

Bingham McCutchen LLP

85 Exchange Street
Portland, Maine

3rd Floor Renovations

architect

phpartners

18 Tremont Street, Suite 707
Boston MA 02108
Tel 617.720.0740
Fax 617.720.0747
www.powershiggins.com

owner

Bingham McCutchen LLP

150 Federal Street
Boston, MA 02110
Tel 617.951.8000
Fax 617.951.8736

mep engineering

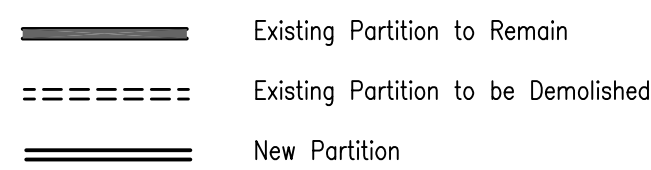
Richard D. Kimball Co.

200 Brickstone Square
Andover, MA 01810
Tel 978.296.6200
Fax 978.475.5768

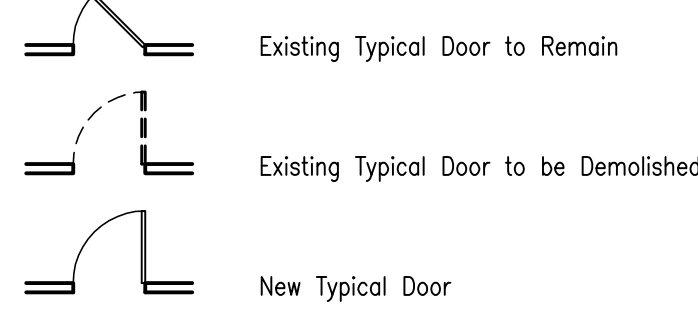
December 8, 2006

ARCH. DRAFTING CONVENTIONS

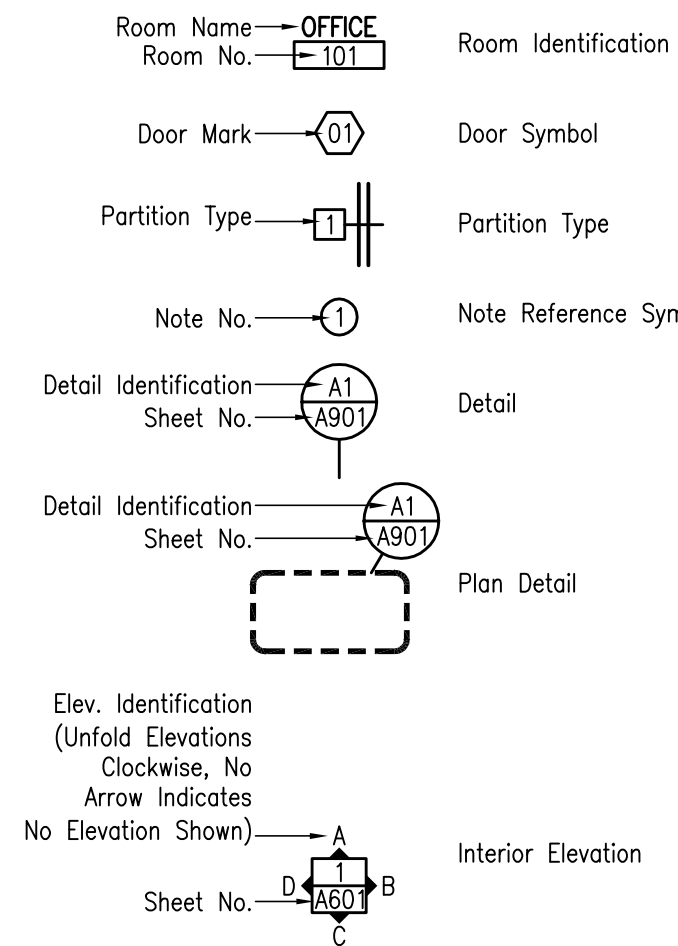
WALL INDICATION



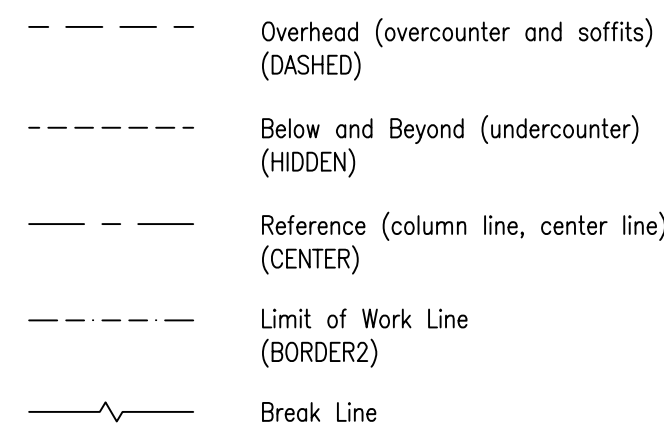
DOORS



ARCH. GRAPHIC SYMBOLS



LINETYPES



MISCELLANEOUS



ARCHITECTURAL ABBREVIATIONS

&	And	FPRF	Fireproofing	PNL	Panel
<	Angle	FS	Full Size	PNT	Point
⊙	At	FSH	Fire Sprinkler Head	PNTD	Painted
⊖	Centerline	FSTP	Firestopping	POL	Polished
⊕	Diameter	FT	Foot or Feet	POLY	Polyethylene
#	Pound	FTG	Footing	PR	Pair
±	Tolerance Dimension	FURN	Furniture	PRCST	Precast
A/E	Architect / Engineer	FURR	Furring	PREFAB	Prefabricated
AB	Anchor Bolt	FUT	Future	PREFIN	Prefinished
ACBL	Accessible (ADA Compliant)	G	Gas	PTD	Paper Towel Dispenser
ACOUS	Acoustical	GA	Gage	PTN	Partition
AF	Above Finished Floor	GALV	Galvanized	PTR	Paper Towel Receptacle
AD	Access Door	GB	Grab Bar	PVC	Polyvinyl Chloride
ADA	The Americans with Disabilities Act	GEN	Generator	PVG	Paving
ADBL	Adaptable (ADA Compliant)	GFR	Glass Fiber Reinforced Concrete	QT	Quarry Tile
ADDL	Additional	GFRG	Glass Fiber Reinforced Gypsum	QTY	Quantity
ADH	Adhesive	GL	Glass	QUAL	Quality
ADJ	Adjustable	GLMU	Glass Masonry Unit	R	Riser
ADJC	Adjuster	GMMU	Glass Mesh Mortar Unit	RAD	Radius
AF	Access Floor	GND	Ground	RBR	Rubber
AGGR	Aggregate	GR	Grade	RD	Roof Drain
AL	Aluminum	GRG	Grille	REC	Recessed
ALD	Aluminum Drip	GRTG	Grating	REF	Reference
ALT	Alternate	GSKT	Gasket	REFR	Refrigerator
ANOD	Anodized	GT	Grout	REG	Register
AP	Access Panel	GVL	Gravel	RENF	Reinforced or Reinforcing
ARCH	Architect	GYP	Gypsum	REM	Removeable
ASC	Above Suspended Ceiling	HB	Hose Bibb	REQD	Required
ASPH	Asphalt	HC	Hollow Core	RESIL	Resilient
BD	Board	HDBD	Hardboard	RFG	Roofing
BLDG	Building	HDWD	Hardwood	RH	Right Hand
BLKG	Blocking	HJ	Hardware	RHR	Right Hand Reverse
BM	Beam	HJWE	Hardware	RLG	Railing
BOT	Bottom	HGR	Hanger	RM	Room
BUR	Built-up Roofing	HGT	Height	RO	Rough Opening
		HM	Hollow Metal	RV	Roof Vent
CAB	Cabinet	HMD	Hollow Metal Door	RWL	Rain Water Leader
CB	Casing Bead	HNDRL	Handrail	S	South
CG	Corner Guard	HO	Hold Open	SC	Solid Core
CEM	Cement	HORIZ	Horizontal	SCHED	Schedule
CEMTS	Cementitious	HPT	High Point	SCRN	Screen
CER	Ceramic	HR	Hour	SD	Soap Dispenser
CHAN	Channel	HVAC	Heating, Ventilation, Air Conditioning	SECT	Section
CHBD	Chalkboard	HYDR	Hydraulic	SGL	Single
CHFR	Chamfer	ID	Inside Diameter	SHR	Shower
CJ	Construction Joint	IF	Inside Face	SHT	Sheet
CLG	Ceiling	IN	Inch or inches	SHTHG	Sheathing
CLJ	Control Joint	INSUL	Insulation	SHV	Shelving
CLO	Closet	INTR	Interior	SIM	Similar
CLR	Clear	IWH	Instantaneous Water Heater	SK	Sink
CLR	Clear	JAN	Janitor	SLV	Sleeve
CLRM	Classroom	JST	Joint	SM	Sheet Metal
CMPTST	Composite	JT	Joint	SND	Sanitary Napkin Dispenser
CNTFG	Centrifuge	KIT	Kitchen	SNR	Sanitary Napkin Receptacle
CNTR	Counter	KO	Knockout	SPEC	Specification
CO	Cased Opening	KOP	Knockout Panel	SQ	Square
COL	Column	KPL	Kick Plate	SSK	Service Sink
COMP	Computer	L	Left	ST	Street
CONC	Concrete	LAB	Laboratory	STA	Station
CONN	Connection	LAD	Ladder	STAG	Stagger
CONSTR	Construction	LAM	Lamination	STC	Sound Transmission Class
CONT	Continuous	LAV	Lavatory	STD	Standard
CONTR	Contractor	LAV	Lavatory	STL	Steel
CORR	Corridor	LB	Pound	STOR	Storage
CPRS	Compressible or Compression	LBL	Label	STRUCT	Structural
CRS	Cold Rolled Steel	LF	Linear Foot	SUSP	Suspended
CS	Cast Stone	LG	Length	SYM	Symbol
CSK	Countersunk	LH	Left Hand	SYMM	Symmetrical
CSMT	Cosement	LHR	Left Hand Reverse	SYS	System
CSWK	Cosework	LIB	Library	T	Tread
CYL	Cylinder	LIN	Linear	T&B	Top and Bottom
		LKR	Locker	T&G	Tongue and Groove
DBL	Double	LLH	Long Leg Horizontal	TB	Towel Bar
DEMO	Demolition	LLV	Long Leg Vertical	TBM	Top of Beam
DEPT	Department	LNTL	Lintel	TC	Top of Concrete
DET	Detail	LONG	Longitudinal	TEL	Telephone
DF	Drinking Fountain	LP	Lightproof	TEMP	Temporary
DIA	Diameter	LPT	Low Point	TER	Terrazzo
DIA	Diameter	LT	Light	TF	Top of Footing
DIM	Dimension	LTWG	Lightweight	TF	Top of Footing
DISP	Dispenser	LWG	Lighting	TF	Top of Finished Floor
DIV	Division	LVR	Lever or Louver	THK	Thickness
DMBD	Damp Proofing	MACH	Machine	THRES	Threshold
DMPF	Dampproofing	MAINT	Maintenance	THRU	Through
DN	Down	MAS	Masonry	TBKO	Tackboard
DO	Door	MATL	Material	TMPD	Tempered
DOP	Door Opening	MAX	Maximum	TOL	Tolerance
DS	Downspout	MECH	Mechanical	TP	Top of Pavement
DSP	Dry Standpipe	MEC	Mechanical	TPH	Toilet Paper Holder
DST	Door Stop	MED	Medium	TSL	Top of Slab
DWG	Drawing	MEMB	Membrane	TST	Top of Steel
DWR	Drawer	MET	Metal	TV	Television
		MEZZ	Mezzanine	TW	Top of Wall
E	East	MFC	Manufacturer	TYP	Typical
EA	Each	MH	Manhole	UNEX	Unexcavated
EIFS	Exterior Insulation Finish System	MIN	Minimum	UNFN	Unfinished
EL	Elevation	MIR	Mirror	UNO	Unless Otherwise Noted
ELAST	Elastomeric	MISC	Miscellaneous	UPS	Uninterruptible Power Supply
ELEC	Electric	ML	Metal Lath	UR	Urinal
ELEV	Elevator	MLDG	Molding	UV	Ultraviolet
EMER	Emergency	MLWK	Millwork	VAC	Vacuum
ENCL	Enclosure	MO	Masonry Opening	VCT	Vinyl Composition Tile
ENGR	Engineer	MTD	Mounted	VERT	Vertical
ENTR	Entrance	MTR	Mortar	VEST	Vestibule
EP	Electrical Panel	MULL	Mullion	VIF	Contractor to Verify in Field
EPDM	Ethylene Propylene Diene Monomer	MVBL	Movable	VNR	Veneer
EPRF	Explosion Proof	N	North or Nitrogen	VR	Vapor Retarder
EQ	Equipment	NA	Not Applicable	W	West
EQUIP	Equipment	NAT	Natural	W	West
ESCAL	Escalator	NIC	Not In Contract	W/O	Without
ESMT	Eseament	NO	Number	W/O	Without
EW	Each Way	NOM	Nominal	WC	Watercloset
EWC	Electric Water Cooler	NTS	Not To Scale	WD	Wood
EXC	Excavate	OA	Overall	WLD	Welded
EXH	Exhaust	OC	On Center	WSC	Wainscot
EXP	Expansion	OD	Outside Diameter	WT	Weight
EXST	Existing	OF	Outside Face	WTRPRF	Waterproofing
EXT	Exterior	OFCI	Owner Furnished/ Contractor Installed	WWF	Welded Wire Fabric
F/F	Face to Face	OFF	Office		
FA	Fire Alarm	OPNG	Opening		
FACP	Fire Alarm Control Panel	OPP	Opposite		
FB	Flat Bar	OXY	Oxygen		
FCO	Floor Clean Out	PB	Panic Bar		
FD	Floor Drain	PERF	Perforated		
FDC	Fire Department Connection	PERIM	Perimeter		
FDN	Foundation	PERP	Perpendicular		
FEC	Fire Extinguisher Cabinet	PGBD	Peg Board		
FEXT	Fire Extinguisher	PL	Plate		
FGL	Fiberglass	PLAM	Plastic Laminate		
FHC	Fire Hose Cabinet	PLAS	Plaster		
FHP	Full Height Partition	PLBG	Plumbing		
FHY	Fire Hydrant	PLYWD	Plywood		
FIN	Finish	PNEU	Pneumatic		
FL	Flashing				
FLR	Floor or Flooring				
FLUOR	Fluorescent				
FOC	Face of Concrete				
FOF	Face of Finish				
FOM	Face of Masonry				
FOS	Face of Stud				

GENERAL NOTES AND CONDITIONS

- ALL WORK SHALL COMPLY WITH THE CITY OF PORTLAND AND THE STATE OF MAINE BUILDING CODES AND REGULATIONS, AND THE REGULATIONS OF THE NATIONAL BOARD OF FIRE UNDERWRITERS AND THE AMERICANS WITH DISABILITIES ACT.
- ALL ARCHITECTURAL DRAWINGS AND CONSTRUCTION NOTES ARE COMPLEMENTARY, AND WHAT IS CALLED FOR BY EITHER WILL BE BINDING AS IF CALLED FOR BY ALL. ANY WORK SHOWN OR REFERRED TO ON ANY SET OF DRAWINGS SHALL BE PROVIDED AS THOUGH SHOWN ON ALL RELATED DRAWINGS.
- THE GENERAL CONTRACTOR SHALL NOTIFY ARCHITECT IMMEDIATELY IF HE CANNOT COMPLY WITH ALL NOTES CALLED FOR IN THIS DOCUMENT ON ALL OTHER ARCHITECTURAL DRAWINGS.
- THE GENERAL CONTRACTOR SHALL NOTIFY ARCHITECT OF ANY DISCREPANCIES BETWEEN THE DRAWINGS, THESE NOTES, AND FIELD CONDITIONS BEFORE COMMENCING ANY WORK, AND REQUEST CLARIFICATION.
- THE CHARACTER AND SCOPE OF THE WORK ARE ILLUSTRATED BY THE DRAWINGS LISTED IN THE SCHEDULE OF DRAWINGS. ANY ADDITIONAL DETAIL DRAWINGS TO INTERPRET AND EXPLAIN THE DRAWINGS AND OTHER INFORMATION DEEMED NECESSARY BY ARCHITECT WILL BE FURNISHED TO THE GENERAL CONTRACTOR WHEN AND AS REQUIRED BY THE WORK, AND IT IS TO BE UNDERSTOOD THAT THE SAID ADDITIONAL DRAWINGS ARE TO BE CONSIDERED AS FORMING A PART OF THESE NOTES TO WHICH THEY RELATE.
- THE SUBMISSION OF A PROPOSAL WILL BE CONSTRUED AS EVIDENCE THAT SUCH AN EXAMINATION OF THE PREMISES HAS BEEN MADE AND LATER CLAIMS FOR LABOR, EQUIPMENT OR MATERIAL REQUIRED OR FOR DIFFICULTIES ENCOUNTERED, WHICH COULD HAVE BEEN FORESEEN HAD SUCH AN EXAMINATION BEEN MADE, WILL NOT BE RECOGNIZED.
- EACH CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS AND CONDITIONS AT JOB SITE.
- EACH CONTRACTOR SHALL MAKE ALL REQUIRED ARRANGEMENTS FOR DELIVERY OF EQUIPMENT AND/OR MATERIALS. IT SHALL BE THE RESPONSIBILITY OF EACH CONTRACTOR TO CHECK THE RULES AND REGULATIONS GOVERNING WORK ON THE PREMISES, INCLUDING THE FOLLOWING:
 - DATE AND TIME OF DELIVERY SHALL BE ESTABLISHED IN CONJUNCTION WITH THE PERSON HAVING JURISDICTION OVER PREMISES (OVERTIME CHARGES AND/OR ANY NECESSARY EXPENSE SHALL BE PAID BY CONTRACTOR REQUIRING SERVICE).
 - BUILDING CONDITIONS, INCLUDING SIZE AND LOADING CAPACITY OF ELEVATORS; SIZE OF DOORWAYS, CORRIDORS, WINDOW OPENINGS, ETC., SHALL BE CHECKED FOR ITEMS BEING DELIVERED BY CONTRACTOR REQUESTING DELIVERY.
 - ALL CHARGES INVOLVING THE INSTALLATION AND/OR OPERATION OF A HOIST SYSTEM, IF REQUIRED, SHALL BE BORNE BY THE CONTRACTOR USING THIS SERVICE. CHARGES INVOLVING THE TEMPORARY REMOVAL AND REINSTALLATION OF WINDOW SASH AND/OR FIXED PANELS REQUIRED FOR DELIVERY SHALL BE BORNE BY CONTRACTOR.
- ALL CORRESPONDENCE TO OWNER, TO CONTRACTOR, TO LANDLORD, OR TO ARCHITECT SHALL BE FORWARDED IN COPY TO THE OTHER PARTY/PARTIES.
- THE GENERAL CONTRACTOR SHALL FURNISH A FIELD PROGRESS SCHEDULE TO ARCHITECT FOR ALL PHASES OF CONSTRUCTION.
- THE USE OF THE WORDS "PROVIDE" OR "PROVIDED" IN CONNECTION WITH ANY ITEM SPECIFIED, IS INTENDED TO MEAN, UNLESS OTHERWISE NOTED, THAT SUCH ITEM SHALL BE FURNISHED AND INSTALLED, AND CONNECTED WHERE SO REQUIRED.
- WHERE THE TERMS "APPROVED EQUAL", "OTHER APPROVED", "EQUAL TO", "ACCEPTABLE", OR OTHER GENERAL QUALIFYING TERMS ARE USED IN THESE NOTES, IT SHALL BE UNDERSTOOD THAT REFERENCE IS MADE TO THE RULING AND JUDGMENT OF ARCHITECT.
- THE GENERAL CONTRACTOR SHALL SUPPLY CUTS FOR APPROVAL BY ARCHITECT FOR ALL FIXTURES AND EQUIPMENT CALLED FOR ON ARCHITECTURAL DRAWINGS. I.E., LIGHT FIXTURES, HARDWARE, ETC.
- THE GENERAL CONTRACTOR SHALL SUBMIT ALL FABRICATION SHOP DRAWINGS AND FIXTURE CUTS TO ARCHITECT FOR APPROVAL. ALL SHOP DRAWINGS AND CUTS SIGNED "APPROVED" SHALL SUPERSEDE ORIGINATING DRAWINGS IN DESIGN APPEARANCE ONLY. CONTRACTORS AND ENGINEERS SHALL ASSUME RESPONSIBILITY FOR ALL ERRORS ON THEIR DRAWINGS (SUBMIT MINIMUM FOUR COPIES OF EACH).
- THE GENERAL CONTRACTOR SHALL REMOVE ALL RUBBISH AND WASTE MATERIALS, BOTH FROM HIS OWN EMPLOYEES AND HIS SUBCONTRACTORS.
- ALL WOODWORK ATTACHED TO PREMISES AND ALL WOOD DOORS SHALL COMPLY WITH THE CITY OF PORTLAND BUILDING CODE AND THE STATE OF MAINE FIRE CODES.
- ALL BUILDING PERMITS AND FILING FEES CONNECTED WITH THIS WORK SHALL BE SECURED BY THE GENERAL CONTRACTOR.
- THE GENERAL CONTRACTOR SHALL EXERCISE STRICT CONTROL OVER JOB CLEANING TO PREVENT ANY DIRT, DEBRIS OR DUST FROM LEAVING THE JOB SITE.
- THE CONSTRUCTION NOTES AND/OR DRAWINGS ARE SUPPLIED TO ILLUSTRATE THE DESIGN AND THE GENERAL TYPE OF CONSTRUCTION DESIRED AND ARE INTENDED TO IMPLY TO THE FINEST QUALITY OF CONSTRUCTION, MATERIAL AND WORKMANSHIP THROUGHOUT.
- THE GENERAL CONTRACTOR SHALL MAINTAIN A CURRENT AND COMPLETE SET OF CONSTRUCTION DRAWINGS ON THE FLOOR DURING ALL PHASES OF CONSTRUCTION FOR USE OF ALL TRADES.
- THE GENERAL CONTRACTOR UPON ACCEPTANCE AND APPROVAL OF THE DRAWINGS ASSUMES FULL RESPONSIBILITY FOR THE CONSTRUCTION, MATERIALS AND WORKMANSHIP OF THE WORK DESCRIBED IN THESE NOTES AND DRAWINGS AND HE WILL BE EXPECTED TO COMPLY WITH THE "SPIRIT AS WELL AS THE LETTER" IN WHICH THEY WERE WRITTEN.
- ALL REQUIRED EXITS, WAY OF APPROACH THERETO AND WAY OF TRAVEL FROM THE EXITS INTO THE STREET SHALL CONTINUOUSLY BE MAINTAINED FREE FROM ALL OBSTRUCTIONS AND IMPEDIMENTS TO FULL INSTANT USE IN THE CASE OF FIRE OR OTHER EMERGENCY.
- DURING THE ENTIRE PERIOD OF CONSTRUCTION, ALL EXISTING EXITS, EXIT LIGHTING, FIRE PROTECTIVE DEVICES AND ALARMS SHALL BE CONTINUOUSLY MAINTAINED.
- DURING THE ENTIRE PERIOD OF CONSTRUCTION, THE TELEPHONE NUMBERS OF THE CLOSEST AVAILABLE PHYSICIANS, HOSPITALS OR AMBULANCES SHALL BE CONSPICUOUSLY POSTED.
- THE GENERAL CONTRACTOR SHALL DO ALL CUTTING, FITTING AND PATCHING OF WORK THAT MAY BE REQUIRED TO MAKE ALL PARTS COME TOGETHER PROPERLY AND FIT TO RECEIVE OR BE RECEIVED BY WORK OF OTHER CONTRACTORS SHOWN UPON OR REASONABLY IMPLIED BY THE DRAWINGS AND NOTES.
- THE GENERAL CONTRACTOR SHALL PROVIDE ALL FLOOR CUTOUTS AND PATCHING REQUIRED FOR THE INSTALLATION OF ALL WORK.
- THE GENERAL CONTRACTOR SHALL CUT AND PATCH EXISTING DRYWALL OR PLASTER AS REQUIRED TO CONCEAL NEW ELECTRICAL, PLUMBING AND HVAC WORK CONCEALED IN EXISTING WALLS.
- THE GENERAL CONTRACTOR SHALL PROVIDE AND INSTALL ALL PARTITIONS AS DESIGNATED ON ARCHITECTURAL DRAWINGS.
- THE GENERAL CONTRACTOR SHALL PROVIDE ALL LINE AND GRADE MARKINGS ON THE FINISH FLOOR OF ALL PARTITIONS FOR ARCHITECT APPROVAL.
- UNLESS OTHERWISE NOTED, ALL DIMENSIONS FOR PARTITIONS ARE FROM FINISH TO FINISH.
- WALLS SHOWN ALIGNED WITH BASE BUILDING STRUCTURE SHALL BE FLUSH AND SMOOTH WITH BASE BUILDING STRUCTURE UNLESS OTHERWISE INDICATED.
- THE GENERAL CONTRACTOR SHALL USE CORNER BEADS AT ALL EXPOSED CORNERS AND EXPOSED ENDS IN PLASTER AND DRYWALL PARTITIONS.
- ALL PARTITIONS SHALL BE ANCHORED FIRMLY AS PER MANUFACTURER'S SPECIFICATIONS OR BUILDING CODE REQUIREMENTS.
- THE GENERAL CONTRACTOR SHALL SUPPLY ALL RAO (RETURN AIR OPENINGS) IN PARTITIONS ABOVE HUNG CEILINGS AS SHOWN ON HVAC ENGINEERING DRAWINGS.
- THE GENERAL CONTRACTOR SHALL PROVIDE SUFFICIENT FRAMING FOR ALL WALL OPENINGS FOR DUCTWORK, RETURN AIR OPENINGS AND GRILLE OPENINGS ABOVE AND BELOW HUNG CEILING. THESE ARE TO BE COORDINATED WITH HVAC ENGINEERING DRAWINGS AND THE MECHANICAL CONTRACTOR'S SHOP DRAWINGS. ALL OPENINGS SHALL BE PROPERLY SEALED FOR SOUNDPROOFING AND VIBRATION.

LIST OF DRAWINGS

COVER	
ARCHITECTURAL	
A001	DRAFTING COVENTIONS AND SYMBOLS, GENERAL NOTES AND LIST OF DRAWINGS
D103	DEMOLITION PLAN
A103	CONSTRUCTION PLAN, ENLARGED TOILET ROOMS AND PARTITION TYPES
A203	REFLECTED CEILING PLAN AND CEILING DETAILS
A303	ELECTRICAL/TEL/DATA PLAN
A403	FURNITURE AND SECRETARIAL STATION DETAILS
A403a	FINISH PLAN
A601	INTERIOR ELEVATIONS
A701	DOOR AND FRAME SCHEDULE, DOOR HARDWARE AND DOOR DETAILS
A901	CASEWORK DETAILS
PLUMBING	
P0.00	PLUMBING LEGEND & SPECIFICATION
PD2.00	PLUMBING 3RD FLOOR PLAN DEMOLITION
P2.00	PLUMBING 3RD FLOOR PLAN
HVAC	
H0.00	HVAC LEGEND AND ABBREVIATIONS
HD2.00	HVAC 3RD FLOOR PLAN DEMOLITION
H2.00	HVAC 3RD FLOOR PLAN
H7.00	HVAC DETAILS
H8.00	SCHEDULES AND DETAILS
H9.00	HVAC NOTES & SPECIFICATIONS
ELECTRICAL	
E0.00	ELECTRICAL LEGEND, NOTES
E0.01	ELECTRICAL SPECIFICATION
E2.00	ELECTRICAL 3RD FLOOR LIGHTING PLAN
E3.00	ELECTRICAL 3RD FLOOR POWER PLAN
E4.00	3RD FLOOR FIRE ALARM PLAN
E5.00	ELECTRICAL SCHEDULES AND RISER DIAGRAM
STRUCTURAL	
S0	STRUCTURAL GENERAL NOTES
S1.1	STRUCTURAL FRAMING AND SECTIONS

revisions

Bingham
McCutchen
LLP

3rd Floor Renovations
85 Exchange Place
Portland, Maine

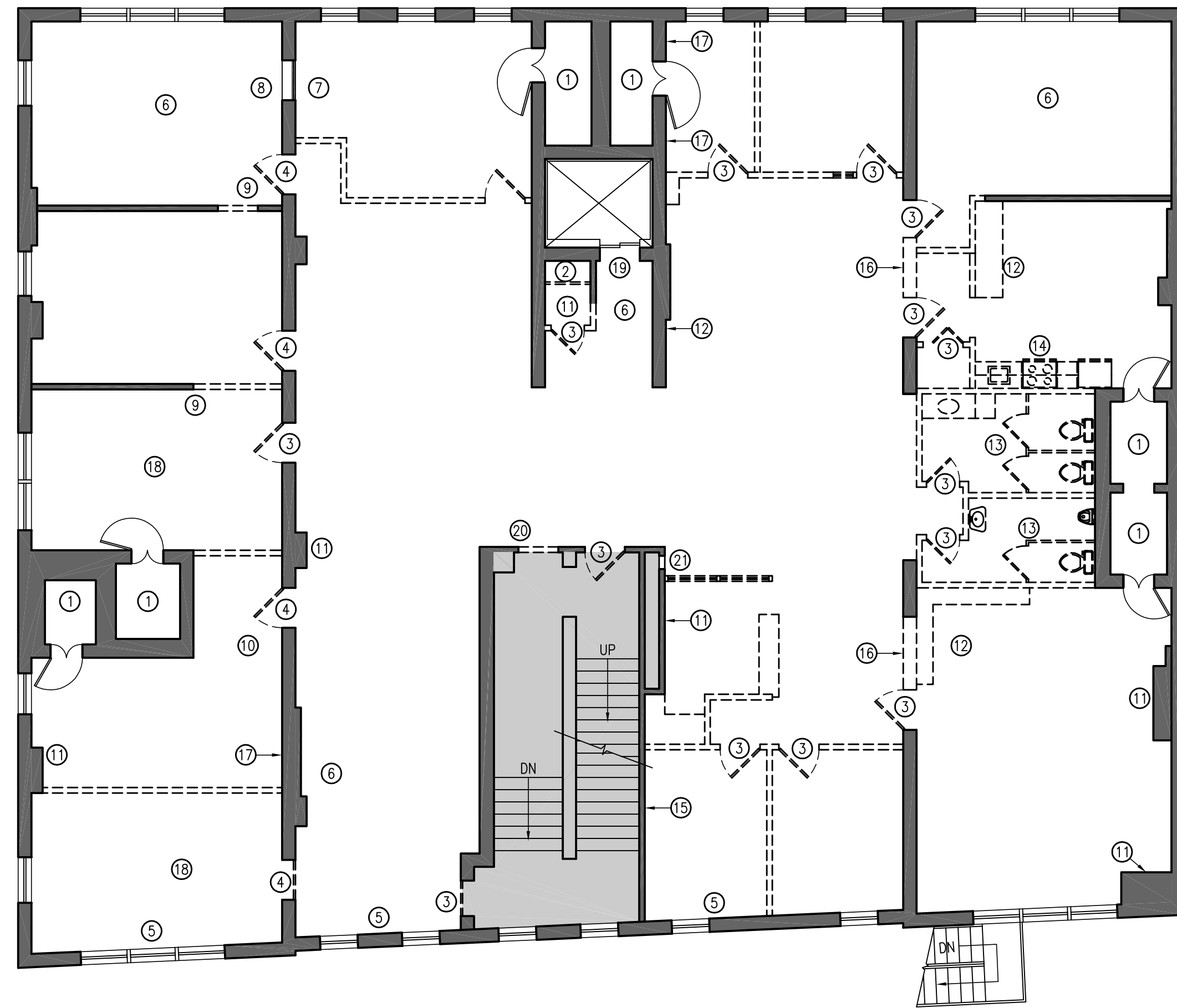
architect
phpartners

18 Tremont Street, Suite 707
Boston MA 02108
Tel 617.720.0740
Fax 617.720.0747
www.powershiggins.com

DRAFTING CONVENTIONS AND
SYMBOLS, GENERAL NOTES AND
LIST OF DRAWINGS

scale	
N.T.S.	
date	
12/08/2006	
project	
06032	

A001



DEMOLITION PLAN GENERAL NOTES

1. COORDINATE ALL SCHEDULING AND ACCESS WITH THE BUILDING.
2. REMOVE AND LEGALLY DISPOSE OF DEMOLISHED MATERIALS.
3. COORDINATE WITH OWNER RETURN OF ITEMS NOT TO BE REUSED.
4. AREAS AFFECTED BY SELECTIVE DEMOLITION. PATCH AND REPAIR ALL SURFACES AT AREAS WHERE DEMOLITION INTERFACES WITH EXISTING/NEW CONSTRUCTION. SEE FINISH PLAN FOR EXTENT OF NEW FINISHES.
5. REMOVE ALL EXISTING FLOORING INCLUDING TILE FLOOR AT ELEVATOR LOBBY AND ALL VINYL FLOORING EXCEPT FOR EXISTING CARPET AT EGRESS STAIR AND HALL WAY.
6. ALL WOOD BASE, ON WALLS TO BE DEMOLISHED, IS TO BE SALVAGED FOR REUSE IF FEASIBLE AND AT THE DISCRETION OF THE GENERAL CONTRACTOR.
7. PARTITIONS SHOWN TO BE DEMOLISHED, INCLUDING DOORS, DOOR FRAMES, HARDWARE, SWITCHES, PLUMBING FIXTURES, EXTRANEOUS PIPING, CONTROLS, ETC.
8. ALL EXISTING MILLWORK ITEMS, NOT SHOWN AS EXISTING TO REMAIN TO BE REMOVED THE ON CONSTRUCTION PLAN, ARE TO BE REMOVED. THIS DOES NOT INCLUDE BASE BUILDING ITEMS.
9. EXISTING EXTERIOR WINDOW MILLWORK SILLS, CASING AND FRAMES ARE TO REMAIN AND PROTECTED DURING DEMOLITION AND CONSTRUCTION.
10. EXISTING WINDOW BLINDS AND ASSOCIATED BRACKETS AND HARDWARE TO BE REMOVED.
11. ALL EXISTING ELECTRICAL & TEL/DATA DEVICES, LOCATED IN PARTITIONS OR COLUMN ENCLOSURES THAT ARE TO REMAIN, ARE TO BE REMOVED ALONG WITH ANY ELECTRICAL BOX OR MUD RING, UNLESS SHOWN OTHERWISE ON ELECTRICAL PLAN A319. PARTITIONS AND COLUMN ENCLOSURES ARE TO BE PATCHED AND PREPARED FOR FINAL FINISH. NO BLANK COVER PLATES WILL BE ACCEPTED.
12. ALL EXISTING TELECOMMUNICATION CABLING, JACKS, COVER PLATES, MUD RINGS, FLOOR MONUMENTS, & WALL BOXES TO BE REMOVED FROM ALL AREAS, U.O.N.
13. REMOVE ALL EXISTING CEILING SYSTEM, SUSPENDED AND GWB. SEE REFLECTED CEILING PLAN FOR ADDITIONAL INFO.
14. ALL EXISTING LIGHT FIXTURES TO BE REMOVED U.O.N.
15. CABLING ABOVE CEILING TO BE REMOVED. COORDINATE W/CLIENT & CABLING CONTRACTOR.
16. EXISTING VAULT DOORS, DOOR FRAMES AND HARDWARE ARE TO REMAIN AND PROTECTED DURING DEMOLITION AND CONSTRUCTION.
17. ALL EXISTING WALLCOVERINGS ARE TO BE REMOVED.

DEMOLITION PLAN KEY NOTES

- ① EXISTING VAULTS: REMOVE ALL SHELVING AND ASSOCIATED BLOCKING AND SUPPORTS. REMOVE ANY CARPET AND VINYL WALL BASE. REMOVE EXISTING LIGHTING AND WIRING. PREPARE WALL FOR NEW PAINTED FINISH AND PREP FLOORS FOR NEW CARPET.
- ② REMOVE EXISTING AND ANY UNUSED ELECTRICAL DEVICES AND BOXES INCLUDING FIRE PROTECTION AND SECURITY DEVICES. PATCH WALL AS NEEDED IN PREPARATION FOR NEW PAINTED FINISH. REMOVE EXISTING CARPET.
- ③ EXISTING DOOR AND FRAME TO BE REMOVED.
- ④ EXISTING DOOR AND HARDWARE TO BE REMOVED INCLUDING STRIKE PLATE AND HINGES. FRAME AND CASING TO REMAIN.
- ⑤ REMOVE EXISTING BASEBOARD HEATING ELEMENTS AND ALL ASSOCIATED WIRING.
- ⑥ REMOVE EXISTING CHAIR RAIL.
- ⑦ EXISTING SEALED DOOR TO REMAIN. REMOVE ALL VISIBLE HARDWARE AND PATCH HOLES IN DOOR.
- ⑧ EXISTING ADJUSTABLE SHELVES TO BE REMOVED ALONG WITH ASSOCIATED HARDWARE.
- ⑨ REMOVE WALL MOUNTED VENTS AND PATCH WALL OPENING.
- ⑩ REMOVE PUMP TYPE DEVICE LOCATED AT TOP OF WALL.
- ⑪ IF POSSIBLE REDUCE SIZE OF EXISTING WALL CHASE. REVIEW PROPOSED CHANGE WITH ARCHITECT PRIOR TO PROCEEDING.
- ⑫ REMOVE EXISTING MILLWORK.
- ⑬ REMOVE ALL EXISTING BATHROOM FIXTURES.
- ⑭ REMOVE EXISTING KITCHEN CABINETS AND ALL APPLIANCES.
- ⑮ REMOVE EXISTING PLYWOOD BACK BOARD.
- ⑯ REMOVE EXISTING SECTIONS OF MASONRY BEAMING WALL, SEE STRUCTURAL DRAWING FOR SCOPE.
- ⑰ REMOVE SECTION OF EXISTING PLASTER/GWB TO EXPOSE BRICK, SEE CONSTRUCTION PLAN FOR EXTENT OF DEMO.
- ⑱ REMOVE WALL COVERING.
- ⑲ EXISTING ELEVATOR DOOR & FRAME TO REMAIN. PROTECT FROM DAMAGE DURING DEMOLITION AND CONSTRUCTION.
- ⑳ DEMOLISH PORTION OF WALL FOR NEW EGRESS DOOR AND FRAME.

DEMOLISH PORTION OF EXISTING WALL FOR NEW FIRE EXTINGUISHER CABINET. REFER TO CONSTRUCTION PLAN.

**Bingham
McCutchen
LLP**

3rd Floor Renovations

85 Exchange Place
Portland, Maine

architect

phpartners

18 Tremont Street, Suite 707
Boston MA 02108
Tel 617.720.0740
Fax 617.720.0747
www.powershiggins.com

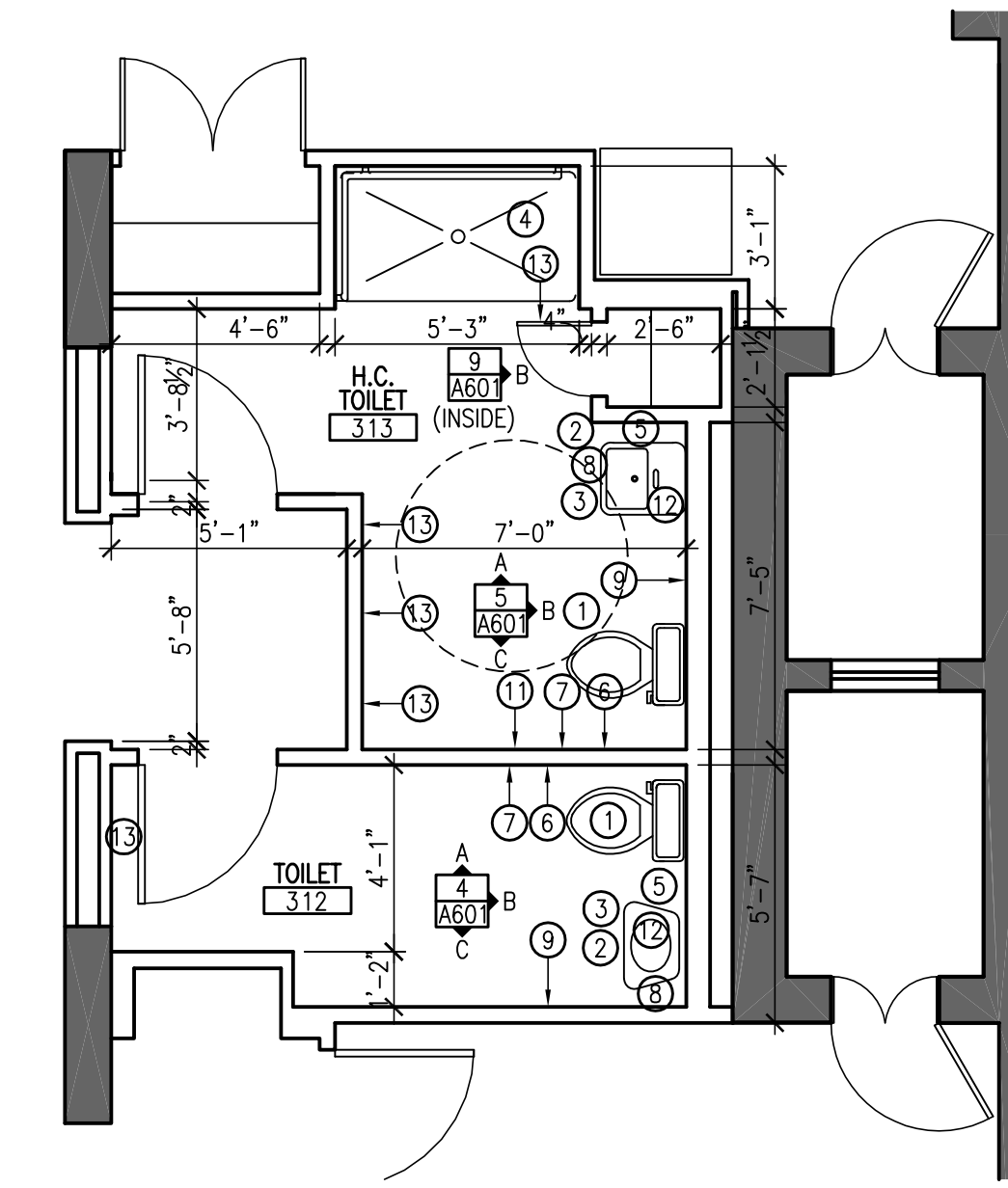
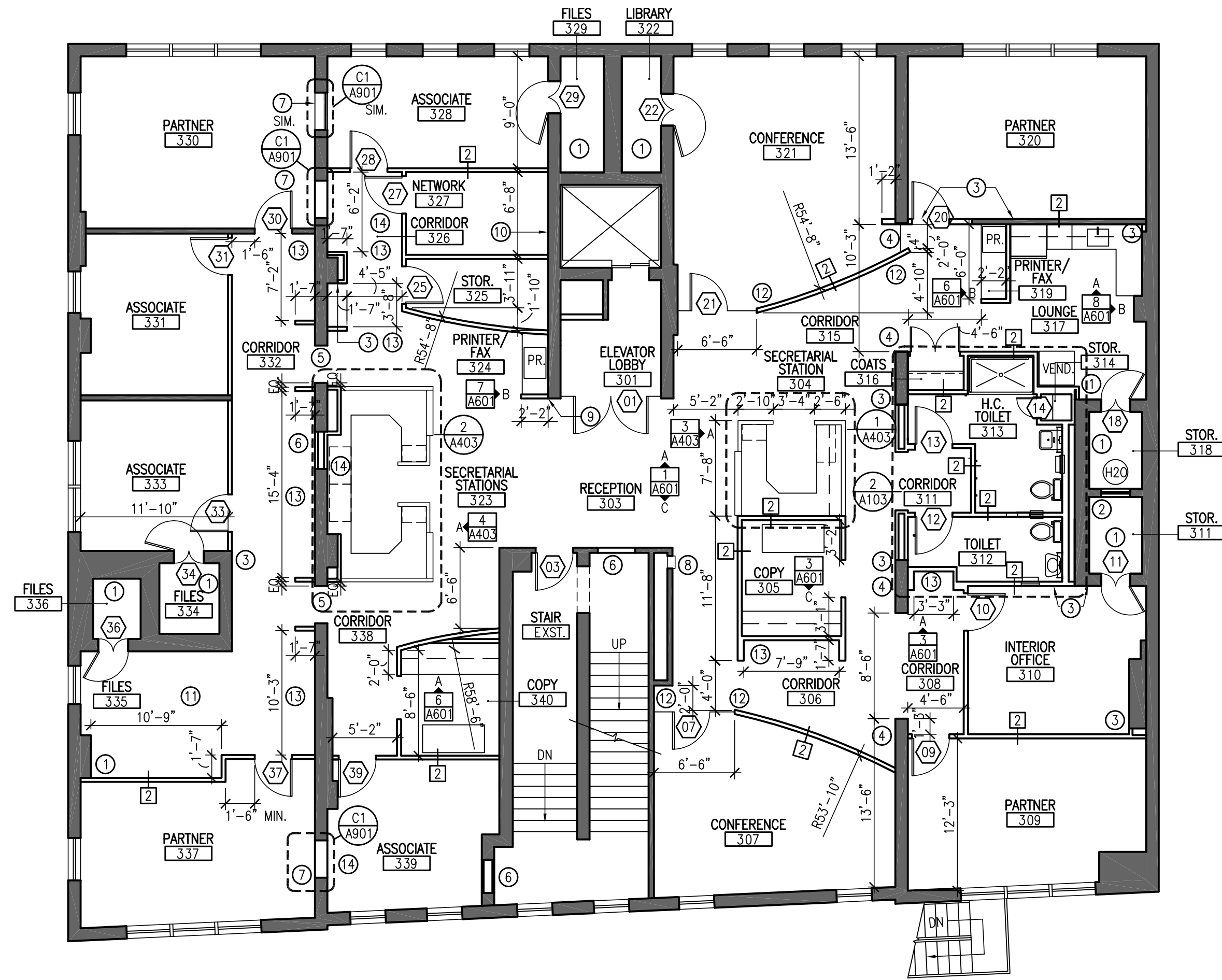
DEMOLITION PLAN

scale
1/8" = 1'-0"

date
12/08/2006

project
06032

D103



2. ENLARGED CONSTRUCTION PLAN AT TOILET 312 AND H.C. TOILET 313

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

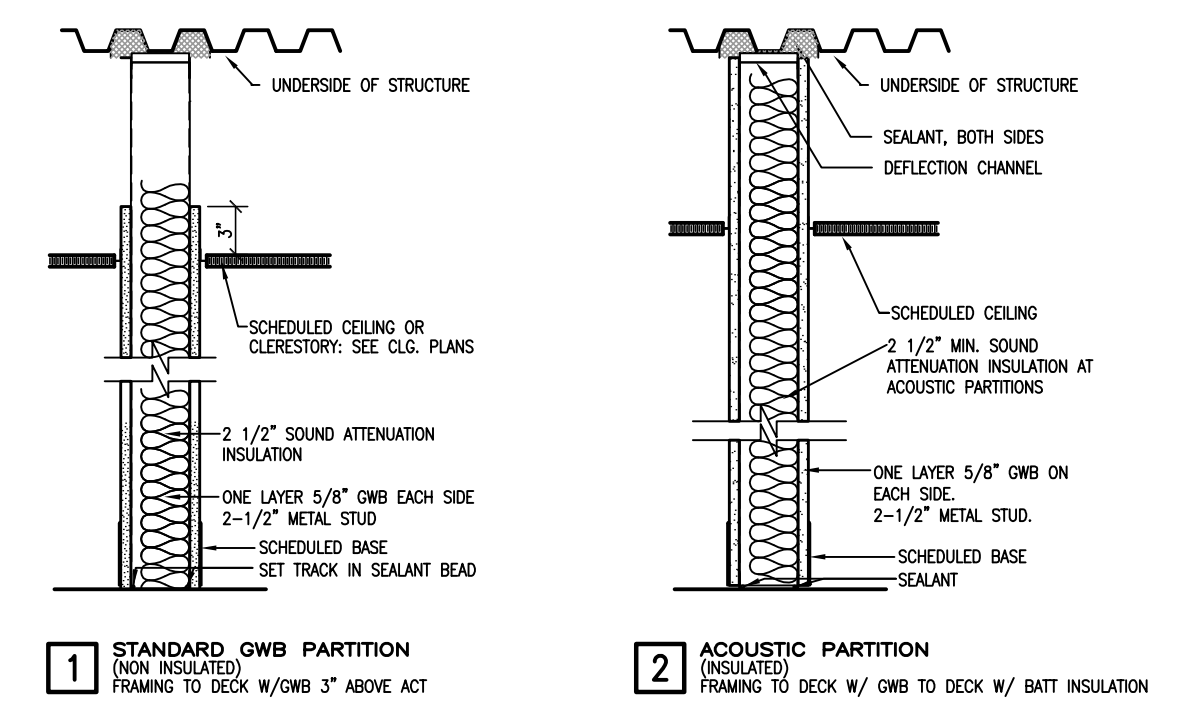
TOILET ROOM EQUIPMENT LEGEND

- ① TOILETS:
KOHLER WELLWORTH, COMFORT HEIGHT, ELONGATED BOWL
MODEL # K-3481
COLOR: WHITE
- ② SINKS:
KOHLER CHESAPEAKE WALL MOUNT LAVATORY
MODEL # K-1722
COLOR: WHITE
- ③ FAUCETS:
KOHLER TRITON WRISTBLADE LEVER HANDLES
MODEL # K16012-5
- ④ SHOWER:
BEST BATH SYSTEMS SHOWER STALL (WWW.BEST-BATH.COM)
MODEL: 4LS6331A1B
COLOR: WHITE
WITH:
STAINLESS STEEL "J" GRAB BAR
SYMMONS VALVE AND HAND HELD SHOWER ASSEMBLY
SYMMONS PRESSURE BALANCED MIXING VALVE #15-1-X-FG.
HANS GROHE #27712, ALSONS #462BG, #4980BX, #4900, #490-6-0BG
SURFACE MOUNTED SOAP DISH
SIOUX CHIEF CAULKLESS BRASS DRAIN WITH CHROME SCREEN #827-2B
NEOPRENE 5.5" WATER RETAINER FOR 60" SHOWER OPENING
CURTAIN ROD, 20 GAUGE STAINLESS STEEL 62.5" W/RINGS & AQA BRACKETS 66"x 73", 10 GA. VINYL
- ⑤ GLASS MIRROR WITH STAINLESS STEEL ANGLE FRAME
BOBRICK: B-280 SERIES
- ⑥ RECESSED DUAL-ROLL TOILET TISSUE DISPENSER
BOBRICK: B-697
- ⑦ RECESSED SANITARY NAPKIN DISPOSAL
BOBRICK: TRIMLINE SERIES B-35303
- ⑧ SURFACE MOUNTED SOAP DISPENSER
BOBRICK: CANTURA SERIES B-4112
- ⑨ SEMI-RECESSED CONVERTIBLE PAPER TOWEL DISPENSER AND WASTE RECEPTACLE
BOBRICK: B-3942
- ⑩ ELONGATED TOILET SEAT
KOHLER: BREVIA K-4664
- ⑪ STAINLESS STEEL GRAB BAR WITH SNAP FLANGE
BOBRICK: B-6806
1/2"
- ⑫ SURFACE MOUNTED STAINLESS STEEL SHELF
BOBRICK: B-683
- ⑬ SURFACE MOUNTED ROBE HOOK
BOBRICK: B-7671

CONSTRUCTION PLAN GENERAL NOTES

1. PARTITIONS TO BE TYPE 1 UNLESS OTHERWISE INDICATED SEE
2. STUDS TO EXTEND TO DECK, U.O.N.
3. ARCHITECT TO APPROVE PARTITION TRACK LAYOUT BEFORE WALL CONSTRUCTION.
4. DOORS TO BE LOCATED 4" FROM ADJACENT WALL, U.O.N.
5. FLOOR CONDITION AT ALL FILE NICHS SHALL BE MADE LEVEL THE FULL LENGTH OF THE NICHE.
6. ALL EXISTING TO REMAIN PARTITIONS ARE TO BE REPAIRED: GWB PARTITIONS, PATCH ALL HOLES AND REPAIR ALL DAMAGE. PREP. FOR NEW PAINTED FINISH. PLASTER WALLS, REPAIR ALL CRACKS AND SKIM AS NEEDED TO ACHIEVE SMOOTH CONTINUOUS CONDITIONS, PREP. FOR PAINT. EXPOSED BRICK, CLEAN ALL BRICK AND MORTAR, PATCH ANY HOLES, CRACKS OR VOIDS. SEAL BRICK AND MORTAR.
7. ALL EXISTING TO REMAIN MILLWORK AROUND WINDOWS AND EXISTING TO REMAIN DOOR CASTINGS AND JAMBS, CAULK ALL CRACKS AND GAPS AND FILL ALL HOLES, PREP. FOR NEW PAINTED FINISH.
8. EXISTING PARTITIONS THAT ARE EXTENDED THE WALL CONSTRUCTION TO MATCH EXISTING PARTITION.
9. EXPOSED BRICK WALLS ARE TO RECEIVE SURFACE-APPLIED WOOD BASE.
10. CURVED PARTITIONS IN OPEN AREAS ARE TO RECEIVE A SEMI-GLOSS PAINT FINISH. WALL SURFACE MUST BE SKIM COATED FOR A SMOOTH CONSISTENT FINISH.

PARTITION TYPES



CONSTRUCTION PLAN KEY NOTES

- ① EXISTING VAULTS: PATCH ANY HOLES IN BRICK WALLS AND FLOORS, PREPARE FOR NEW FINISHES.
- ② INFILL EXISTING PASSAGE BETWEEN VAULTS WITH METAL STUDS, ACOUSTIC INSULATION AND GWB, FLUSH WITH EXISTING VAULT WALLS.
- ③ FACE OF FINISH TO ALIGN WITH FACE OF FINISH.
- ④ FACE OF FINISH GWB TO EXTEND OVER MASONRY WALL, CONDITION TO BE CONTINUOUS AND FLUSH.
- ⑤ EXISTING CUTOUTS FOR DOOR HINGES AND LATCH PLATES ARE TO BE PATCHED/FILLED AND PREPARED FOR NEW PAINTED FINISH.
- ⑥ EXISTING WALL PENETRATION TO BE INFILLED SO THAT FINISH CONDITION IS CONTINUOUS AND FLUSH ON BOTH SIDES OF PARTITION AND ANY REQUIRED FIRE RATING IS MAINTAINED.
- ⑦ EXISTING DOOR OPENING TO BE MODIFIED INTO ADJUSTABLE SHELVING, SEE INDICATED DETAIL.
- ⑧ FIRE EXTINGUISHER AND RECESSED BRUSHED STAINLESS STEEL CABINET
- ⑨ FACE OF FINISHED GWB TO ALIGN WITH FACE OF EXPOSED BRICK.
- ⑩ EXISTING PLASTER/GWB WALL CONDITION TO BE EXTENDED TO COVER EXISTING EXPOSED BRICK WALL.
- ⑪ GENERAL CONTRACTOR TO SUPPLY A PLASTIC LAMINATE TOP FOR LOW FILE CABINET IN THIS AREA. SEE FURNITURE PLAN FOR SIZE AND LOCATION INFORMATION.
- ⑫ SURFACE APPLIED WOOD BASE TO PUT INTO GLASS PARTITION ON BOTH SIDES.
- ⑬ SURFACE APPLIED WOOD BASE TO EXTEND INTO FILE NICHE AS SIDE WALLS ONLY.
- ⑭ STRAP EXISTING PARTITION TO COVER EXISTING WALL OPENING. INSTALL NEW 1/2" GWB OVER STRAPPING AND REAPPLY WOOD BASE.

CONSTRUCTION PLAN KEY NOTES

- ① REFRIGERATOR
G.E. ENERGY STAR 19.5 CU. FT. REFRIGERATOR
MODEL # GDS20SBSSS
COLOR: STAINLESS STEEL
- ② MICROWAVE OVEN
G.E. 1.3 CU. FT. CAPACITY COUNTERTOP MICROWAVE OVEN
MODEL # JES1384SF
COLOR: STAINLESS STEEL
- ③ DISHWASHER
G.E. TRITON XL BUILT-IN DISHWASHER
MODEL # GSD6960JSS
COLOR: STAINLESS STEEL
- ④ DISPOSER
G.E. 1 HORSEPOWER CONTINUOUS FEED DISPOSER
MODEL # GFC1020F

Bingham McCutchen LLP

3rd Floor Renovations

85 Exchange Place
Portland, Maine

architect

phpartners

18 Tremont Street, Suite 707
Boston MA 02108
Tel 617.720.0740
Fax 617.720.0747
www.powershiggins.com

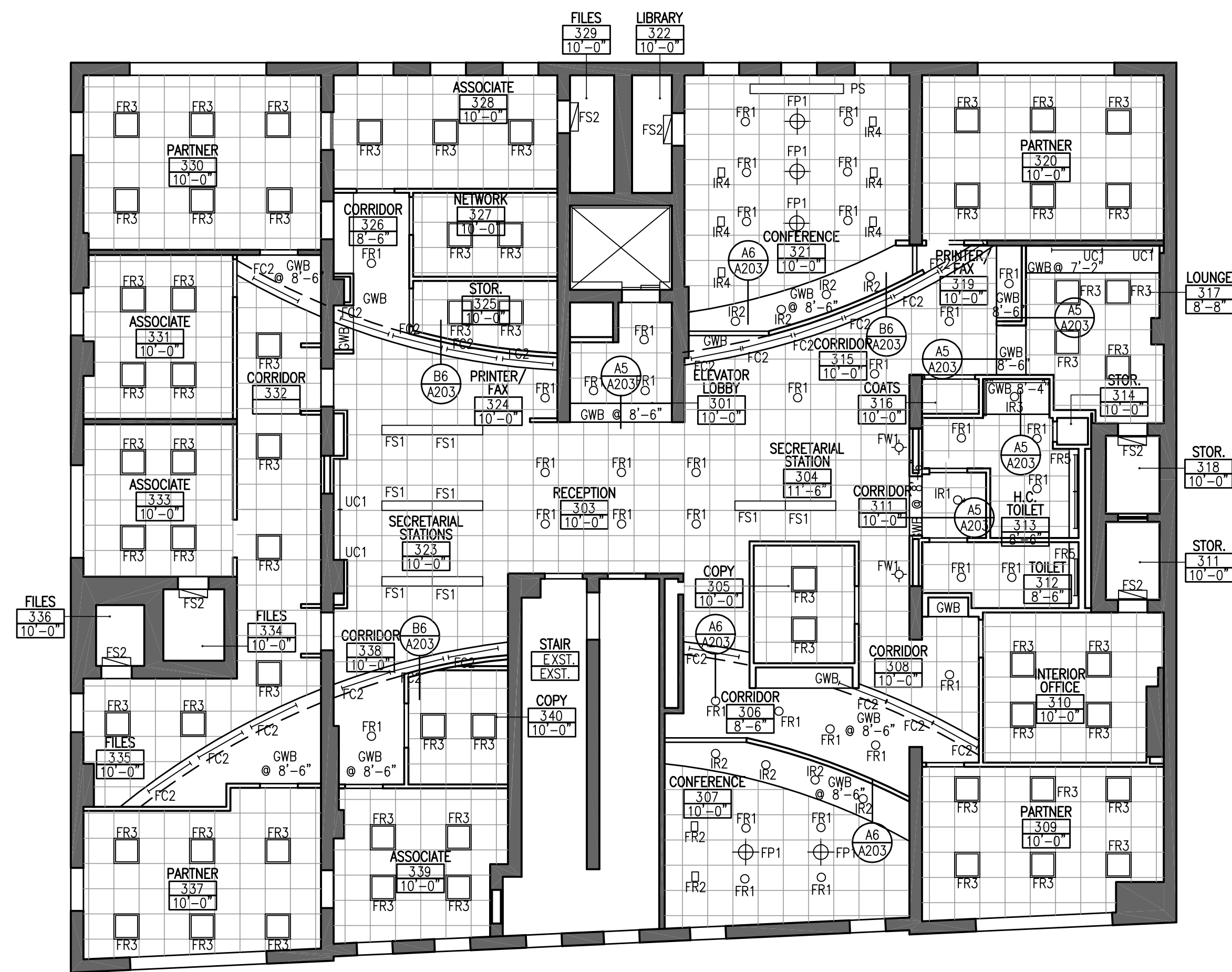
CONSTRUCTION PLAN,
ENLARGED TOILET ROOMS AND
PARTITION TYPES

scale
1/8" = 1'-0"

date
12/08/2006

project
06032

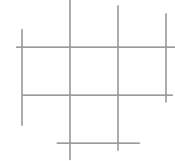
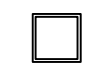



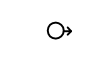

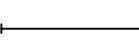
A103

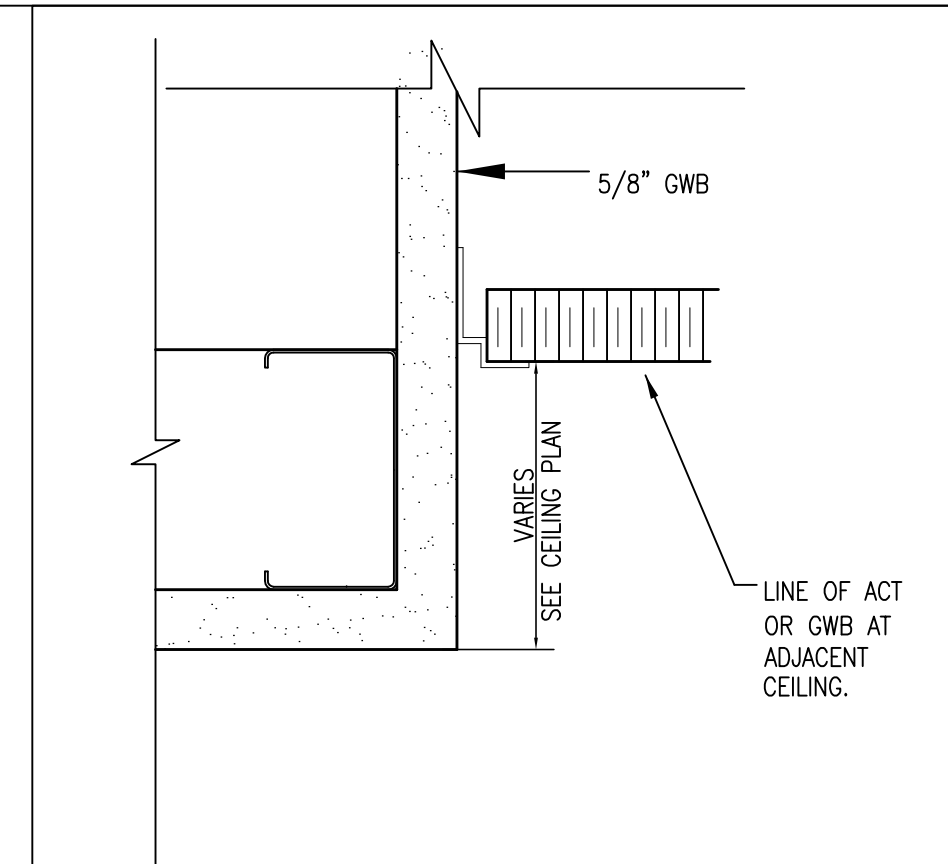


REFLECTED CEILING PLAN GENERAL NOTES

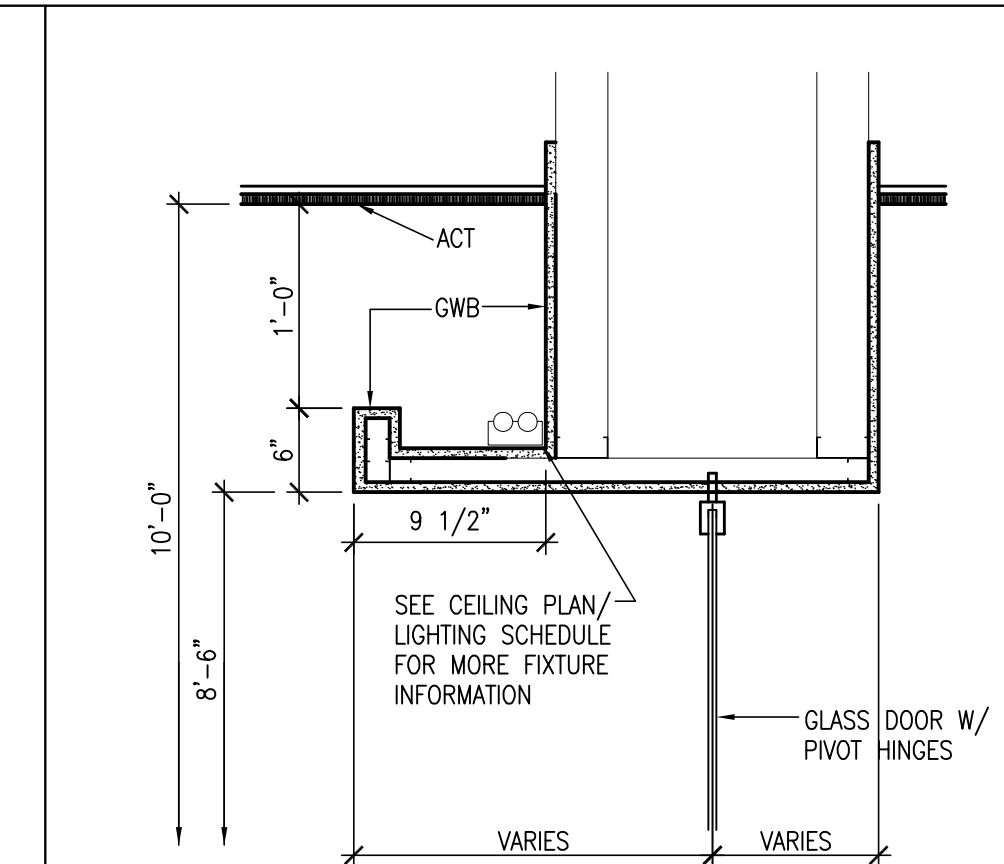
1. FOR ORGANIZATIONAL LAYOUT AND MOUNTING HEIGHTS OF LIGHT SWITCHES, DIMMER SWITCHES, THERMOSTATS, ETC. REFER TO ARCHITECTURAL POWER/TEL/DATA PLANS, ELEVATIONS AND DETAILS.
2. MEP/FP INFORMATION SHOWN ON THIS PLAN IS FOR LOCATION ONLY. REFER TO AND COORDINATE WITH ENGINEERS DRAWINGS.
3. ALL MECHANICAL DIFFUSERS AND GRILLES, FIRE ALARM DEVICES, SPRINKLERS AND RECESSED LIGHT FIXTURES ARE TO BE CENTERED IN CEILING TILE UNLESS OTHERWISE NOTED.
4. CONFLICTS IN LOCATION OF MECHANICAL DIFFUSERS AND GRILLES, FIRE ALARM DEVICES, SPRINKLER HEADS AND/OR LIGHT FIXTURES ARE TO BE COORDINATED WITH ARCHITECT PRIOR TO PROCEEDING.
5. ALL ACCESS PANEL TYPES, SIZES, AND LOCATIONS TO BE COORDINATED AND VERIFIED IN WRITING WITH ARCHITECT PRIOR TO INSTALLATION.
6. ALL FIELD CONDITIONS ARE TO BE REVIEWED TO INSURE THAT NO ACOUSTIC CEILING TILE IS CUT TO A DIMENSION OF LESS THAN 3".
7. ALL DIMENSIONS ARE TO CENTERLINE OF FIXTURE UNLESS OTHERWISE NOTED.
8. PROVIDE F.R.T. WOOD BLOCKING ABOVE CEILING AS REQUIRED FOR SPECIALTY CONSTRUCTION ITEMS, IE: PENDANTS, RECESSED PROJECTION SCREENS, OPERABLE PARTITIONS, CEILING MOUNTED PROJECTORS, SECURITY CAMERAS, ETC.
9. ALL CEILING HEIGHTS TO BE 10'-0" AFF UNLESS OTHERWISE NOTED.

REFLECTED CEILING PLAN LEGEND

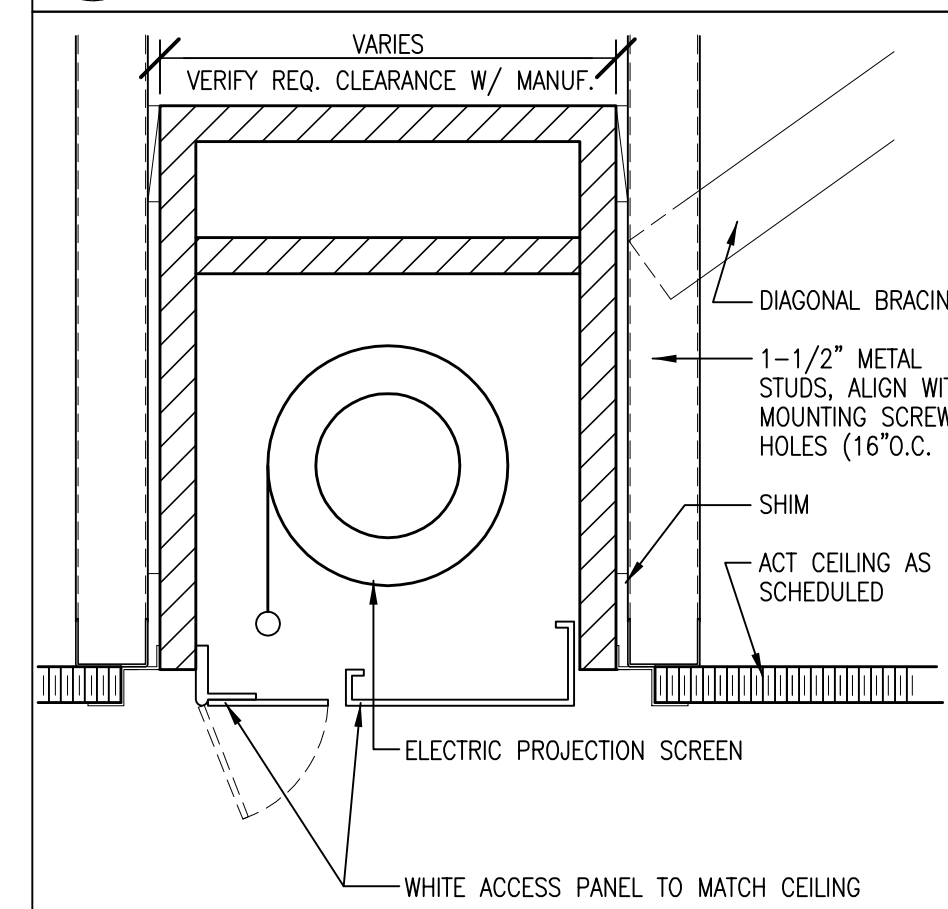
-  2X2 CEILING GRID
-  2x2 PARABOLIC
-  STANDARD FLUORESCENT DOWNLIGHT
-  FLUORESCENT PENDANT
-  INDIRECT RECESSED WALL SCONCE
-  LOW VOLTAGE ADJUSTABLE ACCENT LIGHT
-  SEMI-RECESSED WALL WASHER
-  FLUORESCENT COVE LIGHTING



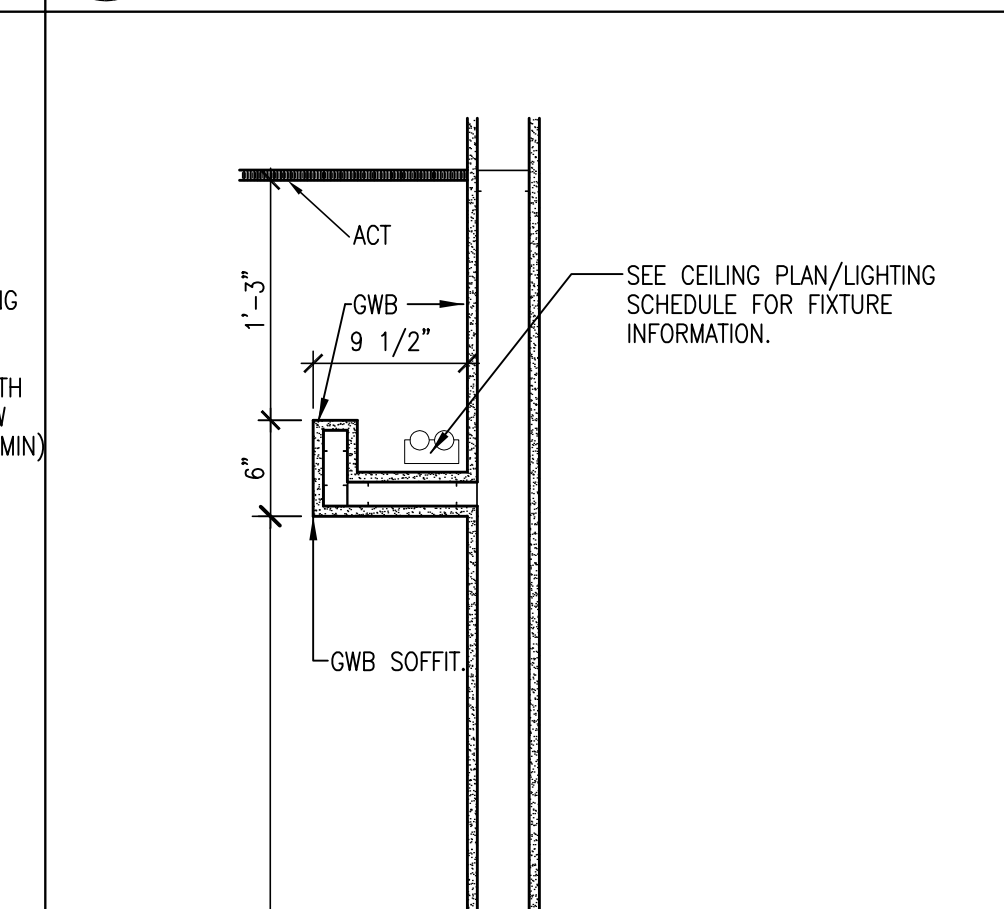
A5 GWB CEILING EDGE CONDITION
SCALE: 6" = 1'-0"



A6 SECTION AT SOFFIT W/ LIGHT COVE
SCALE: 1" = 1'-0"



B5 PROJECTION SCREEN DETAIL
SCALE: 3" = 1'-0"



B6 SECTION AT LIGHT COVE
SCALE: 1" = 1'-0"

revisions

**Bingham
McCutchen
LLP**

3rd Floor Renovations

85 Exchange Place
Portland, Maine

architect

phpartners

18 Tremont Street, Suite 707
Boston MA 02108
Tel 617.720.0740
Fax 617.720.0747
www.powershiggins.com

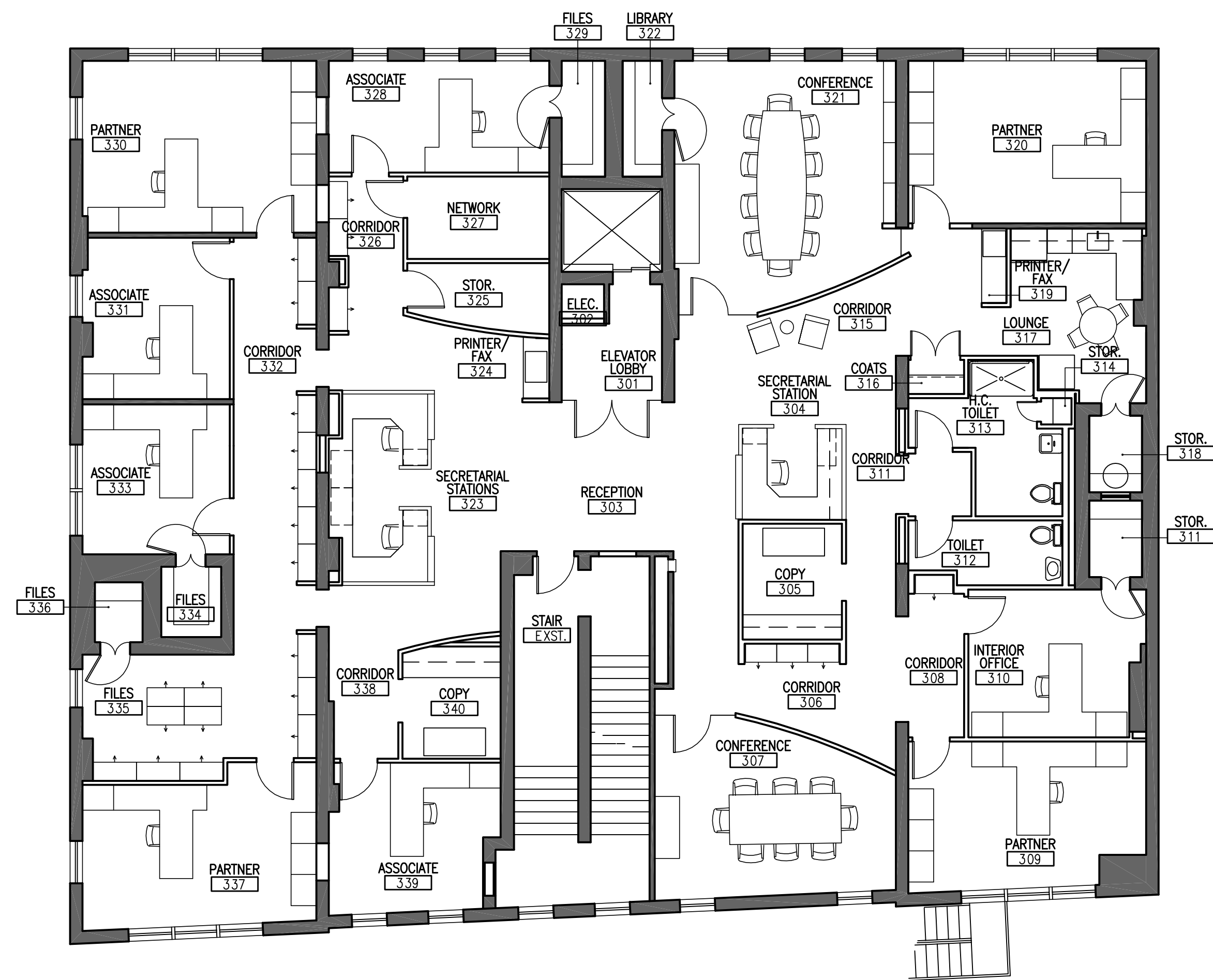
**REFLECTED CEILING PLAN
AND CEILING DETAILS**

scale
1/8" = 1'-0"

date
12/08/2006

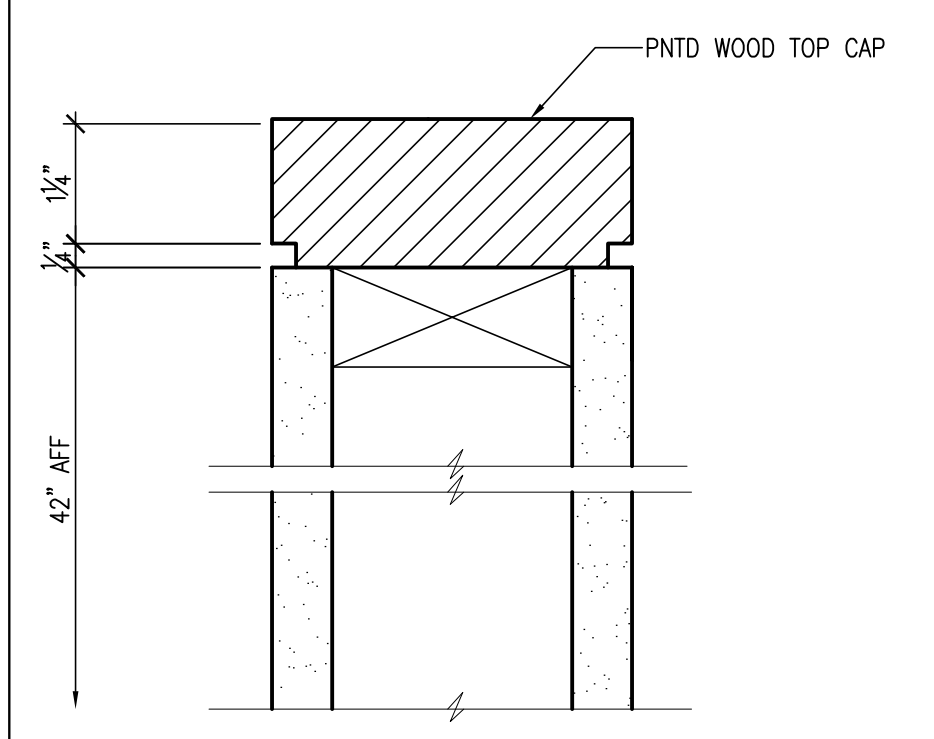
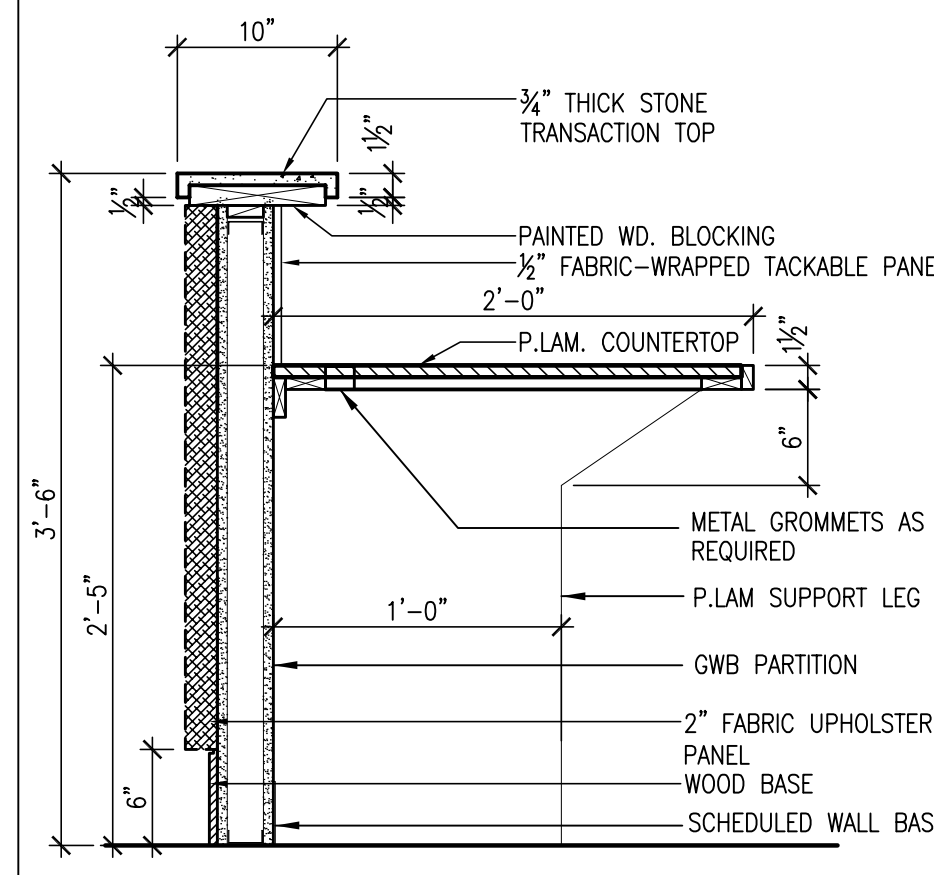
project
06032

A203



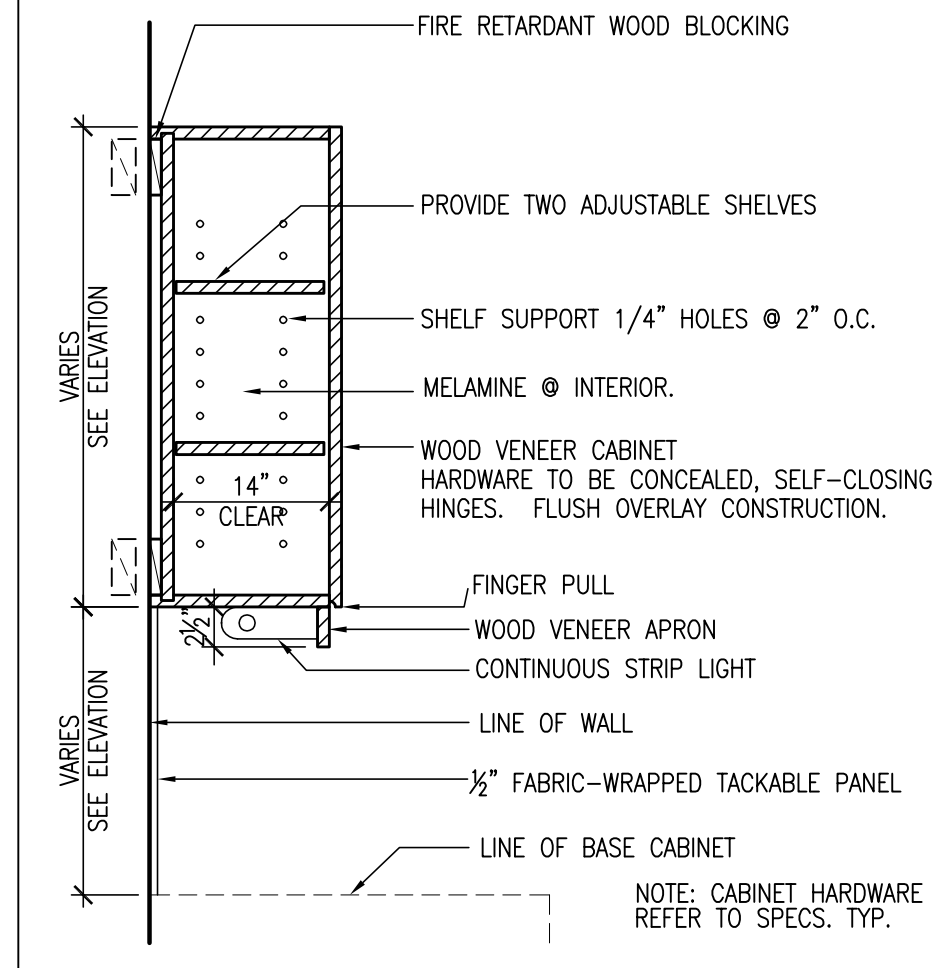
FURNITURE PLAN GENERAL NOTES

1. FURNITURE SHOWN FOR REFERENCE PURPOSES ONLY.

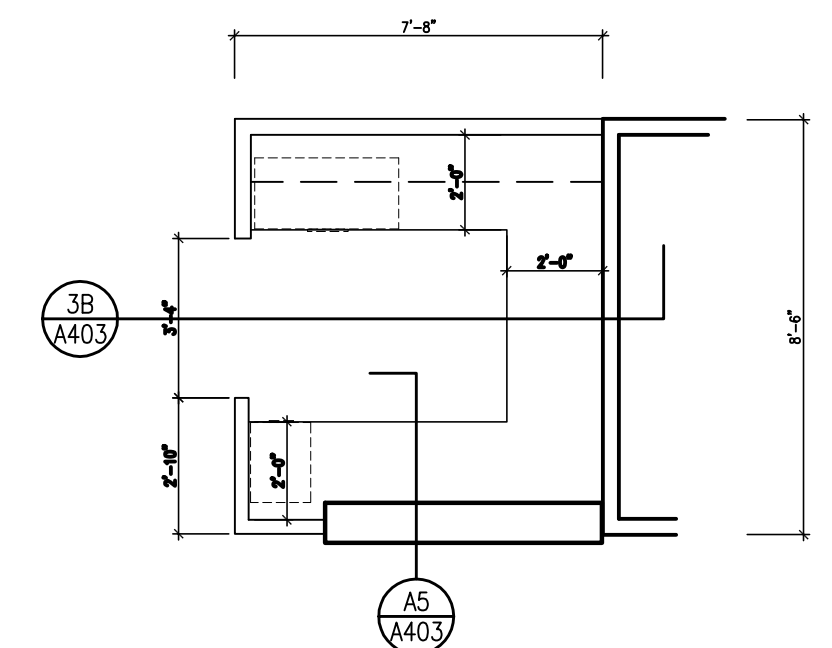


A5 SECTION THROUGH SECRETARIAL STATION
SCALE: 1" = 1'-0"

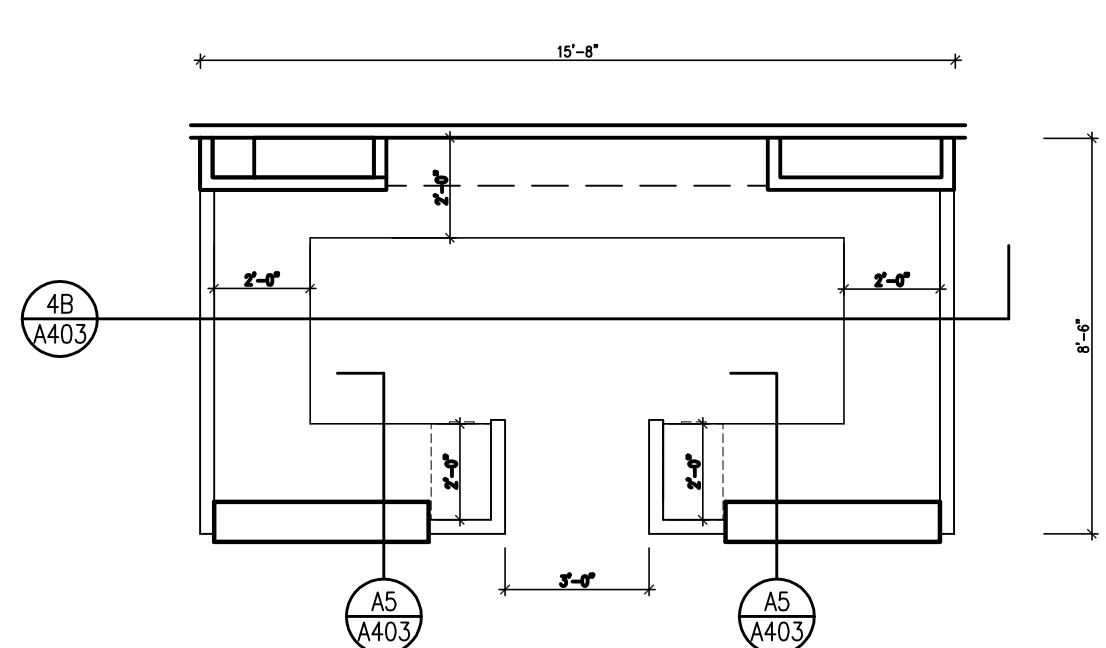
A6 SILL DETAIL AT INTERIOR GLAZING
SCALE: 6" = 1'-0"



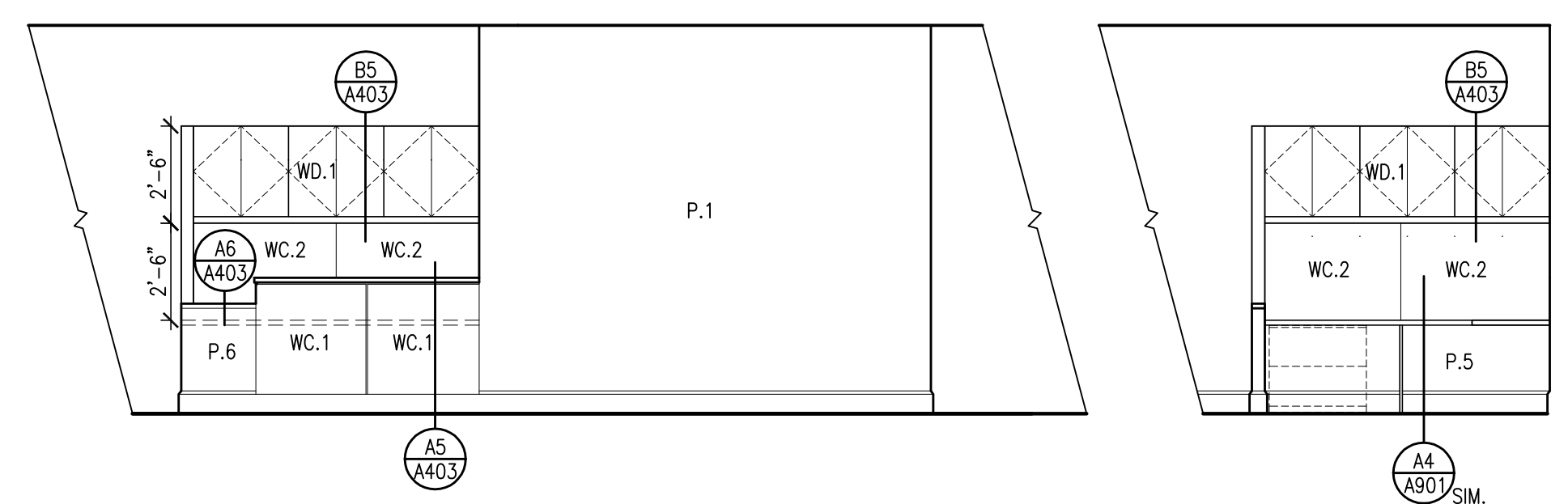
B5 UPPER CABINET WITH SOFFIT
SCALE: 1" = 1'-0"



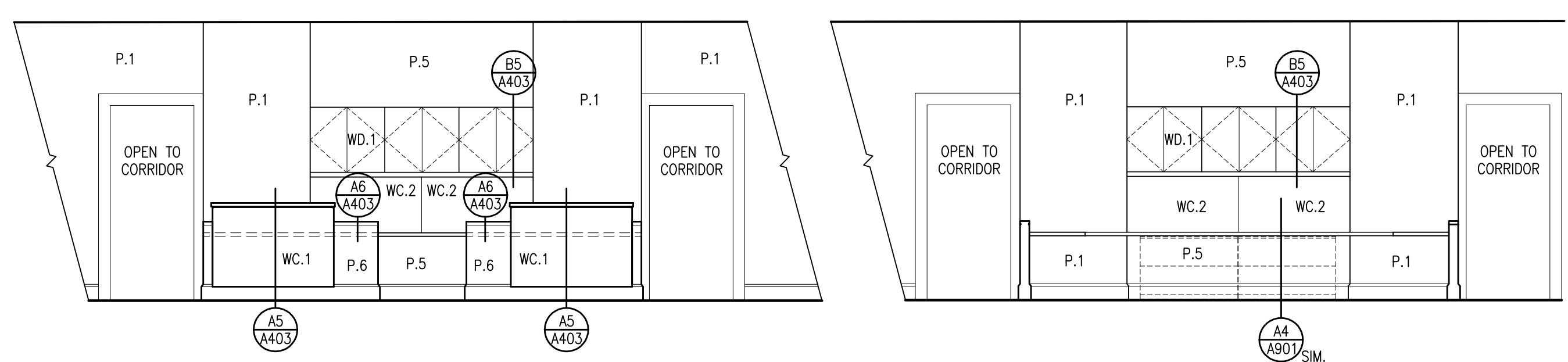
1. SECRETARIAL STATION 304 ENLARGED PLAN



2. SECRETARIAL STATIONS 323 ENLARGED PLAN



3. SECRETARIAL STATION 304 ELEVATIONS



4. SECRETARIAL STATIONS 323 ELEVATIONS

revisions

**Bingham
McCutchen
LLP**

3rd Floor Renovations

85 Exchange Place
Portland, Maine

architect
phpartners

18 Tremont Street, Suite 707
Boston MA 02108
Tel 617.720.0740
Fax 617.720.0747
www.powershiggins.com

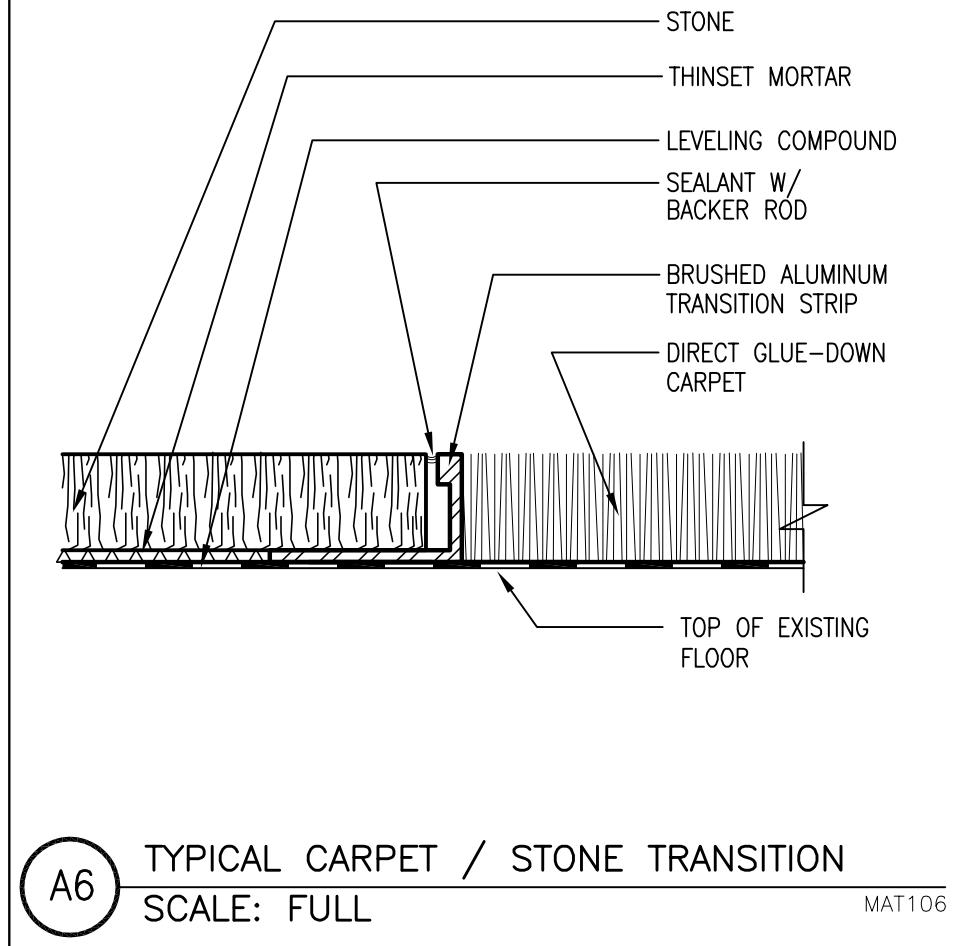
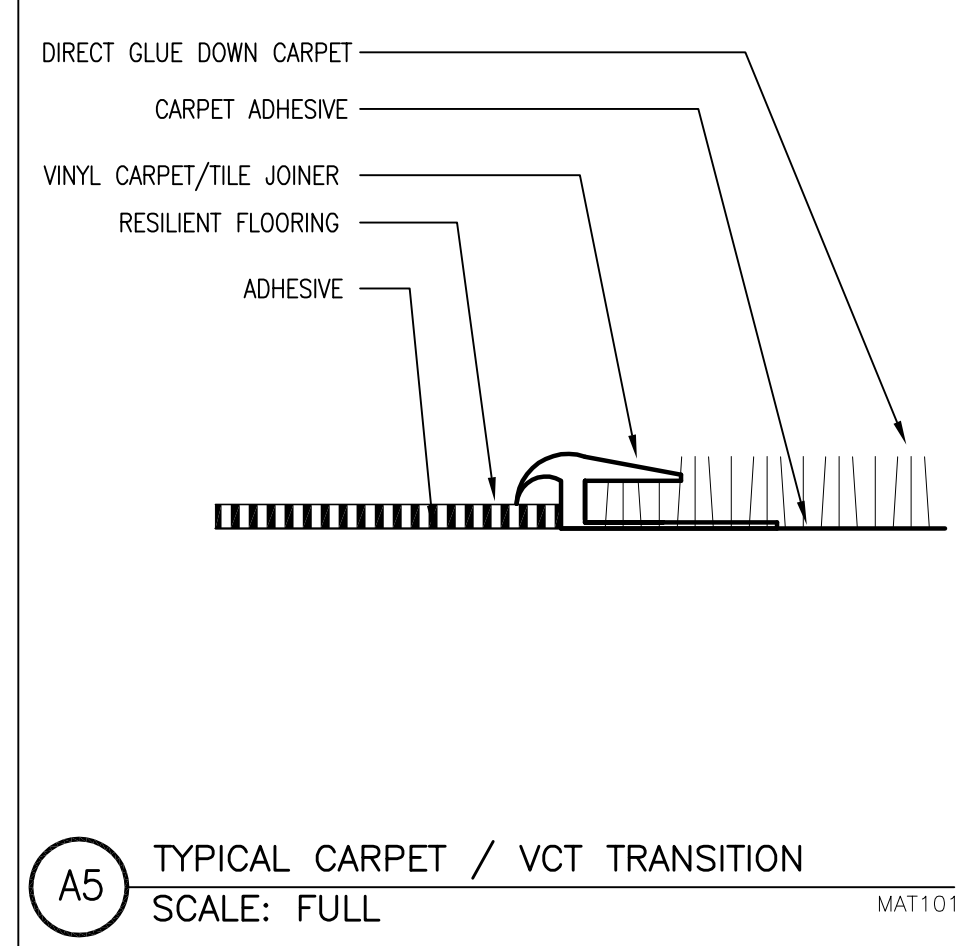
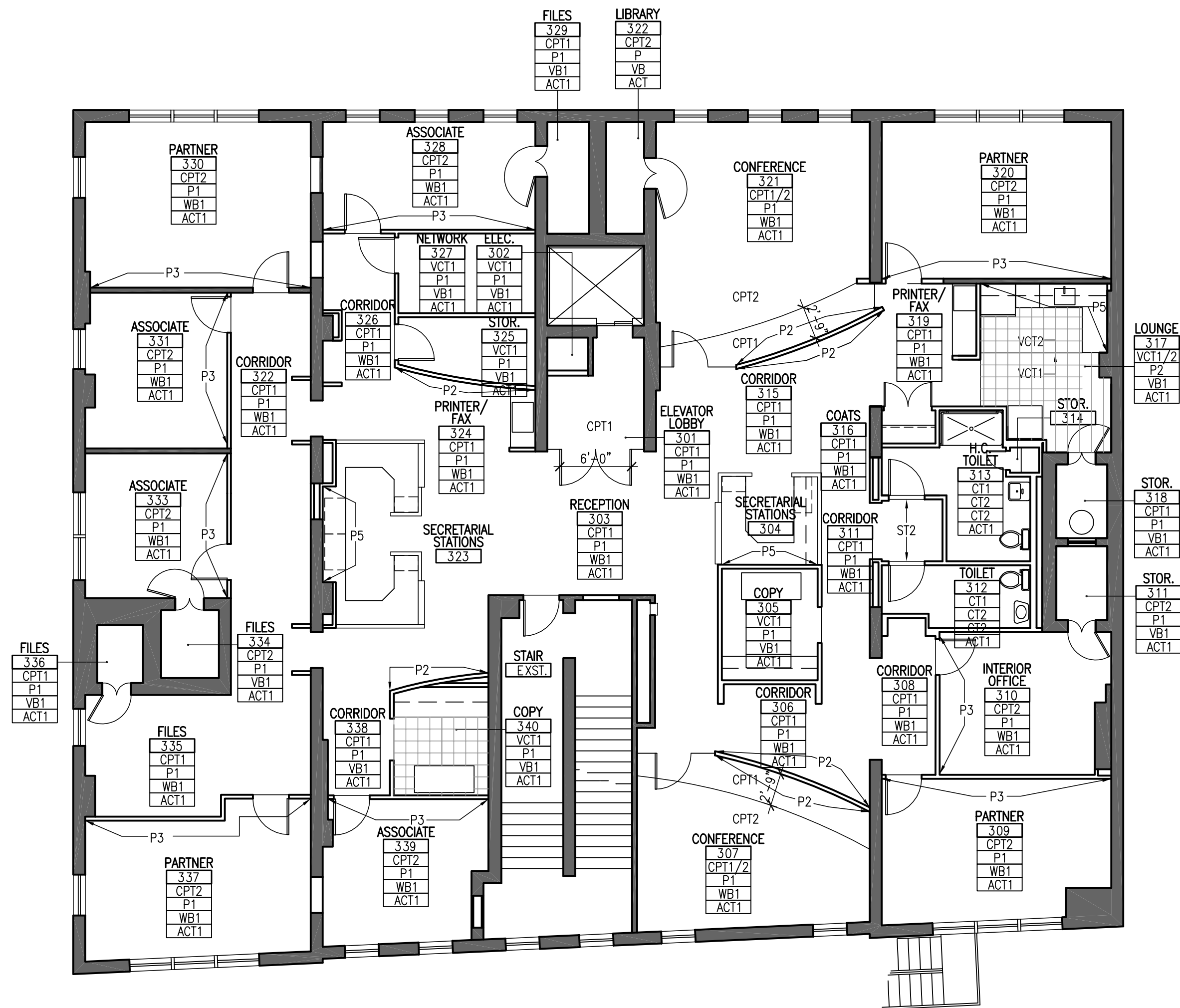
FURNITURE PLAN AND
SECRETARIAL STATION DETAILS

scale
1/8" = 1'-0"

date
12/08/2006

project
06032

A403



revisions

FINISH PLAN GENERAL NOTES

1. ALL MATERIALS SHALL BE APPLIED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS FOR THE PARTICULAR SURFACE.
2. SAMPLES OF ALL FINISHES SHALL BE SUBMITTED TO THE ARCHITECT FOR APPROVAL PRIOR TO COMMENCEMENT OF THE WORK.
3. A BRUSH COAT REVIEW IN FIELD WILL BE REQUIRED FOR EACH PAINT FINISH. REVIEW TO BE IN AREA WHICH REPLICATES ACTUAL FINISH LOCATION.
4. FLASH PATCH AS REQUIRED BETWEEN FLOORING MATERIALS TO MAINTAIN UNIFORM FLOOR LEVEL.
5. THE CONTRACTOR SHALL SUBMIT FLOORING INSTALLATION DIAGRAM TO ARCHITECT FOR REVIEW AND APPROVAL PRIOR TO PROCEEDING.
6. CHANGES IN FLOORING MATERIAL BETWEEN ROOMS SHALL OCCUR UNDER THE CENTERLINE OF DOOR, U.O.N. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
7. ALL MILLWORK TO BE SHOP FINISHED.
8. STRAIGHT BASE SHALL BE USED IN AREAS WHERE CARPET IS SPECIFIED.
9. COVE BASE SHALL BE USED IN AREAS WITH VCT.
10. ALL EXISTING WALLS, SURFACES, AND MATERIALS TO REMAIN ARE TO BE IN "AS-NEW" CONDITION AT END OF CONSTRUCTION. WHERE CONSTRUCTION PARTIALLY AFFECTS EXISTING MATERIALS TO REMAIN, PATCH AND REPAIR AS NECESSARY TO MATCH EXISTING SURROUND.
11. WALL BASE SCHEDULED SHALL RETURN INTO FILE NICHES.
12. ALL METAL FRAMES TO BE SHOP FINISHED.
13. PAINT GRILLES/DIFFUSERS MOUNTED IN DRYWALL CEILING TO MATCH FINISH OF CEILING.
14. ALL FABRIC WALL COVERING AND SUBSTRATE SHALL BE TREATED TO MEET OR EXCEED CURRENT FIRE CODES.
15. ALL WOOD BASE TO BE PAINTED TO MATCH WALL ABOVE, SEMI-GLOSS FINISH.
16. ALL PAINTED DOORS TO BE SHOP FINISHED.
17. REFER TO ENLARGED PLANS AND ELEVATIONS FOR MULTIPLE FINISH LOCATIONS.
18. PROVIDE METAL TRANSITION STRIP TO BE USED WITH STONE FLOORING.
19. PROVIDE VINYL TRANSITION STRIP BETWEEN VINYL FLOORING AND CARPET.
20. ELECTROSTATIC PAINTING OF FILES, METAL ENCLOSURES, ELEVATOR DOORS AND FRAMES, ETC.

FINISH SPECIFICATION

PAINT

- P1: GENERAL PAINT, BENJAMIN MOORE, OC-9, BALLET WHITE, EGGSHELL
- P2: ACCENT, BENJAMIN MOORE, 976, COASTAL FOR, SEMI-GLOSS, CURVED WALLS
- P3: ACCENT, BENJAMIN MOORE, HC-95, SAG HARBOR GRAY, DOOR FRAMES, ACCENT WALLS, EGGSHELL
- P4: DOORS, BENJAMIN MOORE, HC-103, DOORS, SEMI-GLOSS
- P5: ACCENT, BENJAMIN MOORE, HC-37, EGGSHELL
- P6: SECRETARIAL, BENJAMIN MOORE, HC-92, SEMI-GLOSS
- P7: TOILET ROOMS,
- P8: KITCHEN,

FABRIC WALL COVERING

- WC1: ARCHITEX, AUTHENTIC PERFORMANCE, BEIGE, ON 2" SNAPLOC SYSTEM.
- WC2: MAHARAM, TREAT 464570, ON ½" SNAPLOC, TACKABLE

WOOD

- WD1: QUARTER CUT CLEAR MAPLE, NATURAL FINISH, 40% SHEEN.

GLAZING

- GL1: ½" CLEAR, TEMPERED GLASS, BUTT GLAZED
- GL2: ½" CLEAR, BACK PAINTED, TRANSITION TOPS, COLOR T.B.D.

CARPET

- CPT1: CONSTANTINE COMMERCIAL, RAW SILK, 683742, HARVEST
- CPT2: CONSTANTINE COMMERCIAL, SEASCAPE, SC42742, SEA BIG SUR
- CPT2 ALTERNATE: J&J COMMERCIAL, COLORS CLASSIC (5636), 118 DESERT

CERAMIC TILE

- CT1:
- CT2: DAL-TILE, 2X2, SEMI-GLOSS, ALMOND #0135, TOILET ROOM WALLS.

VINYL COMPOSITION TILE

- VCT1: ARMSTRONG, EXCELON, STONETEX, 52132, DUSTY KHAKI
- VCT2: ARMSTRONG, EXCELON, STONETEX, 52128 DESERT DUST

PLASTIC LAMINATE

- PL1: NEVARMAR, FOUNDRY, TEXTURED S-2084T
- PL2: NEVARMAR, STRING, TEXTURED S-6052T
- PL3: WILSONART, 4813-60, KICKEL EV
- PL4: NEVARMAR, PURE SPUN YARN, TEXTURED, YSN002T
- PL5: FORMICA, 7812-58, MDF SOLID E

BASE

- WB1: JOHNSONITE, #22, PEARL, 4" VINYL

CEILING

- ACT1:

STONE

- ST1: ¾" SLAB, EMPERADOR LIGHT, HONED FINISH.
- ST2: STONE THRESHOLD AT BATHROOM DOORS.

Bingham McCutchen LLP

3rd Floor Renovations

85 Exchange Place
Portland, Maine

architect

phpartners

18 Tremont Street, Suite 707
Boston MA 02108
Tel 617.720.0740
Fax 617.720.0747
www.powershiggins.com

FINISH PLAN AND FLOOR
TRANSITION DETAILS

scale
1/8" = 1'-0"

date
12/08/2006

project
06032

A403a

DOOR AND FRAME SCHEDULE														
LOCATION		DOOR					FRAME					HWDW	LABEL	REMARKS
MARK	ROOM NAME	ELEV	MATL	WIDTH	HGT	THICK	ELEV	MATL	HEAD	JAMB	SILL			
01	ELEVATOR LOBBY	CC	GL	(2) 3'-0"	8'-6"	1/2"	2	GL	D2/A701	E3/A701	-	HW-1		CARD READER, MAGNETIC LOCK
03	STAIR	A	WD	3'-0"	8'-4"	1-3/4"	1	MTL	D1/A701	D1/A701	-	HW-9		FIRE RATED EGRESS DOOR, 2 HOUR
07	CONFERENCE	B	GL	3'-0"	8'-6"	1/2"	2	GL	E1/A701	E3/A701	-	HW-2		90° HOLD OPEN
09	PARTNER	A	WD	3'-0"	8'-4"	1-3/4"	1	MTL	D1/A701	D1/A701	-	HW-3		
10	INTERIOR OFFICE	A	WD	3'-0"	8'-4"	1-3/4"	1	MTL	D1/A701	D1/A701	-	HW-3		
11	STORAGE/VAULT	-	-	-	-	-	-	-	-	-	-	HW-11		EXISTING
12	TOILET	A	WD	3'-0"	8'-4"	1-3/4"	1	MTL	D1/A701	D1/A701	-	HW-4		
13	H.C. TOILET	A	WD	3'-0"	8'-4"	1-3/4"	1	MTL	D1/A701	D1/A701	-	HW-4		
14	STORAGE	A	WD	1'-6"	8'-4"	1-3/4"	1	MTL	D1/A701	D1/A701	-	HW-6		
16	COATS	AA	WD	3'-0"	8'-4"	1-3/4"	1	MTL	D1/A701	D1/A701	-	HW-5		
18	STORAGE/VAULT	-	-	-	-	-	-	-	-	-	-	HW-11		EXISTING
20	PARTNER	A	WD	3'-0"	8'-4"	1-3/4"	1	MTL	D1/A701	D1/A701	-	HW-3		
21	CONFERENCE	B	GL	3'-0"	8'-6"	1/2"	2	GL	E1/A701	E3/A701	-	HW-2		90° HOLD OPEN
22	LIBRARY/VAULT	-	-	-	-	-	-	-	-	-	-	HW-11		EXISTING
25	STORAGE	A	WD	3'-0"	8'-4"	1-3/4"	1	MTL	D1/A701	D1/A701	-	HW-8		LOCK
27	NETWORK	A	WD	3'-0"	8'-4"	1-3/4"	1	MTL	D1/A701	D1/A701	-	HW-7		LOCK
28	ASSOCIATE	A	WD	3'-0"	8'-4"	1-3/4"	1	MTL	D1/A701	D1/A701	-	HW-3		
29	FILES/VAULT	-	-	-	-	-	-	-	-	-	-	HW-11		EXISTING
30	PARTNER	A	WD	3'-0"	8'-4"	1-3/4"	1	MTL	D1/A701	D1/A701	-	HW-3		
31	ASSOCIATE	A	WD	3'-0"	8'-4"	1-3/4"	1	MTL	D1/A701	D1/A701	-	HW-3		
33	ASSOCIATE	A	WD	3'-0"	8'-4"	1-3/4"	1	MTL	D1/A701	D1/A701	-	HW-3		
34	FILES/VAULT	-	-	-	-	-	-	-	-	-	-	HW-11		EXISTING
36	FILES/VAULT	-	-	-	-	-	-	-	-	-	-	HW-11		EXISTING
37	PARTNER	A	WD	3'-0"	8'-4"	1-3/4"	1	MTL	D1/A701	D1/A701	-	HW-3		
39	ASSOCIATE	A	WD	3'-0"	8'-4"	1-3/4"	1	MTL	D1/A701	D1/A701	-	HW-3		

DOOR SCHEDULE NOTES

- ALL NEW PAINTED DOORS TO HAVE A FACTORY PAINTED FINISH.
- HARDWARE FINISHED TO BE STAINLESS STEEL.
- HARDWARE SHALL BE FURNISHED AS SPECIFIED BELOW (NO SUBSTITUTIONS).
- PRIOR TO KEYING DOORS, REVIEW KEYING SEQUENCES WITH THE TENANT.
- DOOR HEIGHTS ARE NOMINAL CONTRACTOR TO COORDINATE AND VERIFY ACTUAL HEIGHTS WITH DETAILS AND FIELD CONDITIONS.
- CALLK ALL GAPS BETWEEN DOOR FRAME AND PARTITION.
- CABINET PULLS- HAFLE #117.05.600 MATT STAINLESS STEEL.

HARDWARE NOTES

- BUTTS SHALL BE STANLEY CB1900 SERIES X US26D FINISH. NUMBER OF HINGES OR PIVOTS PER DOOR: TWO HINGES ARE TO BE PROVIDED FOR DOORS UP TO AND INCLUDING FIVE FEET IN HEIGHT, AND AN ADDITIONAL HINGE FOR EACH ADDITIONAL TWO-AND-ONE-HALF FEET, OR FRACTION THEREOF, IN THE HEIGHT OF THE DOOR. HAGER & PBB ARE ACCEPTABLE EQUALS.
- LOCKSETS/LATCHSETS SHALL BE EQUAL TO ARROW "BM" SERIES X "NL" X US32D FINISH IN FUNCTIONS AS NOTED IN THE SETS BELOW. FURNISH ALL LOCKSETS WITH ASA STRIKES AND WROUGHT BOXES. FURNISH INTERCHANGEABLE CORE CYLINDERS AND MASTERKEY ALL LOCKING FUNCTIONS.
- CLOSERS SHALL BE DORMA 8900 X 689 FINISH AS NOTED IN THE SETS BELOW. FURNISH ON LEAST OBJECTIONABLE SIDE OF PUBLIC VIEW.
- FLOOR CLOSERS SHALL BE DORMA BTS-80-BF X HDR062 TOP PIVOT FOR SHOE AND PATCH FITTING APPLICATIONS. FURNISH TP-80-CH TERRAZZO PLANS.
- PULLS SHALL BE EQUAL TO ROCKWOOD RM3820 SERIES X FULL HEIGHT (OFFSET TO CLEAR MAGNETIC LOCK ASSEMBLIES) X BTB MOUNT. ALL PULLS SHALL BE SATIN STAINLESS STEEL (US32D).
- DUMMY TRIMS
- CATCHES SHALL BE IVES CL21A.
- HEAD JAMB STOPS SHALL BE ABH 1801 X US32D (WITH SILENCERS).
- FLOOR STOPS SHALL BE EQUAL TO ROCKWOOD 446 X US26D FINISH.
- GASKETING SHALL BE NGP 5050 X CHARCOAL X PERIMETER.
- AUTOMATIC DOOR BOTTOMS SHALL BE NGP 423.
- THRESHOLDS SHALL BE NGP 513.
- MAGNETIC LOCK ASSEMBLIES SHALL BE DYNALOCK 3002-VOP2. FURNISH (1) EMERGENCY EXIT RELEASE DYNALOCK 6275.
- POWER SUPPLIES FOR MAGNETIC LOCKS SHALL BE DYNALOCK 5500-FAC.
- COAT HOOKS SHALL BE ROCKWOOD RM806.
- FURNISH SILENCERS (BURNS 500/501) FOR ALL WOOD AND HOLLOW METAL DOORS.

HARDWARE SPECIFICATION

- DOOR 01
2 FLOOR CLOSERS
2 SETS CUSTOM PULLS
1 MAGNETIC LOCK ASSEMBLY

ACCESS CONTROL, RX SENSOR & DPS BY SECURITY INTERFACE WITH BUILDING FIRE ALARM SYSTEM
- DOORS 07, 21

1 FLOOR CLOSER WITH 90° HOLD OPEN
1 SET CUSTOM PULLS
1 HEAD JAMB STOP
1 STOP
- DOORS 09,10,20,28,30,31,33,37,39

BUTTS
1 LATCHSET X 01
1 STOP
- DOORS 12, 13

BUTTS
1 PRIVACY SET X 02
1 STOP
- DOOR 16
BUTTS
2 DUMMY TRIMS
2 CATCHES
2 OH STOP X DORMA 700S
- DOOR 14

BUTTS
1 DUMMY TRIM
1 CATCH
1 OH STOP X DORMA 700S
- DOOR 27

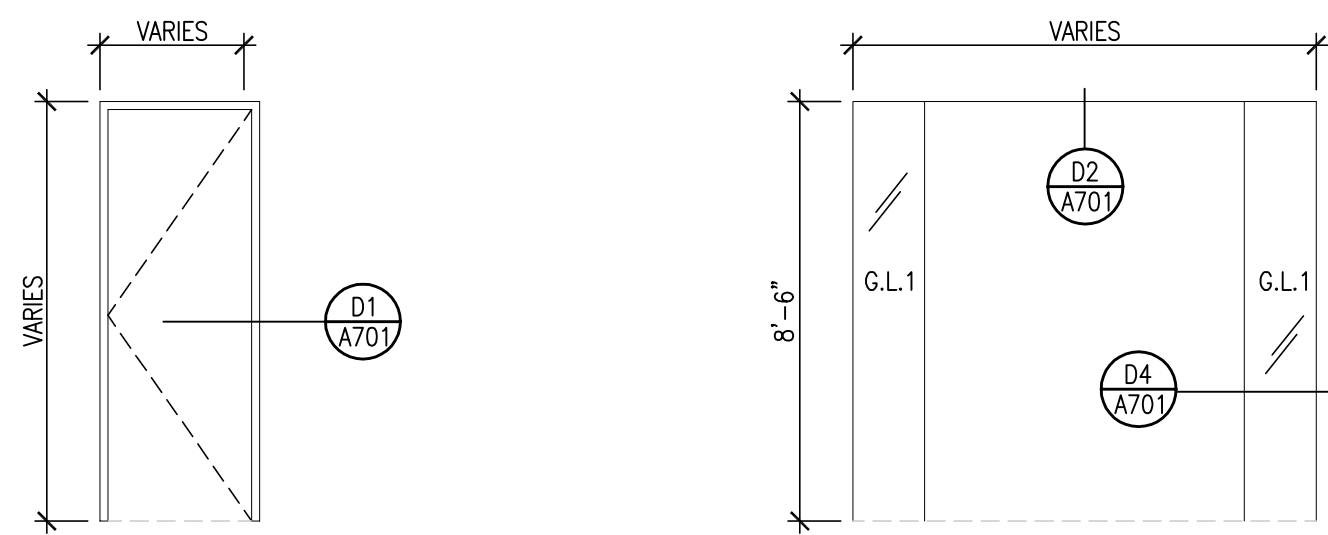
BUTTS
1 LOCKSET X 12
1 CLOSER X S-DS
- DOOR 25

BUTTS 1 LOCKSET X 17
1 CLOSER
1 STOP
- DOOR 03

1 CONDUCTOR HINGE CB1901 X ACSI 1108
BUTTS X CB1901
1 ELECTRIC LOCKSET X 17-177 (FAIL SAFE STAIR SIDE)
1 CLOSER
1 STOP
1 SET GASKETING
1 AUTOMATIC DOOR BOTTOM
1 THRESHOLD
ACCESS CONTROL, RX SENSOR & DPS X BY SECURITY INTERFACE WITH BUILDING FIRE ALARM SYSTEM.
- DOORS 11,18,22,29,34,36

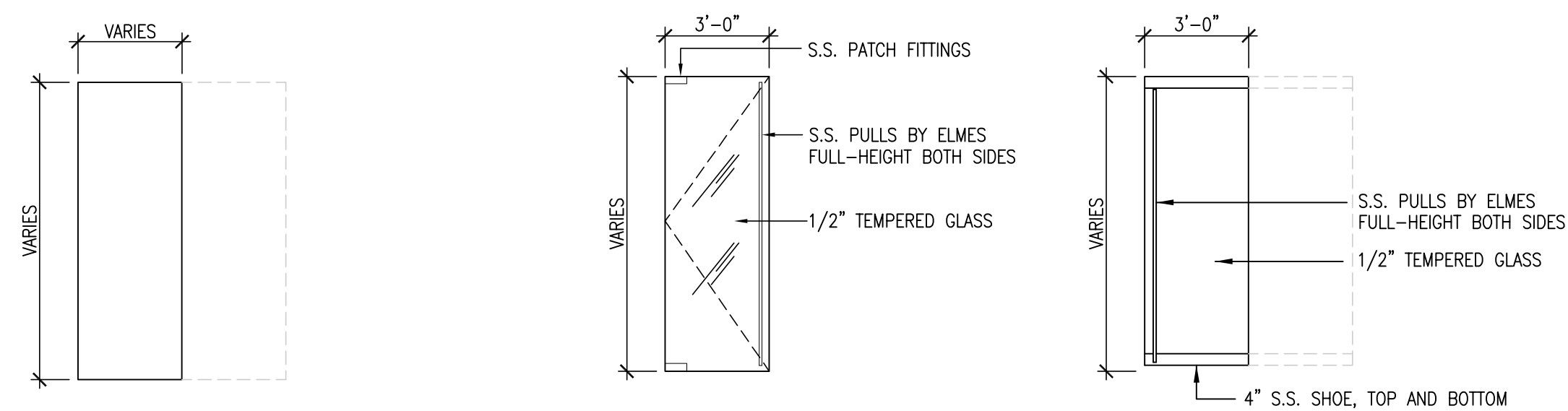
REUSE EXISTING VAULT DOORS

FRAME ELEVATIONS

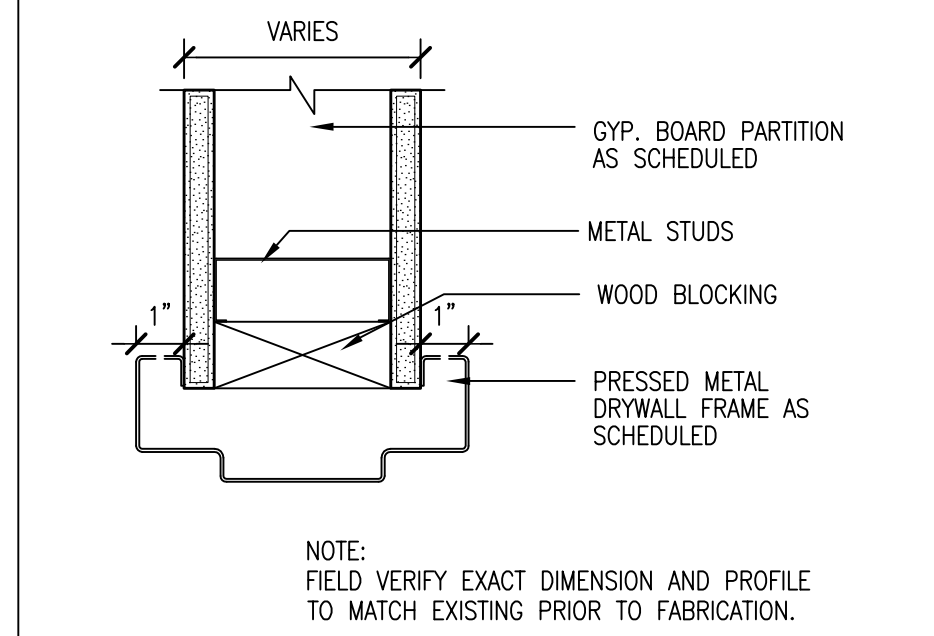


1 METAL FRAME 2 FRAMELESS IN GLASS WALL

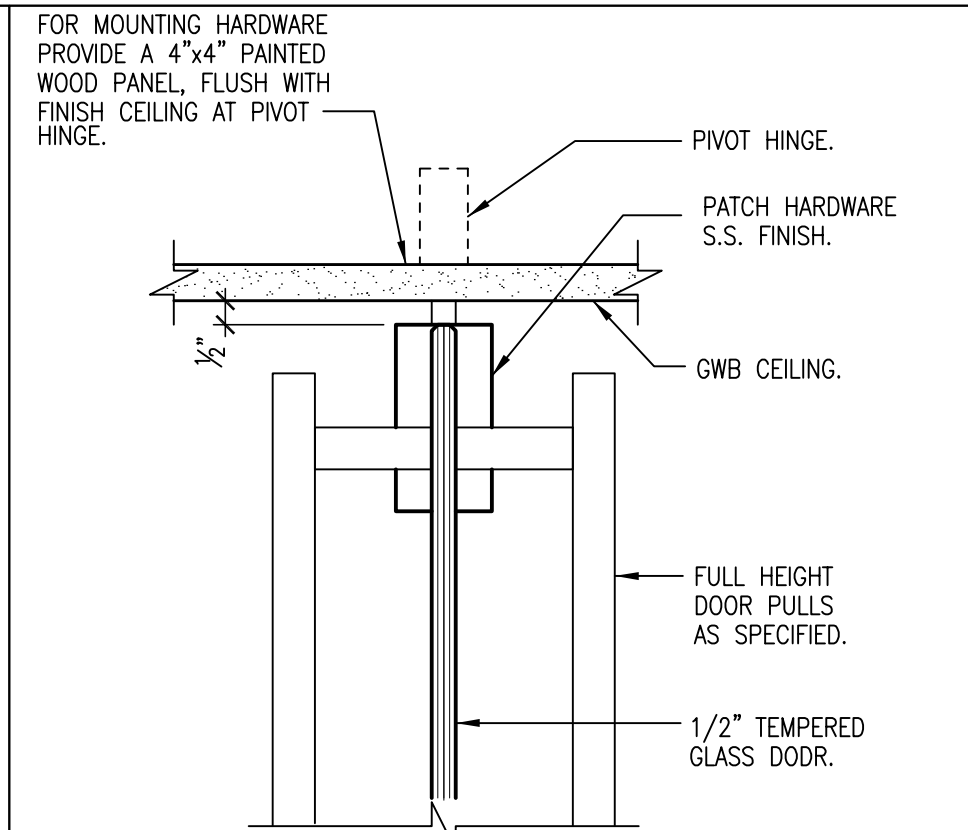
DOOR ELEVATIONS



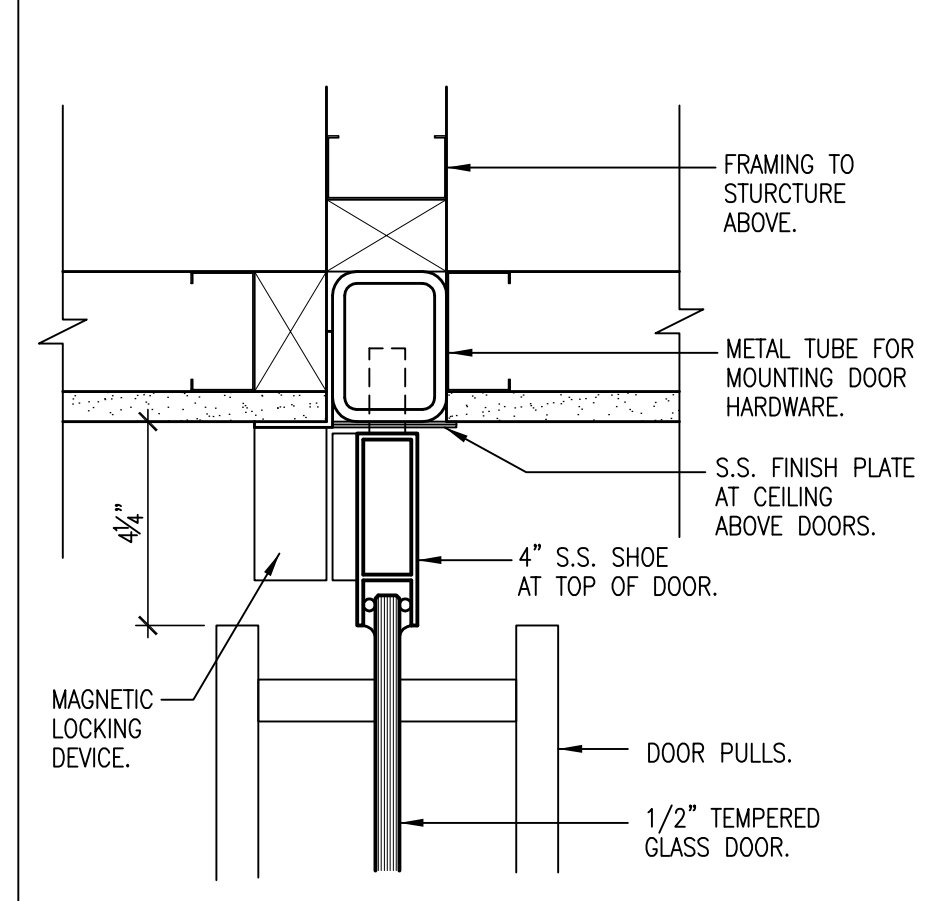
A FLUSH SINGLE LEAF B FULL GLASS DOOR SINGLE LEAF C FLUSH GLASS SINGLE LEAF
AA FLUSH DOUBLE LEAF BB FLUSH GLASS DOOR DOUBLE LEAF CC FLUSH GLASS DOUBLE LEAF



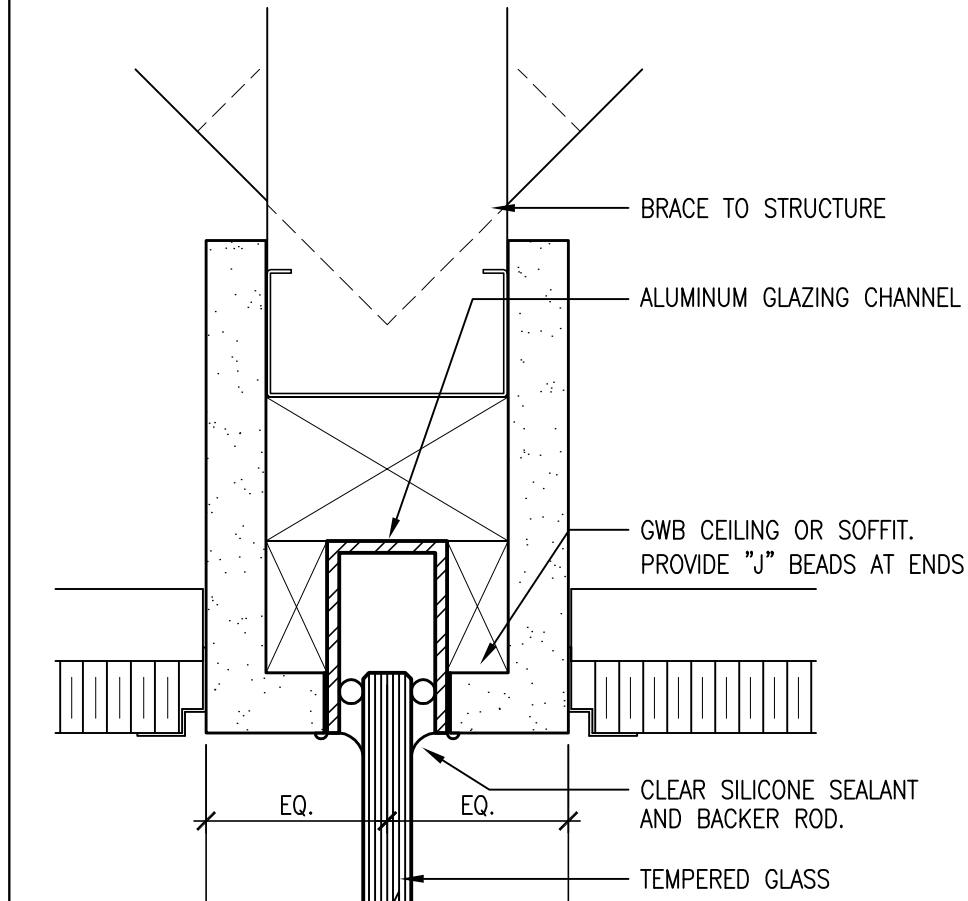
A5 JAMB AT METAL FRAME (HEAD SIMILAR) SCALE: 3" = 1'-0"



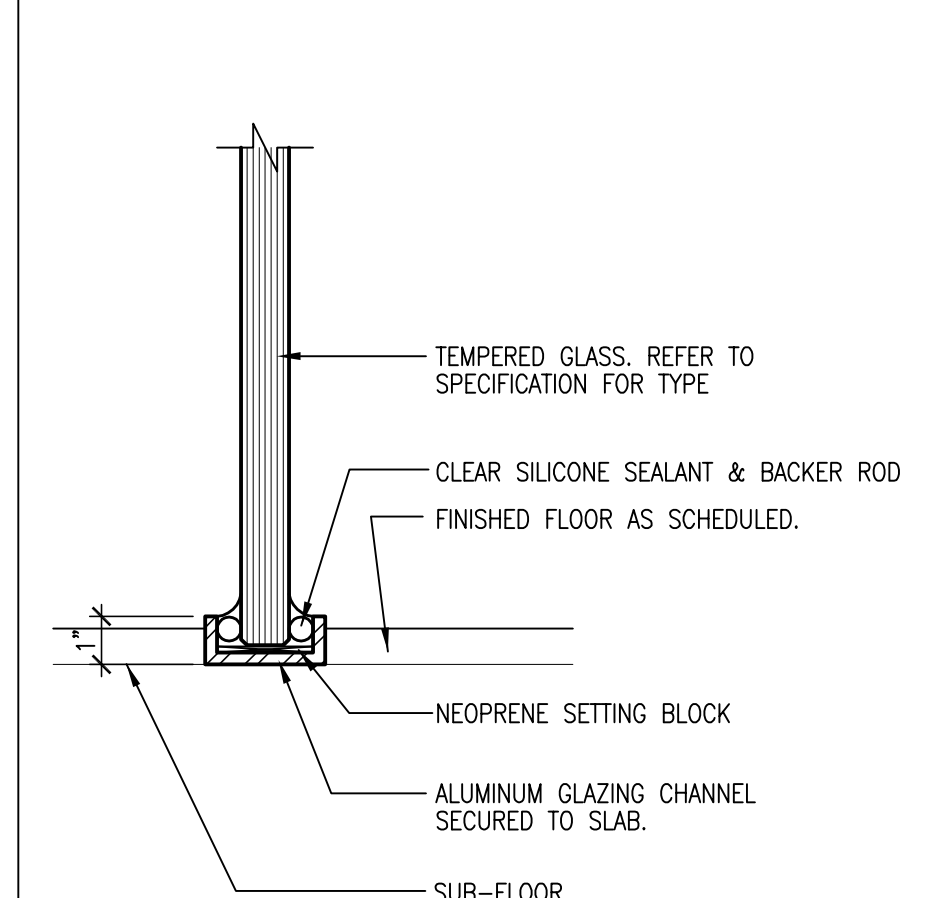
A6 HEAD AT GLASS DOOR W/ PATCH HARDWARE SCALE: 3" = 1'-0"



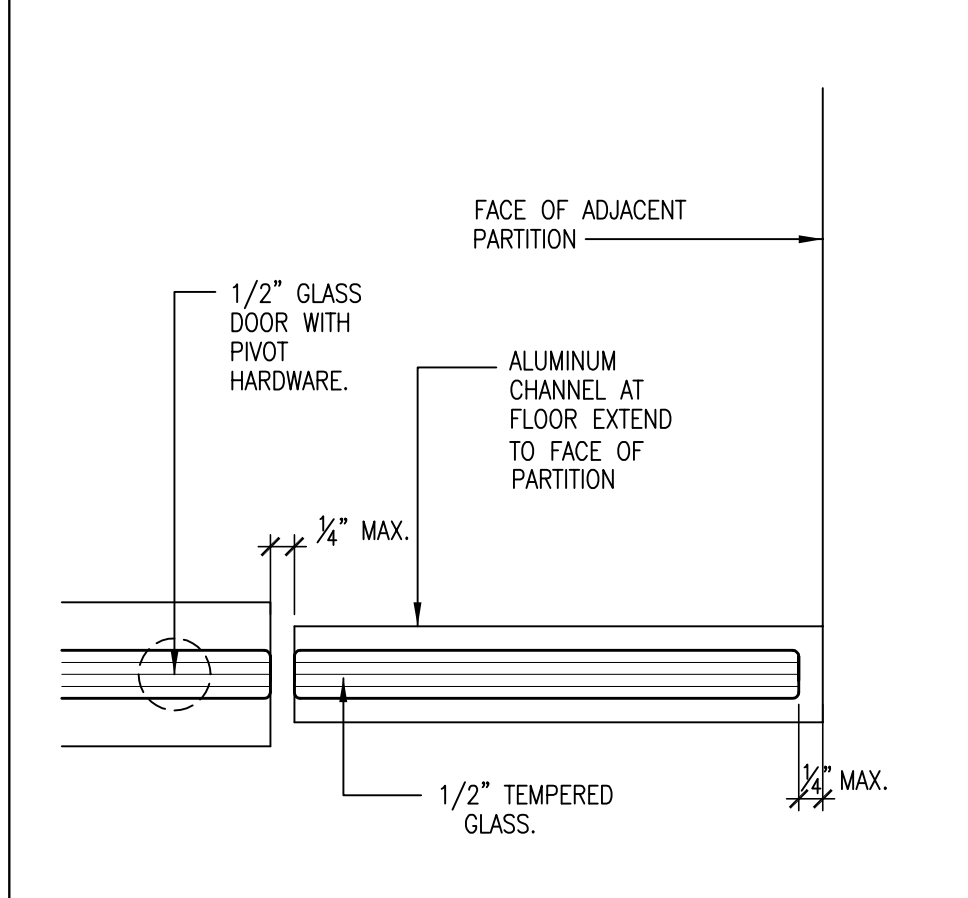
B5 HEAD CONDITION AT GLASS ENTRANCE DOORS SCALE: 3" = 1'-0"



B6 HEAD DETAIL AT FIXED GLASS SCALE: 3" = 1'-0"



C5 TYPICAL GLAZING CONDITIONS SCALE: 3" = 1'-0"



C6 GLASS JAMB DETAIL SCALE: 6" = 1'-0"

revisions

**Bingham
McCutchen
LLP**

3rd Floor Renovations
85 Exchange Place
Portland, Maine

architect
phpartners

18 Tremont Street, Suite 707
Boston MA 02108
Tel 617.720.0740
Fax 617.720.0747
www.powershiggins.com

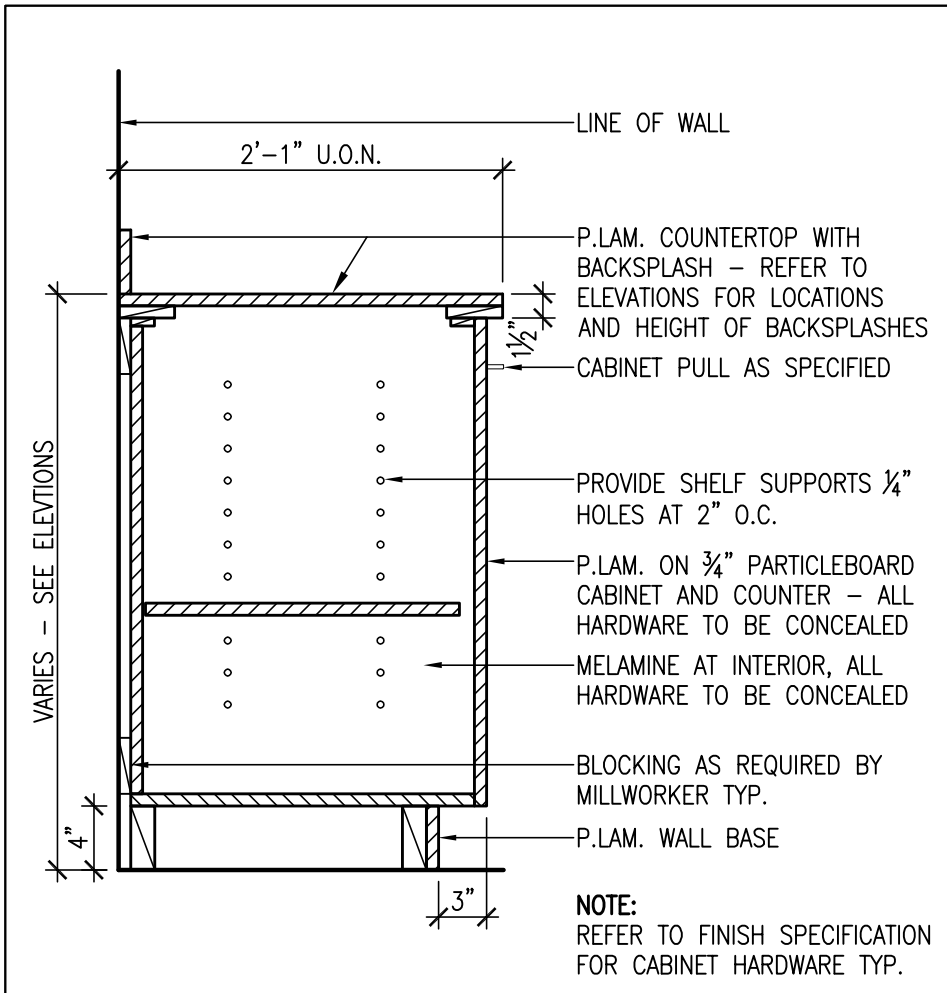
DOOR SCHEDULE,
DOOR AND FRAME ELEVATIONS,
AND DOOR DETAILS

scale
AS NOTED

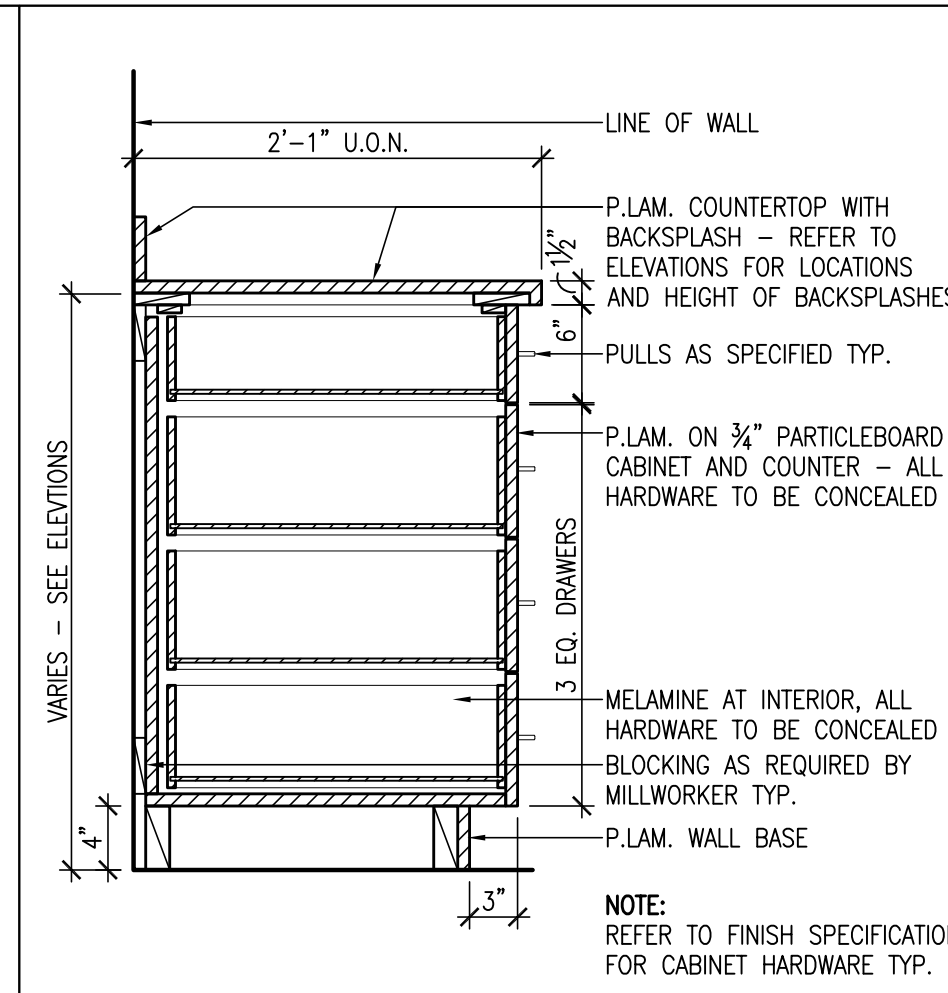
date
12/08/2006

project
06032

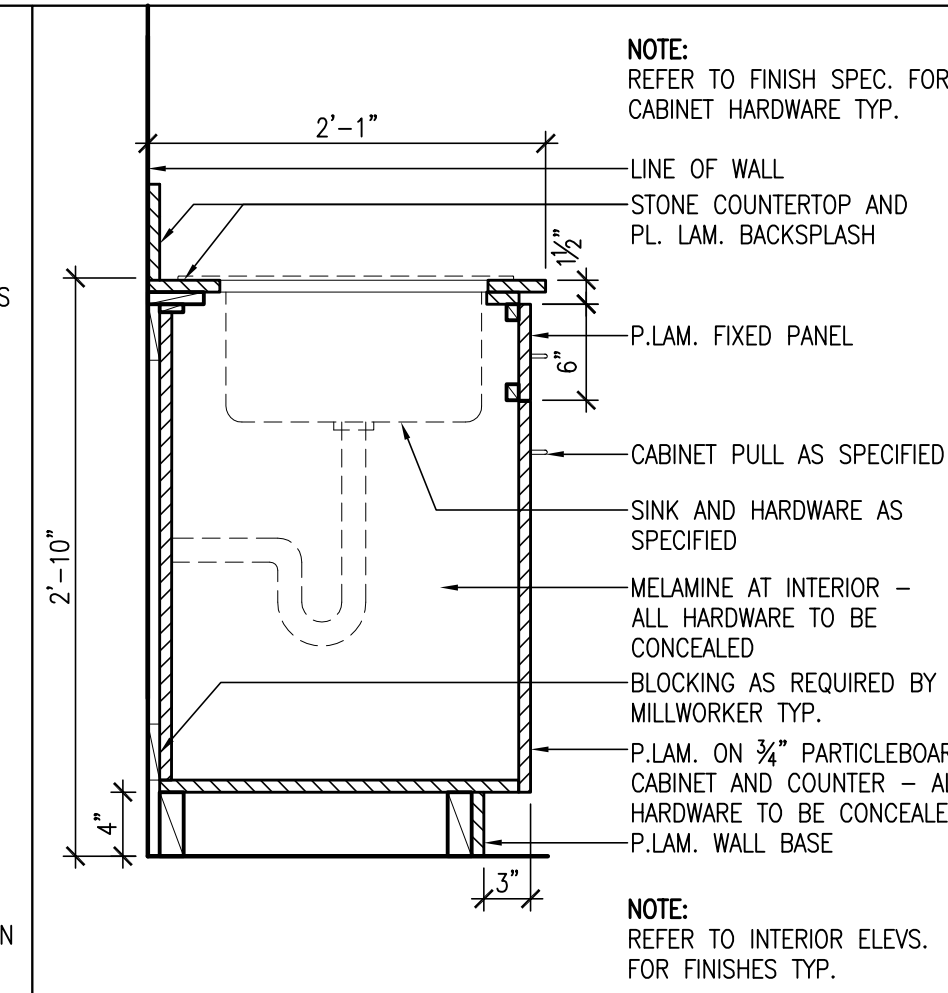
A701



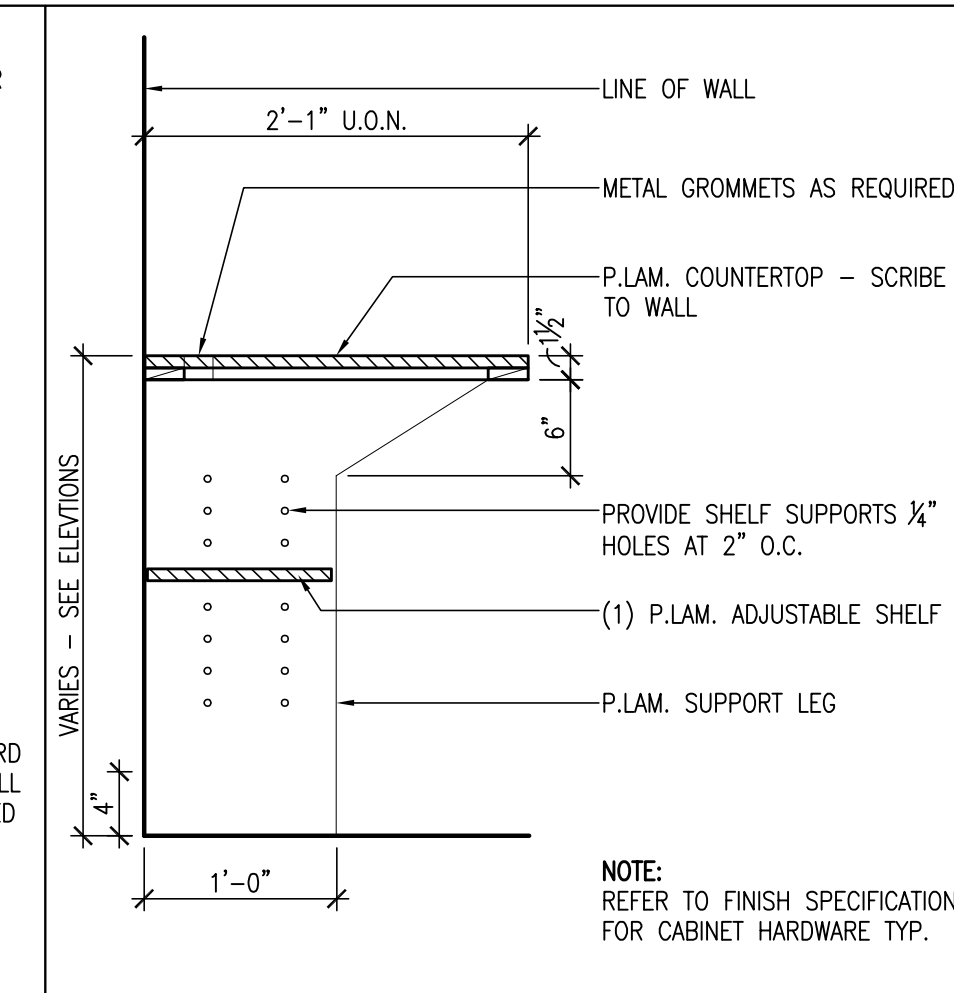
A1 BASE CABINET
SCALE: 1" = 1'-0"



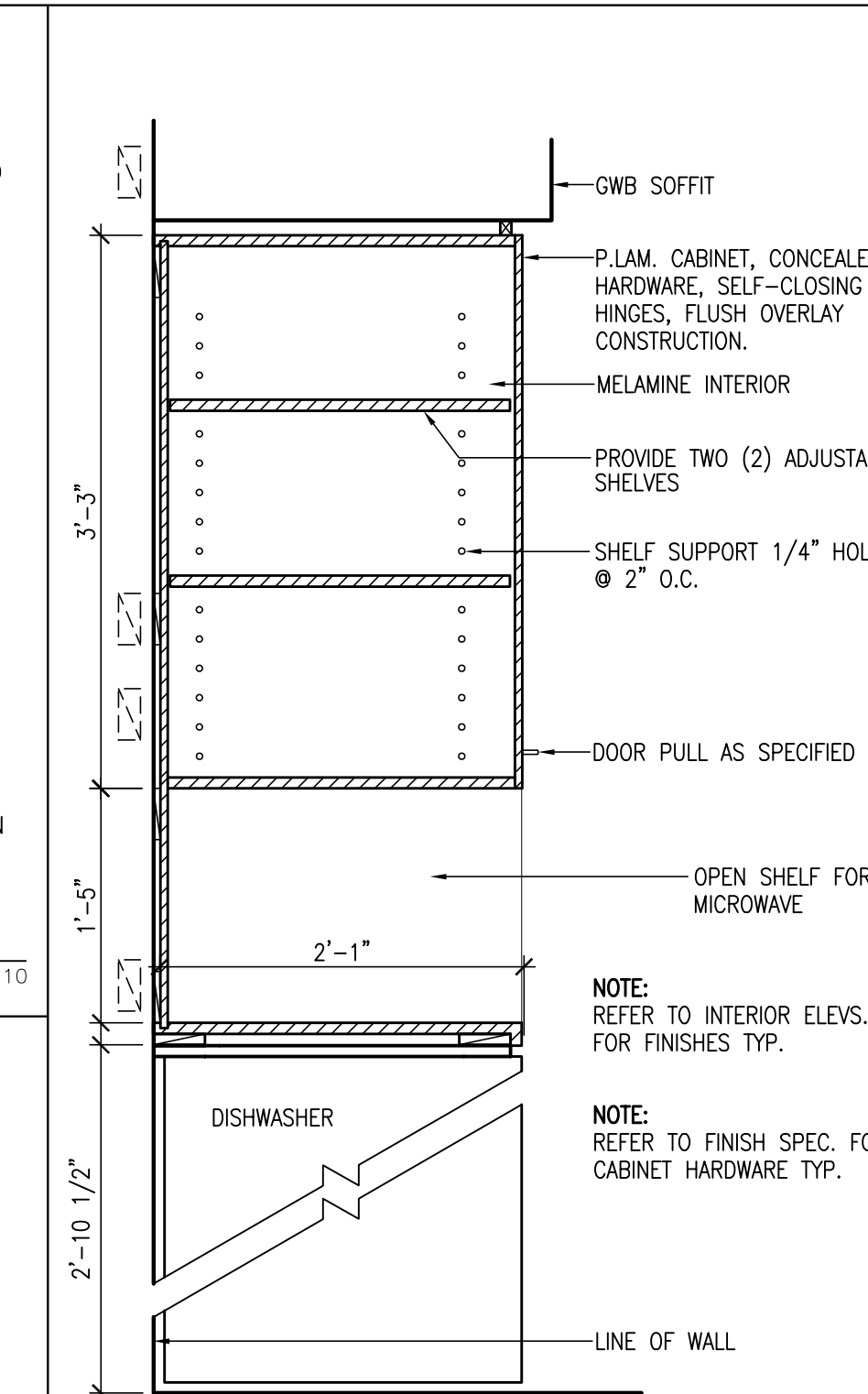
A2 BASE CABINET WITH FOUR (4) DRAWERS
SCALE: 1" = 1'-0"



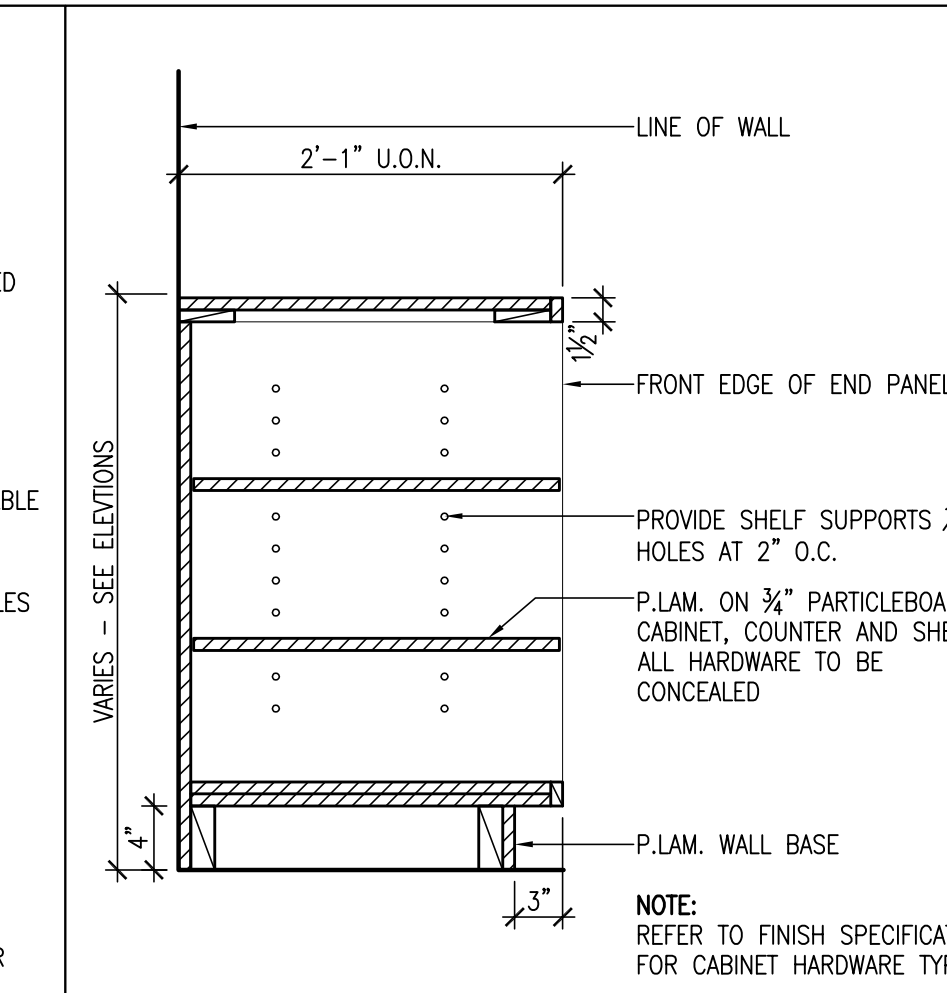
A3 BASE CABINET WITH SINK
SCALE: 1" = 1'-0"



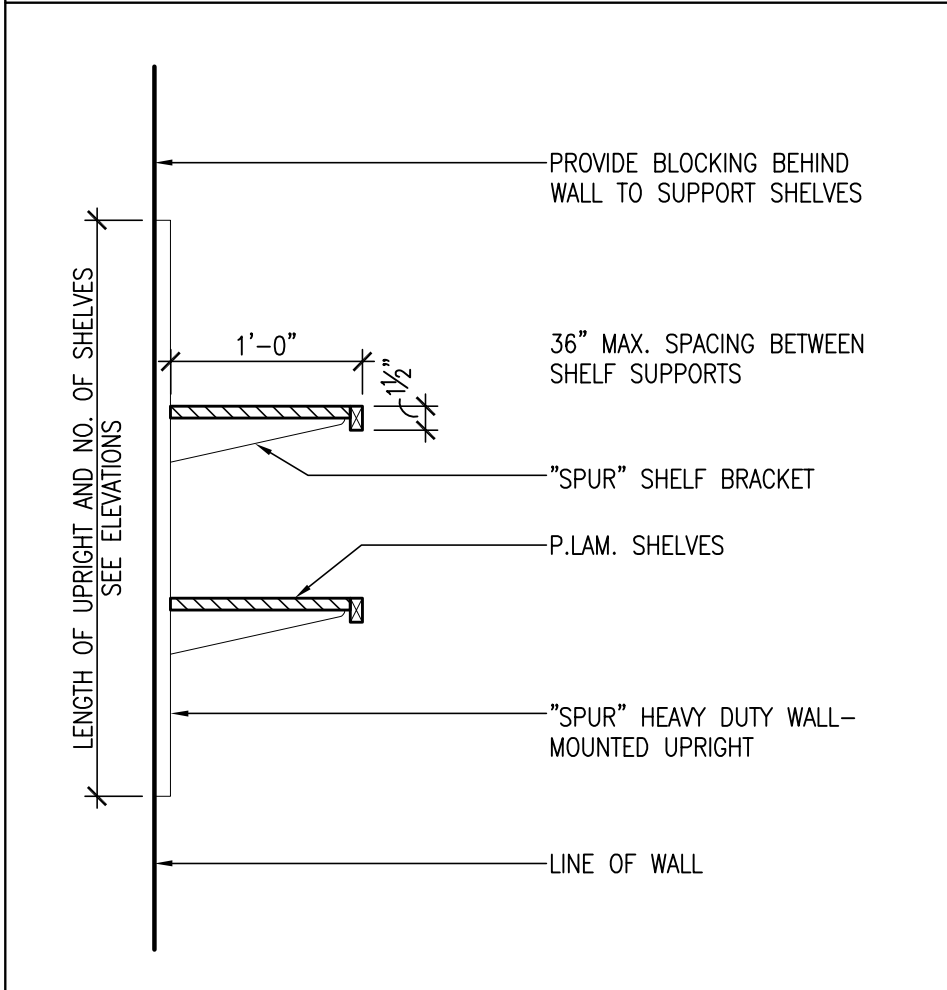
A4 COUNTER WITH SUPPORT
SCALE: 1" = 1'-0"



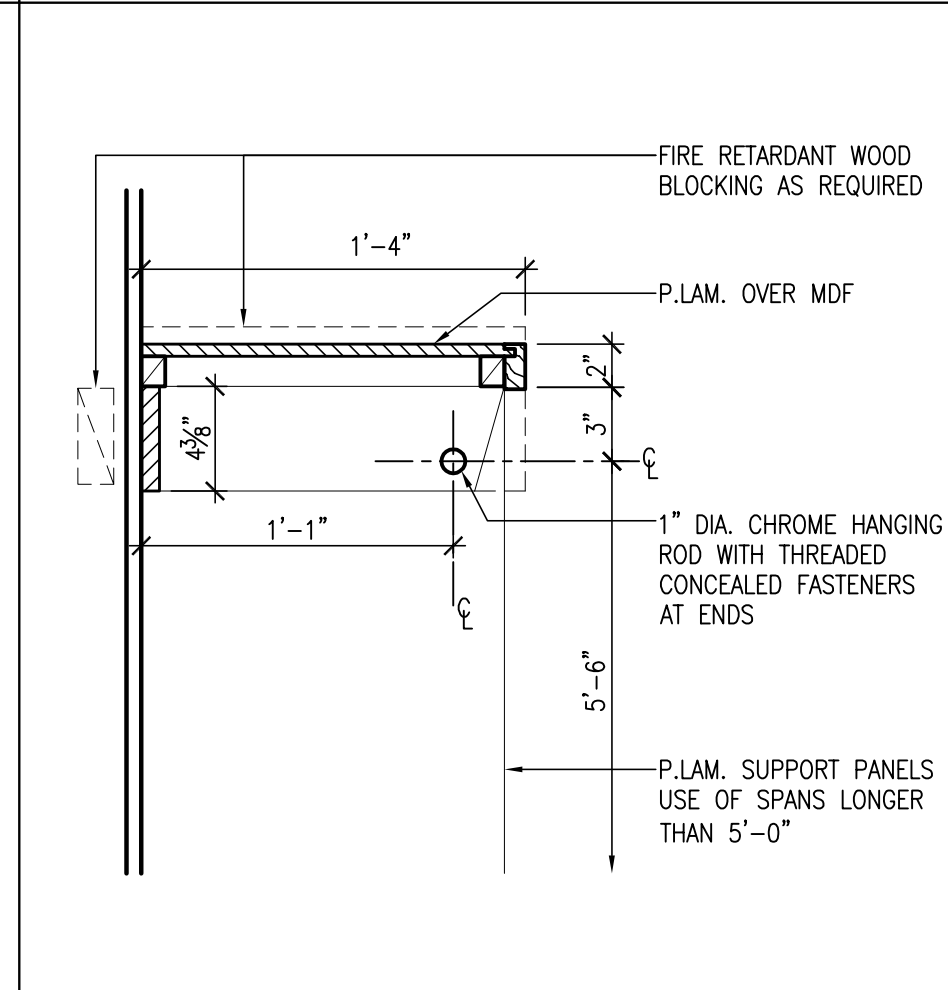
A5 TALL CABINET AT DISHWASHER
SCALE: 1" = 1'-0"



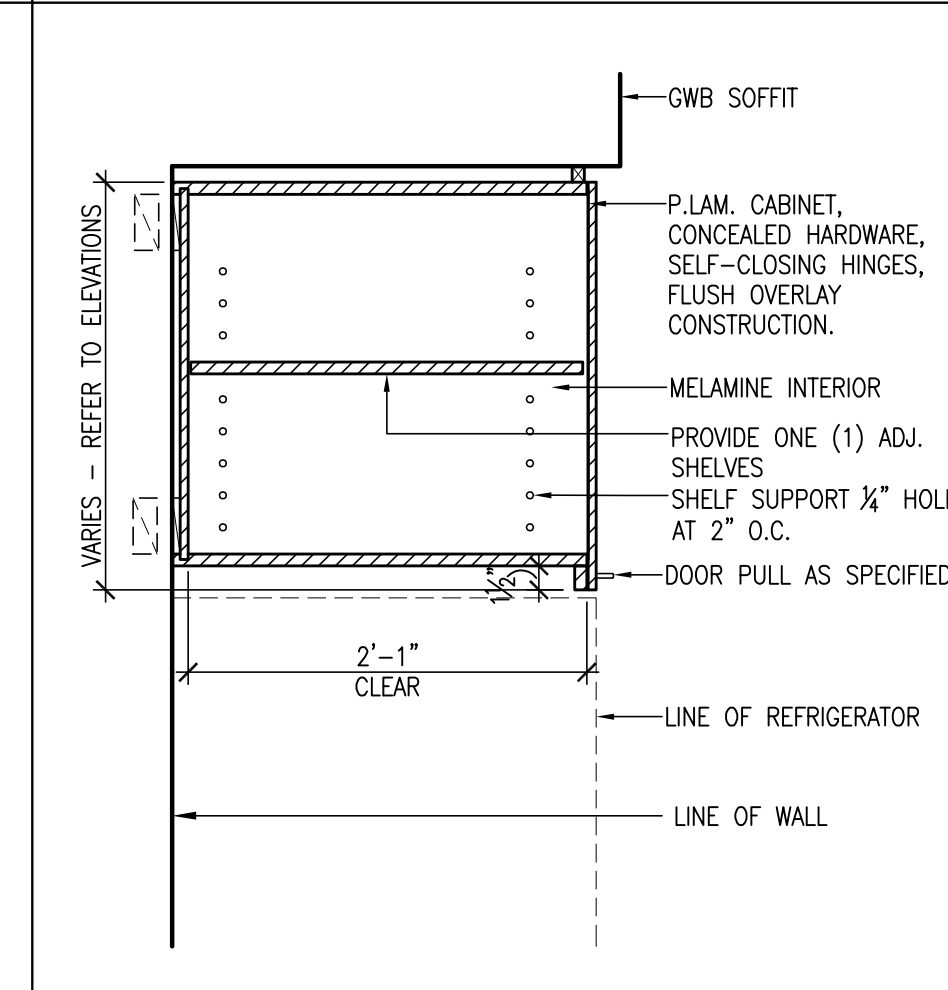
A6 BASE CABINET WITH ADJUSTABLE SHELVES
SCALE: 1" = 1'-0"



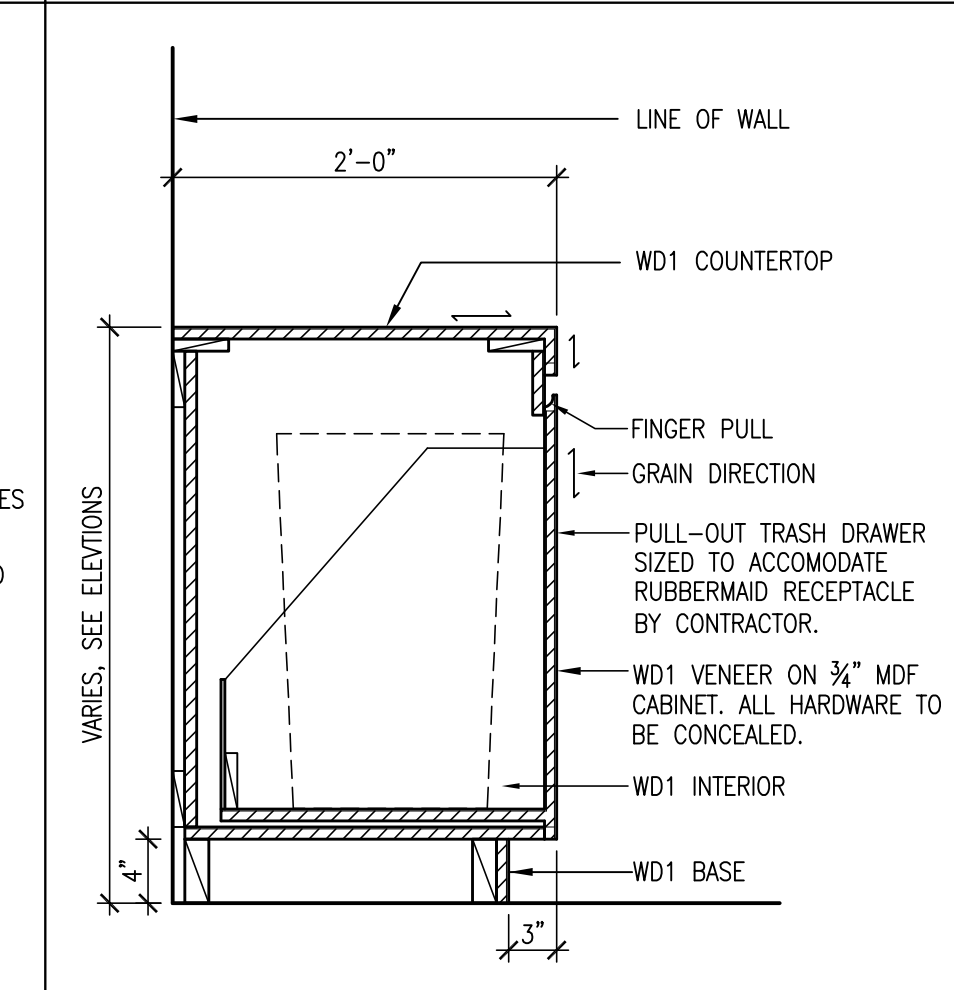
B1 WALL-MOUNTED ADJUSTABLE SHELVING
SCALE: 1" = 1'-0"



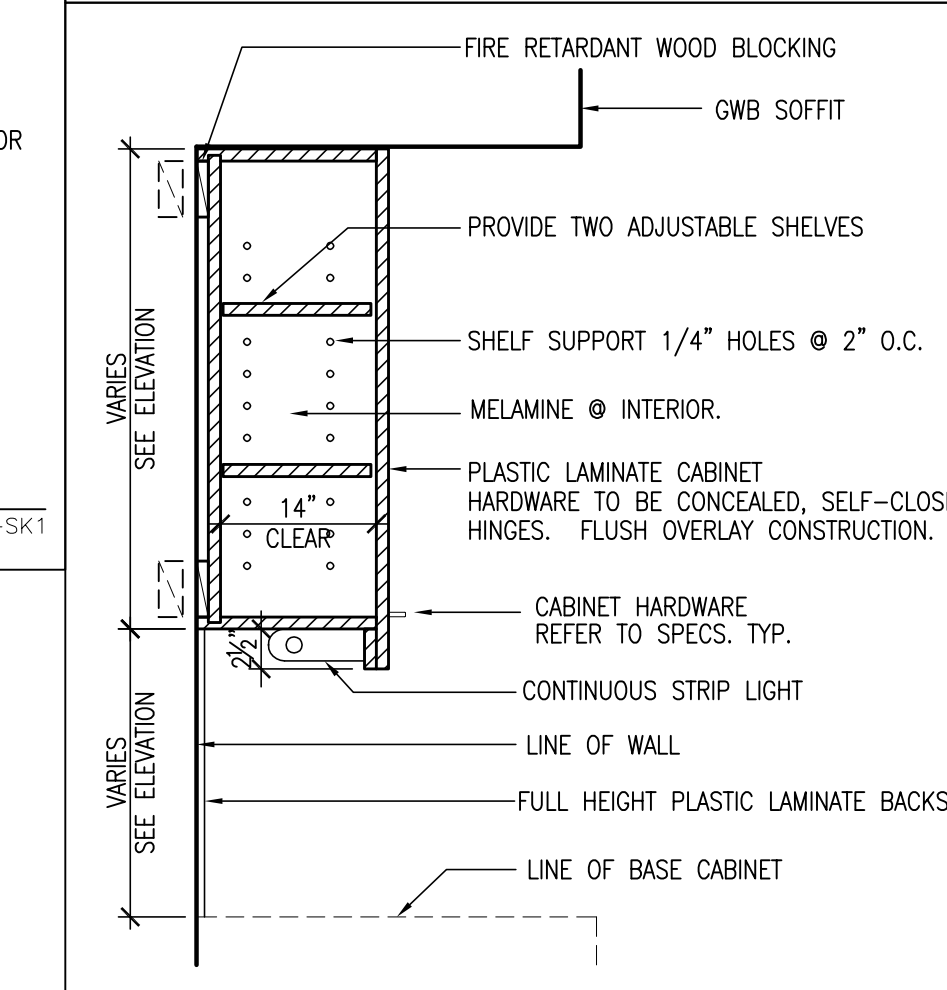
B2 COAT ROD AND SHELF
SCALE: 1 1/2" = 1'-0"



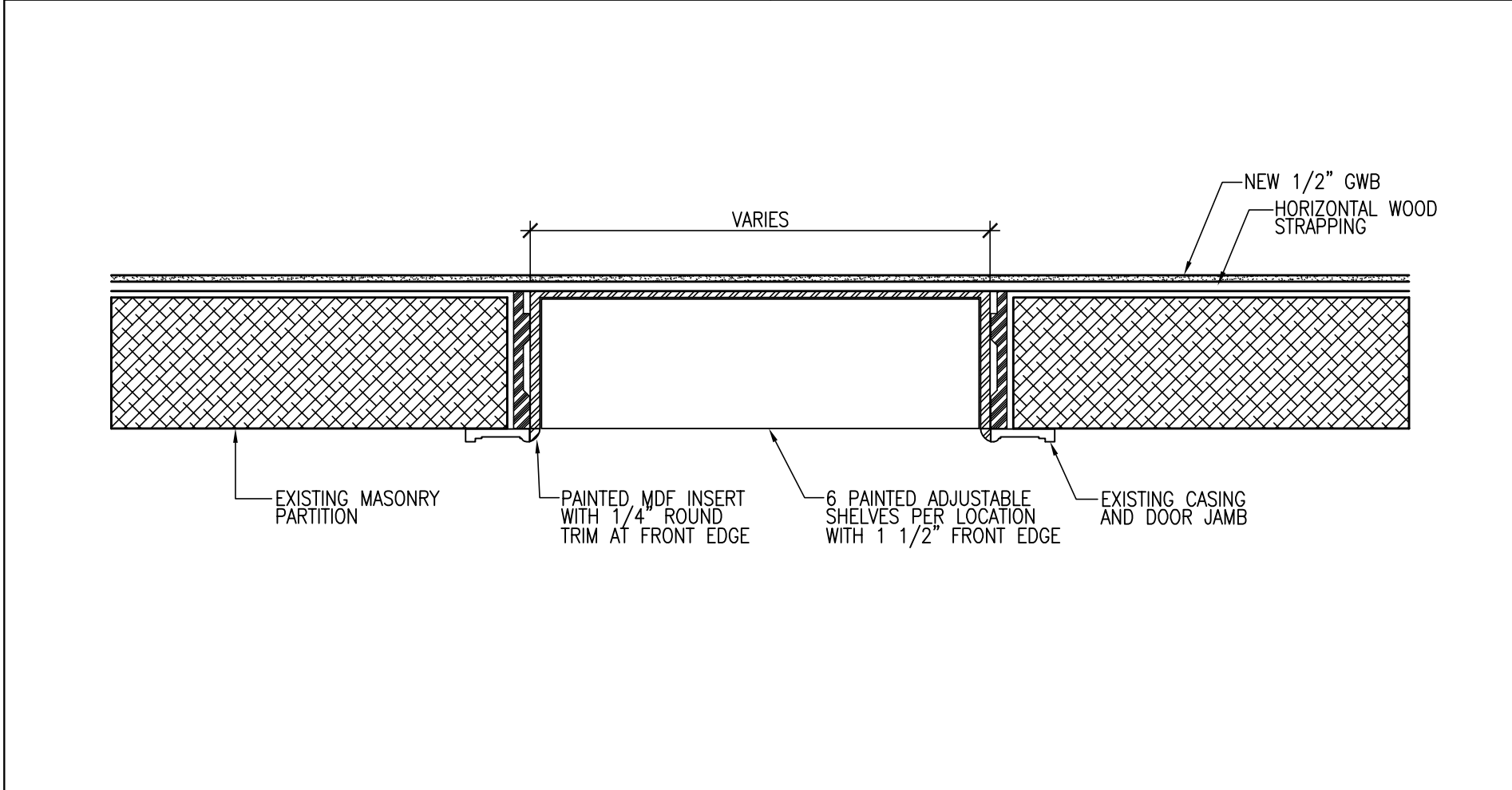
B3 OVERHEAD CABINET ABOVE REFRIGERATOR
SCALE: 1" = 1'-0"



B4 SECTION AT TRASH DRAWER
SCALE: 1" = 1'-0"



B6 UPPER CABINET WITH SOFFIT
SCALE: 1" = 1'-0"



C1 SECTION AT BUILT-IN SHELVING
SCALE: 1" = 1'-0"

revisions

**Bingham
McCutchen
LLP**

3rd Floor Renovations

85 Exchange Place
Portland, Maine

architect

phpartners

18 Tremont Street, Suite 707
Boston MA 02108
Tel 617.720.0740
Fax 617.720.0747
www.powershiggins.com

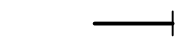


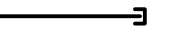





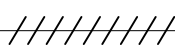

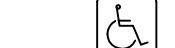



MISCELLANEOUS DETAILS

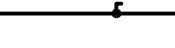
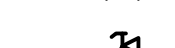



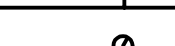
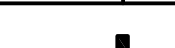



scale
AS NOTED


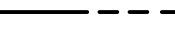






date
12/08/2006

project
06032

A901

GENERAL		
	CO	CLEANOUT
	P-TRAP	P-TRAP
		ELBOW UP OR RISE
		ELBOW DOWN OR DROP
		CAP OR END OF PIPE
		TEE LOOKING DOWN
		TEE LOOKING UP
		UNION
		STRAINER
	CTE	CONNECT TO EXISTING
	CWR	COLD WATER RISER
	ETBR	EXISTING TO BE REMOVED
	ETR	EXISTING TO BE REMAIN
	HC	HANDICAPPED ACCESSIBLE
	OED	OPEN END DRAIN

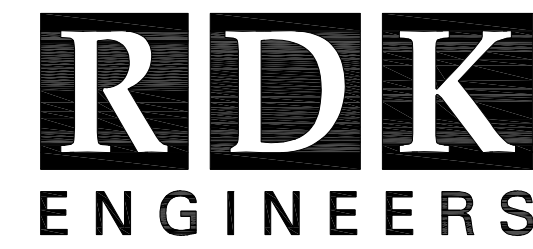
VALVE LEGEND		
		BALL VALVE
		GATE VALVE
	T&P	TEMPERATURE AND PRESSURE RELIEF VALVE
		VACUUM RELIEF VALVE
		AQUASTAT
		THERMOMETER
	PG	PRESSURE GAUGE
	WHA	WATER HAMMER ARRESTOR
		CHECK VALVE
		BALANCING VALVE

PIPING LEGEND		
	CW	COLD WATER
	HW	HOT WATER
	HWR	HOT WATER RETURN
	S or W	SOIL OR WASTE ABOVE GROUND
	V	VENT ABOVE GROUND
	IW	INDIRECT WASTE
	GW	GREASE WASTE
	COND	CONDENSATE DRAIN

GENERAL NOTES	
1.	PLUMBING WORK SHALL BE DONE IN ACCORDANCE WITH THE LATEST EDITION OF THE STATE PLUMBING AND GAS CODE INCLUDING ALL LOCAL AMENDMENTS, AND BUILDING RULES AND REGULATIONS.
2.	OBTAIN ALL PERMITS AND PAY ALL FEES ASSOCIATED WITH THIS WORK PRIOR TO COMMENCEMENT.
3.	PIPING AND EQUIPMENT IS SHOWN DIAGRAMTICALLY. THE ACTUAL ROUTING OF PIPING AND EXACT LOCATION OF EQUIPMENT SHALL BE DETERMINED IN THE FIELD.
4.	IN ADDITION TO REVIEWING AND COORDINATING WITH THE OTHER TRADES (STRUCTURAL, ARCHITECTURAL, HVAC AND AND ELECTRICAL) THE CONTRACTOR SHALL VISIT THE SITE AND FAMILIARIZE HIMSELF WITH DETAILS OF CONSTRUCTION.
5.	FURNISH AND INSTALL ALL NECESSARY PIPING, EQUIPMENT SUPPORTS AND ANY EQUIPMENT NOT SHOWN ON DRAWINGS OR CALLED FOR IN THE SPECIFICATIONS BUT NECESSARY TO PROVIDE A COMPLETE AND WORKABLE SYSTEM.
6.	PROVIDE ACCESSIBLE SHUTOFF VALVES ON ALL BRANCH PIPING AND ON ALL SUPPLY PIPING TO INDIVIDUAL FIXTURES AND EQUIPMENT.
7.	PROVIDE ACCESS TO ALL EQUIPMENT REQUIRING PERIODIC SERVICE AND MAINTENANCE.
8.	FURNISH ACCESS PANELS TO THE GENERAL CONTRACTOR FOR INSTALLATION UNDER THE RELATED TRADES.
9.	PITCH ALL WATER LINES TO DRAIN.
10.	INSTALL HORIZONTAL RUNS OF WATER PIPING AS HIGH AS POSSIBLE AND PROVIDE DRAIN-OFFS AT ALL LOW POINTS.
11.	HOT WATER TAKEOFFS SHALL HAVE NOT LESS THAN THREE ELBOW SWINGS.
12.	PIPING SHALL RUN CONCEALED IN ALL AREAS WITH THE EXCEPTION OF MECHANICAL ROOMS, AREAS WHERE NO CEILING EXISTS OR WHERE NOTED ON THE PLANS.
13.	INSTALL DIELECTRIC COUPLINGS BETWEEN DISSIMILAR MATERIALS.
14.	AN AIR GAP OF 3" SHALL BE PROVIDED ON ALL EQUIPMENT DRAINS PIPED TO OPEN END DRAINS.
15.	REQUIRED FIRE RESISTANCE RATING OF FLOORS, WALLS AND CEILINGS SHALL BE MAINTENANCED WHEN PIPE PENETRATIONS ARE MADE.
16.	REFER TO DETAILS FOR PIPE AND EQUIPMENT SIZES NOT SHOWN ON THE PLANS.
17.	ALL WORK SHOWN ON DETAILS BUT NOT ON PLANS OR VICE VERSA SHALL BE INCLUDED AS IF SHOWN ON BOTH.
18.	SEE SPECIFICATIONS FOR OTHER REQUIREMENTS.

SPECIFICATIONS	
PLUMBING SPECIFICATIONS – GENERAL	PLUMBING SPECIFICATIONS – PRODUCTS
<p>1. GENERAL PROVISIONS: BEFORE SUBMITTING BID, VISIT AND CAREFULLY EXAMINE SITE TO IDENTIFY EXISTING CONDITIONS AND DIFFICULTIES THAT WILL AFFECT WORK OF THIS SECTION. NO EXTRA PAYMENT WILL BE ALLOWED FOR ADDITIONAL WORK CAUSED BY UNFAMILIARITY WITH SITE CONDITIONS THAT ARE VISIBLE OR READILY CONSTRUED BY EXPERIENCED OBSERVER. PERFORM WORK AND PROVIDE MATERIAL AND EQUIPMENT FOR SYSTEMS SHOWN ON DRAWINGS AND AS SPECIFIED IN THIS SECTION. COMPLETELY COORDINATE WORK OF THIS SECTION WITH WORK OF OTHER SECTIONS AND PROVIDE COMPLETE AND FULLY FUNCTIONAL INSTALLATION. DRAWINGS AND SPECIFICATIONS FORM COMPLEMENTARY REQUIREMENTS; PROVIDE WORK SPECIFIED AND NOT SHOWN, AND WORK SHOWN AND NOT SPECIFIED AS THOUGH EXPRESSLY REQUIRED BY BOTH.</p> <p>2. REFERENCE STANDARDS: PERFORM WORK STRICTLY AS REQUIRED BY RULES, REGULATIONS, STANDARDS, CODES, ORDANANCES, AND LAWS OF LOCAL STATE, AND FEDERAL GOVERNMENTS, AND OTHER AUTHORITIES THAT HAVE LAWFUL JURISDICTION. INCLUDING BY NOT LIMITED TO:</p> <p>a) MAINE STATE INTERNAL PLUMBING CODE. b) MAINE STATE BUILDING CODE. c) MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION. d) ALL APPLICABLE NFPA STANDARDS. e) OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA). f) MAINE DEPARTMENT OF PUBLIC SAFETY CODES.</p> <p>2. SCOPE OF WORK: PERFORM WORK AND PROVIDE MATERIAL AND EQUIPMENT AS SHOWN ON DRAWINGS AND AS SPECIFIED IN THIS SECTION OF THE SPECIFICATIONS. GIVE NOTICES, FILE PLANS, OBTAIN PERMITS AND LICENSES, PAY FEES AND BACKCHARGES, AND OBTAIN NECESSARY APPROVALS FROM AUTHORITIES THAT HAVE JURISDICTION AS REQUIRED TO PERFORM WORK IN ACCORDANCE WITH ALL LEGAL REQUIREMENTS AND WITH SPECIFICATIONS AND DRAWINGS.</p> <p>3. RELATED WORK: THE FOLLOWING WORK IS NOT INCLUDED IN THIS SECTION AND WILL BE PROVIDED UNDER OTHER SECTIONS:</p> <p>a) PAINTING, EXCEPT AS SPECIFIED. b) ELECTRICAL POWER WIRING FOR ALL EQUIPMENT. c) TEMPORARY LIGHT, POWER, WATER, HEAT, GAS AND SANITARY FACILITIES FOR USE DURING CONSTRUCTION.</p> <p>4. SUBMITTALS: SUBMIT FIVE (5) COMPLETE COPIES OF PRODUCT DATA FOR EQUIPMENT SPECIFIED OR SHOWN ON DRAWINGS PREPARED BY MANUFACTURERS, SUPPLIERS AND VENDORS. SUBMITTALS SHALL INCLUDE:</p> <p>a) TESTING REPORTS. b) ALL CUT SHEETS OF THE FOLLOWING, BUT NOT LIMITED TO: FIXTURES, PIPE MATERIALS, FITTINGS, VALVES, WATER HEATERS, DRAINS, BACKFLOW PREVENTERS, INSULATION, HANGERS, ETC. c) OPERATION AND MAINTENANCE DATA: PREPARE AND SUBMIT PRIOR TO THE COMPLETION OF THE PROJECT OPERATING AND MAINTENANCE MANUALS INCLUDING SYSTEMS DESCRIPTIONS AND WIRING DIAGRAMS FOR THE FOLLOWING: a) BACKFLOW PREVENTERS. b) WATER HEATERS. c) FIXTURES.</p> <p>6. RECORD DRAWINGS: RECORD DRAWINGS SHALL BE SUBMITTED FOR REVIEW PRIOR TO THE COMPLETION OF THE PROJECT SHOWING THE "AS-BUILT" CONDITION INCLUDING WORK INSTALLED AND ALL MODIFIKATONS OR ADDITIONS TO ORIGINAL DESIGN. THE CONTRACTOR SHALL OBTAIN THE AUTOCAD FILES FOR PREPARATION OF AS-BUILT DRAWINGS FROM THE ARCHITECT. THE ARCHITECT AND ENGINEER ARE NOT GRANTING TO THE CONTRACTOR ANY OWNERSHIP OR PROPERTY INTEREST IN THE CADD DRAWINGS BY THE DELIVERY OF THE CADD FILES TO THE CONTRACTOR. THE CONTRACTOR'S RIGHTS TO USE THE CADD FILES AND DRAWING ARE LIMITED TO USE FOR THE SOLE PURPOSE OF ASSISTING THE CONTRACTOR'S PERFORMANCE IN ITS CONTRACTUAL OBLIGATIONS UNDER THE CONTRACT WITH RESPECT TO THIS PROJECT. THE ARCHITECT AND ENGINEER ARE GRANTING NO FURTHER RIGHTS. ANY REUSE AND/OR OTHER USE BY THE CONTRACTOR WILL BE AT THE CONTRACTOR'S SOLE RISK AND WITHOUT LIABILITY TO THE ARCHITECT AND ENGINEER.</p> <p>7. WARRANTIES: GUARANTEE WORK OF THIS SECTION IN WRITING FOR ONE YEAR FROM DATE OF OWNERS ACCEPTANCE OF CERTIFICATE OF SUBSTANTIAL COMPLETION. REPAIR OR REPLACE DEFECTIVE MATERIALS, EQUIPMENT, WORKMANSHIP AND INSTALLATION THAT DEVELOP WITHIN THE PERIOD, PROMPTLY AND TO OWNER'S SATISFACTION AND CORRECT DAMAGE CAUSED IN MAKING NECESSARY REPAIRS AND REPLACEMENTS UNDER GUARANTEE WITHIN CONTRACT PRICE.</p> <p>8. COORDINATION: CONFER WITH ALL OTHER TRADES RELATIVE TO LOCATION OF ALL APPARATUS AND EQUIPMENT TO BE INSTALLED, AND SELECT LOCATIONS SO AS NOT TO CONFLICT WITH WORK OF OTHER SECTIONS.</p> <p>9. CUTTING AND PATCHING: PROVIDE ALL CUTTING AND PATCHING NECESSARY FOR THE PROPER INSTALLATION OF WORK TO BE PERFORMED UNDER THIS SECTION.</p> <p>10. SEISMIC RESTRAINT REQUIREMENTS: PROVIDE SEISMIC RESTRAINTS AS REQUIRED IN ACCORDANCE WITH THE MAINE STATE BUILDING CODE.</p> <p>11. ACCESSIBILITY: ALL WORK SHALL BE INSTALLED SO THAT PARTS REQUIRING PERIODIC INSPECTION, MAINTENANCE, AND REPAIR ARE ACCESSIBLE.</p> <p>12. ELECTRICAL WORK: ALL ELECTRICAL APPARATUS AND CONTROLS FURNISHED AND THE INSTALLATION THEREOF, AS A PART OF PLUMBING WORK, SHALL CONFORM TO APPLICABLE REQUIREMENTS UNDER THE ELECTRICAL DRAWINGS AND SPECIFICATION.</p>	<p>1. PLUMBING FIXTURES AND TRIM: REFER TO ARCHITECTURAL AND PLUMBING DRAWINGS FOR QUANTITIES, LOCATIONS AND MOUNTING HEIGHTS OF FIXTURES PROVIDED UNDER THIS SECTION. FIXTURE TRIM, TRAPS, FAUCETS, ESCUTCHEONS AND WASTE PIPES EXPOSED TO VIEW IN THE FINISHED SPACES SHALL BE 1/2" P.S. BRASS WITH POLISHED CHROMIUM PLATING OVER NICKEL FINISH.</p> <p>2. PIPE MATERIALS:</p> <p>a) SERVICE, ABOVE GROUND WATER PIPING, PIPE MATERIAL TYPE L HARD DRAWN COPPER TUBING, ASTM B88 FITTING MATERIAL: WROUGHT COPPER AND BRONZE SOLDER JOINTS, PIPE JOINT: 95-S LEAD-FREE SOLDER. b) SERVICE, ABOVE GROUND, SANITARY VENT, WASTE, AND STORM DRAINAGE PIPE MATERIAL: DWV COPPER TUBE, OR TYPE M COPPER FOR DRAINAGE ONLY, CAST IRON NO HUB (CISPI301) FITTING MATERIAL: WROUGHT COPPER DRAINAGE FITTINGS TO SUIT PIPE MATERIAL, CAST IRON, PIPE JOINT: SOLDER WITH 95-S LEAD FREE SOLDER, STAINLESS STEEL COUPLING WITH NEOPRENE GASKET.</p> <p>3. VALVES: BALL VALVES SHALL BE FULL PORT WITH STAINLESS STEEL STEM AND BALL, BRONZE BODY, SOLDER AND EQUAL TO APOLLO 77-200 SERIES FOR PIPING UP TO 2" SIZE.</p> <p>4. INSULATION:</p> <p>a) INSULATION SHALL BE BY OWENS-CORNING, CERTAIN-TEED OR MANVILLE. b) INSULATION, JACKETS AND ADHESIVES SHALL BE FLAME RETARDANT AND SHALL HAVE ASTM E-84 FIRE HAZARD RATINGS OF 25 FLAME SPREAD, 50 SMOKE DEVELOPED AND 50 FUEL CONTRIBUTED. c) HOT WATER SUPPLY PIPING SHALL BE INSULATED WITH HEAVY DENSITY FIBERGLASS WITH SELF-SEALING LAP AND ALL SERVICE JACKET. FITTINGS AND VALVES SHALL BE INSULATED WITH TWO LAYERS BLANKET INSULATION WITH PVC COVERS. INSULATION SHALL BE RATED FOR MAXIMUM OPERATING TEMPERATURE OF 450°F. INSULATION THICKNESS SHALL BE 1". d) COLD WATER SUPPLY PIPING, VALVES AND FITTINGS SHALL BE INSULATED AS SPECIFIED FOR HOT WATER SUPPLY PIPING. IN ADDITION, CONTINUOUS VAPOR BARRIER SHALL BE MAINTAINED. INSULATION THICKNESS SHALL BE 1".</p> <p>5. HANGERS, ANCHORS, CLAMPS AND INSERTS:</p> <p>a) PROVIDE STEEL BAND HANGERS FOR PIPING 4" AND SMALLER. SUPPORT PIPING FROM BUILDING STRUCTURE TO MAINTAIN REQUIRED GRADE AND PITCH OF PIPE LINES, PREVENT VIBRATION, SECURE PIPING IN PLACE. SECURE HANGERS TO INSERTS WHERE PRACTICAL. HANGER RODS SHALL HAVE MACHINE THREADS. b) HANGER RODS SHALL BE CONNECTED TO BEAM CLAMP, UL-APPROVED CONCRETE INSERTS OR PHILLIPS OR APPROVED EQUAL EXPANSION SHIELDS. RAMSET OR POWER DRIVEN INSERTS WILL NOT BE ALLOWED. c) HANGER SPACING SHALL MEET REQUIREMENTS OF STATE AND LOCAL CODES.</p> <p>6. SLEEVES AND PENETRATIONS:</p> <p>a) PIPE SLEEVES THROUGH FIRE-RATED CONSTRUCTION SHALL BE SCHEDULE 40 STEEL. SLEEVES THROUGH PARTITIONS AND NON-FIRE-RATED CONSTRUCTION SHALL BE 22 GAUGE GALVANIZED STEEL WITH LOCK LONGITUDINAL SEAMS. b) FIRE STOP PENETRATION SEALS IN FIRE-RATED CONSTRUCTION SHALL BE CERAMIC FIBRE, MINERAL FIBRE, OR SILICONE FOAM. PROVIDE MINERAL FIBRE BOARD, MATTING OR PUTTY FOR DAMMING AND FORMING. FINISH SEALS FLUSH TO WALL SURFACE AND FILL GAPS WITH SILICONE ADHESIVE SEALANT CAULKING. c) PACKING FOR SLEEVES THAT DO NOT REQUIRE MAINTENANCE OF FIRE RATING SHALL BE OAKUM, SILICATE FOAM, CERAMIC FIBRE OR MINERAL FIBRE WITH APPROVED SEALANT, PACK OR FOAM TO WITHIN ONE INCH OF BOTH WALL SURFACES. SEAL PENETRATION PACKING WITH APPROVED CAULKING AND PAINTABLE WATER-PROOF MASTIC SURFACE FINISH OR SILICONE CAULKING.</p> <p>7. WATER HAMMER ARRESTORS: STAINLESS STEEL WATER HAMMER ARRESTORS SHALL BE INSTALLED ON WATER SUPPLY LINES TO PLUMBING FIXTURES TO CONTROL WATER HAMMER. WATER HAMMER ARRESTORS SHALL BE SIZED AND SELECTED IN ACCORDANCE WITH P.D.I. STANDARD WH201. WATER HAMMER ARRESTORS SHALL BE ZURN Z1700, JAY R. SMITH, JOSAM OR APPROVED EQUAL. PROVIDE ACCESS PANEL AT WATER HAMMER ARRESTORS, WHERE REQUIRED.</p>
PLUMBING SPECIFICATIONS – EXECUTION	
<p>1. IDENTIFICATION:</p> <p>a) FURNISH AND AFFIX APPROVED ADHESIVE BANDS IDENTIFYING THE SERVICE AND DIRECTION OF FLOW OF EACH PIPING SYSTEM INSTALLED UNDER THIS WORK. b) PROVIDE VALVE TAGS ON ALL VALVES. VALVE NUMBERS AND LEGEND ON VALVE TAGS SHALL CORRESPOND TO NUMBERS INDICATED ON RECORD DRAWINGS AND VALVE LIST.</p> <p>2. TESTING: THE PLUMBING SYSTEMS SHALL BE TESTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE PLUMBING CODE AND FUEL GAS CODE, ANDO OWNERS PROTOCOL.</p> <p>3. MATERIALS AND WORKMANSHIP: MAINTAIN MAXIMUM HEADROOM AT ALL TIMES. DO NOT RUN PIPES EXPOSED UNLESS SHOWN EXPOSED ON DRAWINGS. MATERIAL AND EQUIPMENT SHALL BE NEW AND INSTALLED ACCORDING TO MANUFACTURER'S RECOMMENDED BEST PRACTICE SO THAT COMPLETED INSTALLATION SHALL OPERATE SAFELY AND EFFICIENTLY.</p> <p>4. CONTINUITY OF SERVICES: DO NOT INTERRUPT EXISTING SERVICES WITHOUT OWNER'S APPROVAL.</p> <p>5. ACCESS: PROVIDE PROPER ACCESS TO EQUIPMENT THAT REQUIRE INSPECTION, REPLACEMENT OR REPAIR. ACCESS PANELS SHALL BE A MINIMUM OF 12" X 12".</p> <p>6. CLEANING:</p> <p>a) CLEAN SYSTEMS THOROUGHLY BEFORE TESTING. FIXTURES, EQUIPMENT, PIPE, VALVES AND FITTINGS SHALL BE FREE OF GREASE, METAL CUTTINGS, DIRT AND OTHER FOREIGN MATERIAL. b) REPAIR DISCOLORATION AND DAMAGE TO PARTS OF BUILDING FINISH AND FURNISHINGS DUE TO FAILURE TO PROPERLY CLEAN PIPING SYSTEM.</p> <p>7. DISINFECTION OF WATER SYSTEMS: WATER PIPING SYSTEMS SHALL BE THOROUGHLY DISINFECTED WITH A SOLUTION CONTAINING NO LESS THAN 50 PARTS PER MILLION OF AVAILABLE CHLORINE. CHLORINATING MATERIALS SHALL BE EITHER LIQUID CHLORINE OR SODIUM HYPOCHLORITE SOLUTION, SHALL BE INTRODUCED INTO THE SYSTEM AND DRAWN TO ALL POINTS IN THE SYSTEM. DISINFECTION SOLUTION SHALL BE ALLOWED TO REMAIN IN SYSTEM FOR 24 HOURS, DURING THIS TIME, VALVES AND FAUCETS SHALL BE OPENED AND CLOSED SEVERAL TIMES. AFTER DISINFECTION, SOLUTION SHALL BE FLUSHED FROM THE SYSTEM WITH CLEAR WATER UNTIL RESIDUAL CHLORINE CONTENT IS NO GREATER THAN 0.2 PARTS PER MILLION.</p>	

revisions



Andover, MA · Boston, MA

Richard D. Kimball Company, Inc
200 Brickstone Square
Andover, MA 01810-1488

P 978-476-0298

F 978-476-5768

W www.rdkengineers.com

Bingham McCutchen

3rd Floor Renovations

85 Exchange Street
Portland, Maine

architect

phpartners

18 Tremont Street, Suite 707
Boston MA 02108
Tel 617.720.0740
Fax 617.720.0747
www.powershiggins.com

PLUMBING
LEGEND, SPECIFICATION
& DETAIL

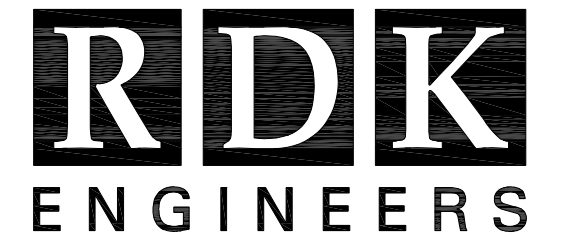
scale
NTS

date
December 8th, 2006

project
26739.00

P0.00

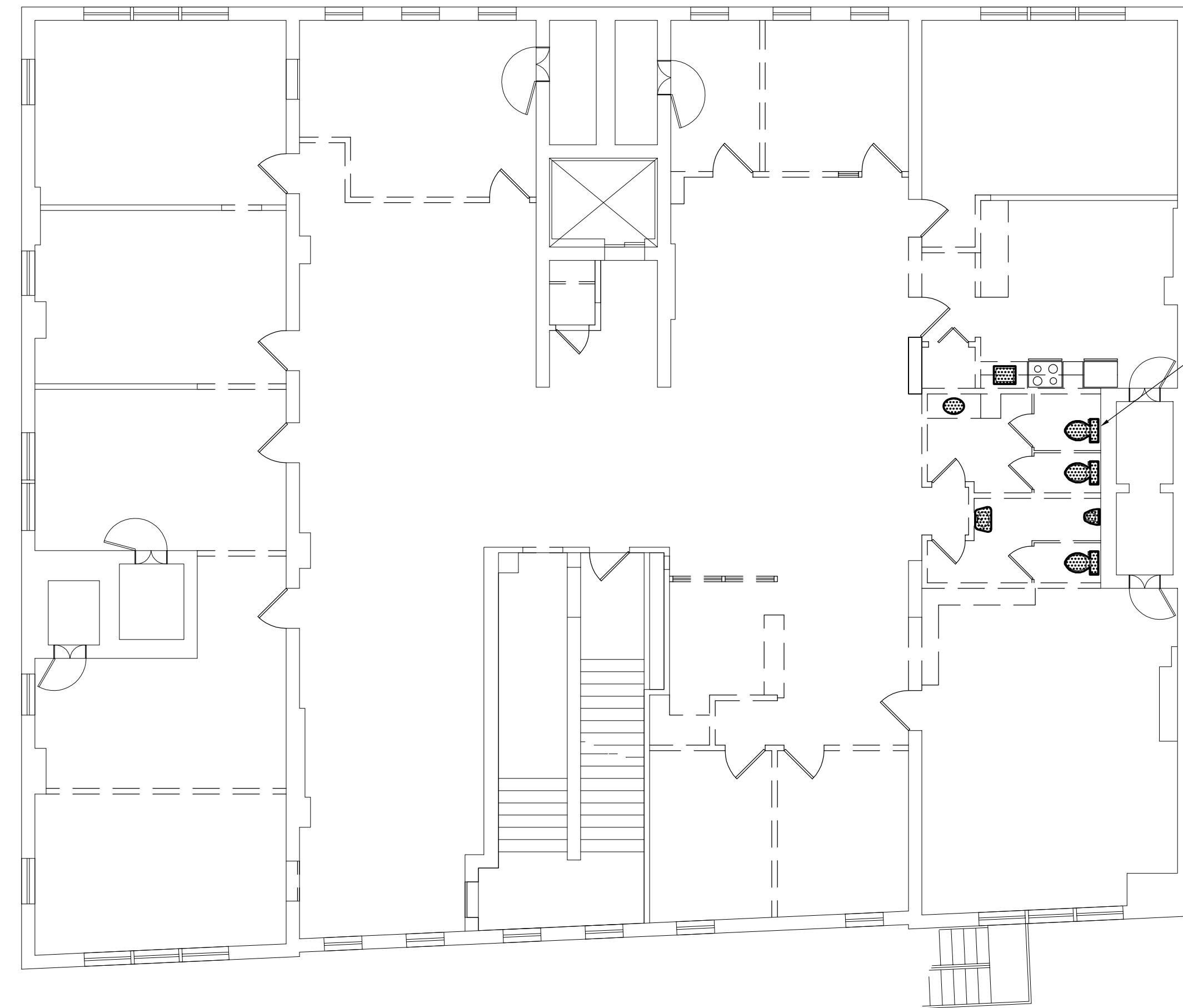
revisions



Andover, MA · Boston, MA

Richard D. Kimball Company, Inc
200 Brickstone Square
Andover, MA 01810-1488

P 978-475-0298
F 978-475-5768
W www.rdkengineers.com



EXISTING FIXTURES SHALL BE REMOVED AND PROPERLY DISPOSED OF OFF SITE. ALL CW, HW & V PIPING SHALL BE CUT & CAPPED AT POINT OF CONNECTION INSIDE WALL FOR RECONNECTION TO NEW FIXTURES. EXISTING SANITARY SHALL BE CUT AND CAPPED AT FLOOR BELOW FOR RECONNECTION TO NEW FIXTURES. (TYPICAL)

Bingham McCutchen

3rd Floor Renovations

85 Exchange Street
Portland, Maine

architect

phpartners

18 Tremont Street, Suite 707
Boston MA 02108
Tel 617.720.0740
Fax 617.720.0747
www.powershiggins.com

PLUMBING
3RD FLOOR PLAN
DEMOLITION

scale
1/8" = 1'-0"

date
December 8th, 2006

project
26739.00

PD2.00

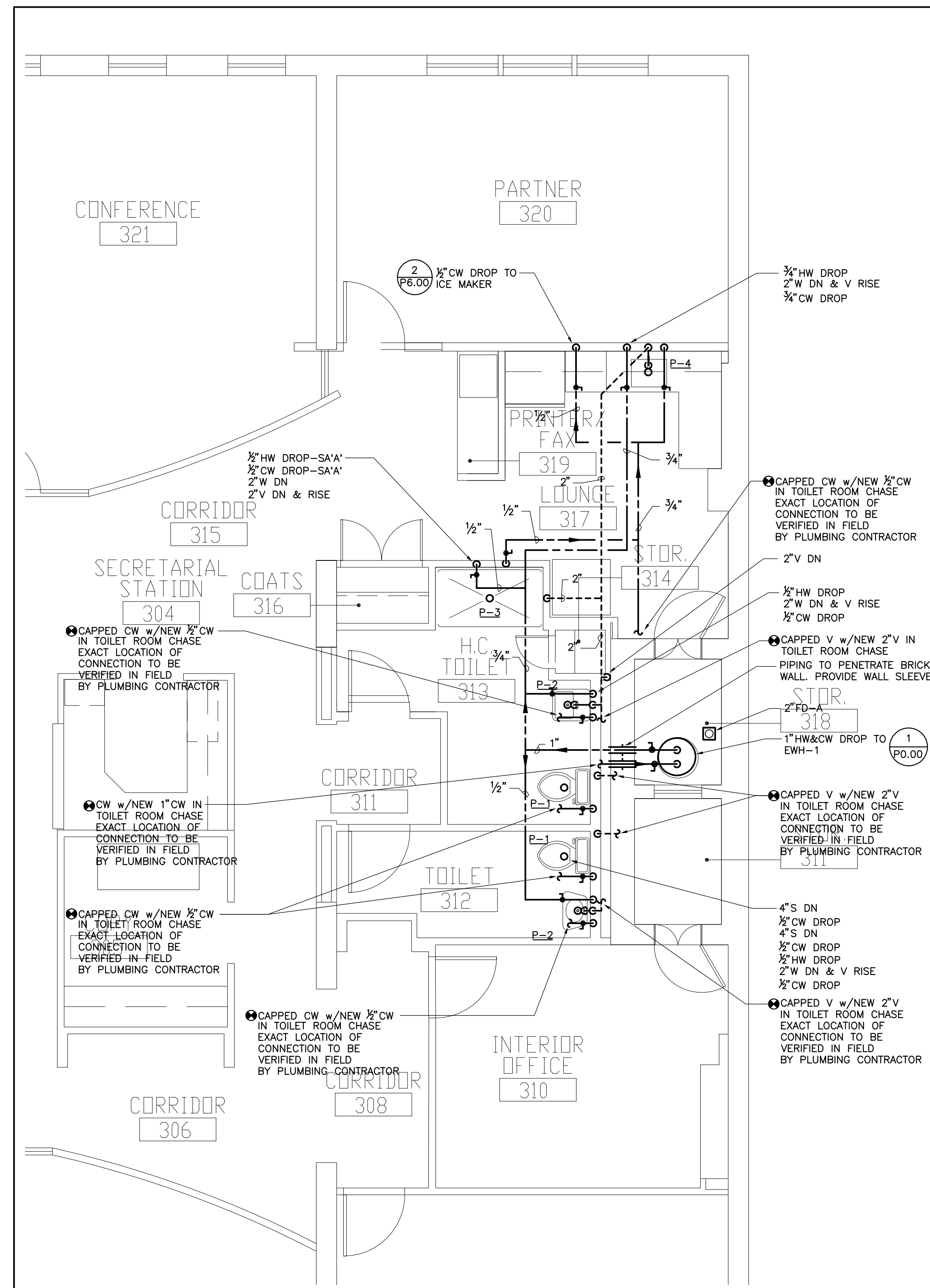
**Bingham
McCutchen**
3rd Floor Renovations

85 Exchange Street
Portland, Maine

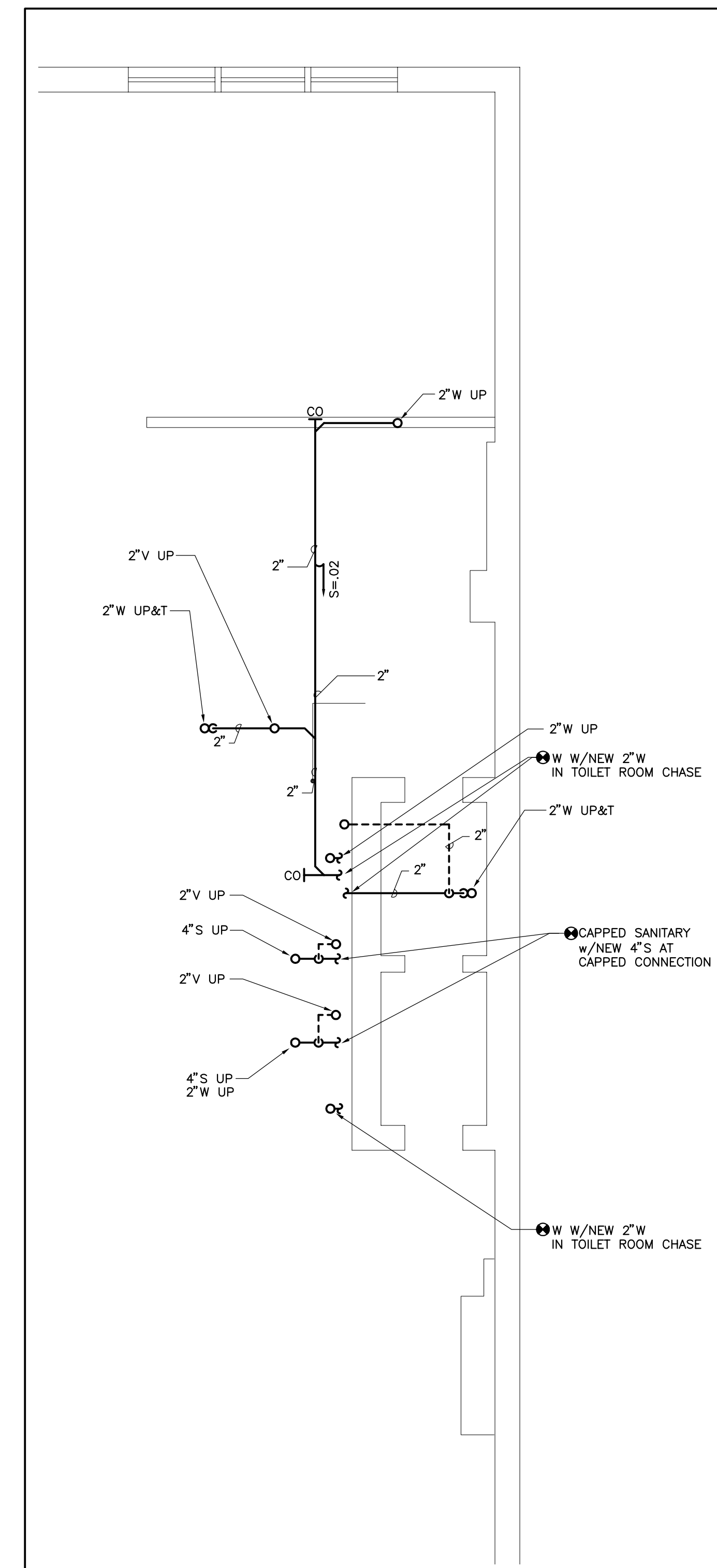
architect

phpartners

18 Tremont Street, Suite 707
Boston MA 02108
Tel 617.720.0740
Fax 617.720.0747
www.powershiggins.com



PLUMBING NEW WORK PLAN
SCALE: 1/4"=1'-0"



PLUMBING WASTE & VENT PIPING
AT CEILING OF FLOOR BELOW
SCALE: 1/4"=1'-0"

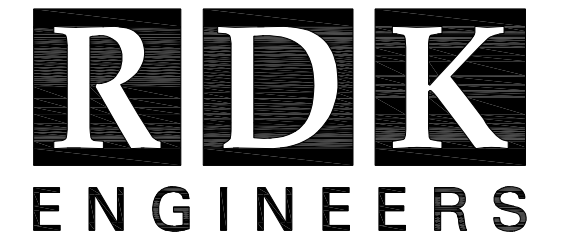
PLUMBING
3RD FLOOR PLAN

scale
1/8"=1'-0"

date
December 8th, 2006

project
26739.00

P2.00



Andover, MA Boston, MA

Richard D. Kimball Company, Inc
200 Brickstone Square
Andover, MA 01810-1488

P 978-475-0298
F 978-475-5768
W www.rdkengineers.com

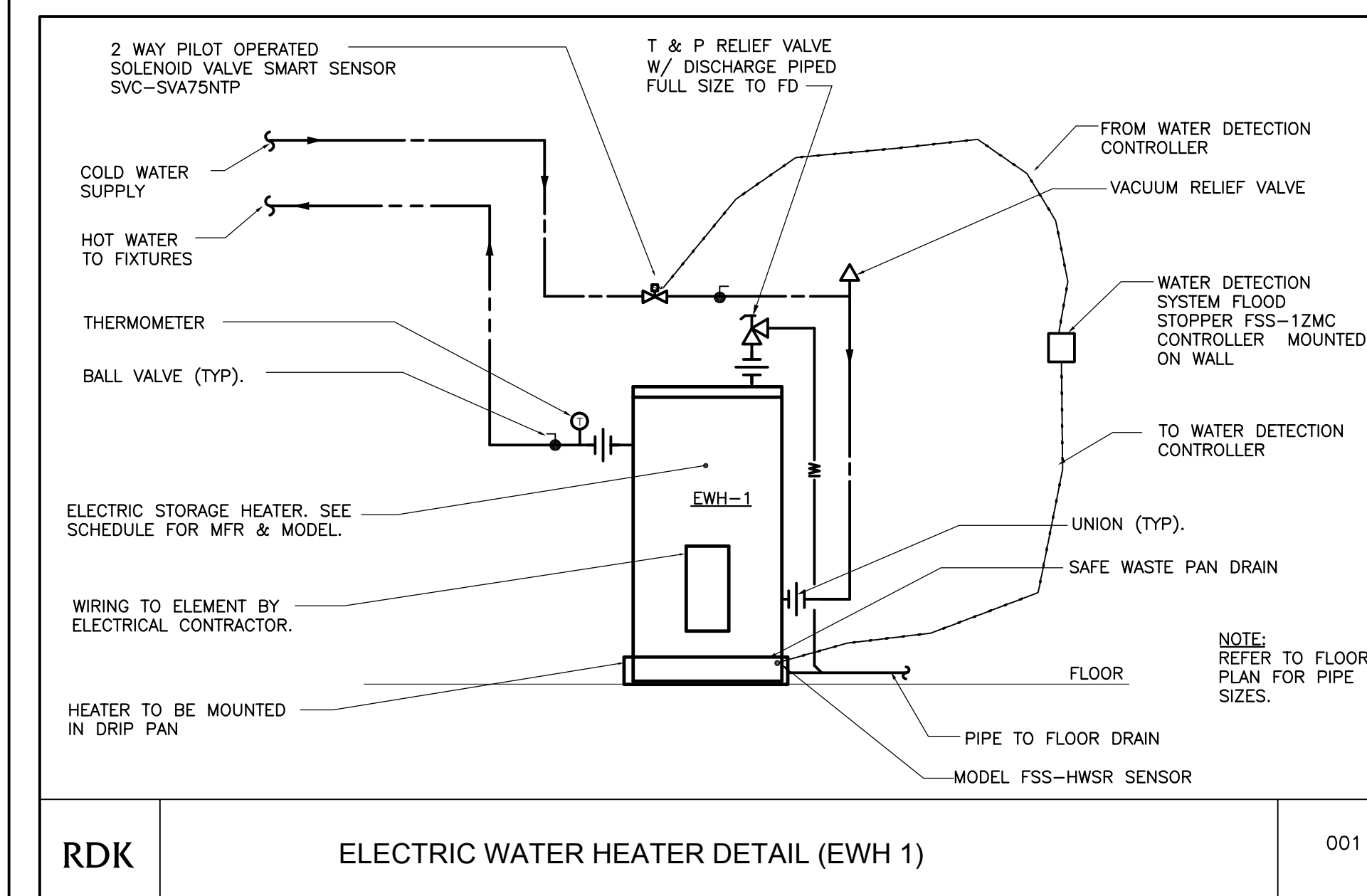
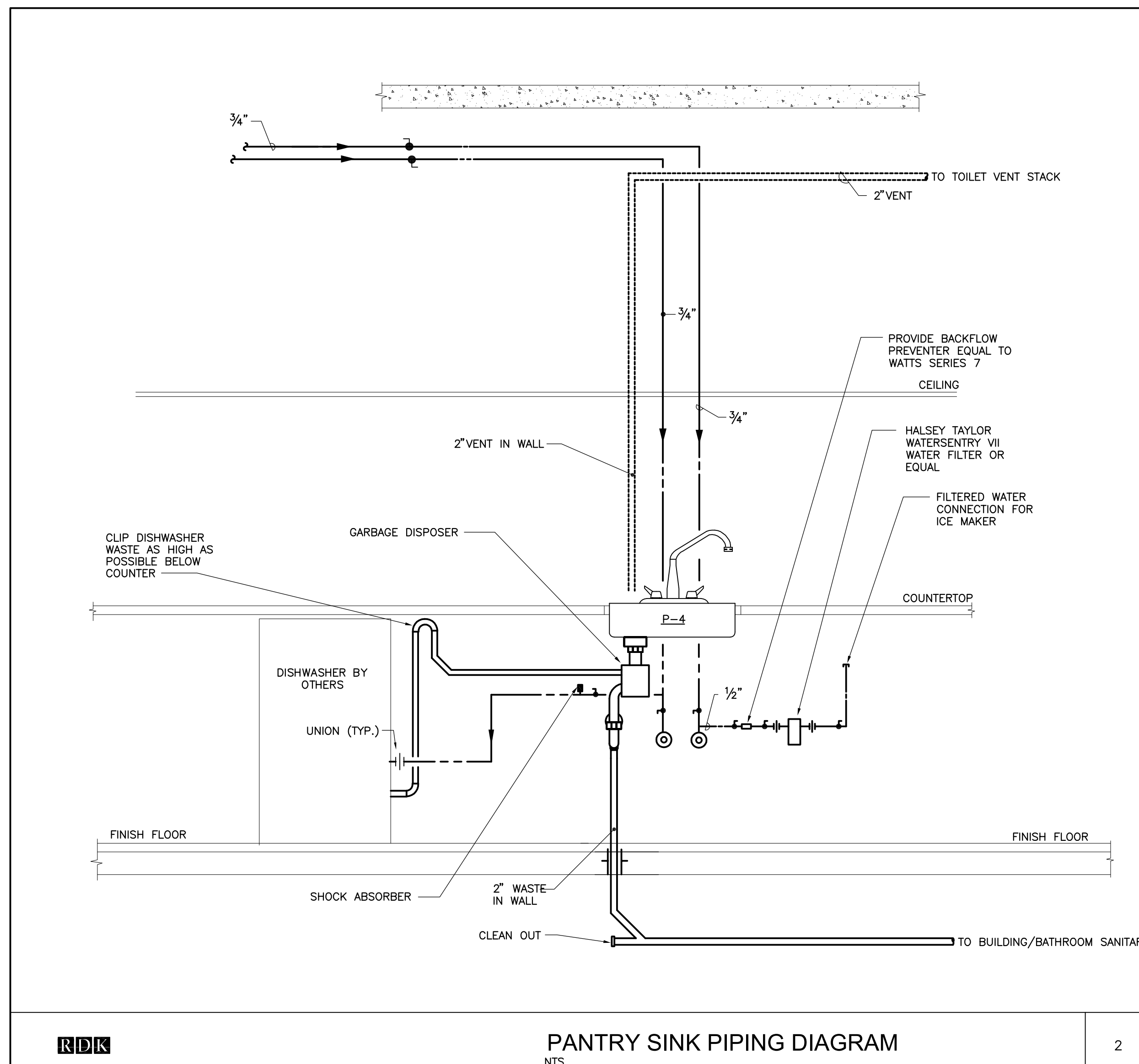
PLUMBING FIXTURE SCHEDULE										
TAG	FIXTURE				FITTING			TRAP	CARRIER	REMARKS
	TYPE	MODEL	MANUFACTURER	SIZE	MANUFACTURER	TYPE	SUPPLY			
P-1	WATER CLOSET TANK TYPE	K-3481	KOHLER	1.6 GPF	-	-	1/2" CW	-	-	MOUNT FOR ADA COMPLIANCE PROVIDE TOILET FLANGE, WAX RING AND JOHN BOLTS
P-2	LAVATORY WALL MOUNT 3-HOLE	K-1722	KOHLER	14" x 11" x 4 1/2"	KOHLER	MODEL K-7307-15	1/2" CW&HW	2" CAST BRASS CP P-TRAP W/CO PLUG	-	MOUNT FOR ADA COMPLIANCE
P-3	SHOWER	4LSS6331A75B-	BEST BATH	63" x 60" x 30"	HANS GROHE WALLBAR #22712 ALSONS #462BG, #4980BX, #4900, #490-60B-G	-	-	2" P-TRAP	-	-
P-4	KITCHEN SINK 4-HOLE	LRAD-252165R	ELKAY	25" x 21 1/4" x 6 1/2"	KOHLER	MODEL K-8762 W/HAND SPRAY	1/2" CW&HW	2" CAST BRASS CP P-TRAP W/CO PLUG	-	PROVIDE GARBAGE DISPOSER BY GE MODEL GFC1020F, 1 HP MOTOR PROVIDE ADDITIONAL 1/2" STOP ON HW SUPPLY FOR DISHWASHER

NOTES:
1 X
2 X
3 X

ELECTRIC WATER HEATER SCHEDULE											
SYMBOL	STORAGE GALS	RECOVERY		NUMBER ELEMENTS	ELECTRICAL				TEMP SETTING	MANUFACTURER & MODEL	REMARKS
		GPH	DEG RISE		KW	V	PH	HZ			
EWH-1	40	23	80'	1	4.5	208	3	60	120' F	RUUD ELD 40	MOUNTED IN STORAGE ROOM IN DRIP PAN

DRAIN SCHEDULE						
SYMBOL	TYPE	MFGR	MODEL	OUTLET	STRAINER	REMARKS
FD-A	FD	J.R. SMITH	2010	CAULK	NICKLE BRONZE	STORAGE RM 318 PROVIDE TRAP GUARD PROSET MODEL #TG22G

SHOCK ABSORBER SCHEDULE		
TYPE	FIXTURE UNIT RATING	MODEL
SA"A"	1-11	JAY R. SMITH 5005



Bingham McCutchen

3rd Floor Renovations

85 Exchange Street
Portland, Maine

architect

phpartners

18 Tremont Street, Suite 707
Boston MA 02108
Tel 617.720.0740
Fax 617.720.0747
www.powershiggins.com

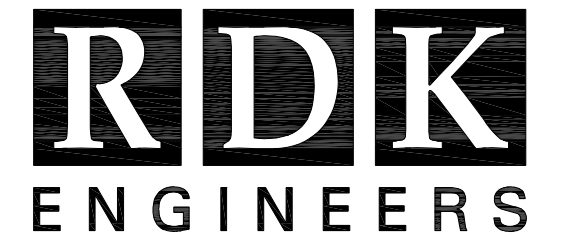
PLUMBING SCHEDULES

scale NTS

date December 8th, 2006

project 28739.00

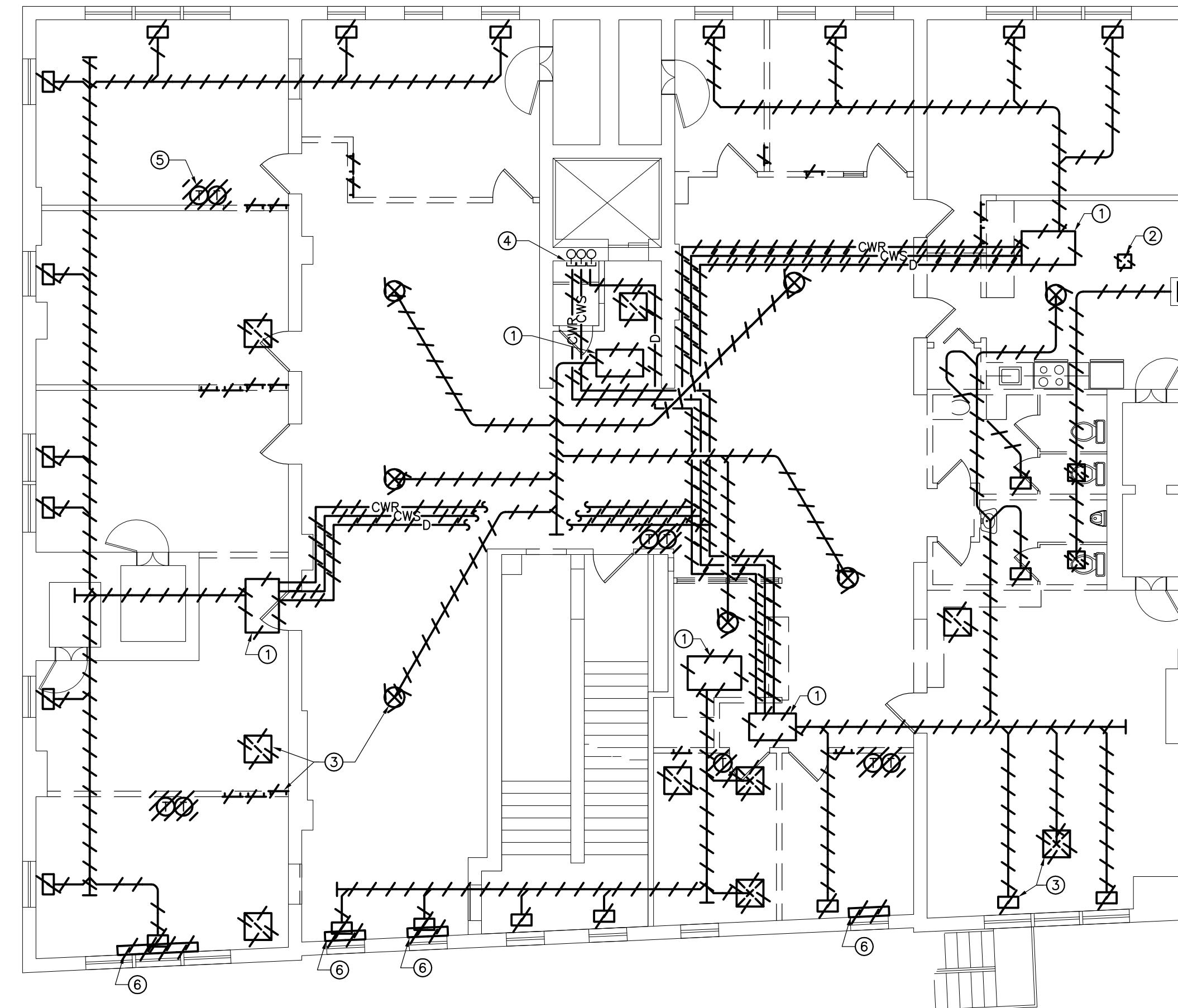
P6.00



Andover, MA · Boston, MA

Richard D. Kimball Company, Inc
200 Brickstone Square
Andover, MA 01810-1488

P 978-475-0298
F 978-475-5768
W www.rdkengineers.com



DEMOLITION NOTES:

- ① EXISTING HEAT PUMP AND ALL ASSOCIATED PIPING, DUCTWORK, SUPPORTS, VALVES, CONTROL WIRING, CONDENSATE PUMPS AND ANY OTHER APPURTENANCES TO BE REMOVED. OFFER ALL EQUIPMENT TO BE REMOVED TO OWNER OR DISCARD AS DIRECTED.
- ② EXISTING EXHAUST FAN AND ALL ASSOCIATED DUCTWORK, SUPPORTS, CONTROLS AND ANY OTHER APPURTENANCES TO BE REMOVED. OFFER ALL EQUIPMENT TO BE REMOVED TO OWNER OR DISCARD AS DIRECTED.
- ③ ALL EXISTING DIFFUSERS/GRILLES AND ALL ASSOCIATED DUCTWORK, SUPPORTS AND ANY OTHER APPURTENANCES TO BE REMOVED. (TYPICAL FOR ALL DIFFUSERS AND GRILLES).
- ④ ALL EXISTING PIPING AND ALL ASSOCIATED SUPPORTS, VALVES AND ANY OTHER APPURTENANCES TO BE REMOVED BACK TO EXISTING RISERS. DRAIN ALL PIPING PRIOR TO REMOVAL. CAP PIPING AT RISERS. CONTRACTOR SHOULD CONFIRM EXISTING VALVES AT RISER CLOSE OFF SYSTEM BEFORE ATTEMPTING DRAIN DOWN OF PIPING ON FLOOR. COMPLETE SYSTEM DRAIN DOWN ONLY NECESSARY IF VALVES DO NOT HOLD.
- ⑤ EXISTING THERMOSTATS AND ALL ASSOCIATED CONTROL WIRING AND ANY OTHER APPURTENANCES TO BE REMOVED. (TYPICAL FOR ALL THERMOSTATS)
- ⑥ EXISTING ELECTRIC BASEBOARD RADIATION AND ALL ASSOCIATED THERMOSTATS, CONTROL WIRING, SUPPORTS AND ANY OTHER APPURTENANCES TO BE REMOVED.

**Bingham
McCutchen**
3rd Floor Renovations

85 Exchange Street
Portland, Maine

architect

phpartners

18 Tremont Street, Suite 707
Boston MA 02108
Tel 617.720.0740
Fax 617.720.0747
www.powershiggins.com

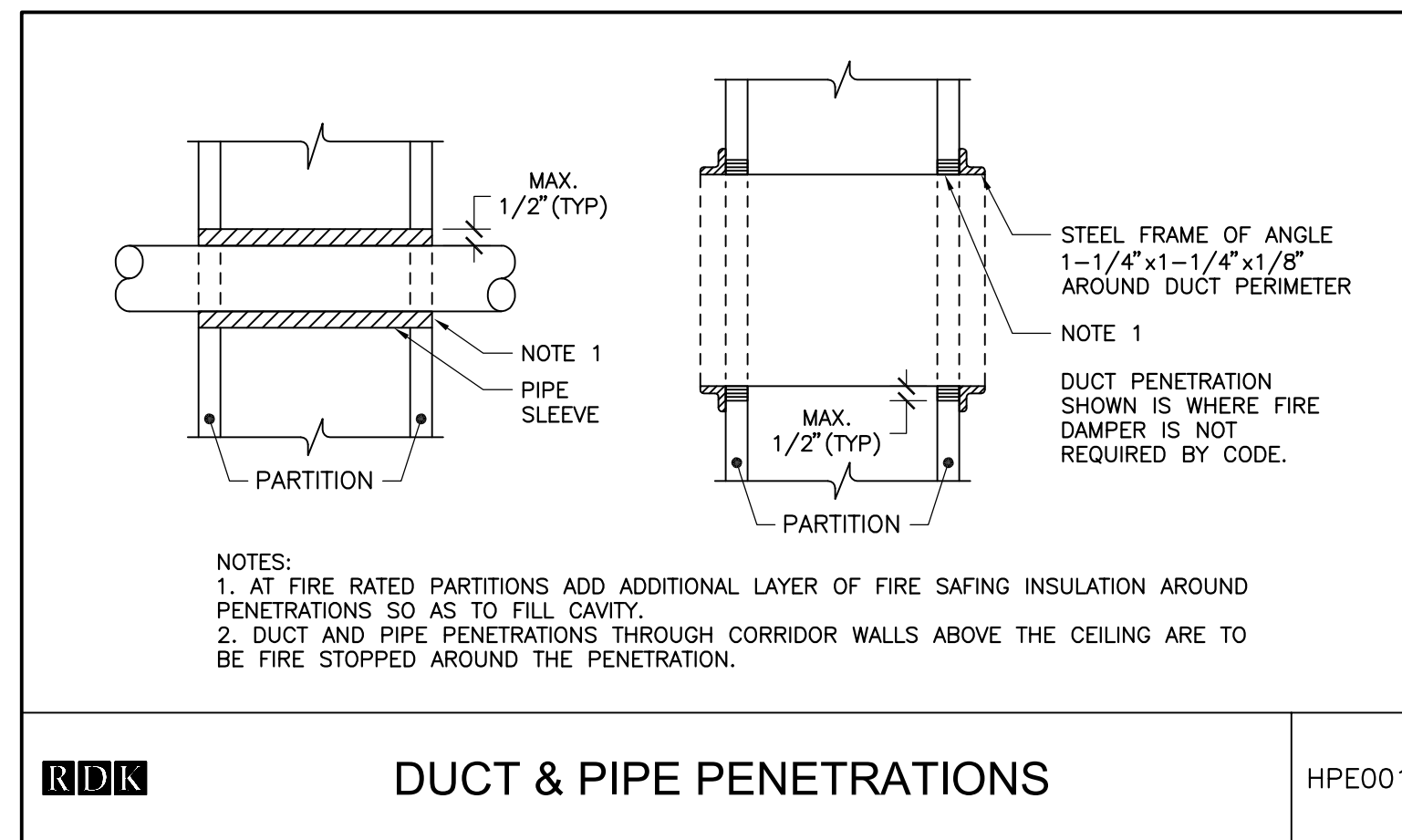
HVAC
3RD FLOOR PLAN
DEMOLITION

scale
1/8" = 1'-0"

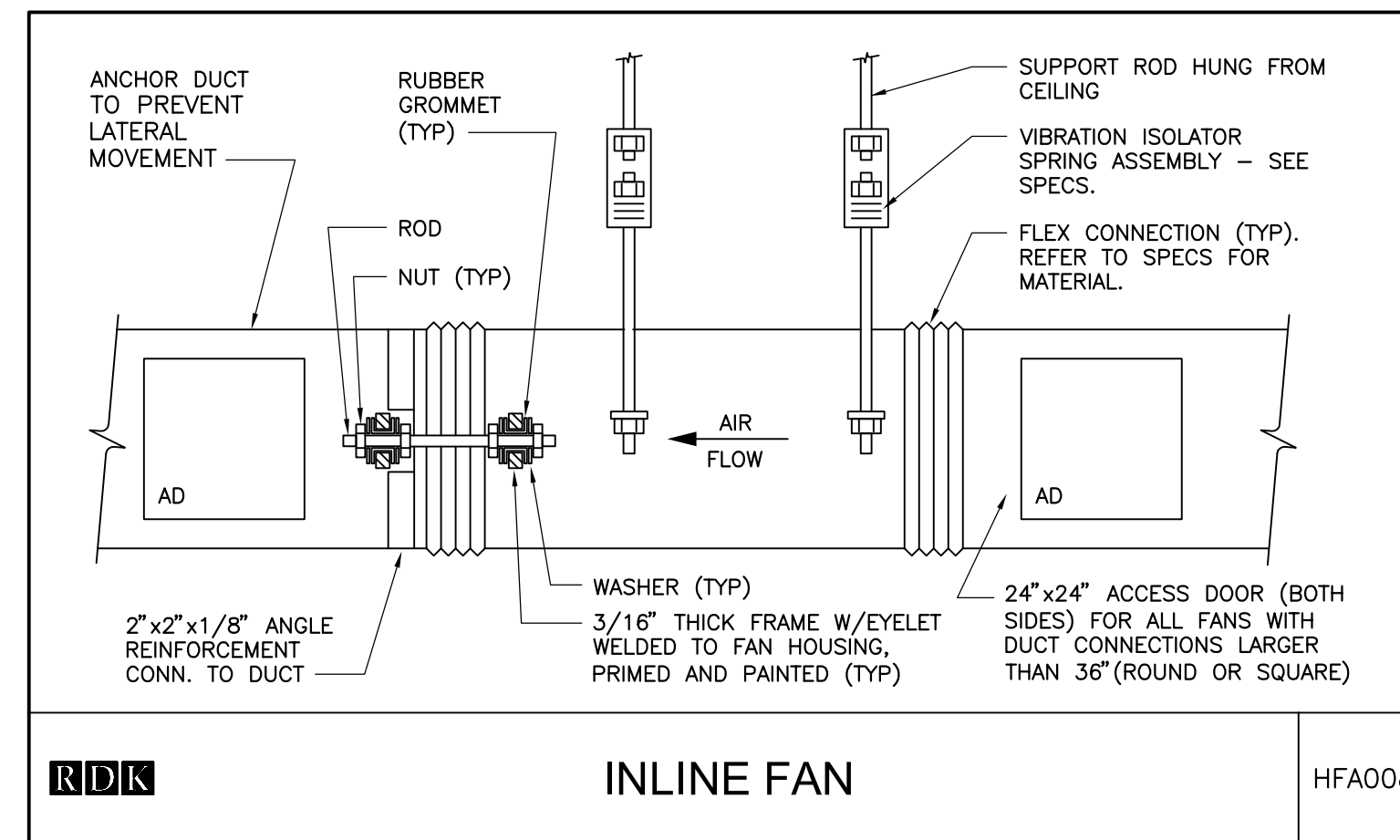
date
December 8th, 2006

project
26739.00

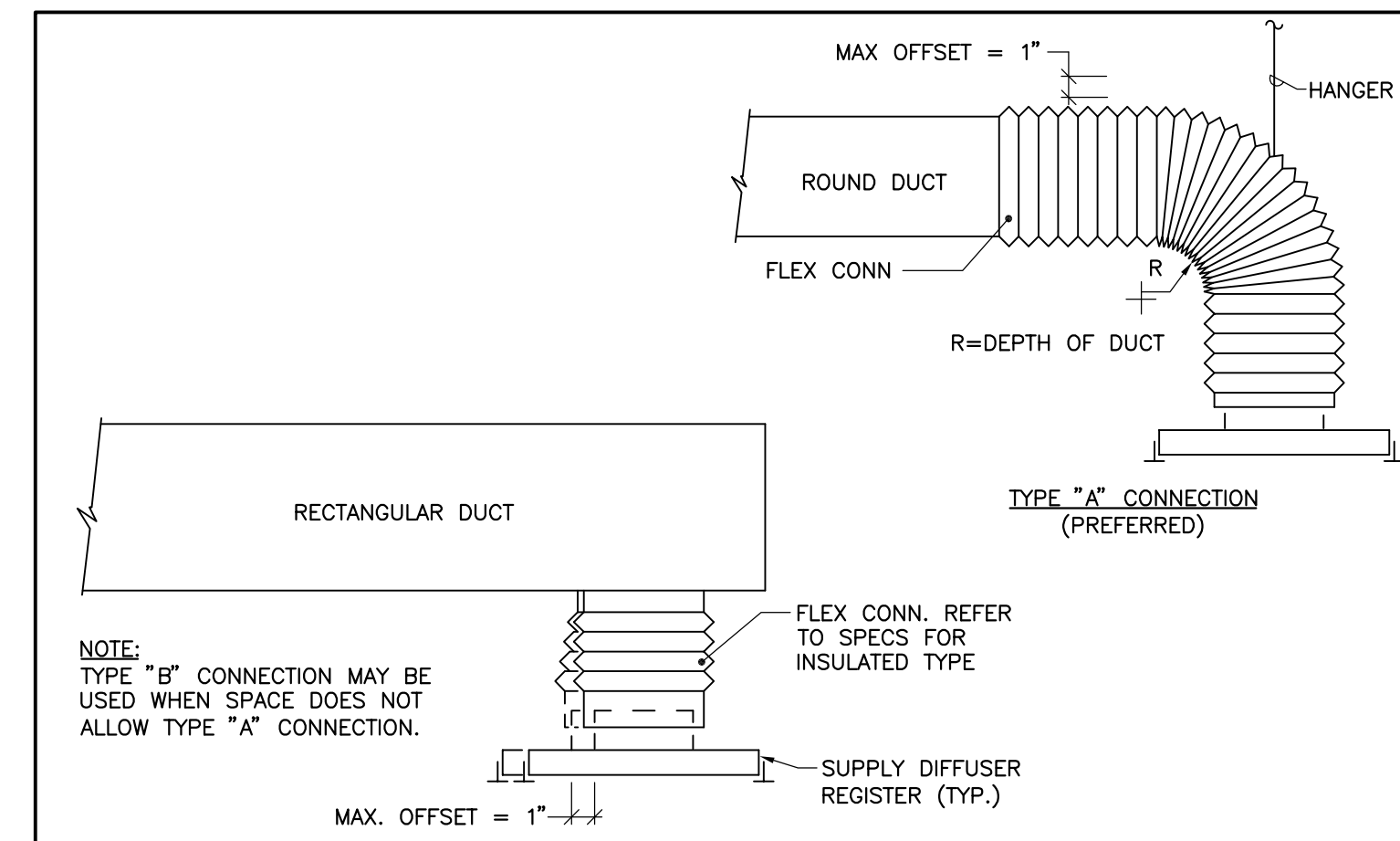
HD2.00



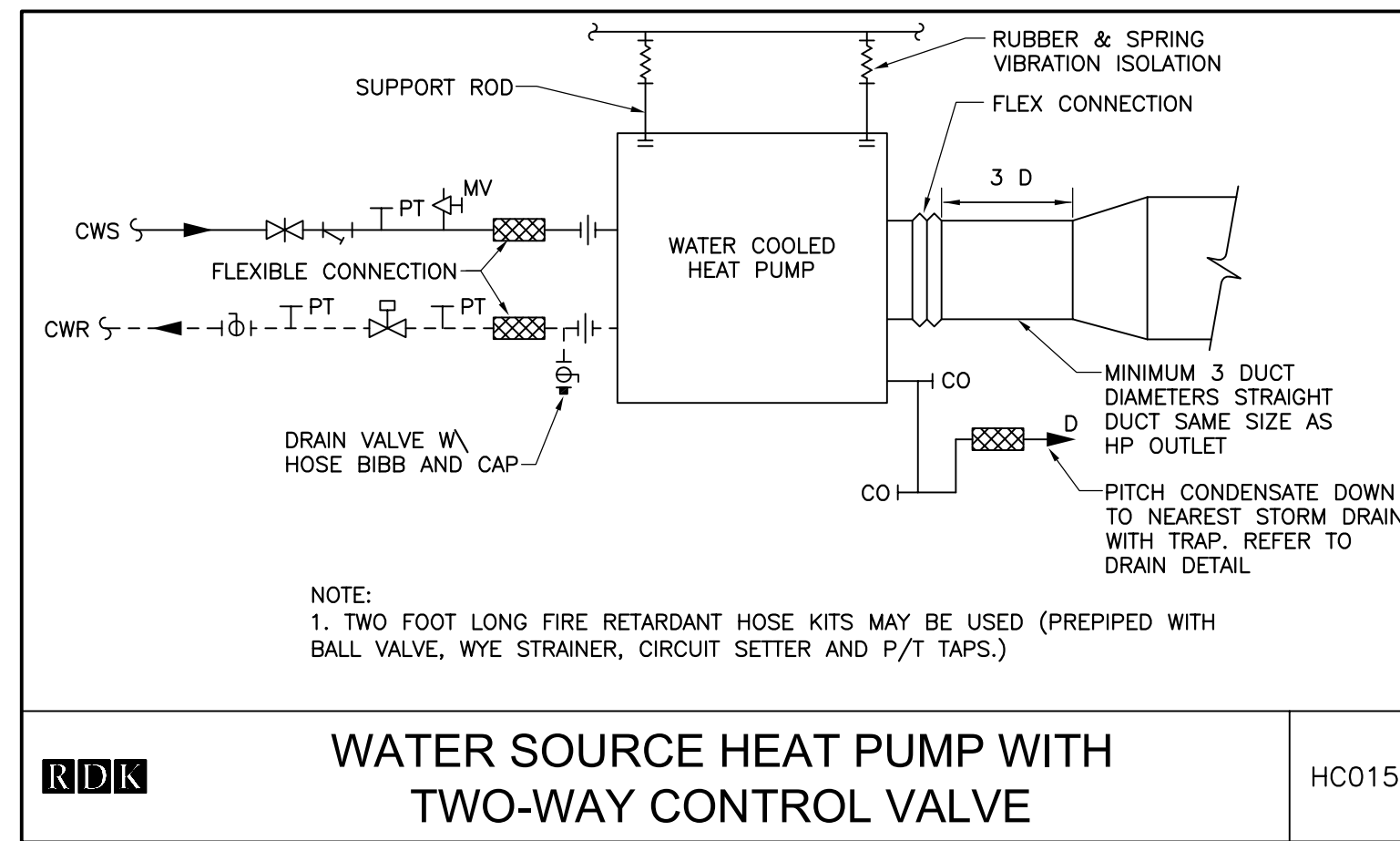
RD DUCT & PIPE PENETRATIONS HPE001



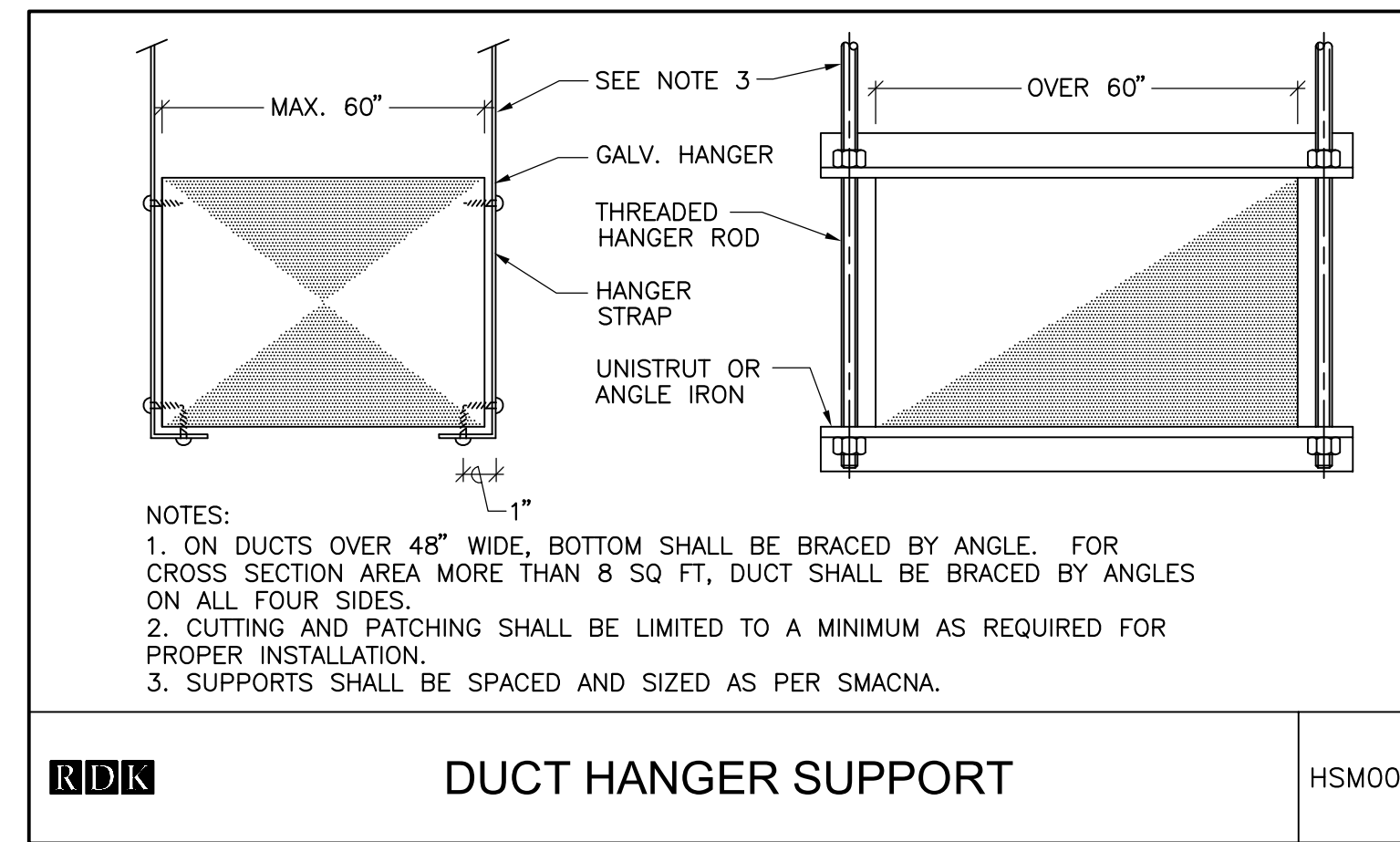
RD INLINE FAN HFA008



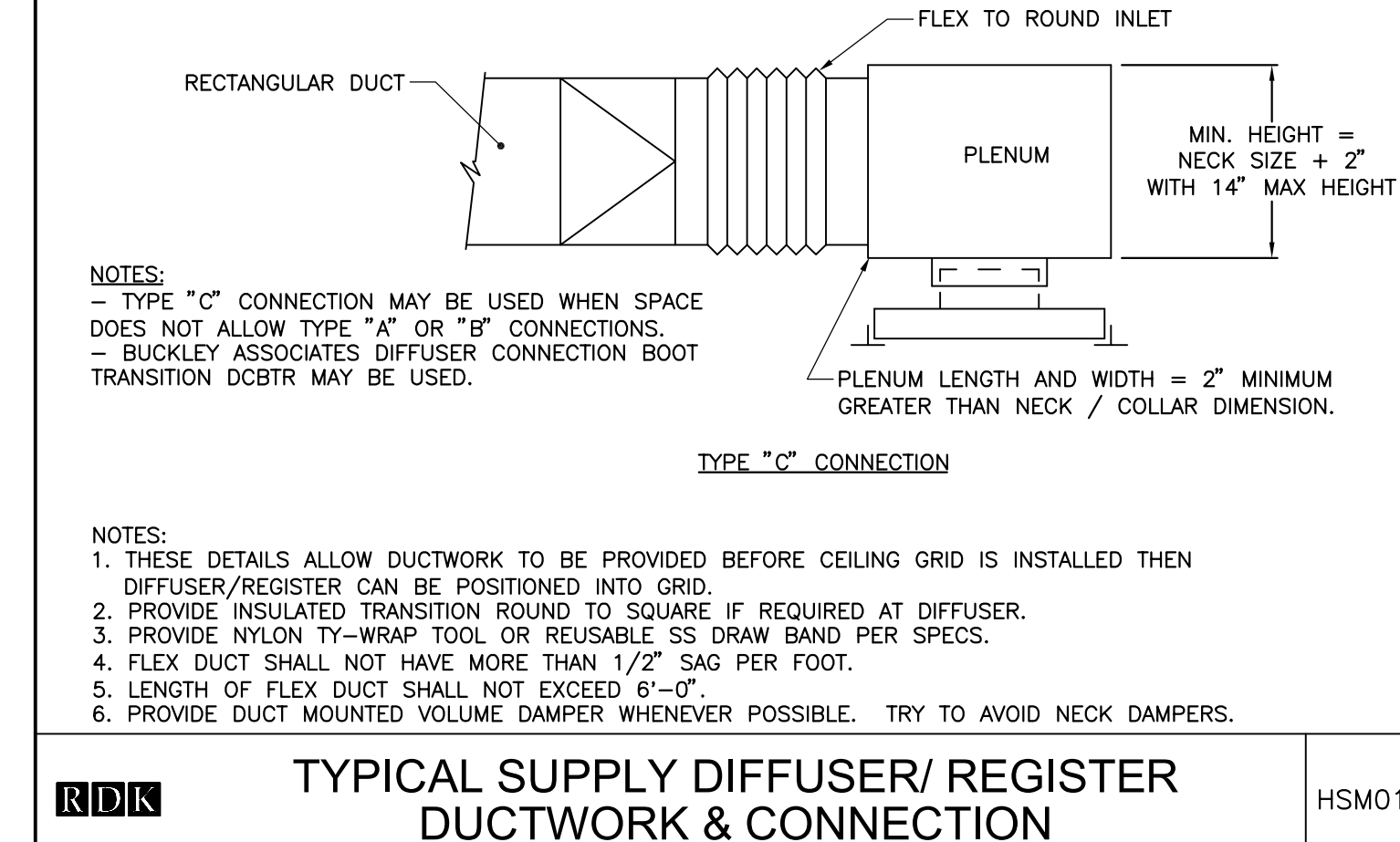
RD TYPICAL SUPPLY DIFFUSER/ REGISTER DUCTWORK & CONNECTION HSM017



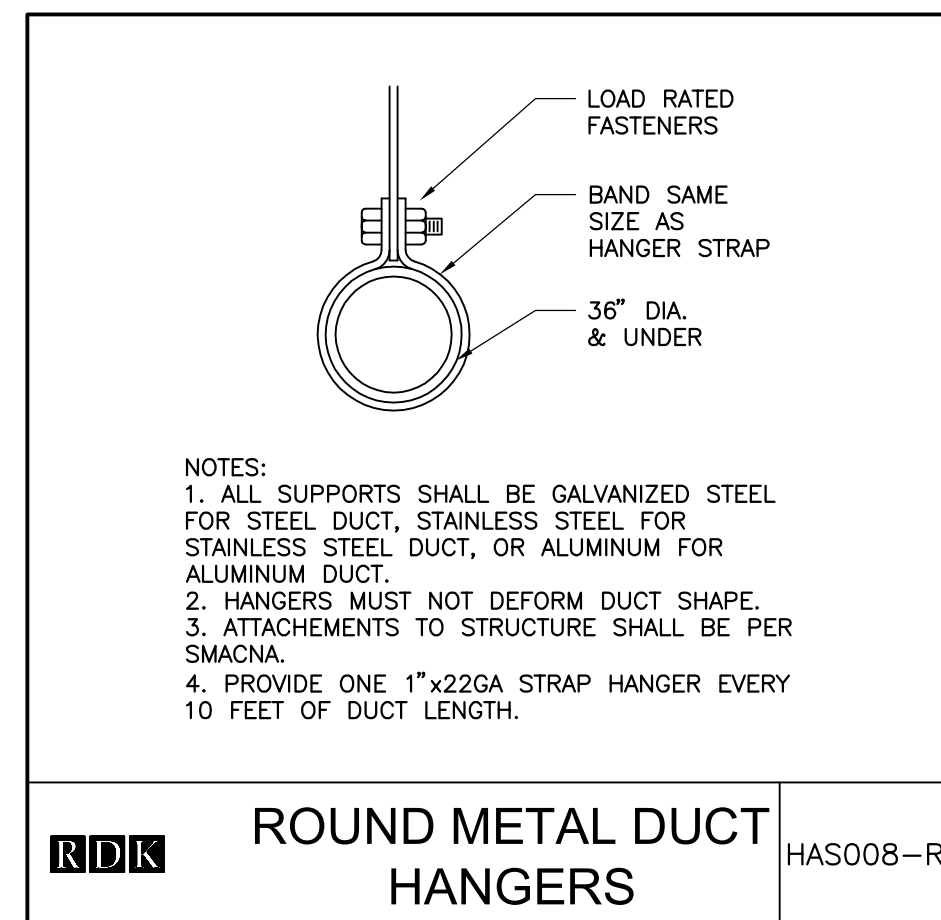
RD WATER SOURCE HEAT PUMP WITH TWO-WAY CONTROL VALVE HC015



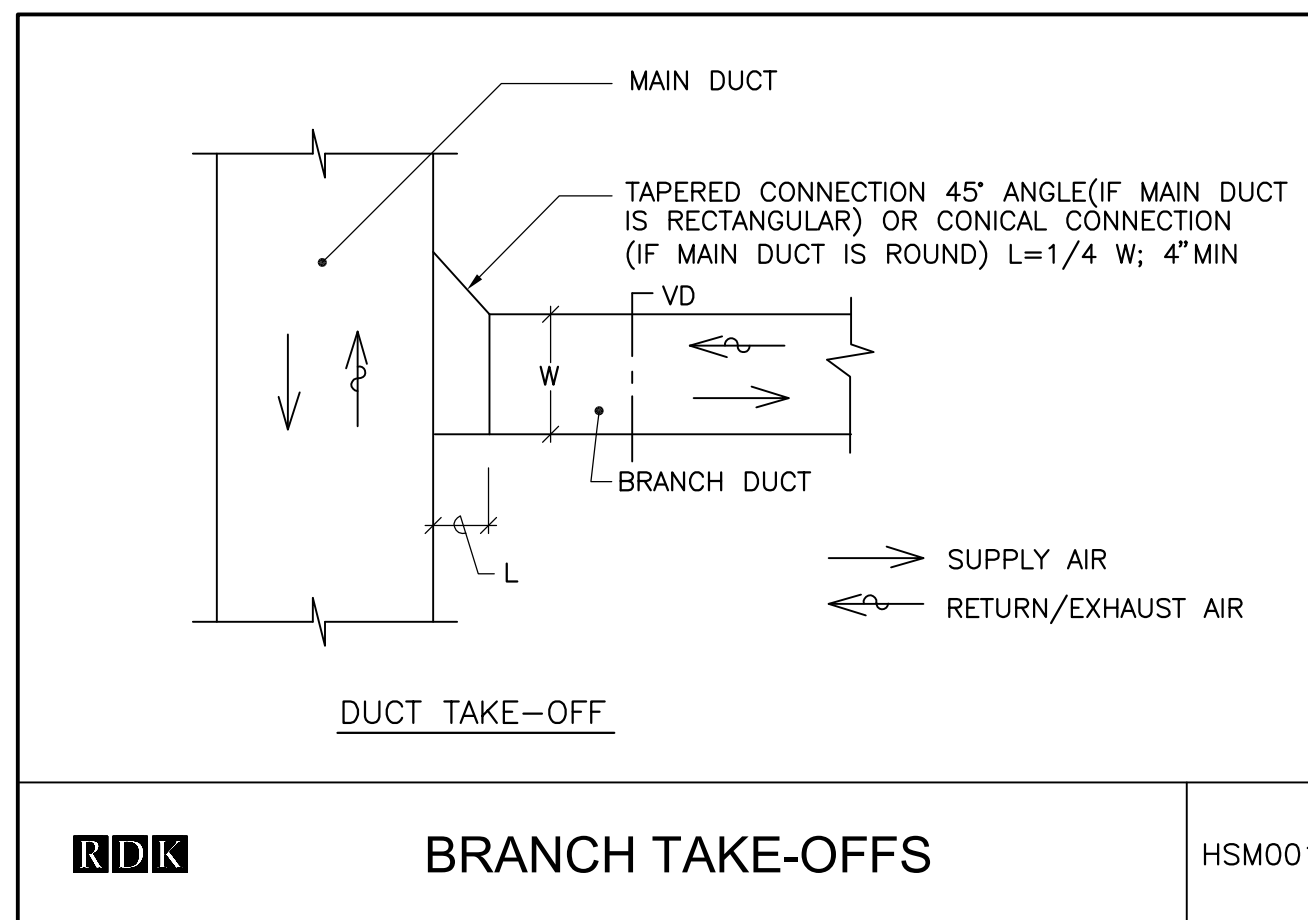
RD DUCT HANGER SUPPORT HSM008



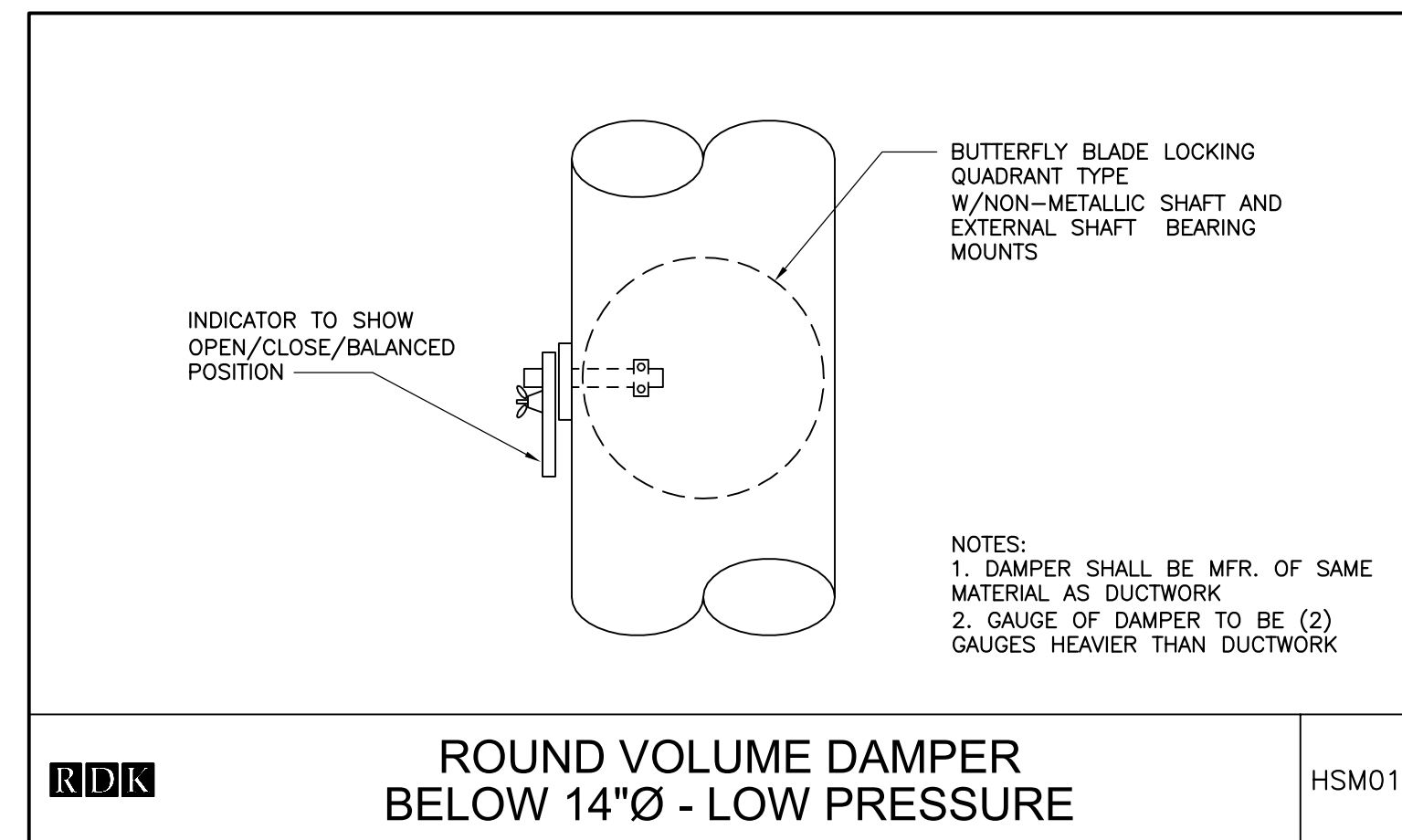
RD TYPICAL SUPPLY DIFFUSER/ REGISTER DUCTWORK & CONNECTION HSM017



RD ROUND METAL DUCT HANGERS HAS008-R



RD BRANCH TAKE-OFFS HSM001



RD ROUND VOLUME DAMPER BELOW 14\"/>

ALTERNATE ROUND BRANCH DUCT TAKE-OFFS

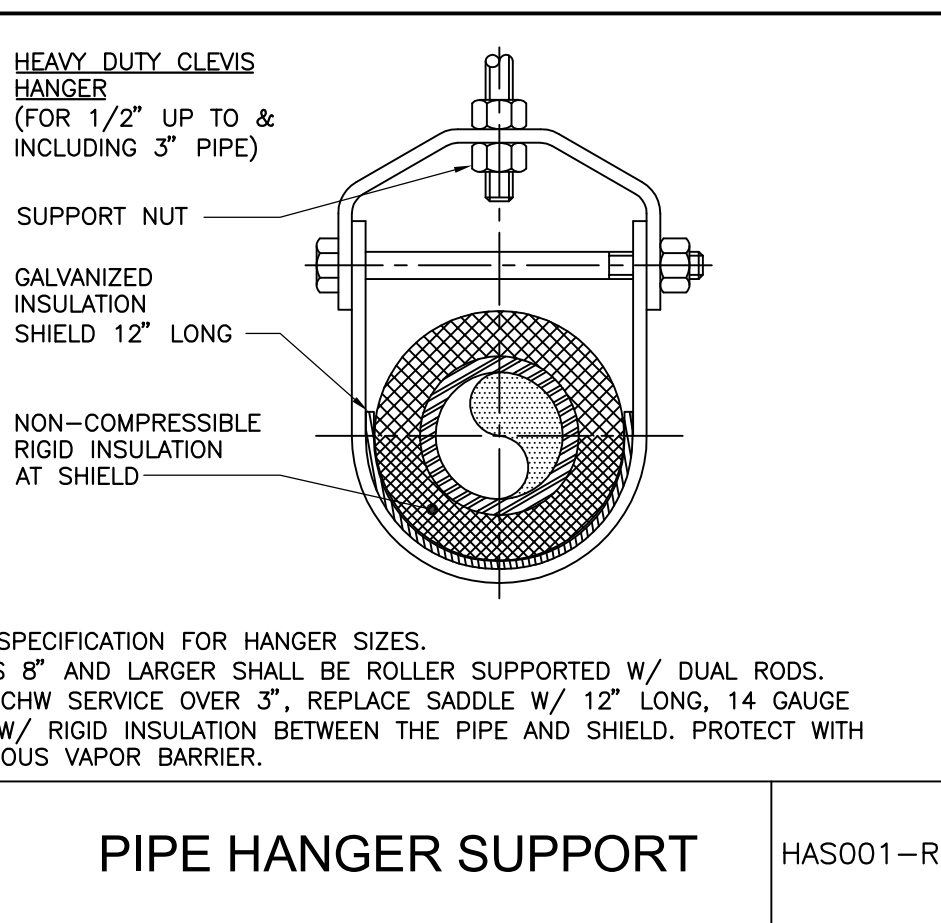
* ALTERNATE FITTING'S TO BE USED WHEN DUCT HEIGHT DOES NOT PERMIT THE USE OF THE FULL SIZE BELLMOUTH

DUCT SIZE	HOLE SIZE	MINIMUM DUCT HEIGHT	DUCT SIZE	HOLE SIZE	MINIMUM DUCT HEIGHT	DUCT SIZE	HOLE SIZE	MINIMUM DUCT HEIGHT	DUCT SIZE	HOLE SIZE	MINIMUM DUCT HEIGHT
5"	8"	9"	5"	7"	9"	5"	7"	9"	5"	7"	9"
6"	9"	10"	6"	8"	10"	6"	8"	10"	6"	8"	10"
7"	10"	11"	7"	9"	11"	7"	9"	11"	7"	9"	11"
8"	11"	12"	8"	10"	12"	8"	10"	12"	8"	10"	12"
9"	12"	13"	9"	11"	13"	9"	11"	13"	9"	11"	13"
10"	13"	14"	10"	12"	14"	10"	12"	14"	10"	12"	14"
12"	15"	16"	12"	14"	16"	12"	14"	16"	12"	14"	16"
14"	17"	18"	14"	16"	18"	14"	16"	18"	14"	16"	18"
16"	19"	20"	16"	18"	20"	16"	18"	20"	16"	18"	20"

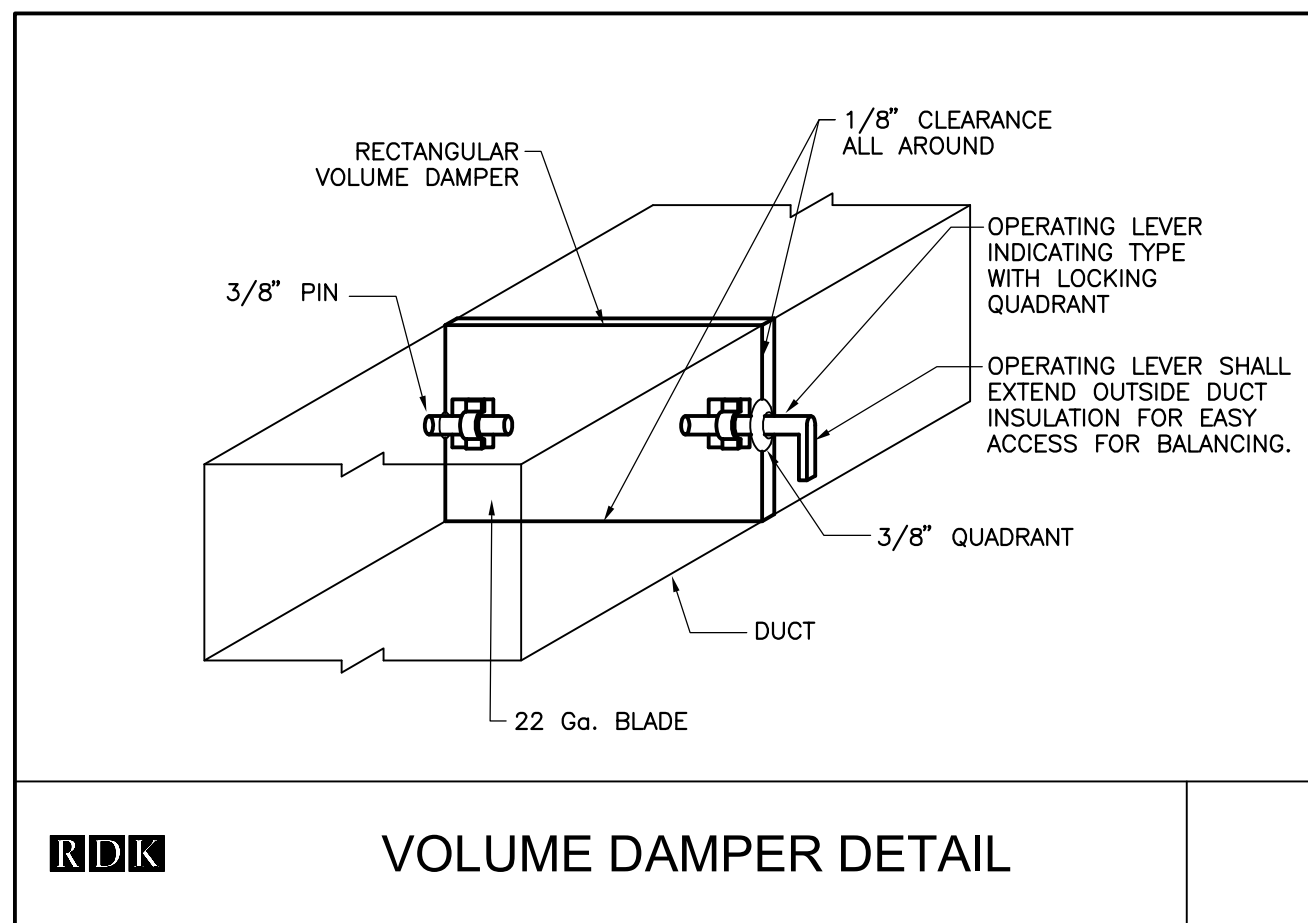
ALTERNATE RECTANGULAR BRANCH DUCT TAKE-OFF

DUCT SIZE	HOLE SIZE	MINIMUM DUCT HEIGHT
6 x 4	7.5 x 5.5	7.5
10 x 4	11.5 x 5.5	7.5
16 x 4	17.5 x 5.5	7.5
24 x 4	25.5 x 5.5	7.5
6 x 5	7.5 x 6.5	8.5
10 x 5	11.5 x 6.5	8.5
16 x 5	17.5 x 6.5	8.5
24 x 5	25.5 x 6.5	8.5
6 x 6	7.5 x 7.5	9.5
10 x 6	11.5 x 7.5	9.5
16 x 6	17.5 x 7.5	9.5
24 x 6	25.5 x 7.5	9.5
8 x 8	9.5 x 9.5	11.5
16 x 8	17.5 x 9.5	11.5
24 x 8	25.5 x 9.5	11.5
10 x 10	11.5 x 11.5	13.5
16 x 10	17.5 x 11.5	13.5
24 x 10	25.5 x 11.5	13.5

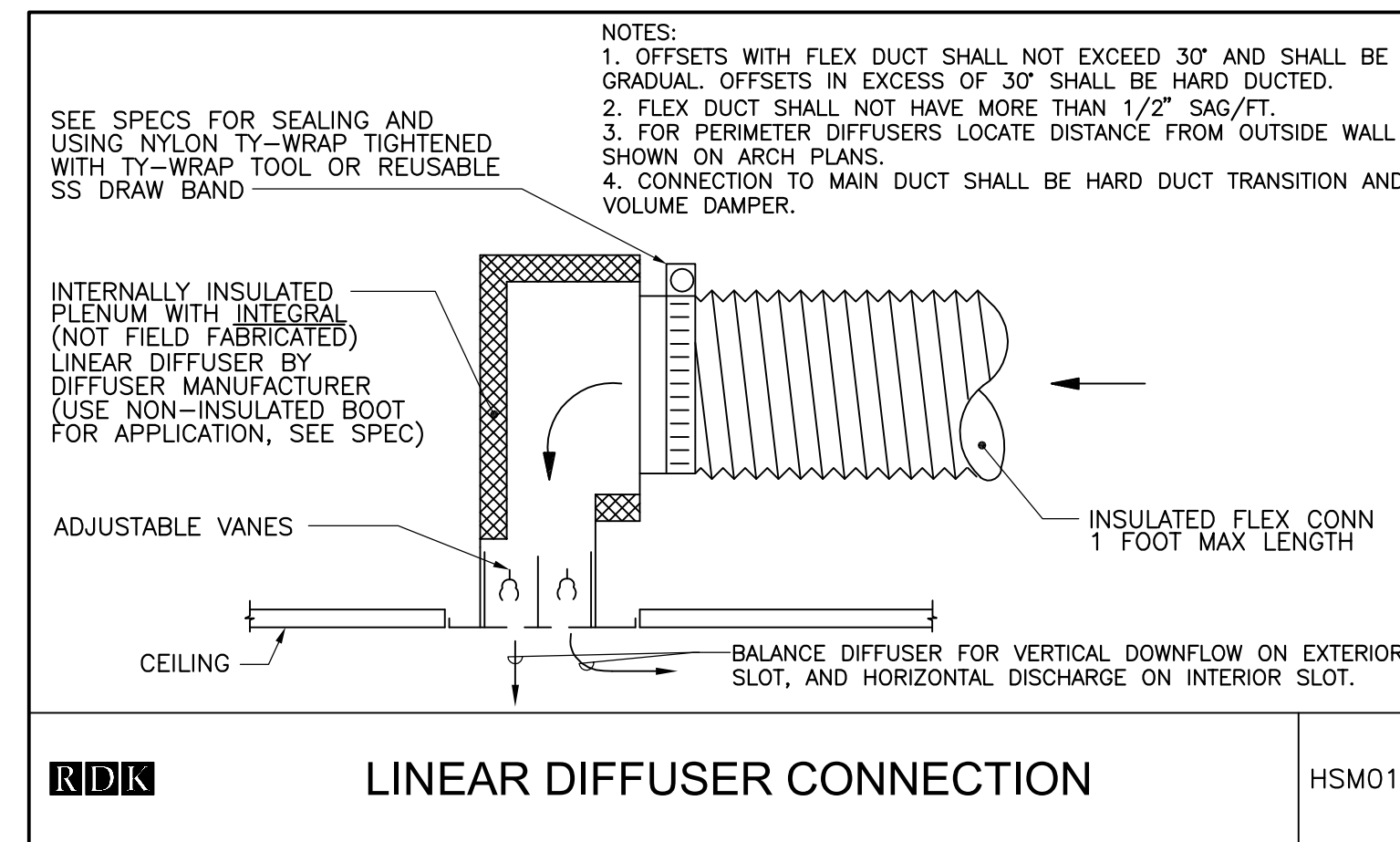
RD TYPICAL DUCT TAKE-OFF HSM021



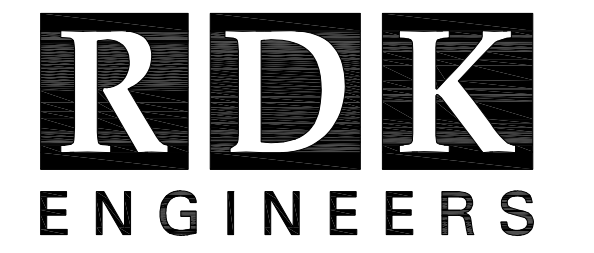
RD PIPE HANGER SUPPORT HAS001-R



RD VOLUME DAMPER DETAIL



RD LINEAR DIFFUSER CONNECTION HSM016



Andover, MA Boston, MA
 Richard D. Kimball Company, Inc
 200 Brickstone Square
 Andover, MA 01810-1488
 P 978-475-0298
 F 978-475-5768
 W www.rdkengineers.com

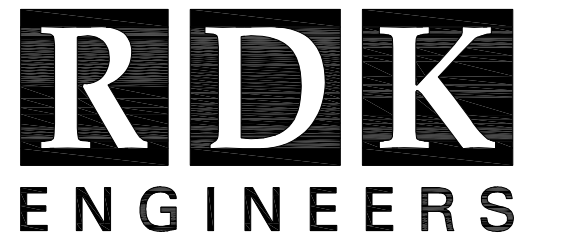
Bingham McCutchen
 3rd Floor Renovations
 85 Exchange Street
 Portland, Maine

architect
phpartners

18 Tremont Street, Suite 707
 Boston MA 02108
 Tel 617.720.0740
 Fax 617.720.0747
 www.powershiggins.com

HVAC
 DETAILS

scale
 NTS
 date
 December 8th, 2006
 project
 26739.00
H7.00



Andover, MA Boston, MA

Richard D. Kimball Company, Inc
200 Brickstone Square
Andover, MA 01810-1488

P 978-475-0298
F 978-475-5768
W www.rdkengineers.com

Bingham McCutchen

3rd Floor Renovations

85 Exchange Street
Portland, Maine

architect



18 Tremont Street, Suite 707
Boston MA 02108
Tel 617.720.0740
Fax 617.720.0747
www.powershiggins.com

SCHEDULES AND
CONTROLS

scale
NTS

date
December 8th, 2006

project
26739.00

H8.00

DIFFUSER, GRILLE & REGISTER SCHEDULE

TAG	SELECTION RANGE (CFM)	NECK SIZE (IN.)	OVERALL SIZE (IN.)	SERVICE	MOUNTING	MANUFACTURER AND MODEL NUMBER (AS STANDARD)	NC OR AIR PRESSURE DROP NOT TO EXCEED	REMARKS
SA	0-240	8"ø	48x4	SUPPLY	SURFACE	TITUS ML-39	25	1,2
SC	0-350	8"ø	24x24	SUPPLY	LAY-IN	TITUS OMNI	25	
RA	0-720	14x14	16x16	RETURN	SURFACE	TITUS 350FL	25	
EA	0-150	6x6	8x8	EXHAUST	SURFACE	TITUS 350FL	25	

NOTES:

1. PROVIDE WITH MATCHING TITUS PLENUM BOX.
2. LINEAR DIFFUSER TO HAVE (2) 1" SLOTS. BALANCE DIFFUSER FOR VERTICAL DOWNFLOW ON EXTERIOR SLOT, AND HORIZONTAL DISCHARGE ON INTERIOR SLOT.

FAN SCHEDULE

TAG	LOCATION	SERVICE	CFM	FAN TYPE	E.S.P. (N.WG)	WHEEL			MOTOR				MANUFACTURER AND MODEL NUMBER (AS STANDARD)	REMARKS	
						DIA. (IN.)	TYPE	DRIVE	RPM	BHP	HP	V			PH
F-1	LOUNGE	LOUNGE/TOILETS	315	INLINE	0.35	12	BI	BELT	1725	0.07	1/4	115	1	GREENHECK BSQ-80-4	

NOTES:

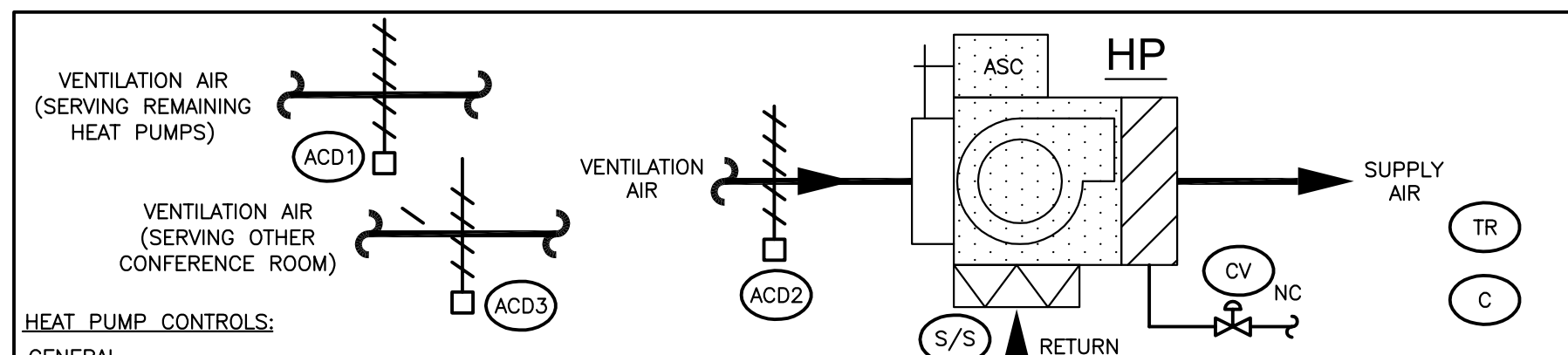
1. PROVIDE WITH UNIT MOUNTED DISCONNECT SWITCH.
2. PROVIDE WITHOUT INTEGRAL BACKDRAFT DAMPER.

HEAT PUMP SCHEDULE

TAG	LOCATION	SERVES	COOLING CAPACITIES						HEATING CAPACITY				WATER SIDE		AIR SIDE			ELECTRICAL CHARACTERISTICS			MANUFACTURER AND MODEL NUMBER (AS STANDARD)	REMARKS
			ENT H2O (°F)	LVG H2O (°F)	EAT (°F) DB	WB	TOTAL MBH	SENS. MBH	REJECTED BTUH	ENT H2O (°F)	LVG H2O (°F)	TOTAL BTU	EAT (°F) DB	GPM	P.D. (FT. H2O)	CFM	ESP (IN. H2O)	FLA	V	PH		
HP-1	CORRIDOR 332	PARTNER 330	85	103.2	75	63	22.7	17.5	30127	70	55.8	30.1	70	3.4	3.4	640	0.5	15.8	208	1	MCQUAY-WCRH024	1,2,3
HP-2	CORRIDOR 332	ASSOCIATE 331 & 332	85	102.4	75	63	11.1	9.0	14471	70	55.5	14.7	70	1.7	5.3	360	0.4	7.4	208	1	MCQUAY-WCRH012	1,2,3
HP-3	FILES 334	SECRETARIAL 323	85	98.8	75	63	15.8	12.0	19965	70	58.5	20.4	70	3.1	2.8	720	.35	8.1	208	1	MCQUAY-WCRH015	1,2,3
HP-4	COPY 340	PARTNER 337	85	98.8	75	63	15.8	12.0	19965	70	58.5	20.4	70	3.1	2.8	650	0.45	8.1	208	1	MCQUAY-WCRH015	1,2,3
HP-5	LOBBY 301	SECRETARIAL 304	85	103.2	75	63	18.0	13.9	23672	70	55.7	24.0	70	2.7	2.1	680	0.45	8.5	208	1	MCQUAY-WCRH019	1,2,3
HP-6	CORRIDOR 315	CONFERENCE 321	85	98.8	75	63	15.8	12.0	19965	70	58.5	20.4	70	3.1	2.8	620	0.5	8.1	208	1	MCQUAY-WCRH015	1,2,3
HP-7	FAX 319	PARTNER 320	85	95.0	75	63	8.5	7.1	10789	70	61.5	11.8	70	2.4	8.8	370	0.4	6.0	208	1	MCQUAY-WCRH009	1,2,3
HP-8	TOILET 312	PARTNER 309	85	102.4	75	63	11.1	9.0	14471	70	55.5	14.7	70	1.7	5.3	360	0.4	7.4	208	1	MCQUAY-WCRH012	1,2,3
HP-9	COPY 305	CONFERENCE 307	85	95.0	75	63	8.5	7.1	10789	70	61.5	11.8	70	2.4	8.8	370	0.4	6.0	208	1	MCQUAY-WCRH009	1,2,3
HP-10	NETWORK 327	NETWORK 327	85	105.0	85	71	9.0	7.3	11513	70	54.8	11.2	60	1.3	2.6	410	0.25	6.0	208	1	MCQUAY-WCRH009	1,2,3

NOTES:

1. PROVIDE WITH FLEXIBLE HOSE KIT, EXTRA SET OF FILTERS, HANGERS BRACKETS AND 300 PSI COIL.
2. THE ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL DISCONNECT SWITCH.
3. PROVIDE CONDENSATE PUMP ALL ASSOCIATED PIPING SUPPORTS, CONTROLS AND ANY OTHER APPURTENANCES REQUIRED TO MAKE PUMP OPERATIONAL WITH ASSOCIATED HEAT PUMP. SEE SPECIFICATIONS FOR OTHER REQUIREMENTS.



HEAT PUMP CONTROLS:

GENERAL

1. HEAT PUMP SHALL BE CONTROLLED BY AN APPLICATION SPECIFIC CONTROLLER (ASC). ALL SETPOINTS SHALL BE ADJUSTABLE. ALL ACTUATORS SHALL BE ELECTRONIC.
2. ALL TEMPERATURES LISTED ARE FAHRENHEIT AND SHALL BE ADJUSTABLE.
3. OCCUPIED HEATING SETPOINT SHALL BE 70°F. OCCUPIED COOLING SETPOINT SHALL BE 5°F WARMER THAN HEATING SETPOINT.
4. ROOM TEMPERATURES SHALL BE SET BY THE BUILDING AUTOMATION SYSTEM (BAS) AND CAPABLE OF LOCAL +/- 2°F ADJUSTMENT.
5. COORDINATE OCCUPIED/UNOCCUPIED SCHEDULES WITH BUILDING OWNER.

HEAT PUMP FAN CONTROL

1. THE HEAT PUMP FAN SHALL OPERATE CONTINUOUSLY DURING OCCUPIED MODE.

OCCUPIED CO2 CONTROL

1. AUTOMATIC CONTROL DAMPER 1 (ACD1) SERVING ALL OTHER HEAT PUMPS SHALL BE OPEN AND AUTOMATIC CONTROL DAMPERS 2&3 (ACD2 & ACD3) SERVING CONFERENCE ROOMS SHALL BE CLOSED.
2. WHEN CO2 LEVELS AT SENSOR (C) RISES ABOVE 900 PPM IN EITHER CONFERENCE ROOM, THE CONTROLLER SHALL CLOSE ACD1 TO 70% OPEN. CO2 SENSOR SHALL COMPLETELY OPEN ITS RESPECTIVE DAMPER (ACD2 OR ACD3). THE REVERSE SHALL OCCUR UPON A DROP IN CO2 LEVEL BELOW 850 PPM FOR 10 MINUTES.
3. IF CO2 LEVELS AT SENSORS (C) RISES ABOVE 900 PPM IN BOTH CONFERENCE ROOMS, THE CONTROLLERS SHALL CLOSE ACD1 TO 30% OPEN. CO2 SENSOR SHALL COMPLETELY OPEN ITS BOTH CONFERENCE ROOM DAMPERS (ACD2 & ACD3). THE REVERSE SHALL OCCUR UPON A DROP IN CO2 LEVEL BELOW 850 PPM FOR 10 MINUTES.

OCCUPIED COOLING CONTROL

1. UPON A CALL FOR COOLING FROM THE ROOM TEMPERATURE SENSOR (TR), THE HEAT PUMP COMPRESSORS SHALL ENERGIZE AND THE CONTROL VALVE (CV) SHALL MODULATE TO MAINTAIN COOLING SETPOINT.

OCCUPIED HEATING CONTROL

1. UPON A CALL FOR HEATING FROM THE ROOM TEMPERATURE SENSOR (TR), THE HEAT PUMP COMPRESSORS SHALL ENERGIZE AND THE CONTROL VALVE (CV) SHALL MODULATE TO MAINTAIN HEATING SETPOINT.

UNOCCUPIED CONTROL

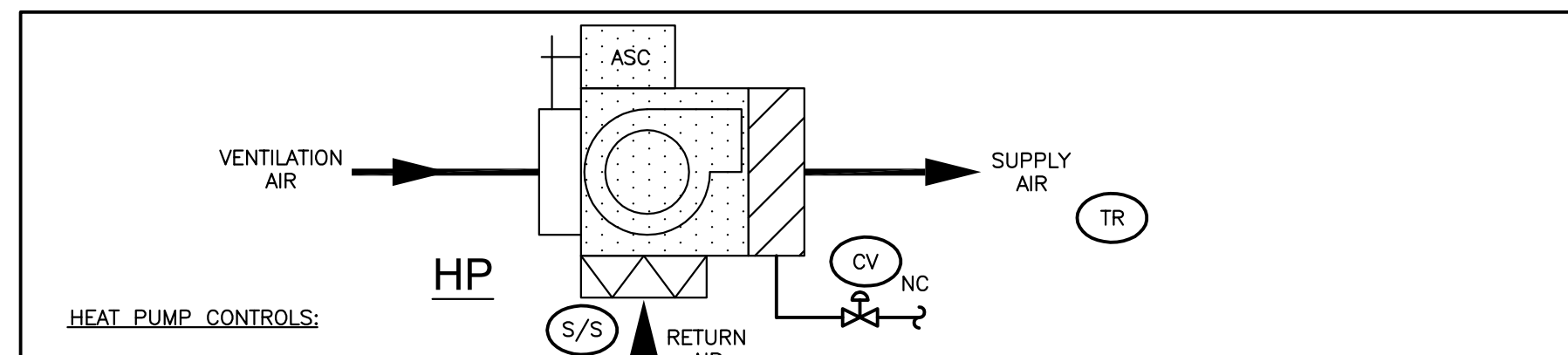
1. THE HEAT PUMP FAN AND COMPRESSORS SHALL BE OFF.
2. UPON A CALL FOR COOLING OR HEATING FROM THE ROOM TEMPERATURE SENSOR (TR), THE HEAT PUMP FAN AND COMPRESSOR SHALL ENERGIZE AND CV SHALL MODULATE TO MAINTAIN 60°F (WINTER) AND 85°F (SUMMER) TEMPERATURES.

ALARMS

1. IF, DURING OCCUPIED MODE, THE ROOM TEMPERATURE SENSOR TR SENSES A TEMPERATURE MORE THAN 5°F ABOVE OR BELOW THE SETPOINT FOR 5 MINUTES, OR BELOW 50°F DURING UNOCCUPIED CONTROL, THE DDC SYSTEM SHALL GIVE A DETAILED ROOM "HIGH" OR "LOW" TEMPERATURE ALARM SIGNAL.



CONFERENCE ROOM HEAT PUMP CONTROL SEQUENCES



HEAT PUMP CONTROLS:

GENERAL

1. HEAT PUMP SHALL BE CONTROLLED BY AN APPLICATION SPECIFIC CONTROLLER (ASC). ALL SETPOINTS SHALL BE ADJUSTABLE. ALL ACTUATORS SHALL BE ELECTRONIC.
2. ALL TEMPERATURES LISTED ARE FAHRENHEIT AND SHALL BE ADJUSTABLE.
3. OCCUPIED HEATING SETPOINT SHALL BE 70°F. OCCUPIED COOLING SETPOINT SHALL BE 5°F WARMER THAN HEATING SETPOINT. SERVER ROOM COOLING SETPOINT TO BE 85°F.
4. ROOM TEMPERATURES SHALL BE SET BY THE BUILDING AUTOMATION SYSTEM (BAS) AND CAPABLE OF LOCAL +/- 2°F ADJUSTMENT.
5. COORDINATE OCCUPIED/UNOCCUPIED TIMES WITH BUILDING OWNER.

HEAT PUMP FAN CONTROL

1. THE HEAT PUMP FAN SHALL OPERATE CONTINUOUSLY DURING OCCUPIED MODE. AS PROGRAMMED INTO THE LOCAL DDC.

OCCUPIED COOLING CONTROL

1. UPON A CALL FOR COOLING FROM THE ROOM TEMPERATURE SENSOR (TR), THE HEAT PUMP COMPRESSORS SHALL ENERGIZE AND THE CONTROL VALVE (CV) SHALL MODULATE TO MAINTAIN COOLING SETPOINT.

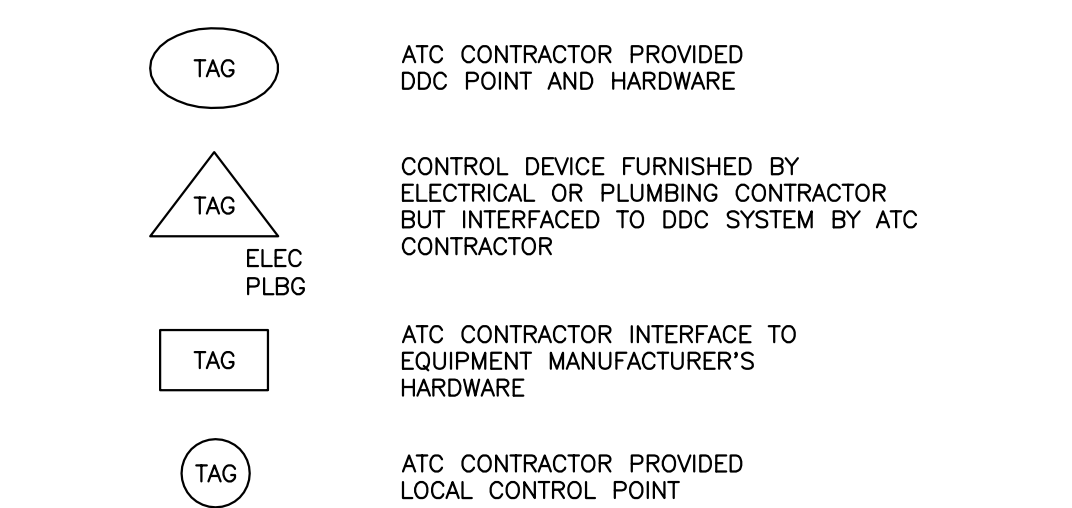


HEAT PUMP CONTROL SEQUENCES

NOTES TO ATC CONTRACTOR:

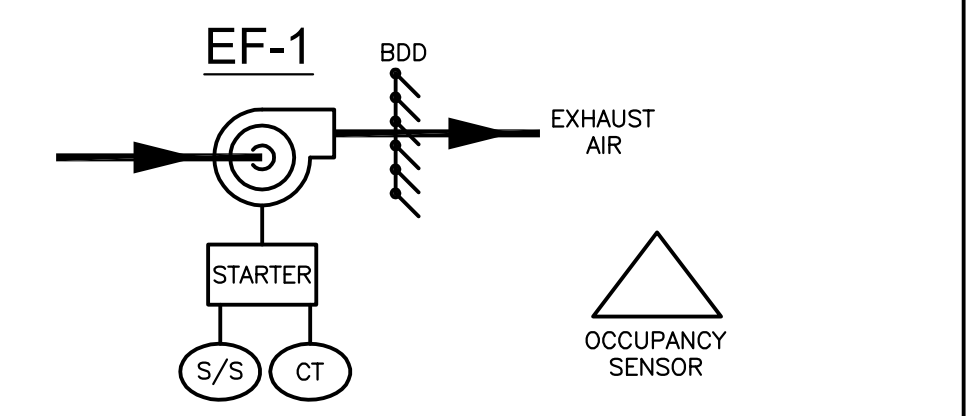
1. PROVIDE DDC COMPONENTS TO INTEGRATE AND ACCOMPLISH ALL SEQUENCES NOTED.
2. SYSTEM DOES NOT REQUIRE A FRONT END P.C. PROVIDE HAND-HELD TO PLUG INTO EQUIPMENT TO READ COMMON ALARMS AND TO ADJUST SETPOINTS.
3. PROVIDE ALL PROGRAMMING, SCHEDULING, WIRING, ETC. AND SUBMIT FOR REVIEW.

CONTROL POINT DESCRIPTOR LEGEND



CONTROL ABBREVIATIONS

ACD	AUTOMATIC CONTROL DAMPER
ACV	AUTOMATIC CONTROL VALVE
ALM	ALARM
ATC	AUTOMATIC TEMPERATURE CONTROL
BDD	BACKDRAFT DAMPER (ADJUSTABLE COUNTERWEIGHT)
CT	CURRENT TRANSFORMER (STATUS FEEDBACK)
CV	CONTROL VALVE
DAT	DISCHARGE AIR TEMPERATURE SENSOR
DDC/FP	DIRECT DIGITAL CONTROL/FIELD PANEL
ES	END SWITCH
FA	FAULT ALARM
H	HUMIDITY SENSOR
HCLT	HEATING COIL LEAVING AIR TEMPERATURE SENSOR
HEPA	HIGH EFFICIENCY PARTICULATE AIR FILTER
NC	NORMALLY CLOSED (ON LOSS OF POWER)
NO	NORMALLY OPEN (ON LOSS OF POWER)
SSID	SUPPLY SMOKE ISOLATION DAMPER
SSP	SUCTION STATIC PRESSURE SENSOR
T	TEMPERATURE SENSOR/THERMOSTAT
TR	TEMPERATURE SENSOR/THERMOSTAT (ROOM)
WC	WATER COLUMN



EXHAUST FAN CONTROLS:

GENERAL

1. EXHAUST FAN SHALL BE CONTROLLED VIA A DDC CONTROLLER AND OCCUPANCY SENSORS. OCCUPANCY SENSORS SHALL BE LOCATED IN EACH ROOM THE FAN SERVES. COORDINATE OCCUPIED/UNOCCUPIED SCHEDULES WITH OWNER. ALL SETPOINTS SHALL BE ADJUSTABLE. ALL ACTUATORS SHALL BE ELECTRONIC.
2. MOTOR RATED RELAYS SHALL BE PROVIDED TO INTERFACE MANUAL MOTOR STARTER WITH CONTROL WIRING TO SATISFY CONTROL SEQUENCE.

FAN CONTROL

1. WHILE IN UNOCCUPIED MODE THE EXHAUST SHALL BE OFF.
2. WHEN IN OCCUPIED MODE, THE EXHAUST FAN SHALL START UPON A CALL FOR OPERATION BY ANY ROOM OCCUPANCY SENSOR.

ALARMS

1. IF THE EXHAUST FAN FAILS, THE DDC CONTROLLER SHALL GIVE A DETAILED ALARM SIGNAL TO THE OPERATOR WORKSTATION.



TOILET EXHAUST FAN CONTROL SEQUENCE

HVAC GENERAL NOTES

- GENERAL NOTES APPLY TO ALL DRAWINGS.
- THIS PROJECT INVOLVES CONSTRUCTION INSIDE AN EXISTING STRUCTURE. CONTRACTORS, BY SUBMITTING A BID, ARE DEEMED TO BE COMPLETELY FAMILIAR WITH THE EXISTING CONDITION OF THE BUILDING AS IT INFLUENCES THE WORK DESCRIBED. ABSOLUTELY NO CLAIMS FOR EXTRA COMPENSATION WILL BE CONSIDERED FOR EXISTING CONDITIONS VISIBLE OR REASONABLY INFERRABLE FROM A CAREFUL EXAMINATION OF THE EXISTING BUILDING.
- THIS CONTRACTOR SHALL INSPECT THE EXISTING FIELD CONDITIONS AT THE SITE AND THE "AS-BUILT" BASE BUILDING CONTRACT DOCUMENTS PRIOR TO THE START OF ANY WORK TO DETERMINE WHAT EFFECT THE EXISTING CONDITIONS WILL HAVE ON HIS WORK. POTENTIAL PROBLEM AREAS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND/OR ENGINEER IMMEDIATELY.
- THIS CONTRACTOR SHALL CONNECT HIS WORK TO VARIOUS EXISTING PIPING, DUCTWORK, AND CONTROL SYSTEMS IN THE BASE BUILDING. THE NEW WORK SHALL BE COMPATIBLE WITH THE EXISTING SYSTEMS. LOCATION OF EQUIPMENT OR THE ROUTING OF THE VARIOUS SYSTEMS AS WELL AS OPENINGS IN FLOOR SLABS OR WALLS SHALL BE GOVERNED BY THE EXISTING CONDITIONS AS THEY APPEAR IN THE FIELD OR ON THE "AS-BUILT" DRAWINGS.
- CARE SHALL BE TAKEN DURING THE INSTALLATION TO NOT DAMAGE OR INTERFERE WITH EXISTING SYSTEMS AND SERVICES THAT ARE ALREADY INSTALLED. DAMAGE TO SUCH SYSTEMS OR EQUIPMENT CAUSED BY THIS CONTRACTOR DURING INSTALLATION SHALL BE REPAIRED AND/OR REPLACED AT THIS CONTRACTOR'S EXPENSE TO THE COMPLETE SATISFACTION OF THE BUILDING OWNER.
- SHUTDOWN OF EXISTING SYSTEMS FOR CONNECTION TO EXISTING SERVICES SHALL BE COORDINATED WITH THE CONSTRUCTION MANAGER OR GENERAL CONTRACTOR AND BUILDING OWNER. THIS CONTRACTOR SHALL SUBMIT REQUESTS, WHERE THEY AFFECT THE OPERATION OF THE BUILDING SYSTEMS, AT LEAST ONE WEEK IN ADVANCE OF ANY REQUIRED SHUTDOWN. THE ACTUAL SHUTDOWN PERIOD SHALL BE AS SHORT AS POSSIBLE AND AT A TIME MUTUALLY AGREEABLE TO THE BUILDING OWNER AND THE CONSTRUCTION MANAGER/GENERAL CONTRACTOR.
- DRAWINGS ARE DIAGRAMMATIC, THEREFORE DETERMINE EXACT LOCATIONS OF SYSTEMS AND COMPONENTS IN FIELD.
- ALL WORK SHALL BE COORDINATED WITH ALL TRADES INVOLVED. OFFSETS IN PIPING AND DUCTS (INCLUDING DIVERTED DUCTS) AND TRANSITIONS AROUND OBSTRUCTIONS SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.
- VERIFY ALL EQUIPMENT CONNECTIONS WITH MANUFACTURER'S CERTIFIED DRAWINGS. VERIFY AND PROVIDE DUCT AND/OR PIPE TRANSITIONS TO FURNISHED EQUIPMENT. FIELD VERIFY AND COORDINATE ALL DIMENSIONS BEFORE FABRICATION.
- REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATIONS OF AIR TERMINAL DEVICES.
- ALL MATERIALS AND EQUIPMENT UNLESS SPECIFICALLY INDICATED AS REUSED, SHALL BE NEW.
- DUCTWORK SHALL NOT RUN ALONG FULL HEIGHT PARTITIONS.
- ACCESS PANELS SHALL BE PROVIDED TO ALLOW FOR CLEANING OF COILS AND SERVICING OF DAMPERS, HEATERS, VALVES, AND ALL CONCEALED MECHANICAL EQUIPMENT.
- THE INSIDE OF ALL DUCTWORK VISIBLE THROUGH A GRILLE OR DIFFUSER SHALL BE PAINTED FLAT BLACK.
- INSTALL NEW AND RELOCATED THERMOSTATS 4.5 FEET AFF OR AS DIRECTED OTHERWISE BY ARCHITECT.
- WHEN SECTION OF DUCTWORK IS NOT LABELED FOR SIZE, THE LARGER SIZE INDICATED ON THE CONNECTED DUCT SHALL PREVAIL. SIZE OF DUCT RUN-OUTS TO DIFFUSER SHALL EQUAL DIFFUSER NECK SIZE.
- THE FIRE PROOFING OF THE BUILDING STRUCTURE IS NOT TO BE REMOVED FOR THE INSTALLATION OF HANGERS, SUPPORTS, DUCTWORK, ETC. IF FIRE PROOFING IS DAMAGED, IT SHALL BE REPAIRED AT THE EXPENSE OF THE TRADE.

PART 1 - GENERAL

- GENERAL PROVISIONS: DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT OF WORK IN CONTRACT.
- SCOPE: PERFORM WORK AND PROVIDE NEW MATERIAL AND EQUIPMENT AS SHOWN ON DRAWINGS AND AS SPECIFIED IN THIS SECTION OF THE SPECIFICATIONS. PROVIDE ALL COMPONENTS AND MATERIALS WHETHER SPECIFICALLY SHOWN OR NOT, THAT ARE NECESSARY TO MAKE THE SYSTEMS COMPLETE AND FULLY OPERATIONAL AS INTENDED IN THE CONSTRUCTION DOCUMENTS. WORK SHALL INCLUDE, BUT NOT BE LIMITED TO: 1) THE DESIGN INTENT AS ILLUSTRATED ON THESE DRAWINGS, 2) REQUIREMENTS INCLUDED IN THE "NARRATIVE REPORT FOR COMPLIANCE WITH SECTION 1301.8.4.1 OF THE MASSACHUSETTS STATE BUILDING CODE (780CMR) - APPROVAL AND ACCEPTANCE", AND 3) ALL TESTING AND CERTIFICATIONS NECESSARY FOR COMPLIANCE INCLUDING ANY REQUIRED REMEDIAL ACTIONS AND RETESTING DUE TO FAILURE.
- SITE VISIT: VISIT AND CAREFULLY EXAMINE SITE TO IDENTIFY EXISTING CONDITIONS THAT MAY AFFECT WORK OF THIS SECTION BEFORE SUBMITTING BID. NO EXTRA PAYMENT SHALL BE ALLOWED FOR ADDITIONAL WORK CAUSED BY UNFAMILIARITY WITH SITE CONDITIONS THAT ARE VISIBLE OR READILY DISCERNED BY AN EXPERIENCED OBSERVER.
- RELATED WORK: THE FOLLOWING WORK IS NOT INCLUDED IN THIS SECTION AND WILL BE PROVIDED UNDER OTHER SECTIONS: 1) TEMPORARY HEAT FOR USE DURING CONSTRUCTION AND TESTING UNLESS SPECIFICALLY NOTED IN OTHER SPECIFICATION SECTIONS, 2) PAINTING, EXCEPT AS SPECIFIED, 3) ELECTRICAL POWER WIRING TO ALL EQUIPMENT OTHER THAN AUTOMATIC TEMPERATURE CONTROL PANELS AND COMPONENTS, AND 4) DUCT MOUNTED SMOKE DETECTORS SHALL BE FURNISHED BY OTHERS FOR MOUNTING AND WIRING TO THE ATC SYSTEM UNDER THIS SECTION.
- CODES, STANDARDS, AUTHORITIES AND PERMITS: CODES, LAWS AND ORDINANCES PROVIDE A BASIS FOR THE MINIMUM INSTALLATION CRITERIA. THESE DRAWINGS AND SPECIFICATIONS ILLUSTRATE THE SCOPE REQUIRED FOR THIS PROJECT, WHICH MAY EXCEED MINIMUM CODE, LAW AND STANDARDS CRITERIA. GIVE NOTICES, FILE PLANS, OBTAIN PERMITS AND LICENSES, PAY FEES AND BACKLOGS AND OBTAIN NECESSARY APPROVALS FROM AUTHORITIES HAVING JURISDICTION AS REQUIRED FOR THE EXECUTION OF ALL WORK ASSOCIATED WITH THIS PROJECT. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITIONS OF: 1) THE STATE BUILDING, ELECTRICAL, MECHANICAL, AND ENERGY CODES, 2) SMACNA, NFPA, ANSI/ASHRAE, ASME, UL, AND NEMA STANDARDS, 3) ALL OTHER APPLICABLE CODES, REGULATIONS, STANDARDS AND LAWS OF LOCAL, STATE AND FEDERAL GOVERNMENT AND OTHER AUTHORITIES HAVING JURISDICTION, AND 4) APPLICABLE BASE BUILDING STANDARDS AND SPECIFICATIONS.
- INTERPRETATIONS OF DOCUMENTS: WHERE DRAWINGS OR SPECIFICATIONS DO NOT COINCIDE WITH MANUFACTURER'S RECOMMENDATIONS, OR ARE UNCLEAR AS TO INTENT, OR REQUIRED MATERIAL SHALL BE CERTAIN-TEEDED, KNAUF, OWENS CORNING, OR MANVILLE FOR THE FOLLOWING DUCTWORK: 1) SUPPLY, RETURN, AND EXHAUST AIR DUCTS, INCLUDING PLENUMS, FOR MINIMUM OF 20 FEET FROM HEAT PUMP UNITS AND FANS.
- REQUESTS FOR INFORMATION: ANY RFQ FOR RESOLVING AN APPARENT CONFLICT OR UNCLEARITY, OR A REQUEST FOR ADDITIONAL DETAIL, SHALL INCLUDE A SKETCH OR EQUIVALENT DESCRIPTION OF CONTRACTOR'S PROPOSED SOLUTION.
- SUBMITTALS: PROVIDE SPECIFIED ITEMS AND EQUIPMENT UNLESS "EQUAL" OR "APPROVED EQUAL" IS EXPLICITLY INDICATED ON THE DRAWINGS. DEVIATIONS TO SPECIFIED ITEMS SHALL BE AT THE SOLE RISK OF THE CONTRACTOR, WHO SHALL BE RESPONSIBLE FOR ALL ASSOCIATED CHANGES TO THIS AND OTHER TRADES. REVIEW THE SHOP DRAWINGS BY THE ENGINEER SHALL NOT RELIEVE THE CONTRACTOR FROM TESTING THE FULL DESIGN INTENT OF THE ASSOCIATED SYSTEM(S). SUBMITTALS SHALL INDICATE PRIOR REVIEW AND APPROVAL BY THE RESPONSIBLE CONTRACTOR. SUBMIT FOR REVIEW (6) SETS OF MANUFACTURER'S PRODUCT DATA FOR THE FOLLOWING ITEMS: 1) AIR DISTRIBUTION LAYOUT DRAWINGS AND DETAILS, 2) PIPING DISTRIBUTION LAYOUT DRAWINGS, COMPONENTS, AND DETAILS, 3) ALL EQUIPMENT, 4) CONTROL SCHEMATICS, COMPONENTS AND SEQUENCES, INCLUDING THE IN-TUNE TO THE EXISTING BUILDING CONTROL OR MANAGEMENT SYSTEM, 5) BALANCING REPORTS, 6) ALL TEST REPORTS, AND 7) ALL CERTIFICATES.
- OPERATION AND MAINTENANCE DATA: SUBMIT (3) SETS OF OPERATING AND MAINTENANCE MANUALS PRIOR TO THE COMPLETION OF THE PROJECT. PROVIDE ON-SITE DEMONSTRATION OF ALL SYSTEMS TO OWNER AFTER SYSTEMS ARE FULLY OPERATIONAL. O&M MANUALS SHALL INCLUDE ALL COMPONENTS (DIFFUSERS, VALVES, ETC.) AS WELL AS SYSTEM DESCRIPTIONS OF ALL SYSTEMS WITH FLOW DIAGRAMS, WIRING DIAGRAMS, WRITTEN WARRANTIES, RECOMMENDED SPARE PARTS AND REPAIR MAINTENANCE REQUIREMENTS WITH RECOMMENDED INTERVALS FOR ALL MOVING EQUIPMENT AND CONTROLS.
- RECORD DRAWINGS: CAD RECORD DRAWING FILES SHALL BE SUBMITTED AT THE COMPLETION OF THE PROJECT SHOWING THE "AS-BUILT" CONDITION INCLUDING WORK INSTALLED AND ALL MODIFICATIONS OR ADDITIONS TO ORIGINAL DESIGN. OBTAIN THE AUTOCAD FILES FOR PREPARATION OF AS-BUILT DRAWINGS FROM THE ARCHITECT. THE ARCHITECT AND ENGINEER ARE NOT GRANTING ANY OWNERSHIP OR PROPERTY INTEREST IN THE CAD DRAWINGS BY THE DELIVERY OF THE CAD FILED AND AUTOCAD FILES AND DRAWINGS ARE LIMITED FOR THE SOLE PURPOSE OF ASSISTING THE CONTRACTOR'S PERFORMANCE IN ITS CONTRACTUAL OBLIGATIONS WITH RESPECT TO THIS PROJECT. ANY REUSE AND/OR OTHER USE BY THE CONTRACTOR WILL BE AT THE CONTRACTOR'S SOLE RISK AND WITHOUT LIABILITY TO THE ARCHITECT AND ENGINEER.
- WARRANTIES: WARRANTY INSTALLATION IN WRITING FOR ONE YEAR FROM DATE OF OWNER'S ACCEPTANCE OF CERTIFICATE OF SUBSTANTIAL COMPLETION. WHERE INDIVIDUAL EQUIPMENT SECTIONS SPECIFY LONGER WARRANTIES, PROVIDE THE LONGER WARRANTY. REPAIR, REPLACE OR PROVIDE TEMPORARY REPAIRS FOR DEFECTS IN MATERIALS, EQUIPMENT, WORKMANSHIP AND INSTALLATION THAT DEVELOP WITHIN 24 HOURS OF NOTIFICATION. WARRANTY SHALL INCLUDE A CONTACT PERSON (NAME AND 24 HOUR TELEPHONE NUMBER) FOR SERVICE REQUESTS. CORRECT DAMAGE CAUSED WHILE MAKING NECESSARY REPAIRS AND REPLACEMENTS UNDER WARRANTY PERIOD AT NO ADDITIONAL COST.
- COORDINATION: CONFER WITH ALL OTHER TRADES RELATIVE TO LOCATION OF ALL APPARATUS AND EQUIPMENT TO BE INSTALLED AND SELECT LOCATIONS SO AS NOT TO CONFLICT WITH OR HINDER THE WORK OF OTHER SECTIONS. WORK INSTALLED THAT INTERFERES OR CREATES INTERFERENCE OR RESTRICTS ACCESS REQUIRED BY CODE (INCLUDING CLEARANCES TO ELECTRICAL COMPONENTS) OR TO CONDUCT MAINTENANCE AND/OR ADJUSTMENTS SHALL BE MODIFIED AT NO ADDITIONAL COST TO THE OWNER.
- SUPPORTS: INCLUDE ALL STRUCTURAL STEEL SUPPORTS, HANGER BRACKETS, ETC., REQUIRED FOR THE EXECUTION OF THE WORK OF THIS SECTION. THE WELDS AND EDGES OF ALL BRACKETS SHALL BE FILED OR GROUND SMOOTH FOR PAINTING. HANGERS SHALL BE STEEL ANGLE IRON, CHANNEL OR STEEL ROD USED WITH APPROVED CLAMPS, INSERTS, ETC. ALL HANGERS SHALL BE GALVANIZED OR PAINTED WITH TWO COATS OF RUSTOLEUM PAINT BEFORE INSTALLATION. APPLY TOUCH-UP PAINT (ZINC GALVANIZING FOR GALVANIZED STEEL) AFTER INSTALLATION. SUPPORTS INSTALLED IN EXTERIOR LOCATIONS SHALL BE PVC COATED STEEL, GALVANIZED STEEL, OR STAINLESS STEEL WITH STAINLESS STEEL HARDWARE.
- CUTTING AND PATCHING: INCLUDE ALL CORING, CUTTING, PATCHING AND FIREPROOFING NECESSARY FOR THE EXECUTION OF THE WORK OF THIS SECTION. STRUCTURAL ELEMENTS SHALL NOT BE CUT WITHOUT WRITTEN APPROVAL OF THE ARCHITECT. REPAIR AND PATCH AROUND THE WORK SPECIFIED HEREIN TO MATCH THE EXISTING ADJACENT SURFACES TO THE SATISFACTION OF THE ARCHITECT. FILL AND PATCH ALL OPENINGS OR HOLES LEFT IN THE EXISTING STRUCTURES BY THE REMOVAL OF EXISTING EQUIPMENT THAT IS PART OF THIS SECTION OF THE SPECIFICATIONS. PATCH AND SEAL ALL EXISTING OPENINGS IN DUCTWORK AND PIPING NOT UTILIZED FOR NEW LAYOUT.
- HOISTING, SCAFFOLDING AND PLANKING: INCLUDE THE FURNISHING, SET-UP AND MAINTENANCE OF ALL HOISTING MACHINERY, CRANES, SCAFFOLDS, STAGING AND PLANKING AS REQUIRED FOR THE EXECUTION OF WORK FOR THIS SECTION.
- SAFETY PRECAUTIONS: LIFE SAFETY AND ACCIDENT PREVENTION SHALL BE A PRIMARY CONSIDERATION. COMPLY WITH ALL OF THE SAFETY REQUIREMENTS OF THE OWNER AND OSHA THROUGHOUT THE ENTIRE CONSTRUCTION PERIOD OF THE PROJECT. FURNISH, PLACE AND MAINTAIN PROPER GUARDS AND ANY OTHER NECESSARY CONSTRUCTION REQUIRED TO SECURE SAFETY OF LIFE AND PROPERTY.
- PROTECTION OF WORK AND PROPERTY: THIS CONTRACTOR SHALL BE RESPONSIBLE FOR THE CARE AND PROTECTION OF ALL WORK INCLUDED UNDER THIS SECTION UNTIL THE COMPLETION AND FINAL ACCEPTANCE OF THIS PROJECT. PROTECT ALL EQUIPMENT AND MATERIALS FROM DAMAGE FROM ALL CAUSES INCLUDING, BUT NOT LIMITED TO, FIRE, VANDALISM AND THEFT. ALL MATERIALS AND EQUIPMENT DAMAGED OR STOLEN SHALL BE REPAIRED OR REPLACED WITH EQUAL MATERIAL OR EQUIPMENT AT NO ADDITIONAL COST TO THE OWNER. PROTECT ALL EQUIPMENT, OUTLETS AND OPENINGS, AND ROOF PENETRATIONS WITH TEMPORARY PLUGS, CAPS AND COVERS. PROTECT WORK AND MATERIALS OF OTHER TRADES FROM DAMAGE THAT MIGHT BE CAUSED BY WORK OR WORKMEN UNDER THIS SECTION AND MAKE GOOD DAMAGE THUS CAUSED. DAMAGED MATERIALS ARE TO BE REMOVED FROM THE SITE; NO SITE STORAGE OF DAMAGED MATERIALS WILL BE ALLOWED. ANY DAMAGE TO EXISTING SYSTEMS AND EQUIPMENT CAUSED BY THIS CONTRACTOR DURING INSTALLATION SHALL BE REPAIRED AND/OR REPLACED AT THIS CONTRACTOR'S EXPENSE TO THE COMPLETE SATISFACTION OF THE BUILDING OWNER.

HVAC SPECIFICATIONS

- SEISMIC RESTRAINT REQUIREMENTS: PROVIDE SEISMIC RESTRAINTS AS REQUIRED IN ACCORDANCE WITH THE STATE BUILDING CODE. A REGISTERED PROFESSIONAL STRUCTURAL ENGINEER, LICENSED IN THE APPLICABLE STATE FOR THE PROJECT LOCATION, SHALL PREPARE THE SEISMIC RESTRAINT DESIGN AND CERTIFY THAT THE DESIGN IS IN COMPLIANCE WITH THE STATE BUILDING CODE REQUIREMENTS.
- PROJECT CLOSEOUT: A CERTIFICATE OF COMPLETION SHALL BE ISSUED BY THE CONTRACTOR INDICATING THAT THE INSTALLATION IS IN CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS AND ALL APPLICABLE LOCAL, STATE AND FEDERAL STATUTES AND CODES. ALL SUBMITTALS, AS-BUILTS, O&M MANUALS, AND BALANCING REPORTS ARE TO BE PROVIDED, FOR ENGINEER'S REVIEW, PRIOR TO REQUEST FOR COMPLETION CERTIFICATES. IN ADDITION, AND ALSO PRIOR TO REQUEST FOR COMPLETION CERTIFICATES, ALL PUNCH LIST ITEMS MUST BE COMPLETED TO THE SATISFACTION OF THE ENGINEER. THE CONTRACTOR MUST VERIFY THAT ALL SEQUENCES OF OPERATIONS AND CONTROLS HAVE BEEN INCORPORATED AND ALL SYSTEMS AND EQUIPMENT ARE WORKING PER THE SPECIFIED SEQUENCES OF OPERATIONS. A BLANK CONTRACTOR'S CERTIFICATE FORM CAN BE FURNISHED BY ROK ENGINEERS UPON REQUEST. FINAL INSPECTION BY THE ENGINEER SHALL BE CONDUCTED AFTER RECEIPT OF THE CERTIFICATE OF COMPLETION. PREMATURE REQUESTS FOR FINAL INSPECTIONS THAT REQUIRE REINSPECTION OF DEFICIENT ITEMS WILL RESULT IN BACK CHARGES OF THE COSTS ASSOCIATED WITH THE REINSPECTION.

PART 2 - PRODUCTS

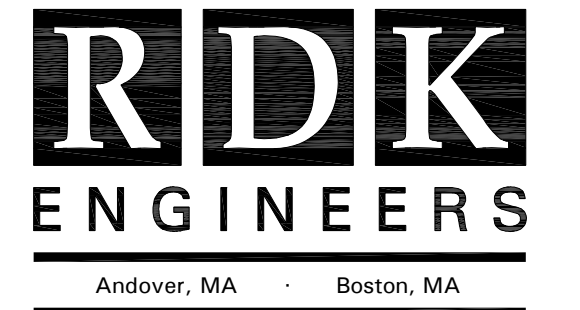
- DUCTWORK: MATERIAL, CONSTRUCTION, AND INSTALLATION SHALL MEET REQUIREMENTS OF MOST RECENT EDITIONS OF SMACNA HVAC DUCT CONSTRUCTION STANDARDS, EXCEPT FOR MORE STRINGENT REQUIREMENTS SPECIFIED OR SHOWN ON DRAWINGS. UNLESS SPECIFIED OTHERWISE, ALL DUCTWORK SHALL BE BUILT TO 2" PRESSURE CLASS WITH SEAL CLASS B. PROVIDE FLEXIBLE CONNECTION ON ALL DUCTS CONNECTING TO FANS EQUIPPED WITH CURTAIN TYPE ALL DUCTS SHALL BE GROUNDED ACROSS FLEXIBLE CONNECTION WITH FLEXIBLE COPPER GROUNDING STRAPS. MAXIMUM LENGTH OF FLEXIBLE RUN-OUT TO DIFFUSERS SHALL BE 6 FEET. FOR LONGER RUN-OUTS, ADD RIGID DUCT. DUCTS SHALL BE CONSTRUCTED OF HOT DIPPED GALVANIZED STEEL UNLESS OTHERWISE NOTED.
- FIRE DAMPERS: PROVIDE FIRE DAMPERS THROUGHOUT AIR SYSTEMS FOR ALL DUCTS PENETRATING FIRE RATED WALLS AND AS REQUIRED BY APPLICABLE CODES, STANDARDS, AND AUTHORITIES. PROVIDE ACCESS DOOR FOR EACH FIRE DAMPER OF SUFFICIENT SIZE TO REPAIR INTERNAL LINK. FIRE DAMPERS SHALL BE AS MANUFACTURED BY GREENHECK, RUSKIN, ARROW, NAILOR, OR APPROVED EQUAL. DAMPER BLADES SHALL BE OUT OF AIR STREAM (UNLESS SIZE IS LARGER THAN AVAILABLE IN CURTAIN TYPE, THEN BLADE TYPE SHALL BE USED, SIMILAR TO FIRE/SMOKE DAMPERS. IF ACTUATORS ARE REQUIRED, MECHANICAL CONTRACTOR SHALL INCLUDE THE WIRING IN HIS COST). DAMPERS SHALL BEAR 1-1/2 HOUR MINIMUM FIRE RATING FIRE DAMPER LABEL AND NOT BE CONSTRUCTED AS REQUIRED BY UL 555
- VOLUME DAMPERS: PROVIDE MANUAL ADJUSTABLE VOLUME DAMPERS, WITH EXTENDED MOUNT, INDICATING AND LOCKING QUADRANTS ON EACH TAKE-OFF TO REGISTER, GRILLE, OR DIFFUSER (NOT ALL MAY BE SHOWN ON DRAWINGS).
- DIFFUSERS, REGISTERS, AND GRILLES: PROVIDE DIFFUSERS, REGISTERS AND GRILLES FOR SUPPLY, RETURN, AND EXHAUST OUTLETS OF SIZE, TYPE, AND DESIGN SHOWN ON DRAWINGS. DIFFUSER SIZES SHOWN ARE NECK SIZES; REGISTER AND GRILLE SIZE ARE NOMINAL. ACCEPTABLE MANUFACTURERS SHALL BE TITUS, ANEMOSTAT, KRUEGER, TUTTLE & BAILEY, OR METALAIR. SOUND PRESSURE LEVELS ARE NOT TO EXCEED NC 30.
- ACOUSTICAL SOUND LINING: MATERIALS AND INSTALLATION SHALL MEET THE FOLLOWING STANDARDS, AS APPLICABLE: NFPA-90A, UL723, NFPA-255; SMACNA DUCT LINER APPLICATIONS STANDARD; SMACNA MECHANICAL FASTENERS STANDARD; ADHESIVE AND SEALANT COUNCIL: ADHESIVES STANDARD FOR DUCT LINER - ASTM A-7001A; ASTM E-84 FIRE HAZARD CLASSIFICATIONS OF 25 FLAME SPREAD, 50 SMOKE DEVELOPED, AND 50 FUEL CONTRIBUTED. INTERNAL AIRFLOW DIMENSIONS ARE SHOWN FOR DUCTS, CONTRACTOR SHALL INCREASE DUCT SIZE FOR LINING. PROVIDE MINIMUM 1" THICK ACOUSTICAL LINING TO MEET THE ENERGY CODE REQUIREMENTS FOR R5 INSULATION FOR SUPPLY AND RETURN DUCTWORK IN CONCEALED SHAFTS AND PLENUMS (EXCEPT FOR AREAS WHERE THE RETURN AIR IS NOT DUCTED, SUCH AS RETURN AIR SHAFTS) OR UNCONDITIONED SPACES, PROVIDE EITHER 1-1/2" THICK LINING OR 1" THICK LINING WITH MINIMUM 1/2" THICK EXTERIOR INSULATION. SEAL ALL JOINTS WITH MANUFACTURER APPROVED MASTIC. USE SHEET METAL NOSING AT ALL RAW EDGES. LINING SHALL BE BY CERTAIN-TEED, KNAUF, OWENS CORNING, OR MANVILLE FOR THE FOLLOWING DUCTWORK: 1) SUPPLY, RETURN, AND EXHAUST AIR DUCTWORK, INCLUDING PLENUMS, FOR MINIMUM OF 20 FEET FROM HEAT PUMP UNITS AND FANS.
- DUCT INSULATION (EXTERNAL): INSULATION SHALL BE CERTAIN-TEED, KNAUF, MANVILLE, OR OWENS CORNING. MATERIALS SHALL MEET REQUIREMENTS OF ADHESIVE AND SEALANT COUNCIL STANDARDS AND SMACNA. DUCTWORK THAT IS LINED DOES NOT NEED EXTERNAL INSULATION EXCEPT FOR SUPPLY AND RETURN DUCTWORK LINED WITH ONLY 1" THICK LINING LOCATED IN CONCEALED SHAFTS AND PLENUMS (EXCEPT FOR AREAS WHERE THE RETURN AIR IS NOT DUCTED, SUCH AS RETURN AIR SHAFTS) OR UNCONDITIONED SPACES. TO MEET ENERGY CODE R5 REQUIREMENT, ADD A MINIMUM 1/2" THICK EXTERIOR INSULATION TO THESE LINED DUCTS. INSULATE ALL SUPPLY AND FRESH AIR DUCTS AND PLENUMS, INSULATE RETURN DUCTS NOT IN CEILING RETURN AIR PLENUMS. INSULATION SHALL BE AT LEAST 1-1/2" THICK. FOR CONCEALED INSULATION, USE FIBROUS GLASS DUCT WRAP WITH CAPACITY WITH FLAME RESISTANT VAPOR BARRIER. EXPOSED INSULATION SHALL BE RIGID FIBERGLASS INSULATION WITH ALUMINUM VAPOR BARRIER.
- WATER PIPING AND VALVES: PIPING 2-1/2" AND LARGER SHALL BE WELDED SCHEDULE 40 STEEL, 2" AND SMALLER SHALL BE SCHEDULE 40 STEEL OR 1/8" GALVANIZED TYPE L COPPER. CONDENSATE DRAIN PIPING SHALL BE COPPER. PROVIDE FLEX CONNECTORS (DOUBLE SPHERE) AT ALL CONNECTIONS TO ROTATING EQUIPMENT. PROVIDE DIELECTRIC FITTINGS TO CONNECT DIFFERENT PIPING MATERIALS. VALVES SHALL HAVE NAME OF MANUFACTURER AND GUARANTEED WORKING PRESSURE CAST OR STAMPED ON BODIES. VALVES AND STRAINERS SHALL BE AS MANUFACTURED BY CRANE, HAMMOND, JENKINS, STOCKHOLM, MUELLER, APOLLO, WATTS, SARCO, OR MILWAUKEE. BALL VALVES SHALL BE USED ON 2" AND SMALLER WATER PIPING, BUTTERFLY USED ON 2 1/2" AND LARGER WATER PIPING. CALIBRATED COMBINATION BALANCING AND SHUT-OFF VALVES SHALL BE BY ARMSTRONG, BELL AND GOSSETT, FLOWSET, MESCO, AUTOFLOW, MASON, OR TACO. PROVIDE DIFFERENTIAL PRESSURE METER KIT WITH FLOW CALIBRATION CHARTS. PROVIDE DRAIN VALVES AT LOW POINTS IN PIPING AND VALVED VENTS AT HIGH POINTS. STRAINERS SHALL BE "Y" TYPE (ALTERNATIVELY, NON-REDUCING SUCTION DIFFUSERS MAY BE USED ON PUMP INLETS). FULL SIZE OF ENTERING PIPE SIZE AND HAVE A MAXIMUM CLEAN PRESSURE DROP OF 1/2" WG. PROVIDE SHUTTERS TO INCLUDE BLOW DOWN VALVE. CHECK VALVES SHALL BE SWING TYPE EXCEPT SPRING SILENT TYPE SHALL BE USED FOR PUMP DISCHARGE (ALTERNATIVELY, MULTIPURPOSE PUMP DISCHARGE VALVES CAN BE USED). AUTOMATIC FLOW CONTROL VALVES SHALL BE BY GRISWOLD OR AUTOFLOW WHERE INDICATED ON THE DRAWINGS. VALVES SHALL BE FACTORY SET AND SHALL AUTOMATICALLY LIMIT THE RATE OF FLOW TO REQUIRE ENGINEERED CAPACITY WITHIN 5% ACCURACY OVER ITS CONTROL RANGE. PROVIDE DIFFERENTIAL PRESSURE METER KIT.
~~DUCT ALTERNATE~~ CONTRACTOR TO PROVIDE PRICE FOR SCHEDULE 80 CPVC PIPING, VALVES AND FITTINGS.
- PIPE INSULATION: INSULATION SHALL BE FIBROUS GLASS INSULATION WITH FACTORY-APPLIED FIRE RETARDANT VAPOR BARRIER JACKET WITH K FACTOR OF AT LEAST 0.23 AT 75 DEG. F MEAN TEMPERATURE BY OWENS CORNING, CERTAIN-TEED, MANVILLE, OR KNAUF. ASTM E-84 FIRE HAZARD RATINGS SHALL BE 25 FLAME SPREAD, 50 SMOKE DEVELOPED AND 50 FUEL CONTRIBUTED. CONDENSATE DRAIN LINES, SHALL BE INSULATED WITH 3/8" THICK RIGID CLOSED CELL FOAM INSULATION. ARMSTRONG RIGID ARMAFLEX, MANVILLE, OWENS CORNING, OR HALSTEAD/NOMACO (INSULTUBE), EXCEPT IN COMPUTER ROOM PLENA.
- PIPE HANGERS AND SUPPORTS: PROVIDE PIPE STANDS, SUPPORTS, HANGERS, AND OTHER SUPPORTING APPLIANCES AS NECESSARY TO SUPPORT WORK REQUIRED BY CONTRACT DOCUMENTS. SPACING OF HANGERS SHALL BE INSTRUCTED IN ACCORDANCE WITH APPLICABLE BUILDING AND MECHANICAL CODES. SIZE OF HANGERS SHALL INCLUDE THE PIPE INSULATION WITH SHIELD, WHERE HANGERS ARE USED OUTDOORS, THEY SHALL BE STAINLESS STEEL OR PVC COATED GALVANIZED STEEL.
- EQUIPMENT INSULATION: INSULATION SHALL BE CERTAIN-TEED, KNAUF, MANVILLE, OR OWENS CORNING AND SHALL BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. INSULATE THE FOLLOWING EQUIPMENT: 1) DUCT-MOUNTED COILS, 2) DRAIN PANS, INSULATION SHALL BE 1" THICK FIBROUS GLASS RIGID BLOCK OR SEMIRIGID BOARD RATED FOR TEMPERATURE INTENDED. INSULATION SHALL BE FORMED OR FABRICATED TO FIT EQUIPMENT AND HAVE REMOVABLE SECTIONS FOR SERVICING.
- MOTORS, STARTERS, AND WIRING: PROVIDE PREMIUM EFFICIENCY MOTORS. STARTERS AND/OR VFD'S SHALL BE PROVIDED BY DIVISION 16 UNLESS PART OF PACKAGED EQUIPMENT. PROVIDE CONTROL AND OTHER RELATED WIRING INCLUDING INTERLOCKS.
- FANS: ALL FANS SHALL HAVE THEIR AIR PERFORMANCE RATED IN ACCORDANCE WITH AMCA AND SHALL BE LICENSED TO BEAR THE AMCA SEAL. ACCEPTABLE MANUFACTURERS OF FANS, SHALL BE PENN, GREENHECK, OR COOK. ACCEPTABLE MANUFACTURERS FOR CENTRIFUGAL FANS SHALL BE: BUFFALO, CHICAGO, TRANE, PEERLESS, OR BARRY.
- VIBRATION ISOLATION: PROVIDE VIBRATION ISOLATION FOR EACH PIECE OF ROTATING OR PISTON DRIVEN HVAC EQUIPMENT SHOWN ON THE DRAWINGS. ISOLATION MAY BE INTERNAL OR EXTERNAL TO THE EQUIPMENT AND SHALL PROVIDE AT LEAST 90% ISOLATION EFFICIENCY. ISOLATE THE FIRST THREE PIPE HANGER LOCATIONS FROM EQUIPMENT WITH 1" DEFLECTION COMBINATION SPRING AND NEOPRENE, NA (NOVIA ASSOCIATION) MODEL "SNH" OR EQUIVALENT BY MASON INDUSTRIES OR KINETICS. INSTALLATION PRACTICES SHALL BE STRICTLY IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE VIBRATION ISOLATION MANUFACTURER.

- WATER SOURCE HEAT PUMPS: PROVIDE WATER SOURCE HEAT PUMPS BY CARRIER, MOQUAY, CLIMATE MASTER, OR TRANE. PROVIDE MICROPROCESSOR CONTROLS AND ALL REQUIRED SENSORS, VALVES AND COMPONENTS. UNITS SHALL INCLUDE UNIT MOUNTED DISCONNECT. UNITS SHALL INCLUDE HOSE KITS WITH THE FOLLOWING ACCESSORIES: 1) FIRE-RATED, BRADED SUPPLY AND RETURN HOSE, 2) VALVES AND FITTINGS PER THE PIPING DETAIL.
- CONDENSATE DRAIN PUMPS: PROVIDE, ON ALL HEAT PUMPS, CONDENSATE PUMPS WITH TANK AND LEVEL CONTROL BY HARTELL, LITTLE GIANT, LIBERTY, ZOLLNER, OR APPROVED EQUAL. PROVIDE EACH PUMP WITH A CHECK VALVE. PUMPS LOCATED IN RETURN AIR PLENUMS SHALL BE HARDWIRED AND BE CONSTRUCTED OF MATERIALS THAT ARE NON-COMBUSTIBLE (METAL) OR LIMITED COMBUSTIBLE WITH A MAXIMUM SMOKE DEVELOPED INDEX OF 50. THESE PUMPS SHALL BE EQUAL TO HARTELL MODEL A2-X-1985
- AUTOMATIC TEMPERATURE CONTROLS: PROVIDE COMPLETE SYSTEM OF AUTOMATIC TEMPERATURE CONTROLS BY ANDOVER, INVENSYS BUILDING SYSTEMS, HONEYWELL, JOHNSON, OR SIEMENS CONTROL SYSTEM SHALL BE CAPABLE OF PERFORMING ALL SEQUENCES OF OPERATION SHOWN ON THE DRAWINGS OR DESCRIBED IN THESE SPECIFICATIONS. INDIVIDUAL CONTROL COMPONENTS MAY NOT BE SHOWN ON CONTRACT DOCUMENTS, BUT ATC CONTRACTOR SHALL SUPPLY ALL COMPONENTS, CONTROL WIRING (INCLUDING POWER WIRING TO ALL PANELS, CONTROLLERS, TRANSFORMERS, ACTUATORS, ETC.), NECESSARY FOR A COMPLETE OPERABLE SYSTEM. COORDINATE WITH ELECTRICAL CONTRACTOR FOR LOCATION OF LINE VOLTAGE JUNCTION BOX IN EACH MECHANICAL AREA. ATC CONTRACTOR SHALL EXTEND WIRING FROM THESE BOX(ES) TO ALL CONTROL COMPONENTS AND SHALL BE RESPONSIBLE FOR ALL SYSTEM COMPONENTS, WHETHER THE SUBCONTRACTS ELECTRICAL AND OTHER WORK OR NOT. ALL WIRING SHALL COMPLY WITH THE REQUIREMENTS OF THE ELECTRICAL SECTION OF THESE SPECIFICATIONS. WIRING BETWEEN FIRE ALARM SYSTEM AND TEMPERATURE CONTROL SYSTEM, EXCEPT FOR DUCT MOUNTED SMOKE DETECTORS (FURNISHED BY THE ELECTRICAL CONTRACTOR), SHALL BE BY THE ATC CONTRACTOR.
- DDC/BUILDING AUTOMATION SYSTEM INTERFACE: PROVIDE ALL NECESSARY COMPONENTS AND WIRING FOR INTERLOCK TO EXISTING DDC/BUILDING AUTOMATION SYSTEM. ALL COMPONENTS MUST BE COMPATIBLE WITH EXISTING OUTPUT DEVICES. PROVIDE HAND HELD OPERATOR TERMINALS FOR LOCAL OUTPUT OF SENSORS WHEN NO OUTPUT DEVICES EXIST. PROVIDE TO OWNER ALL OPERATING AND MAINTENANCE INSTRUCTIONS FOR USE AND/OR ALTERATION OF DDC SYSTEMS.

PART 3 - EXECUTION

- DEMOLITION: THE EXISTING FACILITY WILL CONTINUE TO OPERATE DURING ALL PHASES OF THE DEMOLITION WORK AND SUBSEQUENT CONSTRUCTION. NO INTERRUPTION OF THE SYSTEMS WILL BE PERMITTED WITHOUT PRIOR APPROVAL OF THE OWNER'S REPRESENTATIVE. SUBMIT PROPOSED METHODS AND SEQUENCE OF OPERATIONS FOR THE SELECTIVE DEMOLITION WORK TO THE OWNER'S REPRESENTATIVE FOR REVIEW PRIOR TO THE START OF THE WORK. ANY DEMOLITION SHALL BE COORDINATED WITH OWNER, ARCHITECT, CM/CA, AND ENGINEER. PERFORM ALL DEMOLITION WHILE ENSURING MINIMUM INTERFERENCE WITH ADJACENT OCCUPIED AREAS.
- INSTALLATION OF EQUIPMENT: INSTALL ALL ITEMS SPECIFIED UNDER PART 2 - PRODUCTS, ACCORDING TO THE MANUFACTURER'S REQUIREMENTS, SHOP DRAWINGS, AND DETAILS AS SHOWN ON THE DRAWINGS AND AS SPECIFIED. INSTALL ALL WORK SO THAT PARTS REQUIRING INSPECTION, REPLACEMENT, MAINTENANCE AND REPAIR SHALL BE READILY ACCESSIBLE. MINOR DEVIATIONS FROM THE DRAWINGS MAY BE MADE TO ACCOMPLISH THIS, BUT ANY SUBSTANTIAL CHANGE SHALL NOT BE MADE WITHOUT PRIOR WRITTEN OWNER APPROVAL.
- IDENTIFICATION: ALL EQUIPMENT, PIPING, VALVES, AND DUCTWORK PROVIDED UNDER THIS SECTION OF THE SPECIFICATIONS SHALL BE MARKED FOR EASE OF IDENTIFICATION PER OWNER'S OR INDUSTRY STANDARDS.
- FIRESTOPPING: INSTALL FIRESTOPPING ASSEMBLY AT ALL FIRE RATED WALLS AND AS SPECIFIED IN ACCORDANCE WITH UL FRD SYSTEMS OR FM P7825 DESIGNS, AND AS RECOMMENDED BY MANUFACTURER.
- PIPE EXPANSION: THE EXPANSION OF SUPPLY AND RETURN PIPES SHALL BE PROVIDED FOR BY CHANGES IN THE DIRECTION OF THE RUN OF PIPE, BY EXPANSION LOOPS, OR BY EXPANSION JOINTS AS REQUIRED.
- CLEANING: DUCTS SHALL BE THOROUGHLY CLEANED SO THAT NO DIRT OR DUST SHALL BE DISCHARGED FROM DIFFUSERS, REGISTERS, OR GRILLES, WHEN SYSTEM IS OPERATED. AFTER ALL WATER, STEAM, AND CONDENSATE PIPING SYSTEMS HAVE BEEN PRESSURE TESTED AND APPROVED FOR TIGHTNESS, CLEAN AND FLUSH PIPING. AFTER COMPLETION OF PROJECT, CLEAN EXTERIOR SURFACES OF ALL EQUIPMENT INCLUDED IN THIS SECTION, INCLUDING REMOVAL OF CONCRETE RESIDUE. AFTER COMPLETION OF PROJECT, REMOVE ALL CONSTRUCTION DEBRIS, TEMPORARY FACILITIES AND EQUIPMENT FROM WORK AREA. CLEAN WORK AREA TO PERMIT OCCUPATION.
- TESTING AND INSPECTION: PROVIDE QUALIFIED PERSONNEL, EQUIPMENT, APPARATUS, AND SERVICES FOR TESTING AND INSPECTION OF MECHANICAL SYSTEMS. DO NOT COVER OR CONCEAL WORK BEFORE TESTING AND INSPECTION AND OBTAINING APPROVAL. ALL WATER PIPING SHALL BE HYDROSTATICALLY TESTED AT 125% OF DESIGN PRESSURE (125 PSIG MINIMUM). ALL STEAM AND STEAM CONDENSATE PIPING SHALL BE TESTED AT 125% OF DESIGN PRESSURE (50 PSIG MINIMUM). TESTS SHALL BE FOR A FOUR-HOUR DURATION, DURING WHICH TIME PIPING SHALL SHOW NO LEAKS AND DURING WHICH TIME NO SEALING OF LEAKS WILL BE PERMITTED. ANY EQUIPMENT NOT CAPABLE OF WITHSTANDING TEST PRESSURES SHALL BE SUITABLY ISOLATED FROM THE TEST PRESSURE. LEAKS, DAMAGE, AND DEFECTS DISCOVERED OR RESULTING FROM TESTING SHALL BE REPAIRED OR REPLACED TO LIKE-NEW CONDITION WITH ACCEPTABLE MATERIALS. TESTS SHALL BE CONTINUED UNTIL SYSTEMS OPERATE WITHOUT LEAKS OR REPAIRS. REPORT ON INDUSTRY STANDARD REPORTING FORMS, SUBMITTED FOR APPROVAL IN ADVANCE. SUBMIT SIX COPIES OF TESTING REPORTS FOR APPROVAL. CONTRACTOR SHALL FURNISH ALL TEST MEDIUMS AND DISPOSE OF ALL TEST MEDIUMS AT AN APPROVED OFF SITE LOCATION AFTER TESTING IS COMPLETE.
- START UP AND BALANCING: PROVIDE QUALIFIED PERSONNEL, EQUIPMENT, APPARATUS, AND SERVICES FOR START-UP AND BALANCING OF MECHANICAL SYSTEMS TO PERFORMANCE DATA SHOWN IN SCHEDULES AND ON DRAWINGS, AS SPECIFIED, AND AS REQUIRED BY CODES, STANDARDS, REGULATIONS, AND AUTHORITIES HAVING JURISDICTION INCLUDING CITY INSPECTORS. AIR AND WATER FLOWS SHALL BE BALANCED TO ± 10% OF DESIGN. LEAKS, DAMAGE, AND DEFECTS DISCOVERED OR RESULTING FROM START-UP AND BALANCING SHALL BE REPAIRED OR REPLACED TO LIKE-NEW CONDITION WITH ACCEPTABLE MATERIALS. TESTS SHALL BE CONTINUED UNTIL SYSTEM OPERATES WITHOUT ADJUSTMENTS OR REPAIRS. REPORT DATA ON INDUSTRY STANDARD NEBB OR ASBC REPORTING FORMS. AIR TERMINAL UNIT DATA SHALL INCLUDE ALL PRIMARY AIRFLOWS (MAXIMUM, MINIMUM AND HEATING). SUBMIT SIX COPIES OF START-UP AND BALANCING REPORTS TO ARCHITECT FOR APPROVAL.

revisions



Richard D. Kimball Company, Inc.
200 Brickstone Square
Andover, MA 01810-1488
P 978-475-0298
F 978-475-5768
W www.rdkengineers.com

Bingham McCutchen

3rd Floor Renovations

85 Exchange Street
Portland, Maine

architect

phpartners

18 Tremont Street, Suite 707
Boston MA 02108
Tel 617.720.0740
Fax 617.720.0747
www.powershiggins.com

HVAC
NOTES &
SPECIFICATIONS

scale
NTS

date
December 8th, 2006

project
26739.00

H9.00

DEMOLITION NOTES

- REFER TO THE ARCHITECTURAL DRAWINGS FOR THE FULL EXTENT OF THE SCOPE OF DEMOLITION, DISCONNECT AND MAKE SAFE ALL ELECTRICAL EQUIPMENT IDENTIFIED FOR REMOVAL ON THE HVAC, PLUMBING AND FIRE PROTECTION PLANS. THE ELECTRICAL SCOPE MAY EXTEND BEYOND THE AREA DEFINED BY THE ARCHITECTURAL DEMOLITION LIMITS TO FULLY COMPLY WITH VARIOUS REQUIREMENTS DEFINED BY THESE NOTES.
- ALL ELECTRICAL CONTRACTOR SHALL VISIT THE SITE PRIOR TO THE SUBMISSION OF BIDS TO BECOME FAMILIAR WITH THE ACTUAL CONDITIONS AND EXTENT OF WORK. DEVICES AND EQUIPMENT LOCATED ON WALLS AND/OR CEILING TO BE REMOVED SHALL BE DISCONNECTED AND MADE SAFE. THE ELECTRICAL CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE OF ANY UNANTICIPATED HIDDEN CONDITIONS ENCOUNTERED DURING DEMOLITION.
- THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OF ALL SYSTEMS OR BUILDING COMPONENTS DAMAGED DURING THE EXECUTION OF THE WORK. DAMAGE SHALL INCLUDE BUT NOT BE LIMITED TO DESTRUCTION OR DISPOSAL OF ITEMS INTENDED TO REMAIN OR TO BE SALVAGED.
- THE ELECTRICAL CONTRACTOR SHALL CIRCUIT TRACE AND LABEL ALL EXISTING BRANCH CIRCUITS AND FEEDERS WITHIN THE AREA OF DEMOLITION SCOPE PRIOR TO DE-ENERGIZING AND DISCONNECTION. ALL CIRCUITS WITHIN PANELBOARDS IDENTIFIED FOR REMOVAL SHALL BE TRACED AND LABELED TO ENSURE THAT NO AREA OUTSIDE THE DEMOLITION SCOPE LIMIT IS AFFECTED.
- THE ELECTRICAL CONTRACTOR SHALL IDENTIFY ALL BRANCH CIRCUITS, FEEDERS AND SYSTEM COMPONENTS, WHICH ARE TO REMAIN WITHIN THE AREA OF DEMOLITION SCOPE. THERE SHALL BE NO INTERRUPTION OF SERVICE TO ANY AREA OUTSIDE THE SCOPE LIMITS WITHOUT APPROVAL FROM THE OWNER'S REPRESENTATIVE. EXISTING EQUIPMENT TO REMAIN SHALL BE LEFT IN A CODE COMPLIANT MANNER.
- THE ELECTRICAL CONTRACTOR SHALL DE-ENERGIZE AND REMOVE ALL CONDUCTORS AND RACEWAYS TO THEIR POINTS OF ORIGIN WITHIN THE AREA OF DEMOLITION SCOPE. ITEMS IDENTIFIED FOR DEMOLITION SHALL NOT BE ABANDONED IN PLACE. RACEWAYS THAT ENTER MASONRY WALLS AND FLOORS SHALL BE CUT FLUSH AT THE SURFACE FOR PATCHING BY OTHERS. ALL CIRCUIT BREAKERS ASSOCIATED WITH THE DEMOLITION SCOPE SHALL BE DE-ENERGIZED AND LABELED SPARE.
- THE ELECTRICAL CONTRACTOR SHALL TEMPORARILY SUPPORT ALL ITEMS TO REMAIN THAT ARE AFFECTED BY THE DEMOLITION OF BUILDING STRUCTURAL COMPONENTS (WALLS, CEILING, ETC.). TEMPORARILY SUPPORTED ITEMS SHALL BE PERMANENTLY SUPPORTED AND INSTALLED WHEN FINALIZED STRUCTURES ARE IN PLACE.
- ALL REMOVED ITEMS SHALL BE LEGALLY DISPOSED OF UNLESS IDENTIFIED FOR REUSE. THE OWNER'S REPRESENTATIVE SHALL INSPECT ALL RETAINED ITEMS PRIOR TO PLACEMENT IN THE IDENTIFIED STORAGE LOCATION BY THE ELECTRICAL CONTRACTOR.
- THE EXISTING FIRE ALARM SYSTEM SHALL REMAIN FULLY FUNCTIONAL DURING THE ENTIRE DEMOLITION AND CONSTRUCTION PERIOD. REUSE OF EXISTING FIRE ALARM SYSTEM RACEWAYS SHALL NOT BE ALLOWED. ALL REQUIRED SYSTEM SHUTDOWNS SHALL BE COORDINATED WITH AND APPROVED BY THE OWNER'S REPRESENTATIVE AND THE AUTHORITY HAVING JURISDICTION. DEMOLITION OF THE EXISTING SYSTEM SHALL NOT COMMENCE UNTIL THE NEW SYSTEM HAS BEEN COMPLETELY INSTALLED, TESTED AND APPROVED BY THE AUTHORITY HAVING JURISDICTION.
- REMOVED FLUORESCENT LAMPS SHALL BE RECYCLED BY A FACILITY APPROVED BY THE OWNER'S REPRESENTATIVE. A UNIFORM HAZARDOUS WASTE MANIFEST SHALL BE PREPARED FOR ALL DISPOSALS AND RETURNED WITH ALL APPLICABLE SIGN OFF'S PRIOR TO APPLICATION FOR FINAL PAYMENT.
- ALL BALLAST IN LIGHTING FIXTURES TO BE DISPOSED SHALL BE VERIFIED TO BE PCB FREE. ALL BALLAST MANUFACTURED PRIOR TO 1979 AND NOT LABELED AS PCB FREE SHALL BE CONSIDERED TO CONTAIN PCBs. PROVIDE WRITTEN VERIFICATION TO THE OWNER'S REPRESENTATIVE THAT CONFIRMS PCB FREE WASTE. WHERE PCB FREE WASTE CANNOT BE VERIFIED, BALLAST SHALL BE RECYCLED BY A FACILITY APPROVED BY THE OWNER'S REPRESENTATIVE. WITH PCB COMPONENTS ELIMINATED BY A HIGH TEMPERATURE INCINERATION. A UNIFORM HAZARDOUS WASTE MANIFEST SHALL BE PREPARED FOR ALL DISPOSALS AND RETURNED WITH ALL APPLICABLE SIGN OFF'S PRIOR TO APPLICATION FOR FINAL PAYMENT. ALL HANDLING SHALL CONFORM TO EPA REQUIREMENTS. PROVIDE BREAKOUT COST FOR THIS SCOPE.

WIRING DEVICE LEGEND

- DUPLEX RECEPTACLE, GROUNDING TYPE, RATED 20A, 125V, 2P, 3W
"5" - INDICATES CIRCUIT NUMBER
"GF" - INDICATES INTEGRAL GROUND FAULT CIRCUIT INTERRUPTER
"C" - INDICATES COUNTER HEIGHT
- DOUBLE DUPLEX RECEPTACLE, GROUNDING TYPE, RATED 20A, 125V, 2P, 3W
- FLUSH MOUNTED FIRE RATED POKE-THRU DEVICE WITH COMBINATION OF POWER (DOUBLE DUPLEX RECEPTACLE) AND TELE/DATA OUTLETS. WALKER #RC4 WITH COM 50 ADAPTERS. COORDINATE FLANGE AND COVER PLATE FINISH WITH ARCHITECT. FOR TELE/DATE PROVIDE TWO (2)-3/4" CONDUITS WITH #10 NYLON PULL STRING FROM DEVICE COM 75 ADAPTER (FROM COM 75 ADAPTER PROVIDE 5'-0" OF FLEXIBLE METAL CONDUIT SLACK FOR REMOVAL OF POKE-THRU DEVICE FROM FLOOR ABOVE) TO RESPECTIVE FLOOR HUNG CEILING SPACE. FOR POWER PROVIDE CONDUIT/CONDUCTORS AS INDICATED ON FLOOR PLANS. (4" CORE HOLE) COORDINATE OFF-HOURS INSTALLATION WITH BUILDING MANAGEMENT FOR ACCESS TO SECOND FLOOR SPACE.
- JUNCTION BOX
- PULLBOX
- TIMECLOCK

LIGHTING FIXTURE LEGEND

- LIGHTING FIXTURE (SEE LIGHTING FIXTURE SCHEDULE)
"FR3" - INDICATES LIGHTING FIXTURE TYPE
"2" - INDICATES CIRCUIT NUMBER
"2" - INDICATES SWITCH CONTROL
"NE" - INDICATES NIGHT LIGHT (UNSWITCHED) CIRCUIT
- RECESSED DIRECTIONALLY ORIENTED WALLWASH TYPE LIGHTING FIXTURE.
- LIGHTING FIXTURE SHADING INDICATES FIXTURE WITH "BODINE" EMERGENCY BATTERY BALLAST. ELECTRICAL CONTRACTOR SHALL WIRE IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS. CONNECT BATTERY PACK AHEAD OF LOCAL SWITCHING (UNSWITCHED) WITH FIXTURE SWITCH CONTROL PER FLOOR PLANS. REFER TO LIGHTING FIXTURE SCHEDULE NOTES FOR MODEL INFORMATION.
- SELF-CONTAINED EXIT SIGN LIGHTING FIXTURE EQUIPPED WITH BATTERY BACKUP, CEILING, PENDENT MOUNTED, ARROWS AND EXIT FACE (SHADED) AS INDICATED ON FLOOR PLAN.

SWITCH LEGEND

- SINGLE POLE SWITCH, RATED 20A, 120VOLT,
"a" LOWER CASE LETTER INDICATES FIXTURE SWITCH CONTROL
- TWO POLE SINGLE THROW SWITCH, RATED 20A, 120VOLT
- THREE WAY SWITCH, RATED 20A, 120VOLT
- INCANDESCENT DIMMER SWITCH, RATED 1000W
LUTRON NOVA T SERIES OR APPROVED EQUAL. CATALOG #NT-1000-xx. COORDINATE EXACT COLOR OF DEVICE WITH ARCHITECT.
- LOW VOLTAGE DIMMER (ELECTRONIC BALLAST) SWITCH, RATED 600W LUTRON NOVA T SERIES OR APPROVED EQUAL. CATALOG# NTEL-1000-xx. COORDINATE EXACT COLOR OF DEVICE WITH ARCHITECT.
- FLUORESCENT DIMMER SWITCH RATED RAMP, 120V. LUTRON NOVA T SERIES OR APPROVED EQUAL. CATALOG# NTF-10-xx. COORDINATE EXACT DEVICE COLOR WITH ARCHITECT.
- OCCUPANCY SENSOR, RECESS WALL MOUNTED, DUAL TECHNOLOGY (PIR AND ULTRASONIC). "01" INDICATES SINGLE CIRCUIT OUTPUT. HUBBELL LIGHTHAWK SERIES. CATALOG# LHMTD-1.
- OCCUPANCY SENSOR, RECESS WALL MOUNTED, DUAL TECHNOLOGY (PIR AND ULTRASONIC). "02" INDICATES SINGLE CIRCUIT OUTPUT. HUBBELL LIGHTHAWK SERIES. CATALOG# LHMTD-2.
- OCCUPANCY SENSOR, CEILING MOUNTED, DUAL TECHNOLOGY (PIR AND ULTRASONIC). HUBBELL CATALOG# OMNI-DT-1000 OR APPROVED EQUAL. PROVIDE WITH TWO (2) POWER PACKS FOR 120V SWITCH CONTROL. POWER PACK CATALOG # MP120-A AND SATELLITE POWER PACK CATALOG # MPSA.
- OCCUPANCY SENSOR, CEILING MOUNTED, DUAL TECHNOLOGY (PIR AND ULTRASONIC). HUBBELL CATALOG# OMNI-DT-1000 OR APPROVED EQUAL. PROVIDE WITH THREE (3) POWER PACKS FOR 120V SWITCH CONTROL. POWER PACK CATALOG # MP120-A AND SATELLITE POWER PACK CATALOG # MPSA.
- OCCUPANCY SENSOR, CEILING MOUNTED, DUAL TECHNOLOGY (PIR AND ULTRASONIC). HUBBELL CATALOG# OMNI-DT-1000 OR APPROVED EQUAL. PROVIDE WITH FOUR (4) POWER PACKS FOR 120V SWITCH CONTROL. POWER PACK CATALOG # MP120-A AND SATELLITE POWER PACK CATALOG # MPSA.
- OCCUPANCY SENSOR, CEILING MOUNTED, DUAL TECHNOLOGY (PIR AND ULTRASONIC). HUBBELL CATALOG# OMNI-DT-1000 OR APPROVED EQUAL. PROVIDE WITH FIVE (5) POWER PACKS FOR 120V SWITCH CONTROL. POWER PACK CATALOG # MP120-A AND SATELLITE POWER PACK CATALOG # MPSA.

BRANCH CIRCUIT & FEEDER LEGEND

- BRANCH CIRCUIT OR FEEDER CONCEALED IN FINISHED AREAS
- BRANCH CIRCUIT OR FEEDER, CONCEALED IN OR UNDER FLOOR SLAB
- BRANCH CIRCUIT OR FEEDER TURNING UP TOWARDS OBSERVER
- BRANCH CIRCUIT OR FEEDER TURNING DOWN AWAY FROM OBSERVER
- CONDUIT STUBBED ABOVE CEILING
- BRANCH CIRCUIT HOME RUN TICKS INDICATE QUANTITY OF CONDUCTORS, GROUND CONDUCTORS ARE NOT INDICATED. NO TICKS INDICATES 2#12 & 1#125 IN 3/4" MINIMUM. RP231-1,3,5 INDICATES PANEL AND CIRCUIT DESIGNATION FROM WHICH HOMERUN SHALL ORIGINATE. EACH CIRCUIT SHALL BE 20A-1P (20AMP SINGLE POLE) UNLESS NOTED OTHERWISE.
- FLEXIBLE CONNECTION TO EQUIPMENT. RACEWAY AND CONDUCTOR RATING TO MATCH ASSOCIATED BRANCH CIRCUIT OR FEEDER

FIRE ALARM LEGEND

- FIRE ALARM TERMINAL CABINET
- FIRE ALARM HORN AND VISUAL DEVICE, NUMERAL INDICATES CANDELA VALUE
- FIRE ALARM VISUAL DEVICE
- FIRE ALARM MANUAL PULL STATION
- FIRE ALARM SMOKE DETECTOR
"ER" - INDICATES ELEVATOR RECALL
- REMOTE ALARM INDICATOR

TELECOMMUNICATIONS LEGEND

- COMBINATION TELEPHONE/DATA OUTLET. PROVIDE SINGLE-GANG PLASTER RING AND WITH #10 NYLON PULLSTRING TO ACCESSIBLE HUNG CEILING SPACE.
- WALL MOUNTED TELEPHONE OUTLET. PROVIDE SINGLE-GANG RING AND #10 NYLON PULL STRING TO ACCESSIBLE CEILING FOR LOW VOLTAGE WIRING BY OTHERS.
- JUNCTION BOX FOR CONNECTION OF TELE/DATA TO FURNITURE PARTITION SYSTEM. PROVIDE 1 1/4". WITH #10 NYLON PULL STRING (10'-0" OF SLACK ON BOTH ENDS). COORDINATE MOUNTING HEIGHT AND EXACT LOCATION WITH FURNITURE PARTITION CONTRACTOR/ARCHITECT TO ENSURE PROPER CODE REQUIRED ACCESS.
- OVERHEAD LADDER TRAY. FURNISHED / INSTALLED BY OTHERS. GROUNDING BY ELECTRICAL CONTRACTOR.
- CONNECTION TO GROUND BUS BAR.

SECURITY SYSTEMS LEGEND

- CARD READER. ELECTRICAL CONTRACTOR TO PROVIDE SINGLE-GANG PLASTER RING AND NYLON PULLSTRING TO SECURE SIDE OF TENANT DOOR. IN AREAS OF EXISTING CONSTRUCTION PROVIDE AN "OLD WORKBOX" AND PULLSTRING.
- DOOR RELEASE BUTTON. COORDINATE EXACT LOCATION WITH ARCHITECT AND SECURITY SYSTEM INSTALLER. PROVIDE SINGLE-GANG PLASTER RING (AS REQUIRED) AND #10 NYLON PULLSTRING TO ACCESSIBLE HUNG CEILING FOR LOW VOLTAGE WIRING PROVIDED BY SECURITY SYSTEM INSTALLER.
- SECURITY SYSTEM PANEL. PROVIDE 120V HARDWIRED CONNECTION TO PANEL FURNISHED AND INSTALLED BY OTHERS. COORDINATE EXACT LOCATION WITH OWNER/SECURITY SYSTEM INSTALLER.

POWER DISTRIBUTION

- SURFACE MOUNTED, 208Y/120 VOLT PANELBOARD
- GROUND BAR. REFER TO DETAIL ON DRAWING E5.00.

EXISTING EQUIPMENT LEGEND

- EXISTING EQUIPMENT TO REMAIN
- EXISTING EQUIPMENT TO BE REMOVED
- EXISTING EQUIPMENT TO BE RELOCATED
- EXISTING EQUIPMENT TO REMAIN AND BE REFEED.
- EXISTING EQUIPMENT TO BE REMOVED AND NEW EQUIPMENT TO BE INSTALLED ON EXISTING BRANCH/FEEDER
- EXISTING EQUIPMENT TO BE REWIRED - INDICATED BY SYMBOL WITH DASHED AND IN FUNCTION LINE TYPE

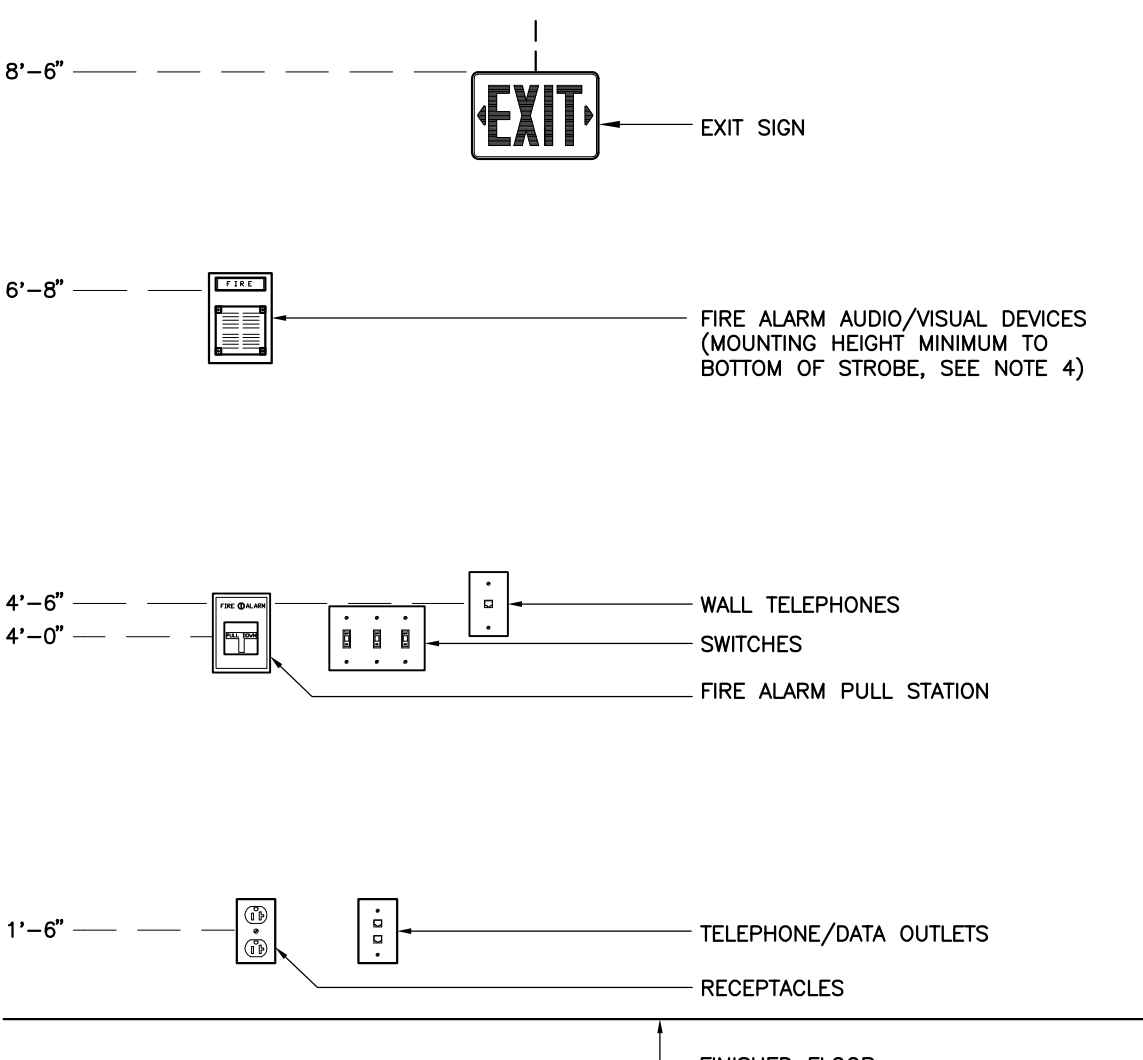
DRAWING LIST

- E0.00 ELECTRICAL LEGEND, NOTES AND SCHEDULES
- E0.01 ELECTRICAL SPECIFICATIN
- E2.00 ELECTRICAL THIRD FLOOR LIGHTING PLAN AND FIXTURE SCHEDULE
- E3.00 ELECTRICAL THIRD FLOOR POWER PLAN
- E4.00 ELECTRICAL FIRE ALARM PLAN
- E5.00 ELECTRICAL RISER DIAGRAM

MECHANICAL / PLUMBING EQUIPMENT SCHEDULE

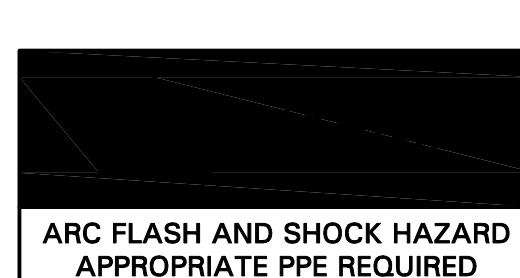
EQUIP TAG	DESCRIPTION	LOAD			POWER SOURCE		BRANCH CIRCUIT		CONNECTION				REMARKS
		HP	KVA	VOLT	PH	WIRE	PANEL	C/B	FLEX	UB	REC	DISC	
HP-1	HEAT PUMP	-	3.3	208	1	3	RP232-1	30A-2P	2#10, 1#10G.-3/4"C.	X		X	SEE NOTE 3
HP-2	HEAT PUMP	-	1.5	208	1	3	RP232-5	20A-2P	2#12, 1#10G.-3/4"C.	X		X	SEE NOTE 3
HP-3	HEAT PUMP	-	1.7	208	1	3	RP232-9	20A-2P	2#12, 1#10G.-3/4"C.	X		X	SEE NOTE 3
HP-4	HEAT PUMP	-	1.7	208	1	3	RP232-13	20A-2P	2#12, 1#10G.-3/4"C.	X		X	SEE NOTE 3
HP-5	HEAT PUMP	-	1.4	208	1	3	RP232-17	20A-2P	2#12, 1#10G.-3/4"C.	X		X	SEE NOTE 3
HP-6	HEAT PUMP	-	1.7	208	1	3	RP232-2	20A-2P	2#12, 1#10G.-3/4"C.	X		X	SEE NOTE 3
HP-7	HEAT PUMP	-	1.2	208	1	3	RP232-6	20A-2P	2#12, 1#10G.-3/4"C.	X		X	SEE NOTE 3
HP-8	HEAT PUMP	-	1.5	208	1	3	RP232-10	20A-2P	2#12, 1#10G.-3/4"C.	X		X	SEE NOTE 3
HP-9	HEAT PUMP	-	1.2	208	1	3	RP232-14	20A-2P	2#12, 1#10G.-3/4"C.	X		X	SEE NOTE 3
EF-1	EXHAUST FAN	1/4	.70	120	1	3	RP232-	15A-1P	2#12, 1#12G.-3/4"C.	X		X	SEE NOTE 4,6
EW-1	ELECTRIC WATER HEATER	-	4.50	208	3	3	RP232-26	20A-3P	3#12, 1#12G.-3/4"C.	X		X	SEE NOTE 7
CP	CONDENSATE PUMP	-	.40	120	1	3	RP232	20A-1P	2#12, 1#12G.-3/4"C.	X		X	SEE NOTE 5,8

- NOTES:
- BRANCH CIRCUIT WIRING METHODS SHALL BE AS NOTED ON THE DRAWINGS AND/OR SPECIFICATIONS FOR THE APPLICABLE LOCATION.
 - "FLEX" - DENOTES FINAL THREE FEET (MAXIMUM) OF RACEWAY SHALL BE FLEXIBLE METAL OR LIQUIDTIGHT FLEXIBLE METAL CONDUIT.
 - DISCONNECT SHALL BE RATED 30AMP - SINGLE FUSE UNFUSED.
 - DISCONNECT SHALL BE MOTOR-RATED SWITCH WITH THERMAL OVERLOAD ELEMENT.
 - DISCONNECT PROVIDED INTEGRAL (PREWIRED) TO EQUIPMENT BY OTHERS.
 - ON/OFF VIA CEILING MOUNTED OCCUPANCY SENSOR POWER PACK (PANTRY AND TOILET ROOMS)
 - DISCONNECT SHALL BE RATED 30AMP - THREE PHASE UNFUSED.
 - CONDENSATE PUMP CP-1 THROUGH CP-9 ARE SIMILAR PIECES OF EQUIPMENT . REFER TO FLOOR PLANS FOR CIRCUIT DESIGNATIONS.



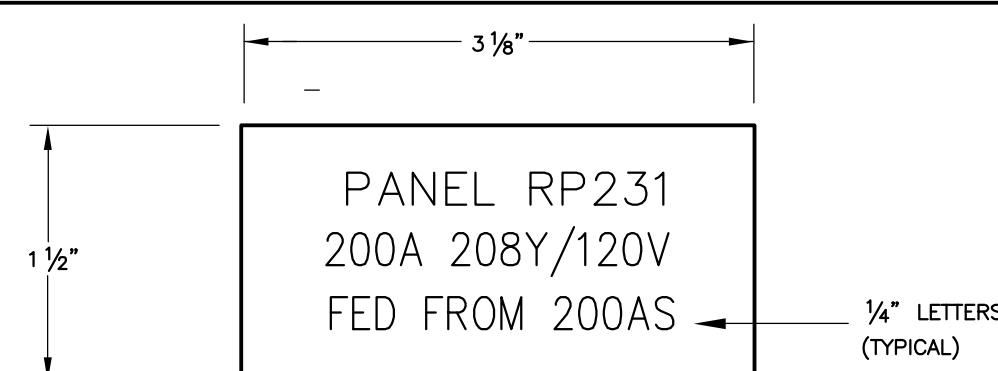
- NOTES:
- ALL MOUNTING HEIGHTS SHALL BE MEASURED FROM FINISHED FLOOR TO CENTERLINE OF DEVICE EXCEPT EXIT SIGNS AND FIRE ALARM A/V DEVICES.
 - DEVICES SHALL BE INSTALLED ON A COMMON VERTICAL CENTERLINE WHEREVER POSSIBLE.
 - ALL DEVICES SHALL BE INSTALLED AT MOUNTING HEIGHTS AS INDICATED ON THIS DETAIL UNLESS OTHERWISE NOTED.
 - STROBE HEIGHT ILLUSTRATED AT MAXIMUM HEIGHT. STROBE SHALL BE 80" AFF OR 6" BELOW CEILING, WHICHEVER IS LOWER.

DETAIL "C" TYPICAL DEVICE MOUNTING HEIGHT



- NOTES:
- REFER TO SPECIFICATIONS FOR ADDITIONAL NAMEPLATE REQUIREMENTS.
 - PROVIDE ON ALL PANELBOARDS IN ACCORDANCE WITH NEC 110.16.

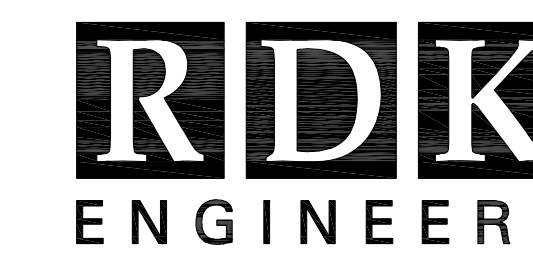
DETAIL "A" - FLASH PROTECTION WARNING LABEL



- NOTES:
- REFER TO SPECIFICATIONS (DRAWING E0.01) FOR ADDITIONAL NAMEPLATE REQUIREMENTS.
 - NAMEPLATE TO BE 1/16" THICK PLASTIC WITH WHITE CENTER LAMINATION. FACE SHALL BE BLACK, ENGRAVED LETTERS SHALL BE WHITE.
 - SECURE NAMEPLATE TO SURFACES WITH ADHESIVE CEMENT.
 - TYPICAL FOR "PANELBOARDS" AND "DISCONNECTS".

DETAIL "B" TYPICAL NAMEPLATE DETAIL

revisions



Andover, MA Boston, MA

Richard D. Kimball Company, Inc
200 Brickstone Square
Andover, MA 01810-1488

P 978-475-0298

F 978-475-5768

W www.rdkengineers.com

Bingham McCutchen
3rd Floor Renovations

85 Exchange Street
Portland, Maine

architect

phpartners

18 Tremont Street, Suite 707
Boston MA 02108
Tel 617.720.0740
Fax 617.720.0747
www.powershiggins.com

ELECTRICAL
LEGEND, NOTES

scale
NTS

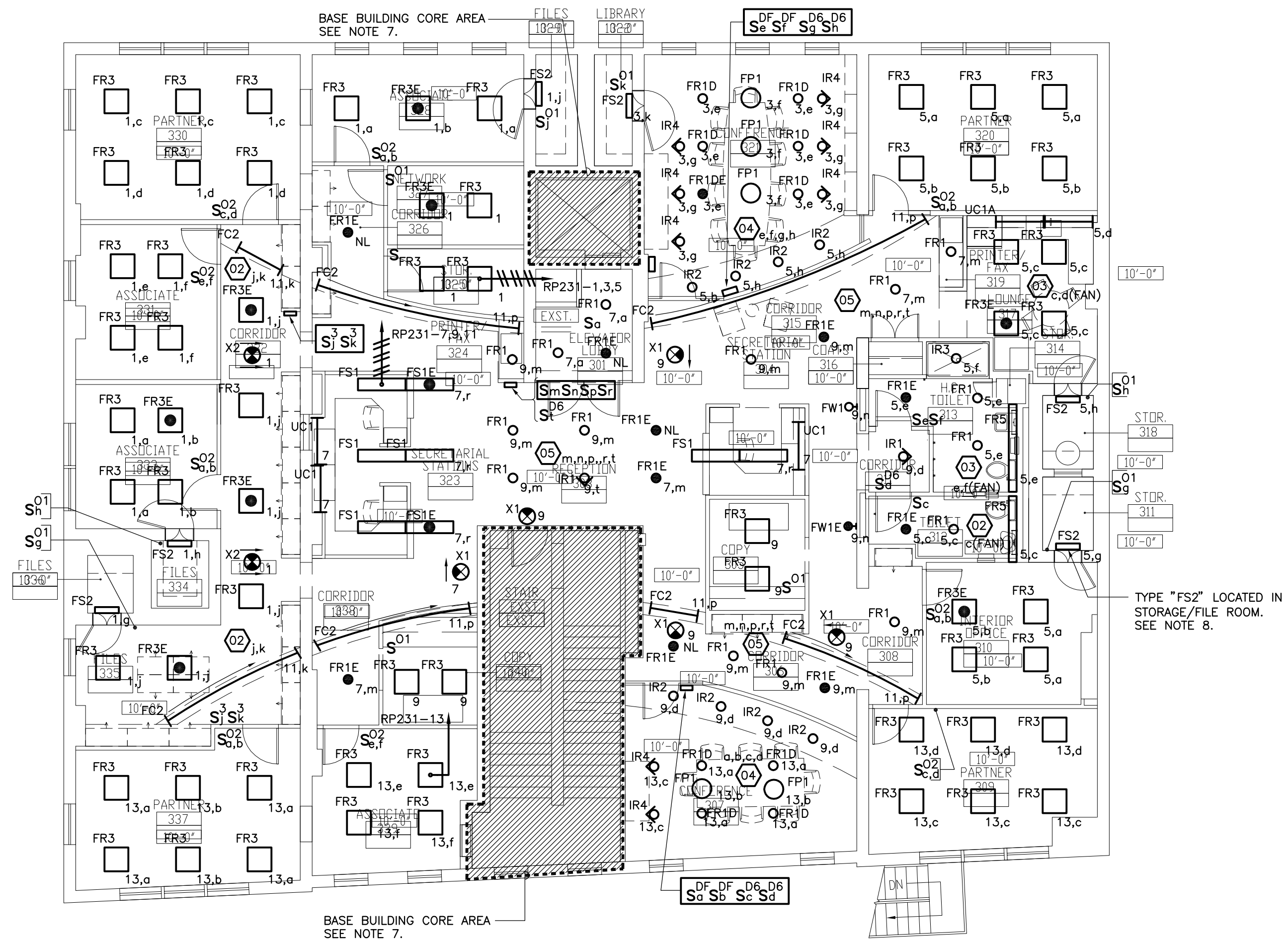
date
December 8th, 2006

project
26739.00

E0.00

LIGHTING FIXTURE SCHEDULE								
TYPE	MANUFACTURERS	CATALOG NUMBER	DESCRIPTION	LAMPS		INPUT		REMARKS
				NO.	TYPE	VOLTS	WATTS	
FC1	CORELITE	#CS-S-N-1-T5-1-C-120-LENGTH	FLUORESCENT T5 COVE LIGHTING ELECTRONIC BALLAST	1	FP54/T5H0/830	120	62	
FC2	COLUMBIA	#SS-4-2-32-EB8LH-120	FLUORESCENT, 4 FOOT STAGGERED STRIP, ELECTRONIC BALLAST	2	F032/T8/830	120	59	
FP1	EUREKA	#4212-EC-SC-MOUNTING-24-WH-CFD26	PENDANT MOUNTED 2'X2' WITH COMPACT FLUORESCENT LAMPS, WHITE FINISH, LUTRON DIMMING BALLAST	2	CFD26/E/IN/830	120	60	SEE NOTES 8,12
FR1	EDISON PRICE	#TRPV 26/6-120-ECOL-WF	6" VERTICAL FLUORESCENT LAMP DOWNLIGHT, CLEAR REFLECTOR	1	CFD26/E/IN/830	120	30	
FR1D	EDISON PRICE	#TRPV 26/6-120-ECOL-WF-LUTRON	6" VERTICAL FLUORESCENT LAMP DOWNLIGHT CLEAR REFLECTOR DIMMING BALLAST	1	CFD26/E/IN/830	120	30	SEE NOTE 12
FR1E	EDISON PRICE	#TRPV 26/6-120-ECOL-WF-EM	6" VERTICAL FLUORESCENT LAMP DOWNLIGHT, CLEAR REFLECTOR WITH EMERGENCY BATTERY BALLAST	1	CFD26/E/IN/830	120	30	SEE NOTE 13
FR1DE	EDISON PRICE	#TRPV 26/6-120-ECOL-WF-LUTRON-EM	6" VERTICAL FLUORESCENT LAMP DOWNLIGHT WITH CLEAR REFLECTOR, LUTRON DIMMING BALLAST, EM BATTERY	1	CFD26/E/IN/830	120	30	SEE NOTES 12,13
FR2	NOT USED	-						
FR3	LEDALITE	#97-22-D1-ST-B-1-40-S-1-120-E	RECESSED 2'X2' LIGHT HIGH EFFICIENCY ACRYLIC OPTICS LENS, BIAx LAMP	1	FT40DL/BIAx 830/RS	120	38	
FR3E	LEDALITE	#97-22-D1-ST-B-1-40-S-1-120-E	RECESSED 2'X2' LIGHT HIGH EFFICIENCY ACRYLIC OPTICS LENS, BIAx LAMP, EMERGENCY BALLAST	1	FT40DL/BIAx 830/RS	120	38	SEE NOTE 14
FR4	NOT USED	-						
FR5	LITECONTROL	#85N-1-4-T5-R/BW-G-ELB-120	RECESSED PERIMETER WALL SLOT LINEAR FLUORESCENT WITH BAFFLED SHIELDING	1	FP28/T5/830	120	32	
FS1	ZUMTOBEL	#ML4A-14-2545-MD-UNV	SURFACE MOUNTED FLUORESCENT, 2-LAMP WITH MICROGRID DIFFUSER, WHITE ENAMEL FINISH	2	FP54/T5H0/830	120	121	
FS1E	ZUMTOBEL	#ML4A-14-2545-MD-EM	SURFACE MOUNTED FLUORESCENT, 2-LAMP WITH MICROGRID DIFFUSER, WHITE ENAMEL FINISH, EM BALLAST	2	FP54/T5H0/830	120	121	SEE NOTE 11
FS2	MERCURY	#MP1-1-17-OCT-A-WHT-ELB-120	FLUORESCENT WALL MOUNTED STRIP FIXTURE WITH ACRYLIC LENS	1	F017/830/	120	20	
FW1	BELFER	#1320-42-120-E-MWR/1320A-DTS-WH	COMPACT FLUORESCENT INDIRECT RECESSED WALL SCONCE DIRECT/DECORATIVE	1	CFD42/E/IN/830	120	44	
FW1E	BELFER	#1320-42-120-E-MWR/1320A-DTS-WH-EM	COMPACT FLUORESCENT INDIRECT RECESSED WALL SCONCE DIRECT/DECORATIVE, EM BALLAST	1	CFD42/E/IN/830	120	44	SEE NOTE 14
IR1	EDISON PRICE	#ANGLUX MR-ECOL-WF	LOW VOLTAGE ADJUSTABLE MR16 ACCENT LIGHT	1	37W MR16 IR/NFL	120	50	
IR2	EDISON PRICE	#DLMR/4-ECOL-WF	DECORATIVE LOW VOLTAGE MR16 DOWNLIGHT	1	37W MR16 IR/NFL	120	50	
IR3	BEGA	#1224/560	RECESSED TUNGSTEN HALOGEN MINI BI-PIN WET LOCATION DOWNLIGHT WITH STAINLESS STEEL TRIM	1	T40/CL/AX/12V 100W	120/12	50	
IR4	ELLIPTIPAR	#T200-0100-T-02-A-000	SEMI-RECESSED ADJUSTABLE WALL WASHER TUNGSTEN HALOGEN LAMP WITH WHITE FINISH	1	TUNGSTEN HALOGEN	120	100	
UC1	COLUMBIA	#UC-48-1-32-EB8-120-RS	FLUORESCENT UNDER CABINET LIGHTING 4 FOOT SECTION, ACRYLIC LENS	1	F032/T8/830	120	29	PROVIDE WITH ROCKER SWITCH FOR ON/OFF CONTROL
UC1A	COLUMBIA	#UC-48-1-32-EB8-120	FLUORESCENT UNDER CABINET LIGHTING, 4 FOOT SECTION, ACRYLIC LENS WITH ROCKER SWITCH	1	F032/T8/830	120	29	
X1	DUAL-LITE	#LE-C-S-R-XX-N-E	CEILING MOUNTED, LED EXIT SIGNAGE, RED LETTERS ON MIRROR BACKGROUND, SELF-CONTAINED NICKLE CADMIUM BATTERY	-	LED	120	3.9	NOTE 10
X2	LITHONIA	#LRP-1-RMR-XX-120-ELN	CEILING MOUNTED, LED EXIT SIGNAGE, RED LETTERS ON MIRROR BACKGROUND, SELF-CONTAINED NICKLE CADMIUM BATTERY	-	LED	120	3.9	NOTE 10

- NOTES:
- NOTES 2-9 APPLY TO ALL APPLICABLE LIGHTING FIXTURES. THE REMARKS COLUMN SHALL NOTE ADDITIONAL REQUIREMENTS.
 - FIXTURES SPECIFIED WITH CATALOG NUMBERS ESTABLISH QUALITY LEVEL FOR EQUAL FIXTURES FROM MANUFACTURERS LISTED WITHOUT CATALOG NUMBERS. WHERE ONLY ONE MANUFACTURER LISTED, THERE SHALL BE NO SUBSTITUTION.
 - VERIFY EXACT MOUNTING CONDITIONS AND PROVIDE APPROPRIATE ACCESSORIES AND HARDWARE TO ACCOMMODATE REQUIREMENTS.
 - FIXTURE TYPE INDICATED ONCE ON A CONTINUOUS ROW SHALL BE TYPICAL OF ALL FIXTURES IN THE ROW UNLESS NOTED OTHERWISE.
 - CONTINUOUS ROWS OF FIXTURES SHALL BE PROVIDED WITH ALL NECESSARY HARDWARE AND FILLERS TO PROVIDE THE EXACT LENGTHS AS INDICATED ON THE PLANS. FIXTURES IN SOFFITS SHALL BE CONTINUOUS END TO END.
 - PROVIDE ALL FLUORESCENT FIXTURES WITH ELECTRONIC BALLASTS WITH MAXIMUM THD OF 20%, PF GREATER THAN 97% AND BF GREATER THAN 0.88. BALLASTS SHALL BE PROGRAMMED RAPID START WITH END-OF-LAMP-LIFE PROTECTION. ACCEPTABLE MANUFACTURERS SHALL BE ADVANCE, GENERAL ELECTRIC, OSRAM SYLVANIA OR UNIVERSAL.
 - BALLAST EFFICIENCY SHALL BE GREATER THAN THAT REQUIRED TO ENSURE THAT THE VALUE LISTED FOR INPUT WATTS IS NOT EXCEEDED.
 - DIMMING BALLASTS SHALL BE MATCHED TO THE SPECIFIED CONTROLS TO ENSURE FULL OPERATION OVER THE INTENDED RANGE AS NOTED IN THE REMARKS SECTION.
 - FLUORESCENT LAMPS SHALL HAVE A MINIMUM CRI OF 82. LAMP COLOR SHALL BE AS LISTED IN THE SCHEDULE.
 - PROVIDE EXIT SIGNS WITH ARROWS AND MOUNTING ACCESSORIES AS INDICATED ON THE PLANS.
 - PROVIDE FIXTURE WITH LOW PROFILE EMERGENCY BATTERY BALLAST. BODINE CATALOG #LP600 OR APPROVED EQUAL. MINIMUM LUMEN OUTPUT OF 1230 LUMEN.
 - PROVIDE FIXTURE WITH LUTRON HI-LUME DIMMING BALLAST FOR COMPACT FLUORESCENT (T4) LAMPS.
 - PROVIDE FIXTURE WITH EMERGENCY BATTERY BALLAST. BODINE CATALOG #B84CG OR APPROVED EQUAL. MINIMUM LUMEN OUTPUT OF 700 LUMEN.
 - PROVIDE FIXTURE WITH EMERGENCY BATTERY BALLAST. BODINE CATALOG #B50 OR APPROVED EQUAL. MINIMUM LUMEN OUTPUT OF 900 LUMEN.



THIRD FLOOR LIGHTING PLAN
SCALE: 1/8"=1'-0"

- LIGHTING NOTES:
- REFER TO DRAWING E0.00 FOR LEGEND, SYMBOLS AND GENERAL NOTES.
 - REFER TO ARCHITECTURAL DRAWINGS, INCLUDING BUT NOT LIMITED TO, REFLECTED CEILING PLANS AND ELEVATIONS FOR ASSOCIATED NOTES, MOUNTING DETAILS AND EXACT LOCATIONS OF ALL LIGHTING FIXTURES.
 - PROVIDE COMMON FACE PLATE AND METAL INTERIOR BOX BARRIERS FOR ALL MULTIPLE GANG SWITCH LOCATIONS.
 - VOLTAGE DROP HAS BEEN CONSIDERED IN THE DESIGN OF ALL BRANCH CIRCUIT AND FEEDER SIZES BASED UPON THE ILLUSTRATED EQUIPMENT LAYOUTS AND SHORTEST CONDUCTOR/RACEWAY ROUTING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DEVIATIONS TAKEN THAT WILL INCREASE CONDUCTOR/RACEWAY ROUTING LENGTHS. BRANCH CIRCUITS LONGER THAN 75' FOR 120V FROM PANEL TO LAST OUTLET SHALL BE INCREASED A MINIMUM OF ONE SIZE ABOVE THAT SPECIFIED TO LIMIT VOLTAGE DROP TO LESS THAN 3%.
 - PROVIDE CONSTANTLY ENERGIZED (UNSWITCHED) BRANCH CIRCUIT TO ALL EXIT SIGNS AND EGRESS LIGHTS FROM LOCAL 120V CIRCUIT SERVING RESPECTIVE AREA.
 - LIGHTING BRANCH CIRCUITRY SHALL BE INSTALLED IN CONDUIT FROM THE PANELBOARD TO THE FIRST OUTLET. LIGHTING BRANCH CIRCUITRY MAY BE TYPE MC CABLE WHERE CONCEALED ABOVE SUSPENDED CEILINGS OR IN METAL STUD WALLS. ELECTRICAL CONTRACTOR TO PROVIDE WIREMOLD 800 SERIES WITH ALL ASSOCIATED INTERNAL/EXTERNAL ELBOWS, CONNECTORS, BOXES/FACEPLATES, SUPPORTS AND DEVICES AS INDICATED ON FLOOR PLANS.
 - MAINTAIN/RECONNECT CONTINUITY OF BRANCH CIRCUITRY ASSOCIATED WITH ALL EXISTING LIGHTING TO REMAIN. EXISTING PANELBOARD ON THIRD FLOOR TO BE DISCONNECTED AND REMOVED. ELECTRICAL CONTRACTOR TO EXTEND PANELBOARD 120V CIRCUITS TO EXISTING HOUSE PANEL LOCATED ON SECOND FLOOR.
 - TYPE "FS2" LIGHTING FIXTURE BRANCH CIRCUIT WIRING TO BE INSTALLED THROUGH 12" THICK BLOCK/CONCRETE WALL. ELECTRICAL CONTRACTOR TO COORDINATE PENETRATION LOCATIONS. SWITCH CONTROL DEVICE AND ASSOCIATED CONNECTIONS TO BE INSTALLED SURFACE MOUNTED WIREMOLD RACEWAY. (TYPICAL FOR STORAGE ROOMS 318,311 AND FILE ROOMS 322,329,334,336).

revisions

RDK ENGINEERS
Andover, MA · Boston, MA

Richard D. Kimball Company, Inc.
200 Brickstone Square
Andover, MA 01810-1488

P 978-476-0298
F 978-475-5768
W www.rdkengineers.com

Bingham McCutchen
3rd Floor Renovations

85 Exchange Street
Portland, Maine

architect

phpartners

18 Tremont Street, Suite 707
Boston MA 02108
Tel 617.720.0740
Fax 617.720.0747
www.powershiggins.com

ELECTRICAL
3RD FLOOR
LIGHTING PLAN

scale
1/8"=1'-0"

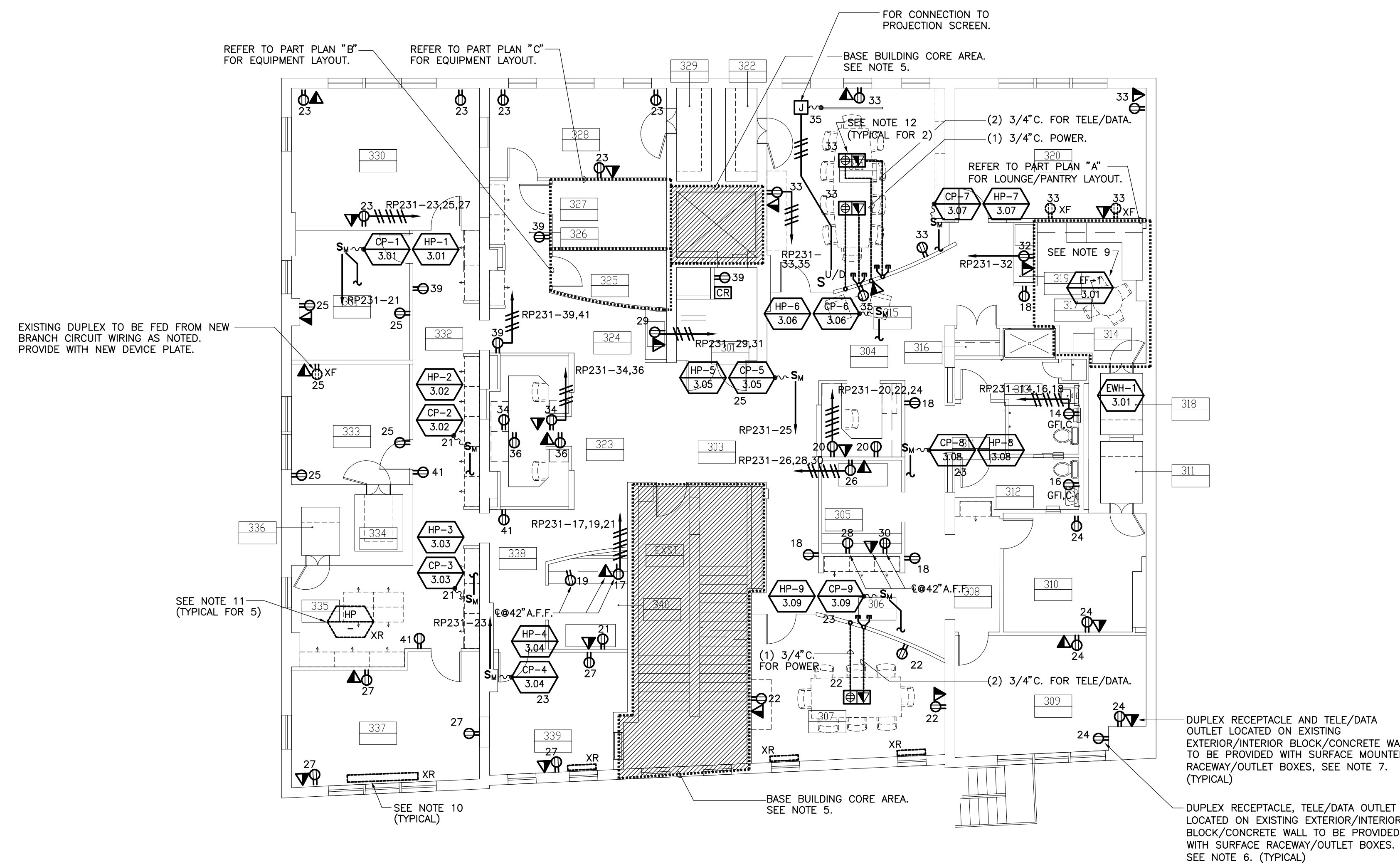
date
December 8th, 2006

project
26739.00

E2.00

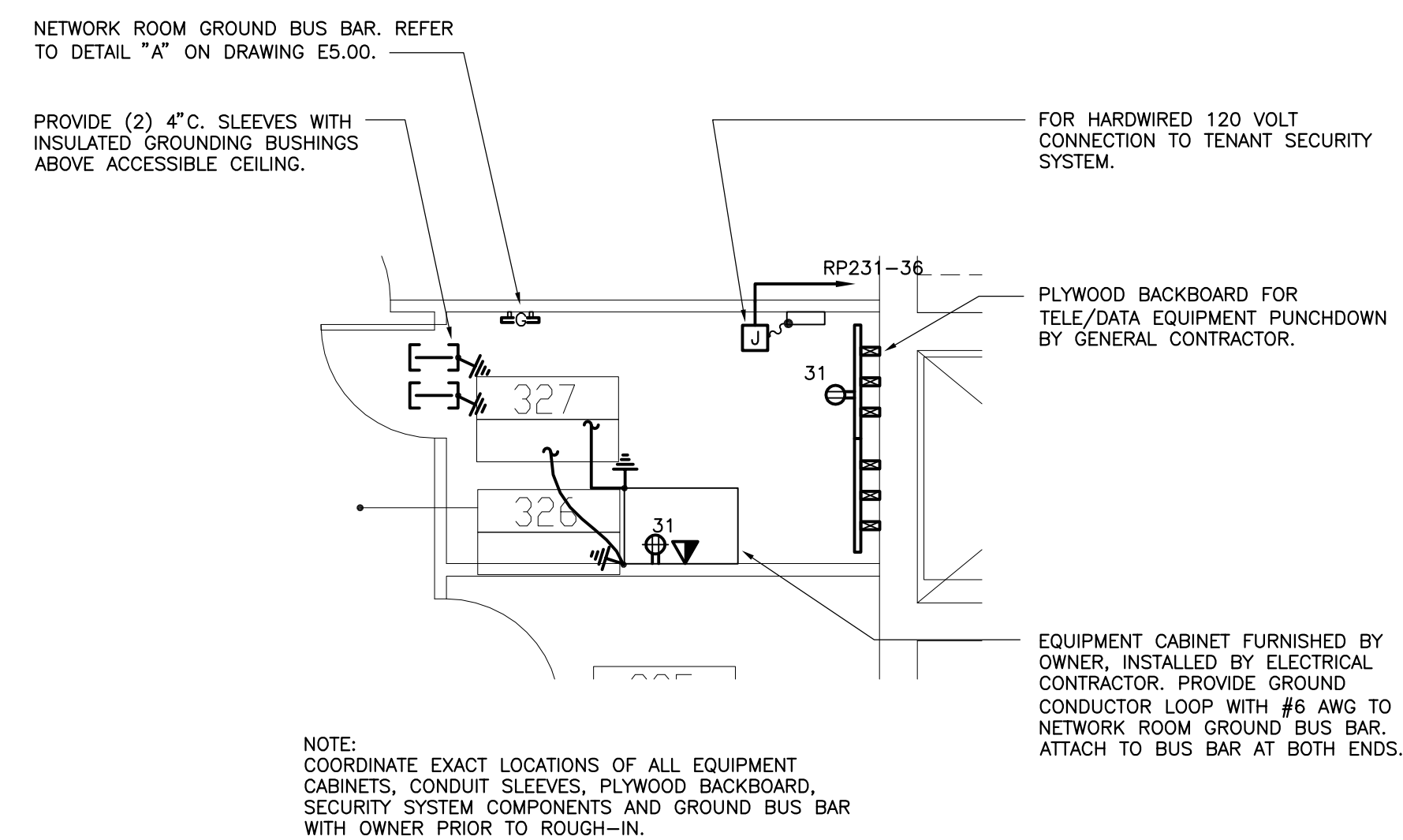
POWER NOTES:

- REFER TO DRAWING E0.00 FOR LEGEND, SYMBOLS AND GENERAL NOTES.
- REFER TO ARCHITECTURAL DRAWINGS FOR ASSOCIATED NOTES, MOUNTING DETAILS, HEIGHTS AND EXACT LOCATIONS OF ALL DEVICES.
- VOLTAGE DROP HAS BEEN CONSIDERED IN THE DESIGN OF ALL BRANCH CIRCUITRY AND FEEDER SIZES BASED UPON THE ILLUSTRATED EQUIPMENT LAYOUTS AND SHORTEST CONDUCTOR/RACEWAY ROUTING. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR DEVIATIONS TAKEN THAT WILL INCREASE CONDUCTOR/RACEWAY ROUTING LENGTHS. BRANCH CIRCUITS LONGER THAN 75' FOR 120V FROM PANEL TO LAST OUTLET SHALL BE INCREASED A MINIMUM OF ONE SIZE ABOVE THAT SPECIFIED TO LIMIT VOLTAGE DROP TO LESS THAN 3%. FEEDERS SHALL FOLLOW SIMILAR GUIDELINES AND BE LIMITED TO 2% DROP.
- POWER BRANCH CIRCUITRY SHALL BE INSTALLED IN CONDUIT FROM THE PANEL TO THE FIRST DEVICE. POWER BRANCH CIRCUITRY MAY BE TYPE MC CABLE WHERE CONCEALED ABOVE SUSPENDED CEILINGS AND IN METAL STUD WALLS. ELECTRICAL CONTRACTOR TO PROVIDE WIREMOLD 800 SERIES WITH ALL ASSOCIATED INTERNAL/EXTERNAL ELBOWS, CONNECTORS, BOXES/FACEPLATES, SUPPORTS AND DEVICES AS INDICATED ON FLOOR PLANS.
- MAINTAIN/RECONNECT OF BRANCH CIRCUITRY ASSOCIATED WITH ALL EXISTING POWER DEVICES TO REMAIN. EXISTING PANELBOARD ON THIRD FLOOR TO BE DISCONNECTED AND REMOVED. ELECTRICAL CONTRACTOR TO EXTEND PANELBOARD 120V CIRCUITS TO EXISTING HOUSE PANEL LOCATED ON SECOND FLOOR.
- PROVIDE SURFACE MOUNTED SINGLE CHANNEL WIREMOLD RACEWAY FROM ACCESSIBLE CEILING LOCATION TO OUTLET LOCATIONS SHOWN. ROUTE VERTICAL RACEWAY DOWN IN NEAREST CORNER AND OVER TO OUTLET BOX, OUTLET BOXES AND HORIZONTAL SECTION OF RACEWAY TO BE MOUNTED AT TOP OF MILLWORK. PROVIDE RACEWAY WITH ALL INTERNAL/EXTERNAL ELBOWS, CONNECTORS, BOXES/FACEPLATES, SUPPORTS AND DEVICES AS INDICATED ON FLOOR PLANS. RACEWAY SHALL BE WIREMOLD 2100 SERIES (IVORY) OR APPROVED EQUAL. RACEWAY TO BE PAINTED BY GENERAL CONTRACTOR.
- PROVIDE SURFACE MOUNTED, DUAL CHANNEL WIREMOLD RACEWAY FROM ACCESSIBLE CEILING LOCATION TO OUTLET LOCATIONS SHOWN. ROUTE VERTICAL RACEWAY DOWN IN NEAREST CORNER AND OVER TO OUTLET BOX, OUTLET BOXES AND HORIZONTAL SECTION OF RACEWAY TO BE MOUNTED AT TOP OF MILLWORK. PROVIDE RACEWAY WITH ALL INTERNAL/EXTERNAL ELBOWS, CONNECTORS, BOXES/FACEPLATES, SUPPORTS AND DEVICES AS INDICATED ON FLOOR PLANS. RACEWAY SHALL BE WIREMOLD 2400BD SERIES WITH INTERNAL DIVIDER (IVORY) OR APPROVED EQUAL. RACEWAY TO BE PAINTED BY GENERAL CONTRACTOR.
- ELECTRICAL CONTRACTOR SHALL DISCONNECT AND REMOVE ALL EXISTING TENANT/HOUSE LOAD CENTERS, ABANDONED UTILITY COMPANY METER SOCKETS, TIME CLOCKS, ABANDONED TELEPHONE BACKBOARD AND "DEAD" LOW VOLTAGE COPPER AND EXPOSED MC CABLING IN EXISTING ELECTRIC CLOSET. EXISTING FACP TO BE RELOCATED/EXISTING 200AMP TENANT FEEDER SHALL BE EXTENDED TO NEW DISTRIBUTION LOCATED AT STORAGE CLOSET 325. REFER TO POWER RISER DIAGRAM ON DRAWING E5.00 FOR ADDITIONAL REQUIREMENTS.
- EXHAUST FAN "ON/OFF" CONTROL VIA CEILING MOUNTED OCCUPANCY SENSOR. REFER TO DRAWING E2.00 FOR SENSOR LOCATIONS. MOTION DETECTED IN PANTRY ROOM 314, HANDICAP TOILET ROOM 313 OR PRIVATE TOILET ROOM 312 SHALL ENERGIZE SENSOR POWER PACK AND ACTIVATE EXHAUST FAN. PROVIDE ADDITIONAL 120V POWER SWITCH PACKS AT RESPECTIVE SENSORS AS REQUIRED.
- DISCONNECT EXISTING CONNECTIONS AT ELECTRIC BASEBOARD RADIATION AND MAKE-SAFE FOR REMOVAL BY HVAC CONTRACTOR. REMOVE EXISTING BRANCH CIRCUIT WIRING BACK TO SOURCE.
- DISCONNECT EXISTING CONNECTIONS AT HEAT PUMPS AND MAKE-SAFE FOR REMOVAL BY HVAC CONTRACTOR. REMOVE EXISTING BRANCH CIRCUIT WIRING BACK TO SOURCE. (TYPICAL FOR 5 UNITS, COORDINATE REMOVAL WITH HVAC CONTRACTOR).
- THE INSTALLATION OF FLUSH FIRE RATED FLOOR BOXES (POKE-THRU) IN 4" DIAMETER CORES SHALL MEET UL CRITERIA FOR SPACING IN ACCORDANCE WITH THE MANUFACTURERS INSTALLATION INSTRUCTIONS. CORES SHALL BE SPACED A MINIMUM OF TWO FEET CENTER TO CENTER AND THERE SHALL BE ONLY ONE CORE PER 65 SQUARE FEET OF AREA TO ENSURE THAT THE FLOOR FIRE RATING IS NOT IMPACTED. REFER TO THE ARCHITECTURAL DRAWINGS FOR EXACT DIMENSIONING OF EACH CORE.



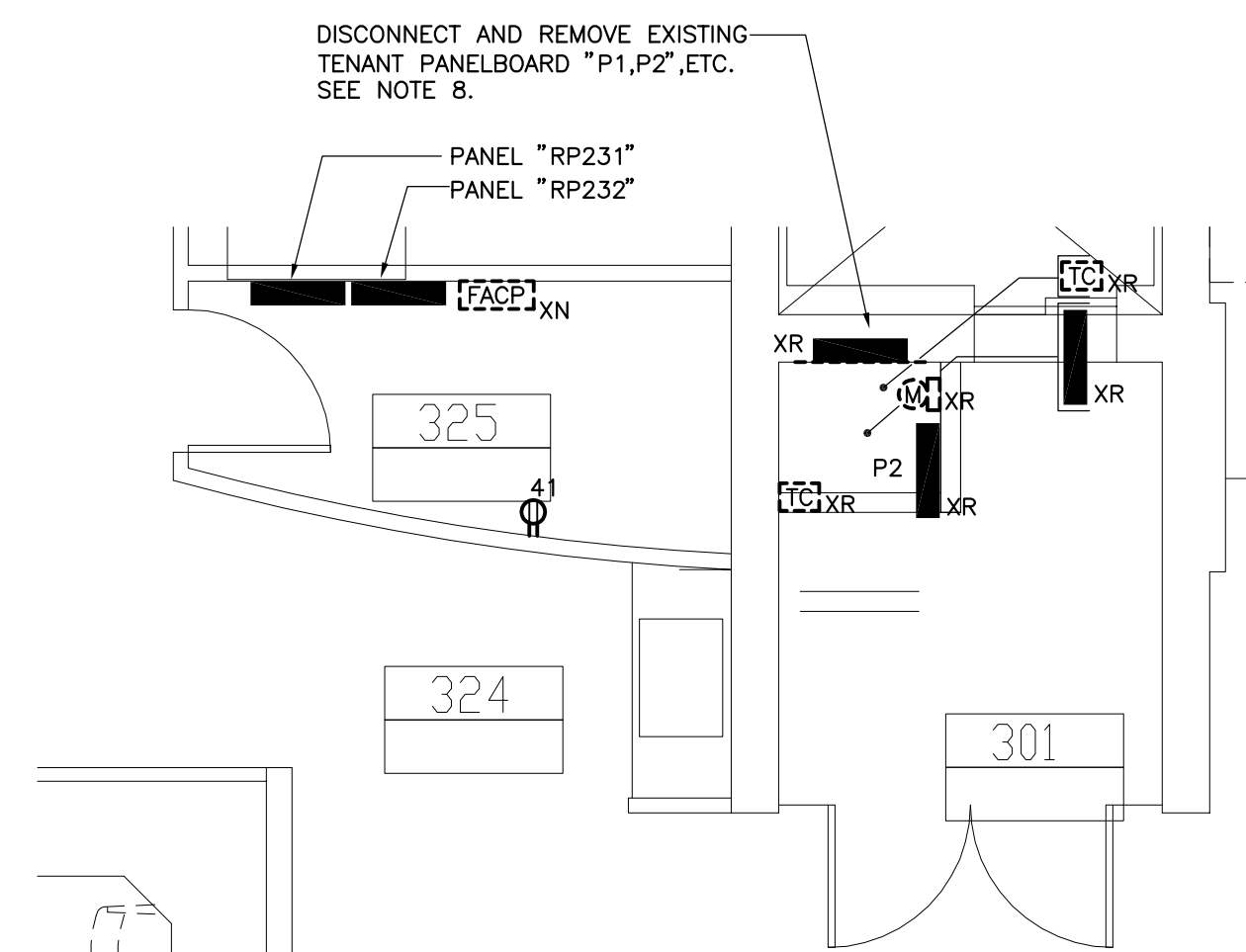
THIRD FLOOR POWER PLAN

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



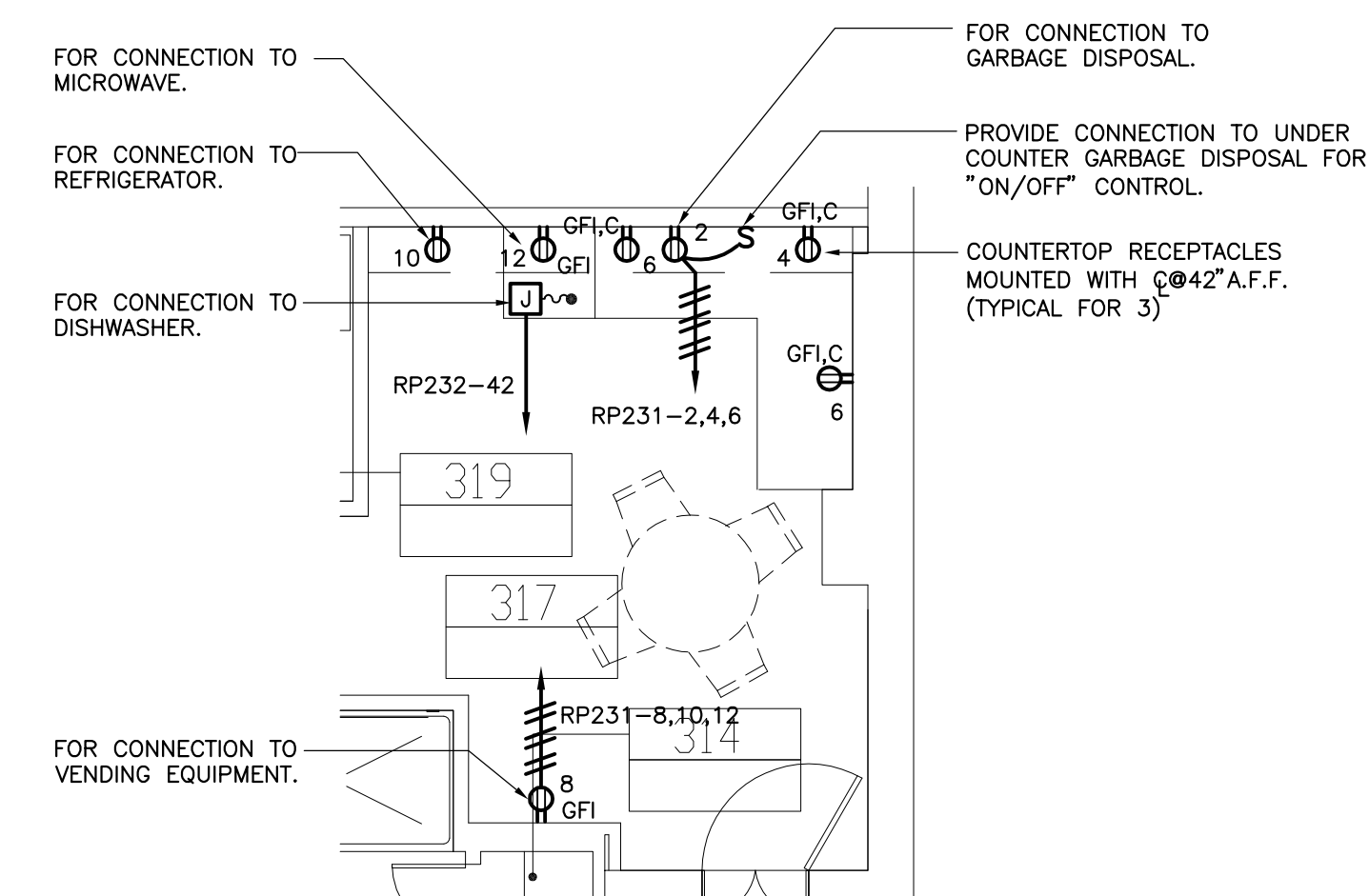
**PART PLAN "C"
NETWORK ROOM 327 PLAN**

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



**PART PLAN "B"
STORAGE ROOM 325 POWER PLAN**

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



**PART PLAN "A"
LOUNGE 317 POWER PLAN**

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

architect

phpartners

18 Tremont Street, Suite 707
Boston MA 02108
Tel 617.720.0740
Fax 617.720.0747
www.powershiggins.com

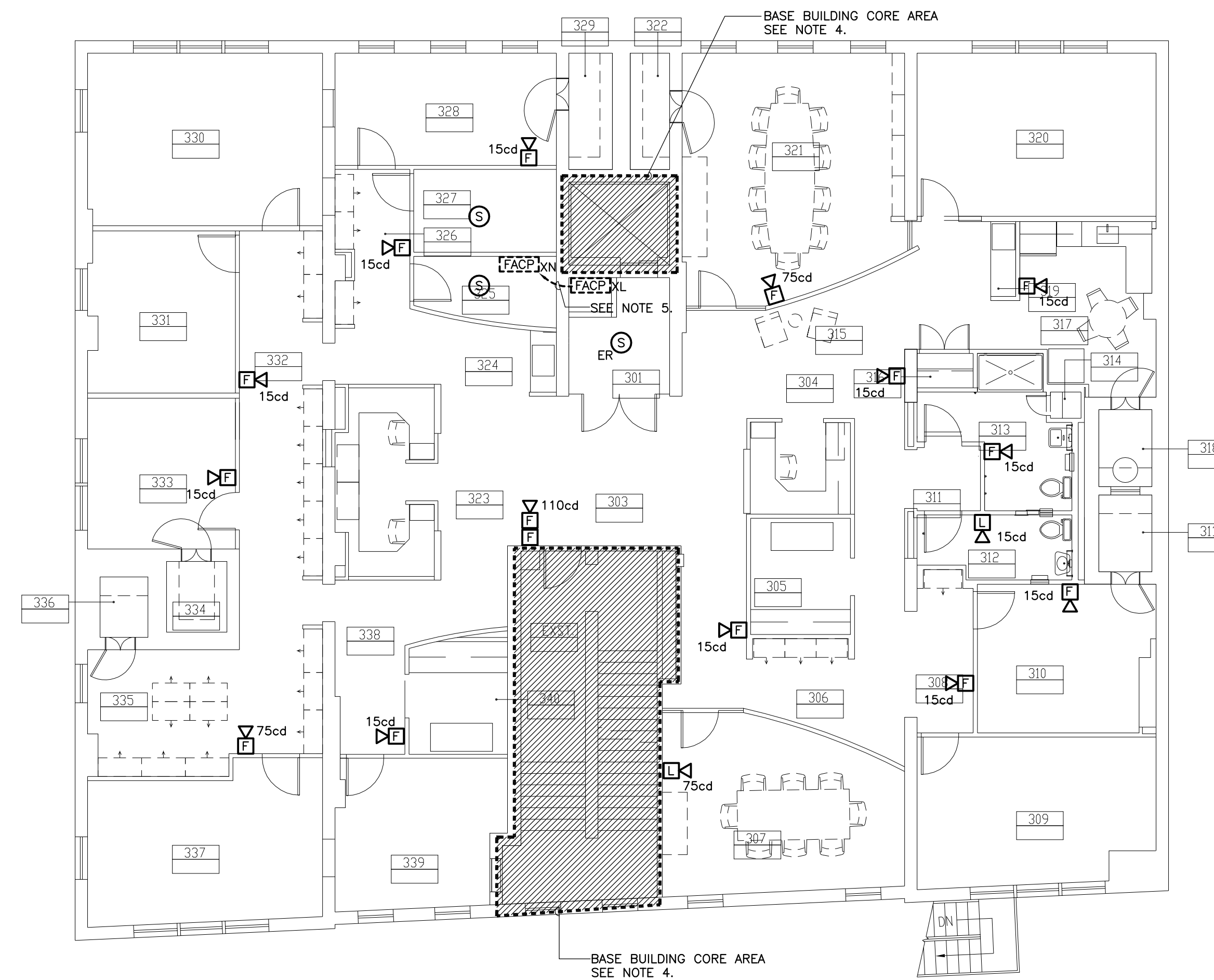
ELECTRICAL
3RD FLOOR
POWER PLAN

scale
1/8"=1'-0"

date
December 8th, 2006

project
26739.00

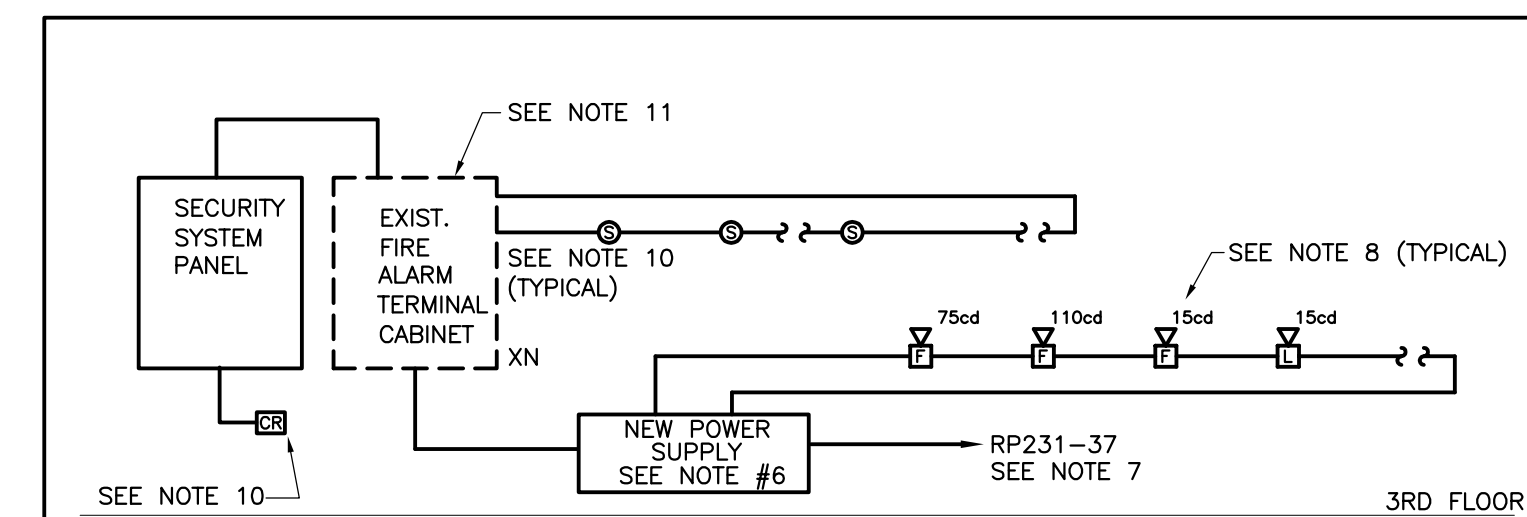
E3.00



THIRD FLOOR FIRE ALARM PLAN
SCALE: 1/8"=1'-0"

FIRE ALARM NOTES:

- REFER TO DRAWING E0.00 FOR LEGEND, SYMBOLS AND GENERAL NOTES.
- FIRE ALARM BRANCH CIRCUITRY SHALL BE INSTALLED IN CONDUIT FROM THE PANEL TO THE FIRST DEVICE. FIRE ALARM BRANCH CIRCUITRY MAY BE TYPE MC CABLE WHERE CONCEALED ABOVE SUSPENDED CEILINGS AND IN METAL STUD WALLS. ELECTRICAL CONTRACTOR TO PROVIDE WIREMOLD 800 SERIES WITH ALL ASSOCIATED INTERNAL/EXTERNAL ELBOWS, CONNECTORS, BOXES/FACEPLATES, SUPPORTS AND DEVICES AS INDICATED ON FLOOR PLANS.
- MC CABLE FOR FIRE ALARM SERVICE SHALL HAVE A RED IDENTIFIER ALONG ITS ENTIRE LENGTH. JUNCTION BOX COVERS AND CONDUIT COUPLINGS FOR ALL FIRE ALARM WIRING RACEWAYS SHALL BE PAINTED RED PRIOR TO INSTALLATION.
- MAINTAIN/RECONNECT CONTINUITY OF BRANCH CIRCUITRY ASSOCIATED WITH ALL EXISTING FIRE ALARM DEVICES TO REMAIN. EXISTING FACP LOCATED IN ELECTRIC CLOSET 302 TO BE DISCONNECTED AND RELOCATED. ELECTRICAL CONTRACTOR TO RECONNECT FACP 120V CIRCUIT TO EXISTING HOUSE PANELBOARD LOCATED ON SECOND FLOOR. IN ADDITION, EXTEND FIRE ALARM CONTROL LOOP/ZONES 24V CONTROL WIRING TO NEW FACP LOCATION AS REQUIRED.
- RELOCATE EXISTING FIRE ALARM CONTROL CABINET TO STORAGE ROOM 325. EXTEND ALL EXISTING CIRCUITS AS REQUIRED TO ALLOW FOR DEMOLITION OF ELECTRIC CLOSET 302. ELECTRICAL CONTRACTOR TO COORDINATE WITH BUILDING MANAGEMENT FOR DISCONNECTING EXISTING FIRE ALARM ZONE TO ALLOW FOR RELOCATION OF PANEL. COORDINATE REQUIREMENT FOR OFF-HOUR CONSTRUCTION/CARRY PREMIUM TIME AND PERSONEL FIRE WATCH AS REQUIRED BY PORTLAND FIRE DEPARTMENT. BUILDING CAN NOT BE OCCUPIED WITHOUT FIRE ALARM SYSTEM OPERATIONAL.



NOTES:

- THIS DRAWING IS INTENDED TO ILLUSTRATE EQUIPMENT AND THE INTENDED INTERCONNECTIONS. REFER TO THE FLOOR PLANS FOR EXACT LOCATIONS AND QUANTITIES OF DEVICES. REFER TO THE MANUFACTURER'S WIRING DIAGRAMS FOR INTERCONNECTION REQUIREMENTS. INTERCONNECTION DETAILS SHALL BE INCLUDED IN THE SHOP DRAWINGS WITH COMPONENT CUT SHEETS FOR REVIEW AND APPROVAL.
- ALL FINAL CONNECTIONS INTO THE EXISTING FIRE ALARM SYSTEM SHALL BE TERMINATED PER FIRE ALARM EQUIPMENT MANUFACTURER REQUIREMENTS. THE ELECTRICAL CONTRACTOR SHALL CARRY ALL ASSOCIATED COSTS FOR FINAL CONNECTION AND ASSOCIATED TESTING OF EXISTING AND NEW DEVICES.
- ALL NEW FIRE ALARM DEVICES SHALL MATCH EXISTING MANUFACTURER AND BE CROSSED LISTED FOR CONNECTION TO THE EXISTING SYSTEM.
- EXISTING SMOKE DETECTORS, PULL STATIONS, AUDIO/VISUAL DEVICES, HEAT DETECTORS, ETC. WITHIN THE BUILDING SHALL BE MAINTAINED, UNLESS OTHERWISE NOTED. DEVICES IDENTIFIED FOR REMOVAL SHALL BE RETAINED UNTIL NEW SYSTEM OPERATIONAL AND APPROVED. PROVIDE CONTROL MODULES, WIRING, PROGRAMMING OF SYSTEM AS REQUIRED TO MAINTAIN SYSTEM OPERATION OF EXISTING DEVICES. REPROGRAM SYSTEM AND MODIFY EXISTING ANNUNCIATOR(S) TO ACCOMMODATE THE NEW DEVICES AND FUNCTIONS.
- FIRE ALARM SYSTEM MODIFICATION SHALL BE IN CONFORMANCE WITH THE LATEST PORTLAND, MAINE FIRE DEPARTMENT RULES AND REGULATIONS.
- PROVIDE POWER BOOSTERS SIZED TO ACCOMMODATE NOTIFICATION APPLIANCE QUANTITIES ILLUSTRATED WITH 50% ADDITIONAL SPARE CAPACITY. PROVIDE DEDUCT ALTERNATE TO DELETE NEW POWER SUPPLY IF EXISTING CAPACITY SUFFICIENT AND ILLUSTRATED WITH CALCULATIONS.
- PROVIDE UL LISTED LOCKING DEVICE FOR POWER SOURCE CIRCUIT BREAKER AND LABEL AS "FIRE ALARM CONTROL CIRCUIT" IN THE PANELBOARD DIRECTORY.
- VISUAL APPLIANCES WITHIN SAME ROOM OR FIELD OF VIEW SHALL BE SYNCHRONIZED.
- STROBES INDICATED AS 15cd SHALL BE DUAL RATED 15/75cd.
- PROVIDE SIGNAL TO CARD READER SYSTEM TO UNLOCK ALL (EQUIPPED WITH CARD READERS) DOORS DURING FIRE ALARM CONDITION. COORDINATE WITH SECURITY CONTRACTOR.
- EXISTING FIRE ALARM TERMINAL CABINET TO BE RELOCATED FROM ELECTRIC CLOSET 302 TO NEW STORAGE ROOM 325.
- ELECTRICAL CONTRACTOR TO CONNECT FIRE ALARM ANNUNCIATOR DEVICE WIRING/COLOR CODING TO MATCH EXISTING BUILDING SYSTEM INSTALLATION.
- ALL WIRING SHALL BE #14AWG COPPER CONDUCTORS IN TYPE MC CABLE WITH RED TRACER.

RDK	DETAIL "A" FIRE ALARM RISER	EF001
------------	--	-------

**Bingham
McCutchen**
3rd Floor Renovations

85 Exchange Street
Portland, Maine

architect

phpartners

18 Tremont Street, Suite 707
Boston MA 02108
Tel 617.720.0740
Fax 617.720.0747
www.powershiggins.com

3RD FLOOR
FIRE ALARM PLAN

scale
1/8"=1'-0"

date
December 8th, 2006

project
26739.00

E4.00

THE FOLLOWING BUILDING CODES AND STANDARDS SHALL BE REFERENCED DURING CONSTRUCTION:

IBC	2003 EDITION OF THE IBC INTERNATIONAL BUILDING CODE
ASCE 7	AMERICAN SOCIETY OF CIVIL ENGINEERS, MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES
ACI 301	AMERICAN CONCRETE INSTITUTE SPECIFICATION FOR STRUCTURAL CONCRETE
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION, MANUAL OF STEEL CONSTRUCTION, NINTH EDITION
ACI 318	AMERICAN CONCRETE INSTITUTE BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE
ASTM	AMERICAN SOCIETY OF TESTING AND MATERIALS
NDS	NATIONAL DESIGN SPECIFICATIONS FOR WOOD CONSTRUCTION BY NATIONAL FOREST PRODUCTS ASSOCIATION, 2001.

REFERENCE ARCHITECTURAL PLANS FOR DIMENSIONS NOT SHOWN. REFERENCE MECHANICAL, ELECTRICAL, AND ARCHITECTURAL PLANS FOR SIZES AND LOCATIONS OF WALL AND SLAB OPENINGS, DUCTS, PIPING, CURBS, AND EQUIPMENT PADS. IN THE EVENT OF A CONFLICT BETWEEN THE DRAWINGS, SPECIFICATIONS, OR NOTES ON THE DRAWINGS, THE ENGINEER SHALL BE NOTIFIED PRIOR TO CONSTRUCTION.

EXISTING DIMENSIONS AND CONDITIONS ARE FOR REFERENCE ONLY. CONTRACTOR SHALL VERIFY ALL EXISTING CONSTRUCTION AND DIMENSIONS IN THE FIELD PRIOR TO CONSTRUCTION OR FABRICATION. ALL DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER PRIOR TO COMMENCING WORK.

THE CONTRACTOR SHALL NOTIFY THE ENGINEER IF DEVIATIONS OR CHANGES ARE REQUIRED TO THE CONTRACT DOCUMENTS OR APPROVED SHOP DRAWINGS DUE TO INTERFERENCES, FABRICATION ERRORS, OR OTHER CAUSES.

THE STRUCTURE IS SELF-SUPPORTING AND STABLE AFTER THE ENTIRE BUILDING IS COMPLETELY CONSTRUCTED. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ERECTION PROCEDURES AND SEQUENCING DURING CONSTRUCTION AND ERECTION TO PROVIDE AND ENSURE LOCAL AND OVERALL STABILITY OF THE BUILDING AND ITS COMPONENTS DURING CONSTRUCTION AND ERECTION. THE CONTRACTOR SHALL RETAIN A LICENSED STRUCTURAL ENGINEER TO DESIGN TEMPORARY BRACING/SHORING AND DETERMINE WHERE THE TEMPORARY BRACING/SHORING IS NEEDED.

GENERAL NOTES

LIVE LOAD:
OFFICES = 50 PSF LIVE LOAD + 20 PSF PARTITION LOAD;
CORRIDORS ABOVE FIRST FLOOR = 80 PSF

SNOW LOADS:
GROUND SNOW LOAD, $P_g = 50$ PSF
SNOW EXPOSURE FACTOR, $C_e = 1.0$
SNOW LOAD IMPORTANCE FACTOR, $I = 1.0$
FLAT ROOF SNOW LOAD, $P_f = 35$ PSF + DRIFT

DESIGN CRITERIA

ALL STRUCTURAL STEEL WORK SHALL CONFORM TO:

AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION, MANUAL OF STEEL CONSTRUCTION, NINTH EDITION
AISC	CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES

STRUCTURAL STEEL MEMBERS SHALL BE IN CONFORMANCE WITH THE FOLLOWING:

ALL STEEL, UNO	ASTM A572, GRADE 50
ANGLES, PLATES	ASTM A36, $F_y=36$ KSI
STRUCTURAL TUBING	ASTM A500, GRADE B, $F_y=46$ KSI
STEEL PIPE	ASTM A53, TYPE E OR S, GRADE B, $F_y=35$ KSI

SHOP DRAWINGS SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR REVIEW PRIOR TO COMMENCING FABRICATION. SHOP DRAWINGS SUBMITTALS SHALL INCLUDE:

CERTIFIED MILL TEST REPORTS OF STRUCTURAL STEEL (INCLUDING NAMES AND LOCATIONS OF MILLS AND SHOPS).
CERTIFIED MILL TEST REPORTS OF BOLTS, NUTS AND WASHERS (INCLUDING NAMES AND LOCATIONS OF MILLS AND SHOPS).
STRUCTURAL STEEL FABRICATION AND ERECTION DRAWINGS WHICH INCLUDE BOLTED CONNECTIONS (SHOP AND FIELD) AND WELDED CONNECTIONS (SHOP AND FIELD) DEPICTING AWS WELDING SYMBOLS.
METAL DECK SHOP DRAWINGS DEPICTING SHEAR STUD LAYOUT ON BEAMS AND GIRDERS.

OWNER SHALL RETAIN A QUALIFIED TESTING AGENCY TO PERFORM AND VERIFY THE FOLLOWING:

VISUAL INSPECTION OF ALL WELDS.
ULTRASONIC TESTING, IN ACCORDANCE WITH ASTM E-164, ON 100% OF ALL FIELD FULL PENETRATION WELDS.
PROVIDE RANDOM VERIFICATION VIA ULTRASONIC TESTING OF SHOP FULL PENETRATION WELDS.
FIELD BOLTED CONNECTIONS, INCLUDING VERIFICATION OF BOLT GRADES.
SHEAR STUD QUANTITY, PROPER INSTALLATION, SIZE, AND SPACING. SHEAR STUDS SHALL CONFORM TO AWS D1.1.

BOLTED CONNECTIONS

FIELD CONNECTIONS SHALL UTILIZE MINIMUM 3/4-INCH DIAMETER A325 HIGH STRENGTH BOLTS, UNO. BOLTED CONNECTION SHALL BE SLIP CRITICAL (SC) AT ALL MOMENT FRAMES, BRACED FRAMES, AND AT ADDITIONAL LOCATIONS INDICATED IN THE DRAWINGS. SLIP CRITICAL CONNECTIONS SHALL UTILIZE LOAD INDICATOR WASHERS OR TENSION CONTROL BOLTS. BOLT HOLES SHALL BE STANDARD SIZE, UNO.

HIGH STRENGTH BOLTS SHALL BE INSTALLED AND TIGHTENED PER AISC SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 BOLTS.

ANCHOR BOLTS SHALL CONFORM TO ASTM A307, GRADE A, STANDARD HEX HEAD FURNISHED WITH HEAVY HEX NUTS AND LOCK WASHERS.

CONTRACTOR SHALL DESIGN CONNECTIONS NOT ALREADY DETAILED ON STRUCTURAL DRAWINGS. DESIGN SHALL BE STAMPED BY A LICENSED STRUCTURAL ENGINEER AND SUBMITTED PRIOR TO COMMENCING FABRICATION.

WELDED CONNECTIONS

WELDING SHALL CONFORM TO AWS D1.1. USE LOW-HYDROGEN SMAW ELECTRODES WITH MINIMUM TENSILE STRENGTH OF 70 KSI.

STRUCTURAL STEEL SHALL RECEIVE THE FOLLOWING PROTECTIVE COATINGS:

DO NOT PAINT SURFACES TO RECEIVE METAL DECK AND/OR SHEAR CONNECTORS FASTENED BY WELDING, CONTACT SURFACES OF HIGH STRENGTH BOLTED CONNECTIONS, FINISHED BEARING SURFACES, AND SURFACES TO BE WELDED IN THE FIELD. IF REQUIRED, PROTECT THESE SURFACES BY RUST-INHIBITING COATING THAT CAN BE REMOVED EASILY PRIOR TO ERECTION

UNEXPOSED STRUCTURAL STEEL SHALL BE CLEANED IN ACCORDANCE WITH SSPC-SP3 AND PAINTED WITH PRIMER PAINT, NEMEC 10-99, OR EQUIVALENT, UNO.

EXPOSED STRUCTURAL STEEL TO RECEIVE ZINC-RICH EPOXY PAINT SHALL BE FIRST CLEANED IN ACCORDANCE WITH SSPC-SP6, COMMERCIAL BLAST CLEANING. USE NEMEC ZIN-RICH EPOXY PAINT, OR EQUIVALENT. APPLY FINISH COAT PER ARCHITECT.

EXPOSED STRUCTURAL STEEL TO BE HOT-DIPPED GALVANIZED SHALL BE IN ACCORDANCE WITH ASTM A123.

SHEAR CONNECTOR STUDS

SHEAR CONNECTOR STUDS SHALL BE NELSON, OR EQUIVALENT, 3/4-INCH DIAMETER, UNO. WELD STUDS PER STUD MANUFACTURER'S RECOMMENDATIONS THROUGH METAL DECKING. STUD LENGTH SHALL BE 1-INCH BELOW TOP OF CONCRETE SLAB ON DECK.

SHEAR STUDS, WHERE REQUIRED, ARE INDICATED ON THE DRAWINGS AS [xx], WHERE XX IS THE NUMBER OF STUDS EQUALLY SPACED BETWEEN SUPPORTS ON A BEAM OR GIRDER.

STEEL NOTES

AB	ANCHOR BOLT	L	ANGLE
ADDL	ADDITIONAL	LL	DOUBLE ANGLE
ARCH	ARCHITECT	LB	POUND
&	AND	LH	LINEAR FOOT
B/FTG, BOF	BOTTOM OF FOOTING	LLV	LONG LEGS VERTICAL
BLDG	BUILDING	MAX	MAXIMUM
BM	BEAM	MECH	MECHANICAL
BOT	BOTTOM	MFR	MANUFACTURER
BRG	BEARING	MIN	MINIMUM
BTWN	BETWEEN	MISC	MISCELLANEOUS
C	STRUCTURAL STEEL CHANNEL	NF	NEAR FACE
CANT	CANTILEVER	NO	NUMBER
CP	CAST-IN-PLACE CONCRETE	NS	NEAR SIDE
CJ	CONTROL JOINT	NTS	NOT TO SCALE
CL	CENTERLINE	OC	ON CENTER
CLR	CLEAR	OF	OUTSIDE FACE
CMU	CONCRETE MASONRY UNIT	OPNG	OPENING
CNJ	CONSTRUCTION JOINT	OPP	OPPOSITE
COL	COLUMN	P	PIER DESIGNATION
CONC	CONCRETE	PL	PLATE
CONN	CONNECTION	PP	PARTIAL PENETRATION WELD
CONT	CONTINUOUS	PREFAB	PREFABRICATED
CONTR	CONTRACTOR	PSF	POUNDS PER SQUARE FOOT
CP	COMPLETE PENETRATION WELD	PSI	POUNDS PER SQUARE INCH
CTR, CEN	CENTER	REINF	REINFORCING STEEL
CY	CUBIC YARD	REQ, REQD	REQUIRED
DIA	DIAMETER	RD	ROOF DRAIN
DIM	DIMENSION	SC	SLIP CRITICAL
DISCONT	DISCONTINUOUS	SECT	SECTION
DWG	DRAWING	SHEATH	SHEATHING
(E), EX, EXIST	EXISTING	SM	SIMILAR
EA	EACH	SOG	SLAB ON GRADE
EF	EACH FACE	SPAC	SPACING
EL, ELEV	ELEVATION	SPECS	SPECIFICATIONS
EQ	EQUAL	SS	STAINLESS STEEL
EQUIP	EQUIPMENT	STD	STANDARD
ES	EACH SIDE	STIFF	STIFFENER
EW	EACH WAY	STL	STEEL
EXP	EXPANSION	STR	STRAIGHT
EXT	EXTERIOR	STRUCT	STRUCTURAL
F	FOOTING DESIGNATION	T	TOP
FDN	FOUNDATION	T&B	TOP AND BOTTOM
FF	FINISH FLOOR	TOC, T/CONC	TOP OF CONCRETE
FLG	FLANGE	T/FTG, TOF	TOP OF FOOTING
FLR	FLOOR	TEMP	TEMPERATURE
FT	FOOT	T/SHELF	TOP OF SHELF
FTG	FOOTING	T/SLAB	TOP OF SLAB
FV	FIELD VERIFY	T/STL	TOP OF STEEL
GA	GAGE	T/WALL	TOP OF WALL
GALV	GALVANIZED	TS	STRUCTURAL TUBING
HOR, HORIZ	HORIZONTAL	TYP	TYPICAL
HSS	HOLLOW STRUCTURAL SHAPE	UNO	UNLESS NOTED OTHERWISE
HT	HEIGHT	VER, VERT	VERTICAL
IF	INSIDE FACE	VF	VERIFY IN FIELD
IN	INCH	W	STRUCTURAL STEEL WIDE FLANGE
INFO	INFORMATION	W/	WITH
J	JOINT	W/O	WITHOUT
K	KIP (1 KIP = 1000 LBS)	WP	WORK POINT
KSI	KIPS PER SQUARE INCH	WT	WEIGHT
		WWF	WELDED WIRE FABRIC

ABBREVIATIONS

SLOPE DESIGNATION		UNDISTURBED EARTH	
ELEVATION MARK		LEDGE	
ROOF PITCH		COMPACTED STRUCTURAL FILL	
SPAN DIRECTION		CONCRETE	
SECTION MARK		GROUT	
		BRICK	
		CMU	

LEGEND

revisions



**Bingham
McCutchen
LLP**
3rd Floor Renovations

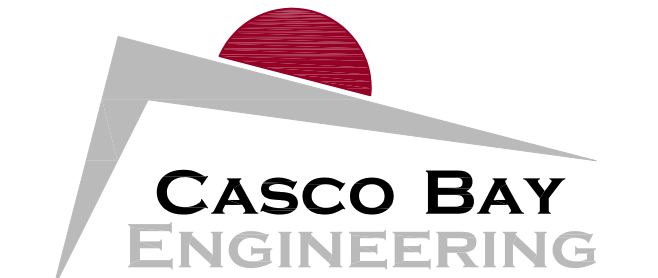
85 Exchange Street
Portland, Maine

architect



18 Tremont Street, Suite 707
Boston MA 02108
Tel 617.720.0740
Fax 617.720.0747
www.powershiggins.com

engineer



424 Fore Street, Portland, ME 04101
P 207.842.2800 F 207.842.2828
www.cascobayengineering.com

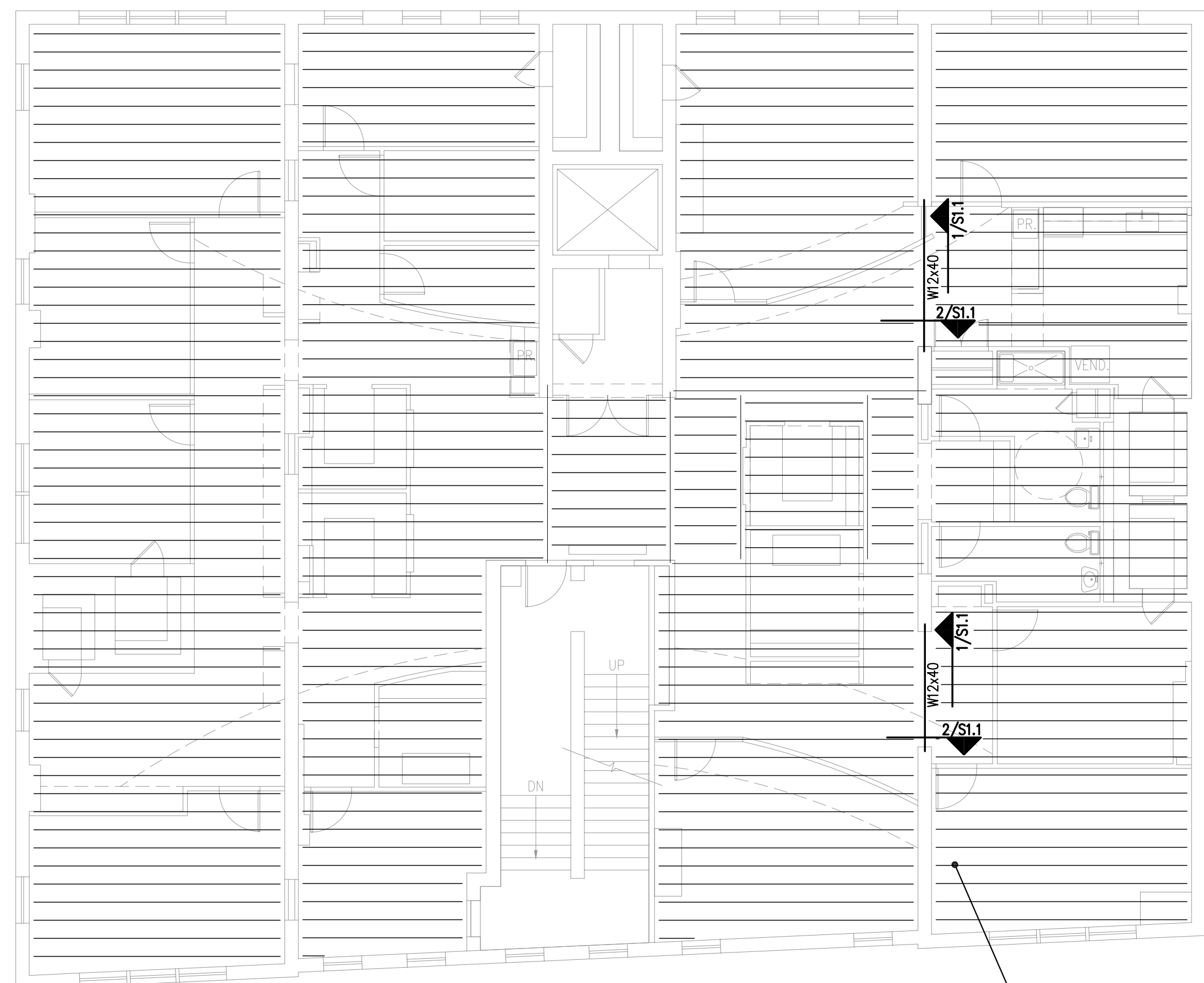
GENERAL
NOTES

scale
1/8" = 1'-0"

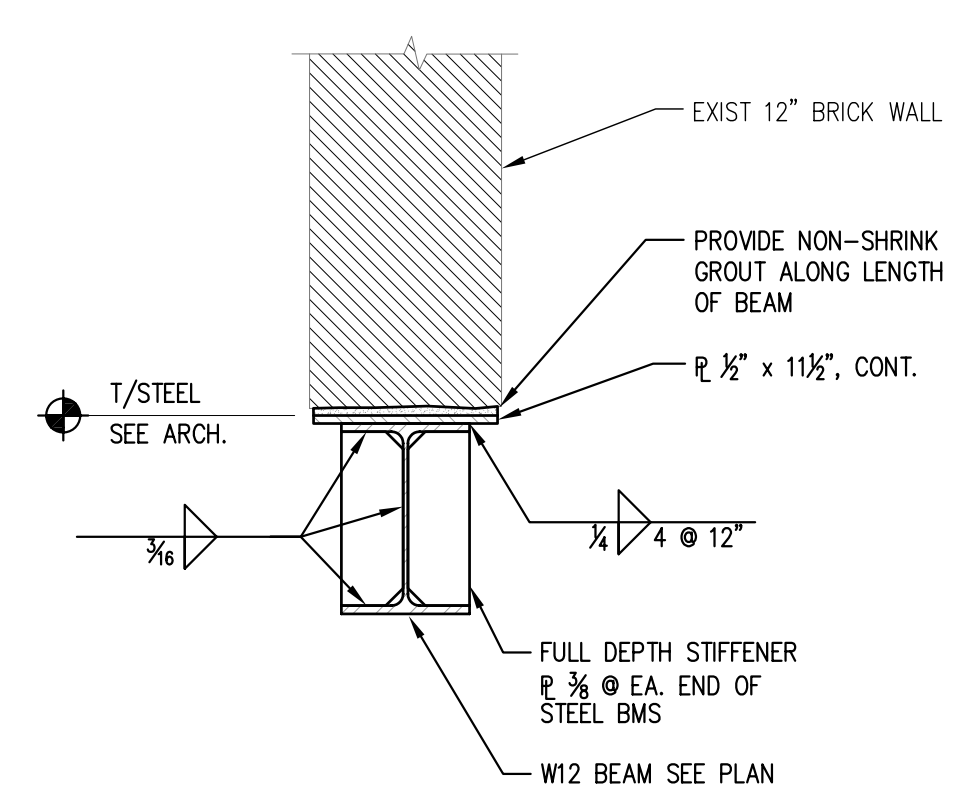
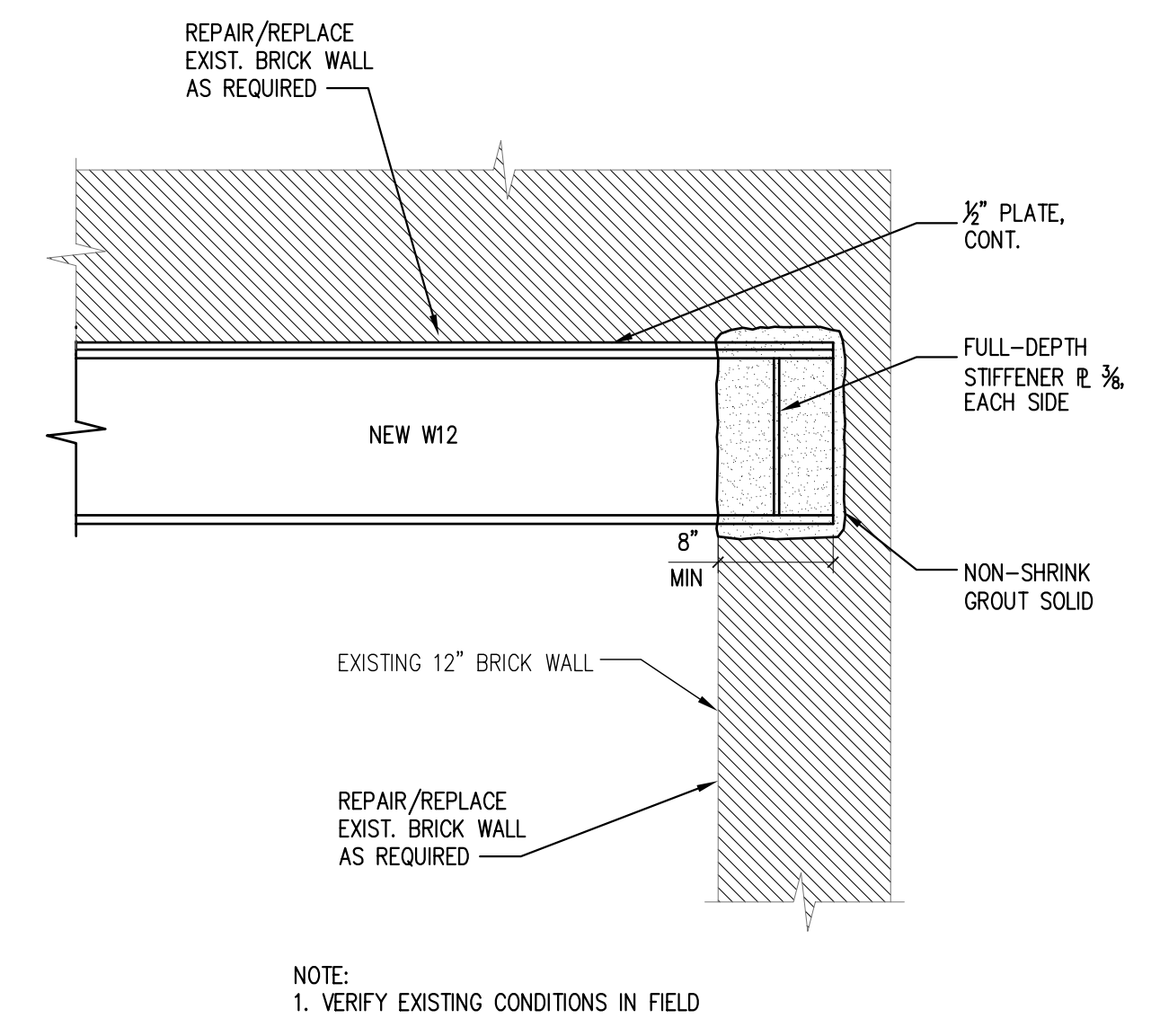
date
Nov. 14, 2006

project
06032

SO



CONTRACTOR TO VERIFY EXISTING FLOOR JOIST (DIRECTION AND SPAN) FRAMING IN FIELD *REPORT DISCREPANCIES TO STRUCTURAL ENGINEER



revisions



**Bingham
McCutchen
LLP**
3rd Floor Renovations
85 Exchange Street
Portland, Maine

architect
phpartners
18 Tremont Street, Suite 707
Boston MA 02108
Tel 617.720.0740
Fax 617.720.0747
www.powershiggins.com

engineer
**CASCO BAY
ENGINEERING**
424 Fore Street, Portland, ME 04101
P 207.842.2800 F 207.842.2828
www.cascobayengineering.com

FRAMING
AND
SECTIONS

scale
1/8" = 1'-0"
date
Nov. 14, 2006
project
06032

S1.1

Addendum

To Brad Finlay
Monaghan Woodworks, Inc.
100 Commercial Street
Portland, Maine 04101

Date January 4, 2007

Addendum #3 to Plans and Specifications For:

Project	Bingham McCutchen LLP 85 Exchange Street Portland Maine	PHP Job No.	6032
		Original Issuance Date	12/08/06

This addendum revises, supplements, or otherwise modifies original contract documents. When issued by the Architect and received by Contractor, this document becomes effective immediately and becomes part of the contract.

Description

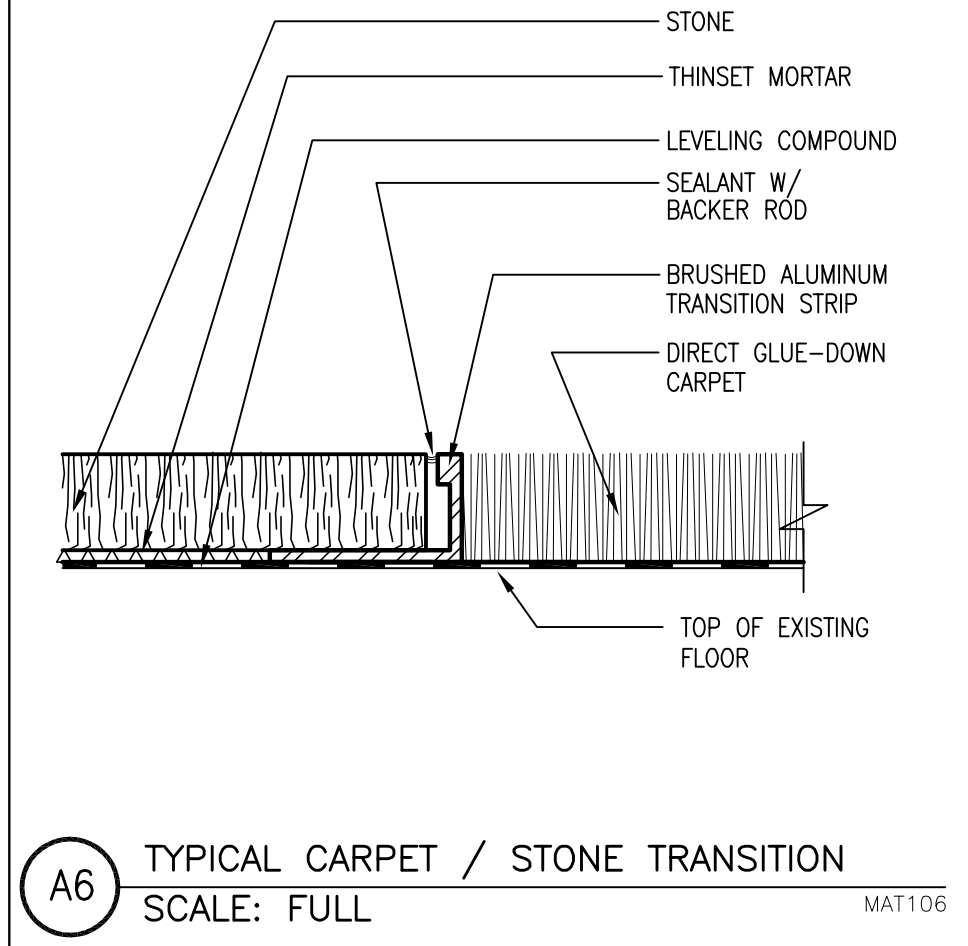
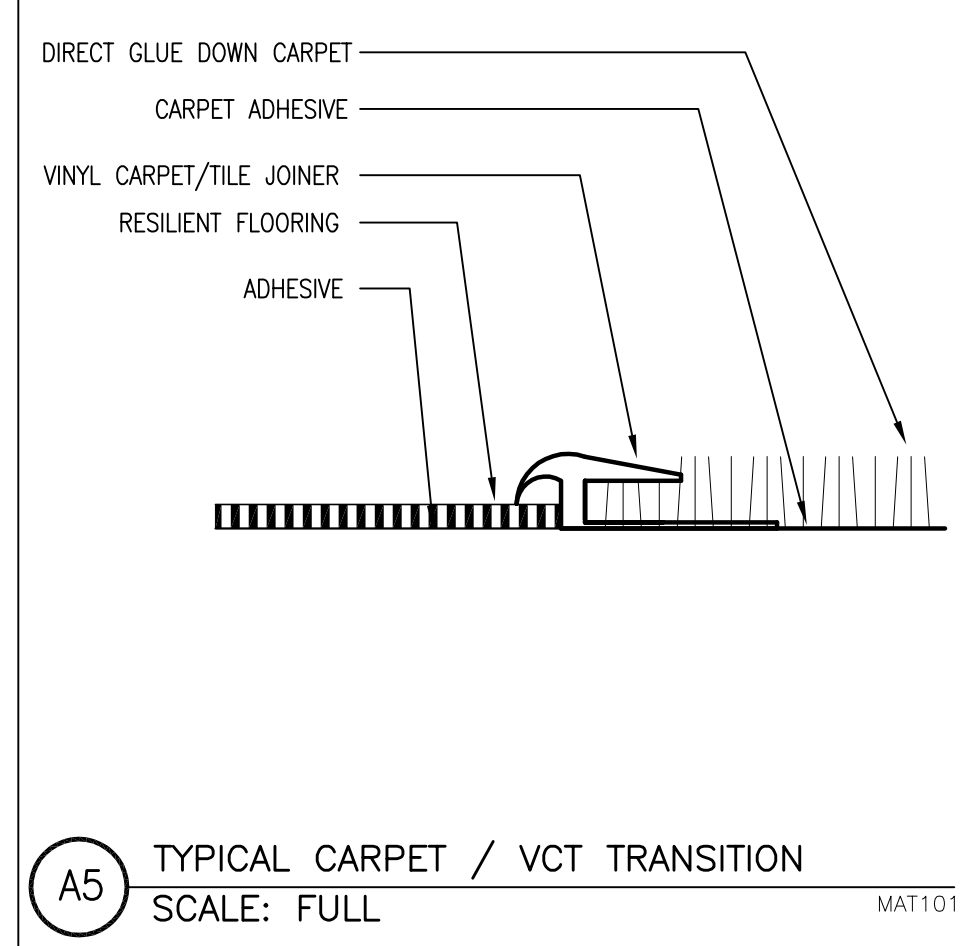
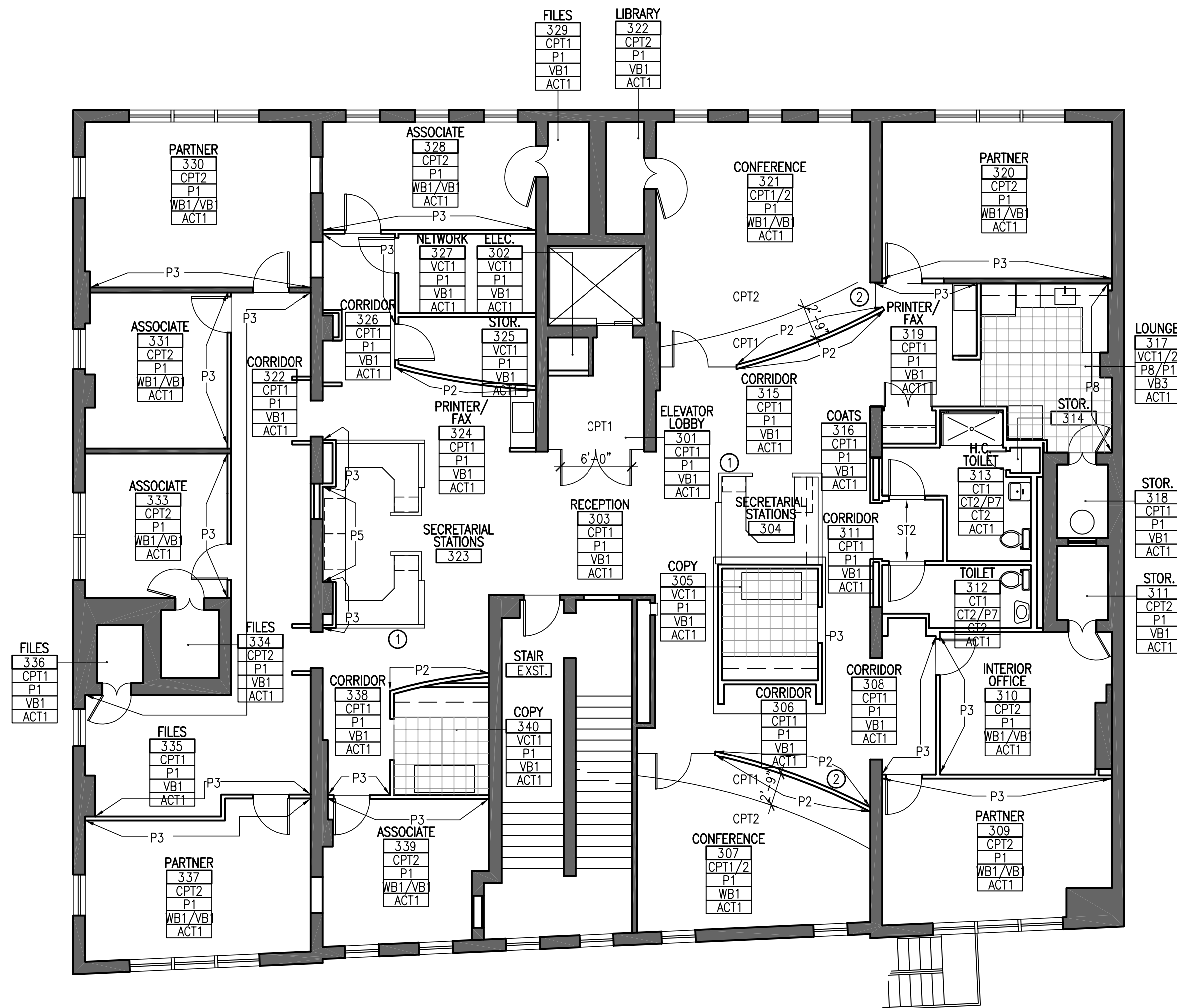
Bathroom revisions to comply with ADA codes.

Revisions to life safety to clearly identify the fire escape as the second means of egress.

Finish changes.

Attachments

- A403a – Finish Plan and Floor Transition Details
- A601 – Interior Elevations
- SKA-06 – ADA Bathrooms
- SKA-07 – ADA Kitchen Sink Section
- SKE-01 E 2.00 – Electrical 3rd Floor Ltg.
- SKE-02 E 4.00 – Electrical 3rd Floor Fire



FINISH PLAN GENERAL NOTES

- ALL MATERIALS SHALL BE APPLIED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS FOR THE PARTICULAR SURFACE.
- SAMPLES OF ALL FINISHES SHALL BE SUBMITTED TO THE ARCHITECT FOR APPROVAL PRIOR TO COMMENCEMENT OF THE WORK.
- A BRUSH COAT REVIEW IN FIELD WILL BE REQUIRED FOR EACH PAINT FINISH. REVIEW TO BE IN AREA WHICH REPLICATES ACTUAL FINISH LOCATION.
- FLASH PATCH AS REQUIRED BETWEEN FLOORING MATERIALS TO MAINTAIN UNIFORM FLOOR LEVEL.
- THE CONTRACTOR SHALL SUBMIT FLOORING INSTALLATION DIAGRAM TO ARCHITECT FOR REVIEW AND APPROVAL PRIOR TO PROCEEDING.
- CHANGES IN FLOORING MATERIAL BETWEEN ROOMS SHALL OCCUR UNDER THE CENTERLINE OF DOOR, U.O.N. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
- ALL MILLWORK TO BE SHOP FINISHED.
- STRAIGHT BASE SHALL BE USED IN AREAS WHERE CARPET IS SPECIFIED.
- COVE BASE SHALL BE USED IN AREAS WITH VCT.
- ALL EXISTING WALLS, SURFACES, AND MATERIALS TO REMAIN ARE TO BE IN "AS-NEW" CONDITION AT END OF CONSTRUCTION. WHERE CONSTRUCTION PARTIALLY AFFECTS EXISTING MATERIALS TO REMAIN, PATCH AND REPAIR AS NECESSARY TO MATCH EXISTING SURROUND.
- WALL BASE SCHEDULED SHALL RETURN INTO FILE NICHES.
- ALL METAL FRAMES TO BE SHOP FINISHED.
- PAINT GRILLES/DIFFUSERS MOUNTED IN DRYWALL CEILING TO MATCH FINISH OF CEILING.
- ALL FABRIC WALL COVERING AND SUBSTRATE SHALL BE TREATED TO MEET OR EXCEED CURRENT FIRE CODES.
- ALL WOOD BASE TO BE PAINTED TO MATCH WALL ABOVE, SEMI-GLOSS FINISH.
- ALL PAINTED DOORS TO BE SHOP FINISHED.
- REFER TO ENLARGED PLANS AND ELEVATIONS FOR MULTIPLE FINISH LOCATIONS.
- PROVIDE METAL TRANSITION STRIP TO BE USED WITH STONE FLOORING.
- PROVIDE VINYL TRANSITION STRIP BETWEEN VINYL FLOORING AND CARPET.
- ELECTROSTATIC PAINTING OF FILES, METAL ENCLOSURES, ELEVATOR DOORS AND FRAMES, ETC.
- ALL EXISTING WINDOWS AND FRAMES TO BE PAINTED P1-SEMIGLOSS.

FINISH SPECIFICATION

- PAINT**
- P1: GENERAL PAINT, BENJAMIN MOORE, OC-18, DOVE WING, EGGSHELL
 - P2: ACCENT, BENJAMIN MOORE, 1558, FIELDSTONE, SEMI-GLOSS, CURVED WALLS
 - P3: ACCENT, BENJAMIN MOORE, OC-28, COLLINGWOOD, ACCENT WALLS, EGGSHELL
 - P4: DOORS, BENJAMIN MOORE, #980, DOORS, SEMI-GLOSS
 - P5: ACCENT, BENJAMIN MOORE, 2142-10, EGGSHELL
 - P6: NOT USED
 - P7: TOILET ROOMS, BENJAMIN MOORE, OC-52, GRAY OWL, SEMIGLOSS
 - P8: KITCHEN, ACCENT, BENJAMIN MOORE, 2142-20, EGGSHELL

FABRIC WALL COVERING

- WC1: HBF TEXTILES, COCO, 645-18 PLATINUM, ON 2" SNAPLOC SYSTEM.
- WC2: MAHARAM, TREAT 464570, ON ½" SNAPLOC, TACKABLE

WOOD

- WD1: QUARTER CUT CLEAR MAPLE, NATURAL FINISH, 40% SHEEN.

GLAZING

- GL1: ½" CLEAR, TEMPERED GLASS, BUTT GLAZED
- GL2: ½" CLEAR, BACK PAINTED, TRANSITION TOPS, COLOR T.B.D.

CARPET

- CPT1: CONSTANTINE COMMERCIAL, RAW SILK, 683742, HARVEST
- CPT2: CONSTANTINE COMMERCIAL, SEASCAPE, SC42742, SEA BIG SUR
- CPT2 ALTERNATE: J&J COMMERCIAL, COLORS CLASSIC (5636), 118 DESERT

CERAMIC TILE

- CT1: DAL-TILE, 1X1, 0100 WHITE GLOSS, TOILET ROOM WALL
- CT2: DAL-TILE, 2X2, SEMI-GLOSS, DO 26, TOILET ROOM FLOOR.

VINYL COMPOSITION TILE

- VCT1: ARMSTRONG, EXCELON, STONETEX, 52122, PEBBLE GRAY
- VCT2: ARMSTRONG, EXCELON, STONETEX, 52128 DESERT DUST
- VCT3: ARMSTRONG, EXCELON, STONETEX 52127, STONE WHITE

PLASTIC LAMINATE

- PL1: PIONITE, SLATE, SG228, SUEDE
- PL2: WILSONART, D431-60 ALABASTER
- PL3: WILSONART, 4813-60, NICKEL EV
- PL4: WILSONART, 4809-60, OXYGEN EV
- PL5: NEVAMAR, MR5004T, SHALE GREEN MATRIX, TEXTURED

BASE

- WB1:
- VB1: JOHNSONITE, #27, MIST, 4" VINYL
- VB2: ROPPE, TV8P195, ½" VINYL, LIGHT GREY (AT CURVED WALLS)
- VB3: ROPPE, TV8P114, ½" VINYL, LUNAR DUST

CEILING

- ACT1: ARMSTRONG CIRRHUS DUNE WITH SUPRAFINE ½" EXPOSED TEE GRID SYSTEM, SHADOW MOLDING AT PARTITIONS.

STONE

- ST1: ¾" SLAB, VALVERDE HONED, LIMESTONE, W/ MATTE SEALER
- ST2: STONE THRESHOLD AT BATHROOM DOORS.

FINISH PLAN KEY NOTES

- ① P3 AT LOW WALL AT SECRETARY STATION.
- ② VB2 AT CURVED WALLS - P2.
- ③ WB1 AT EXTERIOR WALLS ONLY - TYPICAL.

architect

phpartners

18 Tremont Street, Suite 707
Boston MA 02108
Tel 617.720.0740
Fax 617.720.0747
www.powershiggins.com

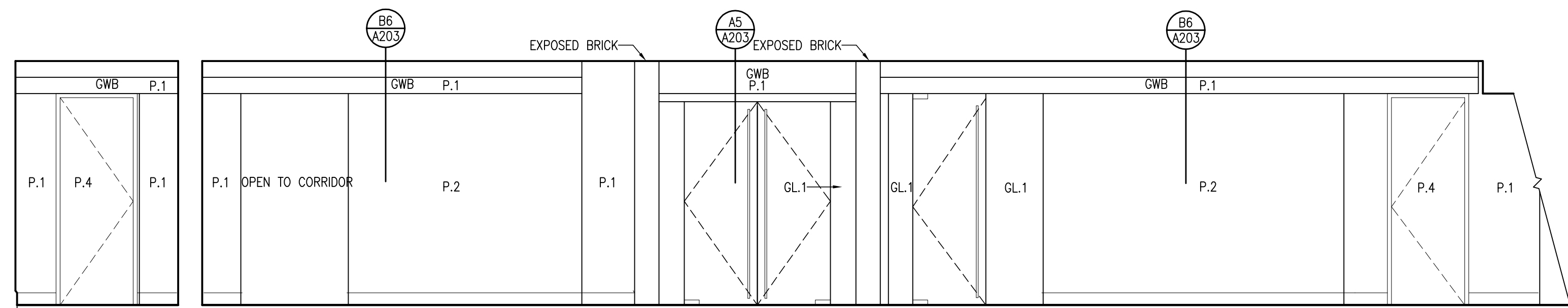
**FINISH PLAN AND FLOOR
TRANSITION DETAILS**

scale
1/8" = 1'-0"

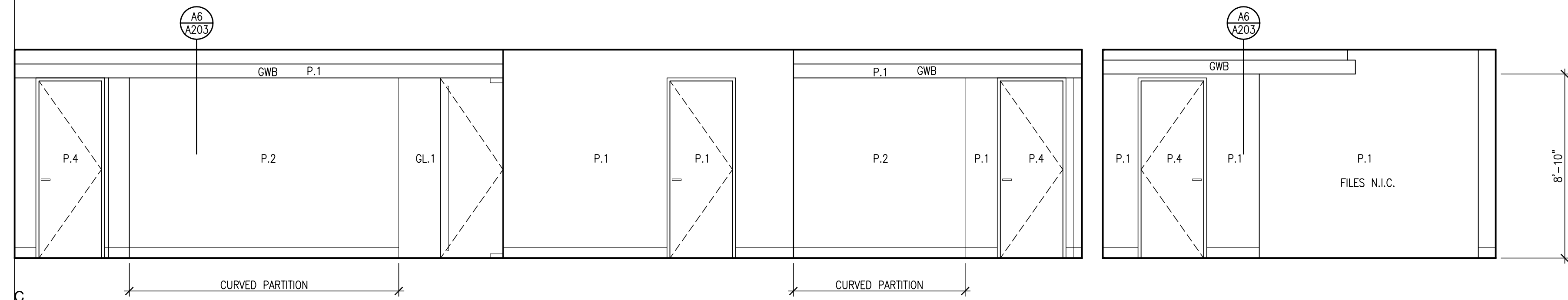
date
12/08/2006

project
06032

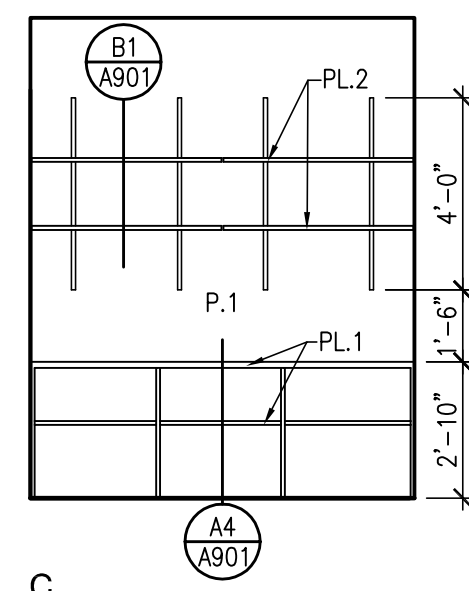
A403a



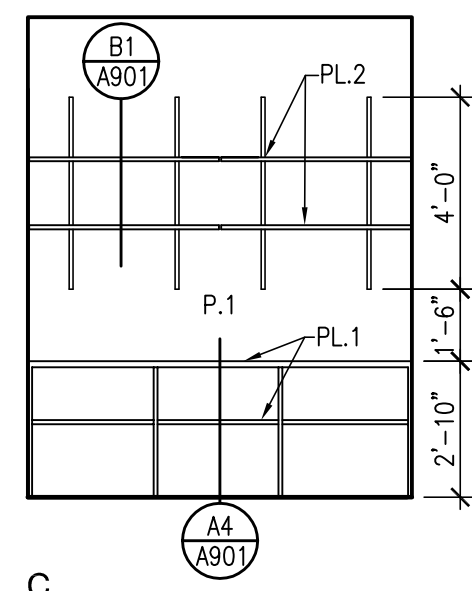
1. CORRIDOR 332 / RECEPTION 303 / CORRIDOR 315



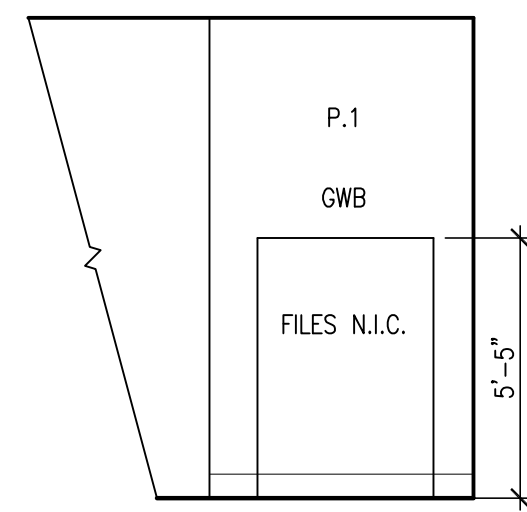
1. CORRIDOR 306 / RECEPTION 303 / CORRIDOR 338 / FILES 335



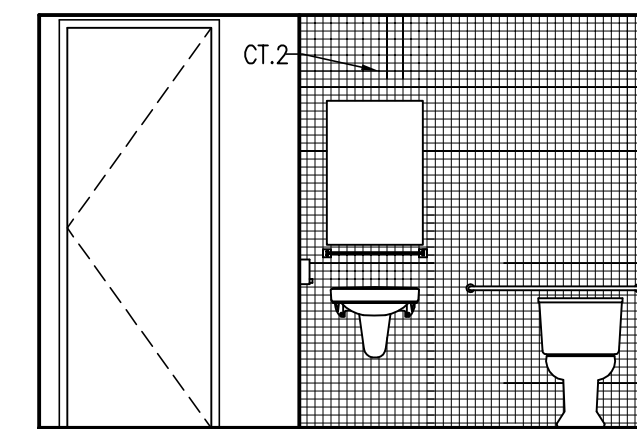
2. COPY 305



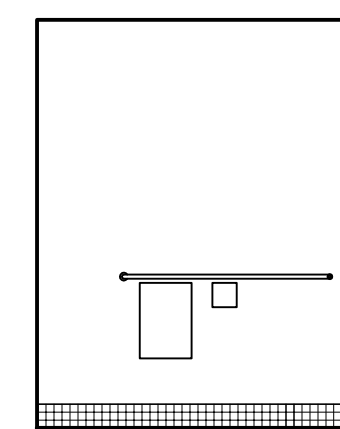
3. COPY 304 SIM. TO 305



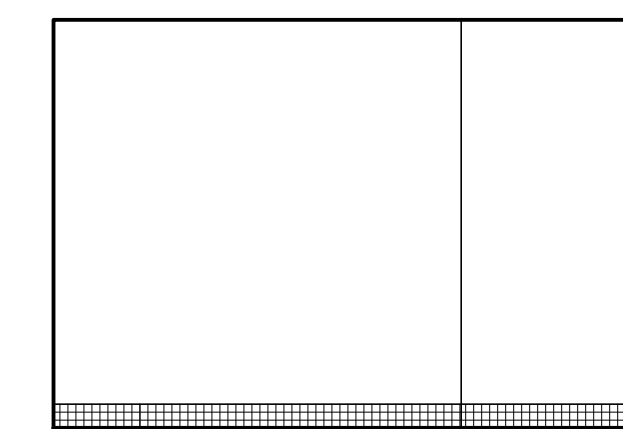
3. CORRIDOR 308



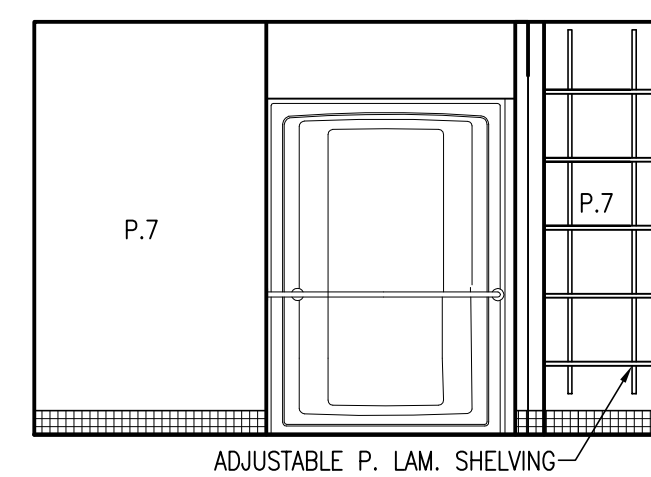
4. TOILET 312



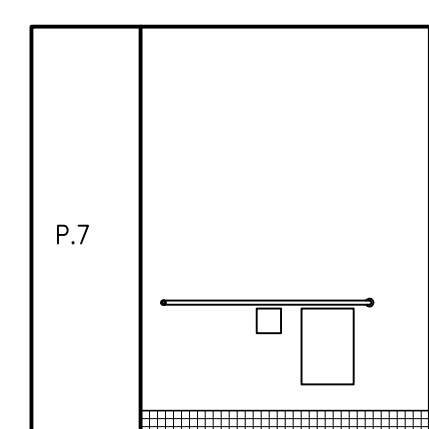
B



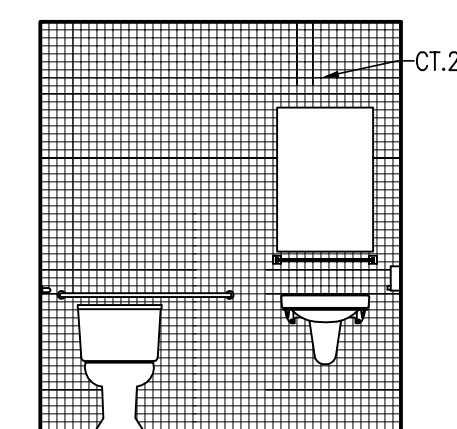
C



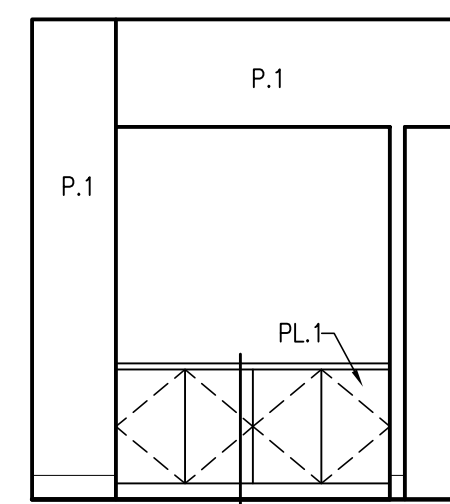
1. H.C. TOILET 313



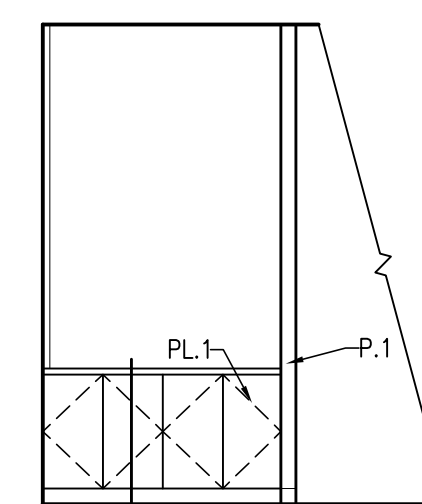
B



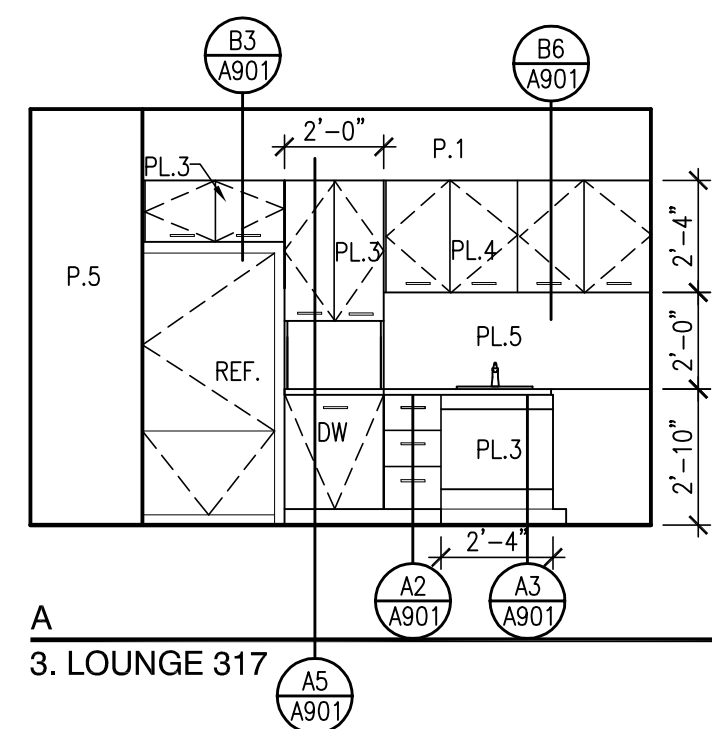
C



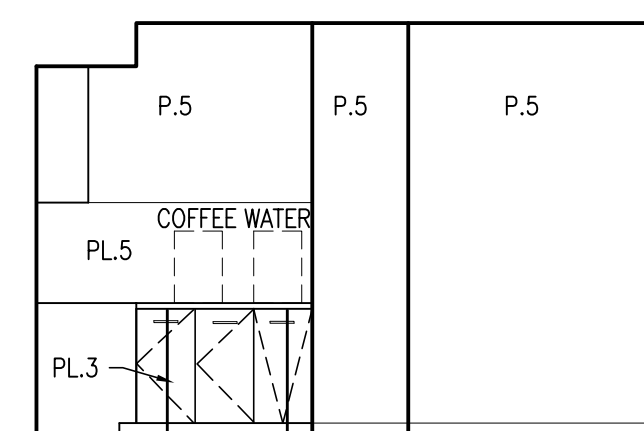
2. PRINTER/FAX 319



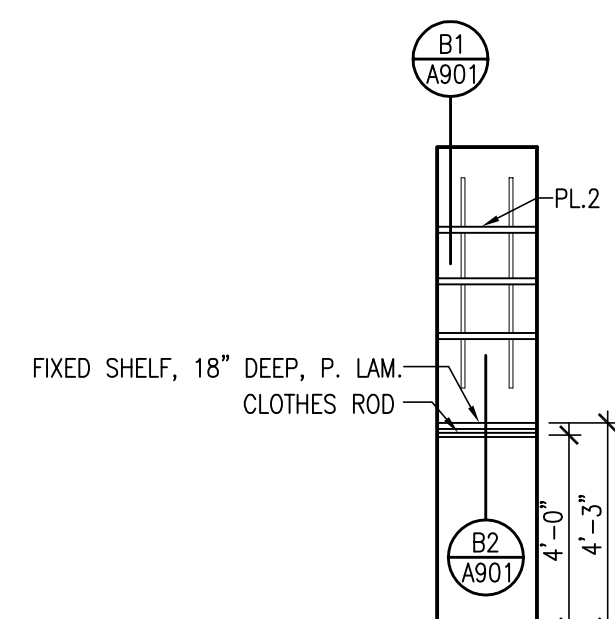
4. PRINTER/FAX 324



3. LOUNGE 317



B



4. STOR. 314

Bingham McCutchen LLP

3rd Floor Renovations

85 Exchange Place
Portland, Maine

architect

phpartners

18 Tremont Street, Suite 707
Boston MA 02108
Tel 617.720.0740
Fax 617.720.0747
www.powershiggins.com

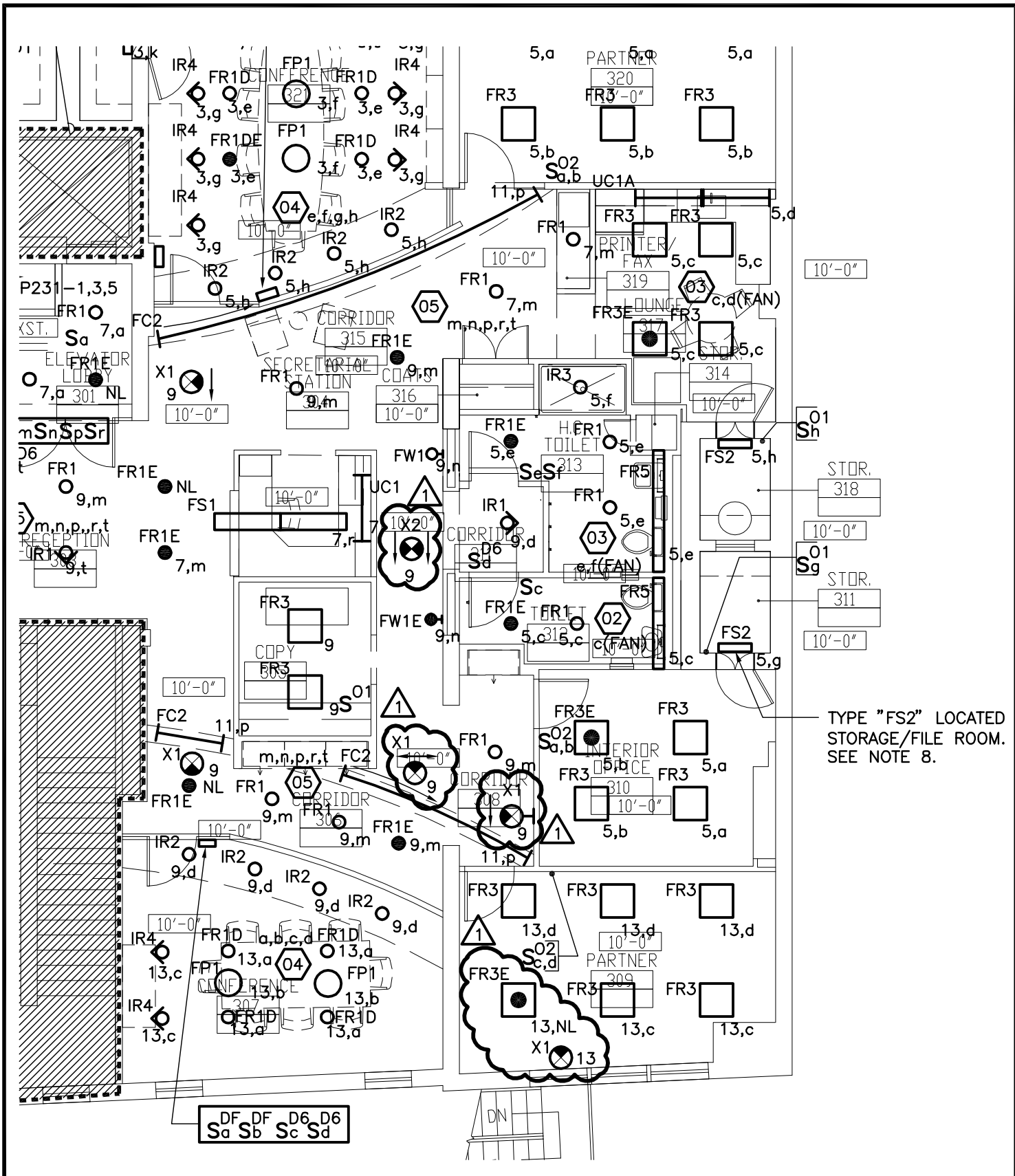
INTERIOR ELEVATIONS

scale
1/8" = 1'-0"

date
12/08/2006

project
06032

A601



Andover, MA
Boston, MA

Richard D. Kimball Company, Inc.
200 Brickstone Square
Andover, MA 01810-1488
P 978-475-0298
F 978-475-5768
W www.rdkengineers.com

PROJECT

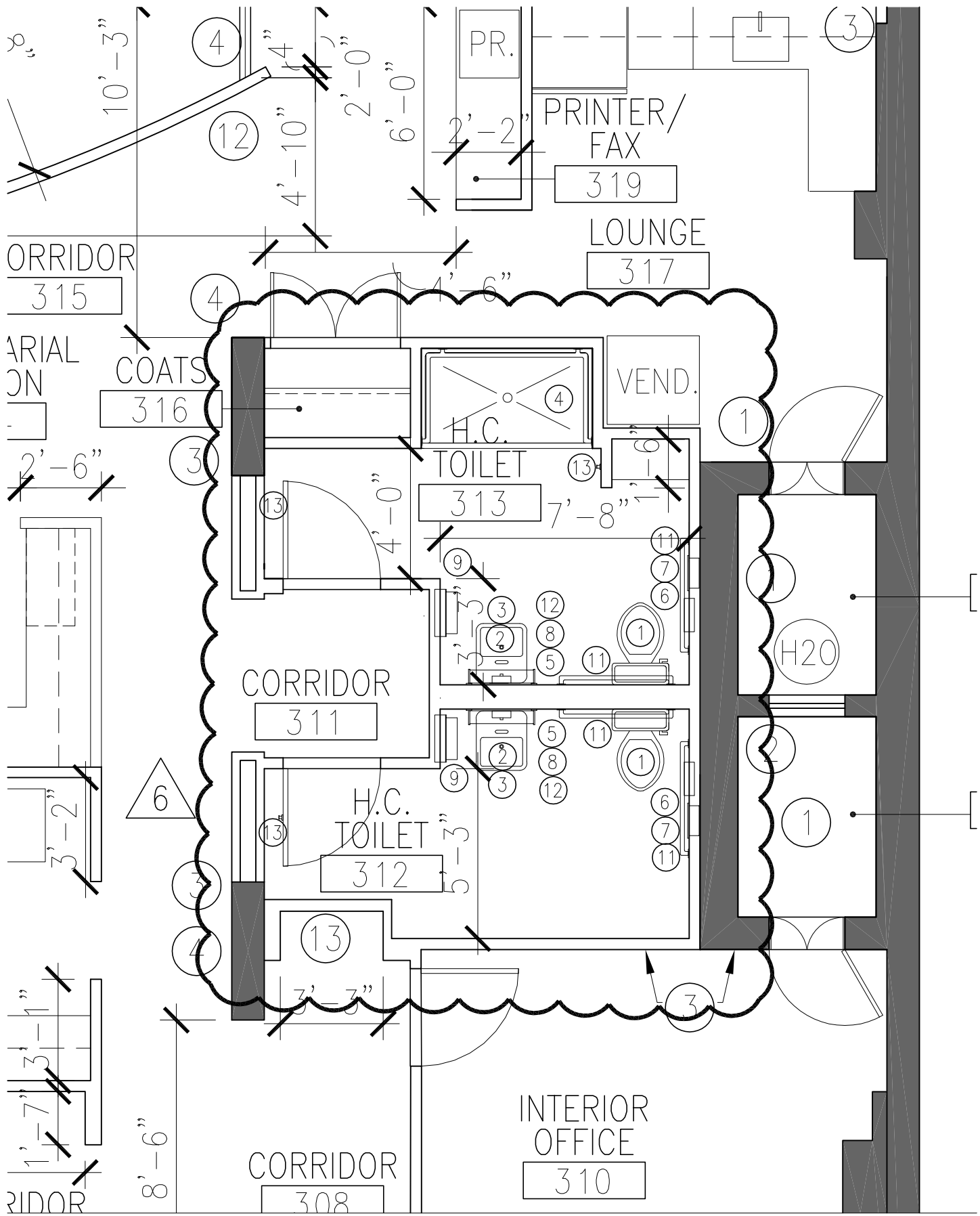
NUMBER 26739 REVISION 1
REFERENCE DRAWING E2.00
BINGHAM MCCUTCHEN
3RD FLOOR RENOVATIONS
PORTLAND, MAINE

DRAWING

DRAWN BY RHA CHECKED BY MTG
DATE 01/04/07 SCALE 1/8" = 1'-0"

PHPARTNERS
18 TREMONT STREET
BOSTON, MASS

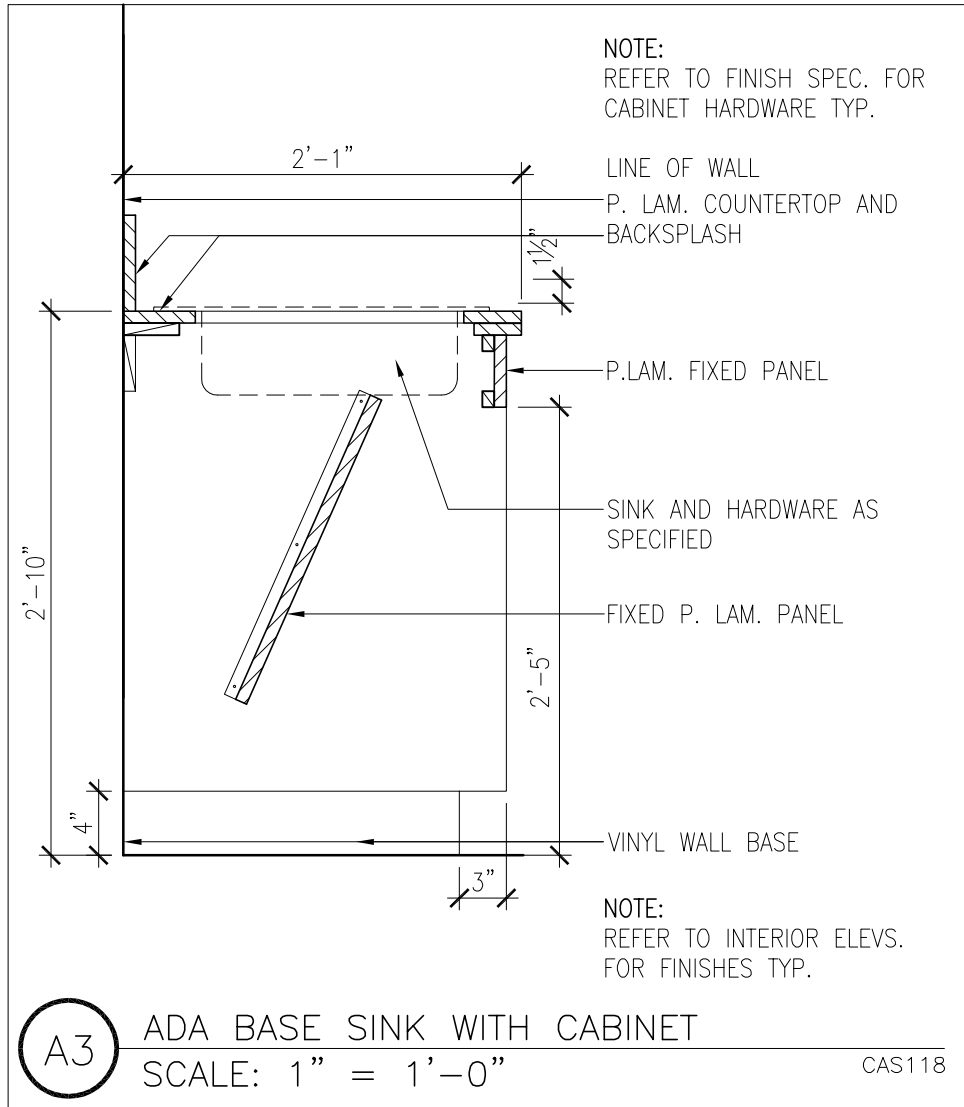
SKE-01

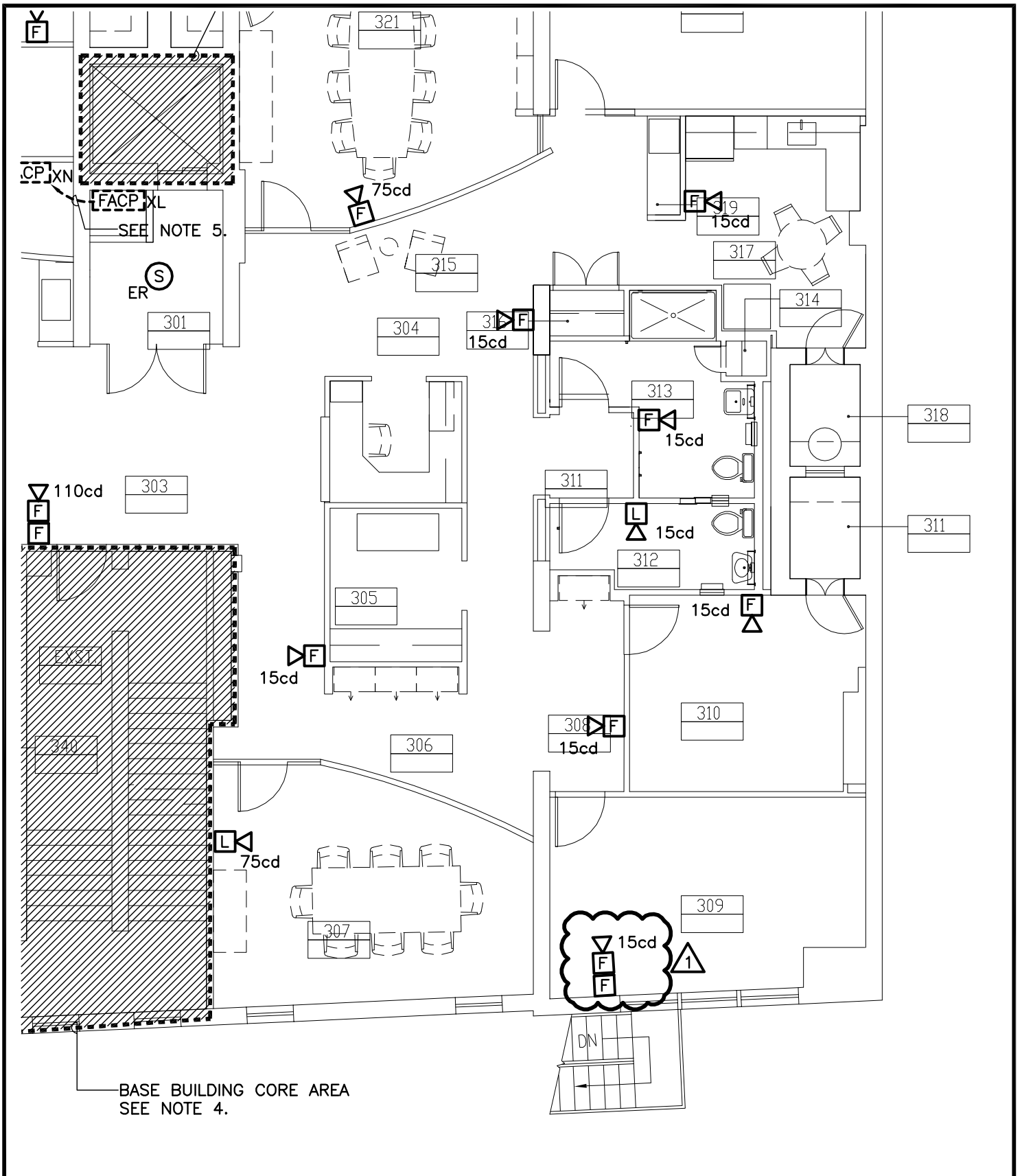


PH PARTNERS
 18 Tremont street, Suite 707
 Boston, MA 02108
 t: 617-720-0740
 f: 617-720-0747

BINGHAM MCCUTCHEN
 85 EXCHANGE STREET, PORTLAND ME
 3RD FLOOR RENOVATIONS

SKA-06
 ADA BATHROOMS





BASE BUILDING CORE AREA
SEE NOTE 4.



Andover, MA
Boston, MA

Richard D. Kimball Company, Inc.
200 Brickstone Square
Andover, MA 01810-1488
P 978-475-0298
F 978-475-5768
W www.rdkengineers.com

PROJECT

NUMBER 26739 REVISION 1
REFERENCE DRAWING E4.00
BINGHAM MCCUTCHEM
3RD FLOOR RENOVATIONS
PORTLAND, MAINE

DRAWING

DRAWN BY RHA CHECKED BY MTG
DATE 01/04/07 SCALE 1/8" = 1'-0"
PHPARTNERS
18 TREMONT STREET
BOSTON, MASS

SKE-02

Construction Change Directive

CCD-01 Exhaust Fan

Date January 09, 2007

<p>To Brad Finlay Monaghan Woodworks 100 Commercial Street Portland, ME 04101</p>	<p>Project Bingham McCutchen LLP 85 Exchange Street Project PHP Job No. <u>6032</u></p>
--	---

The following revisions to the Contract will be required according to instructions which are checked below.

Description

Delete HP-10 and replace with an exhaust fan.

Attachments

SKH-01, SKH-02, SKE-03, SKE-04

Instructions

- PRICE the above change and submit an itemized proposal showing associated labor and material costs, indicating either an increase or decrease in Contract Sum or Contract Time. Do not proceed with work described in this Directive until approved in writing by the Owner.
- PROCEED immediately with items to avoid or minimize delays in the work, and submit a Change Estimate based on lump sum increase or decrease to the Contract.
- PROCEED immediately with items to avoid or minimize delays in the work, and submit itemized documentation of costs incurred in the Work as soon as final cost/time change is determined.
- FOR INFORMATION only. Do no work which will increase the Time or Contract Sum with the above clarifications or supplemental instructions, unless the Owner has been advised in writing that the Contractor considers the Work described to require Contract adjustment.

When signed by Owner and Architect and received by Contractor, this document becomes effective immediately as a Construction Change Directive (CCD) and Contractor shall proceed as directed. Contractor's signature indicates agreement with terms of this Directive.

<p>Owner Bingham McCutchen LLP 150 Federal Street Boston, MA 02110</p>	<p>Architect PH Partners, Inc. 18 Tremont Street, Suite 707 Boston, MA 02108</p>	<p>Contractor Monaghan Woodworks 100 Commercial Street Portland, ME 04101</p>
<p>By Date</p>	<p>By Date</p>	<p>By Date</p>

PROJECT

NUMBER
26739
DATE
01/09/07
REVISION
1

BINGHAM MCCUTCHEM
3RD FLOOR RENOVATIONS
PORTLAND, MAINE

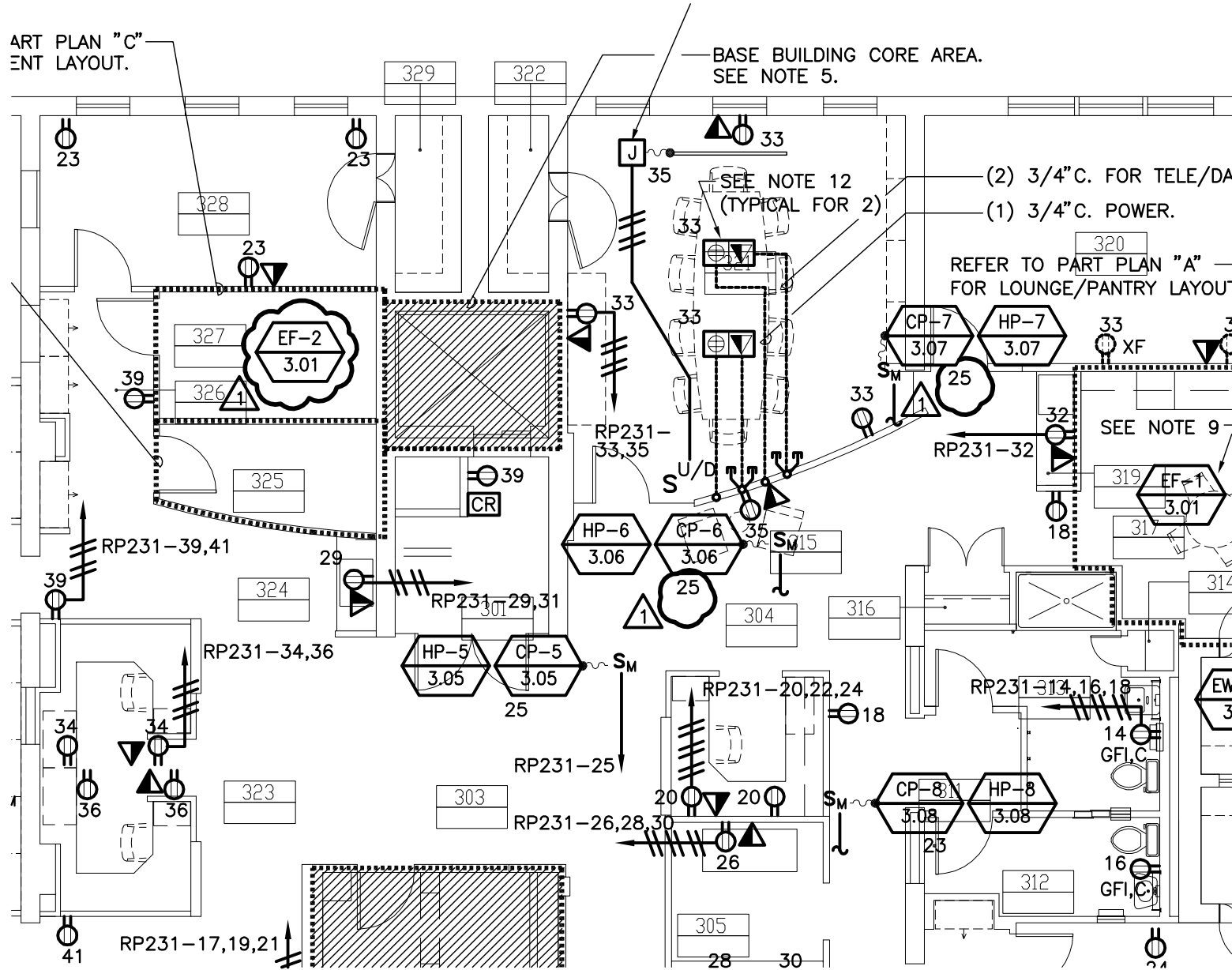
DRAWING

DRAWN BY
RHA
CHECKED BY
MTG
SCALE
1/8" = 1'-0"
REFERENCE DRAWING
E3.00
PHPARTNERS
18 TREMONT STREET
BOSTON, MASS

SKE-03

ART PLAN "C"
ENT LAYOUT.

BASE BUILDING CORE AREA.
SEE NOTE 5.



PROJECT

NUMBER
26739

DATE
01/09/07

REVISION
1

BINGHAM MCCUTCHEM
3RD FLOOR RENOVATIONS
PORTLAND, MAINE

DRAWING

DRAWN BY
RHA

CHECKED BY
MTG

SCALE
NONE

REFERENCE DRAWING
EO.00

PHPARTNERS
18 TREMONT STREET
BOSTON, MASS

MECHANICAL / PLUMBING EQUIPMENT SCHEDULE

EQUIP TAG	DESCRIPTION	LOAD					POWER SOURCE		BRANCH CIRCUIT	CONNECTION				REMARKS
		HP	KVA	VOLT	PH	WIRE	PANEL	C/B		FLEX	JB	REC	DISC	
HP-1	HEAT PUMP	-	3.3	208	1	3	RP232-1	30A-2P	2#10, 1#10G.-3/4"C.	X			X	SEE NOTE 3
HP-2	HEAT PUMP	-	1.5	208	1	3	RP232-5	20A-2P	2#12, 1#10G.-3/4"C.	X			X	SEE NOTE 3
HP-3	HEAT PUMP	-	1.7	208	1	3	RP232-9	20A-2P	2#12, 1#10G.-3/4"C.	X			X	SEE NOTE 3
HP-4	HEAT PUMP	-	1.7	208	1	3	RP232-13	20A-2P	2#12, 1#10G.-3/4"C.	X			X	SEE NOTE 3
HP-5	HEAT PUMP	-	1.4	208	1	3	RP232-17	20A-2P	2#12, 1#10G.-3/4"C.	X			X	SEE NOTE 3
HP-6	HEAT PUMP	-	1.7	208	1	3	RP232-2	20A-2P	2#12, 1#10G.-3/4"C.	X			X	SEE NOTE 3
HP-7	HEAT PUMP	-	1.2	208	1	3	RP232-6	20A-2P	2#12, 1#10G.-3/4"C.	X			X	SEE NOTE 3
HP-8	HEAT PUMP	-	1.5	208	1	3	RP232-10	20A-2P	2#12, 1#10G.-3/4"C.	X			X	SEE NOTE 3
HP-9	HEAT PUMP	-	1.2	208	1	3	RP232-14	20A-2P	2#12, 1#10G.-3/4"C.	X			X	SEE NOTE 3
EF-1	EXHAUST FAN	1/4	.70	120	1	3	RP232-27	15A-1P	2#12, 1#12G.-3/4"C.	X			X	SEE NOTE 4,6
EF-2	EXHAUST FAN	1/4	.70	120	1	3	RP232-27	15A-1P	2#12, 1#12G.-3/4"C.	X			X	SEE NOTE 4,9
EW-1	ELECTRIC WATER HEATER	-	4.50	208	3	3	RP232-26	20A-3P	3#12, 1#12G.-3/4"C.	X			X	SEE NOTE 7
CP	CONDENSATE PUMP	-	.40	120	1	3	RP232	20A-1P	2#12, 1#12G.-3/4"C.	X			X	SEE NOTE 5,8

NOTES:

- BRANCH CIRCUIT WIRING METHODS SHALL BE AS NOTED ON THE DRAWINGS AND/OR SPECIFICATIONS FOR THE APPLICABLE LOCATION.
- "FLEX" - DENOTES FINAL THREE FEET (MAXIMUM) OF RACEWAY SHALL BE FLEXIBLE METAL OR LIQUIDTIGHT FLEXIBLE METAL CONDUIT.
- DISCONNECT SHALL BE RATED 30AMP - SINGLE FUSE UNFUSED.
- DISCONNECT SHALL BE MOTOR-RATED SWITCH WITH THERMAL OVERLOAD ELEMENT.
- DISCONNECT PROVIDED INTEGRAL (PREWIRED) TO EQUIPMENT BY OTHERS.
- ON/OFF VIA CEILING MOUNTED OCCUPANCY SENSOR POWER PACK (PANTRY AND TOILET ROOMS).
- DISCONNECT SHALL BE RATED 30AMP - THREE PHASE UNFUSED.
- CONDENSATE PUMP CP-1 THROUGH CP-9 ARE SIMILAR PIECES OF EQUIPMENT. REFER TO FLOOR PLANS FOR CIRCUIT DESIGNATIONS.
- ON/OFF VIA WALL MOUNTED TSTAT FURNISHED AND INSTALLED BY MECHANICAL CONTRACTOR.

SKE-04

PROJECT

NUMBER 26739

DATE 01/09/07

REVISION 1

BINGHAM McCUTCHEM
3RD FLOOR RENOVATIONS
85 EXCHANGE ST
PORTLAND, ME

DRAWING

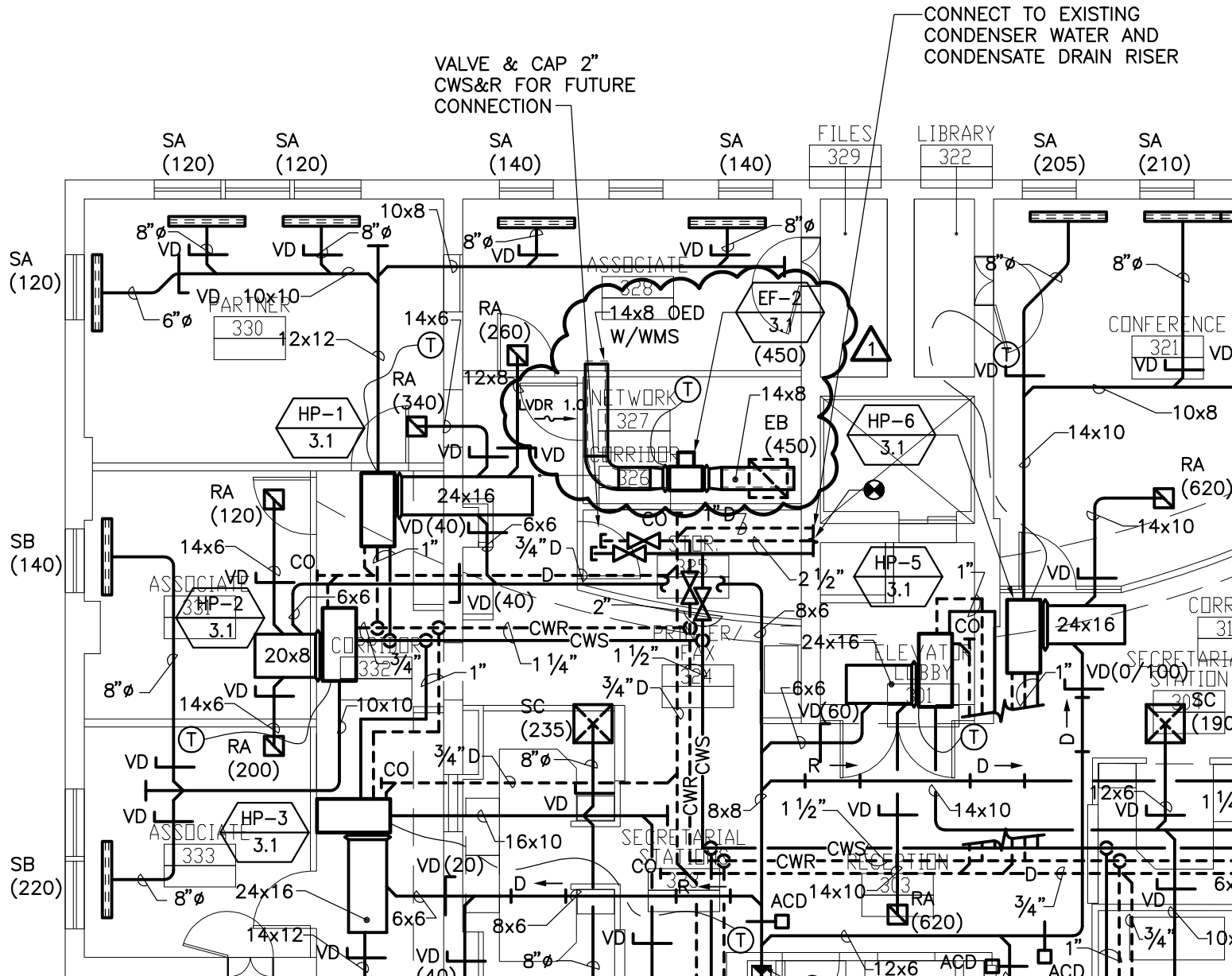
DRAWN BY BSI

CHECKED BY BSI

SCALE 1/8" = 1'-0"

REFERENCE DRAWING H2.00

HVAC
NETWORK ROOM
EXHAUST FAN



SKH-01

PROJECT

NUMBER
26739

DATE
01/09/07

REVISION
1

BINGHAM McCUTCHEN
3RD FLOOR RENOVATIONS
85 EXCHANGE ST
PORTLAND, ME

DRAWING

DRAWN BY
BSI

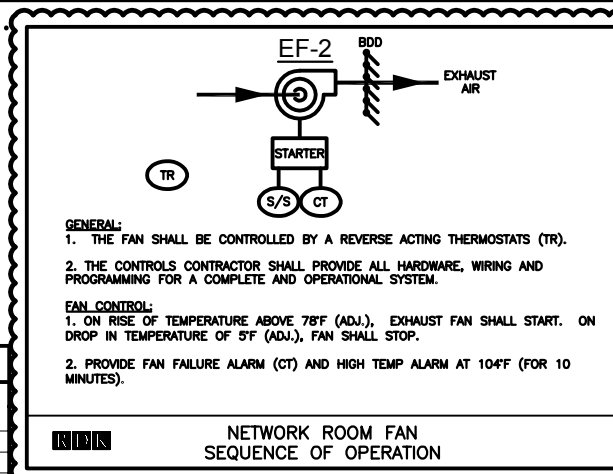
CHECKED BY
BSI

SCALE
NONE

REFERENCE DRAWING
H8.00

HVAC
NETWORK ROOM
EXHAUST FAN

SKH-02



GENERAL:

1. THE FAN SHALL BE CONTROLLED BY A REVERSE ACTING THERMOSTATS (TR).
2. THE CONTROLS CONTRACTOR SHALL PROVIDE ALL HARDWARE, WIRING AND PROGRAMMING FOR A COMPLETE AND OPERATIONAL SYSTEM.

FAN CONTROL:

1. ON RISE OF TEMPERATURE ABOVE 78°F (ADJ.), EXHAUST FAN SHALL START. ON DROP IN TEMPERATURE OF 5°F (ADJ.), FAN SHALL STOP.
2. PROVIDE FAN FAILURE ALARM (CT) AND HIGH TEMP ALARM AT 104°F (FOR 10 MINUTES).



NETWORK ROOM FAN
SEQUENCE OF OPERATION

DIFFUSER, GRILLE & REGISTER SCHEDULE

TAG	SELECTION RANGE (CFM)	NECK SIZE (IN.)	OVERALL SIZE (IN.)	SERVICE	MOUNTING	MANUFACTURER AND MODEL NUMBER (AS STANDARD)	NC OR AIR PRESSURE DROP NOT TO EXCEED	REMARKS
SA	0-240	8"ø	48x4	SUPPLY	SURFACE	TITUS ML-39	25	1,2
SC	0-350	8"ø	24x24	SUPPLY	LAY-IN	TITUS OMNI	25	
RA	0-720	14x14	16x16	RETURN	SURFACE	TITUS 350FL	25	
EF	0-150	8"ø	24x24	EXHAUST	SURFACE	TITUS 350FL	25	
EB	0-720	14x14	16x16	RETURN	SURFACE	TITUS 350FL	25	

NOTES:

1. PROVIDE WITH MATCHING TITUS PLENUM BOX.
2. LINEAR DIFFUSER TO HAVE (2) 1" SLOTS. BALANCE DIFFUSER FOR VERTICAL DOWNFLOW ON EXTERIOR SLOT, AND HORIZONTAL DISCHARGE ON INTERIOR SLOT.

FAN SCHEDULE

TAG	LOCATION	SERVICE	CFM	FAN TYPE	E.S.P. (IN.WG)	WHEEL			MOTOR				MANUFACTURER AND MODEL NUMBER (AS STANDARD)	REMARKS	
						DIA. (IN.)	TYPE	DRIVE	RPM	BHP	HP	V			PH
F-1	LOUNGE	LOUNGE TOILETS	315	INLINE	0.35	12	BI	BELT	1725	0.08	1/4	115	1	GREENHECK BSQ-90-4	
F-2	NETWORK 327	NETWORK 327	450	INLINE	0.35	12	BI	BELT	1725	0.08	1/4	115	1	GREENHECK BSQ-90-4	

NOTES:

1. PROVIDE WITH UNIT MOUNTED DISCONNECT SWITCH.
2. PROVIDE WITHOUT INTEGRAL BACKDRAFT DAMPER.

HEAT PUMP SCHEDULE

TAG	LOCATION	SERVES	COOLING CAPACITIES						HEATING CAPACITY				WATER SIDE		AIR SIDE			ELECTRICAL CHARACTERISTICS			MANUFACTURER AND MODEL NUMBER (AS STANDARD)	REMARKS
			ENT H2O (°F)	LVG H2O (°F)	EAT (°F)		TOTAL MBH	SENS. MBH	REJECTED BTUH	ENT H2O (°F)	LVG H2O (°F)	TOTAL BTU	EAT (°F) DB	GPM	P.D. (FT. H2O)	CFM	ESP (IN. H2O)	COMPRESSOR				
					DB	WB												FLA	V	PH		
HP-1	CORRIDOR 332	PARTNER 330	85	103.2	75	63	22.7	17.5	30127	70	55.8	30.1	70	3.4	3.4	640	0.5	15.8	208	1	MCQUAY-WCRH024	1,2,3
HP-2	CORRIDOR 332	ASSOCIATE 331 & 332	85	102.4	75	63	11.1	9.0	14471	70	55.5	14.7	70	1.7	5.3	360	0.4	7.4	208	1	MCQUAY-WCRH012	1,2,3
HP-3	FILES 334	SECRETARIAL 323	85	98.8	75	63	15.8	12.0	19965	70	58.5	20.4	70	3.1	2.8	720	.35	8.1	208	1	MCQUAY-WCRH015	1,2,3
HP-4	COPY 340	PARTNER 337	85	98.8	75	63	15.8	12.0	19965	70	58.5	20.4	70	3.1	2.8	650	0.45	8.1	208	1	MCQUAY-WCRH015	1,2,3
HP-5	LOBBY 301	SECRETARIAL 304	85	103.2	75	63	18.0	13.9	23672	70	55.7	24.0	70	2.7	2.1	680	0.45	8.5	208	1	MCQUAY-WCRH019	1,2,3
HP-6	CORRIDOR 315	CONFERENCE 321	85	98.8	75	63	15.8	12.0	19965	70	58.5	20.4	70	3.1	2.8	620	0.5	8.1	208	1	MCQUAY-WCRH015	1,2,3
HP-7	FAX 319	PARTNER 320	85	95.0	75	63	8.5	7.1	10789	70	61.5	11.8	70	2.4	8.8	370	0.4	6.0	208	1	MCQUAY-WCRH009	1,2,3
HP-8	TOILET 312	PARTNER 309	85	102.4	75	63	11.1	9.0	14471	70	55.5	14.7	70	1.7	5.3	360	0.4	7.4	208	1	MCQUAY-WCRH012	1,2,3
HP-9	COPY 345	CONFERENCE 307	85	95.0	75	63	8.5	7.1	10789	70	61.5	11.8	70	2.4	8.8	370	0.4	6.0	208	1	MCQUAY-WCRH009	1,2,3

NOTES:

1. PROVIDE WITH FLEXIBLE HOSE KIT, EXTRA SET OF FILTERS, HANGERS BRACKETS AND 300 PSI COIL.
2. THE ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL DISCONNECT SWITCH.
3. PROVIDE CONDENSATE PUMP ALL ASSOCIATED PIPING SUPPORTS, CONTROLS AND ANY OTHER APPURTENANCES REQUIRED TO MAKE PUMP OPERATIONAL WITH ASSOCIATED HEAT PUMP. SEE SPECIFICATIONS FOR OTHER REQUIREMENTS.