

ISSUE/REVISION DATE LIST OF DRAWINGS

ISSUE/REVISION DATE	LIST OF DRAWINGS
A	03.05.04 T001/ TITLE SHEET
A	03.05.04 T002/ GENERAL NOTES/DOOR/FRAME TYPES
A	03.05.04 T003/ SPECIFICATIONS
A	03.05.04 T004/ SPECIFICATIONS
A	03.05.04 A101/ FIRST FLOOR DEMOLITION/CONSTRUCTION PLAN
A	03.05.04 A102/ SECOND FLOOR DEMOLITION/CONSTRUCTION PLAN
A	03.05.04 A201/ INTERIOR ELEVATIONS
A	03.05.04 A401/ FIRST FLOOR REFLECTED CEILING PLAN
A	03.05.04 A402/ SECOND FLOOR REFLECTED CEILING PLAN
A	03.05.04 A701/ MISCELLANEOUS DETAILS
A	03.05.04 A901/ FIRST FLOOR FINISH PLAN
A	03.05.04 A902/ SECOND FLOOR FINISH PLAN
A	03.05.04 A911/ FIRST FLOOR OUTLET LOCATION PLAN
A	03.05.04 A912/ SECOND FLOOR OUTLET LOCATION PLAN
A	03.05.04 A921/ FIRST FLOOR FURNITURE PLAN
A	03.05.04 A922/ SECOND FLOOR FURNITURE PLAN
A	03.05.04 E-1/ ELECTRICAL SYMBOLS, ABBREVIATION & NOTES
A	03.05.04 E-2/ ELECTRICAL DEMOLITION POWER PLAN FLOORS FIRST & SECOND
A	03.05.04 E-3/ ELECTRICAL DEMOLITION LIGHTING PLAN
A	03.05.04 E-4/ ELECTRICAL PROPOSED POWER PLANS, FLOOR FIRST & SECOND
A	03.05.04 E-5/ ELECTRICAL PROPOSED LIGHTING FLOORS FIRST & SECOND
A	03.05.04 E-6/ ELECTRICAL DETAILS AND RISER DIAGRAMS
A	03.05.04 E-7/ ELECTRICAL SCHEDULES "I"
A	03.05.04 E-8/ ELECTRICAL SCHEDULES "II"
A	03.05.04 E-9/ ELECTRICAL SPECIFICATIONS
A	03.05.04 H-1/ HVAC DEMOLITION PLANS
A	03.05.04 H-2/ HVAC PROPOSED PLANS
A	03.05.04 H-3/ HVAC DETAILS, SYMBOLS & ABBREVIATIONS
A	03.05.04 H-4/ HVAC SPECIFICATIONS
A	03.05.04 P-1/ PLUMBING PARTIAL PLANS & DETAILS
A	03.05.04 P-2/ PLUMBING SPECIFICATIONS
A	03.05.04 F-1/ FIRE PROTECTION DEMOLITION PLANS
A	03.05.04 F-2/ FIRE PROTECTION PROPOSED PLANS
A	03.05.04 F-3/ FIRE PROTECTION DETAILS, SPECIFICATIONS & ABBREVIATIONS
A	03.05.04 S101/ STRUCTURAL NOTES, FLOOR FRAMING, AND DETAILS

ISSUE HISTORY

A 03.05.04 - ISSUED FOR CONSTRUCTION



INTERIOR RENOVATIONS TO
1361 WASHINGTON AVENUE, FIRST & SECOND FLOORS
PORTLAND, ME 04103

PROJECT DATA

1. BUILDING AREA: FLOOR AREA FIRST FLOOR = 10,714 SQUARE FEET
FLOOR AREA SECOND FLOOR = 11,324 SQUARE FEET

2. USE: EXISTING USE: OFFICE
PROPOSED USE: LIBERTY MUTUAL INSURANCE (OFFICE)

CODE SUMMARY

CODE SUMMARY (BOCA NATIONAL BUILDING CODE/1994)

1. USE GROUP: B-BUSINESS (EXISTING)
TENANT AREA: FLOOR AREA WITHIN SCOPE OF WORK FIRST FLOOR = 10,944 SQUARE FEET
FLOOR AREA WITHIN SCOPE OF WORK SECOND FLOOR = 11,324 SQUARE FEET

3. TYPE OF CONSTRUCTION: (EXISTING) ASSUMED 2G UNPROTECTED (TO BE VERIFIED AT FUTURE DATE)

4. FIRE RESISTANCE RATINGS: (TABLE 602)

	ALLOWED	PROVIDED
EXTERIOR WALLS (LOAD BEARING)	0	EXISTING - N/A
FIRE/PARTY WALLS	2	EXISTING - N/A
EXIT ENCLOSURES	1	1
TENANT SEPARATION	0	0
SHAFTS	1	EXISTING - N/A
EXIT ACCESS CORRIDORS	0	0
STRUCTURAL MEMBERS (SUPPORT FOR WALLS)	0	0
STRUCTURAL MEMBERS (SUPPORTING ONE FLOOR)	0	0
FLOOR CONSTRUCTION	0	0

4. OCCUPANT LOAD: (TABLE 1008.1.2)

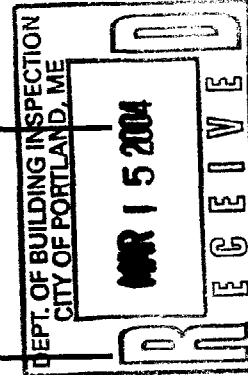
TENANT SPACE FIRST FLOOR: 10,944/100 = 119 OCCUPANTS
TENANT SPACE SECOND FLOOR: 11,324/100 = 113 OCCUPANTS

5. EGRESS WITHIN SCOPE OF WORK FIRST FLOOR:

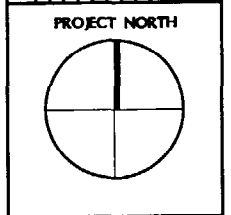
	REQUIRED	PROVIDED
NUMBER OF EXITS	2	2
TRAVEL DISTANCE	250' MAX	60'
SEPARATION	4' MIN	65'

5. EGRESS WITHIN SCOPE OF WORK SECOND FLOOR:

	REQUIRED	PROVIDED
NUMBER OF EXITS	2	2
TRAVEL DISTANCE	250' MAX	106'
SEPARATION	48' MIN	106'

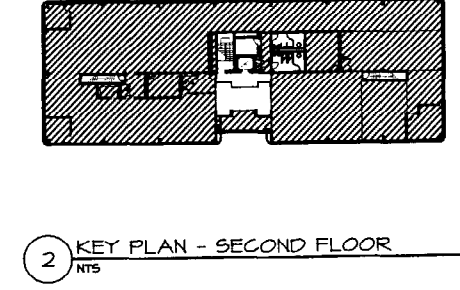
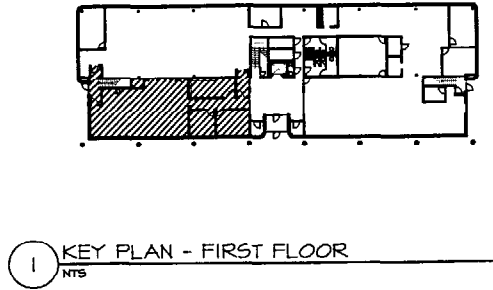


NO.	DATE	REVISIONS



LIBERTY MUTUAL
1361 WASHINGTON AVENUE
PORTLAND, ME 04103
OWNER: LIBERTY MUTUAL

TITLE	SCALE	DATE
TITLE SHEET	NONE	02.02.04
Cubellis Associates Inc. Architects Interior Engineers 27 Adams Ave., 10TH Chicago, IL 60601 Tel: 312-336-0009 Fax: 312-336-0008 www.cubellis.com	DRAWN BY: CA CHECKED BY: MCS	DATE: 02.02.04



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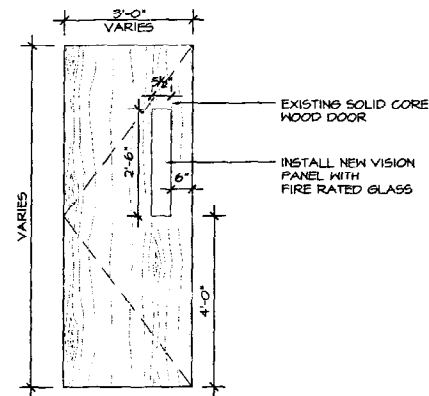
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GENERAL NOTES

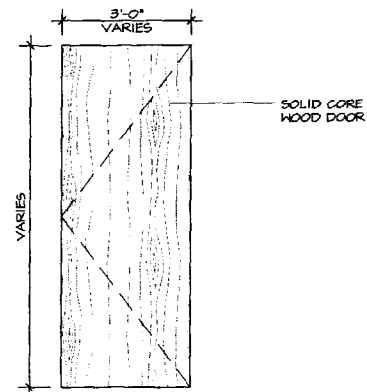
SECTION 01010- GENERAL

1. ALL WORK SHALL CONFORM TO FEDERAL, STATE AND MUNICIPAL CODES AND ORDINANCES. THESE SHALL SUPERSEDE DRAWINGS, NOTES AND DIMENSIONS IN ALL CASES. THE ARCHITECT SHALL BE NOTIFIED OF SUCH CHANGES BEFORE WORK IS STARTED. OBTAIN PERMITS BEFORE STARTING WORK, AND OBTAIN APPROVALS OF ALL REGULATORY AGENCIES UPON COMPLETION AND AS REQUIRED.
2. THE CONTRACT DOCUMENTS CONSIST OF THE DRAWINGS & SPECIFICATIONS, GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION-AIA DOCUMENT A201 (1987 EDITION), OWNER-CONTRACTOR AGREEMENTS AND ALL ADDENDA ISSUED PRIOR TO AND ALL PLAN CHANGES ISSUED AFTER EXECUTION OF THE CONTRACT.
3. UNLESS OTHERWISE INDICATED IN THE CONSTRUCTION DOCUMENTS AS BEING NOT IN CONTRACT (N.I.C.) OR EXISTING, ALL ITEMS, MATERIALS AND INSTALLATION OF SAME ARE A PART OF THE CONTRACT DEFINED BY THE CONSTRUCTION DOCUMENTS. THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL ACCESSORIES, COMPONENTS AND ASSEMBLIES REQUIRED FOR THE WORK SHOWN.
4. CONTRACTOR SHALL SUBMIT A DETAILED PROJECT SCHEDULE. CONTRACTOR IS SOLELY RESPONSIBLE FOR CONSTRUCTION SEQUENCING, METHODS AND TECHNIQUES.
5. ANY DAMAGE TO EXISTING WORK WHICH IS NOT SCHEDULED FOR REMOVAL OR REPLACEMENT, IF CAUSED BY THE CONTRACTOR'S OPERATIONS UNDER THIS CONTRACT SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.
6. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR PAYING AND OBTAINING ALL PERMITS, INSPECTIONS, REQUIRED TESTS AND UTILITY CONNECTIONS UNLESS OTHERWISE NOTED.
7. CONTRACTOR SHALL PROVIDE AND IS SOLELY RESPONSIBLE FOR PUBLIC AND EMPLOYEE PROTECTION AS NECESSARY AND AS REQUIRED BY THE CODES, ORDINANCES AND REGULATIONS OF GOVERNMENTAL AGENCIES HAVING JURISDICTION AT THE PROJECT PLACE.
8. ANY WORK INVOLVING ALTERATIONS TO EXISTING BUILDING UTILITIES & WHICH REQUIRE UTILITY SHUT DOWN, SHALL BE COORDINATED WITH THE OWNER AND SHALL REQUIRE A MINIMUM OF (5) FIVE DAYS NOTICE. THIS WORK SHALL BE COMPLETED AT THE CONVENIENCE OF THE OWNER ALLOWING ENOUGH TIME TO COORDINATE SCHEDULED SHUT DOWNS WITH BUILDING OCCUPANTS.
9. IN THE EVENT OF DISCREPANCIES BETWEEN ANY DRAWINGS AND/OR SPECIFICATIONS, THE COSTLIER OR MORE RESTRICTIVE CONDITIONS SHALL BE DEEMED THE CONTRACT REQUIREMENT, UNLESS OTHERWISE STATED IN WRITING, FROM THE OWNER.
10. GENERAL CONTRACTOR SHALL WARRANT WORK PERFORMED FOR A PERIOD OF ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE.
11. VERIFY DIMENSIONS AND JOB CONDITIONS PRIOR TO SUBMITTING BIDS, AND REPORT TO THE ARCHITECT AND OR OWNER DISCREPANCIES WHICH WOULD INTERFERE WITH SATISFACTORY COMPLETION OF THE WORK. DO NOT SCALE THE DRAWINGS.
12. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO KEEP THE PREMISE CLEAN OF DEBRIS, RUDDISH EXCESS MATERIALS, ETC. RESULTING FROM THE WORK OF THIS CONTRACT. OFFICE AREAS SHALL BE VACUUMED CLEAN EACH WORK DAY.
13. THE CONTRACTOR SHALL NOT CLOSE OR OBSTRUCT ANY STREETS, ALLEYS OR WALKS. NO MATERIAL SHALL BE PLACED OR STORED IN STREETS, ALLEYS OR WALKS. ALL DEBRIS IS TO BE REMOVED COMPLETELY FROM THE PREMISES.
14. THICKNESS OF WALL CONSTRUCTION AT ELECTRICAL PANELS AND OTHER MISCELLANEOUS RECESSED ITEMS SHALL BE OF SUFFICIENT DEPTH TO FLUSH MOUNT UNITS.
15. ALL WORK SHALL BE COMPLETED AS SHOWN ON THE DRAWINGS AND EXECUTED IN GOOD PROFESSIONAL MANNER.
16. REFER TO BUILDING CONSTRUCTION GUIDELINES AND INSURANCE REQUIREMENTS PROVIDED BY LANDLORD.
17. EXTRAS: CHARGES FOR EXTRA WORK DONE BY THE CONTRACTOR WILL NOT BE HONORED UNLESS THE WORK AND THE AMOUNT ARE AGREED TO BY THE OWNER IN WRITING BEFORE THE WORK IS DONE, BASED UPON UNIT PRICING.
18. INSPECTIONS, AS REQUIRED BY CODE, EACH CONTRACTOR AND EACH SUBCONTRACTOR SHALL OBTAIN REQUIRED INSPECTION OF THAT PORTION OF WORK.
19. ALL FIRE-RATED ASSEMBLIES SHALL BE INSTALLED, LABELED, AND INSPECTED IN ACCORDANCE WITH THE APPLICABLE BUILDING CODE.
20. GENERAL CONTRACTOR SHALL PROVIDE FIRE EXTINGUISHERS AS DICTATED BY STATE AND LOCAL BUILDINGS AND SAFETY CODES.
21. GOVERNING CODES AND THE FIRE DEPARTMENT FIELD INSPECTOR SHALL DICTATE SIZE, TYPE, QUANTITY AND LOCATIONS OF BOTH TEMPORARY AND PERMANENT FIRE EXTINGUISHERS.
22. ALL DIMENSIONS ARE TO THE FACE OF DRYWALL OR MASONRY UNLESS NOTED OTHERWISE.
23. REFERENCE/COORDINATE LANDLORD BUILDING STANDARDS REQUIREMENTS.
24. QUALITY CONTROL:
 - A. SITE MEETINGS: CONTRACTOR TO CONDUCT SITE MEETINGS AND WRITE MEETING MINUTES AT FREQUENCY AS DIRECTED BY OWNER. CONTRACTOR AND ALL SUB-CONTRACTORS MUST BE PRESENT, UNLESS WAIVED BY OWNER.
 - B. INSTALLATION: EXCEPT AS MORE STRINGENT REQUIREMENTS ARE INDICATED ON THESE DRAWINGS AND IN THESE NOTES, COMPLY WITH GENERALLY ACCEPTED INDUSTRY STANDARDS AND INSTALL PRODUCTS IN STRICT COMPLIANCE WITH MANUFACTURER'S PRINTED INSTRUCTIONS.
 - C. WHEN EVALUATING APPEARANCE OR CONFORMANCE WITH DESIGN INTENT, THE WORDS "ACCEPTABLE," "VISIBLE," "INVISIBLE," "MATCHING," "ALIGNED," AND SIMILAR TERMS OF JUDGMENT SHALL MEAN "ACCEPTABLE, ETC. IN THE OPINION OF THE ARCHITECT OR OWNER."
25. THE CONTRACTOR IS RESPONSIBLE FOR DEMOLITION SEQUENCING METHODS AND TECHNIQUES.

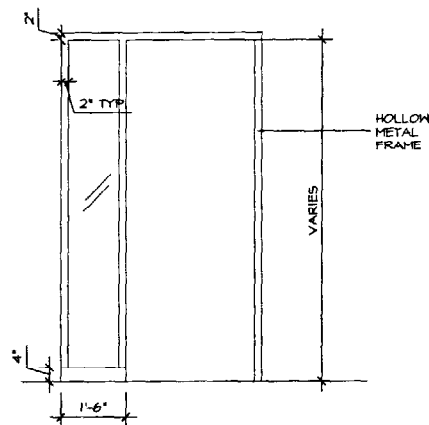
END OF SECTION



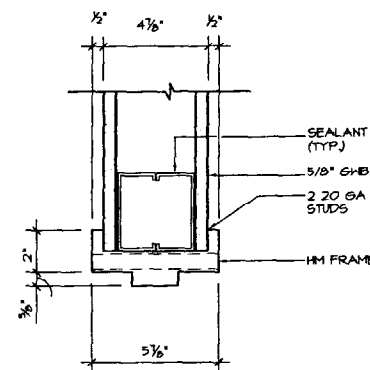
6 TYPICAL DOOR TYPE "B"
1/2"x1'-0"



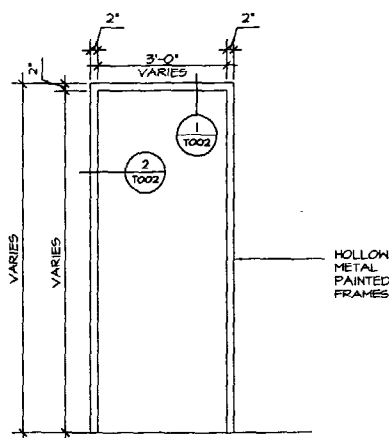
3 TYPICAL DOOR TYPE "A"
1/2"x1'-0"



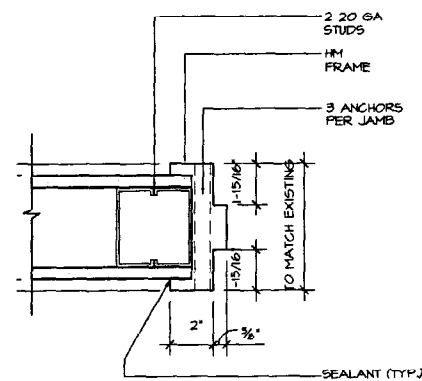
5 TYPICAL FRAME TYPE "2"
3"x1'-0"



2 TYPICAL SECTION AT DOOR HEAD
3"x1'-0"



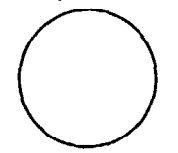
4 TYPICAL FRAME TYPE "1"
1/2"x1'-0"



1 TYPICAL SECTION AT DOOR JAMB
3"x1'-0"

NO.	DATE	REVISIONS
1.	03/03/04	ISSUED FOR CONSTRUCTION

PROJECT NORTH



LIBERTY MUTUAL

1361 WASHINGTON AVENUE
PORTLAND, ME 04103

LIBERTY MUTUAL

OWNER

TITLE	SCALE
GENERAL NOTES/ DOOR/FRAME TYPES	NONE

<p>Cubellis Associates Inc. Architects Interiors Engineers 78 Atlantic Avenue Portland, ME 04101 Tel: 407-333-0000 Fax: 407-333-0088 www.cubellis.com</p>	DRAWN BY	CA	CHECKED BY	MCS
	DATE	03.03.04		

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SECTION 01300 - SUBMITTALS

9. CONTRACTOR TO SUBMIT SAMPLES AS FOLLOWS:
 A. PROVIDE SAMPLES OF ADEQUATE SIZE TO PERMIT PROPER EVALUATION OF MATERIAL. WHERE VARIATIONS IN COLOR OR IN OTHER CHARACTERISTICS ARE TO BE EXPECTED, SUBMIT SAMPLES SHOWING THE MAXIMUM RANGE OF VARIATION.
 B. SUBMIT SAMPLES OF INTERIOR FINISHES SIMULTANEOUSLY TO PERMIT COORDINATED SELECTION OF COLORS AND FINISHES.
 C. TAG OR PERMANENTLY MARK EACH SAMPLE TO IDENTIFY THE ITEM; INDICATE APPLICABLE TRANSMITTAL NUMBER ON TAG.
 D. SUBMIT 2 OF EACH TYPE REQUIRED, UNLESS OTHERWISE SPECIFIED IN THE SECTION REQUIRING THE SAMPLES.
 10. PROVIDE CERTIFICATIONS, QUALIFICATION STATEMENTS, TEST REPORTS AND SIMILAR SUBMITTALS WHERE SPECIFIED FOR SUBMITTALS, QUALITY ASSURANCE, OR QUALITY CONTROL.
 11. QUALITY ASSURANCE AND CONTROL SUBMITTALS ARE INFORMATIONAL SUBMITTALS, AND WILL NOT BE APPROVED OR RETURNED BY THE ARCHITECT.
 12. THE ARCHITECT WILL REVIEW SUBMITTALS AS FOLLOWS:
 A. THE ARCHITECT WILL REVIEW ONLY THOSE SUBMITTALS EXPLICITLY REQUIRED BY THE CONTRACT DOCUMENTS OR REQUESTED BY THE ARCHITECT AS THE WORK PROCEEDS.
 B. THE ARCHITECT WILL STAMP EACH SUBMITTAL TO INDICATE THE ACTION TAKEN, FABRICATION OR INSTALLATION OF WORK FOR WHICH ARCHITECT'S REVIEW IS REQUIRED SHOULD NOT BEGIN UNTIL THE SUBMITTAL IS ACCEPTABLE TO THE ARCHITECT, FABRICATION OR INSTALLATION BEGIN WITHOUT ARCHITECT'S ACCEPTANCE IS UNDERTAKEN AT THE CONTRACTOR'S SOLE RISK.
 C. IF SUBMITTAL IS STAMPED "NO EXCEPTIONS TAKEN" OR "FURNISH AS CORRECTED" THE SHOP DRAWINGS, PRODUCT DATA OR SAMPLES NEED NOT BE RESUBMITTED. MAKE CHANGES NOTED TO THE ACTUAL ITEM PRIOR TO FABRICATION AND INSTALLATION.
 D. RESUBMISSION:
 1. IF SUBMITTAL IS STAMPED "REVISE AND RESUBMIT" MAKE CORRECTIONS OR CHANGES REQUIRED BY THE ARCHITECT IN THE SUBMITTALS AND RESUBMIT UNTIL ACCEPTED.
 2. IF SUBMITTAL IS STAMPED "REJECTED" RESUBMIT IN CONFORMANCE WITH THE CONTRACT DOCUMENTS.
 3. IN RESUBMITTING, COMPLY WITH REQUIREMENTS SPECIFIED FOR THE INITIAL SUBMITTAL. TRANSMIT EACH RESUBMITTAL WITH A NEW LETTER OF TRANSMITTAL AND NOTE THE TRANSMITTAL NUMBER OF THE FIRST SUBMISSION ON THE TRANSMITTAL FORM.
 13. CLOSE-OUT
 CONTRACTOR TO PROVIDE THREE SETS OF THE FOLLOWING CLOSE-OUT DOCUMENTS IN THREE RING BINDERS:
 WARRANTIES
 FINAL WAIVERS OF LIEN
 OPERATIONS AND MAINTENANCE MANUALS (INCLUDING ARCHITECTURAL ELEMENTS I.E. SPECIAL LIGHT FIXTURES, SHOP DRAWINGS, ETC.)
 SPECIAL LETTERS OF WARRANTIES FROM SUB CONTRACTORS
 LETTERS OF WARRANTIES FROM SUB CONTRACTORS
 COPY OF PERMITS (BUILDING PERMITS, OCCUPANCY PERMITS, ETC.)
 RECORD DRAWINGS (ARCHITECTURAL / ENGINEERING)
 LIST / CONTACTS OF ALL SUB CONTRACTORS AND GC
 LETTER OF WARRANTIES FROM GC
 FINAL APPLICATION FOR PAYMENT
 AIR BALANCING REPORTS
 FIRE ALARM CERTIFICATION
 FINAL PUNCHLIST
 MECHANICAL SYSTEMS INSTALLATIONS LETTER FROM ENGINEER
 END OF SECTION

SECTION 02050 - DEMOLITION

1. SCOPE INCLUDES THE FOLLOWING:
 A. REMOVAL OF ALL ITEMS OF ANY NATURE SHOWN ON DRAWINGS TO BE REMOVED.
 B. THE DRAWINGS DO NOT SHOW ALL CONSTRUCTION. BEFORE COMMENCING THE WORK, THE CONTRACTOR MUST VERIFY AT THE SITE EXISTING CONSTRUCTION TO BE PRESERVED AND REPORT TO THE ARCHITECT ANY DISCREPANCIES OR QUESTIONABLE ITEMS.
 2. ALL WORK SHALL COMPLY WITH THE RULES AND REGULATIONS OF THE DIVISION OF INDUSTRIAL SAFETY AND ALL OTHER LOCAL, STATE AND FEDERAL AUTHORITIES HAVING JURISDICTION.
 3. WHEN THE NATURE OF DEMOLITION WORK REQUIRES THEIR USE, ERECT AND MAINTAIN DUST CONTROL CURTAINS TO PROTECT OCCUPANTS FROM CONSTRUCTION DUST AND DEBRIS.
 4. REMOVE AND SALVAGE DEBRIS FROM THE SITE DAILY AS IT ACCUMULATES.
 5. ALL DIMENSIONS AND CONDITIONS ARE TO BE VERIFIED IN THE FIELD. ARCHITECT TO BE IMMEDIATELY NOTIFIED OF ANY DISCREPANCIES.
 6. EXISTING CONSTRUCTION ADJACENT TO ITEMS BEING REMOVED TO BE ADEQUATELY PROTECTED AND PATCHED AND REPAIRED AS REQUIRED.
 7. MECHANICAL AND ELECTRICAL EQUIPMENT SHALL BE REMOVED AS DESCRIBED OR IMPLIED ON THE MEP DRAWINGS.
 8. UTILIZE BRACING AND SHORING WHERE NECESSARY TO PREVENT COLLAPSE OF STRUCTURE OR PARTS THEREOF. GENERAL CONTRACTOR IS RESPONSIBLE FOR DESIGN & CONSTRUCTION OF ALL BRACING AND SHORING.
 END OF SECTION

SECTION 06100 - ROUGH CARPENTRY

1. SCOPE INCLUDES THE FOLLOWING:
 A. NAILERS, BLOCKING, MISCELLANEOUS SHIMS, FRAMING, BRIDGING, BARRICADES, TEMPORARY WALLS, STRAPPING, TEMPORARY DOORS AND FRAMES AND ALL OTHER ITEMS UNDER THE CARPENTERS JURISDICTION.
 B. ALL CUTTING, PATCHING, JOBBING, CENTERING AND MAKING TEMPLATES FOR THE WORK.
 2. SUBMITTALS REQUIRED:
 A. CERTIFICATES FOR ALL PRODUCTS SPECIFIED INDICATING COMPLIANCE WITH SPECIFICATION REQUIREMENTS.
 3. MATERIALS SHALL INCLUDE THE FOLLOWING:
 A. TREATED LUMBER: ALL WOOD IN CONTACT WITH OR WITHIN 12" OF CONCRETE OR MASONRY SHALL BE TREATED ON ALL SURFACES, INCLUDING FIELD CUTS, BY DIPPING THE MATERIAL INTO A SOLUTION OF NOT LESS THAN 3% PENTACHLOROPHENOL IN OIL.
 B. FIRE RETARDANT TREATED: ALL WOOD MEMBERS, BLOCKING, BACKING, BUCKS, ETC. CONCEALED IN STUD PARTITIONS OR WALLS, AND ANY OTHER WOOD MEMBERS USED AS A STRUCTURAL ELEMENT, TELEPHONE AND DATA BACKBOARDS SHALL BE PRESSURE IMPREGNATED WITH "NON-COM" AS MFG. BY KOPPER CO., INC., FLAMESCOPE AS MFG. BY J.H. ASTER CO., OR OSMOSE FLAMEPROOF AS MFG. BY OSMOSE WOOD PRESERVING CO. OF AMERICA OR APPROVED EQUAL.
 C. PLYWOOD SHEATHING: ALL PLYWOOD SHEATHING SHALL BE GROUP 1 SPECIES MEETING THE REQUIREMENTS ON U.S. PRODUCT STANDARD PS1-66, OF THE SIZES AND THICKNESS AS SHOWN ON DRAWINGS.
 D. ROUGH HARDWARE: FURNISH ALL ITEMS OF ROUGH HARDWARE CONNECTIONS TO METAL STUDS, BOLTS, ETC. REQUIRED TO COMPLETE WORK. BOLTS, NUTS, AND WASHERS SHALL BE HOT DIPPED GALVANIZED, CONFORMING TO ASTM A193. WASHERS SHALL BE MALLEABLE IRON. HARDWARE FOR ATTACHING BLOCKING TO METAL STUDS SHALL ALSO BE GALVANIZED.
 1. NAILS: COMMON WIRE FOR PLYWOOD SHEATHING, USE BARBED PLYWOOD NAILS. USE GALVANIZED NAILS FOR ALL EXPOSED FRAMING.
 2. BOLTS: STANDARD MILD STEEL SQUARE OF HEXAGONAL HEAD MACHINE BOLTS WITH MATCHING NUTS AND CUT WASHERS AS INDICATED.
 3. LAG BOLTS AND SCREWS: GALVANIZED.
 4. TOGGLE BOLTS AND MASONRY ANCHORS: ANCHORS SHALL BE GALVANIZED MACHINE SCREWS OR BOLTS WITH STANDARD EXPANSION-SHEILD TYPE CONCRETE ANCHORS, PHILLIPS "RED-HEAD" MASONRY ANCHORS AS MFG. BY PHILLIPS DRILL CO., POWER DRIVEN FASTENERS "DRIVE IT" SYSTEM OF THE POWDER POWER TOOL CORP., "RAMSET" SYSTEM OF RAMSET FASTENERS INC., OR APPROVED EQUAL.
 4. BEFORE COMMENCING WORK, CHECK ALL LINES AND LEVELS INDICATED AND SUCH OTHER WORK AS HAS BEEN COMPLETED.
 5. INSTALL ALL WOOD FRAMING AND MISCELLANEOUS BLOCKING, MAKING PROPER PROVISIONS FOR WORK OF OTHER TRADES. DO ALL CUTTING OF WOOD REQUIRED TO ACCOMMODATE PLUMBING, HEATING AND VENTILATION, ELECTRICAL, AND OTHER TRADES. FIT NEATLY AROUND ALL EXPOSED ITEMS, SUCH AS OUTLET BOXES, CONDUIT, PIPES AND DUCT.
 6. LUMBER FASTENINGS:
 A. MINIMUM REQUIREMENTS: NAILING AND BOLTING OF WOOD MEMBERS SHALL CONFORM TO THE MINIMUM REQUIREMENTS OF THE APPLICABLE BUILDING CODE AND AS SHOWN ON DRAWINGS.
 B. BOLTING: BOLTS SHALL BE STANDARD STOCK MACHINE BOLTS CONFORMING TO U.S. BUREAU OF STANDARDS COARSE THREAD SERIES. EXPOSED BOLTS SHALL BE ALL SQUARE OR HEXAGONAL HEADS WITH MACHINING NUTS. ALL BOLT CONNECTIONS SHALL BE TIGHTENED BEFORE FINAL ACCEPTANCE OR IN THE CASE OF CONCEALED LOCATIONS, IMMEDIATELY BEFORE AREA IS SEALED OFF.
 C. FURNISH AND INSTALL ALL ROUGH HARDWARE AS INDICATED OR REQUIRED, INCLUDING CLIPS ANCHORS, HANGERS, BOLTS, TIES, AND PLATES FOR CONNECTING WOOD FRAMING MEMBERS TO WOOD CONCRETE, MASONRY OR STEEL.
 END OF SECTION

SECTION 06200 - FINISH CARPENTRY

1. SCOPE INCLUDES THE FOLLOWING:
 A. ARCHITECTURAL WOOD WORK INCLUDING INTERIOR STANDING AND RUNNING TRIM, COUNTERS AND MISC. ORNAMENTAL ITEMS.
 2. SUBMITTALS REQUIRED:
 A. SHOP DRAWINGS FOR ALL FABRICATED ITEMS.
 B. FINISH SAMPLES FOR ALL MATERIALS.
 3. ALL WORK SHALL COMPLY WITH ARCHITECTURAL WOODWORK INSTITUTE (AWI) "QUALITY STANDARDS" FOR PREMIUM GRADE.
 4. MATERIALS SHALL INCLUDE THE FOLLOWING:
 A. LAMINATE CLAD COUNTER COMPONENTS: 1/8" THICK NEMA LD3, HIGH PRESSURE LAMINATE ON 3/4" HIGH DENSITY PARTICLE BOARD.
 B. HARDWARE: PROVIDE PULLS, HINGES, PUSH PLATES, AND DEAD BOLTS AS SPECIFIED OR IMPLIED ON THE DRAWINGS.
 5. PLUMB, LEVEL, TRUE, AND STRAIGHT WITH NO DISTORTIONS, CUT TO FIT, SCRIBE AND CUT FOR ACCURATE FIT.
 6. INSTALL IN SINGLE, UNJOINED LENGTH FOR RUNS LESS THAN 10'. COPE AT RETURNS AND MITER AT CORNERS.
 7. NAILINGS: BLIND NAIL WHERE POSSIBLE, USE FINE FINISHING NAILS WHERE EXPOSED.
 8. COUNTERS SHALL BE SECURED TO WOOD BLOCKING BY USE OF SCREWS AND ARCHITECTURAL FINISH WASHERS.
 END OF SECTION

SECTION 07200 - INSULATION

1. SCOPE INCLUDES THE FOLLOWING:
 A. INSULATION.
 2. SUBMITTALS REQUIRED:
 A. PRODUCT LITERATURE FOR ALL ITEMS SPECIFIED INCLUDING CERTIFIED TEST REPORTS
 3. APPLICATION OF INSULATION SPECIFIED IN THIS SECTION INCLUDE THE FOLLOWING:
 A. SOUND ATTENUATION BLANKETS INSTALLED AS PART OF THE METAL- FRAMED SYSTEM DRYWALL ASSEMBLIES ARE SPECIFIED IN DIVISION-4 SECTION "SYSTEM DRYWALL".
 4. FIRE PERFORMANCE CHARACTERISTICS: PROVIDE INSULATION MATERIALS WHICH ARE IDENTICAL TO THOSE WHOSE FIRE PERFORMANCE CHARACTERISTICS, AS LISTED FOR EACH MATERIAL OR ASSEMBLY OF WHICH INSULATION IS A PART, HAVE BEEN DETERMINED BY TESTING, PER METHODS INDICATED BELOW, BY UL OR OTHER TESTING AND INSPECTING AGENCY ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION.
 A. SURFACE BURNING CHARACTERISTICS: ASTM E 84
 B. FIRE RESISTANCE RATINGS: ASTM E 119
 C. COMBUSTION CHARACTERISTICS: ASTM E 136.
 5. GENERAL PROTECTION: PROTECT INSULATION FROM PHYSICAL DAMAGE AND FROM BECOMING WET OR SOILED. COMPLY WITH MANUFACTURER'S RECOMMENDATIONS FOR HANDLING, STORAGE AND PROTECTION DURING INSTALLATION.
 6. EXTEND INSULATION FULL THICKNESS AS SHOWN OVER ENTIRE AREA TO BE INSULATED. CUT AND FIT TIGHTLY AROUND OBSTRUCTIONS, AND FILL VOIDS WITH INSULATION. REMOVE PROJECTIONS WHICH INTERFERE WITH PLACEMENT.
 END OF SECTION

SECTION 08110 - FINISH HARDWARE

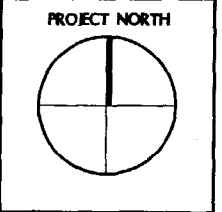
1. SCOPE INCLUDES THE FOLLOWING:
 A. DOOR LOCK AND LATCHSETS
 B. DOOR CLOSERS
 C. MISCELLANEOUS STOPS, PLATBOARDS, HEATHER STRIPPING, THRESHOLDS, AUTO FLUSH BOLTS, ELECTRIC STRIKES, MAGNETIC LOCKS, ETC.
 2. SUBMITTALS REQUIRED:
 A. PRODUCT DATA
 B. FINISH HARDWARE SCHEDULE
 3. SUBSTITUTIONS: MATERIAL OR PRODUCTS SHALL BE AS SPECIFIED. SUBSTITUTIONS WILL NOT BE PERMITTED OTHER THAN AS APPROVED BY THE ARCHITECT.
 4. ALL LABELED HARDWARE FURNISHED SHALL CONFORM TO UNDERWRITERS LABORATORIES LABEL SPECIFICATIONS WHERE CALLED FOR ON THE PLANS AND DOOR SCHEDULE.
 5. NFPA PAMPHLETS #80 AND #101 SHALL BE RECOGNIZED AS A GUIDE FOR FIRE AND SAFETY.
 6. A HARDWARE SCHEDULE SHOWING MANUFACTURERS' NAME AND CATALOGUE NUMBERS FOR ALL ITEMS LISTED SHALL BE SUBMITTED AND APPROVED BY ARCHITECT BEFORE ORDERING ANY HARDWARE.
 7. PRODUCTS: REFER TO SCHEDULE.
 8. KEYING: PROVIDE CONSTRUCTION CYLINDERS DURING CONSTRUCTION. RE-KEY AT PROJECT COMPLETION, TO TENANT MASTER AT ALL STORAGE AND EQUIPMENT ROOMS, ENTRY DOORS AND PER DRAWINGS.
 9. ALL BUILDERS HARDWARE SHALL BE CAREFULLY FITTED, SECURED AND ADJUSTED BY SKILLED MECHANICS IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS. SPECIAL CARE SHALL BE TAKEN TO AVOID DAMAGING SURROUNDING SURFACES. HARDWARE FINISHES SHALL BE ADEQUATELY PROTECTED FROM SOLVENTS, PAINTS, ACIDS, ETC. BY GENERAL CONTRACTOR.
 10. FASTENING OF SUITABLE SIZE QUANTITY AND TYPE SHALL BE PROVIDED TO SECURE HARDWARE IN PROPER POSITION FOR HEAVY USE AND LONG LIFE. FASTENINGS TO BUILDING CONSTRUCTION SHALL BE FURNISHED WITH ANCHORING DEVICES SUITABLE FOR THE CONDITION.
 11. ALL LABELED DOORS SHALL RECEIVE 11 ONS SMOKE SEAL ON JAMBES AND HEAD.
 12. ALL LEVERS SHALL BE CAST.
 13. ALL CLOSERS WHERE POSSIBLE, SHALL BE MOUNTED ON ROOM SIDE OF DOORS. CLOSERS SHALL BE COMMERCIAL MEDIUM GRADE.
 14. PROVIDE LOCKSETS AS NOTED ON PLAN, COORDINATE WITH SECURITY VENDOR. ALL NEW HARDWARE MUST MATCH EXISTING BUILDING STANDARD HARDWARE IN QUALITY AND FINISH.
 15. THE HARDWARE SETS ARE FURNISHED AS INFORMATION AND AS A GUIDE ONLY. THE COMPLETE QUANTITY REQUIREMENTS FOR EACH AND EVERY OPENING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. HARDWARE SETS NOT SHOWN ON THE DRAWINGS FOR NEW DOORS SHALL BE PROVIDED WITH HARDWARE SETS AS INDICATED FOR OTHER SIMILAR PURPOSED ROOMS. CONTRACTOR TO COORDINATE CARD READER QUANTITIES AND LOCATIONS WITH TENANT'S SECURITY VENDOR.
 16. PROVIDE DOOR OPERATING HARDWARE (LEVERS, PANIC BARS, PULLS, PUSH PLATES, HINGERS, ETC.) WHERE INDICATED, TO COMPLY WITH HANDICAP REGULATIONS. THESE DEVICES SHALL BE MADE IDENTIFIABLE TO THE TOUCH BY A TEXTURED SURFACE ON THIS ITEM OBTAINED BY KURLING, ROUGHENING OR BY A MATERIAL APPLIED TO THE SURFACE. TEXTURED SURFACES FOR TACTILE WARNING SHALL BE STANDARD THROUGHOUT THE FACILITY.

17. HARDWARE SETS:

- SET 1: PASSAGE BUTT HINGES (1) LATCHSET (1) DOOR STOP (3) SILENCERS
- SET 2: OFFICE (1) LATCHSET (1) DOORSTOP (1) COAT HOOK (3) SILENCERS
- SET 3: STOREROOM BUTT HINGES (1) LOCKSET (1) DOOR STOP (3) SILENCERS
- SET 4: CLOSET BUTT HINGES PER LEAF (1) CLOSER PER LEAF (1) HALF DUMMY TRIM PER LEAF (1) DOOR STOP PER LEAF
- SET 5: ENTRANCES BUTT HINGES (1) LOCKSET (1) CLOSER (1) DOOR STOP (3) SILENCERS MAGNETIC MORTISE, FAILSAFE MAGNETIC HINGE
- SET 6: PASSAGE BUTT HINGES (1) LATCHSET (1) CLOSER (1) DOOR STOP (3) SILENCERS

END OF SECTION

NO	DATE	REVISIONS
	03.05.04	ISSUED FOR CONSTRUCTION



LIBERTY MUTUAL
 1861 WASHINGTON AVENUE
 PORTLAND, ME 04103

TITLE
SPECIFICATIONS

Cubellis Associates Inc.
 Architect-Engineers
 71 Algonk Avenue
 Boston, MA 02111
 Tel: 617-252-0888
 Fax: 617-252-0889
 www.cubellis.com

DATE: 03.05.04
 DRAWN BY: GA
 CHECKED BY: MGS
 SCALE: NONE

T003

03174

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 C:\Temp\01174_1361w_1003.dwg, Mar 03, 2004 - 4:31pm
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LEGEND

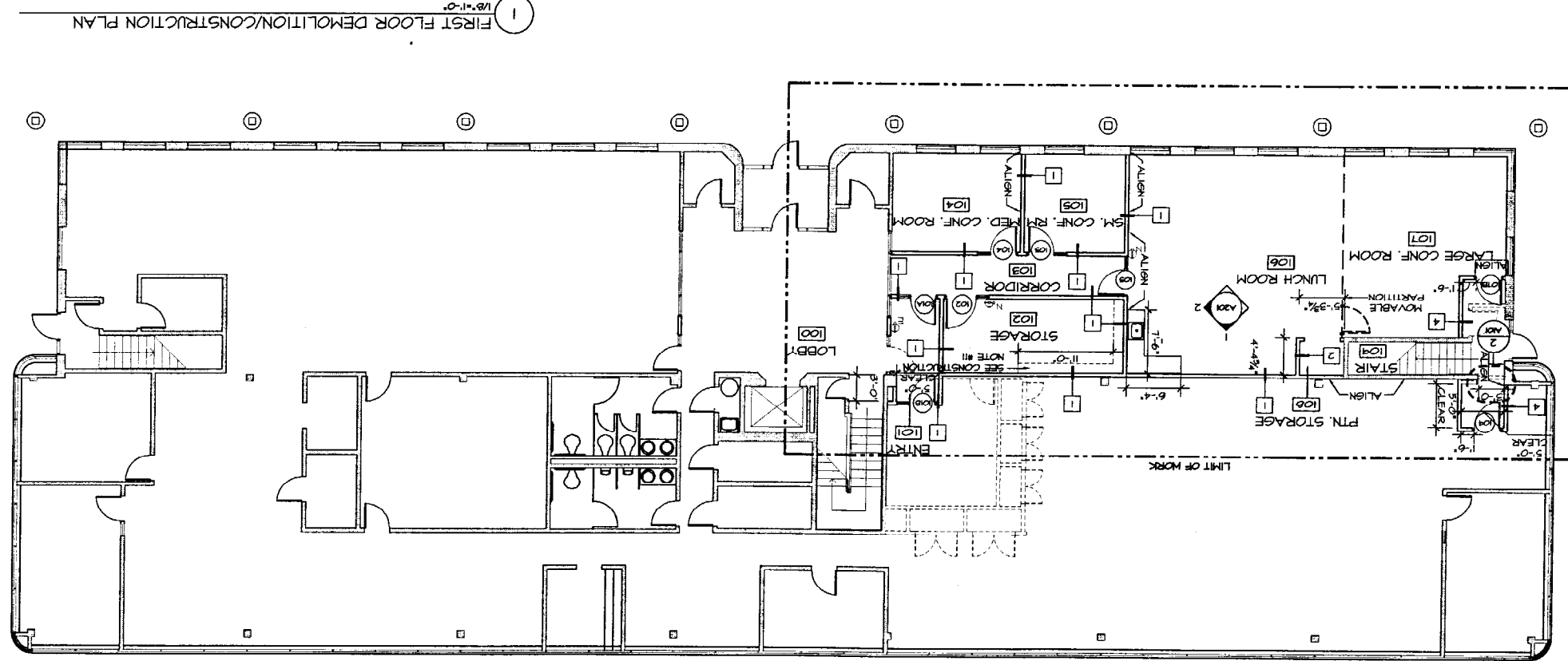
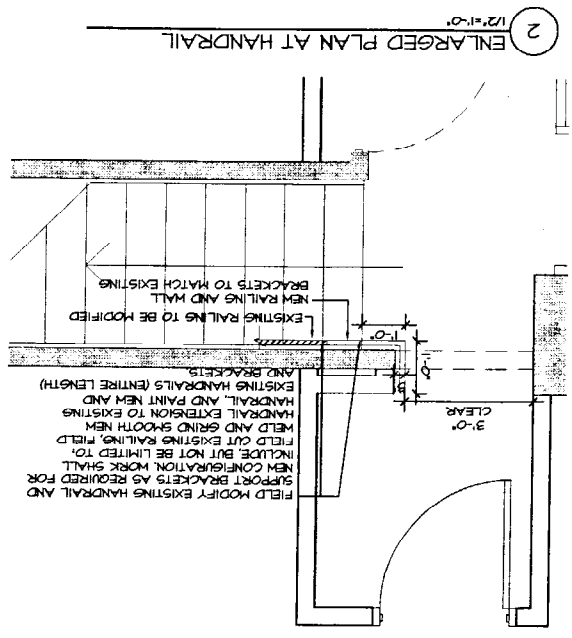
EXISTING WALLS TO REMAIN
 NEW WALLS TO MATCH EXISTING ADJACENT
 EXISTING CONSTRUCTION TO BE REMOVED
 ROOM NAME & NUMBER
 DOOR NUMBER
 NEW GNB PARTITION W/ 1 LAYER 3/8" GNB ON EACH SIDE WOUND ATTENUATION BATT INSULATION FROM FLOOR TO TOP AND BOTTOM FLOOR TO INSIDE OF STRUCTURE ABOVE FLOOR TO INSIDE OF STRUCTURE ABOVE FLOOR TO INSIDE OF EACH PENETRATIONS, THICKNESS TO MATCH EXISTING. NEW GNB PARTITION W/ 1 LAYER 3/8" GNB ON EACH SIDE WOUND ATTENUATION BATT INSULATION FROM FLOOR TO TOP AND BOTTOM FLOOR TO INSIDE OF STRUCTURE ABOVE FLOOR TO INSIDE OF EACH PENETRATIONS, THICKNESS TO MATCH EXISTING. NEW GNB PARTITION TO MATCH EXISTING ADJACENT PARTITIONS.
 MINOR SILL, DRYWALL FINISH ON TOP FACE FROM FLOOR TO INSIDE OF EXISTING NEW GNB PARTITION W/ 1 LAYER 3/8" GNB ON EACH SIDE WOUND ATTENUATION BATT INSULATION FROM FLOOR TO TOP AND BOTTOM FLOOR TO INSIDE OF STRUCTURE ABOVE FLOOR TO INSIDE OF EACH PENETRATIONS, THICKNESS TO MATCH EXISTING. SURFACE MOUNTED FIRE EXTINGUISHER
 * DENOTES NEW

DEMOLITION/CONSTRUCTION NOTES

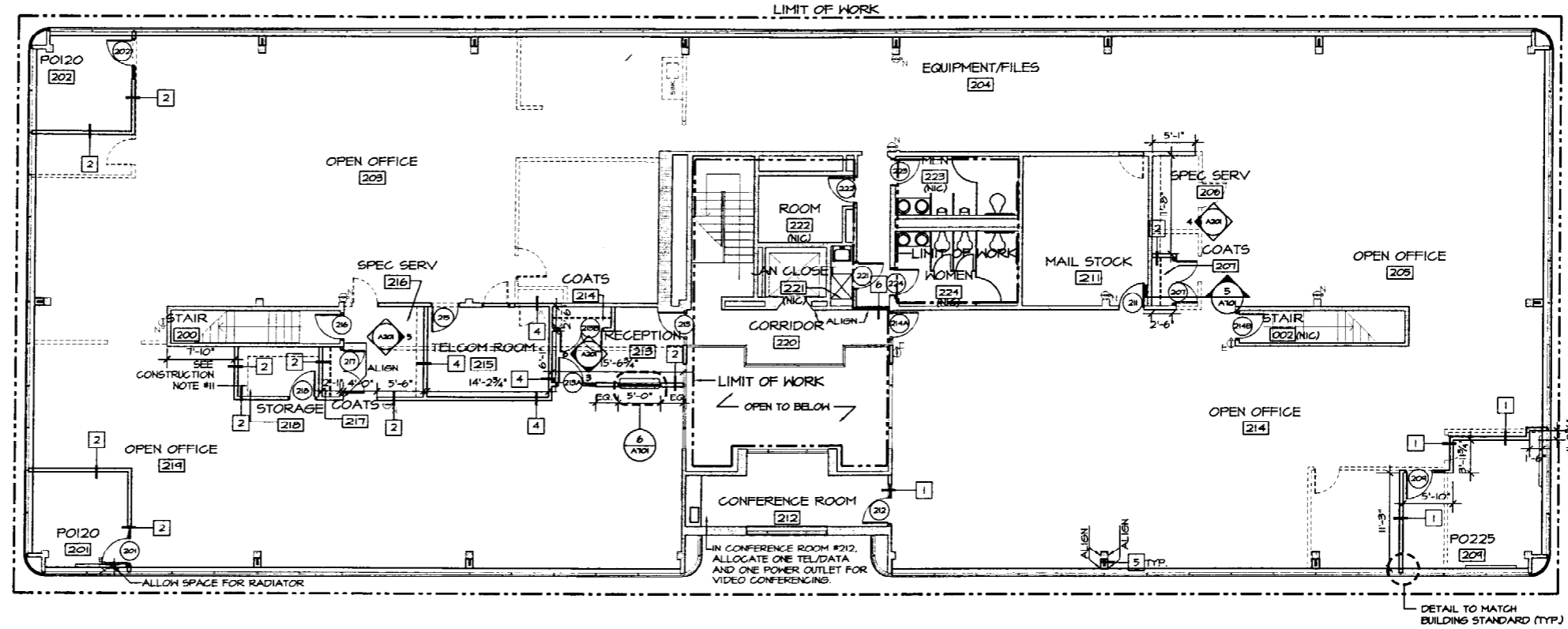
- PROTECT EXISTING CONSTRUCTION TO REMAIN. REPAIR ANY DAMAGE TO EXISTING CONSTRUCTION IN A MANNER WITH NEW ACCEPTABLE TO OWNER.
- VERIFY THAT CONSTRUCTION INDICATED FOR REMOVAL IS NOT BEARING.
- EXISTING DOORS, HARDWARE AND LIGHT FIXTURES THAT ARE REMOVED BUT NOT REUSED SHOULD BE STORED AS DIRECTED BY LANDLORD.
- ANY FIREPROOFING/PROTECTION DISRUBBED BY THIS CONSTRUCTION MUST BE REPLACED/REPAIRED.
- REMOVE FIRE RATED BLOCKING AT ALL LOCATIONS OF PARTITION AND FILL GAPS AT WALL.
- NEW PARTITIONS SHALL BE PLUMB, SQUARE, STRAIGHT AND MOUNTED TO WALLS.
- REPAIR DAMAGED AREAS ADJACENT TO NEW CONSTRUCTION AND DEWALL AREAS ADJACENT TO EXISTING DAMAGED AREAS AT EXISTING DAMAGED GNB SURFACES.
- CONTRACTOR TO NOTIFY THE ARCHITECT OF ANY STARTING AND NOTIFY THE ARCHITECT OF ANY DISCREPANCIES BETWEEN THESE DRAWINGS AND THE ACTUAL CONDITIONS. DO NOT SCALE DRAWINGS. DIMENSIONS SHALL GOVERN. DETAILS SHALL GOVERN OVER PLAN AND ELEVATIONS. LARGE SCALE DETAIL SHALL GOVERN OVER SMALL SCALE PLANS. LARGE SCALE DETAIL SHALL GOVERN OVER SMALL SCALE DETAIL. IF UNABLE TO LOCATE DIMENSIONS FOR ANY ITEM OF WORK, CONSULT THE ARCHITECT PRIOR TO CONSTRUCTION.
- HEIGHTS ARE DIMENSIONED FROM TOP OF EXISTING SLAB, UNLESS OTHERWISE NOTED.
- REPAIR AT LOCATIONS OF DEMOLISHED WALL, CEILING AND FLOOR MOUNTED DEVICES.
- RELOCATE EXISTING WALL MOUNTED DEVICES AT PARTITIONS TO BE REMOVED AS REQUIRED.
- EXISTING DOORS AND HARDWARE MAY BE REUSED WHEREVER POSSIBLE.
- THE STUD RUNNERS HAVE BEEN INSTALLED.
- SALVAGE AND REUSE EXISTING FIRE EXTINGUISHERS WHEREVER POSSIBLE.

DOOR AND FRAME SCHEDULE

NO.	MD	HT	THK	MATT	TYPE	MATT	TYPE	MATT	TYPE	FIRE RATING	LABEL	SET NO	REMARKS
101A	3'-0"	6'-8"	1 3/4"	WOOD	A	HM	2	N/A	5				Card reader w/mag lock
101B	3'-0"	6'-8"	1 3/4"	WOOD	A	HM	2	N/A	5				Card reader w/mag lock
102	3'-6"	6'-9"	1 3/4"	WOOD	A	HM	2	N/A	5				
103	3'-0"	6'-8"	1 3/4"	WOOD	A	HM	2	N/A	5				
104	3'-0"	6'-8"	1 3/4"	WOOD	A	HM	2	N/A	5				
105	3'-0"	6'-8"	1 3/4"	WOOD	A	HM	2	N/A	5				
107B	3'-0"	6'-7"	1 3/4"	WOOD	B	HM	1	C LABEL	5				Card reader w/mag lock
109	3'-0"	6'-7"	1 3/4"	WOOD	B	HM	1	C LABEL	5				Card reader w/mag lock



Cubellis Associates Inc. 271 Adams Avenue Chicago, IL 60601 Tel: 312-331-0888 www.cubellis.com		LIBERTY MUTUAL 1361 WASHINGTON AVENUE, FIRST FLOOR PORTLAND, ME, 04103
TITLE FIRST FLOOR DEMO/CONST. PLAN	SCALE 1/8"=1'-0"	OWNER LIBERTY MUTUAL
DATE 02.20.04	DESIGNED BY MCS	NO. DATE REVISIONS A. DESIGN ISSUED FOR CONSTRUCTION
PROJECT NORTH	DRAWN BY AAD/GA	PROJECT NORTH
A101	03174	PROJECT NORTH



1 SECOND FLOOR DEMOLITION/CONSTRUCTION PLAN
1/8"=1'-0"

LEGEND

--- EXISTING WALLS TO REMAIN
--- NEW WALLS TO MATCH EXISTING ADJACENT.
- - - - EXISTING CONSTRUCTION TO BE REMOVED.

(X) DOOR NUMBER
XXX ROOM NAME & NUMBER

- NEW GMB PARTITION W/ 1 LAYER 3/8" GMB ON EACH SIDE W/ SOUND ATTENUATION BATT INSULATION FROM FLOOR TO UNDERSIDE OF STRUCTURE ABOVE. PROVIDE ACUSTIC SEALANT AT TOP AND BOTTOM OF PARTITION. FILL THE GAPS AT WALL PENETRATIONS. THICKNESS TO MATCH EXISTING.
- NEW GMB PARTITION W/ 1 LAYER 3/8" GMB ON EACH SIDE W/ SOUND ATTENUATION BATT INSULATION FROM FLOOR TO UNDERSIDE OF ACUSTICAL CEILING SYSTEM.
- EXISTING GMB PARTITION TO BE EXTENDED TO UNDERSIDE OF STRUCTURE ABOVE. PROVIDE SOUND ATTENUATION BATT INSULATION AT EXISTING AND EXTENDED PARTITIONS. PROVIDE ACUSTICAL SEALANT AT TOP AND BOTTOM OF PARTITION AND FILL GAPS AT WALL PENETRATIONS. THICKNESS TO MATCH EXISTING.
- NEW 1 HOUR RATED GMB PARTITION-JL DES U414, 3 3/4" x 25 GA METAL STUDS @ 16" OC, W/ 1 LAYER 3/8" GMB, TYPE X, ON EACH SIDE W/ SOUND ATTENUATION BATT INSULATION FROM FLOOR TO UNDERSIDE OF STRUCTURE ABOVE. FINISH JOINTS AND CALK AT PERIMETER.
- NEW GMB PARTITION W/ 1 LAYER 3/8" GMB ON EACH SIDE W/ SOUND ATTENUATION BATT INSULATION FROM FLOOR TO UNDERSIDE OF EXISTING WINDOW SILL. DRYWALL FINISH ON TOP.
- NEW GMB PARTITION TO MATCH EXISTING ADJACENT PARTITIONS.

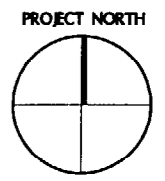
ⓧ SURFACE MOUNTED FIRE EXTINGUISHER
"E" DENOTES EXISTING TO REMAIN
"N" DENOTES NEW

- ### DEMOLITION/CONSTRUCTION NOTES
- PROTECT EXISTING CONSTRUCTION TO REMAIN. REPAIR ANY DAMAGE TO EXISTING CONSTRUCTION IN A MANNER ACCEPTABLE TO THE OWNER OR REPLACE SUCH DAMAGE WITH NEW ACCEPTABLE TO OWNER.
 - VERIFY THAT CONSTRUCTION INDICATED FOR REMOVAL IS NOT BEARING.
 - EXISTING DOORS, HARDWARE AND LIGHT FIXTURES THAT ARE REMOVED BUT NOT REUSED SHOULD BE STORED AS DIRECTED BY LANDLORD.
 - ANY FIREPROOFING/PROTECTION DISTURBED BY THIS CONSTRUCTION MUST BE REPLACED/REPAIRED.
 - PROVIDE FIRE RATED BLOCKING AT ALL LOCATIONS OF MILLWORK, SHELVES OR OTHER ITEMS INDICATED TO BE MOUNTED TO WALLS.
 - NEW PARTITIONS SHALL BE PLUMB, SQUARE, STRAIGHT AND PARALLEL OR PERPENDICULAR TO THE CORE.
 - MAINTAIN RATED CONSTRUCTION AT ALL PENETRATIONS IN RATED WALLS.
 - ALL DIMENSIONS ARE TO FACE OF WALL UNLESS OTHERWISE NOTED.
 - FILL HOLES AND PROVIDE ROUGH AND FINAL FLASH PATCH OF THE FLOOR SLAB FOR AN EVEN CARPET INSTALLATION.
 - EXISTING WINDOW BLINDS TO BE REMOVED, STORED, CLEANED AND REINSTALLED AT CONSTRUCTION COMPLETION.
 - AT STORAGE #102 AND # 210 PROVIDE (5) NEW ADJUSTABLE SHELVES, 14" DEEP (V.I.F.) x FULL WIDTH OF ROOM, UNLESS OTHERWISE NOTED, 3/4" THICK HIGH DENSITY PARTICLE BOARD, PLAN AT ALL FACES. PROVIDE CONTINUOUS HEAVY DUTY SHELF STANDARDS FROM FLOOR TO CEILING. PROVIDE HEAVY DUTY ADJUSTABLE SHELF BRACKETS.
 - CONTRACTOR TO SALVAGE AND REUSE ANY DEMOLISHED EXISTING DOORS AND HARDWARE WHEREVER POSSIBLE.
 - PARTITION LAYOUT IS TO BE APPROVED BY ARCHITECT AFTER THE STUD RUNNERS HAVE BEEN INSTALLED.
 - DOORS TO MAINTAIN 6" FROM ADJACENT WALL ON HINGED SIDE OF DOOR, UNLESS OTHERWISE NOTED.
 - THE ARCHITECT RESERVES THE RIGHT TO MOVE ANY FIXTURE RECEPTACLE OR BUILT-IN OBJECT A REASONABLE DISTANCE PRIOR TO THE WALLS BEING FINISHED.
 - NEW CONSTRUCTION SHALL NOT BE MECHANICALLY FASTENED (VIA SCREWS, NAILS, ETC.) TO EXISTING ALUMINUM FRAMES AT BUILDING PERIMETER.
 - REMOVE EXISTING CARPET AND BASE AT AREAS TO RECEIVE NEW FLOORING AND BASE, OR AS NOTED ON DRAWINGS.
 - REMOVE AND DISPOSE OF EXISTING CEILING TILE AND GRID AT AREAS TO RECEIVE NEW CEILING TILE AND GRID OR AS NOTED ON DRAWINGS. SEE SHEET A409. RETAIN EXISTING TILES ONLY AS REQUIRED TO REPLACE EXISTING DAMAGED CEILING TILES WITHIN LIMIT OF WORK LINE.
 - REPAIR DAMAGE TO EXISTING WALLS AT AREAS OF DEMOLITION. AREAS ADJACENT TO NEW CONSTRUCTION AND AT EXISTING DAMAGED GMB SURFACES.
 - CONTRACTOR TO INSPECT THE AREA OF WORK PRIOR TO STARTING AND NOTIFY THE ARCHITECT OF ANY DISCREPANCIES BETWEEN THESE DRAWINGS AND THE ACTUAL CONDITIONS. DO NOT SCALE DRAWINGS. DIMENSIONS SHALL GOVERN. DETAILS SHALL GOVERN OVER PLAN AND ELEVATIONS. LARGE SCALE PLANS SHALL GOVERN OVER SMALL SCALE PLANS. LARGE SCALE DETAIL SHALL GOVERN OVER SMALL SCALE DETAIL. IF UNABLE TO LOCATE DIMENSIONS FOR ANY ITEM OF WORK, CONSULT THE ARCHITECT PRIOR TO CONSTRUCTION.
 - HEIGHTS ARE DIMENSIONED FROM TOP OF EXISTING SLAB, UNLESS OTHERWISE NOTED.
 - PATCH/REPAIR AT LOCATIONS OF DEMOLISHED WALL CEILING AND FLOOR MOUNTED DEVICES.
 - RELOCATE EXISTING WALL MOUNTED DEVICES AT PARTITIONS TO BE REMOVED AS REQUIRED.
 - CENTER NEW PARTITIONS ON MULLIONS, TYPICAL.
 - SALVAGE AND REUSE EXISTING FIRE EXTINGUISHERS WHEREVER POSSIBLE.

DOOR AND FRAME SCHEDULE

NO.	DOOR				FRAME	FRAME	HARDWARE			REMARKS
	SIZE	WD	HGT	THK			MATL	TYPE	FIRE RATING LABEL	
201	3'-0"	6'-8"	1 3/4"	WOOD	A	HM	2	N/A	2	
202	3'-0"	6'-8"	1 3/4"	WOOD	A	HM	2	N/A	2	
207	PR 2'-6"	6'-8"	1 3/4"	WOOD	A	HM	1	N/A	4	
204	3'-0"	6'-8"	1 3/4"	WOOD	A	HM	2	N/A	2	
212	3'-0"	6'-8"	1 3/4"	WOOD	I	HM	2	N/A	1	
213	3'-0"	6'-8"	1 3/4"	WOOD	A	WD	--	N/A	5	Existing to remain
215A	3'-0"	6'-8"	1 3/4"	WOOD	A	HM	2	N/A	1	Card reader with magnetic lock
215B	PR 2'-6"	6'-8"	1 3/4"	WOOD	A	HM	1	N/A	4	
214A	3'-0"	6'-8"	1 3/4"	WOOD	A	WD	--	N/A	5	Existing to remain. Modify existing hardware for card reader installation with magnetic lock.
214B	3'-0"	6'-8"	1 3/4"	WOOD	B	HM	1	ETR	--	Existing to remain
215	3'-0"	6'-8"	1 3/4"	WOOD	A	HM	1	N/A	5	Card reader with magnetic lock
216	3'-0"	6'-8"	1 3/4"	WOOD	B	HM	1	ETR	--	Existing to remain. Modify existing hardware for card reader installation with magnetic lock.
217	PR 2'-6"	6'-8"	1 3/4"	WOOD	A	HM	1	N/A	4	
218	3'-0"	6'-8"	1 3/4"	WOOD	A	HM	1	N/A	3	
221	3'-0"	6'-8"	1 3/4"	WOOD	A	HM	--	N/A	--	Existing to remain
222	3'-0"	6'-8"	1 3/4"	WOOD	A	HM	--	N/A	--	Existing to remain
223	3'-0"	6'-8"	1 3/4"	WOOD	A	HM	--	N/A	--	Existing to remain
224	3'-0"	6'-8"	1 3/4"	WOOD	A	HM	--	N/A	--	Existing to remain

NO.	DATE	REVISIONS A DESCRIPTION FOR CONSTRUCTION



LIBERTY MUTUAL
1361 WASHINGTON AVENUE, SECOND FLOOR
PORTLAND, ME, 04103

TITLE
SECOND FLOOR DEMO/CONST. PLAN

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A102

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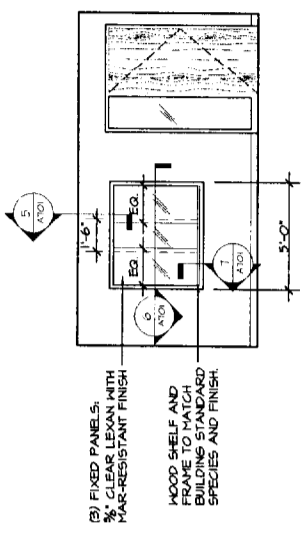
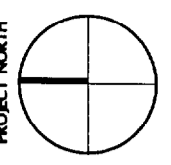
Project No: 022304
 Date: 02/23/04

Drawn By: CA
 Checked By: MCS
 Scale: 1/4"=1'-0"

INTERIOR ELEVATIONS

OWNER: LIBERTY MUTUAL
 1361 WASHINGTON AVENUE
 PORTLAND, MAINE

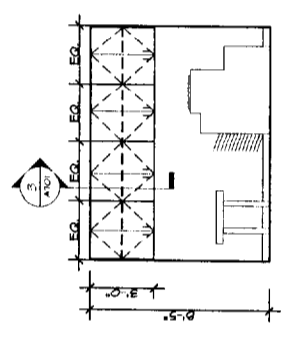
NO	DATE	REVISIONS
1	03/05/04	ISSUED FOR CONSTRUCTION



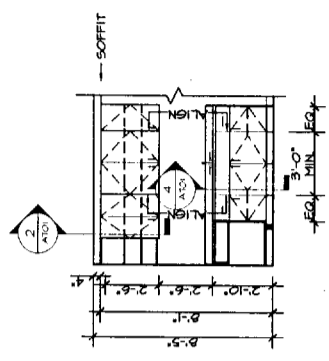
(5) FIXED PANELS,
 3/4" CLEAR LEXAN WITH
 PAK-RESISTANT FINISH

HOOD SHELF AND
 FRAME TO MATCH
 BUILDING STANDARD
 SPECIES AND FINISH.

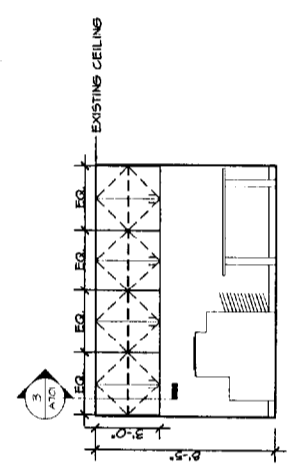
3 ELEVATION AT RECEPTION WINDOW
 1/4"=1'-0"



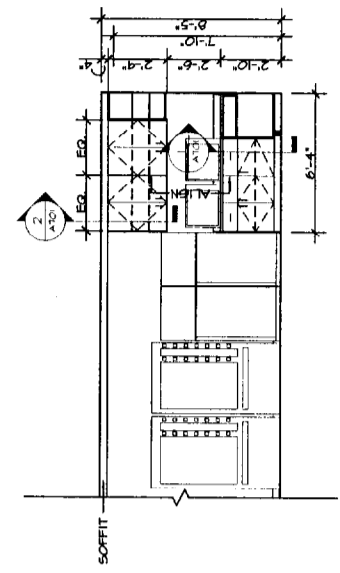
5 ELEVATION AT SPEC. SERV. #216
 1/4"=1'-0"



2 LUNCHROOM ELEVATION
 1/4"=1'-0"



4 ELEVATION AT SPEC. SERV. #206
 1/4"=1'-0"



1 LUNCHROOM ELEVATION
 1/4"=1'-0"

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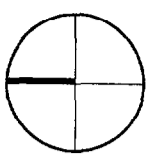
A401

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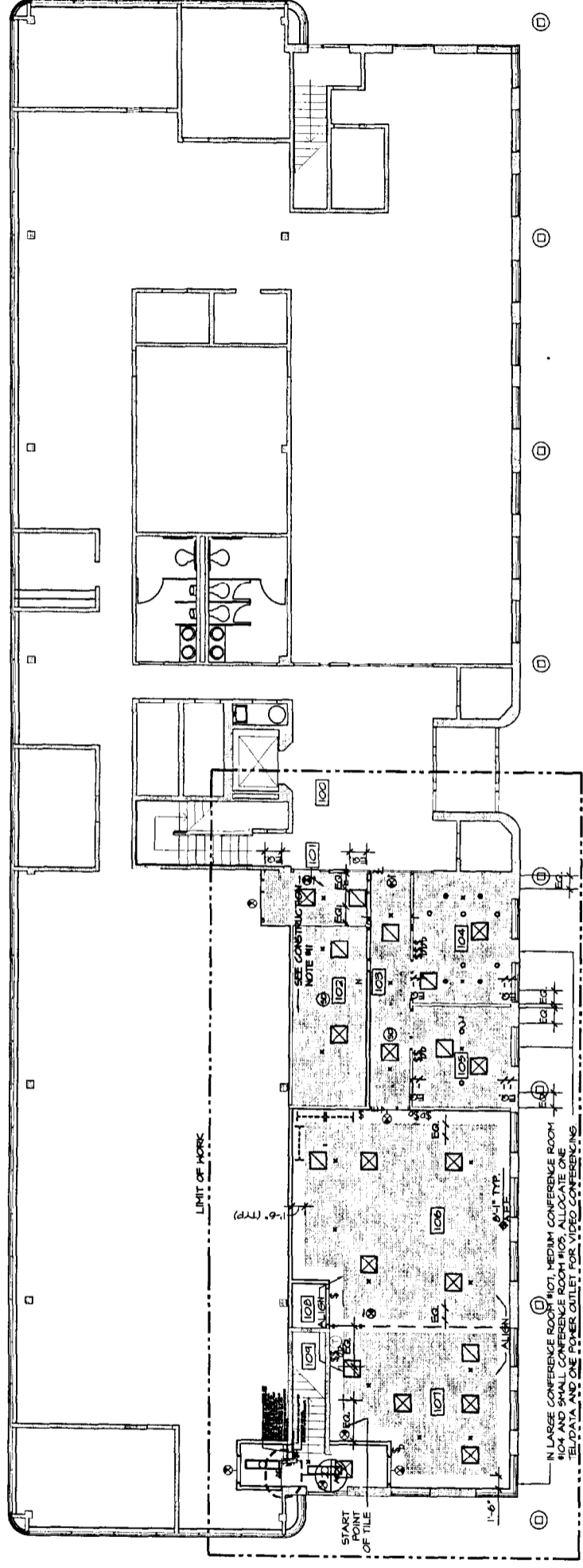
DATE: 01/28/04
 DRAWN BY: AAD/GA
 CHECKED BY: MCS
 SCALE: 1/8"=1'-0"
REFLECTED CEILING PLAN
FIRST FLOOR

OWNER: LIBERTY MUTUAL
 161 WASHINGTON AVENUE, FIRST FLOOR
 PORTLAND, ME, 04103

PROJECT NORTH



NO	DATE	REVISIONS
1	01/05/04	ISSUED FOR CONSTRUCTION



















1 FIRST FLOOR REFLECTED CEILING PLAN
 1/8" = 1'-0"

REFLECTED CEILING LEGEND

- THIS PLAN IS FOR LIGHT FIXTURE AND SWITCH LOCATIONS ONLY. REFER TO MEP DRAWINGS FOR ADDITIONAL INFORMATION AND SYMBOLS LEGEND.
- ADJUST CEILING TILES AND REPLACE DIRTY, STAINED OR DAMAGED TILES AND REPAIR GRID AS REQUIRED WITHIN LIMIT OF WORK LINES.
- REMOVE MISC. DEBRIS HANGING FROM CORNERS OF CEILING GRID, TILES, DIFFUSERS, SPRINKLER HEADS, TYP.
- NEW SPRINKLER HEADS, LIGHT FIXTURES, DIFFUSERS AND CEILING MOUNTED ITEMS SHALL BE CENTERED IN CEILING TILES (EXCEPT AS SHOWN AT TAB FILE LOCATION).
- NEW CEILING HEIGHTS TO MATCH EXISTING ADJACENT (0'-5" AFF) UNLESS OTHERWISE NOTED ON DRAWINGS.
- PATCH AND REPAIR EXISTING A.C.P. AS REQUIRED TO ACCOMMODATE NEW PARTITIONS, AND STRUCTURAL, AND MEP WORK.

REFLECTED CEILING LEGEND

	DOWNLIGHT		EXISTING 2X2 ACOUSTIC CEILING PANEL SYSTEM TO REMAIN
	HALL WASHER		NEW 2X2 ACOUSTIC CEILING PANEL SYSTEM TO MATCH EXISTING
	2X2 FLUORESCENT FIXTURE		EXIT SIGN
	2X4 FLUORESCENT FIXTURE		NEW GRID SOFFIT
	1X4 FLUORESCENT FIXTURE		
	UNDER-CABINET LIGHTING		
	THERMOSTAT		
	SPRINKLER HEAD		
	SINGLE POLE SWITCH		
	DEVOTES DIMMER		
	2X2 AIR SUPPLY GRILLE		
	2X2 AIR RETURN GRILLE		

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A402

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 Tel: 212-693-0000
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 www.cubellis.com

Architect
 Project Engineer

**SECOND FLOOR
 REFLECTED CEILING
 PLAN**

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

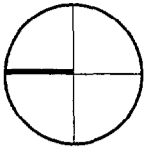
DATE: 01/28/04

DRYAN BY
 AAD/GA
 MCS

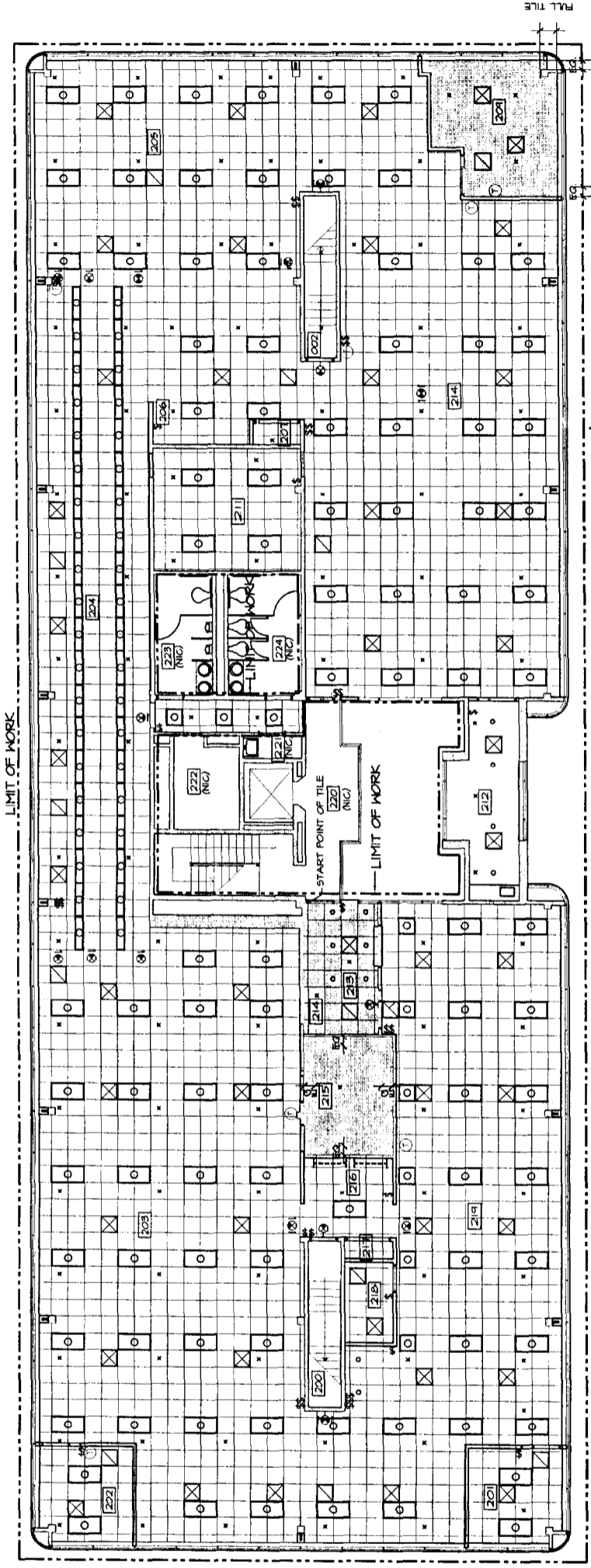
LIBERTY MUTUAL
 1961 WASHINGTON AVENUE, SECOND FLOOR
 PORTLAND, ME, 04103

OWNER: LIBERTY MUTUAL

PROJECT NORTH



NO.	DATE	REVISIONS
A	03/04	ISSUED FOR CONSTRUCTION



1 SECOND FLOOR REFLECTED CEILING PLAN
 1/8"=1'-0"

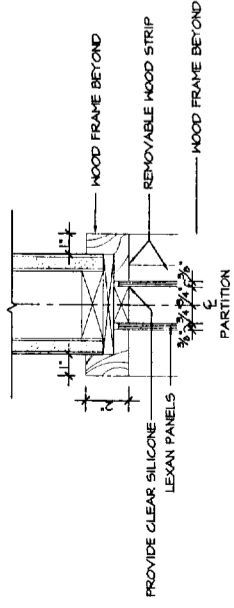
REFLECTED CEILING LEGEND

- THIS PLAN IS FOR LIGHT FIXTURE AND SWITCH LOCATIONS ONLY. REFER TO NEF DRAWINGS FOR ADDITIONAL INFORMATION AND SYMBOLS LEGEND.
- ADJUST CEILING TILES AND REPLACE DIRTY, STAINED OR DAMAGED TILES AND REPAIR GRID AS REQUIRED WITHIN LIMIT OF WORK LINES.
- REMOVE MISC. DEBRIS HANGING FROM CORNERS OF CEILING GRID, TILES, DIFFUSERS, SPRINKLER HEADS, TYP.
- NEW SPRINKLER HEADS, LIGHT FIXTURES, DIFFUSERS AND CEILING MOUNTED ITEMS SHALL BE CENTERED IN CEILING TILES (EXCEPT AS SHOWN AT TAB FILE AREA #304).
- NEW CEILING WEIGHTS TO MATCH EXISTING ADJACENT (8'-5" AFF) UNLESS OTHERWISE NOTED ON DRAWINGS.
- PATCH AND REPAIR EXISTING A.C.F. AS REQUIRED TO ACCOMMODATE NEW PARTITIONS.

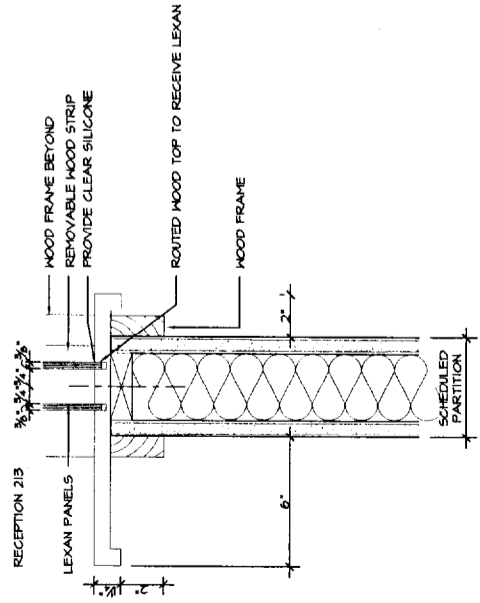
REFLECTED CEILING LEGEND

○	DOWNLIGHT
○	MALL WASHER
○	2X2 FLUORESCENT FIXTURE
○	2X4 FLUORESCENT FIXTURE
○	1X4 FLUORESCENT FIXTURE
—	UNDER-CABINET LIGHTING
⊕	THERMOSTAT
⊗	SPRINKLER HEAD
⊙	SINGLE POLE SWITCH
⊕	"D" DENOTES DIMMER
⊗	2X2 AIR SUPPLY GRILLE
⊗	2X2 AIR RETURN GRILLE
⊗	EXISTING 2X2 ACOUSTIC CEILING PANEL SYSTEM TO REMAIN
⊗	NEW 2X2 ACOUSTIC CEILING PANEL SYSTEM TO MATCH EXISTING
⊗	EXIT SIGN
⊗	NEW GNB SOFFIT

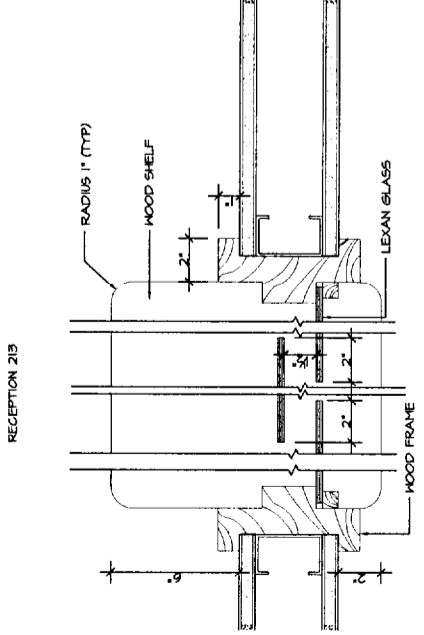
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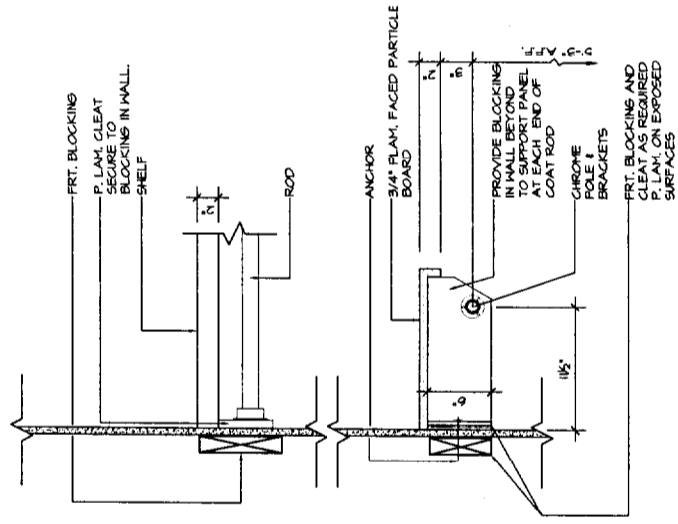
8 HEAD DETAIL @ RECEPTION OPENING
1/12"=1'-0"



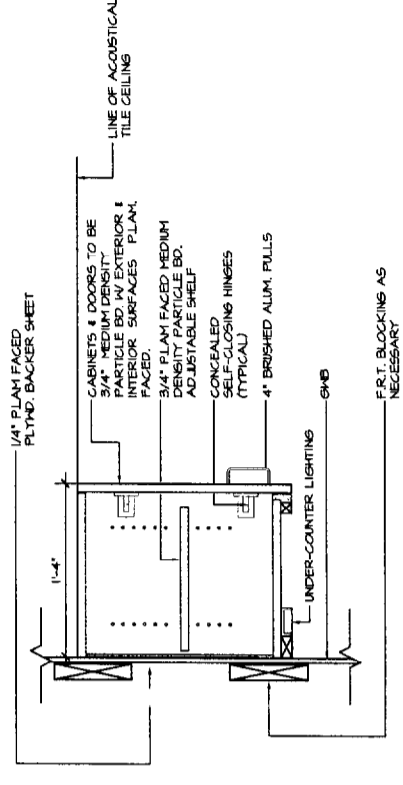
7 SILL DETAIL @ RECEPTION OPENING
1/12"=1'-0"



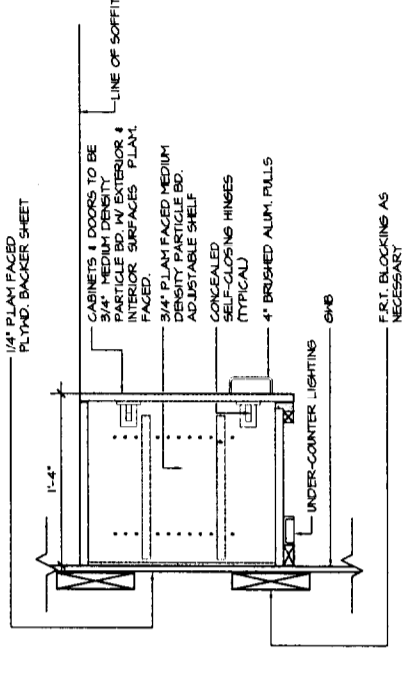
6 PLAN DETAIL @ RECEPTION OPENING
1/12"=1'-0"



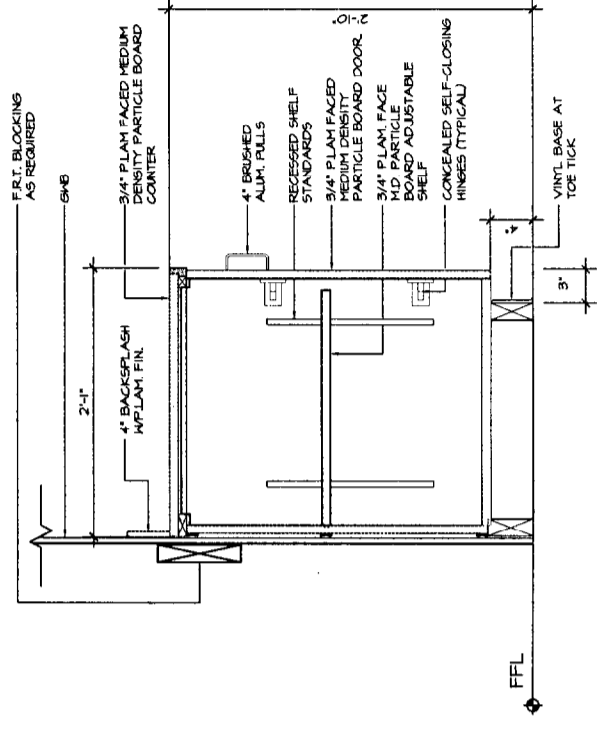
5 DETAIL AT COAT ROD AND SHELF
1/12"=1'-0"



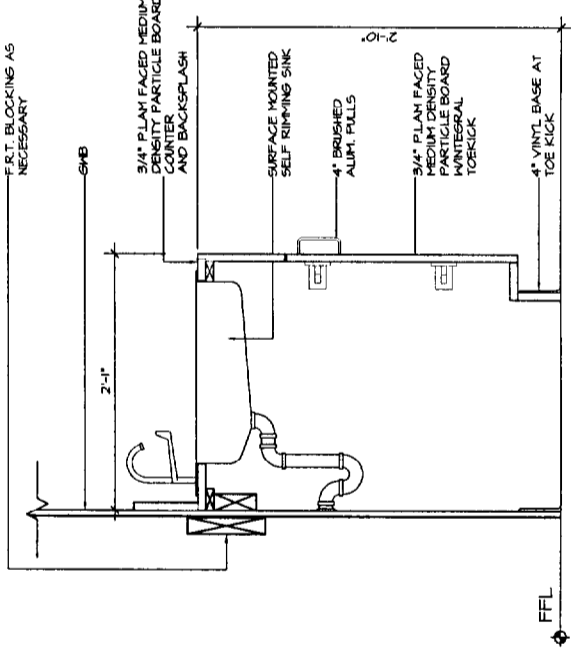
3 DETAIL AT UPPER CABINETS AT SPEC. SERV.
1/12"=1'-0"



2 DETAIL AT UPPER CABINETS AT LUNCHROOM
1/12"=1'-0"



1 DETAIL AT LOWER CABINET
1/12"=1'-0"



4 DETAIL AT SINK
1/12"=1'-0"

LIBERTY MUTUAL
661 WASHINGTON AVENUE
PORTLAND, MAINE

MISCELLANEOUS
DETAILS

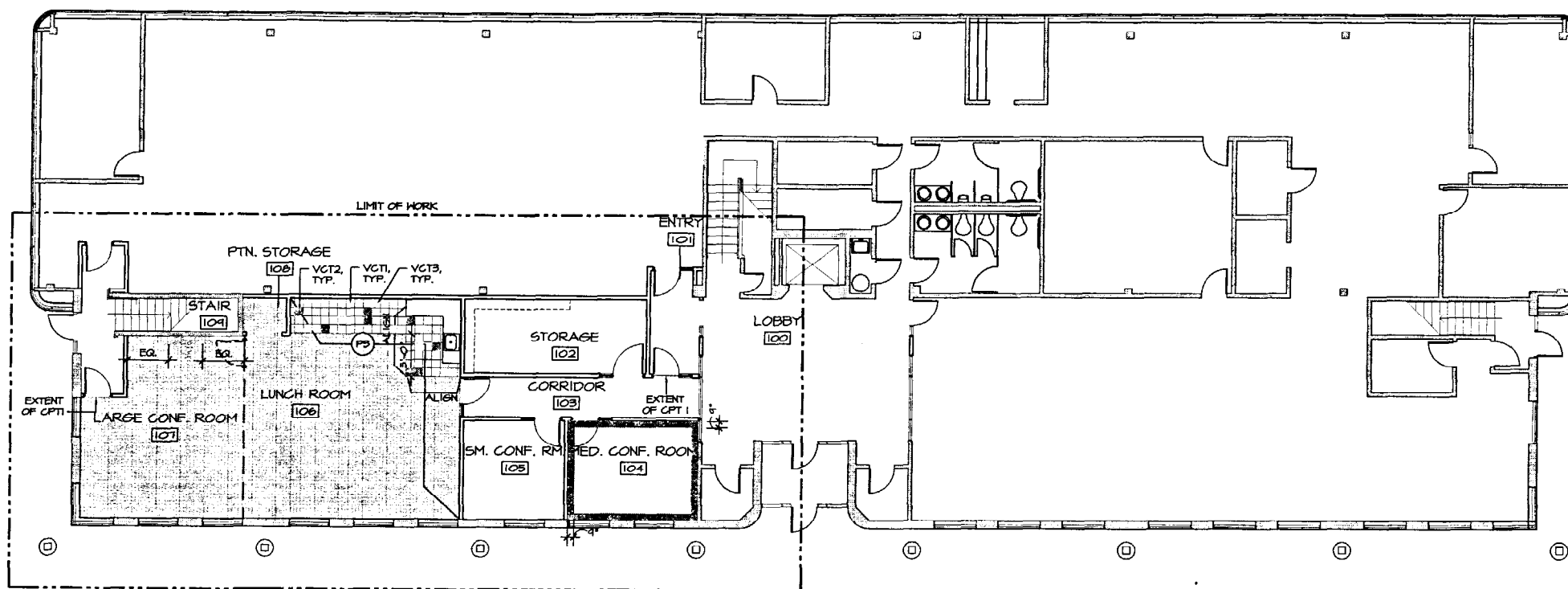
Cubellis Associates Inc.
271 Middle Avenue
Boston, MA 02111
Tel: 617-552-0000
www.cubellis.com

A701
03174

NO.	DATE	REVISIONS
1	03/04	ISSUED FOR CONSTRUCTION

PROJECT NORTH

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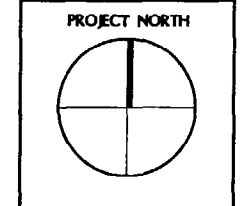
FINISH LEGEND	
	WALL FINISH
	CPT1
	CPT2
	CPT3
	CPT4

- FINISH NOTES**
- NEW AND EXISTING SURFACES TO BE PAINTED OR POLYMYXED SHALL RECEIVE (1) ONE COAT PRIMER AND TWO (2) FINISH COATS.
 - CONFIRM THAT WALLS HAVE BEEN PATCHED AND PROPERLY PREPARED TO RECEIVE FINISH. THE PAINTER SHALL REPORT TO THE CONTRACTOR ANY AREAS THAT ARE NOT READY TO RECEIVE PAINT.
 - GWB SURFACES PAINTED WITH STANDARD PAINT SHALL BE LATEX BASE, EGGSHELL FINISH.
 - METAL SURFACES SHALL BE PAINTED WITH DIRECT TO METAL ALKYLID PAINT, SEMI GLOSS FINISH.
 - SEAM BETWEEN ADJOINING CARPETS TO BE AT CENTER LINE OF DOOR AND/OR BUTT TIGHT TO EXISTING FLOORING TO REMAIN, UNLESS OTHERWISE NOTED.
 - PROVIDE CLEAR PLASTIC CORNER GUARDS AT ALL OUTSIDE GWB CORNERS.

FINISH SCHEDULE			
CODE	ITEM	DESCRIPTION	LOCATION
CPT1	BROADLOOM	MANUFACTURER: SHAH COLOR: 45030 PROXY	THROUGHOUT UNLESS OTHERWISE NOTED.
CPT2	CARPET TILE	MANUFACTURER: SHAH COLOR: 45030 PROXY	AS NOTED ON PLAN
CPT3	CARPET TILE	MANUFACTURER: SHAH COLOR: 40185 RETIREMENT	AS NOTED ON PLAN
CPT4	BROADLOOM	MANUFACTURER: SHAH COLOR: 52850 INSTALL WITH CARPET PAD	AS NOTED ON PLAN
VCT1	VINYL COMPOSITION TILE	MANUFACTURER: ARMSTRONG STONETEX EXCELON COLOR: 52143, SANDSTONE TAN	LUNCHROOM 106 AS NOTED ON PLAN
VCT2	VINYL COMPOSITION TILE	MANUFACTURER: ARMSTRONG STONETEX EXCELON COLOR: 52153, WARM GREEN	AS NOTED ON PLAN
VCT3	VINYL COMPOSITION TILE	MANUFACTURER: ARMSTRONG STONETEX EXCELON COLOR: 52141, PUMICE STONE	AS NOTED ON PLAN
P1	POLYMYX	MANUFACTURER: POLYMYX COLOR: ZH-000126	THROUGHOUT LIMIT OF WORK EXCEPT AT STAIR 104, LOBBY 100, ENTRY 101 AND NON LM SIDE OF NEW DIVISION PARTITION.
P2	POLYMYX	MANUFACTURER: POLYMYX COLOR: P2L-C111 (GREEN)	ACCENT AS NOTED ON PLAN.
P3	PAINT	MANUFACTURER: BENJAMIN MOORE COLOR: LENOX TAN HG-44	ACCENT AS NOTED ON PLAN.
P4	PAINT	MANUFACTURER: BENJAMIN MOORE COLOR: GRAY HORSE 2140-30	ACCENT AS NOTED ON PLAN.
P5	PAINT	BENJAMIN MOORE STORM CLOUD GRAY 2140-40	METAL DOOR FRAMES.
P6	PAINT	MANUFACTURER: BENJAMIN MOORE COLOR: WHITE	GWB CEILINGS/SOFFITS THROUGHOUT.
VB	VINYL BASE	MANUFACTURER: ROPPE COLOR: P1B3 BLACK-BROWN	AT ALL AREAS TO RECEIVE NEW FLOORING.
FLAM1	PLASTIC LAMINATE	MANUFACTURER: WILSONART COLOR: EVENING TIGRIS 4674-60	LUNCHROOM, STORAGE & COATS
FLAM2	PLASTIC LAMINATE	MANUFACTURER: WILSONART COLOR: NATURAL TIGRIS 4669-60	FLAM AT SPEC. SERV.

1 FIRST FLOOR FINISH PLAN
1/8"=1'-0"

NO.	DATE	REVISIONS
1	03/28/04	ISSUED FOR CONSTRUCTION



LIBERTY MUTUAL
1361 WASHINGTON AVENUE, FIRST FLOOR
PORTLAND, ME, 04103

LIBERTY MUTUAL
OWNER

TITLE
FIRST FLOOR FINISH PLAN

SCALE
1/8"=1'-0"

Cubellis Associates Inc.
Architects Interiors Engineers
771 Atlantic Avenue
Chicago, IL 60607
Tel: 67-338-0077
Fax: 67-338-0088
www.cubellis.com

DATE
01/28/04

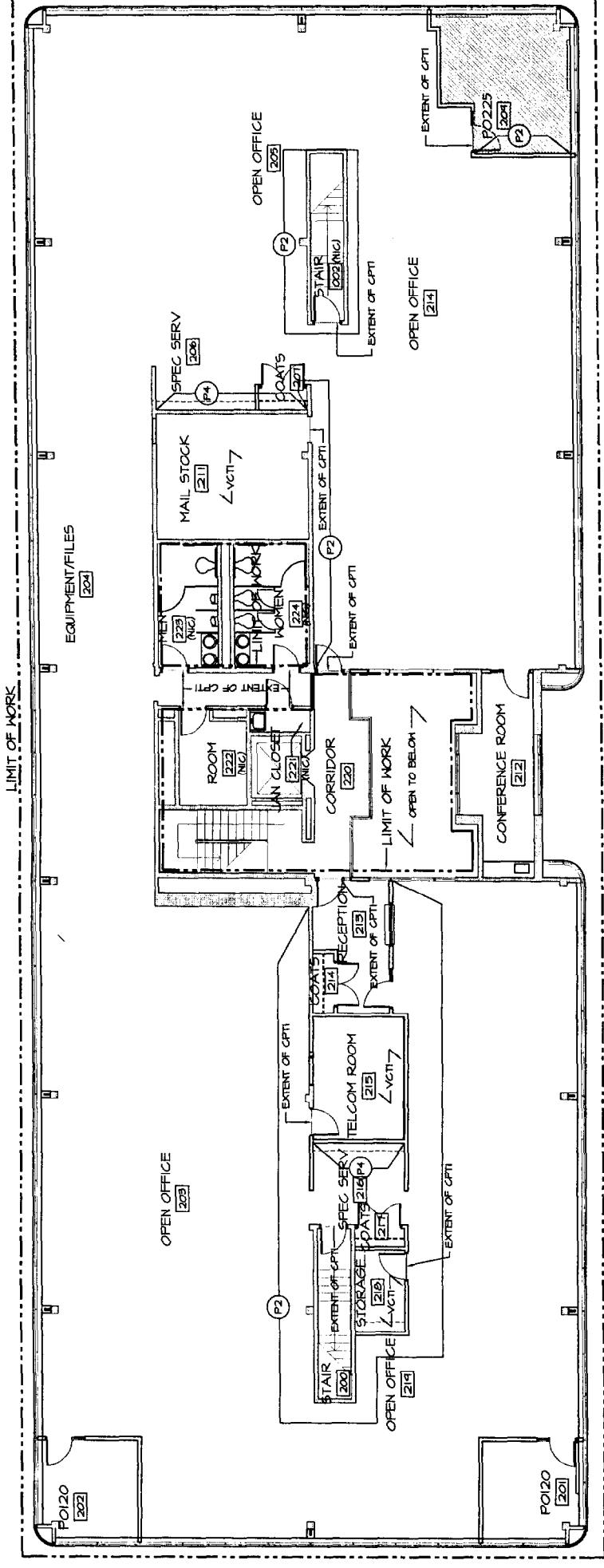
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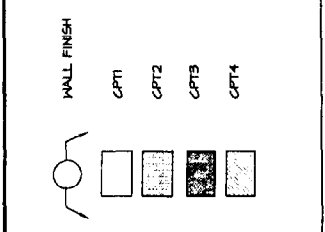
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1 SECOND FLOOR FINISH PLAN
1/8"=1'-0"

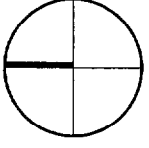
CODE	ITEM	DESCRIPTION	LOCATION
CPT1	BROADLOOM	MANUFACTURER: SHAW COLOR: 45030 PROXY	THROUGHOUT UNLESS OTHERWISE NOTED.
CPT2	CARPET TILE	MANUFACTURER: SHAW COLOR: 45030 PROXY	AS NOTED ON PLAN
CPT3	CARPET TILE	MANUFACTURER: SHAW COLOR: 9035 RETIREMENT	AS NOTED ON PLAN
CPT4	BROADLOOM	MANUFACTURER: SHAW COLOR: 52890	AS NOTED ON PLAN
VC11	VINYL COMPOSITION TILE	MANUFACTURER: ARNSTEONG EXCELON COLOR: 52143 SANDSTONE TAN	LUNcheon ROOM AS NOTED ON PLAN
VC12	VINYL COMPOSITION TILE	MANUFACTURER: ARNSTEONG EXCELON COLOR: 52153 MARSH GREEN	AS NOTED ON PLAN
VC13	VINYL COMPOSITION TILE	MANUFACTURER: ARNSTEONG EXCELON COLOR: 52141, RAINCE STONE	AS NOTED ON PLAN
P1	POLYNTX	MANUFACTURER: POLYNTX COLOR: 2H-000126	THROUGHOUT LIMIT OF WORK. EXCEPT AT STAIR 101, LOBBY 100, AND NON LIT SIDE OF NEW DIVISION PARTITION.
P2	POLYNTX	MANUFACTURER: POLYNTX COLOR: P2L-CITRUS GREEN	ACCENT AS NOTED ON PLAN
P3	PAINT	MANUFACTURER: BENJAMIN MOORE COLOR: LEISA TANTON-4	ACCENT AS NOTED ON PLAN
P4	PAINT	MANUFACTURER: BENJAMIN MOORE COLOR: GRAY HORSE 2H-0-30	ACCENT AS NOTED ON PLAN
P5	PAINT	MANUFACTURER: BENJAMIN MOORE COLOR: STORM CLOUD GRAY 2H-0-40	METAL DOOR FRAMES.
P6	PAINT	MANUFACTURER: BENJAMIN MOORE COLOR: WHITE	6#B CEILING/SOFFITS THROUGHOUT.
VB	VINYL BASE	MANUFACTURER: ROPPE COLOR: P183 BLACK-BROWN	AT ALL AREAS TO RECEIVE NEW FLOORING.
PLA#1	PLASTIC LAMINATE	MANUFACTURER: MILSONART COLOR: EVENING TIGRIS 4614-60	LUNcheon ROOM STORAGE & COATS
PLA#2	PLASTIC LAMINATE	MANUFACTURER: MILSONART COLOR: NATURAL TIGRIS 4664-60	PLAY AT SPEC. SERV.

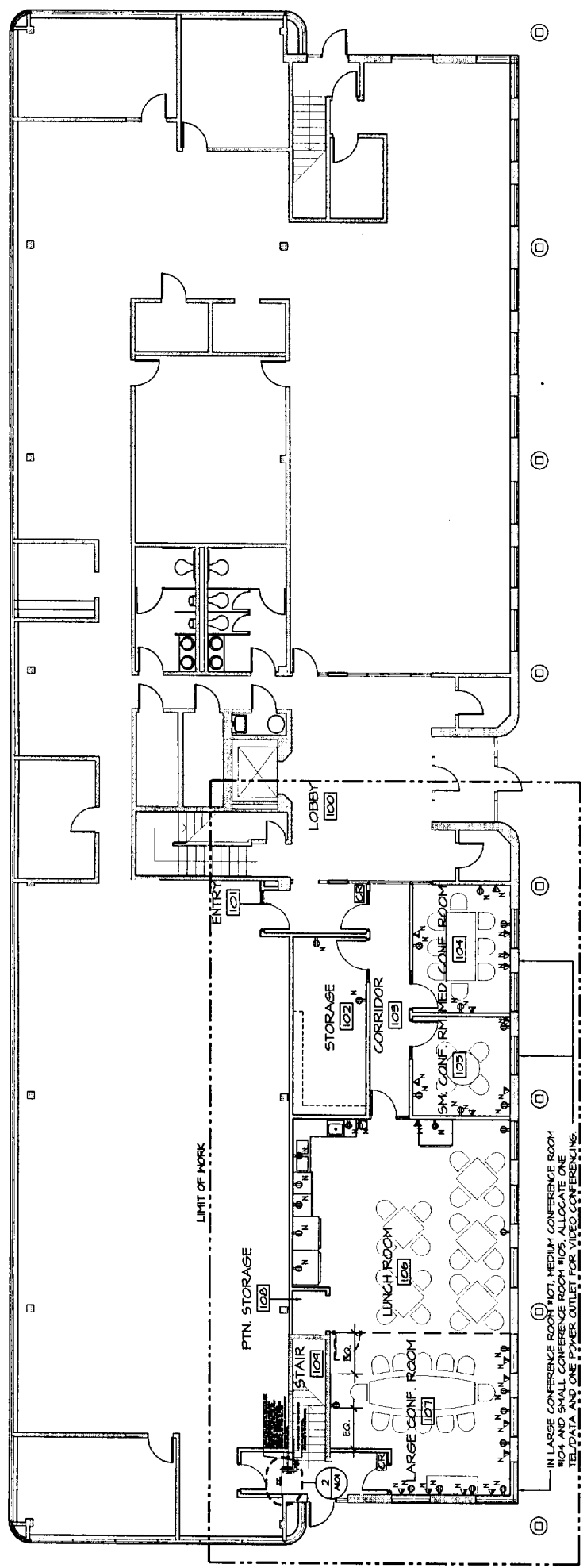
FINISH LEGEND



FINISH NOTES

1. NEW AND EXISTING SURFACES TO BE PAINTED OR POLYNTXED SHALL RECEIVE (1) ONE COAT PRIMER AND TWO (2) FINISH COATS.
2. CONFIRM THAT WALLS HAVE BEEN PATCHED AND PROPERLY PREPARED TO RECEIVE FINISH. THE PAINTER SHALL REPORT TO THE CONTRACTOR ANY AREAS THAT ARE NOT READY TO RECEIVE PAINT.
3. 6#B SURFACES PAINTED WITH STANDARD PAINT SHALL BE LATEX BASE, EGGSHELL FINISH.
4. METAL SURFACES SHALL BE PAINTED WITH DIRECT TO METAL ALKYD PAINT, SEMI GLOSS FINISH.
5. SEAM BETWEEN ADJOINING CARPETS TO BE AT CENTER LINE OF DOOR AND/OR BUTT TIGHT TO EXISTING FLOORING TO REMAIN UNLESS OTHERWISE NOTED.
6. PROVIDE CLEAR PLASTIC CORNER GUARDS AT ALL OUTSIDE 6#B CORNERS.

DATE 01/28/04 DRAWN BY AAD/CA CHECKED BY MCS SCALE 1/8"=1'-0" TITLE FIRST FLOOR OUTLET LOCATION PLAN OWNER LIBERTY MUTUAL 861 WASHINGTON AVENUE, FIRST FLOOR PORTLAND, ME 04103 LIBERTY MUTUAL	PROJECT NORTH 	NO. DATE REVISIONS A 03/04 ISSUED FOR CONSTRUCTION	A911 03174



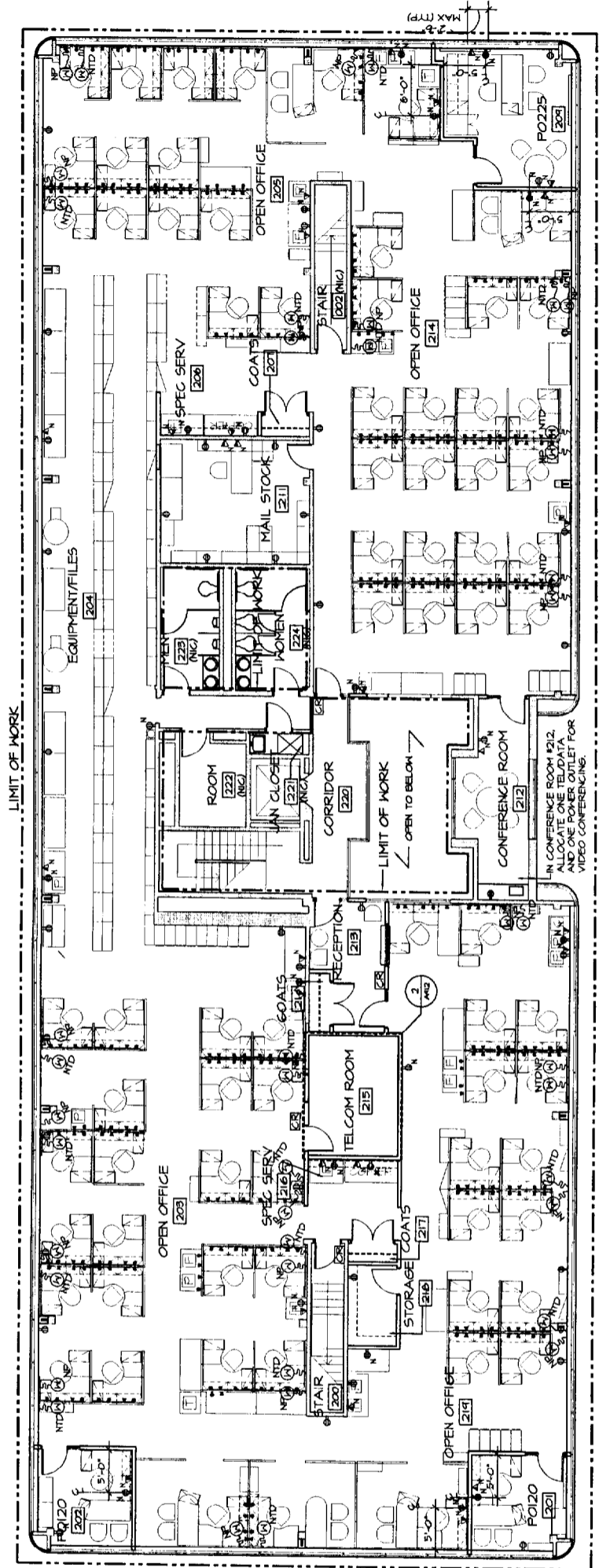
1 FIRST FLOOR OUTLET LOCATION PLAN
1/8"=1'-0"

OUTLET NOTES

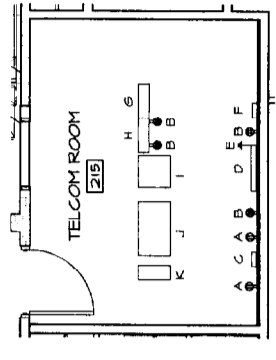
1. LOCATION OF SYSTEMS FURNITURE IN FEEDS INCLUDING: (1) POWER INFEED OR INFEED LOCATIONS TO COORDINATE EXACT LOCATION OF OUTLETS WITH ARCHITECT.
2. THIS PLAN TO BE USED FOR REFERENCE ONLY.
3. SYSTEMS FURNITURE OUTLETS ARE N/C.
4. THIS PLAN INDICATES APPROXIMATE OUTLET LOCATIONS. CONTRACTOR TO VERIFY EXISTING OUTLET LOCATIONS IN THE FIELD TO DETERMINE EXACT LOCATIONS OF NEW VS. EXISTING OUTLETS WITH ARCHITECT AND OWNER ON SITE PRIOR TO INSTALLATION OF NEW OUTLETS.
5. THE DESIGN INTENT OF THE CIRCUITS AT EQUIPMENT AREAS MUST BE REVIEWED WITH LIBERTY MUTUAL PRIOR TO PROCEEDING WITH THIS WORK.
6. OUTLETS SHOWN BACK TO BACK SHALL BE STAGGERED.
7. DIMENSIONS SHOWN ON PLAN FOR SYSTEMS FURNITURE WALL IN FEEDS ARE TO CENTERLINE OF GROUPED FEEDS. TYPICAL DISTANCE BETWEEN ADJACENT WALLS SHALL NOT EXCEED 6" MEASURED TO CENTERLINES OF WALL IN FEED. TYPICAL DO NOT SCALE DRAWINGS FOR DIMENSIONS.
8. OUTLETS AT COUNTER IN LUNCH ROOM (102) TO BE MOUNTED 6" ABOVE COUNTER.

OUTLET LEGEND

- ⊗ X TENANT STANDARD DUPLEX OUTLET @ 1'-6" AFF. U.O.N.
- ⊗ X TENANT STANDARD GUARAPLEX OUTLET @ 1'-6" AFF. U.O.N.
- ⊗ X TENANT STANDARD DEDICATED OUTLET @ 1'-6" AFF. U.O.N.
- ⊗ X TELEPHONE/DATA OUTLET @ 1'-6" AFF. U.O.N.
- "N" DENOTES NEW
- "W" NEW WALL-MOUNTED TELEPHONE
- [CZE] CARD READER INC. - PROVIDED BY SECURITY VENDOR
- [C] NEW SYSTEMS FURNITURE WALL IN FEED
- "P" DENOTES POWER
- "TD" DENOTES TEL/DATA



1 SECOND FLOOR OUTLET LOCATION PLAN
1/8"=1'-0"



2 ENLARGED TELCOM ROOM #215
1/4"=1'-0"

TEL/DATA ROOM EQUIPMENT SPECIFICATIONS

A	30 AMP THISTLOCK (NEMA L5-30P)
B	20 AMP GIARD OUTLET
C	DATA CIRCUIT/ISSON BRI TERMINATIONS
D	VOICE TERMINATION FIELD
E	BUS BAR GROUND
F	VOICE CIRCUIT TERMINATIONS
G	1RT RACK - PATCH PANELS, APC SYMMETRA UPS
H	1RT RACK - CISCO 3640 ROUTER, CISCO CATALYST 4006, PARADYNE 9124 CSJ, FIREGUARD MODERN
I	22 X 21 X 52 SERVER CABINET
J	20 X 21 X 22 DEFINITY PBX
K	24 X 8 X 24 INITIITY AUXIX
*	BTUS - ALL EQUIPMENT - 1266

OUTLET NOTES

1. LOCATION OF SYSTEMS FURNITURE IN FEEDS INCLUDING: (1) POWER INFEEED (2) VOICE/DATA INFEEED CONTRACTOR TO COORDINATE EXACT LOCATION OF OUTLETS WITH ARCHITECT.
2. THIS PLAN TO BE USED FOR REFERENCE ONLY.
3. SYSTEMS FURNITURE OUTLETS ARE N.I.C.
4. THIS PLAN INDICATES APPROXIMATE OUTLET LOCATIONS. CONTRACTOR TO VERIFY EXISTING OUTLET LOCATIONS IN THE FIELD TO DETERMINE WHERE NEW OUTLETS WILL BE REQUIRED. CONTRACTOR TO REVIEW EXACT LOCATIONS OF NEW VS EXISTING OUTLETS WITH ARCHITECT AND OWNER ON SITE PRIOR TO INSTALLATION OF NEW OUTLETS.
5. THE DESIGN INTENT OF THE CIRCUITING AT EQUIPMENT AREAS MUST BE REVIEWED WITH LIBERTY MUTUAL PRIOR TO PROCEEDING WITH THIS WORK.
6. OUTLETS SHOWN BACK TO BACK SHALL BE STAGGERED.
7. DIMENSIONS SHOWN ON PLAN FOR SYSTEMS FURNITURE WALL IN FEEDS ARE TO CENTERLINE OF GROUPED FEEDS. TYPICAL DISTANCE BETWEEN WALLS OF FEEDS SHALL BE 6" UNLESS OTHERWISE NOTED. CENTERLINE OF WALL IN FEED. TYPICAL DO NOT SCALE DRAWINGS FOR DIMENSIONS.
8. OUTLETS AT COUNTER IN LUNCH ROOM (106) TO BE MOUNTED 6" ABOVE COUNTER.

OUTLET LEGEND

- X- TENANT STANDARD DUPLEX OUTLET • 1'-6" A.F.F. U.O.N.
- X- TENANT STANDARD GUARDARPLEX OUTLET • 1'-9" A.F.F. U.O.N.
- X- TENANT STANDARD DEDICATED OUTLET • 1'-6" A.F.F. U.O.N.
- X- TELEPHONE/DATA OUTLET • 1'-6" A.F.F. U.O.N.
- N DENOTES NEH
- NBA WALL-MOUNTED TELEPHONE
- CRD CARD READER (NIC - PROVIDED BY SECURITY VENDOR)
- NBA SYSTEMS FURNITURE WALL IN FEED
- P DENOTES POWER
- TD DENOTES TEL/DATA

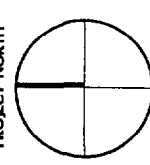
Cubellis Associates Inc.
 711 Alameda Avenue
 Boston, MA 02111
 TEL: 617-552-0099
 FAX: 617-552-0088
 www.cubellis.com

DATE: 01/28/04
 DRAWN BY: MCS
 CHECKED BY: MCS
 SCALE: 1/8"=1'-0"

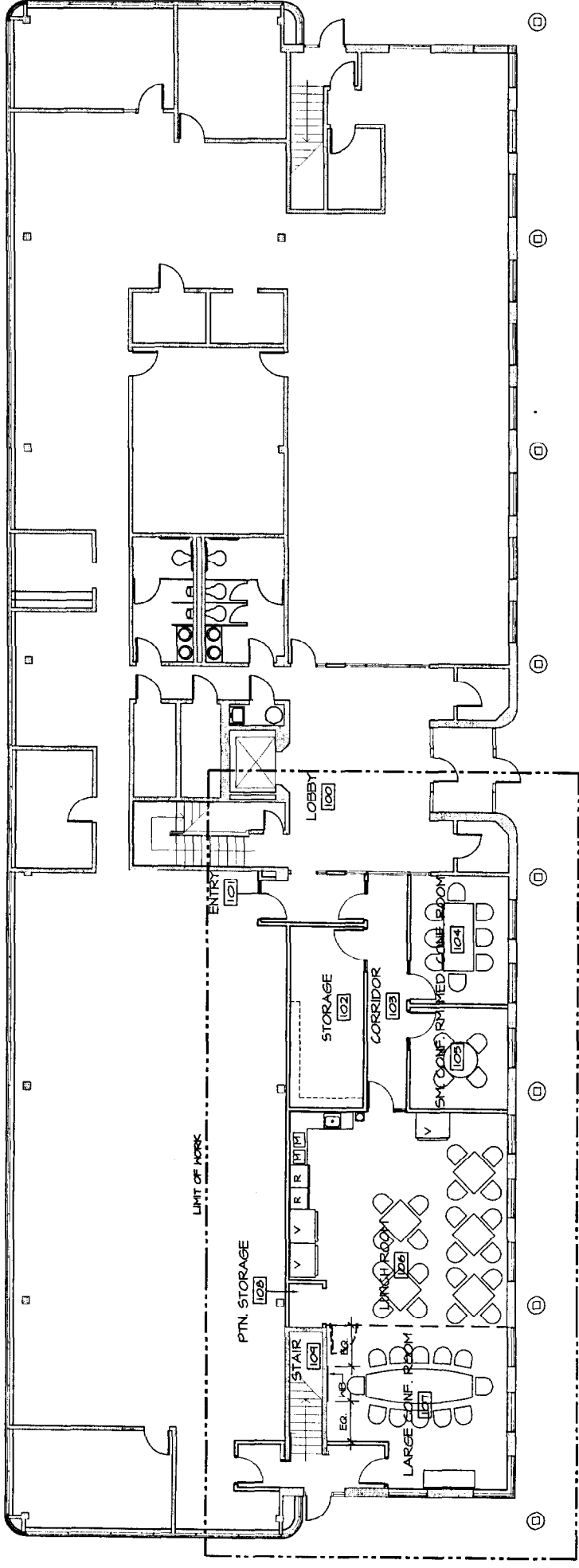
TITLE: FIRST FLOOR FURNITURE PLAN

OWNER: LIBERTY MUTUAL
 191 WASHINGTON AVENUE, FIRST FLOOR
 PORTLAND, ME, 04103

PROJECT NORTH



NO.	DATE	REVISIONS
A	03/05/04	ISSUED FOR CONSTRUCTION



1 FIRST FLOOR FURNITURE PLAN
 1/28/04

FURNITURE INSTALLATION LEGEND

	REFRIGERATOR (NIC)
	VENDING MACHINE (NIC)
	MICROWAVE (NIC)
	WHITEBOARD (NIC)
	WATER COOLER (NIC)

FURNITURE INSTALLATION NOTES

1. THIS PLAN TO BE USED FOR FURNITURE AND EQUIPMENT LOCATION REFERENCE ONLY.

A922

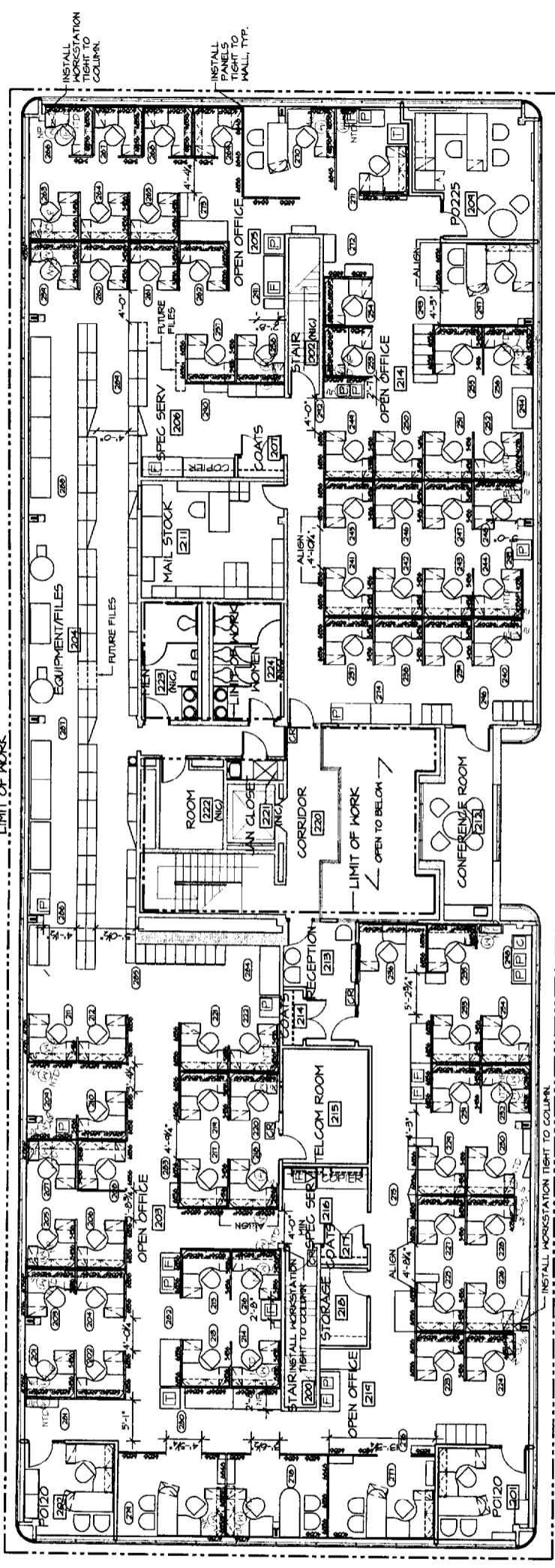
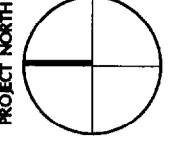
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 Architects Interior Designers
 711 Atlantic Avenue
 Boston, MA 02111
 TEL: 617-248-0000
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 www.cubellis.com
 Portland, ME

SECOND FLOOR FURNITURE PLAN

LIBERTY MUTUAL
 161 WASHINGTON AVENUE, SECOND FLOOR
 PORTLAND, ME, 04103

OWNER: LIBERTY MUTUAL

NO	DATE	REVISIONS
A	03/05/04	ISSUED FOR CONSTRUCTION



1 SECOND FLOOR FURNITURE PLAN
 1/8"=1'-0"

FURNITURE INSTALLATION LEGEND	
WORKSTATION NUMBER	(C-XXXX)
PRINTER (NIC)	[P]
FAX (NIC)	[F]
TYPEWRITER (NIC)	[T]
LATERAL FILE - 42" x 18"	[L]
BOOKCASE - 36" x 12"	[B]
30" x 30" TABLE	[30x30]
30" x 60" TABLE	[30x60]
WATER COOLER (NIC)	[W]
COPIER (NIC)	[C]
HE42 WORKSTATION	[HE42]
HE20 WORKSTATION	[HE20]
PO20 OFFICE FURNITURE	[PO20]
PO225 OFFICE FURNITURE	[PO225]

FURNITURE INSTALLATION NOTES

1. THIS PLAN TO BE USED FOR FURNITURE AND EQUIPMENT LOCATION REFERENCE ONLY.

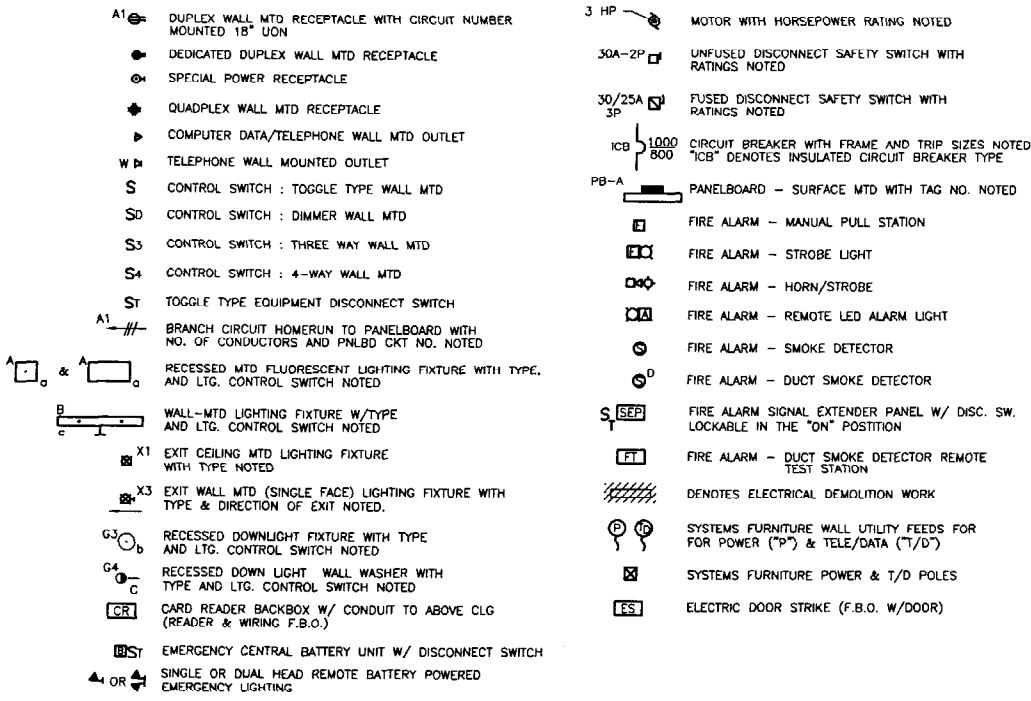
GENERAL ELECTRICAL DEMOLITION NOTES

- 1) PRIOR TO BIDDING, THE ELECTRICAL CONTRACTOR (EC) MUST VISIT THE SITE IN ORDER TO DETERMINE THE EXISTING BUILDING CONDITIONS WHICH AFFECT THEIR BIDDING...
2) NO EXISTING AS-BUILT ELECTRICAL DRAWINGS ARE AVAILABLE. THE ELECTRICAL CONTRACTOR (EC) SHALL PROVIDE ALL NECESSARY MATERIAL AND LABOR TO FIELD SURVEY AND SELECTIVELY DEMOLISH/REUSE ALL REMAINING EXISTING EQUIPMENT AND WIRING AS REQUIRED DUE TO THE ELECTRICAL, MECHANICAL AND GENERAL CONSTRUCTION DEMOLITION AND NEW CONSTRUCTION WORK...
3) THE ELECTRICAL DEMOLITION WORK SHALL BE PERFORMED BY THE ELECTRICAL CONTRACTOR IN COOPERATION WITH THE OTHER TRADES AND AS SCHEDULED AND APPROVED BY THE GC...
4) THE ELECTRICAL CONTRACTOR SHALL VISIT THE SITE BEFORE SUBMITTING THE ELECTRIC BID TO FAMILIARIZE THE EC WITH THE EXISTING CONDITIONS AND THE EXTENT OF THE WORK...
5) ELECTRICAL DEMOLITION WORK INCLUDES FIELD SURVEY OF EXISTING ELECTRICAL POWER, LIGHTING, TELE/DATA AND FIRE ALARM SYSTEMS EQUIPMENT AND WIRING IN ORDER TO DETERMINE THE EXISTING WIRING REVISIONS AS REQUIRED FOR THE PROPOSED NEW WORK...
6) EXISTING WIRING SHALL BE REUSED WHEREVER POSSIBLE FOR BRANCH WIRING FROM PANELBOARDS AND OTHER ELECTRICAL SYSTEMS WIRING IN EXISTING AREAS...
7) ALL POWER SOURCES FEEDING CIRCUITS, FEEDERS OR EQUIPMENT THAT ARE TO BE REMOVED SHALL BE DISCONNECTED AND "TAGGED OFF" AT THE SOURCE PRIOR TO REMOVAL OF ANY WORK PER OSHA REQUIREMENTS...
8) ALL EXISTING ELECTRICAL POWER WIRING, RACEWAYS, PANELBOARDS, PULL BOXES, JUNCTION BOXES, LIGHTING FIXTURES, DEVICES AND SUPPORTS NOT SHOWN ON THE PLAN SHALL REMAIN UNLESS THE AREA IS TO BE REVISED ONLY TO THE EXTENT SHOWN ON THE CONTRACT DRAWINGS...
9) ALL DEMOLITION WORK MUST BE PROVIDED IN STRICT ACCORDANCE WITH THE STATE ELECTRICAL CODE, NATIONAL CODES AND ALL LOCAL CODES, AND THE APPROVAL OF THE ENGINEER, ARCHITECT AND OWNER...
10) PRIOR TO REMOVAL FROM THE SITE, ALL ELECTRICAL EQUIPMENT, CONDUIT AND WIRE SHALL BE EXAMINED BY REPRESENTATIVES OF THE OWNER TO DETERMINE IF ANY MATERIALS WILL BE RETAINED FOR MAINTENANCE OR SALVAGE PURPOSES...
11) ALL WIRING FEEDING AREAS THAT ARE NOT PART OF THIS CONTRACT SHALL ONLY BE INTERRUPTED BY PERMISSION AND SCHEDULING WITH THE OWNER'S REPRESENTATIVE...
12) ANY NON-EXPOSED ELECTRICAL CONDUIT OR WIRING UNCOVERED BY THE REMOVAL OF EXISTING PARTITIONS, WALLS OR CEILINGS THAT PENETRATES LIMITS OF THIS CONTRACT THAT SUPPLIES POWER TO CIRCUITS OR EQUIPMENT THAT ARE TO REMAIN, SHALL BE RELOCATED OR REROUTED TO SUIT THE FIELD CONDITIONS INCLUDING NEW CONSTRUCTION...
13) ALL EXISTING ELECTRICAL WORK, CONDUIT, JUNCTION BOXES, CIRCUITS, SPLICES, ETC. TO REMAIN SHALL BE LEFT IN SATISFACTORY OPERATING CONDITION IN COMPLIANCE WITH ALL CODES AND CONDITIONS AS SPECIFIED UNDER THIS CONTRACT...
14) ALL CONFLICTS BETWEEN EXISTING CONCEALED ELECTRICAL WORK AND THE INSTALLATION OF NEW WORK OF ANY TRADE SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT FOR RESOLUTION PRIOR TO PROCEEDING WITH THE WORK...
15) ALL EXISTING FIXTURES, SWITCHES AND DEVICES AS INDICATED ON DRAWINGS SHALL BE REMOVED INCLUDING WIRES, BOXES AND RACEWAYS OR SHALL REMAIN AND BE REUSED...
16) ADEQUATE ACCESS SHALL BE PROVIDED FOR ALL NEW OR RELOCATED EQUIPMENT, JUNCTION OR PULL BOXES TO COMPLY WITH CODES...
17) THE LOCATIONS OF EXISTING EQUIPMENT TO REMAIN, ARE SHOWN IN AN APPROXIMATE LOCATION ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING EQUIPMENT BEFORE COMMENCING WORK...
18) REGARDING POWER OUTAGES CAUSED BY DEMOLITION THAT AFFECT OTHER AREAS: SHUT-DOWNS SHALL BE COORDINATED WITH THE OTHER USERS AND THE OWNER. ANY PRIME TIME REQUIRED TO PERFORM ELECTRICAL DEMOLITION WORK OR NEW ELECTRICAL WORK SHALL BE CARRIED AS PART OF THE CONTRACT COST...
19) THE ELECTRICAL CONTRACTOR WHENEVER POSSIBLE SHALL RUN CONDUIT AND WIRE CONCEALED. ALL NEW RACEWAYS IN AREAS WITH EXPOSED CEILINGS SHALL BE INSTALLED ALONG THE EXISTING STRUCTURE AND AT THE WALL/CEILING CORNERS TO MINIMIZE THEIR APPEARANCE...
20) EXISTING POWER SOURCES TO EQUIPMENT, CIRCUITS, OR DEVICES LOCATED IN THE NOTED AREAS TO REMAIN THAT ORIGINATE AT BOXES BEING REMOVED SHALL BE EXTENDED TO NEW PANELS OR SOURCES TO SUIT CONDITIONS. CONDUIT AND WIRE SIZES SHALL MATCH EXISTING IN SIZE AND CHARACTERISTICS...
21) ALL REMOVED ELECTRICAL DEVICES IN EXISTING WALLS OR HARD CEILINGS TO REMAIN SHALL HAVE ASSOCIATED BOXES AND CONDUITS REMOVED, SO WALL/CEILING CAN BE PATCHED AND REFINISHED...
22) DEMOLITION OF TELE AND/OR DATA OUTLETS IS SHOWN FOR REFERENCE ONLY. DEMOLITION OF THESE ITEMS SHALL BE BY THE OWNER'S OR TENANT'S CONTRACTOR...
23) EC SHALL CONTACT AND COORDINATE ALL FIRE ALARM DEVICES AND DEMOLITION WORK WITH THE OWNER AND THEIR FIRE ALARM CONTRACTOR/SUPPLIER...
24) ALL LIGHTING FIXTURES AND OTHER EQUIPMENT (NOT INCLUDING STANDARD RECEPTACLES AND LOW VOLTAGE OUTLETS) SHOWN AS BEING DEMOLISHED, SHALL BE CAREFULLY DISCONNECTED, REMOVED AND PROTECTED BY THE EC AND RETURNED TO THE OWNER FOR THEIR REUSE OR DISPOSITION...
25) EC SHALL NOTE THAT THE EXISTING WIRING WHICH IS NOT NOTED SHALL BE REVISED AS REQUIRED FOR THE PROPOSED DEMOLITION AND NEW WORK.

ELECTRICAL GENERAL NOTES

- 1) ALL ELECTRICAL EQUIPMENT AND INSTALLATION WORK SHALL BE IN ACCORDANCE WITH THE NATIONAL, STATE AND LOCAL CITY BUILDING AND ELECTRICAL CODES APPLICABLE SECTIONS. ALL ELECTRICAL PERMITS AND INSPECTIONS AND ANY ASSOCIATED COSTS SHALL BE OBTAINED AND PAID FOR BY THE ELECTRICAL CONTRACTOR...
2) ALL ELECTRICAL MATERIAL SHALL BE OF THE HIGHEST QUALITY SPECIFICATION GRADE AND UL LISTED. THE ELECTRICAL CONTRACTOR SHALL SUBMIT ALL ELECTRICAL MATERIAL SHOP DRAWINGS TO THE ARCHITECT FOR REVIEW AND ACCEPTABILITY PRIOR TO INSTALLATION...
3) ALL ELECTRICAL INSTALLATIONS SHALL BE IN ACCORDANCE WITH THE LOCAL ELECTRICAL INSPECTOR REQUIREMENTS. THE ELECTRICAL CONTRACTOR SHALL COORDINATE ALL ELECTRICAL INSPECTOR REQUIREMENTS PRIOR TO ANY CONSTRUCTION...
4) ALL ELECTRICAL CONSTRUCTION SHALL BE IN CONFORMANCE WITH THE SPECIFIED PROJECT'S CONSTRUCTION PHASING PLAN. ALL EXISTING ELECTRICAL SYSTEMS SHALL BE KEPT FULLY OPERATIONAL WITH MINIMUM SHUTDOWNS UNTIL THE NEW SYSTEMS ARE FULLY OPERATIONAL...
5) ALL NEW AND EXISTING ELECTRICAL EQUIPMENT SHALL HAVE ENGRAVED PLASTIC NAMEPLATES. ALL PANELBOARDS CIRCUIT DIRECTORIES SHALL BE TYPED. ALL WIRING SHALL BE IDENTIFIED BY ALPHA-NUMERICAL TAGS...
6) THE ELECTRICAL CONTRACTOR SHALL PROVIDE FIELD SURVEY MARKED UP ELECTRICAL DRAWINGS, "AS-BUILT" ELECTRICAL DRAWINGS AND INTERCONNECTION WIRING DIAGRAMS ELECTRICAL DRAWINGS. THE EC SHALL ALSO SUBMIT 1/4" SCALE DRAWINGS OF ALL ELECTRICAL EQUIPMENT INSTALLATIONS, SHOWING THAT THE AS-SUPPLIED EQUIPMENT CAN BE INSTALLED AS SHOWN, MEETING ALL CODE REQUIREMENTS...
7) ALL ELECTRICAL CONDUCTORS SHALL BE COPPER WITH TYPE "THHN/THWN" INSULATION. THE MINIMUM CONDUIT AND POWER CONDUCTOR SIZES SHALL BE 3/4 INCH AND NO 12 AWG. RACEWAYS SHALL BE TERMINATED WITH FLEXIBLE RACEWAYS TO EQUIPMENT FOR BOTH VIBRATION ISOLATION AND MAINTENANCE...
8) ALL ELECTRICAL LIGHTING FIXTURES, DEVICES AND WIRING SHALL BE IN CONFORMANCE WITH THE RELEVANT APPLICABLE ARCHITECTURAL DRAWINGS, DETAILS AND REFLECTED CEILING PLANS...
9) ALL MATERIAL AND CONSTRUCTION WORK SHALL BE ROUGH AND FINAL INSPECTED BY THE ARCHITECT, ELECTRICAL ENGINEER AND CITY CODE ENFORCEMENT OFFICIAL PRIOR TO ACCEPTANCE AND PAYMENTS...
10) CONDUIT RUNS ARE SHOWN DIAGRAMMATICALLY ONLY AND SHALL BE INSTALLED IN A MANNER TO PREVENT CONFLICTS WITH EQUIPMENT AND BUILDING CONDITIONS...
11) THE EQUIPMENT LAYOUTS, CONDUIT/WIRE SIZES AND WIRING DIAGRAM REPRESENT A SUGGESTED DESIGN BASED UPON GENERALLY AVAILABLE ELECTRICAL EQUIPMENT SIZES AND WIRING REQUIREMENTS...
12) CONDUIT AND WIRE AS INDICATED BY THE CONDUIT/WIRE SCHEDULE SHALL BE GALVANIZED "TRAC", "EMT" OR "MC" AS SPECIFIED FOR DIFFERENT AREAS...
IN BUILDING AREAS WITH HUNG CEILINGS, GENERALLY ALL ELECTRICAL WIRING SHALL BE CONCEALED ABOVE THE HUNG CEILINGS AND WITHIN THE WALLS, SOFFITS AND FURRED OUT BUILDING STRUCTURE BEAMS...
A) USE TYPE "EMT" WIRING FOR ALL EXPOSED WIRING IN AREAS WITHOUT HUNG CEILINGS...
B) USE TYPE "MC" WIRING FOR ALL WIRING WITHIN WALLS, BEAMS AND ABOVE HUNG CEILINGS...
C) USE MULTI-CONDUCTOR PLENUM RATED WIRING FOR CONCEALED FA WIRING...
13) CONDUIT, BOXES AND WIRE NOT SHOWN INTERCONNECTING THE FIRE ALARM, TELEPHONE, DATA, ETC SPECIAL ELECTRICAL SYSTEMS SHALL BE PROVIDED AS INDICATED IN THE CONTRACT DOCUMENTS...
14) PANELBOARD 3-PHASE BRANCH CIRCUIT HOMERUNS SHALL BE IN "MC" CABLES WITH OVERSIZED NEUTRALS...
15) OUTLET BOXES, SWITCHES, RECEPTACLES, PULL/JUNCTION BOXES, TERMINAL BOXES, ETC. SHALL BE PROVIDED WITH NEMA "1" ENCLOSURES FOR ALL INDOOR LOCATIONS AND NEMA "3R" ENCLOSURES FOR ALL OUTDOOR LOCATIONS...
16) ALL WIRING PENETRATIONS THRU FIRE OR SMOKE RATED WALLS AND FLOORS SHALL BE SEALED WITH A FIRE STOPPING CAULKING...
17) EC WHERE FEASIBLE SHALL RE-USE EXISTING RECEPTACLES AND/OR TELE/DATA OUTLETS WITH NEW/REVISED WIRING IN LIEU OF INSTALLING NEW OUTLETS...
18) ALL NEW ELECTRICAL POWER, LOW VOLTAGE, FIRE ALARM, AND CONTROL DEVICES SHOWN ON THE VARIOUS PLANS FOR A GIVEN LOCATION SHALL ALL ALIGN VERTICALLY, AS NOTED ON THE ARCHITECTURAL PLANS...
ELECTRICAL DRAWINGS REFERENCE NOTES
1) FOR ELECTRICAL SYMBOLS, ABBREVS & NOTES, REFER TO DWG #E-1.
2) FOR ELECTRICAL POWER & LTG DEMO PLANS, REFER TO DWGS #E-2 & E-3.
3) FOR ELECTRICAL PROPOSED POWER & LTG PLANS, REFER TO DWGS #E-4 & E-5.
4) FOR ELECTRICAL RISERS, REFER TO DWG #E-6.
5) FOR ELECTRICAL DETAILS REFER TO DWGS E-6 AND E-7.
6) FOR ELECTRICAL SCHEDULES REFER TO DWGS E-7 AND E-8.
7) FOR ELECTRICAL SPECIFICATIONS, REFER TO DWG #E-9.

ELECTRICAL SYMBOLS



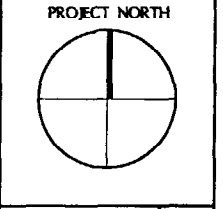
ELECTRICAL ABBREVIATIONS LIST

Table with 3 columns: Abbreviation, Description, and Notes. Includes entries for AMPERES (A), ABOVE (ABV), ABOVE FINISHED FLOOR (AFF), AMPERES INTERRUPTING CAPACITY (AIC), COUNTER HEIGHT MOUNTED (C), CIRCUIT BREAKER (CBK), CIRCUIT (CKT), CEILING (CLG), EBU, DENOTES ELECTRICAL SUB-CONTRACTOR (EC), HVAC EXHAUST FAN (EF), EXISTING ELECTRICAL EQUIPMENT, CONDUIT AND WIRING TO REMAIN (E), EXISTING ELECTRICAL EQUIPMENT OR DEVICE TO BE REMOVED (EM), EXISTING ELECTRICAL EQUIPMENT SHALL BE REMOVED AND RELOCATED (ER), EXISTING ELECTRICAL EQUIPMENT OR DEVICE AND WIRING TO BE REMOVED, AT SAME LOCATION INSTALL NEW EQUIPMENT OR DEVICE AND WIRING, REUSE EXISTING CONDUIT (EX), EXISTING ELECTRICAL EQUIPMENT OR DEVICE AND WIRING TO BE REMOVED, AT SAME LOCATION INSTALL NEW EQUIPMENT OR DEVICE AND WIRING (EY), EXISTING ELECTRICAL EQUIPMENT, FIXTURE OR DEVICE TO REMAIN, BUT BE MODIFIED AS SHOWN HEREIN (EZ), FURNITURE MOUNTED DEVICE (SYSTEMS FURNITURE) (F), FURNISHED BY OTHERS (F.B.O.), FURNISHED & INSTALLED (F&I), GROUND FAULT INTERRUPTER (GF), HORSE POWER (HP), JUNCTION BOX (JB), MOUNTED (MTD), NATIONAL ELECTRICAL CODE (NEC), NOT IN CONTRACT (NIC), NOT TO SCALE (NTS), PANEL (PNL), PANELBOARD (PNLBD), SURGE PROTECTED (SP), UNDER-COUNTER (UC), UNDERWRITERS LABORATORIES INC. (UL), UNLESS OTHERWISE NOTED (U.O.N.), VOLTS (V), WEATHERPROOF (WP).

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Table with 3 columns: NO, DATE, REVISIONS. Row 1: 1, 3-24-04, ISSUED FOR CONSTRUCTION.



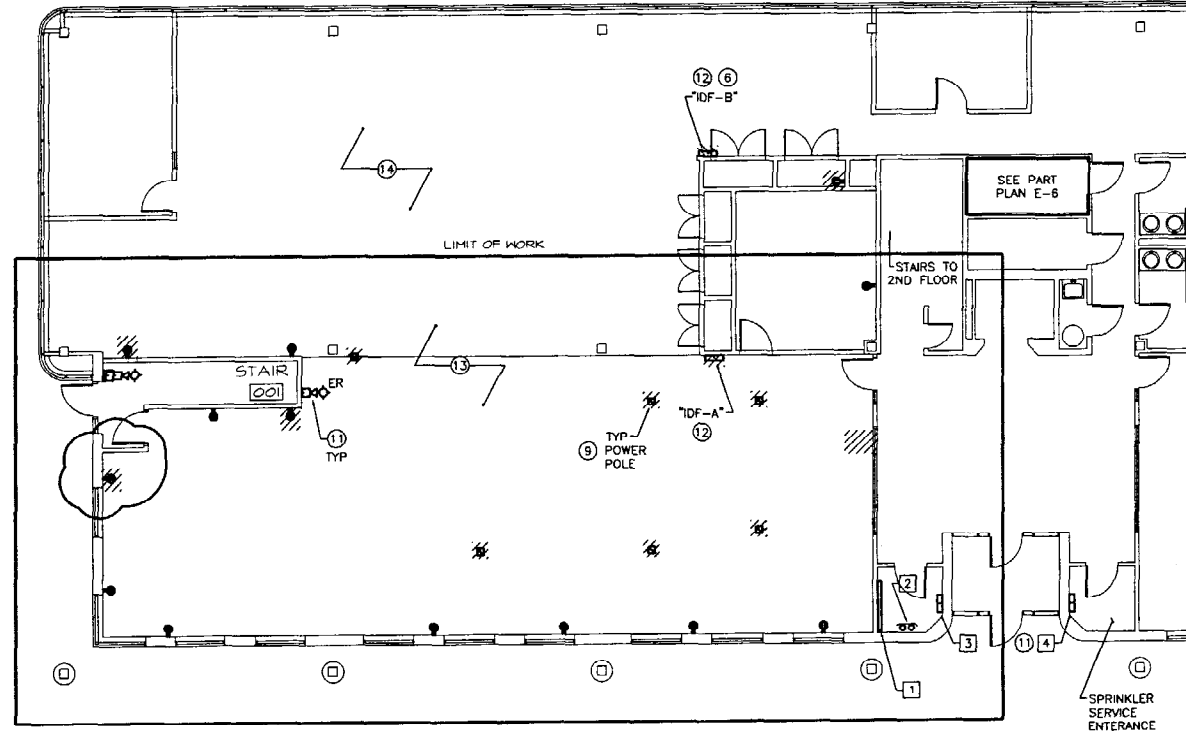
LIBERTY MUTUAL 1361 WASHINGTON AVENUE PORTLAND, MAINE LIBERTY MUTUAL OWNER

TITLE ELECTRICAL SYMBOLS, ABBREV. & NOTES SCALE AS SHOWN

Cubellis Associates Inc. 271 Abbeville Avenue, Boston, MA 02111. DATE 03/05/04. DRAWN BY JCM, CHECKED BY WPE.

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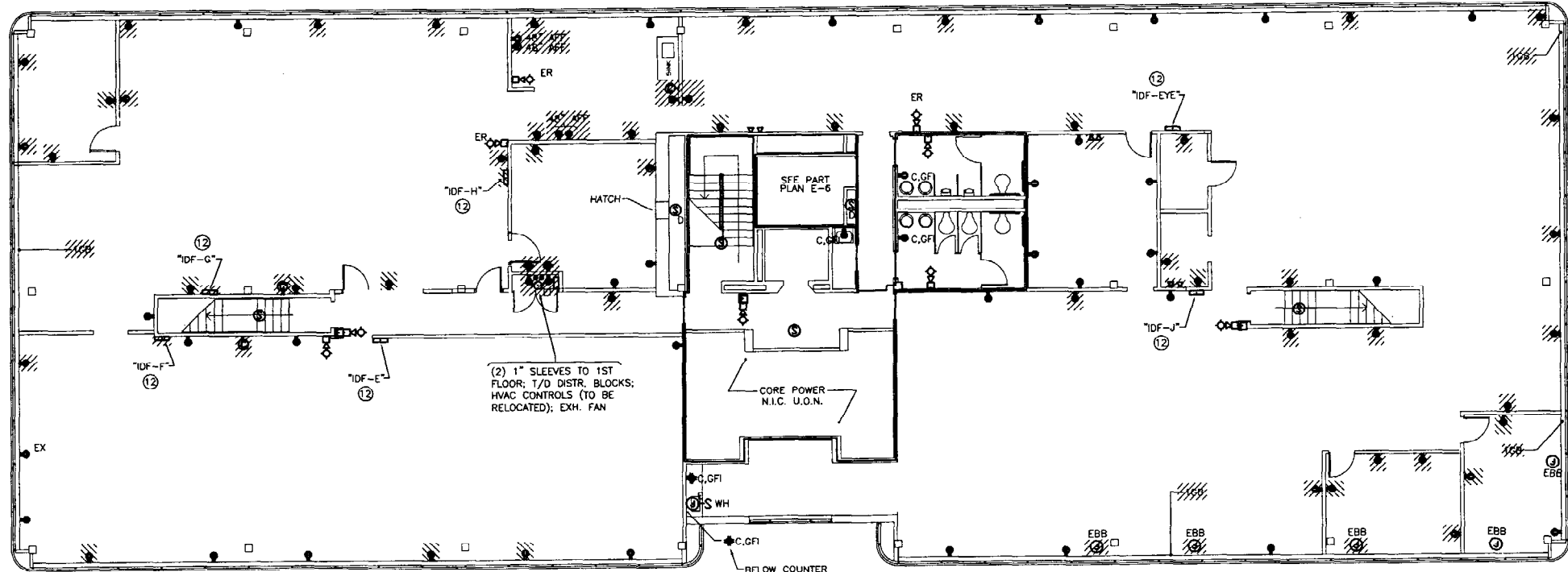
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1ST FLOOR DEMO POWER PART PLAN
 1/8" = 1'-0"

- DEMOLITION POWER PLAN NOTES**
1. ELECTRICAL CONTRACTOR (EC) SHALL COMPLETELY FIELD SURVEY THE EXISTING EQUIPMENT AND WIRING ON THIS FLOOR SUFFICIENTLY TO PROVIDE RELEVANT INFORMATION FOR ALL AREAS WITHIN THE LIMITS OF WORK AS SHOWN ON THIS PLAN, AND DOCUMENT SAME. THE LIMITS OF WORK ON THE FIRST FLOOR INCLUDE THE SOUTHWEST QUADRANT OF THE BUILDING PLUS THE ELECTRICAL ROOM; THE LIMITS OF WORK ON THE SECOND FLOOR INCLUDE THE ENTIRE FLOOR, EXCEPT THE CORE AREA. THERE ARE NO "AS-BUILT" ELECTRICAL DRAWINGS. INFORMATION INDICATED WAS OBTAINED FROM EXISTING AVAILABLE ELECTRICAL DRAWINGS AND A/E GENERAL FIELD WALK-THRU INVESTIGATIONS. THE DESIGN INTENT IS TO SELECTIVELY DEMOLISH THE EXISTING POWER, TELEPHONE, DATA, ETC. EQUIPMENT, AS NOTED ON THE PLANS.
 2. EC SHALL COMPLETELY FIELD SURVEY THE EXISTING PANELBOARDS' BRANCH CIRCUITS AND ASSOCIATED BRANCH WIRING ON THIS FLOOR SUFFICIENTLY TO PROVIDE RELEVANT INFORMATION FOR ALL AREAS SHOWN ON THIS PLAN, AND DOCUMENT SAME, IN ORDER TO SELECTIVELY REVISE AS REQUIRED FROM THE DEMOLITION AND NEW PROPOSED ELECTRICAL WORK. EC SHALL DETERMINE ACTUAL BRANCH CIRCUIT ASSIGNMENTS (ACTUAL NUMBER OF DEVICES AND DEVICE LOCATIONS FOR EACH BRANCH CIRCUIT), BRANCH CIRCUIT AMPERE LOADING, NUMBER OF SPARE CIRCUITS AND SPACES, AND PANELBOARD AMPERE DRAW, FOR THE PURPOSES OF LOCATING AFFECTED CIRCUITS, AND EVALUATING PANELBOARD AVAILABLE CAPACITY FOR ADDED CIRCUITS, UTILIZING SPARES AND SPACES. IN ADDITION, IF ANY EXISTING CIRCUITS TO REMAIN IN ANY PANELBOARDS AFFECTED BY THIS PROJECT ARE FOUND TO BE OVERLOADED PER CODE OR GOOD CONSTRUCTION PRACTICES, OR ARE FOUND TO BE SIGNIFICANTLY UNBALANCED, EC SHALL SO NOTIFY THE GC, ARCHITECT AND ENGINEER, FOR FURTHER DIRECTION.
 3. SINCE THE EXISTING ELECTRICAL DEVICES INDICATED ON THE DRAWINGS ARE NOT "AS-BUILT", THE EC SHALL MAKE FIELD ADJUSTMENTS AND DEMOLITION SCOPE OF WORK ADJUSTMENTS AS NECESSARY DURING THE REQUISITE FIELD SURVEYS AND THE ELECTRICAL DEMOLITION WORK. NOTE - NOT ALL OF THE EXISTING ELECTRICAL EQUIPMENT/DEVICES ARE INDICATED ON THE DRAWINGS. THE EC TO FIELD INVESTIGATE PRIOR TO BIDDING. NO ADDITIONAL COMPENSATION WILL BE PROVIDED FOR DIFFERING FIELD CONDITIONS.
 4. PRIOR TO START OF ANY DEMOLITION WORK, EC SHALL REVIEW THE LOCATIONS OF ALL EXISTING AND NEW RECEPTACLES, T/D OUTLETS WALL FEEDS AND FLOOR CORES WITH THE ARCHITECT AT THE SITE.
 5. EC SHALL DEMOLISH THE EXISTING ELECTRICAL POWER DEVICES AND ASSOCIATED WIRING AS INDICATED. ALL UNUSED WIRING SHALL BE COMPLETELY DEMOLISHED AND REMOVED.
 6. EXISTING TELE/DATA OUTLETS/EQUIPMENT SHOWN FOR REFERENCE ONLY. OWNER'S TELE/DATA CONTRACTOR SHALL HAVE THE RESPONSIBILITY FOR FIELD-SURVEYING AND COMPLETELY DEMOLISHING ALL AFFECTED EXISTING TELEPHONE/DATA DEVICES AND WIRING SHOWN ON PLAN AS BEING DEMOLISHED, AND PROVIDING NEW TELE/DATA EQUIPMENT, OUTLETS AND ASSOCIATED WIRING.

7. EC SHALL PROVIDE NO DEMOLITION WORK IN THE EXISTING "NOT IN CONTRACT" SPACES UNLESS AFFECTED BY THE PROPOSED NEW WORK. HOWEVER, THE GENERAL CONTRACTOR (GC) SHALL REMOVE THE EXISTING CEILING TILES (AS REQUIRED BY THE EC) IN ORDER TO COMPLETE ANY OF THE NEW ELECTRICAL CONSTRUCTION.
8. EC SHALL FIELD-SURVEY THE EXISTING RECEPTACLES AND ASSOCIATED WIRING IN ORDER TO SELECTIVELY DEMOLISH. EC SHOULD ASSUME THE EXISTING RECEPTACLES WIRING WILL BE AFFECTED BY WALL DEMO AND CONSTRUCTION, AND WILL REQUIRE REFEEDING.
9. SYSTEMS FURNITURE POWER POLES ARE SHOWN IN FIELD-MEASURED LOCATIONS WITH RESPECT TO FLOOR LANDMARKS. EC TO COMPLETELY REMOVE ALL ABOVE-CEILING RACEWAY/SUPPORT/BOXES/WIRING ASSOCIATED WITH EACH POWER POLE.
10. DEVICES SHOWN AS BEING DEMOLISHED, AND WHICH ARE NOT SHOWN AS BEING REPLACED ON THE PROPOSED PLAN, SHALL BE COMPLETELY REMOVED ALONG WITH ALL WIRING AND BACKBOXES, TO ALLOW WALL PATCHING AND PAINTING BY OTHERS.
11. EC SHALL FIELD SURVEY EXISTING TO REMAIN FIRE ALARM SYSTEM AND ASSOCIATED WIRING IN ORDER TO REVISE/EXPAND AS INDICATED ON THE POWER PLANS. EC'S DEMO WORK IN THIS PROJECT IS LIMITED TO FIELD-VERIFYING LOCATIONS AND WIRING OF THE APPLIANCES AND FIELD DEVICES, FOR USE IN APPLIANCE/DEVICE RELOCATIONS OR ADDITIONS AS NOTED ON THE PROPOSED PLANS. FOR REFERENCE, FIRE ALARM EQUIPMENT IS DESIGNATED "RADIONICS", WITH FA CONTRACTOR NOTED AS "EASTERN FIRE PROTECTION; 207-942-8014 OR 207-784-1507".
12. ITEMS REFERENCED TO THIS NOTE ARE WALL-MOUNTED (NEAR CEILING) TELE/DATA DISTRIBUTION PANELS LABELED AS SHOWN.
13. FOR EXISTING POWER-POLE-FED SYSTEMS FURNITURE ASSEMBLIES WHICH SPAN AREAS BOTH INSIDE AND OUTSIDE THE LIMIT OF WORK (BUT ARE FED FROM OUTSIDE THE LIMIT OF WORK) SHALL BE DISASSEMBLED BY THE EC ONLY TO THE EXTENT NECESSARY TO CLEAR THE LIMIT OF WORK AREAS.
14. EC SHALL PROVIDE A SEPARATE LINE ITEM IN THEIR BID FOR ALL DEMO WORK ASSOCIATED WITH THE AREA OUTSIDE THE LIMIT OF WORK; REFER TO ARCHITECTURAL PLANS FOR EXACT LIMITS OF WORK.

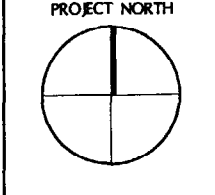


2ND FLOOR DEMO POWER PLAN
 1/8" = 1'-0"

EQUIPMENT LIST EXISTING POWER	
1	TELE/DATA MAIN BACKBOARD W/ DISTRIBUTION EQUIPMENT & BLOCKS
2	(2) 4" CONDUITS TO OUTSIDE FOR T/D SERVICE
3	ALARM PANELS MOUNTED ON WALL
4	FIRE ALARM REMOTE PANEL W/FIREBELL MOUNTED ABOVE (DESIGNATED "RADIONICS")

- ELECTRICAL DRAWINGS REFERENCE NOTES**
1. FOR ELECTRICAL SYMBOLS, ABBREVIATIONS & NOTES, REFER TO DWG #E-1.
 2. FOR ELECTRICAL POWER & LTG DEMO PLANS, REFER TO DWGS #E-2 & E-3.
 3. FOR ELECTRICAL PROPOSED POWER & LTG PLANS, REFER TO DWGS #E-4 & E-5.
 4. FOR ELECTRICAL RISERS, REFER TO DWG #E-6.
 5. FOR ELECTRICAL DETAILS REFER TO DWGS E-6 AND E-7.
 6. FOR ELECTRICAL SCHEDULES REFER TO DWGS E-7 AND E-8.
 7. FOR ELECTRICAL SPECIFICATIONS, REFER TO DWG #E-9.

NO.	DATE	REVISIONS
1		AS SHOWN FOR CONSTRUCTION

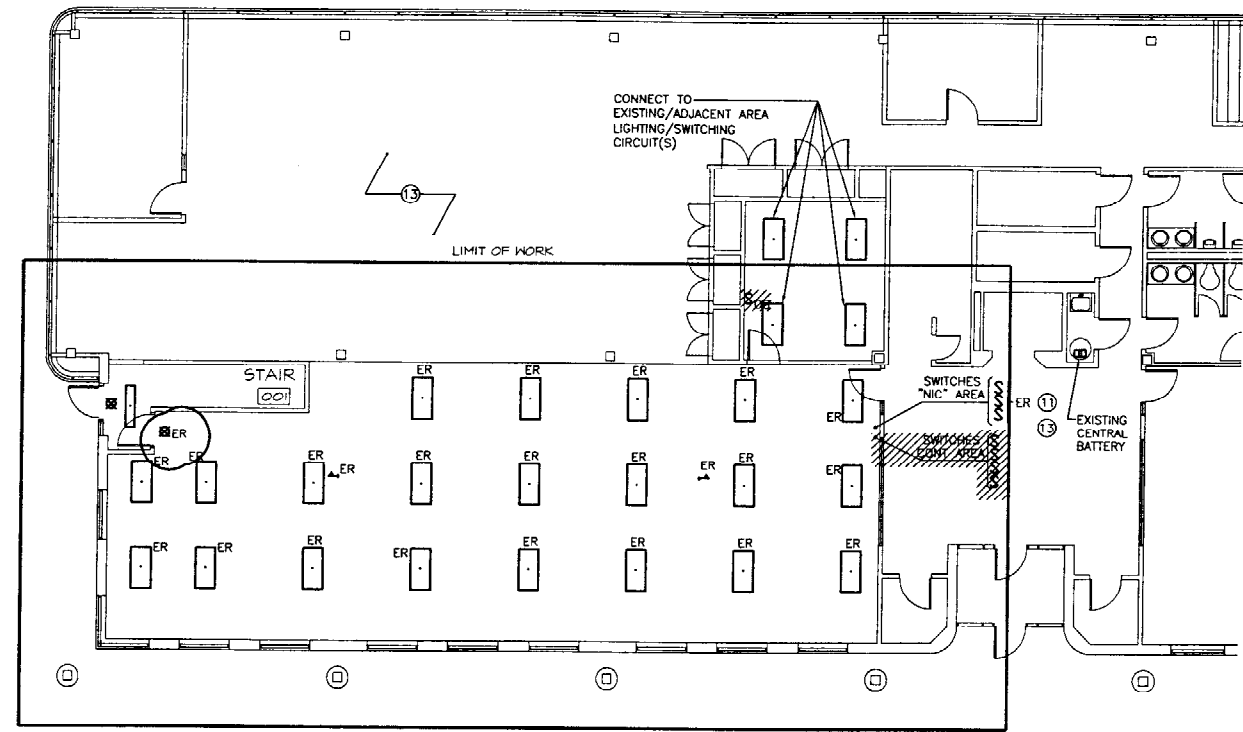


LIBERTY MUTUAL
 1361 WASHINGTON AVENUE
 PORTLAND, MAINE
 OWNER: LIBERTY MUTUAL

TITLE
 ELECTRICAL DEMO PWR PLAN FLOORS 1ST & 2ND
 SCALE: AS SHOWN

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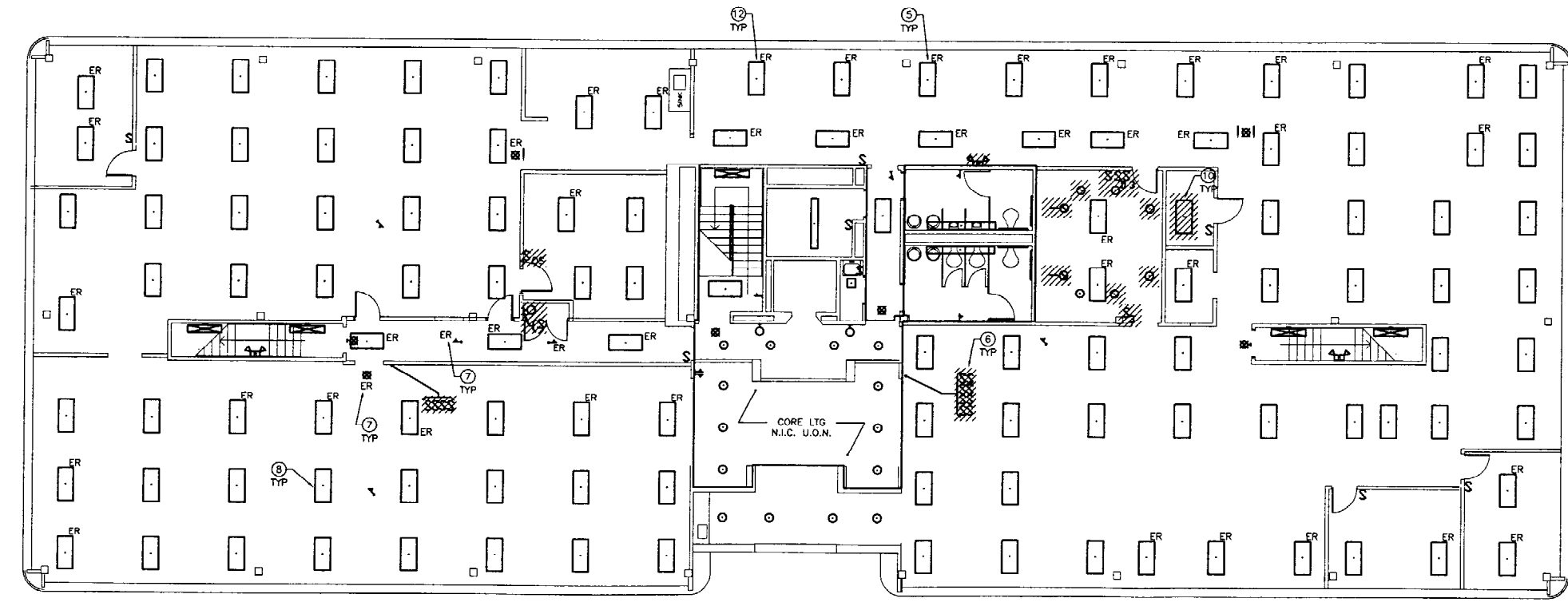
E-2
 03174



1ST FLOOR DEMO LIGHTING PART PLAN
 1/8" = 1'-0"

- DEMOLITION LIGHTING PLAN NOTES**
- ELECTRICAL CONTRACTOR (EC) SHALL FIELD SURVEY THE EXISTING LIGHTING, CONTROLS AND WIRING AND MAY REUSE THE EXISTING WIRING IF IN GOOD CONDITION FOR THE NEW LIGHTING WIRING. EC'S FIELD SURVEY MUST ALLOW ALL EXISTING "NOT IN CONTRACT" LIGHTING, CONTROLS AND WIRING TO REMAIN OPERATIONAL. EC SHALL ASSUME THAT ANY EXISTING FIXTURE OR DEVICE NOT SHOWN AS DEMOLISHED OR RELOCATED SHALL BE EXISTING TO REMAIN.
 - EC SHALL REVISE (AS REQUIRED) THE EXISTING AFFECTED LIGHTING'S BRANCH WIRING IN ORDER TO POWER AND SWITCH THE NEW LIGHTING.
 - EC SHALL FIELD SURVEY AND DOCUMENT EXISTING PANELBOARD'S LIGHTING CIRCUIT BREAKERS.
 - EC SHALL NOTE THAT EXISTING ELECTRICAL FIXTURES, DEVICES AND WIRING INDICATED ON THE DRAWINGS ARE NOT "AS-BUILT". INFORMATION INDICATED WAS OBTAINED FROM A/E GENERAL INSPECTION WALK-THRU INSPECTIONS. EC SHALL MAKE FIELD ADJUSTMENTS AS NECESSARY.
 - EC SHALL RELOCATE THE EXISTING LIGHTING AS INDICATED ON THE PROPOSED LTG PLAN. FIXTURES SHOWN AS BEING RELOCATED SHALL BE CAREFULLY REMOVED, PROTECTED AND STORED DURING CONSTRUCTION. ANY SUCH FIXTURES DAMAGED DURING REMOVAL OR STORAGE SHALL BE REPLACED BY THE EC AT THE OWNER'S OPTION. NOTE THAT THERE ARE MORE FIXTURES (2'X4' PARABOLICS) DESIGNATED "ER" ON THE DEMO PLAN THAT THERE ARE THOSE USED IN THE PROPOSED PLAN. EC SHALL SURVEY AND USE THE "BEST" OF THE AVAILABLE FIXTURES, AND SHALL RETURN THE REMAINDER TO THE OWNER FOR THEIR DISPOSITION.
 - EC SHALL FIELD SURVEY EXISTING LTG CONTROLS WIRING SINCE DRAWINGS ARE NOT AS-BUILT. LTG CONTROLS INDICATED ARE FROM A/E GENERAL FIELD SURVEY. EC SHALL ADJUST AS NECESSARY TO SUIT THE EXISTING CONDITIONS. ALL DEVICES, WIRING, RACEWAYS AND BOXES ASSOCIATED WITH CONTROLS SHOWN AS BEING DEMOLISHED, WHICH CANNOT BE REUSED IN THE PROPOSED WORK, SHALL BE REMOVED AS WELL.
 - EC SHALL FIELD SURVEY BOTH THE EGRESS AND EXIT LTG FIXTURES WITH THE LIMIT OF WORK AREAS, AND ASSOCIATED WIRING IN ORDER TO REVISE AS INDICATED ON THE NEW LIGHTING PLANS. EC SHALL FIELD TEST THE EXIT AND EGRESS LIGHTING IN THE LIMIT OF WORK AREAS AND PROVIDE A WRITTEN RE-CERTIFICATION.
 - EC SHALL CLEAN AND RELAMP (AS NECESSARY) THE EXISTING REMAINING LIGHTING FIXTURES WITHIN THE LIMIT OF WORK AREAS WHETHER OR NOT THEY ARE BEING RELOCATED. ALL LAMPS SHALL MATCH EXISTING IN THE AREAS WITH RESPECT TO COLOR TEMPERATURE. ANY BURNT OUT LAMPS AT THE END OF THE CONSTRUCTION SHALL BE REPLACED BY THE EC.
 - EC SHALL PROVIDE NO DEMOLITION WORK IN THE EXISTING SPACES OUTSIDE OF THE LIMIT OF WORK AREAS UNLESS AFFECTED BY THE PROPOSED NEW WORK. HOWEVER, THE GENERAL CONTRACTOR (GC) SHALL REMOVE THE EXISTING CEILING TILES (AS REQUIRED BY THE EC) IN ORDER TO COMPLETE ANY OF THE NEW ELECTRICAL CONSTRUCTION.

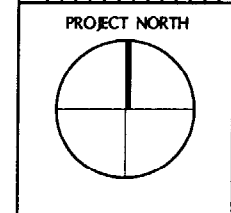
- ALL FIXTURES SHOWN AS BEING DEMOLISHED SHALL BE CAREFULLY REMOVED AND RETURNED TO THE OWNER FOR THEIR DISPOSITION. ANY SUCH FIXTURES DAMAGED DURING REMOVAL OR STORAGE SHALL BE REPLACED BY THE EC AT THE OWNER'S OPTION.
- EC SHALL RELOCATE EXISTING SWITCHING REFERENCED TO THIS NOTE TO NEW LOCATION SHOWN ON PROPOSED PLAN, PROVIDING ALL WIRING, RACEWAYS AND BOXES NECESSARY TO ACCOMPLISH THIS. FUNCTION OF THE SWITCHING SHALL REMAIN THE SAME AS ORIGINALLY CONFIGURED.
- ALL EXISTING AND EXISTING-RELOCATED 2'X4' FIXTURES ARE RECESSED PARABOLIC WITH (2) 32W-T8 LAMPS EACH, U.O.N.
- EC SHALL PROVIDE A SEPARATE LINE ITEM IN THEIR BID FOR ALL DEMO WORK ASSOCIATED WITH THE AREA OUTSIDE THE LIMIT OF WORK; REFER TO ARCHITECTURAL PLANS FOR EXACT LIMITS OF WORK.



2ND FLOOR DEMO LIGHTING PLAN
 1/8" = 1'-0"

- ELECTRICAL DRAWINGS REFERENCE NOTES**
- FOR ELECTRICAL SYMBOLS, ABBREVS & NOTES, REFER TO DWG #E-1.
 - FOR ELECTRICAL POWER & LTG DEMO PLANS, REFER TO DWGS #E-2 & E-3.
 - FOR ELECTRICAL PROPOSED POWER & LTG PLANS, REFER TO DWGS #E-4 & E-5.
 - FOR ELECTRICAL RISERS, REFER TO DWG #E-6.
 - FOR ELECTRICAL DETAILS REFER TO DWGS E-6 AND E-7.
 - FOR ELECTRICAL SCHEDULES REFER TO DWGS E-7 AND E-8.
 - FOR ELECTRICAL SPECIFICATIONS, REFER TO DWG #E-9.

NO.	DATE	REVISIONS
1	12-22-04	ISSUED FOR CONSTRUCTION



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TITLE
 ELECTRICAL DEMO LIGHTING PLAN

SCALE
 AS SHOWN

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 03/05/04

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CHECKED BY
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E-3

03174

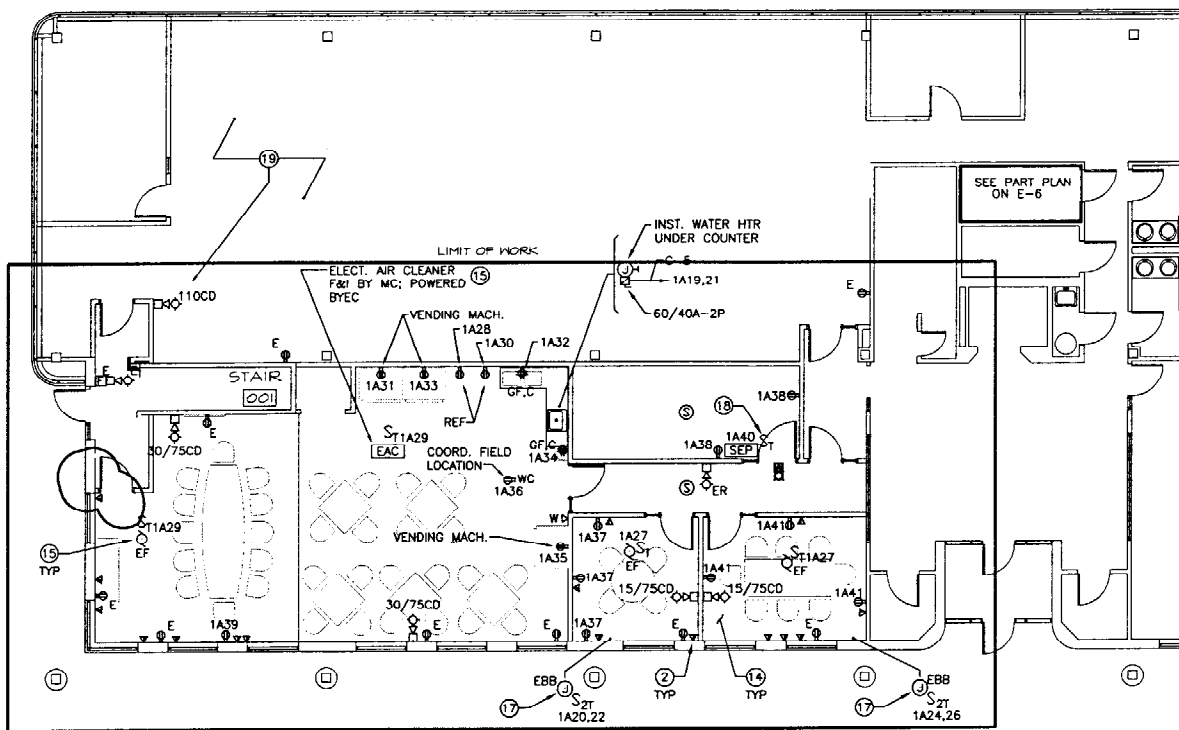
PROPOSED POWER PLAN NOTES

- ELECTRICAL SUB-CONTRACTOR (EC) SHALL FIELD SURVEY THE EXISTING PNLBDS AND ALL ASSOCIATED FIELD WIRING IN ORDER TO REVISE DUE TO THE PROPOSED NEW WORK. EC SHALL PROVIDE "AS-BUILT" DWGS MARK-UPS OF BRANCH CIRCUITING WITH THE FINAL "AS-BUILT" REVISED PANELBOARD SCHEDULES. EC SHALL FURNISH AND INSTALL NEW ELECTRICAL EQUIPMENT NAMEPLATES AND TYPED BRANCH CIRCUIT DIRECTORIES FOR BOTH NEW AND EXISTING PANELBOARDS. EC'S WORK SHALL INCLUDE CLEANING AND TIGHTENING EXISTING PANELBOARDS' COMPONENTS.
- EC SHALL FURNISH AND INSTALL TELE/DATA EMPTY BOXES WITH PULL STRINGS TO ABOVE THE HUNG CEILING FOR TELE/DATA OUTLETS AND WIRING BY OTHERS. EC'S TELE/DATA WORK INCLUDES ALL NECESSARY COORDINATION WITH THE TELE/DATA CONTRACTOR. FOR TELE/DATA OUTLETS OR FURNITURE FEEDS UNDER WINDOWS WHICH ARE NOT DIRECTLY ACCESSIBLE TO THE CEILING, THE EC SHALL SNAKE IN EMPTY (W/PULL STRING) FLEXIBLE METAL RACEWAY TO ENABLE THE T/D CONTRACTOR TO PULL IN THE T/D CABLES.
- SPACES OUTSIDE THE LIMIT OF WORK HAVE NO NEW ELECTRICAL WORK, UNLESS FIELD SURVEYS SHOW THAT DEVICES OR CIRCUITS WITHIN THESE SPACES ARE AFFECTED BY WORK WITHIN THE CONTRACT AREA IN WHICH CASE WORK IS LIMITED TO RESTORATION OF DEVICES AND CIRCUITS TO EXISTING FUNCTIONALITY.
- EC SHALL NOTE THAT ALL ELECTRICAL DEVICES INDICATED WITHIN THE LIMITS OF WORK ARE NEW, EXCEPT THOSE THAT ARE NOTED AS "E" (EXISTING, NO CHANGE) "ER" (EXISTING TO BE RELOCATED) OR "EX"/"EY"/"EZ" (EXISTING TO BE MODIFIED).
- CIRCUITS, EQUIPMENT AND FEEDS NOT LISTED AS EXISTING ("E") OR EXISTING TO BE RELOCATED ("ER"), SHALL BE CONNECTED TO NEW CIRCUIT(S) AS SHOWN. EC TO REVISE NEW CIRCUIT ASSIGNMENTS SHOWN ON DRAWING AS NEEDED BASED ON THE REQUIRED FIELD SURVEY, AFTER ALL DEMO WORK IS COMPLETE. EC SHALL ASSIGN THE ACTUAL POLE POSITIONS BASED UPON AVAILABLE POLES, PANELBOARD LOADING, AND BALANCING OF CIRCUITS. EC'S AS-BUILT PLANS SHALL REFLECT THE ACTUAL CIRCUIT NUMBERS USED.
- PRIOR TO ROUGHING ANY NEW FURNITURE WALL FEEDS, WALL RECEPTACLES OR WALL TELE/DATA BACKBOXES, EC SHALL REVIEW LOCATIONS OF ALL NEW SUCH WALL FEEDS/DEVICES REQUIRED WITH THE ARCHITECT AT THE SITE.
- FOR ALL NEW POWER DEVICES/FEEDS, AND TELE/DATA INFRASTRUCTURE INSTALLED ON OUTSIDE WALLS: EC SHALL FULLY FIELD-SURVEY THESE AREAS, AND SHALL MOUNT ALL THESE ITEMS AS RECESSED, WHEREVER POSSIBLE. IF RECESSED INSTALLATION IS NOT POSSIBLE, EC SHALL NOTIFY ARCHITECT FOR FURTHER INSTRUCTION (I.E. SURFACE-MOUNTED RACEWAY/BOXES); EC SHALL NOT PROCEED IN THIS CASE UNTIL ARCHITECT PROVIDES INSTRUCTION.
- EC TO F & I NEW FA HORN STROBE UNITS, RATED AS SHOWN. H/S UNIT TO BE BY SAME MANUFACTURER, BE FULLY COMPATIBLE WITH THE EXISTING SYSTEM, AND MATCH EXISTING IN BUILDING IN ALL RESPECTS EXCEPT FOR CD RATING. EC TO ASSURE THAT THE ADDITION OF THESE UNITS WILL REQUIRE THE ADDITION OF ONE OR MORE ALARM EXTENDER PANEL(S). REFER TO WIRING DETAIL, AND NOTES BELOW. EC TO F&I NEW FA SMOKE DETECTORS WHERE SHOWN ON PLANS. DETECTORS TO BE BY SAME MANUFACTURER, BE FULLY COMPATIBLE WITH THE EXISTING SYSTEM, AND MATCH EXISTING IN BUILDING IN ALL RESPECTS
- FOR EXISTING & EXISTING-RELOCATED FA HORN/STROBES SHOWN WITH CANDELA LEVEL INDICATED, EC SHALL FIELD-INSPECT EACH UNIT TO ENSURE THAT THE UNIT IS RATED FOR THE INDICATED LEVEL, AS A MINIMUM. IF UNIT HAS A LESSER RATING, THEN EC SHALL REPLACE IT WITH A UNIT RATED AS SHOWN.
- ELECTRICAL CONTRACTOR (EC) SHALL CONTACT THE BLDG'S FA OPERATION & MAINTENANCE CONTRACTOR IN ORDER TO SOLICIT COSTS FOR ALL FA FIELD CONNECTIONS AND TESTING INCLUDING SYSTEM RE-CERTIFICATION. THE BLDG FA O&M CONTRACTOR SHALL PROVIDE FINAL CONNECTIONS, PROGRAMMING, FIELD TESTING, ETC. IN ORDER FOR THE REVISED FA SYSTEM TO BE RE-ACCEPTED BY THE MUNICIPAL FIRE DEPARTMENT. ALL COSTS FOR THE BLDG FA O&M CONTRACTOR SHALL BE PAID BY THE TENANT ELECTRICAL CONTRACTOR. NOTE, EC'S WORK ALSO INCLUDES MUNICIPAL FIRE ALARM PERMIT, SUBMITTAL OF THE FA DRAWINGS, MEETINGS WITH MUNICIPAL FIRE DEPT AND FIELD TESTING BY THE FIRE DEPT.
- EC SHALL FIELD SURVEY THE EXISTING FA WIRING IN ORDER TO REVISE / ADD AS REQUIRED FOR THE RELOCATED AND NEW FA FIELD DEVICES IN THE RENOVATED AREA. THE EXISTING FA DETECTION AND SIGNALING CIRCUITS SHALL BE RE-UTILIZED FOR THE NEW FA DEVICES, WITH THE ADDITION OF A FIRE ALARM SIGNAL EXTENDER PANEL(S) AS NOTED. EC SHALL FURNISH DEDUCT COST VALUE IN ITS BID TO COVER THE SIGNAL EXTENDER PANEL IF IT DEEMED NOT TO BE REQUIRED.
- EC SHALL FURNISH AND INSTALL NEW FA WIRING WHICH MATCHES THE EXISTING WIRING (I.E. - TYPE, NUMBER, SIZE, ETC.) AND WHICH IS COMPLIANT WITH THE FA MANUFACTURER'S TECHNICAL RECOMMENDATIONS. ALL FA WIRING SHALL HAVE COMPUTERIZED ALPHANUMERIC WIRE MARKERS TAGS AS RECOMMENDED BY THE BLDG FA O&M CONTRACTOR.
- EC'S WORK INCLUDES COMPLETE DOCUMENTATION OF THE EXISTING AND NEW FA WIRING FOR BOTH POINT TO POINT INTERCONNECTION AND BUILDING PLAN WIRING DIAGRAMS. THE EC SHALL SUBCONTRACT WITH THE BLDG FA O&M CONTRACTOR IN ORDER TO UPDATE THE EXISTING BUILDING'S FA SYSTEM RECORD DWGS. IF REQUESTED THE ARCHITECT SHALL PROVIDE ELECTRONIC FILES OF THE PROJECT SPACE FOR THESE AS-BUILT DWGS.
- VERTICALLY ALIGN NEW FIRE ALARM HORN/STROBES IN CONFERENCE ROOMS WITH LIGHTING SWITCHES. (EC TO CONFIRM/COORDINATE THIS WITH THE ARCHITECT PRIOR TO ROUGHING.)
- EC TO COORDINATE LOCATION OF EQUIPMENT INSTALLED BY OTHERS AND POWERED BY EC PRIOR TO ROUGHING.
- SYSTEMS FURNITURE AFFECTED BY THIS PROJECT IS THE 4-CIRCUIT, 8-WIRE TYPE.
- EC SHALL F&I ELECTRIC BASEBOARD HEATER IN LOCATION SHOWN (COORDINATE EXACT LOCATION WITH ARCHITECT). UNIT TO BE 6' LONG "QMARK" MODEL "QMKC2506W", RATED 1500 W. AT 208 V. SINGLE PHASE, 5120 BTU/HR, WITH SEPARATE 2P THERMOSTAT MODEL "QMKTAZAW". LOCATE T-STAT PER COORDINATION WITH ARCHITECT AND MC, AND WIRE PER MFR INSTRUCTIONS.
- TOGGLE SWITCH REFERENCED TO THIS NOTE TO BE ABLE TO BE LOCKED IN "ON" POSITION.
- EC SHALL PROVIDE A SEPARATE LINE ITEM IN THEIR BID FOR ALL PROPOSED POWER WORK ASSOCIATED WITH THE AREA OUTSIDE THE NEW DEMISING WALL SHOWN; REFER TO ARCHITECT PLANS FOR EXACT LIMITS OF WORK.

SED ASSOCIATES CORP.
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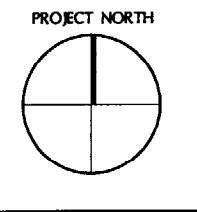


1ST FLOOR PROPOSED POWER PART PLAN

1/8" = 1'-0"

PANELBOARD BRANCH CIRCUITS	
CKT NO'S	FED FROM PNLBD
1A	"T1A"
2A	"T2A"
2B	"T2B"
2C	"T2C"
2D	"T2D"

NO	DATE	REVISIONS

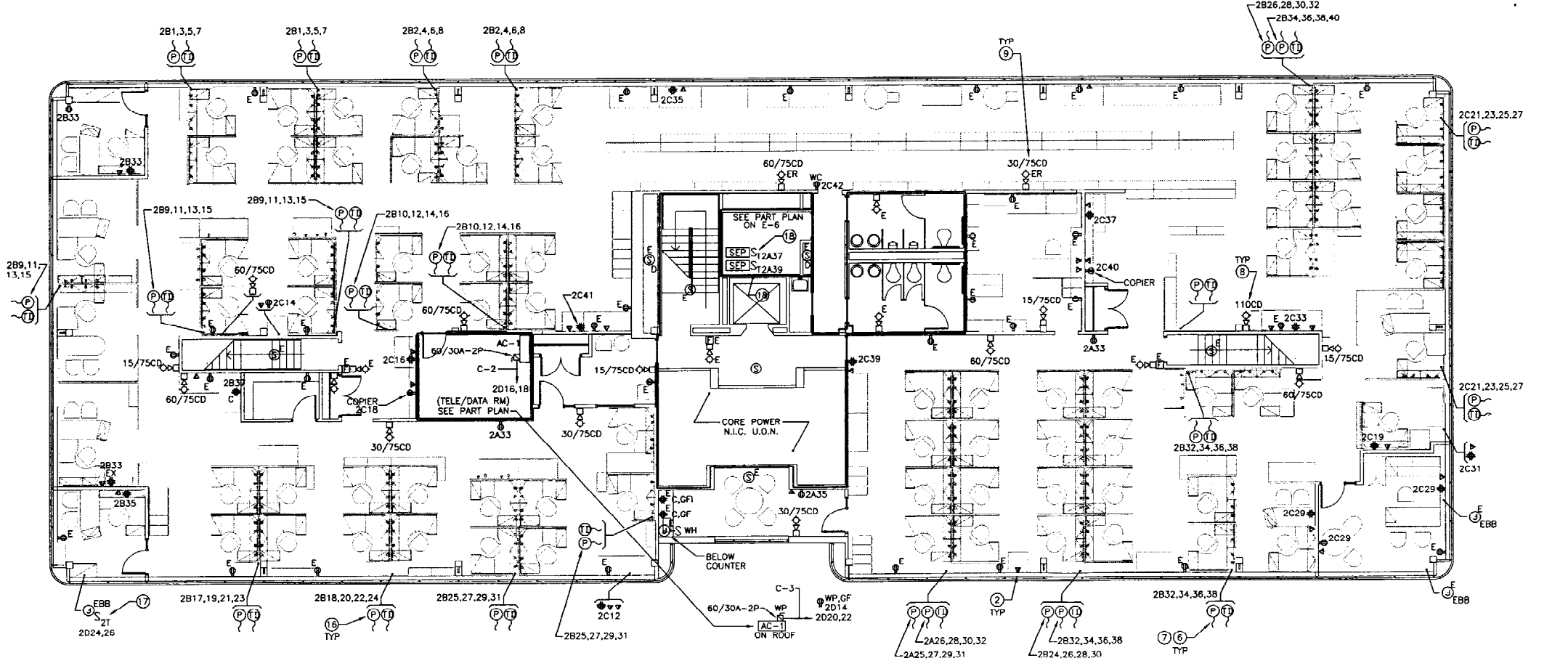


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ELECTRICAL PROPOSED PWR PLANS, FLOOR 1&2
 SCALE
 AS SHOWN

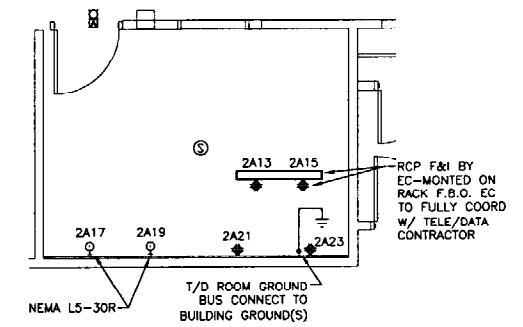
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2ND FLOOR PROPOSED POWER PLAN

1/8" = 1'-0"



PART PLAN - TELE/DATA ROOM

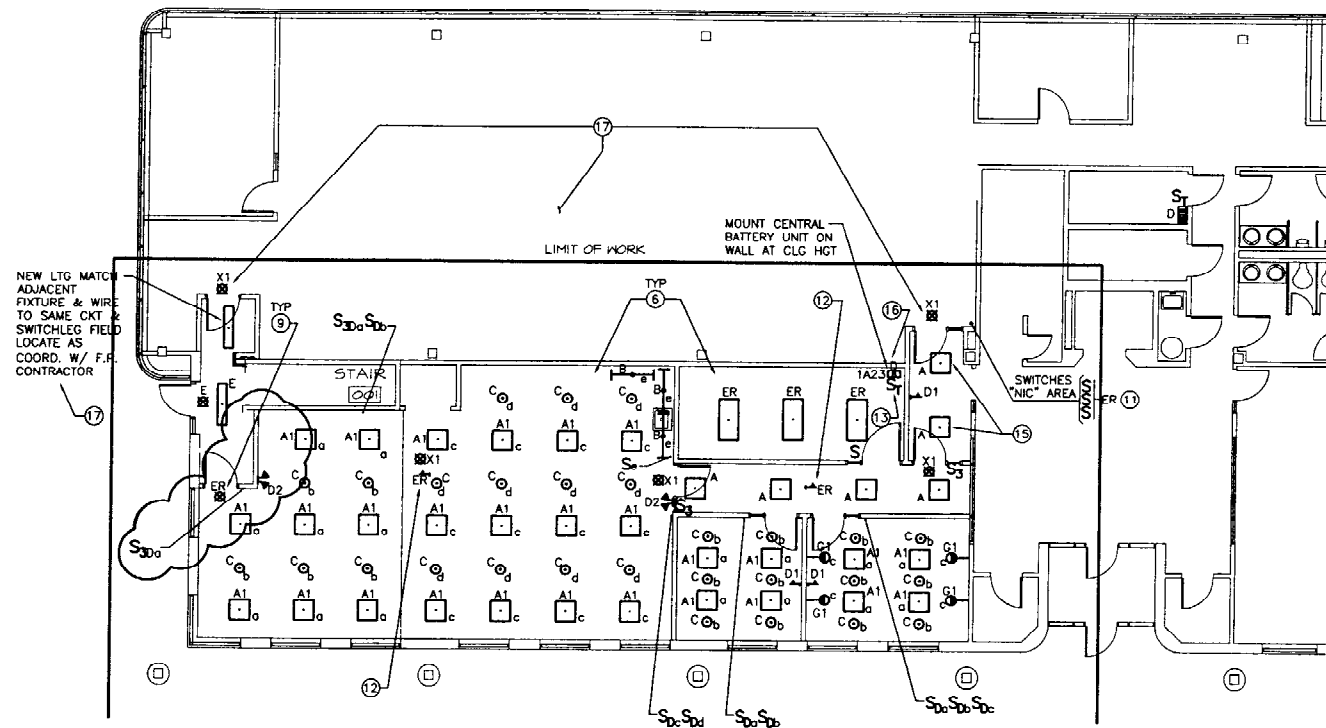
1/4" = 1'-0"

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 - FOR ELECTRICAL SPECIFICATIONS, REFER TO DWG #E-9.

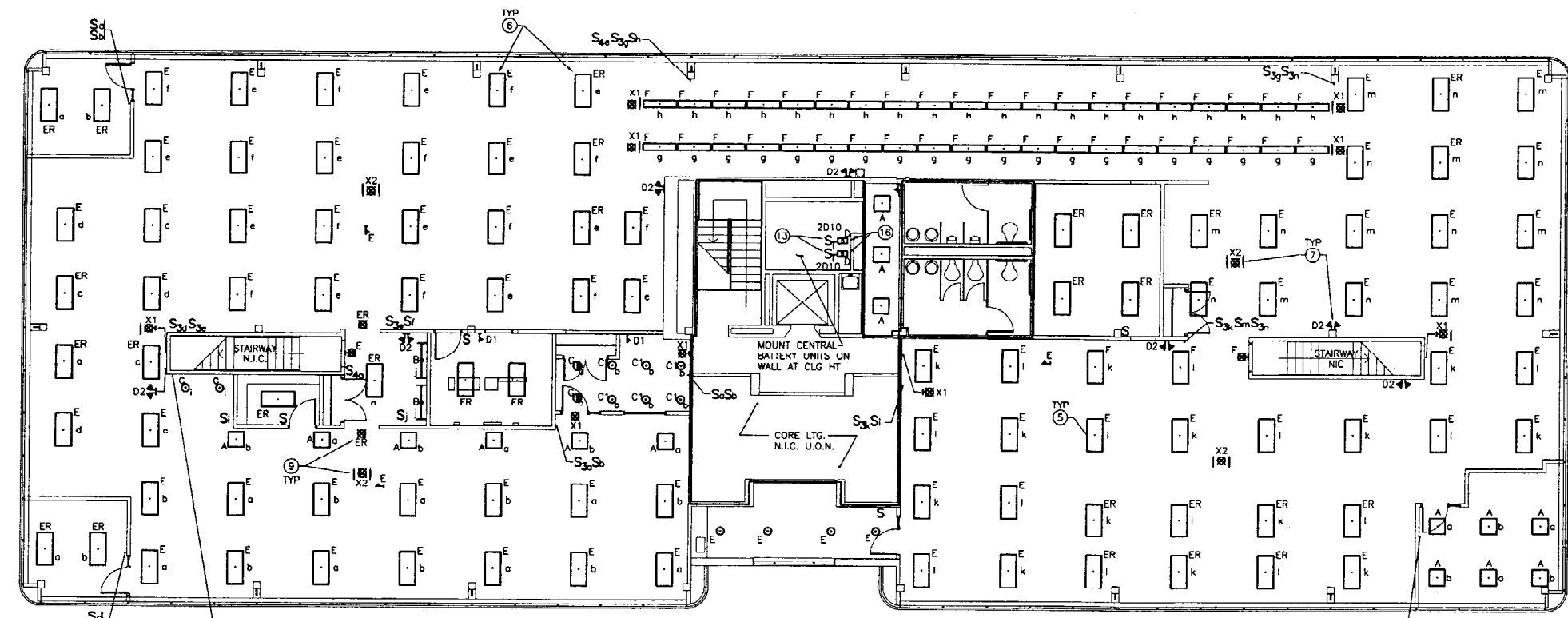
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PROPOSED LIGHTING PLAN NOTES

- ① ELECTRICAL CONTRACTOR (EC) SHALL FURNISH AND INSTALL NEW OR RELOCATED LIGHTING FIXTURES IN THE EXISTING BLDG SPACES AND REUSE (AT THE CONTRACTOR'S OPTION) THE EXISTING WIRING WITH NEW/REVISED WIRING AS REQUIRED FOR THE NEW LIGHTING AND CONTROLS. ALL UNUSED EXISTING WIRING MUST BE COMPLETELY DEMOLISHED.
- ② EC SHALL FIELD SURVEY AND REVISE AS REQUIRED THE EXISTING PANELBOARD BRANCH WIRING AND CIRCUITS WHICH MUST BE REVISED FOR THE NEW AND REVISED LIGHTING CIRCUITS. WORK INCLUDES NEW TYPED "AS-BUILT" PANELBOARD DIRECTORIES.
- ③ EC SHALL NOTE EXISTING ELECTRICAL LIGHTING INDICATED ON THE DRAWINGS ARE NOT "AS-BUILT". INFORMATION INDICATED WAS OBTAINED FROM A/E GENERAL WALK-THRU INSPECTIONS. EC SHALL MAKE FIELD ADJUSTMENTS AS NECESSARY.
- ④ LIGHTING WIRING WHICH IS NOT SHOWN SHALL BE FURNISHED AND INSTALLED BY THE EC IN CONFORMANCE WITH THE SPECS. EC HAS OPTION TO USE EITHER THE EXISTING RACEWAYS WITH MODIFICATIONS AS REQUIRED OR PROVIDE NEW WIRING.
- ⑤ EXISTING, NON-RELOCATED LIGHTING WITHIN THE LIMITS OF WORK SHALL REMAIN "AS-IS" EXCEPT FOR CLEANING AND RELAMPING; SEE DEMO PLAN.
- ⑥ NEW OR RELOCATED LIGHTING SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE ARCHITECTURAL REFLECTED CEILING PLAN.
- ⑦ AFTER INSTALLATION/RELOCATION, EC SHALL FIELD TEST ALL THE EXIT AND EGRESS LIGHTING IN THE PROJECT AREA AND PROVIDE A WRITTEN RECERTIFICATION OF COMPLIANCE WITH ALL REQUIRED CODES.
- ⑧ ALL EXISTING RELOCATED FIXTURES, AND ALL NEW FIXTURES SHALL BE POWERED FROM THE EXISTING AREA LIGHTING CIRCUITS, WHERE POSSIBLE, IN ACCORDANCE WITH NEC AND REQUIRED CODES. UTILIZE NEW LIGHTING CIRCUITS ONLY IF THE FIELD SURVEY INDICATES THAT THE EXISTING CIRCUITS ARE ALREADY, OR WOULD BECOME LOADED OVER +/- 14A WITH THE ADDITIONAL LIGHTING.
- ⑨ BASED UPON THE FIELD SURVEY, THE NEW AND RELOCATED EMERGENCY EXIT SIGNAGE SHALL BE WIRED INTO THE SAME NORMAL POWER CIRCUIT AS THE EXISTING EXIT SIGNAGE IN THE AREA. ALL NEW AND RELOCATED EMERGENCY EXIT SIGNAGE SHALL BE CONNECTED TO THE NEW CENTRAL BATTERY UNIT AS WELL, AS NOTED IN THE BLOCK DIAGRAMS.
- ⑩ EXCEPT AS NOTED, SPACES OUTSIDE THE LIMIT OF WORK HAVE NO NEW ELECTRICAL LIGHTING WORK, UNLESS FIELD SURVEYS SHOW THAT FIXTURES, DEVICES OR CIRCUITS WITHIN THESE SPACES ARE AFFECTED BY THIS WORK, IN WHICH CASE WORK IS LIMITED TO RESTORATION OF FIXTURES, DEVICES AND CIRCUITS TO EXISTING FUNCTIONALITY.
- ⑪ EC SHALL RELOCATE EXISTING SWITCHING REFERENCED TO THIS NOTE TO NEW LOCATION, PROVIDING ALL WIRING, RACEWAYS AND BOXES NECESSARY TO ACCOMPLISH THIS. FUNCTION OF THE SWITCHING SHALL REMAIN THE SAME AS ORIGINALLY CONFIGURED.
- ⑫ EC TO RECONNECT EXISTING EMERGENCY EGRESS BATTERY LIGHTING HEADS REFERENCED TO THIS NOTE TO THE NEW CENTRAL BATTERY UNIT SHOWN.
- ⑬ DISCONNECT SWITCHES REFERENCED TO THIS NOTE SHALL BE ABLE TO BE LOCKED IN THE "ON" POSITION.
- ⑭ EC TO FULLY FIELD COORDINATE EXACT LOCATIONS OF SWITCHES WITH ARCHITECT PRIOR TO ROUGHING.
- ⑮ FIXTURES REFERENCED TO THIS NOTE SHALL BE POWERED AND SWITCHED THE SAME AS THE "HOUSE" LIGHTING IN THE CORE LOBBY, PER FIELD-SURVEY.
- ⑯ EC TO REVISE QUANTITIES OF EMERGENCY BATTERY UNITS FURNISHED, DEPENDING ON THE CAPACITIES OF THE "AS-SUPPLIED" UNITS.
- ⑰ EC SHALL PROVIDE A SEPARATE LINE ITEM IN THEIR BID FOR ALL PROPOSED LIGHTING WORK ASSOCIATED WITH THE AREA OUTSIDE THE NEW DEMISING WALL SHOWN; REFER TO ARCHITECT PLANS FOR EXACT LIMITS OF WORK.



1ST FLOOR PROPOSED LIGHTING PART PLAN
 1/8" = 1'-0"



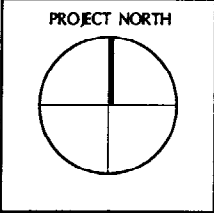
2ND FLOOR PROPOSED LIGHTING PLAN
 1/8" = 1'-0"

PANELBOARD BRANCH CIRCUITS	
CKT NO'S	FED FROM PNLBD
1A	T1A*
2A	T2A*
2B	T2B*
2C	T2C*
2D	T2D*

ELECTRICAL DRAWINGS REFERENCE NOTES

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- 2) FOR ELECTRICAL POWER & LGT DEMO PLANS, REFER TO DWGS #E-2 & E-3.
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- 4) FOR ELECTRICAL RISERS, REFER TO DWG #E-6.
- 5) FOR ELECTRICAL DETAILS REFER TO DWGS E-6 AND E-7.
- 6) FOR ELECTRICAL SCHEDULES REFER TO DWGS E-7 AND E-8.
- 7) FOR ELECTRICAL SPECIFICATIONS, REFER TO DWG #E-9.

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1	12-24	ISSUED FOR CONSTRUCTION



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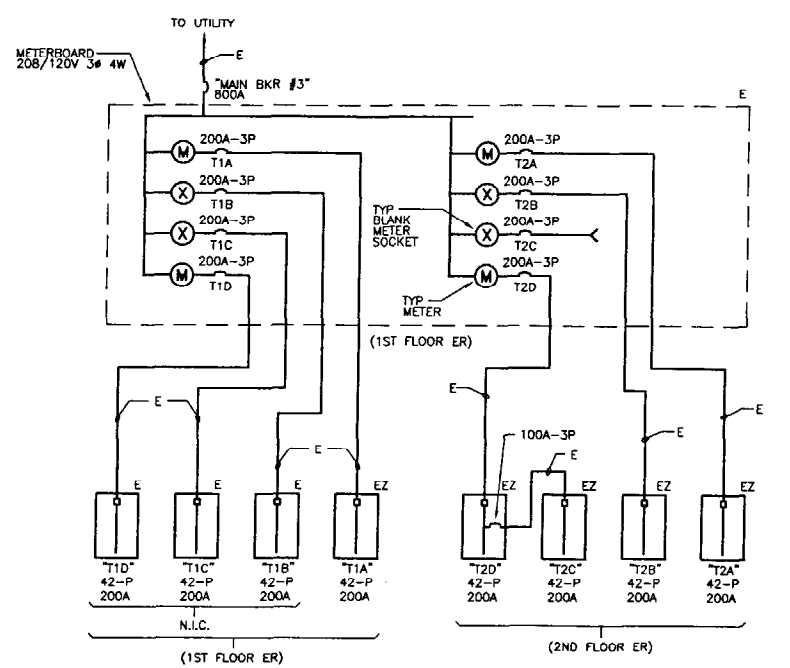
TITLE
 ELECTRICAL
 PROP. LIGHTING
 FLOORS 1ST & 2ND

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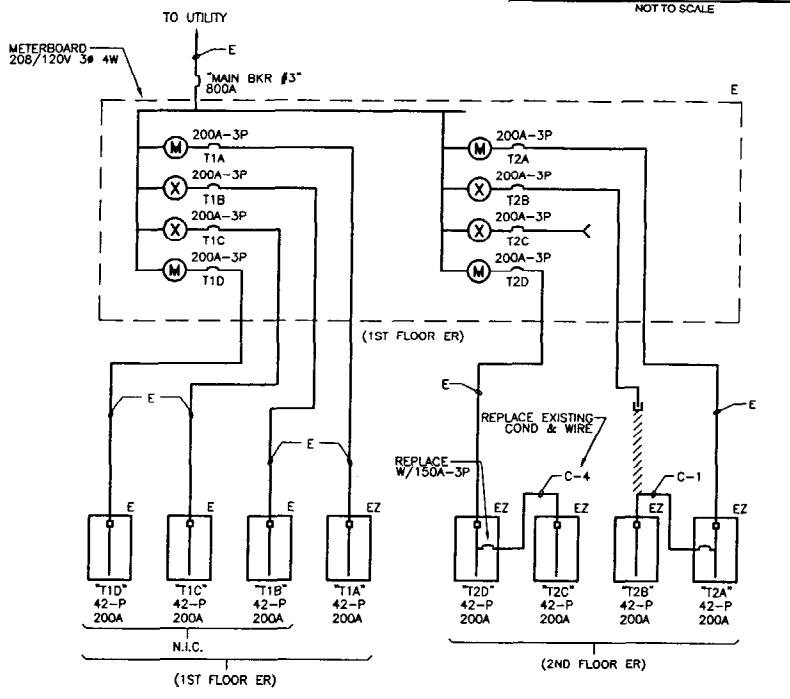
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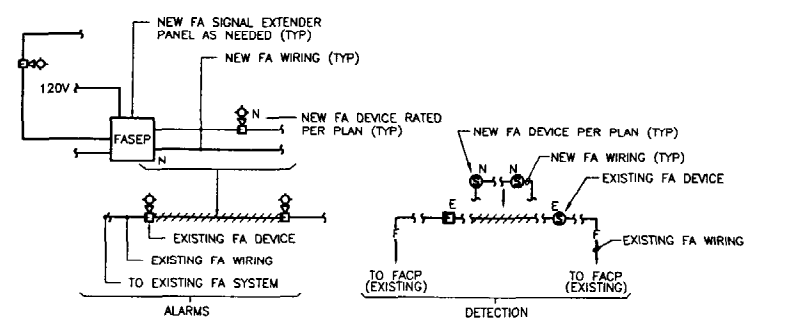
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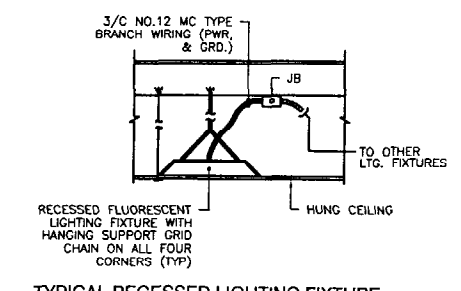
EXISTING POWER RISER DIAGRAM
 NOT TO SCALE



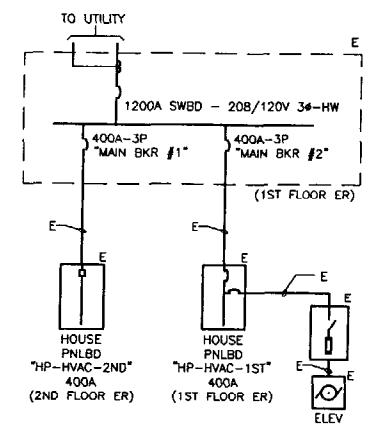
PROPOSED POWER RISER DIAGRAM REVISIONS
 NOT TO SCALE



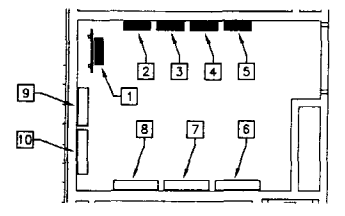
PARTIAL FIRE ALARM SYSTEM RISER DIAGRAMS
 NOT TO SCALE



TYPICAL RECESSED LIGHTING FIXTURE MOUNTING AND WIRING DETAIL
 NOT TO SCALE



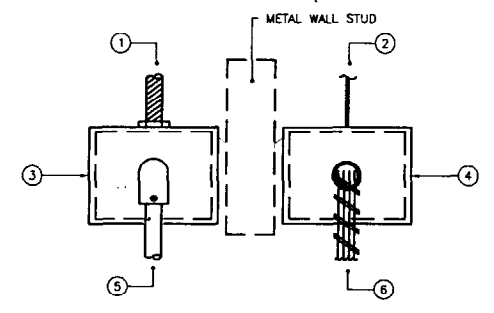
PART PLAN FIRST FLOOR ELECTRICAL ROOM
 1/4" = 1'-0"



PART PLAN SECOND FLOOR ELECTRICAL ROOM
 1/4" = 1'-0"

EQUIPMENT LIST PROPOSED POWER	
1	HOUSE PNLBD "HP-HVAC-2ND"
2	TENANT PNLBD "T2A"
3	TENANT PNLBD "T2B"
4	TENANT PNLBD "T2C"
5	TENANT PNLBD "T2D"
6	FIRE ALARM SYSTEM PANELS W/(5) SMOKE DETECTOR REMOTE TEST STATIONS ABOVE
7	FA ALARM SYSTEM PANELS
8	FIRE ALARM CONTROL PANEL ("RADIONICS")
9	TELE/DATA DISTR PUNCHDOWN BLOCKS
10	T/D CABINET
11	MAIN SWITCHBOARD W/CT CABINET
12	HOUSE PNLBD "HP-1ST"
13	TENANT PNLBD "T1A"
14	TENANT PNLBD "T1B"
15	TENANT PNLBD "T1C"
16	TENANT PNLBD "T1D"
17	TENANT METERBOARD 800A MAIN DISCONNECT
18	TENANT METERBOARD W/(8) METER CAPACITY
19	METER CABINET W/BLANKING PLANT OVER METER OPENING, OF UNKNOWN USE
20	4" SLEEVE TO SECOND FLOOR AND 4" SLEEVE THROUGH FLOOR W/LOW VOLTAGE CABLES
21	CONDUITS FROM BELOW FIRST FLOOR TO SECOND FLOOR ELECTRICAL ROOM ABOVE

- REVISED POWER DISTRIBUTION SYSTEM RISER DIAGRAMS NOTES**
- THE EXISTING SYSTEM SHALL BE MAINTAINED AS REQUIRED DURING THE CONSTRUCTION TO PROVIDE POWER TO THE N.I.C. AREAS. ANY REQUIRED SHUTDOWNS MUST BE COORDINATED WITH THE OWNER, GC AND OTHER TRADES PRIOR TO IMPLEMENTATION.
 - ELECTRICAL CONTRACTOR (EC) SHALL SUFFICIENTLY FIELD SURVEY ALL THE EXISTING POWER DISTRIBUTION SYSTEM'S EQUIPMENT (MAIN SWITCHBOARD, METERBOARD AND AREA PANELBOARDS) AND ALL DOWNSTREAM FEEDERS IN THIS SPACE AND AFFECTED AREAS, AND ASSOCIATED WIRING PRIOR TO BIDDING AND CONSTRUCTION IN ORDER TO VERIFY THE ENGINEER'S DIAGRAMS, AND CONFIRM THAT PHYSICAL SPACE AND CAPACITY EXIST IN THE EXISTING PANELBOARD AND SUBSTATIONS FOR THE NEW WORK SHOWN. NOTE: THE ENGINEER PREPARED THE DIAGRAM FROM THE AVAILABLE NOT-"AS-BUILT" DRAWINGS PLUS A VISUAL WALK THROUGH INSPECTION. EC'S WORK INCLUDES MAKING ALL NECESSARY ADJUSTMENTS TO THE EXISTING AND NEW CIRCUITS TO SUIT BOTH THE EXISTING CONDITIONS, DEMOLITION AND NEW WORK'S EFFECT ON THE EXISTING CIRCUITS. NOTE: THE EC MUST LOCATE THE POWER FEEDS FOR ALL AFFECTED SERVICES, AND EC SHALL PROVIDE A DRAWING MARK-UP OF THE EXISTING POWER DISTRIBUTION SYSTEM FROM THE EC'S FIELD SURVEY PRIOR TO DEMOLITION. THE POWER RISER DIAGRAM DRAWING PLOT SHALL BE USED BY THE EC FOR THIS PURPOSE.
 - EC SHALL NOT ROUGH WIRE THE PROPOSED CIRCUITS UNTIL THE FIELD SURVEY HAS BEEN COMPLETED IN THE EVENT ANY PROPOSED BRANCH CIRCUITS CANNOT BE WIRED TO THE INDICATED EXISTING SUBSTATIONS.
 - EC SHALL SURVEY THE EXISTING-TO-REMAIN PANELBOARDS' GROUNDING TO ENSURE THAT THE NEUTRAL IS BONDED TO THE GROUND; EC SHALL BOND THE GROUND TO THE NEUTRAL IF IT IS NOT ALREADY.
 - EC SHALL "BOND" ALL DISCONTINUOUS STEEL WITH A NO 4/0 GROUNDING CABLE AS REQUIRED.
 - EC SHALL MODIFY THE FEEDERS AND FEEDER BREAKERS AS SHOWN ON THIS DIAGRAM.
 - EC SHALL FURNISH AND INSTALL NEW BRANCH CIRCUIT BREAKERS AS INDICATED. THE NEW BREAKERS SHALL MATCH THE SIMILAR UNITS AND BE OF THE SAME MANUFACTURER AS THE ORIGINAL UNITS.
 - EC'S WORK INCLUDES CLEANING AND TIGHTENING ALL EXISTING PANELBOARDS AFFECTED BY THIS PROJECT.
 - EC SHALL PROVIDE NEW ENGRAVED NAMEPLATES FOR ALL NEW AND EXISTING POWER DISTRIBUTION EQUIPMENT AFFECTED BY THIS PROJECT WHICH INDICATE THE TAG NAME, VOLTAGE/PHASE AND FED FROM "XXXX" INFORMATION.
 - EC SHALL PROVIDE COMPLETE NEW TYPED "AS-BUILT" BRANCH CIRCUIT DIRECTORIES IN EACH OF THE NEW AND EXISTING-TO-REMAIN PANELBOARDS AFFECTED BY THIS PROJECT.
 - ALL NEW DISCONNECT SWITCHES, AND OTHER DISTRIBUTION EQUIPMENT ETC. SHALL BE MANUFACTURED BY THE SAME FIRM. ALL FUSED DISCONNECT SWITCHES SHALL HAVE CURRENT LIMITING FUSES. EC SHALL PROVIDE THE FUSES "LET-THRU CURRENT" CURVES FOR ENGINEER REVIEW AND APPROVAL PRIOR TO RELEASE.



TYPICAL PARTITIONS WORKSTATIONS POWER AND TELE/ DATA SERVICES WALL WIRING DETAIL
 NOT TO SCALE

- WORKSTATION SERVICES DETAIL NOTES**
- POWER SERVICE TYPE "MC" POWER BRANCH WIRING (CONCEALED IN BUILDING WALL).
 - TELE/DATA SERVICE NYLON PULL STRING FROM SERVICE BOX TO ABOVE HUNG CEILING (CONCEALED IN BUILDING WALL).
 - TWO GANG POWER OUTLET BOX WITH STAINLESS STEEL FACEPLATE AND WIRING CONNECTOR.
 - TWO GANG TELE/DATA SERVICES BOX WITH STAINLESS STEEL FACEPLATE AND GROMMETTED TELE/DATA CABLES HOLE.
 - SYSTEMS FURNITURE LIQUID-TIGHT POWER SERVICES WIRING. FIELD CUT TO LENGTH BY EC.
 - TELE/DATA "UTP" WIRING WITH NYLON SPIRAL WIRE MANAGEMENT (TELE/DATA WIRING BY LM'S TELE/DATA CONTRACTOR).

- ELECTRICAL DRAWINGS REFERENCE NOTES**
- FOR ELECTRICAL SYMBOLS, ABBREVS & NOTES, REFER TO DWG #E-1.
 - FOR ELECTRICAL POWER & LTG DEMO PLANS, REFER TO DWGS #E-2 & E-3.
 - FOR ELECTRICAL PROPOSED POWER & LTG PLANS, REFER TO DWGS #E-4 & E-5.
 - FOR ELECTRICAL RISERS, REFER TO DWG #E-6.
 - FOR ELECTRICAL DETAILS REFER TO DWGS E-6 AND E-7.
 - FOR ELECTRICAL SCHEDULES REFER TO DWGS E-7 AND E-8.
 - FOR ELECTRICAL SPECIFICATIONS, REFER TO DWG #E-9.

LIBERTY MUTUAL 161 WASHINGTON AVENUE PORTLAND, MAINE		OWNER
TITLE ELECTRICAL DETAILS AND RISER DIAGRAMS		SCALE AS SHOWN
Cubellis Associates Inc. 77 Atlantic Avenue Boston, MA 02111 Tel: 617-338-0088 www.cubellis.com		DRAWN BY JCM CHECKED BY WPE DATE 03/05/04
E-6		03174

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LIGHTING FIXTURE SCHEDULE			
FIXT TYPE	LAMP TYPE & WATTS	DESCRIPTION	MANUFACTURER/ MODEL
A	FLUOR (2) 31W-T8U	2'X2' RECESSED PARABOLIC; 9-CELL; 3" DEEP LOUVERS, LD BAFFLES 120V ELECTRONIC BALLAST ACT RECESS-MTD	MATCH EXISTING 2'X4' FIXTURES FOR APPEARANCE, ETC.; FOR REFERENCE: DAYBRITE # 2-P3-GSP231U1-33-SL-120-1/2-EB
A1	FLUOR (2) 31W-T8U	2'X2' RECESSED PARABOLIC; 9-CELL; 3" DEEP LOUVERS, LD BAFFLES 120V DIMMING ELECTRONIC BALLAST ACT RECESS-MTD	MATCH EXISTING 2'X4' FIXTURES FOR APPEARANCE, ETC.; FOR REFERENCE: DAYBRITE # 2-P3-GSP231U1-33-SL-120-1/2-DEB
B	FLUOR (1) 32W-T8	4' LONG UNDERCABINET FIXTURE, W/ WHITE STEEL BODY, WHITE ACRYLIC LENS 120V ELECTRONIC BALLAST; NO INTEGRAL SWITCH OR RECEPTACLE SURFACE-MOUNTED	DAYBRITE # B-UC-1-32-W/120-1/1EB-TB
C	COMP FLUOR (2) 32W PLT	8" ROUND OPEN DOWNLIGHT CLEAR ALZAK REFLECTOR/WHITE TRIM 120V DIMMING ELECTRONIC BALLAST RECESS-MTD	OMEGA # OMB-2-H-32-PLT-BB-CS-FFW-DM2- -120
C1	COMP FLUOR (2) 32W OD	8" ROUND OPEN DOWNLIGHT CLEAR ALZAK REFLECTOR/WHITE TRIM 120V ELECTRONIC BALLAST RECESS-MTD	OMEGA # OMB-2-H-32-PLT-BB-CS-FFW-FZ120- -120
D	<<<<<>>>	CENTRAL BATTERY UNIT; WET-CELL LEAD CALCIUM BATTERY, W/AMMETER & VOLTMETER, 120V CHARGER AND TRANSFER CIRCUITRY; SHELF-MOUNTING HARDWARE INCLUDED WALL SHELF MTD	MCPHILBEN # NE12LxxxW-V-A-TD1-MS-F1-PS1
D1	TUNGSTEN (1) 12V/12.5W	SINGLE HEAD EMERGENCY LIGHT, W/SQUARE THERMOPLASTIC WHITE HOUSING FED FROM TYPE "D" BATTERY SURFACE/WALL MOUNTED	MCPHILBEN # PSWE
D2	TUNGSTEN (2) 12V/12.5W	DUAL HEAD EMERGENCY LIGHT, W/SQUARE THERMOPLASTIC WHITE HOUSING FED FROM TYPE "D" BATTERY SURFACE/WALL MOUNTED	MCPHILBEN # 2-PSWE
E		<<<<DESIGNATES EXISTING>>>>	
ER		<<<<DESIGNATES EXISTING-RELOCATED>>>>	
F	FLUOR (2) 32W-T8	1'X4' RECESSED PARABOLIC; 8-CELL; 3" DEEP LOUVERS-LD BAFFLES 120V ELECTRONIC BALLAST ACT RECESS-MTD	MATCH EXISTING 2'X4' FIXTURES FOR APPEARANCE, ETC.; FOR REFERENCE: DAYBRITE # 1-P3-G-5-232-18-SL-1/2EB
G	COMP FLUOR (2) 32W OD	8" ROUND OPEN WALLWASHER CLEAR ALZAK REFLECTOR/WHITE TRIM 120V ELECTRONIC BALLAST RECESS-MTD	OMEGA # OMB-2-H-32-PLT-WW-CS-FFW-FZ120- -120
G1	COMP FLUOR (2) 32W OD	8" ROUND OPEN WALLWASHER CLEAR ALZAK REFLECTOR/WHITE TRIM 120V DIMMING ELECTRONIC BALLAST RECESS-MTD	OMEGA # OMB-2-H-32-PLT-WW-CS-FFW-DM2- -120
X1	LED	EXIT LIGHTING WALL/CEILING MTD SINGLE FACE W/ WHITE BODY & RED LETTERS DUAL INPUTS: 120VAC AND 12VDC EMERGENCY BATTERY POWER WALL/CLG MOUNTED	MCPHILBEN # ER30VL-1--W-R-2C
X2	LED	EXIT LIGHTING WALL/CEILING MTD DUAL FACE W/ WHITE BODY & RED LETTERS DUAL INPUTS: 120VAC AND 12VDC EMERGENCY BATTERY POWER WALL/CLG MOUNTED	MCPHILBEN # ER30VL-2--W-R-2C

LIGHTING FIXTURE NOTES -

- 1) ALL LAMPS SHALL BE SUPPLIED WITH THE FIXTURES.
- 2) ALL FLUORESCENT LAMPS SHALL BE 3500K COLOR LAMPS.
- 3) ALL LIGHTING FIXTURE BALLASTS SHALL MEET OR EXCEED THE POWER COMPANY STANDARDS FOR ENERGY REBATES (WHETHER OR NOT IN EFFECT)
- 4) EC/SUPPLIER SHALL SUBMIT POINT-BY-POINT LIGHTING CALCULATIONS FOR ALL SPACES AFFECTED BY THIS PROJECT.
- 5) EC SHALL COORDINATE ALL FIXTURES WITH THE ARCHITECTURAL CEILING TYPES AND CONDITIONS PRIOR TO RELEASE.
- 6) EC SHALL FURNISH AND INSTALL SPECIFIED LIGHTING FIXTURES.
- 7) CATALOG NUMBERS PROVIDED MUST BE VERIFIED BY THE EC'S LIGHTING SUPPLIER FOR CONFORMANCE WITH FIXTURE DESCRIPTIONS AND APPLICABLE DRAWING REQUIREMENTS PRIOR TO BIDDING, RELEASE AND INSTALLATION.
- 8) THE LIGHTING SUPPLIERS SHALL BE RESPONSIBLE FOR ALL CATALOG NUMBERS ACCURACY. REGARDLESS OF THE CATALOG NUMBER THE FIXTURE'S SPECIFIED FEATURES MUST BE PROVIDED.

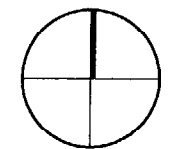
CONDUIT AND WIRE SCHEDULE						
CONDUIT NUMBER "C"	CONDUIT SIZE	NO. OF WIRES	WIRE SIZE (#/MCM)	FROM	TO	COMMENTS
1	2.0"	4	1/0	EXIST PNLBD "T2A"	EXIST PNLBD "T2B"	PWR (1/PH) GND
2	2.0"	4	1/0	EXIST PNLBD "T2D"	HVAC AC-1 INDOOR UNIT	PWR (1/PH) GND
3	1.0"	2	8	EXIST PNLBD "T2D"	HVAC AC-1 OUTDOOR UNIT	PWR (1/PH) GND
4	1.0"	2	8	EXIST PNLBD "T2D" (REPLACES EXIST COND)	EXIST PNLBD "T2C"	PWR (1/PH) GND
5	1.0"	2	6	EXIST PNLBD "T1A"	INST WTR HTR	PWR (1/PH) GND

CONDUIT & WIRE SCHEDULE NOTES

- 1) WIRING FOR TELE, DATA AND CTV SERVICES FURNISHED & INSTALLED BY OTHERS.
- 2) EC SHALL COORDINATE ALL EQUIPMENT WIRING AND POWER REQUIREMENTS PRIOR TO ANY EQUIPMENT RELEASE OR ROUGH WIRING
- 3) EC HAS OPTION TO USE TYPE "MC" FEEDERS WHERE CONCEALED ABOVE HUNG CEILINGS. HOWEVER NO INTERMEDIATE SPLICES ARE ALLOWED DUE TO THE USE OF TYPE "MC" FEEDERS.
- 4) SEE POWER RISER DIAG; EC MUST FIELD VERIFY SOURCE EQUIPMENT FOR NEW FEEDERS, AND MODIFY SOURCE AS NECESSARY PER FIELD CONDITIONS

NO.	DATE	REVISIONS
1	03/05/04	ISSUED FOR CONSTRUCTION

PROJECT NORTH



LIBERTY MUTUAL
 1861 WASHINGTON AVENUE
 PORTLAND, MAINE
 OWNER: LIBERTY MUTUAL

TITLE: **ELECTRICAL SCHEDULES "II"**
 SCALE: AS SHOWN

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E-8

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ELECTRICAL DRAWINGS REFERENCE NOTES

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- 4) FOR ELECTRICAL RISERS, REFER TO DWG #E-6.
- 5) FOR ELECTRICAL DETAILS REFER TO DWGS E-6 AND E-7.
- 6) FOR ELECTRICAL SCHEDULES REFER TO DWGS E-7 AND E-8.
- 7) FOR ELECTRICAL SPECIFICATIONS, REFER TO DWG #E-9.

ELECTRICAL CONSTRUCTION SPECIFICATIONS

1) SCOPE OF WORK -

THE ELECTRICAL CONTRACTOR (EC) SHALL FURNISH ALL LABOR, MATERIAL, SUPPLIES, EQUIPMENT, TOOLS AND SERVICES NECESSARY FOR AND REASONABLY INCIDENTAL TO COMPLETION OF THE ELECTRICAL WORK AS SPECIFIED AND AS SHOWN ON THE ELECTRICAL DRAWINGS. THE ELECTRICAL SYSTEMS SHALL BE FULLY INSTALLED, ADJUSTED, FIELD TESTED AND READY FOR USE BY LMI.

THE ELECTRICAL WORK MUST BE CONSTRUCTED PER THE ARCHITECT'S PROJECT SCHEDULE. THE ELECTRICAL CONTRACTOR SHALL INCLUDE IN THEIR BID ALL REQUIRED PREMIUM OVERTIME LABOR WHICH WILL BE REQUIRED TO MEET THE CONSTRUCTION SCHEDULE.

IN ADDITION, THE EXISTING BUILDING ELECTRICAL SYSTEMS MUST BE KEPT "ON-LINE" WITH MINIMUM SHUT-DOWNS. ANY SHUT-DOWNS MUST BE SCHEDULED/ COORDINATED/ APPROVED BY BOTH THE BUILDING MANAGERS AND ARCHITECT.

THE SCOPE OF WORK SHALL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING ITEMS. IN ADDITION, THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL MATERIAL AND WORK IN STRICT REQUIREMENTS WITH THE BUILDING OWNER'S TENANT FIT-UP CONSTRUCTION REQUIREMENTS. THE ARCHITECT SHOULD BE CONTACTED REGARDING ANY BLDG OWNER TENANT IMPROVEMENTS CONSTRUCTION REQUIREMENTS.

A) THE EC SHALL FULLY FIELD SURVEY THE PROJECT AREA, INCLUDING AS A MINIMUM ALL PANELBOARDS ON THE FLOOR, TO INCLUDE ALL FEEDER ROUTINGS, BRANCH CIRCUITS FOR ALL DEVICES AND LIGHTING IN THE PROJECT AREAS, CIRCUIT AMPERAGES FOR ALL AFFECTED CIRCUITS IN THE PROJECT AREAS AND ALL PANELBOARD FEEDERS ON THE FLOOR, LIGHTING CONTROL ZONES AND ZONES COVERED BY FIRE ALARM SYSTEM WIRING ROUTING FOR PROJECT AREAS, AS WELL AS OTHER PARAMETERS NOTED WITHIN THE CONTRACT DOCUMENTS. PROVIDE "MARKED UP" FIELD SURVEY DRAWINGS WHICH INDICATE THESE ITEMS IN ORDER TO MAKE FIELD MODIFICATIONS AS DEEMED NECESSARY DUE TO UNCOVERED CONDITIONS AND TO PRODUCE ACCURATE "AS-BUILT" ELECTRICAL DRAWINGS.

B) PROVIDE POWER DISTRIBUTION SYSTEM REVISIONS INCLUDING BUT NOT LIMITED TO SURVEY OF THE EXISTING PANELBOARDS, TRANSFORMER AND ASSOCIATED WIRING. IT MUST BE NOTED THAT THERE ARE NO EXISTING ELECTRICAL "AS-BUILT" DRAWINGS. IN ADDITION, A NEW PANELBOARD AND ASSOCIATED WIRING SHALL BE FURNISHED AND INSTALLED AS INDICATED ON THE DRAWINGS. IN ADDITION, GENERALLY ALL EXISTING ELECTRICAL POWER DISTRIBUTION EQUIPMENT AS A MINIMUM SHALL BE CLEANED, TIGHTENED AND RE-LABELLED WITH NEW ENGRAVED PLASTIC NAMEPLATES. NAMEPLATES MUST LIST EQUIPMENT TAG, VOLTAGE AND POWER SUPPLY LOCATION.

C) PROVIDE NORMAL, EGRESS AND EXIT LIGHTING FIXTURES INCLUDING NECESSARY NEW/REVISED BRANCH WIRING, SWITCHES AND DIMMERS AS INDICATED ON THE ELECTRICAL DRAWINGS. DUE TO THE EXISTING LIGHTING CIRCUITING WHICH CAN BE RE-USED AT THE ELECTRICAL CONTRACTOR'S OPTION, ALL LIGHTING BRANCH WIRING SHALL BE "DESIGN/BUILD" BY FIELD SURVEY/FIELD MODIFICATIONS/ADDITIONS OF THE EXISTING AND NEW BRANCH WIRING BY THE ELECTRICAL CONTRACTOR. ALL EXISTING LIGHTING CIRCUITS SHALL BE IDENTIFIED VIA NEW MARKINGS ON THE ABOVE THE HUNG CEILING. JUNCTION BOXES COVERS, NO LIGHTING CIRCUIT SHOULD EXCEED 12 AMPERES OF CONNECTED LOAD.

D) PROVIDE RECEPTACLES AND OTHER WIRING DEVICES INCLUDING NECESSARY NEW AND REVISED BRANCH WIRING. ALL NEW RECEPTACLES WIRING SHALL BE NEW AS INDICATED ON THE POWER DRAWINGS. EXISTING RECEPTACLES WHICH SHALL BE RETAINED SHALL BE CONNECTED TO THEIR EXISTING BRANCH CIRCUITS. ALL EXISTING RECEPTACLE CIRCUITS SHALL BE IDENTIFIED VIA NEW MARKINGS ON THE ABOVE THE HUNG CEILING. JUNCTION BOX COVERS. THE EC'S WORK INCLUDES RE-FEEDING ANY RECEPTACLES BRANCH CIRCUIT WHICH IS AFFECTED BY ANY WALL OR CEILING GENERAL CONSTRUCTION DEMOLITION. NO RECEPTACLE CIRCUIT SHOULD EXCEED 12 AMPERES OF CONNECTED LOAD, UNLESS OTHERWISE NOTED.

E) REVISE THE EXISTING FIRE ALARM SYSTEM BY THE FIELD SURVEY, MODIFICATION AND ADDITION OF NEW F.A. DETECTION AND SIGNALING HORN/LIGHTS. THE ELECTRICAL CONTRACTOR SHALL SUB-CONTRACT THE FINAL CONNECTIONS, PROGRAMMING AND TESTING OF THE REVISED/NEW FIRE ALARM SYSTEM TO THE BLDG OWNER'S FIRE ALARM TESTING/O&M CONTRACTOR. THE FA CONTRACTOR SHALL PROVIDE A NEW WRITTEN CERTIFICATION OF THE REVISED/NEW FIRE ALARM SYSTEM.

F) PROVIDE DATA/TELEPHONE WALL PLASTER RINGS OR BOXES AND PULL STRINGS FOR ALL OF THE WALL MOUNTED DATA/TELE, DATA OR TELE OUTLETS AS INDICATED ON THE ELECTRICAL DRAWINGS. ALL FIELD-SURVEYING AND SELECTIVE DEMO OF THE TELE/DATA EQUIPMENT AND ALL NEW DATA/TELE EQUIPMENT, OUTLETS AND ASSOCIATED WIRING SHALL BE FURNISHED AND INSTALLED BY LIBERTY MUTUAL INSURANCE OR ITS DESIGNATED TELE/DATA CONTRACTOR.

G) THE ELECTRICAL CONTRACTOR SHALL PROVIDE ANY ADDITIONAL SELECTIVE DEMOLITION THAT IS REQUIRED FOR THE PROPOSED NEW WORK INCLUDING A FIELD SURVEY OF THE EXISTING ELECTRICAL SYSTEMS. THE EC SHALL FURNISH AND INSTALL ALL OF THE NECESSARY REVISIONS THAT ARE REQUIRED TO PROVIDE THE INDICATED POWER DISTRIBUTION, LIGHTING/RECEPTACLES, PANELBOARD REVISIONS, BRANCH WIRING, FIRE ALARM AND TELE/DATA SYSTEMS.

H) THE EC SHALL NOTE THAT THIS WORK MAY BE DONE IN MULTIPLE PHASES. EC SHALL FULLY COORDINATE PHASE WORK WITH OWNER, GC AND TRADES, AND FIELD-MODIFY WORK AS NEEDED TO ACCOMMODATE THE PHASING.

I) AS PART OF THEIR BID, EC SHALL PROVIDE DETAILED UNIT PRICES FOR THE ADDITION AND DELETION OF ALL TYPES OF ELECTRICAL COMPONENTS AND WIRING COVERED IN THIS PROJECT. UNIT PRICES SHALL INCLUDE ALL MATERIAL AND LABOR REQUIRED FOR THE TASK. FOR POWER-RELATED ITEMS, EC TO ASSUME THAT CONNECTION IS TO AN EXISTING CIRCUIT, UNLESS SPECIFICALLY NOTED BELOW AS BEING ASSOCIATED WITH A NEW BRANCH CIRCUIT. EC IS ADVISED THAT THESE PRICES SHALL BE USED AS THE BASIS FOR ALL CHANGE ORDERS AS APPROPRIATE. AS A MINIMUM, SUCH UNIT PRICES SHALL BE PROVIDED FOR THE FOLLOWING: NEW AND RELOCATED DUPLEX AND QUAD RECEPTACLES - BOTH WALL AND FLOOR-MOUNTED; SWITCHES; NEW AND RELOCATED TELE/DATA BACKBOXES; NEW AND RELOCATED FLOOR-MOUNTED FURNITURE FEEDS, INCLUDING POWER TOMBSTONES AND WHIPS AND TELE/DATA TOMBSTONE BACKBOXES; NEW AND RELOCATED WALL-MOUNTED FURNITURE FEEDS, INCLUDING POWER BACKBOXES AND WHIPS AND TELE/DATA BACKBOXES; EACH TYPE OF LIGHTING FIXTURE AND EXIT SIGN USED ON THE PROJECT (PROVIDE PRICE FOR ADDED FIXTURES, EVEN IF PRESENTLY NOT REQUIRED BY PROJECT); FIXTURES RELOCATION; SPEAKER RELOCATION; NEW AND RELOCATED FIRE ALARM NOTIFICATION APPLIANCES AND DETECTORS; AND NEW BRANCH CIRCUITS, INCLUDING CIRCUIT BREAKER AND COST PER FOOT FOR BRANCH WIRING TO FIRST DEVICE ON CIRCUIT.

2) CODE REQUIREMENTS -

THE ENTIRE ELECTRICAL INSTALLATION SHALL BE SUPPLIED AND INSTALLED IN STRICT ACCORDANCE WITH ALL APPLICABLE STATE AND LOCAL BUILDING/ELECTRICAL CODES, LAWS, ORDINANCES AND INSURANCE REQUIREMENTS.

EC'S WORK INCLUDES ALL COORDINATION WITH THE LOCAL ELECTRICAL INSPECTOR PRIOR TO ANY DEMOLITION OR NEW WORK.

3) INTERPRETATION OF DRAWINGS -

THE DRAWINGS ARE DIAGRAMMATIC ONLY AND ARE NOT INTENDED TO SHOW THE EXACT LOCATIONS OF NEW OR EXISTING UTILITIES AND ARE SUBJECT TO FIELD INSTALLATION ADJUSTMENTS AT THE TIME OF INSTALLATION BY THE ELECTRICAL CONTRACTOR.

THE ELECTRICAL CONTRACTOR SHALL BE HELD ACCOUNTABLE TO VERIFY WITH THE ARCHITECT, THE EXACT LOCATIONS OF EXISTING AND NEW WORK PRIOR TO ITS ACTUAL INSTALLATION.

ANY WORK INSTALLED CONTRARY TO OR WITHOUT SUCH APPROVAL BY THE ARCHITECT SHALL BE SUBJECT TO CHANGE AS DIRECTED BY THE ARCHITECT. NO ADDITIONAL COMPENSATION WILL BE ALLOWED TO THE ELECTRICAL CONTRACTOR.

4) EXAMINATION OF PREMISES -

THE ELECTRICAL CONTRACTOR SHALL VISIT THE SITE PRIOR TO SUBMITTING THE BID AND FAMILIARIZE THEMSELVES WITH THE EXISTING CONDITIONS. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR EXTRA WORK REQUIRED DUE TO THE LACK OF KNOWLEDGE OF THE EXISTING BUILDING/SITE CONDITIONS.

5) COOPERATIONS -

THE ELECTRICAL CONTRACTOR SHALL COOPERATE WITH ANY OTHER CONTRACTORS THAT MAY BE ON THE SITE. ANY CONFLICTING CONDITIONS SHALL BE CALLED TO THE ATTENTION OF THE ARCHITECT.

6) QUALITY OF WORKMANSHIP -

THE WORKMANSHIP OF THE ENTIRE ELECTRICAL INSTALLATION SHALL BE FIRST CLASS IN EVERY RESPECT AND ONLY COMPETENT AND EXPERIENCED LICENSED LABOR SHALL BE ALLOWED ON THE JOB. THE ARCHITECT RESERVES THE RIGHT TO REQUEST THE DISMISSAL OF ANY WORKMAN WHOSE WORK AND PERFORMANCE IS NOT SATISFACTORY. A LICENSED ELECTRICIAN SHALL BE ON SITE AT ALL TIMES DURING ANY DEMOLITION OR NEW WORK.

7) GUARANTEE -

THE ELECTRICAL CONTRACTOR SHALL GUARANTEE (PARTS AND LABOR) ALL THE ELECTRICAL MATERIALS AND WORKMANSHIP AGAINST DEFECTS AND FAULTY INSTALLATION FOR A PERIOD OF ONE (1) YEAR STARTING FROM THE DATE OF FINAL ACCEPTANCE OF THE WORK (IN WRITING) BY THE ARCHITECT. THE ELECTRICAL CONTRACTOR SHALL MAKE GOOD AT THEIR EXPENSE ANY DEFECTS IN MATERIAL AND WORKMANSHIP EXCEPT WHERE SUCH IS CAUSED BY ABUSE OR MISUSE BY THE BUILDING MAINTENANCE PERSONNEL.

8) CUTTING AND PATCHING -

THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING, PATCHING AND DRILLING AND ALL NECESSARY GALVANIZED STEEL FOR SUPPORT AND INSTALLATION OF THE ELECTRICAL MATERIAL AND EQUIPMENT. THIS INCLUDES ANY REQUIRED SCAFFOLDING OR SIMILAR EQUIPMENT FOR THE ELECTRICAL WORK INSTALLATION.

IN ADDITION, ALL PENETRATIONS THRU FIRE RATED WALLS SHALL BE CAULKED WITH FIRE / SMOKE STOPPING MATERIAL BY THE ELECTRICAL CONTRACTOR. THE EC SHALL CORE THE FLOOR AND INSTALL A FIRE RATED ELECTRIC SERVICE FEED FOR ANY PARTITION RECEPTACLES WHICH ARE NOT ACCESSIBLE FROM THE CEILING OR AN ADJACENT WALL.

9) PERMITS AND INSPECTIONS -

THE ELECTRICAL CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS, INSPECTIONS, LICENSES AND CERTIFICATIONS REQUIRED FOR WORK SPECIFIED OR SHOWN ON THE ELECTRICAL DRAWINGS. NO ELECTRICAL WORK SHALL COMMENCE UNTIL ALL ELECTRICAL CONSTRUCTION IS COORDINATED WITH THE MUNICIPALITY'S INSPECTION SERVICES DEPT. ANY DIFFERING INSPECTOR REQUIREMENTS SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR WITHOUT ANY ADDITIONAL COMPENSATION.

10) COORDINATION -

THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL OF THE ELECTRICAL WIRING WITH THE "AS SUPPLIED" AND "EXISTING" EQUIPMENT. NO WIRING SHALL BE INSTALLED UNTIL THE ELECTRICAL CONTRACTOR HAS VERIFIED THE EXACT REQUIRED POWER AND INTERCONNECTION WIRING. NO ADDITIONAL COMPENSATION SHALL BE PROVIDED FOR WIRING COORDINATION CONSTRUCTION PROBLEMS.

PRIOR TO MATERIAL RELEASE AND INSTALLATION, THE EC SHALL COORDINATE ALL ELECTRICAL EQUIPMENT WITH THE ARCHITECTURAL AND MECHANICAL DRAWINGS AND SPECIFICATIONS. ALL MISS-COORDINATION BY THE EC SHALL BE PROVIDED AT NO ADDITIONAL COSTS TO LMI OR THE ARCHITECT/ENGINEER.

11) MATERIAL AND EQUIPMENT -

A) MATERIAL - ALL ELECTRICAL CONSTRUCTION MATERIAL SHALL BE OF THE HIGHEST QUALITY (SPECIFICATION GRADE) AND U.L. LISTED. SUBMIT ALL MATERIAL SHOP DRAWINGS FOR REVIEW AND ACCEPTABILITY TO THE ARCHITECT/ENGINEER (PRIOR TO ANY INSTALLATION). THE ENGINEER'S SHOP DRAWINGS REVIEWS ARE LIMITED TO ONLY TWO REVIEWS PER ITEMS. ADDITIONAL REVIEWS SHALL BE BACKCHARGED TO THE CONTRACTOR AT THE ENGINEER'S STANDARD HOURLY BILLING RATES. EC

ANY MATERIAL NOT SUBMITTED AND APPROVED WHICH DOES NOT MEET THE DRAWINGS AND SPECIFICATIONS REQUIREMENTS MAY AT THE OPTION OF THE ARCHITECT BE REMOVED AND REPLACED BY THE ELECTRICAL CONTRACTOR AT NO ADDITIONAL COST.

B) ELECTRICAL EQUIPMENT - ALL ELECTRICAL DISTRIBUTION EQUIPMENT SHALL BE MANUFACTURED BY THE SAME COMPANY. PANELBOARDS MUST MEET FEDERAL SPEC # W-P-1158 WITH BOLT-ON CIRCUIT BREAKERS, ALUMINUM BUSES, EQUIPMENT GROUND BUS AND SIDE PLANO TYPE HINGED COVER. PANELBOARDS SHALL BE FULLY RATED. LOAD CENTERS ARE NOT ACCEPTABLE. THE DRY TYPE TRANSFORMERS SHALL BE HIGH EFFICIENCY, K-13 RATED TYPES AS SPECIFIED ON THE PLANS WITH ALUMINUM WINDINGS. ACCEPTABLE MANUFACTURERS ARE GENERAL ELECTRIC CO., WESTINGHOUSE CORP., ITE-SIEMENS OR SQUARE D COMPANY.

C) WIRING -

ALL WIRING SHALL BE "EMT" RACEWAYS WITH TYPE "THWN/ THHN" COPPER CONDUCTORS FOR EXPOSED WORK IN THE BUILDING. ALL CONCEALED WIRING IN THE WALLS AND ABOVE THE HUNG CEILING SHALL BE TYPE "MC" METAL CLAD CABLE WITH COPPER CONDUCTORS. MINIMUM POWER CONDUCTOR SIZE IS NO. 12 AWG. ALL POWER WIRING SHALL HAVE COPPER GROUNDING CONDUCTORS. ALL "MC" WIRING SHALL BE SUPPORTED WITH METAL CLIPS. TEFLON TIE WRAPS ARE NOT ACCEPTABLE. ALL MULTI-PHASE HOWEVERS SHALL HAVE NO 10 OVER-SIZED NEUTRAL CONDUCTORS. WHERE POSSIBLE, EC SHALL UTILIZE EXISTING UNDERFLOOR DUCTS FOR ROUTING OF ALL POWER CABLING. ALL EXTERIOR WIRING SHALL BE IN GALVANIZED RMC RACEWAY WITH TYPE "THWN/ THHN" COPPER CONDUCTORS.

SURFACE MOUNTED RACEWAYS AS INDICATED ON THE DRAWINGS SHALL BE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR. ALL RACEWAYS SHALL BE FIELD PAINTED BY THE GENERAL CONTRACTOR.

D) EXISTING EQUIPMENT MODIFICATIONS - THE CONTRACTOR SHALL PROVIDE THE NECESSARY ELECTRICAL MODIFICATIONS OF THE EXISTING ELECTRICAL WORK BASED ON THE EXISTING FIELD CONDITIONS AND PROPOSED NEW WORK. ALL EXISTING WIRING AND EQUIPMENT NOT RE-USED SHALL BE DEMOLISHED COMPLETELY. THE ORIGINAL EQUIPMENT MANUFACTURER SHALL BE CONTACTED IN ORDER TO FURNISH THE NEW FEEDER CIRCUIT BREAKER AND ANY OTHER NECESSARY EXISTING PANELBOARD MODIFICATIONS. THE NEW BREAKER SHALL MATCH THE EXISTING PANELBOARD CIRCUIT BREAKERS.

E) NAMEPLATES AND PANELBOARD CIRCUIT DIRECTORIES - ALL NEW AND EXISTING ELECTRICAL EQUIPMENT (PANELBOARDS, STARTERS, SWITCHES, ETC.) AFFECTED BY THIS PROJECT SHALL HAVE ENGRAVED PLASTIC NAMEPLATES WITH THE VOLTAGE INDICATED. ALL NEW AND EXISTING PANELBOARDS BRANCH CIRCUIT DIRECTORIES SHALL BE TYPED. THE EXISTING MODIFIED PANELBOARDS SHALL HAVE A NEW TYPED DIRECTORIES INSTALLED.

SPECIAL PURPOSE POWER RECEPTACLES SHALL BE IDENTIFIED WITH SMALL ENGRAVED PLASTIC NAMEPLATES (I.E.: COPIER).

F) WIRING DEVICES - ALL WIRING DEVICES SHALL BE HEAVY DUTY SPECIFICATION GRADE QUALITY. ALL SWITCHES SHALL BE RATED FOR 20 AMPERES AT 120/277 VAC AND ALL RECEPTACLES SHALL BE 15 AMPERES AT 120VAC. ALL WIRING DEVICES SHALL MATCH EXISTING FOR COLOR AND TYPE AND COLOR OF FACEPLATE. FOR BIDDING PURPOSES, EC SHALL ASSUME THAT DEVICES SHALL BE WHITE, AND FACEPLATES SHALL BE STAINLESS STEEL. THE TOGGLE TYPE DISCONNECT SWITCHES SHALL BE HORSEPOWER INDUCTIVE LOAD RATED.

LIGHTING DIMMERS SHALL BE SOLID STATE ELECTRONIC TYPE AND BE SPECIFICATION GRADE. ALL WALL DIMMERS SHALL BE "WHITE" AND BE LITHONIA - MONOGRAM TYPES.

G) TELEPHONE/DATA DEVICES - THE ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL ALL NEW TELE/DATA BOXES WITHIN THE PROJECT AREA. FOR WALL OUTLETS, THE EC SHALL FURNISH AND INSTALL NEW PLASTER TYPE TWO-GANG RINGS WITH NYLON PULL STRING FROM THE PLASTER RING TO ABOVE THE HUNG CEILING. FOR WALL-MOUNTED TELE/DATA SERVICES TO THE SYSTEMS FURNITURE PARTITIONS, THE EC SHALL FURNISH AND INSTALL A TWO-GANG OUTLET BOX WITH NYLON PULL STRING TO ABOVE HUNG CEILING. OUTLETS, COVERPLATES AND WIRING SHALL BE FURNISHED AND INSTALLED BY THE LIBERTY MUTUAL TELE/DATA CONTRACTOR. REFER TO ARCHITECTURAL PLANS. FOR BIDDING PURPOSES, EC SHOULD ASSUME THAT ALL EXISTING-TO-REMAIN T/D FEEDS SHALL NEED TO BE BROUGHT UP TO BUILDING STANDARDS. EC'S WORK IN THIS REGARD SHALL INCLUDE NEW INFRASTRUCTURE FOR THE EXISTING T/D FEEDS, AS NOTED ELSEWHERE IN THE CONSTRUCTION DOCUMENTS. EC SHALL FULLY COORDINATE THIS WITH THE LMI TELE/DATA INSTALLATION CONSULTANT/CONTRACTOR; ANY CHANGES RESULTING FROM LACK OF SUCH COORDINATION SHALL BE MADE AT NO COST TO THE PROJECT.

12) INSTALLATION -

A) WIRING IDENTIFICATION - ALL POWER WIRING SHALL BE COLOR CODED PER ITS VOLTAGE CLASS AND HAVE SELF ADHESIVE NUMERICAL IDENTIFICATION TAGS THAT INDICATES THE PANELBOARD AND BRANCH CIRCUIT NUMBER. ALL FIRE ALARM WIRING SHALL HAVE NUMERICAL SELF ADHESIVE IDENTIFICATION AT ALL TERMINATIONS.

B) JUNCTION BOX IDENTIFICATION - ALL POWER JUNCTION BOXES SHALL HAVE THE VOLTAGE AND PANELBOARD/CIRCUIT NUMBERS OF ITS CONDUCTORS MARKED ON ITS COVER PLATE.

C) POWER WIRING TERMINATIONS - ALL FEEDER TERMINATIONS SHALL BE COMPLETED WITH MULTI-LUG CONNECTORS IN THE WIREWAY. SPLIT-BOLT TAPPED CONNECTORS ARE NOT ACCEPTABLE. ALL LUGS AT THE CONNECTORS AND EQUIPMENT SHALL BE TORQUED TO THE RECOMMENDED PRESSURES.

D) AS-BUILT DRAWINGS - THE ELECTRICAL CONTRACTOR SHALL PROVIDE ONE SET OF CLEAN MARKED UP ELECTRICAL DRAWINGS WITH ALL "AS-BUILT" ELECTRICAL CONSTRUCTION INFORMATION. THIS INCLUDES BRANCH CIRCUIT NUMBERS FOR ALL LIGHTING, RECEPTACLES, EQUIPMENT, ETC. THE NEW / REVISED FIRE ALARM SYSTEM INSTALLATION "AS-BUILT" DOCUMENTATION SHALL INCLUDE POINT TO POINT AND BUILDING PLANS FA WIRING DIAGRAMS WHICH ARE FURNISHED VIA MARKED UP YELLOW REPRODUCIBLE DRAWINGS. THE BLDG PLANS REPRODUCIBLE DRAWINGS SHALL BE FURNISHED BY THE ARCHITECT.

E) INSPECTIONS - ALL ELECTRICAL WORK AND MATERIAL SHALL BE ROUGH AND FINAL INSPECTED BY THE ARCHITECT/ENGINEER, PRIOR TO ACCEPTANCE AND PROGRESS PAYMENTS. ALL CIRCUITS AND EQUIPMENT CONTROL/ALARM SHALL BE FIELD DEMONSTRATED BY THE ELECTRICAL CONTRACTOR TO INDICATE PROPER COORDINATION, WIRING AND OPERATION.

F) FIELD TESTING - THE NEW/REVISED FIRE ALARM EQUIPMENT AND WIRING SHALL BE 100% FIELD TESTED BY THE FA SUPPLIER'S FACTORY AUTHORIZED TECHNICIAN IN THE PRESENCE OF THE BUILDING'S FA O&M CONTRACTOR. THE FA SUPPLIER'S TECH SHALL PROVIDE NFPA FIELD TESTING FORMS AND A LETTER CERTIFYING THE NEW / REVISED FA EQUIPMENT AND WIRING IS ACCEPTABLE.

SED ASSOCIATES CORP.
Consulting MEP and I&C Engineers

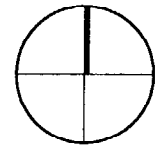
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PROJECT NORTH



LIBERTY MUTUAL
1361 WASHINGTON AVENUE
PORTLAND, MAINE
LIBERTY MUTUAL

TITLE
ELECTRICAL SPECIFICATIONS

Cubellis Associates Inc.
27 Adams Avenue
Tel: 617-338-0079
Fax: 617-338-0088
www.cubellis.com

DATE 03/05/04
DRAWN BY JCM
CHECKED BY WPE

E-9

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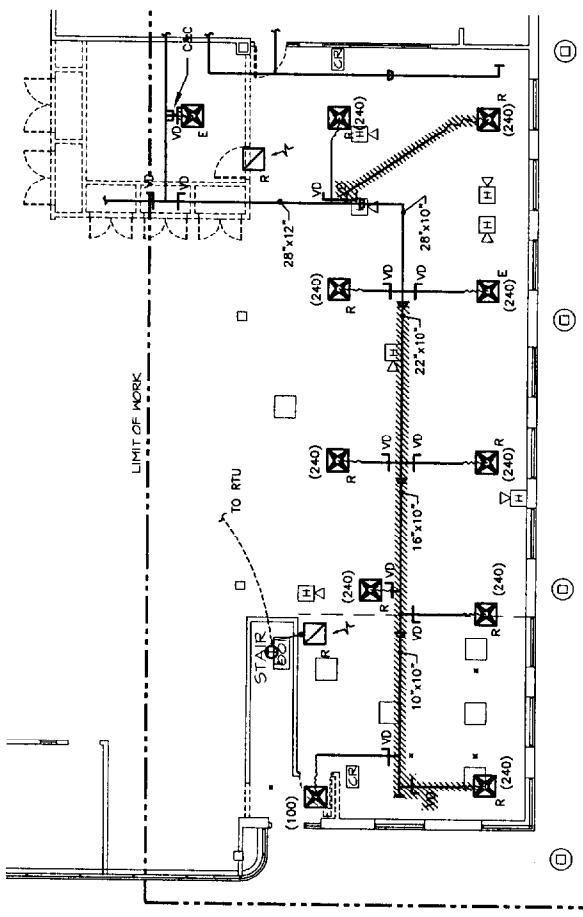
ELECTRICAL DRAWINGS REFERENCE NOTES

- FOR ELECTRICAL SYMBOLS, ABBREVS & NOTES, REFER TO DWG #E-1.
- FOR ELECTRICAL POWER & LTG DEMO PLANS, REFER TO DWGS #E-2 & E-3.
- FOR ELECTRICAL PROPOSED POWER & LTG PLANS, REFER TO DWGS #E-4 & E-5.
- FOR ELECTRICAL RISERS, REFER TO DWG #E-6.
- FOR ELECTRICAL DETAILS REFER TO DWGS E-6 AND E-7.
- FOR ELECTRICAL SCHEDULES REFER TO DWGS E-7 AND E-8.
- FOR ELECTRICAL SPECIFICATIONS, REFER TO DWG #E-9.

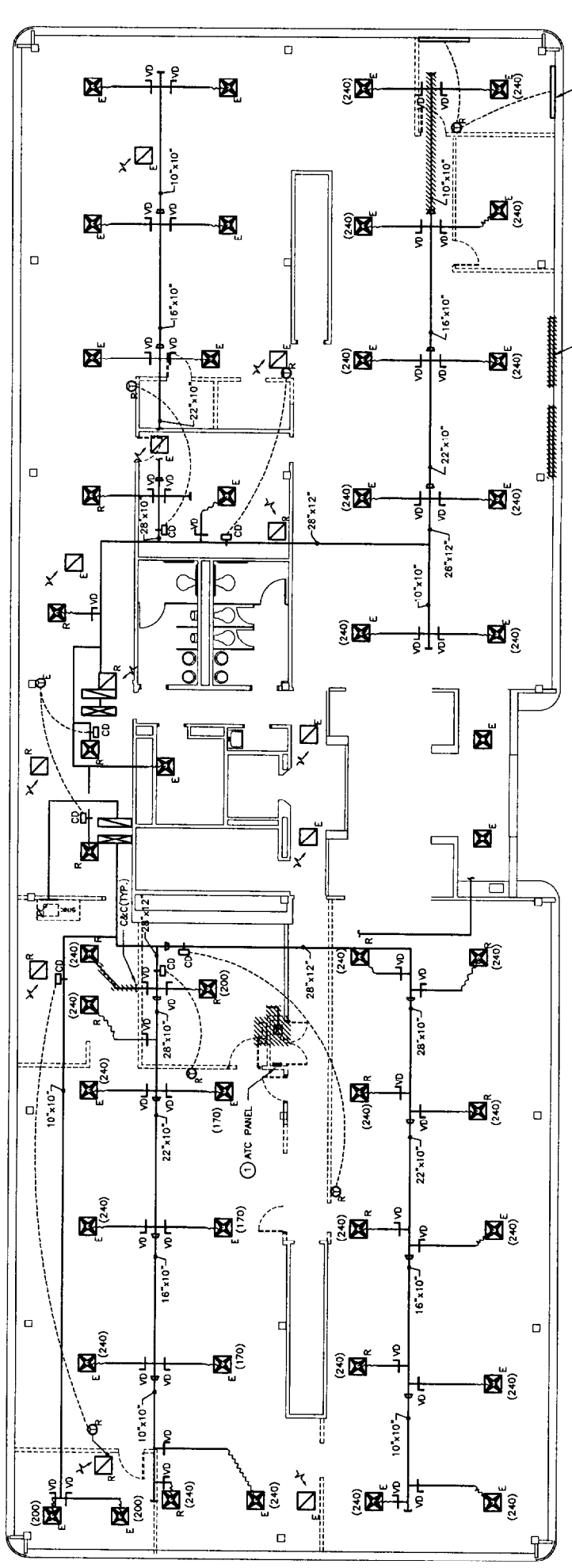
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FIRST FLOOR HVAC DEMOLITION PART PLAN
 1/8" = 1'-0"

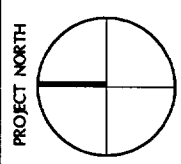


SECOND FLOOR HVAC DEMOLITION PLAN
 1/8" = 1'-0"

DEMO. HVAC NOTES
 ① MECHANICAL CONTRACTOR SHALL RELOCATE EXISTING ATC PANEL, RE-WIRE AS NECESSARY.

- DUCTWORKS**
- AIR FLOW (RETURN/EXHAUST)
 - AIR FLOW (SUPPLY)
 - ⊠ CEILING EXHAUST DIFFUSER, NEW
 - ⊠ CEILING RETURN DIFFUSER, NEW
 - ⊠ CEILING RETURN DIFFUSER, EXISTING
 - ⊠ CEILING SUPPLY DIFFUSER, NEW
 - ⊠ CEILING SUPPLY DIFFUSER EXISTING TO BE RELOCATED
 - ⊠ CEILING SUPPLY DIFFUSER, EXISTING
 - ⊠ FLEXIBLE DUCT
 - ⊠ VOLUME DAMPER
 - ⊠ CONTROL DAMPER AND DESIGNATION
 - ⊠ CONNECT TO EXISTING
- EQUIPMENT/TAGS**
- ⊙ N SENSOR, THERMOSTAT NEW
 - ⊙ S SENSOR, THERMOSTAT EXISTING
 - ⊙ T THERMOSTAT EXISTING
 - ⊙ R EXISTING THERMOSTAT TO BE RELOCATED
 - ⊙ N THERMOSTAT NEW
- AC-1 AIR CONDITIONING INDOOR UNIT & DESIGNATION**
- S C&C CUT AND CAP CONTROL DAMPER & DESIGNATION
 - CD-1 CONTROL DAMPER
 - DN DOWN DIFFUSER
 - E EXHAUST AIR
 - E.A. ELECTRONIC AIR CLEANER
 - EC-1 EXHAUST FAN & DESIGNATION
 - EXH EXHAUST EXISTING TO REMAIN
 - ETR ELECTRIC BASEBOARD EXISTING TO REMAIN
 - F FIRE DAMPER
 - FD FIRE DAMPER
 - M MANFR. MANUFACTURER
 - R RELOCATED EXISTING
 - RAC-1 REMOTE AIR CONDITIONING OUTDOOR UNIT & DESIGNATION
 - R.A. RETURN AIR
 - S S.A. SUPPLY AIR
 - I TYP. TYPICAL
 - X VOLUME DAMPER

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OWNER: LIBERTY MUTUAL

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 Architects Interiors Engineers
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 www.cubellis.com

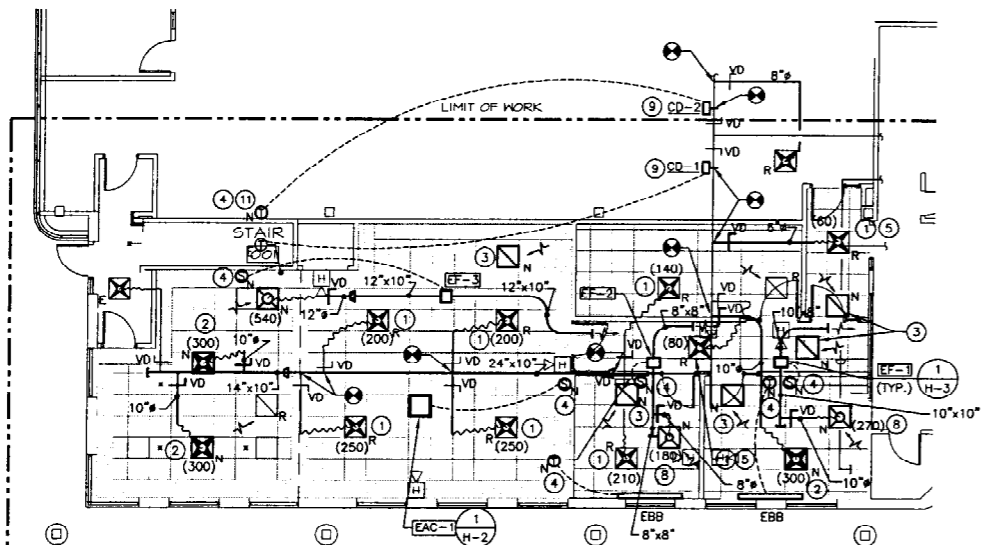
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DEMOLITION PLANS
 HVAC

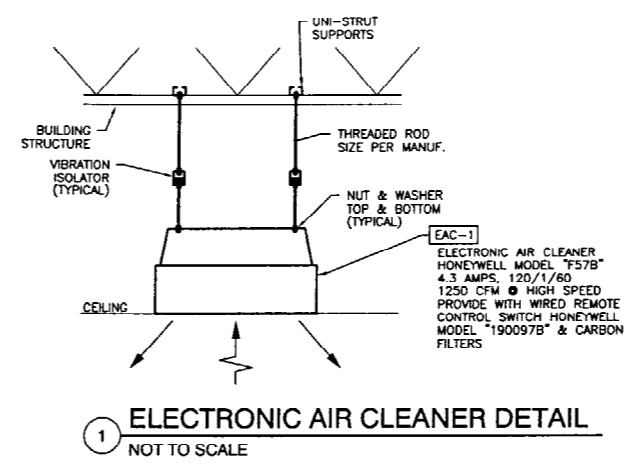
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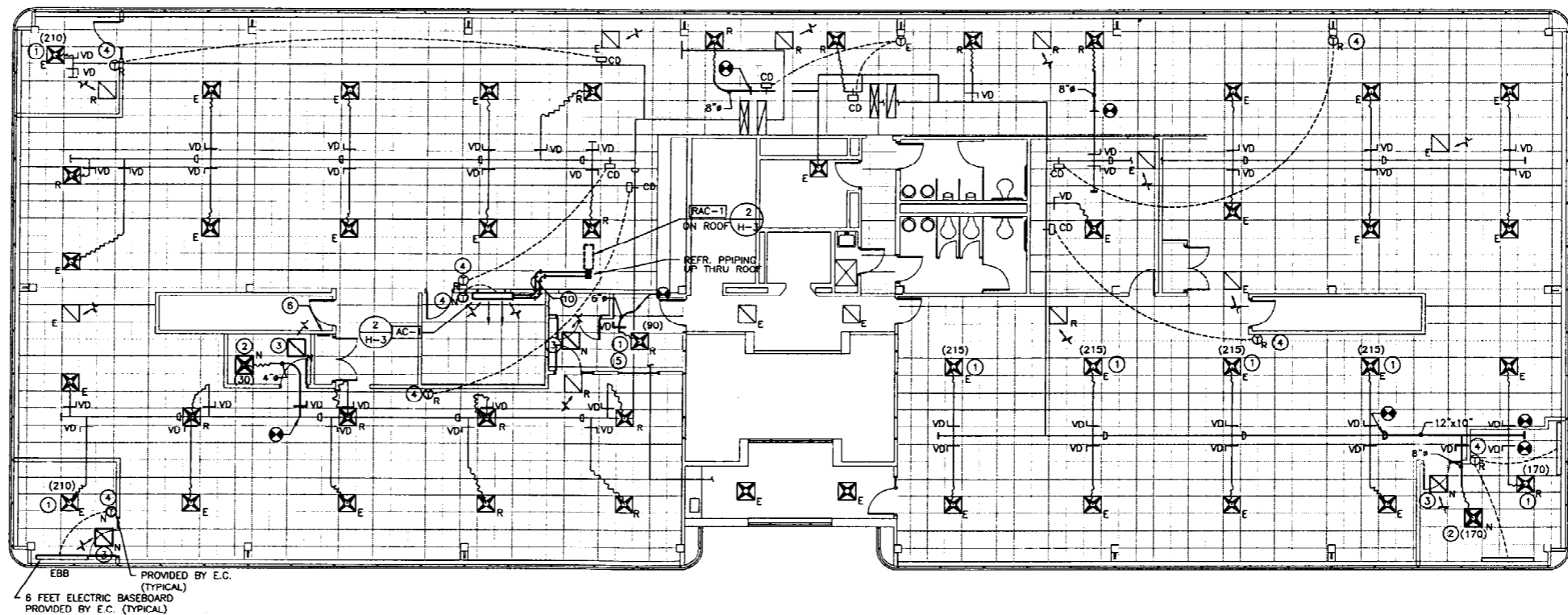
FIRST FLOOR HVAC PROPOSED PART PLAN
 1/8" = 1'-0"



ELECTRONIC AIR CLEANER DETAIL
 NOT TO SCALE

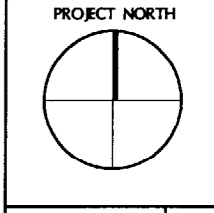
PROPOSED HVAC NOTES

- 1 MECHANICAL CONTRACTOR SHALL REBALANCE EXISTING RELOCATED SUPPLY DIFFUSERS TO MATCH NEW CFM RATE AS INDICATED.
- 2 NEW SUPPLY DIFFUSERS TO MATCH EXISTING DIFFUSERS IN ALL RESPECT. MFR: TITUS, MODEL: TMS. NECK SIZE TO SUIT BRANCH DUCT SIZE.
- 3 NEW 24"x24" PERFORATED R.A. DIFFUSER MFR: TITUS, MODEL: PAR.
- 4 THERMOSTAT/FAN SWITCH LOCATIONS SHALL BE COORDINATED WITH ARCHITECTS PRIOR TO INSTALLATION.
- 5 PROVIDE TRANSITION TO SUIT SIZE OF DIFFUSER NECK.
- 6 RELOCATED ATC PANEL, COORDINATE EXACT LOCATION WITH ARCHITECTS PRIOR TO INSTALLATION.
- 7 MECHANICAL CONTRACTOR SHALL DROP MAIN EXISTING DUCT TO AVOID ALL PIPING AND STRUCTURE BEAMS. PROVIDE (2) 45° ELBOWS AND TRANSITION. REINSTALL DUCT AFTER ALL STRUCTURAL WORK IS DONE.
- 8 NEW EXHAUST DIFFUSERS MFR: TITUS, MODEL: TMS. NECK SIZE TO SUIT BRANCH DUCT SIZE.
- 9 CONTRACTOR SHALL PROVIDE NEW CONTROL DAMPERS AND ACTUATORS AS INDICATED. ALL COMPONENTS SHALL BE COMPATIBLE W/ THE EXISTING ATC SYSTEM. ON A CALL FOR HEAT FROM EITHER THERMOSTAT THE ASSOCIATED CONTROL DAMPER SHALL OPEN AND ENERGIZE THE EXISTING ROOFTOP UNIT. CONTRACTORS WORK SHALL INCLUDE PROVIDING A NEW CONTROL PANEL IF THE EXISTING PANEL CANNOT ACCOMMODATE THE ADDITIONAL ZONE CONTROLS.
- 10 REFRIGERANT PIPING, RUN ABOVE CEILING. SIZE PER MANUFACTURERS RECOMMENDATION.
- 11 CONTRACTOR TO PROVIDE NEW THERMOSTAT TO MATCH EXISTING AND BE COMPATIBLE W/ THE EXISTING ATC SYSTEM.



SECOND FLOOR HVAC PROPOSED PLAN
 1/8" = 1'-0"

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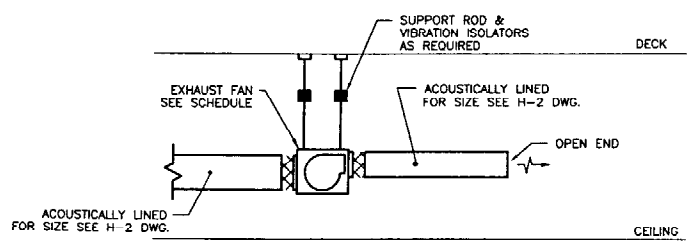
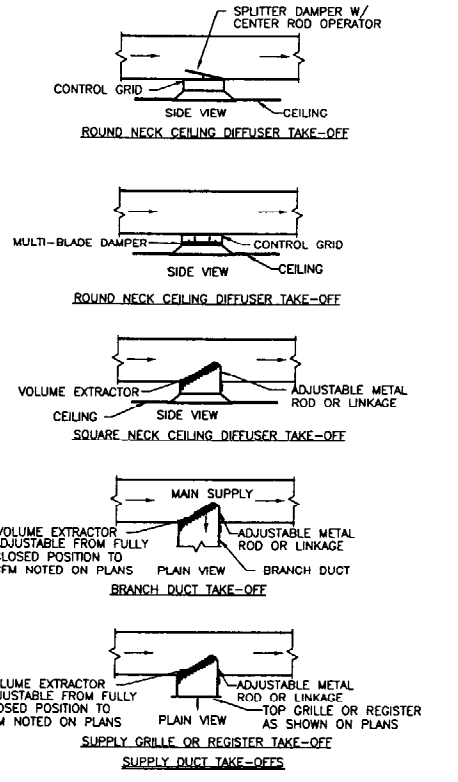
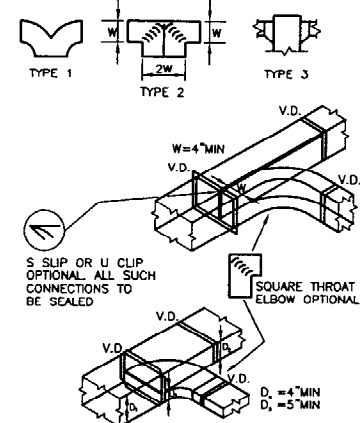
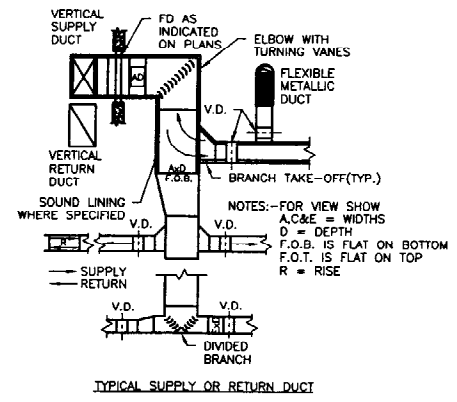
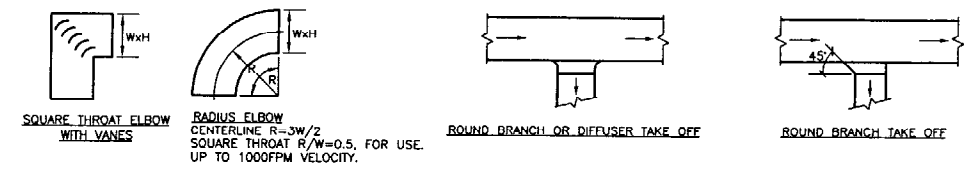


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 OWNER: LIBERTY MUTUAL

TITLE: **H.V.A.C. PROPOSED PLANS**
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 DATE: 03/05/04
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H-2
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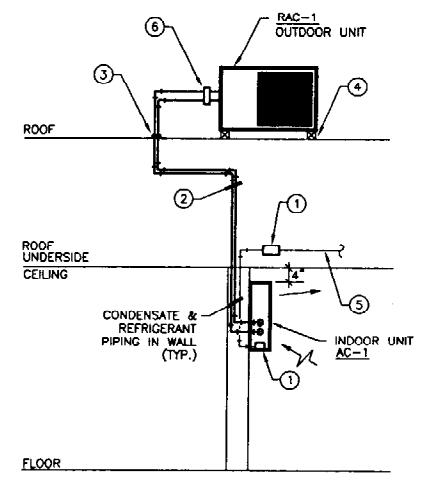
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EXHAUST FAN SCHEDULE

TAG	AIRFLOW (CFM)	ESP (IN WC)	FRPM	MOTOR (WATTS)	V/C/P	GREENHECK MODEL
EF-1	275	0.375	942	139	115/1/60	CSP-A410
EF-2	180	0.375	916	83	115/1/60	CSP-A250
EF-3	540	0.375	1052	325	115/1/60	CSP-A710

1. PROVIDE WITH SOLID-STATE SPEED CONTROLLER.

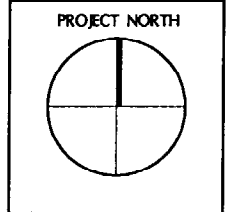


AC-1
 INDOOR SECTION
 MITSUBISHI MODEL "PK24FK/FL"
 24,000 BTU TOTAL COOLING
 E.E.R. COOLING 10.3
 FAN MOTOR F.I.A. 0.7
 208/1/60
 PROVIDE WITH OPTIONAL CONDENSATE PUMP, PUMP TO BE INSTALLED BY PLBG. CONTRACTOR

RAC-1
 OUTDOOR SECTION (ROOF MTD)
 MITSUBISHI MODEL "PU24EK"
 FAN MOTOR F.I.A. 0.65+0.65
 COMPRESSOR: NH33MBD
 REFRIGERANT :R-22
 208/1/60

- DUCTLESS SPLIT SYSTEM DETAIL NOTES**
- 1 PROVIDE CONDENSATE PUMP MANUF: LITTLE GIANT OR EQUAL MODEL: EC-400(120/1PH) NOTE: FOR WALL TYPE MOUNT COLLECTING RESERVOIR IN WALL WITH PUMP ABOVE CEILING. MAXIMUM 3 FEET VERTICAL HEIGHT DIFFERENCE.
 - 2 REFRIGERANT PIPING, SIZE AND QUANTITY PER MANUFACTURER'S RECOMMENDATIONS.
 - 3 WATERPROOF SLEEVE BY THE HVAC SUBCONTRACTOR.
 - 4 4"x4"x24" PRESSURE TREATED TIMBER ANCHOR TO ROOF BY HVAC SUBCONTRACTOR.
 - 5 PROVIDE CONDENSATE (DRAIN) LINE AS REQUIRED.
 - 6 PROVIDE BRANCH CONNECTOR BY MANUFACTURER.

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 1361 WASHINGTON AVENUE
 PORTLAND, MAINE

OWNER
 LIBERTY MUTUAL

TITLE
 H.V.A.C. DETAILS, SYMBOLS & ABBREVIATIONS

SCALE
 NONE

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 71 Atlantic Avenue
 Boston, MA 02111
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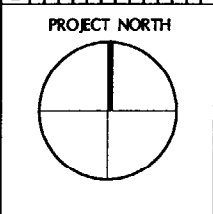
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MECHANICAL CONSTRUCTION SPECIFICATIONS

- 1) **GENERAL -**
 THE MECHANICAL CONTRACTOR SHALL FURNISH ALL LABOR, MATERIAL, SUPPLIES, EQUIPMENT, TOOLS AND SERVICES NECESSARY FOR AND REASONABLY INCIDENTAL TO COMPLETION OF THE MECHANICAL WORK AS HEREIN SPECIFIED AND AS SHOWN ON THE MECHANICAL DRAWINGS. THE MECHANICAL SYSTEMS SHALL BE FULLY INSTALLED, ADJUSTED, TESTED AND READY FOR USE.
- THE MECHANICAL WORK MUST BE CONSTRUCTED IN PHASES AS SPECIFIED IN THE ARCHITECT'S SPECIFICATIONS. THE MECHANICAL CONTRACTOR SHALL INCLUDE IN THEIR BID ALL REQUIRED PREMIUM OVERTIME LABOR WHICH WILL BE REQUIRED TO PROVIDE THE CONSTRUCTION PHASING.
- IN ADDITION, THE EXISTING MECHANICAL SYSTEMS MUST BE KEPT "ON-LINE" WITH MINIMAL SYSTEM DOWN TIME. ALL SYSTEM SHUT DOWNS MUST BE SCHEDULED / COORDINATED / APPROVED BY BOTH THE ARCHITECT AND OWNER'S PROJECT REPRESENTATIVE.
- THE SCOPE OF WORK SHALL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING ITEMS. GENERALLY, ALL MECHANICAL MATERIAL AND LABOR SHALL BE IN ACCORDANCE WITH "MECHANICAL INDUSTRY STANDARDS".
- A) FIELD SURVEY OF EXISTING CONDITIONS TO DETERMINE LOCATION OF EXISTING UTILITIES
 B) SELECTIVE DEMOLITION AS INDICATED ON THE DRAWINGS.
 C) TESTING AND BALANCING OF THE EXISTING HVAC SYSTEM PRIOR TO DEMOLITION TO DETERMINE EXISTING DIFFUSER FLOW RATES TO BE USED IN RE-BALANCING OF THE SYSTEM AFTER THE INSTALLATION OF THE NEW DIFFUSERS AND RECONFIGURATION OF EXISTING. THE CONTRACTOR SHALL FIELD TEST ALL AIR TERMINAL DEVICES AND SUBMIT REPORT TO THE ENGINEER. REPORT SHALL CONSIST OF A MARKED-UP PLAN INDICATING AIR DEVICES AND ASSOCIATED FLOW RATES. BALANCING OF THE EXISTING SYSTEM SHALL BE LIMITED TO THE SYSTEM IN THE REVISED AREAS AS INDICATED ON THE DRAWINGS. ALL DIFFUSERS CONNECTED TO WATER SOURCE HEAT PUMPS SHALL BE TESTED EVEN IF THE DIFFUSERS ARE NOT LOCATED IN THE RENOVATED SPACE.
 D) DUCTWORK, FITTINGS AND ACCESSORIES.
 E) DIFFUSERS, REGISTERS, GRILLES AND DAMPERS.
 F) AIR BALANCING.
- 2) **CODE REQUIREMENTS -**
 THE ENTIRE MECHANICAL INSTALLATION SHALL BE SUPPLIED AND INSTALLED IN STRICT ACCORDANCE WITH ALL APPLICABLE STATE AND LOCAL BUILDING CODES, LAWS, ORDINANCES AND INSURANCE REQUIREMENTS.
- 3) **INTERPRETATION OF DRAWINGS -**
 THE DRAWINGS ARE DIAGRAMMATIC ONLY AND ARE NOT INTENDED TO SHOW THE EXACT LOCATIONS OF NEW OR EXISTING UTILITIES AND ARE SUBJECT TO FIELD INSTALLATION ADJUSTMENTS AT THE TIME OF INSTALLATION BY THE MECHANICAL CONTRACTOR. THE MECHANICAL CONTRACTOR SHALL BE HELD ACCOUNTABLE TO VERIFY WITH THE ARCHITECT, THE EXACT LOCATIONS OF EXISTING UTILITIES AND NEW WORK PRIOR TO ITS ACTUAL INSTALLATION.
- ANY WORK INSTALLED CONTRARY TO OR WITHOUT SUCH APPROVAL BY THE ARCHITECT SHALL BE SUBJECT TO CHANGE AS DIRECTED BY THE ARCHITECT. NO ADDITIONAL COMPENSATION WILL BE ALLOWED TO THE MECHANICAL CONTRACTOR.
- 4) **EXAMINATION OF PREMISES -**
 THE MECHANICAL CONTRACTOR SHALL VISIT THE SITE PRIOR TO SUBMITTING THE BID AND FAMILIARIZE THEMSELVES WITH THE EXISTING CONDITIONS. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR EXTRA WORK REQUIRED DUE TO THE LACK OF KNOWLEDGE OF THE EXISTING BUILDING CONDITIONS.
- 5) **COOPERATIONS -**
 THE MECHANICAL CONTRACTOR SHALL COOPERATE WITH ANY OTHER CONTRACTORS THAT MAY BE ON THE SITE. ANY CONFLICTING CONDITIONS SHALL BE CALLED TO THE ATTENTION OF THE ARCHITECT.
- 6) **QUALITY OF WORKMANSHIP -**
 THE WORKMANSHIP OF THE ENTIRE MECHANICAL INSTALLATION SHALL BE FIRST CLASS IN EVERY RESPECT AND ONLY COMPETENT AND EXPERIENCED LICENSED LABOR SHALL BE ALLOWED ON THE JOB. THE ARCHITECT RESERVES THE RIGHT TO REQUEST THE DISMISSAL OF ANY WORKMAN WHOSE WORK AND PERFORMANCE IS NOT SATISFACTORY.
- 7) **GUARANTEE -**
 THE MECHANICAL CONTRACTOR SHALL GUARANTEE (PARTS AND LABOR) ALL THE MECHANICAL MATERIALS AND WORKMANSHIP AGAINST DEFECTS AND FAULTY INSTALLATION FOR A PERIOD OF ONE (1) YEAR STARTING FROM THE DATE OF FINAL ACCEPTANCE OF THE WORK (IN WRITING) BY THE ARCHITECT. THE MECHANICAL CONTRACTOR SHALL MAKE GOOD AT THEIR EXPENSE ANY DEFECTS IN MATERIAL AND WORKMANSHIP, EXCEPT WHERE SUCH IS CAUSED BY ABUSE OR MISUSE BY THE BUILDING MAINTENANCE PERSONNEL.
- 8) **CUTTING AND PATCHING -**
 THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING, PATCHING AND DRILLING AND ALL NECESSARY GALVANIZED STEEL FOR SUPPORT AND INSTALLATION OF THE MECHANICAL MATERIAL AND EQUIPMENT. THIS INCLUDES ANY REQUIRED SCAFFOLDING OR SIMILAR EQUIPMENT FOR THE MECHANICAL WORK INSTALLATION.
- IN ADDITION, ALL PENETRATIONS THRU FIRE RATED WALLS SHALL BE CAULKED WITH FIRE STOPPING MATERIAL BY THE MECHANICAL CONTRACTOR.
- 9) **PERMITS AND INSPECTIONS -**
 THE MECHANICAL CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS, INSPECTIONS, LICENSES AND CERTIFICATIONS REQUIRED FOR WORK SPECIFIED OR SHOWN ON THE MECHANICAL DRAWINGS. NO MECHANICAL WORK SHALL COMMENCE UNTIL ALL MECHANICAL CONSTRUCTION IS COORDINATED WITH THE LOCAL BUILDING INSPECTOR. ANY DEFERRING INSPECTOR REQUIREMENTS SHALL BE PROVIDED BY THE MECHANICAL CONTRACTOR WITHOUT ANY ADDITIONAL COMPENSATION.
- 10) **COORDINATION -**
 THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL OF THE MECHANICAL SYSTEMS IN THE MOST PRACTICAL MANNER FREE FROM INTERFERENCES WITH OTHER EQUIPMENT, LIGHTS, PIPING OR STRUCTURAL FEATURES. IF ANY CHANGES FROM THE DRAWINGS ARE DEEMED ADVISABLE, DETAILS OF SUCH PROPOSED CHANGES SHALL BE SUBMITTED TO THE ARCHITECT FOR WRITTEN APPROVAL. NO CHANGES SHALL BE MADE WITHOUT SUCH APPROVAL.

- 11) **MATERIAL AND EQUIPMENT -**
- A) **MATERIAL -** ALL MECHANICAL CONSTRUCTION MATERIAL SHALL BE OF THE HIGHEST QUALITY (SPECIFICATION GRADE) AND U.L. LISTED. SUBMIT ALL MATERIAL SHOP DRAWINGS FOR REVIEW AND ACCEPTABILITY TO THE ARCHITECT/ENGINEER (PRIOR TO ANY INSTALLATION). ANY MATERIAL NOT SUBMITTED AND REVIEWED MAY AT THE OPTION OF THE ARCHITECT/ENGINEER BE REPLACED AT NO ADDITIONAL COSTS.
- B) **DUCTWORK AND ACCESSORIES -**
- 1) ALL NEW GALVANIZED SHEET METAL DUCTWORK SHALL BE FABRICATED AND SIZED AS TO GAUGE AND INSTALLED AS PER SMACNA AND ASHRAE LATEST APPLICABLE RECOMMENDATIONS.
 2) ALL DUCTWORK SHALL BE FIELD MEASURED PRIOR TO FABRICATION. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL REQUIRED DIMENSIONS PRIOR TO FABRICATION OR INSTALLATION. DUCT SIZES MAY BE ALTERED TO ACCOMMODATE CONSTRUCTION SO LONG AS CROSS SECTIONAL AREAS OF DUCT IS MAINTAINED.
 3) ALL DUCTS SHALL BE SECURELY ANCHORED TO THE BUILDING CONSTRUCTION IN AN APPROVED MANNER.
 4) ALL DUCTS SHALL BE INSULATED WITH 1" THICK FIBERGLASS INSULATION.
 5) VOLUME DAMPERS SHALL BE INSTALLED WHERE INDICATED ON THE DRAWINGS. DAMPERS SHALL BE TWO GAUGES HEAVIER THAN THAT OF THE INSTALLED DUCTWORK. BLADES PERMANENTLY ATTACHED TO A CONTINUOUS SUPPORTING ROD. DO NOT USE SPLIT ROD TYPE. CAST OR MALLEABLE BRACKETS PERMANENTLY ATTACHED TO THE DUCT TO SUPPORT THE DAMPER ROD. PROVIDE EXTERNAL QUADRANT ARMS TO ALLOW SETTING BALANCING AND VISUAL POSITION INDICATION.
 6) FLEXIBLE DUCT SHALL BE RIGID METAL TYPE. MAXIMUM LENGTH NOT TO EXCEED 6 FEET.
 7) NEW RETURN AIR DIFFUSERS SHALL BE TITUS, PXP RETURN PANELS.
- 12) **INSTALLATION -**
- A) FURNISH AND INSTALL ALL EQUIPMENT AND APPURTENANCES IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND INDUSTRY STANDARDS. PROTECT ALL MATERIALS, INSTRUMENTS AND EQUIPMENT FROM DAMAGE. PROVIDE ALL SUPPLEMENTARY STEEL REQUIRED FOR SETTING AND/OR HANGING DUCTWORK AND EQUIPMENT.
 B) DUCTWORK SHALL BE ASSEMBLED AND INSTALLED PER SMACNA STANDARDS.
 C) AS-BUILT DRAWINGS - THE MECHANICAL CONTRACTOR SHALL PROVIDE ONE SET OF CLEAN MARKED UP MECHANICAL DRAWINGS WITH ALL "AS-BUILT" MECHANICAL CONSTRUCTION INFORMATION.
 D) INSPECTIONS - ALL MECHANICAL WORK AND MATERIAL SHALL BE ROUGH AND FINAL INSPECTED BY THE ARCHITECT/ENGINEER, PRIOR TO ACCEPTANCE AND PROGRESS PAYMENTS.
- 13) **AIR BALANCING -**
- 1) OBTAIN THE SERVICES OF AN INDEPENDENT, QUALIFIED TESTING ORGANIZATION, APPROVED BY THE ENGINEER, TO PERFORM THE TESTING AND BALANCING WORK. THE CRITERIA FOR DETERMINING QUALIFICATIONS OF THE TESTING ORGANIZATION SHALL BE CERTIFICATION BY THE ASSOCIATED AIR BALANCE COUNCIL (AABC) AND CERTIFICATION BY THE NATIONAL ENVIRONMENTAL BALANCING BUREAU (NEEB).
 2) ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH THE ASSOCIATED AIR BALANCE COUNCIL'S "NATIONAL STANDARDS FOR FIELD MEASUREMENTS AND INSTRUMENTATION TOTAL SYSTEM BALANCE" LATEST EDITION AND THE STANDARDS OF THE NATIONAL ENVIRONMENTAL BALANCING BUREAU.
 3) MAKE PITOT TUBE TRAVERSES OF EACH DUCT TO MEASURE AIR FLOW. PITOT TUBES, ASSOCIATED INSTRUMENTATION, TRAVERSES AND TECHNIQUES SHALL CONFORM TO THE ASHRAE HANDBOOK OF FUNDAMENTALS.
 4) WHERE A DUCT'S DESIGN VELOCITY AND AIR QUANTITY ARE BOTH LESS THAN 1000 (FPM/CFM), DETERMINE AIR QUANTITY BY MEASUREMENTS AT TERMINALS SERVED.
 5) PROVIDE TEST HOLES, IN STRAIGHT DUCTS, AS FAR AS POSSIBLE DOWNSTREAM FROM ELBOWS, BENDS, TAKE-OFFS, AND OTHER TURBULENCE GENERATING DEVICES, TO OPTIMIZE RELIABILITY OF FLOW MEASUREMENTS.
 6) BALANCE THE SYSTEM SO THAT ALL OUTLETS ARE WITHIN 10%; EACH TERMINAL UNIT, EXHAUST FAN AND THE EXISTING AIR HANDLING UNIT IS WITHIN 5% OF THE INDICATED VALUES.
 7) PROVIDE CERTIFIED REPORT FOR EACH TERMINAL DEVICE, EXHAUST FAN AND THE VAV BOXES. INCLUDE IN THE REPORT THE FOLLOWING DATA:
 A) TERMINAL DEVICES
 -IDENTIFICATION AND LOCATION
 -TYPE, SIZE, MANUFACTURER AND CATALOG IDENTIFICATION
 -DESIGN AND RECORDED VELOCITIES (FPM)
 -DESIGN AND RECORDED QUANTITIES (CFM)
 -DAMPER POSITION (PERCENTAGE OPEN)

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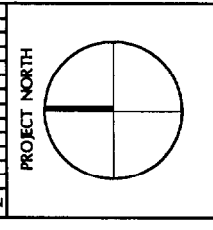
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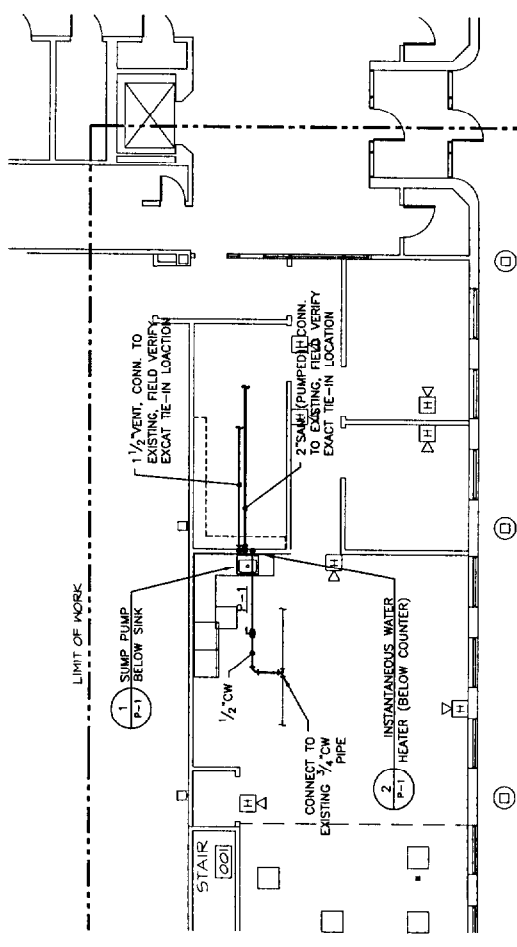
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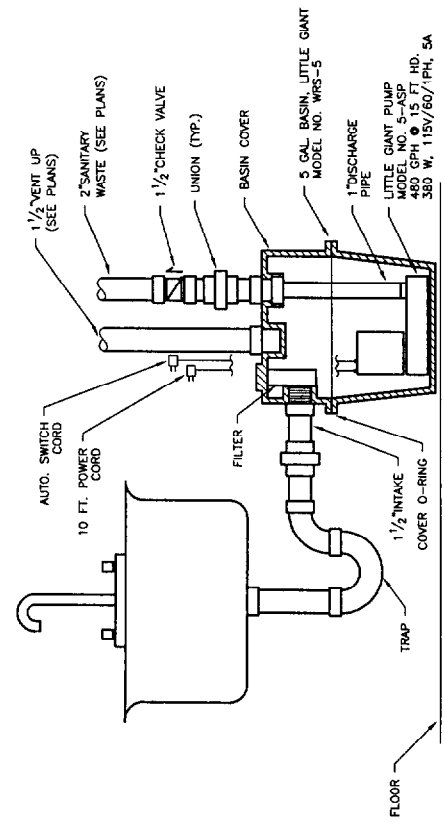
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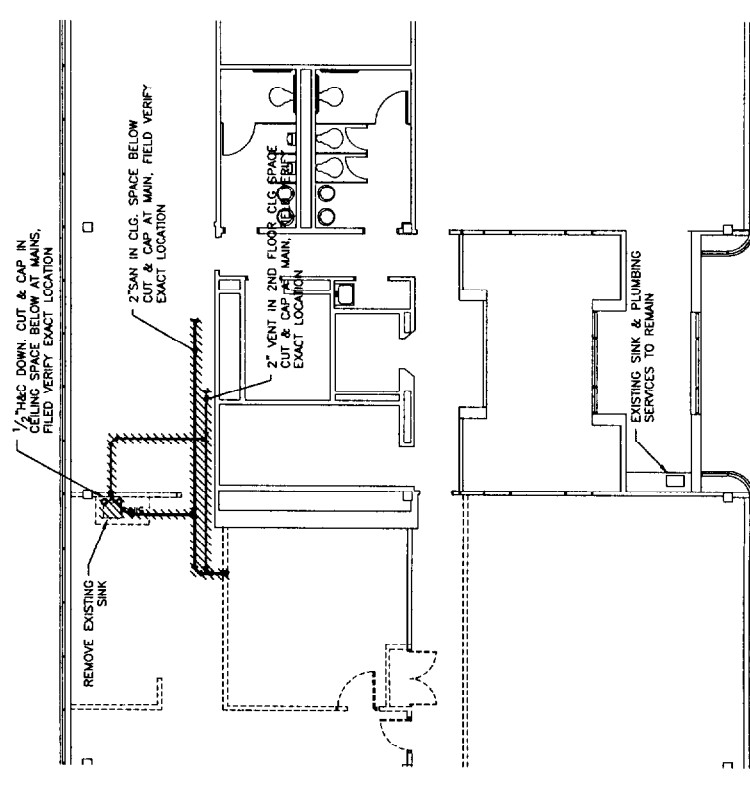
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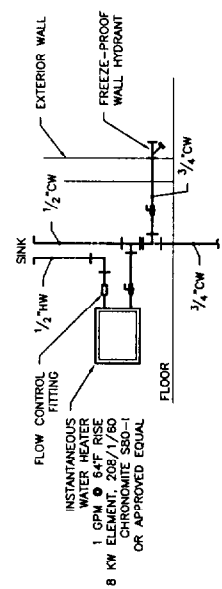
FIRST FLOOR PLUMBING PROPOSED PART PLAN
 1/8" = 1'-0"



INDIRECT WASTE PUMP DETAIL
 1 NOT TO SCALE



SECOND FLOOR PLUMBING DEMOLITION PLAN
 1/8" = 1'-0"



INSTANTANEOUS WATER HEATER DETAIL
 1 NOT TO SCALE

PLUMBING CONSTRUCTION SPECIFICATIONS

1) SCOPE OF WORK - THE PLUMBING CONTRACTOR SHALL FURNISH ALL LABOR, MATERIAL, SUPPLIES, EQUIPMENT, TOOLS, AND SERVICES NECESSARY FOR AND REASONABLY INCIDENTAL TO COMPLETION OF THE PLUMBING WORK AS HEREIN SPECIFIED AND AS SHOWN ON THE PLUMBING DRAWINGS. THE PLUMBING SYSTEMS SHALL BE FULLY INSTALLED, ADJUSTED, TESTED AND READY FOR USE.

THE SCOPE OF WORK SHALL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING ITEMS: GENERALLY, ALL PLUMBING MATERIAL AND LABOR SHALL BE IN ACCORDANCE WITH "PLUMBING INDUSTRY STANDARDS".

- A) FIELD SURVEY OF THE EXISTING PLUMBING SYSTEMS THAT ARE TO BE AFFECTED DURING THIS RENOVATION.
- B) SELECTIVE DEMOLITION AS INDICATED ON THE DRAWINGS AND AS REQUIRED.
- C) FURNISH AND INSTALL NEW PLUMBING FIXTURES AND APPURTENANCES.
- D) FURNISH AND INSTALL NEW SANITARY, WASTE, VENT, HOT AND COLD WATER.
- E) FURNISH AND INSTALL NEW SEALED COMBUSTION GAS-FIRED WATER HEATER.

2) CODE REQUIREMENTS - THE ENTIRE PLUMBING INSTALLATION SHALL BE SUPPLIED AND INSTALLED IN STRICT ACCORDANCE WITH ALL APPLICABLE STATE AND LOCAL BUILDING/PLUMBING CODES, LAWS, ORDINANCES AND INSURANCE REQUIREMENTS.

3) INTERPRETATION OF DRAWINGS - THE DRAWINGS ARE DIAGRAMMATIC ONLY AND ARE NOT INTENDED TO SHOW THE EXACT LOCATIONS OF NEW OR EXISTING UTILITIES AND ARE SUBJECT TO FIELD INSTALLATION ADJUSTMENTS AT THE TIME OF INSTALLATION BY THE PLUMBING CONTRACTOR. THE PLUMBING CONTRACTOR SHALL BE HELD ACCOUNTABLE TO VERIFY WITH THE ARCHITECT, THE EXACT LOCATIONS OF EXISTING UTILITIES AND NEW WORK PRIOR TO ITS ACTUAL INSTALLATION.

ANY WORK INSTALLED CONTRARY TO OR WITHOUT SUCH APPROVAL BY THE ARCHITECT SHALL BE SUBJECT TO CHANGE AS DIRECTED BY THE ARCHITECT. NO ADDITIONAL COMPENSATION WILL BE ALLOWED TO THE PLUMBING CONTRACTOR.

4) EXAMINATION OF PREMISES - THE PLUMBING CONTRACTOR SHALL VISIT THE SITE PRIOR TO SUBMITTING THE BID AND FAMILIARIZE THEMSELVES WITH THE EXISTING CONDITIONS. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR EXTRA WORK REQUIRED DUE TO THE LACK OF KNOWLEDGE OF THE EXISTING BUILDING/SITE CONDITIONS.

5) COOPERATIONS - THE PLUMBING CONTRACTOR SHALL COOPERATE WITH ANY OTHER CONTRACTORS THAT MAY BE ON THE SITE. ANY CONFLICTING CONDITIONS SHALL BE CALLED TO THE ATTENTION OF THE ARCHITECT.

6) QUALITY OF WORKMANSHIP - THE WORKMANSHIP OF THE ENTIRE PLUMBING INSTALLATION SHALL BE FIRST CLASS IN EVERY RESPECT AND ONLY COMPETENT AND EXPERIENCED LICENSED LABOR SHALL BE ALLOWED ON THE JOB. THE ARCHITECT RESERVES THE RIGHT TO REQUEST THE DISMISSAL OF ANY WORKMAN WHOSE WORK AND PERFORMANCE IS NOT SATISFACTORY.

7) GUARANTEE - THE PLUMBING CONTRACTOR SHALL GUARANTEE (PARTS AND LABOR) ALL THE PLUMBING SYSTEMS, MATERIALS AND WORKMANSHIP AGAINST DEFECTS AND FAULTY INSTALLATION FOR A PERIOD OF ONE (1) YEAR STARTING FROM THE DATE OF FINAL ACCEPTANCE OF THE WORK (IN WRITING) BY THE ARCHITECT/ENGINEER. THE PLUMBING CONTRACTOR SHALL MAKE GOOD AT THEIR EXPENSE ANY DEFECTS IN MATERIAL AND WORKMANSHIP, EXCEPT WHERE SUCH IS CAUSED BY ABUSE OR MISUSE BY THE BUILDING MAINTENANCE PERSONNEL.

8) CUTTING AND PATCHING - THE PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING, PATCHING AND DRILLING AND ALL NECESSARY GALVANIZED STEEL FOR SUPPORT AND INSTALLATION OF THE PLUMBING MATERIAL AND EQUIPMENT. THIS INCLUDES ANY REQUIRED SCAFFOLDING OR SIMILAR EQUIPMENT FOR THE PLUMBING WORK INSTALLATION.

IN ADDITION, ALL PENETRATIONS THRU FIRE RATED WALLS SHALL BE CALKED WITH FIRE STOPPING MATERIAL BY THE PLUMBING CONTRACTOR.

9) PERMITS AND INSPECTIONS - THE PLUMBING CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS, INSPECTIONS, LICENSES AND CERTIFICATIONS REQUIRED FOR WORK SPECIFIED OR SHOWN ON THE PLUMBING DRAWINGS. NO PLUMBING WORK SHALL COMMENCE UNTIL ALL PLUMBING CONSTRUCTION IS COORDINATED WITH THE LOCAL PLUMBING INSPECTOR. ANY DIFFERING INSPECTOR REQUIREMENTS SHALL BE PROVIDED BY THE PLUMBING CONTRACTOR WITHOUT ANY ADDITIONAL COMPENSATION.

10) COORDINATION - THE PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL OF THE PLUMBING SYSTEMS IN THE MOST PRACTICAL MANNER FREE FROM INTERFERENCES WITH OTHER EQUIPMENT, LIGHTS, DUCTWORK OR STRUCTURAL FEATURES. IF ANY CHANGES FROM THE DRAWINGS ARE DEEMED ADVISABLE, DETAILS OF SUCH PROPOSED CHANGES SHALL BE SUBMITTED TO THE ARCHITECT FOR WRITTEN APPROVAL. NO CHANGES SHALL BE MADE WITHOUT SUCH APPROVAL.

11) MATERIAL AND EQUIPMENT - A) MATERIAL - ALL PLUMBING CONSTRUCTION MATERIAL SHALL BE OF THE HIGHEST QUALITY (SPECIFICATION GRADE) AND U.L. LISTED. SUBMIT ALL MATERIAL SHOP DRAWINGS FOR REVIEW AND ACCEPTABILITY TO THE ARCHITECT/ENGINEER (PRIOR TO ANY INSTALLATION). ANY MATERIAL NOT SUBMITTED AND REVIEWED MAY AT THE OPTION OF THE ARCHITECT/ENGINEER BE REPLACED AT AN ADDITIONAL COST. ANY MATERIAL NOT SUBMITTED AND APPROVED WHICH DOES NOT MEET THE DRAWINGS AND SPECIFICATIONS REQUIREMENTS MAY AT THE OPTION OF THE ARCHITECT/ENGINEER BE REMOVED AND REPLACED BY THE PLUMBING CONTRACTOR AT NO ADDITIONAL COST.

B) PIPING - GENERAL
1. COPPER: TUBE DRAWN SEAMLESS, TYPE K ASTM B88.
2. CAST IRON: STANDARD WEIGHT, ANSI A21, CEMENT LINING CONFORMING TO ANSI A21.4.
3. DUCTILE IRON: ANSI A21, CEMENT LINING CONFORMING TO ANSI A21.4.
4. STEEL: SCHEDULE 40, ASTM 120, A530 OR A153.

C) FITTINGS - GENERAL
1. STEEL PIPE: THREADED OR WELDED, WELDED JOINTS WITH FORGED STEEL WELDING FITTINGS.
SCREWED JOINTS 2 1/2-INCH MAXIMUM SIZE. FLANGED OR SCREWED, CAST IRON ANSI B16, STEEL ANSI B.5, B16 OR B.25 OR ASTM A234.
2. COUPLINGS AND UNIONS: SCREWED UNIONS 2-INCH AND LESS, NON-SCREWED TYPE 2 1/2-INCH AND GREATER.
3. CAST OR DUCTILE IRON: CAST IRON DUCTILE IRON.
4. COPPER TUBE: CAST COPPER, ANSI B16 OR WROUGHT COPPER ANSI B16.

D) SYSTEMS
1. DOMESTIC WATER: COPPER TYPE L EXPOSED, TYPE K BURIED.
2. DRAINAGE: SOIL, WASTE, ROOF AND VENT:
A. STANDARD WEIGHT CAST IRON SOIL PIPE AND FITTINGS. ALTERNATIVE JOINTS WERE PERMITTED BY LOCAL CODE, PUSH-ON OR HUBLESS-JOINT PIPE.
3. MEDICAL GAS/VACUUM SERVICE: TYPE "L" COPPER, ASTM "B819", CLEANED AND CAPPED, LABELED FOR "OXY/MED" SERVICE.

E) INSULATION
1. PRE-MOLDED INSULATION OR PREFABRICATED PVC JACKETS WITH GLASS BLANKET INSERTS FOR ALL VALVES AND FITTINGS.
2. 25 MAXIMUM FLAME-SPREAD RATING; 50 MAXIMUM SMOKE DEVELOPMENT RATING; FEDERAL STANDARD NO. 00136B, AND NFPA.
3. PIPING - GENERAL
A. FIBROUS GLASS MOLDED FOR PIPES WITH ALL SERVICE JACKETING (ASJ). MAXIMUM K-FACTOR 0.24 BTU/IN./SQ.FT./HR./DEG. F. AT 100 DEG. F. MEAN TEMPERATURE; MAXIMUM 0.02 PERMS VAPOR PERMANENCE. 3-1/2 LB. DENSITY GENERAL. 6 LBS. AT PROTECTION SHELD.
B. ELASTOMERIC FLEXIBLE EXPANDED CLOSED CELL MOLDED FOR PIPES. DOUBLE LAYER, INSULATION FOR NON-STANDARD THICKNESS AS SCHEDULES. MAXIMUM K-FACTOR 0.28 BTU/IN./SQ.FT./HR./DEG.F. AT 75 DEG. F. MEAN TEMPERATURE; MAXIMUM 0.1 PERMS VAPOR PERMANENCE.

C. FOAMGLASS, CELLULAR MOLDED FOR PIPES, MAXIMUM K-FACTOR 0.35 BTU/IN./SQ.FT./HR./DEG. F. AT 75 DEG. F. MEAN TEMPERATURE. MAXIMUM 0.00 (ZERO) PER MS VAPOR PERMANENCE DENSITY 8.5 LB./CU. FT., MAXIMUM SERVICE TEMPERATURE 900 DEG. F. SUITABLE FOR DIRECT BURIAL.
4. EQUIPMENT - GENERAL:
A. FIBROUS GLASS MOLDED FOR PIPES WITH ALL SERVICE JACKETING (ASJ). MAXIMUM K-FACTOR 0.24 BTU/IN./SQ.FT./HR./DEG. F. AT 100 DEG. F. MEAN TEMPERATURE; MAXIMUM 0.02 PERMS VAPOR PERMANENCE. 3-1/2 LB. DENSITY GENERAL. 6 LBS. AT PROTECTION SHELD.

F) FIXTURES
MANUFACTURER SHALL BE AMERICAN STANDARD, MODEL AS LISTED IN SCHEDULE. EQUIVALENT PRODUCTS NOT CONSIDERED, UNLESS OTHERWISE NOTED. PROVIDE FIXTURES WITH VALVES, VACUUM BREAKERS, AIR GAPS, FAUCETS, FLUSH VALVES, WASTES, TRAPS, WALL PLATES AND ESCUTCHEONS, STAMPED INDEX ON FAUCET HANDLES. EXPOSED METAL PARTS: HEAVY CHROME-PLATED BRASS, POLISHED SURFACE. COLOR OF FIXTURES SHALL BE WHITE UNLESS OTHERWISE NOTED. EXACT MOUNTING HEIGHT SHALL BE DETERMINED BY ARCHITECT. MOUNTING HEIGHT SHALL CONFORM TO HANDICAPPED ACCESSIBILITY REQUIREMENTS AS REQUIRED. SCHEDULE OF PLUMBING FIXTURES AS LISTED IN APPENDIX A.

G) VALVE TAGS AND PIPE MARKINGS
PROVIDE UNMOUNTED PLASTIC OR BRASS TAGS ATTACHED TO STEM OF EACH VALVE. EACH TAG CLEARLY STAMPED WITH LARGE LETTERS AND NUMBERS TO DESIGNATE THE VALVE NUMBERS AND SERVICE. A TYPED WRITTEN LIST OF SCHEDULE OF ALL VALVES SHALL BE MADE WHICH SHALL GIVE THE NUMBER, SERVICE ANCHOR VALVE, LOCATION, MARKING SHALL BE BY PAINTED STENCIL SUITABLE FRAME, LOCATED AS DIRECTED BY ARCHITECT. ALL VALVE NUMBERS SHALL CORRESPOND TO NUMBERS INDICATED FOR VALVES ON THE RECORD DRAWINGS. MARK ALL PIPING SHOWING SERVICE AND DIRECTION OF FLOW EVERY 10 FEET, CHANGE IN DIRECTION AND ENTRY/EXITS TO A ROOM, AFTER PIPE IS INSULATED AND/OR PAINTED. MARKING SHALL BE BY PAINTED STENCIL LETTERING, 2-INCH HEIGHT MINIMUM. PROVIDE AS FOLLOWS:
1. MECHANICAL ROOMS, BASEMENT, SHOWER ROOMS, AND CORRIDORS.
2. FLOOR: MAIN BRANCH LINES, INCLUDING BUT NOT LIMITED TO, ABOVE ALL CEILINGS.
3. GAS PIPING, COMPLETE.
4. ALL PIPE TERMINATIONS ABOVE THE ROOF.

I) VALVES AND APPURTENANCES
1. PROVIDE COLOR CODED HANDLED OPERATORS FOR ALL VALVES AS FOLLOWS:
A. HOT WATER SERVICES - RED.
B. COLD WATER SERVICES - BLUE.
C. RETURN WATER SERVICES - GREEN.
DO NOT COLOR CODE CHROME FINISH VALVES. PROVIDE WITH MANUFACTURERS STANDARD COLOR CODED INSERT.
2. HOSE BIB
A. 3/4 INCH, SCREWED OR SOLDERED ENDS, 150 LB. WSP. REMOVABLE HANDLE, BUILT-IN VACUUM BREAKER, THREADED HOSE OUTLET, CHROME PLATED.
3. SHOCK ABSORBERS
A. BODY COPPER CONSTRUCTION, BRASS PISTON WITH EPDM O-RING SEALS. 150 PSIG WORKING PRESSURE, AND THREADED CONNECTION. TEMPERATURE RANGE 30-180 DEG. F. PDI CERTIFIED.
B. SIZE PER MANUFACTURER RECOMMENDATIONS.

4. CHECK VALVES
A. 2-INCH MAXIMUM: SCREWED END, 150LB. WSP, 300LB. WOG. BRONZE BODY, ASTM B62, SCREWED-IN CAP, BRONZE REGRINDABLE DISK, SWING CHECK.
B. 2.5-MINIMUM: FLANGED, 125 LB. WSP, 200 LB. WOG, IRON BODY, BRONZE MOUNTED BODY, ASTM A126, BOLTED COVER, BRONZE REGRINDABLE OR RENEWABLE DISK AND SEAT RING, SWING CHECK.

5. BALL VALVES
A. 2-INCH MAXIMUM: SCREWED OR SOLDERED ENDS 150 LB. WSP, 600 LB. WOG. BRONZE VINYL GRIP LEVER, ADJUSTABLE STEM GLAND, TEFLON STUFFING BOX SEATS.
B. 2.5-INCH MINIMUM: FLANGED OR SCREWED ENDS, 150 LB. WSP, 275 LB. WOG. BRONZE VINYL GRIP LEVER, ADJUSTABLE STEM GLAND, TEFLON STUFFING BOX SEATS.

6. THERMOMETERS
A. BRASS, CAST ALUMINUM-BRONZE OR CAST ALUMINUM CASE WITH RED READING MERCURY AND GLASS WINDOWS OR DUAL TYPE BIMETAL WITH STAINLESS STEEL CASES AND STAINLESS ADJUSTMENT.
3-INCH DIAMETER WHITE DIALS OR 9 INCH SCALES WITH BLACK NUMBERS, ADJUSTABLE ANGLE TYPE, BRASS SEPARABLE WELLS WITH EXTENDED NECK TO SUIT INSULATION THICKNESS, STEMS AND WELLS TO EXTEND APPROXIMATELY TO CENTER OF THE PIPE OR MAXIMUM LENGTH OR 12 INCHES FOR LARGE PIPE. ACCURACY 1% PERCENT AT IN-RANGE, COLD PIPING RANGE 20-120 DEG. F.; HOT PIPING APPROX. 30-240 DEG. F.

7. ESCUTCHEON PLATES
A. ONE PIECE OR HINGED WALL AND CEILING EXPANSION-TYPE PLATES, ROUND HEAD SET SCREWS FOR IRON OR ALUMINUM PIPE CLIPS, RECESSED TYPE FOR FLOORS; MINIMUM 18 GAGE SPUN BRASS, CHROME-PLATED OVER NICKEL IN FINISHED ROOMS; ELSEWHERE 18 GAGE ENAMELED CAST-IRON OR STEEL.
8. GAS VALVES
A. LISTED WITH THE STATE FOR USE ON A NATURAL GAS SYSTEM, MASSACHUSETTS LISTED FOR FUEL GAS USAGE. MANUAL BALL VALVE, FULL PORT TYPE OR PLUG VALVE, NON-LUBRICATING TYPE.

9. GAGES
A. ANSI B40.1, SINGLE STYLE PRESSURE GAGE FOR WATER WITH 4-1/2-INCH DIAMETER DIAL, BRASS OR ALUMINUM CASE, BRONZE TUBE, GASKET, COCK, PRESSURE SNUBBER, AND SIPHON. PROVIDE SCALE RANGE SUITABLE FOR THE INTENDED SERVICE.

L) HANGERS AND SUPPORTS
FURNISH AND INSTALL ALL HANGERS AND SUPPORTS AND ALL STEEL FRAMEWORK REQUIRED FOR THE SUPPORT OF THE VARIOUS PLUMBING SYSTEMS. ALL PIPING SHALL BE SUPPORTED FROM THE BUILDING STRUCTURE BY MEANS OF APPROVED HANGERS, CHAIN, STRAP, PERFORATED BAR OR WIRE HANGERS WILL NOT BE APPROVED, UNLESS OTHERWISE SPECIFIED HEREINAFTER. APPROVED GANG HANGERS MAY BE USED IN LIEU OF SEPARATE HANGERS ON PIPES RUNNING PARALLEL TO EACH OTHER AND CLOSE TOGETHER. WHERE USED FOR COPPER TUBING AND PIPING, THE GANG HANGERS SHALL HAVE COPPER SADDLES OR SHALL BE SHEET LEAD COATED. PROVIDE SEISMIC SUPPORT FOR ALL EQUIPMENT AND PIPING PER MASSACHUSETTS STATE BUILDING CODE 6TH EDITION, ARTICLE 16, SUBSECTION 1612.7.

2) INSTALLATION - GENERAL
A) FURNISH AND INSTALL ALL PLUMBING FIXTURES AND EQUIPMENT, WATER, VENT, SANITARY DRAINAGE, STORM DRAINAGE PIPING. INSTALL ALL FAUCETS, OUTLETS AND TRAPS AND MAKE ALL CONNECTIONS FOR COLD AND HOT WATER, DRAIN AND STORM PIPING. INSTALL EQUIPMENT AT LOCATIONS INDICATED. MAKE PIPING CONNECTIONS TO EQUIPMENT PREVENTING EXCESSIVE STRAIN ON EQUIPMENT. INSTALL FLEXIBLE CONNECTIONS WHERE INDICATED OR REQUIRED.
B) FIXTURES ACCESSORIES:
INSTALL WHERE INDICATED, HEIGHT PER MANUFACTURER'S RECOMMENDATIONS UNLESS OTHERWISE INDICATED OR DIRECTED BY THE ARCHITECT. INSTALL ESCUTCHEONS AT ALL WALL AND FLOOR PENETRATIONS.
C) DRAINS: FOR DRAINS INSTALLED ABOVE BASEMENTS, FLASHING CLAMP, 8 INCH OF 16 OZ. SHEET COPPER FLASHING, ALL AROUND; EXTEND 4 LB. SHEET LEAD FLASHING 8 INCH FROM ROOF DRAIN INTO MEMBRANE WATERPROOFING.
D) CLEANOUTS AND TRAPS: INSTALL FLOOR CLEANOUT PLUGS JUST BELOW FINISHED FLOOR LEVEL. PROVIDE BRASS ACCESS COVER.

3) INSTALLATION OF PIPING
A) GENERAL:
INSTALL TO ACCURATE LINES AND GRADES, PARALLEL TO BUILDING WALLS WHERE POSSIBLE. USE RIGID TEMPORARY SUPPORTS TO PREVENT SHIFTING OR DISTORTION. DO NOT RUN PIPE THROUGH, OVER OR IN FRONT OF ELECTRICAL SWITCHBOARDS OR PANELS. MAINTAIN 3 FOOT HORIZONTAL CLEARANCE. DO NOT USE CLOSE NIPPLES ON THREADED PIPING. ALLOW 3-INCH CLEARANCE FROM WALLS, CEILING, FLOORS OR OTHER PIPING AND ELECTRICAL CONDUITS. ALLOW FOR 1-1/2 INCH EXPANSION FOR HOT WATER PIPING AND 3/4-INCH FOR COLD WATER PIPING PER 100 FT. RUN. CONTRACTOR TO SIZE, LOCATE AND SELECT ALL EXPANSION LOOPS AND JOINTS, UNLESS OTHERWISE INDICATED. INSTALL ISOLATION OR SERVICE VALVES ON SUPPLY BRANCH AND SUB BRANCH PIPING AND AT EQUIPMENT INLET AND OUTLET CONNECTIONS. FURNISH ADDITIONAL ISOLATION VALVES PER LOCAL CODES AND AS DIRECTED BY PLUMBING INSPECTOR. INSTALL DIELECTRIC BUSHINGS OR UNIONS AT JOINTS BETWEEN FERROUS AND NON-FERROUS PIPING. INSTALL UNIONS AT PIPING CONNECTIONS FOR EQUIPMENT AND APPURTENANCES UNLESS FLANGED. INSTALL PIPELINE STRAINER UPSTREAM

OF PRESSURE CONTROL VALVES. INSTALL SHOCK ABSORBERS ON PLUMBING HOT AND COLD WATER SUPPLY PIPING NEAR EACH QUICK CLOSING TYPE FAUCET, FLUSH VALVE OR CONTROL VALVE, AND AS INDICATED. PROVIDE COMPLETE SEISMIC SUPPORT OF THE PIPING SYSTEM AS REQUIRED BY CODE.

B) PIPE PITCH:
SANITARY AND ROOF DRAINAGE PIPING, 1/4 INCH PER FOOT WHEN POSSIBLE, MINIMUM 1/8 INCH PER FOOT.
C) DRAINAGE SYSTEMS:
THE INTERIOR DRAINAGE SYSTEMS SHALL BE CONSTRUCTED USING MATERIALS AND METHODS AS SPECIFIED AND/OR INDICATED. PROVIDE PROPERLY TRAPPED AND VENTED WASTE CONNECTIONS TO FIXTURES, FLOOR DRAINS, AND SPECIAL EQUIPMENT. EACH DRAIN LEAVING THE BUILDING SHALL HAVE CLEANOUT INSTALLED TO MEET THE APPROVAL OF THE PLUMBING INSPECTOR. DRAIN PIPING SHALL BE UNIFORMLY PITCHED TO CONFORM WITH LOCAL AND STATE CODE REQUIREMENTS. CHECK SITE UTILITY DRAWINGS AND VERIFY LOCATION, SIZE AND ELEVATION OF STREET SEWERS BEFORE PROCEEDING WITH INSTALLATION. CLEANOUTS SHALL BE INSTALLED AT THE BASE OF ALL STACKS, BEYOND RUNNING TRAPS, AT CHANGES IN DIRECTION OF MORE THAN 45 DEGREES, AT NOT OVER 50 FOOT INTERVALS IN HORIZONTAL RUNS. CLEANOUT TEES SHALL NOT BE USED WHERE IT IS POSSIBLE TO USE A STRAIGHT TEE. TRAPS OF MATERIAL AND DESIGN APPROVED BY LOCAL OR STATE PLUMBING INSPECTOR SHALL BE FURNISHED AND INSTALLED BY THE PLUMBING CONTRACTOR FOR ALL EQUIPMENT AND APPLIANCES. ALL TRAPS SHALL HAVE THE BOTTOM CLEANOUTS WHERE ACCESS CAN BE PROVIDED. VENTS THROUGH ROOF SHALL BE BASE FLASHED BY ROOFER, FLASHING BY THE PLUMBING CONTRACTOR. VENTS SHALL BE AT LEAST TWO FEET ABOVE THE ROOF. CAREFULLY INSPECT FOR DAMAGED MATERIALS. RUN PIPING AS SHOWN ON THE DRAWINGS, MAKING CHANGES IN DIRECTION WITH LONG SWEEP 1/8 AND/OR 1/16 BENDS. CONNECTIONS TO STACKS MAY BE WITH SANITARY T-FITTINGS.

14) INSTALLATION OF PIPE JOINTS AND CONNECTIONS
A) GENERAL:
CUT PIPE AND REMOVE BURRS. CLEAN DIRT, CHIPS AND FOREIGN MATTER FROM INSIDE BEFORE ASSEMBLY. FINAL CONNECTIONS TO EQUIPMENT MADE WITH UNIONS OR FLANGES. UNIONS IN COPPER TUBING 125 LB. WS P. ALL BRONZE. GROUND JOINT SEAT; STANDARD PVC UNIONS IN PVC PIPE; ALL OTHER 150 LB. WSP, MALLEABLE IRON, GROUND BRASS-TO-IRON SEAT. THREADED JOINTS, MADE WITH LEAD FREE SEALANT APPLIED TO THE MALE THREAD ONLY.
B) COPPER PIPE:
SOLDER WITH 95 PERCENT TIN AND 5 PERCENT ANTIMONY FOR ALL DOMESTIC WATER PIPING. COMPLY WITH LOCAL AUTHORITY REQUIREMENTS. DO NOT USE CORED SOLDER. POTABLE WATER: MAKE JOINTS USING FILLER MATERIALS ONLY WITH ANSI-ASME STANDARD AWS/AS 8 LEAD FREE FLUXES. USE FLARING TOOL FOR FLARED CONNECTION, MAKE-UP WITH SLEEVE UNIT. DO NOT USE FLARED CONNECTIONS FOR BURIED PIPING.
C) CALKED JOINTS: USE PICKED OAKUM AND LEAD BETWEEN HUB AND PIPE, PLACE 1 INCH DEEP MOLTEN LEAD IN ONE POUR. USE COMPRESSION TYPE GASKETS FOR DRY JOINT PIPING ASSEMBLED WITH SPECIAL TOOLS PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE TIGHT SEAL WITH 10 DEGREE DEFLECTION. MAKE JOINTS BETWEEN SOIL AND SILENE WITH WAX. USE WAX MANIFOLD FITTINGS. INSTALL CLEANOUTS IN SOIL AND WASTE PIPING AT BRANCH ENDS, IN TRAPS AND STACKS, AT POINTS OF CHANGE IN FLOW DIRECTION, AND AT CONVENIENT POINTS IN LONG PIPE RUNS; INSTALL CLEANOUT ACCESS COVER WITH FLUSH WITH FLOOR ON BURIED PIPING.
D) WELDED PIPES:
WELDING BY QUALIFIED WELDER CERTIFIED BY APPROVED WELDING BUREAU. PROCEDURES PER ANSI B31.1 AND AWS B3.0. INSTALL FORGED STEEL WELDING OUTLET FITTINGS AT PIPING INTERSECTIONS AND DIRECTION CHANGES. MITERING OR NOTCHING NOT PERMITTED.
E) FLANGED JOINTS:
MAKE JOINTS WITH BOLTS; BOLT STUDS WITH NUT ON EACH END; OR STUDS WITH NUT FOR TAPPED FLANGE. BOLT SIZE AND QUANTITY TO SUIT ANSI FLANGE. BOLTS AND NUTS ASTM A307. REMOVE COATING FROM MACHINED SURFACES. BURRS AND SMOOTH IMPERFECTIONS; INSERT .0625-INCH GASKET OF MATERIAL SUITABLE FOR EXPOSURE TO THE PRODUCT. MAKE UP JOINT TIGHTLY WITHOUT UNDUE STRAIN ON VALVES.

15) INSTALLATION OF INSULATION
A) PIPING:
INSTALL ONLY ON TESTED PIPE. APPLY WHEN CLEAN AND DRY TO PIPE, FITTINGS, FLANGES AND VALVES. INSTALL CONTINUOUS THROUGH HANGERS AND SUPPORTS WITH PIPE SHIELDS. INSTALL CONTINUOUS THROUGH SLEEVES EXCEPT FOR FIRESTOPPED AND WATER TIGHT SLEEVES. FOR PIPING PASSING THROUGH SLEEVES, PLACE METAL AND PROTECTORS OVER END OF INSULATION AT THE FLOOR, WALL OR CEILING. FOR VAPOR BARRIER JACKETS INSULATION, COAT END OF PIPE AND INSULATION WITH VAPOR BARRIER CEMENT BEFORE FITTING WITH END PROTECTOR. EXPOSED INSULATED PIPE WITHIN 5 FT. OR FLOOR PROTECTED BY SHEET ALUMINUM OR PVC JACKET. PVC JACKET COLOR BY ARCHITECT. SEAL LONGITUDINAL SEAM AND JOINT STRIPS FOR BUTT JOINTS OF VAPOR BARRIER JACKETS WITH VAPOR BARRIER ADHESIVE. NO STAPLES WILL BE ALLOWED. INSTALL PRE-MOLDED INSULATION OR PREFABRICATED PVC JACKETS WITH GLASS BLANKET INSERTS, EQUAL TO PIPE INSULATION THICKNESS, TO VALVES AND FITTINGS; OR MITERED SECTIONS OF INSULATION TO FIT SNUGLY WITHOUT OPEN SPACES, SECURED WITH CEMENT AND WIRE, FINISHED WITH GLASS FABRIC AND VAPOR BARRIER MASTIC FOR COLD PIPING. PATCH NEATLY ALL JACKET SEAMS, PUNCTURES AND TEARS. SEAL WITH PASTED ON PRE-SIZED WHITE FIBROUS GLASS CLOTH JACKET. INTEGRITY OF THE VAPOR BARRIER JACKET FOR ALL COLD PIPING TO BE MAINTAINED. INSULATION SHALL BE MITERED SECTIONS WITH MANUFACTURERS RECOMMENDED ADHESIVE. SEAL BUTT JOINTS WITH OVERLAPPED INSULATION, ADHESIVE ATTACHED. DO NOT INSULATE HOT AND COLD WATER INDIVIDUAL FIXTURES, UNLESS PIPING IS EXPOSED OR OTHERWISE NOTED. BURIED PIPING, FOAMGLASS, PER MANUFACTURERS RECOMMENDATION.
B. INSULATION SCHEDULE, NEW AND EXISTING COMPLETE.

SYSTEM DESCRIPTION	THICKNESS (INCHES)	INSULATION VAPOR-BARRIER JACKET REQUIRED	TYPE
DOMESTIC (ALL) BURIED	1.0	NO	F.G.
DOMESTIC HOT WATER RETURNS	0.5	NO	C.C.
DOMESTIC HOT AND COLD WATER MAINS	1.5	YES(COLD)	F.B.
DOMESTIC COLD AND HOT WATER BRANCH	1.0	YES(COLD)	F.B.
ROOF DRAINAGE	1.0	YES	F.B./C.C.
HANDICAPPED LAV. AND SINKS			PREFAB
SANITARY LINES			PREFAB
WATER LINES			PREFAB

NOTES:
1. HOT AND COLD WATER; EXCEPTION DO NOT INSULATE SHORT CHROME PLATED CONNECTIONS TO STANDARD FIXTURES.
2. ROOF LEADERS: HORIZONTAL ONLY.
3. CONNECTIONS TO ROOF DRAINS.
4. INSULATE EXPOSED HANDICAPPED LAVATORY AND SINKS PIPING, WATER AND DRAIN LINES.
5. TYPES: F.G. - FOAMGLASS, C.C. - CLOSED CELL F.B. - FIBERGLASS.

16) INSTALLATION OF PIPE HANGERS AND SUPPORTS
A) GENERAL:
INSTALL A HANGER AT EACH CHANGE OF DIRECTION OR OFFSET; INSTALL ADDITIONAL HANGERS AT CONCENTRATED LOADS. HANGERS SHALL BE LOCATED ON THE TOP DECK. ALL ATTACHMENTS TO BE A SIDE ATTACHMENT TYPE LOCATED ON THE TOP CORD OF THE STRUCTURE. USE PROPER COMPONENTS FOR MAXIMUM PRESSURE AND TEMPERATURE. SUPPORT VERTICAL PIPING TO PREVENT SWAYING OR VIBRATION. USE PROTECTION SHIELDS FOR INSULATED PIPE. INSULATION TO BE CONTINUOUS THROUGH HANGER, UNLESS OTHERWISE INDICATED. USE TRAPZEE HANGER FOR SEVERAL PARALLEL PIPES. SET INSERTS FOR HANGERS BEFORE CONCRETE IS PLACED. ATTACHED ALL HANGER WOOD ATTACHMENTS TO THE ROOF SUPPORT STRUCTURE OR WALL FRAMING ONLY. STEEL HANGERS FIELD PRIME. PROVIDE ANCHORS AND SUPPORTS FOR ALL EXPANSION JOINTS AS REQUIRED.
B) HORIZONTAL PIPING SHALL BE HUNG WITH ADJUSTABLE WROUGHT IRON OR MALLEABLE IRON PIPE HANGERS, SPACED AS FOLLOWS:

PIPE SIZE	COPPER	STEEL	ROD SIZE
3/4" TO 1"	6 FT.	8 FT.	3/8"
1-1/4" TO 2"	8 FT.	10 FT.	3/8"
2-1/2" TO 4"	10 FT.	14 FT.	1/2"

C) CAST IRON SOIL PIPE SHALL BE SUPPORTED AT 5 FOOT INTERVALS AT HUB. COPPER TUBE STRAPS MAY BE USED ON WATER LINES UP TO 1 INCH FOR WOOD JOIST CONSTRUCTION ONLY. BANDS OR RINGS SUPPORTING COPPER TUBING SHALL BE HEAVILY COPPER PLATED.
D) HANGERS SHALL BE LOCATED NOT MORE THAN 4 FEET FROM ELBOW OR 10 FEET ON SCREWED PIPING. FOR COPPER TUBING, THE HANGERS SHALL BE COPPERIZED.

HANGERS FOR PIPING LARGER THAN 4 INCH SHALL BE ADJUSTABLE CLEVIS, WROUGHT IRON OR MALLEABLE IRON.
E) VERTICAL STACKS OF SOIL, WASTE, VENT AND CONDUCTOR PIPING SHALL HAVE FRICTION CLAMPS ON EACH FLOOR. VERTICAL SUPPLY RISERS SHALL BE SUPPORTED AT EACH FLOOR BY FRICTION CLAMPS OR INSERTING AROUND THE SUPPLY PIPE, A COUPLING WHICH SHALL REST ON PIPE SLEEVE. SOIL, WASTE AND CONDUCTOR STACKS SHALL BE FIRMLY SUPPORTED AT THEIR BASE, EITHER BY A SUITABLE HANGER PLACED ON THE HORIZONTAL LINE NEAR THE RISER, OR BY A BASE FITTING SET ON A PEDESTAL OR FOUNDATION CARRIED DOWN TO A FIRM BEARING. COPPER TUBING 1-INCH AND SMALLER SHALL HAVE ADDED SUPPORT AT MIDPOINT BETWEEN FLOORS.
F) SEISMIC HANGERS AND SUPPORTS PER THE MANUFACTURERS RECOMMENDATION AND CODE REQUIREMENTS, COMPLETE.

17) PROTECTION AND CLEANING
A) THE PLUMBING CONTRACTOR SHALL TAKE EFFECTIVE MEASURES TO PROTECT ALL MATERIALS, FIXTURES AND FITTINGS FROM LOSS OR DAMAGE; AND ALL PIPE OPENINGS FROM OBSTRUCTION, THROUGHOUT THE CONSTRUCTION. HEAVY JUTE INSERTED TYPE PAPER SHALL BE TAPED SECURELY FOR COMPLETE COVERING AND PROTECTION OF FIXTURES AND EQUIPMENT.
B) ALL DIRT AND DEBRIS RESULTING FROM THE WORK SHALL BE THOROUGHLY TAKEN UP AND REMOVED FROM THE PREMISES. ALL FIXTURES, FITTINGS, EXPOSED TRIM AND EQUIPMENT SHALL BE CLEANED AND POLISHED TO LEAVE FOR INSPECTION AND USE IN THE BEST POSSIBLE CONDITION.

18) TESTING
A) CLEAN AND FLUSH PIPE BEFORE TESTING. USE COMPRESSED AIR FOR AIR AND GAS PIPING; WATER FOR ALL OTHER. REMOVE EQUIPMENT AND APPURTENANCES WHICH MAY BE DAMAGED DURING TEST. PERFORM TEST IN PRESENCE OF ARCHITECT, OWNERS REPRESENTATIVE AND THE BUILDING OR PLUMBING INSPECTOR AS LOCAL CODES REQUIRE. NOTICE FOR WITNESSING TEST SHALL BE GIVEN WITH SUFFICIENT TIME, BUT NOT LESS THAN TEN WORKING DAYS. TEST UNDERGROUND PIPING BEFORE BACKFILLING. TEST CONCEALED PIPING SEPARATELY. TEST BEFORE PAINTING OR APPLYING INSULATION. FURNISH ALL TESTING MATERIALS, EQUIPMENT AND LABOR. DISCONNECT PUMPS DURING TEST. REMEDY LEAKS BY REPLACING DEFECTIVE MATERIALS; DO NOT REMEDY WITH CAULKING OR CHEMICALS.
B) TEST PROCEDURES:
TEST PLUMBING PIPING WITH WATER FOR LIQUID UNDER PRESSURE; 2 HOURS CONTINUOUS AT 100 PSIG OR 150 PERCENT NORMAL WORKING PRESSURE, WHICHEVER IS GREATER. TEST GAS PIPING WITH AIR; 2 HOURS CONTINUOUS AT 150 PSIG OR 150 PERCENT NORMAL WORKING PRESSURE, WHICHEVER IS GREATER.

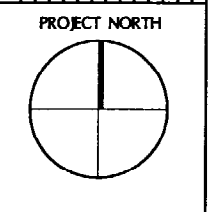
19) DISINFECTION
A) AFTER TESTING, THE PLUMBING SUBCONTRACTOR IS TO DISINFECT THE COMPLETE WATER SYSTEMS PER THE APPLICABLE PLUMBING CODE. PROVIDE COPY OF ALL TEST RESULTS INDICATING COMPLIANCE WITH THE APPLICABLE CODE REQUIREMENTS.

20) COMPLETION - FINAL ACCEPTANCE
A) PROVIDE PROPERLY EXECUTED CERTIFICATE OF INSPECTIONS FROM AUTHORITY HAVING JURISDICTION. INSTRUCT SUCH PERSONS AS THE OWNER DESIGNATES IN THE PROPER OPERATION AND MAINTENANCE OF THE EQUIPMENT OF THE SYSTEMS AND THEIR PARTS. SUBMIT TO ARCHITECT A LETTER NAMING THE PERSON(S) SO INSTRUCTED AND THE DATES OF SUCH INSTRUCTIONS, SUBJECT TO THE OWNERS ACCEPTANCE. PREPARE LITERATURE SHOWING OPERATION, SERVICE AND REPLACEMENT DATA FOR ALL EQUIPMENT WHICH WILL REQUIRE PERIODIC MAINTENANCE OR REPLACEMENT. DELIVER ALL LITERATURE PRIOR TO FINAL ACCEPTANCE. DELIVER ALL SPARE PARTS AND REPAIR KITS, PRIOR TO FINAL ACCEPTANCE.
B) AS-BUILT DRAWINGS - THE PLUMBING CONTRACTOR SHALL PROVIDE ONE SET OF CLEAN MARKED UP PLUMBING DRAWINGS WITH ALL "AS-BUILT" PLUMBING CONSTRUCTION INFORMATION.

SCHEDULE OF FIXTURES
P-1 (SINK)
ELKAY LRAD25224 25"x22"x6.5"DEEP STAINLESS STEEL SINK, 18 GAUGE TYPE 304, SELF RIMMING, FULLY INSTALLED, POLISHED SATIN FINISH, TWO HOLE PUNCHED ON 4" CENTERS. PROVIDE WITH ELKAY LK-99 DRAIN BASKET ASSEMBLY, OFFSET TAILPIECE, P-TRAP, ANGLE STOPS, SUPPLY RISERS, CHICAGO 895-317E2805-5CP GOOSENECK FAUCET WITH 4" WRIST BLADE HANDLES

SED ASSOCIATES CORP.
Consulting MEP and I&C Engineers
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BOSTON, MA 02111
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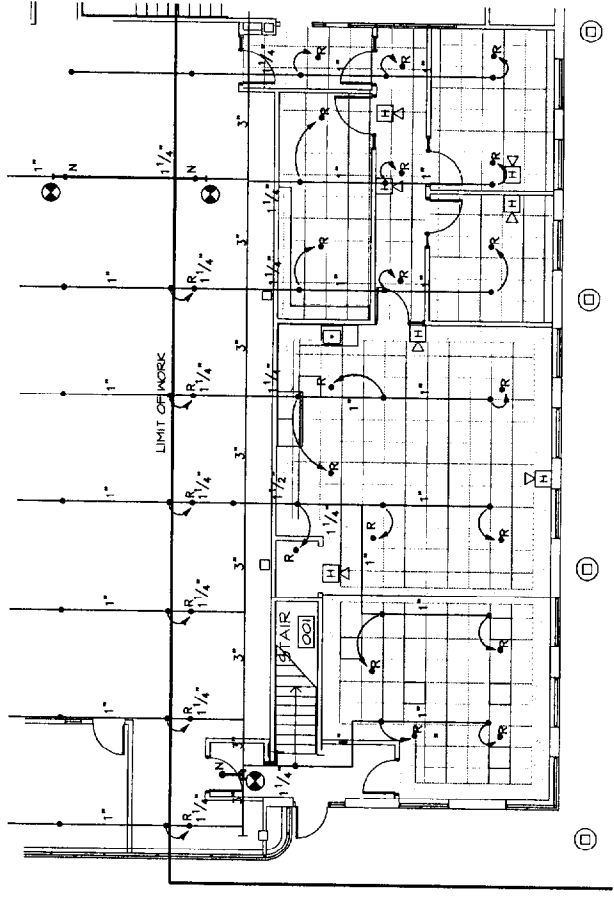


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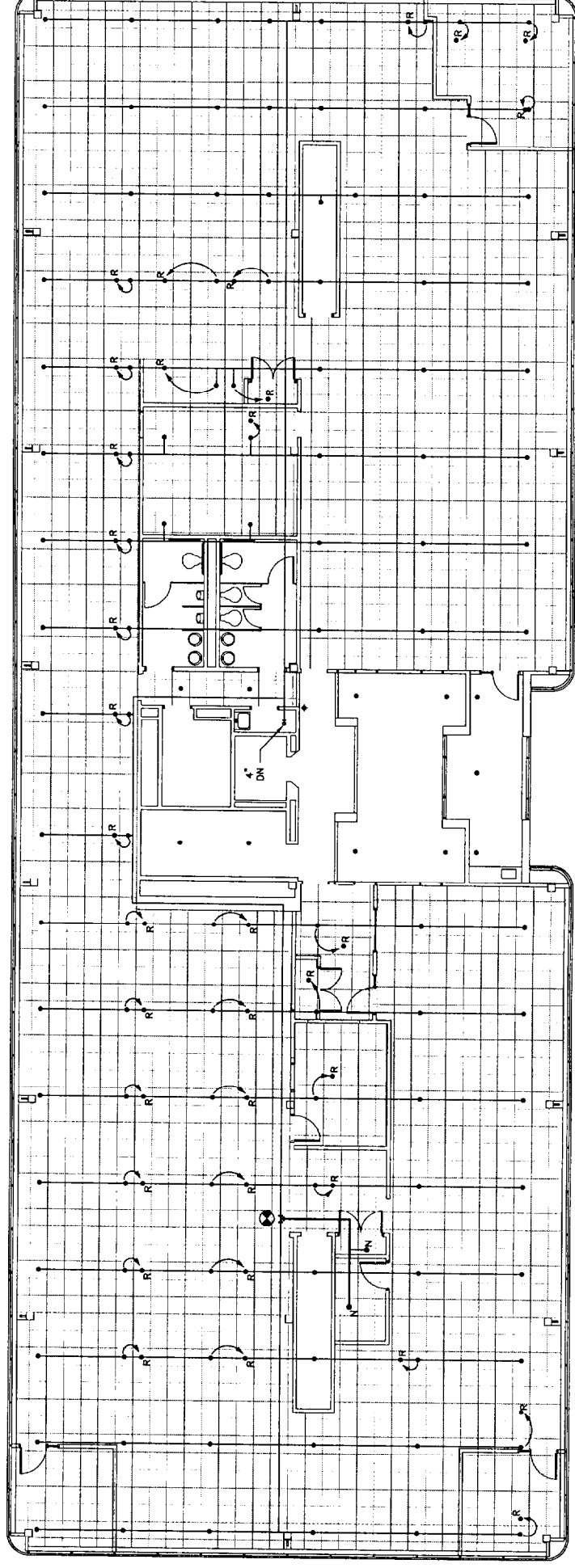
PLUMBING SPECIFICATIONS

Cubellis Associates Inc.
Engineers
71 Atlantic Avenue
Boston, MA 02111
Tel: 617-338-0800
www.cubellis.com

P-2
03/05/04
03174



FIRST FLOOR FIRE PROTECTION PROPOSED PART PLAN
1/8" = 1'-0"



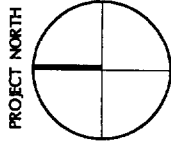
SECOND FLOOR FIRE PROTECTION PROPOSED PLAN
1/8" = 1'-0"

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BOSTON, MA 02111
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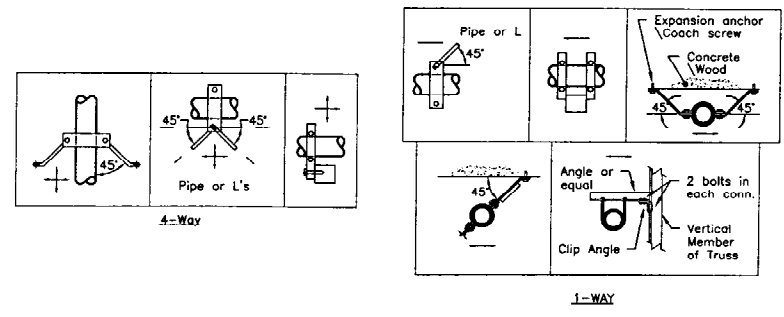
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DRAWN BY: BMH
CHECKED BY: FRC
SCALE: 1/8" = 1'-0"

TITLE: FIRE PROTECTION
PROPOSED PLANS

Cubellis Associates Inc.
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F-2

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Sway Bracing

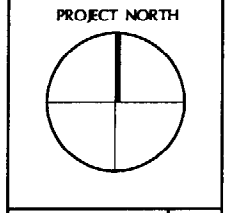
Detail Notes:

1. The means and methods depicted here are based on NFPA's accepted standards and methods for seismic bracing.
2. The methods depicted are not all-inclusive, nor do they preclude other accepted methods of seismic bracing.
3. Indicated types are general information only. Contractor to size and select to suit project.
4. Copyrights per NFPA.

SYMBOLS & ABBREVIATIONS

- ◆ STAND PIPE
- |— PIPE UP
- |— PIPE DOWN
- |— TEE UP
- |— TEE DOWN
- |— UNION
- |— END OF PIPE, CAP OPEN END
- |— CHECK VALVE
- |— BACK FLOW PREVENTER
- |— FIRE VALVE
- |— FLOW SWITCH/PRESSURE SWITCH
- |— E EXISTING PENDANT SPRINKLER HEAD TO REMAIN
- |— R EXISTING RELOCATED PENDANT SPRINKLER HEAD
- |— N NEW PENDENT SPRINKLER HEADS
- |— GATE VALVE (OS&Y) W/TAMPER SWITCH
- |— HOSE CONNECTION
- |— CONNECTION POINT: NEW TO EXISTING

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TITLE: FIRE PROTECTION DETAILS, SPECIFIC & ABBREVIATIONS

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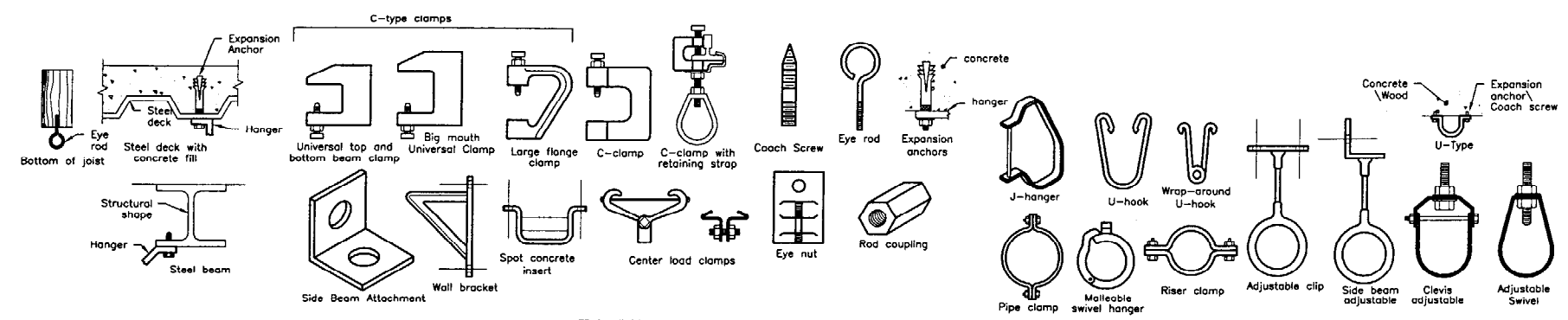
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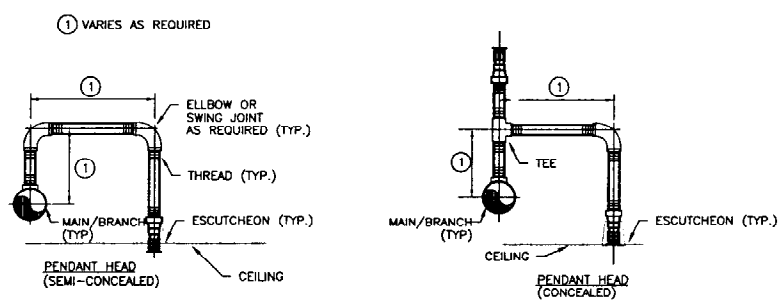


PIPE SUPPORT DETAILS-TYPICAL

NOT TO SCALE

FIRE PROTECTION CONSTRUCTION SPECIFICATIONS

- 1) SCOPE OF WORK - THE FIRE PROTECTION CONTRACTOR SHALL FURNISH ALL LABOR, MATERIAL, SUPPLIES, EQUIPMENT, TOOLS AND SERVICES NECESSARY FOR AND REASONABLY INCIDENTAL TO COMPLETION OF THE FIRE PROTECTION WORK AS HEREIN SPECIFIED AND AS SHOWN ON THE FIRE PROTECTION DRAWINGS. THE FIRE PROTECTION SYSTEMS SHALL BE FULLY INSTALLED, ADJUSTED, TESTED AND READY FOR USE.
 THE SCOPE OF WORK SHALL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING MAJOR ITEMS:
 A) SELECTIVE DEMOLITION AS INDICATED ON THE DRAWINGS.
 B) SPRINKLER HEAD RELOCATION.
- 2) CODE REQUIREMENTS - THE ENTIRE FIRE PROTECTION INSTALLATION SHALL BE SUPPLIED AND INSTALLED IN STRICT ACCORDANCE WITH ALL APPLICABLE STATE AND LOCAL BUILDING/FIRE PROTECTION CODES, LAWS, ORDINANCES AND INSURANCE REQUIREMENTS.
- 3) INTERPRETATION OF DRAWINGS - THE DRAWINGS ARE DIAGRAMMATIC ONLY AND ARE NOT INTENDED TO SHOW THE EXACT LOCATIONS OF NEW OR EXISTING UTILITIES AND ARE SUBJECT TO FIELD INSTALLATION ADJUSTMENTS AT THE TIME OF INSTALLATION BY THE FIRE PROTECTION CONTRACTOR.
 THE FIRE PROTECTION CONTRACTOR SHALL BE HELD ACCOUNTABLE TO VERIFY THE EXACT LOCATIONS OF EXISTING UTILITIES AND NEW WORK PRIOR TO ITS ACTUAL INSTALLATION.
 ANY WORK INSTALLED CONTRARY TO OR WITHOUT SUCH APPROVAL BY THE ENGINEER SHALL BE SUBJECT TO CHANGE AS DIRECTED BY THE ENGINEER. NO ADDITIONAL COMPENSATION WILL BE ALLOWED TO THE FIRE PROTECTION CONTRACTOR.
- 4) EXAMINATION OF PREMISES - THE FIRE PROTECTION CONTRACTOR SHALL VISIT THE SITE PRIOR TO SUBMITTING THE BID AND FAMILIARIZE THEMSELVES WITH THE EXISTING CONDITIONS. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR EXTRA WORK REQUIRED DUE TO THE LACK OF KNOWLEDGE OF THE EXISTING BUILDING/SITE CONDITIONS.
- 5) COOPERATIONS - THE FIRE PROTECTION CONTRACTOR SHALL COOPERATE WITH ANY OTHER CONTRACTORS THAT MAY BE ON THE SITE. ANY CONFLICTING CONDITIONS SHALL BE CALLED TO THE ATTENTION OF THE ARCHITECT.
- 6) QUALITY OF WORKMANSHIP - THE WORKMANSHIP OF THE ENTIRE FIRE PROTECTION INSTALLATION SHALL BE FIRST CLASS IN EVERY RESPECT AND ONLY COMPETENT AND EXPERIENCED LICENSED LABOR SHALL BE ALLOWED ON THE JOB. THE ARCHITECT RESERVES THE RIGHT TO REQUEST THE DISMISSAL OF ANY WORKMAN WHOSE WORK AND PERFORMANCE IS NOT SATISFACTORY.
- 7) GUARANTEE - THE FIRE PROTECTION CONTRACTOR SHALL GUARANTEE (PARTS AND LABOR) ALL THE FIRE PROTECTION SYSTEMS, MATERIALS AND WORKMANSHIP AGAINST DEFECTS AND FAULTY INSTALLATION FOR A PERIOD OF ONE (1) YEAR STARTING FROM THE DATE OF FINAL ACCEPTANCE OF THE WORK (IN WRITING) BY THE ARCHITECT/ENGINEER. THE FIRE PROTECTION CONTRACTOR SHALL MAKE GOOD AT THEIR EXPENSE ANY DEFECTS IN MATERIAL AND WORKMANSHIP, EXCEPT WHERE SUCH IS CAUSED BY ABUSE OR MISUSE BY THE BUILDING MAINTENANCE PERSONNEL.
- 8) CUTTING AND PATCHING - THE FIRE PROTECTION CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING, PATCHING AND DRILLING AND ALL NECESSARY GALVANIZED STEEL FOR SUPPORT AND INSTALLATION OF THE FIRE PROTECTION MATERIAL AND EQUIPMENT. THIS INCLUDES ANY REQUIRED SCAFFOLDING OR SIMILAR EQUIPMENT FOR THE FIRE PROTECTION WORK INSTALLATION.
 IN ADDITION, ALL PENETRATIONS THRU FIRE RATED WALLS SHALL BE CAULKED WITH FIRE STOPPING MATERIAL BY THE FIRE PROTECTION CONTRACTOR.
- 9) PERMITS AND INSPECTIONS - THE FIRE PROTECTION CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS, INSPECTIONS, LICENSES AND CERTIFICATIONS REQUIRED FOR WORK SPECIFIED OR SHOWN ON THE FIRE PROTECTION DRAWINGS. NO FIRE PROTECTION WORK SHALL COMMENCE UNTIL ALL FIRE PROTECTION CONSTRUCTION IS COORDINATED WITH THE LOCAL FIRE DEPARTMENT. ANY DIFFERING INSPECTOR REQUIREMENTS SHALL BE PROVIDED BY THE FIRE PROTECTION CONTRACTOR WITHOUT ANY ADDITIONAL COMPENSATION.
- 10) COORDINATION - THE FIRE PROTECTION CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL OF THE FIRE PROTECTION SYSTEMS IN THE MOST PRACTICAL MANNER FREE FROM INTERFERENCES WITH OTHER EQUIPMENT, LIGHTS, DUCTWORK OR STRUCTURAL FEATURES. IF ANY CHANGES FROM THE DRAWINGS ARE DEEMED ADVISABLE, DETAILS OF SUCH PROPOSED CHANGES SHALL BE SUBMITTED TO THE ARCHITECT FOR WRITTEN APPROVAL. NO CHANGES SHALL BE MADE WITHOUT SUCH APPROVAL.
- 11) MATERIAL AND EQUIPMENT -
 A) MATERIAL - ALL FIRE PROTECTION CONSTRUCTION MATERIAL SHALL BE OF THE HIGHEST QUALITY (SPECIFICATION GRADE) AND U.L. LISTED. SUBMIT ALL MATERIAL SHOP DRAWINGS FOR REVIEW AND ACCEPTABILITY TO THE ARCHITECT/ENGINEER (PRIOR TO ANY INSTALLATION). ANY MATERIAL NOT SUBMITTED AND REVIEWED MAY AT THE OPTION OF THE ARCHITECT/ENGINEER BE REPLACED AT NO ADDITIONAL COSTS.
 B) PIPING: SPRINKLER PIPING SHALL BE SCHEDULE 40 STEEL WITH FLANGED OR VICTAULIC FITTINGS.
- 12) INSTALLATION -
 A) FURNISH AND INSTALL ALL FIRE PROTECTION FIXTURES AND EQUIPMENT. INSTALL ALL PIPING AT LOCATIONS INDICATED ON THE DRAWINGS. THE FIRE PROTECTION CONTRACTOR SHALL PROVIDE AS A MINIMUM THE FOLLOWING DOCUMENTATION ON THE INSTALLATION:
 - PHOTO-COPIES OF "SIGNED OFF" PERMITS FROM LOCAL INSPECTORS
 - WRITTEN CERTIFICATION OF COMPLIANCE WITH APPLICABLE BLDG/MECH/NFPA INSTALLATION TECHNICAL REQUIREMENTS
 - WRITTEN CERTIFICATION OF SUCCESSFUL COMPLETE SYSTEM AIR PRESSURE TESTING
 - WRITTEN CERTIFICATION OF SUCCESSFUL COMPLETE SYSTEM WATER PRESSURE TESTING
 B) AS-BUILT DRAWINGS - THE FIRE PROTECTION CONTRACTOR SHALL PROVIDE ONE SET OF CLEAN MARKED UP FIRE PROTECTION DRAWINGS WITH ALL "AS-BUILT" FIRE PROTECTION CONSTRUCTION INFORMATION.
 C) INSPECTIONS - ALL FIRE PROTECTION WORK AND MATERIAL SHALL BE ROUGH AND FINAL INSPECTED BY THE ENGINEER, PRIOR TO ACCEPTANCE AND PROGRESS PAYMENTS.



SPRINKLER HEADS PIPING DETAILS-TYPICAL

NOT TO SCALE

GENERAL STRUCTURAL NOTES

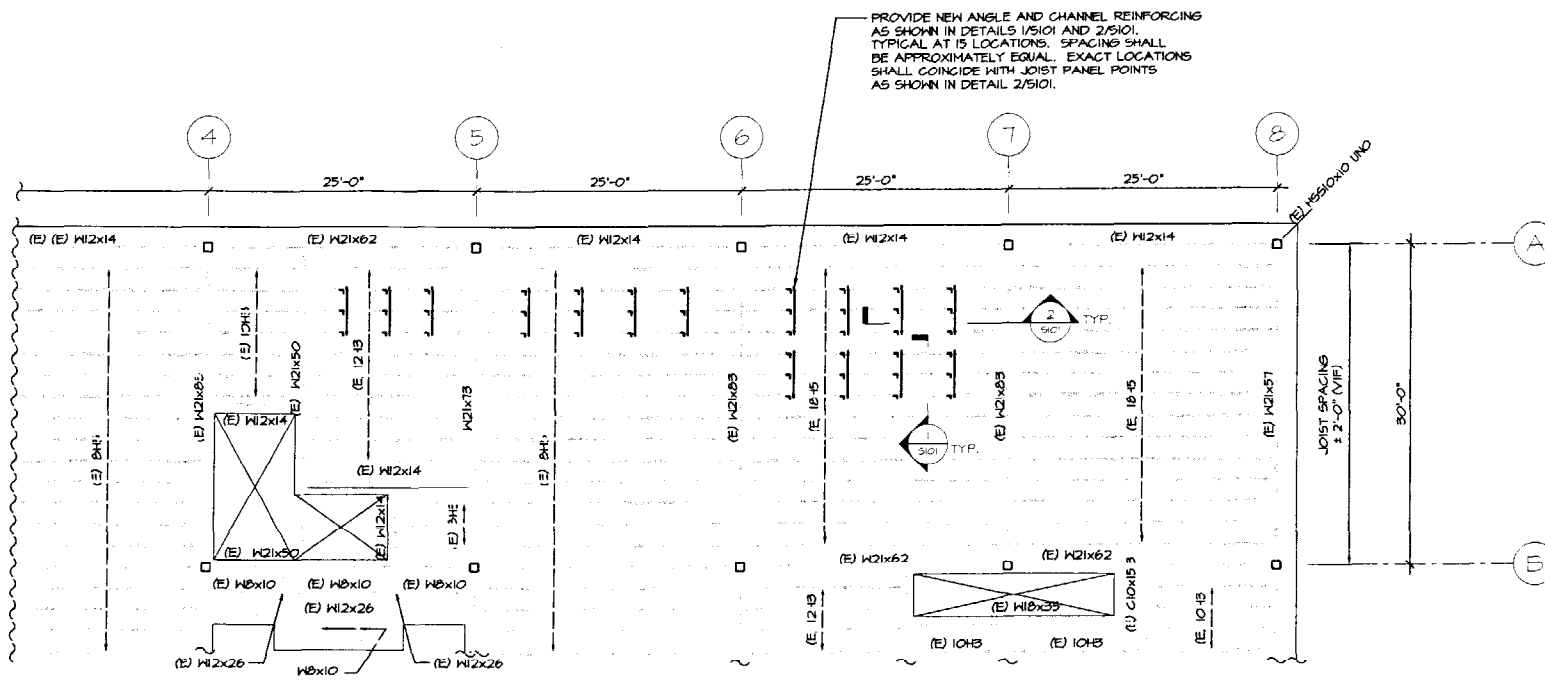
1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE 1999 BOCA NATIONAL BUILDING CODE
2. THE CONTRACTOR SHALL NOT SCALE THE CONTRACT DRAWINGS.
3. TYPICAL AND CERTAIN SPECIFIC CONDITIONS HAVE BEEN DETAILED ON THE DRAWINGS. FOR CONDITIONS NOT SPECIFICALLY SHOWN, THE CONTRACTOR SHALL PREPARE DETAILS SIMILAR TO THOSE SHOWN AND SUBMIT THEM WITH THE RELEVANT SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL.
4. ALL EXISTING CONDITIONS, DIMENSIONS, AND ELEVATIONS SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO SUBMISSION OF RELEVANT SHOP DRAWINGS FOR REVIEW AND PRIOR TO COMMENCEMENT OF FABRICATION AND CONSTRUCTION.
5. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING OF FIELD CONDITIONS WHICH ARE IN CONFLICT WITH THE STRUCTURAL CONTRACT DOCUMENTS.
6. METHODS OF CONSTRUCTION ARE THE RESPONSIBILITY OF THE CONTRACTOR.
7. THE CONTRACTOR SHALL COORDINATE THE STRUCTURAL CONTRACT DOCUMENTS WITH ARCHITECTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS BEFORE COMMENCEMENT OF WORK AND SHALL NOTIFY THE ENGINEER OF ANY CONFLICTS.

DESIGN LOADS

1. FLOOR LIVE LOADS
 A. SECOND FLOOR - 80 PSF
 B. ROOF - 50 PSF
2. FLOOR DEAD LOAD
 A. SECOND FLOOR - 34 PSF
 B. ROOF - 41 PSF

STRUCTURAL STEEL NOTES

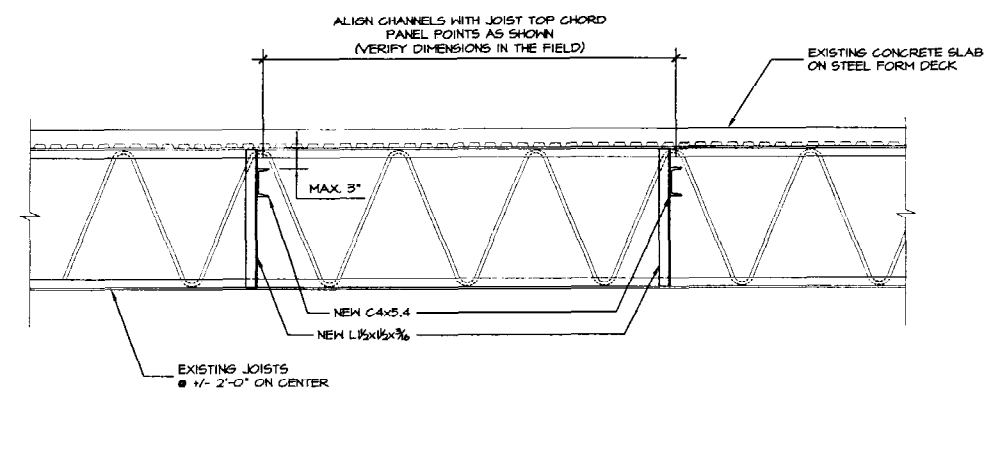
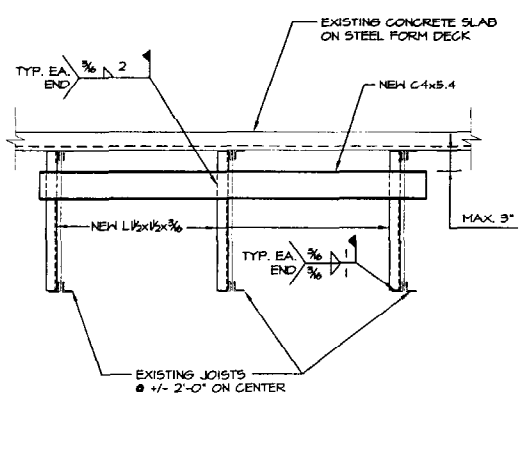
1. DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH THE MANUAL OF STEEL CONSTRUCTION, 9TH EDITION, BY THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION AND THE STRUCTURAL WELDING CODE AWS D11, LATEST EDITION BY THE AMERICAN WELDING SOCIETY.
2. ALL CHANNELS AND ANGLES SHALL BE ASTM A36 UNLESS NOTED OTHERWISE.
3. ALL WELDING SHALL BE MADE WITH E70XX ELECTRODES IN ACCORDANCE WITH AWS D11, AND SHALL BE PERFORMED BY CERTIFIED WELDERS.



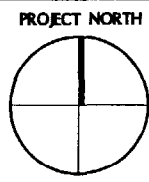
A PARTIAL SECOND FLOOR FRAMING PLAN
 1/8" = 1'-0"

ABBREVIATIONS

AB	ANCHOR BOLT	FLR	FLOOR	PSI	POUNDS PER SQUARE INCH
ADDL	ADDITIONAL	FS	FAR SIDE	QTY	QUANTITY
ANCH	ANCHOR	FTG	FOOTING	RAD	RADIUS
ARCH	ARCHITECTURAL	SHA	SHADE	REF	REFERENCE
BCK	BOTTOM CHORD EXTENSION	GALV	GALVANIZED	REINF	REINFORCING
BOF	BOTTOM OF FOOTING	HORIZ	HORIZONTAL	REQD	REQUIRED
BM	BEAM	HP	HIGH POINT	REV	REVISION
BOT	BOTTOM	HT	HEIGHT	SCHED	SCHEDULE
BS	BOTH SIDES	INFO	INFORMATION	SECT	SECTION
C	COMPRESSION	JT	JOINT	SF	SQUARE FOOT
CJ	CONTROL JOINT	K	KIPS	SM	SIMILAR
CLR	CLEAR	KSF	KIPS PER SQUARE FOOT	SPEC	SPECIFICATION
COL	COLUMN	KSI	KIPS PER SQUARE INCH	SQ	SQUARE
CONC	CONCRETE	LG	LONG	SQ. IN.	SQUARE INCH
CONT	CONTIGUOUS	LLH	LONG LES HORIZONTAL	SS	STAINLESS STEEL
COORD	COORDINATE	LLV	LONG LES VERTICAL	STD	STANDARD
CMU	CONCRETE MASONRY UNIT	LOD	LIMIT OF DECK	STL	STEEL
CTR	CENTER	LOS	LIMIT OF SLAB	T	TENSION
DET	DETAIL	LP	LOW POINT	T&B	TOP AND BOTTOM
DIA	DIAMETER	MAS	MASONRY	TCX	TOP CHORD EXTENSION
DM	DIMENSION	MAX	MAXIMUM	TOC	TOP OF CONCRETE
DWG	DRAWING	MECH	MECHANICAL	TOPC	TOP OF CONCRETE
DNL	DOANEL	MFR	MANUFACTURER	TOPP	TOP OF PIER OR PLASTER
EA	EACH	MIN	MINIMUM	TOS	TOP OF STEEL
EF	EACH FACE	MIS	MISCELLANEOUS	TOM	TOP OF WALL
EX	EXHAMPLE	NO	MASONRY OPENING	TSP	TONS PER SQUARE FOOT
EJ	EXPANSION JOINT	NO	NOT IN CONTRACT	TYP	TYPICAL
EL	ELEVATION	NS	NEAR SIDE	UNO	UNLESS NOTED OTHERWISE
ELEC	ELECTRICAL	NTS	NOT TO SCALE	VERT	VERTICAL
EOD	EDGE OF DECK	OC	ON CENTER	VIF	VERIFY IN FIELD
EOS	EDGE OF SLAB	OQ	OUTSIDE DIAMETER	W	WITH
EQ	EQUAL	OPN	OPENING	WO	WITHOUT
ES	EACH SIDE	OPP	OPP HD OPPOSITE HAND	WP	WORKING POINT
ELEV	ELEVATION	PC	PIECE	WHF	WELDED WIRE FABRIC
EH	EACH WAY	PL	PLATE	HGT	HEIGHT
EXIST	EXISTING	PL	PLATE	L	ANGLE
EJ	EXISTING	PL	PLATE	>	GREATER THAN
FIN	FOUNDATION	PL	PLATE	<	LESS THAN
		PSF	POUNDS PER SQUARE FOOT	-	MINUS
				+	PLUS
				/-	PLUS OR MINUS



NO.	DATE	REVISIONS
1	03/03/04	ISSUED FOR CONSTRUCTION



LIBERTY MUTUAL
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 PORTLAND, MAINE

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S101

DATE: 03/03/04
 DRAWN BY: CD
 CHECKED BY: GEM
 SCALE: AS SHOWN

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