

WARNER LIBRARY

121 NORTH BROADWAY TARRYTOWN, NEW YORK 10591

CHILDREN'S LIBRARY ACOUSTICAL TILE CEILING AND PIPE INSULATION REPLACEMENT

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Tarrytown, NY 10591

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ISSUE NO.	ISSUE DATE	DESCRIPTION
2	03/04/24	ISSUE FOR BID
1	12/06/23	ISSUE FOR CLIENT REVIEW

LOCATION MAP



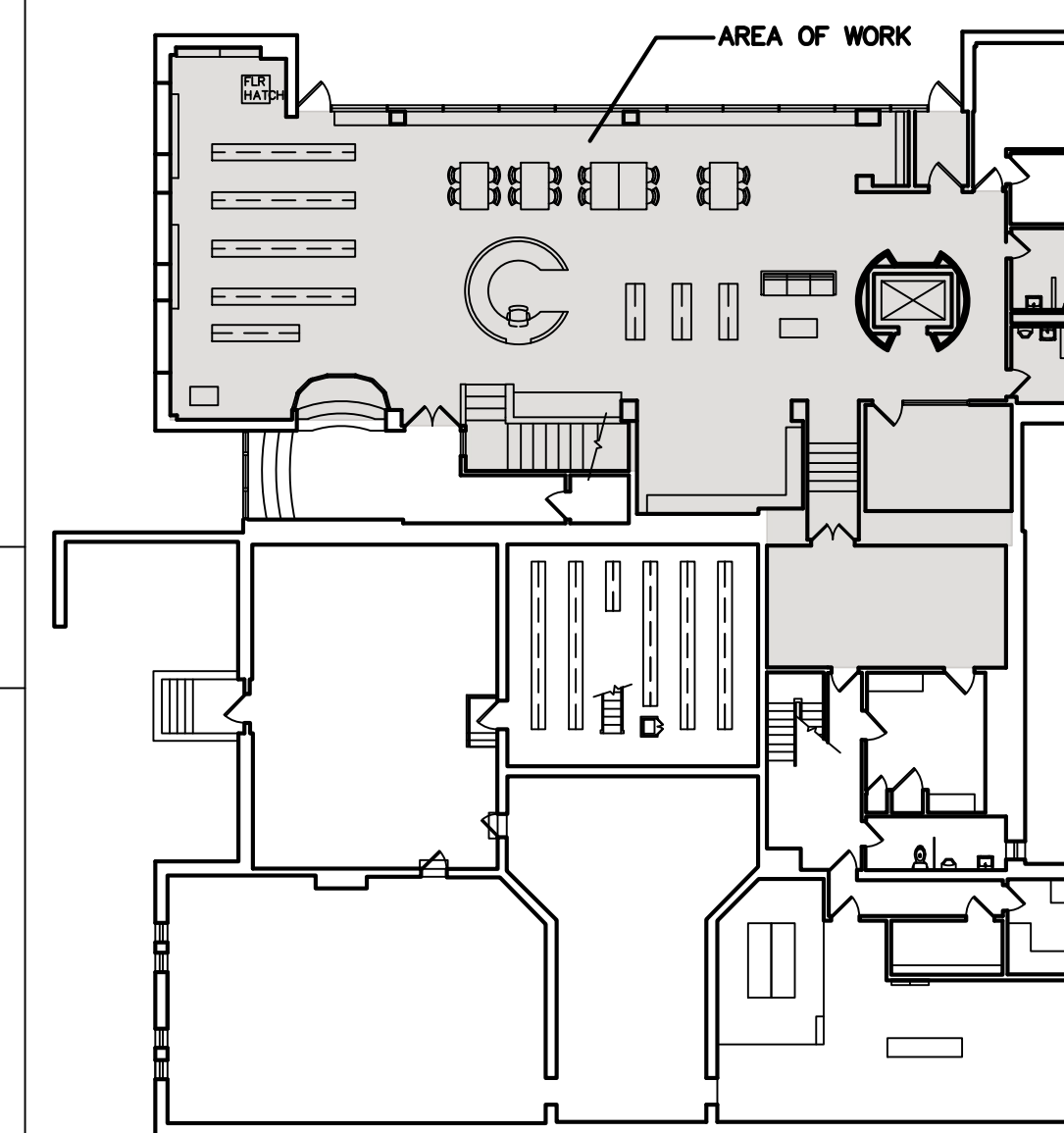
LIST OF DRAWINGS

ARCHITECTURAL DRAWINGS		MEP ENGINEERING DRAWINGS	
A000	COVER SHEET	M-001	MECHANICAL SYMBOLS, ABBREVIATIONS, NOTES & SPECIFICATIONS
A001	GENERAL NOTES	M-002	MECHANICAL SPECIFICATIONS
A100	REFLECTED CEILING DEMOLITION PLAN LEGEND & NOTES	M-101	MECHANICAL LOWER LEVEL DEMOLITION PLAN
A101	REFLECTED CEILING PLAN & CEILING DETAILS LEGEND & NOTES	M-201	MECHANICAL LOWER LEVEL NEW WORK PLAN
		M-701	MECHANICAL DETAILS
E-001	ELECTRICAL SYMBOLS, ABBREVIATIONS, NOTES & SPECIFICATIONS	E-002	ELECTRICAL SPECIFICATIONS
E-003	ELECTRICAL SPECIFICATIONS	E-101	ELECTRICAL LOWER LEVEL DEMOLITION PLAN
E-201	ELECTRICAL LOWER NEW WORK CEILING PLAN	E-601	ELECTRICAL LIGHTING FIXTURE SCHEDULE
E-701	ELECTRICAL DETAILS		

ABBREVIATIONS

AFC - ABOVE FINISHED COUNTER	HT. - HEIGHT	REQ' MNTS - REQUIREMENTS
AFF - ABOVE FINISHED FLOOR	HVAC - HEATING, VENTILATING, AND AIR CONDITIONING	SEFL - SEE ELEVATION FOR LOCATION
BLDG. - BUILDING	MFCTR - MANUFACTURER	STD(S) - STANDARD(S)
CLG. - CEILING	MECH - MECHANICAL	TYP. - TYPICAL
DWG(S) - DRAWING(S)	NYS - NEW YORK STATE	U.O.N. - UNLESS OTHERWISE NOTED
EQ - EQUAL	O.C. - ON CENTER	
EXIST/EXT'G - EXISTING	PT - PAINT	
FIN - FINISH	REQ' D - REQUIRED	
GWB - GYPSUM WALL BOARD		

AREA OF WORK



WARNER LIBRARY

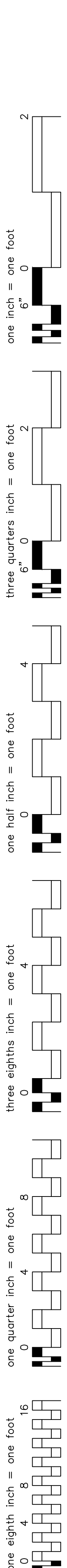
CHILDREN'S LIBRARY ACOUSTICAL TILE CEILING AND PIPE INSULATION REPLACEMENT

COVER SHEET

PROJECT NO.: 2639-00 SCALE:

DRAWING NO.:
A000

N:\10 PROJECTS\LIB\EDU\2639-00 - Warner Library - Children's ACT and Piping Insulation\2639-00 - 20 Drawings\2639-00_24_0109 - CAD Progress Set\2639-00_24_0109_A000 - Cover Sheet.dwg
 one eighth inch = one foot
 one quarter inch = one foot
 one half inch = one foot
 one inch = one foot
 three eighths inch = one foot
 three quarters inch = one foot
 one inch = one foot
 one inch = one foot



NOTES

BUILDING MANAGEMENT AND COORDINATION

REVIEW THE REQUIREMENTS OF THE BUILDING MANAGEMENT TO DETERMINE THE USE OF BUILDING ELEVATORS, LOADING DOCKS, RAMPS, ETC., AND INCORPORATE RELATED CHARGES IN THE COST OF THE WORK.

BEFORE STARTING ANY WORK TO EXISTING UTILITIES, WHICH WILL DISRUPT SERVICES, GIVE 48 HOURS NOTICE TO THE ARCHITECT AND THE BUILDING MANAGEMENT AND OBTAIN THEIR APPROVAL IN WRITING BEFORE PROCEEDING WITH THIS PHASE OF WORK.

WORK GENERATING LOUD NOISE THAT WILL BE DISRUPTIVE TO THE TENANTS OF THE BUILDING SHALL BE PERFORMED ON OFF HOURS. COORDINATE WITH BUILDING MANAGEMENT AND ARCHITECT.

REVIEW AND COMPLY WITH BUILDING MANAGEMENT, UNION AND/OR SUBCONTRACTOR REQUIREMENTS.

PERMITS AND FEES

PLACEMENT OF PERMIT – THE BUILDING PERMIT OR COPY SHALL BE KEPT ON THE SITE OF THE WORK UNTIL THE COMPLETION OF THE PROJECT.

INSPECTIONS

REVIEW INSPECTION REQUIREMENTS WITH THE LOCAL JURISDICTION AND COMPLY WITH ALL INSPECTION REQUIREMENTS.

SCOPE OF WORK COVERED ON THE DRAWINGS

THE CONTRACT DOCUMENTS HAVE BEEN PREPARED TO SHOW THE GENERAL CONFIGURATION OF THE COMPONENTS OF THIS PROJECT. THE PLANS DO NOT DETAIL, NOR ARE THEY INTENDED TO DETAIL, QUANTITY OR QUALITY OF MATERIALS, NAILING PROCEDURES OR DETAILED ASSEMBLY INSPECTIONS.

DRAWINGS SHOW WORK THAT IS INTENDED TO BE COMPLETE FINISHED, TESTED, GUARANTEED AND READY FOR OCCUPANCY. FOLLOW THE INTENT OF THE DRAWINGS. MAKE NO CHANGES WITHOUT THE APPROVAL OF THE ARCHITECT.

THE DRAWINGS SHALL NOT BE USED BY PERSONS OTHER THAN EXPERIENCED WORKMEN WHO ARE THOROUGHLY TRAINED AND EXPERIENCED IN THE REQUIRED CRAFTS.

INSTALLATION OF EQUIPMENT, MATERIAL, FINISHES AND OTHER ELEMENTS SHALL BE PER THE MANUFACTURER'S INSTRUCTIONS. CONSULT MANUFACTURER INSTRUCTIONS SHALL BE BROUGHT TO THE ARCHITECT'S ATTENTION FOR REVIEW.

ANY WORK ABOVE AND BEYOND THE AGREEMENT SHALL NOT PROCEED WITHOUT THE PRIOR WRITTEN APPROVAL FROM THE CLIENT.

BE FAMILIAR WITH TERMS AND CONDITIONS ON THE DRAWINGS. INFORM ONESELF WITH THE CONDITIONS UNDER WHICH WORK WILL BE PERFORMED. EMPLOY WORKMEN AND METHODS THAT WILL NOT CAUSE INTERRUPTION OR INTERFERENCE WITH THE EXECUTION OF THE WORK.

PROTECTION

PROTECT SURROUNDING FROM AREAS POTENTIAL DAMAGE FROM CONSTRUCTION. PROVIDE A PROTECTION PLAN FOR REVIEW AND APPROVAL BY THE BUILDING REPRESENTATIVE AND ARCHITECT.

PROTECTION SHALL INCLUDE:
 1. COVERING OF THE FLOOR AND WALLS IN AREAS WHERE MATERIALS OR WORKERS ACCESS THE SITE.
 2. PROTECTION OF OCCUPIED AREAS FROM DUST AND ODORS.
 3. PROTECTION OF HVAC SYSTEMS FROM DUST AND MATERIAL ENTERING THE SYSTEM.
 4. PROTECTION OF PUBLIC AREAS WITH PHYSICAL AND VISUAL BARRIAGES OR TEMPORARY WALLS TO ISOLATE THE WORK AREA FROM ADJOINING AREAS AND TO ENSURE SAFE OCCUPANCY OF ADJOINING AREAS.

DEMOLITION NOTES:

PROVIDE TEMPORARY LIGHTING ACCORDING TO CODE REQUIREMENTS.

DEMOLITION SHALL INCLUDE BUT NOT BE LIMITED TO THE EXISTING CEILING, FIXTURES, WALLS, PARTITIONS, DOORS, BUILT IN FURNITURE, EQUIPMENT, WIRING, PLUMBING, EXISTING THERMOSTATS, DUCTS, TELEPHONES, PLUMBING LINES OR FIRE SPRINKLER SYSTEM. WIRING SHALL BE REMOVED PACK TO PANELS OR POINT OF ENTRY.

ACTIVE WIRING, PLUMBING OR OTHER BUILDING SYSTEMS PASSING THROUGH THE SPACE SHALL BE MAINTAINED IN OPERATION UNTIL A COORDINATED AND SCHEDULED RELOCATION.

EXISTING EQUIPMENT, DOORS, BUCKS, HARDWARE AND OTHER REUSABLE ELEMENTS, REMOVED SHALL NOT BE REUSED BUT SHALL BE WIPED CLEAN AND GIVEN TO THE CLIENT FOR STORAGE.

KEEP THE PREMISES FREE FROM ACCUMULATED REFUSE. CONSTRUCTION DEBRIS SHALL NOT BE MIXED WITH BUILDING OCCUPANT'S REFUSE.

AS REMOVAL WORK PROGRESSES, DEBRIS AND SURPLUS MATERIAL SHALL BE REMOVED FROM THE BUILDING. EACH AREA SHALL BE LEFT IN A BROOM CLEAN CONDITION DAILY.

EMPLOY RUBBER WHEELED CARTS TO REMOVE DEBRIS FROM THE BUILDING. PROTECT EXISTING CONSTRUCTION FROM DAMAGE.

REMOVE EXISTING TELEPHONE AND POWER WIRING BACK TO PANEL FROM OUTLETS REMOVED.

REMOVE EXISTING FLOORING INCLUDING CARPETING DOWN TO CONCRETE FLOOR DECK. SCRAPE FLOOR CLEAN OF ANY REMAINING FLOORING MATERIALS AND FLOORING INSTALLATION. FLOOR SURFACES SHALL BE MADE READY TO ACCEPT NEW FLOORING.

REMOVE SURFACE MOUNTED ELECTRICAL OUTLETS AND ASSOCIATED CONDUIT AND WIRING.

REMOVE EXISTING PIPE AND CONDUIT STUBS IN EXISTING FLOORS.

PROTECT ADJACENT BUILDING AREAS AND PROPERTIES. ANY DAMAGE DONE TO ADJACENT AREAS SHALL BE REPAIRED OR REPLACED WITHOUT CHARGE.

MATERIALS THAT ARE REMOVED OR DEMOLISHED SHALL BE DISPOSED OFF SITE ACCORDING TO LOCAL CONSTRUCTION MATERIAL DISPOSAL REGULATIONS. PROVIDE CARTING AND

REMOVE EXISTING DOORS AND FRAMES TO ALLOW INSTALLATION OF NEW DOORS.

DOORS AND OTHER MATERIALS INTENDED FOR REUSE ELSEWHERE SHALL BE PROPERLY REMOVED AND PROTECTED.

REMOVE EXISTING CEILING, CEILING FIXTURES, AND ALL ATTENDANT COMPONENTS BACK TO CONCRETE DECK ABOVE.

AS ERECTION PROGRESSES, WORK SHALL BE SECURELY BRACED, BOLTED, OR WELDED, TO RESIST DEAD LOADS, WIND, AND ERECTION STRESSES.

CONSTRUCTION EQUIPMENT AND MATERIALS SHALL BE STORED AND PLACED SO AS NOT TO ENDANGER THE PUBLIC, WORKERS AND/OR ADJOINING PROPERTY FOR THE DURATION OF THE CONSTRUCTION PROJECT.

TIMELY COMPLETION OF WORK

COMPLETE THE PROJECT WITH IN THE AGREED TIME SCHEDULE. IF THE PROJECT IS NOT PROGRESSING OR COMPLETED PER THE TIME SCHEDULE FOR ANY REASON, THE CLIENT MAY TAKE ACTIONS THEY DEEM APPROPRIATE TO COMPLETE THE WORK.

AS-BUILT DRAWINGS

SIGNIFICANT DEPARTURES FROM CONTRACT DOCUMENTS SHALL BE DOCUMENTED BY THE CONTRACTOR ON FIELD RECORD DRAWINGS (AS BUILT) ON PRINTS AT THE CONTRACTOR'S EXPENSE.

GENERAL NOTES

BEFORE STARTING WORK, PREPARE AND SUBMIT A SCHEDULE SHOWING THE COMMENCEMENT, SEQUENCE AND COMPLETION DATES OF WORK.

WORK SHALL CONFORM TO CITY OF WHITE PLAINS, ZONING ORDINANCES, CITY OF WHITE PLAINS AND NEW YORK STATE BUILDING CODE REQUIREMENTS, APPLICABLE NEW YORK STATE ENERGY CONSERVATION CODE AND OTHER AGENCY REQUIREMENTS HAVING JURISDICTION.

THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CONSTRUCTION METHODS, METHODS, TECHNIQUES, AND PROCEDURES.

VERIFY FIELD CONDITIONS AND REPORT DISCREPANCIES TO THE ARCHITECT BEFORE COMMENCING WORK. DISCREPANCIES BETWEEN THE DRAWINGS AND/OR FIELD CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT BEFORE WORK IS COMMENCED.

VERIFY ALL FIELD DIMENSIONS BEFORE ELEMENTS FABRICATED OFF-SITE ARE ORDERED OR MANUFACTURED. FIELD DIMENSIONS ARE THOSE DIMENSIONS THAT ARE CRITICAL TO THE DESIGN AND/OR LIMITING THE DETERMINATION OF OFFSITE FABRICATED COMPONENTS. SHOP DIMENSIONS ARE THOSE DIMENSIONS DETERMINED BY THE MANUFACTURER.

PROVIDE AND PAY FOR LABOR MATERIALS, EQUIPMENT, UTILITIES AND OTHER SERVICES NECESSARY FOR A FIRST CLASS, FULLY FUNCTIONING AND COMPLETE PROJECT INSTALLATION.

BRACE AND SHORE WALLS ADEQUATELY UNTIL PERMANENT FRAMING AND SUPPORTS ARE IN PLACE. SEE PRECAUTIONS ABOVE.

NOTES

COORDINATE WORK WITH THE WORK OF ALL OTHER SUBCONTRACTORS INCLUDING THE TELEPHONE COMPANY AND ALL OTHER CLIENT SUBCONTRACTORS.

MECHANICAL AND ELECTRICAL SHUTDOWNS OR CONNECTIONS MUST BE MADE AT A TIME CONVENIENT TO THE OWNER. EVEN IF THESE SHUTDOWNS AND CONNECTIONS ARE MADE AFTER NORMAL WORKING HOURS.

PROTECT SURROUNDING AREAS AND AREAS TRAVELED BY WORKERS TO INSURE THAT NO DAMAGE OCCURS TO SURROUNDING CONSTRUCTION OR PROPERTIES. PROTECTION SHALL MEET THE APPROVAL OF THE ARCHITECT AND BUILDING MANAGEMENT.

ACCESS PANELS, DOORS, GRILLES, CONTROLS, AND OTHER CONTROL POINTS SHALL BE MAINTAINED. RELOCATION OR REMOVING OF THESE ITEMS IS SUBJECT TO APPROVAL OF THE ARCHITECT. PROVIDE AND INSTALL ALL NEW ACCESS PANELS, DOORS, GRILLES, CONTROLS AND CONTROL POINTS, AND FRAMING AND FASTENERS REQUIRED FOR ACCESS OF ALL NEW AND EXISTING CONSTRUCTION.

PROVIDE ESCUTOCHON PLATES AT ALL PIPE PENETRATIONS. VISIBLE ESCUTOCHON IN FINAL SPACE SHALL BE CHROME PLATED OR AS OTHERWISE APPROVED BY THE ARCHITECT.

ARCHITECTURAL NOTES:

WALLS SHALL BE TYPICAL PARTITION 4/A-300 UNLESS OTHERWISE NOTED.

CONCEALED SPACES WITH PARTITIONS, WALLS, FLOORS, ROOFS, STAIRS, FURRING, PIPE SPACES, COLUMN ENCLOSURES, AND OTHER ELEMENTS THAT CAN PERMIT PASSAGE OF FLAME, SMOKE, FUMES, OR HOT GASES FROM ONE FLOOR TO ANOTHER, OR FROM ONE CONCEALED AREA TO ANOTHER, SHALL BE FIRE-STOPPED TO FORM A DRAFT BARRIER OR SHALL BE FILLED WITH NONCOMBUSTIBLE MATERIAL. FIRE STOPPING SHALL BE AS PERMITTED BY NYS BUILDING CODE AND AHJ.

DUCTS AND PIPES ENCLOSED IN CONSTRUCTION, BUT NOT IN SHAFTS, SHALL BE FIRE-STOPPED AT EVERY FLOOR LEVEL.

INFILL SLAB OPENINGS AND OTHER UNUSED PENETRATIONS, AS PERMITTED BY NEW YORK STATE BUILDING CODE AND AHJ FIRE RATED MATERIAL SHALL BE USED TO PROVIDE OR MAINTAIN FIRE RATINGS.

PATCH AND REPAIR FIRE RATED WALLS IN DISREPAIR, OR OTHERWISE AFFECTED BY THE WORK ESPECIALLY WHERE PENETRATIONS ARE NOT TIGHTLY FITTED ABOVE THE CEILING. PROVIDE FIRE RATED DAMPERS OR PARTITIONS OPENINGS WHERE OPENINGS ARE REQUIRED.

DIMENSIONS ARE SHOWN FROM GWB FINISH TO GWB FINISH UNLESS OTHERWISE NOTED.

MARK PARTITION LOCATIONS ON THE FLOOR FOR APPROVAL BY THE ARCHITECT BEFORE PROCEEDING WITH THE CONSTRUCTION. NOTIFY THE ARCHITECT 48 HOURS BEFORE STRIKING PARTITIONS AND OBTAIN ARCHITECT'S APPROVAL BEFORE STARTING PARTITION INSTALLATION.

PARTITIONS SHALL BE PLUMB, TRUE, STRAIGHT, PROPERLY BRACED AND RIGID, WITHIN 1/8" VARIATION OVER 10 FEET.

PROVIDE BLOCKING FOR MILLWORK. BLOCKING SHALL BE FIRE TREATED DIMENSIONAL LUMBER, 3/4 INCH FIRE TREATED PLYWOOD MOUNTED BEHIND THE GYPSUM WALL BOARD OR 18 GAUGE SHEET METAL MOUNTED BEHIND THE GYPSUM WALLBOARD.

CONTROLLED INSPECTIONS

THE OWNER SHALL HIRE A LICENSED THIRD PARTY ARCHITECT OR ENGINEER THE INSPECTOR FOR THE CONTROLLED INSPECTIONS REQUIRED BY CITY OF WHITE PLAINS.

THE THIRD PARTY ARCHITECT OR ENGINEER SHALL DIRECTLY SUPERVISE THE REQUIRED INSPECTIONS AND TESTS AND SHALL FILE WITH THE BUILDING DEPARTMENT SIGNED COPIES OF REQUIRED INSPECTION AND TEST REPORTS WITH HIS OR HER SIGNED STATEMENT THAT THE MATERIAL AND ITS USE OR INCORPORATION INTO THE WORK COMPLY WITH NYS OR CITY OF WHITE PLAINS CODE AND DESIGN REQUIREMENTS.

IN CASES WHERE NYS OR CITY OF WHITE PLAINS CODE PROVISIONS REQUIRE THE OFF-SITE INSPECTION AND/OR TESTING OF MATERIALS OR TESTING PRIOR TO ACTUAL USE OR INCORPORATION INTO THE WORK, THE INSPECTOR SHALL MARK THE MATERIAL INSPECTED AND THE REPORTED RESULTS OF THE INSPECTION SHALL STATE THAT THE MATERIAL WAS MARKED FOR IDENTIFICATION.

BEFORE WORK IS COMMENCED ON CONSTRUCTION REQUIRING CONTROLLED INSPECTION, THE CONTRACTOR SHALL NOTIFY THE PERSONS RESPONSIBLE FOR THE CONTROLLED INSPECTIONS, IN WRITING, WITH AT LEAST SEVENTY-TWO HOURS NOTICE PRIOR TO WORK.

CONCEALED VERTICAL SPACES IN WALLS AND PARTITIONS SHALL BE FIRESTOPPED AT EACH FLOOR LEVEL AND AT THE CEILING OF THE UPPERMOST STORY, SO THAT SUCH SPACES WILL NOT BE CONTINUOUS FOR MORE THAN ONE STORY OR COMMUNICATE WITH CONCEALED HORIZONTAL SPACES IN THE FLOOR OR ROOF CONSTRUCTION.

FIRESTOPPING OF AT LEAST 1-INCH NOMINAL SOLID LUMBER, 5/16-INCH THICK GYPSUM BOARD, OR THE EQUIVALENT, SHALL BE PROVIDED TO CUT OFF CONCEALED DRAFT OPENINGS BETWEEN WALLS AND PARTITIONS, INCLUDING CURVED SPACES, AND THE ROOF OR FLOORS, SO AS TO RETARD VERTICAL MOVEMENT OF FIRE. IN PARTICULAR, SUCH CONCEALED SPACES MUST BE CONSTRUCTED SO THAT FLOOR-TO-CEILING CONCEALED SPACES ON ONE FLOOR DO NOT COMMUNICATE WITH ANY CONCEALED SPACE ON ANOTHER FLOOR, ANY CONCEALED SPACE IN THE FLOOR, OR ANY CONCEALED SPACE IN THE ROOF CAVITY. AN APPROVED BARRIER MUST BE INSTALLED TO PREVENT COMMUNICATION BETWEEN ADJACENT CONCEALED SPACES.

RAISED THRESHOLDS AND FLOOR LEVEL CHANGES GREATER THAN 0.25 INCH AT DOORWAYS SHALL BE BEVELED WITH A SLOPE NOT GREATER THAN ONE UNIT VERTICAL IN TWO UNITS HORIZONTAL (50-PERCENT SLOPE).

PROVIDE LABOR, PARTS AND ACCESSORIES FOR A COMPLETE DOOR AND HARDWARE INSTALLATION.

EXIT DOORS SHALL BE OPERABLE WITH OUT THE USE OF KEYS, SPECIAL KNOWLEDGE OR SPECIAL EFFORT.

EXIT DOORS SHALL HAVE CLEARANCES GREATER THAN 32 INCHES AS PER "AMERICANS WITH DISABILITY" (ADA) REQUIREMENTS AND NFPA 101 SECTION 5-2.1.3.1.

EXIT DOORS SHALL HAVE PANIC TYPE HARDWARE COMPLYING WITH SECTION 5-2.1.5.1 OF NFPA 101.

BRACE WALLS ABOVE DOORS TO THE STRUCTURE ABOVE.

LOCKING WALLS SHALL BE GRAND MASTERS KEYS PER OWNER DIRECTION.

EXISTING HARDWARE INTENDED FOR REUSE SHALL BE RE-KEYED PER OWNER DIRECTION.

DOORS

INSTALL DOORS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. DOORS SHALL BE PLUMB, LEVEL AND WITH PROPER CLEARANCES. INSTALL AND ADJUST HARDWARE FOR GOOD AND PROPER OPERATION.

WOOD DOORS SHALL BE FIRST QUALITY AND SHALL BE WARRANTED NOT TO WARP OR TWIST.

IMMEDIATELY AFTER ERECTION, SAND SMOOTH, DAMAGED AREAS OF DOORS, AND APPLY TOUCH-UP AS SPECIFIED BY MANUFACTURER.

DOORS SHALL BE PROPERLY PROTECTED FROM DAMAGE OR DETERIORATION UNTIL CONSTRUCTION COMPLETION AND ACCEPTANCE OF THE WORK.

MILLWORK

THE WOODWORK MANUFACTURER IS RESPONSIBLE FOR DETAILS AND DIMENSIONS NOT CONTROLLED BY JOB SITE CONDITIONS. SHOW REQUIRED FIELD MEASUREMENTS BEYOND THE CONTROL OF THE WOODWORKER SHOP.

COORDINATE BLOCKING REQUIREMENTS WITH GENERAL CONTRACTOR. BLOCKING CAN BE EITHER FRAMING MOUNTED BETWEEN STUDS OR SHEET MATERIAL MOUNTED ON THE FACE OF STUDS. SHEET BLOCKING SHALL BE 3/4 INCHES THICK PLYWOOD OR 18 GAUGE SHEET METAL MOUNTED BETWEEN THE GYPSUM WALL BOARD AND STUD FRAMING. SHEET BLOCKING SHALL SPAN ACROSS AT LEAST THREE STUDS

PROVIDE SHOP DRAWINGS OF ALL WOODWORK FOR REVIEW AND APPROVAL BY THE ARCHITECT.

WOOD FINISHES SHALL BE SHOP APPLIED.

EXPOSED ENDS SHALL BE LOCK MITERED AND GLUED UNLESS OTHERWISE NOTED AND CONFORM TO AW STUDS.

REFLECTED CEILING

PROVIDE LABOR AND MATERIAL REQUIRED FOR A COMPLETE CEILING SYSTEM. INSTALLATION SHALL BE COMPLETE WITH SUSPENSION DEVICES AND RELATED ACCESSORY ITEMS AS SHOWN ON THE DRAWINGS AND AS OTHERWISE FOR A COMPLETE, FIRST-CLASS AND NEW YORK STATE CODE COMPLIANT INSTALLATION.

ACOUSTICAL SUSPENDED CEILING INSTALLATION SHALL BE PER THE "OSCA CODE OF PRACTICES FOR ACOUSTICAL CEILING SYSTEMS" – MOST CURRENT EDITION.

CEILING SHALL BE LEVEL TO WITHIN 1/8 INCH IN 12 FEET.

NEW GRILLES AND REGISTERS SHALL BE THE SAME COLOR AS THE SURROUNDING CEILING, UNLESS OTHERWISE NOTED.

NOTES

GLASS AND GLAZING

GLASS ASSEMBLIES AND GLAZING SHALL CONFORM TO ALL APPLICABLE NY STATE CODES AND GOVERNING AUTHORITIES, INCLUDING U.S. CONSUMER PRODUCTS SAFETY COMMISSION (CPSC) SAFETY STANDARD FOR ARCHITECTURAL GLAZING MATERIALS, OSHA AND CRSC GLAZING SAFETY STANDARDS.

EACH PANE OF TEMPERED GLASS, EXCEPT TEMPERED SPANDREL GLASS, SHALL BE PERMANENTLY IDENTIFIED BY THE MANUFACTURER. THE IDENTIFICATION LABEL SHALL BE ANOD ETCHED, SAND BLASTED, CERAMIC FRIED, EMBOSSED OR SHALL BE OF A TYPE THAT ONCE APPLIED CANNOT BE REMOVED WITHOUT BEING DESTROYED.

EACH GLASS PANE SHALL BEAR THE MANUFACTURER'S LABEL DESIGNATING THE TYPE AND THICKNESS OF THE GLASS OR GLAZING MATERIAL. THE IDENTIFICATION SHALL NOT BE OMITTED UNLESS APPROVED AND AN AFFIDAVIT IS FURNISHED BY THE GLAZING CONTRACTOR CERTIFYING THAT EACH LIGHT IS GLAZED IN ACCORDANCE WITH APPROVED CONSTRUCTION DOCUMENTS.

GYPSUM WALL BOARD

FURNISH AND INSTALL GYPSUM DRYWALL PARTITIONS AND RELATED ITEMS, COMPLETE WITH CORNER BEAD AND OTHER ACCESSORIES REQUIRED FOR PROPER INSTALLATION.

METAL FRAMING – DRYWALL FRAMING SHALL BE 15G 20 GAUGE SYSTEM, INCLUDING TOP AND BOTTOM RUNNERS, BRIDGING AND OTHER NECESSARY ELEMENTS. STUD SPACING SHALL BE 16 INCHES ON CENTER. MAIN RUNNER CEILING CHANNELS SHALL BE 3-5/8 INCH C.R. GALVANIZED STEEL. OPEN CELL BLACK SPONGE NEOPRENE SHALL BE USED WHERE NEOPRENE PADS OR GASKETS ARE REQUIRED. FOR STUDS TALLER THAN 12 FEET, USE MANUFACTURER'S RECOMMENDED GAUGES.

GYPSUM WALLBOARD SHALL BE 5/8 INCH THICK, 4 FEET WIDE AND IN LENGTHS PRACTICAL TO MINIMIZE THE NUMBER OF JOINTS. GYPSUM WALLBOARD SHALL BE APPLIED WITH LONG DIMENSION PARALLEL TO FRAMING MEMBERS. END JOINTS SHALL OCCUR OVER A BEARING SURFACE AND SHALL BE FITTED NEATLY AND ACCURATELY. SCREW FASTENERS SHALL BE SPACED 12 INCHES ON CENTERS ALONG EACH SUPPORTING MEMBER AND PLACED WITHIN 3/8 OF AN INCH FROM EDGE OF SUPPORTING MEMBERS. SCREW HEADS SHALL PROVIDE A SLIGHT DEPRESSION BELOW THE SURFACE OF THE BOARD. INSTALL METAL TRIM AND ACCESSORIES. WALLS SHALL BE PLUMB AND TRUE AND ANCHOR SECURELY.

ACOUSTICAL SEALANT SHALL BE USED TO SEAL TOP AND BOTTOM CHANNELS AND OPENINGS ACCORDING TO WALLBOARD MANUFACTURER'S DIRECTIONS AND AS DRAWN.

INSTALL GYPSUM WALLS AND CEILING AS PER MANUFACTURER'S SPECIFICATIONS. INSTALL FASTENERS, JOINT TREATMENT, MOLDINGS, ACCESSORIES, AND OTHER ELEMENTS NEATLY.

EXAMINE THE SUPPORTING STRUCTURE AND INSURE THAT IT IS ADEQUATE FOR THE GYPSUM WALL BOARD INSTALLATION. STARTING AN INSTALLATION WILL BE CONSIDERED TO MEAN THAT SURFACES ARE IN ACCEPTABLE CONDITION FOR THE INSTALLATION.

COMPLY WITH THE MANUFACTURER'S PRINTED TEMPERATURE AND VENTILATION REQUIREMENTS DURING APPLICATION AND FINISHING. VENTILATE THE INSTALLATION TO RELIEVE EXCESS MOISTURE.

WALL BOARD SHALL HAVE TAPERED EDGES AND SHALL BE MANUFACTURED BY US GYPSUM, NATIONAL GYPSUM COMPANY, JOHNS MANVILLE OR EQUAL.

WALLBOARD SHALL BE ATTACHED TO FRAMING WITH SPECIALLY DESIGNED STEEL SCREWS WITH A RUST-INHIBITIVE COATING 1-1/4 INCHES LONG, SIMILAR TO U.S. GYPSUM HI-LO SCREW TYPE-B BUGLE HEAD. MAXIMUM SPACING OF SCREWS SHALL BE 12 INCHES ON CENTER IN THE FIELD AND 8" O.C. ALONG EDGES STAGGER JOINTS AND ALTERNATE COURSES.

JOINT TAPE AND JOINT COMPOUND SHALL COMPLY WITH ASTM C-475 AS RECOMMENDED BY THE WALLBOARD MANUFACTURER. APPLY A MINIMUM OF 3 COATS OF JOINT COMPOUND OVER JOINTS, FASTENER HEADS AND OTHER DEPRESSIONS.

WALLS SHALL BE FINISHED TO "GYPSUM CONSTRUCTION HANDBOOK" FINISH: (SEE HANDBOOK FOR ADDITIONAL INFORMATION)

LEVEL 5 – (FOR PAINTED WALLS OR WALLS WITH THIN WALL COVERINGS), LEVEL 5 REQUIRES 1/8" SKIM COAT SANGED FLAT TO WITH IN VARIATIONS OF 1/8" IN 10 FEET.

PROVIDE GALVANIZED METAL DRYWALL ACCESSORIES INCLUDING CORNER BEAD, CASING BEAD, AND OTHER ELEMENTS AND ACCESSORIES AS SPECIFIED BY MANUFACTURER.

DOOR AND HARDWARE

DOORS SHALL HAVE LEVER HANDLES UNLESS OTHERWISE NOTED

DOORS SHALL HAVE A MINIMUM CLEAR OPENING WIDTH OF 32 INCHES. ALL DOOR LATCHES SHALL BE EQUIPPED WITH ADA COMPLIANT LEVER TYPE HANDLES OR PANIC BARS.

HARDWARE SHALL COMPLY WITH AMERICAN WITH DISABILITIES ACT.

DOOR OPENING HARDWARE SHALL BE MOUNTED AT 34 INCHES ABOVE FINISHED FLOOR UNLESS OTHERWISE NOTED. WHEN MOUNTING HEIGHTS ARE DIFFERENT THAN 34 INCHES, DOOR OPENING HARDWARE SHALL BE MOUNTED BETWEEN 30 INCHES AND 44 INCHES ABOVE FINISH FLOOR.

FLOOR AREAS AT EACH SIDE OF ALL DOORS SHALL BE CLEAR AND LEVEL ON BOTH SIDES OF DOORS AS PER NFPA 101 SECTION 5-2.1.3.3. MAXIMUM THRESHOLD HEIGHT SHALL BE 1/2 INCH. SADDLES SHALL COMPLY WITH THE AMERICANS WITH DISABILITIES ACT. THRESHOLDS SHALL BE FLUSH U.O.N.

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INSTALL DOORS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. DOORS SHALL BE PLUMB, LEVEL AND WITH PROPER CLEARANCES. INSTALL AND ADJUST HARDWARE FOR GOOD AND PROPER OPERATION.

WOOD DOORS SHALL BE FIRST QUALITY AND SHALL BE WARRANTED NOT TO WARP OR TWIST.

IMMEDIATELY AFTER ERECTION, SAND SMOOTH, DAMAGED AREAS OF DOORS, AND APPLY TOUCH-UP AS SPECIFIED BY MANUFACTURER.

DOORS SHALL BE PROPERLY PROTECTED FROM DAMAGE OR DETERIORATION UNTIL CONSTRUCTION COMPLETION AND ACCEPTANCE OF THE WORK.

MILLWORK

THE WOODWORK MANUFACTURER IS RESPONSIBLE FOR DETAILS AND DIMENSIONS NOT CONTROLLED BY JOB SITE CONDITIONS. SHOW REQUIRED FIELD MEASUREMENTS BEYOND THE CONTROL OF THE WOODWORKER SHOP.

COORDINATE BLOCKING REQUIREMENTS WITH GENERAL CONTRACTOR. BLOCKING CAN BE EITHER FRAMING MOUNTED BETWEEN STUDS OR SHEET MATERIAL MOUNTED ON THE FACE OF STUDS. SHEET BLOCKING SHALL BE 3/4 INCHES THICK PLYWOOD OR 18 GAUGE SHEET METAL MOUNTED BETWEEN THE GYPSUM WALL BOARD AND STUD FRAMING. SHEET BLOCKING SHALL SPAN ACROSS AT LEAST THREE STUDS

PROVIDE SHOP DRAWINGS OF ALL WOODWORK FOR REVIEW AND APPROVAL BY THE ARCHITECT.

WOOD FINISHES SHALL BE SHOP APPLIED.

EXPOSED ENDS SHALL BE LOCK MITERED AND GLUED UNLESS OTHERWISE NOTED AND CONFORM TO AW STUDS.

REFLECTED CEILING

PROVIDE LABOR AND MATERIAL REQUIRED FOR A COMPLETE CEILING SYSTEM. INSTALLATION SHALL BE COMPLETE WITH SUSPENSION DEVICES AND RELATED ACCESSORY ITEMS AS SHOWN ON THE DRAWINGS AND AS OTHERWISE FOR A COMPLETE, FIRST-CLASS AND NEW YORK STATE CODE COMPLIANT INSTALLATION.

ACOUSTICAL SUSPENDED CEILING INSTALLATION SHALL BE PER THE "OSCA CODE OF PRACTICES FOR ACOUSTICAL CEILING SYSTEMS" – MOST CURRENT EDITION.

CEILING SHALL BE LEVEL TO WITHIN 1/8 INCH IN 12 FEET.

NEW GRILLES AND REGISTERS SHALL BE THE SAME COLOR AS THE SURROUNDING CEILING, UNLESS OTHERWISE NOTED.

NOTES

ACOUSTICAL MATERIALS SHALL BE PROTECTED FROM DAMAGE AND FROM SOILING. FINISHED SURFACES SHALL BE LEFT FREE OF FINISH MARKS, DIRT STREAKS, TOOL MARKS, SCRATCHES, ABRASIONS, CHIPS AND BROKEN CORNERS OR OTHER MARKS OR DAMAGE.

COORDINATE THE INSTALLATION OF ACOUSTICAL CEILING WITH INSTALLATION OF LIGHTING FIXTURES, SPRINKLER PIPING, DUCTWORK, HVAC GRILLES AND OTHER ITEMS.

HAND-HELD FIRE EXTINGUISHERS

GENERAL AREAS AND COMMON AREAS REQUIRE A 2A RATED EXTINGUISHER.

FURNISH AND INSTALL ONE #10 ABC FIRE EXTINGUISHER IN EACH ELECTRICAL CLOSET AND ONE #10 ABC FIRE EXTINGUISHER AT EACH MECHANICAL ROOM.

PROVIDE 1 FIRE EXTINGUISHER FOR EVERY 3,000 SQUARE FEET OF LIGHT (LOW) HAZARD OCCUPANCY. MAXIMUM TRAVEL DISTANCE TO ANY FIRE EXTINGUISHER SHALL BE 75 FEET.

FURNISH AND INSTALL ADDITIONAL FIRE EXTINGUISHERS PER CITY OF WHITE PLAINS FIRE DEPARTMENT AND NFPA-10.

PAINTING

MATERIALS SHALL BE DELIVERED TO THE SITE IN ORIGINAL MANUFACTURER'S SEALED CONTAINERS.

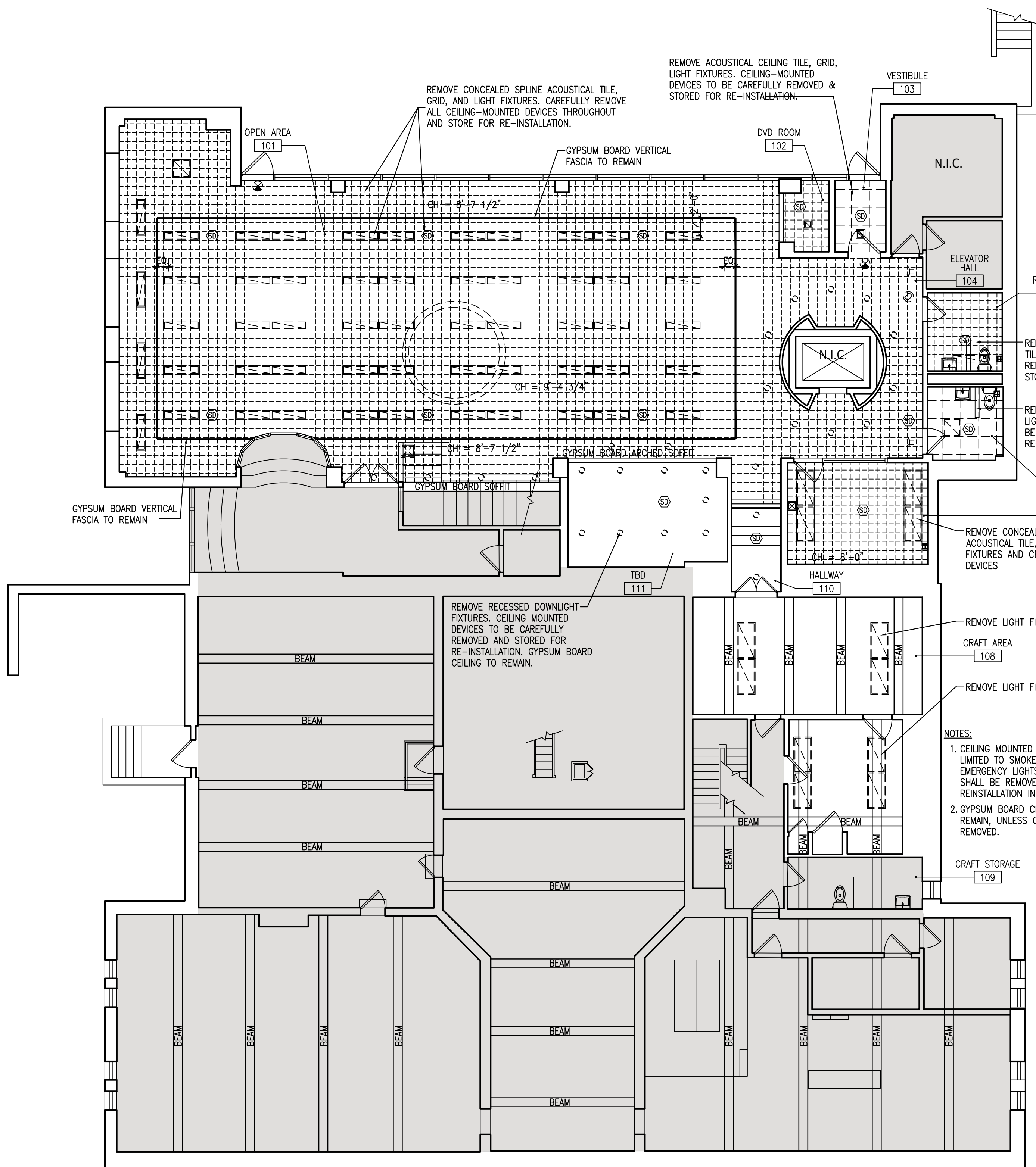
BEFORE STARTING PAINTING, EXAMINE SURFACES AND CONDITIONS FOR IMPERFECT OR OTHERWISE NONCOMPLIANT WORKMANSHIP. STARTING AN INSTALLATION WILL BE CONSIDERED TO MEAN THAT SURFACES ARE IN ACCEPTABLE CONDITION FOR THE INSTALLATION. CORRECTIVE WORK SHALL BE PERFORMED AT NO CHARGE.

PAINTED SURFACES SHALL BE CLEAN, SMOOTH, FREE FROM SCRATCHES AND DUST, AND SHALL BE THOROUGHLY DRY. METAL SURFACES SHALL BE CAREFULLY SANDED WITH FINE SANDPAPER PRIOR TO THE APPLICATION OF THE FIRST BODY COAT.

NAIL HOLES, SCREW HOLES, CRACKS, JOINTS, IRREGULARITIES AND IMPERFECTIONS IN SURFACES TO BE PAINTED SHALL BE CUT, STOPPED OR FILLED FLUSH.

PAINTING SHALL BE DONE BY SKILLED MECHANICS. MATERIALS SHALL BE EVENLY SPREAD, SMOOTHLY FLOWED AND FREE FROM RUNS, SAGS, DRIPS, HOLIDAYS AND OTHER DEFECTS. FINISHED SURFACES SHALL BE UNIFORM IN SHEEN OR FINISH, COLOR, SHA

N:\PROJECTS\LIB\EDU\2639-00 - Warner Library - Children's ACT and Piping Insulation\2639-00 - 20 Drawings\2639-00_24_0109 - CAD Progress Set\2639-00_24_0109_A100 - Plans.dwg
 one eighth inch = one foot
 one quarter inch = one foot
 three eighths inch = one foot
 one half inch = one foot
 one inch = one foot
 three quarters inch = one foot
 two inches = one foot



- NOTES:**
1. CEILING MOUNTED DEVICES, INCLUDING, BUT NOT LIMITED TO SMOKE DETECTORS, EXIST SIGNS, EMERGENCY LIGHTS, SECURITY CAMERAS, ETC, SHALL BE REMOVED AND SAVED FOR REINSTALLATION IN SAME LOCATIONS.
 2. GYPSUM BOARD CEILINGS AND SOFFITS TO REMAIN, UNLESS OTHERWISE INDICATED TO BE REMOVED.

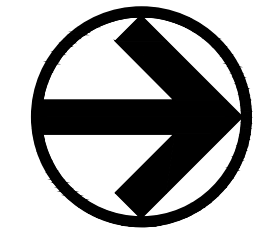
DEMOLITION LIGHTING/CEILING LEGEND			
FIXTURE	DESCRIPTION	FIXTURE	ITEM
	1 x 4 RECESSED LIGHT FIXTURE		WALL / CEILING MOUNTED EXIT SIGN
	2 x 4 RECESSED LIGHT FIXTURE		SMOKE DETECTOR
	8" DIA. DOWNLIGHT		SUPPLY AIR DIFFUSERS
	TRACK LIGHTING		RETURN AIR, OR EXHAUST AIR, GRILLES
	CEILING GRID AND TILES		SECURITY CAMERA
			EMERGENCY FLOOD LIGHT

DEMOLITION LIGHTING/CEILING NOTES	
1.	ALL EXISTING LIGHT FIXTURES TO BE REMOVED AND DISPOSED COMPLETELY.
2.	ALL EXISTING CEILING DEVICES TO BE CAREFULLY REMOVED, STORED AND CLEANED FOR RE-INSTALLATION. REPLACE NEW DEVICES TO MATCH EXISTING IF NOT WORKING.
3.	EXISTING EXIT SIGNS TO BE CAREFULLY REMOVED, STORED AND CLEANED FOR RE-INSTALLATION. REPLACE NEW DEVICES TO MATCH EXISTING IF NOT WORKING.
4.	REFER TO ELECTRICAL & MECHANICAL DEMOLITION DRAWINGS FOR MORE INFORMATION.
5.	IF DAMAGED DURING CONSTRUCTION, CONTRACTOR IS RESPONSIBLE FOR THE REPLACEMENT.



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PLAN NORTH

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CHILDREN'S LIBRARY ACOUSTICAL TILE CEILING AND PIPE INSULATION REPLACEMENT

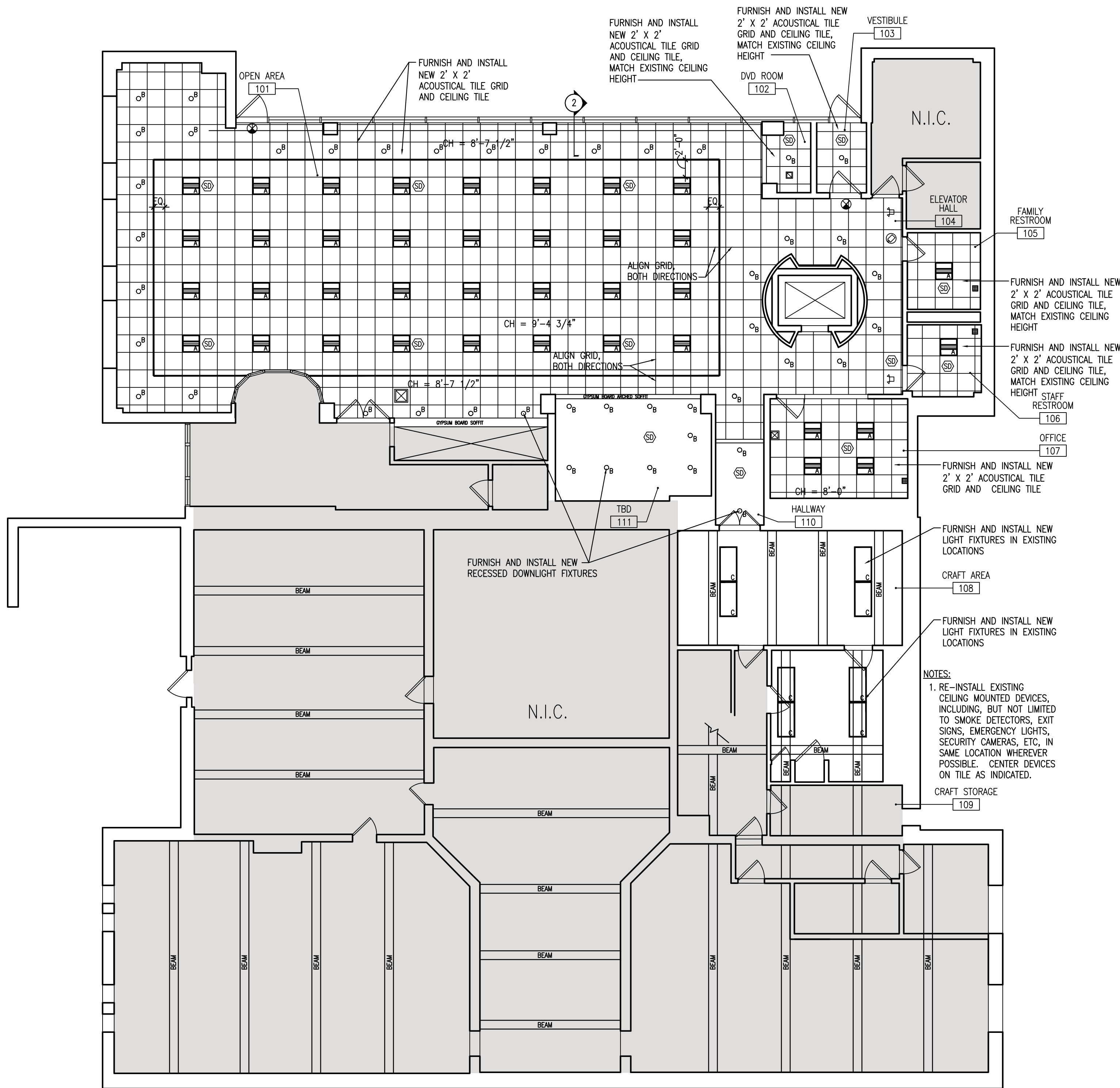
CEILING DEMOLITION PLAN - LOWER LEVEL

PROJECT NO.: 2639-00 SCALE: 1/8" = 1'-0"

DRAWING NO.: **A100**

1 REFLECTED CEILING PLAN - REMOVAL PLAN
 1/8" = 1'-0"

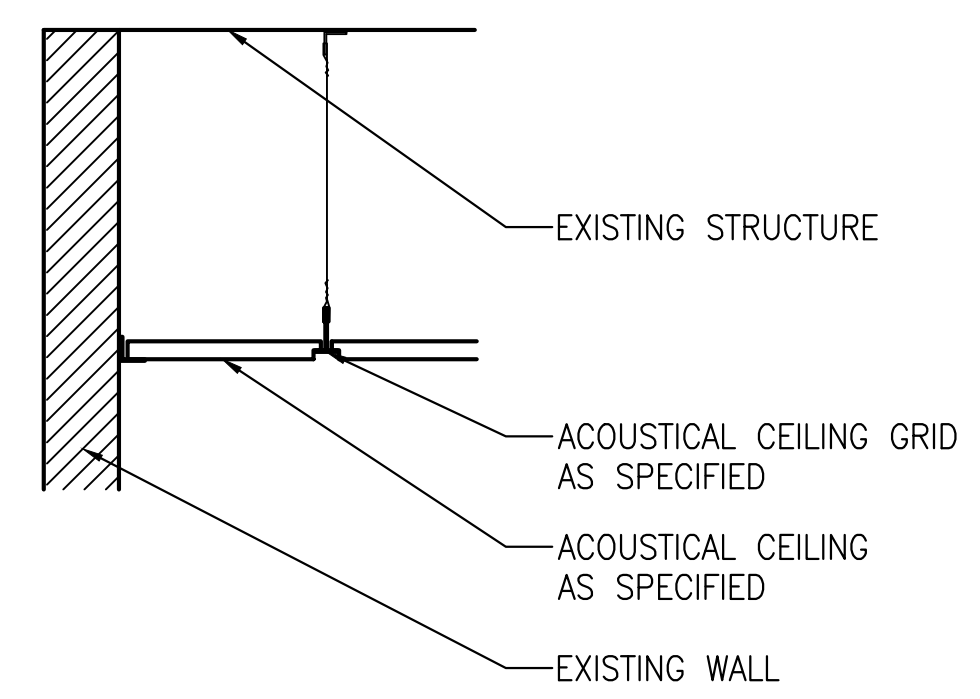
N:\10 PROJECTS\LIB-EDU\2639-00 - Warner Library - Children's ACT and Piping Insulation\2639-00-24_0109 - CAD Progress Set\2639-00-24_0109_A100 - Plans.dwg
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 two inches = one foot



1 REFLECTED CEILING PLAN - CONSTRUCTION PLAN
 1/8" = 1'-0"

LIGHTING/CEILING LEGEND			
FIXTURE	DESCRIPTION	FIXTURE	ITEM
	24" X 24" RECESSED LIGHT FIXTURE BY FOCAL POINT ZEPHYR 2X2 SPEC#: FZR-22-FL-3500L-30K-1C-UNV-G-WH		WALL OR CEILING MOUNTED EXIT SIGN - RE-INSTALL EXISTING
	24" X 24" RECESSED LIGHT FIXTURE BY FOCAL POINT ZEPHYR 2X2 SPEC#: FZR-22-FL-3500L-30K-1C-UNV-G-EM-WH		SMOKE DETECTOR - RE-INSTALL EXISTING
	3.5" DIA. RECESSED DOWNLIGHT BY FOCAL POINT ID+3.5" SPEC#: FLC3D-RO-SW-900L-UNV-LC3-35K-WH		NEW SUPPLY AIR DIFFUSERS
	3.5" DIA. RECESSED DOWNLIGHT BY FOCAL POINT ID+3.5" SPEC#: FLC3D-RO-SW-900L-UNV-EMR-LC3-35K-WH		NEW RETURN AIR, OR EXHAUST AIR, GRILLES
	24" X 48" RECESSED LIGHT FIXTURE BY FOCAL POINT AMICA2 2X4 #FAM2-24-ACR-5000L-30K-1C-UNV-C24-WH TO BE MOUNTED AT 7"-8" AFF UNDERSIDE OF FIXTURE		SECURITY CAMERA - RE-INSTALL EXISTING
	CEILING TILE BY OWA - OCTAVE-70 HIGH CAC RE 9/16" - 24"x24"x3/4" WITH CEILING GRID BY OWA/CLIQ 9/16" #CLIQ-9/16-MR, CLIQ-9/16-CT, AND 50/15G		EMERGENCY FLOOD LIGHT - RE-INSTALL EXISTING

LIGHTING/CEILING NOTES
 1. RE-INSTALL EXISTING CEILING DEVICES INCLUDING BUT NOT LIMITED TO: EXIT SIGNS, SMOKE DETECTORS, EMERGENCY FLOOD LIGHTS, SECURITY CAMERAS, DIFFUSERS AND RETURNS
 2. SEE RCP PLAN FOR ACOUSTICAL CEILING HEIGHTS AS NOTED.
 3. REFER TO ELECTRICAL & MECHANICAL DRAWINGS FOR MORE INFORMATION.
 4. ALL LIGHT FIXTURES ARE NEW UNLESS OTHERWISE NOTED.



2 TYP. ACT - WALL TO CEILING DETAIL
 1 1/2" = 1'-0"

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ACOUSTICAL TILE CEILING
AND PIPE INSULATION
REPLACEMENT

REFLECTED CEILING PLAN
- LOWER LEVEL

PROJECT NO.: 2639-00 SCALE: 1/8" = 1'-0"

DRAWING NO.:

A101

SPECIFICATIONS CONTINUED

WITH HOSE CONNECTIONS SHALL BE PROVIDED AT THE BASE OF EACH RISER, AT ALL LOW POINTS AND WHEREVER REQUIRED TO PERMIT COMPLETE DRAINING OF ALL LINES.

G.) AUTOMATIC FLOAT TYPE AIR VENTS SHALL BE PROVIDED AT HIGH POINTS OF WATER LINES AND WHEREVER REQUIRED TO ALLOW AIR TO VENT FROM SYSTEM. EACH VENT SHALL HAVE A DRAIN LINE PIPED TO NEAREST INDIRECT WASTE.

H.) RUN OUTS, AND CONNECTIONS TO EQUIPMENT, SHALL BE PROVIDED WITH A SWING JOINT OR FLEXIBLE CONNECTION TO WITHSTAND EXPANSION AND CONTRACTION. RISERS SHALL HAVE SWING JOINTS COMPOSED OF AT LEAST 4 ELBOWS.

I.) ALL CHANGES IN SIZE AND DIRECTION OF PIPING SHALL BE MADE WITH FITTINGS. DO NOT USE MITER FITTINGS, FACE OR FLUSH BUSHINGS, CLOSE NIPPLES OR STREET ELBOWS. ALL NIPPLES (PIPE LESS THAN 3" LONG) SHALL BE EXTRA HEAVY.

J.) ALL BRANCH CONNECTIONS SHALL BE MADE WITH TEES, EXCEPT THAT ON STEEL PIPING FORGED STEEL "WELDOLETS" AND "LATROLETS" AS MANUFACTURED BY BONNEY FORGE MAY BE USED WHERE THE BRANCH PIPE IS AT LEAST TWO NOMINAL PIPE SIZES LESS THAN THE MAIN PIPE.

K.) ECCENTRIC REDUCING FITTINGS OR ECCENTRIC REDUCING COUPLINGS SHALL BE USED WHERE REQUIRED BY THE CONTRACT DOCUMENTS OR WHERE REQUIRED TO PREVENT POCKETING OF LIQUID OR NON-CONDENSIBLES.

L.) FITTINGS SHALL BE FACTORY MANUFACTURED. SHOP OR FIELD FABRICATED FITTINGS ARE NOT ACCEPTABLE. WELDING FITTINGS SHALL BE "TUBE-TURNS" OR EQUIVALENT. FITTINGS SHALL HAVE THE SAME PRESSURE RATING AS THE SYSTEM IN WHICH THEY ARE INSTALLED.

M.) ELECTROLYTIC COUPLINGS OR UNIONS SHALL BE INSTALLED BETWEEN COPPER AND STEEL PIPE.

N.) ALL JOINTS SHALL BE MADE IN A WORKMANLIKE MANNER USING CLEAN THREADS, DEBURRED PIPE AND PROPER MATERIALS. ALL JOINTS SHALL CONFORM TO THE APPLICABLE ANSI AND ASTM STANDARDS. QUALIFY WELDERS TO THE CODE FOR PRESSURE PIPING ANSI SPECIFICATIONS B31.1, WITH CERTIFICATION BY THE WELDING BUREAU OF HEATING, PIPING AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION. ASME STAMP SHALL BE PROVIDED AS REQUIRED.

O.) RUN OUTS, AND CONNECTIONS TO EQUIPMENT, SHALL BE PROVIDED WITH A SWING JOINT OR FLEXIBLE CONNECTION TO WITHSTAND EXPANSION AND CONTRACTION. RISERS SHALL HAVE SWING JOINTS COMPOSED OF AT LEAST 4 ELBOWS.

Q.) PIPING MATERIALS: REFER TO PIPING MATERIAL SCHEDULE.

R.) PIPE FITTINGS: REFER TO PIPING MATERIAL SCHEDULE.

S.) PIPING CONNECTIONS TO EQUIPMENT

1.) FLANGES OR UNIONS SHALL BE PROVIDED AT ALL FINAL CONNECTIONS TO EQUIPMENT AND CONTROL VALVES TO FACILITATE DISMANTLING. OFFSETS SHALL BE PROVIDED AND CONNECTIONS ARRANGED SO THAT THE EQUIPMENT BEING SERVED MAY BE REMOVED WITHOUT DISTURBING THE PIPING.

2.) ALL AUTOMATIC VALVES SHALL BE PROVIDED WITH A GATE VALVE AND A STRAINER ON THE INLET SIDE.

3.) HANGERS AND SUPPORTS FOR CONNECTED EQUIPMENT SHALL CONFORM TO THE CRITERIA FOR PIPING. NO WIRE, TAPE OR METAL BANDS ARE PERMITTED.

4.) INSTALL ALL SUPPLY PIPING TO EQUIPMENT INCLUDING GATE VALVES AND STRAINERS AT LINE SIZE WITH THE REDUCTION IN SIZE BEING MADE ONLY AT THE INLET TO THE CONTROL VALVE OR PUMP. INSTALL THE OUTLET PIPING FROM THE CONTROL VALVE AT THE FULL SIZE OF THE TAPPING IN THE EQUIPMENT SERVED.

5.) FOR EQUIPMENT MOUNTED ON ISOLATION BASES AND WHEREVER INDICATED ON DRAWING AND DETAILS, MASON INDUSTRIES TYPE BSS STAINLESS STEEL BRAIDED FLEXIBLE HOSE CONNECTIONS OR EQUIVALENT SHALL BE PROVIDED.

T.) VALVES

1.) ALL HAND VALVES, CHECK-VALVES, VENT VALVES, COCKS, ETC., SHALL BE FURNISHED AND INSTALLED AS REQUIRED FOR THE COMPLETE AND PROPER VALVING OF THE ENTIRE INSTALLATION AS DEFINED HEREIN. VALVES SHALL HAVE THE SAME PRESSURE RATING AS THE SYSTEM IN WHICH THEY ARE INSTALLED.

2.) VALVES WITH HAND-WHEELS SHALL BE INSTALLED HORIZONTALLY OR VERTICALLY UPWARD UNLESS SPECIFICALLY SHOWN OTHERWISE. ALL VALVES SHALL BE INSTALLED IN ACCESSIBLE LOCATIONS TO FACILITATE EASY REMOVAL FOR REPAIR OR REPLACEMENT.

3.) VALVES SHALL BE FULL LINE SIZE UNLESS OTHERWISE NOTED. ALL DRAIN VALVES IN EQUIPMENT ROOMS SHALL BE LOCATED AT AN ELEVATION NOT GREATER THAN 6'-0" ABOVE FLOOR AND SHALL BE PROVIDED WITH 3/4" HOSE CONNECTIONS.

4.) VALVES SHALL BE CAPABLE OF BEING REPACKED WHILE WIDE OPEN AND OPERATING AT THEIR RATED PRESSURE.

5.) UNLESS OTHERWISE NOTED OR REQUIRED BY THE APPLICATION, SCREWED VALVES SHALL BE OF BRONZE CONSTRUCTION AND FLANGED VALVES OF CAST IRON CONSTRUCTION WITH BRONZE TRIM. GLOBE AND CHECK VALVE DISCS SHALL BE IN ACCORDANCE WITH MANUFACTURERS

RECOMMENDATIONS FOR THE SERVICE. ALL CAST IRON BODY VALVES SHALL HAVE RENEWABLE BRONZE SEAT RINGS AND BRONZE SPINDLES.

6.) IN GENERAL, USE GLOBE VALVES FOR ALL THROTTLING SERVICE (INCLUDING PUMP DISCHARGES). FOR WATER LINES 3" AND OVER, ECCENTRIC PLUG VALVES SHALL BE USED. WHERE BUTTERFLY OR BALL VALVES ARE SPECIFIED THESE TYPES SUFFICE FOR THROTTLING. BALL VALVES USED FOR BALANCING SHALL HAVE LOCKING STOP.

7.) HORIZONTAL CHECK VALVES SHALL GENERALLY BE 15 DEGREE SWING CHECK TYPE. CHECK VALVES IN VERTICAL PIPING AND IN ALL PUMP DISCHARGES SHALL BE SPRING-CUSHIONED OF THE DISC OR DUAL PLATE TYPE AS MANUFACTURED BY ONE OF THE FOLLOWING:

- a. MILLER VALVE CO.
- b. CPV CO.
- c. SMOLENSKY VALVE CO.
- d. WILLIAMS GAUGE CO. - "WILLIAMS - HAGER"
- e. MISSION "DUO-CHEK"

8.) EXCEPT WHERE SPECIFICALLY STATED TO CONTRARY, ALTERNATE MANUFACTURERS FOR VALVES ARE AS FOLLOWS: CRANE CO., LUNKENHEIMER CO., NIBCO, INC.

9.) THE CONTRACTOR SHALL PROVIDE THE VALVES SPECIFIED, OR THE EQUIVALENT AS PRODUCED BY ONE OF THE ABOVE LISTED MANUFACTURERS.

U.) PIPE SLEEVES AND ESCUTCHEONS

1.) ALL PIPE OPENINGS THROUGH WALLS, CEILINGS, FURRING, PARTITIONS AND SLABS SHALL BE PROVIDED WITH SLEEVES HAVING AN INTERNAL DIAMETER AT LEAST 2" LARGER THAN THE OUTSIDE DIAMETER OF THE PIPE FOR UNINSULATED LINES OR OF THE INSULATION FOR INSULATED SERVICES. SLEEVES SHALL BE LOCATED SO THAT THE PIPE PASSES THROUGH CENTER OF SLEEVE.

2.) SLEEVES SHALL BE INSTALLED THROUGH INTERIOR WALLS AND PARTITIONS FLUSH WITH FINISHED SURFACE; SLEEVES THROUGH OUTSIDE WALLS SHALL PROJECT 1/2" ON EACH SIDE OF THE FINISHED WALL; FLOOR SLEEVES SHALL PROJECT 1" ABOVE FINISHED FLOORS.

3.) INTERIOR WALLS AND FLOORS - THE SPACE BETWEEN OUTSIDE OF PIPE OR INSULATION AND THE INSIDE OF THE SLEEVE OR FRAMED OPENING SHALL BE FILLED WITH FIBROUS GLASS AND FIRE STOPPED WITH 3-M FIRE BARRIER.

4.) ESCUTCHEONS SHALL BE PROVIDED ON BOTH SIDES OF THE PENETRATION THROUGH THE STRUCTURE FOR ALL PIPES EXPOSED TO VIEW PASSING THROUGH FURRING, WALLS, FLOORS, CEILING AND PARTITIONS, WHETHER INSULATED OR NOT. FOR PIPES PASSING THROUGH FLOORS, AND EXTERIOR WALLS, ESCUTCHEONS SHALL FIT OVER THE SLEEVE.

5.) ALL ESCUTCHEONS SHALL BE CHROME PLATED BRASS, SPLIT HINGED TYPE WITH SET SCREWS.

V.) PIPING SPECIALTIES

A.) PROVIDE ALL SPECIAL APPLIANCES REQUIRED FOR THE PROPER OPERATION OF THE PIPING SYSTEMS.

B.) PROVIDE "Y" TYPE STRAINERS WITH FULL SIZE BLOW-OFF-VALVES. SPENCE, MUELLER, McALEAR OR CRANE CAST BRONZE UP TO 2 1/2", SEMI-STEEL 3" AND OVER. MONEL BASKETS WITH NO. 20 MESH.

C.) PROVIDE FLOAT AND THERMOSTATIC TRAPS AS MANUFACTURED BY SPIRAX/SARCO OR APPROVED EQUAL. TRAPS SHALL BE CAST IRON BODY AND BOLTED COVER, STAINLESS STEEL OR BRONZE BELLOW TYPE AIR VENT, STAINLESS STEEL OR COPPER FLOAT, STAINLESS STEEL LEVER AND VALVE ASSEMBLY.

W.) CLEANING - ALL PIPING SYSTEMS

1.) ALL OPEN ENDS OF PIPING, VALVES AND EQUIPMENT SHALL BE PLUGGED EXCEPT WHEN ACTUAL WORK IS BEING PERFORMED, TO MINIMIZE ACCUMULATION OF DIRT AND DEBRIS.

2.) AFTER INSTALLATION IS COMPLETE TEMPORARY SCREENS SHALL BE PLACED AT CONNECTIONS TO ALL EQUIPMENT AND AT AUTOMATIC CONTROL VALVES WHERE PERMANENT STRAINERS ARE NOT PROVIDED.

3.) PRIOR TO THE PERFORMANCE OF TESTS, ALL PIPING THAT IS TO RECEIVE A HYDROSTATIC TEST SHALL BE FLUSHED OUT WITH CLEAN WATER. PIPING THAT IS TO BE AIR OR GAS PRESSURE TESTED SHALL BE BLOWN OUT WITH COMPRESSED AIR. DIRT AND DEBRIS COLLECTED AT SCREENS STRAINERS, AND OTHER POINTS FROM THE SYSTEM, SHALL BE REMOVED BOTH BEFORE AND AFTER TESTING.

4.) THE MANUFACTURER SHALL CLEAN ALL STEEL PIPE AND FITTINGS BEFORE SHIPMENT. THE PIPE AND FITTINGS SHALL BE DIPPED INTO A SOLUTION OF SULPHURIC ACID TO REMOVE THE MILL SCALE AND THEN INTO A SOLUTION TO STOP THE CHEMICAL ACTION ON THE METAL AND REMOVE GREASE.

X.) HANGERS, SUPPORTS, ANCHORS AND GUIDES - GENERAL

1.) SUPPORT, ANCHOR AND GUIDE ALL PIPING AND CONNECTED EQUIPMENT TO PRECLUDE FAILURE OR DEFORMATION. CONSTRUCT AND INSTALL HANGERS, SUPPORTS, ANCHORS, GUIDES AND ACCESSORIES IN CONFORMANCE WITH THE CODE FOR PRESSURE PIPING ANSI B-31.1 AS A MINIMUM REQUIREMENT. WHERE SPECIFICATION REQUIREMENTS ARE MORE STRINGENT THAN THE CODE, THE SPECIFICATION SHALL APPLY. WIRE, TAPE OR METAL BANDS SHALL NOT BE USED.

2.) PIPING SHALL BE SECURELY FASTENED TO THE STRUCTURE WITHOUT OVERSTRESSING ANY PORTION OF THE SUPPORTS OF THE STRUCTURE

ITSELF. SUFFICIENT INTERMEDIATE STEEL SHALL BE PROVIDED TO TRANSFER LOADS TO AREAS WHERE THEY CAN SAFELY BE ACCOMMODATED. PIPE SUPPORTS, ANCHORS AND GUIDES SHALL BE SECURED TO STEEL BY WELDED BRACKETS, BEAM CLAMPS, OR BY FASTENING RODS OVER THE BEAM TOP FLANGE, AND TO CONCRETE BY MEANS OF INSERTS, OR IF GREATER LOAD CARRYING CAPACITY IS REQUIRED, BY MEANS OF STEEL FISHPLATES EMBEDDED IN THE CONCRETE ABOVE THE REINFORCEMENT RODS. ALL HANGERS SHALL BE LOCATED TO PERMIT FREE EXPANSION AND CONTRACTION.

3.) UNLESS OTHERWISE INDICATED, ALL HORIZONTAL PIPING SHALL BE HUNG TIGHT TO CEILING BEAMS AND LOCATED MORE THAN SIX FEET ABOVE THE FLOOR. PIPING LOCATED WITHIN SIX FEET OF THE FLOOR SHALL BE SUPPORTED ON FABRICATED STANDS OR PIERS. WHERE PIPING RUNS ALONG WALLS, SUITABLE WALL TYPE AND GANG-TYPE HANGERS SHALL BE PROVIDED.

4.) PIPING AND TUBING SHALL BE SUPPORTED AT ALL CHANGES IN DIRECTION. MAXIMUM DEFLECTION SHALL BE 1/8". MAXIMUM SPACING BETWEEN SUPPORTS SHALL BE:
MATERIAL 1/2" - 1-1/4" 1-1/2" - 2"

COPPER TUBING 6 FT O.C. 10 FT O.C.

5.) HANGER RODS FOR BOTH SINGLE AND DOUBLE ROD HANGERS SHALL CONFORM TO THE FOLLOWING SCHEDULE OF DIAMETERS:

STEEL PIPE		COPPER TUBING	
PIPE SIZE	HANGER ROD Ø	PIPE SIZE	HANGER ROD Ø
1/2" - 1"	- 3/8"	1/2" - 2"	- 3/8"
1-1/4" - 2"	- 1/2"	2-1/2" - 5"	- 5/8"
2-1/2" - 4"	- 1/2"	5" - 6"	- 3/4"

6.) COPPER PLATED PIPE HANGERS AND SUPPORTS SHALL BE USED FOR VERTICAL AND HORIZONTAL RUNS OF COPPER OR BRASS PIPE AND TUBING WHERE THE HANGER IS IN DIRECT CONTACT WITH THE PIPE, OTHERWISE STEEL HANGERS AND SUPPORTS SHALL BE USED.

7.) PIPE HANGERS AND SUPPORTS COMPLETE WITH RODS, BOLTS, LOCKNUTS, SWIVELS, COUPLINGS, BRACKETS AND ALL OTHER COMPONENTS AND ACCESSORIES SHALL BE PROVIDED.

Y.) HANGER TYPES

1.) IN GENERAL, HANGERS SHALL BE OF CLEVIS TYPE OR ROLL TYPE WITH VERTICAL ADJUSTMENT. WHERE SEVERAL LINES OF PIPING RUN AS A COMMON GROUP, THEY SHALL BE SUPPORTED ON A COMMON HANGER BAR OF GALVANIZED CHANNEL OR BACK TO BACK ANGLE SECTIONS OR "UNISTRUT" TYPE SUPPORTS.

2.) HANGERS SHALL BE AS FOLLOWS:
 APPLICATION _____ CENTRAL IRON FIG. NO.
 CLEVIS HANGER 10
 RISER CLAMP - THRU 3" 261
 RISER CLAMP - OVER 3" 262
 ROLL HANGER THRU 6" 272
 ROLL HANGER OVER 6" 171

3.) ALTERNATE MANUFACTURERS: GRINELL, GRABLER, CRANE

M-13 MISCELLANEOUS

A.) THE CONTRACTOR SHALL PROVIDE THE OWNERS WITH CATALOG DATA, OPERATING INSTRUCTIONS, MAINTENANCE INSTRUCTIONS AND RECORD (AS-BUILT) DRAWINGS OF ALL COMPLETED WORK. AS-BUILT DRAWINGS SHALL SHOW EXACT LOCATION OF ALL MECHANICAL SYSTEMS, EQUIPMENT, DUCTWORK, PIPING, ETC.

B.) SUBMIT THREE (3) SETS OF AS BUILT DRAWINGS AND AN ELECTRONIC FILE OF THE AS BUILT DOCUMENTS IN AN AUTO CAD LT 2004 FORMAT TO BUILDING MANAGEMENT.

C.) ALL WORK SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR FROM THE DATE OF ACCEPTANCE BY THE OWNER.

END OF SPECIFICATIONS

CONDENSATE DRAIN SIZING	
EQUIPMENT CAPACITY	MINIMUM CONDENSATE DRAIN PIPE DIAMETER (IN.)
UP TO 20 TONS OF REFRIGERATION	3/4"
OVER 20 TONS OF REFRIGERATION	1"
OVER 40 TONS TO 90 TONS OF REFRIGERATION	1 1/4"
OVER 90 TONS TO 125 TONS OF REFRIGERATION	1 1/2"
OVER 125 TONS TO 250 TONS OF REFRIGERATION	2"
NOTES: FOR SI: 1"=25.4mm, 1 TON OF CAPACITY=3.517 KW	

MECHANICAL PIPE MATERIAL SCHEDULE								
PIPE SYSTEM	SIZE	PIPE			FITTINGS			REMARKS
		MATERIAL	TYPE / WEIGHT	STANDARD	MATERIALS	TYPE / WEIGHT	STANDARD	
CONDENSATE DRAIN	ALL	COPPER	HARD TEMPER TYPE L	ASTM B88	COPPER	WROUGHT COPPER SOLDER JOINT	ANSI 16.18	
NOTES:								



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REPLACEMENT**

**MECHANICAL
SPECIFICATIONS 2 OF 2**

PROJECT NO.: NLAA0034.00 SCALE: AS NOTED

DRAWING NO.:

M-002



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3	03/04/2024	ISSUED FOR BID
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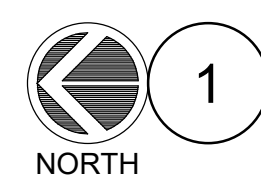
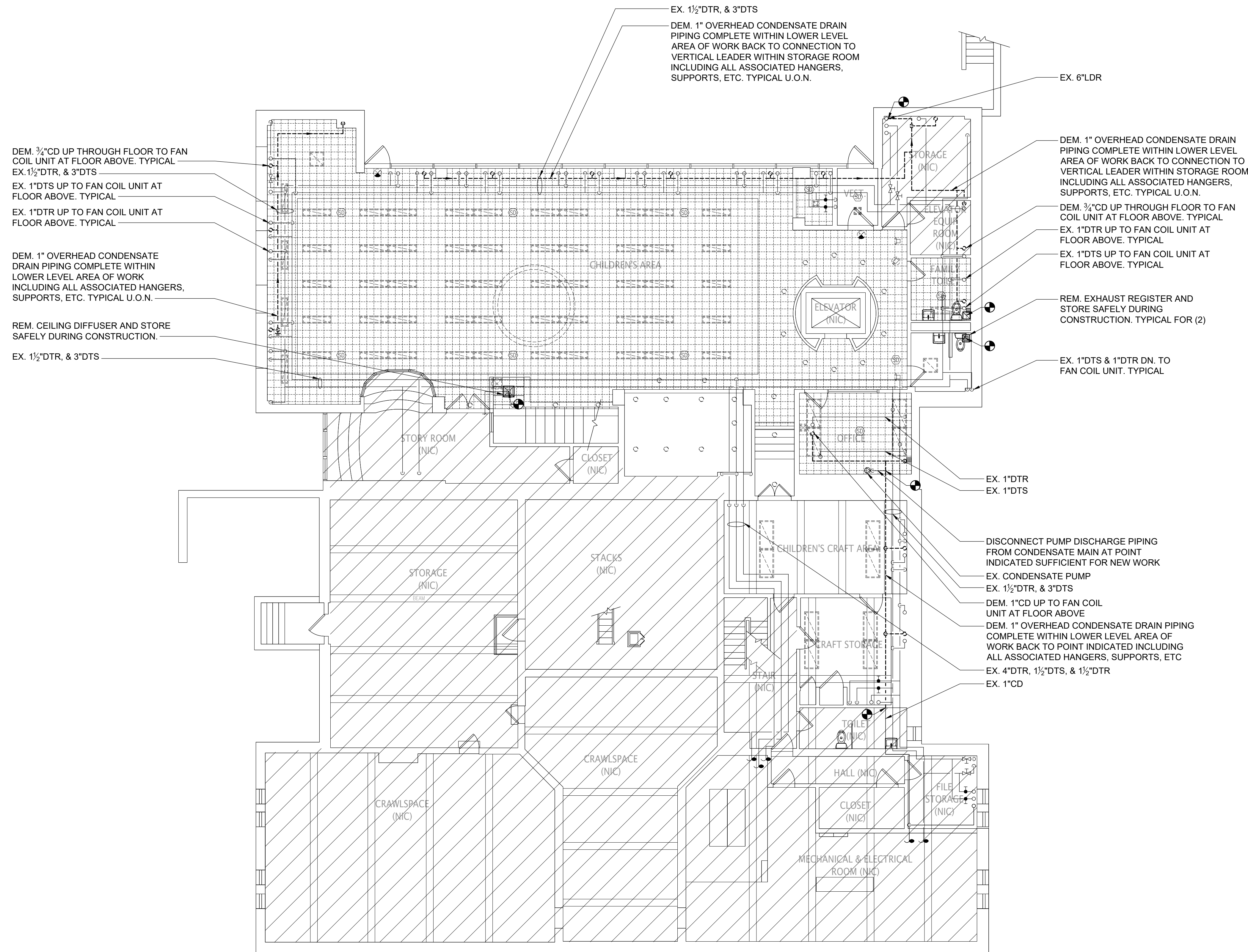
CHILDREN'S LIBRARY ACOUSTICAL TILE CEILING AND PIPE INSULATION REPLACEMENT

MECHANICAL LOWER LEVEL DEMOLITION PLAN

PROJECT NO.: NLAA0034.00 SCALE: AS NOTED

DRAWING NO.:

M-101

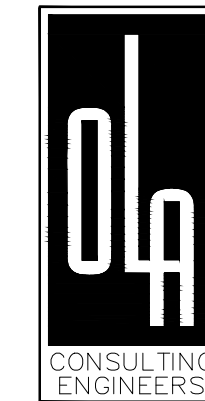


1 MECHANICAL LOWER LEVEL DEMOLITION PLAN

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

NOTES:

- DEMOLISH DUAL TEMPERATURE SUPPLY AND RETURN INSULATION COMPLETE THROUGHOUT LOWER LEVEL AREA OF WORK.
- ALL CONDENSATE DRAIN / PUMP DISCHARGE PIPING FROM FAN COIL UNITS AT LOWER LEVEL SHALL BE DISCONNECTED FROM THE OVERHEAD CONDENSATE MAIN AND REMAIN IN PLACE SUFFICIENT FOR NEW WORK WHETHER INDICATED OR NOT.



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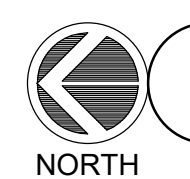
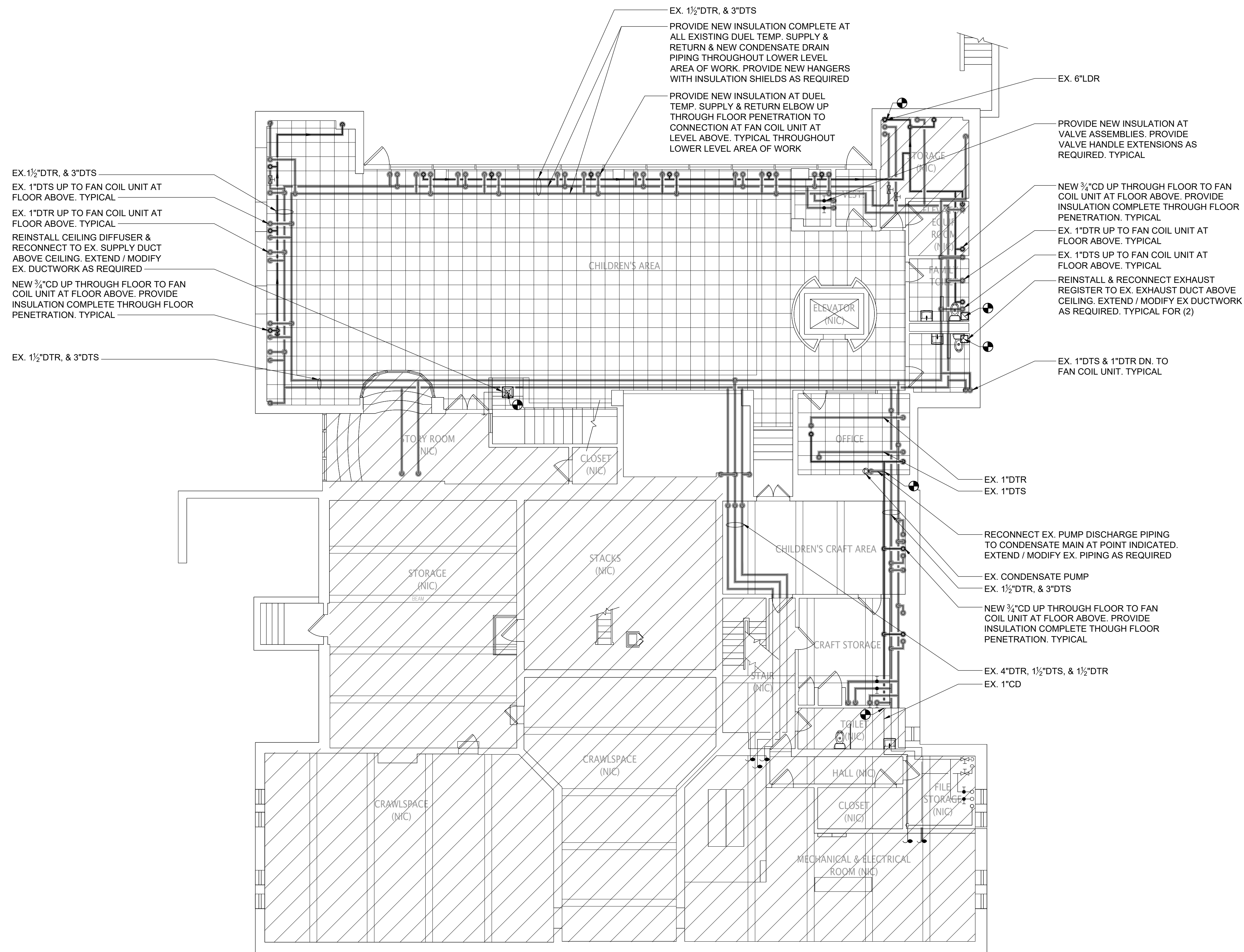
CHILDREN'S LIBRARY ACOUSTICAL TILE CEILING AND PIPE INSULATION REPLACEMENT

MECHANICAL LOWER LEVEL NEW WORK PLAN

PROJECT NO.: NLAA0034.00 SCALE: AS NOTED

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M-201



1

MECHANICAL LOWER LEVEL NEW WORK PLAN

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

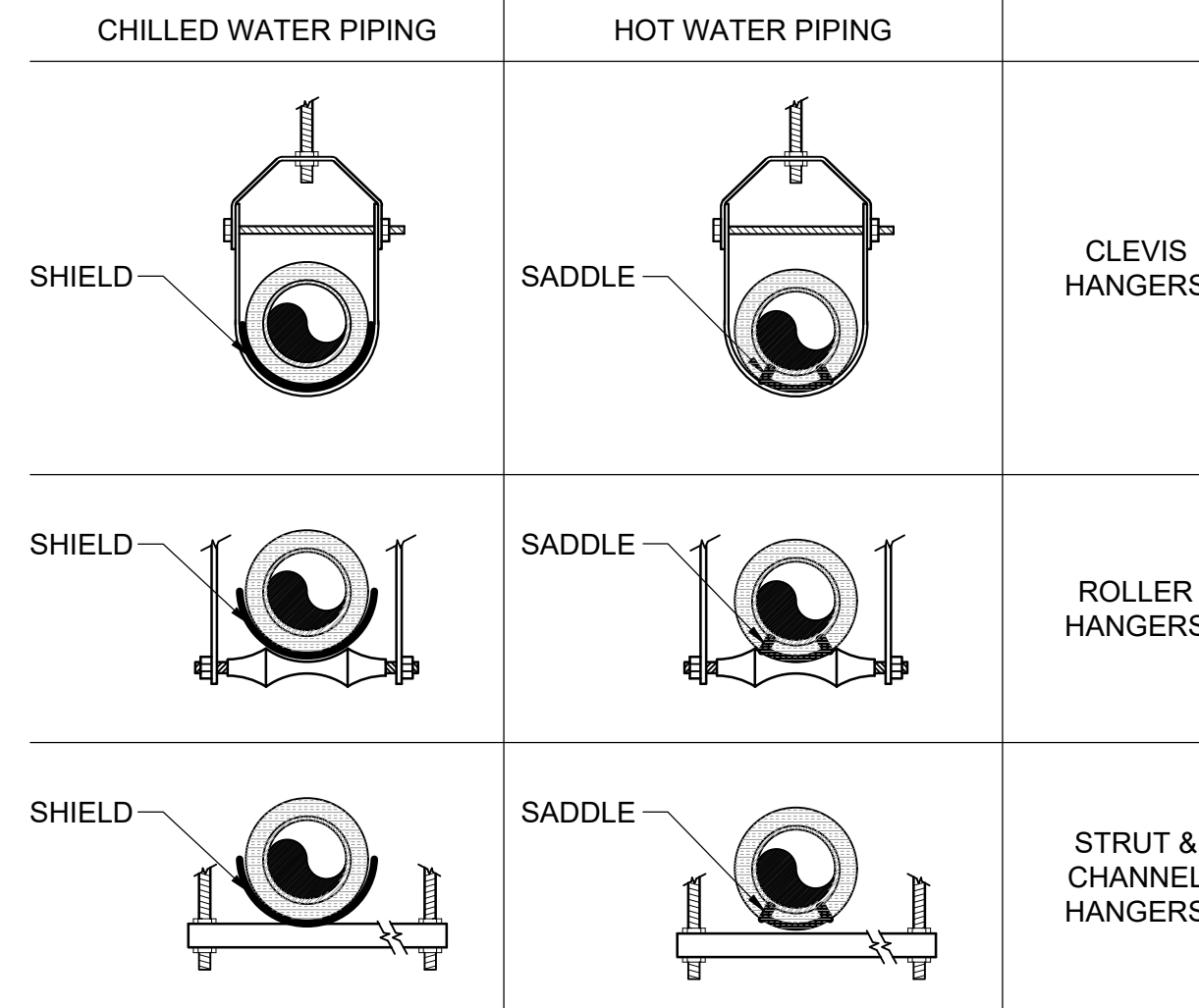
NOTES:

1. NEW INSULATION AT DUAL TEMPERATURE SUPPLY & RETURN PIPING AND CONDENSATE DRAIN PIPING SHALL BE CONTINUOUS UP THROUGH ALL FLOOR PENETRATIONS. FLOOR PENETRATIONS SHALL BE PROPERLY SEALED TO BE WATERTIGHT.
2. ALL CONDENSATE DRAIN / PUMP DISCHARGE PIPING FROM FAN COIL UNITS AT LOWER LEVEL SHALL BE RECONNECTED EX. TO NEW OVERHEAD CONDENSATE MAIN WHETHER INDICATED OR NOT. EXTEND / MODIFY EX. PIPING AS REQUIRED
3. NEW CONDENSATE DRAIN PIPING SHALL MAKE USE OF EXISTING FLOOR PENETRATIONS THROUGHOUT FOR INSTALLATION.

**TABLE C403.2.10
MINIMUM PIPE INSULATION THICKNESS (IN INCHES)^{A, C}**

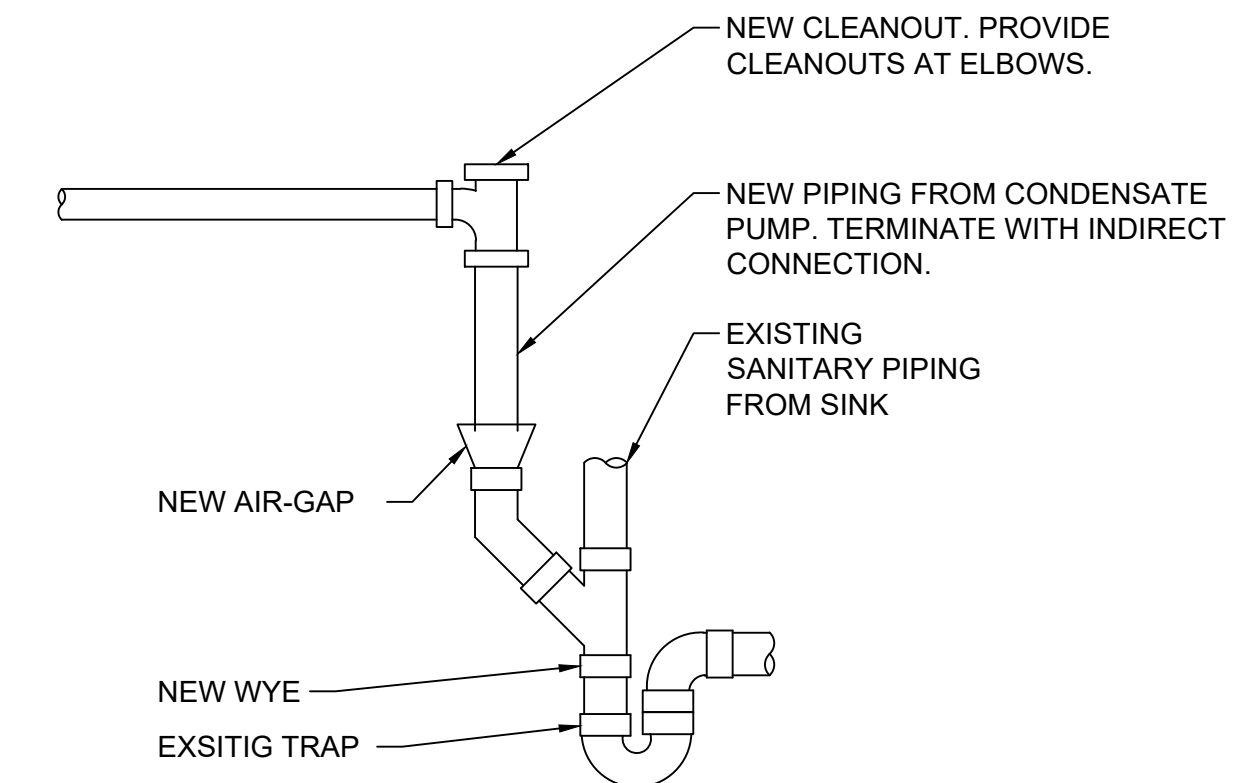
FLUID OPERATING TEMPERATURE RANGE AND USAGE (°F)	INSULATION CONDUCTIVITY		NOMINAL PIPE OR TUBE SIZE (INCHES)				
	CONDUCTIVITY BTU*IN./(H*FT ² *F) ^B	MEAN RATING TEMPERATURE, °F	< 1	1 TO < 1½	1½ TO < 4	4 TO < 8	≥ 8
> 350	0.32 - 0.34	250	4.5	5.0	5.0	5.0	5.0
251 - 350	0.29 - 0.32	200	3.0	4.0	4.5	4.5	4.5
201 - 250	0.27 - 0.30	150	2.5	2.5	2.5	3.0	3.0
141 - 200	0.25 - 0.29	125	1.5	1.5	2.0	2.0	2.0
105 - 140	0.21 - 0.28	100	1.0	1.0	1.5	1.5	1.5
40 - 60	0.21 - 0.27	75	0.5	0.5	1.0	1.0	1.0
< 40	0.20 - 0.26	50	0.5	1.0	1.0	1.0	1.5

NOTES:
FOR SI: 1 INCH = 25.4 MM, °C = [(°F)-32]/1.8
a. FOR PIPING SMALLER THAN 1½ INCHES AND LOCATED IN PARTITIONS WITHIN CONDITIONED SPACES, REDUCTION OF THESE THICKNESSES BY 1 INCH SHALL BE PERMITTED (BEFORE THICKNESS ADJUSTMENT REQUIRED IN FOOTNOTE b) BUT NOT TO A THICKNESS LESS THAN 1 INCH.
b. FOR INSULATION OUTSIDE THE STATED CONDUCTIVITY RANGE, THE MINIMUM THICKNESS (T) SHALL BE DETERMINED AS FOLLOWS:
 $T = r \{ (1 + t/r) / k - 1 \}$
WHERE:
T = MINIMUM INSULATION THICKNESS,
r = ACTUAL OUTSIDE RADIUS OF PIPE,
t = INSULATION THICKNESS LISTED IN THE TABLE FOR APPLICABLE FLUID TEMPERATURE AND PIPE SIZE,
k = CONDUCTIVITY OF ALTERNATE MATERIAL AT MEAN RATING TEMPERATURE INDICATED FOR THE APPLICABLE FLUID TEMPERATURE (BTU * IN/H * FT² * °F)
k = THE UPPER VALUE OF THE CONDUCTIVITY RANGE LISTED IN THE TABLE FOR THE APPLICABLE FLUID TEMPERATURE.
c. FOR DIRECT-BURIED HEATING AND HOT WATER SYSTEM PIPING, REDUCTION OF THESE THICKNESSES BY 1½ INCHES (38 MM) SHALL BE PERMITTED (BEFORE THICKNESS ADJUSTMENT REQUIRED IN FOOTNOTE b) BUT NOT TO THICKNESSES LESS THAN 1 INCH (25 MM).

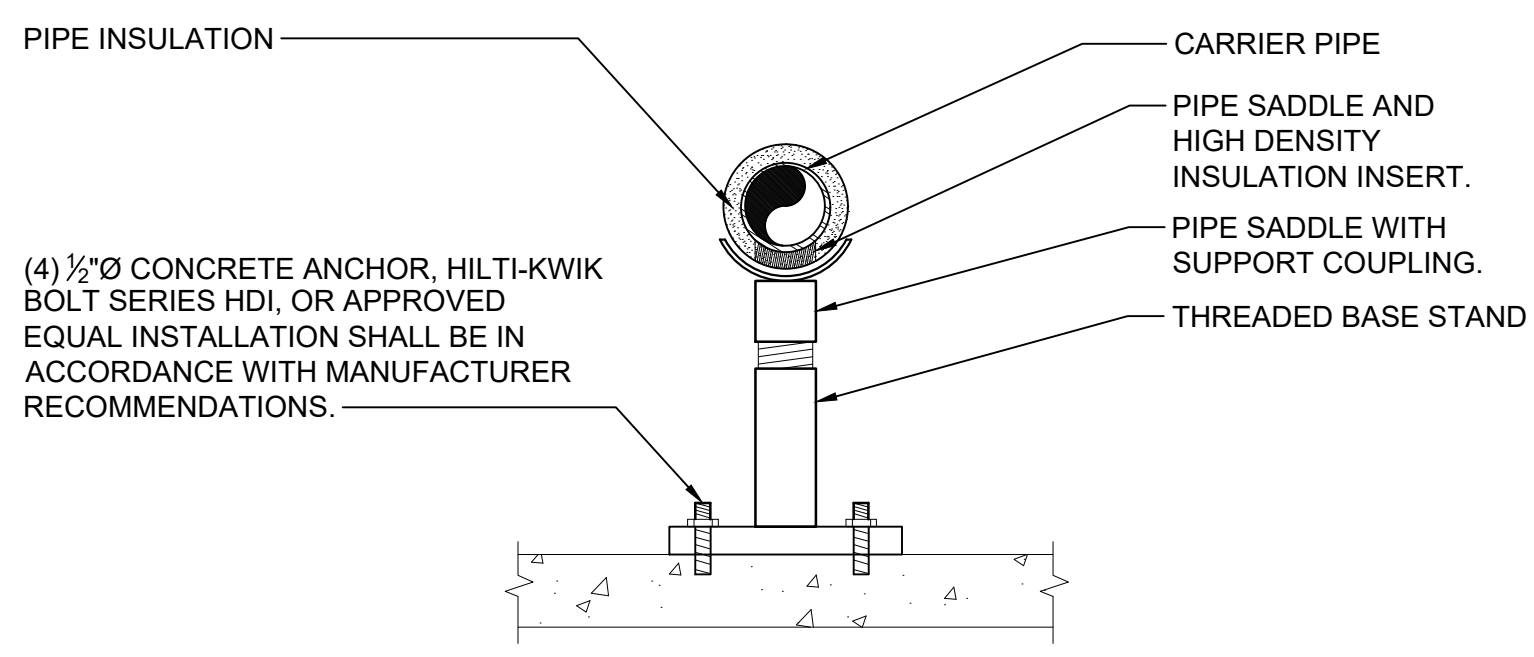


NOTES:
1. INSULATION ON ALL COLD SURFACES SHALL BE APPLIED WITH A CONTINUOUS, UNBROKEN VAPOR SEAL. HANGERS, SUPPORTS, ANCHORS, ETC., THAT ARE SECURED DIRECTLY TO COLD SURFACES SHALL BE ADEQUATELY INSULATED AND VAPOR SEALED TO PREVENT CONDENSATION.
2. GALVANIZED METAL SHIELDS SHALL BE APPLIED BETWEEN HANGERS OR SUPPORTS AND THE PIPE INSULATION AS SHOWN ABOVE. SHIELDS SHALL BE FORMED TO FIT THE INSULATION AND SHALL EXTEND UP TO THE CENTERLINE OF THE PIPE.
3. RIGID INSULATION INSERTS SHALL BE INSTALLED ON PIPE SIZES 1½" (38 MM) OR LARGER AS SHOWN ABOVE. INSERTS SHALL BE OF EQUAL THICKNESS TO THE ADJOINING INSULATION AND SHALL BE PROVIDED WITH VAPOR RETARDER SEALS.

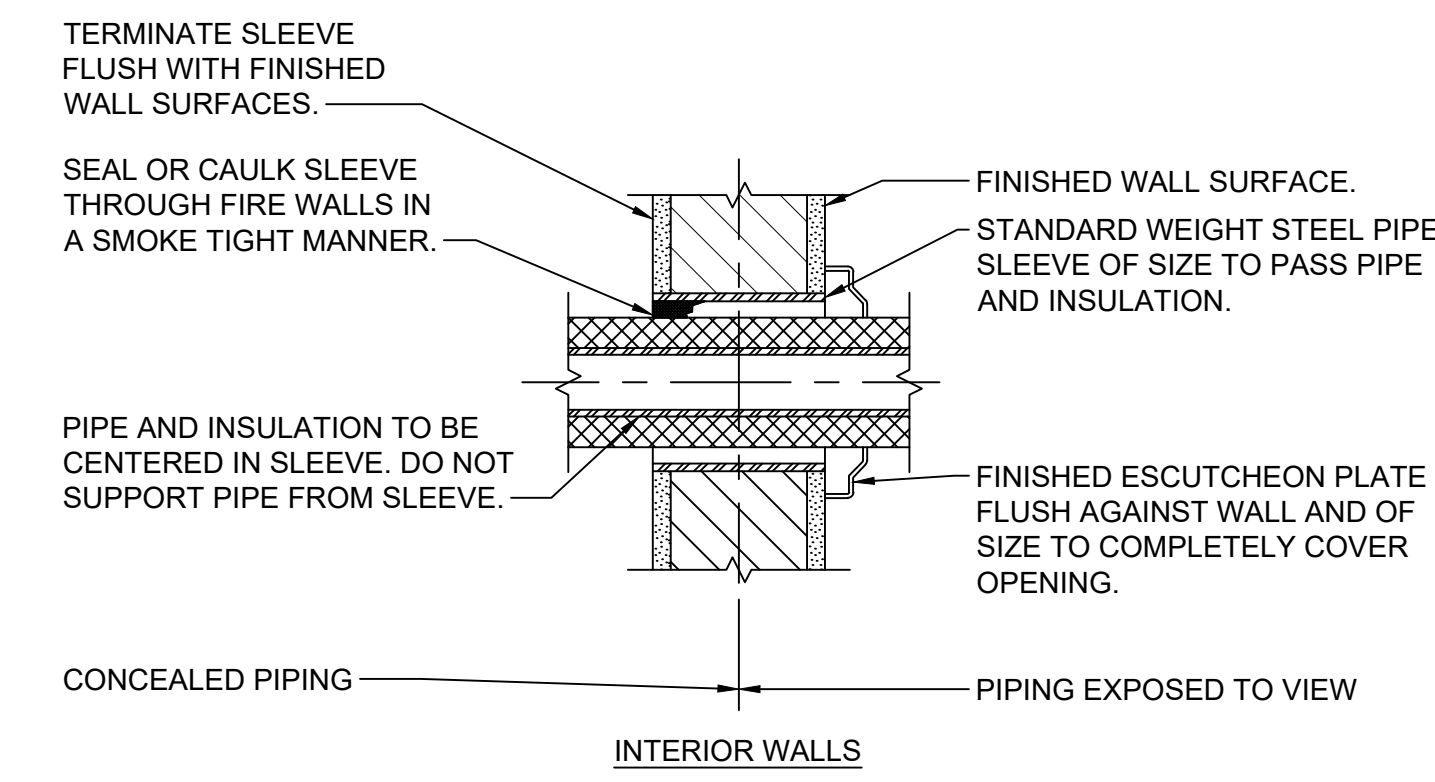
5 PIPE INSULATION SADDLE/SHIELD SCHEDULE
SCALE: NONE



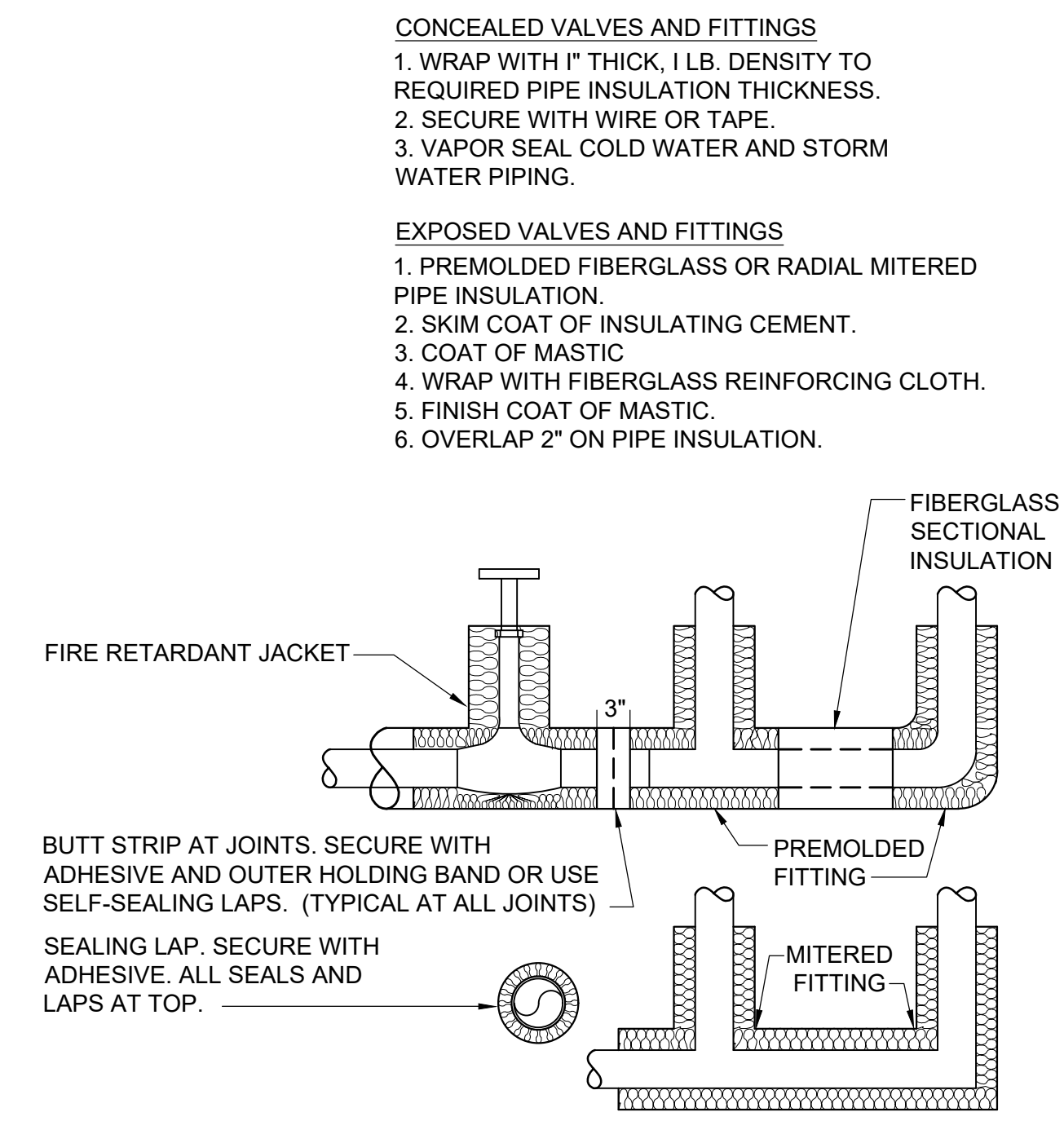
3 CONDENSATE DRAIN CONNECTION DETAIL
SCALE: NONE



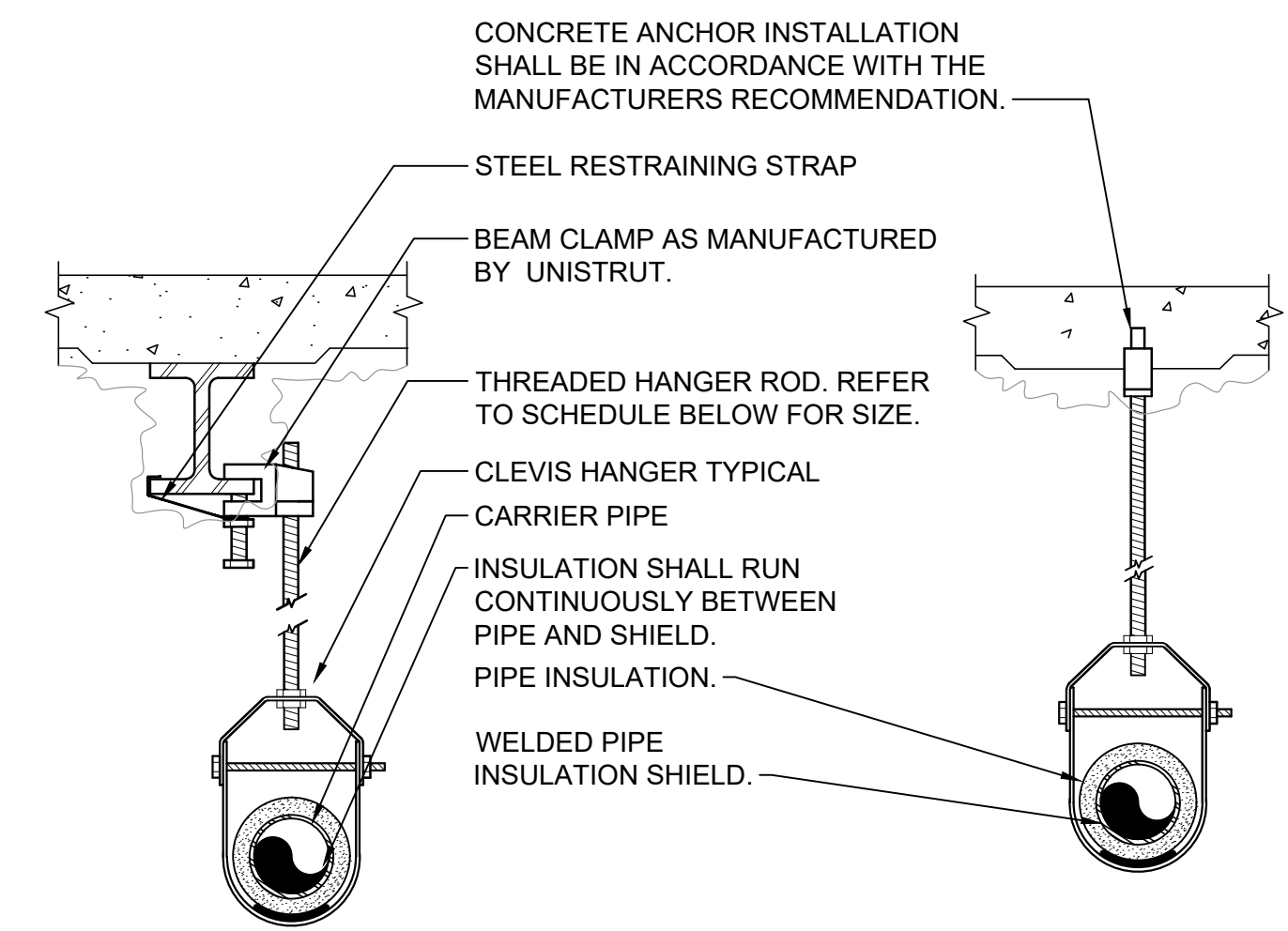
2 FLOOR PIPE SUPPORT DETAIL
SCALE: NONE



6 PIPE WALL SLEEVE DETAIL FOR INTERIOR WALLS
SCALE: NONE



4 PIPE INSULATION DETAIL
SCALE: NONE



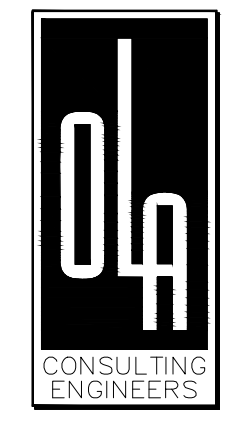
PIPE DIA.	3/4"-2"	2 1/2"-3"	4"-5"	6"	8"-12"
HANGER DIA.	3/8"	1/2"	5/8"	3/4"	7/8"

NOTES:
1. CLEVIS HANGERS WITH WELDED INSULATION SHIELDS SIMILAR TO RAUCH FIG. 100SH ON ALL PIPES LARGER THAN 1".
2. FOR PIPES 1" OR SMALLER, A BAND HANGER WITH INSULATION SHIELD MAY BE USED SIMILAR TO RAUCH FIG. NO. 1ASH.
3. FOR NON-INSULATED PIPE, INSULATION SHIELDS MAY BE OMITTED.
4. ALL PIPE HANGERS SHALL BE GALVANIZED STEEL OR FACTORY PAINTED BLACK WITH ENAMEL.
5. FOR NON FERROUS PIPING WITHOUT INSULATION, ALL HANGERS SHALL BE COPPER PLATED OR FURNISHED WITH A DI-ELECTRIC BETWEEN PIPE AND HANGERS.
6. WHERE EXISTING BUILDING STRUCTURAL COMPONENTS HAVE FIREPROOF MATERIAL, ANY AREA THAT IS DISTURBED OR DAMAGED AS A RESULT OF HANGER INSTALLATION SHALL BE PATCHED WITH UL AND FM APPROVED FIREPROOFING TO MATCH EXISTING.
7. ALL ANCHORS AND INSERTS SHALL HAVE NEW YORK CITY BOARD OF STANDARD AND APPEALS, (BSA) APPROVAL.

1 PIPE HANGER DETAIL
SCALE: NONE

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**CHILDREN'S LIBRARY
ACOUSTICAL TILE CEILING
AND PIPE INSULATION
REPLACEMENT**

MECHANICAL DETAILS

PROJECT NO.: NLAA0034.00 SCALE: AS NOTED

DRAWING NO.:
M-701

SPECIFICATIONS CONTINUED

- INCLUDED IN BASE BID. USE EXTREME CAUTION DURING ANY CUTTING OPERATION TO AVOID DAMAGE TO EXISTING EQUIPMENT/SYSTEMS. ANY ITEMS DAMAGED AS A RESULT OF CORE DRILLING SHALL BE REPAIRED AT NO COST TO THE CLIENT. ALL CORES SHALL BE FIRE SEALED.
- CONTRACTOR SHALL VERIFY CONDUIT ROUTING WITH OWNER AND/OR CLIENT PRIOR TO INSTALLATION.
- B. CONDUIT WORK:**
- ALL THREADED JOINTS IN CONDUIT WORK SHALL BE MADE WATERTIGHT BY A COATING OF THOMAS & BETTS KOPR-SHIELD COMPOUND ON THE MALE THREADS ONLY. WHENEVER THREADS ARE CUT, THEY SHALL BE COATED WITH KOPR-SHIELD BEFORE MAKING UP THE CONNECTION.
 - EXPOSED CONDUIT ON CEILING SHALL BE RUN PARALLEL OR PERPENDICULAR TO WALL AND VISE VERSA TO CEILING. WHEN INSTALLED ON WALL. SECURE CONDUIT CLAMPS AND SUPPORTS TO MASONRY MATERIALS BY TOGGLE BOLT, EXPANSION BOLT OR STEEL INSERT. SPACING OF CONDUIT SUPPORTS SHALL NOT EXCEED 7 FEET.
 - THE ENDS OF ALL CONDUIT SHALL BE CAREFULLY REAMED OUT FREE FROM BURRS BEFORE INSTALLATION AND AFTER THREADING. THE END OF EACH CONDUIT 1" AND SMALLER SHALL BE PROVIDED WHERE IT ENTERS A JUNCTION BOX, OUTLET BOX, CABINET, ETC., WITH A LOCK NUT AND BUSHINGS. FOR CONDUITS 1-1/4" AND LARGER, INSULATED BUSHINGS SHALL BE USED. IF INSULATED BUSHINGS ARE OF THE FULLY INSULATED TYPE, AN ADDITIONAL LOCK NUT SHALL BE USED INSIDE JUNCTION BOX OR CABINET BEFORE INSTALLING THE BUSHINGS.
 - FLEXIBLE SEAL-TITE CONDUIT AND SEAL-TITE FITTINGS SHALL BE USED TO CONNECT ALL MOTORS SO AS TO ISOLATE THE MOTION OR VIBRATION FROM THE RIGID CONDUIT SYSTEM AND THE BUILDING. AN EQUIPMENT GROUNDING CONDUCTOR SHALL BE PROVIDED IN ALL FLEXIBLE CONDUITS.
 - CONDUITS SHALL BE SECURELY FASTENED IN PLACE WITH STRAPS, HANGERS AND SUPPORTS AS REQUIRED.
 - CONDUIT IN HUNG CEILINGS SHALL BE SUPPORTED IN AN APPROVED MANNER FROM THE BUILDING STRUCTURE.
 - FLEXIBLE METALLIC CONDUIT OR MC CABLE SHALL BE USED FOR BRANCH CIRCUIT WIRING ABOVE HUNG CEILINGS AND IN PARTITIONS.
 - THE CONTRACTOR SHALL PROVIDE PULL BOXES, JUNCTION BOXES, CONDUITS, CONDUIT ELBOWS, AND OFFSETS IN CONDUIT RUNS WHICH INTERFERE WITH THE STRUCTURAL WOOD OR STEEL, MECHANICAL EQUIPMENT, DUCTWORK, PIPING, ETC., TO SUIT THE FIELD CONDITIONS.
 - NO MORE THAN THREE RIGHT ANGLE BENDS SHALL BE PERMITTED IN CONDUIT BETWEEN ANY TWO TERMINATION OR PULLBOXES. PROVIDE ADDITIONAL PULLBOXES AS REQUIRED.
 - TELEPHONE SERVICE CONDUITS SHALL HAVE ONE 18"x18"x8" PULL BOX AFTER 270 DEGREES OF BENDS WITH A MAXIMUM OF 360 DEGREES OF BEND PER RUN. ALL BENDS IN CONDUIT SHALL BE SWEEPING BENDS FOR FIBER OPTIC CABLE. 90 DEGREE BENDS SHALL NOT BE PERMITTED.
 - ALL MC CABLE RUNS ABOVE HUNG CEILINGS SHALL BE SECURED TO BUILDING STRUCTURE. NO MC CABLES SHALL BE LEFT UNSUPPORTED ON DUCTWORK OR CEILING TILES.
 - WHERE MULTIPLE HOME RUNS ARE ROUTED TOGETHER IN THE SAME RACEWAY LONGER THAN 24 INCHES, CONDUCTORS SHALL BE INCREASED TO #10 AWG FOR UP TO EIGHT CONDUCTORS (HOT & NEUTRAL) MAXIMUM. INSTALLATION SHALL BE IN ACCORDANCE WITH THE AFOREMENTIONED CODE.
- C. CABLE AND WIRING WORK:**
- CONDUCTORS FOR BRANCH CIRCUITS SHALL BE OF SIZES INDICATED ON THE ELECTRICAL DRAWINGS, BUT SHALL NOT BE SMALLER THAN NO. 12 AWG EXCEPT AS OTHERWISE SHOWN OR SPECIFIED.
 - ALL JOINTS, SPLICES AND TAPS FOR WIRING CONNECTIONS SHALL BE MADE WITH MATERIALS AS HEREINAFTER SPECIFIED.
 - CONDUCTORS SHALL BE CONTINUOUS FROM OUTLET TO OUTLET, AND NO SPLICES OR CONNECTIONS SHALL BE MADE, EXCEPT WITHIN OUTLET BOXES, JUNCTION BOXES OR CABINETS.
 - THE NEUTRAL WIRE SHALL NOT BE USED AS A GROUND WIRE. THE NEUTRAL WIRE SHALL BE AN INSULATED WIRE AND SHALL BE CONNECTED TO THE GROUND SYSTEM AT ONE PLACE ONLY. THIS CONNECTION SHALL BE MADE AT THE BEGINNING OF THE SEPARATELY DERIVED SYSTEM.
 - TELEPHONE/DATA CABLING RUN ABOVE THE HUNG CEILING SHALL NOT BE LEFT UNSUPPORTED. ALL CABLING SHALL BE SUPPORTED FROM THE BUILDING STRUCTURE.
- D. ELECTRICAL GROUNDING AND BONDING:**
- ALL CABINETS AND TERMINAL BOXES SHALL BE BONDED TO THE CONDUIT SYSTEM, AND WHERE APPLICABLE TO THE GROUND WIRE.
 - THE ELECTRICAL RACEWAY SYSTEM, METALLIC ELECTRICAL EQUIPMENT FRAMES, HOUSING AND ENCLOSURES SHALL BE BONDED TOGETHER AND GROUNDED.
 - THE EQUIPMENT BONDING JUMPERS SHALL NOT BE SMALLER THAN THE SIZES LISTED IN THE AFOREMENTIONED CODE.
 - GROUND LUGS FOR CABLE CONNECTIONS SHALL BE SIMILAR TO BURNDY, TYPE YAV FOR CONDUCTOR SIZES AS PERMITTED BY THE AFOREMENTIONED CODES.

- ALL GROUNDING AND BONDING SHALL BE INSTALLED IN A NEAT AND WORKMANLIKE MANNER AND SHALL BE AS INCONSPICUOUS AS POSSIBLE. ALL WORK EXPOSED TO MECHANICAL DAMAGE SHALL BE PROTECTED IN AN APPROVED MANNER. ALL GROUND SCREWS AND BUSHINGS SHALL BE MADE TIGHT.
 - THE PROVISION OF A FULLY-WIRED GROUNDING SYSTEM DOES NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY FOR PROVIDING CONTINUITY OF THE METALLIC RACEWAY SYSTEM. THE METALLIC RACEWAY SYSTEM SHALL BE ASSEMBLED AND BONDED TOGETHER TO FORM A CONTINUOUS PATH FROM THE MOST REMOTE OUTLET.
 - ALL GROUNDING WIRES, EXCEPT AS OTHERWISE SPECIFIED OR INDICATED ON THE DRAWINGS, SHALL BE SIZED IN ACCORDANCE WITH THE RULES OF THE AFOREMENTIONED CODE.
 - FOR CONNECTION TO THE GROUNDING SYSTEM, THE CONTRACTOR SHALL FURNISH AND INSTALL A GROUND LUG WELDED TO THE INTERIOR OF EVERY METALLIC BOX, CABINET, HOUSING OR ENCLOSURE WHICH IS FURNISHED UNDER THIS OR ANY OTHER SECTION OF THE SPECIFICATIONS.
 - EACH STEEL BOX SHALL BE CONNECTED BY THE USE OF A GROUNDING BUSHING ON RIGID CONDUIT, O.Z. TYPE BLG.
 - A SEPARATE GREEN INSULATED GROUND WIRE SHALL BE RUN WITH EACH CIRCUIT AS INDICATED.
- E. OUTLET BOXES:**
- OUTLET BOXES SHALL BE INSTALLED AT ALL LOCATIONS SHOWN ON THE DRAWINGS FOR ALL ELECTRICAL DEVICES INCLUDING CONVENIENCE RECEPTACLES AND LIGHTING FIXTURES. THE LOCATIONS OF THE OUTLETS ON THE DRAWINGS ARE APPROXIMATE. ACTUAL LOCATIONS SHALL BE COORDINATED IN THE FIELD.
 - ALL OUTLETS SHALL BE INSTALLED IN ACCESSIBLE LOCATIONS AND NONE SHALL BE INSTALLED ABOVE DUCTS, BEHIND FURRING OR OTHER SIMILAR LOCATIONS. ANY OUTLET DESIGNATED AS PROVIDING POWER FOR A PARTICULAR PIECE OF EQUIPMENT SHALL BE ACCESSIBLE FOR DISCONNECTION WITH SAID UNIT IN PLACE. ALL JUNCTION BOXES SHALL BE LABELED IDENTIFYING THE CIRCUIT(S) CONTAINED.
 - OUTLETS IN HUNG CEILING AREAS SHALL BE CONCEALED ABOVE HUNG CEILING FOR RECESSED LIGHTING FIXTURES; OR SET FLUSH WITH HUNG CEILING FOR SURFACE AND PENDANT MOUNTED LIGHTING FIXTURES. THESE OUTLETS SHALL BE SECURELY SUPPORTED FROM THE FRAMING WORK WHICH SUPPORTS THE CEILING OR FROM THE BUILDING STRUCTURE ABOVE THE CEILING.
 - WHERE NECESSARY FOR THE SUPPORT OF THE ELECTRICAL WORK, BARS, ANGLES OR CHANNEL MEMBERS OF SUITABLE SIZE SHALL BE FURNISHED AND INSTALLED.
 - MOUNTING HEIGHTS FOR ELECTRICAL DEVICES SHALL BE AS INDICATED ON ARCHITECTURAL PLANS. IF THERE ARE NO ARCHITECTURAL PLANS FOR THIS PROJECT THE MOUNTING SHALL BE AS FOLLOWS, UNLESS OTHERWISE NOTED ON THE PLANS:
 - LIGHT SWITCHES: 48" AFF TO CENTERLINE OF BOX.
 - WALL MOUNTED OCCUPANCY SENSORS: 48" AFF TO CENTERLINE OF BOX.
 - RECEPTACLES: 18" AFF TO CENTERLINE OF BOX.
 - DATA/TELEPHONE OUTLETS: 18" AFF TO CENTERLINE OF BOX.
 - FIRE ALARM MANUAL PULL STATION: 42" MIN./48" MAX. AFF TO HANDLE.
 - FIRE ALARM AUDIO AND/OR STROBE: 80" AFF TO BOTTOM OF STROBE LENS OR 6" FROM CEILING TO TOP OF STROBE LENS, WHICHEVER IS LOWER.
 - BLANK STEEL BOX COVERS SHALL BE INSTALLED ON ALL UNUSED OUTLETS UNLESS OTHERWISE INDICATED. IN FINISHED AREAS, BLANK COVERS SHALL BE PROVIDED. COLOR SHALL BE COORDINATED WITH THE ARCHITECT.
 - OUTLET BOXES FOR SWITCHES, RECEPTACLES AND COMMUNICATION OUTLETS SHALL NOT BE MOUNTED BACK-TO-BACK
- E-7 MATERIALS**
- A. CONDUIT:**
- MINIMUM SIZE OF CONDUIT SHALL BE 3/4" EXCEPT FOR LOW VOLTAGE CONTROL AND WIRING BETWEEN LIGHT FIXTURES WHERE 1/2" CONDUIT MAYBE USED OR UNLESS OTHERWISE INDICATED ON THE DRAWINGS OR SPECIFIED.
 - FLEXIBLE METALLIC CONDUIT, EXCEPT WHERE OTHERWISE SPECIFIED, SHALL BE SINGLE-STRIP ELECTROGAL VANIZED, SPIRALLY-WOUND, INTERLOCKED, STEEL FLEXIBLE CONDUIT.
 - MC CABLE MAY BE USED FOR WIRING IN CONCEALED AREAS OR AS INDICATED ON DRAWINGS. EMT SHALL BE USED IN ALL EXPOSED AREAS AND FOR WIRING PENETRATING FLOOR.
 - LOCKNUTS SHALL BE HEAVY GAUGE SHEET STEEL TYPE WITH A PLATED CORROSION-RESISTANT COATING.
 - BUSHINGS SHALL BE MALLEABLE IRON INSULATED TYPE WITH A CADMIUM COATING.
 - ALL CONDUIT INSTALLED IN WET LOCATIONS, OR WHERE EXPOSED TO WEATHER SHALL BE RIGID GALVANIZED STEEL CONDUIT (RGS), CONDUITS INSTALLED UNDERGROUND SHALL BE SCHEDULE 40 PVC AND INTERIOR CONDUITS SHALL BE EMT U.O.N.
 - ALL MAIN FEEDERS AND CIRCUITRY FOR MECHANICAL EQUIPMENT OR IN EXPOSED AREAS SHALL BE IN CONDUIT.
- B. SLEEVES:**
- SLEEVES THROUGH FIRE RESISTANT WALLS AND CEILINGS SHALL BE COMPLETELY PACKED WITH NON-COMBUSTIBLE FIRE STOP MATERIAL RATED FOR THE PARTICULAR WALL BEING PENETRATED. PENETRATIONS THRU FIRE RATED MATERIAL SHALL BE MINIMIZED.
- C. WIRE AND CABLE:**
- ALL WIRE AND CABLE SHALL HAVE SOFT ANNEALED COPPER CONDUCTORS WITH 600 VOLT INSULATION, AND SHALL BE LISTED AND APPROVED BY UNDERWRITERS' LABORATORIES, AND SHALL MEET

- ALL SPECIFICATIONS OF THE IPCEA-NEMA STANDARDS.
- ALL WIRE FOR GENERAL USE, UNLESS SHOWN OR SPECIFIED OTHERWISE, SHALL BE TYPE THHN. ALL WIRE INSTALLED UNDERGROUND OR ON ROOFTOPS SHALL BE TYPE XHHW-2 UNLESS OTHERWISE NOTED. WIRE #10 AWG AND SMALLER SHALL BE CONSISTENTLY COLOR CODED THROUGHOUT BY MEANS OF COLORING APPLIED TO THE OUTER COVERING TO INDICATE PHASE AND NEUTRAL. ALL OTHER WIRES AND CABLES SHALL BE COLOR CODED BY APPLICATION OF A BAND OF APPROPRIATELY COLORED PLASTIC TAPE APPLIED OVER THE JACKETS AT EACH OUTLET, JUNCTION, PULL AND TERMINAL POINTS. THE COLOR CODING FOR WIRING SHALL BE:

120/208V	277/480V	
PHASE A	BLACK	BROWN
PHASE B	RED	ORANGE
PHASE C	BLUE	YELLOW
	NEUTRAL	WHITE GRAY
	GROUND	GREEN GREEN
 - ALL BRANCH CIRCUIT CONDUCTORS SHALL BE MINIMUM #12 AWG SIZE UNLESS OTHERWISE INDICATED.
 - GROUND WIRE AND CABLE SHALL BE COPPER CONDUCTORS.
 - 120 VOLT CONDUCTOR LENGTHS IN EXCESS OF 100 FEET SHALL BE #10 AWG MIN.
- D. CONNECTORS FOR WIRE AND CABLE:**
- WIRE AND CABLE CONNECTORS SHALL BE SOLDERLESS, MECHANICAL, SOLID COPPER OR COPPER ALLOY TYPES. CONNECTORS SHALL BE BUCHANAN ELECTRICAL PRODUCTS COPPER SQUEEZE-ON TYPE WITH MOLDED RUBBER OR VINYL CAP, MINNESOTA MINING AND MANUFACTURING COMPANY "SCOTCHLOCK" OR IDEAL INDUSTRIES "SUPER NUT" SPRING CONNECTOR WITH MOLDED VINYL CAP.
 - CONNECTORS FOR CONDUCTORS LARGER THAN #8 AWG SHALL BE MECHANICAL BOLTED TYPE, INSULATED WITH CLAMP-ON MOLDED COVERS. THE MANUFACTURER SHALL BE OZ ELECTRICAL MANUFACTURING COMPANY OR BURNDY ENGINEERING COMPANY.
 - ELECTRICAL INSULATING TAPE SHALL BE VINYL PLASTIC TYPE WITH PRESSURE ADHESIVE, MINNESOTA MINING AND MANUFACTURING COMPANY "SCOTCH" NO. 33 ELECTRICAL TAPE APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION. ALL CONNECTORS AND CONNECTIONS HAVING IRREGULAR SURFACES SHALL BE PROPERLY PADDED WITH "SCOTCHFIL" PUTTY PRIOR TO APPLICATION OF TAPE.
 - ALL CABLE TIES INSTALLED IN PLENUM SHALL BE PANDUIT, TYPE HALAR, U.L. LISTED/APPROVED FOR USE IN PLENUM AREAS. ALL OTHER LOCATIONS SHALL BE NYLON TIE STRAPS AS MANUFACTURED BY THOMAS AND BETTS.
- E. WIRING AND OUTLET DEVICES:**
- UNLESS OTHERWISE NOTED, WIRING DEVICES SHALL BE AS HEREIN SPECIFIED OR AS PER BUILDING STANDARDS, INDUSTRIAL GRADE. DEVICES AND COVER PLATES SHALL BE GANGED UNDER COMMON FACEPLATE U.O.N. AND SHALL MATCH EXISTING DEVICES. VERIFY IN FIELD.
 - DUPLEX RECEPTACLES SHALL BE 15 OR 20 AMPERE, TWO-POLE, THREE WIRE, 125 VOLT, SELF GROUNDING, NEMA 5-15 OR 5-20, WITH MATCHING DEVICE PLATE.
 - ISOLATED GROUND DUPLEX RECEPTACLE SHALL BE 15 OR 20 AMPERE, 125 VOLT, NEMA 5-15 OR 5-20, (ORANGE) WITH WHITE COVER PLATE.
 - SINGLE POLE, THREE-WAY AND FOUR-WAY SWITCHES SHALL BE 15 OR 20 AMPERE, 120/277 VOLTS, TOGGLE TYPE, WITH MATCHING DEVICE PLATE.
 - GFI RECEPTACLE SHALL BE 15 OR 20 AMPERE, TWO-POLE, THREE WIRE, 125 VOLT, NEMA 5-15 OR 5-20, WITH MATCHING DEVICE PLATE. COORDINATE COLOR WITH ARCHITECT.
- F. OUTLET AND JUNCTION BOXES:**
- RECESSED CEILING FIXTURE OUTLETS SHALL BE 4-11/16" SQUARE SHEET METAL BOX WITH BLANK COVER AND SUITABLE HANGER BAR; BOX TO BE FASTENED TO CEILING SUSPENSION MEMBERS IN AN APPROVED MANNER, NOT LESS THAN 1'-0" FROM FIXTURE OPENING.
 - EXTENSION RINGS FOR FLUSH OUTLETS SHALL BE GALVANIZED, DRAWN SHEET STEEL 4" OCTAGONAL OR SQUARE, 4-11/16" SQUARE RINGS TO SUIT FLUSH OUTLETS, 1-1/2" DEEP OR DEEPER WHERE NECESSARY.
 - ALL EQUIPMENT EXPOSED TO THE OUTDOORS SHALL BE IN A NEMA-3R ENCLOSURE, INCLUDING THE GFI RECEPTACLES.
- G. MISCELLANEOUS MATERIALS:**
- PIPE STRAPS FOR EXPOSED CONDUIT SHALL BE HEAVY DUTY CADMIUM OR ZINC COATED, ONE SCREW, MALLEABLE RIGID CONDUIT CLAMPS, COMPLETE WITH BACKSTRAPS (CLAMP BACKS), APPLETON ELECTRIC COMPANY #17100 AND #27100 LINE.
 - HANGER RODS SHALL BE GALVANIZED OR CADMIUM PLATED THREADED STEEL RODS OF ADEQUATE SIZE TO SUPPORT THE LOAD WHICH THEY CARRY. MINIMUM DIAMETER SHALL BE 1/2".
 - INSERTS IN EXISTING CONCRETE WORK SHALL BE EXPANSION ANCHORS WITH TAPPED STEEL OR BRASS CORE NUTS SET IN DRILLED HOLES. PIERCE, PHILLIPS READ HEAD, STAR OR ACKERMAN-JOHNSON EXPANSION NUTS WILL BE ACCEPTABLE.
 - SPECIAL FASTENERS SHALL COMPRISE MISCELLANEOUS TYPES OF CONDUIT AND BOX FASTENERS OF MALLEABLE IRON OR STEEL WITH A CORROSION-RESISTANT COATING OF CADMIUM OR ZINC; THESE SHALL BE PROVIDED AS REQUIRED OR NECESSARY TO COMPLETE THE INSTALLATION OF ELECTRICAL WORK. THE TYPE SELECTED SHALL BE OF ADEQUATE STRENGTH FOR THE LOAD TO WHICH IT IS SUBJECTED AND OF A DESIGN SUITED TO THE INSTALLATION

- CONDITIONS.
- FASTENING HARDWARE SHALL BE CADMIUM OR ZINC-PLATED STEEL, SHEET METAL OR MACHINE SCREWS, BOLTS, NUTS, WASHERS, SHIMS AND SIMILAR FASTENING ACCESSORY HARDWARE.
 - REFER TO ENGINEERING DRAWINGS (ELECTRICAL, MECHANICAL OR PLUMBING) FOR DETAIL.
- H. LIGHTING FIXTURES:**
- FURNISH AND INSTALL ALL LIGHTING FIXTURES SHOWN AND AS DESCRIBED ON THE DRAWINGS. ALL NEW FIXTURES SHALL BE AS INDICATED BY THE FIXTURE SCHEDULE. ALL FIXTURES SHALL BE FURNISHED AND INSTALLED COMPLETE WITH ALL MOUNTING HARDWARE AS REQUIRED BY SPECIFIC CEILING CONSTRUCTION OR OTHER MOUNTING METHODS. ALSO PROVIDE ALL YOKES, BACKBOXES, APPROVED HANGERS, ALL REQUIRED MISCELLANEOUS HARDWARE AND LAMPS. ALL STEEL PARTS SHALL BE BONDERIZED AND PHOSPHATIZED. ALL FIXTURES AND TRIMS SHALL BE FREE FROM LIGHT LEAKS.
 - SUPPORT EACH FIXTURE SECURELY. RECESSED FLUORESCENT FIXTURES SHALL BE SECURED AT A MINIMUM OF TWO POINTS TO THE BUILDING STRUCTURE TO MEET THE LOCAL BUILDING CODE SEISMIC REQUIREMENTS.
 - UPON COMPLETION OF WORK AND AFTER THE BUILDING AREA IS BROOM CLEAN, ALL FIXTURES SHALL BE MADE CLEAN. USE DESTAINTIZING CLOTH ON ALL PLASTIC AND GLASS MATERIAL.
 - RELAMPING ACCESS SHALL REQUIRE NO SPECIAL TOOLS.
 - ALL FLUORESCENT FIXTURES SHALL BE EQUIPPED WITH ELECTRONIC BALLASTS.
 - ALL FLUORESCENT LAMPS SHALL BE WARM WHITE 3000K, 82 CRI UNLESS OTHERWISE INDICATED. FURNISH NEW LAMPS FOR ALL NEW FIXTURES.
- I. PULLBOXES AND TROUGHS:**
- PULLBOXES AND TROUGHS WITH COVERS SHALL BE FABRICATED FROM MINIMUM #12 USSG GALVANIZED SHEET STEEL WITH ALL SEAMS AND JOINTS WELDED AND GROUND SMOOTH. COVERS SHALL BE SECURED TO PULLBOXES WITH NICKEL OR CADMIUM PLATED, OVAL HEAD SCREWS PROVIDED WITH STOP BEAD WASHERS. TROUGHS SHALL HAVE HINGED COVERS AND SHALL BE HELD CLOSED WITH EXTERNAL CLAMPS. DIMENSIONS OF BOXES AND TROUGHS SHALL BE AS REQUIRED BY ARRANGEMENT OF CONDUITS, EQUIPMENT OR APPLICABLE CODE REQUIREMENTS.
 - PULLBOXES AND TROUGHS SHALL BE FINISHED INSIDE AND OUTSIDE WITH A SHOP-APPLIED COAT OF ASA #61 LIGHT GRAY ENAMEL.
 - THE CONTRACTOR SHALL PROVIDE ALL PULLBOXES REQUIRED TO PULL WIRES IN CONDUIT RUNS WHETHER INDICATED ON THE DRAWINGS OR NOT. BOXES AND TROUGHS USING CONCENTRIC OR ACENTRIC KNOCKOUTS SHALL BE GROUNDED TO THE INCOMING CONDUITS BY MEANS OF GROUNDING FITTINGS AND BONDING JUMPERS. OZ TYPE BLG INSULATED GROUNDING BUSHINGS, AS SPECIFIED ELSEWHERE, SHALL BE USED. BONDING JUMPERS SHALL BE COPPER SIZED IN ACCORDANCE WITH THE AFOREMENTIONED CODE. A GROUND LUG SHALL BE WELDED INSIDE EACH BOX AND TROUGH.
- M. ALTERATIONS AND REMOVAL OF EXISTING EQUIPMENT, CONDUIT & WIRING:**
- THE EXISTING BUILDING ELECTRICAL SYSTEMS SHALL BE MAINTAINED IN OPERATION DURING THE CONSTRUCTION PERIOD. EXISTING SYSTEMS SHALL NOT BE SHUT DOWN NOR SHALL CONNECTIONS BE MADE THERETO WITHOUT PRIOR APPROVAL OF THE OWNER.
 - CERTAIN EXISTING CONDUITS AND ASSOCIATED WIRING ARE INDICATED ON THE DRAWINGS ACCORDING TO THE BEST INFORMATION AVAILABLE. CERTAIN OTHER EXISTING CONDUITS AND ASSOCIATED WIRING MAY NOT BE SHOWN. THE CONTRACTOR SHALL MAKE EVERY EFFORT TO DETERMINE THE LOCATION OF EXISTING CONDUIT AND WIRING AS REQUIRED FOR NEW CONSTRUCTION OR IF DAMAGED DURING CUTTING OPERATIONS, REPLACE/REPAIR AT NO EXPENSE TO THE OWNER.
 - WHERE EQUIPMENT IS REMOVED OR WHERE WALLS AND CEILINGS ARE DEMOLISHED, WIRING DEVICES, CONDUIT, WIRING AND INSTALLATION MATERIAL (FITTINGS, BOXES, HANGERS, SUPPORTS, ETC.) THAT IS NOT TO BE REUSED SHALL BE REMOVED. ALL CONDUITS REMOVED SHALL BE CUT FLUSH WITH CONSTRUCTION AND OPENINGS PATCHED. ALL WIRING REMOVED SHALL BE DISCONNECTED AS FAR BACK AS THE BRANCH CIRCUIT PANELBOARD TERMINALS UNLESS OTHERWISE NOTED. WHERE WIRING IS TO REMAIN IN EXISTING CONDUITS TO MAINTAIN CONTINUITY OF CIRCUITS AND PASSES THROUGH OUTLET BOXES NOT TO BE REUSED FOR WIRING DEVICES OR LIGHTING FIXTURES, SUCH OUTLETS SHALL BE FURNISHED WITH COVERPLATES. ACTIVE CIRCUITS, IF REQUIRED AND NECESSARY TO REMAIN, SHALL BE REROUTED WITH NEW MATERIALS.
 - ALL EQUIPMENT WHICH IS BEING REMOVED AND NOT BEING REUSED SHALL BE RETURNED TO THE OWNER OR DISPOSED OF AS DIRECTED.
 - CONTRACTOR SHALL MEASURE STEADY STATE LOAD CURRENTS ON EACH PANELBOARD FEEDER OR EACH PANELBOARD THAT WAS ALTERED. SHOULD THE DIFFERENCE AT ANY PANELBOARD BETWEEN PHASES EXCEED 20 PERCENT, REARRANGE CIRCUITS IN PANELBOARD TO BALANCE THE PHASE LOAD WITHIN 20 PERCENT. TAKE CARE TO MAINTAIN PROPER PHASING FOR MULTI-WIRE BRANCH CIRCUITS. UPDATE DIRECTORIES ACCORDINGLY.
- E-8 FIRE ALARM SYSTEM MODIFICATIONS**
- A. NEW FIRE ALARM SYSTEM COMPONENTS AND OPERATION SHALL BE PER BUILDING STANDARDS AND AS INDICATED.**
- B. ALL NEW FIRE ALARM DEVICES TO BE INSTALLED IN THE SPACE SHALL BE SPECIFICATIONS CONTINUED ON NEXT PAGE.**



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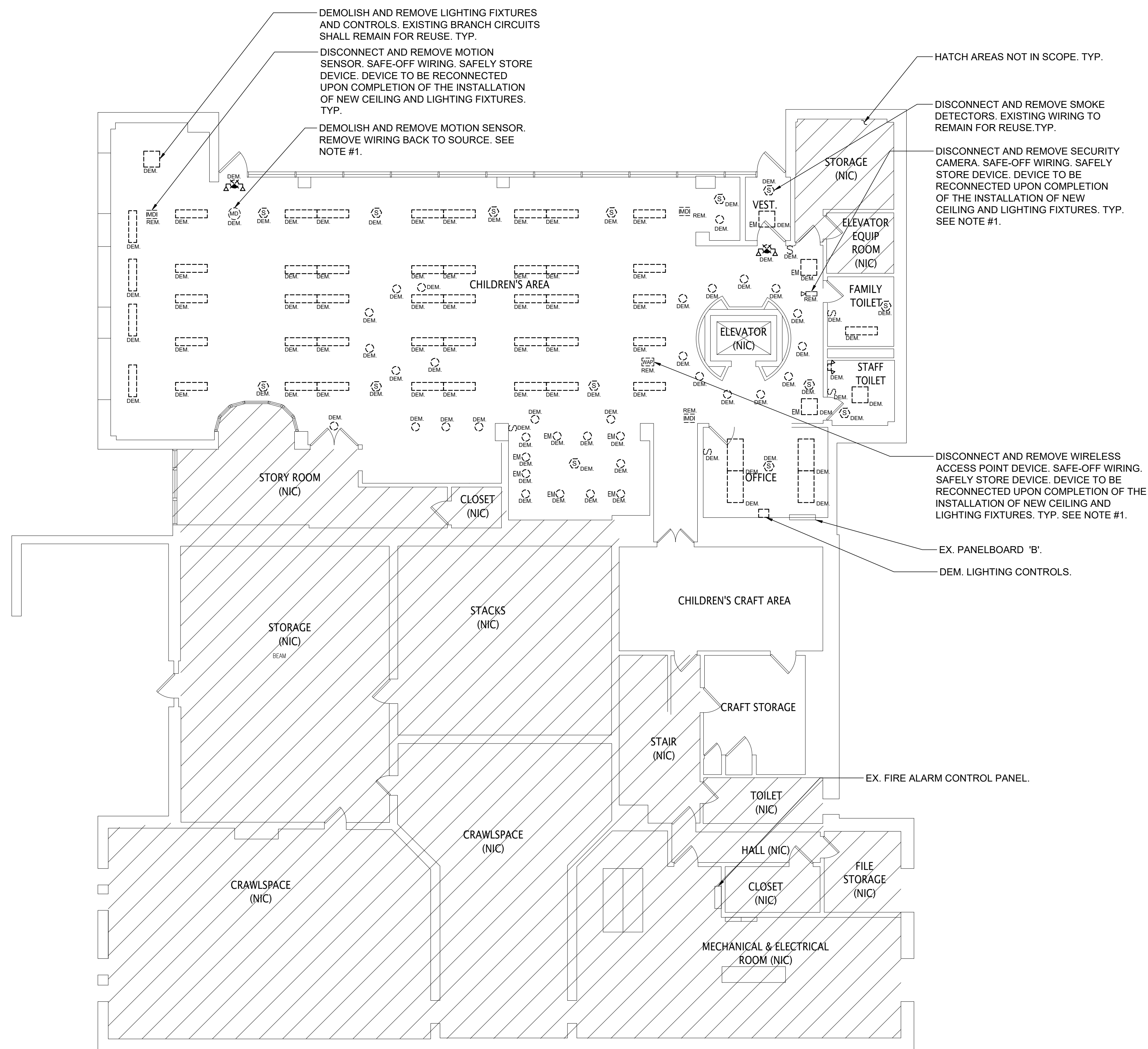
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ELECTRICAL SPECIFICATIONS

PROJECT NO.: NLA0034.00	SCALE:	AS NOTED
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DRAWING NO.:

E-002



1

ELECTRICAL LOWER LEVEL DEMOLITION PLAN

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

NOTES:

1.) COORDINATE REMOVAL AND REINSTALLATION OF ALL LOW VOLTAGE DEVICES INCLUDING AT A MINIMUM, SMOKE DETECTORS, SECURITY CAMERAS, WIRELESS ACCESS POINTS, MOTION SENSORS, AND ASSOCIATED CABLE/WIRING, ETC. WITH THE CLIENT'S LOW VOLTAGE VENDORS TO ACCOMMODATE THE REMOVAL AND REINSTALLATION OF THE CEILING. CONTACT GLOBAL SYSTEMS INTEGRATOR (SAL LOPES OR SIMON LOPES) AT 914-592-8372 FOR THE FIRE ALARM AND SECURITY SYSTEM/DEVICES AND CONTACT RYEBROOK SECURITY AT 914-934-7700 FOR THE CCTV SYSTEM/DEVICES. DEVICES SHALL BE CLEANED AND STORED DURING CONSTRUCTION AND WIRING/CABLES SAFE-OFF AND PROTECTED TO BE REUTILIZED. EXTEND WIRING/CABLES AS REQUIRED.

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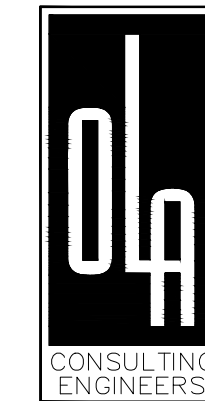
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ELECTRICAL LOWER LEVEL DEMOLITION PLAN

PROJECT NO.: NLAA0034.00 SCALE: AS NOTED

DRAWING NO.:

E-101



DESIGN INTENT - LIGHTING CONTROL SYSTEM

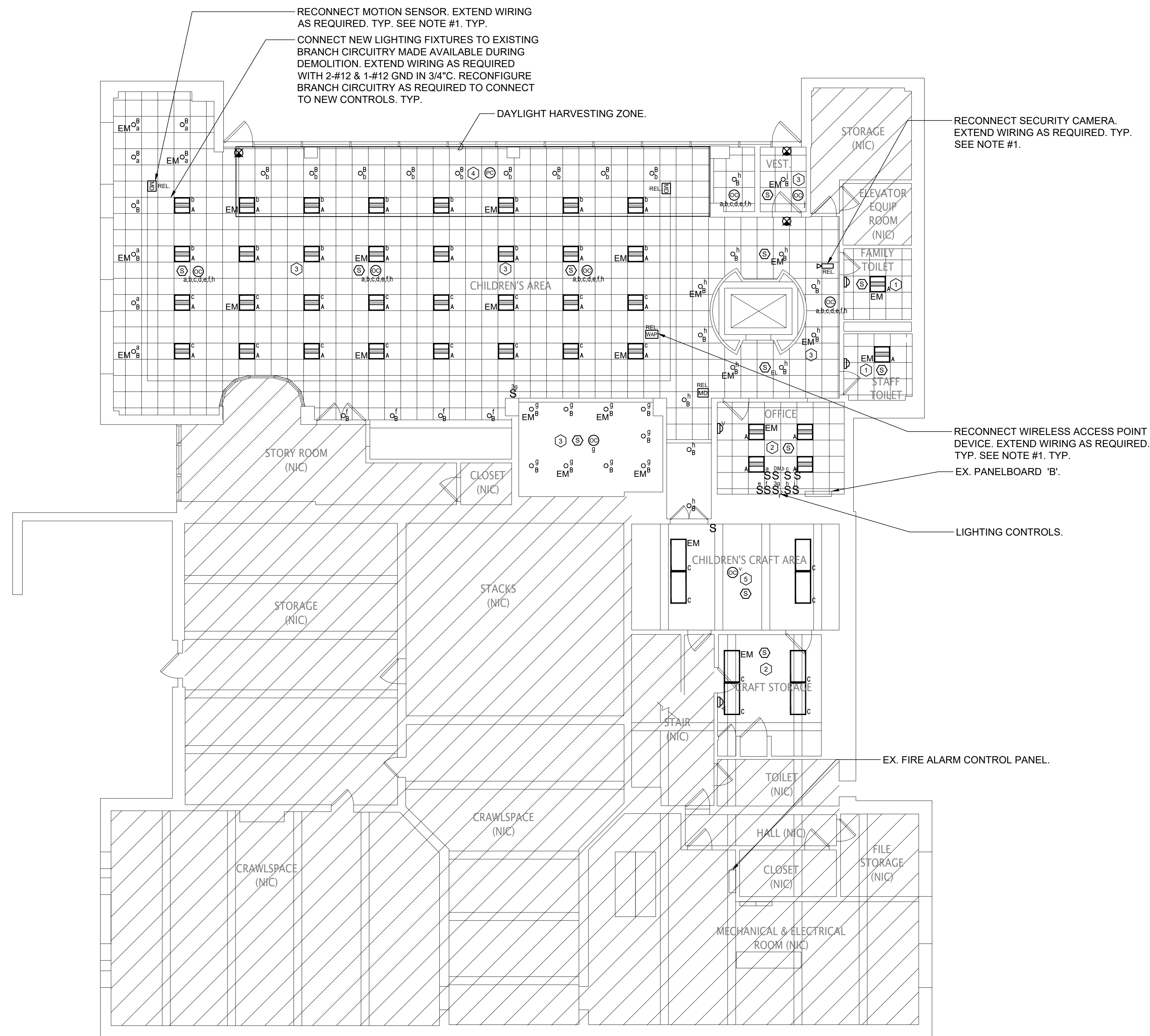
- 1.) LIGHTING CONTROL SYSTEM IS BASED ON N-LIGHT BY SENSOR SWITCH (FINN O'BRIEN (646) 352-2188) OR APPROVED EQUAL. (OTHER ACCEPTABLE MANUFACTURERS ARE LUTRON & COOPER LIGHTING.)
- 2.) LIGHTING CONTROL COMPONENTS SHOWN ARE FOR GENERAL DESIGN INTENT. ALL COMPONENTS AND WIRING ARE NOT SHOWN. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL NECESSARY COMPONENTS, WIRING (LINE AND LOW VOLTAGE) AND PROGRAMMING FOR A FULLY OPERATIONAL SYSTEM. CONTRACTOR IS RESPONSIBLE FOR DELEGATED DESIGN OF THE SYSTEM BASED ON THE DESIGN INTENT INCLUDED ON THESE DRAWINGS.
- 3.) THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE LIGHTING CONTROLS WITH LIGHT FIXTURES.
- 4.) ALL LIGHT FIXTURE AND LIGHTING CONTROL SUBMITTALS SHALL BE SUBMITTED AT THE SAME TIME FOR APPROVAL.

LIGHTING CONTROL LEGEND

- ① LINE VOLTAGE WALL SWITCH DUAL TECHNOLOGY OCCUPANCY SENSOR.
- ② LINE VOLTAGE WALL SWITCH DUAL TECHNOLOGY VACANCY SENSOR.
- ③ TIMECLOCK WITH DUAL TECHNOLOGY OCCUPANCY CONTROL AFTER HOURS WITH MANUAL OVERRIDE SWITCH.
- ④ DAYLIGHT HARVESTING
- ⑤ LINE VOLTAGE CEILING MOUNTED DUAL TECHNOLOGY VACANCY SENSOR WITH LINE VOLTAGE WALL SWITCH.

NOTES:

1.) COORDINATE REMOVAL AND REINSTALLATION OF ALL LOW VOLTAGE DEVICES INCLUDING AT A MINIMUM, SMOKE DETECTORS, SECURITY CAMERAS, WIRELESS ACCESS POINTS, MOTION SENSORS, AND ASSOCIATED CABLE/WIRING, ETC. WITH THE CLIENT'S LOW VOLTAGE VENDORS TO ACCOMMODATE THE REMOVAL AND REINSTALLATION OF THE CEILING. CONTACT GLOBAL SYSTEMS INTEGRATOR (SAL LOPES OR SIMON LOPES) AT 914-592-8372 FOR THE FIRE ALARM AND SECURITY SYSTEM/DEVICES AND CONTACT RYEBROOK SECURITY AT 914-934-7700 FOR THE CCTV SYSTEM/DEVICES. DEVICES SHALL BE CLEANED AND STORED DURING CONSTRUCTION AND WIRING/CABLES SAFE-OFF AND PROTECTED TO BE REUTILIZED. EXTEND WIRING/CABLES AS REQUIRED.



1

ELECTRICAL LOWER LEVEL NEW WORK CEILING PLAN
SCALE: 1/8" = 1'-0"

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ELECTRICAL LOWER LEVEL NEW WORK CEILING PLAN

PROJECT NO.: NLAA0034.00 SCALE: AS NOTED

DRAWING NO.:

E-201

LIGHTING FIXTURE SCHEDULE							
FIXTURE DESIGNATION	MANUFACTURER	CATALOG NUMBER	WATTAGE	LUMENS	VOLTS	MOUNTING	REMARKS
A	FOCAL POINT	FZR-22-FL-3500L-30K-UNV-G-WH	33W	3500	120V 277V	RECESSED	ZEPHYR 2' x 2' LED, 3000K
A-EM	FOCAL POINT	FZR-22-FL-3500L-30K-UNV-G-EM-WH	33W	3500	120V 277V	RECESSED	ZEPHYR 2' x 2' LED, 3000K, 10 WATT 120 EM BATTERY PACK
B	FOCAL POINT	FLC3D-RO-SW-900L-UNV-LC3-35K-WH	10W	919	120V 277V	RECESSED	ID+3.5", 3.5" DIAMETER LED DOWNLIGHT, 3500K
B-EM	FOCAL POINT	FLC3D-RO-SW-900L-UNV-EMR-LC3-35K-WH	10W	919	120V 277V	RECESSED	ID+3.5", 3.5" DIAMETER LED DOWNLIGHT, 3500K, 7 WATT EM BATTERY PACK WITH REMOTE TEST / INDICATOR LIGHT
C	FOCAL POINT	FAM2-24-ACR-5000L-30K-1C-UNV-C24-WH	38W	5000	120V 277V	SURFACE	2' x 4' LED FLAT LENS, PENDANT MOUNTED WITH 24" AIRCRAFT CABLE, 3000K
C-EM	FOCAL POINT	FAM2-24-ACR-5000L-30K-1C-UNV-C24-EM-WH	38W	5000	120V 277V	SURFACE	2' x 4' LED FLAT LENS, PENDANT MOUNTED WITH 24" AIRCRAFT CABLE, 3000K, 10 WATT EM BATTERY PACK WITH INTEGRAL TEST SWITCH
	LITHONIA LIGHTING	LQM-S-W-3-R-MVOLT-ELN-SD	LED	-	120V	SURFACE	LED EXIT SIGN, THERMOPLASTIC HOUSING WITH 90 MINUTES OF BATTERY BACKUP TIME, MIN., UNIVERSAL MOUNTING, RED LETTERS ON WHITE BACKGROUND AND NICKEL CADMIUM BATTERY. PROVIDE CHEVRONS AS INDICATED ON DRAWINGS.

NOTES:

- 1.) VERIFY ALL FIXTURE CATALOG NUMBERS FOR INTENDED APPLICATIONS WITH REQUIRED ACCESSORIES.
- 2.) LIGHT FIXTURES INDICATED AS EMERGENCY (EM) ON DRAWINGS SHALL CONTAIN AN EMERGENCY BACK-UP BATTERY WHERE POSSIBLE THE SHALL BE INTERNAL TO FIXTURE WITH A VISUAL INDICATING CHARGE LAMP AND TEST SWITCH. IF IT IS NOT POSSIBLE TO INSTALL THE EMERGENCY BATTERY IN THE FIXTURE, THE CONTRACTOR SHALL FURNISH & INSTALL A REMOTE EMERGENCY BATTERY. EACH BATTERY PACK SHALL BE CONNECTED SO THAT THE FIXTURE CAN BE SWITCHED UNDER NORMAL CONDITIONS AND IN THE EVENT OF A POWER OUTAGE, THE FIXTURE SHALL AUTOMATICALLY ILLUMINATE FOR 90 MINUTES WITH A 1200 LUMEN OUTPUT (TOTAL FROM FIXTURE), MINIMUM.
- 3.) ALL EXIT AND EMERGENCY FIXTURES SHALL BE FED FROM UNSWITCHED LEG OF ASSOCIATED LOCAL LIGHTING CIRCUITS.
- 4.) IN THE EVENT THE CONTRACTOR CHOOSES TO SUBSTITUTE LIGHT FIXTURES FOR THOSE THAT ARE SPECIFIED ON THE LIGHT FIXTURE SCHEDULE, THE CONTRACTOR SHALL SUBMIT POINT-TO-POINT PHOTOMETRIC CALCULATIONS FOR ALL AREAS WHERE THE SUBSTITUTED FIXTURES ARE INDICATED TO BE INSTALLED ON THE DRAWINGS. THESE CALCULATIONS SHALL BE SUBMITTED ALONG WITH THE LIGHT FIXTURE SHOP DRAWINGS.

LIGHTING SYSTEM FUNCTIONAL TESTING/COMMISSIONING

I. FUNCTIONAL TESTING

PRIOR TO PASSING FINAL INSPECTION, THE CONTRACTOR SHALL PROVIDE EVIDENCE TO THE BUILDING OWNER AND THE ENGINEER THAT THE LIGHTING CONTROL SYSTEMS HAVE BEEN TESTED TO ENSURE THAT CONTROL HARDWARE AND SOFTWARE ARE CALIBRATED, ADJUSTED, PROGRAMMED AND IN PROPER WORKING CONDITION IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS AND MANUFACTURER'S DOCUMENTS. FUNCTIONAL TESTING, FOR THE APPLICABLE CONTROL TYPE, SHALL BE IN ACCORDANCE WITH THE FOLLOWING:

1. OCCUPANT SENSOR CONTROLS

WHERE OCCUPANT SENSOR CONTROLS ARE PROVIDED, THE FOLLOWING PROCEDURES SHALL BE PERFORMED:

- A. CERTIFY THAT THE OCCUPANT SENSOR HAS BEEN LOCATED AND AIMED IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS.
- B. FOR PROJECTS WITH SEVEN OR FEWER OCCUPANT SENSORS, EACH SENSOR SHALL BE TESTED.
- C. FOR PROJECTS WITH MORE THAN SEVEN OCCUPANT SENSORS, TESTING SHALL BE DONE FOR EACH UNIQUE COMBINATION OF SENSOR TYPE AND SPACE GEOMETRY. WHERE MULTIPLES OF EACH UNIQUE COMBINATION OF SENSOR TYPE AND SPACE GEOMETRY ARE PROVIDED, NOT LESS THAN 10 PERCENT, BUT IN NO CASE LESS THAN ONE, OF EACH COMBINATION SHALL BE TESTED UNLESS THE BUILDING OFFICIAL OR DESIGN PROFESSIONAL REQUIRES A HIGHER PERCENTAGE TO BE TESTED. WHERE 30 PERCENT OR MORE OF THE TESTED CONTROLS FAIL, ALL REMAINING IDENTICAL COMBINATIONS SHALL BE TESTED.

FOR OCCUPANT SENSOR CONTROLS TO BE TESTED, VERIFY THE FOLLOWING:

- i. WHERE OCCUPANT SENSOR CONTROLS INCLUDE STATUS INDICATORS, VERIFY CORRECT OPERATION.
- ii. THE CONTROLLED LIGHTS TURN OFF OR DOWN TO THE PERMITTED LEVEL WITHIN THE REQUIRED TIME.
- iii. FOR AUTO-ON OCCUPANT SENSOR CONTROLS, THE LIGHTS TURN ON TO THE PERMITTED LEVEL WHEN AN OCCUPANT ENTERS THE SPACE.
- iv. FOR MANUAL-ON OCCUPANT SENSOR CONTROLS, THE LIGHTS TURN ON ONLY WHEN MANUALLY ACTIVATED.
- v. THE LIGHTS ARE NOT INCORRECTLY TURNED ON BY MOVEMENT IN ADJACENT AREAS OR BY HVAC OPERATION.

2. TIME-SWITCH CONTROLS

WHERE TIME-SWITCH CONTROLS ARE PROVIDED, THE FOLLOWING PROCEDURES SHALL BE PERFORMED:

- A. CONFIRM THAT THE TIME-SWITCH CONTROL IS PROGRAMMED WITH ACCURATE WEEKDAY, WEEKEND AND HOLIDAY SCHEDULES.
- B. PROVIDE DOCUMENTATION TO THE OWNER OF TIME-SWITCH CONTROLS PROGRAMMING INCLUDING WEEKDAY, WEEKEND, HOLIDAY SCHEDULES, AND SET-UP AND PREFERENCE PROGRAM SETTINGS.
- C. VERIFY THE CORRECT TIME AND DATE IN THE TIME SWITCH.
- D. VERIFY THAT ANY BATTERY BACK-UP IS INSTALLED AND ENERGIZED.
- E. VERIFY THAT THE OVERRIDE TIME LIMIT IS SET TO NOT MORE THAN 2 HOURS.
- F. SIMULATE OCCUPIED CONDITION. VERIFY AND DOCUMENT THE FOLLOWING:
 - i. ALL LIGHTS CAN BE TURNED ON AND OFF BY THEIR RESPECTIVE AREA CONTROL SWITCH.
 - ii. THE SWITCH ONLY OPERATES LIGHTING IN THE ENCLOSED SPACE IN WHICH THE SWITCH IS LOCATED.
- G. SIMULATE UNOCCUPIED CONDITION. VERIFY AND DOCUMENT THE FOLLOWING:
 - i. NONEXEMPT LIGHTING TURNS OFF.
 - ii. MANUAL OVERRIDE SWITCH ALLOWS ONLY THE LIGHTS IN THE ENCLOSED SPACE WHERE THE OVERRIDE SWITCH IS LOCATED TO TURN ON OR REMAIN ON UNTIL THE NEXT SCHEDULED SHUTOFF OCCURS.

3. DAYLIGHT RESPONSIVE CONTROLS

WHERE DAYLIGHT RESPONSIVE CONTROLS ARE PROVIDED, THE FOLLOWING SHALL BE VERIFIED:

- A. CONTROL DEVICES HAVE BEEN PROPERLY LOCATED, FIELD CALIBRATED AND SET FOR ACCURATE SET POINTS AND THRESHOLD LIGHT LEVELS.
- B. DAYLIGHT CONTROLLED LIGHTING LOADS ADJUST TO LIGHT LEVEL SET POINTS IN RESPONSE TO AVAILABLE DAYLIGHT.
- C. THE CALIBRATION ADJUSTMENT EQUIPMENT IS LOCATED FOR READILY ACCESS ONLY BY AUTHORIZED PERSONNEL.

II. DOCUMENTATION REQUIREMENTS

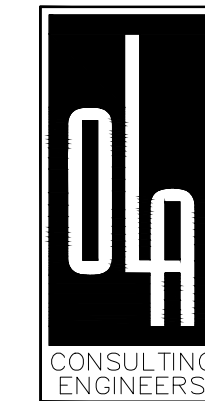
THE DOCUMENTS DESCRIBED IN THIS SECTION SHALL BE PROVIDED TO THE BUILDING OWNER OR OWNER'S AUTHORIZED AGENT WITHIN 60 DAYS OF THE DATE OF RECEIPT OF THE CERTIFICATE OF OCCUPANCY.

- A. DRAWINGS:
 - i. AS-BUILT CONSTRUCTION DOCUMENTS, SHOWING THE LOCATION AND CATALOG NUMBER OF EACH PIECE OF EQUIPMENT.
- B. MANUALS: AN OPERATING AND MAINTENANCE MANUAL SHALL BE PROVIDED AND INCLUDE THE FOLLOWING:
 - i. NAME AND ADDRESS OF NOT LESS THAN ONE SERVICE AGENCY FOR INSTALLED EQUIPMENT.
 - ii. A NARRATIVE OF HOW EACH SYSTEM IS INTENDED TO OPERATE, INCLUDING RECOMMENDED SET POINTS.
 - iii. SUBMITTAL DATA INDICATING ALL SELECTED OPTIONS FOR EACH PIECE OF LIGHTING EQUIPMENT AND LIGHTING CONTROLS.
 - iv. OPERATION AND MAINTENANCE MANUALS FOR EACH PIECE OF LIGHTING EQUIPMENT. REQUIRED ROUTINE MAINTENANCE ACTIONS, CLEANING AND RECOMMENDED RELAMPING SHALL BE CLEARLY IDENTIFIED.
 - v. A SCHEDULE FOR INSPECTING AND RECALIBRATING ALL LIGHTING CONTROLS.
- C. REPORT: A REPORT OF TEST RESULTS SHALL BE PROVIDED AND INCLUDE THE FOLLOWING.
 - i. RESULTS OF FUNCTIONAL PERFORMANCE TESTS.
 - ii. DISPOSITION OF DEFICIENCIES FOUND DURING TESTING, INCLUDING DETAILS OF CORRECTIVE MEASURES USED OR PROPOSED.



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**ELECTRICAL LIGHTING
FIXTURE SCHEDULE**

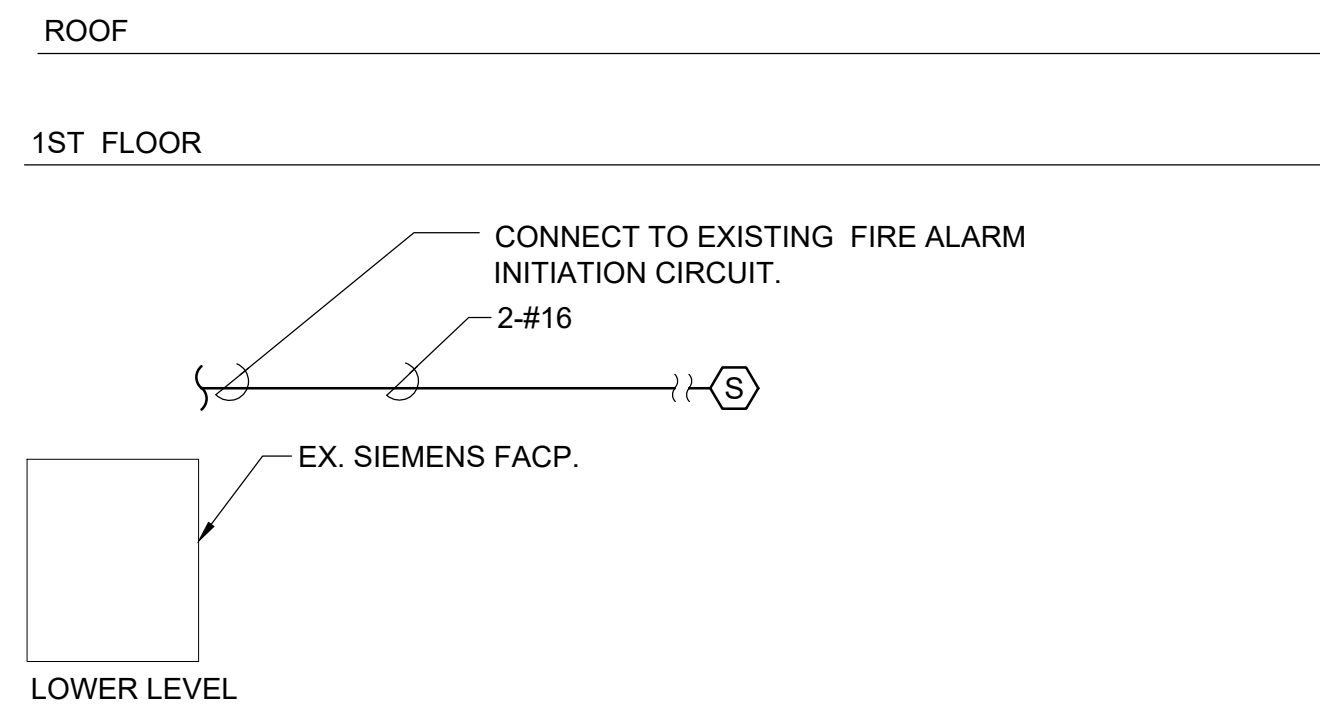
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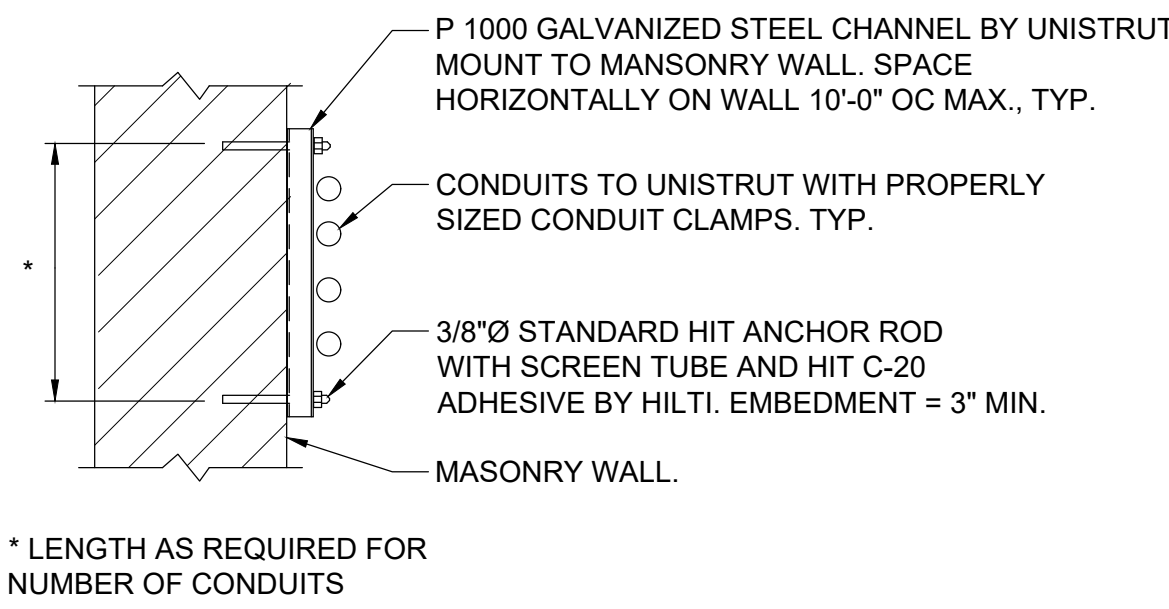
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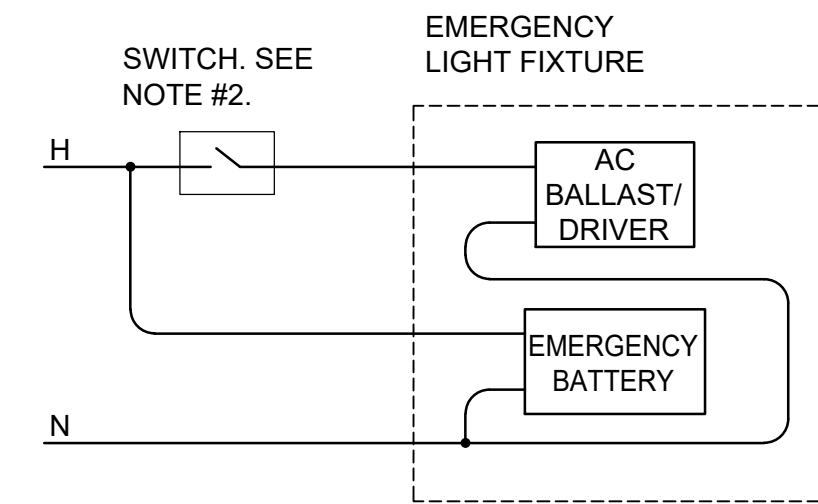
1. THIS IS NOT A POINT-TO-POINT WIRING DIAGRAM. PRIOR TO STARTING ANY WORK, A WORKING POINT-TO-POINT WIRING DIAGRAM SHALL BE OBTAINED FROM FIRE ALARM SYSTEM VENDOR AND PERFORM ALL WORK IN ACCORDANCE WITH THAT DIAGRAM.
2. ELECTRICAL CONTRACTOR SHALL INCLUDE IN THE BASE BID ALL 120V CIRCUITS THAT ARE REQUIRED TO SUPPORT THE OPERATION OF THE FIRE ALARM SYSTEM. COORDINATE REQUIREMENTS WITH THE FIRE ALARM VENDOR.
3. QUANTITY OF STROBE BOOSTER POWER SUPPLY PANELS AND ASSOCIATED 120V CIRCUITS SHALL BE COORDINATED WITH SELECTED FIRE ALARM SYSTEM MANUFACTURER AND/OR FIRE ALARM VENDOR.
4. PROVIDE ALL NECESSARY WIRING, MODULES, COMPONENTS, EXTENDER CABINET, AND PROGRAMMING REQUIRED TO CONNECT NEW DEVICES TO EXISTING SYSTEM.
5. PROVIDE AS PART OF THE BASE CONTRACT ALL LABOR AND MATERIALS TO INSTALL FIVE (5) ADDITIONAL FIRE ALARM DEVICES DURING CONSTRUCTION. THE FIVE (5) FIRE ALARM DEVICES CAN BE BUT NOT LIMITED TO SMOKE DETECTOR, HEAT DETECTOR, ETC. INCLUDE ALL LABOR AND MATERIALS INCLUDING WIRE, BOXES, CONDUIT, TERMINATIONS, HARDWARE, SOFTWARE, PROGRAMMING AND TESTING.
6. ALL VISUAL ALARM DEVICES SHALL BE ADA COMPLIANT.
7. FIRE ALARM VENDOR IS GLOBAL SYSTEM INTEGRATORS AT 914-592-8372.



8 FIRE ALARM PARTIAL RISER DIAGRAM
SCALE: NONE

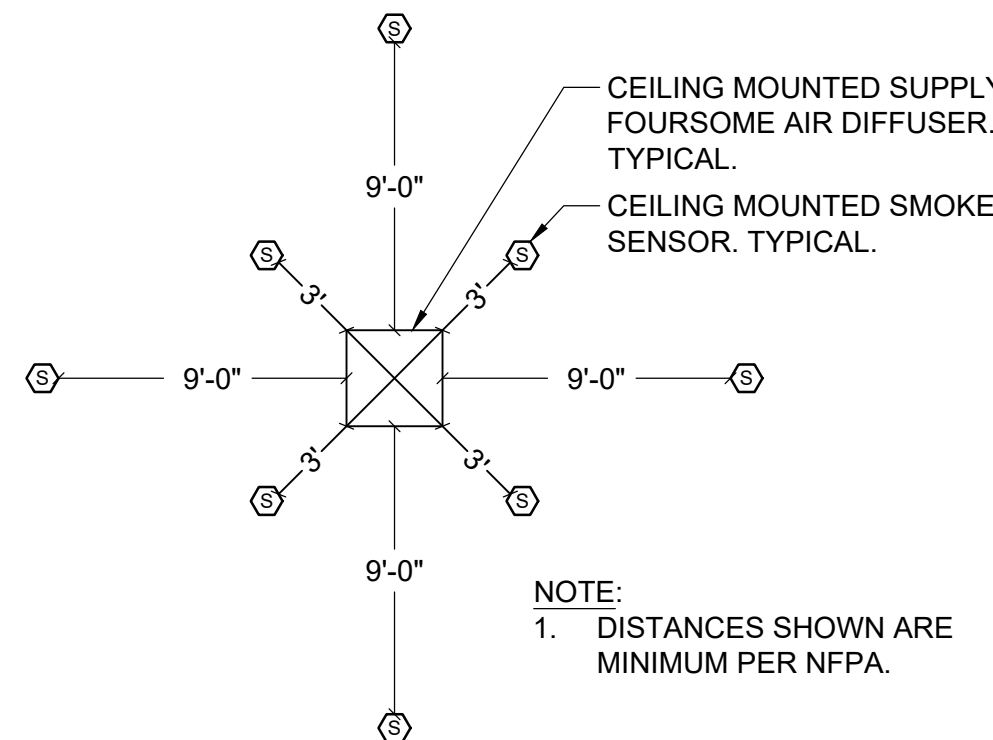


6 TYPICAL CONDUIT SUPPORT ON MASONRY DETAIL
SCALE: NONE

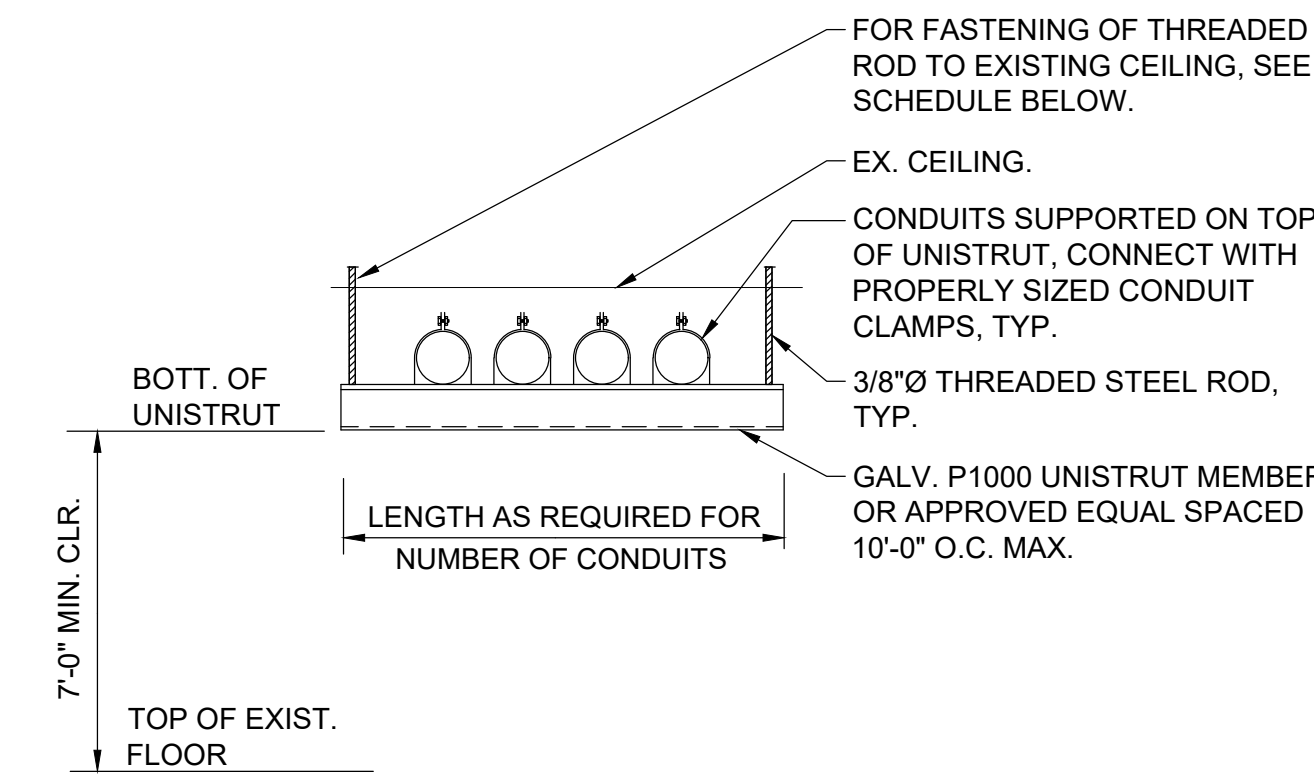


- NOTES:
1. THE CONNECTION TO THE LAMPS IS NOT SHOWN - FOLLOW MANUFACTURER WIRING DIAGRAMS.
 2. "SWITCH" REPRESENTS A SINGLE POLE SWITCH, A SET OF CONTACTS, A COMBINATION OF 3 WAY AND 4 WAY SWITCHES, ETC. SEE DRAWINGS FOR ACTUAL SWITCH CONFIGURATION.

3 SWITCHED EMERGENCY FIXTURE WIRING DIAGRAM
SCALE: NONE

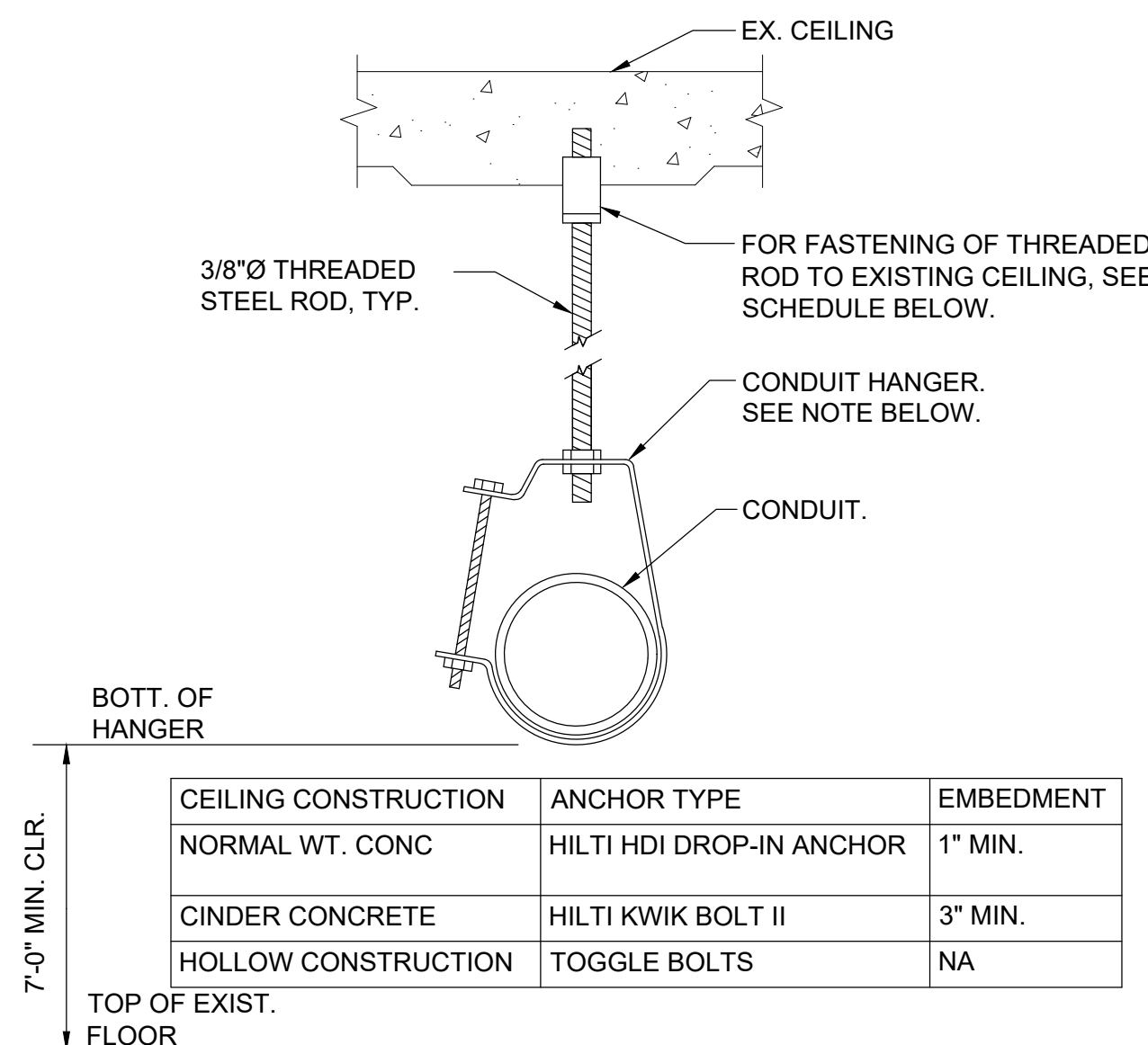


5 CEILING MOUNTED SMOKE DETECTOR LOCATION WITH RESPECT TO AIR DIFFUSER
SCALE: NONE



CEILING CONSTRUCTION	ANCHOR TYPE	EMBEDMENT
NORMAL WT. CONC	HILTI HDI DROP-IN ANCHOR	1" MIN.
CINDER CONCRETE	HILTI KWIK BOLT II	3" MIN.
HOLLOW CONSTRUCTION	TOGGLE BOLTS	NA

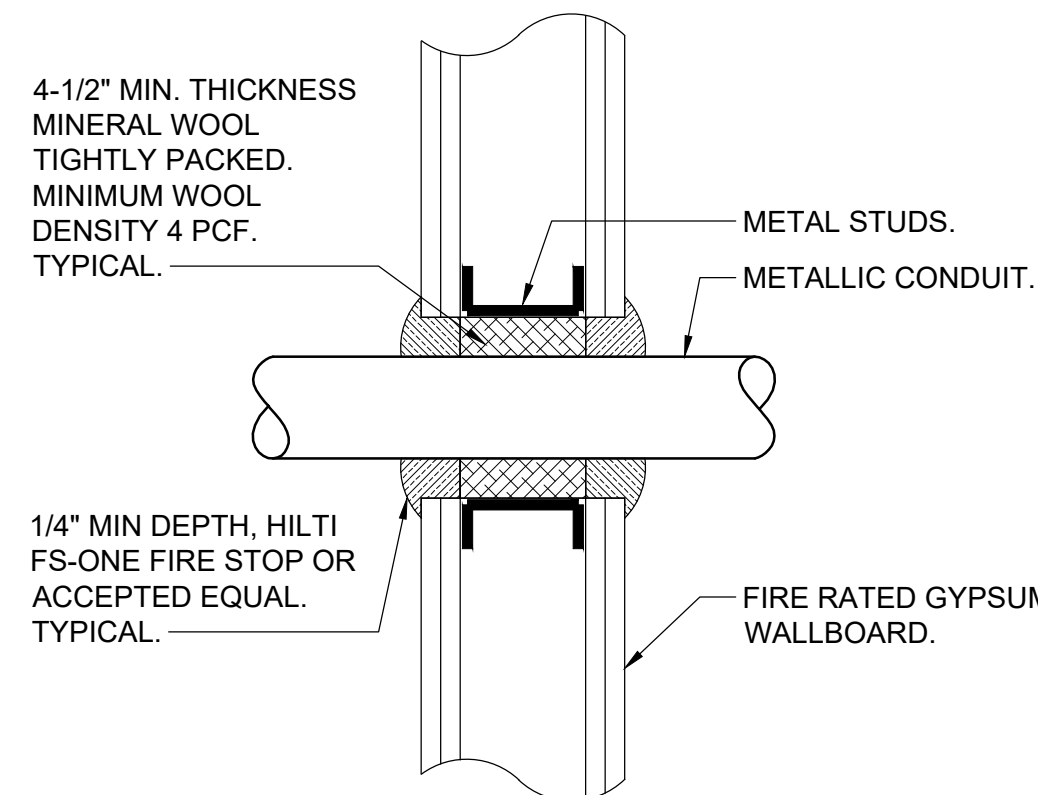
2 TRAPESE SUPPORT DETAIL
SCALE: NONE



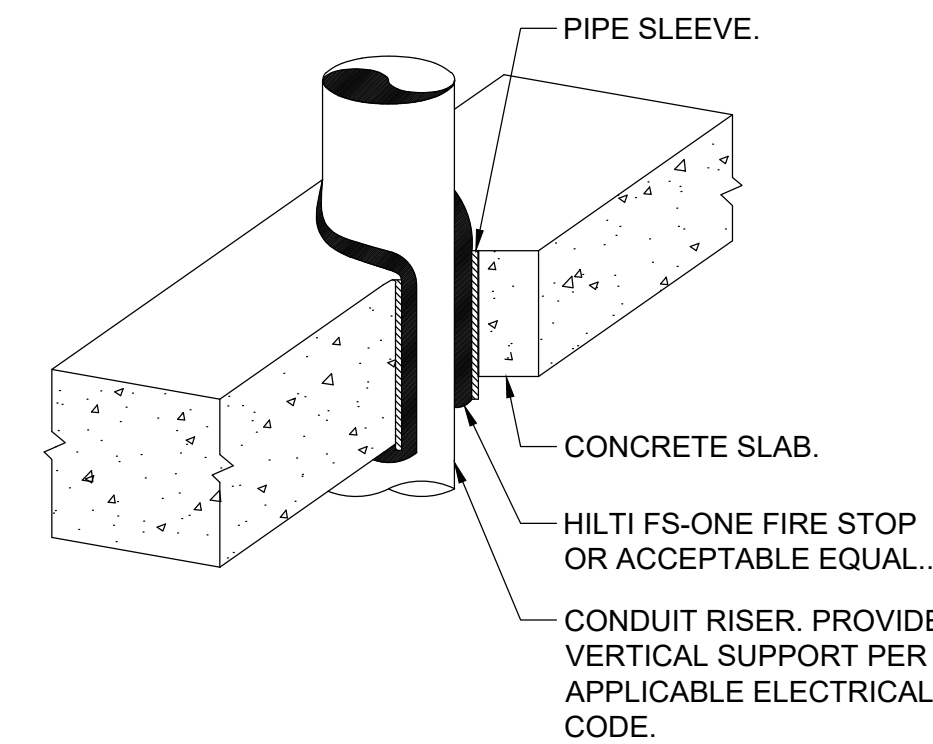
CEILING CONSTRUCTION	ANCHOR TYPE	EMBEDMENT
NORMAL WT. CONC	HILTI HDI DROP-IN ANCHOR	1" MIN.
CINDER CONCRETE	HILTI KWIK BOLT II	3" MIN.
HOLLOW CONSTRUCTION	TOGGLE BOLTS	NA

NOTE: CLEVIS HANGERS REQUIRED ON PIPING LARGER THAN 1". GENERAL PURPOSE HANGERS MAY BE USED ON PIPING 1" OR SMALLER.

7 SINGLE CONDUIT HANGER DETAIL
SCALE: NONE



4 TYPICAL FIRE RATED GYPSUM WALL CONDUIT PENETRATION DETAIL
SCALE: NONE



1 TYPICAL VERTICAL CONDUIT PENETRATION DETAIL
SCALE: NONE



ISSUE NO.	ISSUE DATE	DESCRIPTION
3	03/04/2024	ISSUED FOR BID
2	11/22/2023	100% CDs - ISSUE FOR CLIENT REVIEW
1	08/22/2023	ISSUED FOR SCHEMATIC DESIGN

WARNER LIBRARY

**CHILDREN'S LIBRARY
ACOUSTICAL TILE CEILING
AND PIPE INSULATION
REPLACEMENT**

ELECTRICAL DETAILS

PROJECT NO.: NLAA0034.00 SCALE: AS NOTED

DRAWING NO.:

E-701