NO.	ISSUANCE	DATE	REVISION
1	S.E.D. SUBMISSION	1/26/2022	
2	ISSUED FOR BID	04/05/2022	

### LIST OF DRAWINGS

#### ARCHITECTURAL

CHA G1 LOCATION MAP, ABBREVIATIONS, LEGENDS, GENERAL NOTES, GENERAL WINDOW

CHA A-10 CROSS HILL ACADEMY OVERALL GROUND FLOOR PLAN FIRE DAMAGE

CHA AR-100 CROSS HILL ACADEMY PARTIAL GROUND FLOOR PLAN FIRE DAMAGE REMOVAL PLANS

CHA A-100 CROSS HILL ACADEMY PARTIAL GROUND FLOOR PLAN REFLECTED CEILING PLAN CHA A-101 CROSS HILL ACADEMY PARTIAL GROUND FLOOR PLAN FF%E AND FINISH PLANS

WINDOW SCHEDULE, DOOR SCHEDULE
CHA A-525 CASEWORK DETAILS CEILING DETAILS

CHA A-725 WINDOW DETAILS

#### MECHANICAL/PLUMBING

CHA M-001 ABBREVIATIONS AND SYMBOLS

CHA P-001 ABBREVIATIONS AND SYMBOLS
CHA MPD-100 PARTIAL GROUND FLOOR PLANS - DEMOLITIO

CHA MPD-100 PARTIAL GROUND FLOOR PLANS - DEMOLITION
CHA MP-101 PARTIAL GROUND FLOOR PLANS - NEW WORK

CHA MP-500 DETAILS AND SCHEDULES CHA MP-600 CONTROL SCHEMATICS

#### ELECTRICAL

CHA E-001 ABBREVIATIONS AND SYMBOLS

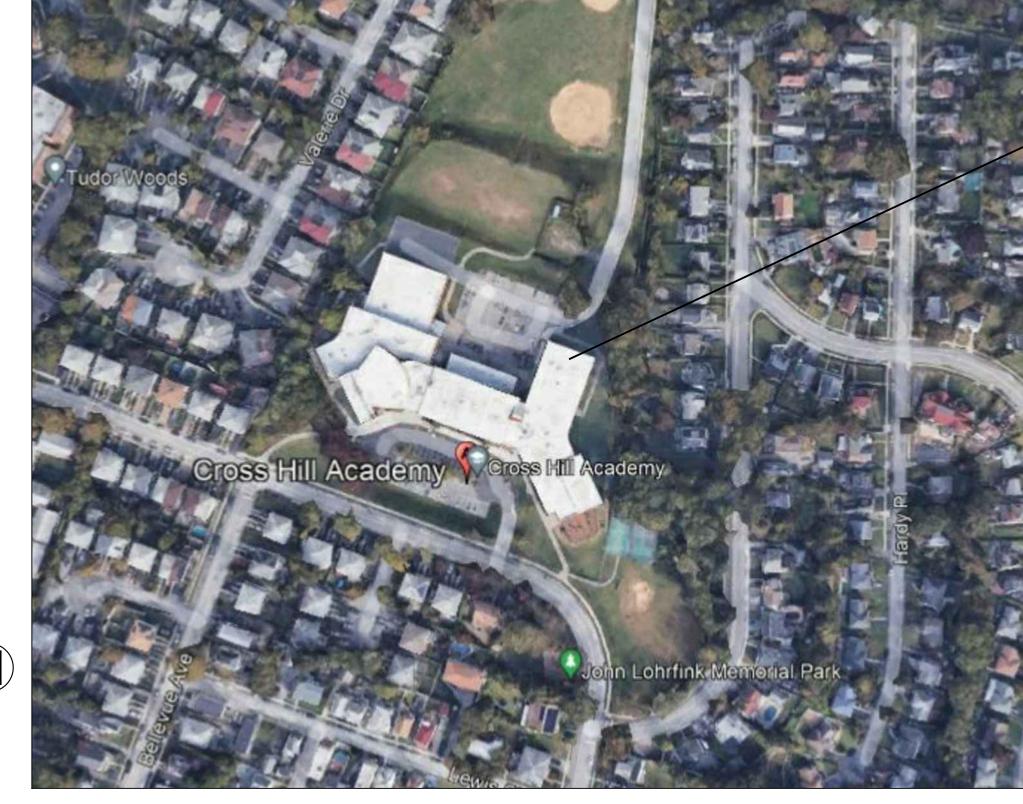
CHA ED-100 PARTIAL GROUND FLOOR PLANS- DEMOLITION

A E-100 PARTIAL GROUND FLOOR PLANS- NEW WORK - LIGHTING, PARTIAL BASEMENT PLAN -

CHA E-101 PARTIAL GROU

CHA E-500 SCHEDULES AND DETAILS





PROJECT LOCATION MAP SCALE: N.T.S.

— CROSS HILL ACADEMY



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CROSS HILL ACADEMY

FIRE RESTORATIONS

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Sheila Greenwald

Gail Burns

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DESIGN TEAM:

# EISENBACH & RUHNKE ENGINEERING, P.C.

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CONSULTANTS:

# FULLER AND D'ANGELO P.C. ARCHITECTS AND PLANNERS

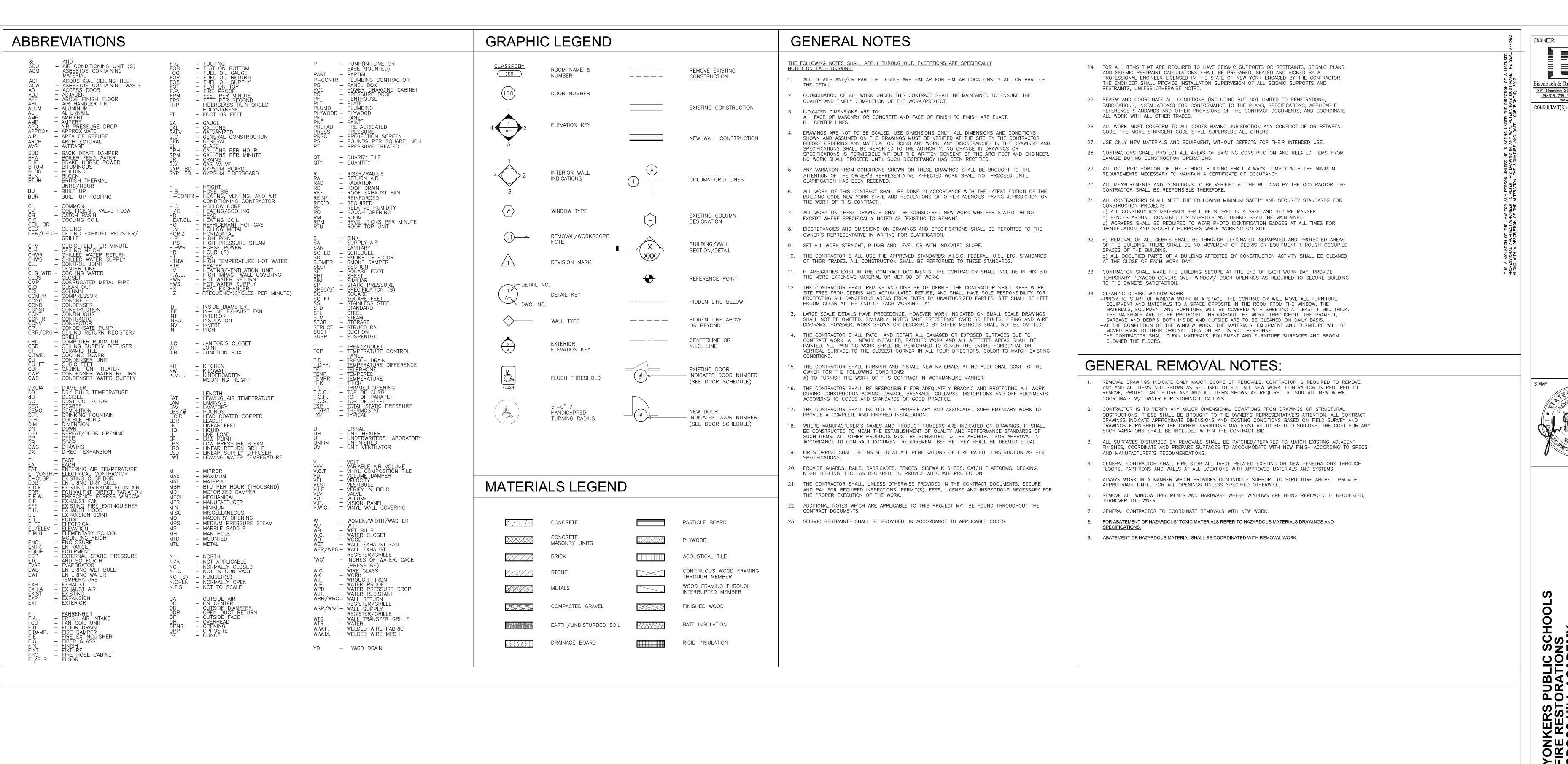
45 Knollwood Road, Suite 401 Elmsford, NY 10523 phone: 914.592.4444 S.E.D. # 66-23-00-01-0041-011

YPS JOB # 10929

**BID SET** 

4-05-2022

00 CP





Ph: 315-735-1916 Fax: 315-735-6365 www.erengpc.com CONSULTANT(S):

YONKERS PUBLIC SCH FIRE RESTORATIONS CROSS HILL ACADEMY

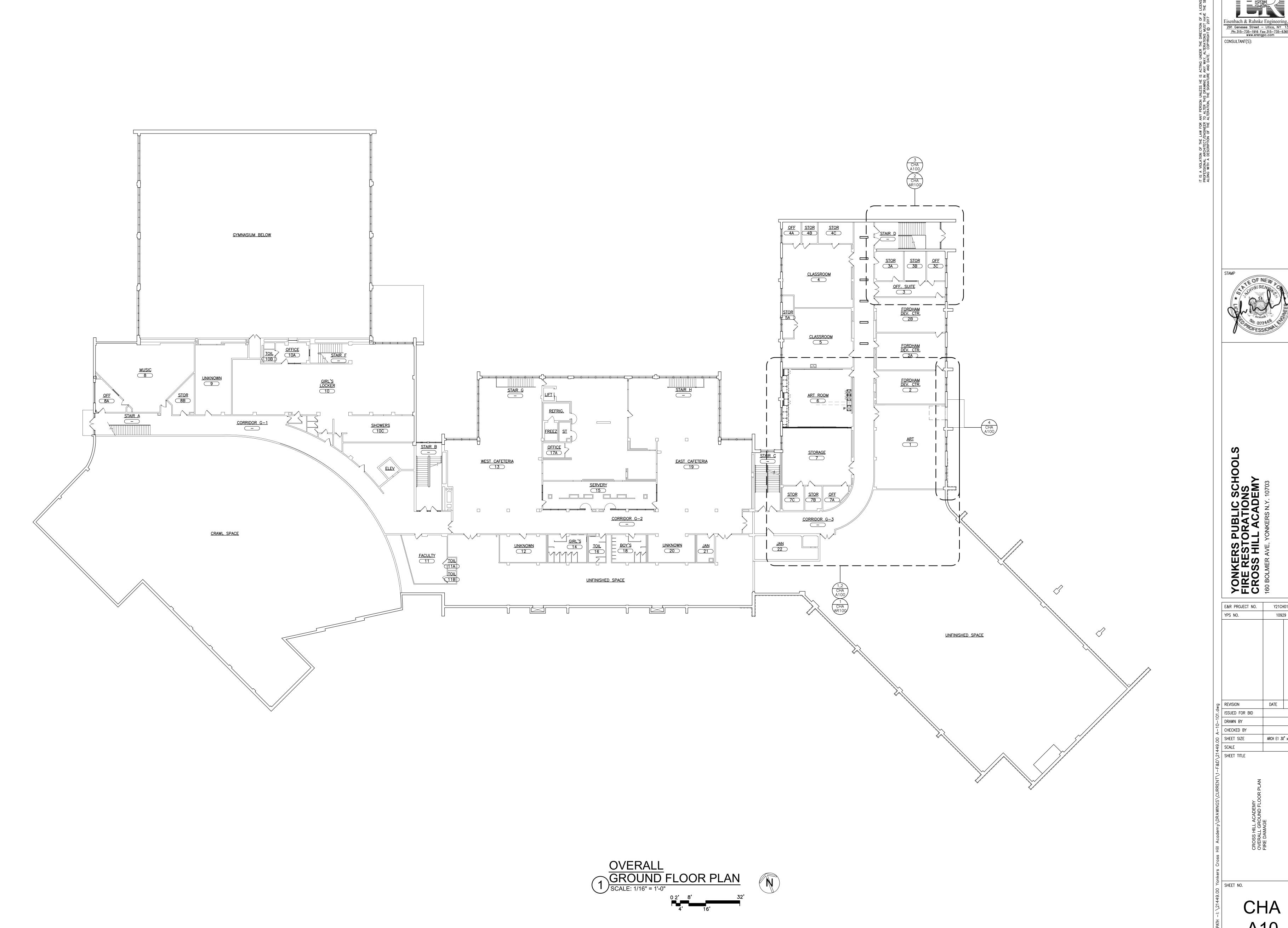
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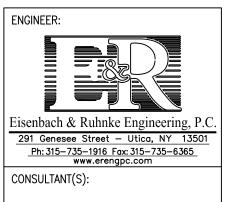
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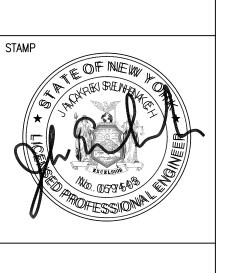
DATE BY REVISION ISSUED FOR BID DRAWN BY CHECKED BY , SHEET SIZE ARCH E1 30" x 42" SCALE SHEET TITLE

Y21CH01

10929

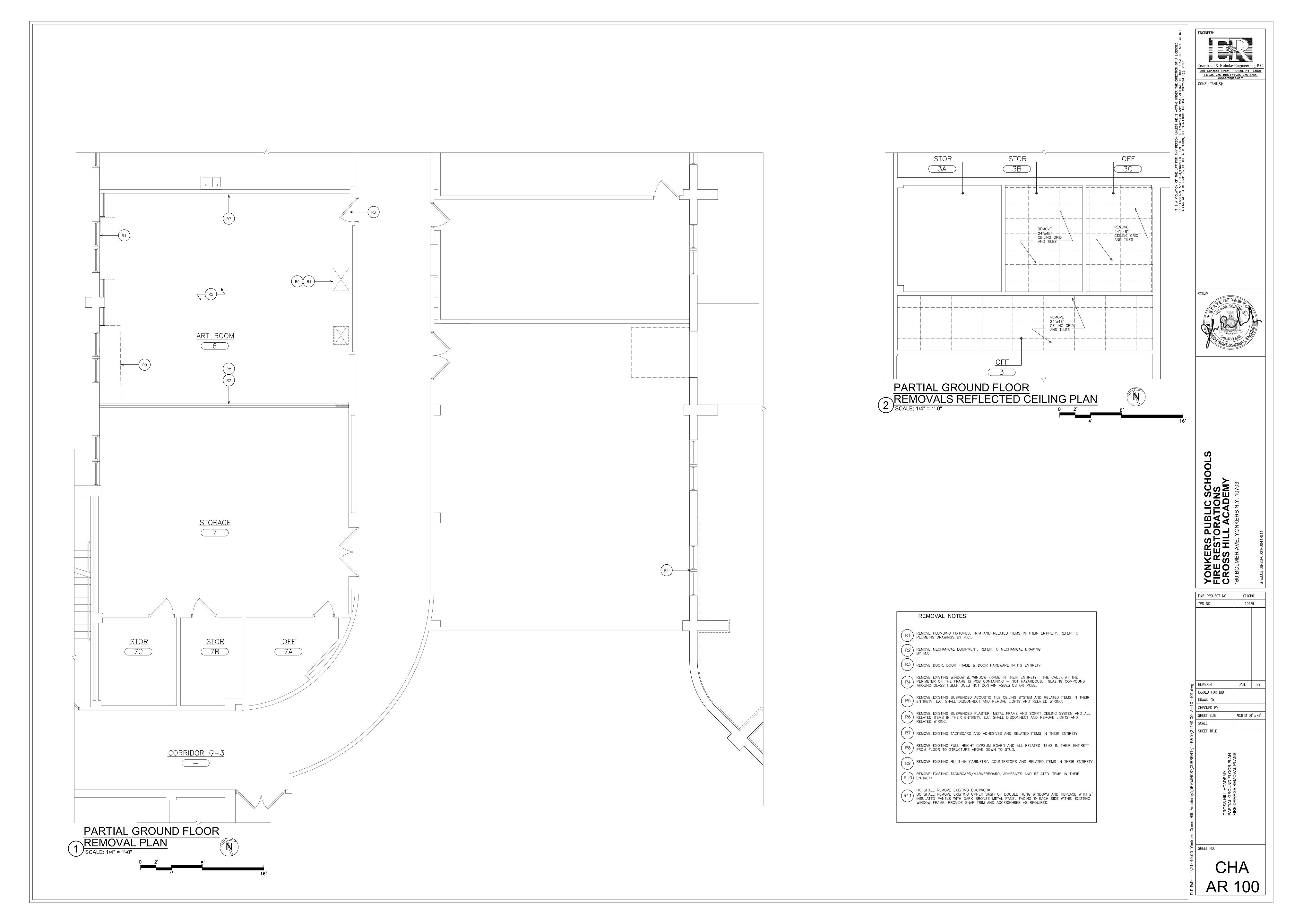


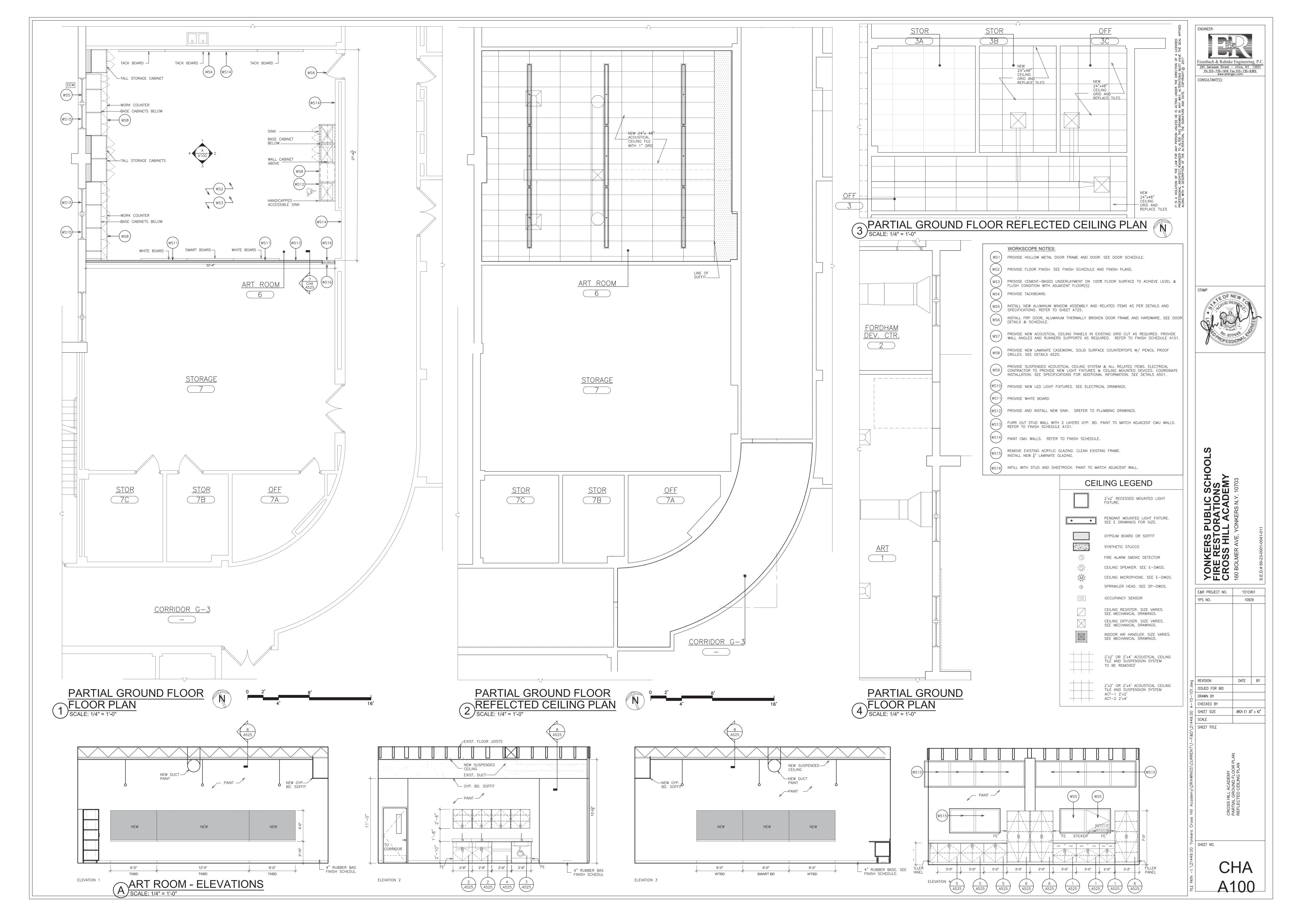


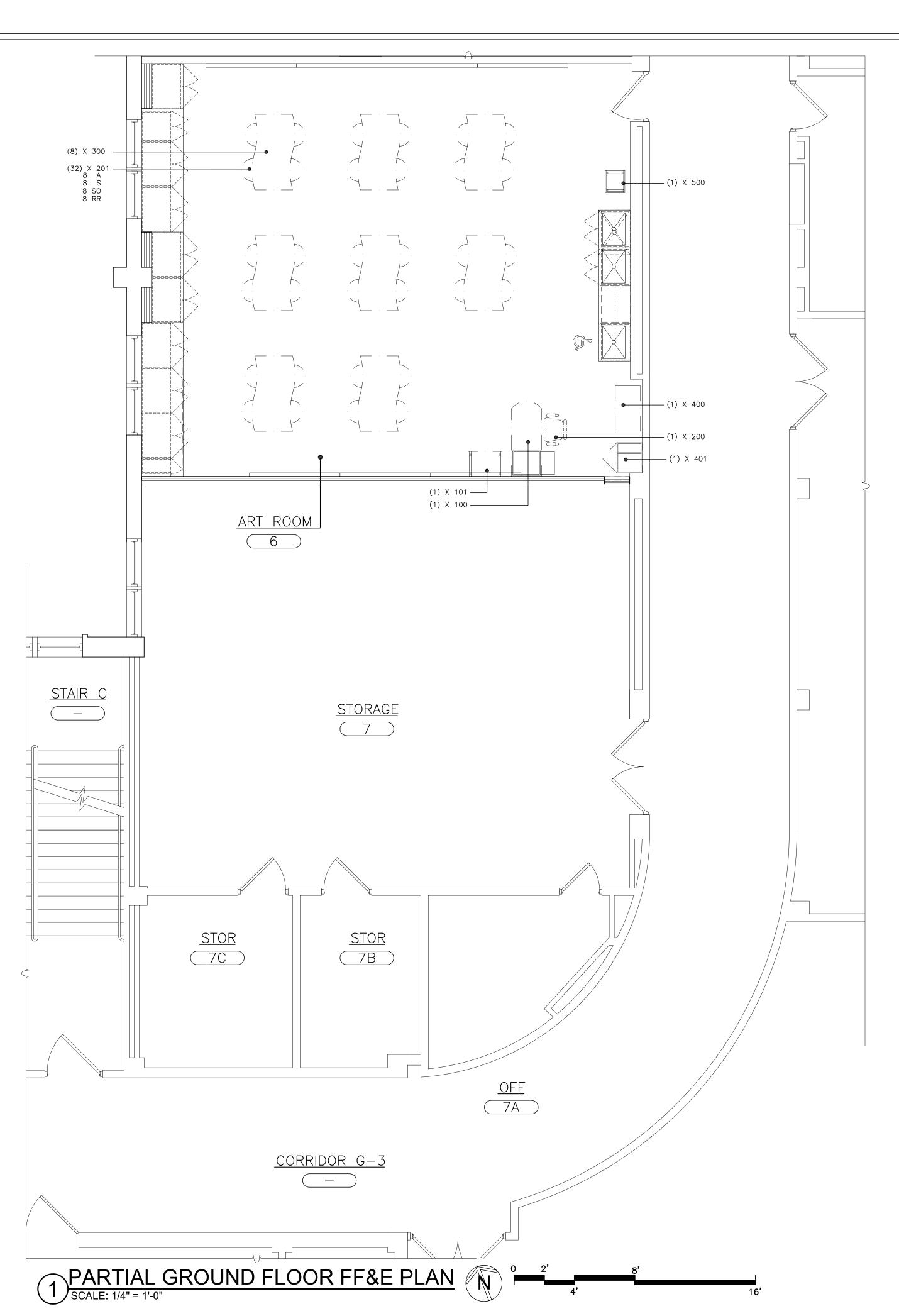


Y21CH01 10929 DATE BY ARCH E1 30" x 42"

A10







		FF&E SCHE	EDULE - CRO	SS HILL ACADEN	MY
ITEM	QTY.	ITEM	MANUFACTURER	LINE	DESCRIPTION
100	1	DESK, TEACHER	FLEETWOOD	D-TOP	60w 24d C-LEGS, BOX/BOX/FILE, CASTERS, D-TOP LAMINATE& EDGE: FUSION MAPLE / FRAME: SILVER PAINT
101	1	DESK, MOBILE PODIUM		C-LEG	27w 20d ADJ. HT LEGS 29-42, LOCKABLE SOFT CASTERS LAMINATE & EDGE: FUSION MAPLE / FRAME: SILVER PAINT
200	1	CHAIR, TEACHER	EUROTECH	APOLLO	FABRIC: BLACK / MESH: BLACK / SOFT CASTERS / BASE: BLACK
201	32	STOOL, STUDENT	ARTCOBELL	ALPHBET	14h, FELT GLIDES FRAME: TITANIUM PLASTICS: 8 APPLE GREEN 8 SQUASH 8 SUNSET ORANGE 8 RUBY RED
300	8	TABLE, STUDENT	FLEETWOOD	WAVE	60w 30d ADJ. HT I-LEGS, LOCKABLE SOFT CASTERS LAMINATE & EDGE: FUSION MAPLE / FRAME: SILVER PAINT
400	1	STORAGE CABINET, TEACHER WARDROBE	FLEETWOOD	DESIGNER COLLECTION WARDROBE	24w 20d 68h, DOORS, SOFT CASTERS LAMINATE & EDGE: FUSION MAPLE / FRAME: SILVER PAINT
401	1	STORAGE, PRINTER CART	FLEETWOOD	COMMON STORAGE — 3-D PRINTER CART	36w 20d 36h DOORS, SOFT CASTERS LAMINATE & EDGE: FUSION MAPLE / FRAME: SILVER PAINT
500	1	DRYING RACK	SPROGS	ART DRYING RACK.	17 ½"w 14 ½"d 38h, 25 SHELVES, CASTERS

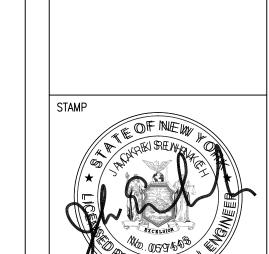
#### CODE COMPLIANCE NOTES:

- 1. IN ORDER TO MEET THE NEEDS OF PERSONS WITH DISABILITIES, WHEN APPLICABLE ALL ITEMS SHALL COMPLY WITH THE CURRENT ICC-A117.1-09 ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES.
- 2. ACCESSIBLE KNEE CLEARANCE SHALL BE A MINIMUM OF: 30" WIDE, 27" HIGH (24" CHILD), AND 19" DEEP.
- 3. THE "ITEMS" SHALL INCLUDE, BUT ARE NOT LIMITED TO FIXTURES, FURNISHINGS, EQUIPMENT, WORKSTATIONS (INCLUDING BUILT-INS), SHOP EQUIPMENT, ETC.
- 4. DELIVERY, INSTALLATION, PACKAGE REMOVAL AND PROTECTION OF THE FF&E IS THE RESPONSIBILITY OF THE PROVIDER OF THAT ITEM.

FINISH SCHEDULE												4	» <sup>2</sup> WALI	_ INDICATION PLAN	ONS		
DG.	LEVEL	LINE	DESIGNATION	RM. No.	FLOOR	BASE (MAT.)	WALL 1	WALL 2	WALL 3	WALL 4	CLG.		DOOR FRAMES		CASEWORI COUNTER TOPS		REMARKS
		01	ART ROOM	6	VCT-1 VCT-2	CT-1	P-2	P-2	P-2	P-2	ACT-1 P-1	_	P-7	-	_	-	
		02	STORAGE	7							·	_	P-7	_	_	_	

			FINISH & COLOR SCH	EDULE LEGEND	
LEGEND	SIZE	MANUFACTURER	SERIES / MODEL NO. / COLOR	DESCRIPTION	LOCATION / REMARKS
P-1	_	BENJAMIN MOORE	L-01 / WHITE	FLAT FINISH	ALL SOFFITS
P-2	_	BENJAMIN MOORE	I-74 / CHINA WHITE	SEMI-GLOSS FINISH	WALL PAINT/LOCKER ROOM
ACT-1	2'x2'	ARMSTRONG	CIRRUS HIGH NRC 565	ACOUSTICAL CEILING TILE	OFFICES/TOILETS
PL-1	_	WILSONART	D456-60 / CAFE CREME / MATT FINISH	PLASTIC LAMINATE	SHELVES — SEE SPEC. WOOD TAPE / 7243 S—2—86 / JULE
PL-2	_	WILSONART	4841-60 / DESERT ZEPHER / MATT FINISH	PLASTIC LAMINATE	CABINET DOORS & CABINET BODY WOOD TAPE / 7243 S-2-86 / JULE
EG-1	_	WILSONART	7243 S-2-86 / JULE	WOOD TAPE	CABINET EDGES
COT-1	_	CORIAN	SANDAL WOOD	SOLID SURFACING	COUNTERTOPS AND WINDOW SILLS
VCT-1	18x18	TOLI	KOLURPATH / MERCURY / 3002	VCT — FLOOR TILE	ALL CLASSROOMS
VCT-2	18x18	TOLI	KOLURPATH / JASPER / 3001	VCT — FLOOR TILE	ALL CLASSROOMS
RB-1	4"	JOHNSONITE	BLACK	RUBBER WALL BASE	BASE FOR ALL VCT FLOORS



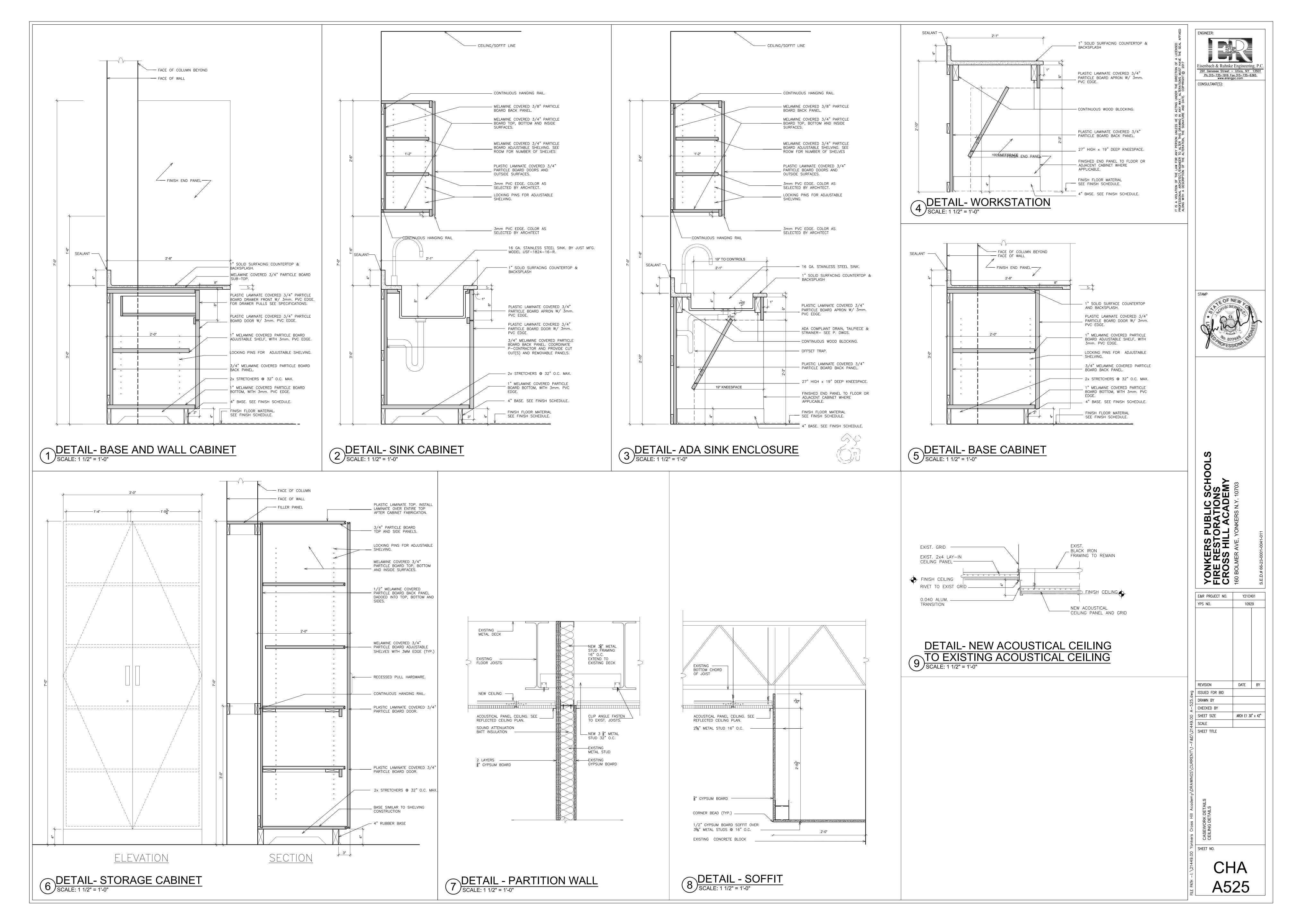


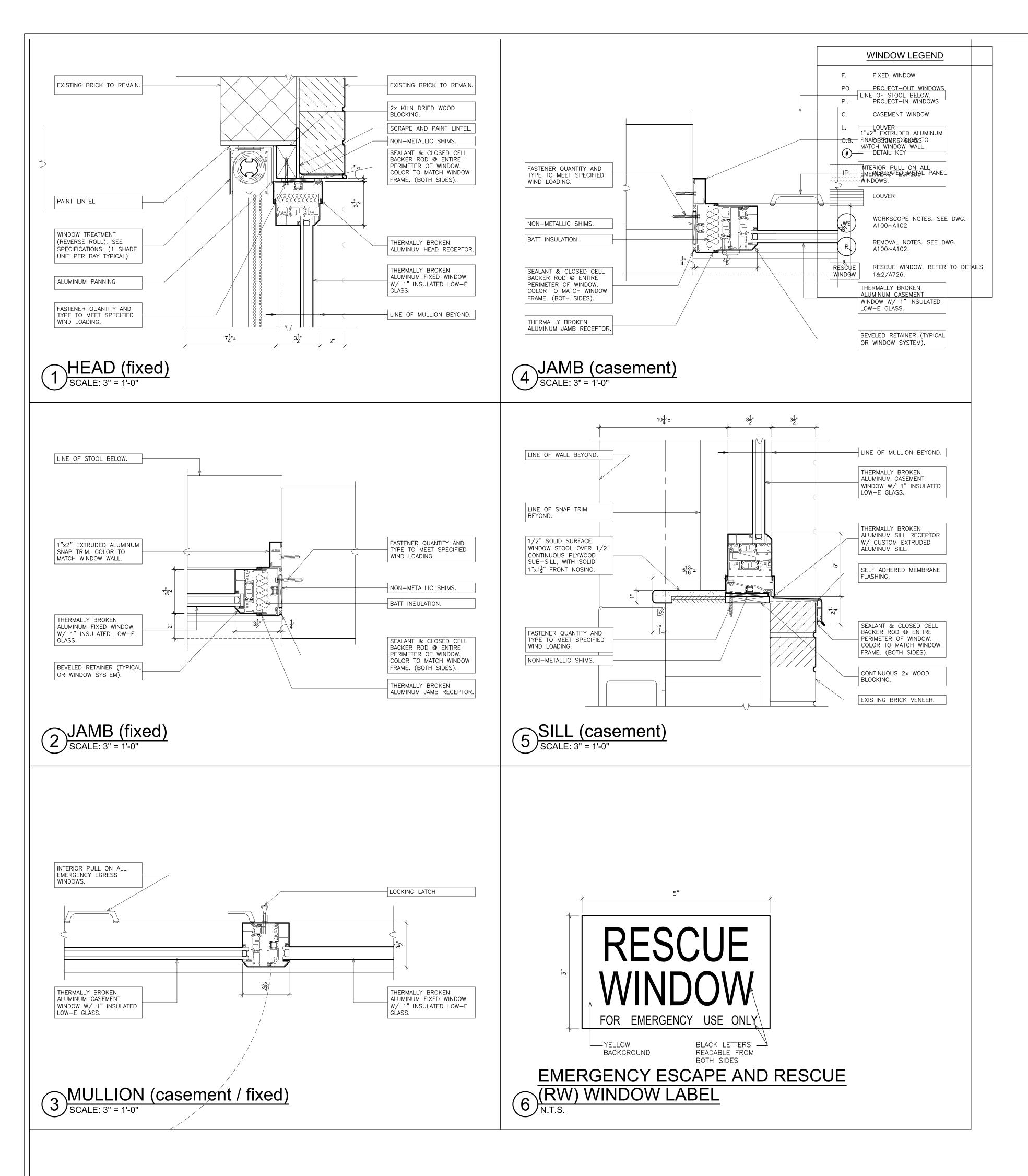
YONKERS PUBLIC SCHOOLS
FIRE RESTORATIONS
CROSS HILL ACADEMY
160 BOLMER AVE, YONKERS N.Y. 10703

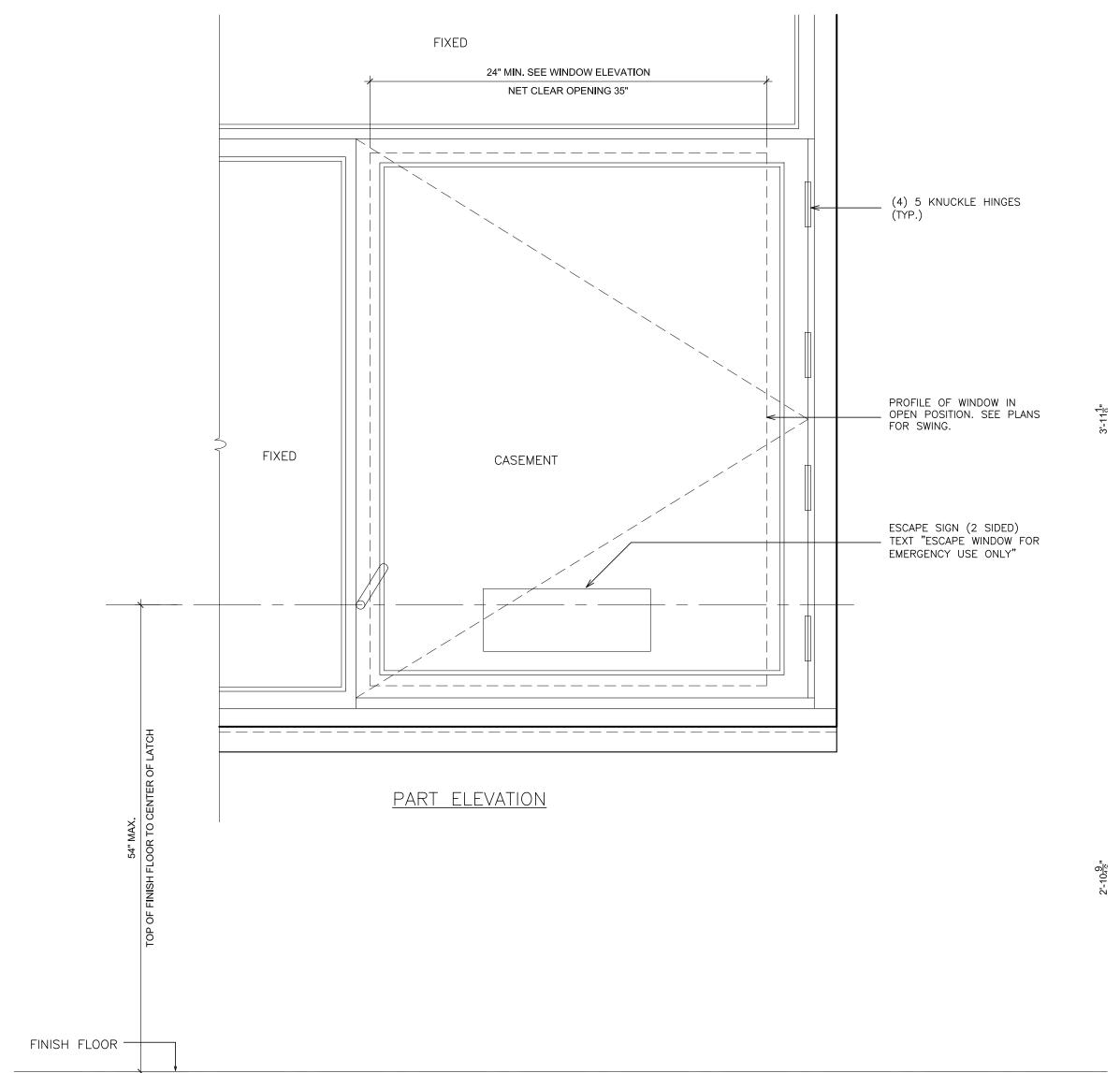
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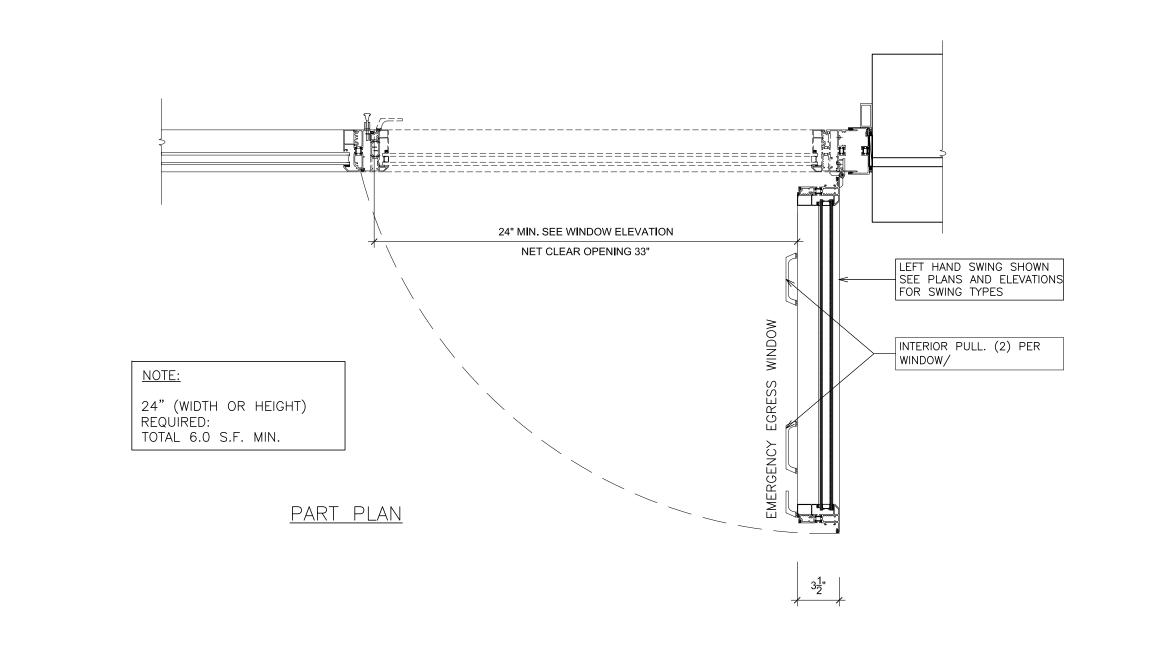
CROSS HILL ACADEMY
PARTIAL GROUND FLOOR PLAN
FF&E AND FINISH PLANS
WINDOW SCHEDULE, DOOR SCHEDULE

CHA A101

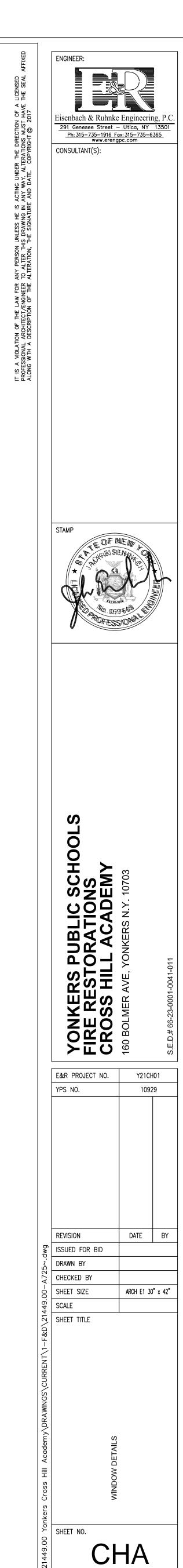








EXTERIOR ELEVATION- TYPICAL EMERGENCY EGRESS WINDOW SCALE: 1 1/2" = 1'-0"



#### MECHANICAL GENERAL NOTES:

- DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT OF SYSTEMS AND WORK INCLUDED IN THE CONTRACT. IT IS NOT INTENDED TO SPECIFY OR SHOW EVERY OFFSET, FITTING OR COMPONENT; HOWEVER, CONTRACT DOCUMENTS REQUIRE COMPONENTS AND MATERIALS WHETHER OR NOT INDICATED OR SPECIFICALLY SPECIFIED TO MAKE THE SYSTEMS BEING INSTALLED COMPLETE, CODE COMPLIANT, TESTED AND OPERATIONAL.
- CONTRACTOR SHALL FIELD VERIFY ALL LOCATIONS, DIMENSIONS AND ELEVATIONS PRIOR TO CONSTRUCTION.
- ALL MATERIALS, EQUIPMENT, METHODS OF INSTALLATION, REMOVALS AND DISPOSAL SHALL BE IN ACCORDANCE WITH THE STANDARDS, REGULATIONS, CODES, ORDINANCES, AND LAWS OF LOCAL, STATE, AND FEDERAL GOVERNMENTS, AND OTHER AUTHORITIES THAT HAVE LAWFUL JURISDICTION.
- . PERFORM WORK, PROVIDE MATERIALS AND EQUIPMENT FOR SYSTEMS SHOWN, SPECIFIED AND DESCRIBED ON DRAWINGS. COMPLETELY COORDINATE ALL TRADES OF THIS CONTRACT AND PROVIDE COMPLETE AND FULLY FUNCTIONAL INSTALLATION. ALL WORK IN THIS SET TO BE COMPLETED UNDER THIS CONTRACT. UNLESS OTHERWISE INDICATED.
- PROTECT ALL EXISTING AND NEW BUILDING ELEMENTS (INSTALLED BY OTHER CONTRACTS) FROM DAMAGE. CONTRACTOR SHALL RESTORE ALL DAMAGED ELEMENTS TO ORIGINAL OR BETTER
- WORK SHALL BE EXECUTED IN A WORKMANLIKE MANNER AND SHALL PRESENT NEAT, RECTILINEAR APPEARANCE WHEN COMPLETED. MAINTAIN MAXIMUM HEAD ROOM AT ALL TIMES. DO NOT RUN PIPES, DUCTS, AND CONDUIT EXPOSED UNLESS SHOWN AND NOTED TO BE EXPOSED ON DRAWINGS.
- MATERIALS AND EQUIPMENT SHALL BE NEW AND INSTALLED ACCORDING TO MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS. MAINTAIN MANUFACTURER'S EQUIPMENT
- B. CONTRACTOR IS RESPONSIBLE FOR ALL WORK RELATED TO ISOLATING, SHUTTING DOWN, DRAINING, FILLING AND TESTING SYSTEMS TO ALLOW FOR COMPLETION OF WORK. INTERRUPTIONS TO EXISTING SERVICES AND SYSTEMS SHALL BE AS SHORT AS POSSIBLE AND AT A TIME AND DURATION APPROVED BY THE OWNER AND UTILITY AS APPLICABLE. INCLUDE ALL PREMIUM TIME ASSOCIATED WITH INTERRUPTIONS. ALL SYSTEM INTERRUPTIONS SHALL BE SCHEDULED WITH OWNER, UTILITY AND COORDINATED WITH OTHER TRADE WORK.
- 9. ALL EQUIPMENT PIPING, WIRING, INSULATION ETC. INSTALLED IN HVAC AIR PLENUM SPACES SHALL MEET CODE REQUIREMENTS FOR SMOKE AND COMBUSTIBILITY.
- 10. SEAL ALL PENETRATIONS THROUGH FIRE RATED WALLS, PARTITIONS AND FLOORS WITH UL RATED MATERIALS/METHODS EQUIVALENT TO FIRE RATING OF ASSEMBLY.
- 1. COORDINATE ALL WALL/FOUNDATION PENETRATIONS WITH GENERAL CONTRACT AND SEAL WEATHERTIGHT. PROVIDE STAINLESS STEEL ESCUTCHEON PLATE/TRIM RING FOR EACH ABOVE GRADE PENETRATION (BOTH SIDES).
- 12. PROVIDE PROPER ACCESS TO EQUIPMENT THAT REQUIRES INSPECTION, REPLACEMENT OR REPAIR. ACCESS PANELS/DOORS SHALL BE A MINIMUM OF 12"x12", UNLESS OTHERWISE NOTED.
- 13. DO NOT SUPPORT EQUIPMENT FROM SUSPENDED CEILINGS. ALL SUPPORTS SHALL BE FROM BUILDING STRUCTURE OR FROM CEILING SUSPENSION SYSTEM WHICH HAS BEEN REINFORCED. SUPPORTS SHALL BE SELECTED AND INSTALLED TO PROVIDE A VIBRATION FREE INSTALLATION.
- 14. CLEANING DURING MECHANICAL WORK: CLEAN THE MECHANICAL ROOM AND ROOMS WORK WILL BE DONE TO MINIMIZE DISTURBANCE IN THE BUILDINGS. WORKERS ARE TO USE PATHWAYS AND FACILITIES AGREED UPON WITH THE DISTRICT DESIGNEE IN WRITING. THE AREA OUTSIDE THE BUILDING WHERE CUTTING WELDING OR STORAGE IS ALLOWED IS TO BE FENCED AT ALL TIMES. THE CONTRACTOR WILL ON A DAILY BASIS CLEAN THE GROUNDS AND THE BUILDING OF ANY DEBRIS OR GARBAGE GENERATED BY THEIR WORK.
- 15. MODIFICATIONS TO CONTROLS WILL BE PROVIDED BY EMF CONTROLS. 581 N STATE ROAD, STE 6, BRIARCLIFFE MANOR NY 10510-1556

#### **HVAC REMOVAL NOTES:**

- THE SCOPE OF REMOVAL SHOWN ON "REMOVALS" DRAWING IS DIAGRAMMATIC ONLY AND INDICATES THE INTENT OF THE WORK TO BE PERFORMED AND NOT THE COMPLETE SCOPE OF DEMOLITION AND/OR REMOVAL WORK. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REMOVE OR RELOCATE ANY RELATED MECHANICAL DEVICES/ITEMS EVEN IF NOT SPECIFICALLY INDICATED TO BE REMOVED ON THESE DRAWINGS IN ORDER TO ACCOMODATE NEW WORK.
- EQUIPMENT/ITEMS SHOWN CROSS HATCHED ON DRAWINGS ARE ITEMS | TO BE REMOVED. ANY DEVICES/ITEMS REMOVED SHALL INCLUDE (BUT SHALL NOT BE LIMITED TO) THE REMOVAL OF ALL ASSOCIATED PIPING, CONTROLS, ETC. THAT ARE NOT INCORPORATED IN THE NEW LAYOUT. THE CONTRACTOR SHALL PERFORM ALL WORK REQUIRED TO INSURE CONTINUITY OF SERVICE TO EXISTING REMAINING EQUIPMENT. NO EXTRAS RELATING TO THE SCOPE OF WORK DESCRIBED WILL BE
- EQUIPMENT, PIPING, ETC. REQUIRED TO RECONNECT SHALL BE INSTALLED CONCEALED WITHIN THE SUSPENDED CEILINGS, PARTITIONS AND/OR WALLS, FLOORS. NO SURFACE MOUNTED OR EXPOSED EQUIPMENT, PIPING, ETC., SHALL BE PERMITTED, UNLESS SPECIFICALLY INDICATED.
- ALL ITEMS TO BE REMOVED SHALL BE REVIEWED WITH THE OWNER PRIOR TO REMOVAL. OWNER SHALL HAVE FIRST SALVAGE RIGHTS. ITEMS THE OWNER WISHES TO KEEP SHALL BE REMOVED WITH CARE AND STORED AS DIRECTED BY OWNER. ITEMS THE OWNER DOES NOT WISH TO KEEP SHALL BE REMOVED FROM THE SITE AND DISPOSED OF PROPERLY.

#### MECHANICAL SYMBOLS - THERMOSTAT - ARROW INDICATES → NEW PIPING, DUCTWORK, → PIPE ELBOW UP AND EQUIPMENT DEVICE/ZONE CONTROL - EXISTING TO REMAIN PIPING, FREEZESTAT GAUGE WITH BALL VALVE DUCTWORK, AND EQUIPMENT PIPING, DUCTWORK, AND - STATIC PRESSURE SENSOR AUTOMATIC AIR VENT EQUIPMENT FOR REMOVAL TEMPERATURE SENSOR W/CONTROL $\longrightarrow$ BALL VALVE MANUAL AIR VENT WIRING AND 1/2" CONDUIT WITH CLEAR PLASTIC GUARD(LOCKABLE) HUMIDITY SENSOR – CHECK VALVE PIPE CAP FLOW SENSOR CONTROL VALVE - 2 WAY PIPE BREAK - DUCT SMOKE DETECTOR DRAIN VALVE WITH HOSE BIB PIPE FLOW ARROW - VARIABLE FREQUENCY DRIVE REVISION NOTE UNION **├** ROUND DUCTWORK STRAINER WITH BLOWDOWN KEYED NOTE POINT OF NEW CONNECTION - 4- WAY CEILING SUPPLY DIFFUSER → → → → REDUCER OR INCREASER LIMIT OF REMOVAL - CEILING EXHAUST/RETURN REGISTER - BRANCH FROM BOTTOM OF PIPE BRANCH FROM TOP OF PIPE -√-▶ FLOW ARROW DIFFUSER/GRILLE LABEL - NEW VALVE OR ENCLOSURE → PIPE ELBOW DN - CAP - REMOVE VALVE OR ENCLOSURE FIRE DAMPER SMOKE DAMPER FIRE AND SMOKE DAMPER DOUBLE LINE SINGLE LINE DOUBLE LINE SINGLE LINE MANUAL VOLUME DAMPER RETURN/EXHAUST AIR RECTANGULAR ELBOW DN AUTOMATIC AIR DAMPER ROUND ELBOW UP $\leftarrow$ INTERLOCKED WITH EQUIPMENT - DUCT SMOKE DETECTOR ROUND ELBOW DN ← ← ← ← CENTERED TRANSITION → FLEXIBLE CONNECTION SUPPLY/OUTSIDE AIR → OFFSET TRANSITION RECTANGULAR ELBOW UP SUPPLY/OUTSIDE AIR → SQUARE TO ROUND TRANSITION RECTANGULAR ELBOW DN - RETURN/EXHAUST AIR RADIUS ELBOW RECTANGULAR ELBOW UP 45° DEGREE LEADING EDGE → → <</p> - MITERED ELBOW WITH TURNING BRANCH TAKEOFF

### COORDINATION NOTE:

. COORDINATION- IT SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL AND MECHANICAL CONTRACTORS TO COORIDNATE THEIR WORK. THE HVAC CONTRACTOR SHALL TAKE THE LEAD IN THE COORDINATION EFFORT AND PRODUCE THE COORDINATION DRAWINGS. COORDINATION DRAWINGS SHALL BE SUBMITTED FOR APPROVAL TO THE ENGINEER PRIOR TO STARTING ANY WORK. CEILING SPACE IS VERY LIMITED AND DUCTWORK/PIPING INSTALLATION AND LOCATION IS CRITIAL. THE PURPOSE OF THESE DRAWINGS IS TO COORDINATE THE LOCATIONS OF ALL PIPING, DUCTWORK, AND ASSOCIATED ELECTRICAL EQUIPMENT. ALL ELECTRICAL EQUIPMENT SHALL BE INSTALLED AND LOCATED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE (NEC). MECHANICAL EQUIPMENT CANNOT INFILTRATE THE ELECTRICAL EQUIPMENTS WORKING CLEARANCE AND WORKING SPACE, NOR CAN IT BE INSTALLED DIRECTLY ABOVE OR BELOW TO THE STRUCTURE, AS IDENTIFIED WITHIN THE NEC, ARTICLE 110 -"REQUIREMENTS FOR ELECTRICAL INSTALLATION". THIS COORDINATION IS REQUIRED FOR ALL PHASES OF THIS PROJECT. FAILURE TO FOLLOW THIS PROCEDURE DOES NOT RELIEVE THE CONTRACTOR FROM THE DUTIES AND WILL NOT CONSTITUTE A

REASON FOR A CHANGE ORDER.

# HVAC ABBREVIATIONS

## AUTOMATIC AIR DAMPER AIR COOLED CONDENSING UNIT ACCESS DOOR

AIR HANDLING UNIT

AMPERAGE BACKDRAFT DAMPER BRAKE HORSEPOWER

BUILDING MANAGEMENT SYSTEM BRITISH THERMAL UNIT CUBIC FEET PER MINUTE

DRYBULB TEMPERATURE DIRECT DIGITAL CONTROL (SYSTEM)

CONDENSATE

DIAMETER DOWN DEWPOINT TEMPERATURE

DIRECT EXPANSION EXHAUST AIR ENTERING AIR TEMPERATURE EXHAUST FAN

**EFFICIENCY** 

EXHAUST GRILLE EXTERNAL STATIC PRESSURE

EXHAUST FAHRENHEIT FIRE DAMPER FINAL FILTER **FLOOR** FEET PER MINUTE

> FEET FT HD FEET OF HEAD FT WG FEET OF WATER GAUGE

FREEZESTAT

GALLON GALLONS PER MINUTE GPM

> HEAD HORSEPOWER MIXED AIR TEMPERATURE MAKE-UP AIR UNIT

1,000 BTU/HR MINIMUM BRANCH CIRCUIT AMPACITY

OUTSIDE AIR OUTSIDE AIR INTAKE PRESSURE DROP REMOVE RETURN AIR REFRIGERANT LIQUID

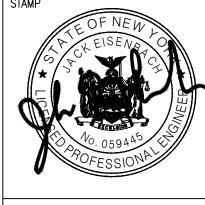
REVOLUTIONS PER MINUTE REFRIGERANT SUCTION SATISFACTORY

SUPPLY AIR TEMPERATURE SENSIBLE HEAT SEN SPECIFIC GRAVITY

STATIC PRESSURE TESTING, ADJUSTING, BALANCE TSTAT THERMOSTAT

TEMPERATURE DIFFERENCE

TYPICAL VOLUME DAMPER WETBULB WATER GAUGE HEAT PUMP



Eisenbach & Ruhnke Engineering, P

<u>Ph: 315-735-1916 Fax: 315-735-6365</u> www.erengpc.com

CONSULTANT(S):

KERS PUBLIC SERESTORATION SS HILL ACADE YOI FIR CR(

E&R PROJECT NO. 10929

DATE BY ISSUED FOR BID DRAWN BY CHECKED BY ARCH E1 30" x 42" SHEET SIZE AS NOTED

SHEET TITLE ABBREVIATIONS

AND SYMBOLS

ANY PERSON UNLESS HE IS A TO ALTER THIS DRAWING IN A A ALTERATION, THE SIGNATURE

IT IS A VIOLATION OF THE LAW FOR PROFESSIONAL ARCHITECT/ENGINEER ALONG WITH A DESCRIPTION OF THE

DAMAGED ELEMENTS TO ORIGINAL OR BETTER CONDITION.

. MATERIALS AND EQUIPMENT SHALL BE NEW AND INSTALLED ACCORDING TO MANUFACTURER'S INSTRUCTIONS AND

8. CONTRACTOR IS RESPONSIBLE FOR ALL WORK RELATED TO ISOLATING, SHUTTING DOWN, DRAINING, FILLING AND TESTING SYSTEMS TO ALLOW FOR COMPLETION OF WORK. INTERRUPTIONS TO EXISTING SERVICES AND SYSTEMS SHALL BE AS SHORT AS POSSIBLE AND AT A TIME AND DURATION APPROVED BY THE OWNER AND UTILITY AS APPLICABLE. INCLUDE ALL PREMIUM TIME ASSOCIATED

9. ALL EQUIPMENT PIPING, WIRING, INSULATION ETC.

10. SEAL ALL PENETRATIONS THROUGH FIRE RATED WALLS, PARTITIONS AND FLOORS WITH UL RATED MATERIALS/METHODS EQUIVALENT TO FIRE RATING OF

11. PROVIDE PROPER ACCESS TO EQUIPMENT THAT REQUIRES INSPECTION, REPLACEMENT OR REPAIR. ACCESS PANELS/DOORS SHALL BE A MINIMUM OF 12"X12", UNLESS OTHERWISE NOTED.

FROM CEILING SUSPENSION SYSTEM WHICH HAS BEEN REINFORCED. SUPPORTS SHALL BE SELECTED AND INSTALLED TO PROVIDE A VIBRATION FREE INSTALLATION.

13. PLUMBING CONTRACTOR IS RESPONSIBLE FOR DRAINS) SHOWN ON THE DRAWINGS TO BE FULLY OPERATIONAL.

14. CLEANING DURING PLUMBING WORK: THE MECHANICAL ROOM AND ROOMS WHERE WORK WILL BE DONE TO MINIMIZE DISTURBANCE IN THE BUILDINGS. WORKERS ARE TO USE PATHWAYS AND FACILITIES AGREED UPON WITH THE DISTRICT DESIGNEE IN WRITING. THE AREA OUTSIDE THE BUILDING WHERE CUTTING, WELDING OR STORAGE IS ALLOWED IS TO BE FENCED AT ALL TIMES. THE CONTRACTOR WILL ON A DAILY BASIS CLEAN THE GROUNDS AND THE BUILDING OF ANY DEBRIS OR GARBAGE GENERATED BY THEIR WORK.

15. CONTRACTOR TO PROVIDE NECESSARY MODIFICATIONS TO EXISTING PLUMBING TO ACCOMPLISH NEW WORK AND TO PROVIDE A PROPERLY FUNCTIONING SYSTEM. VERIFY IN

 GAUGE WITH BALL VALVE NEW PIPING AND EQUIPMENT  $\longleftarrow$  EXISTING TO REMAIN PIPING AND AUTOMATIC AIR VENT EQUIPMENT PIPING AND EQUIPMENT FOR REMOVAL MANUAL AIR VENT THERMOMETER – BALL VALVE BUTTERFLY VALVE BALL VALVE (HOSE END & CAP) **├──**Ö**─**─ BALANCING VALVE PIPE CAP END OF LINE CLEAN OUT  $\longleftarrow \hspace{-0.1cm} \hspace{$ – CHECK VALVE CONTROL VALVE - 2 WAY HOSE BIBB DRAIN VALVE WITH HOSE BIBB FLOOR DRAIN FLANGED CONNECTION **├**  FLOOR DRAIN WITH P-TRAP - FUSIBLE LINK OIL SHUTOFF VALVE DECK PLATE CLEAN OUT  $\longrightarrow \longrightarrow$  $\longleftarrow \longrightarrow$  FLOW CONTROL VALVE GAS OUTLET GATE VALVE  $\longleftarrow \bowtie$  WATER HAMMER ARRESTOR GLOBE VALVE WALL HYDRANT VACUUM BREAKER GAS COCK – INLINE PUMP LUBRICATED PLUG VALVE  $\longrightarrow$  $\leftarrow$ WATER METER PRESSURE REDUCING VALVE SUCTION DIFFUSER RELIEF VALVE FLEXIBLE CONNECTOR  $\longrightarrow \longrightarrow$  STRAINER WITH BLOWDOWN  $\longrightarrow$ PIPE BREAK STRAINER WITH BLOWDOWN  $\leftarrow$ PIPE FLOW ARROW SOLENOID VALVE REVISION/KEYED NOTE THREE—WAY CONTROL VALVE KEYED NOTE KEYED NOTE KEYED NOTE → → → − REDUCER OR INCREASER POINT OF NEW CONNECTION BRANCH FROM BOTTOM OF PIPE  $\leftarrow$  LIMIT OF REMOVAL BRANCH FROM TOP OF PIPE  $\longleftarrow$  $\cup$  $\longrightarrow$ PIPE ELBOW DN  $\leftarrow$ SAW CUT FLOOR

PIPE ELBOW UP

PIPE FLOW ARROW

BELOW SLAB PIPING

COLD WATER PIPING

HOT WATER PIPING

SANITARY PIPING

DRAIN PIPING

VENT PIPING

----SAN---- SANITARY PIPING (BELOW GRADE)

INDIRECT WASTE PIPING

NATURAL GAS PIPING

---- HWC---- HOT WATER RECIRC PIPING

 $\leftarrow$ 

**——** 

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——— CM ———

——— HW ———

\_\_\_\_\_ IW \_\_\_\_\_

—— SAN——

—— D ——

----V-----

—— G ——

PLUMBING SYMBOLS

PLUMBING ABBREVIATIONS

ARCHITECT / ENGINEER

ABOVE FINISH FLOOR

ABOVE FINISHED GRADE

AMERICANS WITH DISABILITIES ACT

AUTHORITY HAVING JURISDICTION

& AIR CONDITIONING ENGINEERS

AMERICAN SOCIETY OF PLUMBING

AMERICAN WATERWORKS ASSOCIATION

BRITISH THERMAL UNIT PER HOUR

COMPRESSED GAS ASSOCIATION

CHLORINATED POLYVINYL CHLORIDE

AMERICAN NATIONAL STANDARDS INSTITUTE

AMERICAN SOCIETY OF HEATING, REFRIGERATION

AMERICAN SOCIETY OF MECHANICAL ENGINEERS

AREA DRAIN

ACCESS DOOR

ACCESS PANEL

**ENGINEERS** 

BELOW FINISHED GRADE

BRITISH THERMAL UNIT

BREAK HORSEPOWER

BASE OF RISER

COMBUSTION AIR

COMPRESSED AIR

CARBON DIOXIDE

CIRCULATING PUMP

COLD WATER (DOMESTIC)

DRAINAGE FIXTURE UNIT

DECK PLATE CLEANOUT

DOMESTIC WATER HEATER

ELECTRICAL CONTRACTOR

ELECTRIC WATER COOLER

DRAIN WASTE VENT

EXPANSION TANK

CONDENSATE

CELSIUS

CLEANOUT

DRAIN

DOWN

DRAWING

ELEVATION

EXISTING

FAHRENHEIT

FLOOR DRAIN

FLUSH VALVE

NATURAL GAS

GALLON

GPM

GALVANIZED

HOSE BIBB

HUB DRAIN

HAND SINK

INVERT

HORSEPOWER

GENERAL CONTRACTOR

GALLONS PER MINUTE

HOT AND COLD WATER

HOT WATER (DOMESTIC)

HEATING & HVAC CONTRACTOR

GALLONS PER HOUR

FIXTURE UNITS

DIAMETER

CGA

CO2

COND

CPVC

CICAST IRON

INDIRECT WASTE

KILOWATT

LAVATORY

1000 BTUH

NORMALLY CLOSED

NOT IN CONTRACT

NON POTABLE WATER

NOT TO SCALE

OUTSIDE DIAMETER

ADMINISTRATION

PUMP DISCHARGE

PLUMBING FIXTURE

PRESSURE GAGE

PARTS PER MILLION

POLYVINYL CHLORIDE

REVERSE OSMOSIS WATER

ROOF DRAIN

RAIN LEADER

SANITARY SEWER

SMACNA SHEET METAL AND AIR CONDITIONING

SOFTENED COLD WATER

SUMP PUMP

SQUARE FEET

STAINLESS STEEL

STORM SEWER

TRENCH DRAIN

TRAP PRIMER

THERMOSTAT

**TYPICAL** 

URINAL

VENT

UNDERCUT

UNIT HEATER

TEMPERED WATER

TOTAL DYNAMIC HEAD

TEMPERATURE/TEMPORARY

THERMOSTATIC MIXING VALVE

UNDERWRITERS LABORATORY

UNIFORM PLUMBING CODE

VACUUM BREAKER

WATER CLOSET

WALL CLEANOUT

WALL HYDRANT

EXHAUST AIR

VENT THROUGH ROOF

WATER HAMMER ARRESTER

WATER SUPPLY FIXTURE UNIT

STANDARD CUBIC FOOT/MINUTE

PRESSURE REDUCING STATION

PRESSURE REDUCING VALVE

POUNDS PER SQUARE INCH

POUNDS PER SQUARE INCH ATMOSPHERE

POUNDS PER SQUARE INCH GAUGE

REDUCED PRESSURE ZONE BACKFLOW

CONTRACTORS NATIONAL ASSOCIATION

TEMPERATURE & PRESSURE (RELIEF VALVE)

PLUMBING CONTRACTOR

OCCUPATIONAL SAFETY AND HEALTH

PLUMBING AND DRAINAGE INSTITUTE

NATURAL GAS

MANHOLE

NOMINAL

OXYGEN

PUMP

NOM

NPW

NTS

PSIG

PREVENTER

SCW

SQFT

TDH

TEMP

TSTAT

TYP

METER

INSTANTANEOUS WATER HEATER

MECHANICAL CONTRACTOR

. DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT OF SYSTEMS AND WORK INCLUDED IN THE CONTRACT. IT IS NOT INTENDED TO SPECIFY OR SHOW EVERY OFFSET, FITTING OR COMPONENT; HOWEVER, CONTRACT DOCUMENTS REQUIRE COMPONENTS AND MATERIALS WHETHER OR NOT INDICATED OR SPECIFICALLY SPECIFIED TO MAKE THE SYSTEMS BEING INSTALLED COMPLETE, CODE COMPLIANT, TESTED AND OPERATIONAL.

2. CONTRACTOR SHALL FIELD VERIFY ALL LOCATIONS, DIMENSIONS AND ELEVATIONS PRIOR TO CONSTRUCTION.

3. ALL MATERIALS, EQUIPMENT, METHODS OF INSTALLATION, REMOVALS AND DISPOSAL SHALL BE IN ACCORDANCE WITH THE STANDARDS, REGULATIONS, CODES, ORDINANCES, AND LAWS OF LOCAL, STATE, AND FEDERAL GOVERNMENTS, AND OTHER AUTHORITIES THAT HAVE LAWFUL JURISDICTION.

4. PERFORM WORK, PROVIDE MATERIALS AND EQUIPMENT FOR SYSTEMS SHOWN, SPECIFIED AND DESCRIBED ON DRAWINGS. COMPLETELY COORDINATE ALL TRADES OF THIS CONTRACT AND PROVIDE COMPLETE AND FULLY FUNCTIONAL INSTALLATION. ALL WORK IN THIS SET TO BE COMPLETED UNDER THIS CONTRACT, UNLESS OTHERWISE

5. PROTECT ALL EXISTING AND NEW BUILDING ELEMENTS FROM DAMAGE. CONTRACTOR SHALL RESTORE ALL

6. WORK SHALL BE EXECUTED IN A WORKMANLIKE MANNER AND SHALL PRESENT NEAT, RECTILINEAR APPEARANCE WHEN COMPLETED. MAINTAIN MAXIMUM HEAD ROOM AT ALL TIMES. DO NOT RUN PIPES, DUCTS, AND CONDUIT EXPOSED UNLESS SHOWN AND NOTED TO BE EXPOSED ON

RECOMMENDATIONS. MAINTAIN MANUFACTURER'S EQUIPMENT CLEARANCES.

WITH INTERRUPTIONS. ALL SYSTEM INTERRUPTIONS SHALL BE SCHEDULED WITH OWNER, UTILITY AND COORDINATED WITH OTHER TRADE WORK.

INSTALLED IN HVAC AIR PLENUM SPACES SHALL MEET CODE REQUIREMENTS FOR SMOKE AND COMBUSTIBILITY.

12. DO NOT SUPPORT EQUIPMENT FROM SUSPENDED CEILINGS. ALL SUPPORT SHALL BE FROM BUILDING STRUCTURE OR

JETTING/SNAKING ALL SANITARY WASTE LINES (ALL FLOOR

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E&R PROJECT NO. Y21CH01

YPS NO.

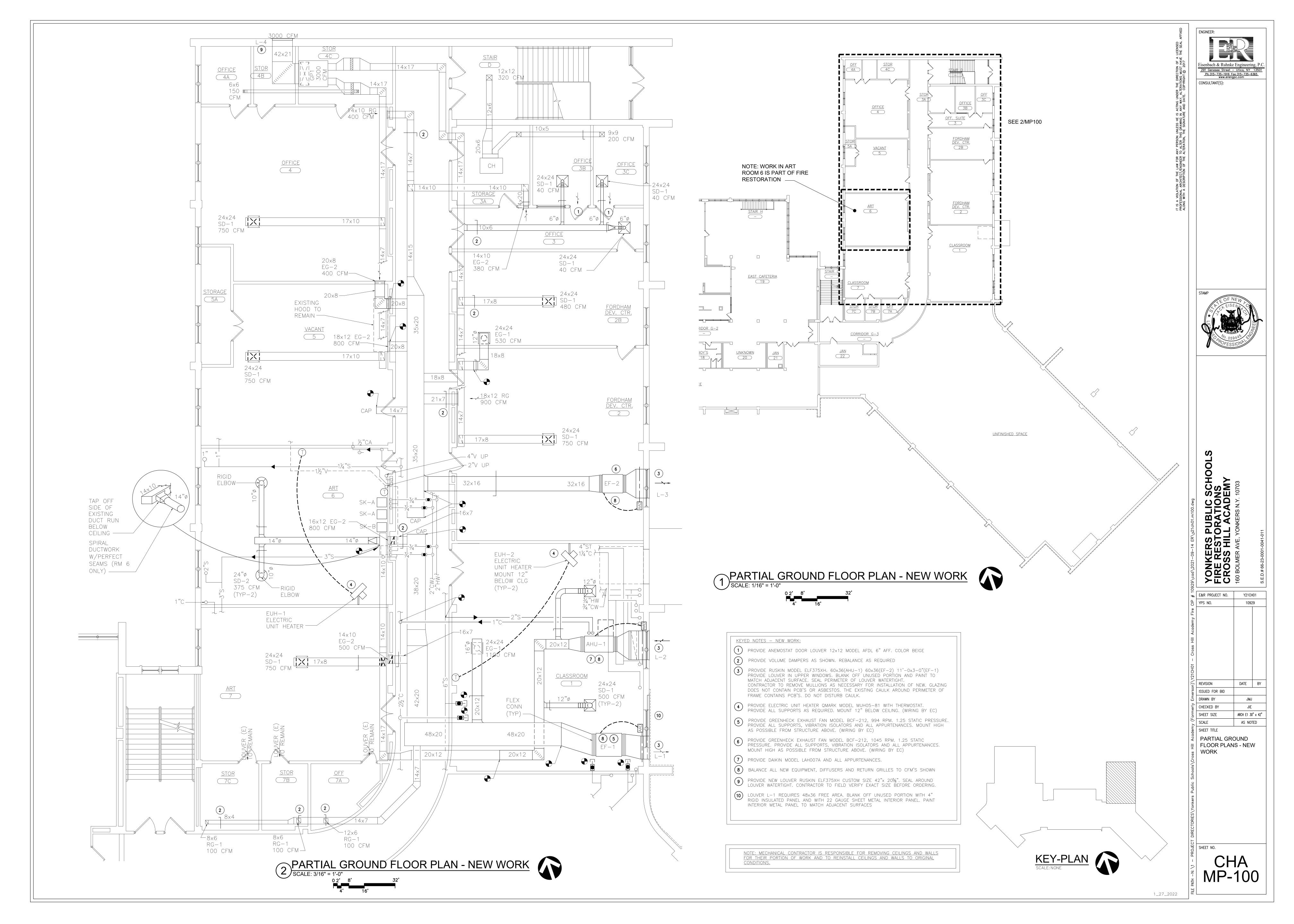
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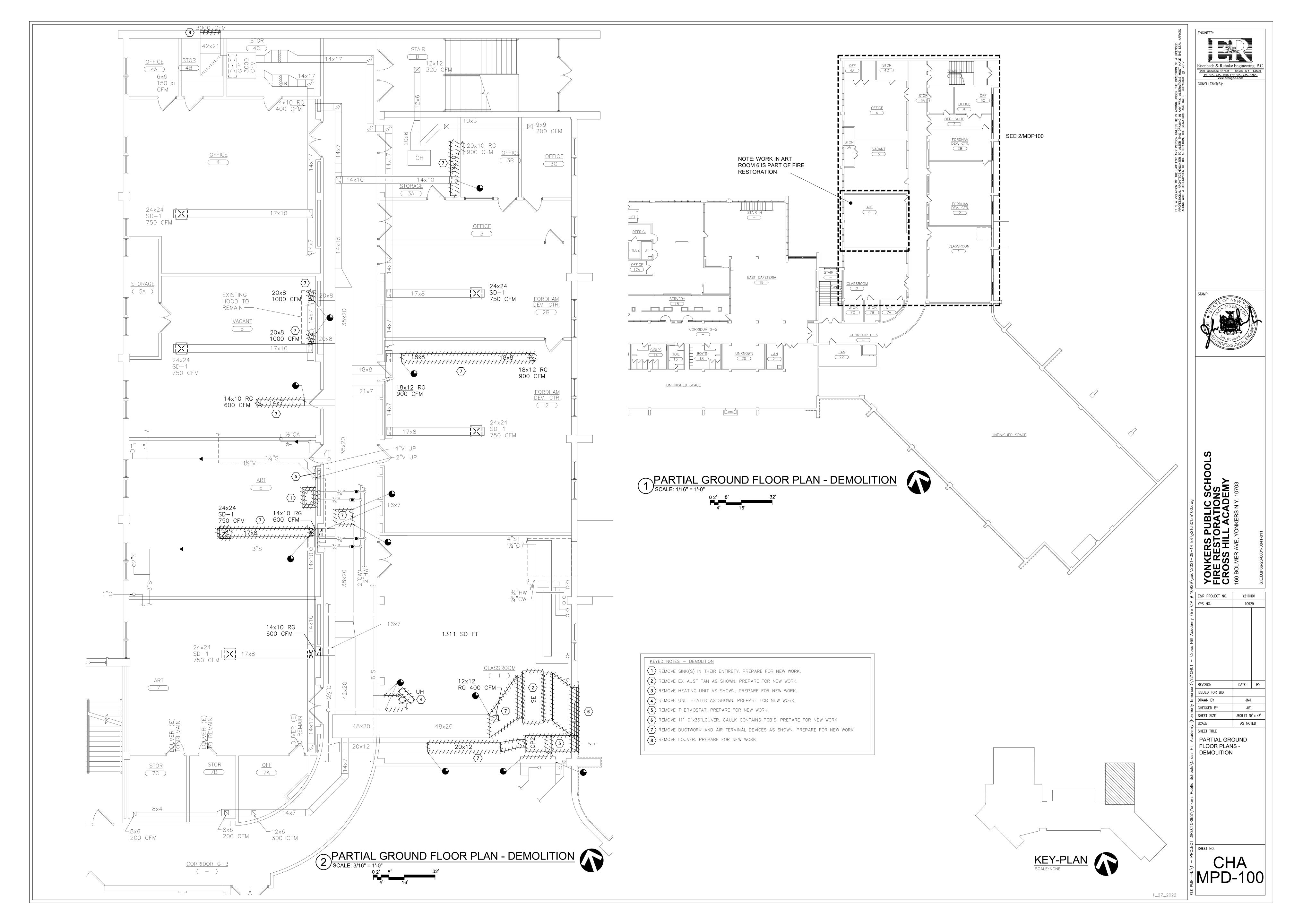
DATE BY ISSUED FOR BID DRAWN BY JMJ CHECKED BY JIE SHEET SIZE ARCH E1 30" x 42"

AS NOTED

SHEET TITLE

ABBREVIATIONS AND SYMBOLS





#### COORDINATION NOTE:

1. COORDINATION- IT SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL AND MECHANICAL CONTRACTORS TO COORIDNATE THEIR WORK. THE HVAC CONTRACTOR SHALL TAKE THE LEAD IN THE COORDINATION EFFORT AND PRODUCE THE COORDINATION DRAWINGS. COORDINATION DRAWINGS SHALL BE SUBMITTED FOR APPROVAL TO THE ENGINEER PRIOR TO STARTING ANY WORK. CEILING SPACE IS VERY LIMITED AND DUCTWORK/PIPING INSTALLATION AND LOCATION IS CRITIAL. THE PURPOSE OF THESE DRAWINGS IS TO COORDINATE THE LOCATIONS OF ALL PIPING, DUCTWORK, AND ASSOCIATED ELECTRICAL EQUIPMENT. ALL ELECTRICAL EQUIPMENT SHALL BE INSTALLED AND LOCATED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE (NEC). MECHANICAL EQUIPMENT CANNOT INFILTRATE THE ELECTRICAL EQUIPMENTS WORKING CLEARANCE AND WORKING SPACE, NOR CAN IT BE INSTALLED DIRECTLY ABOVE OR BELOW TO THE STRUCTURE, AS IDENTIFIED WITHIN THE NEC, ARTICLE 110 -"REQUIREMENTS FOR ELECTRICAL INSTALLATION". THIS COORDINATION IS REQUIRED FOR ALL PHASES OF THIS PROJECT. FAILURE TO FOLLOW THIS PROCEDURE DOES NOT RELIEVE THE CONTRACTOR FROM THE DUTIES AND WILL NOT CONSTITUTE A REASON FOR A CHANGE ORDER.

	INSULATION SCHEDULE												
TYPE	EQUIPMENT OR SYSTEM	INSULATION CLASS (a)			JACKETING CLASS (b)			THICKNESS (IN)  NOMINAL PIPE SIZE (IN)  DUCT					DUCTWORK
ITPE	SERVED	INTERIOR CONCEALED	INTERIOR EXPOSED	EXTERIOR	INTERIOR GENERAL	EQUIPMENT ROOMS	EXTERIOR	<1"	1"-<11"	1½"- <4"	4 "- <8"	≥8" & UP	(c)
DCW, COOLING COIL	FE			0			0.5	0.5	1.0	1.0	1.0		
A	CONDENSATE		FE			4		0.5	0.5	1.0	1.0	1.0	
B HWS, HWR	FG			1			1.5	1.5	2	2	2		
	HWS, HWR		FG		1	1		1.5	1.5	2	2	2	
				UR			6	1.5	1.5	2	2	2	
		FG (d)			2								1.5(g)(J)
С	DUCTWORK		FG (e)		2	2							2 (f)(g)(J)
				UR(e)			3						2 (i)(J)
		FG			1			1.5	1.5	3	3	3	
D	LPS,LPC		FG		1	1		1.5	1.5	3	3	3	
				UR			6	1.5	1.5	3	3	3	
(a) FG — FIBROUS GLASS FE — FLEXIBLE ELASTOMERIC UR — URETHANE CS — CALCIUM SILICATE FR — FIRE RATED				0 NONE 1 ALL SERV 2 ALUMINUM 3 CANVAS 4 POLYVINY 5 STAINLESS 6 ALUMINUM 7 EPDM	FOIL  CHLORIDE  STEEL	(c) (d) (e)			SP. (g) INS EX <sup>-</sup> (i) TW	ACE SULATE EXHA TERIOR PENI O LAYERS, (	AUST AIR 15'- ETRATION 3 IN TOTAL	N CONDITIONED -0" FROM O HAVE PVC WRAP	

ALL INSULATION TO COMPLY WITH 2015 NYS ENERGY CONSERVATION CONSTRUCTION CODE

l

NOTE 4: PROVIDE MERV 14 FILTER NOTE 5: PROVIDE (2) 24"x24"x4" THICK FILTERS

FIXTURE AND EQUIPMENT CONNECTION SCHEDULE							
DESIGNATION	DESCRIPTION	COLD WATER	HOT WATER	WASTE OR SANITARY	VENT	CARRIERS & ACCESSORIES	NOTES
SK-A	SINK	1/2"	1/2"	1 1/2"	2"	YES	NOTE 1
SK-B	SINK(HANDICAPPED)	IANDICAPPED) 1/2"		1 1/2"	2"	YES	NOTE 1

1. PROVIDE ELKAY SINK LRAD 2022 WITH FAUCET ELKAY LK4101, WATER SUPPLIES MCGUIRE 2167-LK-F AND TRAP MCGUIRE 8912-F ADA COMPLIANT. PROVIDE SOLID INTERCEPTOR MIFAB MI-SOLIDS-S WITH ALL APPURTENANCES. 2. ALL PLUMBING FIXTURES TO BE PROVIDED WITH 1/4 TURN SHUT-OFF VALVES AS SPECIFIED

	LOUVER SCHEDULE										
UNIT NO.	LOCATION	SERVICE	CFM	LOUVER -	AF	PROXIMATE	SIZE	MAX PD IN	BIRD SCREEN	DESIGN EQUIPMENT	
UNIT NO.	LUCATION	SERVICE	VICE CFIVI	CFM LOUVER		DEPTH	HEIGHT	W.G.	BIRD SCREEN	DESIGN EQUIPMENT	
L-1	ROOM 1	EXHAUST	SEE PLAN	ALUMINUM LOUVER	132	4	36	.05	YES	RUSKIN ELF375XH	
L-2	ROOM 1	AIR INTAKE	SEE PLAN	ALUMINUM LOUVER	36	4	36	.05	YES	RUSKIN ELF375XH	
L-3	ROOM 2	EXHAUST	SEE PLAN	ALUMINUM LOUVER	60	4	36	.05	YES	RUSKIN ELF375XH	
L-4	STOR. 4B	AIR INTAKE	SEE PLAN	ALUMINUM LOUVER	42	4	20.625	.05	YES	RUSKIN ELF375XH	

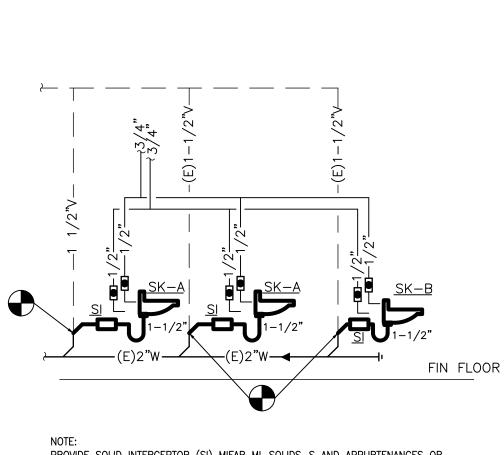
NOTE: PROVIDE FACTORY PAINTED FINISH (COLOR BY OWNER) ALL LOUVERS TO HAVE ALUMINUM BIRD SCREENS

	REGISTER,	GRILLE	AND DIFF	USER SCHEDUL	.E
TYPE	APPLICATION	MATERIAL	FINISH	DESIGN EQUIPMENT	NOTES
SD-1	SUPPLY	STEEL	WHITE	TITUS MODEL TMS	1,2,3
SD-2	SUPPLY	STEEL	WHITE	TITUS MODEL R-OMNI	1,3
EG-1	EXHAUST	STEEL	WHITE	TITUS MODEL 350 RL	1,2,3
EG-2	EXHAUST	STEEL	WHITE	TITUS MODEL 350-ZRL	3

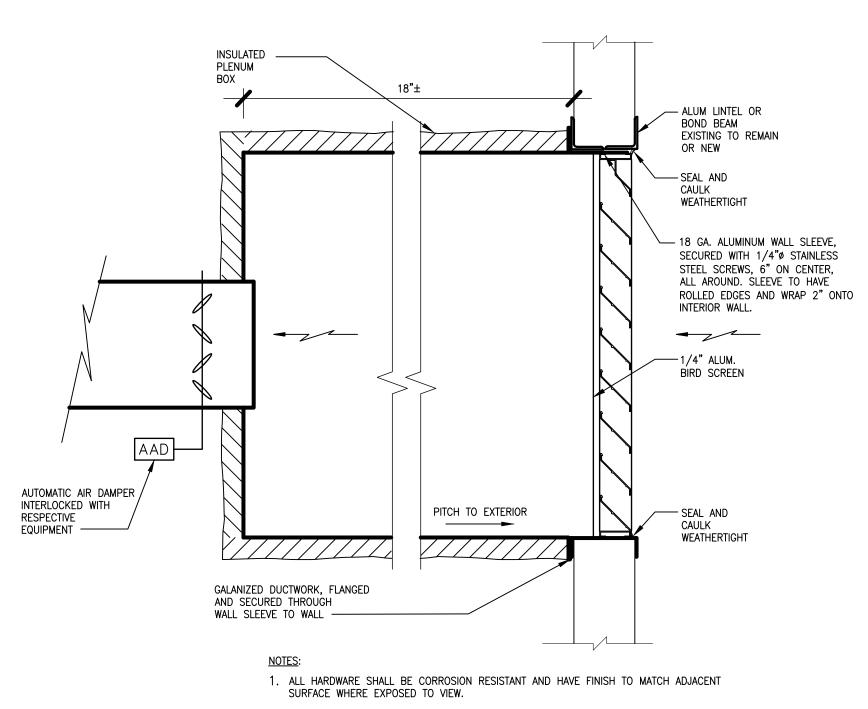
NOTE 1: PROVIDE APPROPRIATE SIZED NECK TO CONNECT TO NEW OR EXISTING DUCT. SEAL AND MAKE CONNECTIONS AIR TIGHT.

NOTE 2: PROVIDE GRILLE OR DIFFUSER TO FIT IN A FULL 2X2 CEILING TILE IN ALL DROP CEILING.

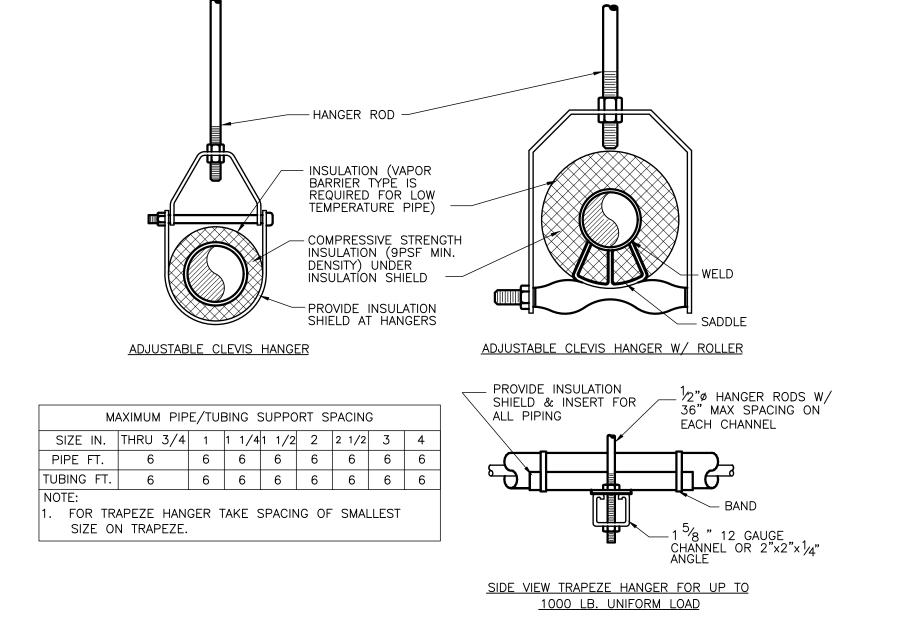
NOTE 3: PROVIDE VOLUME DAMPERS FOR AIR BALANCING.

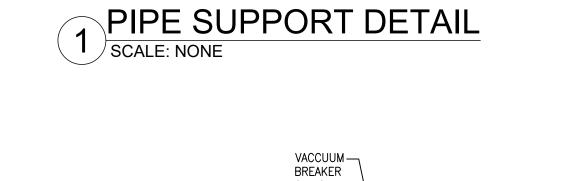


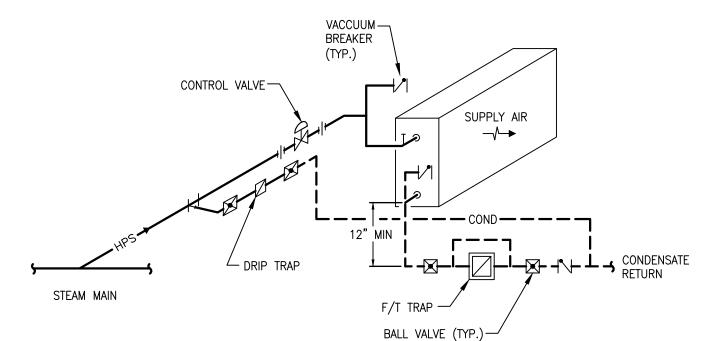
NOTE:
PROVIDE SOLID INTERCEPTOR (SI) MIFAB MI-SOLIDS-S AND APPURTENANCES OR APPROVED EQUAL 5 PLUMBING RISER DIAGRAM SCALE: NONE



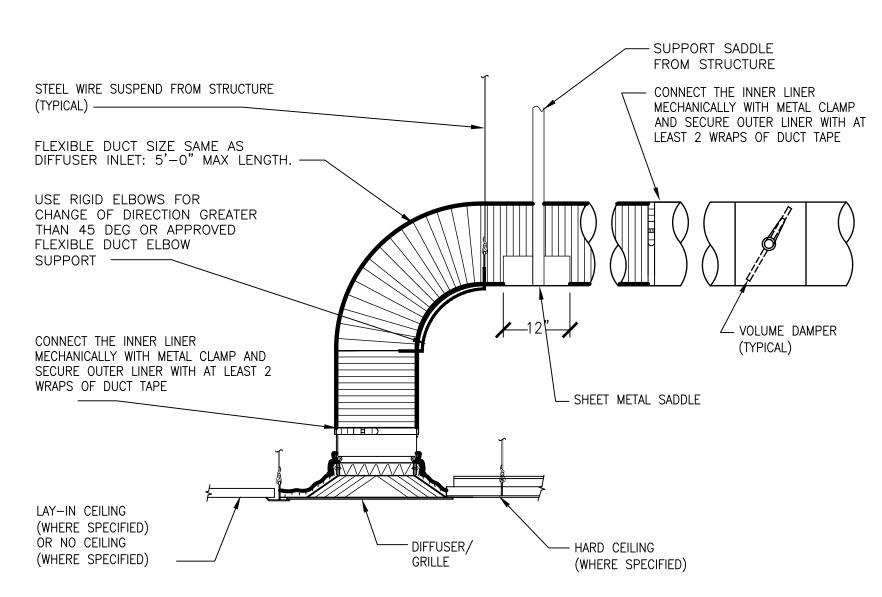
4 LOUVER DETAIL
SCALE: NONE







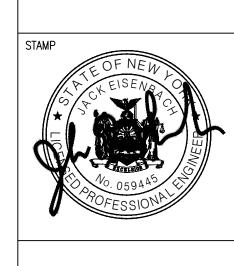
# 2 STEAM HEATING COIL PIPING DETAIL SCALE: NONE



3 FLEXIBLE AIR DUCT CONNECTOR SCALE: NONE

ENGINEER: Eisenbach & Ruhnke Engineering, P. Ph: 315-735-1916 Fax: 315-735-6365 www.erengpc.com CONSULTANT(S):

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E&R PROJECT NO. Y21CH01 YPS NO. 10929

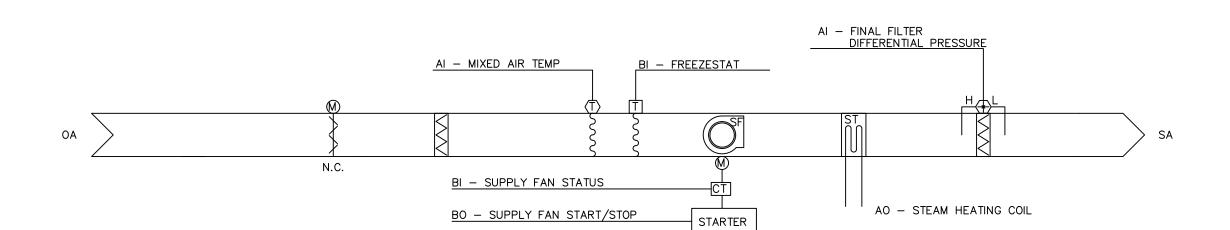
REVISION DATE BY ISSUED FOR BID MM/N DRAWN BY CHECKED BY JIE SHEET SIZE ARCH E1 30" x 42"

as noted

SCALE SHEET TITLE **DETAILS AND** 

SCHEDULES

SHEET NO. CHA MP-500



RUN CONDITIONS - SCHEDULED: THE UNIT SHALL RUN ACCORDING TO A USER DEFINABLE TIME SCHEDULE IN THE FOLLOWING OCCUPIED MODE: THE UNIT SHALL MAINTAIN 75 DEG. F (ADJ.) COOLING SETPOINT

70 DEG. F (ADJ.) HEATING SETPOINT. UNOCCUPIED MODE (NIGHT SETBACK): THE UNIT SHALL MAINTAIN 80 DEG. F (ADJ.) COOLING SETPOINT. 65 DEG. F (ADJ.) HEATING SETPOINT.

ALARMS SHALL BE PROVIDED AS FOLLOWS:
HIGH ZONE TEMP: IF THE ZONE TEMPERATURE IS GREATER THAN THE COOLING SETPOINT BY A USER DEFINABLE AMOUNT (ADJ.). LOW ZONE TEMP: IF THE ZONE TEMPERATURE IS LESS THAN THE HEATING SETPOINT BY A USER DEFINABLE AMOUNT (ADJ.).

ZONE OPTIMAL START: THE UNIT SHALL USE AN OPTIMAL START ALGORITHM FOR MORNING START-UP. THIS ALGORITHM SHALL MINIMIZE THE UNOCCUPIED WARM-UP OR COOL-DOWN PERIOD WHILE STILL ACHIEVING COMFORT CONDITIONS BY THE START OF SCHEDULED OCCUPIED PERIOD.

ZONE UNOCCUPIED OVERRIDE: A TIMED LOCAL OVERRIDE CONTROL SHALL ALLOW AN OCCUPANT TO OVERRIDE THE SCHEDULE AND PLACE THE UNIT INTO AN OCCUPIED MODE FOR AN ADJUSTABLE PERIOD OF TIME. AT THE EXPIRATION OF THIS TIME, CONTROL OF THE UNIT SHALL AUTOMATICALLY RETURN TO THE SCHEDULE.

THE UNIT SHALL SHUT DOWN AND GENERATE AN ALARM UPON RECEIVING A FREEZESTAT STATUS.

SUPPLY FAN:
THE SUPPLY FAN SHALL RUN ANYTIME THE UNIT IS COMMANDED TO RUN, UNLESS SHUTDOWN ON SAFETIES. TO PREVENT SHORT CYCLING, THE SUPPLY FAN SHALL HAVE A USER DEFINABLE (ADJ.) MINIMUM RUNTIME.

ALARMS SHALL BE PROVIDED AS FOLLOWS: SUPPLY FAN FAILURE: COMMANDED ON, BUT THE STATUS IS OFF.
SUPPLY FAN IN HAND: COMMANDED OFF, BUT THE STATUS IS ON.
SUPPLY FAN RUNTIME EXCEEDED: STATUS RUNTIME EXCEEDS A USER DEFINABLE LIMIT (ADJ.).

THE CONTROLLER SHALL MEASURE THE ZONE TEMPERATURE AND MODULATE THE ELECTRIC HEATING COIL TO MAINTAIN ITS HEATING SET POINT.

THE HEATING SHALL BE ENABLED WHENEVER:

OUTSIDE AIR TEMPERATURE IS LESS THAN 65 DEG.F (ADJ.).
AND THE ZONE TEMPERATURE IS BELOW HEATING SETPOINT.

AND THE SUPPLY FAN STATUS IS ON. THE HEATING COIL SHALL OPEN WHENEVER THE FREEZESTAT (IF PRESENT) IS ON.

MINIMUM OUTSIDE AIR VENTILATION - FIXED PERCENTAGE: THE OUTSIDE AIR DAMPERS SHALL MAINTAIN A MINIMUM POSITION (ADJ.) DURING BUILDING OCCUPIED HOURS AND BE CLOSED DURING UNOCCUPIED HOURS.

FINAL FILTER DIFFERENTIAL PRESSURE MONITOR:

THE CONTROLLER SHALL MONITOR THE DIFFERENTIAL PRESSURE ACROSS THE FINAL FILTER.

ALARMS SHALL BE PROVIDED AS FOLLOWS:
FINAL FILTER CHANGE REQUIRED: FINAL FILTER DIFFERENTIAL PRESSURE EXCEEDS A USER DEFINABLE LIMIT (ADJ.).

MIXED AIR TEMPERATURE:

THE CONTROLLER SHALL MONITOR THE MIXED AIR TEMPERATURE AND USE AS REQUIRED FOR ECONOMIZER CONTROL (IF PRESENT) OR PREHEATING CONTROL (IF PRESENT).

ALARMS SHALL BE PROVIDED AS FOLLOWS: HIGH MIXED AIR TEMP: IF THE MIXED AIR TEMPERATURE IS GREATER THAN 90 DEG. F (ADJ.). LOWMIXED AIR TEMP: IF THE MIXED AIR TEMPERATURE IS LESS THAN 45 DEG. F (ADJ.).

AIR HANDLING UNIT CONTROL SCHEMATIC

SCALE: NONE

## SEQUENCE OF OPERATION

EXHAUST FAN(S):

DEFINABLE LIMIT (ADJ.)

RUN CONDITIONS INTERLOCKED: THE FAN(S) EF-1, EF-2 SHALL BE INTERLOCKED TO RUN WHENEVER AHU-1 RUNS UNLESS SHUTDOWN ON SAFETIES.

THE FAN SHALL HAVE A USER DEFINABLE (ADJ.) MINIMUM RUNTIME

THE CONTROLLER SHALL MONITOR THE FAN STATUS. ALARMS SHALL BE PROVIDED AS FOLLOWS: FAN FAILURE: COMMANDED ON BUT THE STATUS IS OFF. FAN IN HAND: COMMAND OFF, BUT THE STATUS IS ON. FAN RUNTIME EXCEEDED: FAN STATUS RUNTIME EXCEEDS A USER

> BI- FAN STATUS ■ BO- FAN START/STOP

2 EXHAUST FAN(S) CONTROL SCHEMATIC SCALE: NONE

CONTROL DIAGRAMS LEGEND

AI = ANALOG INPUT. A PHYSICAL INPUT TO THE CONTROL MODULE.

AO = ANALOG OUTPUT. A PHYSICAL OUTPUT FROM THE CONTROL MODULE.

AV = ANALOG VALUE. AN INTERMEDIATE (SOFTWARE) POINT THAT MAY BE EDITABLE OR READ—ONLY. EDITABLE AVS ARE TYPICALLY USED TO ALLOW THE USER TO SET A FIXED CONTROL PARAMETER, SUCH AS A SETPOINT. READ ONLY AVS ARE TYPICALLY USED TO DISPLAY THE STATUS OF A CONTROL OPERATION.

BI = BINARY INPUT. A PHYSICAL INPUT TO THE CONTROL MODULE.

BO = BINARY OUTPUT. A PHYSICAL OUTPUT FROM THE CONTROL MODULE.

BV = BINARY VALUE. AN INTERMEDIATE (SOFTWARE) POINT THAT MAY BE EDITABLE OR READ-ONLY. EDITABLE BVS ARE TYPICALLY USED TO ALLOW THE USER TO SET A FIXED CONTROL PARAMETER, SUCH AS A SETPOINT. READ ONLY BVS ARE TYPICALLY USED TO DISPLAY THE STATUS OF A CONTROL OPERATION.

ENGINEER: IT IS A VIOLATION OF THE LAW FOR ANY PERSON UNLESS HE IS ACTING UNDER THE DIRECTION OF A PROFESSIONAL ARCHITECT/ENGINEER TO ALTER THIS DRAWING IN ANY WAY. ALTERATIONS MUST HAVE ALONG WITH A DESCRIPTION OF THE ALTERATION, THE SIGNATURE AND DATE. COPYRIGHT® 2017 Ph: 315-735-1916 Fax: 315-735-6365 www.erengpc.com CONSULTANT(S):

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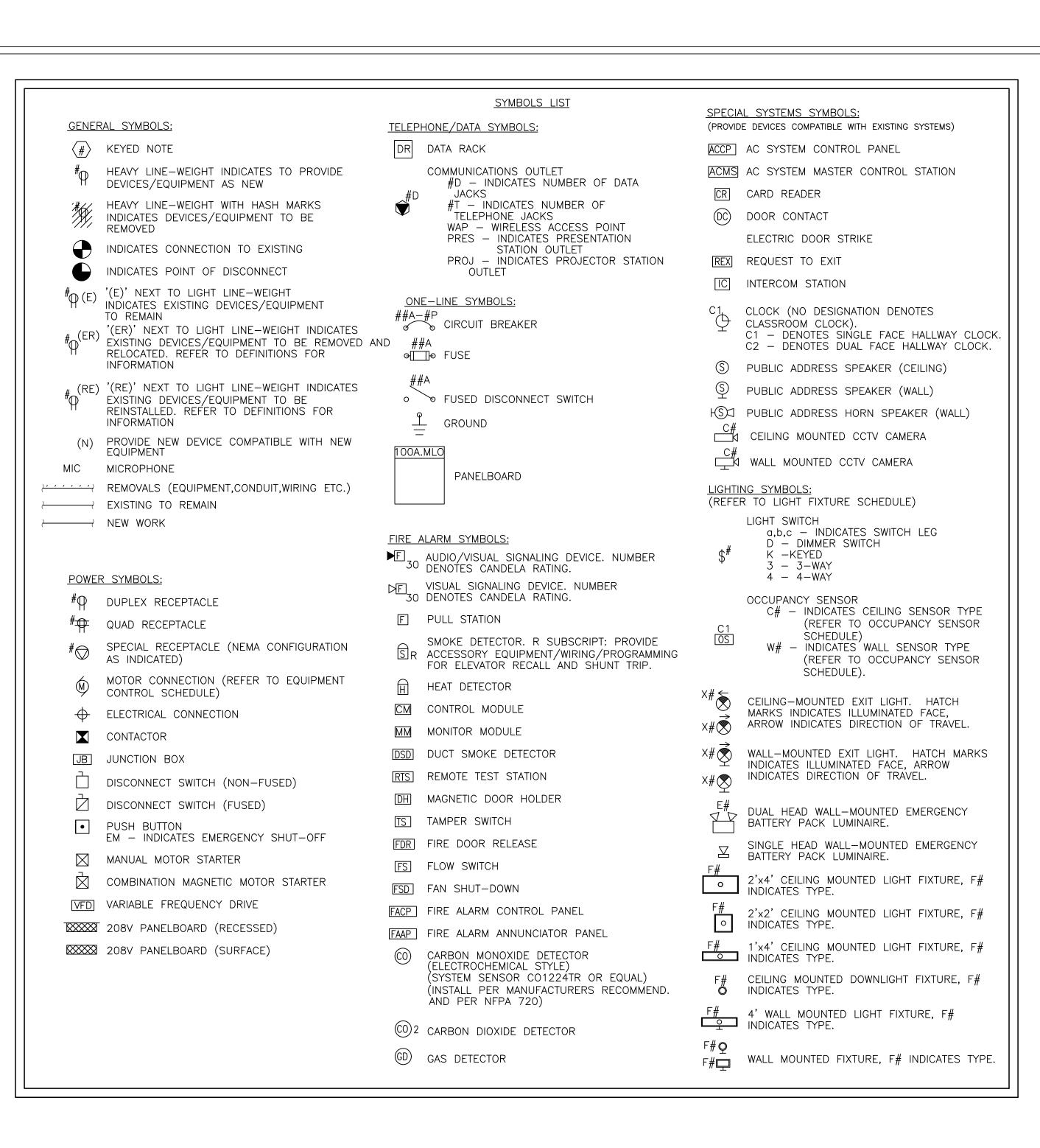
REVISION DATE BY ISSUED FOR BID DRAWN BY CHECKED BY JIE ARCH E1 30" x 42"

SHEET SIZE AS NOTED

SHEET TITLE CONTROL SCHEMATICS

SHEET NO.

1\_27\_2022



**GENERAL DEMOLITION NOTES:** 

- DEMOLITION DRAWINGS ARE BASED ON FIELD OBSERVATION. REPORT ANY CONFLICTS TO THE ENGINEER BEFORE DISTURBING EXISTING EQUIPMENT.
- BEGINNING OF DEMOLITION MEANS THE CONTRACTOR ACCEPTS ALL EXISTING CONDITIONS.
- VERIFY SCOPE OF WORK: CONTRACTOR SHALL VISIT THE JOB SITE PRIOR TO SUBMITTING A BID TO DETERMINE THE SCOPE OF THE WORK, AND TO BECOME FAMILIAR WITH THE EXISTING CONDITIONS THAT WILL AFFECT THEIR WORK AND, THEREFORE, THEIR BID.
- 4. UNLESS NOTED OTHERWISE, EXISTING ELECTRICAL EQUIPMENT SHOWN ON THESE PLANS ARE A PART OF CONTRACT. TO MAINTAIN DRAWING CLARITY NOT ALL EXISTING ELECTRICAL EQUIPMENT HAS BEEN SHOWN. FIELD VERIFY EXISTING CONDITIONS AND NOTIFY ARCHITECT/ ENGINEER OF ANY CONFLICTS.
- 5. UNLESS NOTED OTHERWISE, REMOVE ALL ELECTRICAL ITEMS SHOWN ON THESE PLANS AS INDICATED BY CROSS HATCHED LINES AND/OR KEYED NOTES.
- 6. UNLESS NOTED OTHERWISE, DEMOLITION OF ELECTRICAL EQUIPMENT/DEVICES INCLUDES REMOVAL OF CIRCUITRY BACK TO ASSOCIATED SOURCE/PANEL. THIS INCLUDES REMOVAL OF THE DEVICE, WIRING, CONDUIT, BOXES, CONTROL DEVICES, ETC.
- WHERE POSSIBLE, EXISTING CONDUITS/RACEWAYS (ASSOCIATED WITH REMOVED EQUIPMENT AND WIRING) MAY BE RE-USED FOR NEW CIRCUITING. EXISTING CONDUITS/RACEWAYS MUST BE IN GOOD CONDITION, AND IN COMPLIANCE WITH NEC/SPECIFICATION REQUIREMENTS. NOTIFY ENGINEER PRIOR TO REUSING.
- 8. EXISTING CIRCUIT BREAKERS ASSOCIATED WITH ELECTRICAL EQUIPMENT SCHEDULED FOR DEMOLITION SHALL REMAIN FOR SPARES UNLESS REMOVAL IS REQUIRED TO MAKE ADDITIONAL SPACE (IN EXISTING PANELBOARDS) FOR NEW CIRCUIT BREAKERS.
- 9. MAINTAIN THE ELECTRICAL INTEGRITY OF ALL EXISTING BRANCH CIRCUITS INTERRUPTED BY REMOVAL WORK. PROVIDE ALL WIRING, CONDUIT, AND HARDWARE REQUIRED TO MAINTAIN CONTINUITY OF ELECTRICAL EQUIPMENT REMAINING ON
- EXISTING BRANCH CIRCUITS NOT BEING COMPLETELY REMOVED OR OUTSIDE WORK THE WORK AREA. 10. UNLESS NOTED OTHERWISE, REMOVE EXISTING ELECTRICAL DEVICES, AND ASSOCIATED CIRCUITRY, LOCATED ON OR IN
- WALLS SCHEDULED FOR REMOVAL. REFER TO ARCHITECTURAL DRAWINGS FOR DEMOLITION COORDINATION. 11. UNLESS NOTED OTHERWISE, REMOVE EXISTING ELECTRICAL DEVICES, AND ASSOCIATED CIRCUITRY, LOCATED ON OR IN CEILINGS SCHEDULED FOR REMOVAL. TO MAINTAIN DRAWING CLARITY, EXISTING CEILINGS SCHEDULED FOR DEMOLITION HAVE NOT BEEN IDENTIFIED ON THIS DRAWING. REFER TO ARCHITECTURAL DRAWINGS FOR DEMOLITION COORDINATION.
- 12. WHERE REMOVALS OCCUR ON SERVICES THAT ARE TO REMAIN IN OPERATION, CAP OR OTHERWISE TERMINATE THE REMAINING SERVICES BENEATH FINISHED SURFACES.
- 13. ALL CONDUITS STUBBED THRU FLOOR SERVING ITEMS TO BE REMOVED, AND NOT SHOWN OR REQUIRED TO BE REUSED, SHALL BE CUT OFF FLUSH, SLAB LEVEL WITH CONCRETE.
- 14. PORTIONS OF FEEDERS RISERS WHICH REQUIRE REMOVAL DUE TO DEMOLITION WORK, BUT WHICH ARE REQUIRED TO REMAIN ENERGIZED, SHALL BE CUT AT ACCESSIBLE LOCATIONS, REROUTED AND RECONNECTED. EXTEND EXISTING FEEDERS AS REQUIRED. MATCH EXISTING FEEDERS IN CONDUCTOR SIZE (AMPACITY RATING), RACEWAY SIZE, ETC.
- 15. CAREFULLY REMOVE, PROTECT AND STORE ALL EQUIPMENT TO BE REUSED IN A SAFE PLACE UNTIL READY FOR REINSTALLATION. CLEAN MATERIALS BEFORE REINSTALLATION AND ENSURE EQUIPMENT IS STILL FULLY OPERATIONAL.
- 16. THE CONTRACTOR IS RESPONSIBLE FOR REMOVAL OR RELOCATION OF ITEMS, NOT SHOWN ON THESE DRAWINGS TO ACCOMMODATE THE RENOVATIONS. CONTRACTOR SHALL INCLUDE, IN BASE BID, AN ALLOWANCE FOR UNFORESEEN CONDITIONS WHEN CONCEALED WORK IS EXPOSED. CLAIMS FOR ADDITIONAL DEMOLITION WORK WILL NOT BE ACCEPTED EXCEPT FOR CERTAIN CASES CONSIDERED JUSTIFIABLE BY THE ARCHITECT/ENGINEER.

FIRE ALARM NOTES:

- CONTRACTOR SHALL VERIFY AND COORDIANTE WITH THE BUILDING FIRE ALARM MAINTENANCE VENDOR FOR TYPE OF FIRE ALARM DEVICES TO BE USED.
- CONTRACTOR SHALL BE RESPONSIBLE TO RETAIN AND COORDINATE THE BUILDING FIRE ALARM MAINTENANCE VENDOR FOR PROGRAMMING AND FINAL CONNECTIONS. CONTRACTOR SHALL INCLUDE PROGRAMMING AND FINAL CONNECTION COSTS IN THEIR BID.
- FIRE ALARM WIRING DIAGRAMS SHOWN ARE GENERAL ARRANGEMENTS ONLY, OBTAINED PRIOR TO THE COMMENCEMENT OF THE WORK, ALL PERMIT COSTS AND INSPECTION FEES SHALL BE INCLUDED AS PART OF THIS CONTRACT.
- PERMITS AND APPROVALS NECESSARY FOR INSTALLATION OF WORK SHALL BE OBTAINED PRIOR TO THE COMMENCEMENT OF THE WORK. ALL PERMIT COSTS AND INSPECTION FEES SHALL BE INCLUDED AS PART OF THIS CONTRACT.
- CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN AND PROTECT FIRE ALARM NOTIFICATION DEVICES, SMOKE DETECTORS AND OTHER FIRE ALARM SAFETY DEVICES IN OPERATION AT ALL TIMES. IF ANY PORTION OF FIRE ALARM SYSTEM IS DISABLED, NOTIFY BUILDING CUSTODIAN
- IN AREAS WHERE DUST AND DIRT WILL BE AIRBOURNE DURING DEMOLITION AND CONSTRUCTION THE CONTRACTOR SHALL PROVIDE PLASTIC WRAPOVER SMOKE DETECTORS AND THEN REMOVE ONCE SPACE IS CLEAN.IF A FIRE ALARM DEVICE IS LOCATED ON A WALL OR CEILING TO BE REMOVED, UNLESS OTHERWISE INDICATED THE DEVICE SHALL BE REMOVED AND STORED. ONCE CONSTRUCTION IS COMPLETE THE DEVICE SHALL BE REINSTALLED IN IT'S ORIGINAL LOCATION OR AS CLOSE TO ' ITS ORIGINAL LOCATION AS FEASIBLE. REUSE EXISTING WIRING IF POSSIBLE, PROVIDE NEW WIRING IF NECESSARY.
- UNLESS DIRECTED OTHERWISE BY FIRE ALARM SYSTEM MANUFACTURER FIRE ALARM DEVICE WIRING SHALL BE AS FOLLOWS (FOR BIDDING PURPOSES ONLY)
- SIGNAL WIRING #14 AWG TWISTED/SHIELDED BELL WIRING - #14 AWG TWISTED CABLE STROBE WIRING - #14 TWISTED CABLE
- THE WIRING SHALL HAVE THE FOLLOWING CHARACTERISTICS: A. A MINIMUM TEMPERATURE RATING 150° C
- B. A MINIMUM AVERAGE INSULATION THICKNESS OF 15 MILS C. A MINIMUM AVERAGE JACKET THICKNESS OF 25 MILS D. THE COLOR OF THE CABLE SHALL BE RED
- E. THE CABLE SHALL BE A TYPE FPLP (PLENUM TYPE) WHEN CONDUIT IS USED. TO PURCHASING F. THE CABLE SHALL BE VISIBLY MARKED EXTERNALLY THAT IT MEETS THE ABOVE REQUIREMENTS AND IS LISTED BY U.L. CONFIRM WIRING TYPE AND QUANTITY WITH FIRE ALARM SYSTEM MANUFACTURER PRIOR.
- PROVIDE MC FIRE ALARM CABLE WITH RED STRIPE AS MANUFACTURED BY AFC SERIES 1800 WHEN CABLE IS CONCEALED OR ABOVE HUNG CEILING. WHEN FIRE ALARM CABLE IS RUN EXPOSED IN FINISHED AREAS, CABLE SHALL RUN IN WIREMOLD V-700. WHEN FIRE ALARM CABLE IS RUN EXPOSED IN UNFINISHED AREAS, PROVIDE PLENUM RATED CABLE IN MIN.  $\frac{3}{4}$ " CONDUIT.
- STROBES SHALL HAVE A MINIMUM LIGHT OUTPUT OF 75 CANDELA AND A FLASH RATE OF 1-3 HZ.
- 10. SHUTDOWN OF HVAC SYSTEM EQUIPMENT (NOT LIMITED TO, ROOF TOP, EXHAUST FANS, ETC.) OF 1000 CFM OR GREATER, SHALL BE PERFORMED VIA A RELAY INTERFACE SYSTEM. SEND SIGNAL TO BUILDING AUTOMATED TEMPERATURE CONTROL (ATC) SYSTEM INDICATING SHUTDOWN HAS OCCURED, EQUIPMENT RESTART SHALL BE BY BUILDING 'ATC' SYSTEM UPON FIRE ALARM RESET TO NORMAL MODE. RESTART OF EQUIPMENT SHALL BE SEQUENTIAL.
- 11. AFTER THE SYSTEM MODIFICATIONS ARE COMPLETE TEST ALL COMPONETS IN ACCORDANCE WITH SEQUENCE OF OPERATION PRIOR TO FIRE DEPARTMENT INSPECTION.
- 12. A CARBON MONOXIDE DETECTORS SHALL BE PROVIDED IN ALL BOILER ROOMS. ACTIVATION INITIATE A SUPERVISORY SIGNAL AT THE FIRE ALARM CONTROL PANEL AND ANNUNCIATOR PANEL WHEN 70 PPM ARE REACHED WITHIN 60-240 MINUTES OR 150 PPM ARE REACHED WITHIN 10-50 PER UL 2034.

**GENERAL NEW WORK NOTES:** 

- UNLESS NOTED AS EXISTING OR PROVIDED BY OTHERS, CONTRACTOR SHALL PROVIDE ALL MATERIALS SHOWN ON DRAWINGS. ALL MATERIALS PROVIDED SHALL BE NEW, UNUSED CONDITION.
- ALL WORK PERFORMED UNDER THIS CONTRACT SHALL BE PROVIDED WITH MINIMUM DISRUPTION TO THE BUILDING SYSTEMS AND STAFF. CONTINUOUS OPERATION OF THE BUILDING SYSTEMS, OUTSIDE OF WORK AREA, SHALL BE MAINTAINED THROUGHOUT THE ENTIRE PROJECT. TEMPORARY SHUTDOWN OF SYSTEMS SHALL ONLY BE ALLOWED WITH WRITTEN CONSENT OF OWNER. EXISTING ALARM AND EMERGENCY SYSTEMS SHALL NOT BE DISRUPTED AT ANY TIME DURING THE PROJECT.
- REMOVE & REINSTALL EXISTING CONSTRUCTION (CEILINGS, LIGHTING, ELECTRICAL EQUIPMENT, FIRE ALARM DEVICES, FURNISHINGS, ETC.) AS NECESSARY TO COMPLETE THE REMOVALS & RENOVATION WORK REQUIRED BY THE DRAWINGS & SPECIFICATIONS. REPLACE ANY ITEMS DAMAGED BY OR DUE TO THIS REMOVAL & REINSTALLATION WITH NEW ITEMS TO MATCH EXISTING. (APPLIES TO AREAS WITHIN & OUTSIDE OF THE PROJECT AREA).
- . IN AREAS WHERE CEILING IS BEING REMOVED, EXISTING CONDUITS AND CABLING WHICH ARE NOT INDEPENDENTLY SUPPORTED ABOVE THE CEILING SHALL BE INDEPENDENTLY SUPPORTED FROM THE STRUCTURE ABOVE USING SPECIFIC
- SURFACE MOUNT ALL WIRING DEVICES, LIGHTING CONTROLS, TELECOMMUNICATION DEVICES, FIRE ALARM DEVICES, ETC. LOCATED ON EXISTING MASONRY WALLS. PROVIDE SURFACE MOUNTED BOXES, RACEWAYS, WIREMOLD, ETC. PER
- COVERS ASSOCIATED WITH JUNCTION AND PULL BOXES SHALL BE READILY ACCESSIBLE.
- PROVIDE PULL BOXES WHERE REQUIRED BY CODE AND WHERE NECESSARY FOR CONDUCTOR INSTALLATION. PROVIDE PULL BOXES EVERY 100' FOR ALL EMPTY RACEWAY RUNS. PRIOR TO INSTALLATION OF PULL BOXES, COORDINATE WITH OTHER TRADES.
- PROVIDE SEPARATE RACEWAYS AND BOXES FOR CONDUCTORS OF NORMAL AND EMERGENCY CIRCUITS.
- 9. DO NOT COMBINE MORE THAN THREE PHASE CONDUCTORS, THREE NEUTRAL CONDUCTORS PLUS THREE GROUND
- CONDUCTORS, IN ANY ONE BRANCH CIRCUIT CONDUIT, UNLESS OTHERWISE INDICATED ON DRAWINGS. 10. THE USE OF NON-METTALLIC SURFACE RACEWAY OR EXPOSED NON-METTALLIC RACEWAY IN ASSEMBLY SPACES AND
- 11. THE USE OF SHARED NEUTRALS IN LIGHTING AND RECEPTACLE BRANCH CIRCUITS IS PROHIBITED. PROVIDE SEPARATE NEUTRAL AND GROUND FOR EVERY CIRCUIT.
- 12. PROTECT EXISTING SURFACES.

MEANS OF EGRESS AREAS IS PROHIBITED.

- 13. WALK-THRU WITH OWNER REPRESENTATIVE AND VERIFY ALL ELECTRICAL DEVICE LOCATIONS PRIOR TO INSTALLATION. 14. INSTALL ALL CIRCUITRY PARALLEL OR PERPENDICULAR TO WALLS, FLOOR, AND CEILING.
- 15. REFER TO ELECTRICAL EQUIPMENT AND CONTROL SCHEDULE FOR HVAC/PLUMBING EQUIPMENT CIRCUITRY, CONTROLS & ADDITIONAL INFORMATION.
- 16. TO MAINTAIN DRAWING CLARITY, MOTOR CONTROL DEVICES, FOR HVAC/PLUMBING EQUIPMENT, HAVE NOT BEEN SHOWN. REFER TO ELECTRICAL EQUIPMENT & CONTROL SCHEDULE FOR TYPES OF MOTOR CONTROL DEVICES

REQUIRED, LOCATIONS WHERE CONTROL DEVICES ARE SCHEDULED FOR INSTALLATION, AND ADDITIONAL INFORMATION.

- 17. COORDINATE LOCATIONS AND MOUNTING HEIGHTS OF ELECTRICAL EQUIPMENT/DEVICES WITH ARCHITECTURAL PLANS, ELEVATIONS, FURNITURE LAYOUTS, AND WITH OTHER DIVISIONS PRIOR TO INSTALLATION. CORRECT ANY INACCURACY RESULTING FROM FAILURE TO DO SO WITHOUT COST TO OWNER.
- 18. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL SUPPORT HARDWARE FOR SECURELY FASTENING THE ELECTRICAL CONTROL DEVICES AND ENCLOSURES TO THE BUILDING STRUCTURE. THE REQUIRED HARDWARE INCLUDES, BUT IS NOT LIMITED TO, INTERMEDIATE STEEL ANGLE, UNISTRUCT, FASTENERS, JOISTS CLAMPS, ETC. MOUNT STARTERS, VFD'S, DISCONNECTS, RELAYS, AND OTHER ELECTRICAL CONTROL DEVICES AND ENCLOSURES AT LOCATION(S) INDICATED IN ELECTRIC EQUIPMENT & CONTROL SCHEDULE(S). ALLOW MAINTENANCE ACCESS AND SERVICE SPACE AT EACH LOCATION.
- 19. WHERE NEW CIRCUIT BREAKERS ARE REQUIRED FOR INSTALLATION IN EXISTING ELECTRICAL PANELS. CONTRACTOR SHALL PROVIDE CIRCUIT BREAKERS WHICH ARE COMPATIBLE WITH EXISTING ELECTRICAL PANELS. MATCH FRAME SIZES, KIAC RATINGS, ETC.
- 20. UPON COMPLETION OF THIS PROJECT, THE CONTRACTOR SHALL PROVIDE COMPLETE, TYPE-WRITTEN, AND UP-TO-DATE PANELBOARD DIRECTORIES FOR ALL PANELBOARDS (NEW AND EXISTING) AFFECTED BY THIS PROJECT. PROVIDE OWNER WITH TWO COPIES OF UPDATED PANELBOARD CIRCUIT BREAKER DIRECTORIES.
- 21. EACH RECEPTACLE, SWITCH AND JUNCTION BOX, PROVIDED, OR ALTERED, UNDER THIS CONTRACT, SHALL BE LABELED WITH THE CORRESPONDING POWER PANEL NAME AND CIRCUIT BREAKER NUMBER. ALL LABELING SHALL BE TYPEWRITTEN USING A LABEL MAKER AND SHALL BE PERMANENTLY AFFIXED TO EACH FACEPLATE. HANDWRITTEN LABELS WILL NOT BE ACCEPTED. PRIOR TO START OF LABELING. MEET WITH OWNER TO DETERMINE LABELING SCHEME TO BE UTILIZED. PROVIDE LABELING TO MEET OWNER REQUIREMENTS.
- 22. ALL ITEMS THAT REQUIRE ACCESS, SUCH AS FOR OPERATING, CLEANING, SERVICING, MAINTENANCE, AND CALIBRATION, SHALL BE FASILY AND SAFFLY ACCESSIBLE BY PERSONS STANDING AT FLOOR LEVEL, OR STANDING ON PERMANENT PLATFORMS. WITHOUT THE USE OF PORTABLE LADDERS. EXAMPLES OF THESE ITEMS INCLUDE, BUT ARE NOT LIMITED TO: ALL TYPES OF SWITCHES. PANELBOARDS, OCCUPANCY SENSORS, CONTROL DEVICES, ETC., PRIOR TO COMMENCING INSTALLATION WORK, REFER CONFLICTS BETWEEN THIS REQUIREMENT AND CONTRACT DRAWINGS TO OWNER FOR RESOLUTION.
- 23. CLEANING DURING ELECTRICAL WORK: CLEAN THE ROOMS AND AREAS OF WORK THAT WILL BE DONE TO MINIMIZE DISTURBANCE IN THE BUILDINGS. WORKERS ARE TO USE PATHWAYS AND FACILITIES AGREED UPON WITH THE DISTRICT DESIGNEE IN WRITING. THE AREA OUTSIDE THE BUILDING WHERE CUTTING WELDING OR STORAGE IS ALLOWED IS TO BE FENCED AT ALL TIMES. THE CONTRACTOR WILL ON A DAILY BASIS CLEAN THE GROUNDS AND THE BUILDING OF ANY DEBRIS OR GARBAGE GENERATED BY THEIR WORK.

**COORDINATION NOTE:** 

. COORDINATION- IT SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL AND MECHANICAL CONTRACTORS TO COORIDNATE THEIR WORK. THE HVAC CONTRACTOR SHALL TAKE THE LEAD IN THE COORDINATION EFFORT AND PRODUCE THE COORDINATION DRAWINGS. COORDINATION DRAWINGS SHALL BE SUBMITTED FOR APPROVAL TO THE ENGINEER PRIOR TO STARTING ANY WORK. CEILING SPACE IS VERY LIMITED AND DUCTWORK/PIPING INSTALLATION AND LOCATION IS CRITIAL. THE PURPOSE OF THESE DRAWINGS IS TO COORDINATE THE LOCATIONS OF ALL PIPING, DUCTWORK, AND ASSOCIATED ELECTRICAL EQUIPMENT. ALL ELECTRICAL EQUIPMENT SHALL BE INSTALLED AND LOCATED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE (NEC). MECHANICAL EQUIPMENT CANNOT INFILTRATE HE ELECTRICAL EQUIPMENTS WORKING CLEARANCE AND WORKING SPACE, NOR CAN IT BE INSTALLED DIRECTLY ABOVE OR BELOW TO THE STRUCTURE, AS IDENTIFIED WITHIN THE NEC. ARTICLE 110 -"REQUIREMENTS FOR ELECTRICAL INSTALLATION" THIS COORDINATION IS REQUIRED FOR ALL PHASES OF THIS PROJECT. FAILURE TO FOLLOW THIS PROCEDURE DOES NOT RELIEVE THE CONTRACTOR FROM THE DUTIES AND WILL NOT CONSTITUTE A REASON FOR A CHANGE ORDER.

**EXISTING** AMPERE NON-FUSED EXT-EXTERIOR ABOVE COUNTER NOT IN CONTRACT FIRE ALARM FA-ABOVE FINISHED FLOOR AFF-NIGHT LIGHT NOT TO SCALE FLOOR AIR HANDLING UNIT ON CENTER FULL LOAD AMPS AUDIO/VISUAL FLUORESCENT AMERICAN WIRE GUAGE GENERAL CONTRACTOR GC-AT UNIT AU-**PRIMARY** GFI-GROUND FAULT CIRCUIT BKR-BREAKER SEC-**SECONDARY** CONDUIT **GROUND** SWITCH CIRCUIT BREAKER HORSEPOWER **TELEPHONE** HEATING VENTILATION & AIR CONDITIONING TELEVISION CEILING TYPICAL DEMOLISH/DEMOLITION K\/A\_ KILOVOLT AMPS UNDERGROUND ELECTRIC DETAIL KILOWATTS KW-UNLESS NOTED OTHERWISE UNO-DRAWING DWG-LIGHTING LTG-FACH MC-MECHANICAL CONTRACTOR ELECTRICAL CONTRACTOR EC-MCA-MINIMUM CIRCUIT AMPS WIRE GUARD WG-FF— EXHAUST FAN MCB-MAIN CIRCUIT BREAKER WP-WEATHERPROOF **EMERGENCY** FM-MDP-MAIN DISTRIBUTION PANEL XFMR— TRANSFORMER ELECTRICAL CONTRACTOR EC- $\mathsf{MC}-$ MECHANICAL CONTRACTOR PLUMBING CONTRACTOR PC-VERIFY IN FIELD NOTE: ABBREVATIONS MAY OR MAY NOT USE PERIODS, EXAMPLE A.F.F. OR AFF

**ABBREVIATIONS** 

CONSULTANT(S):

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VIOLATION OF T SIONAL ARCHITE WITH A DESCRIP

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REF SS I

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E&R PROJECT NO. Y21CH01 10929

DATE BY ISSUED FOR BID DRAWN BY JMJ CHECKED BY JIE SHEET SIZE ARCH E1 30" x 42"

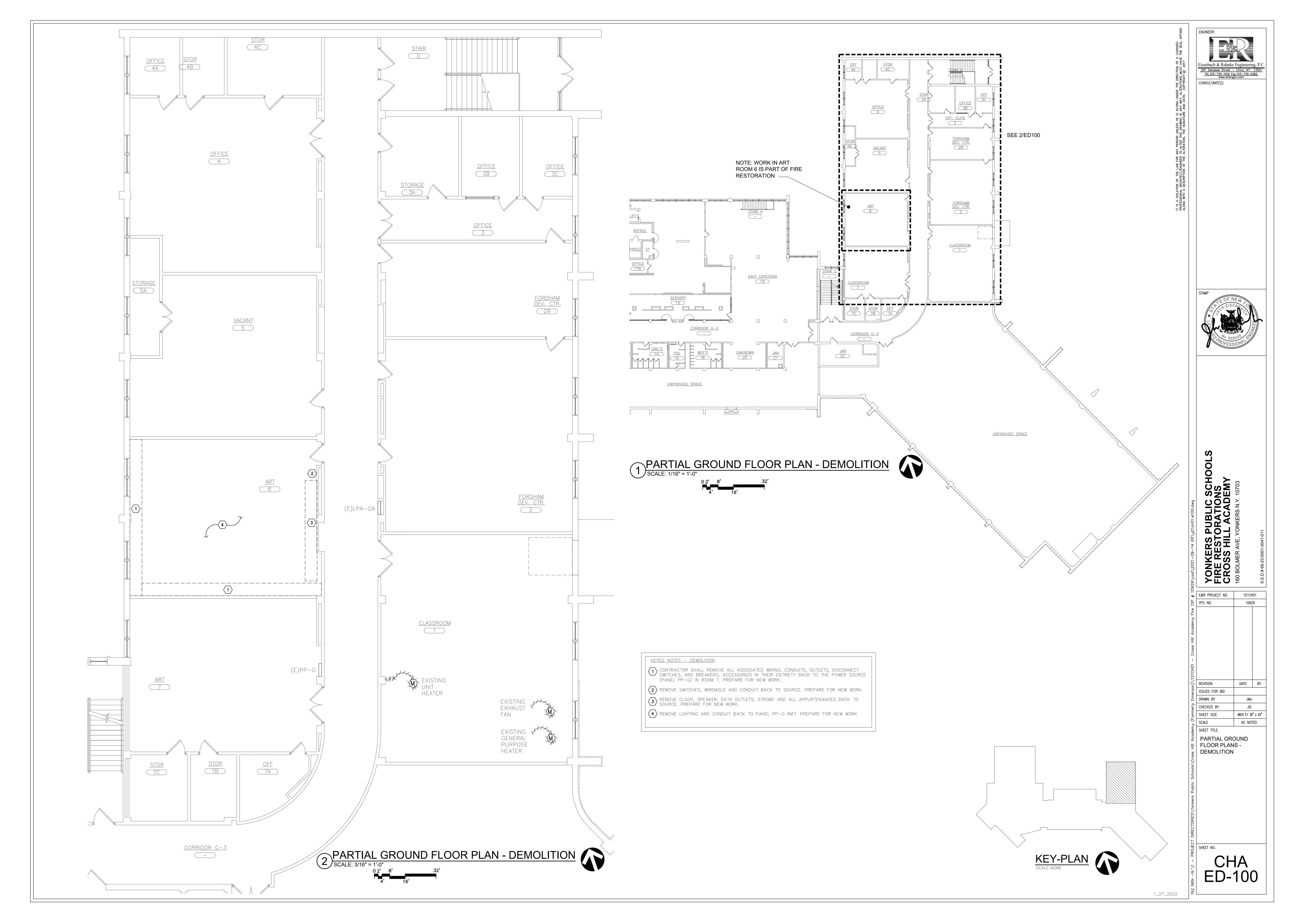
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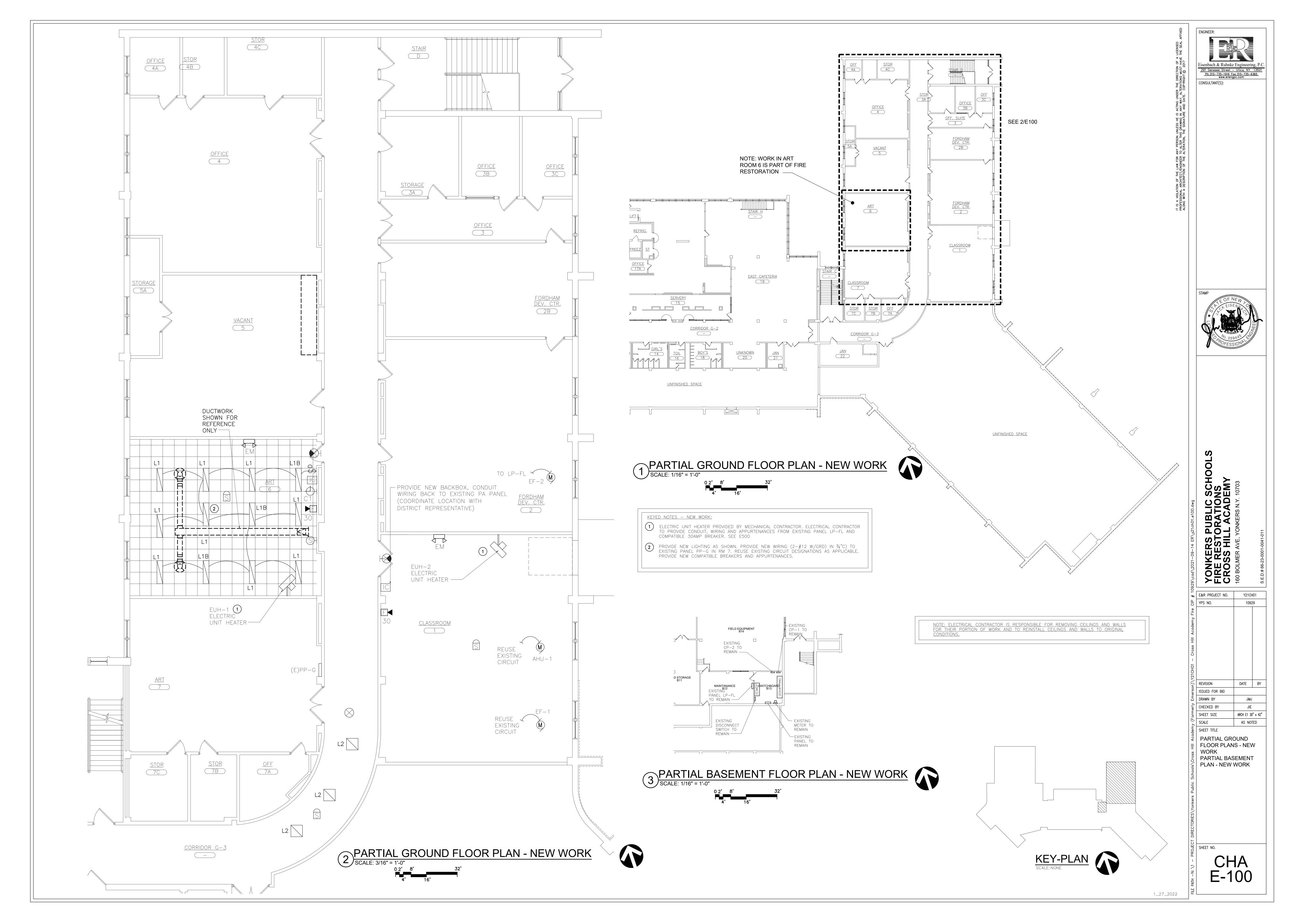
ABBREVIATIONS AND SYMBOLS

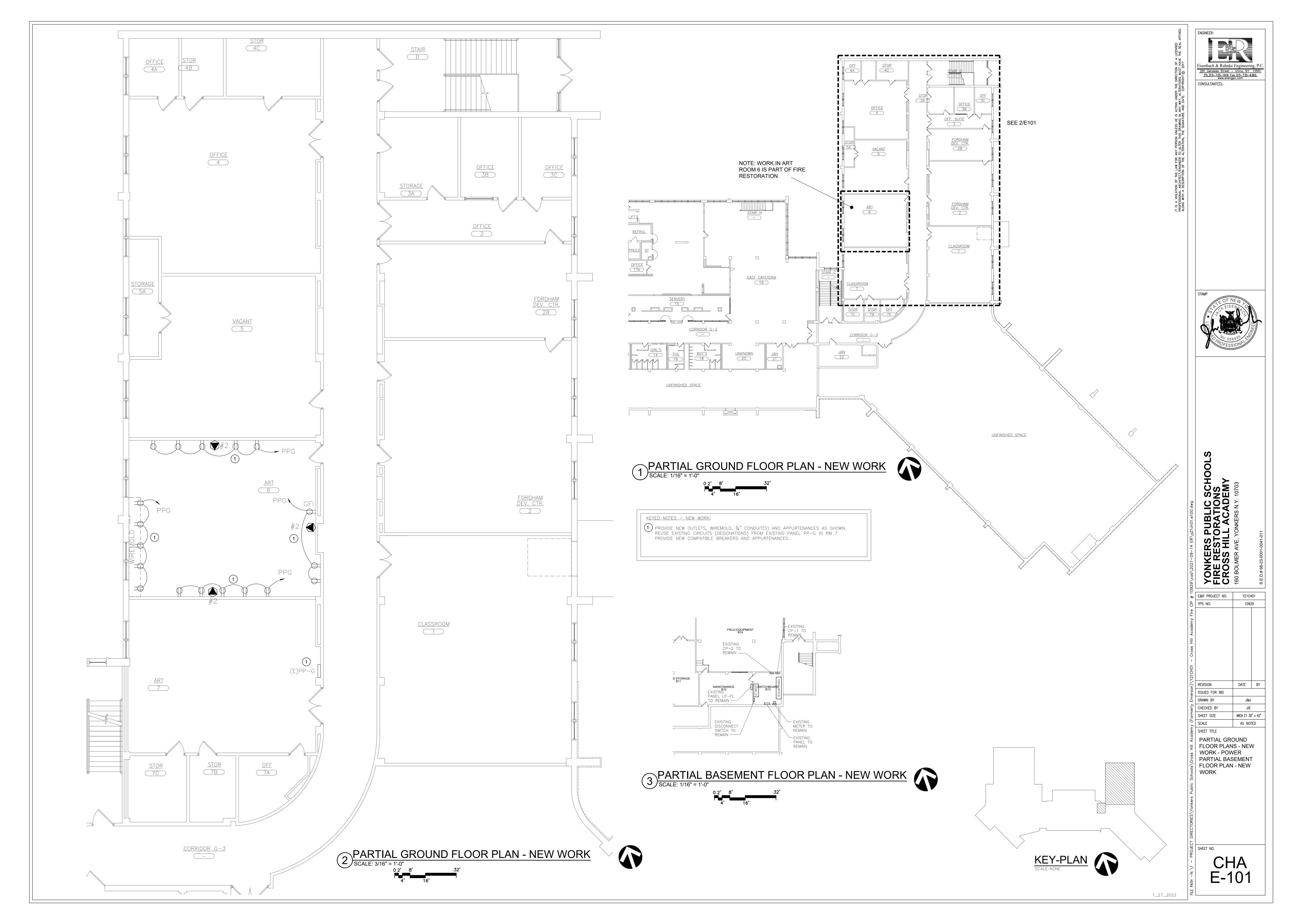
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YONKERS PUBLIC SCHOOLS FIRE RESTORATIONS CROSS HILL ACADEMY	160 BOLMER AVE, YONKERS N.Y. 10703
 YONK FIRE I CROS	160 BOLM

REVISION	DATE	BY				
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E&R PROJECT NO. Y21CH01

10929

SHEET SIZE	ARCH E1 30" x 42"							
SCALE	AS NOTED							
SHEET TITLE								
SCHEDULES AND DETAILS								

SHEET NO. CHA

						ELEC	CTRIC EQ	UIPMEN	T AND	CONTRO	L SCHED	ULE																		
EQUIPMENT						SUPPLY								CONTROLLER	R DEVICE TYPE	E & ACCESSO	DRIES (UNC	, PROVIDED	BY ELECTRICAL CONTRACTO											
DESIGNATION	DESCRIPTION	ROOM LOCATION	SIZE		VOLTAGE/ PHASE	PANEL/CONTROL CENTER	CIRCUIT NUMBER	BREAKER SIZE	POWER WI PANEL TO UNIT	RING FROM CONTROL	POWER WIR CONTROL U EQUIPMENT	JNIT TO	GROUND WIRE (SIZED PER NEC)	CONTROL DEVICE INSTALL	FIRE ALARM FAN SHUTDOWN	DISCONNEC	T SWITCH		REF. NOTES											
																HP WA	ATTS F	LA				WIRE	COND.	WIRE	COND.	]   [	LOCATION	(DSD)	FRAME	FUSE
EF-1	EXHAUST FAN	CLASSROOM 1	4	34 1	4 115-60-	-1 REUSE EXISTING	RE	20	#12	3/4"	BUILT-IN		YES	AU	YES	30	N/A	BUILT-IN	1											
EF-2	EXHAUST FAN	FORDHAM RM 2	9	08 1	4 115-60-	·1 LP-FL		20	#12	3/4"	BUILT-IN		YES	AU	YES	30	N/A	BUILT-IN	1											
EUH-1	ELECTRIC UNIT HEATER	ART RM 1	5	KW 2	24 208/3/6	O LP-FL		50	#10	3/4"	BUILT-IN		YES	AU		60	N/A	BUILT-IN	1											
EUH-2	ELECTRIC UNIT HEATER	CLASSROOM 1	5	KW 2	24 208/3/6	O LP-FL		50	#10	3/4"	BUILT-IN		YES	AU		60	N/A	BUILT-IN	1											
AHU-1	AIR HANDLING UNIT	CLASSROOM 1	2.0 –	- 7	7.8 208/3/6	O REUSE EXISTING	RE	20	#12	3/4"	BUILT-IN		YES	AU	YES	30	N/A	BUILT-IN	1											

AU — AT UNIT N/A — NOT APPLICABLE FRAC. — FRACTIONAL

1. FOLLOW NEC REQUIREMENTS.

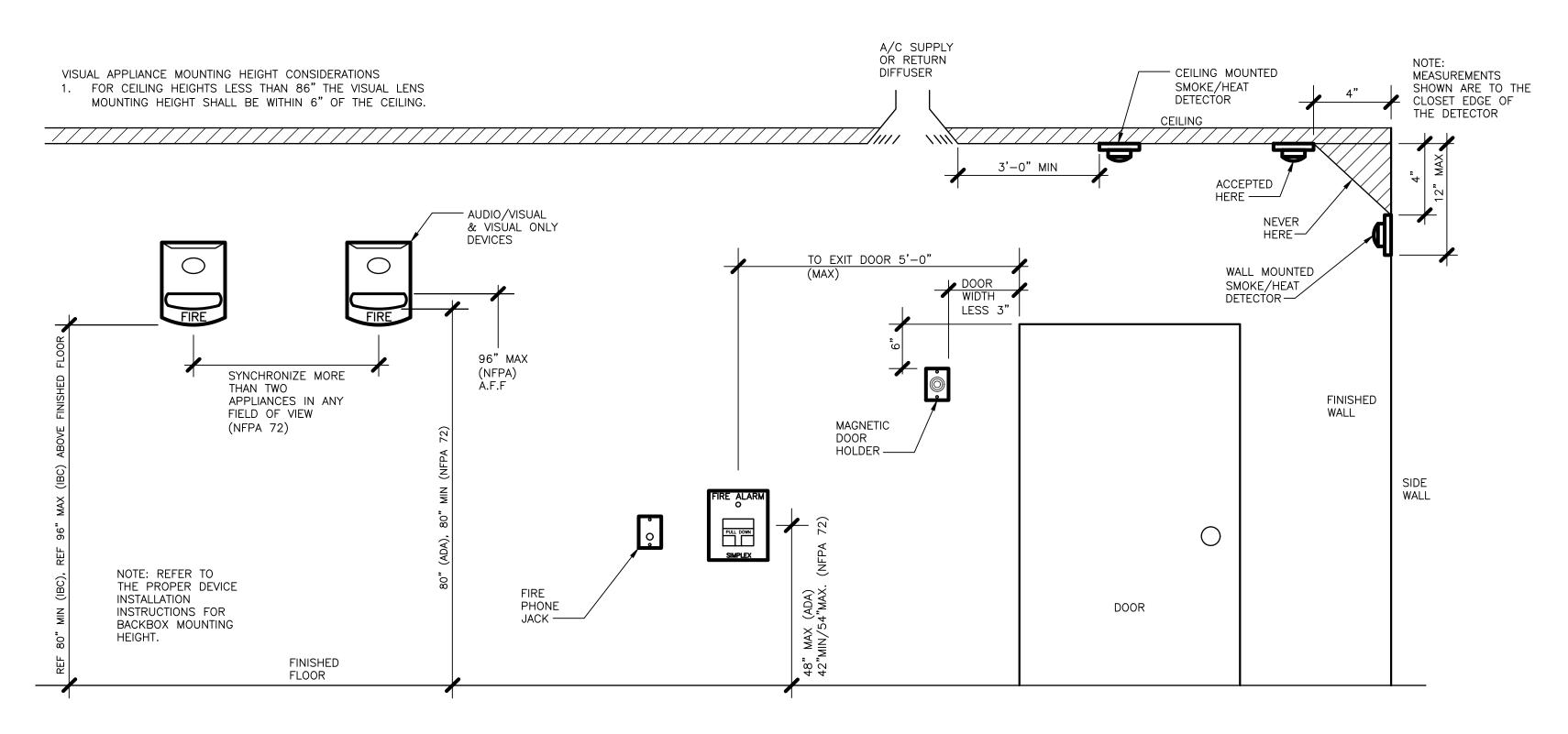
	DEVICE/FIXTURE SCHEDULE									
TYPE	DESCRIPTION	MOUNTING	DESIGN BASIS	ACCEPT. MFR'S.						
<b>▶</b> E 30	AUDIO/VISUAL SIGNALING DEVICE. NUMBER DENOTES CANDELA RATING.	SEE DEVICE LOCATION DETAIL THIS DWG	P2RL (RED) (HONEYWELL)	OR APPROVED EQUAL						
	HEAT DETECTOR	SEE DEVICE LOCATION DETAIL THIS DWG	FST-851(A) W/B210LP(A) (HONEYWELL)	OR APPROVED EQUAL						
	SMOKE DETECTOR	SEE DEVICE LOCATION DETAIL THIS DWG	FSP-851(A) W/B200S(COA) (HONEYWELL)	OR APPROVED EQUAL						
<b>Þ</b> E 30	VISUAL SIGNALING DEVICE. NUMBER DENOTES CANDELA RATING.	SEE DEVICE LOCATION DETAIL THIS DWG	SRL (RED) (HONEYWELL)	OR APPROVED EQUAL						
EM	EMERGENCY WALL LIGHT		SURE-LITES SEL50R7WHSD SELF DIAGNOSTIC, ROUND LENSE (WHITE) (COOPER)	OR APPROVED EQUAL						

GENERAL NOTES: CANDELA RATINGS SHALL BE BASED ON NFPA 72 TABLE 18.5.5.4.1(a) 2013

	LIGHT FIXTURE SCHEDULE										
TYPE	DESCRIPTION	LAMPS	VOLTAGE/DRIVER	MOUNTING	DESIGN BASIS	ACCEPT. MFR'S.	REMARKS				
L1	GRAD LINEAR 8"x4'-0"	4000K	120	PENDENT LINEAR	LITHONIA LIGHTING GRD-LSL-4FT-MSL4-80CRI-40K -ID1000LMF 20/80-MIN1-ZT-120V -E10WLCP-F1A/-24A-C202-DU	OR APPROVED EQUAL	NOTE 1				
L2 🔽	LED FLAT PANEL 2'X2'	4000K	120-277	LAY-IN	RAB LIGHTING EZPANFA-2x2-D10-E2 40W W/ ALL APPURTENANCES	OR APPROVED EQUAL					

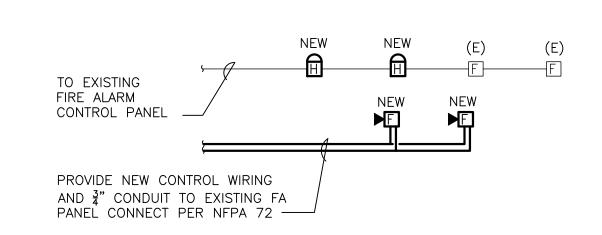
BB- BATTERY BACKUP

1. CONTRACTOR TO FIELD VERIFY EXACT STEM LENGTH IN FIELD (24" IN BASES OF DESIGN) THE LIGHT FIXTURE SHOULD BE MOUNTED AT SAME HEIGHT OFF FINISHED FLOOR TO MATCH THE BOTTOM OF LOWEST DUCTWORK INSTALLATION NOT TO CREATE SHADOWS

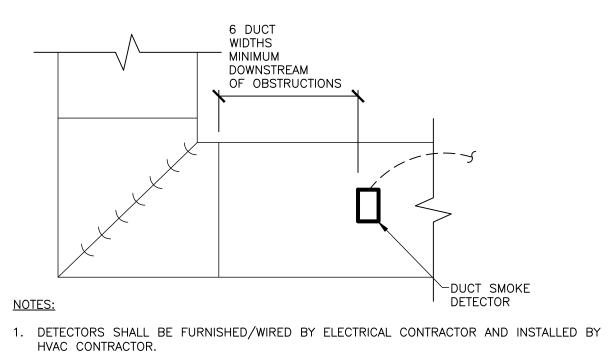


(FOR POWER, LIGHTS, PA AND FA SYSTEMS)
PROVIDE ARMORED METALLIC CABLE "MC" SHALL BE USED IN SHEETROCK WALLS AND
ABOVE HUNG CEILINGS, WIREMOLD SHALL BE USED ON MASONRY WALLS STUBBING ABOVE 6" ABOVE CEILING SWITCHING TO "MC" AND "EMT" IN STORAGE ROOMS AND MECHANICAL AND ELECTRICAL ROOMS

NOTE: NOT ALL DEVICES MAY BE USED. (SHOWN FOR REFERENCE ONLY)



(NOT ALL DEVICES ARE SHOWN SEE ACTUAL FLOOR PLANS FOR QUANTITIES) PARTIAL FIRE ALARM 2 RISER DIAGRAM SCALE: NONE



**DUCTWORK SMOKE** DETECTOR INSTALLATION SCALE: NONE