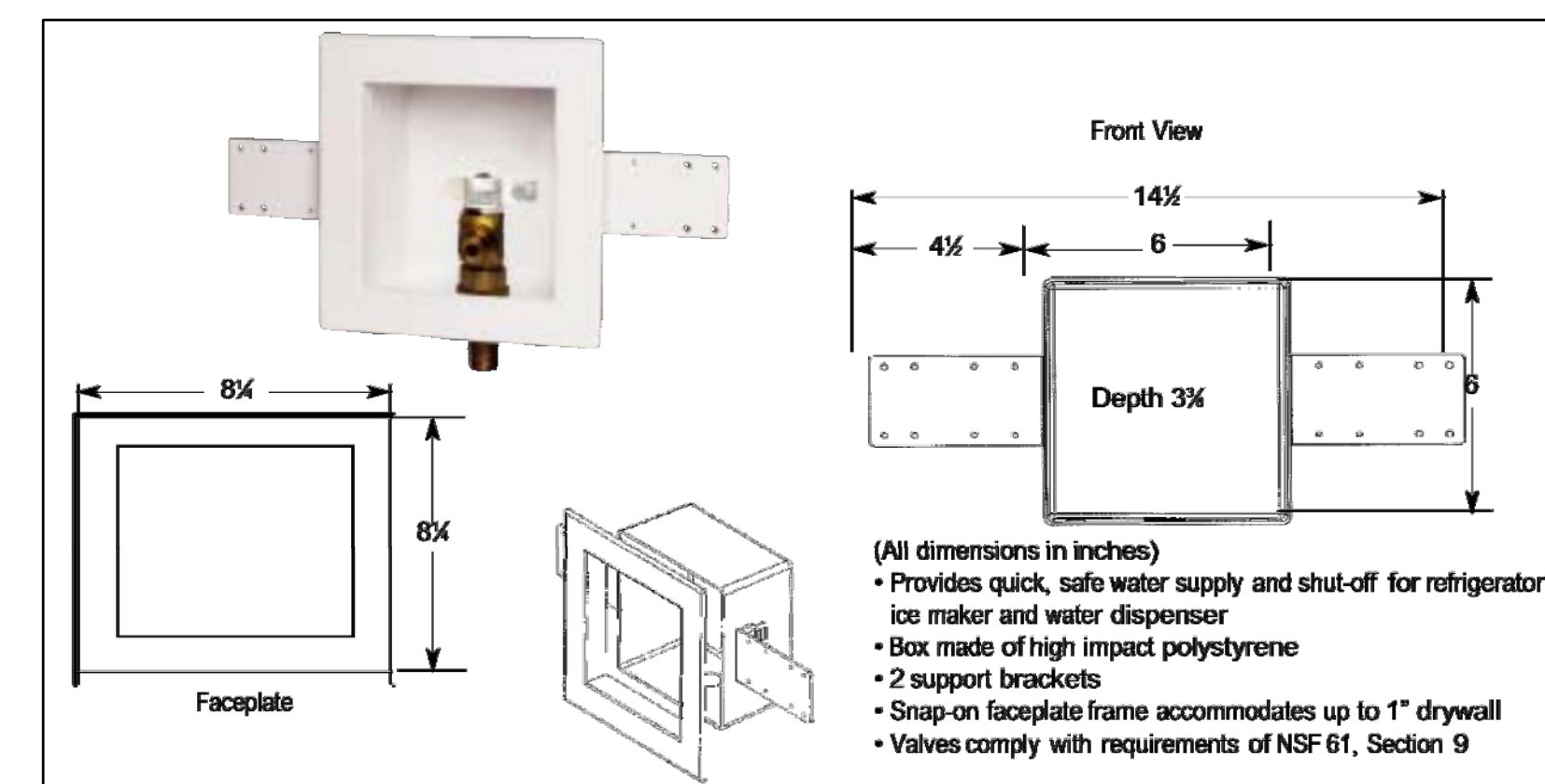
NOTES:

- OPENINGS IN WALL SHALL BE 1/8" PER FOOT LARGER THAN DAMPER DIMENSIONS (5/16" LARGER PER FOOT FOR STAINLESS STEEL). MINIMUM CLEARANCE OF 1/4" REQUIRED FOR ALL INSTALLATIONS.
- SLEEVE GAUGE SHALL BE AT LEAST EQUAL TO THE GAUGE OF THE DUCT AS DEFINED BY THE APPROPRIATE SMACNA DUCT CONSTRUCTION STANDARDS AND NFPA 90A, WHEN ONE OR MORE OF THE FOLLOWING DUCT SLEEVE CONNECTIONS ARE USED:
 - PLAIN "S" SLIP.
 - HEMMED "S" SLIP.
 - STANDING "S" SLIP.
 - REINFORCED STANDING "S" SLIP.
 - INSIDE SLIP JOINT.
 - DOUBLE "S" SLIP.
- IF ANY OTHER DUCT SLEEVE CONNECTIONS ARE USED, THE SLEEVE SHALL BE MINIMUM 16-GAUGE FOR DAMPERS UP TO 36"W x 24"H AND 14-GAUGE IF WIDTH EXCEEDS 36" OR HEIGHT EXCEEDS 24".
- MOUNTING ANGLE SHALL BE MINIMUM OF 2"x1"x14-GAUGE AND BOLTED, TACK WELDED OR SCREWED TO SLEEVE AT MAXIMUM SPACING OF 12" AND WITH MINIMUM OF TWO CONNECTIONS IN EACH SIDE, TOP AND BOTTOM. MOUNTING ANGLES SHALL OVERLAP WALL A MINIMUM OF 1" ON ALL FOUR SIDES.
- DAMPER SHALL BE BOLTED, TACK WELDED OR SCREWED TO SLEEVE ON SAME SPACING AS ANGLES. SLEEVES SHALL NOT EXTEND MORE THAN 6" OUTSIDE OF WALL.

FIRE DAMPER (INSIDE DUCT) DETAIL

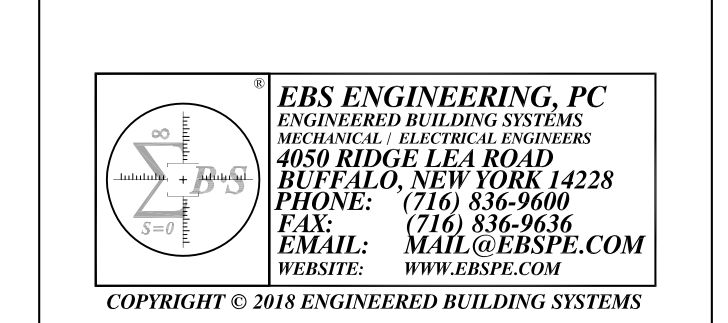


BRANCH PIPING TAKEOFF DETAIL



COFFEE MACHINE VALVE BOX DETAIL

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 PROJ. ARCH. _____ DRAFTER _____
 JOB CAPT. _____ INTERIORS _____

SEAL:

TITLE:
MECHANICAL & PLUMBING REQUIRED WORK



SA JOB #: 17158.01 DATE: 05-22-18

DRAWING #: **MP-2**

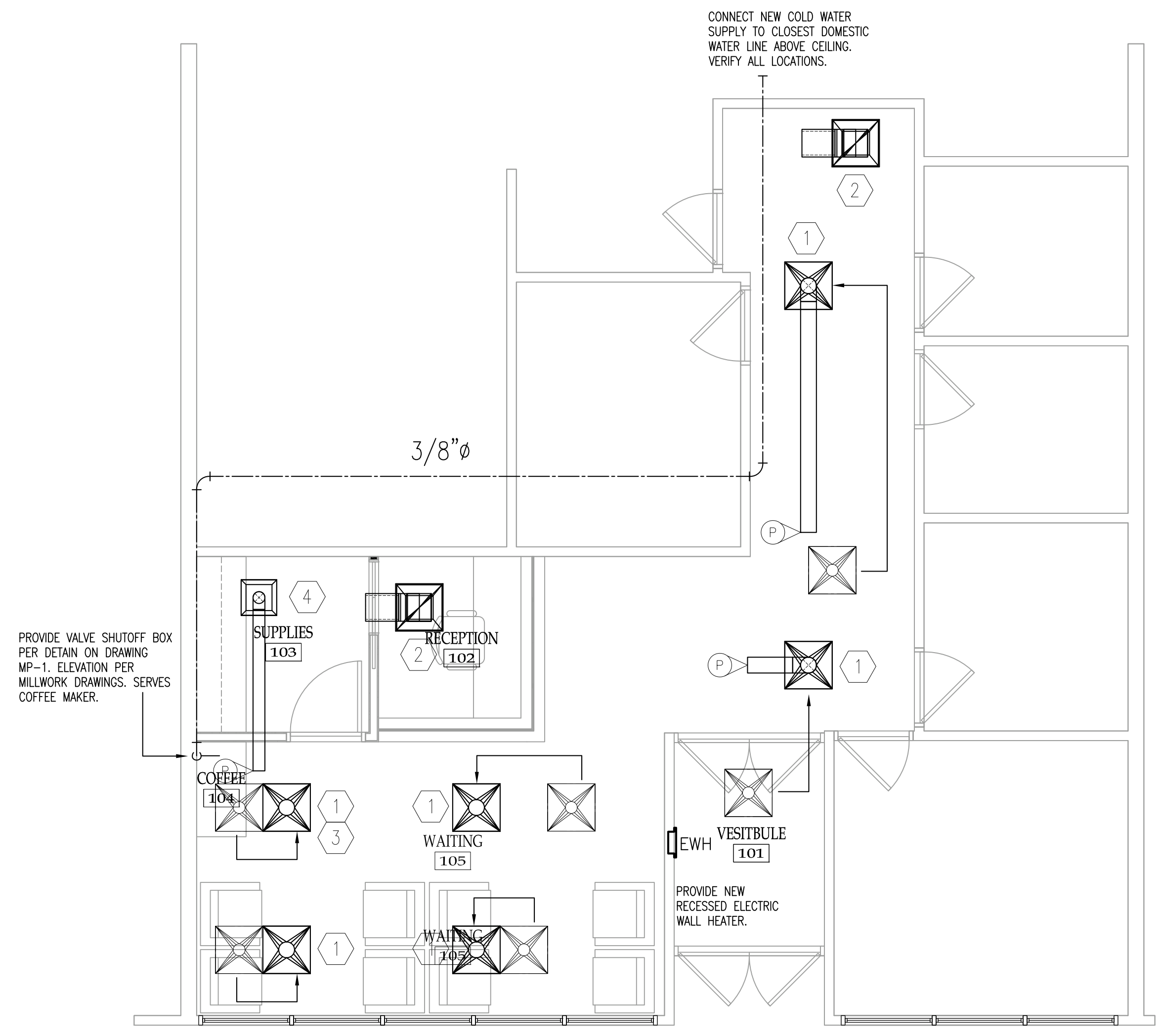
HVAC KEYED NOTES: #

1. MOVE EXISTING DIFFUSER TO NEW LOCATION SHOWN AND PROVIDE NEW DIFFUSER. EXTEND DUCTWORK AND PROVIDE NEW FLEXIBLE DUCT CONNECTION AS REQUIRED.
2. PROVIDE NEW 24"x24" RETURN AIR REGISTER.
3. REBALANCE DIFFUSER TO 50 CFM LESS THAN ORIGINAL MEASUREMENT AND DISTRIBUTE AIR TO SUPPLY ROOM.
4. PROVIDE NEW DIFFUSER - 50 CFM IN SUPPLY ROOM.

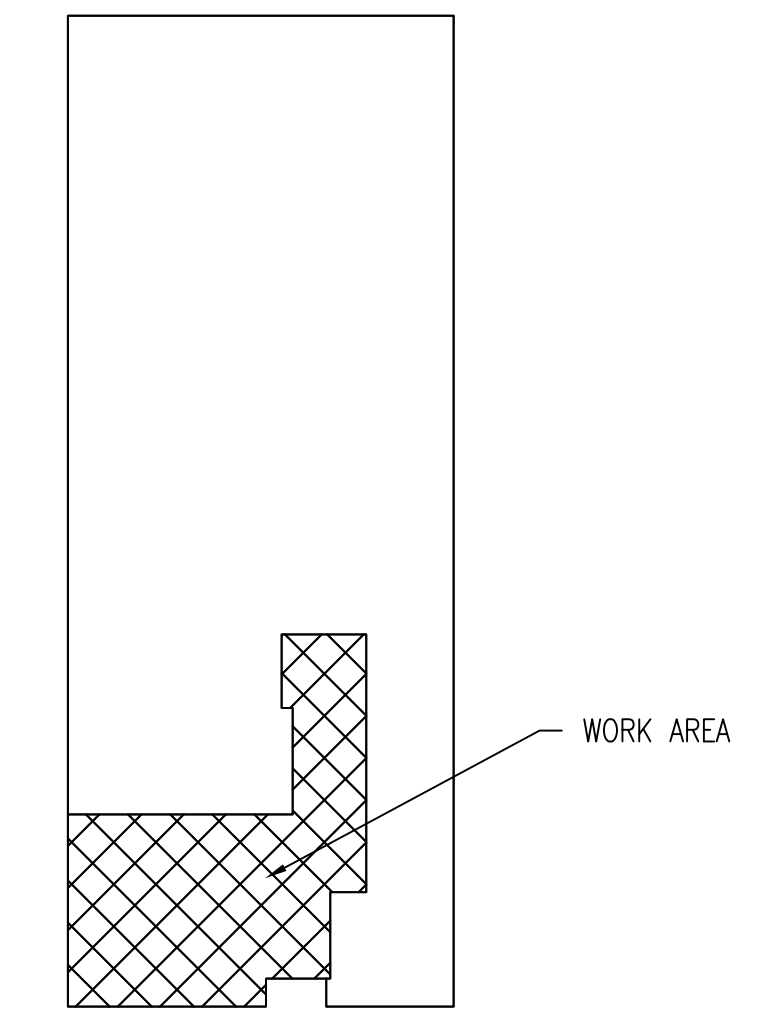
HVAC GENERAL NOTES:

- A. HVAC SYSTEM IS EXISTING WITH CONTROLS AND SHALL BE UTILIZED TO SUPPORT THE REMODEL.
- B. PRIOR TO PERFORMING ANY WORK, MEASURE AIRFLOWS AT EACH DIFFUSER SUPPLY AIR TERMINAL AND RECORD TO ASSIST WITH BALANCING TO BE COMPLETED AT THE END OF CONSTRUCTION.
- C. ALL AIR DEVICES WHICH ARE TO REMAIN SHALL BE CLEANED AND FREE FROM DAMAGE. REPLACE ALL DAMAGED AIR TERMINALS.
- D. THERMOSTATS WHICH ARE EXISTING AND TO REMAIN SHALL BE INSPECTED AND TESTED FOR FUNCTION. REPLACE ANY DAMAGED THERMOSTATS WITH SIMILAR STYLE IF REQUIRED.
- E. AIRFLOWS OF RELOCATED DIFFUSERS SHOULD MATCH EXISTING AIRFLOWS. ADJUST NECK SIZES ON NEW DIFFUSERS AS REQUIRED. 8" NECK SIZES SUGGESTED.

THE SUITE IS EXISTING WITH THE MAJORITY OF THE HVAC SCHEDULED TO REMAIN AND CONSISTING OF FURNACES AND ASSOCIATED DUCTWORK. ALL PROSPECTIVE CONTRACTORS SHOULD VISIT THE SITE PRIOR TO SUBMITTING THEIR BID AND FAMILIARIZE THEMSELVES WITH CONDITIONS.



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



2 KEY PLAN
 SCALE: N.T.S.

HVAC SPECIFICATIONS

PART 1 – GENERAL

1.1 QUALITY ASSURANCE

- A. MATERIALS AND EQUIPMENT SHALL BE PROVIDED BY ONE OF THE MANUFACTURERS LISTED IN PART 2 – PRODUCTS.
- MATERIALS AND EQUIPMENT FROM OTHER MANUFACTURERS MAY BE ACCEPTED IF PROVEN EQUAL TO THOSE SPECIFIED.
 - EQUIPMENT SELECTION OF HIGHER ELECTRICAL CHARACTERISTICS, PHYSICAL DIMENSIONS, CAPACITIES, AND RATINGS MAY BE FURNISHED PROVIDED SUCH PROPOSED EQUIPMENT IS APPROVED IN WRITING AND CONNECTING MECHANICAL AND ELECTRICAL SERVICES CIRCUIT BREAKERS, CONDUIT, MOTOR, BASES, AND EQUIPMENT SPACES ARE INCREASED.
 - DIVISION 15 ALSO IS LIABLE FOR ALL COSTS AND CHANGES IN THE WORK REQUIRED BY SUBSTITUTE EQUIPMENT.
 - NO ADDITIONAL COSTS WILL BE APPROVED FOR THESE INCREASES, IF LARGER EQUIPMENT IS APPROVED.
 - IF MINIMUM ENERGY RATINGS OR EFFICIENCIES OF EQUIPMENT ARE SPECIFIED, EQUIPMENT MUST MEET DESIGN AND COMMISSIONING REQUIREMENTS.
2. DIVISION 15 IS LIABLE FOR AND SHALL PAY FOR, ALL ARCHITECTURAL AND ENGINEERING REVIEWS AND REDESIGN COSTS FOR SUBSTITUTE MATERIALS AND EQUIPMENT.
- B. THE LENGTH OF TIME THE MANUFACTURER HAS BEEN IN BUSINESS, THE LOCATION AND CAPABILITY OF COMPLETE REPAIR FACILITIES, AVAILABILITY OF REPAIR PARTS AND ANNUAL MAINTENANCE CONTRACTS ALL WILL BE CONSIDERED IN DETERMINING EQUALITY.

1.2 LAWS, PERMITS, INSPECTIONS

- A. WORK SHALL COMPLY WITH THE LATEST REVISIONS OF NEW YORK STATE BUILDING CODE, NEW YORK STATE MECHANICAL CODE, NEW YORK STATE UNIFORM FIRE PROTECTION AND CONSTRUCTION CODE.
- B. COMPLY WITH NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) CODES AS APPLICABLE.
- C. COMPLY TO REQUIREMENTS OF DRAWINGS AND SPECIFICATIONS THAT ARE IN EXCESS OF GOVERNING CODES.
- D. DO NOT INSTALL WORK AS SPECIFIED OR SHOWN IF IN CONFLICT WITH GOVERNING CODES.
- NOTIFY ENGINEER IN WRITING AND REQUEST DIRECTION.
- E. PROVIDE CERTIFICATE OF INSPECTION FROM ALL GOVERNING AUTHORITIES.
- F. WORK SHALL COMPLY WITH THE LATEST REVISIONS OF NEW YORK STATE BUILDING CODE, NEW YORK STATE MECHANICAL CODE, NEW YORK STATE UNIFORM FIRE PROTECTION AND CONSTRUCTION CODE, NEW YORK STATE ENERGY CONSERVATION CODE, LANDLORDS LEASING SPECIFICATION, AND ANY LOCAL CODES OR REGULATIONS THAT APPLY.
- IN CASE OF CONFLICTS BETWEEN DRAWINGS, SPECIFICATIONS, AND INTERPRETATION OF CODES BY LOCAL AUTHORITY, LATER SHALL GOVERN.

1.3 INSTALLERS QUALIFICATIONS

- A. SKILLED MECHANICS WHO HAVE SUCCESSFULLY COMPLETED AN APPRENTICESHIP PROGRAM OR ANOTHER CRAFT TRAINING PROGRAM CERTIFIED BY THE U.S. DEPARTMENT OF LABOR, BUREAU OF APPRENTICESHIP AND TRAINING.
- B. DIVISION 15 SHALL BE LICENSED TO PERFORM MECHANICAL WORK IN THE MUNICIPALITY IN WHICH THE PROJECT IS LOCATED.

1.4 OMISSIONS.

- A. OMISSIONS, DISCREPANCIES OR POINTS OF QUESTION FOUND BY A BIDDER IN THE PLANS OR SPECIFICATIONS SHALL BE REFERRED TO THE ARCHITECT, WHO WILL FORWARD TO THE ENGINEER TO MAKE ANY CLARIFICATIONS IN WRITING.

1.5 SHOP DRAWINGS

- A. DIVISION 15 SUBMITTALS SHALL BE DELIVERED TO THE ENGINEER IN FIVE (5) COMPLETE SETS, WITH FOUR (4) BEING RETURNED.
- DIVISION 15 SHALL CHECK, SIGN, STAMP AND DATE ALL SUBMITTALS BEFORE SENDING THEM TO THE ENGINEER FOR REVIEW.
 - THE ENGINEER SHALL BE ALLOWED 10-WORKING DAYS FOR SUBMITTAL REVIEWS BEFORE RETURNING THEM TO THE DIVISION 15 CONTRACTOR.

1.6 RECORD (AS-BUILT) DRAWINGS

- A. DURING THE PROGRESS OF CONSTRUCTION, THE RECORD DRAWINGS SHALL BE CORRECTED BY DIVISION 15 TO INDICATE ACTUAL INSTALLATIONS.
- B. UPON COMPLETION OF THE PROJECT, 3-SETS OF FINAL RECORD DRAWINGS SHALL PRODUCED, WITH 1-SET EACH BEING DELIVERED TO THE OWNER, ARCHITECT AND ENGINEER.

1.7 PROTECTION

- A. DELIVER PIPES AND TUBES WITH FACTORY APPLIED END-CAPS.
- MAINTAIN END-CAPS THROUGH SHIPPING, STORAGE AND HANDLING TO PREVENT PIPE-END DAMAGE AND PREVENT ENTRANCE OF DIRT, DEBRIS AND MOISTURE.
- B. CLOSE AND WATERPROOF THROUGH OPENINGS, PIPES AND VOIDS IN WALLS TO PREVENT ENTRANCE OF WATER OR MOISTURE.
- C. PROTECT STORED PIPES AND TUBES FROM MOISTURE AND DIRT.
- ELEVATE ABOVE GRADE.
- D. SEAL ALL DUCTWORK AND PIPING, INCLUDING OPEN-ENDED DUCTWORK, AT THE END OF EACH DAY TO PREVENT DUST, DEBRIS, ETC. FROM ENTERING THE DUCTWORK AND PIPING.

1.8 GUARANTEES.

- A. DIVISION 15 SHALL GUARANTEE ALL WORK PERFORMED AND MATERIALS FURNISHED UNDER THIS CONTRACT AGAINST DEFECTS IN MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF THE OWNER'S FINAL ACCEPTANCE OF THE WORK. ANY DEFECTS SHALL BE RECTIFIED BY DIVISION 15 WITHOUT ANY ADDITIONAL COST TO THE OWNER.

1.9 PUNCH LIST.

- A. DIVISION 15 SHALL SCHEDULE, THROUGH THE ARCHITECT WITH A MINIMUM OF 7-DAYS NOTICE, THE ENGINEER TO PERFORM THE FOLLOWING:
- PRE-PUNCH LIST: VERIFICATION OF MECHANICAL ITEMS SUCH AS, BUT NOT LIMITED TO, DUCTWORK SIZES, LOCATIONS, METHODS OF ASSEMBLY / INSTALLATION, BEFORE ITEMS ARE ENCLOSED BY CEILINGS, WALLS, ETC.
 - DIVISION 15 SHALL DELIVER TO BOTH THE ARCHITECT AND ENGINEER, A LETTER STATING THAT ALL ITEMS IN THE PRE-PUNCH LIST HAVE BEEN CORRECTED OR ADJUSTED ACCORDING TO THE GENERAL CONDITIONS OF THE CONTRACT BEFORE ANY CEILINGS, WALLS, ETC. CAN BE INSTALLED TO ENCLOSE MECHANICAL ITEMS.
 - FINAL PUNCH LIST: VERIFICATION OF MECHANICAL ITEMS SUCH AS, BUT NOT LIMITED TO, UNIT OPERATION, SENSOR LOCATIONS, COLORS SELECTED BY ARCHITECT.
 - BEFORE PROCEEDING WITH THE FINAL PUNCH LIST, DIVISION 15 SHALL PROVIDE THE ENGINEER WITH A COMPLETE SIGNED AND SEALED BALANCE REPORT.
 - THE ENGINEER SHALL NOT PERFORM A FINAL PUNCH LIST UNTIL A COMPLETED BALANCE REPORT IS RECEIVED.
 - DIVISION 15 SHALL, AT THE REQUEST OF THE ENGINEER, PROVIDE A LADDER AND ONE EMPLOYEE TO REMOVE AND REPLACE CEILING TILES, OPEN ACCESS DOORS, ETC. FOR INSPECTION OF MECHANICAL ITEMS.
 - THE EMPLOYEE SHALL BE MADE IMMEDIATELY AVAILABLE TO REMOVE ITEMS THAT ARE REQUESTED BY THE ENGINEER.
 - ANY CEILING TILE THAT IS DAMAGED SHALL BE REPLACED WITH NEW (TO MATCH EXISTING) AT DIVISION 15'S EXPENSE.
 - DIVISION 15 SHALL DELIVER TO BOTH THE ARCHITECT AND ENGINEER, A LETTER STATING THAT ALL ITEMS IN THE FINAL PUNCH LIST HAVE BEEN CORRECTED OR ADJUSTED ACCORDING TO THE GENERAL CONDITIONS OF THE CONTRACT.

PART 2 – PRODUCTS

2.1 FIRESTOPPING

- A. PROVIDE UL LISTED AND TESTED FIRESTOPPING MATERIAL, SILICONE ELASTOMER SPECIFICALLY FORMULATED FOR USE IN HORIZONTAL AND VERTICAL APPLICATIONS.
- THE MATERIAL SHALL POSSESS INTUMESCENT CHARACTERISTICS, AND UPON EXPOSURE TO HEAT ABOVE 250° F, SHALL EXPAND TO NOT LESS THAN FIVE TIMES ITS ORIGINAL VOLUME TO FORM A FIREPROOF ENVELOPE UL RATED FOR 2 AND 3-HOURS PROTECTION, WHEN APPLIED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.
- B. UNUSED SLOTS AND OTHER PENETRATIONS IN WALLS OR OTHER GENERAL CONSTRUCTION SHALL BE CLOSED AND SEALED WITH AN APPROVED FIRESTOPPING MATERIAL.
- OPENINGS IN WALLS SHALL BE CLOSED WITH 16 GAGE GALVANIZED STEEL SHEET SECURELY ATTACHED AT THE MIDPOINT OF THE WALL THICKNESS AND FIRESTOPPED ON BOTH SIDES OF THE STEEL SHEET WITH NOT LESS THAN 1/8-INCH THICK LAYER OF NON-SAGGING SILICONE ELASTOMER TO FULLY COVER THE OPENING.
 - SINGLE OR MULTIPLE PIPES PASSING THROUGH WALLS SHALL HAVE THE ANNULAR SPACE BETWEEN PIPES AND STRUCTURE FILLED WITH SILICONE ELASTOMER TO PROVIDE A MINIMUM 2-HOUR RATED FIRESTOP FOR WALLS.
- C. PIPES AND DUCTS: THE ANNULUS BETWEEN PIPING AND DUCTWORK AND WALLS IN FINISHED SPACES SHALL BE FILLED, SEALED, AND PAINTED TO MATCH ADJACENT SURFACES.

2.2 DUCTWORK ACCESSORIES

- A. VOLUME DAMPERS.
- LOW LEAKAGE VOLUME DAMPERS: MULTIPLE OR SINGLE-BLADE, OPPOSED BLADE DESIGN, LOW LEAKAGE RATING, LINKAGE OUTSIDE OF AIRSTREAM, AND SUITABLE FOR HORIZONTAL OR VERTICAL APPLICATIONS.
 - STEEL FRAMES: HAT-SHAPED, GALVANIZED SHEET STEEL CHANNELS, MINIMUM OF 0.064" THICK, WITH MITERED AND WELDED CORNERS; FRAMES WITH FLANGES FOR ATTACHING TO WALLS, FLANGELESS FRAMES FOR INSTALLATION IN DUCTS.
 - ROLL-FORMED STEEL BLADES: 0.064" THICK, GALVANIZED SHEET STEEL.
 - BLADE AXLES: 1/2", GALVANIZED STEEL.
 - BEARINGS: TWO-PIECE MOLDED SYNTHETIC THRUST OR BALL.
 - BLADE SEALS: FELT OR NEOPRENE.
 - JAMB SEALS: CAMBERED STAINLESS STEEL.
 - TIE BARS AND BRACKETS: GALVANIZED STEEL.
 - FINISH: MILL.
 - JACKSHAFT: 1" DIAMETER, GALVANIZED STEEL PIPE ROTATING WITHIN PIPE-BEARING ASSEMBLY MOUNTED ON SUPPORTS AT EACH MULLION AND AT EACH END OF MULTIPLE DAMPER ASSEMBLIES.
 - DAMPER HARDWARE: ZINC-PLATED, DIE-CAST CORE WITH DIAL AND HANDLE MADE OF 3/32" THICK ZINC-PLATED STEEL, AND A 3/4" HEXAGON LOCKING NUT.
 - INCLUDE CENTER HOLE TO SUIT DAMPER OPERATING-ROD SIZE.
 - INCLUDE ELEVATED PLATFORM FOR INSULATED DUCT MOUNTING.
 - DUCT ACCESSORY HARDWARE.
 - QUADRANT LOCKS: PROVIDE FOR EACH VOLUME DAMPER, QUADRANT LOCK DEVICE ON ONE END OF SHAFT; AND END BEARING PLATE ON OTHER END FOR DAMPER LENGTHS OVER 12".
 - PROVIDE EXTENDED QUADRANT LOCKS FOR EXTERNALLY INSULATED DUCTWORK.
 - MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE QUADRANT LOCKS OF ONE OF THE FOLLOWING:
 - VENT FABRICS, INC.
 - YOUNG REGULATOR COMPANY.
 - MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE VOLUME DAMPERS OF ONE OF THE FOLLOWING:
 - AIR BALANCE, INC.
 - MC GILL AIRFLOW CORPORATION.
 - RUSKIN COMPANY.

2.3 DIFFUSERS, REGISTERS AND GRILLES

- A. CEILING COMPATIBILITY: PROVIDE DIFFUSERS AND GRILLES WITH BORDER STYLES THAT ARE COMPATIBLE WITH ADJACENT CEILING SYSTEMS, AND THAT ARE SPECIFICALLY MANUFACTURED TO FIT INTO CEILING MODULE AND WITH ACCURATE FIT AND ADEQUATE SUPPORT.
- B. PERFORMANCE: PROVIDE CEILING DIFFUSERS THAT HAVE, AS MINIMUM, TEMPERATURE AND VELOCITY TRAVERSES, THROW AND DROP, AND NOISE CRITERIA RATINGS FOR EACH SIZE DEVICE AS LISTED IN MANUFACTURERS CURRENT DATA.
- NOISE LEVELS OF NC 20 OR LESS.
- C. CEILING SUPPLY DIFFUSERS.
- LOUVERED FACE DIFFUSER.
 - MATERIAL: STEEL.
 - FINISH: BAKED ENAMEL, WHITE.
 - FACE SIZE: 24"x24".
 - FACE STYLE: PROVIDE 18"x18" BACKPAN (NECK SIZE AS SHOWN ON DRAWINGS FOR FULL PANEL APPLICATION) WITH FULL FACE DIFFUSER, EASILY REMOVABLE CORE OF CONCENTRIC LOUVERS (FLUSH WITH FACE), SQUARE OR ROUND DUCT CONNECTION.
 - MINIMUM 22-GAUGE STEEL BACKPAN (WELDED-IN INLETS AND CORNER JOINTS ARE NOT ACCEPTABLE).
 - MOUNTING: T-BAR (LAY-IN).
 - PATTERN (THROW): 4-WAY, FIXED, HORIZONTAL DISCHARGE.
 - DAMPERS: ADJUSTABLE, OPPOSED-BLADE, KEY OPERATED FROM FACE OF DIFFUSER.
 - ACCESSORIES.
 - SQUARE TO ROUND NECK ADAPTOR.
 - PLASTER RING.
 - CEILING RETURN GRILLES.
 - MATERIAL: STEEL.
 - FINISH: BAKED ENAMEL, WHITE.
 - FACE SIZE: 24"x24".
 - FACE STYLE: FLUSH, MINIMUM 22-GAUGE STEEL,, HOUSING COVERED WITH REMOVABLE PERFORATED PANEL (PERFORATED SCREEN WITH 3/16" DIAMETER HOLES ON 1/4" STAGGERED CENTERS) IN FRAME, MINIMUM 51% FREE AREA, PROVIDE 22"x22" BACKPAN (NECK SIZE AS SHOWN ON DRAWINGS, STANDARD NECK SIZE WHERE NOT INDICATED).
 - MINIMUM 22-GAUGE STEEL BACKPAN (WELDED-IN INLETS AND CORNER JOINTS ARE NOT ACCEPTABLE).
 - MOUNTING: T-BAR (LAY-IN).
 - DAMPERS: ADJUSTABLE, OPPOSED-BLADE, KEY OPERATED FROM FACE OF DIFFUSER.

2.4 DUCTWORK CLEANING

- A. EXISTING DUCTWORK RETAINED FOR REUSE AND ALL NEW DUCTWORK INSTALLED UNDER THIS SCOPE SHALL BE CLEANED, TESTED, AND DEMONSTRATED TO BE CLEAN IN ACCORDANCE WITH THE STANDARDS SET FORTH BY NADCA, THE CLEANING, TESTING, AND DEMONSTRATION TO ARCHITECT, AND OWNER SHALL OCCUR IMMEDIATELY PRIOR TO OCCUPANCY TO AVOID CONTAMINATION FROM CONSTRUCTION DUST AND OTHER AIRBORNE PARTICULATES.

PLUMBING SPECIFICATIONS

PART 1 GENERAL

1.01 SUMMARY:

- A. THE CONTRACTOR SHALL PROVIDE THE BUILDING PLUMBING SYSTEMS AS SHOWN ON THE DRAWINGS, AS SPECIFIED IN THIS SECTION, AND AS NEEDED FOR A COMPLETE INSTALLATION INCLUDING, BUT NOT NECESSARILY LIMITED TO:

- APPLICATIONS AND FEES FOR ALL PLUMBING PERMITS, SERVICES, AND INTERIM AND FINAL INSPECTIONS.
- TEMPORARY WATER PROVISIONS AS REQUIRED FOR CONSTRUCTION PURPOSES.
- EXCAVATION AND BACKFILL FOR PLUMBING SYSTEMS WORK.
- CONCRETE PADS AND PITS AS MAY BE REQUIRED FOR PLUMBING SYSTEMS WORK.
- DOMESTIC HOT AND COLD WATER PIPING SYSTEMS, INCLUDING BACKFLOW PREVENTER.
- DRAIN, WASTE, AND VENT SYSTEMS.
- GAS PIPING SYSTEM.
- STORM PIPING SYSTEM.
- PLUMBING FIXTURES AND TRIM.
- CATHODIC AND DIELECTRIC PROTECTION.
- ACCESSORY PLUMBING DEVICES INCLUDING BUT NOT NECESSARILY LIMITED TO HANGERS, SUPPORTS, INSERTS AND VALVES.
- ACCESS PANELS AND BOXES FOR CONTRACTOR-PROVIDED VALVES.
- PIPING INSULATION.
- CUTTING AND PATCHING.
- FINAL GAS CONNECTIONS TO HVAC EQUIPMENT.
- PAINTING OF EXPOSED PIPING.
- STERILIZATION OF THE POTABLE WATER SYSTEM.
- SEISMIC RESTRAINTS (AS MAY BE REQUIRED BY THE LOCAL JURISDICTION).
- TESTING, ADJUSTING AND BALANCING.

- B. THE CONTRACTOR SHALL INCLUDE THE COST OF APPLICATIONS AND FEES FOR ALL PLUMBING PERMITS, SERVICES, AND INTERIM AND FINAL INSPECTIONS IN THE BASE BID.

1.02 SUBMITTALS:

THE CONTRACTOR SHALL SUBMIT PLUMBING FIXTURE PRODUCT DATA FOR REVIEW BY THE ARCHITECT/ENGINEER. ANY REQUEST FOR PRODUCT SUBSTITUTION MUST BE SUBMITTED ONE WEEK PRIOR TO BID SUBMISSION.

1.03 QUALITY ASSURANCE:

CODES AND REGULATIONS:

ALL MATERIALS, APPARATUS, AND EQUIPMENT AND THE INSTALLATION THEREOF SHALL COMPLY WITH ALL STATE AND COUNTY ORDINANCES AND ALL OTHER GOVERNMENTAL AND/OR PRIVATE AUTHORITIES HAVING JURISDICTION, AND SHALL COMPLY WITH ALL COUNTY AND STATE LAWS, RULES, AND REGULATIONS, AS WELL AS RULES AND REGULATIONS OF THE NATIONAL BOARD OF FIRE UNDERWRITERS, AND THE PLUMBING CODE HAVING JURISDICTION, IN THE EVENT OF CONFLICT BETWEEN OR AMONG SPECIFIED REQUIREMENTS AND PERTINENT REGULATIONS, THE MORE STRINGENT REQUIREMENT WILL GOVERN AND SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.

DRAWINGS AND COORDINATION:

CONSTRUCTION DRAWINGS SHALL BE CONSIDERED AS A PART OF THE WORK, INsofar AS THE DRAWINGS FURNISH THE CONTRACTOR WITH INFORMATION RELATING TO DESIGN AND CONSTRUCTION OF THE BUILDING. BECAUSE OF THE SCALE OF THE MECHANICAL DRAWINGS, IT IS NOT POSSIBLE TO INDICATE ALL OFFSETS, FITTINGS, AND ACCESSORIES WHICH MAY BE REQUIRED TO MEET SUCH CONDITIONS. THE PLUMBING DRAWINGS SHOW THE GENERAL ARRANGEMENTS OF ALL PIPING, DUCTWORK, EQUIPMENT, ETC., AND SHALL NOT BE SCALED. THIS WORK SHALL BE COORDINATED WITH ALL TRADES. CRITICAL LOCATIONS ARE DIMENSIONED ON THE DRAWINGS; IF A CONFLICT ARISES, THE CONTRACTOR SHALL NOTIFY THE OWNER AND THE ARCHITECT/ ENGINEER IMMEDIATELY FOR CLARIFICATION.

THE CONTRACTOR SHALL VERIFY THE DIMENSIONS GOVERNING THE PLUMBING SYSTEMS WORK IN THE BUILDING, NO EXTRA COMPENSATION SHALL BE CLAIMED OR ALLOWED ON ACCOUNT OF DIFFERENCES BETWEEN ACTUAL DIMENSIONS AND THOSE INDICATED ON THE DRAWINGS. THE CONTRACTOR SHALL EXAMINE ADJOINING WORK, ON WHICH MECHANICAL WORK IS DEPENDENT FOR PROPER OPERATION, AND SHALL REPORT ANY WORK WHICH MUST BE CORRECTED. NO WAIVER OF RESPONSIBILITY FOR DEFECTIVE WORK SHALL BE CLAIMED OR ALLOWED DUE TO ANY FAILURE TO REPORT UNFAVORABLE CONDITIONS AFFECTING THE PLUMBING SYSTEMS WORK.

1.04 WARRANTY/ CLOSEOUT DOCUMENTS:

MANUFACTURER'S WARRANTY: THE CONTRACTOR SHALL PROVIDE THE MANUFACTURER'S STANDARD PRODUCT WARRANTY.

INSTALLER'S WARRANTY: THE CONTRACTOR SHALL INCLUDE A COPY OF THE SUBCONTRACTOR'S WARRANTY FOR ALL WORK PROVIDED UNDER THE CONTRACT FOR CONSTRUCTION FOR A TERM OF 1 YEAR AFTER THE DATE OF SUBSTANTIAL COMPLETION.

WARRANTIES SHALL BE INCLUDED IN THE BUILDING MAINTENANCE MANUALS SUBMITTED TO THE OWNER AFTER THE DATE OF FINAL COMPLETION.

STERILIZATION CERTIFICATE OF PERFORMANCE: UPON COMPLETION OF THE WATER LINE STERILIZATION, THE CONTRACTOR SHALL DELIVER A COPY OF AN ACCEPTABLE STERILIZATION "CERTIFICATE OF PERFORMANCE" TO THE OWNER. THIS STERILIZATION CERTIFICATE OF PERFORMANCE SHALL ADDITIONALLY BE INCLUDED IN THE BUILDING MAINTENANCE MANUALS SUBMITTED TO THE CONSTRUCTION PROJECT MANAGER AFTER THE DATE OF FINAL COMPLETION, AS FURTHER DESCRIBED IN THIS SECTION.

PROJECT RECORD DRAWINGS: THE CONTRACTOR SHALL RECORD ALL CHANGES AS THE WORK PROGRESSES ON A SET OF PROJECT RECORD DRAWINGS KEPT AT THE JOB SITE, AND SHALL PROVIDE RECORD DRAWINGS TO THE CONSTRUCTION PROJECT MANAGER AFTER THE DATE OF SUBSTANTIAL COMPLETION.

PART 2 PRODUCTS

2.01 GENERAL:

THE WORD PIPING SHALL MEAN PIPE, FITTINGS, NIPPLES, VALVES, ETC. COMPLETELY ASSEMBLED.

2.02 DOMESTIC WATER SYSTEM:

WATER LINES:

COPPER: TYPE "L" HARD DRAWN, PER ASTM B88-7, FOR ALL WATER PIPE ABOVE CONCRETE OR GROUND.

COPPER: TYPE "K" HARD DRAWN, PER ASTM B88-7, FOR WATER PIPE SET IN OR UNDER CONCRETE OR IN THE GROUND. WRAP LINES BELOW CONCRETE FLOORS WITH 5 MILS POLYETHYLENE TAPE WITH JOINTS OVERLAPPED 25% MINIMUM, AND INSULATE WITH ARMAFLEX INSULATION. NO FITTINGS SHALL BE UNDER THE SLAB.

FITTINGS: WROUGHT COPPER, PER ANSI B16.18 AND B16.22.

IDENTIFICATION: COLOR IDENTIFY PIPE WITH SIZE OF PIPE MANUFACTURER'S TRADEMARK, AND CONFORM TO THE FOLLOWING SCHEDULE:

TYPE "K" COPPER – GREEN
TYPE "L" COPPER – BLUE

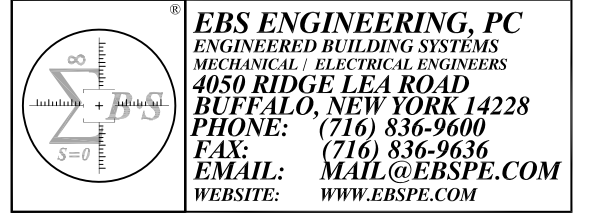
PEX WATER LINES: (MAY BE USED ONLY IF APPROVED BY THE PROPERTY OWNER)

UPONOR PEX-A TUBING: TUBING TO BE PER ASTM F876 AND ASTM F877, UPONOR AQUAPEX, FOR ALL WATER PIPE ABOVE OR BELOW CONCRETE OR GROUND, ALL SIZES BELOW 3". FITTINGS: FITTING ASSEMBLY IS MANUFACTURED FROM MATERIAL LISTED IN PARAGRAPH 5.1 OF ASTM F1960. ALL FITTING MATERIAL IS TO COMPLY WITH ASTM F1960. TYPE: PEX-A COLD EXPANSION FITTING. ASSEMBLY CONSISTS OF THE APPROPRIATE PROPEX INSERT WITH A CORRESPONDING PROPEX RING. PEX MANIFOLD: MATERIAL: TYPE L COPPER BODY WITH UNS 3600 SERIES BRASS PROPEX OUTLET CONNECTIONS OR ENGINEERED PLASTIC (EP) BODY WITH PROPEX OUTLET CONNECTIONS. MANIFOLD TYPE: UPONOR PROPEX 1" COPPER MANIFOLD OR UPONOR ENGINEERED PLASTIC (EP) MANIFOLD. ALL MANIFOLDS MANUFACTURED WITH THE APPROPRIATE-SIZED PROPEX FITTINGS ON THE MANIFOLD SUPPLY INLETS.

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ISSUE:
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SA PROJECT TEAM: PRINCIPAL P. Silvestri
PROJ. ARCH. _____ DRAFTER _____
JOB CAPT. _____ INTERIORS _____

SEAL:

TITLE: MECHANICAL & PLUMBING SPECIFICATIONS



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MP-3

ELECTRICAL SYMBOLS LEGEND
NOT ALL SYMBOLS MAY BE REPRESENTED ON DRAWINGS

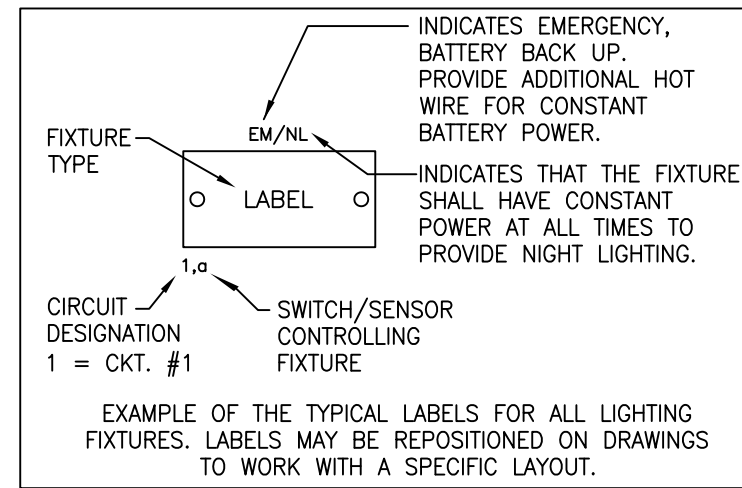
| POWER SYMBOLS | LIGHTING CONTROL SYMBOLS | FIRE ALARM SYMBOLS |
|--|---|--|
| HOMERUN TO PANELBOARD 2#12 - 1#12G IN 1/2" UNLESS SHOWN OTHERWISE. | TOGGLE SWITCH. LOWER CASE LETTER IS CONTROL (SINGLE-POLE) | FIRE ALARM CONTROL PANEL |
| JUNCTION BOX (SIZE AS REQUIRED) | TOGGLE SWITCH. LOWER CASE LETTER IS CONTROL (SINGLE-POLE, 3-WAY) | FIRE ALARM REMOTE ANNUNCIATOR PANEL |
| CONDUIT/WIRE BREAK | DIMMER. LOWER CASE LETTER INDICATES CONTROL (SINGLE-POLE) | FIRE ALARM PULLSTATION - INSTALL 48" A.F.F. TO CENTER OF BOX |
| CONDUIT STUB OUT | DIMMER (SINGLE-POLE) SHALL BE SUITABLE FOR DIMMING LED LAMPS. PROVIDE WIRING FOR 0-10V DIMMING. LOWER CASE LETTER INDICATES CONTROL. | PHOTOELECTRIC SMOKE DETECTOR WITH STANDARD BASE. WIRE INTO INITIATING CIRCUITS OF BUILDING FIRE ALARM SYSTEM. INSTALL FINISHED CEILING. |
| CONDUIT STUB-DOWN | DIMMER (SINGLE-POLE, 3-WAY) SHALL BE SUITABLE FOR DIMMING LED LAMPS. PROVIDE WIRING FOR 0-10V DIMMING. LOWER CASE LETTER INDICATES CONTROL. | COMBINATION CARBON MONOXIDE / PHOTOELECTRIC SMOKE DETECTOR WITH AN AUDIBLE BASE. WIRE INTO INITIATING / SUPERVISORY / SIGNALING CIRCUITS OF BUILDING FIRE ALARM SYSTEM. INSTALL FINISHED CEILING. |
| CONDUIT STUB-UP | MOMENTARY CONTACT SWITCH (SINGLE-POLE) | HEAT DETECTOR - FIXED TEMPERATURE OF 135°. WIRE INTO INITIATING CIRCUITS OF BUILDING FIRE ALARM SYSTEM. INSTALL FINISHED CEILING. |
| 208Y/120V RECESSED OR SURFACE MOUNTED PANELBOARD | DUAL TECHNOLOGY OCCUPANCY SENSOR, WALL MOUNTED. OCCUPANCY TIME DELAY = 15 MINUTES. ON MODE = MANUAL ACUITY CONTROLS - SENSOR SWITCH #WSX-PDT-SA-WH PROGRAM OCC. SENSOR FOR MANUAL CONTROL. PROGRAM AUTOMATIC CONTROL FOR ALL PUBLIC AREAS I.E. PUBLIC RESTROOMS. SHALL MEET 2015 IECC REQUIREMENTS. | COMBINATION CARBON MONOXIDE / HEAT DETECTOR, FIXED TEMPERATURE OF 135° WITH AN AUDIBLE BASE. WIRE INTO INITIATING / SUPERVISORY / SIGNALING CIRCUITS OF BUILDING FIRE ALARM SYSTEM. INSTALL FINISHED CEILING. |
| 480Y/277V RECESSED OR SURFACE MOUNTED PANELBOARD | LOW-VOLTAGE, DUAL TECHNOLOGY, SMALL MOTION CEILING OCCUPANCY SENSOR. OCCUPANCY TIME DELAY = 15 MINUTES. ACUITY CONTROLS - SENSOR SWITCH #CM-PDT-9 ADC | CARBON MONOXIDE DETECTOR WITH AUDIBLE BASE. WIRE INTO SUPERVISORY CIRCUITS OF BUILDING FIRE ALARM SYSTEM. INSTALL FINISHED CEILING. |
| ELECTRIC MOTOR - PROVIDED & INSTALLED BY OTHERS, WIRE BY E.C. SEE EQUIPMENT WIRING SCHEDULE FOR ELEC. REQUIREMENTS | COMMUNICATION SYMBOLS | |
| RECEPTACLE (SIMPLEX) # INDICATES CKT. | SYMBOL SIGNIFIES THAT THE E.C. SHALL SUPPLY A SINGLE-GANG ELECTRICAL BOX AND INSTALL 18" A.F.F., UNLESS OTHERWISE NOTED. SUPPLY 3/4" EMT CONDUIT AND INSTALL VERTICALLY WITHIN WALL FROM ELECTRICAL BOX STUBBING CONDUIT OUT FROM WALL INTO ACCESSIBLE CEILING SPACE. SUPPLY CONDUIT WITH PLASTIC BUSHINGS AND A PULLSTRING. ELECTRICAL BOX & CONDUIT SHALL BE UTILIZED FOR THE INSTALLATION OF COMMUNICATION CONNECTORS (IE: TELEPHONE & DATA) WITH WALLPLATE & ASSOCIATED WIRING, CONNECTORS, WALLPLATE, WIRING ETC... SHALL BE PROVIDED & INSTALLED BY OTHERS. | DUCT SMOKE DETECTOR - WIRE INTO INITIATING CIRCUITS OF BUILDING FIRE ALARM SYSTEM. INSTALL WITHIN HVAC DUCTWORK. |
| RECEPTACLE (DUPEX) # INDICATES CKT. | RECEPTACLE (DUPEX) W/ GROUND FAULT PROTECTION, # INDICATES CKT. | AUDIO DEVICE (WALL) - WIRE INTO SIGNALING CIRCUITS OF BUILDING FIRE ALARM SYSTEM. INSTALL 80" A.F.F. TO BOTTOM OF BOX. |
| RECEPTACLE (QUAD) # INDICATES CKT. | | VISUAL DEVICE (WALL) - WIRE INTO SIGNALING CIRCUITS OF BUILDING FIRE ALARM SYSTEM. INSTALL 80" A.F.F. TO BOTTOM OF BOX. |
| RECEPTACLE (DUPEX) W/ GROUND FAULT PROTECTION, # INDICATES CKT. | | COMBINATION AUDIO/VISUAL DEVICE (WALL) - WIRE INTO SIGNALING CIRCUITS OF BUILDING FIRE ALARM SYSTEM. INSTALL 80" A.F.F. TO BOTTOM OF BOX. |
| RECEPTACLE (QUAD) W/ GROUND FAULT PROTECTION, # INDICATES CKT. | STROBE DEVICE (CEILING) - WIRE INTO SIGNALING CIRCUITS OF BUILDING FIRE ALARM SYSTEM. INSTALL FINISHED CEILING. | MAGNETIC DOOR HOLDER - TO BE INSTALLED WITHIN WALL & WIRE INTO BUILDING FIRE ALARM SYSTEM AS REQUIRED. |
| COMBINATION MOTOR STARTER/FUSED DISCONNECT SWITCH | NON-FUSED DISCONNECT SWITCH | REMOTE TEST STATION |
| DOOR RELEASE INTERCOM/PUSH BUTTON | CR | |

GENERAL NOTES TO ELECTRICAL SYMBOLS LEGEND:

- UTILIZE TYPE "MC" CABLE IN CONCEALED AREAS UNLESS NOTED OTHERWISE. EXPOSED ELECTRICAL WORK SHALL BE INSTALLED WITHIN CODE SIZED CONDUIT WITH STEEL SET SCREW FITTINGS.
- MULTIWIRE BRANCH CIRCUITS SHALL BE INSTALLED PER ALL REQUIREMENTS OF N.E.C. ARTICLE 210.4. HANDLE TIES MUST BE INSTALLED TO IDENTIFY SINGLE-POLE, MULTIWIRE BRANCH CIRCUITS PER ALL REQUIREMENTS OF N.E.C. ARTICLE 240.15(B).
- ALL STANDARD RECEPTACLES SHALL BE INSTALLED 18" A.F.F., TO CENTER OF BOX, FLUSH TO FINISHED WALL, UNLESS OTHERWISE NOTED.
- ALL INTERIOR GFI RECEPTACLES SHALL BE INSTALLED 44" A.F.F., TO CENTER OF BOX/ABOVE COUNTER TOP, FLUSH TO FINISHED WALL, UNLESS OTHERWISE NOTED. COORDINATE INSTALLATION HEIGHT WITH ARCHITECTURAL MILLWORK/ELEVATION PLANS WHEN APPLICABLE.
- ALL EXTERIOR GFI RECEPTACLES SHALL BE INSTALLED HORIZONTALLY 24" A.F.F., TO CENTER OF BOX, FLUSH TO FINISHED WALL, UNLESS OTHERWISE NOTED. PROVIDE A WEATHERPROOF COVERPLATE FOR EXTERIOR USE.
- ALL TOGGLE SWITCHES, DIMMERS, KEYED SWITCHES ETC... SHALL BE INSTALLED 48" A.F.F., TO CENTER OF BOX, FLUSH TO FINISHED WALL, UNLESS OTHERWISE NOTED.
- ELECTRICAL DEVICES WITHIN HANDICAP ACCESSIBLE ROOMS SHALL BE INSTALLED AT HEIGHTS PER ADA REQUIREMENTS.
- COMMUNICATION DEVICES (IE: TELEPHONE, DATA, CATV) SHALL BE INSTALLED 18" A.F.F., TO CENTER OF BOX, FLUSH TO FINISHED WALL, UNLESS OTHERWISE NOTED.
- FIRE ALARM DEVICES SHALL BE INSTALLED AS NOTED IN INDIVIDUAL DESCRIPTIONS.

LIGHTING FIXTURE SCHEDULE

| SYMBOL/ DESIGNATION | DESCRIPTION | LAMP (QTY/TYPER/COLOR) | VOLT | VA | MOUNTING | MANUFACTURER/ MODEL # |
|---------------------|---|---|--------------|-----|--|--|
| FA | 2'X4' LAY-IN LED TROFFER, COLD ROLLED STEEL HOUSING WITH ACRYLIC CURVED DIFFUSER. | LED/3500°K 4000 LUMENS | 120/ 277V | 39W | RECESSED GRID | LITHONIA LIGHTING: 2BL14-40L-ADP- E21-LP835 |
| FA1 | 2'X4' LAY-IN LED TROFFER, COLD ROLLED STEEL HOUSING WITH ACRYLIC CURVED DIFFUSER. | LED/3500°K 4800 LUMENS | 120/ 277V | 45W | RECESSED GRID | LITHONIA LIGHTING: 2BL14-40L-ADP- E21-LP835 |
| FB | 6" DIAMETER OPEN LED DOWNLIGHT, GALVANIZED STEEL FRAME AND SEMI-SPECULAR FINISH. | LED/3500°K 1500 LUMENS | 120/ 277V | 18W | RECESSED | LITHONIA LIGHTING: LDN6-35-15-L06-AR- LSS-MVOLT-EZ10 |
| FC | 4" DIAMETER OPEN LED DOWNLIGHT, GALVANIZED STEEL FRAME AND SEMI-SPECULAR FINISH. | LED/3500°K 1500 LUMENS | 120/ 277V | 18W | RECESSED | LITHONIA LIGHTING: LDN4-35-15-L06-AR- LSS-MVOLT-EZ10 |
| EXIT | EXIT SIGN, UNIVERSAL MOUNT WITH CANOPY, WHITE IMPACT & SCRATCH RESISTANT THERMOPLASTIC HOUSING, 8" STENOILED RED LETTERS WITH LED LAMPS & AN INTEGRAL BATTERY PACK. | LED - FURNISHED WITH FIXTURE | 120/ 277V | N/A | WALL/CEILING - TO BE DETERMINED BY E.C. | LITHONIA LIGHTING: "QUANTUM" LQ4-S-W-3-R- 120/277-ELN |
| EM | EMERGENCY LED FIXTURE W/WHITE IMPACT & SCRATCH RESISTANT THERMOPLASTIC HOUSING, TWIN ADJ. HEADS & AN INTEGRAL BATTERY PACK. | TWO 1.5W/3.6V LEDs FURNISHED WITH FIXTURES | 120/ 277V | N/A | WALL-8"-0" A.F.F. OR 8" FROM FINISHED CEILING | LITHONIA LIGHTING: "QUANTUM" ELM2-LED |
| EM | EMERGENCY LED FIXTURE W/WHITE IMPACT & SCRATCH RESISTANT THERMOPLASTIC HOUSING, TWIN ADJ. HEADS & HIGH OUTPUT INTEGRAL BATTERY PACK. | TWO 1.5W/3.6V LEDs FURNISHED WITH FIXTURES | 120/ 277V | N/A | WALL-8"-0" A.F.F. OR 8" FROM FINISHED CEILING | LITHONIA LIGHTING: "QUANTUM" ELM2-LED-HO |
| EM | REMOTE EMERGENCY LED FIXTURE WITH TWIN ADJUSTABLE LAMP HEADS AND A WEATHER-PROOF ALUMINUM HOUSING. FOR EMERGENCY EGRESS ILLUMINATION. | TWO 1.5W/3.6V LEDs | 3.6V | N/A | WALL ±8"-6" A.F.F. | LITHONIA LIGHTING: ELA-1-QWP- L0304 (ELM2) |



GENERAL NOTES TO LIGHTING FIXTURE SCHEDULE:

- CONTRACTOR TO VERIFY VOLTAGE SUPPLY TO EACH FIXTURE BEFORE ORDERING.
- FURNISH ALL FIXTURES COMPLETE WITH LAMPS.
- ALL LIGHTING FIXTURES SHALL CONFORM, AS A MINIMUM STANDARD, TO THE APPLICABLE PORTIONS OF THE FEDERAL SPECIFICATIONS.
- EACH LIGHTING FIXTURE SHALL BE SUPPORTED IN ACCORDANCE WITH ALL APPLICABLE CODE REQUIREMENTS.
- PROVIDE "EARTHQUAKE CLIPS" ON LAY-IN (OR GRID) TROFFERS.
- WHERE FIXTURES ARE INSTALLED ON DRYWALL CEILINGS, THEY SHALL BE SUPPORTED FROM THE CEILING FRAMING SYSTEM OR THE BUILDING STRUCTURE. SUPPORT FROM DRYWALL IS NOT ACCEPTABLE.
- FIXTURES DESIGNATED "NL" SHALL BE PROVIDED WITH A CONSTANT POWER CONNECTION IN ORDER TO REMAIN ON AT ALL TIMES.
- FIXTURES DESIGNATED "EM" SHALL HAVE BATTERY BACKUP FOR EMERGENCY LIGHTING. EMERGENCY LIGHTING BATTERY PACKS SHALL PROVIDE 1-1/2 HOURS OF RELATED LAMP OPERATION.
- ELECTRICAL CONTRACTOR SHALL VERIFY THE REQUIREMENT OF FLANGE KITS FOR FIXTURES IN ALL AREAS PRIOR TO ORDERING. SEE ARCHITECTURAL DRAWINGS FOR RCP DETAILS.

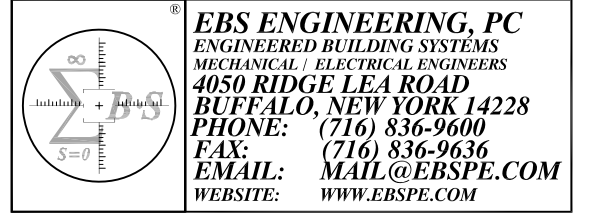
GENERAL SYMBOLS & ABBREVIATION
NOT ALL ABBREVIATIONS MAY BE REPRESENTED ON DRAWINGS

| | |
|--|---|
| SIGNIFIES EXISTING ELECTRICAL EQUIPMENT/ DEVICES TO REMAIN | GFI GND HCA HVAC HZ HERTZ IG ISOLATED GROUND IMC INTERMEDIATE METAL CONDUIT INT INTERLOCK KCMIL THOUSAND CIRCULAR MILS KV KILOVOLT-AMPERES KVAR KILOVOLT-AMPERES REACTIVE LC LIGHTING CONTACTOR LFMC LIQUID TIGHT FLEXIBLE METAL CONDUIT MAU MAKE-UP AIR UNIT MC MECHANICAL CONTRACTOR MCA MINIMUM CIRCUIT AMPS MCB MAIN CIRCUIT BREAKER MCC MOTOR CONTROL CENTER MCP MOTOR CIRCUIT PROTECTION MIN MINIMUM MLO MAIN LUGS ONLY NA NOT APPLICABLE NAC NOTIFICATION APPLIANCE CIRCUIT NC NORMALLY CLOSED NEC NATIONAL ELECTRICAL CODE NFPA NATIONAL FIRE PROTECTION ASSOCIATION NL NIGHT LIGHT NO NORMALLY OPEN NTS NOT TO SCALE OC OVER COUNTER OHE OVER HEAD ELECTRIC PB PULL BOX PC PLUMBING CONTRACTOR PNL PANEL PWR POWER PT POTENTIAL TRANSFORMER QTY QUANTITY RGS RIGID GALVANIZED STEEL RMC RIGID METAL CONDUIT RNC RIGID NON-METALLIC CONDUIT RTS REMOTE TEST STATION RTU ROT UP UNIT ST SHUNT TRIP UC UNDER GROUND COMMUNICATIONS UGE UNDER GROUND ELECTRIC UL UNDERWRITERS LABORATORY V VOLT VA VOLT-AMPERE W WATT WG WIRE GUARD WP WEATHER PROOF XFMR TRANSFORMER |
| SIGNIFIES EXISTING ELECTRICAL EQUIPMENT/ DEVICES TO BE REMOVED | |
| KEYNOTE | |
| REVISION TAG | |
| PHASE | |
| AMPERES | |
| ALTERNATING CURRENT | |
| AMPERE FRAME | |
| ABOVE FINISHED FLOOR | |
| AIR HANDLING UNIT | |
| AMPERE INTERRUPTING CAPACITY | |
| ALUMINUM | |
| AMPERE TRIP | |
| AUTOMATIC TRANSFER SWITCH | |
| AMERICAN WIRE GAUGE | |
| CONDUIT | |
| CABLE TELEVISION | |
| CIRCUIT BREAKER | |
| CIVIL CONTRACTOR | |
| CLOSED CIRCUIT TELEVISION | |
| CANDELA | |
| CIRCUIT | |
| CURRENT LIMITING FUSE | |
| CEILING MOUNT | |
| CONTROL POWER TRANSFORMER | |
| CURRENT TRANSFORMER | |
| COPPER | |
| DIRECT CURRENT | |
| DIAMETER | |
| ELECTRICAL CONTRACTOR | |
| EXHAUST FAN | |
| ELEVATOR | |
| EMERGENCY | |
| ELECTRICAL METALLIC TUBING | |
| EMERGENCY POWER OFF | |
| EXISTING TO REMAIN | |
| EXISTING | |
| ELECTRIC WATER COOLER | |
| FUSE | |
| FIRE ALARM ANNUNCIATOR | |
| FAN COIL UNIT | |
| FULL LOAD AMPERES | |
| FLEXIBLE METAL CONDUIT | |
| GROUND | |
| GENERAL CONTRACTOR | |

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SA PROJECT TEAM: PRINCIPAL P. Silvestri
PROJ. ARCH. _____ DRAFTER _____
JOB CAPT. _____ INTERIORS _____

SEAL:

TITLE:
**ELECTRICAL
SYMBOLS,
ABBREV. &
LIGHTING
SCHEDULE**

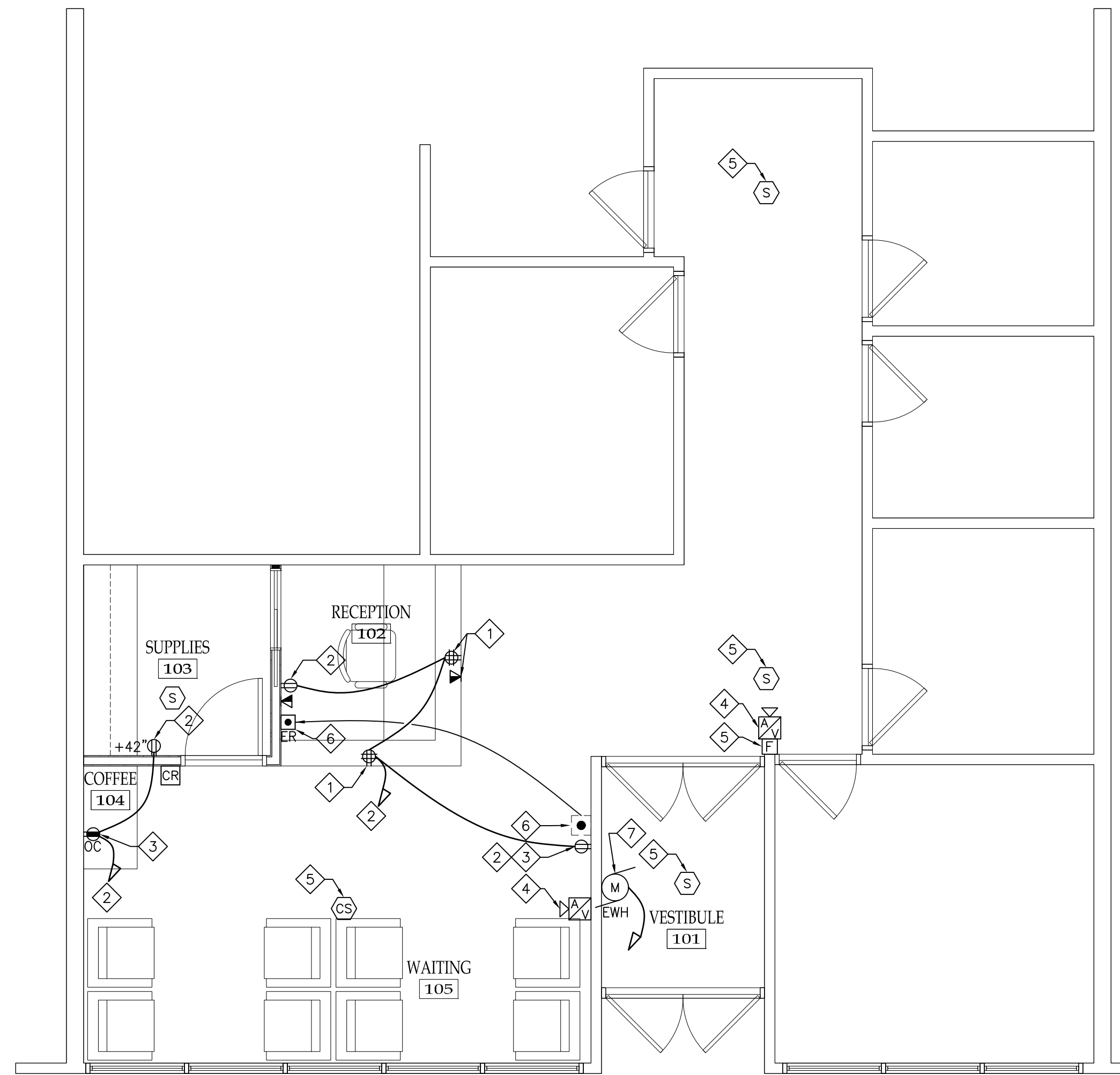


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DRAWING #: **E-1**



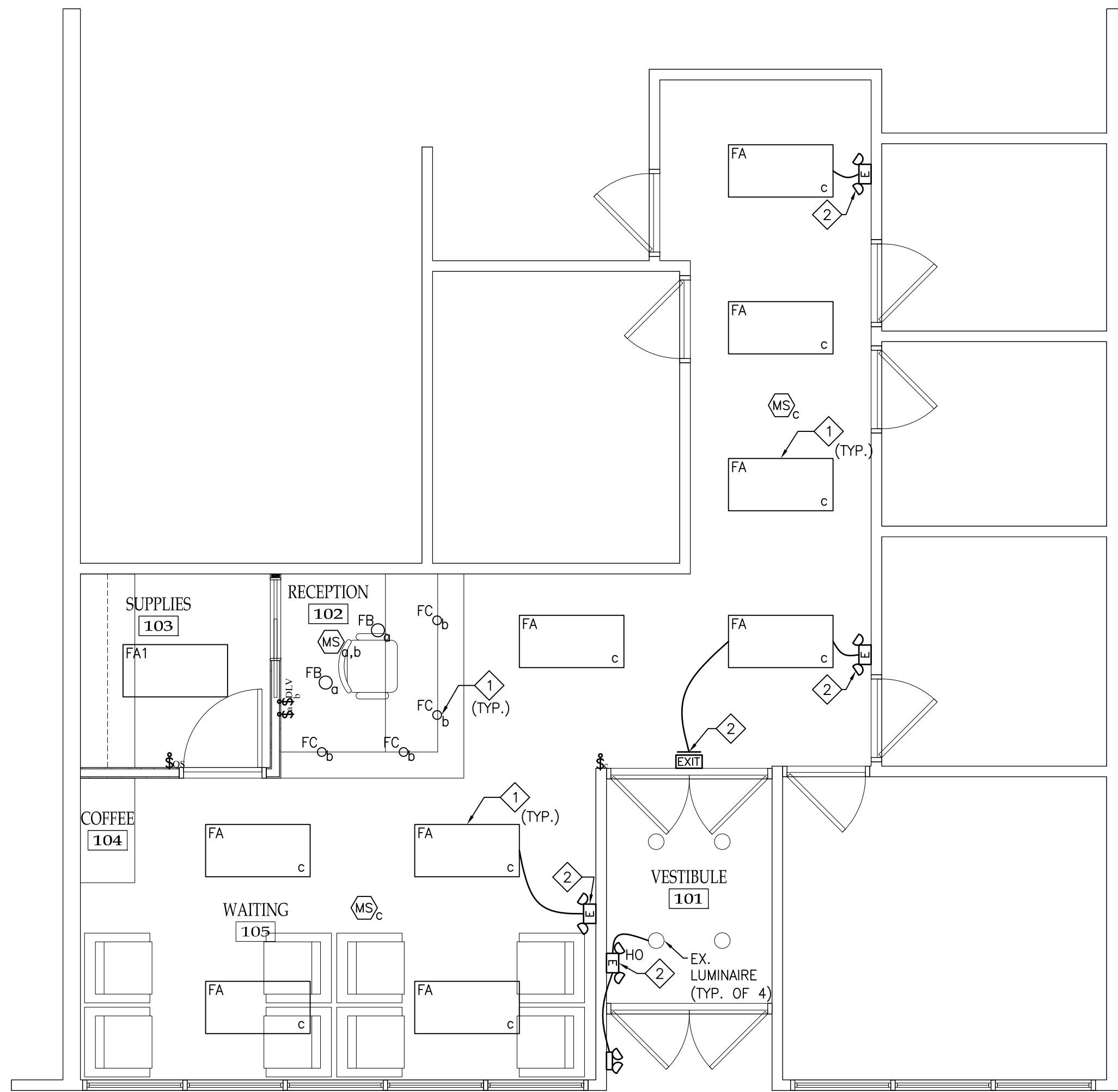
1 FLOOR PLAN - POWER AND SYSTEMS
E-3 SCALE: 1/4" = 1'-0"

GENERAL POWER NOTES:

- A. WIRING NOT SHOWN FOR CLARITY.
- B. WIRING SHALL BE PROVIDED TO DEVICES SHOWN, UNLESS OTHERWISE INDICATED. MINIMUM WIRING SIZE SHALL BE #12 AWG. AMPACITY, DERATING AND CONDUIT FILL SHALL BE AS REQUIRED BY THE NEC.
- C. MULTIPLE GROUPINGS OF DEVICES SHALL BE GANGED UNDER THE SAME COVERPLATE. SEPARATE PLATES ARE UNACCEPTABLE EXCEPT IN CASES OF DIMMER SWITCHES ADJACENT TO OTHER LIGHT SWITCHES. IN THAT CASE, PLATES SHALL BE AS CLOSE TOGETHER AS POSSIBLE. PLUMB TRUE FOR A NEAT AND COMPACT ORGANIZED APPEARANCE.
- D. SEE ARCHITECTURAL ELEVATIONS AND DETAILS FOR EXACT LOCATIONS OF ELECTRICAL ITEMS. THESE SHALL TAKE PRECEDENCE OVER ANY INDICATIONS IN ELECTRICAL CONSTRUCTION DOCUMENTS.
- E. ENSURE ALL SMOKE AND HEAT DETECTORS ARE PLACED A MINIMAL DISTANCE OF 3'-0" FROM HVAC SUPPLY / RETURN AIR GRILLS.

ELECTRICAL POWER KEYNOTES:

1. INSTALL DATA AND POWER RECEPTACLES IN FRONT DESK MILLWORK. COORDINATE EXACT LOCATION AND MOUNTING HEIGHTS PRIOR TO INSTALLATION.
2. PROVIDE 20A/1P CIRCUIT BREAKER IN EXISTING PANEL LOCATED IN REAR SECTION OF SUITE. MATCH EXISTING WAC. UPDATE EXISTING PANEL BOARD SCHEDULE.
3. RECEPTACLE SHALL BE TAMPER-PROOF.
4. WIRE FIRE ALARM AUDIO/VISUAL STROBE TO NEAREST EXISTING NOTIFICATION APPLIANCE CIRCUIT.
5. WIRE FIRE ALARM DEVICE TO CLOSEST EXISTING SIGNAL LINE CIRCUIT SERVING AREA.
6. REMOVE AND RELOCATE EXISTING DOOR ENTRY BUTTON. EXTEND WIRING AND CONDUIT AS NECESSARY TO ACCOMMODATE NEW LOCATION. COORDINATE EXACT LOCATION WITH OWNER/TENANT PRIOR TO INSTALLATION.
7. CIRCUIT ELECTRIC WALL HEATER (EWH) TO DEDICATED 208V CIRCUIT IN EXISTING PANEL LOCATED IN REAR SECTION OF SUITE. PROVIDE NEW 20A/2P CIRCUIT BREAKER, MATCH EXISTING WAC. UPDATE EXISTING PANEL BOARD SCHEDULE.



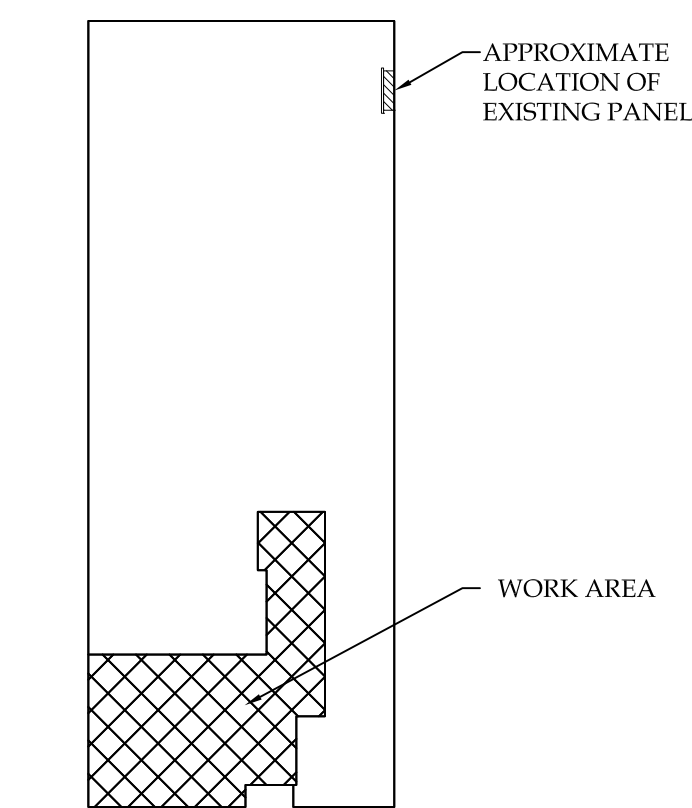
2 FLOOR PLAN - LIGHTING
E-3 SCALE: 1/4" = 1'-0"

GENERAL LIGHTING NOTES:

- A. WIRING NOT SHOWN FOR CLARITY.
- B. IF NO LIGHTING CONTROL IS INDICATED ON LUMINAIRE(S), LIGHTING IN ROOM SHALL BE CONTROLLED BY THE LOCAL SWITCHING.
- C. ALL EMERGENCY LIGHTING UNITS AND EXIT SIGNS SHALL BE CONNECTED TO UNSWITCHED PORTION OF LIGHTING CIRCUIT SERVING THE AREA.
- D. VERIFY ALL HEIGHTS OF PENDANT FIXTURES WITH ARCHITECT PRIOR TO INSTALLATION.
- E. COORDINATE LOCATIONS OF LIGHTING FIXTURES WITH MECHANICAL DUCT WORK AND SPRINKLER HEADS/PIPING. NOTIFY ARCHITECT OF ANY LOCATIONS WHERE CONFLICT MAY OCCUR.

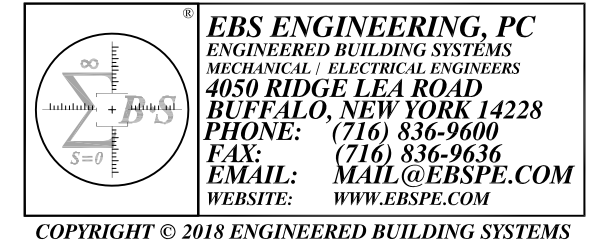
LIGHTING KEYNOTES:

1. EXTEND EXISTING LIGHTING CIRCUIT SERVING AREA TO NEW LUMINAIRE & CIRCUIT TO SWITCH AS SHOWN.
2. CIRCUIT EXIT SIGN/EMERGENCY WALL PACK AHEAD OF LOCAL SWITCHING.



3 KEY PLAN
E-3 SCALE: N.T.S.

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ISSUE:
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SA PROJECT TEAM: PRINCIPAL P. Silvestri
 PROJ. ARCH. _____ DRAFTER _____
 JOB CAPT. _____ INTERIORS _____

SEAL:

TITLE:
FLOOR PLAN - POWER, SYSTEMS & LIGHTING



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SA JOB #: 17158.01 DATE: 05-22-18

DRAWING #: E-3

GENERAL PROVISIONS

- A. **GENERAL:**
 1. REQUIREMENTS SPECIFIED ON COVER SHEET, ALONG WITH ELECTRICAL SPECIFICATIONS AND ALL ITS SECTIONS, COMPRISE THE CONTRACT DOCUMENTS FOR THE ELECTRICAL CONTRACT. DRAWINGS AND ALL THEIR REVISIONS UP TO THE BID SUBMITTAL DATE BECOME A BINDING PART OF THE CONTRACT, ALONG WITH ANY SPECIFICATIONS MENTIONED IN THEM. ANYTHING IMPLIED BY THE DRAWINGS AND VICE VERSA. THESE SPECIFICATIONS SHALL BE INTERPRETED AS ALSO IMPLIED BY THE DRAWINGS AND VICE VERSA. PROVIDE NECESSARY ITEMS FOR A COMPLETE INSTALLATION OF ALL ELECTRICALLY OPERATED EQUIPMENT LISTED IN THE SPECIFICATIONS OR SHOWN ON THE CONTRACT DRAWINGS.
 2. THE ARCHITECTURAL, STRUCTURAL, MECHANICAL, PLUMBING AND EQUIPMENT DRAWINGS AND SPECIFICATIONS ARE INCORPORATED INTO, AND BECOME A PART OF THIS DIVISION. THIS CONTRACTOR SHALL EXAMINE ALL SUCH DRAWINGS AND SPECIFICATIONS AND BECOME THOROUGHLY FAMILIAR WITH THE PROVISIONS CONTAINED THEREIN. THE SUBMISSION OF HIS BID SHALL INDICATE SUCH KNOWLEDGE.
 3. ELECTRICAL DRAWINGS ARE DIAGRAMMATIC. THEY ARE INTENDED TO SHOW THE APPROXIMATE LOCATIONS OF EQUIPMENT AND CONDUIT. DIMENSIONS GIVEN ON THE PLANS, IN FIGURES, SHALL TAKE PRECEDENCE OVER SCALED DIMENSIONS AND SHALL BE VERIFIED IN THE FIELD. THE ELECTRICAL CONTRACTOR SHALL LAYOUT ALL EQUIPMENT ROOMS TO MAKE SURE THE EQUIPMENT, AS PURCHASED, FITS IN THE ROOM OR SPACE SHOWN. EXACT LOCATION OF ALL EQUIPMENT SHALL BE VERIFIED IN THE FIELD AND ROUTING OF CONDUITS SHALL SUIT FIELD CONDITIONS.
 4. UNTIL THE TIME OF INSTALLATION, THE ARCHITECT RESERVES THE RIGHT TO MAKE MINOR CHANGES IN THE LOCATION OF CONDUIT AND EQUIPMENT WITHOUT ADDITIONAL COST TO THE CONTRACT.
 5. THE ELECTRICAL DRAWINGS AND SPECIFICATIONS ARE INTENDED TO SUPPLEMENT EACH OTHER. MATERIAL AND LABOR NECESSARY TO THE PROJECT SHALL BE FURNISHED AND INSTALLED EVEN THOUGH NOT SPECIFICALLY MENTIONED IN BOTH. LABOR AND/OR MATERIALS NEITHER SHOWN NOR SPECIFIED, BUT OBVIOUSLY NECESSARY FOR THE COMPLETION AND PROPER FUNCTIONING OF THE SYSTEM, SHALL BE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR AT NO ADDITIONAL COST.
 6. ARRANGE ALL EQUIPMENT SUBSTANTIALLY AS SHOWN ON THE DRAWINGS. MAKE DEVIATIONS ONLY WHERE NECESSARY TO AVOID INTERFERENCE. CHECK ALL EQUIPMENT SIZES AGAINST AVAILABLE SPACE PRIOR TO SHIPMENT TO AVOID INTERFERENCE.
 7. EXAMINE THE WORK OF OTHER TRADES INsofar AS THEIR WORK COMES IN CONTACT WITH OR IS COVERED BY THIS WORK. IN NO CASE ATTACH TO, OR FINISH AGAINST ANY DEFECTIVE WORK OR INSTALL WORK IN A MANNER WHICH WILL PREVENT PROPER INSTALLATION OF THE WORK OF OTHER TRADES.
 8. ELECTRICAL CONTRACTOR SHALL VERIFY WITH OTHER TRADES ALL ELECTRICAL CHARACTERISTICS OF EQUIPMENT REQUIRING ELECTRICAL CONNECTIONS. CONTRACTOR SHALL VERIFY VOLTAGE, PHASE AND HORSEPOWER AND SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO START OF WORK. ELECTRICAL CONTRACTOR SHALL PROVIDE DISCONNECTING MEANS AND OVERLOAD PROTECTION FOR ALL EQUIPMENT, UNLESS FURNISHED WITH EQUIPMENT PACKAGE.
 9. IT IS THE INTENT OF THESE DRAWINGS THAT THIS BE A COMPLETE ELECTRICAL JOB. ANY ERRORS OR OMISSIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT, PRIOR TO BIDDING THE JOB, WHO WILL MAKE CLARIFICATIONS IN WRITING.
- B. **VISIT TO THE SITE:**
 1. THIS CONTRACTOR SHALL VISIT THE SITE OF THE WORK AND FAMILIARIZE HIMSELF WITH ALL CONDITIONS AFFECTING HIS WORK. THE SUBMISSION OF HIS PROPOSAL SHALL INDICATE SUCH KNOWLEDGE. NO ADDITIONAL PAYMENT SHALL BE MADE ON CLAIMS THAT ARISE FROM A LACK OF KNOWLEDGE OF THE EXISTING CONDITIONS.
- C. **CODE AND PERMITS:**
 1. INSTALLATION SHALL BE IN FULL ACCORDANCE WITH ALL CODES, RULES AND REGULATIONS OF MUNICIPAL, CITY, COUNTY, STATE AND PUBLIC UTILITIES AND ALL OTHER AUTHORITIES HAVING JURISDICTION OVER THE PREMISES.
 2. COMPLY WITH ANY SPECIFICATION REQUIREMENTS THAT ARE IN EXCESS BUT NOT IN CONFLICT WITH CODE REQUIREMENTS.
 3. THE CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS, PLAN REVIEWS AND CERTIFICATES OF INSPECTION IN CONNECTION WITH HIS WORK, AS REQUIRED BY THE FOREGOING AUTHORITIES. BEFORE FINAL PAYMENT OF THE CONTRACT IS ALLOWED, ALL CERTIFICATES SHALL BE DELIVERED TO THE ARCHITECT IN DUPLICATE.
 4. ELECTRICAL MATERIAL AND EQUIPMENT SHALL BE LISTED TO A NATIONALLY RECOGNIZED TESTING LABORATORY, SUCH AS UL, CSA, ETL OR APPROVED EQUIVALENT.
- D. **ELECTRICAL INSPECTION:**
 1. ALL ELECTRICAL INSPECTIONS SHALL BE BY A 3RD PARTY AGENCY APPROVED BY THE LOCAL TOWN.
- E. **RECORD DRAWINGS:**
 1. IMMEDIATELY AFTER THE CONTRACT IS SIGNED, THE CONTRACTOR SHALL OBTAIN A COMPLETE SET OF REPRODUCTIONS OF THE CONTRACT DRAWINGS. THESE WILL BE THE BASIC RECORD DRAWINGS, TO BE DELIVERED TO THE ARCHITECT WITH TWO SETS OF PRINTS, UPON COMPLETION OF THE PROJECT, PRIOR TO REQUEST FOR FINAL PAYMENT. DURING THE PROGRESS OF THE JOB, THE RECORD DRAWINGS SHALL BE CORRECTED FROM MONTH-TO-MONTH TO SHOW THE WORK AS ACTUALLY INSTALLED.
- F. **STANDARDS AND SUBSTITUTIONS:**
 1. WHEREVER THE WORDS "APPROVED BY", "APPROVED EQUAL", "AS DIRECTED" OR SIMILAR PHRASES ARE USED IN THE FOLLOWING SPECIFICATIONS, THEY SHALL BE UNDERSTOOD TO REFER TO THE OWNER AS THE APPROVING AGENCY. THE NAME OR MAKE OF ANY EQUIPMENT OR MATERIALS NAMED IN THIS SPECIFICATION (WHETHER OR NOT THE WORDS "OR APPROVED EQUAL" ARE USED) SHALL BE KNOWN AS THE STANDARD FOR THE WORK.
 2. THESE SPECIFICATIONS ESTABLISH QUALITY STANDARD OF MATERIALS AND EQUIPMENT TO BE PROVIDED. SPECIFIC ITEMS ARE IDENTIFIED BY MANUFACTURER, TRADE NAME OR CATALOG DESIGNATION. THIS CONTRACTOR SHALL SUBMIT HIS BASE BID PRICE BASED UPON STANDARD SPECIFIED EQUIPMENT DESCRIBED HEREIN AND AS DETAILED ON DRAWINGS AND ASSOCIATED CONTRACT DOCUMENTS. THESE SPECIFICATIONS ARE NOT TO BE CONSIDERED PROPRIETARY. THE CONTRACTOR MAY SUBMIT INFORMATION ON MANUFACTURERS (OTHER THAN THOSE LISTED) FOR REVIEW BY THE ARCHITECT AND ENGINEER NO LATER THAN TEN (10) DAYS BEFORE BIDS ARE SUBMITTED. IN ADDITION, SAMPLES OF PROPOSED EQUIPMENT MAY BE REQUIRED TO BE SUBMITTED TO THE ENGINEER FOR REVIEW NO LATER THAN TEN (10) DAYS BEFORE BIDS ARE SUBMITTED. MANUFACTURERS OF PRODUCTS ACCEPTED BY THE ARCHITECT AND ENGINEER WILL BE LISTED IN AN ADDENDUM TO THE SPECIFICATIONS AS AN ACCEPTABLE SUBSTITUTION EQUIPMENT ACCEPTED AS DETAILED BELOW AND SHALL BE SHOWN AS A SEPARATE ADD OR DEDUCT PRICE TO BE FACTORED INTO THE BASE BID PRICE BY THE ARCHITECT AND OWNER IF ACCEPTED.
 3. SHOULD THE CONTRACTOR PROPOSE TO FURNISH MATERIALS AND EQUIPMENT OTHER THAN THOSE SPECIFIED OR APPROVED BY ADDENDUM, SUBMIT A WRITTEN REQUEST FOR SUBSTITUTIONS TO THE ARCHITECT AT THE BID OPENING. THE REQUEST SHALL BE AN ALTERNATE TO THE ORIGINAL BID; BE ACCOMPANIED WITH COMPLETE DESCRIPTIVE (MANUFACTURER, BRAND NAME, CATALOG NUMBER, ETC.) AND TECHNICAL DATA FOR ALL ITEMS. FAILURE BY THIS CONTRACTOR TO SUBMIT THE REQUISITE DOCUMENTATION DETAILED ABOVE SHALL BE UNDERSTOOD BY THE ARCHITECT AND ENGINEER TO INDICATE THAT SUBSTITUTE EQUIPMENT WILL NOT BE PRESENTED BY THE CONTRACTOR FOR CONSIDERATION. SUCH SUBSTITUTIONS WILL NOT BE CONSIDERED AFTER THE BID OPENING DATE AND DELAY OF PROJECT WILL NOT BE PERMITTED FOR FURTHER INSPECTION AND EVALUATION AFTER THIS DATE.
 4. WHERE SUCH SUBSTITUTIONS ALTER THE DESIGN OR SPACE REQUIREMENTS INDICATED ON THE DRAWINGS, INCLUDE ALL ITEMS OF COST FOR THE REVISED DESIGN AND CONSTRUCTION INCLUDING COST OF ALL ALLIED TRADES INVOLVED.
 5. ACCEPTANCE OR REJECTION OF THE PROPOSED SUBSTITUTIONS SHALL BE SUBJECT TO APPROVAL OF THE ARCHITECT AND ENGINEER. IF REQUESTED, THE CONTRACTOR SHALL SUBMIT (AT HIS COST) INSPECTION SAMPLES OF BOTH THE SPECIFIED AND PROPOSED SUBSTITUTE ITEMS.
 6. IN ALL CASES WHERE SUBSTITUTIONS ARE PERMITTED, THE CONTRACTOR SHALL BEAR ANY EXTRA COST OF EVALUATING THE QUALITY OF THE MATERIAL AND EQUIPMENT TO BE PROVIDED, INCLUDING ALL ARCH/ENGINEER FEES ASSOCIATED WITH CHANGE.
- G. **TESTING AND PLACING IN SERVICE:**
 1. ANY MATERIAL OR EQUIPMENT FAILING A TEST SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.
 2. TESTS SHALL INCLUDE THE FOLLOWING:
 - a. MEASURE THE LOAD ON EACH PHASE OF THE MAIN SERVICE AND EACH PHASE OF EVERY FEEDER UNDER FULL LOAD CONDITIONS.
 - b. MEASURE THE NO-LOAD AND FULL-LOAD VOLTAGES (PHASE TO PHASE, PHASE TO NEUTRAL AND PHASE TO GROUND FOR EACH PHASE OF EACH SERVICE, OF EACH SEPARATELY DERIVED SYSTEM, AND AT EACH PANELBOARD OR TRANSFORMER).
 - c. MEASURE THE GROUND RESISTANCE OF THE MAIN SERVICE GROUNDING ELECTRODE AND THE GROUND RESISTANCE OF EACH SEPARATELY DERIVED SYSTEM'S GROUNDING ELECTRODE.
 - d. MAKE INSULATION RESISTANCE TESTS ON ALL DRY TYPE TRANSFORMERS AND MOTORS.
- H. **INTERFERENCES:**
 1. BEFORE THE INSTALLATION OF ANY ITEM BEGINS, THE ELECTRICAL CONTRACTOR SHALL CAREFULLY ASCERTAIN THAT IT DOES NOT INTERFERE WITH CLEARANCES FOR THE ERECTION OF FINISH BEAMS, COLUMNS, PLASTER, WALLS OR OTHER STRUCTURAL OR ARCHITECTURAL MEMBERS AS SHOWN ON THE ARCHITECTURAL DRAWINGS. IF ANY WORK IS INSTALLED AND THE ARCHITECTURAL DESIGN CANNOT BE FOLLOWED, THIS CONTRACTOR SHALL, AT HIS OWN EXPENSE, MAKE CHANGES IN HIS WORK AS DIRECTED BY THE ARCHITECT TO PERMIT THE COMPLETION OF THE ARCHITECTURAL WORK IN ACCORDANCE WITH DRAWINGS AND SPECIFICATIONS.
 2. IT SHALL BE THE DUTY OF THIS CONTRACTOR TO REPORT ANY INTERFERENCES BETWEEN HIS WORK AND THAT OF ANY OF THE OTHER CONTRACTORS AS SOON AS THEY ARE DISCOVERED. THE ARCHITECT AND / OR ENGINEER SHALL DETERMINE WHICH EQUIPMENT WILL BE RELOCATED, REGARDLESS OF WHICH WAS INSTALLED FIRST. THEIR DECISION WILL BE FINAL.
- I. **QUALITY ASSURANCE:**
 1. ALL PRODUCTS SHALL BE NEW AND OF THE TYPE AND QUALITY SPECIFIED. WHERE MATERIALS, EQUIPMENT, APPARATUS OR OTHER PRODUCTS ARE SPECIFIED BY MANUFACTURER, BRAND NAME, TYPE OF CATALOG NUMBER, SUCH DESIGNATION SHALL ESTABLISH THE STANDARDS OF THE DESIRED QUALITY AND STYLE. IT IS THE INTENT OF THESE SPECIFICATIONS TO ESTABLISH A STANDARD OF QUALITY OF MATERIALS AND EQUIPMENT INSTALLED.

SCOPE OF WORK:

1. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIAL, STORAGE, UNPACKING AND PLACEMENT; TO INCLUDE BUT NOT BE LIMITED TO, THE FOLLOWING ITEMS:
 - a. COMPLETE POWER AND LIGHTING DISTRIBUTION SYSTEM INCLUDING ALL PANELS AND FEEDERS.
 - b. COMPLETE BRANCH CIRCUIT WIRING SYSTEM.
 - c. COMPLETE POWER WIRING FOR ALL AIR CONDITIONING EQUIPMENT, PLUMBING SYSTEM, HEATING EQUIPMENT, VENTILATING AND EXHAUST EQUIPMENT.
 - d. WIRING DEVICES.
 - e. COMPLETE LIGHTING FIXTURE INSTALLATION INCLUDING ALL REQUIRED LAMPS.
 - f. ILLUMINATED EXIT LIGHT SYSTEM.
 - g. LIGHTING CONTROLS.
 - h. OUTDOOR LIGHTING AND CONTROLS.
 - i. FIRE ALARM SYSTEM.
 - j. GROUNDING OF THE ELECTRICAL SYSTEM.
 - k. TESTING OF ALL CABLES AND CIRCUIT WIRING AFTER INSTALLATION.
 - l. TELEPHONE AND COMMUNICATION CONDUIT SYSTEM INCLUDING BOXES SHOWN ON THE DRAWINGS AND REQUIRED BY THE LOCAL TELEPHONE COMPANY AND/OR OWNER.
 - m. TELEPHONE AND ELECTRIC SERVICES.
 - n. IDENTIFY RACEWAYS AND CABLES WITH COLOR BANDING AS FOLLOWS:
 - a). FIRE ALARM SYSTEM: RED
 - b). SECURITY SYSTEM: BLUE AND YELLOW.
 - c). TELECOMMUNICATION SYSTEM: GREEN AND YELLOW.
 - o. TEMPORARY ELECTRICAL POWER AND LIGHTING AS REQUIRED FOR CONSTRUCTION.

BASIC ELECTRICAL MATERIALS AND METHODS

- A. **NAMEPLATES:**
 1. GENERAL: FURNISH AND MOUNT ON EACH PANELBOARD, SWITCHBOARD (INCLUDING BRANCH SWITCHES), LARGE JUNCTION BOX, SAFETY SWITCH, STARTER, REMOTE CONTROL, PUSH BUTTON STATION, AND ALL SIMILAR CONTROLS, A NAMEPLATE DESCRIPTIVE OF THE EQUIPMENT OR EQUIPMENT CONTROLLED.
 2. PROVIDE BLACK AND WHITE NAMEPLATES CONSTRUCTED FROM LAMINATED PHENOLIC WITH A WHITE CENTER CORE. LETTERS SHALL BE ENGRAVED IN THE PHENOLIC TO FORM WHITE LETTERS 3/8" HIGH. FASTEN THE NAMEPLATES WITH SCREWS AND AN ADHESIVE TYPE FASTENER.
- B. **MOUNTING ACCESSORIES:**
 1. THIS CONTRACTOR SHALL FURNISH AND INSTALL ALL ANGLE IRON, CHANNEL IRON, RODS, SUPPORTS, HANGERS, CONCRETE OR PLYWOOD REQUIRED TO INSTALL, MOUNT AND SUPPORT ANY ELECTRICAL EQUIPMENT OR DEVICE CALLED FOR ON THE PLANS.
 2. SUPPORTING MATERIAL SHALL BE COMPLETE WITH HANGERS, CONNECTORS, BOLTS, CLAMPS AND NECESSARY ACCESSORIES TO MAKE A COMPLETE INSTALLATION. SUPPORTING MATERIAL SHALL BE GALVANIZED, PAINTED OR OTHERWISE SUITABLY FINISHED. PRODUCTS BY BRINKLEY, STEEL CITY OR RACO WILL BE ACCEPTABLE.
 3. ALL SURFACE-MOUNTED EQUIPMENT ON BLOCK WALLS SHALL BE MOUNTED ON 3/4" PAINTED PLYWOOD BACKBOARD. ALL FLOOR-MOUNTED EQUIPMENT SHALL BE INSTALLED ON A 4" HIGH CONCRETE HOUSEKEEPING PAD.
- C. **EXECUTION:**
 1. THE ELECTRICAL WORK FOR CONSTRUCTION PROPOSED SHALL CONFORM TO ALL FEDERAL (OSHA), STATE, ALL SPECIFIC SAFETY REQUIREMENTS AND THE REQUIREMENTS OF THE CURRENT EDITION OF THE NEC.
 2. CHECK THE HVAC AND PLUMBING SPECIFICATIONS FOR ELECTRICAL REQUIREMENTS AND INCLUDE THE SAME IN THE CONTRACT COST.
 3. EQUIPMENT CONNECTIONS, STARTERS, DISCONNECT SWITCHES, CONTROL TRANSFORMERS AND PUSHBUTTON STATIONS FOR THE EQUIPMENT FURNISHED BY THE OWNER OR UNDER A SEPARATE CONTRACT SHALL BE INSTALLED AND CONNECTED UNDER THIS DIVISION, AS INDICATED ON THE CONTRACT DRAWINGS.
 4. ALL CUTTING, PATCHING, EXCAVATING, BACKFILLING AND CONCRETE WORK RELATED TO THIS CONTRACT WILL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR. THIS CONTRACTOR SHALL ASSUME THE RESPONSIBILITY OF PROVIDING THE SLEEVES, CHASES AND OPENINGS NECESSARY FOR THE ELECTRICAL INSTALLATION AND FOR THEIR REPAIR IN AN ACCEPTABLE MANNER, AS DETERMINED BY THE ARCHITECT. ALL HOLES SHALL BE CORE-DRILLED. PROVIDE FIRE STOP IN ALL OPENINGS CREATED THROUGH FIRE-RATED WALLS, FLOORS OR CEILINGS. PROVIDE WATER TIGHT SEALS FOR ALL OPENINGS CREATED THROUGH FOUNDATION WALLS OR EXTERIOR WALLS.
 5. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL REQUIRED ACCESS PANELS NECESSARY FOR HIS WORK, COORDINATE WITH ARCHITECT PRIOR TO INSTALLATION.
- D. **OPENINGS AND CHASES:**
 1. DETERMINE AND BE RESPONSIBLE FOR PROPER SIZE AND LOCATION OF OPENINGS AND CHASES REQUIRED. INSTALL ALL SLEEVES NECESSARY FOR THE WORK. WHERE ANY PIPING PASSES THROUGH ANY WALL, THE OPENING SHALL BE SEALED TIGHT AGAINST THE PIPING BY THIS CONTRACTOR. PIPING THROUGH FOUNDATION WALLS AND ROOFS SHALL BE SEALED WATER TIGHT BY THIS CONTRACTOR.
- E. **MATERIALS AND WORKMANSHIP:**
 1. ALL WORK LISTED BE INSTALLED IN A PRACTICAL AND WORKMANLIKE MANNER, BY MECHANICS SKILLED IN THE SEVERAL TRADES NECESSARY.
 2. ALL MATERIALS SHALL BE NEW AND FREE FROM DEFECTS AND SHALL BE THE BEST OF THEIR SEVERAL KINDS UNLESS SPECIFIED OR INDICATED ON THE DRAWINGS TO THE CONTRARY.
 3. DURING EACH PHASE AND AT THE COMPLETION OF THE CONSTRUCTION, THIS CONTRACTOR SHALL REMOVE ALL DEBRIS AND EXCESS MATERIALS CAUSED BY HIS WORK. HE SHALL LEAVE THE AREA OF OPERATION BROOM CLEAN.
 4. ALL ELECTRICAL EQUIPMENT SHALL BEAR THE UNDERWRITERS LABORATORIES LABEL OR ETL LABEL.
 5. THIS CONTRACTOR SHALL GUARANTEE HIS WORKMANSHIP AND MATERIAL (LAMPS EXCEPTED) FOR A PERIOD OF ONE YEAR FROM THE DATE OF BUILDING OPENING AND LEAVE HIS WORK IN PERFECT ORDER AT THE COMPLETION. SHOULD DEFECTS DEVELOP WITHIN THE GUARANTEE PERIOD, THE CONTRACTOR SHALL, UPON NOTICE OF THE SAME, REMEDY THE DEFECTS AND HAVE ALL DAMAGES TO OTHER WORK OR FURNISHINGS CAUSED BY THE REPAIRS CORRECTED AT HIS EXPENSE TO THE CONDITION BEFORE SUCH DAMAGE.
- F. **FIRE STOPPING:**
 1. FIRE-STOPPING FOR OPENINGS THROUGH FIRE AND SMOKE RATED WALLS AND ALL FLOOR ASSEMBLIES SHALL BE LISTED OR CLASSIFIED BY AN APPROVED INDEPENDENT TESTING LABORATORY FOR "THROUGH-PENETRATION FIRE-STOP SYSTEMS." THE SYSTEM SHALL MEET THE REQUIREMENTS OF "FIRE TESTS OF THROUGH-PENETRATION FIRE-STOPS" DESIGNATED ASTM E814.
 2. ACCEPTABLE MANUFACTURERS:
 - a. DOW CORNING FIRE-STOP SYSTEM FOAMS AND SEALANTS
 - b. NELSON ELECTRIC FIRE-STOP SYSTEM PUTTY, CLK AND WRP
 - c. THOMAS & BETTS - S-100 F500/600
 - d. CARBORUNDUM Fyre PUTTY
 - e. HILTI FIRESTOP SYSTEMS
 3. INSTALLATION OF FIRE-STOPPING FOR OPENINGS THROUGH FIRE AND SMOKE RATED WALLS AND FLOOR ASSEMBLIES SHALL BE AS FOLLOWS:
 - a. PROVIDE FIRE-STOP SYSTEM SEALS AT ALL LOCATIONS WHERE PIPING, TUBING, CONDUIT, ELECTRICAL BUSWAYS/CABLES/WIRES, DUCTWORK AND SIMILAR UTILITIES PASS THROUGH OR PENETRATE FIRE RATED WALL OR FLOOR ASSEMBLY. PROVIDE FIRESTOP SEAL BETWEEN SLEEVE AND WALL FOR DRY WALL CONSTRUCTION.
 - b. PROVIDE INTUMESCENT INSERT (SPECIFIED TECHNOLOGIES, INC. SERIES EP POWERSHIELD FIRESTOP INSERT, OR APPROVED EQUIVALENT) IN ALL ELECTRICAL SWITCH, OUTLET AND JUNCTION BOXES INSTALLED IN A FIRE RATED WALL ASSEMBLY.
 - c. THE MINIMUM REQUIRED FIRE RESISTANCE RATINGS OF THE WALL OR FLOOR ASSEMBLY SHALL BE MAINTAINED BY THE FIRE-STOP SYSTEM. THE INSTALLATION SHALL PROVIDE AN AIR AND WATER TIGHT SEAL.
 - d. THE METHODS USED SHALL INCORPORATE QUALITIES THAT PERMIT THE EASY REMOVAL OR ADDITION OF ELECTRICAL CONDUITS OR CABLES WITHOUT DRILLING OR USE OF SPECIAL TOOLS. THE PRODUCT SHALL ADHERE TO ITSELF TO ALLOW REPAIRS TO BE MADE WITH THE SAME MATERIAL AND PERMIT THE VIBRATION, EXPANSION AND/OR CONTRACTION OF ANY ITEMS PASSING THROUGH THE PENETRATION WITHOUT CRACKING, CRUMBLING AND RESULTING REDUCTION IN FIRE RATING.
 - e. PROVIDE RIGID STEEL SLEEVES WHERE NON-ARMORED CABLES PASS THROUGH FIRE RATED WALLS AND BARRIERS.

RACEWAYS AND BOXES

- A. **RACEWAYS:**
 1. ALL WIRE SHALL BE RUN IN ACCORDANCE WITH CODE IN CORROSION RESISTANT, RIGID, THREADED, METAL CONDUIT OR ELECTRICAL METALLIC TUBING (E.M.T.) UNLESS OTHERWISE SPECIFICALLY STATED HEREIN.
 - a. CONDUIT IN EXTERIOR WALLS, BELOW FLOOR SLAB, OR UNDERGROUND SHALL BE RIGID, THREADED, GALVANIZED, HEAVY WALL TYPE.
 - b. CARLON PVC TYPE 40 HEAVY WALL CONDUIT WITH GROUND WIRE MAY BE USED BELOW FLOOR SLAB OR UNDERGROUND IN LIEU OF RIGID, THREADED CONDUIT. PVC SCHEDULE 40 CONDUIT SHALL NOT BE RUN IN OR ABOVE FLOOR SLABS. PVC CONDUIT SHALL TERMINATE BELOW FLOOR SLAB WITH RIGID, THREADED METAL CONDUIT ADAPTER. CONDUIT ABOVE SLAB SHALL BE METAL.
 - c. CONDUIT RUN EXPOSED TO THE WEATHER SHALL BE HEAVY WALL, METAL THREADED TYPE.
 2. CONDUIT SIZE SHALL BE 1/2" MINIMUM.
 3. CONDUIT SHALL BE SECURELY FASTENED IN PLACE.
 4. ALL CONDUIT SHALL BE CONCEALED IN WALLS, FLOOR AND CEILINGS WHEREVER POSSIBLE. EXPOSED CONDUIT IN FINISHED AREAS WILL NOT BE PERMITTED. EXPOSED CONDUIT WILL BE PERMITTED IN UNFINISHED AREAS WITH THE SPECIFIC APPROVAL OF THE ARCHITECT.
 5. USE FLEXIBLE CONDUIT FOR THE CONNECTION TO RECESSED OR SEMI-RECESSED LIGHTING FIXTURES (6" LENGTH MAXIMUM). USE LIQUID TIGHT METAL CONDUIT FOR ALL CONNECTIONS TO MOTORS AND OTHER EQUIPMENT SUBJECT TO VIBRATION AND IN AREAS SUBJECT TO MOISTURE.
 6. USE WATER TIGHT JOINTS WITH BURIED AND CONCRETE ENCASED CONDUIT. ALL BURIED CONDUITS OUTSIDE OF BUILDINGS SHALL HAVE A MINIMUM OF 24" OF COVER UNLESS SHOWN OTHERWISE.
 7. METAL CONDUITS BURIED IN EARTH SHALL BE PAINTED (TWO COATS) WITH THE HEAVY ASPHALTUM PAINT.
 7. SUPPORT RUNS OF CONDUIT AS DETAILED IN THE APPROPRIATE TABLE OF THE NATIONAL ELECTRICAL CODE (NEC).
 8. INSTALL EXPOSED RUNS OF CONDUIT AND CONDUIT ABOVE LAY-IN CEILINGS PARALLEL OR PERPENDICULAR TO THE WALLS, STRUCTURAL MEMBERS OF INTERSECTIONS OF VERTICAL PLANES AND CEILINGS. PROVIDE RIGHT ANGLE TURNS USING FITTINGS OR SYMMETRICAL BENDS. SUPPORT CONDUITS WITHIN 1" OF ALL CHANGES IN DIRECTION.
 9. IF CONDUIT IS SUSPENDED, IT SHALL BE SUPPORTED ON TRAPPEZ HANGERS WHICH USE "ALL-THREAD" RODS FROM THE STRUCTURAL STEEL. THE USE OF CEILING SUPPORT WIRE OR SIMILAR MATERIAL WILL NOT BE ACCEPTED.
 10. INSTALL EMPTY CONDUIT FOR FUTURE USE AS INDICATED ON THE DRAWINGS. CONDUIT SHALL BE COMPLETE WITH JETLINE OR PULL ROPE, JUNCTION/OUTLET BOXES, TIE RINGS AND APPROPRIATE COVER PLATES.
 11. PROVIDE PITCHPOCKETS WHERE CONDUITS PENETRATE THE ROOF.
 12. THROUGH LUBRICATION/SEALANT IS REQUIRED ON OUTDOOR AND UNDERGROUND THREADED METAL JOINTS.
 13. INSTALL FIRE SEAL FITTINGS WHERE CONDUITS PENETRATE CONCRETE FLOOR SLABS OR MASONRY WALLS REQUIRED TO BE FIRE RATED.
 14. HORIZONTAL PORTION OF CONDUIT EXPOSED ON THE ROOF AND FEEDING EQUIPMENT SHALL NOT BE MORE THAN 5'-0" UNLESS THE WRITTEN APPROVAL FROM ARCHITECT OR ENGINEER IS OBTAINED.
- B. **SURFACE RACEWAYS:**
 1. FINISHED AREAS WHERE BRANCH CIRCUITS CANNOT BE CONCEALED DUE TO EXISTING CONDITIONS, THE USE OF SURFACE MOUNTED RACEWAYS MAY BE PERMITTED. E.G. SHALL CONTACT ENGINEER/ARCHITECT FOR APPROVAL PRIOR TO INSTALLATION. USE SURFACE METAL RACEWAY, CONSTRUCTED OF ENAMELED, SHEET METAL CHANNEL WITH FITTED COVER, COLOR & FINISH BY ARCHITECT. FURNISH STANDARD COUPLINGS, FITTINGS, BOXES, CONNECTORS, ELBOWS AND OTHER ACCESSORIES FOR A 100% COMPLETE INSTALLATION. EQUAL TO WIREMOLD OR APPROVED.
- C. **PULL & JUNCTION BOXES:**
 1. INSTALL PULL AND JUNCTION BOXES WHERE SHOWN ON THE DRAWINGS, AND WHERE REQUIRED FOR CHANGES IN DIRECTION, AT JUNCTION POINTS, AND TO FACILITATE WIRE PULLING. FURNISH BOX SIZES IN ACCORDANCE WITH NEC UNLESS LARGER BOXES ARE INDICATED.
 2. PROVIDE STEEL BOXES AND REMOVABLE COVERS OF CODE GAUGE, HOT ROLLED SHEET STEEL, HOT DIPPED GALVANIZED INSIDE AND OUTSIDE, FOR ABOVE GROUND WORK. FURNISH WATERPROOF BOXES WHEN INSTALLED ABOVE GROUND OUTSIDE.
 3. PROVIDE CAST IRON BOXES, HOT DIPPED GALVANIZED INSIDE AND OUTSIDE WHERE SHOWN ON THE DRAWINGS. FURNISH REMOVABLE COVERS WITH GASKETS AND STAINLESS STEEL, BRASS OR BRONZE SCREWS.
 4. PROVIDE CONCRETE BOXES FOR UNDERGROUND WORK UNLESS OTHERWISE INDICATED ON THE DRAWINGS. FURNISH STEEL FRAMES AND COVERS WITH THE COVER ATTACHED TO THE FRAME. WITH HEXAGON HEAD, BRASS OR BRONZE CAP SCREWS, 3/8" DIAMETER. PROVIDE A RUBBER GASKET FOR SEALING BETWEEN THE COVER AND THE FRAME. PAINT THE COVER WITH TWO COATS OF HEAVY ASPHALTUM.
 5. PROVIDE SIZE AS REQUIRED FOR NUMBER AND SIZE OF CONDUIT AND CONDUCTORS. COORDINATE DEPTH TO SUIT WALL DEPTH AND CONSTRUCTION. MAXIMUM NUMBER OF CONDUCTORS PERMITTED IN STANDARD BOXES SHALL BE AS LISTED IN N.E.C. INSTALL FLUSH RECESSED WHEREVER POSSIBLE AND SECURELY SUPPORTED FROM BUILDING CONSTRUCTION. 0.2/GEDNEY, GROUSE HINDS, T&B, STEEL CITY, RACO OR ACCEPTED EQUAL.

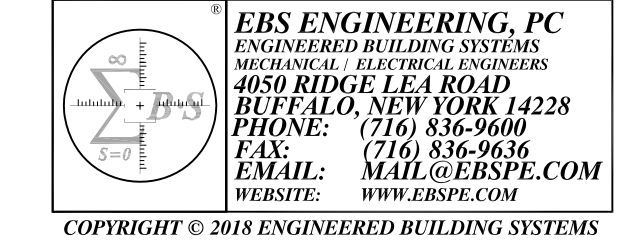
GROUNDING AND BONDING

- A. **GENERAL:**
 1. ALL GROUNDING AND GROUNDING CIRCUITRY SHALL MEET OR EXCEED THE REQUIREMENTS OF NEC 2014, ARTICLE 250. RACEWAY SYSTEMS WHICH INCLUDES ALL METAL CONDUIT, PULLBOXES, JUNCTION BOXES, ENCLOSURES, MOTOR FRAMES, ETC. SHALL BE MADE TO FORM A CONTINUOUS CONDUCTING, PERMANENT GROUND CIRCUIT OF THE LOWEST PRACTICAL IMPEDANCE TO ENHANCE THE SAFE CONDUCTION OF GROUND FAULT CURRENTS AND TO PREVENT OBJECTIONABLE DIFFERENCES IN VOLTAGE BETWEEN METAL CURRENT CARRYING PARTS OF THE ELECTRICAL SYSTEM. PROVIDE A GREEN GROUNDING CONDUCTOR IN ALL CIRCUITS. CONDUIT SYSTEM SHALL NOT BE USED AS THE EQUIPMENT GROUNDING CONDUCTOR. CONDUIT SIZE SHALL BE AS REQUIRED BY NEC, ARTICLE 250. ALL EQUIPMENT GROUND BUS, GROUND PADS, FRAMES, ENCLOSURES, ETC SHALL HAVE SURFACES AT THE POINT OF CONNECTION THOROUGHLY CLEANED AND BRIGHTENED JUST PRIOR TO ACTUALLY MAKING THE CONNECTION. TOUCH-UP DAMAGES PAINTED SURFACES. SPLICES IN WIRE OR CABLE GROUNDING CONDUCTORS ARE PROHIBITED. SOLDER PROHIBITED FOR CONNECTIONS.
 2. ALL CONDUITS SHALL CONTAIN A CODE-SIZED GROUND WIRE SIZE PER N.E.C. IN ADDITION TO THE CONDUCTORS SHOWN ON THE PLANS. WHERE CIRCUIT CONDUCTORS ARE INCREASED IN SIZE FOR VOLTAGE DROP, THE GROUND WIRE SIZE SHALL BE INCREASED PROPORTIONATELY.
 3. ALL GROUNDING SYSTEMS SHALL BE INSTALLED IN A NEAT AND WORKMANLIKE MANNER. ALL METHODS OF CONSTRUCTION THAT ARE NOT SPECIFICALLY DESCRIBED OR INDICATED IN THE CONTRACT DOCUMENTS SHALL BE SUBJECT TO THE CONTROL AND APPROVAL OF THE OWNER'S REPRESENTATIVE.
 4. GROUND EACH OUTSIDE LIGHTING POLE SEPARATELY.
 5. SEE CONTRACT DOCUMENTS FOR ADDITIONAL GROUNDING INFORMATION SPECIFIC TO THIS PROJECT.
- B. **CONDUCTORS:**
 1. EXPOSED GROUNDING CONDUCTORS SUCH AS BARS, STRAPS, CABLES, FLEXIBLE JUMPERS, BRANDS, SHUNTS, ETC., SHALL BE BARE COPPER UNLESS OTHERWISE CALLED FOR.
 2. CONDUCTORS SHALL BE COPPER.
 3. PROVIDE CONDUCTORS WITH THHN/THWN INSULATION. SIZES #10 AWG AND SMALLER SHALL BE GREEN IN COLOR. CONDUCTOR SIZES #8 AWG AND LARGER MAY HAVE GREEN TAPED BANDS AT EACH END AND IN ALL PULLBOXES.
- C. **CONNECTORS, CLAMPS, TERMINALS:**
 1. PROVIDE BRONZE MECHANICAL CONNECTORS AND CLAMPS. SOLDERLESS COMPRESSION TERMINALS SHALL BE COPPER, LONG BARREL, NEMA TWO BOLT.
- D. **TESTS:**
 1. GROUNDS AND GROUNDING SYSTEM SHALL HAVE A RESISTANCE TO SOLID EARTH GROUND NOT TO EXCEED THE FOLLOWING VALUES:
 - a. FOR GROUNDING SECONDARY SERVICE NEUTRAL: 25 OHMS
 - b. FOR GROUNDING NON-CURRENT CARRYING METAL PARTS ASSOCIATED WITH SECONDARY DISTRIBUTION SYSTEM; 25 OHMS
 2. PROVIDING GROUNDING TESTS TO VERIFY THE ABOVE VALUES. WHERE THESE VALUES ARE NOT MET, ADD ADDITIONAL GROUND RODS OR CONNECTIONS IN ORDER TO MEET THESE VALUES.

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Endeavor Health Services

463 William Street
Buffalo, NY

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SA PROJECT TEAM: PRINCIPAL P. Silvestri
 PROJ. ARCH. _____ DRAFTER _____
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SEAL:

ELECTRICAL SPECIFICATIONS



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SA JOB #: 17158.01 DATE: 05-22-18

DRAWING #: E-4

WIRING DEVICES

- A. **GENERAL:**
1. PROVIDE WIRING DEVICES, IN TYPES, CHARACTERISTICS, GRADES AND ELECTRICAL RATINGS FOR APPLICATIONS INDICATED WHICH ARE UL LISTED AND WHICH COMPLY WITH NEMA WD 1 AND OTHER APPLICABLE UL AND NEMA STANDARDS.
 2. WIRING DEVICE COLOR SHALL BE SELECTED BY ARCHITECT, UNLESS OTHERWISE INDICATED.
 3. PROVIDE COVER OR DEVICE PLATES FOR OUTLET BOXES AS FOLLOWS UNLESS OTHERWISE NOTED:
 - a. FINISHED AREAS: THERMOPLASTIC – COLOR TO MATCH DEVICE.
 - b. UNFINISHED AREAS: ZINC COATED SHEET METAL, ALUMINUM, OR CAST METAL, AS APPROPRIATE FOR THE TYPE OF BOX.
 - c. EXTERIOR AREAS: COPPER FREE ALUMINUM WITH GRAY, POWDER EPOXY FINISH, GASKET, WEATHERPROOF, CROUSE-HINDS "WLRO" FOR DUPLEX RECEPTACLES AND "WLRS" FOR SINGLE RECEPTACLES OR EQUAL.
 - d. TELEPHONE, COMMUNICATION, AND SIGNAL OUTLET PLATES, SHALL MATCH THOSE USED FOR RECEPTACLES AND SWITCHES. ALL OUTLET AND/OR JUNCTION BOXES SHALL BE COMPLETE WITH A COVER PLATE BY THIS CONTRACTOR.
 - e. WHERE DEVICES ARE GANGED, THEY SHALL BE INSTALLED UNDER A COMMON COVERPLATE.
 3. LOCATE SWITCHES AND WALL SWITCH SENSORS AT A MAXIMUM HEIGHT OF 4'-0" A.F.F., MEASURED TO CENTER OF BOX, OR NEAREST BLOCK COURSE (WITHIN A.D.A. REQUIREMENTS) UNLESS OTHERWISE INDICATED. THE LONG DIMENSION OF THE SWITCHES SHALL BE VERTICAL. INSTALL ALL SWITCHES ON STRIKE SIDE OF DOOR.
 4. LOCATE RECEPTACLES AT A MINIMUM HEIGHT OF 1'-6" A.F.F., MEASURED TO CENTER OF BOX, OR NEAREST BLOCK COURSE (WITHIN A.D.A. REQUIREMENTS), UNLESS NOTED OTHERWISE. THE LONG DIMENSION OF RECEPTACLES SHALL BE VERTICAL.
 5. ALL WIRING DEVICES SHALL BE INSTALLED NEATLY AND PARALLEL WITH BUILDING LINES.

- B. **SUBMITTALS:**
1. SUBMIT DEVICE PRODUCT DATA SHEETS IDENTIFYING MANUFACTURE AND MODEL NUMBERS.

- C. **RECEPTACLES:**
1. PROVIDE NEMA CONFIGURATION 5-20R DUPLEX 125 VOLT GROUNDING TYPE RECEPTACLES RATED FOR 20 AMPERES UNLESS OTHERWISE INDICATED ON THE DRAWINGS.
 2. STANDARD RECEPTACLES SHALL BE SPECIFICATION GRADE. RECEPTACLES LOCATED IN DWELLINGS SHALL BE TAMPER-RESISTANT TYPE.
 3. GFI RECEPTACLES SHALL BE SPECIFICATION GRADE. GFI RECEPTACLES LOCATED IN DWELLINGS SHALL BE TAMPER-RESISTANT TYPE.
 4. RECEPTACLES REQUIRING AMPERAGES, VOLTAGES OR CONFIGURATIONS DIFFERENT FROM THE DUPLEX CONVENIENCE RECEPTACLES ABOVE SHALL BE AS INDICATED ON THE DRAWINGS OR AS REQUIRED FOR EQUIPMENT SUPPLIED BY OTHERS.
 5. CONNECT WIRING DEVICE GROUNDING TERMINAL TO BRANCH CIRCUIT EQUIPMENT GROUNDING CONDUCTOR.
 7. PROVIDE OTHER RECEPTACLES OF A QUALITY, MATERIAL AND WORKMANSHIP EQUAL TO THAT OF ABOVE DESCRIPTIONS.
 8. ACCEPTABLE MANUFACTURES INCLUDED EATON/ARROW HART, LEGRAND (P&S), HUBBELL OR LEVITON. ALL DEVICES SELECTED FOR PROJECT SHALL BE SUPPLIED BY THE SAME MANUFACTURE.

- D. **WALL SWITCHES:**
1. PROVIDE SINGLE-POLE, THREE-WAY, AND FOUR-WAY 20A, 120/277 VOLT HEAVY-DUTY SPECIFICATION GRADE DEVICES WITH COPPER ALLOY CONTACT ARM, HEAVY DUTY BUMPER PADS FOR QUIET, SMOOTH OPERATION, HIGH STRENGTH THERMOPLASTIC POLYCARBONATE TOGGLE, AND SILVER ALLOY CONTACTS.
 2. ACCEPTABLE MANUFACTURES INCLUDE EATON/ARROW HART, LEGRAND (P&S), HUBBELL, LUTRON OR LEVITON. ALL DEVICES SELECTED FOR PROJECT SHALL BE SUPPLIED BY THE SAME MANUFACTURE.

- E. **WALL DIMMER / SWITCHES:**
1. PROVIDE SINGLE-POLE, THREE-WAY 120/277 VOLT SPECIFICATION GRADE 0-10V LED DIMMER DEVICES WITH THERMOPLASTIC POLYCARBONATE CONSTRUCTION, SEPARATE ON/OFF CONTROL AND SLIDE ADJUSTER FOR DIMMING. FOR USE WHEN SERVING LED FIXTURES WITH 0-10V DIMMING DRIVERS.
 2. PROVIDE SINGLE-POLE, THREE-WAY 120/277 VOLT RESIDENTIAL GRADE ELECTRONIC LOW-VOLTAGE (ELV) AND/OR CFL-LED COMPATIBLE DIMMER DEVICES WITH THERMOPLASTIC POLYCARBONATE CONSTRUCTION, TOGGLE/ROCKER PADDLE WITH SEPARATE SLIDE ADJUSTER FOR DIMMING. FOR USE IN APARTMENT UNITS ONLY (WHEN APPLICABLE).
 3. ACCEPTABLE MANUFACTURES INCLUDE EATON/ARROW HART, LEGRAND (P&S), HUBBELL, LUTRON OR LEVITON. ALL DEVICES SELECTED FOR PROJECT SHALL BE SUPPLIED BY THE SAME MANUFACTURE.

- F. **AUTOMATIC LIGHTING CONTROL DEVICES:**
1. ALL LIGHTING CONTROL DEVICES MUST BE SELECTED, INSTALLED AND WIRED TO MEET CURRENT LOCAL AND STATE ENERGY CODE REQUIREMENTS. WHEN LOCAL AND STATE CODES ARE NOT APPLICABLE THE 2015 IECC (INTERNATIONAL ENERGY CONSERVATION CODE) SHALL BE APPLIED. ANY DISCREPANCIES BETWEEN THESE DESIGN DOCUMENTS AND CURRENT ENERGY CODES MUST BE BROUGHT TO THE ENGINEERS ATTENTION PRIOR TO BID SUBMISSION.
 2. PROVIDE SINGLE RELAY, DUAL TECHNOLOGY, 120/277 VOLT, WALL SENSOR SWITCH, UNLESS OTHERWISE INDICATED IN DESIGN DOCUMENTS. BASIC PROGRAMMING SHALL INCLUDE MANUAL ON, AUTOMATIC OFF WITH THE OCCUPANCY SENSOR TIME DELAY SET FOR 15 MINUTES. REMAINING PROGRAMMING OPTIONS SHALL BE FACTORY DEFAULT UNLESS OTHERWISE INDICATED OR REQUIRED.
 3. PROVIDE SINGLE ZONE, DUAL TECHNOLOGY 120/277V CEILING MOUNT OCCUPANCY SENSOR WITH 360 DEGREE VIEWING ANGLE, UNLESS OTHERWISE INDICATED IN DESIGN DOCUMENTS. PROVIDE ALL REQUIRED POWER PACKS, SLAVE POWER PACKS, CONTROL UNITS, RELAYS, BACKBOXES, MOUNTING PLATES AND OTHER EQUIPMENT NECESSARY FOR PROPER SYSTEM OPERATION. BASIC PROGRAMMING SHALL INCLUDE OCCUPANCY SENSOR TIME DELAY SET FOR 15 MINUTES. REMAINING PROGRAMMING OPTIONS SHALL BE FACTORY DEFAULT UNLESS OTHERWISE INDICATED.
 4. PROVIDE SINGLE ZONE, DUAL TECHNOLOGY 120/277V CEILING MOUNT DIMMING AND PHOTOCONTROL OCCUPANCY SENSOR WITH 360 DEGREE VIEWING ANGLE, UNLESS OTHERWISE INDICATED IN DESIGN DOCUMENTS. PROVIDE ALL REQUIRED POWER PACKS, SLAVE POWER PACKS, CONTROL UNITS, RELAYS, BACKBOXES, MOUNTING PLATES AND OTHER EQUIPMENT NECESSARY FOR PROPER SYSTEM OPERATION. BASIC PROGRAMMING SHALL INCLUDE OCCUPANCY SENSOR TIME DELAY SET FOR 15 MINUTES AND DIMMING SET TO 3V. REMAINING PROGRAMMING OPTIONS SHALL BE FACTORY DEFAULT UNLESS OTHERWISE INDICATED.
 5. ACCEPTABLE MANUFACTURERS INCLUDE SENSOR SWITCH, WATTSTOPPER OR APPROVED EQUAL. ALL DEVICES SELECTED FOR PROJECT SHALL BE SUPPLIED BY THE SAME MANUFACTURE.

LIGHTING

- A. **GENERAL:**
1. SEE SHEET E-1 FOR PROJECT LIGHT FIXTURE SPECIFICATIONS.
 2. ALL LIGHTING FIXTURES SHALL BE UL LISTED AND BARE THE UL LABEL OF APPROVAL
 3. SET LEVEL, PLUMB, AND SQUARE WITH CEILINGS AND WALLS UNLESS OTHERWISE INDICATED.
 4. INSTALL LAMPS IN EACH LUMINAIRE AS NEEDED.
 5. FIXTURES SHALL BE SUPPORTED FROM BUILDING STRUCTURE.
 6. WHERE FIXTURES ARE INSTALLED ON DRYWALL CEILINGS, THEY SHALL BE SUPPORTED FROM THE CEILING FRAMING SYSTEM OR THE BUILDING STRUCTURE. SUPPORT FROM DRYWALL IS NOT ACCEPTABLE.
 7. NFPA 70 REQUIRES MINIMUM SUPPORT FOR FIXTURES. REFER TO "LAY-IN CEILING LIGHTING FIXTURES SUPPORTS" PARAGRAPH BELOW FOR MORE SPECIFIC SUPPORT REQUIREMENTS AND FOR REQUIREMENTS EXCEEDING CODE MINIMUMS. FOR PROJECTS REQUIRING SEISMIC DESIGN, ADDITIONAL SUPPORTS, AND RESTRAINING DEVICES BEYOND THOSE SPECIFIED HERE MAY BE REQUIRED.

- B. **SUBMITTALS:**
1. SUBMIT LIGHT FIXTURE DATA SHEETS IDENTIFYING MANUFACTURE AND MODEL NUMBERS.

- C. **LAY-IN CEILING LIGHTING FIXTURES SUPPORTS:**
1. USE GRID AS A SUPPORT ELEMENT.
 2. INSTALL CEILING SUPPORT SYSTEM RODS OR WIRES FOR EACH FIXTURE. LOCATE NOT MORE THAN 6 INCHES FROM LIGHTING FIXTURE CORNERS.
 3. SUPPORT CLIPS: FASTEN TO LIGHTING FIXTURES AND TO CEILING GRID MEMBERS AT OR NEAR EACH FIXTURE CORNER WITH CLIPS THAT ARE UL LISTED FOR THE APPLICATION.
 4. FIXTURES OF SIZES LESS THAN CEILING GRID: INSTALL AS INDICATED ON REFLECTED CEILING PLANS OR CENTER IN ACOUSTICAL PANEL, AND SUPPORT FIXTURES INDEPENDENTLY WITH AT LEAST TWO 3/4-INCH METAL CHANNELS SPANNING AND SECURED TO CEILING TEES.

- D. **SUSPENDED LIGHTING FIXTURE SUPPORT:**
1. PENDANTS AND RODS: WHERE LONGER THAN 48 INCHES (1200 MM), BRACE TO LIMIT SWINGING.
 2. STEM-MOUNTED, SINGLE-UNIT FIXTURES: SUSPEND WITH TWIN-STEM HANGERS.
 3. CONTINUOUS ROWS: USE TUBING OR STEM FOR WIRING AT ONE POINT AND TUBING OR ROD FOR SUSPENSION FOR EACH UNIT LENGTH OF FIXTURE CHASSIS, INCLUDING ONE AT EACH END.
 4. DO NOT USE GRID AS SUPPORT FOR PENDANT LUMINAIRES. CONNECT SUPPORT WIRES OR RODS TO BUILDING STRUCTURE.

- E. **AIR-HANDLING LIGHTING FIXTURES:** INSTALL WITH DAMPERS CLOSED AND READY FOR ADJUSTMENT.

- F. IMMEDIATELY PRIOR TO OCCUPANCY, DAMP CLEAN ALL DIFFUSERS, GLASSWARE, FIXTURE TRIMS, REFLECTORS, LAMPS AND REPLACE BURNED OUT LAMPS.

PANELBOARDS

- C. **MANUFACTURER:**
1. ALL EQUIPMENT IDENTIFIED IN THIS SECTION, AND THROUGHOUT DESIGN DOCUMENTS, IS BASED ON THE MANUFACTURER OF SQUARE-D. ACCEPTABLE ALTERNATE MANUFACTURES INCLUDE CUTLER-HAMMER, SIEMENS OR EQUAL PROVIDED EQUIPMENT MEETS ALL DESIGN CRITERIA AND PHYSICAL CHARACTERISTICS OF THE PROJECT.

- B. **GENERAL:**
1. FOR EXISTING PANELBOARDS, RELABEL EXISTING PANELBOARD DIRECTORIES TO REFLECT ALL BRANCH CIRCUIT REVISIONS; PROVIDE TYPEWRITTEN WITH ROOM NUMBERS, FUNCTION, ETC. TO POSITIVELY IDENTIFY EACH BRANCH CIRCUIT.
 2. FOR EXISTING PANELBOARDS, PROVIDE NEW QUICK MAKE, QUICK BREAK, THERMAL MAGNETIC, TOGGLE MECHANISM, MOLDED CASE CIRCUIT BREAKERS AS RECOMMENDED BY EQUIPMENT MANUFACTURER. PROVIDE AMPACITY AND POLES AS INDICATED ON PLANS WITH APPROPRIATE AMPERE INTERRUPTING RATING TO MATCH EXISTING EQUIPMENT. MULTIPOLE BREAKERS SHALL HAVE COMMON TRIP. MAKE TO MATCH EXISTING PANELBOARDS.

- C. **SUBMITTALS:**
1. SUBMIT EQUIPMENT DATA SHEETS INCLUDING CIRCUIT BREAKERS AND ALL ASSOCIATED ACCESSORIES. INFORMATION SHALL INCLUDE EQUIPMENT MANUFACTURE, MODEL NUMBERS AND APPLICABLE SHOP DRAWINGS.

FIRE ALARM SYSTEM SPECIFICATION

- A. **GENERAL:**
1. THE FIRE ALARM SYSTEM IS EXISTING. FIELD VERIFY SYSTEM TYPE, MANUFACTURE AND MODEL. NEW DEVICES SHOWN IN DESIGN DOCUMENTS MUST BE COMPATIBLE WITH EXISTING SYSTEM.

- B. **COMPLIANCE:**
1. SYSTEM AND INSTALLATION SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE STANDARDS AND REQUIREMENTS OF THE NFPA INCLUDING:
 - a. NFPA 70 – INCLUDING ARTICLE 760 (NEC)
 - b. NFPA 72 – COMPLETE
 - c. NFPA 101
 - d. APPLICABLE REQUIREMENTS OF THE LOCAL TOWN
 2. ALL EQUIPMENT SHALL BE "UL" LISTED UNDER THE FIRE PROTECTION DIRECTORY AND SUPPLEMENTS.

- C. **INSTALLATION:**
1. STEEL OUTLET OR METAL BACK BOXES SHALL BE PROVIDED FOR ALL COMPONENTS OF THE SYSTEM.
 2. ALL WIRING FOR THIS SYSTEM SHALL BE CONCEALED WITHIN THE BUILDING STRUCTURE AND FINISHES.
 3. "UL" LISTED AND APPROVED FIRE ALARM CABLE MAY BE EMPLOYED FOR THE COMPLETE SYSTEM AND SHALL BE FULLY CONCEALED. FIRE ALARM CABLE SHALL BE "PLENUM" RATED CONSISTING OF #14 (MINIMUM SIZE) COPPER CONDUCTORS WITH HYPALON OR TEFLON INSULATION AND JACKET. THE OUTER JACKET SHALL BE RED IN COLOR. WHERE EXPOSED, FIRE ALARM CABLE SHALL BE INSTALLED IN EMT.
 4. FIRE ALARM WIRING SYSTEM SHALL BE CONFIGURED AS CLASS "B".
 5. PROVIDE GALVANIZED CHASE NIPPLE (OR SIMILAR PLASTIC FITTING) WHERE CABLES ENTER OUTLET BOXES, BACKBOXES, PANELS ETC.

D. CONTROL PANEL

1. EXISTING.

E. DEVICES:

1. PULLSTATIONS SHALL BE DUAL ACTION, RED IN COLOR LABELED "FIRE".
2. HORN/STROBE (AUDIO/VISUAL) SHALL BE RED IN COLOR LABELED "FIRE".
3. STROBE DEVICES (VISUAL) SHALL BE RED IN COLOR LABELED "FIRE".
4. WEATHER-PROOF HORN/STROBE (AUDIO/VISUAL) SHALL BE RED IN COLOR LABELED "FIRE".
5. HORN DEVICES LOCATED IN BEDROOMS / SLEEPING UNITS HAVE BE LOW FREQUENCY TYPE WITH A 520hz TONE.
6. SMOKE DETECTORS SHALL BE PHOTOELECTRIC TYPE WITH STANDARD BASE UNLESS OTHERWISE INDICATED.
7. HEAT DETECTORS SHALL BE 135° FIXED TEMPERATURE WITH STANDARD BASE UNLESS OTHERWISE INDICATED.
8. CO DETECTORS SHALL HAVE AN AN AUDIBLE BASE PROVIDING A TEMPORAL 4 NOTIFICATION TONE.
9. SEE "FIRE ALARM SYSTEM SCHEDULE" ON SHEET E-1 FOR FURTHER INFORMATION ON SYSTEM DEVICES.

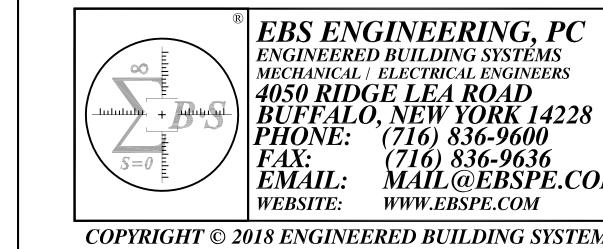
F. COMMISSIONING

1. THE COMPLETED FIRE ALARM SYSTEM SHALL BE FULLY TESTED IN THE PRESENCE OF: THE OWNER'S REPRESENTATIVE, CITY REPRESENTATIVE, THE ARCHITECT/ENGINEER, THE CONTRACTOR AND THE FACTORY AUTHORIZED REPRESENTATIVE OF THE MANUFACTURER. UPON COMPLETION OF A SUCCESSFUL TEST, THE CONTRACTOR SHALL SO CERTIFY, IN WRITING, TO THE JURISDICTION HAVING AUTHORITY, OWNER, ARCHITECT AND THE ENGINEER.
2. THE CONTRACTOR SHALL WARRANTY THE COMPLETED FIRE ALARM SYSTEM EQUIPMENT, WIRING AND INSTALLATION, TO BE FREE FROM INHERENT DEFECTS FOR A PERIOD OF ONE YEAR FROM THE DATE OF ACCEPTANCE OF THE CERTIFIED TEST.

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SA JOB #: **17158.01** DATE: **05-22-18**

DRAWING #: **E-5**