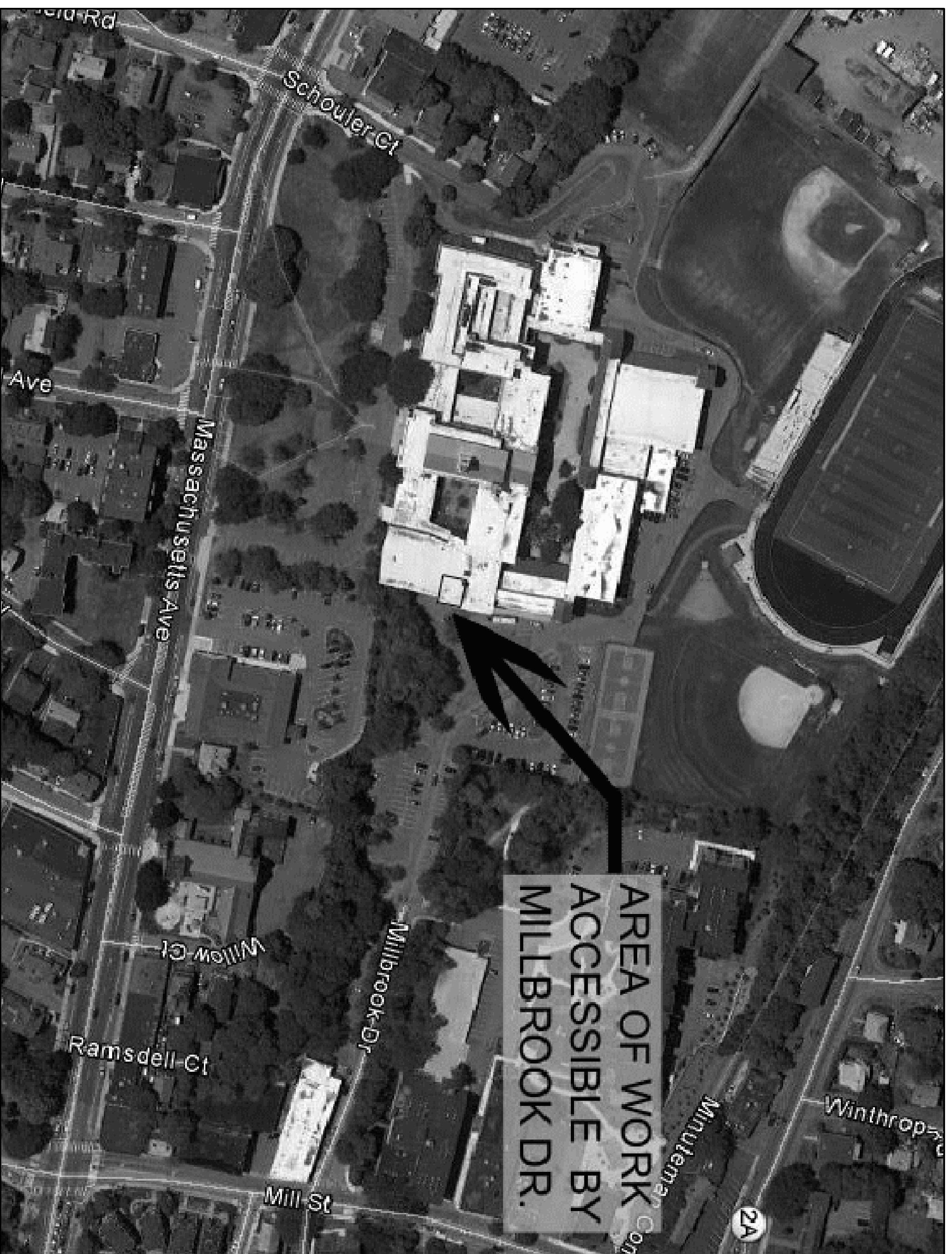


Arlington Bid #16-21

ARLINGTON HIGH SCHOOL PRE-K CLASSROOM CONVERSION ARLINGTON, MASSACHUSETTS



DRA DRAWING LIST

ARCHITECTURAL

A1-0-1 OVERALL FIRST FLOOR PLANS
A1-0-2 ELEVATIONS AND PHOTOS

MEP

P1-1-1 PLUMBING FLOOR PLANS, SPECS & DETAILS
M1-1-1 MECHANICAL FLOOR PLANS, SPECS & DETAILS
E1-1-1 ELECTRICAL FLOOR PLANS, SPECS & DETAILS

APRIL 27, 2016

D·R·A

ARCHITECT

DRUMMEY ROSANE ANDERSON, INC.
235 Bear Hill Rd.
4th Floor
Tel: 617-964-1700
Fax: 617-964-1701

MECHANICAL/ELECTRICAL ENGINEER

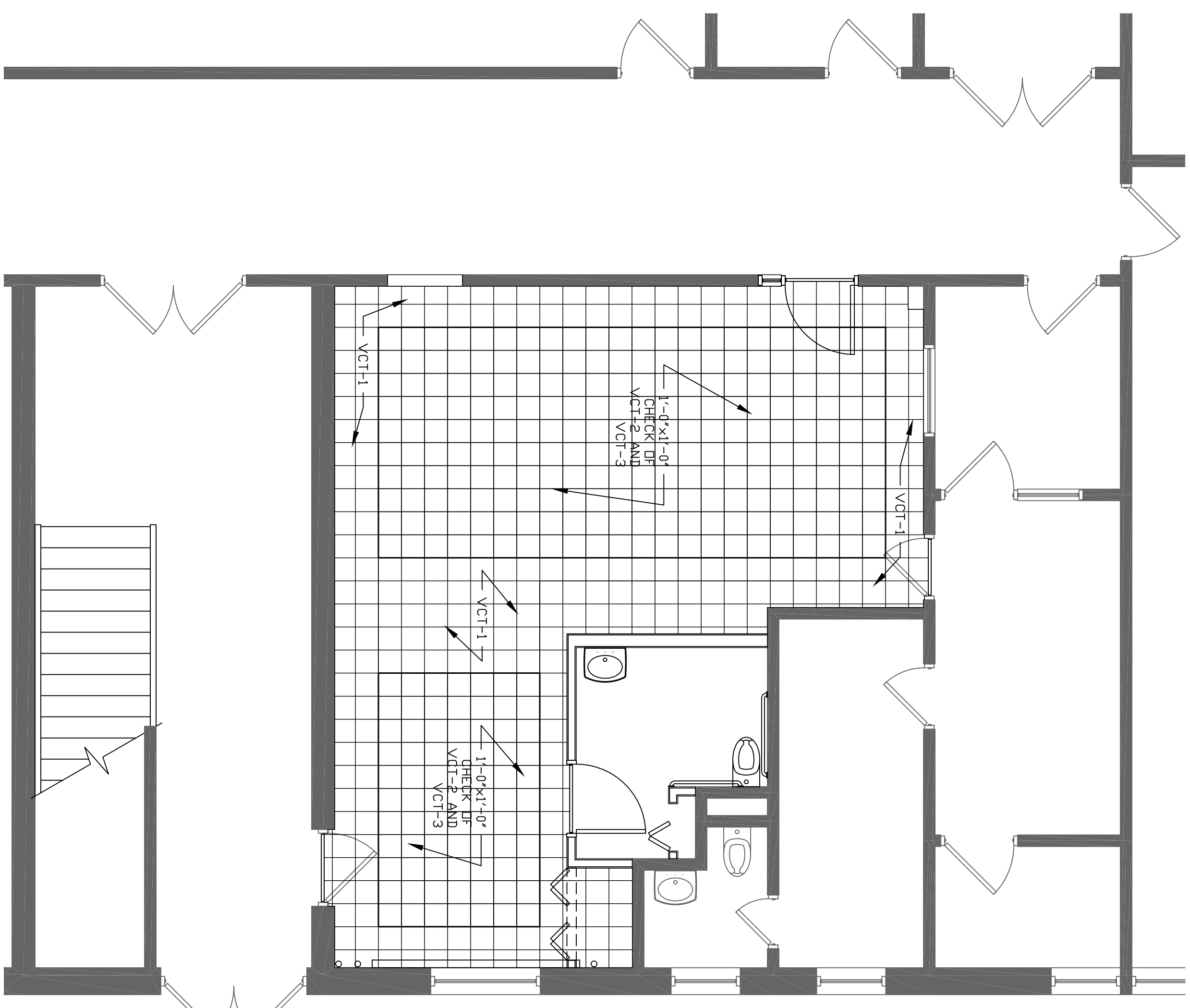
CONSULTING ENGINEERING SERVICES, INC.
128 Carnegie Row, Suite 204
Norwood, MA 02062
Tel: 860-632-1682
Fax: 860-632-1768



8 CORRIDOR PAINT
SCALE: NTS



8 CORRIDOR PAINT
SCALE: NTS



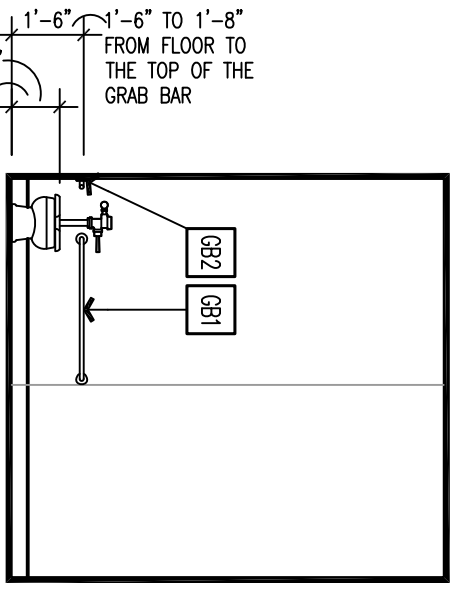
9 ROOM 109 NEW FLOOR PATTERN
SCALE: 1/2"=1'-0"



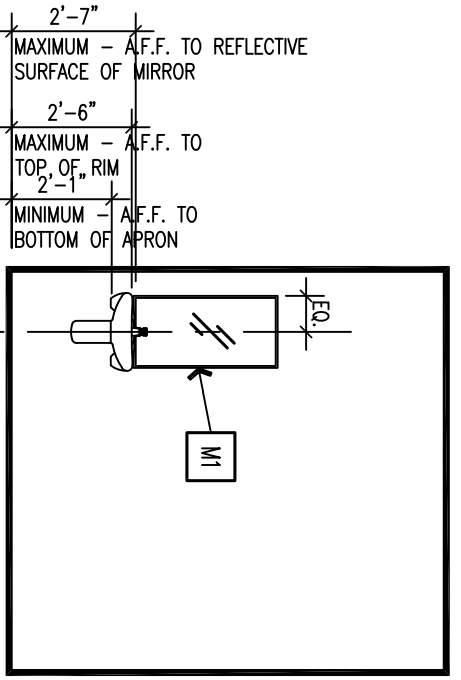
7 CONSTRUCTION ENTRANCE
SCALE: NTS

TOILET ACCESSORY SCHEDULE		
TYPE	DESCRIPTION	REMARKS
CH	STAINLESS STEEL SURFACE MOUNTED COAT HOOK	4'-6" MAX
GB1	1 1/2" x 3/4" STAINLESS STEEL HORIZONTAL GRAB BAR	1'-6" TO 1'-8" AFF TO TOP OF BAR
GB2	1 1/2" x 4" STAINLESS STEEL HORIZONTAL GRAB BAR	1'-6" TO 1'-8" AFF TO TOP OF BAR
WB	18" x 36" STAINLESS STEEL FRAMED MIRROR	3'-4" AFF TO BOTTOM OF MIRROR

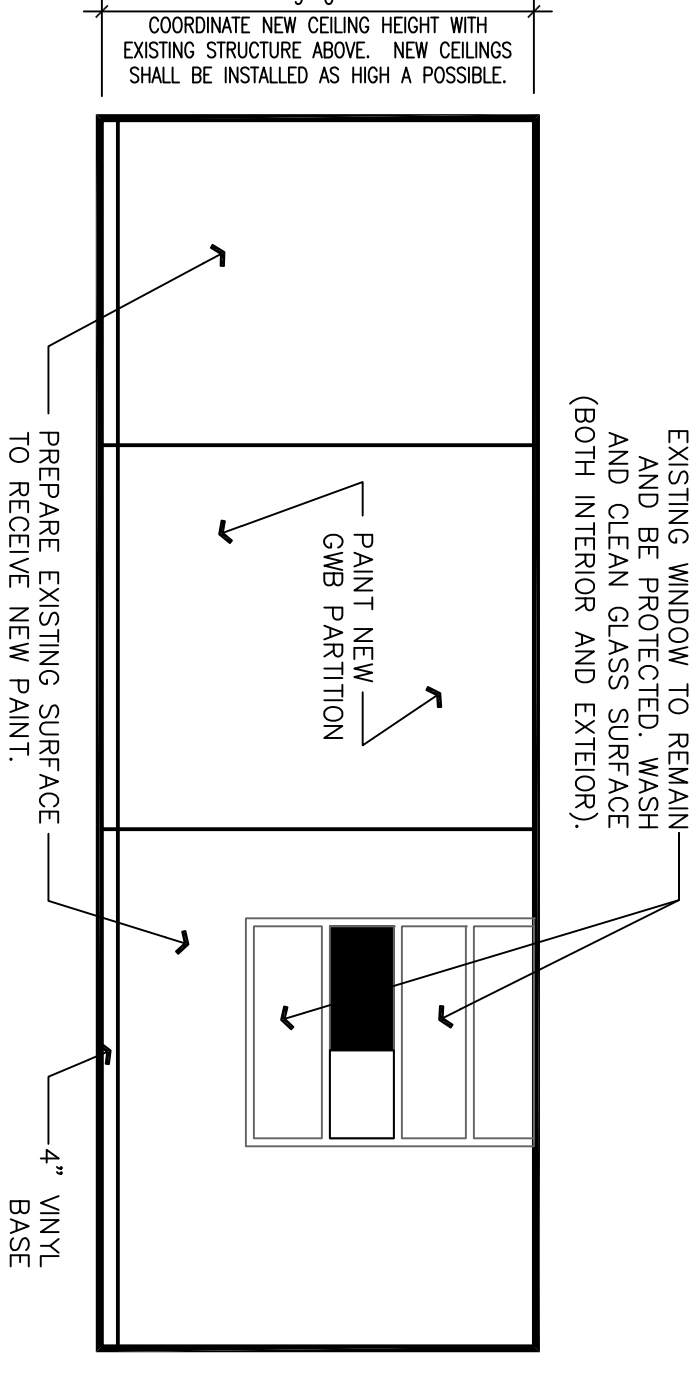
NOTES: PROVIDE FIRE-RETARDANT WOOD BLOCKING AS REQD FOR MOUNTING OF ALL ACCESSORIES



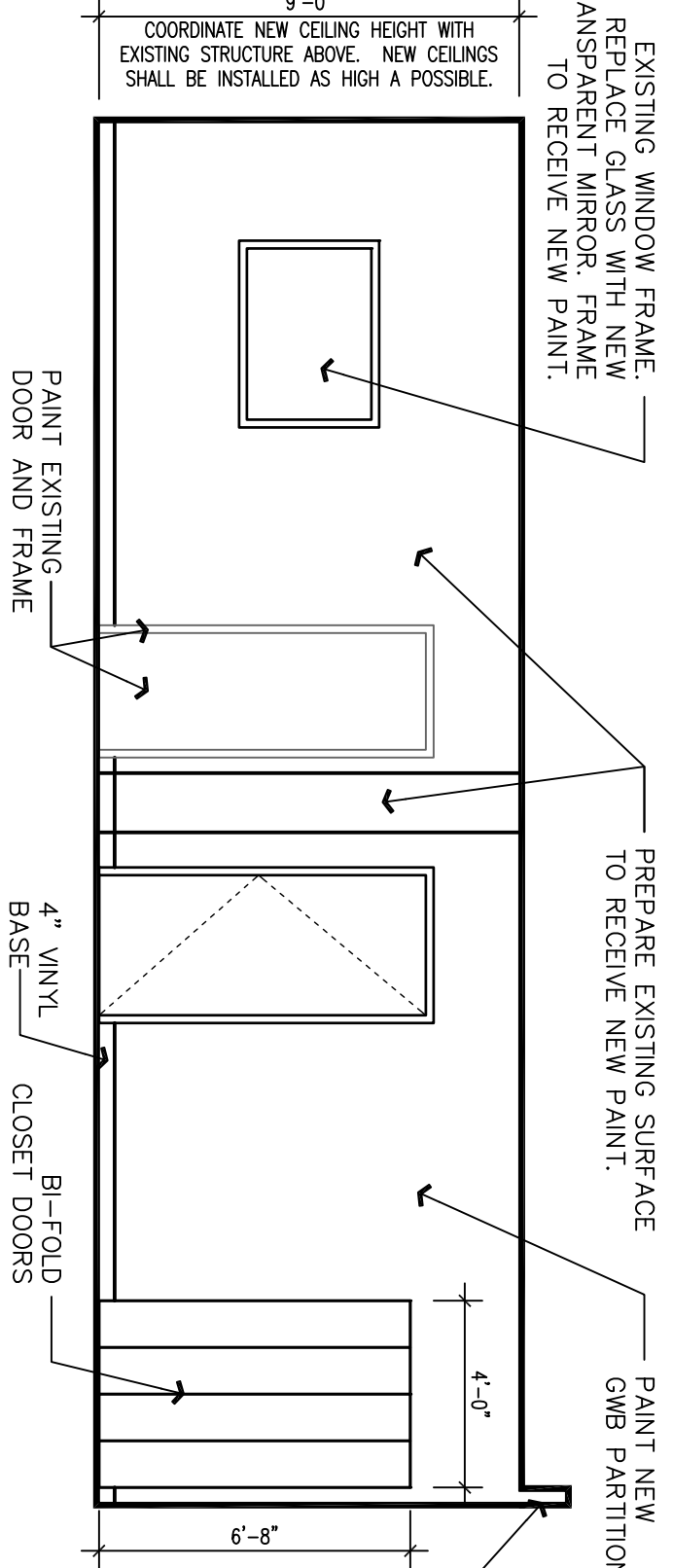
6 TOILET ROOM ELEVATION
SCALE: 1/2"=1'-0"



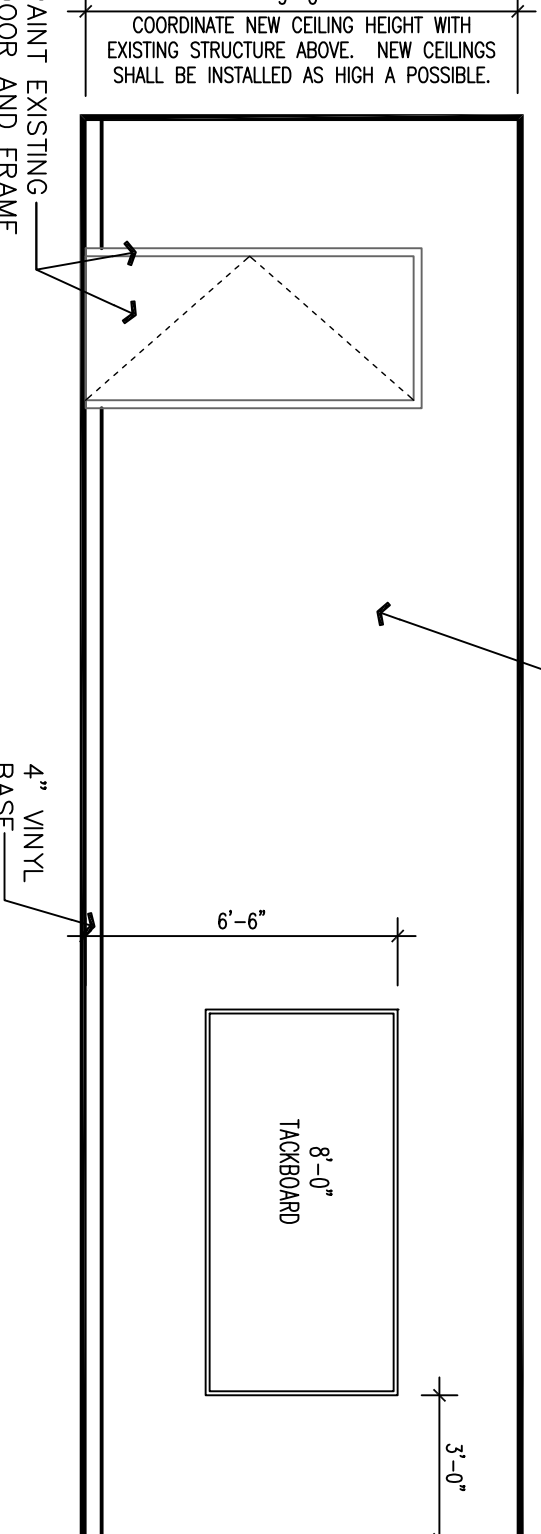
5 TOILET ROOM ELEVATION
SCALE: 1/2"=1'-0"



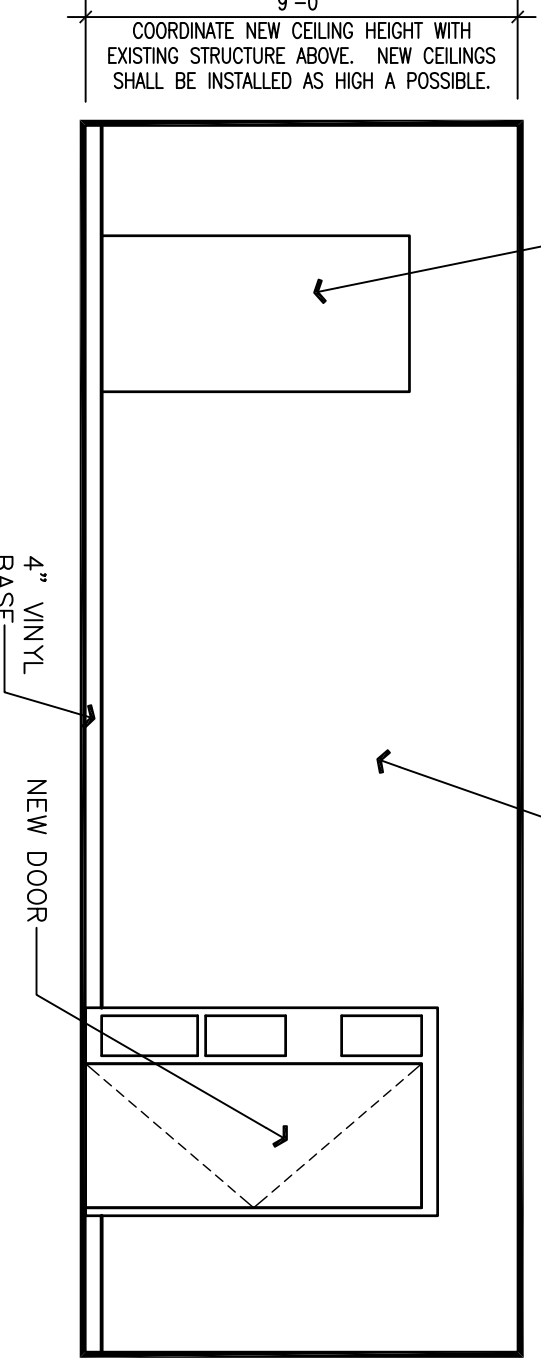
4 PRE-K CLASSROOM ELEVATION
SCALE: 1/2"=1'-0"



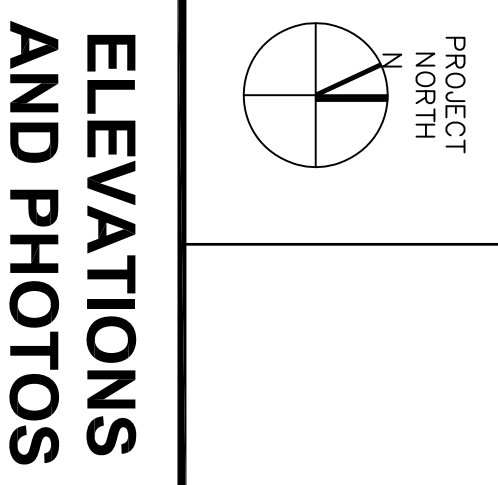
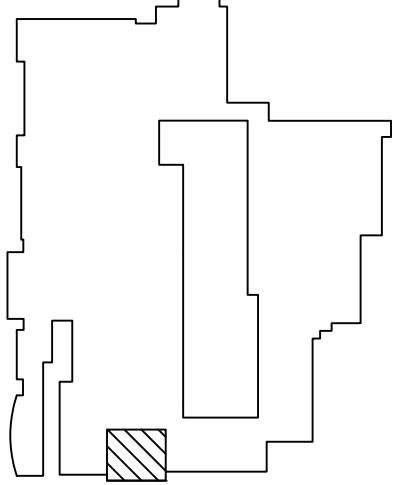
3 PRE-K CLASSROOM ELEVATION
SCALE: 1/2"=1'-0"



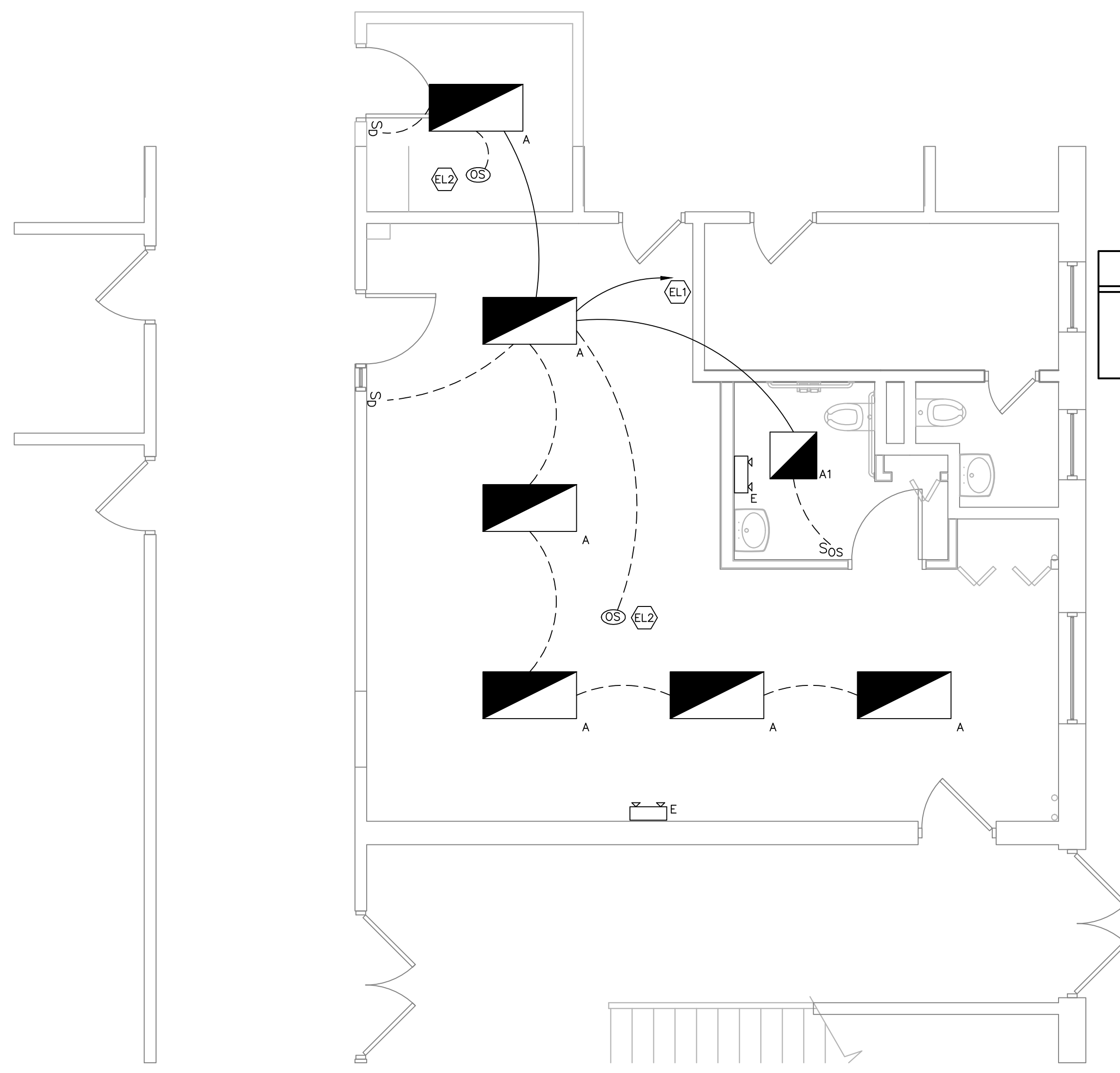
2 PRE-K CLASSROOM ELEVATION
SCALE: 1/2"=1'-0"



1 PRE-K CLASSROOM ELEVATION
SCALE: 1/2"=1'-0"



**ELEVATIONS
AND PHOTOS**

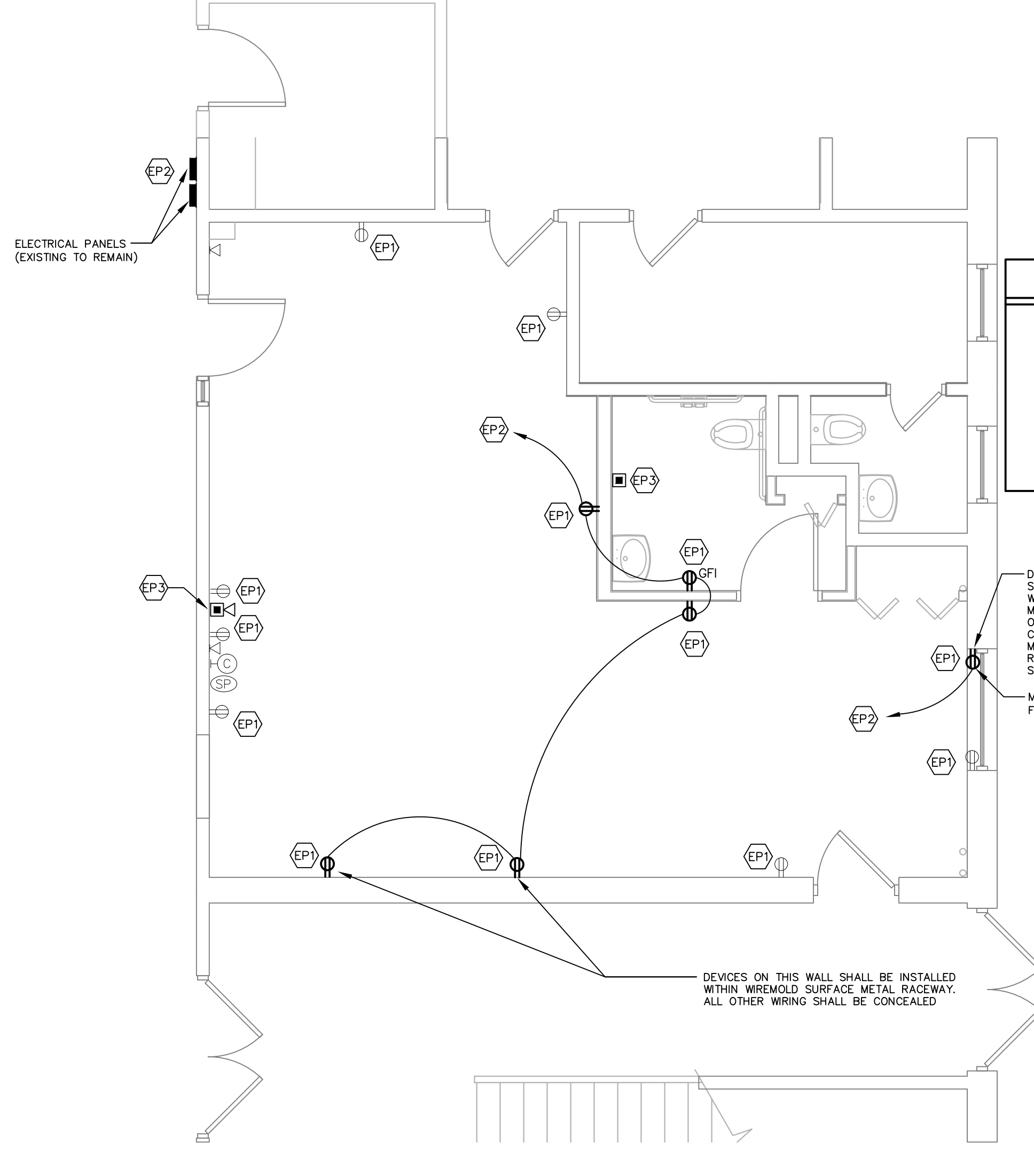


ELECTRICAL LIGHTING- KEY NOTES

EL1 CONNECT TO EXISTING LIGHTING CIRCUIT MADE AVAILABLE DURING DEMOLITION WITH 2-#12 AWG & 1-#12 GROUND IN 3/4" CONDUIT.

EL2 CEILING MOUNTED OCCUPANCY SENSOR.

EL1 ELECTRICAL- LIGHTING PLAN
1/4" = 1'-0"



ELECTRICAL POWER- KEY NOTES

EP1 ALL EXISTING RECEPTACLES SHALL BE REMOVED & REPLACED WITH TAMPER RESISTANT RECEPTACLES. RE-USE EXISTING WIRING. ALL NEW RECEPTACLES SHALL BE TAMPER RESISTANT.

EP2 PROVIDE A NEW 1P-20 AMP CIRCUIT BREAKER IN EXISTING PANEL. CONNECT NEW DEVICE WITH 2-#12 AWG & 1-#12 GROUND IN 3/4" CONDUIT.

EP3 PROVIDE NEW FIRE ALARM DEVICE. CONNECT TO EXISTING FIRE ALARM SYSTEM NOTIFICATION CIRCUIT WITH 2-#12 AWG IN 3/4" CONDUIT. PROVIDE ADA NOTIFICATION CIRCUIT POWER AMPLIFIER, IF REQUIRED. CONNECT TO EXISTING PANEL. PROVIDE A NEW 1P-20 AMP CIRCUIT BREAKER IN EXISTING PANEL WITH CB LOCK. CONNECT WITH 2-#12 AWG & 1-#12 GROUND IN 3/4" CONDUIT.

EP1 ELECTRICAL- POWER PLAN
1/4" = 1'-0"

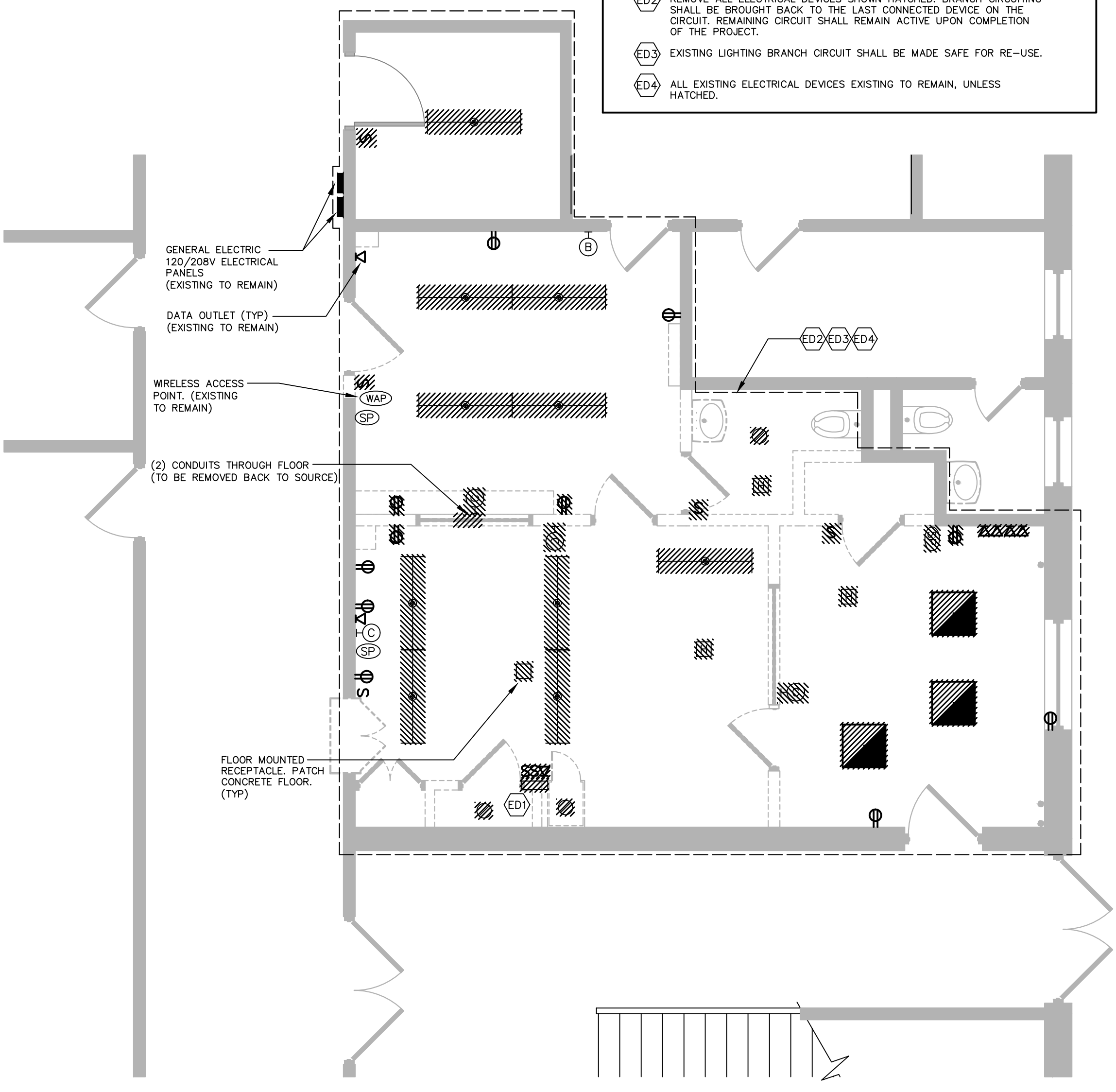
ELECTRICAL DEMOLITION KEY NOTES

ED1 WALL MOUNTED ELECTRIC UNIT HEATER TO BE REMOVED WITH ALL ASSOCIATED WIRING BACK TO SOURCE PANEL.

ED2 REMOVE ALL ELECTRICAL DEVICES SHOWN HATCHED. BRANCH CIRCUITING SHALL BE BROUGHT BACK TO THE LAST CONNECTED DEVICE ON THE CIRCUIT. REMAINING CIRCUIT SHALL REMAIN ACTIVE UPON COMPLETION OF THE PROJECT.

ED3 EXISTING LIGHTING BRANCH CIRCUIT SHALL BE MADE SAFE FOR RE-USE.

ED4 ALL EXISTING ELECTRICAL DEVICES EXISTING TO REMAIN, UNLESS HATCHED.



ED1 ELECTRICAL- DEMO PLAN
1/4" = 1'-0"

ELECTRICAL SPECIFICATIONS

- GENERAL PROCEDURES**
- THESE SPECIFICATIONS ARE APPLICABLE TO ALL ELECTRICAL DRAWINGS UNLESS NOTED OTHERWISE.
 - DESCRIPTION
 - SCOPE OF WORK COMPRISES ALTERATIONS AND RENOVATIONS TO THE EXISTING BUILDING. THE EXISTING BUILDING IS CURRENTLY OCCUPIED AND THE PROJECT WILL PROCEED IN A MANNER WHICH WILL MINIMIZE ANY INCONVENIENCE TO THE BUILDING OCCUPANTS.
 - SCOPE OF WORK CONSISTS OF INSTALLATION OF MATERIALS TO BE FURNISHED UNDER THE CONTRACT DOCUMENTS AND WITHOUT LIMITING GENERALITY THEREOF CONSISTS OF FURNISHING LABOR, MATERIALS, EQUIPMENT, HOISTING, PLANT, TRANSPORTATION, RIGGING, STAGING, APPURTENANCES, AND SERVICES NECESSARY AND/OR INCIDENTAL TO PROPERLY COMPLETE ALL WORK AS SHOWN ON THE DRAWINGS AND AS DESCRIBED HEREIN.
 - DEFINITIONS: THE FOLLOWING DEFINITIONS APPLY TO THIS CONTRACT
 - FURNISH: THE TERM "FURNISH" MEANS TO "SUPPLY AND DELIVER TO THE PROJECT SITE, READY FOR UNLOADING, UNPACKING, ASSEMBLY, INSTALLATION, AND SIMILAR OPERATIONS."
 - INSTALL: THE TERM "INSTALL" IS USED TO DESCRIBE OPERATIONS AT PROJECT SITE INCLUDING THE ACTUAL "UNLOADING, UNPACKING, ASSEMBLY, ERECTION, PLACING, ANCHORING, APPLYING, WORKING TO DIMENSION, FINISHING, CURING, PROTECTING, CLEANING, AND SIMILAR OPERATIONS."
 - PROVIDE: THE TERM "PROVIDE" MEANS TO FURNISH AND INSTALL, COMPLETE AND READY FOR THE INTENDED USE."
 - REMOVE: THE TERM REMOVE MEANS TO DISCONNECT FROM ITS PRESENT POSITION, REMOVE FROM THE PREMISES AND TO DISPOSE OF IN A LEGAL MANNER."
 - SUBSTITUTIONS: "SUBSTITUTIONS" ARE REQUESTS FOR CHANGES IN PRODUCTS, MATERIALS AND METHODS OF CONSTRUCTION AS PROPOSED BY THE CONTRACTOR AFTER AWARD OF THE CONTRACT.
 - DRAWINGS
 - PROVIDE ALL MATERIALS, EQUIPMENT AND LABOR NECESSARY TO COMPLETE THE WORK OUTLINED ON THESE CONTRACT DOCUMENTS. THE CONTRACTOR IS TO NOTE THAT THESE DOCUMENTS ARE DIAGRAMMATIC ONLY AND THAT FINAL PLACEMENT OF EQUIPMENT OR DEVICES IN THE FIELD MAY NOT DIRECTLY CORRESPOND TO THAT WHICH IS SHOWN ON THE DRAWINGS. IF A CONFLICT IN POSITIONING OCCURS THE CONTRACTOR IS TO NOTIFY THE ENGINEER IMMEDIATELY TO ASCERTAIN WHAT THE INTENT WAS BY THE DESIGN PROFESSIONAL.
 - SURVEY AND MEASUREMENTS:
 - PRIOR TO SUBMITTING BID, VISIT SITE AND IDENTIFY EXISTING CONDITIONS AND DIFFICULTIES THAT WILL AFFECT WORK TO BE PERFORMED. NO COMPENSATION WILL BE GRANTED FOR ADDITIONAL WORK CAUSED BY UNFAMILIARITY WITH SITE CONDITIONS THAT ARE VISIBLE OR READILY IDENTIFIED BY EXPERIENCED OBSERVERS. INCLUDE IN THE BID ALL DEMOLITION WORK REQUIRED.
 - DO NOT SCALE DRAWINGS. SCALE INDICATED ON DRAWINGS IS FOR ESTABLISHING REFERENCE POINTS ONLY. ACTUAL FIELD CONDITIONS SHALL GOVERN ALL DIMENSIONS.
 - PRIOR TO ORDERING ANY MATERIALS AND EQUIPMENT, THOROUGHLY REVIEW THE SITE CONDITIONS TO DETERMINE IF ADEQUATE CLEARANCES AND ACCESS IS ALLOWED TO INSTALL THE COMPONENTS. ORDER EQUIPMENT BROKEN DOWN AS NECESSARY TO ALLOW FOR PROPER RIGGING THROUGH THE PROJECT AREA. PROVIDE ALL NECESSARY ALTERATIONS TO THE STRUCTURE OF THE BUILDING AS NECESSARY TO FIT THE EQUIPMENT IN PLACE.
 - ARRANGE INSTALLATION TO PROVIDE ACCESS TO EQUIPMENT FOR EASY MAINTENANCE AND REPAIR.
 - CODES AND STANDARDS: ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH THE LATEST STATE OF MASSACHUSETTS ACCEPTED VERSION OF THE FOLLOWING
 - INTERNATIONAL BUILDING CODE
 - NATIONAL ELECTRIC CODE (NFPA 70)
 - THE LIFE SAFETY CODE (NFPA 101)
 - PERMITS AND FEES: THE CONTRACTOR SHALL OBTAIN ALL NECESSARY NOTICES, OBTAIN ALL PERMITS, AND PAY ALL GOVERNMENT AND STATE SALES TAXES AND FEES WHERE APPLICABLE, AND OTHER COSTS, INCLUDING UTILITY CONNECTIONS OR EXTENSIONS IN CONNECTION WITH THE WORK. FILE ALL NECESSARY DRAWINGS, PREPARE ALL DOCUMENTS AND OBTAIN ALL NECESSARY APPROVALS OF ALL GOVERNMENTAL AND STATE DEPARTMENTS HAVING JURISDICTION, OBTAIN ALL REQUIRED CERTIFICATES OF INSPECTION FOR HIS WORK, AND DELIVER A COPY TO THE OWNER AND ENGINEER BEFORE REQUEST FOR ACCEPTANCE AND FINAL PAYMENT FOR THE WORK.
 - USE ADEQUATE NUMBERS OF SKILLED WORKMEN WHO ARE THOROUGHLY TRAINED AND EXPERIENCED IN THE NECESSARY CRAFTS AND WHO ARE COMPLETELY FAMILIAR WITH THE SPECIFIED REQUIREMENTS AND THE METHODS NEEDED FOR PROPER PERFORMANCE OF THE WORK.
 - THE CONTRACTOR SHALL COORDINATE ALL INTERRUPTIONS OF SERVICES AND LIMITATIONS OF ACCESS WITH THE OWNER NO LESS THAN 5 DAYS PRIOR TO THE INTERRUPTION.
 - OBTAIN IN OWNER'S NAME WRITTEN EQUIPMENT AND MATERIAL WARRANTIES OFFERED IN MANUFACTURER'S PUBLISHED PRODUCT DATA WITHOUT EXCLUSION OR LIMITATION.
 - GUARANTEE WORK OF THESE CONTRACT DOCUMENTS IN WRITING FOR NOT LESS THAN ONE (1) YEAR FROM DATE OF FINAL NOTICE OF ACCEPTANCE. REPAIR OR REPLACE DEFECTIVE EQUIPMENT, WORKMANSHIP AND INSTALLATION THAT DEVELOP WITHIN THIS PERIOD, PROMPT AND TO OWNER'S SATISFACTION AND CORRECT DAMAGE CAUSED IN MAKING NECESSARY REPAIRS AND REPLACEMENTS UNDER GUARANTEE WITHIN CONTRACT PRICE.
 - SUBMIT TO THE OWNER AN OFFICIAL CERTIFICATE OF INSURANCE FOR THEIR RECORDS.
- MEANS AND METHODS**
- INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS
 - DO NOT BURN WASTE MATERIALS. DO NOT BURY DEBRIS OR EXCESS MATERIALS ON THE OWNER'S PROPERTY. DO NOT DISCHARGE VOLATILE, HARMFUL OR DANGEROUS MATERIALS INTO DRAINAGE SYSTEMS. REMOVE AND DISPOSE OF ALL WASTE MATERIALS, PACKAGING MATERIAL, SKIDS ETC FROM THE SITE AND DISPOSE OF IN A LAWFUL MANNER IN ACCORDANCE WITH MUNICIPAL, STATE AND FEDERAL REGULATIONS.
 - MATERIALS AND EQUIPMENT SHALL BE UL LISTED WHERE STANDARD HAS BEEN ESTABLISHED.
 - CAREFULLY INSPECT ALL BUILDING ELEMENTS PRIOR TO CUTTING OR DRILLING INTO WALL, FLOORS OR CEILINGS. PATCH AND PAINT SURFACES DISTURBED BY WORK UNDER THIS CONTRACT AS REQUIRED TO RESTORE THEM TO THEIR ORIGINAL CONDITION.
 - SCAFFOLDING, RIGGING, HOISTING: THE CONTRACTOR SHALL FURNISH ALL SCAFFOLDING, RIGGING, HOISTING AND SERVICES NECESSARY FOR ERECTION AND DELIVERY INTO THE PREMISES ANY EQUIPMENT AND APPARATUS FURNISHED UNDER THIS DIVISION. REMOVE SAME FROM PREMISES WHEN NO LONGER REQUIRED.
 - PROVIDE FIRESTOPPING AROUND ALL ELECTRICAL PENETRATIONS THROUGH FIRE RATED PARTITIONS. PROVIDE ASBESTOS FREE FIRESTOPPING SYSTEM CAPABLE OF MAINTAINING AN EFFECTIVE BARRIER AGAINST FLAME AND GASES. SYSTEM SHALL BE UL LISTED AND COMPLY WITH ASTM E 814.
 - SEISMIC RESTRAINTS SHALL BE INSTALLED AS REQUIRED PER BUILDING CODE AND FIRE SAFETY CODE. RESTRAINTS SHALL BE INSTALLED IN ACCORDANCE WITH NFPA 13 AND SMACNA STANDARDS. SUBMIT SHOP DRAWINGS INCLUDING SEISMIC CALCULATIONS WITH PROFESSIONAL ENGINEER'S SEAL FOR REVIEW BY ENGINEER.
- ELECTRICAL SPECIFICATIONS**
- GROUNDING SHALL BE COMPLETED IN ACCORDANCE WITH NFPA 70. GROUND EXPOSED, NON-CURRENT-CARRYING METALLIC PARTS OF ELECTRICAL EQUIPMENT, METALLIC RACEWAY SYSTEMS, GROUNDING CONDUCTOR IN METALLIC RACEWAYS, AND NEUTRAL CONDUCTOR OF WIRING SYSTEMS.
 - CONDUCTORS NO. 8 AWG AND LARGER DIAMETER SHALL BE STRANDED ANNEALED COPPER. CONDUCTORS NO. 10 AWG AND SMALLER DIAMETER SHALL BE SOLID ANNEALED COPPER, EXCEPT THAT CONDUCTORS FOR REMOTE CONTROL, ALARM, AND SIGNAL CIRCUITS, CLASSES 1, 2, AND 3, SHALL BE STRANDED UNLESS SPECIFICALLY INDICATED OTHERWISE. CONDUCTOR SIZES AND AMPACITIES SHOWN ARE BASED ON COPPER, UNLESS INDICATED OTHERWISE. UNLESS SPECIFIED OR INDICATED OTHERWISE OR REQUIRED BY NFPA 70, POWER AND LIGHTING WIRES SHALL BE 90-DEGREE, TYPE THHN/THWN ANNEALED COPPER. REMOTE-CONTROL AND SIGNAL CIRCUITS SHALL BE TYPE TW, THW, OR TF ANNEALED COPPER. WHERE LIGHTING FIXTURES REQUIRE 90 DEGREE C CONDUCTORS, PROVIDE ONLY CONDUCTORS WITH 90 DEGREE C INSULATION OR BETTER.
 - MAKE ALL SPICES IN ACCESSIBLE LOCATIONS. MAKE SPICES IN CONDUCTORS NO. 10 AWG AND SMALLER DIAMETER WITH INSULATED, PRESSURE-TYPE CONNECTOR. MAKE SPICES IN CONDUCTORS NO. 8 AWG AND LARGER DIAMETER WITH SOLDERLESS CONNECTOR AND COVER WITH INSULATION MATERIAL EQUIVALENT TO CONDUCTOR INSULATION.
 - PHASE CONDUCTORS SHALL BE IDENTIFIED BY COLOR CODING. THE COLOR OF THE INSULATION ON PHASES A AND B RESPECTIVELY (FOR SINGLE PHASE) OR DIFFERENT VOLTAGE SYSTEMS SHALL BE AS FOLLOWS: 120/208 VOLT, SINGLE-PHASE: BLACK AND RED.
 - UNLESS OTHERWISE INDICATED, THE WIRING METHOD SHALL CONSIST OF THE INSTALLATION OF INSULATED CONDUCTORS INSTALLED IN ELECTRICAL METALLIC-ARMORED CABLES INSTALLED IN GYPSONUM BOARD WALL, ABOVE FINISHED CEILINGS AND IN PROTECTED AREAS AS PERMITTED BY NFPA 70. PROVIDE INSULATED, GREEN EQUIPMENT GROUNDING CONDUCTOR IN FEEDER AND BRANCH CIRCUITS, INSTALLED IN CONDUIT OR RACEWAYS, INCLUDING LIGHTING CIRCUITS. GROUNDING CONDUCTOR SHALL BE SEPARATE FROM ELECTRICAL SYSTEM NEUTRAL CONDUCTOR. METAL CONDUIT SHALL EXTEND THROUGH SHIFTS FOR MINIMUM DISTANCE OF 6 INCHES. CONDUIT SIZES SHOWN ARE BASED ON USE OF COPPER CONDUCTORS WITH INSULATION TYPES AS INDICATED HEREIN. MINIMUM SIZE OF RACEWAYS SHALL BE 1.5 INCH (1/2 INCH). ONLY METAL CONDUITS WILL BE PERMITTED WHEN CONDUITS ARE REQUIRED FOR SHIELDING OR OTHER SPECIAL PURPOSES INDICATED, OR WHEN REQUIRED BY CONFORMANCE TO NFPA 70.
 - ELECTRICAL METALLIC TUBING MAY BE INSTALLED ONLY WITHIN BUILDINGS. ELECTRICAL METALLIC TUBING MAY NOT BE INSTALLED IN CONCRETE OR EXTERIOR TO BUILDINGS. EMT SHALL NOT BE INSTALLED IN DAMP OR WET LOCATIONS. DO NOT USE IN AREAS SUBJECT TO SEVERE PHYSICAL DAMAGE INCLUDING BUT NOT LIMITED TO EQUIPMENT ROOMS WHERE MOVING OR REPLACING EQUIPMENT COULD PHYSICALLY DAMAGE THE EMT. BUSHINGS, MANUFACTURED FITTINGS OR BOXES PROVIDING EQUIVALENT MEANS OF PROTECTION SHALL BE INSTALLED ON THE ENDS OF ALL CONDUITS AND SHALL BE OF THE INSULATING TYPE, WHERE REQUIRED BY NFPA 70. ONLY UL LISTED ADAPTERS SHALL BE USED TO CONNECT EMT TO RIGID METAL CONDUIT, CAST BOXES, AND CONDUIT BODIES. METALLIC CONDUITS AND TUBING SHALL BE SECURELY AND RIGIDLY FASTENED IN PLACE AS REQUIRED BY NFPA 70.
 - SINGLE AND DUPLEX RECEPTACLES SHALL BE RATED 20 AMPERES, 125 VOLTS, TWO-POLE, THREE-WIRE, GROUNDING TAMPER RESISTANT TYPE WITH POLARIZED PARALLEL SLOTS. BODIES SHALL BE WORKY TO MATCH COLOR OF SWITCH HANDLES. RECEPTACLE SHALL BE SIDE- OR BACK-WIRED WITH TWO SCREWS PER TERMINAL. THE THIRD GROUNDING POLE SHALL BE CONNECTED TO THE METAL MOUNTING YOK. SWITCHED RECEPTACLES SHALL BE THE SAME AS OTHER RECEPTACLES SPECIFIED EXCEPT THAT THE UNGROUNDED POLE OF EACH SUITABLE RECEPTACLE SHALL BE PROVIDED WITH A SEPARATE TERMINAL. ONLY THE TOP RECEPTACLE OF A DUPLEX RECEPTACLE SHALL BE WIRED FOR SWITCHING APPLICATION. RECEPTACLES WITH GROUND FAULT CIRCUIT INTERRUPTERS SHALL HAVE THE CURRENT RATING AS INDICATED, AND SHALL BE UL CLASS A TYPE UNLESS OTHERWISE SHOWN. GROUND FAULT CIRCUIT PROTECTION SHALL BE PROVIDED AS REQUIRED BY NFPA 70 AND AS INDICATED ON THE DRAWINGS.
 - WALL SWITCHES SHALL BE OF THE TOTALLY ENCLOSED TUMBLER TYPE. THE WALL SWITCH HANDLE AND SWITCH PLATE COLOR SHALL BE IVORY. WIRING TERMINALS SHALL BE OF THE SCREW TYPE OR OF THE SOLDERLESS PRESSURE-TYPE HAVING SUITABLE CONDUCTOR-RELEASE ARRANGEMENT. SWITCHES SHALL BE RATED 20-AMPERE 120/208-VOLT FOR USE ON ALTERNATING CURRENT ONLY. DIMMING SWITCHES SHALL BE SLIDE TYPE, SOLID-STATE, FLUSH MOUNTED, WITH PRESET LIGHT SETTINGS AND SIZED FOR THE LOADS.
 - DEVICE PLATES SHALL BE ONE-PIECE TYPE AND BE PROVIDED FOR ALL RECEPTACLES, OUTLETS, SWITCHES AND FITTINGS. PLATES ON FINISHED WALLS SHALL BE IMPACT-RESISTANT PLASTIC AND SHALL BE IVORY. PLATES SHALL BE INSTALLED WITH ALL FOUR EDGES IN CONTINUOUS CONTACT WITH FINISHED WALL SURFACES WITHOUT THE USE OF WATS OR SIMILAR DEVICES. PASTER FILLINGS WILL NOT BE PERMITTED. PLATES SHALL BE INSTALLED WITH AN ALIGNMENT TOLERANCE OF 1/16 INCH. THE USE OF SECTIONAL-TYPE DEVICE PLATES WILL NOT BE PERMITTED. PLATES INSTALLED IN WET LOCATIONS SHALL BE GASKETED AND PROVIDED WITH A HINGED, GASKETED COVER, UNLESS OTHERWISE SPECIFIED.
 - MOUNT LIGHTING SWITCHES 48 INCHES ABOVE FINISHED FLOOR. RECEPTACLES 18 INCHES ABOVE FINISHED FLOOR, AND OTHER DEVICES AS INDICATED. MEASURE MOUNTING HEIGHTS OF WIRING DEVICES AND OUTLETS TO TOP OF DEVICE OR OUTLET.
 - INSTALL ALL NECESSARY JUNCTION BOXES, PULL BOXES, PULL BOXES, COVER PLATES AND OTHER MISCELLANEOUS EQUIPMENT WHICH IS NOT SHOWN ON THE CONTRACT DOCUMENTS BUT NECESSARY TO COMPLETE THE WORK.
 - PROVIDE SHOP DRAWINGS FOR LIGHT FIXTURES, FIRE ALARM DEVICES, OCCUPANCY SENSORS AND RECEPTACLES.
 - COORDINATE ALL WORK WITH OTHER TRADES AND ARRANGE INSTALLATION TO AVOID CLASHES BETWEEN EQUIPMENT, WORK OF OTHER TRADES AND BUILDING STRUCTURE.

LIGHTING FIXTURE SCHEDULE

TYPE	MANUFACTURER/MODEL	VOLTAGE	LAMPS	FIXTURE DESCRIPTION
A	METALUX 24SR-LD2-46-C-UNV-L835-CD1	UNV.	4800LM, 38.2W, 3500K LED	RECESSED 2X4 LED TROFFER WITH 85+ CRI, CENTER BASKET, STEEL CONSTRUCTION, MATTE WHITE ENAMEL FINISH, ACRYLIC SHIELDING, 0-10V DIMMABLE.
A1	METALUX 22SR-LD2-20-C-UNV-L835-CD1	UNV.	2000LM, 15.4W, 3500K LED	SAME AS TYPE "A" EXCEPT 2X2.
E	COOPER AP250	UNV.	(2) 5-4W INCANDESCENT	WALL MOUNTED DUAL-HEAD EMERGENCY FIXTURE WITH UNIVERSAL INPUT VOLTAGE, OVERLOAD/SHORT CIRCUIT PROTECTION, TEST SWITCH, THERMOPLASTIC HOUSING, AND SEALED LEAD-CALCIUM BATTERY. FIXTURE SHALL BE UL 924 LISTED. MOUNT 6"-0" AFF UNLESS OTHERWISE NOTED.

- NOTES:**
- EQUAL FIXTURE APPROVAL SHALL BE AS JUDGED BY ENGINEER AND/OR ARCHITECT. FIXTURES SHALL BE EQUAL IN AESTHETICS, QUALITY, CONSTRUCTION AND OPTICAL PERFORMANCE. PROVIDE FIXTURE SAMPLES AND PHOTOMETRIC CALCULATIONS AS REQUESTED BY ENGINEER AND/OR ARCHITECT.
 - REFER TO THE ELECTRICAL SPECIFICATIONS FOR ADDITIONAL GENERAL REQUIREMENTS.
 - FIXTURES SHALL BE UL OR ETL LISTED.
 - MOUNTING HARDWARE SUCH AS HANGERS, BRACKETS, RAILS, YOKES, STEMS, CHAINS, ETC., SHALL BE PROVIDED AS NECESSARY TO MOUNT SPECIFIED FIXTURE.
 - REFER TO ARCHITECTURAL DRAWINGS AND REFLECTED CEILING PLANS FOR SPECIFIC DETAILS, ARRANGEMENT, MOUNTING HEIGHTS, CEILING CONSTRUCTION, ETC., COLORS AND FINISHES SHALL BE SELECTED BY THE ARCHITECT.
 - FIXTURES SHALL BE SEISMICALLY SUPPORTED AS REQUIRED BY THE APPLICABLE BUILDING CODE. RECESSED FIXTURES SHALL BE SUPPORTED FROM THE BUILDING STRUCTURE WITH A MINIMUM OF 2 SUPPORTS.
 - WIRE EMERGENCY FIXTURES AHEAD OF SWITCHED LEGS.

ELECTRICAL SYMBOL LIST

SYMBOL	DESCRIPTION
[Hatched Box]	RECESSED PANELBOARD
[Line with Dashed Circle]	BRANCH CIRCUIT WIRING, CONCEALED IN WALLS OR CEILINGS: 2#12, #12G, 3/4" UNLESS OTHERWISE NOTED.
[Line with Solid Circle]	HOMERUN TO PANELBOARD: 2#12, #12G, 3/4" TO INDICATED BREAKER (UNLESS OTHERWISE NOTED).
[Line with Dashed Circle]	SWITCHED WIRING: 2#12, #12G, 3/4" UNLESS OTHERWISE NOTED.
[Circle with 'R']	DUPLEX WALL MOUNTED RECEPTACLE, 18" AFF UNLESS OTHERWISE NOTED.
[Circle with 'GFI']	DUPLEX WALL MOUNTED GFI RECEPTACLE, 18" AFF UNLESS OTHERWISE NOTED.
[Circle with 'S']	DIMMER SWITCH FOR LED LIGHT FIXTURES
[Circle with 'SOS']	SINGLE POLE SWITCH WITH BUILT-IN OCCUPANCY SENSOR. WATT STOPPER DW-200-1
[Circle with 'OS']	CEILING MOUNTED OCCUPANCY SENSOR. WATT STOPPER CI-200 W/ BZ-150 POWER PAK.
[Circle with 'C']	CLOCK
[Circle with 'SP']	SPEAKER
[Circle with 'B']	BLANK-COVER PLATE
[Circle with 'L']	RECESSED LIGHTING FIXTURE
[Circle with 'I']	INDUSTRIAL OR STRIP TYPE FIXTURE
[Circle with 'D']	RECESSED DOWNLIGHT FIXTURE
[Circle with 'H']	CEILING MOUNTED HEAT DETECTOR - TEMPERATURE RATING OF 135° UNLESS OTHERWISE NOTED.
[Circle with 'E']	WALL MOUNTED 2 HEAD EMERGENCY LIGHT FIXTURE
[Circle with 'M']	WALL MOUNTED COMBINATION HORN/STROBE LIGHT WITH A MULTI-CANDELA STROBE. MOUNT AT 6'-8" AFF.
[Circle with 'S']	WALL MOUNTED STROBE-ONLY UNIT WITH A MULTI-CANDELA STROBE. MOUNT 6'-8" AFF.

D·R·A

Drumrey
Rosane
Anderson,
Inc.

235 Bear Hill Road
4th Floor
Waltham, MA 02451

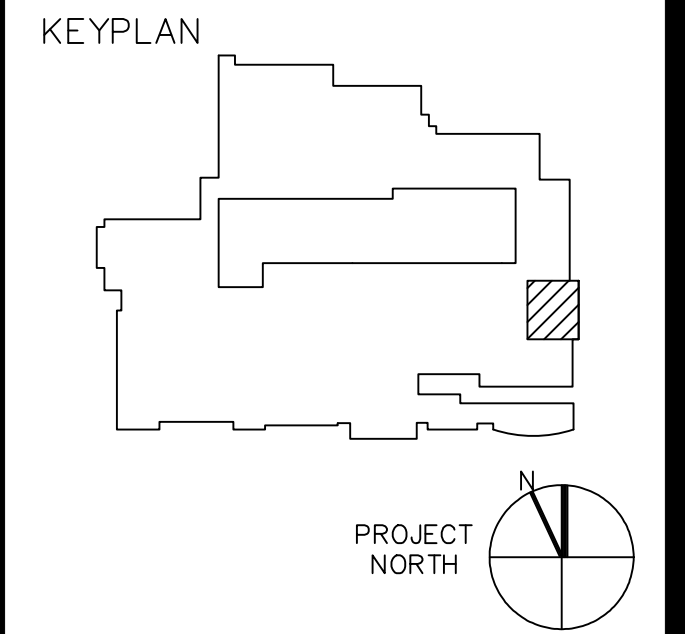
617-964-1700
www.DRArchitects.com

**ARLINGTON
HIGH SCHOOL
PRE-K
CLASSROOM
CONVERSION**

Arlington,
Massachusetts

CES
Columbus Engineering Services, Inc.

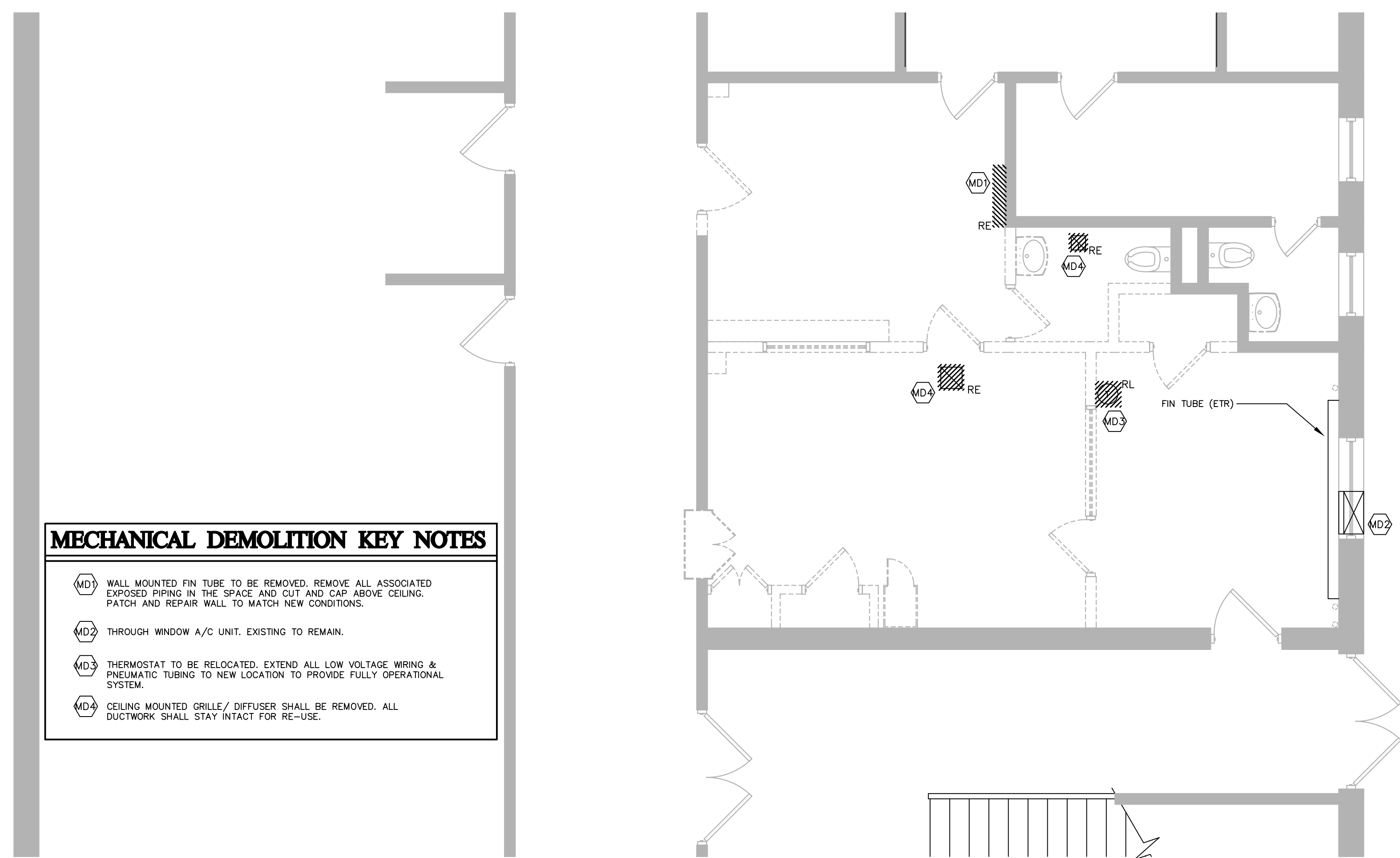
111 Middle Street
Middletown, CT 06457
Tel: 860-632-1500
Fax: 860-632-1700
CES Project #091610600



**ELECTRICAL
FLOOR PLANS,
SPECS & DETAILS**

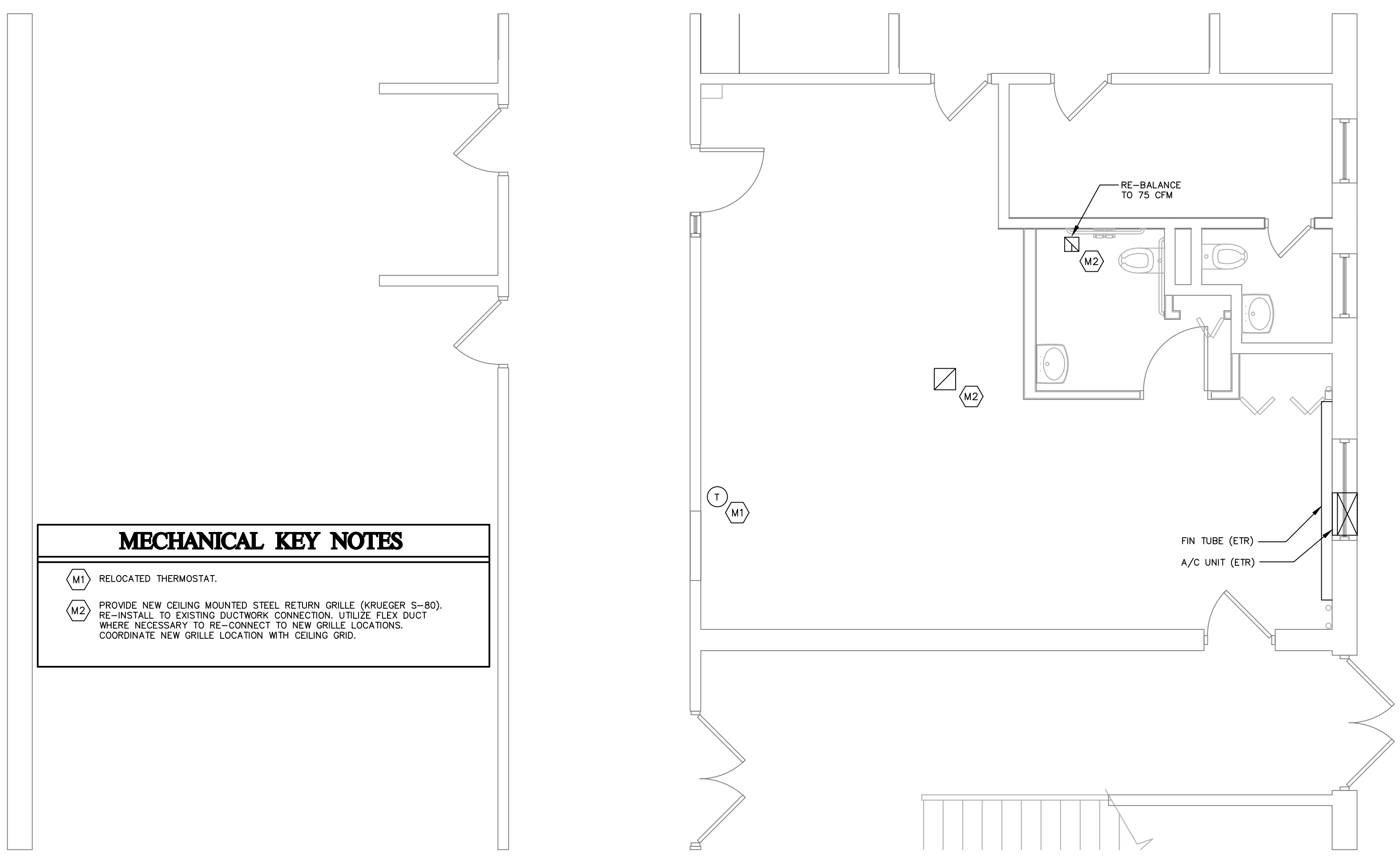
Scale: AS NOTED
Job No.: 16006.00
Drawn By: BCH
Date: 04/27/16

E1-1-1



- MECHANICAL DEMOLITION KEY NOTES**
- MD1 WALL MOUNTED FIN TUBE TO BE REMOVED. REMOVE ALL ASSOCIATED EXPOSED PIPING IN THE SPACE AND CUT AND CAP ABOVE CEILING. PATCH AND REPAIR WALL TO MATCH NEW CONDITIONS.
 - MD2 THROUGH WINDOW A/C UNIT. EXISTING TO REMAIN.
 - MD3 THERMOSTAT TO BE RELOCATED. EXTEND ALL LOW VOLTAGE WIRING & PNEUMATIC TUBING TO NEW LOCATION TO PROVIDE FULLY OPERATIONAL SYSTEM.
 - MD4 CEILING MOUNTED GRILLE/ DIFFUSER SHALL BE REMOVED. ALL DUCTWORK SHALL STAY INTACT FOR RE-USE.

MD1 MECHANICAL- DEMOLITION PLAN
1/4" = 1'-0"



- MECHANICAL KEY NOTES**
- M1 RELOCATED THERMOSTAT.
 - M2 PROVIDE NEW CEILING MOUNTED STEEL RETURN GRILLE (KRUEGER S-80). RE-INSTALL TO EXISTING DUCTWORK CONNECTION. UTILIZE FLEX DUCT WHERE NECESSARY TO RE-CONNECT TO NEW GRILLE LOCATIONS. COORDINATE NEW GRILLE LOCATION WITH CEILING GRID.

M1 MECHANICAL- NEW WORK PLAN
1/4" = 1'-0"

MECHANICAL SPECIFICATIONS

- GENERAL PROCEDURES**
- THESE SPECIFICATIONS ARE APPLICABLE TO ALL MECHANICAL DRAWINGS UNLESS NOTED OTHERWISE.
 - DESCRIPTION**
 - THIS PROJECT COMPRISES ALTERATIONS AND RENOVATIONS TO THE EXISTING BUILDING. THE EXISTING BUILDING IS CURRENTLY OCCUPIED AND THE PROJECT WILL PROCEED IN A MANNER WHICH WILL MINIMIZE ANY INCONVENIENCE TO THE BUILDING OCCUPANTS.
 - SCOPE OF WORK CONSISTS OF INSTALLATION OF MATERIALS TO BE FURNISHED UNDER THE CONTRACT DOCUMENTS AND WITHOUT LIMITING GENERALITY THEREOF CONSISTS OF FURNISHING LABOR, MATERIALS, EQUIPMENT, HOISTING, PLANT, TRANSPORTATION, RIGGING, STAGING, APPURTENANCES, AND SERVICES NECESSARY AND/OR INCIDENTAL TO PROPERLY COMPLETE ALL WORK AS SHOWN ON THE DRAWINGS AND AS DESCRIBED HEREIN.
 - DEFINITIONS: THE FOLLOWING DEFINITIONS APPLY TO THIS CONTRACT**
 - FURNISH: THE TERM "FURNISH" MEANS TO "SUPPLY AND DELIVER TO THE PROJECT SITE, READY FOR UNLOADING, UNPACKING, ASSEMBLY, INSTALLATION, AND SIMILAR OPERATIONS."
 - INSTALL: THE TERM "INSTALL" IS USED TO DESCRIBE OPERATIONS AT PROJECT SITE INCLUDING THE ACTUAL "UNLOADING, UNPACKING, ASSEMBLY, ERECTION, PLACING, ANCHORING, APPLYING, WORKING TO DIMENSION, FINISHING, CURING, PROTECTING, CLEANING, AND SIMILAR OPERATIONS."
 - PROVIDE: THE TERM "PROVIDE" MEANS "TO FURNISH AND INSTALL, COMPLETE AND READY FOR THE INTENDED USE."
 - REMOVE: THE TERM REMOVE MEANS TO DISCONNECT/FROM ITS PRESENT POSITION, REMOVE FROM THE PREMISES AND TO DISPOSE OF IN A LEGAL MANNER."
 - SUBSTITUTIONS: "SUBSTITUTIONS" ARE REQUESTS FOR CHANGES IN PRODUCTS, MATERIALS AND METHODS OF CONSTRUCTION AS PROPOSED BY THE CONTRACTOR AFTER AWARD OF THE CONTRACT.
 - DRAWINGS**
 - PROVIDE ALL MATERIALS, EQUIPMENT AND LABOR NECESSARY TO COMPLETE THE WORK OUTLINED ON THESE CONTRACT DOCUMENTS. THE CONTRACTOR IS TO NOTE THAT THESE DOCUMENTS ARE DIAGRAMMATIC ONLY AND THAT FINAL PLACEMENT OF EQUIPMENT OR DEVICES IN THE FIELD MAY NOT DIRECTLY CORRESPOND TO THAT WHICH IS SHOWN ON THE DRAWINGS. IF A CONFLICT IN POSITIONING OCCURS THE CONTRACTOR IS TO NOTIFY THE ENGINEER IMMEDIATELY TO ACCEPTANCE WHAT THE INTENT WAS BY THE DESIGN PROFESSIONAL.
 - SURVEY AND MEASUREMENTS:**
 - PRIOR TO SUBMITTING BID, VISIT SITE AND IDENTIFY EXISTING CONDITIONS AND DIFFICULTIES THAT WILL AFFECT WORK TO BE PERFORMED. NO COMPENSATION WILL BE GRANTED FOR ADDITIONAL WORK CAUSED BY UNFAMILIARITY WITH SITE CONDITIONS THAT ARE VISIBLE OR READILY IDENTIFIED BY EXPERIENCED OBSERVERS. INCLUDE IN THE BID ALL DEMOLITION, CUTTING & PATCHING WORK REQUIRED.
 - DO NOT SCALE DRAWINGS. SCALE INDICATED ON DRAWINGS IS FOR ESTABLISHING REFERENCE POINTS ONLY. ACTUAL FIELD CONDITIONS SHALL GOVERN ALL DIMENSIONS.
 - PRIOR TO ORDERING ANY MATERIALS AND EQUIPMENT, THOROUGHLY REVIEW THE SITE CONDITIONS TO DETERMINE IF ADEQUATE CLEARANCES AND ACCESS IS ALLOWED TO INSTALL THE COMPONENTS. ORDER EQUIPMENT BROKEN DOWN AS NECESSARY TO ALLOW FOR PROPER RIGGING THROUGH THE PROJECT AREA. PROVIDE ALL NECESSARY ALTERATIONS TO THE STRUCTURE OF THE BUILDING AS NECESSARY TO RIG THE EQUIPMENT IN PLACE.
 - ARRANGE INSTALLATION TO PROVIDE ACCESS TO EQUIPMENT FOR EASY MAINTENANCE AND REPAIR.
 - CODES AND STANDARDS: ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH THE LATEST STATE OF MASSACHUSETTS ACCEPTED VERSION OF THE FOLLOWING**
 - INTERNATIONAL BUILDING CODE
 - INTERNATIONAL MECHANICAL CODE
 - PERMITS AND FEES: THE CONTRACTOR SHALL OBTAIN ALL NECESSARY NOTICES, OBTAIN ALL PERMITS, AND PAY ALL GOVERNMENT AND STATE SALES TAXES AND FEES WHERE APPLICABLE, AND OTHER COSTS, INCLUDING UTILITY CONNECTIONS OR EXTENSIONS IN CONNECTION WITH THE WORK. FILE ALL NECESSARY DRAWINGS, PREPARE ALL DOCUMENTS AND OBTAIN ALL NECESSARY APPROVALS OF ALL GOVERNMENTAL AND STATE DEPARTMENTS HAVING JURISDICTION, OBTAIN ALL REQUIRED CERTIFICATES OF INSPECTION FOR HIS WORK, AND DELIVER A COPY TO THE OWNER AND ENGINEER BEFORE REQUEST FOR ACCEPTANCE AND FINAL PAYMENT FOR THE WORK.**
 - USE ADEQUATE NUMBERS OF SKILLED WORKMEN WHO ARE THOROUGHLY TRAINED AND EXPERIENCED IN THE NECESSARY CRAFTS AND WHO ARE COMPLETELY FAMILIAR WITH THE SPECIFIED REQUIREMENTS AND THE METHODS NEEDED FOR PROPER PERFORMANCE OF THE WORK.**
 - THE CONTRACTOR SHALL COORDINATE ALL INTERRUPTIONS OF SERVICES AND LIMITATIONS OF ACCESS WITH THE OWNER NO LESS THAN 5 DAYS PRIOR TO THE INTERRUPTION.**
 - OBTAIN OWNER'S NAME WRITTEN EQUIPMENT AND MATERIAL WARRANTIES OFFERED IN MANUFACTURER'S PUBLISHED PRODUCT DATA WITHOUT EXCLUSION OR LIMITATION.**
 - GUARANTEE WORK OF THESE CONTRACT DOCUMENTS IN WRITING FOR NOT LESS THAN ONE (1) YEAR FROM DATE OF COMPLETION. REPAIR OR REPLACE DEFECTIVE MATERIALS, EQUIPMENT, WORKMANSHIP AND INSTALLATION THAT DEVELOP WITHIN THIS PERIOD. PROMPT AND TO OWNER'S SATISFACTION AND CORRECT DAMAGE CAUSED IN MAKING NECESSARY REPAIRS AND REPLACEMENTS UNDER GUARANTEE WITHIN CONTRACT PRICE.**
 - SUBMIT TO THE OWNER AN OFFICIAL CERTIFICATE OF INSURANCE FOR THEIR RECORDS.**
- MEANS AND METHODS**
- INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS
 - DO NOT BURY WASTE MATERIALS. DO NOT BURY DEBRIS OR EXCESS MATERIALS ON THE OWNER'S PROPERTY. DO NOT DISCHARGE VOLATILE, HARMFUL OR DANGEROUS MATERIALS INTO DRAINAGE SYSTEMS. REMOVE AND DISPOSE OF ALL WASTE MATERIALS, PACKAGING MATERIAL, SKIDS ETC. FROM THE SITE AND DISPOSE OF IN A LAWFUL MANNER IN ACCORDANCE WITH MUNICIPAL, STATE AND FEDERAL REGULATIONS.
 - MATERIALS AND EQUIPMENT SHALL BE UL LISTED WHERE STANDARD HAS BEEN ESTABLISHED.
 - CAREFULLY INSPECT ALL BUILDING ELEMENTS PRIOR TO CUTTING OR DRILLING INTO WALL, FLOORS OR CEILINGS. PATCH AND PAINT SURFACES DISTURBED BY WORK UNDER THIS CONTRACT AS REQUIRED TO RESTORE THEM TO THEIR ORIGINAL CONDITION.
 - SCAFFOLDING, RIGGING, HOISTING: THE CONTRACTOR SHALL FURNISH ALL SCAFFOLDING, RIGGING, HOISTING AND SERVICES NECESSARY FOR ERECTION AND DELIVERY INTO THE PREMISES ANY EQUIPMENT AND APPARATUS FURNISHED UNDER THIS DIVISION. REMOVE SAME FROM PREMISES WHEN NO LONGER REQUIRED.
- HVAC SPECIFICATIONS**
- DUCTWORK AND ACCESSORIES**
 - ALL DUCTWORK AND ACCESSORIES AS ITEMIZED HERE-IN SHALL BE GALVANIZED STEEL CONSTRUCTION, INCLUDING ALL FITTINGS AND FASTENERS AND SHALL COMPLY WITH THE LATEST EDITION OF SMACNA STANDARDS FOR 1" PRESSURE CLASS. ALL DUCTWORK DIMENSIONS SHOWN ARE INSIDE CLEAR DIMENSIONS. ALL SQUARE DUCT ELBOWS ARE TO BE INSTALLED WITH TURNING VANES. ALL RADIUS DUCT ELBOWS SHALL HAVE MINIMUM CENTER LINE RADIUS EQUAL TO 1-1/2 TIMES THE DUCT WIDTH.
 - FLEXIBLE DUCT RUNOUTS SHALL NOT EXCEED 5 FEET IN LENGTH. SHALL BE PREINSULATED WITH VAPOR BARRIER, CPE INNER LINER, FACTORY FABRICATED, AND SHALL COMPLY WITH NFPA 90A AND UL 181. THE INSULATION MATERIAL SURFACE SHALL NOT BE EXPOSED TO THE AIR STREAM. FLEXIBLE DUCT RUNOUTS SHALL BE INSTALLED FULLY EXTENDED AND SUPPORTED TO MINIMIZE BENDS. FLEXIBLE DUCT SHALL BE AS MANUFACTURED BY THERMAFLEX, TUTTLE AND BAILEY OR APPROVED EQUAL. FLEXIBLE DUCT CONNECTORS APPROXIMATELY 6 INCHES IN LENGTH SHALL BE PROVIDED WHERE SHEET METAL CONNECTIONS ARE MADE TO AIR HANDLING EQUIPMENT.
 - PIPING AND FITTINGS**
 - HVAC HYDRONIC PIPING: FOR PIPE SIZES 2" DIAMETER AND LESS, PIPING SHALL BE TYPE L COPPER TUBING WITH 95-5 TIN-ANTIMONY SOLDER JOINTS. FOR PIPE SIZES LARGER THAN 2" DIAMETER, PIPING SHALL BE SCHEDULE 40 CARBON STEEL WITH THREADED, WELDED OR FLANGED JOINTS.
 - INSULATION:**
 - INSULATION THICKNESS SHALL BE IN ACCORDANCE WITH LATEST EDITION OF ASHRAE 90.1 EXCEPT THAT PIPE INSULATION SHALL NOT BE LESS THAN 1.5" THICK AND, FLEXIBLE DUCTWORK INSULATION SHALL NOT BE LESS THAN 1.5" THICK. ALL INSULATION MATERIALS, ADHESIVES, COATINGS, AND OTHER ACCESSORIES SHALL HAVE FLAME SPREAD RATINGS OF 25 OR LESS, AND "SMOKE DEVELOPED RATINGS OF 50 OR LESS AS TESTED BY ASTM E-84 (NFPA - 252) METHOD. ALL INSULATION MATERIALS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS AND IN ACCORDANCE WITH THE LATEST EDITION OF SMACNA AND ASHRAE STANDARDS.
 - PIPE INSULATION SHALL BE FIBERGLASS WITH VAPOR BARRIER JACKET. PROVIDE INSULATION FOR THE FOLLOWING PIPING SYSTEMS:
 - HVAC HYDRONIC SUPPLY AND RETURN PIPING
 - DUCT INSULATION MATERIALS SHALL BE FLEXIBLE FIBERGLASS DUCTWORK INSULATION WITH VAPOR BARRIER JACKET. DUCT INSULATION INSTALLED WITHIN MECHANICAL ROOMS SHALL BE RIGID, BOMB TYPE, MINIMUM 1.5" THICK. DUCTWORK ACOUSTIC LINING SHALL BE CELLULAR GLASS WITH FACE BONDED TO PROVIDE A SMOOTH DAMAGE RESISTANT FINISH. PROVIDE INSULATION FOR THE FOLLOWING DUCTWORK SYSTEMS:
 - SUPPLY AIR DUCTWORK
 - RETURN AIR DUCTWORK IN UNCONDITIONED SPACES (WHERE SPACE TEMPERATURE IS MORE THAN 10 DEGREES F DIFFERENT FROM DUCT TEMPERATURE)
 - PIPING INSTALLATIONS**
 - INSTALL PIPING IN ACCORDANCE WITH ALL APPLICABLE CODES AND GOOD PRACTICES.
 - INSTALL UNIONS OR FLANGES IN PIPES ADJACENT TO EACH VALVE, CONTROL DEVICE AND AT FINAL CONNECTIONS EACH PIECE OF EQUIPMENT.
 - INSTALL DIELECTRIC UNIONS TO JOIN DISSIMILAR METALS.
 - INSTALL AND ANCHOR PIPING TO ENSURE PROPER EXPANSION AND CONTRACTION.
 - PROVIDE MANUAL AIR VENTS AT ALL HIGH POINTS AND DRAIN VALVES AT ALL LOW POINTS.
 - ANCHOR PIPING TO ENSURE PROPER DIRECTION OF EXPANSION AND CONTRACTION.
 - SUPPORT PIPING TO PREVENT VIBRATION OR SAGGING. PROVIDE HANGER SPACING ACCORDING TO DISTANCES LISTED IN APPLICABLE CODES AND REGULATIONS.
 - TESTING - ADJUSTING AND BALANCING**
 - THE MECHANICAL CONTRACTOR SHALL PROVIDE THE SERVICES OF AN INDEPENDENT TESTING, ADJUSTING, AND BALANCING (TAB) AGENCY TO PROVIDE TAB SERVICES FOR THE MECHANICAL SYSTEMS. THE TAB AGENCY SHALL BE CERTIFIED BY NATIONAL ENVIRONMENTAL BALANCING BUREAU (NEBB) OR THE ASSOCIATED AIR BALANCE COUNCIL (AABC) IN THOSE TESTING AND BALANCING DISCIPLINES REQUIRED FOR THIS PROJECT. THE TAB AGENCY SHALL HAVE AT LEAST ONE PROFESSIONAL ENGINEER REGISTERED IN THE STATE IN WHICH THE SERVICES ARE TO BE PERFORMED AND CERTIFIED BY NEBB OR AABC AS A TEST AND BALANCE ENGINEER.
 - PERFORM TESTING AND BALANCING PROCEDURES ON EACH SYSTEM IDENTIFIED, IN ACCORDANCE WITH THE DETAILED PROCEDURES OUTLINED IN EITHER NEBB: "PROCEDURAL STANDARDS FOR TESTING, ADJUSTING, AND BALANCING OF ENVIRONMENTAL SYSTEMS" OR AABC: "NATIONAL STANDARDS FOR TOTAL SYSTEM BALANCE." THE TAB AGENCY SHALL TEST, ADJUST, AND BALANCE THE FOLLOWING MECHANICAL SYSTEMS:
 - SUPPLY AIR SYSTEMS
 - ALL RETURN AIR SYSTEMS
 - ALL HYDRONIC SYSTEMS
 - VERIFY OPERATION OF ALL TEMPERATURE CONTROL SYSTEMS
 - SUBMIT TESTING, ADJUSTING, AND BALANCING REPORTS BEARING THE SEAL AND SIGNATURE OF THE TAB PROFESSIONAL ENGINEER. PREPARE A REPORT OF RECOMMENDATIONS FOR CORRECTING UNSATISFACTORY MECHANICAL PERFORMANCES WHEN A SYSTEM CANNOT BE SUCCESSFULLY BALANCED.
 - PROVIDE ALL NECESSARY CONTROL DEVICES, EQUIPMENT, MATERIALS, LABOR, WIRE AND CONDUIT TO PERFORM THE SEQUENCES OF OPERATION AS INDICATED. WIRING AND CONDUIT SHALL BE INSTALLED IN ACCORDANCE WITH DIVISION 16. ALL CONTROL WIRING INSTALLED WITHIN AIR PLENUM SPACES TO BE TEFLON COATED RATED FOR PLENUM CELINGS.

MECHANICAL- GENERAL NOTES

- THESE GENERAL NOTES ARE APPLICABLE TO ALL MECHANICAL DRAWINGS.
- DRAWINGS ARE DIAGRAMMATIC AND SHOW GENERAL INTENT OF WORK, SEE DETAILS, SCHEDULES AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.
- CONTRACTOR MUST REVIEW DRAWINGS OF THE OTHER TRADES AS PART OF THIS CONTRACT FOR ADDITIONAL WORK REQUIRED AND OR COORDINATION OF HIS WORK FOR OPERATIONS OR CONNECTIONS TO OTHER SYSTEMS.
- ALL EXISTING DUCTWORK AND EQUIPMENT SHOWN HAS BEEN TAKEN FROM THE BEST AVAILABLE EXISTING INFORMATION. THE DRAWINGS ARE DIAGRAMMATIC AND ALL DIFFUSERS, DUCTWORK, HVAC EQUIPMENT AND LOUVERS MAY NOT BE SHOWN. THE CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIAR WITH THE EXISTING SYSTEMS AND CONDITIONS IN AREAS OF RENOVATION.

MECHANICAL DEMO- GENERAL NOTES

- THE NOTES BELOW APPLY TO MECHANICAL DEMOLITION WORK.
- THIS PLAN IS DIAGRAMMATIC AND NOT INTENDED TO DEPICT THE ENTIRE SCOPE OF DEMOLITION. ADDITIONAL DEMOLITION AND MODIFICATION WORK NOT SHOWN SHOULD BE ANTICIPATED.
- WHERE LOCATIONS OF EXISTING ARE INDICATED, VERIFY LOCATIONS IN THE FIELD AND ADJUST WORK AS REQUIRED.
- VERIFY ITEMS TO BE KEPT BY OWNER. DISPOSE OF DEMOLISHED MATERIALS AS REQUESTED BY CODE AND SPECIFICATION.
- WHERE DISTURBED BY DEMOLITION, PATCH WALLS AND FLOORS TO MATCH EXISTING.
- PRIOR TO SUBMITTING BID, VISIT SITE AND IDENTIFY EXISTING CONDITIONS AND DIFFICULTIES THAT WILL AFFECT WORK TO BE PERFORMED. NO COMPENSATION WILL BE GRANTED FOR ADDITIONAL WORK CAUSED BY UNFAMILIARITY WITH SITE CONDITIONS THAT ARE VISIBLE OR READILY IDENTIFIED BY EXPERIENCED OBSERVERS. INCLUDE IN THE BID ALL DEMOLITION WORK INDICATED AND REQUIRED.
- CONTRACTOR SHALL DISCONNECT AND MAKE SAFE ALL EQUIPMENT, APPURTENANCES TO BE DEMOLISHED. CONTRACTOR IS RESPONSIBLE TO MAINTAIN ACTIVE EQUIPMENT AND SERVICES TO OTHER AREAS NOT WITHIN SCOPE OF WORK BEING PERFORMED.
- PRIOR TO TOUCHING, DEMOLITION, OR OPENING THE SYSTEM, TESTING AND BALANCING, CONTRACTOR SHALL MEASURE AND REPORT TO THE ENGINEER DUCTWORK SIZE, STATIC & VELOCITY PRESSURE AND CFM.

MECHANICAL PLAN LEGEND

SYMBOL	DESCRIPTION
	EXHAUST GRILLE- KRUEGER S80 (STEEL)
	RETURN GRILLE- KRUEGER S80 (STEEL)
	THERMOSTAT

MECHANICAL DEMO LEGEND

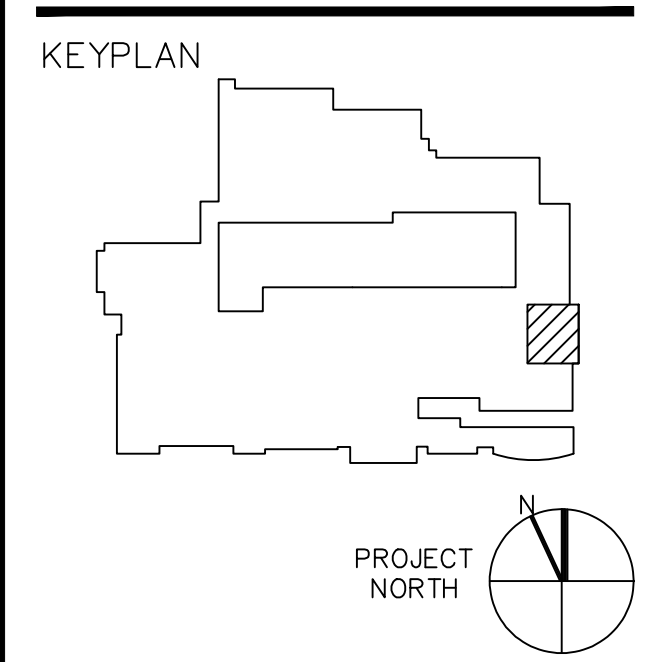
SYMBOL	DESCRIPTION
	REMOVE EXISTING DUCTWORK/EQUIPMENT
	REMOVE EXISTING PIPING/EQUIPMENT
ETR	EXISTING TO REMAIN
RE	REMOVE EXISTING
RL	RELOCATE EXISTING

D·R·A
 Drumme
 Rosane
 Anderson,
 Inc.
 235 Bear Hill Road
 4th Floor
 Waltham, MA 02461
 617-964-1700
 www.DRAarchitects.com

**ARLINGTON
 HIGH SCHOOL
 PRE-K
 CLASSROOM
 CONVERSION**

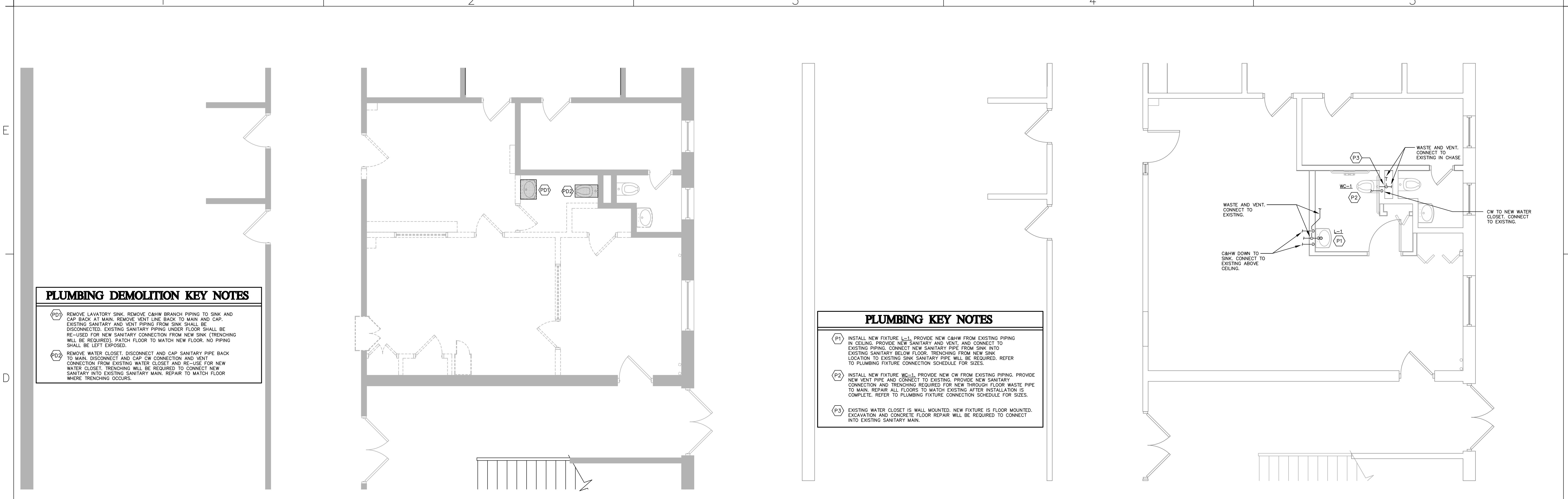
Arlington,
 Massachusetts

CES
 Consulting Engineering Services, Inc.
 111 Middle Street
 Middletown, CT 06457
 Tel: 860-632-1822
 Fax: 860-632-1788
 CES Project #091610630



**MECHANICAL
 FLOOR PLANS,
 SPECS & DETAILS**

Scale: AS NOTED
 Job No.: 16006.00
 Drawn By: BCH
 Date: 04/27/16
M1-1-1



PLUMBING DEMOLITION KEY NOTES

- FD1** REMOVE LAVATORY SINK. REMOVE C&HW BRANCH PIPING TO SINK AND CAP BACK AT MAIN. REMOVE VENT LINE BACK TO MAIN AND CAP. EXISTING SANITARY AND VENT PIPING FROM SINK SHALL BE DISCONNECTED. EXISTING SANITARY PIPING UNDER FLOOR SHALL BE RE-USED FOR NEW SANITARY CONNECTION FROM NEW SINK. TRENCHING WILL BE REQUIRED. PATCH FLOOR TO MATCH NEW FLOOR. NO PIPING SHALL BE LEFT EXPOSED.
- FD2** REMOVE WATER CLOSET. DISCONNECT AND CAP SANITARY PIPE BACK TO MAIN. DISCONNECT AND CAP CW CONNECTION AND VENT CONNECTION FROM EXISTING WATER CLOSET AND RE-USE FOR NEW WATER CLOSET. TRENCHING WILL BE REQUIRED TO CONNECT NEW SANITARY INTO EXISTING SANITARY MAIN. REPAIR TO MATCH FLOOR WHERE TRENCHING OCCURS.

PLUMBING KEY NOTES

- P1** INSTALL NEW FIXTURE L-1. PROVIDE NEW C&HW FROM EXISTING PIPING IN CEILING. PROVIDE NEW SANITARY AND VENT. AND CONNECT TO EXISTING PIPING. CONNECT NEW SANITARY PIPE FROM SINK INTO EXISTING SANITARY BELOW FLOOR. TRENCHING FROM NEW SINK LOCATION TO EXISTING SANITARY PIPE WILL BE REQUIRED. REFER TO PLUMBING FIXTURE CONNECTION SCHEDULE FOR SIZES.
- P2** INSTALL NEW FIXTURE WC-1. PROVIDE NEW CW FROM EXISTING PIPING. PROVIDE NEW VENT PIPE AND CONNECT TO EXISTING. PROVIDE NEW SANITARY CONNECTION AND TRENCHING REQUIRED FOR NEW THROUGH FLOOR WASTE PIPE TO MAIN. REPAIR ALL FLOORS TO MATCH EXISTING AFTER INSTALLATION IS COMPLETE. REFER TO PLUMBING FIXTURE CONNECTION SCHEDULE FOR SIZES.
- P3** EXISTING WATER CLOSET IS WALL MOUNTED. NEW FIXTURE IS FLOOR MOUNTED. EXCAVATION AND CONCRETE FLOOR REPAIR WILL BE REQUIRED TO CONNECT INTO EXISTING SANITARY MAIN.

PD1 PLUMBING- DEMOLITION PLAN
1/4" = 1'-0"

P1 PLUMBING- NEW WORK PLAN
1/4" = 1'-0"

PLUMBING GENERAL NOTES

- GENERAL PROCEDURES**
- THESE SPECIFICATIONS ARE APPLICABLE TO ALL PLUMBING DRAWINGS UNLESS NOTED OTHERWISE.
 - DESCRIPTION
 - THIS PROJECT COMPRISES ALTERATIONS AND RENOVATIONS TO THE EXISTING BUILDING. THE EXISTING BUILDING IS CURRENTLY OCCUPIED AND THE PROJECT WILL PROCEED IN A MANNER WHICH WILL MINIMIZE ANY INCONVENIENCE TO THE BUILDING OCCUPANTS.
 - SCOPE OF WORK CONSISTS OF INSTALLATION OF MATERIALS TO BE FURNISHED UNDER THE CONTRACT DOCUMENTS AND WITHOUT LIMITING GENERALITY THEREOF CONSISTS OF FURNISHING LABOR, MATERIALS, EQUIPMENT, HOISTING, PLANT, TRANSPORTATION, RIGGING, STAGING, APPURTENANCES, AND SERVICES NECESSARY AND/OR INCIDENTAL TO PROPERLY COMPLETE ALL WORK AS SHOWN ON THE DRAWINGS AND AS DESCRIBED HEREIN.
 - DEFINITIONS: THE FOLLOWING DEFINITIONS APPLY TO THIS CONTRACT
 - FURNISH: THE TERM "FURNISH" MEANS TO "SUPPLY AND DELIVER TO THE PROJECT SITE, READY FOR UNLOADING, UNPACKING, ASSEMBLY, INSTALLATION, AND SIMILAR OPERATIONS."
 - INSTALL: THE TERM "INSTALL" IS USED TO DESCRIBE OPERATIONS AT PROJECT SITE INCLUDING THE ACTUAL "UNLOADING, UNPACKING, ASSEMBLY, ERECTION, PLACING, ANCHORING, APPLYING, WORKING TO DIMENSION, FINISHING, CURING, PROTECTING, CLEANING, AND SIMILAR OPERATIONS."
 - PROVIDE: THE TERM "PROVIDE" MEANS "TO FURNISH AND INSTALL, COMPLETE AND READY FOR THE INTENDED USE."
 - REMOVE: THE TERM REMOVE MEANS TO DISCONNECT FROM ITS PRESENT POSITION, REMOVE FROM THE PREMISES AND TO DISPOSE OF IN A LEGAL MANNER."
 - SUBSTITUTIONS: "SUBSTITUTIONS" ARE REQUESTS FOR CHANGES IN PRODUCTS, MATERIALS AND METHODS OF CONSTRUCTION AS PROPOSED BY THE CONTRACTOR AFTER AWARD OF THE CONTRACT.
 - DRAWINGS
 - PROVIDE ALL MATERIALS, EQUIPMENT AND LABOR NECESSARY TO COMPLETE THE WORK OUTLINED ON THESE CONTRACT DOCUMENTS. THE CONTRACTOR IS TO NOTE THAT THESE DOCUMENTS ARE DIAGRAMMATIC ONLY AND THAT FINAL PLACEMENT OF EQUIPMENT OR DEVICES IN THE FIELD MAY NOT DIRECTLY CORRESPOND TO THAT WHICH IS SHOWN ON THE DRAWINGS. IF A CONFLICT IN POSITIONING OCCURS THE CONTRACTOR IS TO NOTIFY THE ENGINEER IMMEDIATELY TO ACCEPTANCE WHAT THE INTENT WAS BY THE DESIGN PROFESSIONAL.
 - SURVEY AND MEASUREMENTS:
 - PRIOR TO SUBMITTING BID, VISIT SITE AND IDENTIFY EXISTING CONDITIONS AND DIFFICULTIES THAT WILL AFFECT WORK TO BE PERFORMED. NO COMPENSATION WILL BE GRANTED FOR ADDITIONAL WORK CAUSED BY UNFAMILIARITY WITH SITE CONDITIONS THAT ARE VISIBLE OR READILY IDENTIFIED BY EXPERIENCED OBSERVERS. INCLUDE IN THE BID ALL DEMOLITION, CUTTING & PATCHING WORK REQUIRED.
 - DO NOT SCALE DRAWINGS. SCALE INDICATED ON DRAWINGS IS FOR ESTABLISHING REFERENCE POINTS ONLY. ACTUAL FIELD CONDITIONS SHALL GOVERN ALL DIMENSIONS.
 - PRIOR TO ORDERING ANY MATERIALS AND EQUIPMENT, THOROUGHLY REVIEW THE SITE CONDITIONS TO DETERMINE IF ADEQUATE CLEARANCES AND ACCESS IS ALLOWED TO INSTALL THE COMPONENTS. ORDER EQUIPMENT BROKEN DOWN AS NECESSARY TO ALLOW FOR PROPER RIGGING THROUGH THE PROJECT AREA. PROVIDE ALL NECESSARY ALTERATIONS TO THE STRUCTURE OF THE BUILDING AS NECESSARY TO RIG THE EQUIPMENT IN PLACE.
 - ARRANGE INSTALLATION TO PROVIDE ACCESS TO EQUIPMENT FOR EASY MAINTENANCE AND REPAIR.
 - CODES AND STANDARDS: ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH THE LATEST STATE OF MASSACHUSETTS ACCEPTED VERSION OF THE FOLLOWING
 - INTERNATIONAL BUILDING CODE
 - INTERNATIONAL PLUMBING CODE
 - MASSACHUSETTS GAS AND EQUIPMENT PIPING CODE
 - PERMITS AND FEES: THE CONTRACTOR SHALL OBTAIN ALL NECESSARY NOTICES, OBTAIN ALL PERMITS, AND PAY ALL GOVERNMENT AND STATE SALES TAXES AND FEES WHERE APPLICABLE, AND OTHER COSTS, INCLUDING UTILITY CONNECTIONS OR EXTENSIONS IN CONNECTION WITH THE WORK. FILE ALL NECESSARY DRAWINGS, PREPARE ALL DOCUMENTS AND OBTAIN ALL NECESSARY APPROVALS OF ALL GOVERNMENTAL AND STATE DEPARTMENTS HAVING JURISDICTION, OBTAIN ALL REQUIRED CERTIFICATES OF INSPECTION FOR HIS WORK, AND DELIVER A COPY TO THE OWNER AND ENGINEER BEFORE REQUEST FOR ACCEPTANCE AND FINAL PAYMENT FOR THE WORK.
 - USE ADEQUATE NUMBERS OF SKILLED WORKMEN WHO ARE THOROUGHLY TRAINED AND EXPERIENCED IN THE NECESSARY CRAFTS AND WHO ARE COMPLETELY FAMILIAR WITH THE SPECIFIED REQUIREMENTS AND THE METHODS NEEDED FOR PROPER PERFORMANCE OF THE WORK.
 - THE CONTRACTOR SHALL COORDINATE ALL INTERRUPTIONS OF SERVICES AND LIMITATIONS OF ACCESS WITH THE OWNER NO LESS THAN 5 DAYS PRIOR TO THE INTERRUPTION.
 - OBTAIN IN OWNER'S NAME WRITTEN EQUIPMENT AND MATERIAL WARRANTIES OFFERED IN MANUFACTURER'S PUBLISHED PRODUCT DATA WITHOUT EXCLUSION OR LIMITATION.
 - GUARANTEE WORK OF THESE CONTRACT DOCUMENTS IN WRITING FOR NOT LESS THAN ONE (1) YEAR FROM DATE OF FINAL NOTICE OF ACCEPTANCE. REPAIR OR REPLACE DEFECTIVE MATERIALS, EQUIPMENT, WORKMANSHIP AND INSTALLATION THAT DEVELOP WITHIN THIS PERIOD, PROMPT AND TO OWNER'S SATISFACTION AND CORRECT DAMAGE CAUSED IN MAKING NECESSARY REPAIRS AND REPLACEMENTS UNDER GUARANTEE WITHIN CONTRACT PRICE.
 - SUBMIT TO THE OWNER AN OFFICIAL CERTIFICATE OF INSURANCE FOR THEIR RECORDS.
- MEANS AND METHODS**
- INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS
 - DO NOT BURN WASTE MATERIALS. DO NOT BURY DEBRIS OR EXCESS MATERIALS ON THE OWNER'S PROPERTY. DO NOT DISCHARGE VOLATILE, HARMFUL OR DANGEROUS MATERIALS INTO DRAINAGE SYSTEMS. REMOVE AND DISPOSE OF ALL WASTE MATERIALS, PACKAGING MATERIAL, SKIDS ETC. FROM THE SITE AND DISPOSE OF IN A LAWFUL MANNER IN ACCORDANCE WITH MUNICIPAL, STATE AND FEDERAL REGULATIONS.
 - MATERIALS AND EQUIPMENT SHALL BE UL LISTED WHERE STANDARD HAS BEEN ESTABLISHED.
 - CAREFULLY INSPECT ALL BUILDING ELEMENTS PRIOR TO CUTTING OR DRILLING INTO WALL, FLOORS OR CEILINGS. PATCH AND PAINT SURFACES DISTURBED BY WORK UNDER THIS CONTRACT AS REQUIRED TO RESTORE THEM TO THEIR ORIGINAL CONDITION.
 - SCAFFOLDING, RIGGING, HOISTING: THE CONTRACTOR SHALL FURNISH ALL SCAFFOLDING, RIGGING, HOISTING AND SERVICES NECESSARY FOR ERECTION AND DELIVERY INTO THE PREMISES. ANY EQUIPMENT AND APPARATUS FURNISHED UNDER THIS DIVISION. REMOVE SAME FROM PREMISES WHEN NO LONGER REQUIRED.
 - PROVIDE FIRESTOPPING AROUND ALL FIRE PROTECTION, PLUMBING, MECHANICAL AND ELECTRICAL PENETRATIONS THROUGH FIRE RATED PARTITIONS. PROVIDE ASBESTOS FREE FIRESTOPPING SYSTEM CAPABLE OF MAINTAINING AN EFFECTIVE BARRIER AGAINST FLAME AND GASES. SYSTEM SHALL BE UL LISTED AND COMPLY WITH ASTM E 814.
 - ACCESS DOORS SHALL BE PROVIDED IN CEILINGS, WALLS AND FLOORS AT ALL DAMPERS, VALVES, CONTROL DEVICES, AND OTHER APPARATUS AND EQUIPMENT REQUIRING PERIODIC SERVICE AND INSPECTION. COORDINATE TYPE AND LOCATION WITH ARCHITECTURAL PLANS.
- PLUMBING**
- PIPING:
 - DOMESTIC WATER PIPING SHALL BE COPPER TUBING TYPE L. SOLDER FILLER METALS SHALL BE 95-5 TIN-ANTIMONY SOLDER JOINTS.
 - WASTE AND VENT PIPING SHALL BE HUBLESS, SERVICE WEIGHT, CAST-IRON SOL. PIPE AND FITTINGS, WITH NEOPRENE GASKETS.
 - INSULATION:
 - INSULATION SHALL BE IN ACCORDANCE WITH LATEST EDITION OF ASHRAE 90.1 EXCEPT THAT PIPE INSULATION SHALL NOT BE LESS THAN 1" THICK. ALL INSULATION MATERIALS, ADHESIVES, COATINGS, AND OTHER ACCESSORIES SHALL HAVE FLAME SPREAD RATINGS OF 25 OR LESS, AND SMOKE DEVELOPED RATINGS OF 50 OR LESS AS TESTED BY ASTM E 84 (NFPA 255) METHOD. ALL INSULATION MATERIALS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS AND IN ACCORDANCE WITH THE LATEST EDITION OF SMACNA AND ASHRAE STANDARDS.
 - PIPE INSULATION SHALL BE FIBERGLASS WITH VAPOR BARRIER JACKET. PROVIDE INSULATION FOR THE FOLLOWING PIPING SYSTEMS:
 - DOMESTIC COLD WATER PIPING
 - DOMESTIC HOT WATER PIPING
 - PIPING INSTALLATION:
 - INSTALL PIPING IN ACCORDANCE WITH ALL APPLICABLE CODES AND GOOD PRACTICES.
 - INSTALL UNIONS OR FLANGES IN PIPES ADJACENT TO EACH VALVE, CONTROL DEVICE AND AT FINAL CONNECTIONS EACH PIECE OF EQUIPMENT.
 - INSTALL DIELECTRIC UNIONS TO JOIN DISSIMILAR METALS.
 - INSTALL AND ANCHOR PIPING TO ENSURE PROPER EXPANSION AND CONTRACTION.
 - ANCHOR PIPING TO ENSURE PROPER DIRECTION OF EXPANSION AND CONTRACTION.
 - SUPPORT PIPING TO PREVENT VIBRATION OR SAGGING. PROVIDE HANGER SPACING ACCORDING TO DISTANCES LISTED IN APPLICABLE CODES AND REGULATIONS.
 - PLUMBING IDENTIFICATION
 - PLUMBING IDENTIFICATION WORK SHALL COMPLY WITH ANSI A13.1 NAMES, ABBREVIATIONS AND OTHER DESIGNATIONS USED IN MECHANICAL IDENTIFICATION WORK, SHALL CORRESPOND WITH DESIGNATIONS SHOWN, SPECIFIED OR SCHEDULED.
 - VALVE TAGS SHALL BE 1-1/2" DIAMETER, 19-GAGE POLISHED BRASS WITH STAMP-ENGRAVED LETTERING. ATTACH VALVES IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
 - PROVIDE VALVE TAG ON EVERY VALVE, EXCLUDING DRAIN VALVES.
 - PIPE IDENTIFICATION, PLASTIC PIPE MARKERS, FACTORY FABRICATED, FLEXIBLE, SEMI-RIGID PLASTIC, PERFORMED TO FIT AROUND PIPE OR PIPE COVERING, MINIMUM INFORMATION INDICATING FLOW DIRECTION ARROW AND IDENTIFICATION OF FLUID BEING CONVEYED.
 - TESTING AND ADJUSTING
 - ALL WATER PIPING SHALL BE TESTED IN ACCORDANCE WITH THE INTERNATIONAL PLUMBING CODE. THE SYSTEM SHALL BE PROVED TIGHT UNDER WATER PRESSURE OF 100 PSIG. THE PRESSURE SHALL BE APPLIED GRADUALLY AND THEN HELD FOR A MINIMUM OF TWO HOURS.
 - ALL WASTE PIPING SHALL BE TESTED IN ACCORDANCE WITH THE INTERNATIONAL PLUMBING CODE. THE SYSTEM SHALL BE FILLED WITH WATER TO A HEAD OF NOT LESS THAN 10 FEET. THE WATER LEVEL AT THE TOP OF THE TEST HEAD OF WATER SHALL NOT DROP FOR AT LEAST 15 MINUTES.
 - THE CONTRACTOR SHALL PROVIDE ALL NECESSARY EQUIPMENT FOR ALL TESTING.

PLUMBING FIXTURE CONNECTION SCHEDULE

FIXTURE TYPE	WASTE CONNECTION	VENT CONNECTION	COLD WATER CONNECTION	HOT WATER CONNECTION
LAVATORY	1 1/2"	1 1/2"	1/2"	1/2"
WATER CLOSET	3"	2"	1"	-

NOTES:

- ALL PIPE TRAPS AT SINKS AND LAVATORIES SHALL BE CHROME PLATED BRASS.

PLUMBING GENERAL NOTES

- THESE GENERAL NOTES ARE APPLICABLE TO ALL PLUMBING DRAWINGS.
- DRAWINGS ARE DIAGRAMMATIC AND SHOW GENERAL INTENT OF WORK, SEE DETAILS, SCHEDULES AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.
- ACCESSIBLE LAVATORY FAUCETS SHALL BE LOCATED WITHIN 13 INCHES FROM THE LEADING EDGE OF LAVATORIES IN ACCORDANCE WITH FEDERAL REGISTER RULES AND REGULATIONS.
- ALL DOMESTIC HOT & COLD WATER PIPING SHALL BE 1/2" MINIMUM.
- ALL VENT PIPING SHALL BE 1 1/2" MINIMUM.
- SEE PLUMBING FIXTURE CONNECTION SCHEDULE THIS SHEET FOR PLUMBING FIXTURE CONNECTION SIZING.
- PROVIDE ACCESS DOORS FOR SHUT-OFF VALVES.
- PROVIDE ISOLATION VALVES AT THE PIPE CONNECTIONS.

PLUMBING DEMO GENERAL NOTES

- THE NOTES BELOW APPLY TO PLUMBING DEMOLITION WORK.
- THIS PLAN IS DIAGRAMMATIC AND NOT INTENDED TO DEPICT THE ENTIRE SCOPE OF DEMOLITION. ADDITIONAL DEMOLITION AND MODIFICATION WORK NOT SHOWN SHOULD BE ANTICIPATED.
- WHERE LOCATIONS OF EXISTING ARE INDICATED, VERIFY LOCATIONS IN THE FIELD AND ADJUST WORK AS REQUIRED.
- VERIFY ITEMS TO BE KEPT BY OWNER. DISPOSE OF DEMOLISHED MATERIALS AS REQUESTED BY CODE AND SPECIFICATION.
- WHERE DISTURBED BY DEMOLITION, PATCH WALLS AND FLOORS TO MATCH EXISTING.
- PRIOR TO SUBMITTING BID, VISIT SITE AND IDENTIFY EXISTING CONDITIONS AND DIFFICULTIES THAT WILL AFFECT WORK TO BE PERFORMED. NO COMPENSATION WILL BE GRANTED FOR ADDITIONAL WORK CAUSED BY UNFAMILIARITY WITH SITE CONDITIONS THAT ARE VISIBLE OR READILY IDENTIFIED BY EXPERIENCED OBSERVERS. INCLUDE IN THE BID ALL DEMOLITION WORK INDICATED AND REQUIRED.

PLUMBING PIPING LEGEND

SYMBOL	DESCRIPTION
---	COLD WATER/UNFILTERED COLD WATER
---110°F---	HOT WATER (110°F)
---110°F---	HOT WATER RECIRCULATION (110°F)
---SAN---	SANITARY WASTE ABOVE FLOOR
○	VENT
○	90° ELBOW DOWN
○	90° ELBOW UP
○	TEE UP
○	TEE DOWN
○	DROP AND RUN
┆	TEE OFF TOP OF PIPE
┆	TEE OFF BOTTOM OF PIPE

PLUMBING FIXTURE SCHEDULE

SYMBOL	MANUFACTURER / MODEL NUMBER	DESCRIPTION OF FIXTURE	TRIM AND ACCESSORIES	REMARKS
L-1	AMERICAN STANDARD "LUCERNE" MODEL #0356.015	LAVATORY, ACCESSIBLE, WALL HUNG, 8" SPACED CHROME FAUCET, TWO HANDLE WIDESPREAD, PROVIDE VITREOUS CHINA, FRONT OVERFLOW, PROVIDE WITH GRID STRAINER.	SYMMONS ALLURA MODEL #SLW-4712-1.5 POLISHED CHROME FAUCET, TWO HANDLE WIDESPREAD, PROVIDE SYMMONS MODEL #7-225 TEMPERING VALVE UNDER SINK, PROVIDE JR SMITH SERIES 700 CONCEALED SUPPORT.	#1,2,3,4,5,6
WC-1	AMERICAN STANDARD "BABY DEVORO FLOWSE" MODEL #2282.001	WATER CLOSET, FLOOR MOUNTED, 10" HIGH, VITREOUS CHINA, PROVIDE WITH INLET SPUD.	AMERICAN STANDARD MANUAL 1.28 GPF FLUSH VALVE, MODEL #M47.121.002, PROVIDE SEAT MODEL #5001.G1010 WITH EVERELEAN LESS COVER.	#1,4

REMARKS:

- COLOR SHALL BE WHITE.
- INSTALL TRUEBRO INC. MODEL #102, (EQUALS MCGUIRE, PLUMBER'S) HANDI LAV-GUARD PROTECTOR ON THE HOT, COLD, AND DRAIN PIPING UNDER FIXTURE.
- FIXTURES AND TRIM AS NOTED SHALL BE "ACCESSIBLE" AND SHALL BE INSTALLED TO ADA / ANS A117 AND FEDERAL 504 REQUIREMENTS.
- PROVIDE ISOLATION VALVES AT THE PIPE CONNECTIONS.
- LAVATORY SHALL BE INSTALLED 34" ABOVE FINISH FLOOR.
- PLUMBER TO PROVIDE ALL SINK ACCESSORIES TO PROVIDE COMPLETE INSTALLATION INCLUDING BUT NOT LIMITED TO ESCUTCHEON, SLIP NUT, P-TRAP, TAILPIECE, ETC.

PLUMBING SYMBOL LEGEND

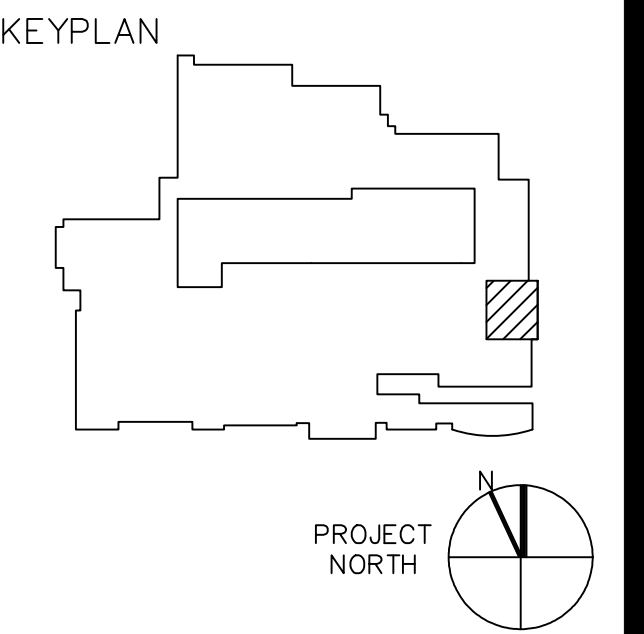
SYMBOL	DESCRIPTION
L-1	FIXTURE TYPE
○	PIPE TRAP
○	ADA ACCESSIBLE FIXTURE

D·R·A
 Drumme
 Rosane
 Anderson,
 Inc.
 235 Bear Hill Road
 4th Floor
 Waltham, MA 02451
 617-964-1700
 www.DRAarchitects.com

ARLINGTON HIGH SCHOOL PRE-K CLASSROOM CONVERSION

Arlington, Massachusetts

CES
 Consulting Engineering Services, Inc.
 111 Middle Street
 Middletown, CT 06457
 Tel: 860-632-1502
 Fax: 860-632-1788
 CES Project #0916106100



PLUMBING FLOOR PLANS, SPECS & DETAILS

Scale: AS NOTED
 Job No.: 16006.00
 Drawn By: BCH
 Date: 04/27/16
P1-1-1