# DISCOVERY ELEMENTARY SCHOOL

# VICTOR ELEMENTARY SCHOOL DISTRICT

13247 AMETHYST RD, VICTORVILLE, CA 92392

# HVAC REPLACEMENT PROJECT



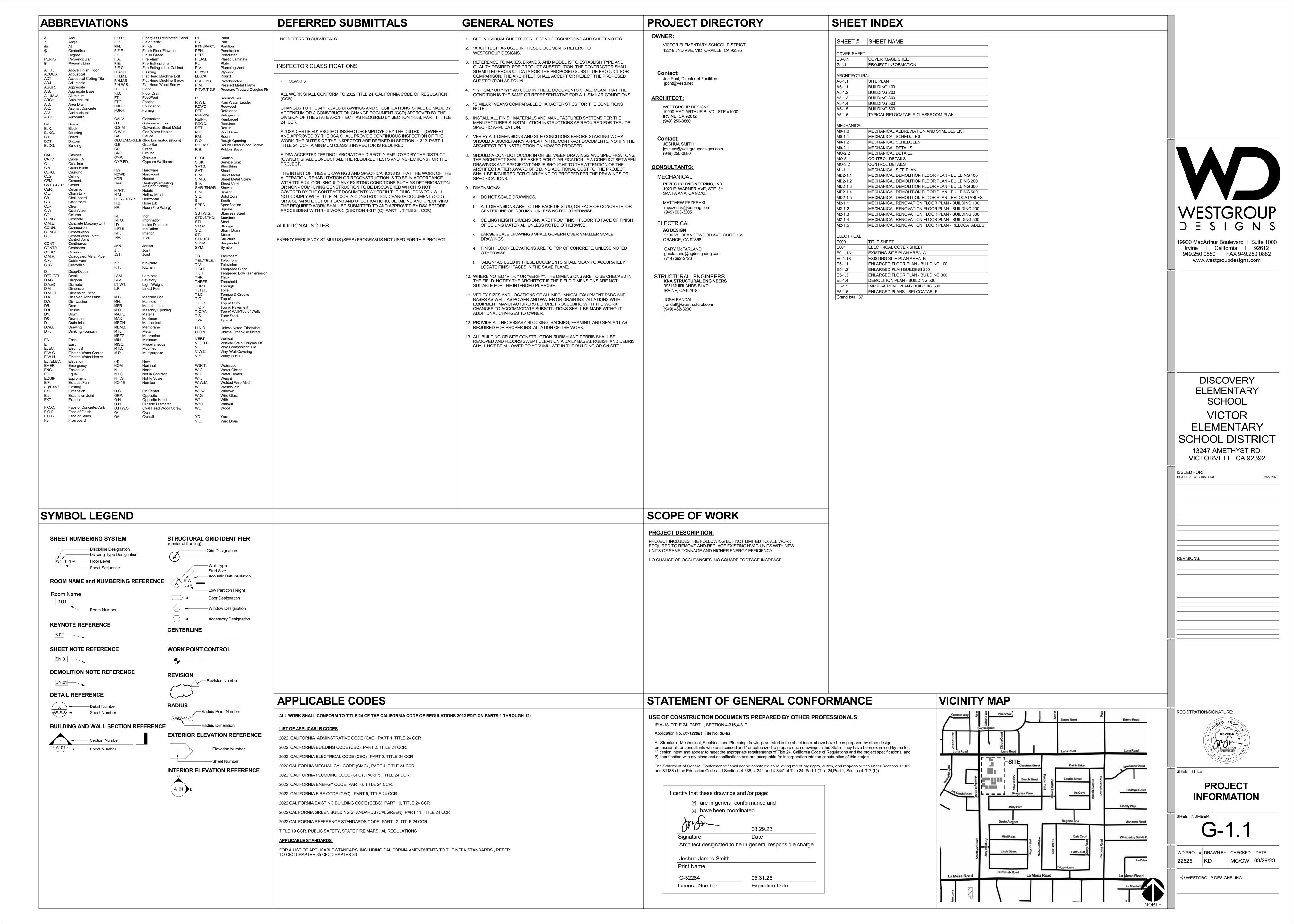


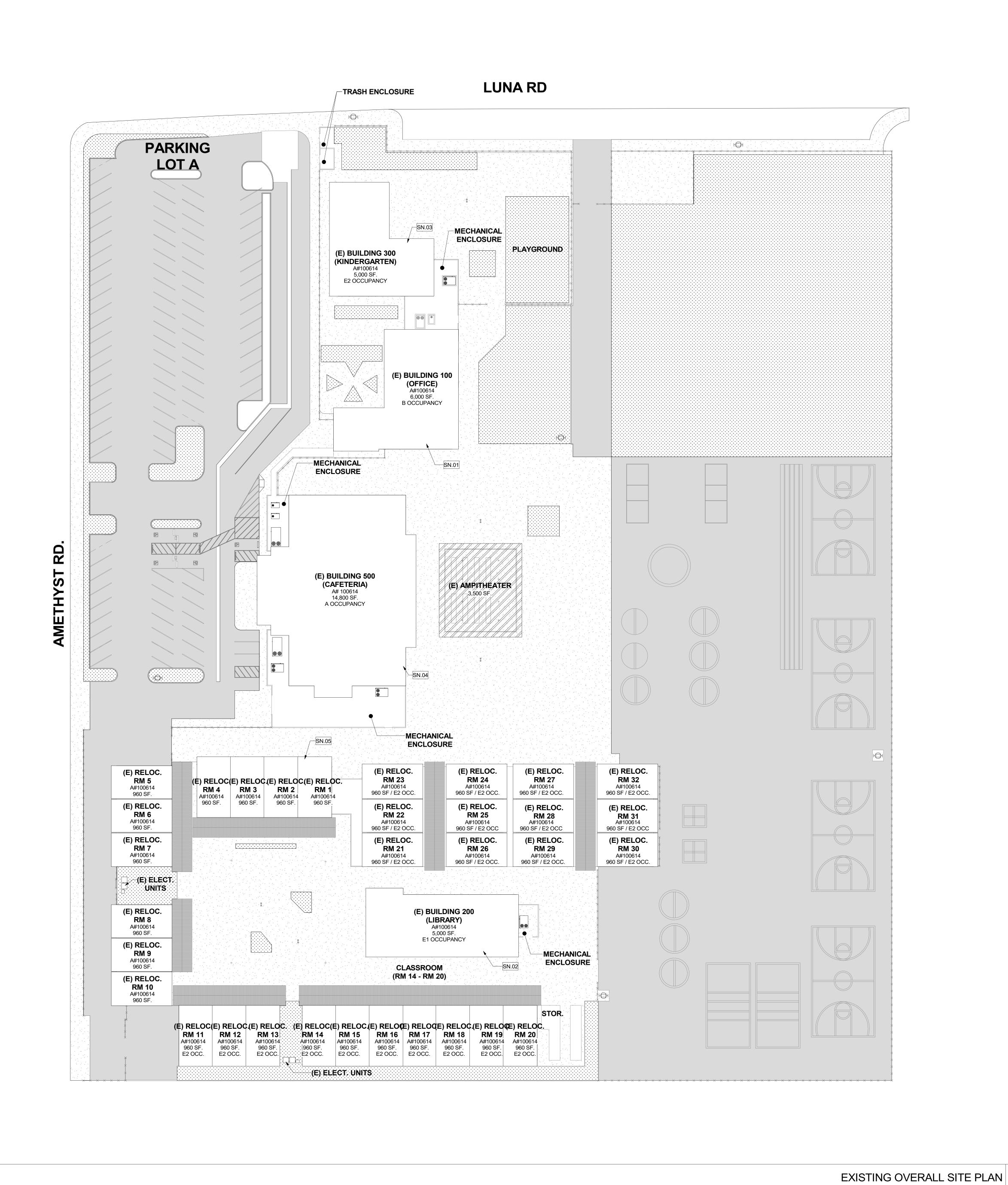
19900 MacArthur Blvd I Suite 1000 Irvine I California I 92612 949.250.0880 | FAX 949.250.0882 www.westgroupdesigns.com

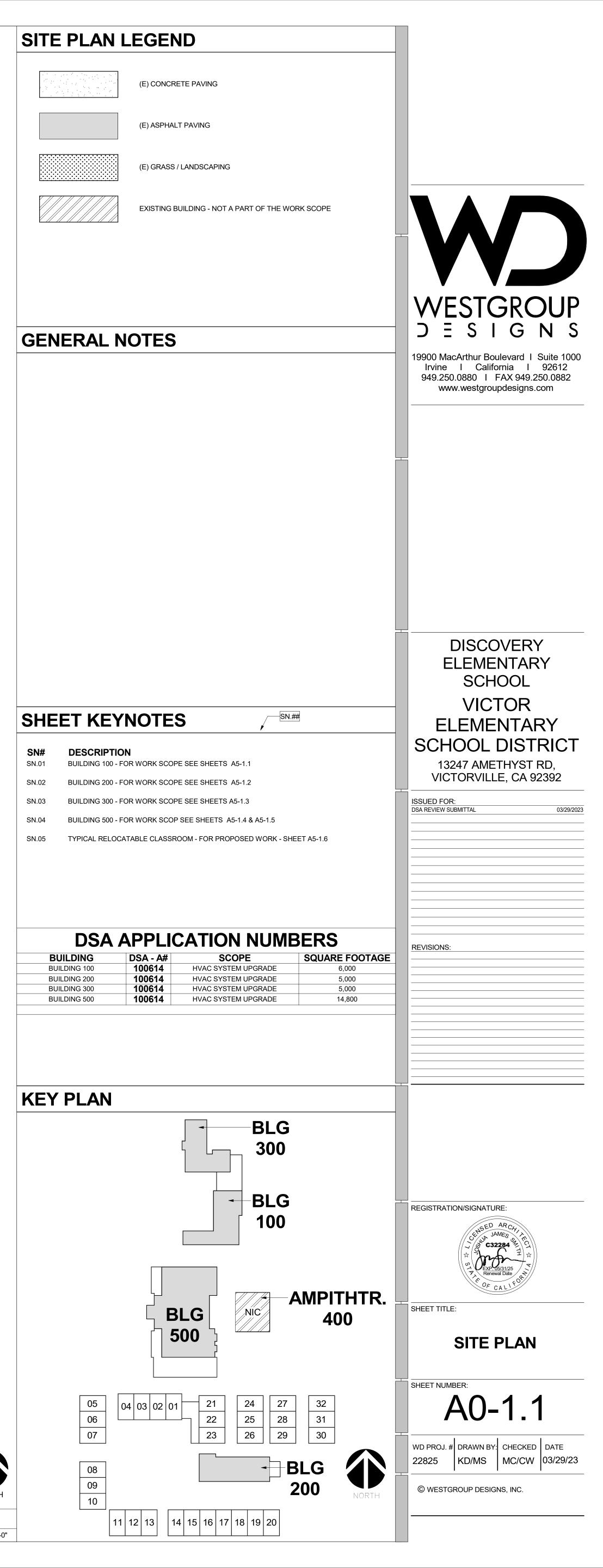
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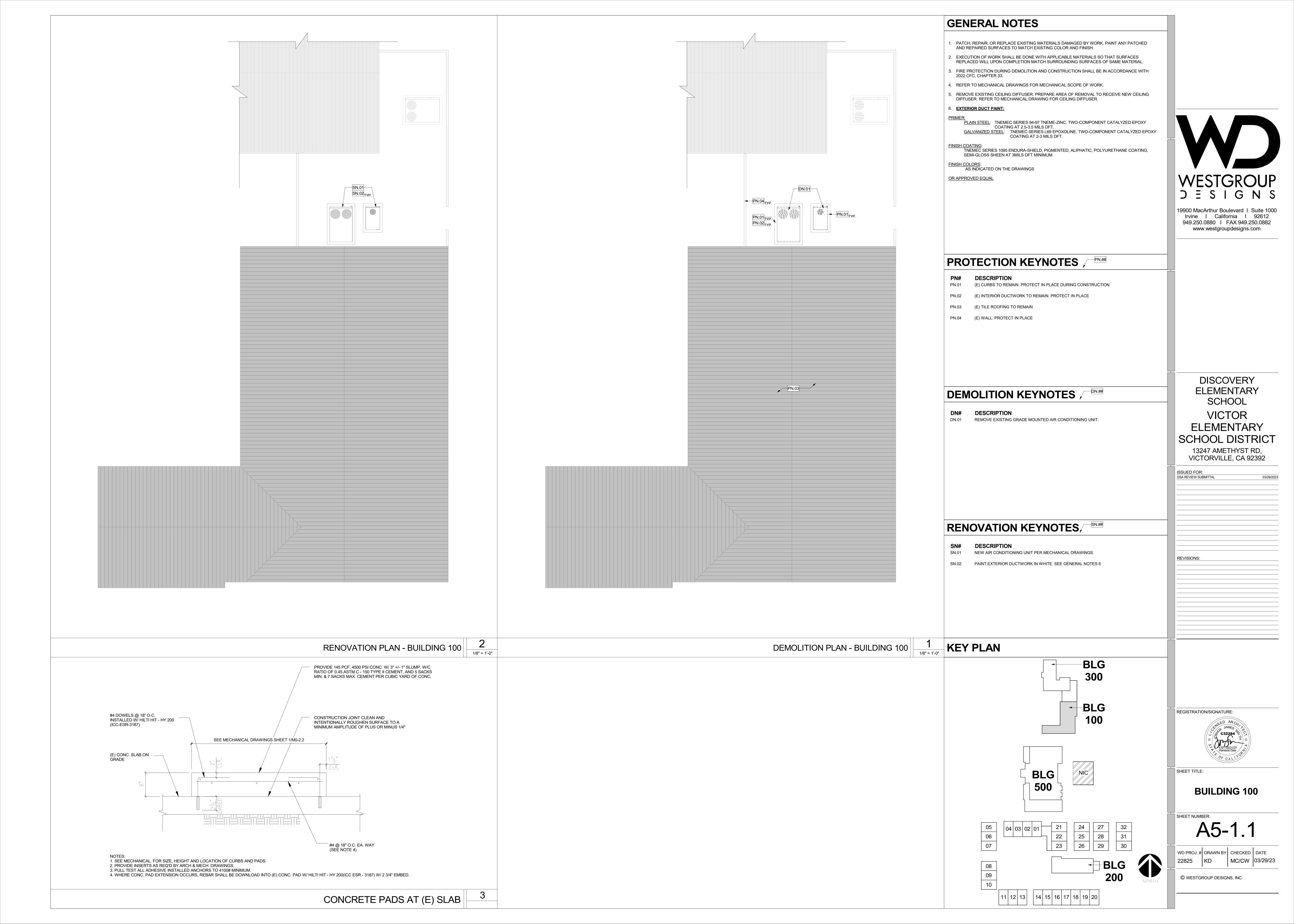
SHEET TITLE:	COVER IMAGE SHEET
SHEET NUMBER:	CS-0 1

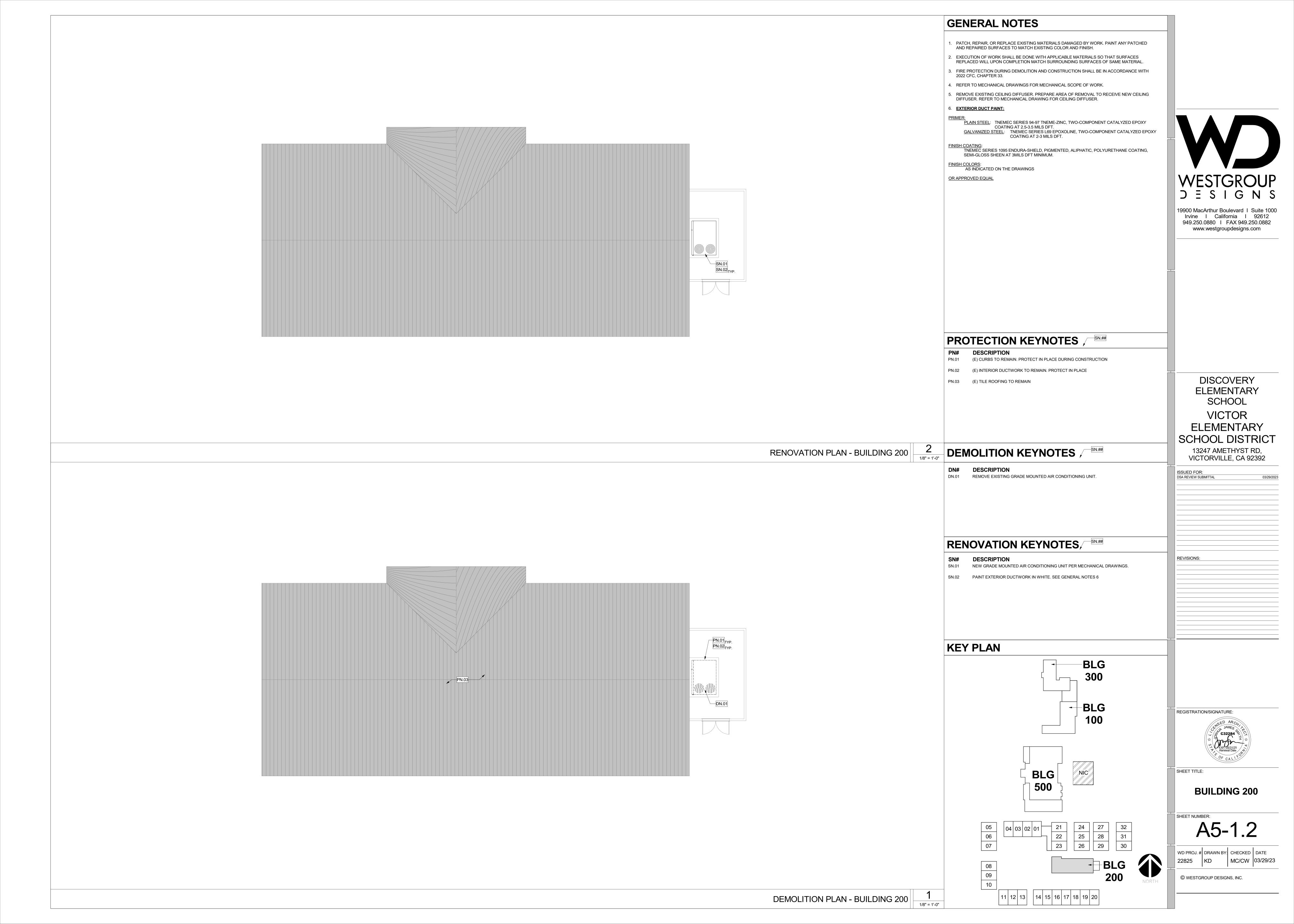
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22825	KD	MC / CW	03/29/23

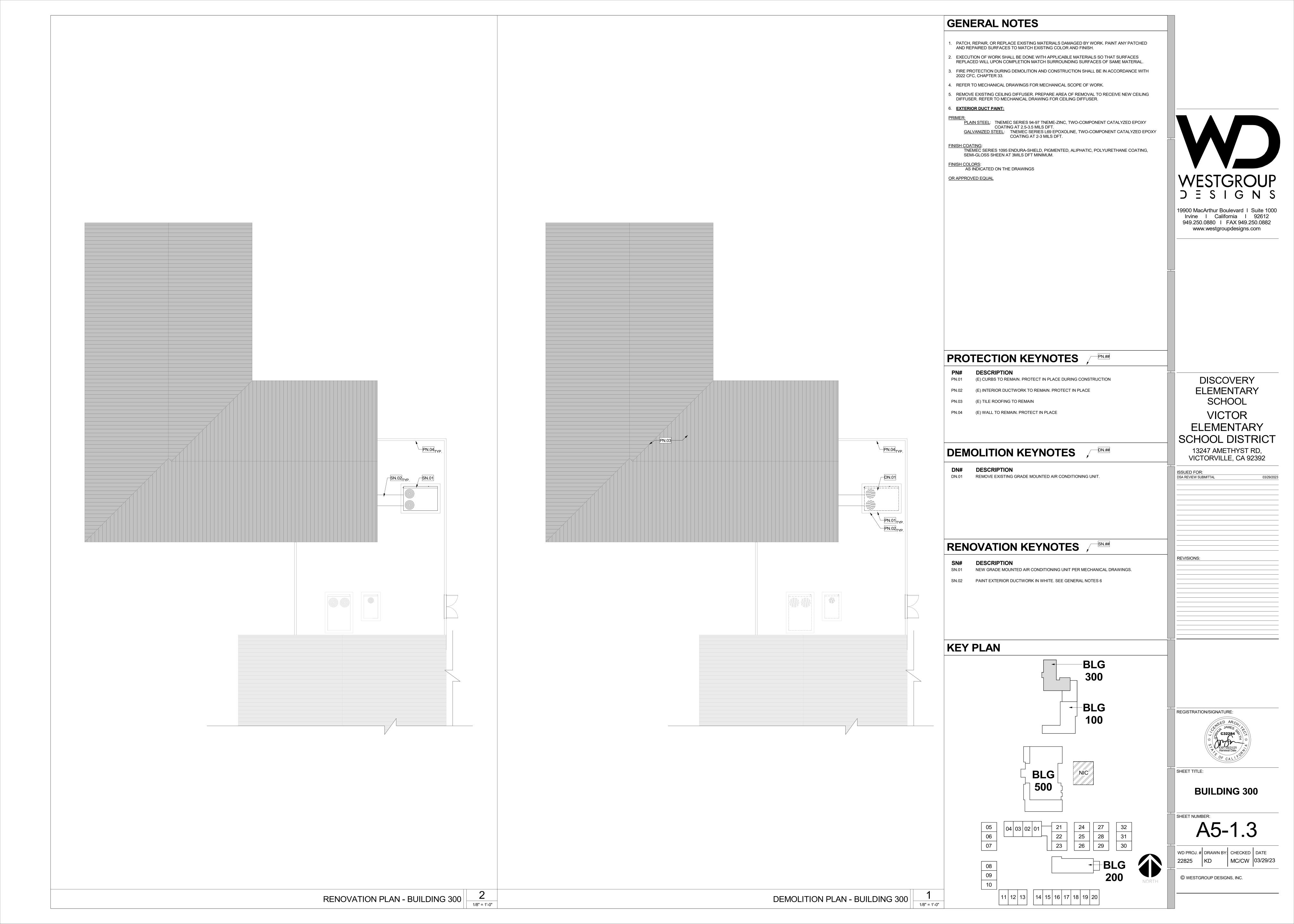


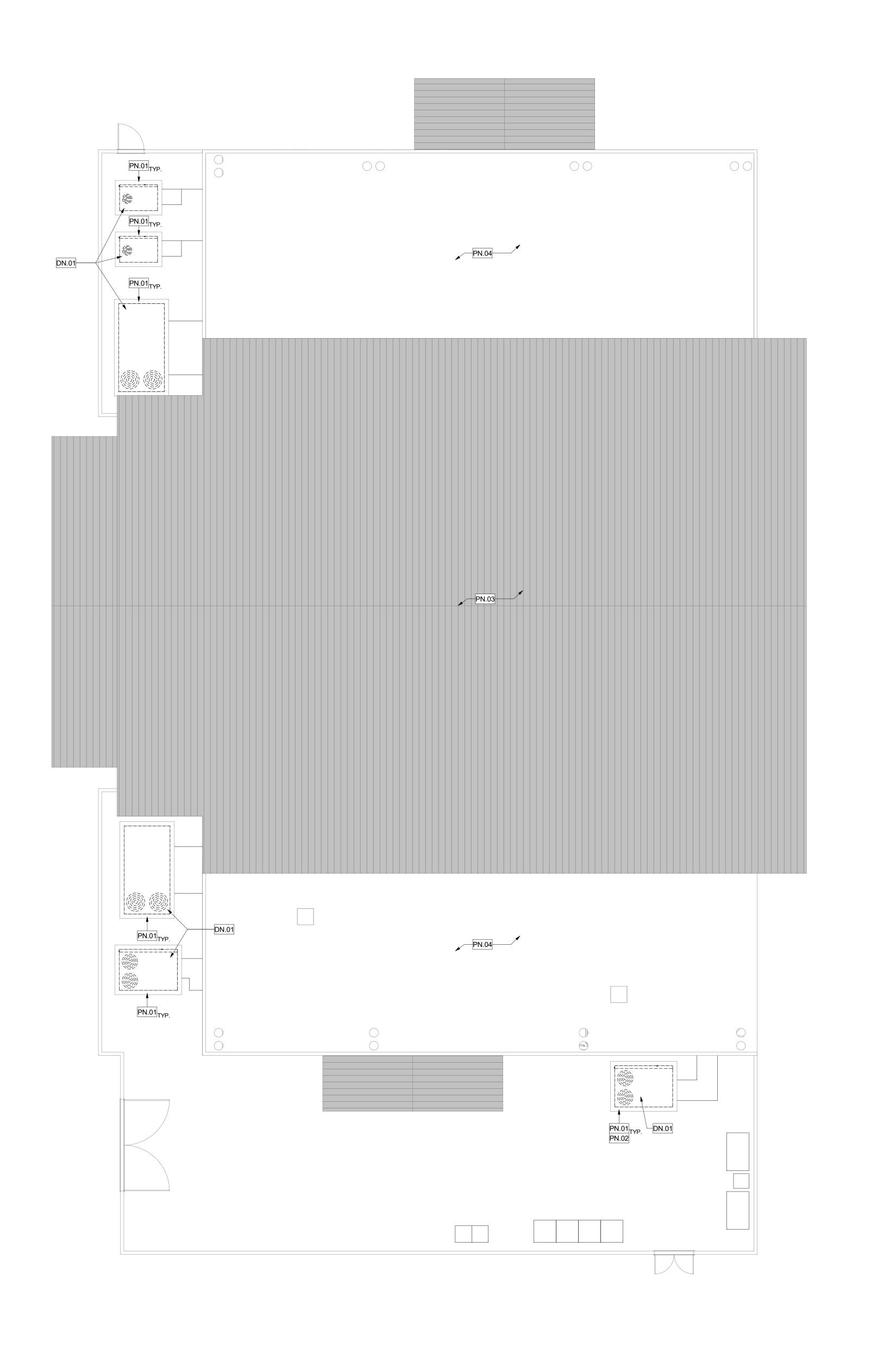












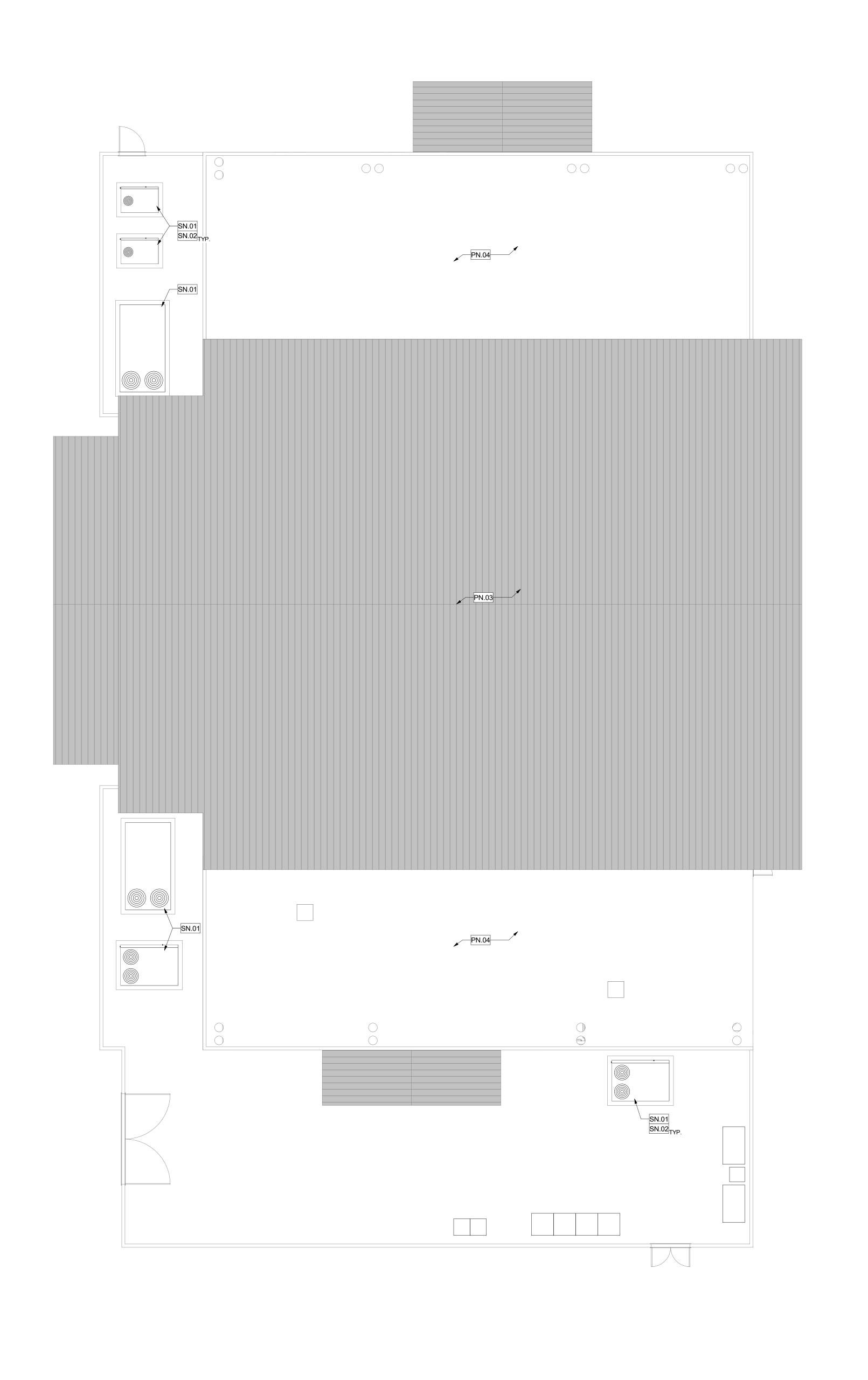
## **GENERAL NOTES** . PATCH, REPAIR, OR REPLACE EXISTING MATERIALS DAMAGED BY WORK. PAINT ANY PATCHED AND REPAIRED SURFACES TO MATCH EXISTING COLOR AND FINISH. 2. EXECUTION OF WORK SHALL BE DONE WITH APPLICABLE MATERIALS SO THAT SURFACES REPLACED WILL UPON COMPLETION MATCH SURROUNDING SURFACES OF SAME MATERIAL. 3. FIRE PROTECTION DURING DEMOLITION AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH 2022 CFC, CHAPTER 33. 4. REFER TO MECHANICAL DRAWINGS FOR MECHANICAL SCOPE OF WORK. 5. REMOVE EXISTING CEILING DIFFUSER. PREPARE AREA OF REMOVAL TO RECEIVE NEW CEILING DIFFUSER. REFER TO MECHANICAL DRAWING FOR CEILING DIFFUSER. 6. **EXTERIOR DUCT PAINT:** PLAIN STEEL: TNEMEC SERIES 94-97 TNEME-ZINC, TWO-COMPONENT CATALYZED EPOXY COATING AT 2.5-3.5 MILS DFT. GALVANIZED STEEL: TNEMEC SERIES L69 EPOXOLINE, TWO-COMPONENT CATALYZED EPOXY COATING AT 2-3 MILS DFT. FINISH COATING: TNEMEC SERIES 1095 ENDURA-SHIELD, PIGMENTED, ALIPHATIC, POLYURETHANE COATING, SEMI-GLOSS SHEEN AT 3MILS DFT MINIMUM. FINISH COLORS: AS INDICATED ON THE DRAWINGS WESTGROUP DESIGNS OR APPROVED EQUAL 19900 MacArthur Boulevard | Suite 1000 Irvine I California I 92612 949.250.0880 I FAX 949.250.0882 www.westgroupdesigns.com PROTECTION KEYNOTES DISCOVERY ELEMENTARY DESCRIPTION SCHOOL (E) CURBS TO REMAIN. PROTECT IN PLACE DURING CONSTRUCTION **VICTOR** (E) INTERIOR DUCTWORK TO REMAIN. PROTECT IN PLACE **ELEMENTARY** (E) TILE ROOFING TO REMAIN (E) BUILT IN ROOFING SCHOOL DISTRICT 13247 AMETHYST RD, VICTORVILLE, CA 92392 ISSUED FOR: DSA REVIEW SUBMITTAL DEMOLITION KEYNOTES , DN.## DESCRIPTION REMOVE EXISTING GRADE MOUNTED AIR CONDITIONING UNIT. **KEY PLAN** BLG 300 BLG REGISTRATION/SIGNATURE: 100 **BLG** 500 SHEET TITLE: **BUILDING 500** A5-1.4 05 06 07 21 24 27 32 22 25 28 31 23 26 29 30

BLG 200

11 12 13 14 15 16 17 18 19 20

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 KD
 MC/CW
 03/29/23



#### **GENERAL NOTES**

- . PATCH, REPAIR, OR REPLACE EXISTING MATERIALS DAMAGED BY WORK. PAINT ANY PATCHED AND REPAIRED SURFACES TO MATCH EXISTING COLOR AND FINISH.
- 2. EXECUTION OF WORK SHALL BE DONE WITH APPLICABLE MATERIALS SO THAT SURFACES REPLACED WILL UPON COMPLETION MATCH SURROUNDING SURFACES OF SAME MATERIAL.
- 3. FIRE PROTECTION DURING DEMOLITION AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH
- 4. REFER TO MECHANICAL DRAWINGS FOR MECHANICAL SCOPE OF WORK.
- 5. REMOVE EXISTING CEILING DIFFUSER. PREPARE AREA OF REMOVAL TO RECEIVE NEW CEILING DIFFUSER. REFER TO MECHANICAL DRAWING FOR CEILING DIFFUSER.

#### 6. **EXTERIOR DUCT PAINT:**

2022 CFC, CHAPTER 33.

PLAIN STEEL: TNEMEC SERIES 94-97 TNEME-ZINC, TWO-COMPONENT CATALYZED EPOXY COATING AT 2.5-3.5 MILS DFT. GALVANIZED STEEL: TNEMEC SERIES L69 EPOXOLINE, TWO-COMPONENT CATALYZED EPOXY COATING AT 2-3 MILS DFT.

FINISH COATING:
TNEMEC SERIES 1095 ENDURA-SHIELD, PIGMENTED, ALIPHATIC, POLYURETHANE COATING, SEMI-GLOSS SHEEN AT 3MILS DFT MINIMUM.

FINISH COLORS:
AS INDICATED ON THE DRAWINGS

OR APPROVED EQUAL



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#### RENOVATION KEYNOTES , SN.##

DESCRIPTION

NEW GRADE MOUNTED AIR CONDITIONING UNIT PER MECHANICAL DRAWINGS.

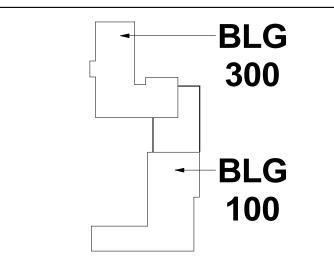
PAINT EXTERIOR DUCTWORK IN WHITE

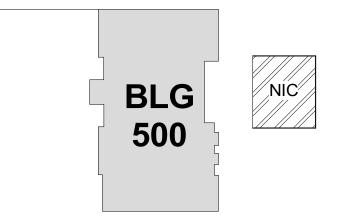
DISCOVERY **ELEMENTARY** SCHOOL **VICTOR** ELEMENTARY SCHOOL DISTRICT

13247 AMETHYST RD, VICTORVILLE, CA 92392

ISSUED FOR:	
DSA REVIEW SUBMITTAL	03/29/2023

#### **KEY PLAN**





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BLG 200

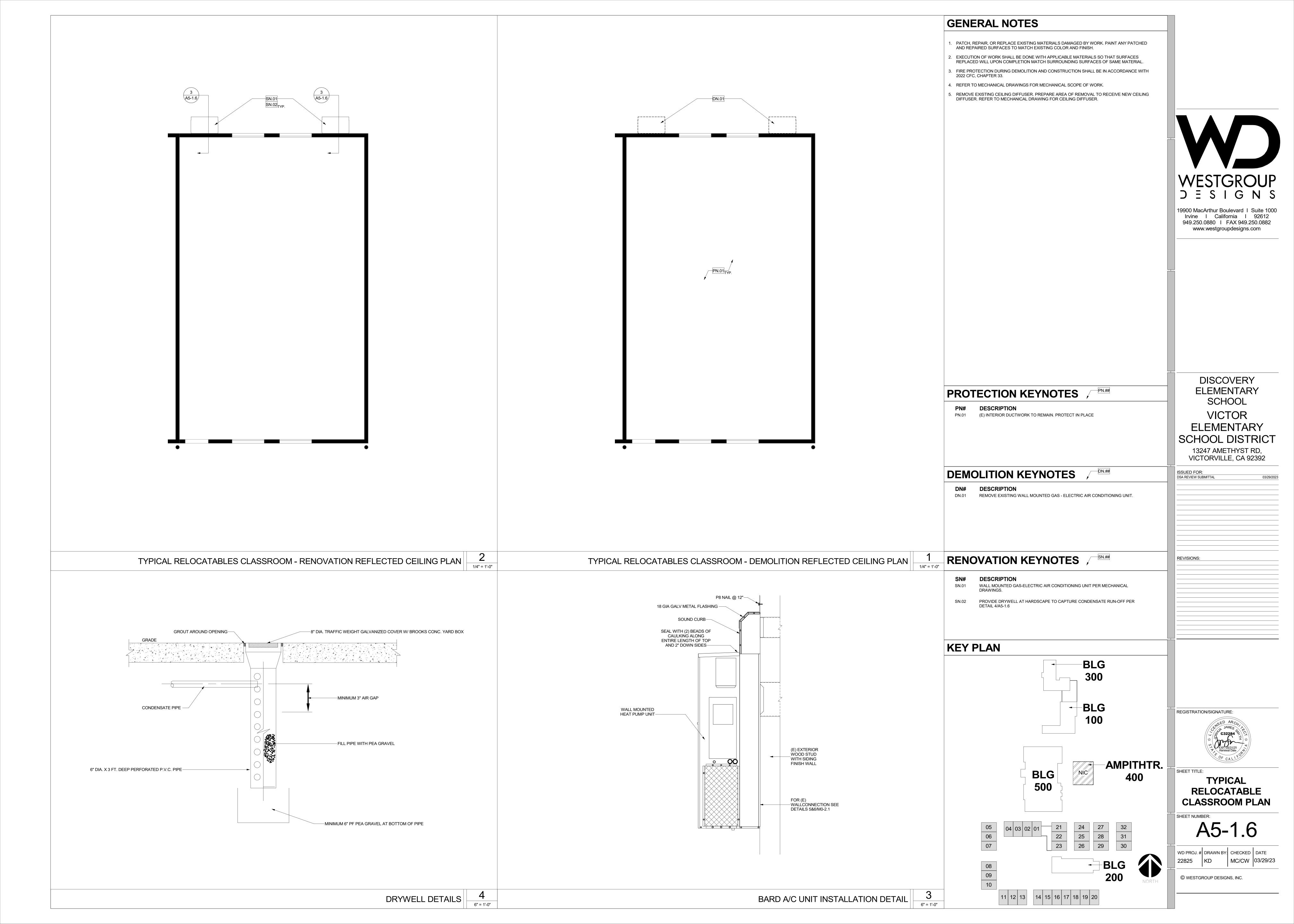


**BUILDING 500** 

A5-1.5

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#### APPLICABLE CODES MECHANICAL ABBREVIATIONS AUTOMATIC AIR VENT MANUAL AIR VENT LIST OF APPLICABLE CODES AIR CONDITIONING MAX MAXIMUM AUTOMATIC CONTROL DAMPER MB MIXING BOX 2022 CALIFORNIA ADMINISTRATIVE CODE (CAC), PART 1, TITLE 24 CCR AIR CONDITIONING UNIT MBH THOUSAND BTU PER HOUR 2022 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 CCR AUTOMATIC CONTROL VALVE MCC MOTOR CONTROL CENTER 2022 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 CCR GAS - MEDIUM PRESSURE ACCESS DOOR MG 2022 CALIFORNIA MECHANICAL CODE (CMC). PART 4, TITLE 24 CCR MIN MINIMUM 2022 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 CCR ABOVE FINISHED FLOOR MOT MOTOR 2022 CALIFORNIA ENERGY CODE (CEC). PART 6. TITLE 24 CCR AUTOMATIC FIRE SPRINKLER MEDIUM PRESSURE RETURN MPR 2022 CALIFORNIA FIRE CODE (CFC), PART 9, TITLE 24 CCR 2022 CALIFORNIA EXISTING BUILDING CODE (CEBC), PART 10, TITLE 24 CCR AIR HANDLING UNIT MPS MEDIUM PRESSURE STEAM 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE (CALGreen), PART 11, TITLE 24 CCR AMB MAKE-UP WATER MU 2022 CALIFORNIA REFERENCED STANDARDS CODE, PART 12, TITLE 24 CCR AMD MOTOR OPERATED VALVE AIR MEASURING DEVICE MVTITLE 19 CCR, PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS MVD MANUAL VOLUME DAMPER ANV ANGLE VALVE MZ-AHU MULTI-ZONE AIR HANDLING UNITS APPLICABLE STANDARDS ACCESS PANEL ARCH ARCHITECTURA NORMALLY CLOSED FOR A LIST OF APPLICABLE STANDARDS, INCLUDING CALIFORNIA AMENDMENTS TO THE NFPA NIC NOT IN CONTRACT STANDARDS, REFER TO CBC CHAPTER 35 AND CFC CHAPTER 80. NO NORMALLY OPEN AUTOMATIC TEMPERATURE CONTROL NUMBER THERMOSTAT MOUNTING HEIGHTS / OVER OBSTRUCTION NPSH NET POSITIVE SUCTION HEAD BALANCING COCK BDD BACK DRAFT DAMPER NTS NOT TO SCALE BUTTERFLY VALVE BFV OPPOSED BLADE DAMPER BRAKE HORSEPOWER OBD BACKWARD INCLINED OAI OUTSIDE AIR INTAKE TOP OF THERMOSTAT TOP OF THERMOSTAT. BACKWARD INCLINED WHEEL OUTSIDE DIAMETER ♦ BIW -24" MAX<del>---</del> SWITCHES, AND CONTROLS. BLV OPW OPERATING WEIGHT BALL VALVES BRITISH THERMAL UNIT OUTSIDE AIR BTU PER HOUR BTUH OV OUTLET VELOCITY BALANCING COCK OPNG OPENING BOP BOTTOM OF PIPE 46"MAX-SIDE APPROACH BOD BOTTOM OF DUCT PRESSURE DROP 48" MAX 44"MAX—FRONT APPROACH PERFORATED (FACE) AT ACCESSIBLE WORKSTATION PRESSURE GAUGE COOLING COIL CEILING DIFFUSER PHASE (ELECTRICAL) CFM CUBIC FEET PER MINUTE POC POINT OF CONNECTION CHWR CHILLED WATER RETURN POR POINT OF REMOVAL - FINISHED FLOOR CHWS CHILLED WATER SUPPLY PRSS PRESSURE CLG PRV PRESSURE REDUCING VALVE CEILING COMP COMPRESSOR PRESSURE SWITCH COND CONDENSATE POUNDS PER SQUARE INCH PROVIDE A 30"Wx27"Hx19"D MIN. TOE/KNEE CLEARANCE FOR FRONT APPROACH OVER OBSTRUCTI CONT PSIA PSI ABSOLUTE CONTINUATION COEFFICIENT OF PERFORMANCE PSIG PSI GAUGE MEP COMPONENT ANCHORAGE NOTE FACTORY-FABRICATED COOLING TOWER PT PLUGGED TEE PTR PRESSURE-TEMPERATURE RELIEF CONDENSING UNIT CV CHECK VALVE VALVE PVC POLYVINYL CHLORIDE PIPE ALL MECHANICAL, PLUMBING, AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND FLOW COEFFICIENT CONDENSER WATER RETURN INSTALLED PER THE DETAILS ON THE DSA APPROVED CONSTRUCTION DOCUMENTS. THE CONDENSER WATER SUPPLY FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND RISE DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2022 CBC, SECTIONS 1617A.1.18 THROUGH RATED LOAD (AMPERAGE) DEMAND CONTROLLED VENTILATION 1617A.1.26 AND ASCE 7-16 CHAPTER 13, 26, AND 30: RA RETURN AIR RAR RETURN AIR REGISTER $\mathsf{D}\!-\!\mathsf{D}$ DOUBLE DEFLECTION (PATTERN) RAG RETURN AIR GRILLE 1. ALL PERMANENT EQUIPMENT AND COMPONENTS. 2. TEMPORARY, MOVABLE OR MOBILE EQUIPMENT THAT IS PERMANENTLY ATTACHED (E.G. HARD DUCT ACCESS DOOR RECTANGULAR (FACE) DRY BULB RD REFRIGERANT DISCHARGE LINE WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS, OR WATER. "PERMANENTLY ATTACHED" SHALL INCLUDE ALL ELECTRICAL CONNECTIONS EXCEPT PLUGS DEMAND CONTROLLED VENTILATION RD ROOF DRAINS FOR 110/220 VOLT RECEPTACLES HAVING A FLEXIBLE CABLE. DIAM DIAMETER REG REGISTER DIFF DIFFUSER RG RELIEF GRILLE 3. TEMPORARY, MOVABLE OR MOBILE EQUIPMENT WHICH IS HEAVIER THAN 400 POUNDS OR DOOR LOUVER HAS A CENTER OF MASS LOCATED 4 FEET OR MORE ABOVE THE ADJACENT FLOOR OR ROC REHEATING COIL DRAIN REFRIGERANT LIQUID LINE LEVEL THAT DIRECTLY SUPPORT THE COMPONENT IS REQUIRED TO BE RESTRAINED IN A MANNER APPROVED BY DSA. RPM REVOLUTION PER MINUTE E (NAME) EXISTING PIPE RS REFRIGERANT SUCTION LINE RELIEF VALVE THE FOLLOWING MECHANICAL AND ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO ESP EXTERNAL STATIC PRESSURE RV EXHAUST AIR THE STRUCTURE BUT NEED NOT DEMONSTRATE DESIGN COMPLIANCE WITH THE REFERENCES EAR EXHAUST AIR REGISTER SUPPLY AIR NOTED ABOVE. THESE COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN EER ENERGY EFFICIENCY RATIO SAC SPLIT AIR CONDITIONER THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT. FLEXIBLE CONNECTIONS EXHAUST FAN SAD SUPPLY AIR DIFFUSER MUST ALLOW MOVEMENT IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTIONS. SAR EXPANSION JOINT SUPPLY AIR REGISTER SD ELEC ELECTRICAL SMOKE DETECTOR A. COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVE A CENTER OF MASS LOCATED FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE ENT ENTERING SEER SEASONAL ENERGY-EFFICIENCY RATIO ER SENS SENSIBLE ECCENTRIC REDUCER EWT ENTERING WATER TEMPERATURE SF SUPPLY FAN B. COMPONENTS WEIGHING LESS THAN 20 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEM LESS THAN 5 POUNDS PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR EXH EXHAUST SHR SENSIBLE HEAT RATIO SMACNA SHEET METAL & AC NATIONAL ASSOCIATION FILTER AUTOMATIC SMOKE DAMPER DEGREE FAHRENHEIT THE ANCHORAGE OF ALL MECHANICAL, ELECTRICAL AND PLUMBING COMPONENTS SHALL BE F&BP FACE AND BYPASS DAMPERS SOH SHUT OFF HEAD SUBJECT TO THE APPROVAL OF THE DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE FLOAT AND THERMOSTATIC TRAPS SOV SHUT OFF VALVE OR STRUCTURAL ENGINEER DELEGATED RESPONSIBILITY AND ACCEPTANCE BY DSA. THE PROJEC INSPECTOR WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN SP STATIC PRESSURE FLA FULL LOAD AMPERAGE FREE AREA SPEC SPECIFICATION ACCORDANCE WITH THE ABOVE REQUIREMENTS. FLEXIBLE CONNECTION SQUARE (FACE) FCU FAN COIL UNIT SQ.FT. SQUARE FOOT PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTE SOUND TRAP FIRE DAMPER PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY FIN FINISHED STRAINER WITH THE FORCES AND DISPLACEMENT PRESCRIBED IN ASCE 7-16 SECTION 13.3 AS DEFINED FLR FLOOR IN ASCE 7-16 SECTIONS 13.6.5, 13.6.6, 13.6.7, 13.6.8; AND THE 2022 CBC, SECTIONS FPM FEET PER MINUTE THROW AWAY (FILTER) 1617A.1.24, 1617A.1.25 AND 1616A.1.26. FPS FEET PER SECOND TC TEMPERATURE CONTROL TCP FLOW SWITCH TEMPERATURE CONTROL PANEL THE METHOD OF SHOWING BRACING AND ATTACHMENT TO THE STRUCTURE FOR THE IDENTIFIED FEET AUTOMATIC TEMPERATURE CONTROL TCV DISTRIBUTION SYSTEM ARE AS NOTED BELOW. WHEN BRACING AND ATTACHMENT ARE BASED ON FF FINISHED VALVE A PREAPPROVED INSTALLATION GUIDE (E.G., HCAI OPM FOR 2013 CBC OR LATER), COPIES OF TRANSFER DUCT THE BRACING SYSTEM INSTALLATION GUIDE OR MANUAL SHALL BE AVAILABLE ON THE JOBSITE TDH TOTAL DYNAMIC HEAD PRIOR TO THE START OF AND DURING THE HANGING AND BRACING OF THE DISTRIBUTION TOTALLY ENCLOSED FAN—COOLED SYSTEMS. THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE GALLON GALVANIZED MOTOR STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS. GALV GC TOP GAS COCK TOP OF PIPE TOD GLOBE VALVE TOP OF DUCT MECHANICAL PIPING (MP), MECHANICAL DUCTS (MD), PLUMBING PIPING (PP), ELECTRICAL GLV GPM TEMP TEMPERATURE DISTRIBUTION SYSTEM (E): GALLONS PER MINUTE GV GATE VALVE TRANSFER GRILLE MP□ MD☒ PP□ E□ OPTION 1: DETAILED ON THE APPROVED DRAWING WITH PROJECT THERMOMETER HIGH TURNING VANES SPECIFIC NOTES AND DETAILS. HB HOSE BIBB TW THERMOMETER WELL HEATING COIL TYP TYPICAL MP $\square$ MD $\square$ PP $\square$ E $\square$ option 2: shall comply with hcai (oshpd) pre-approval (opm#HEPA-AF HIGH EFFICIENCY PARTICULATE AIR FILTERS UNDERCUT (DOOR) HORSEPOWER UH UNIT HEATER HIGH PRESSURE RETURN UNDERWRITERS LABORATORY HPS HIGH PRESSURE STEAM UNION UN HEATING, VENTILATING AND UTR UP THRU ROOF UV UNIT VENTILATOR AIR-CONDITIONING HOT WATER HWR HOT WATER RETURN VENT OR ATMOSPHERIC RELIEF HWS VACUUM VAC VARIABLE AIR VOLUME VOLUME DAMPER VERTICAL IN-LINE VENT THRU ROOF LONG LOCKED ROTOR (AMPERAGE) LRA LEAVING AIR TEMPERATURE WIDE W/ WITH LBS POUNDS LINEAR DIFFUSER W-CLR WATER COOLER LEAVING DB TEMPERATURE W C WATER COOLED LDB LIN FT LINEAR FEET W G WATER GAUGE (PRESSURE) LPR LOW-PRESSURE RETURN W/O WITHOUT LOW-PRESSURE STEAM LPS WB WET BULB WBT WET BULB TEMPERATURE LEAVING WB TEMPERATURE WG WATER GAUGE LEAVING WATER TEMPERATURE WMS WIRE MESH SCREEN WORKING PRESSURE REQUIREMENTS OF ALL MECHANICAL EQUIPMENT. THE CALIFORNIA GREEN BUILDING STANDARDS (5.504.4.1 CAL GREEN)

	DUCTWORK SYMBOLS	GENERAL DEMOLITION NOTES
	RETURN AIR DUCT UP  SUPPLY AIR DUCT UP  EXHAUST AIR DUCT UP	REFER TO ARCHITECTURAL DEMOLITION DRAWINGS IN THIS PHASE AND FOR DEMOLITION AREAS AND EXISTING WALLS. THE SCOPE OF THE DEMOLITION WORK SHALL INCLUDE ALL LABOR, MATERIALS, SERVICES AND EQUIPMENT REQUIRED FOR THE REMOVAL OF EXISTING HVAC EQUIPMENT AND SYSTEMS. VERIFY ALL SPECIFIC DEMOLITION WORK PRIOR TO COMMENCING. THIS WORK INCLUDES, BUT IS NOT LIMITED TO THE FOLLOWING:
	RETURN AIR DUCT DOWN	1- REMOVE ALL DUCTWORK, DUCTWORK ACCESSORIES, DIFFUSERS, GRILLES, HVAC SYSTEM INSULATION AND SUPPORTS, TEMPERATURE CONTROL DEVICES, HVAC EQUIPMENT AND SPECIALTIES.
	SUPPLY AIR DUCT DOWN  EXHAUST AIR DUCT DOWN	2— PERFORM CUTTING AND PATCHING OF THE CONSTRUCTION WORK WHICH MAY BE REQUIRED FOR THE PROPER INSTALLATION OF MECHANICAL WORK OR REMOVAL OF EXISTING MECHANICAL EQUIPMENT AND SYSTEMS. PATCHING SHALL BE OF THE SAME MATERIALS, WORKMANSHIP AND FINISH AS AND ACCURATELY MATCH SURROUNDING WORK TO THE SATISFACTION OF THE ARCHITECT.
	OR ELBOWS WITH TURNING VANES  TEE DUCT WITH TURNING VANES	3- WHERE NEW PARTITIONS OR OTHER CONSTRUCTION AND/OR INSTALLATION OF NEW CEILING INTERFERES WITH THE EXISTING AIR DISTRIBUTION SYSTEM, MODIFY THE AIR OUTLETS / INLETS AND ASSOCIATED DUCTWORK AND ACCESSORIES AS REQUIRED TO MATCH THE NEW ARCHITECTURAL LAYOUT TO SATISFACTION OF THE ARCHITECT.
N S	OR DUCT WITH INSULATION WRAP  OR DUCT WITH ACOUSTICAL LINING  OR DUCT DROP	4- ALL REMOVED MATERIALS AND EQUIPMENT WHICH, IN THE OPINION OF THE ARCHITECT, ARE SALVAGEABLE SHALL REMAIN THE PROPERTY OF THE DISTRICT. DELIVER SUCH SALVAGED MATERIALS AND EQUIPMENT ON PREMISES AS DIRECTED, AND NEATLY PILE OR STORE THEM AND PROTECT FROM DAMAGE. WHERE MATERIALS AND EQUIPMENT HAVE BEEN REMOVED AND NOT REPLACED THE EXPOSED SURFACE BEHIND MATERIAL OR EQUIPMENT SHALL BE PAINTED
	OR R DUCT RISE	TO MATCH SURROUNDING SURFACES. DO NOT REUSE MATERIALS AND EQUIPMENT, UNLESS SPECIFICALLY SPECIFIED ON PLANS. REMOVE FROM PREMISES AND DISPOSE OF ALL MATERIALS CONSIDERED BY ARCHITECT TO BE SCRAP.
	OR ————————————————————————————————————	5- IT IS THE CONTRACTOR'S RESPONSIBILITY TO VISIT THE SITE AND BECOME THOROUGHLY FAMILIAR WITH ALL FEATURES OF THE BUILDING AND SITE, WHICH MAY AFFECT THE PROPER PERFORMANCE OF THIS WORK.
	ROUND TO ROUND TRANSITION	6— EXERCISE EXTREME CAUTION IN EXCAVATING AND TRENCHING ON THIS SITE TO AVOID EXISTING UNDERGROUND UTILITIES, AND TO PREVENT HAZARD TO PERSONNEL AND/OR
	OR — FLEXIBLE CONNECTION	DAMAGE TO EXISTING UNDERGROUND UTILITIES OR STRUCTURES. THESE DRAWINGS AND SPECIFICATIONS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY, WHICH IS THE RESPONSIBILITY OF THE CONTRACTOR.
	OR RADIUS ELBOW  SUPPLY AIR RECTANGULAR CEILING DIFFUSER  300 4-WAY AIR FLOW UNLESS SPECIFIED ON THE FLOOR PLANS, 300 CFM, SEE AIR DISTRIBUTION	SELECTIVE DEMOLITION NOTES
CTION.	SCHEDULE FOR SIZE AND MODEL  250 RETURN AIR RECTANGLAR CEILING REGISTER CFM OR /GRILLE, 250 CFM, SEE AIR DISTRIBUTION	THIS SECTION INCLUDES LIMITED SCOPE OF SELECTIVE MECHANICAL DEMOLITION WORK AS FOLLOWS:      A. NONDESTRUCTIVE REMOVAL OF MATERIALS AND EQUIPMENT FOR REUSE OR SALVAGE AS INDICATED.
E	SCHEDULE FOR SIZE AND MODEL	B. DISMANTLING MECHANICAL MATERIALS AND EQUIPMENT MADE OBSOLETE BY THESE INSTALLATIONS.  2 GENERAL CONDITIONS
	Z ČĚM OR Z ČĚM DISTRIBUTION SCHEDULE FOR SIZE AND MODEL.	A. GENERAL: SUBMIT THE FOLLOWING IN ACCORDANCE WITH CONDITIONS OF CONTRACT AND DIVISION 01 AND 23 SPECIFICATION SECTIONS.
SH	OR ————————————————————————————————————	B. SCHEDULES INDICATING PROPOSED METHODS AND SEQUENCE OF OPERATION FOR SELECTIVE DEMOLITION PRIOR TO COMMENCEMENT OF WORK. INCLUDE COORDINATION FOR SHUT—OFF OF UTILITY SERVICES AND DETAILS FOR DUST AND NOISE CONTROL.
	SIDE WALL REGISTER SUPPLY AIR	COORDINATE SEQUENCING AND OWNER OCCUPANCY SPECIFIED IN DIVISION 01.     COORDINATE OTHER SELECTIVE DEMOLITION WORK AS OUTLINED IN DIVISION 01.
RD	SIDE WALL REGISTER RETURN AIR	3 PROJECT CONDITIONS
		A. CONDITIONS AFFECTING SELECTIVE DEMOLITION: THE FOLLOWING PROJECT CONDITIONS APPLY:  1. PROTECT ADJACENT MATERIALS INDICATED TO REMAIN. INSTALL AND MAINTAIN DUST AND NOISE  PARTIES TO MEET AND NOISE FROM PENDS TRANSMITTED TO ADJACENT APPLACEMENT.
OOF	— - S DUCT SMOKE DETECTOR	BARRIERS TO KEEP DIRT, DUST, AND NOISE FROM BEING TRANSMITTED TO ADJACENT AREAS. REMOVE PROTECTION AND BARRIERS AFTER DEMOLITION OPERATIONS ARE COMPLETE.  2. LOCATE, IDENTIFY, AND PROTECT MECHANICAL SERVICES PASSING THROUGH DEMOLITION AREA
ТО	— - B BACK DRAFT DAMPER (w/ direction of flow)	AND SERVING OTHER AREAS OUTSIDE THE DEMOLITION LIMITS. MAINTAIN SERVICES TO AREAS OUTSIDE DEMOLITION LIMITS. WHEN SERVICES MUST BE INTERRUPTED, INSTALL TEMPORARY SERVICES FOR AFFECTED AREAS. PROVIDE MINIMUM OF 72—HOUR NOTICE TO OWNER PRIOR TO
	MANUAL VOLUME DAMPER	UTILITY INTERRUPTION.  4 SEQUENCE AND SCHEDULING
	——DL——► DOOR LOUVER	A. COORDINATE THE SHUT-OFF AND DISCONNECTION OF UTILITY SERVICES WITH THE OWNER AND THE UTILITY COMPANY.
D 4 HE	UNDERCUT (DOOR)	B. NOTIFY THE ARCHITECT AT LEAST 5 DAYS PRIOR TO COMMENCING DEMOLITION OPERATIONS.  C. PERFORM DEMOLITION IN PHASES AS INDICATED.
ΞM,	THERMOSTAT # CORRESPONDS WITH UNIT NUMBER, SEE DETAIL BELOW.  BY-PASS TIMER	5 EXAMINATION  A. EXAMINE AREAS WHERE SELECTIVE DEMOLITION IS TO OCCUR. DETERMINE EXTENT OF WORK AND AFFECT ON EXISTING CONDITIONS TO REMAIN. ADVISE ARCHITECT OF ANY CONDITIONS THAT MIGHT CREATE EXTENSIVE ALTERATIONS BEYOND INDICATED SCOPE.
GE ECT	NT NIGHT THERMOSTAT  RETURN AIR THERMOSTAT	6 SELECTIVE DEMOLITION
	SD DUCT SMOKE DETECTOR	A. GENERAL: DEMOLISH, REMOVE, DEMOUNT, AND DISCONNECT ABANDONED MECHANICAL MATERIALS AND EQUIPMENT INDICATED TO BE REMOVED AND NOT INDICATED TO BE SALVAGED OR SAVED.
	TIME SWITCH	B. MATERIALS AND EQUIPMENT TO BE SALVAGED: REMOVE, DEMOUNT, AND DISCONNECT EXISTING MECHANICAL MATERIALS AND EQUIPMENT INDICATED TO BE REMOVED AND SALVAGED, AND DELIVER MATERIALS AND EQUIPMENT TO THE LOCATION DESIGNATED FOR STORAGE.
D	TWIST TIMER	C. DISPOSAL AND CLEANUP: REMOVE FROM THE SITE AND LEGALLY DISPOSE OF DEMOLISHED MATERIALS AND EQUIPMENT NOT INDICATED TO BE SALVAGED.
-D	OS OVERRIDE SWITCH  DOOR SENSOR	D. MECHANICAL MATERIALS AND EQUIPMENT: DEMOLISH, REMOVE, DEMOUNT, AND DISCONNECT THE FOLLOWING ITEMS:
DN F	DOOR SENSOR  DUCT DETECTOR	1. INACTIVE AND OBSOLETE PIPING, FITTINGS AND SPECIALTIES, EQUIPMENT, DUCTWORK, CONTROLS, FIXTURES, AND INSULATION.
-	WS WALL SWITCH	a. PIPING AND DUCTS EMBEDDED IN FLOORS, WALLS, AND CEILINGS MAY REMAIN IF SUCH MATERIALS DO NOT INTERFERE WITH NEW INSTALLATIONS. REMOVE MATERIALS ABOVE ACCESSIBLE CEILINGS. DRAIN AND CAP PIPING AND DUCTS ALLOWED TO REMAIN.
	Ø DIAMETER / ROUND	2. PERFORM CUTTING AND PATCHING REQUIRED FOR DEMOLITION.
	SQUARE FEET	STRUCTURAL NOTES
	—  ZONE CONTROL DAMPER  —  BY-PASS DAMPER	1— UNLESS SPECIFICALLY SHOWN ON THESE PLANS NO STRUCTURAL MEMBER SHALL BE CUT, NEITHER DRILLED NOR NOTCHED WITHOUT PRIOR WRITTEN AUTHORIZATION FROM THE
М#)	POINT OF CONNECTION	STRUCTURAL ENGINEER AND THE DIVISION OF THE STATE ARCHITECT/AUTHORITIES HAVING JURISDICTION.
	POINT OF REMOVAL	2- CUTTING, BORING, SAWCUTTING OR DRILLING THROUGH THE NEW OR EXISTING STRUCTURAL ELEMENTS TO BE DONE ONLY WHEN SO DETAIL IN THE DRAWINGS OR ACCEPTED BY THE ARCHITECT WITH THE APPROVAL OF DSA/AHJ.
	PIPING SYMBOLS	3— ALL WELDING SHALL BE SPECIALLY INSPECTED BY AN AWS—CWI QUALIFIED INSPECTOR APPROVED BY DSA/AHJ.
		4- ALL BRACING OF DUCTWORK AND PIPING SHALL BE INSTALLED IN ACCORDANCE WITH SMACNA MANUAL. SEE SEISMIC RESTRAINT NOTES ON THIS SHEET.
	——————————————————————————————————————	5- WHERE BRACING DETAILS ARE NOT SHOWN ON THE DRAWINGS OR IN THE SMACNA GUIDELINES, THE FIELD INSTALLATION SHALL BE SUBJECTED TO THE APPROVAL OF THE
	COORDINATION	ARCHITECT, STRUCTURAL ENGINEER AND DSA FIELD ENGINEER OR AHJ.  6- A COPY OF THE MANUAL PUBLISHED BY SMACNA SHALL BE PROVIDED BY THE CONTRACTOR
	1— THESE DRAWINGS ARE DIAGRAMMATIC AND SHOW IN GENERAL WHERE THE DUCTWORK, PIPING	AND KEPT ON THE JOB AT ALL TIMES.  7- DESIGN CRITERIA
	AND OTHER WORK SPECIFIED IN THE HVAC SECTIONS OF THE SPECIFICATIONS IS TO BE LOCATED. THE DRAWINGS DO NOT NECESSARILY INDICATE ANY AND ALL OFFSETS AND CONFIGURATIONS REQUIRED FOR COORDINATION WITH THE SPACE REQUIREMENTS OF OTHER TRADES. THE CONTRACTOR IS RESPONSIBLE FOR THE CORRECT PLACING, LOCATION, AND CONNECTION OF THIS WORK IN RELATION TO THE WORK OF OTHER TRADES.  2— THE CONTRACTOR SHALL EXAMINE AND COORDINATE WITH ALL MECHANICAL, PLUMBING, CIVIL,	GROUND SNOW LOAD = 5 PSF RISK CATEGORY = III BASIC DESIGN WIND SPEED V = 115 MPH EXPOSURE CATEGORY = C SDS = 1.011 SITE CLASS = D-DEFAULT
	ARCHITECTURAL, STRUCTURAL, ELECTRICAL AND OTHER DRAWINGS THAT HAVE BEEN PREPARED FOR THIS PROJECT, AND ACCEPT SUCH CONDITIONS, AND MAKE ALLOWANCES FOR THEM IN PREPARING THE BID.	COMBINATION SMOKE/FIRE DAMPER NOTE
	3- COORDINATE FINISHING COLOR OF ALL AIR TERMINALS WITH ARCHITECT. FINISHING COLOR SPECIFIED ON EQUIPMENT SCHEDULE IS FOR REFERENCE ONLY.	1— FIRE DAMPERS SHALL BE STATE FIRE MARSHAL APPROVED, UL LISTED AND INSTALLED
	A CONTRACTOR SHALL COORDINATE WITH CENERAL CONTRACTOR FOR SIZE AND LOCATION OF	STRICTLY IN ACCORDANCE WITH THE MANIFACTURER'S INSTRUCTIONS AND LISTING

MECHANICAL ABBREVIATIONS AND SYMBOLS LIST GENERAL DEMOLITION NOTES REFER TO ARCHITECTURAL DEMOLITION DRAWINGS IN THIS PHASE AND FOR DEMOLITION AREAS AND EXISTING WALLS. THE SCOPE OF THE DEMOLITION WORK SHALL INCLUDE ALL LABOR, MATERIALS, SERVICES AND EQUIPMENT REQUIRED FOR THE REMOVAL OF EXISTING HVAC EQUIPMENT AND SYSTEMS. VERIFY ALL SPECIFIC DEMOLITION WORK PRIOR TO COMMENCING. THIS WORK INCLUDES, BUT IS NOT LIMITED TO THE FOLLOWING: 1- REMOVE ALL DUCTWORK, DUCTWORK ACCESSORIES, DIFFUSERS, GRILLES, HVAC SYSTEM INSULATION AND SUPPORTS, TEMPERATURE CONTROL DEVICES, HVAC EQUIPMENT AND 2- PERFORM CUTTING AND PATCHING OF THE CONSTRUCTION WORK WHICH MAY BE REQUIRED FOR THE PROPER INSTALLATION OF MECHANICAL WORK OR REMOVAL OF EXISTING MECHANICAL EQUIPMENT AND SYSTEMS. PATCHING SHALL BE OF THE SAME MATERIALS, WORKMANSHIP AND FINISH AS AND ACCURATELY MATCH SURROUNDING WORK TO THE SATISFACTION OF THE ARCHITECT. 3- WHERE NEW PARTITIONS OR OTHER CONSTRUCTION AND/OR INSTALLATION OF NEW CEILING INTERFERES WITH THE EXISTING AIR DISTRIBUTION SYSTEM. MODIFY THE AIR OUTLETS / INLETS AND ASSOCIATED DUCTWORK AND ACCESSORIES AS REQUIRED TO MATCH THE NEW ARCHITECTURAL LAYOUT TO SATISFACTION OF THE ARCHITECT. 4- ALL REMOVED MATERIALS AND EQUIPMENT WHICH, IN THE OPINION OF THE ARCHITECT, ARE SALVAGEABLE SHALL REMAIN THE PROPERTY OF THE DISTRICT. DELIVER SUCH SALVAGED MATERIALS AND EQUIPMENT ON PREMISES AS DIRECTED, AND NEATLY PILE OR STORE THEM AND PROTECT FROM DAMAGE. WHERE MATERIALS AND EQUIPMENT HAVE BEEN REMOVED AND NOT REPLACED THE EXPOSED SURFACE BEHIND MATERIAL OR EQUIPMENT SHALL BE PAINTED TO MATCH SURROUNDING SURFACES. DO NOT REUSE MATERIALS AND EQUIPMENT. UNLESS SPECIFICALLY SPECIFIED ON PLANS. REMOVE FROM PREMISES AND DISPOSE OF ALL MATERIALS CONSIDERED BY ARCHITECT TO BE SCRAP. 5- IT IS THE CONTRACTOR'S RESPONSIBILITY TO VISIT THE SITE AND BECOME THOROUGHLY FAMILIAR WITH ALL FEATURES OF THE BUILDING AND SITE, WHICH MAY AFFECT THE PROPER PERFORMANCE OF THIS WORK. 6- EXERCISE EXTREME CAUTION IN EXCAVATING AND TRENCHING ON THIS SITE TO AVOID EXISTING UNDERGROUND UTILITIES, AND TO PREVENT HAZARD TO PERSONNEL AND/OR DAMAGE TO EXISTING UNDERGROUND UTILITIES OR STRUCTURES. THESE DRAWINGS AND SPECIFICATIONS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY, WHICH IS THE RESPONSIBILITY OF THE CONTRACTOR. SELECTIVE DEMOLITION NOTES 1. THIS SECTION INCLUDES LIMITED SCOPE OF SELECTIVE MECHANICAL DEMOLITION WORK AS FOLLOWS: A. NONDESTRUCTIVE REMOVAL OF MATERIALS AND EQUIPMENT FOR REUSE OR SALVAGE AS INDICATED B. DISMANTLING MECHANICAL MATERIALS AND EQUIPMENT MADE OBSOLETE BY THESE INSTALLATIONS. 2 GENERAL CONDITIONS A. GENERAL: SUBMIT THE FOLLOWING IN ACCORDANCE WITH CONDITIONS OF CONTRACT AND DIVISION 01 AND 23 SPECIFICATION SECTIONS. B. SCHEDULES INDICATING PROPOSED METHODS AND SEQUENCE OF OPERATION FOR SELECTIVE DEMOLITION PRIOR TO COMMENCEMENT OF WORK. INCLUDE COORDINATION FOR SHUT-OFF OF UTILITY SERVICES AND DETAILS FOR DUST AND NOISE CONTROL. 1. COORDINATE SEQUENCING AND OWNER OCCUPANCY SPECIFIED IN DIVISION 01. 2. COORDINATE OTHER SELECTIVE DEMOLITION WORK AS OUTLINED IN DIVISION 01. 3 PROJECT CONDITIONS A. CONDITIONS AFFECTING SELECTIVE DEMOLITION: THE FOLLOWING PROJECT CONDITIONS APPLY: 1. PROTECT ADJACENT MATERIALS INDICATED TO REMAIN. INSTALL AND MAINTAIN DUST AND NOISE BARRIERS TO KEEP DIRT, DUST, AND NOISE FROM BEING TRANSMITTED TO ADJACENT AREAS. REMOVE PROTECTION AND BARRIERS AFTER DEMOLITION OPERATIONS ARE COMPLETE. 2. LOCATE, IDENTIFY, AND PROTECT MECHANICAL SERVICES PASSING THROUGH DEMOLITION AREA AND SERVING OTHER AREAS OUTSIDE THE DEMOLITION LIMITS. MAINTAIN SERVICES TO AREAS OUTSIDE DEMOLITION LIMITS. WHEN SERVICES MUST BE INTERRUPTED, INSTALL TEMPORARY SERVICES FOR AFFECTED AREAS. PROVIDE MINIMUM OF 72-HOUR NOTICE TO OWNER PRIOR TO 4 SEQUENCE AND SCHEDULING A. COORDINATE THE SHUT-OFF AND DISCONNECTION OF UTILITY SERVICES WITH THE OWNER AND THE UTILITY COMPANY. B. NOTIFY THE ARCHITECT AT LEAST 5 DAYS PRIOR TO COMMENCING DEMOLITION OPERATIONS. C. PERFORM DEMOLITION IN PHASES AS INDICATED. 5 EXAMINATION A. EXAMINE AREAS WHERE SELECTIVE DEMOLITION IS TO OCCUR. DETERMINE EXTENT OF WORK AND AFFECT ON EXISTING CONDITIONS TO REMAIN. ADVISE ARCHITECT OF ANY CONDITIONS THAT MIGHT CREATE EXTENSIVE ALTERATIONS BEYOND INDICATED SCOPE. 6 SELECTIVE DEMOLITION EQUIPMENT INDICATED TO BE REMOVED AND NOT INDICATED TO BE SALVAGED OR SAVED. B. MATERIALS AND EQUIPMENT TO BE SALVAGED: REMOVE, DEMOUNT, AND DISCONNECT EXISTING MECHANICAL MATERIALS AND EQUIPMENT INDICATED TO BE REMOVED AND SALVAGED, AND DELIVER MATERIALS AND EQUIPMENT TO THE LOCATION DESIGNATED FOR STORAGE. C. DISPOSAL AND CLEANUP: REMOVE FROM THE SITE AND LEGALLY DISPOSE OF DEMOLISHED MATERIALS AND EQUIPMENT NOT INDICATED TO BE SALVAGED. D. MECHANICAL MATERIALS AND EQUIPMENT: DEMOLISH, REMOVE, DEMOUNT, AND DISCONNECT THE 1. INACTIVE AND OBSOLETE PIPING, FITTINGS AND SPECIALTIES, EQUIPMENT, DUCTWORK, CONTROLS, FIXTURES, AND INSULATION. a. PIPING AND DUCTS EMBEDDED IN FLOORS, WALLS, AND CEILINGS MAY REMAIN IF SUCH MATERIALS DO NOT INTERFERE WITH NEW INSTALLATIONS. REMOVE MATERIALS ABOVE ACCESSIBLE CEILINGS. DRAIN AND CAP PIPING AND DUCTS ALLOWED TO REMAIN. 2. PERFORM CUTTING AND PATCHING REQUIRED FOR DEMOLITION. STRUCTURAL NOTES JURISDICTION.

- 1- UNLESS SPECIFICALLY SHOWN ON THESE PLANS NO STRUCTURAL MEMBER SHALL BE CUT, NEITHER DRILLED NOR NOTCHED WITHOUT PRIOR WRITTEN AUTHORIZATION FROM THE STRUCTURAL ENGINEER AND THE DIVISION OF THE STATE ARCHITECT/AUTHORITIES HAVING
- 2- CUTTING, BORING, SAWCUTTING OR DRILLING THROUGH THE NEW OR EXISTING STRUCTURAL ELEMENTS TO BE DONE ONLY WHEN SO DETAIL IN THE DRAWINGS OR ACCEPTED BY THE ARCHITECT WITH THE APPROVAL OF DSA/AHJ.
- 3- ALL WELDING SHALL BE SPECIALLY INSPECTED BY AN AWS-CWI QUALIFIED INSPECTOR APPROVED BY DSA/AHJ.
- 4- ALL BRACING OF DUCTWORK AND PIPING SHALL BE INSTALLED IN ACCORDANCE WITH SMACNA MANUAL. SEE SEISMIC RESTRAINT NOTES ON THIS SHEET.
- 5- WHERE BRACING DETAILS ARE NOT SHOWN ON THE DRAWINGS OR IN THE SMACNA GUIDELINES, THE FIELD INSTALLATION SHALL BE SUBJECTED TO THE APPROVAL OF THE ARCHITECT, STRUCTURAL ENGINEER AND DSA FIELD ENGINEER OR AHJ.
- 6- A COPY OF THE MANUAL PUBLISHED BY SMACNA SHALL BE PROVIDED BY THE CONTRACTOR AND KEPT ON THE JOB AT ALL TIMES.

STRICTLY IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS AND LISTING.

MANUFACTURER'S INSTRUCTIONS SHALL BE MADE AVAILABLE TO THE INSPECTING AUTHORITY.

DUCT LINING NOTE

DETAILS SHOWN ARE FOR REFERENCE ONLY.

- SITE CLASS = D-DEFAULT
- 4- CONTRACTOR SHALL COORDINATE WITH GENERAL CONTRACTOR FOR SIZE AND LOCATION OF DUCTWORK ROOF/WALL OPENINGS AND WITH ELECTRICAL CONTRACTOR FOR ELECTRICAL

#### POLLUTANT CONTROL NOTES

FOR THE PERIOD OF ROUGH INSTALLATION, OR DURING STORAGE ON THE CONSTRUCTION SITE AND UNTIL FINAL STARTUP OF THE HEATING AND COOLING EQUIPMENT, PROVIDE COVERING OF DUCT OPENINGS AND PROTECTION OF MECHANICAL EQUIPMENT DURING CONSTRUCTION, ALL DUCT AND OTHER RELATED AIR DISTRIBUTION COMPONENT OPENINGS SHALL BE COVERED WITH TAPE, PLASTIC, SHEETMETAL OR OTHER METHODS ACCEPTABLE TO THE ENFORCING AGENCY. (5.504.3 CAL GREEN) ADHESIVES, SEALANTS, AND CAULKS USED ON THE PROJECT SHALL MEET THE REQUIREMENTS OF

- ALL SUPPLY AND RETURN AIR DUCTWORK SHALL BE ACOUSTICALLY LINED FROM CONNECTION POINT OF UNIT TO MIN. 20 FEET DOWN STREAM OF THE UNIT OPENING. SEE MECHANICAL DRAWINGS FOR EXTENDED (MORE THAN 20') REQUIREMENT OF DUCT LINING. ALL BRANCH DUCTWORK WITH TAKEOFF FROM MAIN SUPPLY/RETURN DUCTS WITHIN 20 FEET OF THE UNIT OPENING SHALL BE ACOUSTICALLY LINED IN ITS ENTIRETY INCLUDING ANY DUCT FITTINGS, ELBOWS, SUB-BRANCH DUCTS, AND SUPPLY/RETURN DIFFUSER/GRILLE PLENUMS. ALL DUCT FITTINGS AND ELBOWS WHERE SHOWN TO BE CONNECTED TO A LINED DUCTWORK SHOULD BE PROVIDED WITH THE SAME LINING SPECIFIED FOR THE DUCT. DUCT LINING AND INSULATION MATERIAL AND THICKNESS SHALL BE PER SPECIFICATION BOOK. SEE

MECHANICAL FLOOR PLANS FOR EXTENDED (MORE THAN 20') DUCT LINING REQUIREMENTS.

I — ALL DUCT DIMENSIONS ON DRAWINGS TO BE INSIDE CLEAR.

- 2— ALL ROOM THERMOSTATS TO BE MOUNTED AT ELEVATION SHOWN ON THIS SHEET. SEE DETAIL BELOW. ALL INDIVIDUAL DUCTWORK BRANCH CONNECTING TO SUPPLY, RETURN,
- EXHAUST, OUTSIDE AIR, ETC.. AIR TERMINAL SHALL BE EQUIPPED WITH A MANUAL VOLUME DAMPER. 4- ALL SQUARE ELBOWS TO BE PROVIDED WITH TURNING VANES UNLESS

GENERAL NOTES

- OTHERWISE INDICATED DO NOT USE SQUARE ELBOW WITH TURNING VANES AT THE FIRST CHANGE.
- IN DIRECTION OF AIR AFTER THE FAN DISCHARGE. INSTALL ACOUSTICALLY LINED RADIUS ELBOW. TO DETERMINE THE EXACT NUMBER AND LOCATION OF FIRE DAMPERS AND COMBINATION SMOKE/FIRE DAMPERS THAT MAY BE REQUIRED, THE CONTRACTOR SHALL REVIEW THE ARCHITECTURAL DRAWINGS WHICH INDICATE THE LOCATION OF FIRE RATED WALLS, PARTITIONS AND CEILINGS. COORDINATE LOCATION OF CEILING DIFFUSERS, REGISTERS AND GRILLES
- WITH ARCHITECTURAL REFLECTED CEILING PLAN AND ELECTRICAL LIGHTING
- FOR BUILDING LOCATIONS, DIMENSIONS AND GRADE ELEVATIONS SEE ARCHITECTURAL AND STRUCTURAL DRAWINGS.
- PROVIDE WATER-PROOFING FOR ALL EQUIPMENT ANCHORAGE ON ROOF AND DUCT PENETRATIONS THRU ROOF PER ARCHITECTURAL DETAILS. IO— ROUND AND RECTANGULAR DUCTWORK IS INTERCHANGEABLE UPON APPROVAL OF MECHANICAL ENGINEER. CONTRACTOR IS TO VERIFY THE EXACT CEILING SPACE AND INTERCHANGE THE DUCT SIZE TO FIT THE
- CEILING SPACE WITHOUT ADDITIONAL FEE. 1- PROVIDE BACK-DRAFT DAMPER FOR ALL EXHAUST AIR DUCT THRU
- BUILDING ENVELOPE UNLESS OTHERWISE NOTED. 12 $^{-}$  PROVIDE ALL FRESH AIR INTAKES AND EXHAUST OUTLETS WITH HOOD,  $1/2^{\circ}$ GALVANIZED MESH SCREENS.
- 13- EXHAUST DUCT TERMINATION SHALL BE MINIMUM 10'-0" AWAY OR 3'-0"ABOVE FROM ANY FRESH AIR INTAKE, OPENABLE WINDOWS, DOORS AND 10'-0" MINIMUM ABOVE GRADE.
- 4- CONTRACTOR SHALL COORDINATE MOUNTING HEIGHT OF ALL DUCTWORK WITH THE WORK OF ALL OTHER TRADES SUCH AS STRUCTURAL BEAMS, PLUMBING PIPING, FIRE SPRINKLER PIPING, ELECTRICAL CONDUITS, LIGHT FIXTURES, ETC.. WHERE REQUIRED OR NOTED ON DRAWINGS, RUN DUCTWORK BETWEEN LIGHT FIXTURES, BEAMS, ETC..
- 15— PROVIDE WATER PROOFING FOR ALL FLASHING AND COUNTERFLASHING FOR MECHANICAL WORK.
- 6- THESE DRAWINGS AND SPECIFICATIONS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. 7- SYMBOLS AND ABBREVIATIONS ON THIS SHEET ARE SHOWN FOR
- REFERENCE; NOT ALL SYMBOLS AND ABBREVIATIONS MAY BE USED. 18- ALL NOTES ON THIS SHEET REMAIN PART OF THE CONTRACT DOCUMENTS. 19- ASBESTOS OR HAZARDOUS WASTE: IT IS UNDERSTOOD AND AGREED THAT THIS CONTRACT DOES NOT CONTEMPLATE THE HANDLING OF ASBESTOS OR ANY HAZARDOUS WASTE MATERIAL. IF ASBESTOS OR ANY HAZARDOUS WASTE MATERIAL IS ENCOUNTERED, NOTIFY THE OWNER IMMEDIATELY. DO
- NOT DISTURB, HANDLE OR ATTEMPT TO REMOVE. 20- FOR ACTUAL DIMENSIONS OF LOUVER SIZES SEE ARCHITECTURAL DRAWINGS, PROVIDE AND ATTACH PLENUMS AND OR DUCTS TO ACCOMMODATE THOSE DIMENSIONS AS NEEDED.
- 21 UNIT NUMBERS FOR MECHANICAL EQUIPMENT SHOWN IN SCHEDULES ARE FOR TYPE OF UNIT ONLY. FOR QUANTITIES & LOCATIONS OF MECHANICAL UNITS, SEE MECHANICAL DRAWINGS.
- 22- ALL ZONE DAMPERS AND COMBINATION SMOKE FIRE DAMPERS TO BE PERMANENTLY LABELED TO INDICATE THE ROOM(S) THEY SERVE. 23- ALL WORK SHALL CONFORM TO THE 2019 EDITION OF THE CALIFORNIA MECHANICAL CODE, INCLUDING ALL APPLICABLE STATE TITLE 24
- AMENDMENTS, CITY AND COUNTY LAWS AND ORDINANCES. 24- THE CONTRACTOR SHALL FURNISH AND INSTALL ACCESS DOORS AND/OR ACCESS PANELS AT LOCATIONS AS NECESSARY TO PROVIDE ACCESSIBILITY FOR SERVICE/ MAINTENANCE OF FIRE/SMOKE DAMPERS, MECHANICAL EQUIPMENT AND DEVICES. ALL ACCESS DOORS AND PANEL LOCATIONS AND SIZES SHALL BE PROVIDED BY CONTRACTOR AND SUBMITTED TO ARCHITECT PRIOR TO INSTALLATION FOR VERIFICATION PURPOSES.
- 25— CONTRACTOR SHALL VISIT SITE PRIOR TO BID TO VERIFY OPERABILITY, LOCATION AND SIZES OF ALL EXISTING EQUIPMENT/ SERVICES AND INFORM
- THE ARCHITECT OF ANY DISCREPANCIES. 26- THE CONTRACTOR SHALL FURNISH ALL MATERIALS, LABOR, EQUIPMENT, TRANSPORTATION AND SERVICES NECESSARY FOR COMPLETION OF THE WORK. ALL MATERIALS AND WORK SHALL COMPLY WITH APPLICABLE CODES AND GOVERNING REGULATIONS AND MEET THE APPROVAL OF THE
- LOCAL JURISDICTION, OR DIVISION OF STATE ARCHITECT, WHERE A. GENERAL: DEMOLISH, REMOVE, DEMOUNT, AND DISCONNECT ABANDONED MECHANICAL MATERIALS AND | 27- TAKE ALL PRECAUTIONS NECESSARY TO PROTECT THE MATERIALS BEFORE, DURING AND AFTER INSTALLATION. IN THE EVENT OF DAMAGE, IMMEDIATELY

REPAIR ALL DAMAGED AND DEFECTIVE WORK TO THE APPROVAL OF THE

- ARCHITECT AT NO ADDITIONAL COST TO THE OWNER. 28- ALL SPACE CONDITIONING EQUIPMENT SHALL BE CERTIFIED BY MANUFACTURER TO COMPLY WITH ALL APPLICABLE REQUIREMENTS OF
- CALIFORNIA BUILDING ENERGY EFFICIENCY STANDARDS. 29- INSTALLATION INSTRUCTIONS FOR ALL LISTED EQUIPMENT SHALL BE MADE AVAILABLE TO THE BUILDING INSPECTOR AT THE TIME OF INSPECTION.
- 30— PROVIDE AIR DIFFUSERS AND GRILLES TO MATCH THE CURVATURE WHEN AIR DIFFUSERS AND GRILLES APPEAR TO BE CURVED OR TO BE INSTALLED ON A CURVED SURFACE.
- 31 ALL PARTS OF AN EXPOSED AIR DISTRIBUTION SYSTEM TO BE PAINTED AS REQUIRED PER ARCHITECT. COORDINATE FINISHING COLOR WITH ARCHITECT.

#### MANUAL VOLUME DAMPER NOTE

I — PROVIDE MANUAL VOLUME DAMPERS WITH REMOTE CONTROL WHERE HARD LID CEILING IS INSTALLED OR ACCESS TO TYPICAL MANUAL VOLUME DAMPER IS NOT POSSIBLE. PROVIDE PRODUCTS OF METROPOLITAN AIR TECHNOLOGY, ROTO-TWIST MODEL NUMBER RT-250 SERIES III FOR ROUND DUCT AND MODEL RT-100 SP/CC FOR RECTANGULAR DUCT APPLICATION OR APPROVED EQUAL PRODUCTS. PROVIDE GUIDE CABLE OF REQUIRED LENGTH FOR INSTALLATION OF THE CEILING CUP AND COVER PLATE AT LOCATIONS APPROVED BY ARCHITECT. CONTRACTOR SHALL SUBMIT ON PROPOSED LOCATIONS OF CEILING CUPS FOR REVIEW AND APPROVAL BY THE ARCHITECT.

#### THERMOSTAT NOTES

1- TEMPERATURE THERMOSTAT: TEMPERATURE RANGE 55°F TO 85°F SEQUENCE HEATING AND COOLING, ADJUSTABLE TO 10°F BETWEEN HEATING AND COOLING, CAPABILITY TO TERMINATE ALL HEATING AT NO MORE THAN 70°F AND TERMINATE ALL COOLING AT NOT LESS THAN 78°F OR PROVIDE T-STAT TO MEET THE OWNER'S STANDARDS, WHERE APPLICABLE. 2- THE LOCATION OF THERMOSTATS TO BE FINALIZED DURING CONSTRUCTION. IF THE LOCATION OF THE THERMOSTATS SHOWN ON MECHANICAL DRAWINGS ARE IN CONFLICT WITH BUILDING ELEMENTS OR DESIGN CONTRACTOR SHALL RELOCATE THE THERMOSTAT AND RUN REQUIRED WIRING FOR A SUCCESSFUL INSTALLATION TO ANOTHER LOCATION

APPROVED BY MECHANICAL ENGINEER AND ARCHITECT AT NO ADDITIONAL COST TO THE OWNER UP TO MAXIMUM 20' AWAY FROM ORIGINAL LOCATION SHOWN ON MECHANICAL DRAWINGS. 3- DO NOT INSTALL THERMOSTATS WHERE THE OPERATION OF THE DEVICE

a. DIRECT SUNSHINE EFFECT.

MAY BE EFFECTED BY:

- b. MINIMIZED AIR CIRCULATION (BEHIND THE DOORS OR CABINETS OR SIMILAR LOCATIONS).
- c. OUTDOOR TEMPERATURE (ON EXTERIOR WALLS, OR SIMILAR LOCATIONS).
- d. HEAT GENERATING EQUIPMENT (PROVIDE PROPER DISTANCE FROM
- HEAT GENERATING EQUIPMENT). e. LOCATIONS SHOWN ON THE DRAWINGS ARE FOR REFERENCE ONLY.
- CONTRACTOR SHALL COORDINATE BETWEEN DRAWINGS AND WORKS OF | = OTHER TRADES AND ENSURE PROPER LOCATION SELECTION FOR INSTALLATION OF THE THERMOSTAT FOR SATISFACTORY OPERATION OF THE DEVICE. THERMOSTATS SHALL BE INSTALLED AT HEIGHTS SHOWN ON
- CONTRACT DOCUMENTS AND AS REQUIRED FOR ACCESSIBILITY
- 4- PROVIDE INSULATED THERMOSTAT BOX IF THERMOSTAT TO BE INSTALLED ON EXTERIOR WALL.



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**DISCOVERY ELEMENTARY ELEMENTARY** SCHOOL DISTRICT 13247 AMETHYST RD. VICTORVILLE, CA 92392

ISSUED FOR:

REGISTRATION/SIGNATURE:



**MECHANICAL ABBREVIATIONS AND SYMBOLS LIST** 

WD PROJ. # DRAWN BY: CHECKED DATE

POWER EXHAUST SCHEDULE (FOR PACKAGED AIR CONDITIONER UNITS)										
UNIT SYMBOL	PE-L1	PE-K1								
SERVICE	AC-L1	AC-K1								
MANUFACTURER	MICROMETL	MICROMETL								
MODEL	PCE-SRT05CA-D-4L3	PECE-SRT05CB-D0DB-4L3-4								
CONTROL TYPE	DIFFERENTIAL DRY BULB TEMPERATURE	DIFFERENTIAL DRY BULB TEMPERATURE								
TYPE	MODULATING	MODULATING								
MOTOR SIZE - HP	2.0	3.0								
VOLTAGE / PHASE	460 / 3	460 / 3								
FLA	4.5	6.5								
MCA / MOCP	5.6 / 10.1	8.1 / 14.6								
WEIGHT (LBS.)	222	313								
REMARKS	1,2	1,2								

#### REMARKS

1- PROVIDE SEPARATE POWER SOURCE AND DISCONNECT TO POWER EXHAUST UNIT. PASS-THRU POWER FROM AIR CONDITIONING UNIT TO POWER EXHAUST IS NOT ACCEPTABLE.
2- POWER EXHAUST SHALL RELIEVE THE EXCESS AIR TO MAINTAIN BUILDING PRESSURE DURING UNIT OPERATION. POWER EXHAUST SHALL BE CAPABLE OF 100% ECONOMIZER MODE TO RELIEVE 100% AIR.

R CONDITIONER SCHEDULE (GRADE MOUNTED)
--

AIR CONDITIONER SCHEDULE (GRADE MOUNTED)													
UNIT SYMBOL	AC-A1	AC-A2	AC-L1	AC-K1	AC-M1	AC-M2	AC-M3	AC-M4	AC-M5	AC-M6			
LOCATION	MECHANICAL YARD	MECHANICAL YARD	MECHANICAL YARD	MECHANICAL YARD	MECHANICAL YARD	MECHANICAL YARD	MECHANICAL YARD	MECHANICAL YARD	MECHANICAL YARD	MECHANICAL YARD			
SERVICE	BUILDING 100 ADMINISTRATION	BUILDING 100 ADMINISTRATION	BUILDING 200 LIBRARY	BUILDING 300 KINDERGARTEN	BUILDING 500 MULTI-PURPOSE								
SHEET REFERENCE	M2-1.1	M2-1.1	M2-1.2	M2-1.3	M2-1.4	M2-1.4	M2-1.4	M2-1.4	M2-1.4	M2-1.4			
MANUFACTURER	CARRIER	CARRIER	CARRIER	CARRIER	CARRIER	CARRIER	CARRIER	CARRIER	CARRIER	CARRIER			
MODEL	48FCDA06	48FCDM08	48FCEM16	48FCFM16	48FCDA06	48FCDA06	48FCDM08	48FCDM08	48A9D025	48A9D025			
TYPE	GAS/ELEC	GAS/ELEC	GAS/ELEC	GAS/ELEC	GAS/ELEC	GAS/ELEC	GAS/ELEC	GAS/ELEC	GAS/ELEC	GAS/ELEC			
DISCHARGE	SIDE	SIDE	SIDE	SIDE	SIDE	SIDE	SIDE	SIDE	SIDE	SIDE			
INDOOR FAN - CFM	1950	3000	4500	6200	1950	1950	3000	3000	11250	11250			
MIN. OUTSIDE AIR — CFM	270	875	900	1750	450	450	1700	450	4275	4275			
EXTERNAL S.P. – "WG	1.40	1.20	1.50	1.20	1.40	1.40	1.20	1.20	1.50	1.50			
BLOWER BHP / RPM	1.63 / 2471	1.77 / 1682	2.60 / 1710	3.76 / 1951	1.63 / 2471	1.63 / 2471	1.77 / 1682	1.77 / 1682	9.46 / 953	9.46 / 953			
EVAP. EAT — °F — DB	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0			
EVAP. EAT — °F — WB	67.0	67.0	67.0	67.0	67.0	67.0	67.0	67.0	67.0	67.0			
EVAP. LAT — °F — DB	60.5	61.5	59.0	61.4	60.5	60.5	61.5	61.5	61.1	61.1			
EVAP. LAT — °F — WB	59.1	59.0	56.5	59.2	59.1	59.1	59.0	59.0	59.4	59.4			
CND. EAT — °F — DB	115.0	115.0	115.0	115.0	115.0	115.0	115.0	115.0	115.0	115.0			
COOLING CAPACITY SENSIBLE -	49.86	78.11	148.68	157.02	49.86	49.86	78.11	78.11	278.30	278.30			
COOLING CAPACITY SENSIBLE — MBH	41.12	59.81	102.11	124.81	41.12	41.12	59.81	59.81	230.10	230.10			
REFRIGERANT TYPE / CAPACITY (LBS-OZ)	R410A / 7.6	R410A / 7.6	R410A / 7.6	R410A / 7.6	R410A / 7.6	R410A / 7.6	R410A / 7.6	R410A / 7.6	R410A / 7.6	R410A / 7.6			
ARI EER / SEER	- / 14.00	11.20 / 15.00	10.80 / 14.50	10.80 / 14.50	- / 14.00	- / 14.00	11.20 / 15.00	11.20 / 15.00	9.8 / 13.6	9.8 / 13.6			
COMPRESSOR INPUT - KW	5.25	8.13	16.69	16.88	5.25	5.25	8.13	8.13	29.1	29.1			
INDOOR COIL EAT — °F — DB	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0			
INDOOR COIL LAT - °F - DB	90.6	96.8	105.1	107.4	90.6	90.6	96.8	96.8	88.3	88.3			
HEATING INPUT - STAGE / MBH	(1) 67.0	(1) 125.0	(2) 192.0/240.0	(2) 280.0/350.0	(1) 67.0	(1) 67.0	(1) 125.0	(1) 125.0	(2) 262.5/350.0	(2) 262.5/350.0			
MIN AFUE %	81.0	81.0	81.0	81.0	81.0	81.0	81.0	81.0	81.0	81.0			
COMPRESSOR NO. / RLA (EA)	1 / 7.8	2 / 6.1	2 / 14.7-8.2	2 / 14.7-8.2	1 / 7.8	1 / 7.8	2 / 6.1	2 / 6.1	3 / 12.8	3 / 12.8			
OUTDOOR FAN MOTOR NO. / FLA (EA)	1 / 0.8	2 / 0.8	3 / 0.8	3 / 0.8	1 / 0.8	1 / 0.8	2 / 0.8	2 / 0.8	2 / 3.3	2 / 3.3			
INDOOR FAN MOTOR FLA	3.1	3.5	5.6	5.6	3.1	3.1	3.5	3.5	14.0	14.0			
COMBUSTION FAN MOTOR NO. / FLA (EA)	1 / 0.25	1 / 0.25	1 / 0.25	1 / 0.25	1 / 0.25	1 / 0.25	1 / 0.25	1 / 0.25	2 / 1.1	2 / 1.1			
MCA / MOP	14 / 20	19 / 25	35 / 45	35 / 45	14 / 20	14 / 20	19 / 25	19 / 25	62 / 70	62 / 70			
VOLTAGE / PHASE	460 / 3	460 / 3	460 / 3	460 / 3	460 / 3	460 / 3	460 / 3	460 / 3	460 / 3	460 / 3			
FILTER TYPE	2" - MERV-13	2" - MERV-13	2" - MERV-13	2" - MERV-13	2" - MERV-13	2" - MERV-13	2" - MERV-13	2" - MERV-13	2" - MERV-13	2" - MERV-13			
CONDENSER COIL HAIL GUARD (LOUVERED)	REQUIRED	REQUIRED	REQUIRED	REQUIRED	REQUIRED	REQUIRED	REQUIRED	REQUIRED	REQUIRED	REQUIRED			
FLUE DEFLECTOR	REQUIRED	REQUIRED	REQUIRED	REQUIRED	REQUIRED	REQUIRED	REQUIRED	REQUIRED	REQUIRED	REQUIRED			
ECONOMIZER MANUFACTURER / MODEL NO.	MICROMETL ECH-SRT12CB-D00B	MICROMETL ECH-SRT34CB-D00B	MICROMETL ECE-SRT05CB-D00B	MICROMETL ECE-SRT05CB-D00B	MICROMETL ECH-SRT12CB-D00B	MICROMETL ECH-SRT12CB-D00B	MICROMETL ECH-SRT34CB-D00B	MICROMETL ECH-SRT34CB-D00B	CARRIER ULTRA LOW LEAK	CARRIER ULTRA LOW LEAK			
POWER EXHAUST MANUFACTURER / MODEL NO.	N/A	N/A	MICROMETL PCE-SRT05CA-D-4L3	MICROMETL PECE-SRT05CB-D0DB-4L3-4	4 N/A	N/A	N/A	N/A	N/A	N/A			
OPERATING WEIGHT (LBS)	637	856	1479	1497	637	637	856	856	4499	4499			
DIMENSIONS (L"xW"xH")	74.4" × 46.6" × 33.4" 8	88.1" × 59.5" × 41.3"	115.9" × 66.4" × 57.4"	115.9" × 66.4" × 57.4"	74.4" × 46.6" × 33.4"	74.4" × 46.6" × 33.4"	88.1" × 59.5" × 41.3"	88.1" × 59.5" × 41.3"	165" × 94" × 73"	165" x 94" x 73"			
DETAIL REFERENCE	1,4/M0-2.1	1,4/M0-2.1	1,4/MO-2.1	6,7/M0-2.1	1,4/MO-2.1	1,4/MO-2.1	1,4/MO-2.1	1,4/MO-2.1	1,4/MO-2.1	1,4/M0-2.1			
REMARKS	1,2,5,6,7	1,2,4,5,6,7	1,2,3,4,5,6,7	1,2,3,4,5,6,7	1,2,5,6,7	1,2,5,6,7	1,2,4,5,6,7	1,2,4,5,6,7	1,2,4,5,6,7	1,2,4,5,6,7			

REMARKS

1- UNIT COMPLETE WITH MODULATING ECONOMIZER WITH 100% OUTSIDE AIR INTAKE, CONVENIENCE OUTLET, LOUVERED HAIL GUARD AND FLUE DEFLECTOR.
2- OPERATING WEIGHT INCLUDES WEIGHT OF BASE UNIT, ACCESSORIES, AND ECONOMIZER.
3- FOR UNITS EQUIPPED WITH POWER EXHAUST, PROVIDE DEDICATED SPACE PRESSURE SENSORS IN ALL REQUIRED SPACES AND INTERLOCK WITH UNIT POWER EXHAUST.
4- UNIT COMPLETE WITH FACTORY PROVIDED FIRE MARSHAL APPROVED, UL LISTED SMOKE DETECTOR FOR AIR MOVING SYSTEM SUPPLYING IN EXCESS OF 2000 CFM FOR AUTOMATIC SHUT OFF.

5- PROVIDE LOW SOUND OUTDOOR FAN.

6- VARIABLE SPEED INDOOR FAN. 7- PROVIDE FACTORY MOUNTED AND TESTED BIPOLAR IONIZATION SYSTEM PER UNIT SPECIFICATION REQUIREMENTS. MANUFACTURER SHALL PROVIDE A TRANSFORMER PACKAGE TO INTERNALLY POWER THE BIPOLAR IONIZATION.

<b>EXISTING AIR</b>	CONDITIONER	AND NEW A	IR CONDITIONER	COMPARISON	<b>SCHEDULE</b>
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EXISTING AIR CONDITIONER	R AND N	EW AIR	CONDI	LIONE	R COMP	ARISON	SCHEL	JULE												
UNIT SYMBOL	AC	C-A1	AC-	-A2	AC	C-L1	AC	-K1	AC-	-M1	AC-	-M2	AC-	-M3	AC	-M4	AC-	-M5	AC-	-М6
MANUFACTURER	CARRIER	CARRIER	CARRIER	CARRIER	ICP	CARRIER	CARRIER	CARRIER	CARRIER	CARRIER	CARRIER	CARRIER	CARRIER	CARRIER	CARRIER	CARRIER	CARRIER	CARRIER	CARRIER	CARRIER
CONDITION	EXISTING	NEW	EXISTING	NEW	EXISTING	NEW	EXISTING	NEW	EXISTING	NEW	EXISTING	NEW	EXISTING	NEW	EXISTING	NEW	EXISTING	NEW	EXISTING	NEW
MODEL	48HJD006	48FCDA06	48HJD008	48FCDM08	RGS181LDE	3 48FCEM16	48HJD017	48FCFM16	48HJD006	48FCDA06	48HJD006	48FCDA06	48HJD008	48FCDM08	48HJD008	48FCDM08	48EWD028	48A9D025	48EWD028	48A9D025
DIMENSIONS (LxWxH) - IN	73.7 x 45 x 33.3	74.4 x 46.6 x 33.4	4 87.4 x 57.75 x 41.3	3 88.1 x 59.5 x 41.	.3 126 x 85 x 49	115.9 x 66.4 x 57.4	4 83.5 x 67.2 x 45	115.9 x 66.4 x 57.4	73.7 x 45 x 33.3	74.4 x 46.4 x 33.4	73.7 x 45 x 33.3	74.4 x 46.4 x 33.4	87.4 x 57.75 x 41.3	88.1 x 59.5 x 41.3	87.4 x 57.75 x 41.	.3 88.1 x 59.5 x 41.5	3 165.1 x 94 x 73	165 x 94 x 73	165.1 x 94 x 73	165 x 94 x 73
UNIT WEIGHT - LBS	619	563	870	745	1520	1345	1820	1363	619	563	619	563	870	745	870	745	4413	4499	4413	4499
ECONOMIZER WEIGHT - LBS	90	74	145	111	149	134	175	134	90	74	90	74	145	111	145	111	500	1	500	1
POWER EXHAUST WEIGHT — LBS	N/A	N/A	N/A	N/A	325	ON RETURN DUCT (222)	775	ON RETURN DUCT (313)		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TOTAL WEIGHT - LBS	709	637	1015	856	1994	1479	2370	1497	709	637	709	637	1015	856	1015	856	4913	4499	4913	4499

REMARKS

1- POWER EXHAUST/ECONOMIZER WEIGHT IS INCLUDED IN TOTAL WEIGHT.



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EXISTING WALL MOUNTED AIR CONDITIONER AND NEW WALL MOUNTED AIR CONDITIONER COMPARISON SCHEDULE			AIR CONDITIONER SCHEDULE (WALL MOUNTED)		
			UNIT SYMBOL	AC-R1	
			LOCATION	RELOCATABLE CLASSROOMS	
RELOCATABLE NUMBER	1 THF	RU 30	SHEET REFERENCE	M2-1.5	
UNIT SYMBOL	AC-	-R1	MANFACTURER	BARD	
MANUFACTURER	BARD	BARD	MODEL	W30G4-AXBXX4TXH	
CONDITION	EXISTING	NEW	TYPE	WALL MOUNTED	
MODEL	WAG30C	W30G4	INDOOR FAN - CFM	975	
	WAGSUC	W30G4	OUTSIDE AIR — CFM	400	
TYPE	GAS/ELECTRIC	GAS/ELECTRIC	EXTERNAL S.P "WG	0.5	
CFH INPUT	65	68	BLOWER MOTOR - HP	0.5	
DIMENSIONS (H"xW"xD") — IN	84 x 38.25 x 18.75	81.63 x 38 x 24.25	EVAP. EAT - °F - DB	80.0	
UNIT WEIGHT — LBS	530	530	EVAP. EAT - °F - WB	67.0	
WALL SOUND CURB WEIGHT — LBS	N/A	224	COND. EAT — °F — DB	95.0	
TOTAL WEIGHT — LBS 530 754		COOLING CAPACITY - MBH	27.8		
			COOLING CAPACITY SENS - MBH	20.7	
			HEATING INPUT-MBH / STAGE	68	
			FILTER TYPE	2" PLEATED MERV-8	
			MCA / MOCP	22.6 / 30	
			MIN. EER / SEER	11.00	
			MIN. AFUE %	82	
			VOLT - PHASE	208/230 - 1	
			WALL SOUND CURB MODEL NO.	CCURBT4860-4	
			OPERATING WEIGHT LBS	754	

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BARD	
W30G4-AXBXX4TXH	
WALL MOUNTED	
975	
400	
0.5	
0.5	
80.0	
67.0	
95.0	
27.8	
20.7	■ \M/FSTGROUP
68	WESTGROUP DESIGNS
2" PLEATED MERV-8	J = 3   G   N   3
22.6 / 30	19900 MacArthur Boulevard I Suite 1000
11.00	Irvine I California I 92612 949.250.0880 I FAX 949.250.0882
82	www.westgroupdesigns.com
208/230 - 1	
CCURBT4860-4	
754	
81.63" × 38" × 24.25"	

5/M0-2.1

1,2,3,4,5

#### REMARKS

DETAIL REFERENCE

REMARKS

DIMENSIONS (H"XW"XD")

- 1- INSTALL UNIT AND PROVIDE CLEARANCES PER MANUFACTURE RECOMMENDATIONS. 2- MATCH COLOR WITH BUILDING FINISH AND RECEIVE APPROVAL FROM
- OWNER/ARCHITECT PRIOR TO ORDERING. 3- IT IS THE INTENT THAT THE EXISTING WALL OPENINGS (WHERE REPLACEMENT OF UNITS IS INDICATED) ARE ADEQUATE WITHOUT ENLARGEMENT. IF ANY INCREASE IN THE EXISTING OPENING IS REQUIRED, THE CONTRACTOR SHALL GET THE APPROVAL OF DSA/SFOR PRIOR TO PROCEEDING.
- 4— ACCESSORY AND OPTION WEIGHTS ARE INCLUDED IN OPERATING WEIGHT.
  5— UNIT COMPLETE WITH CONDENSER COIL PROTECTION GRILLES FROM
  MANUFACTURER FOR CLASSROOM RELOCATABLES 1 THRU 10 AND 21.



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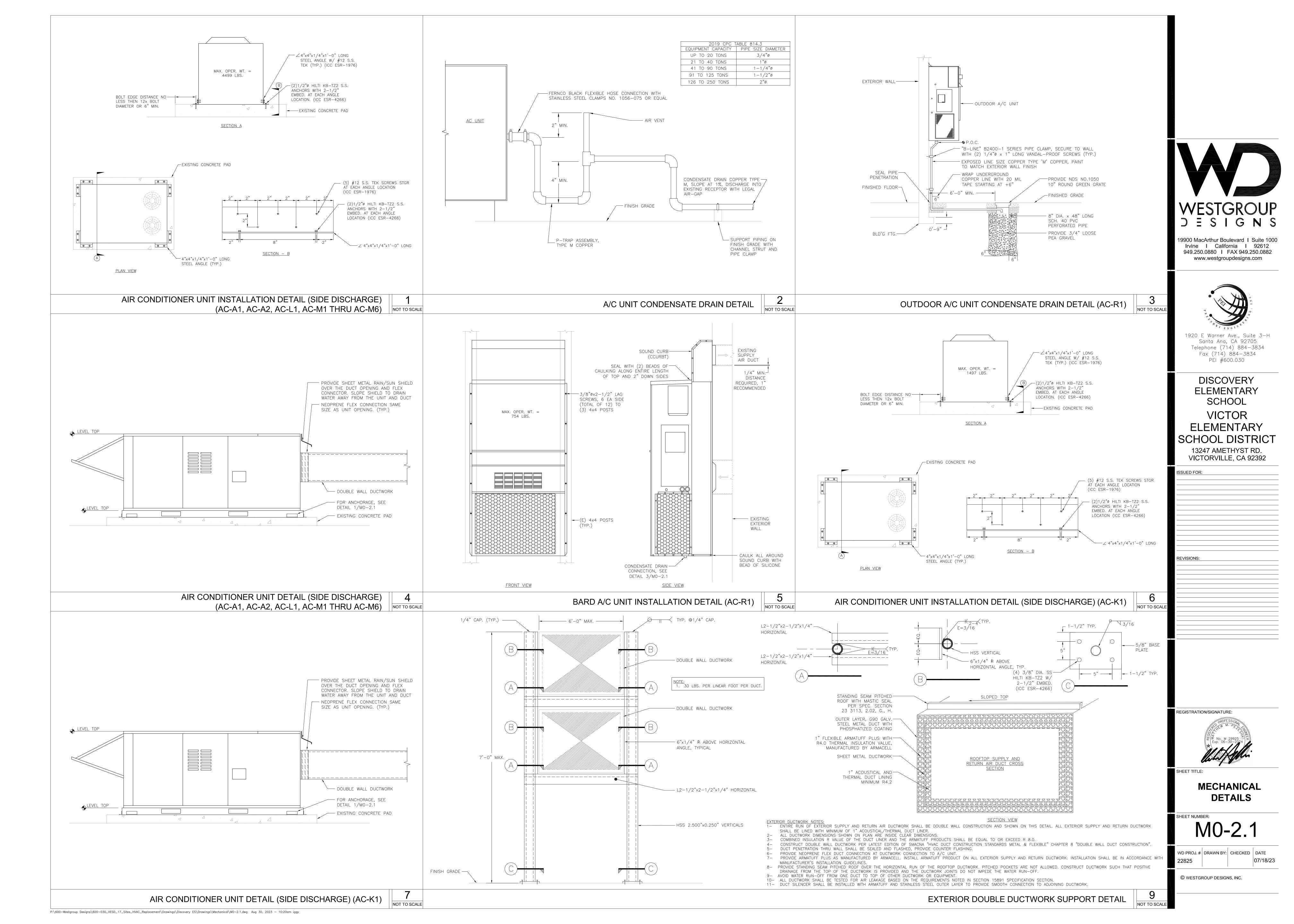
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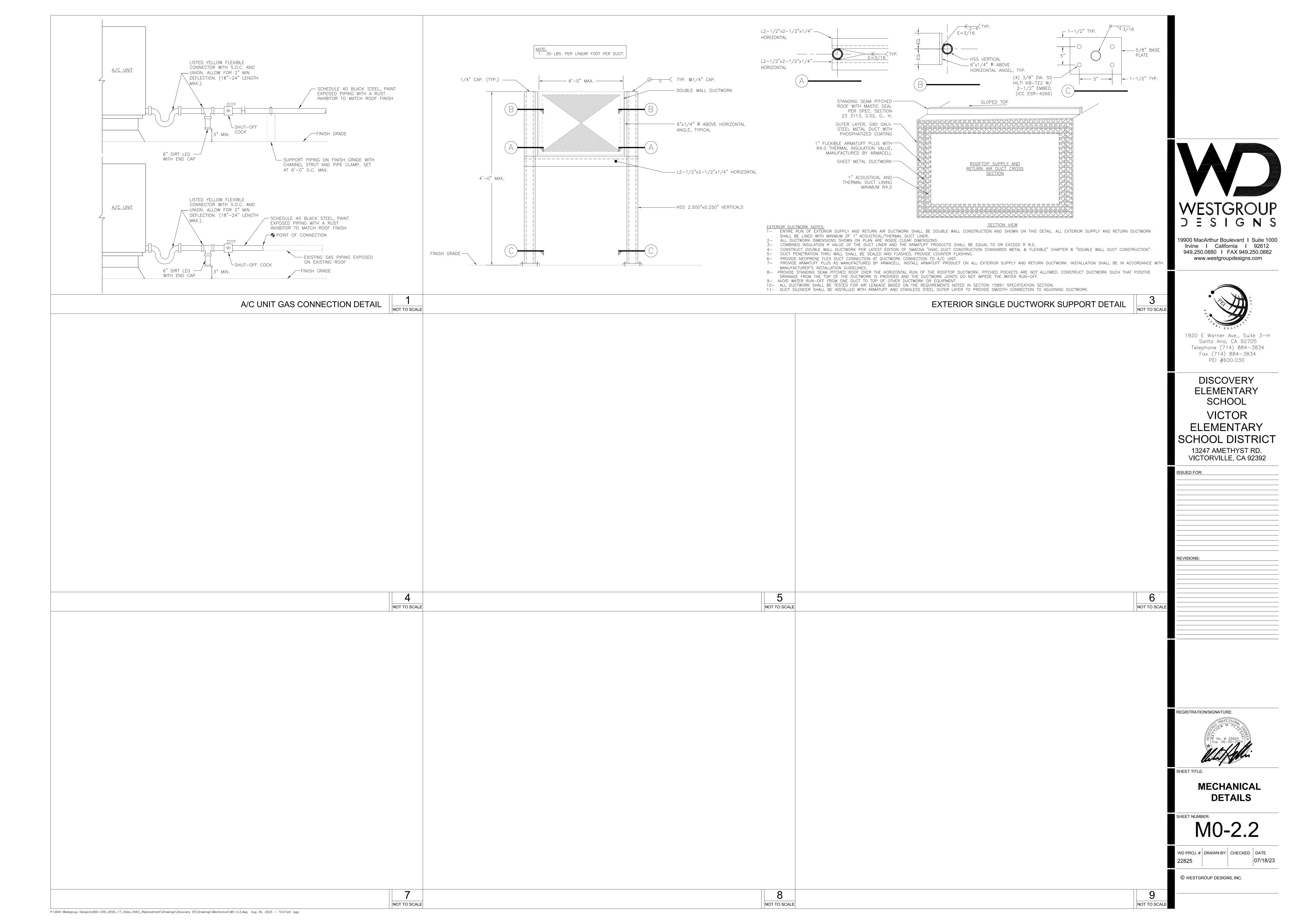
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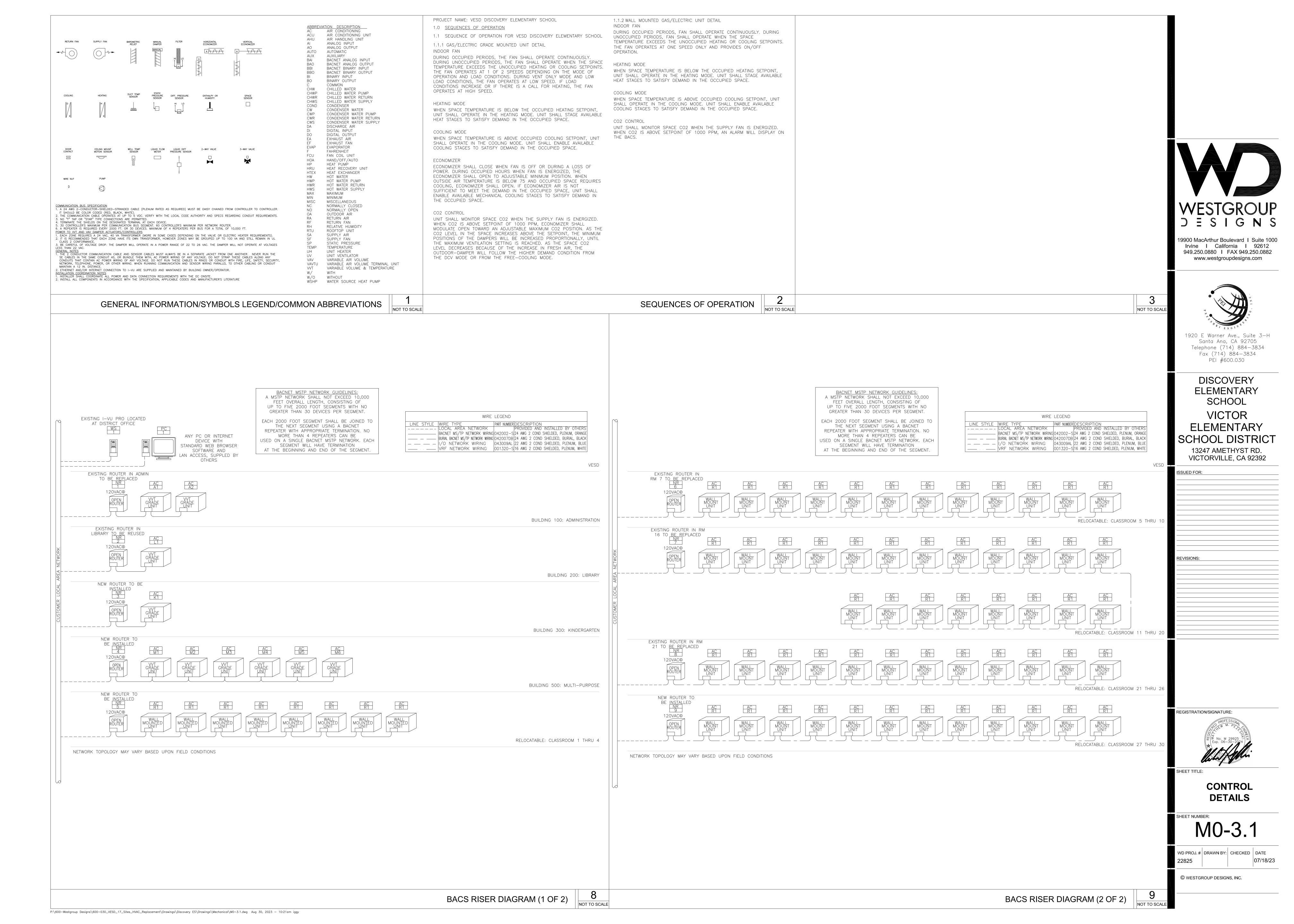
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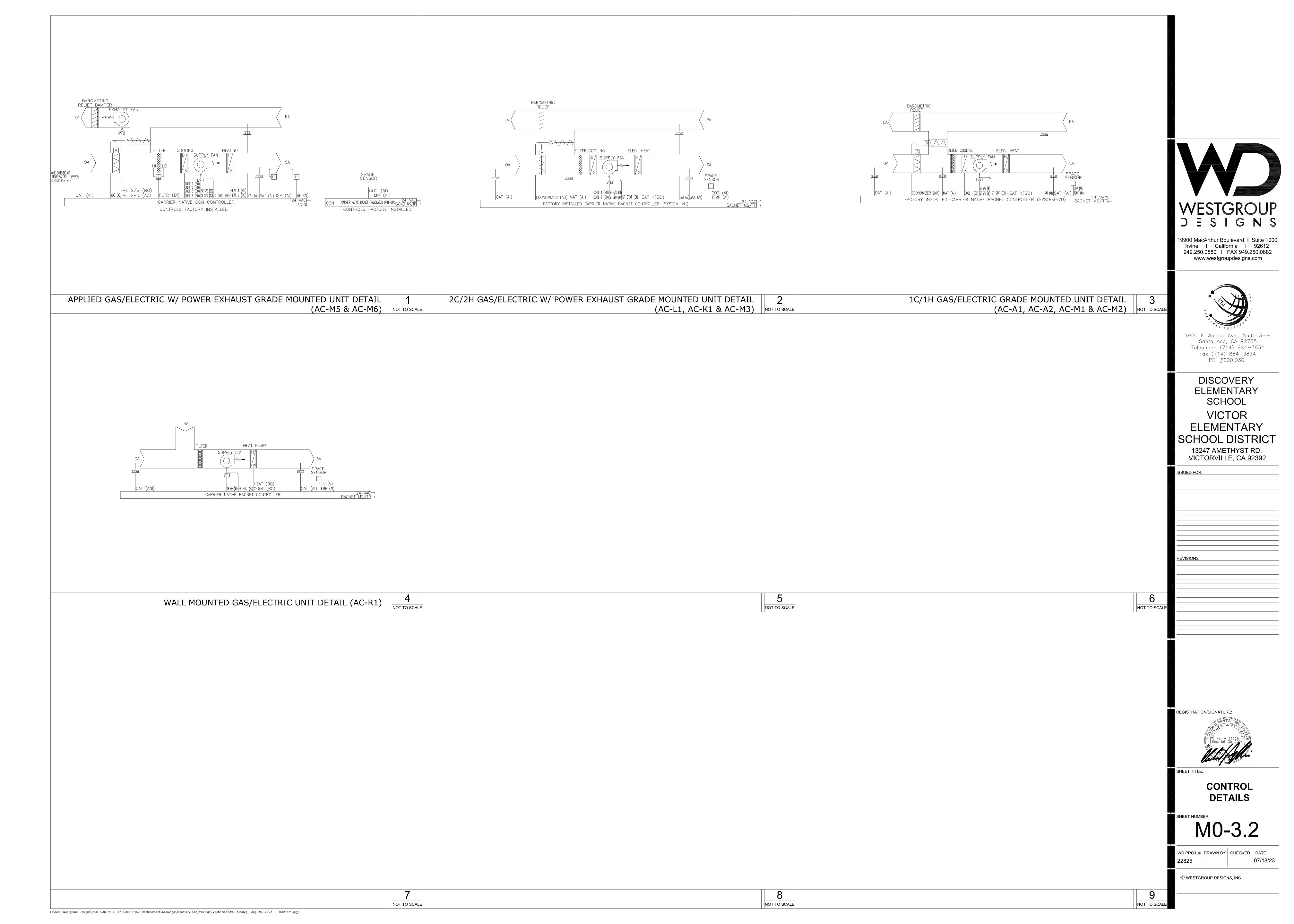
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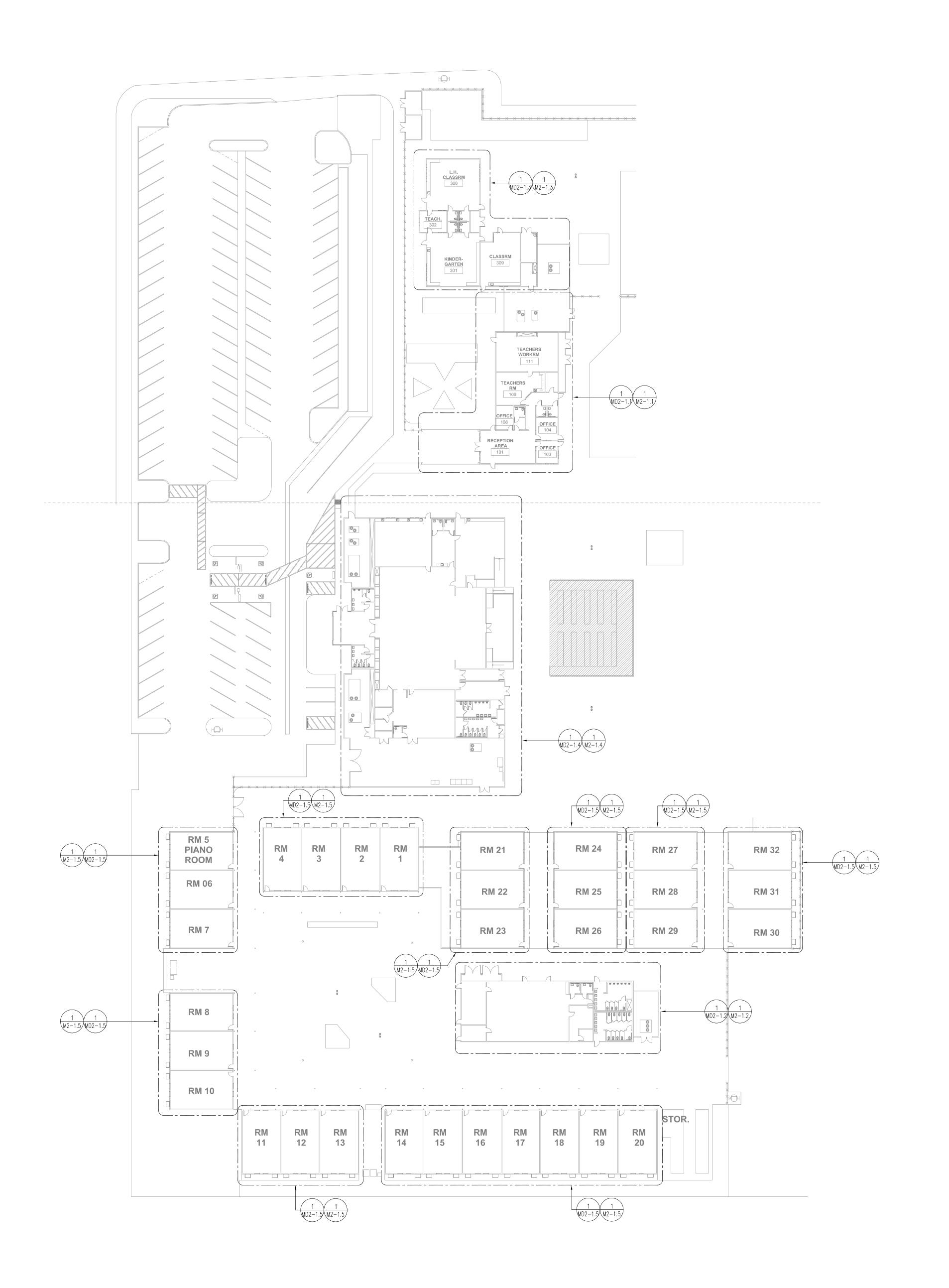
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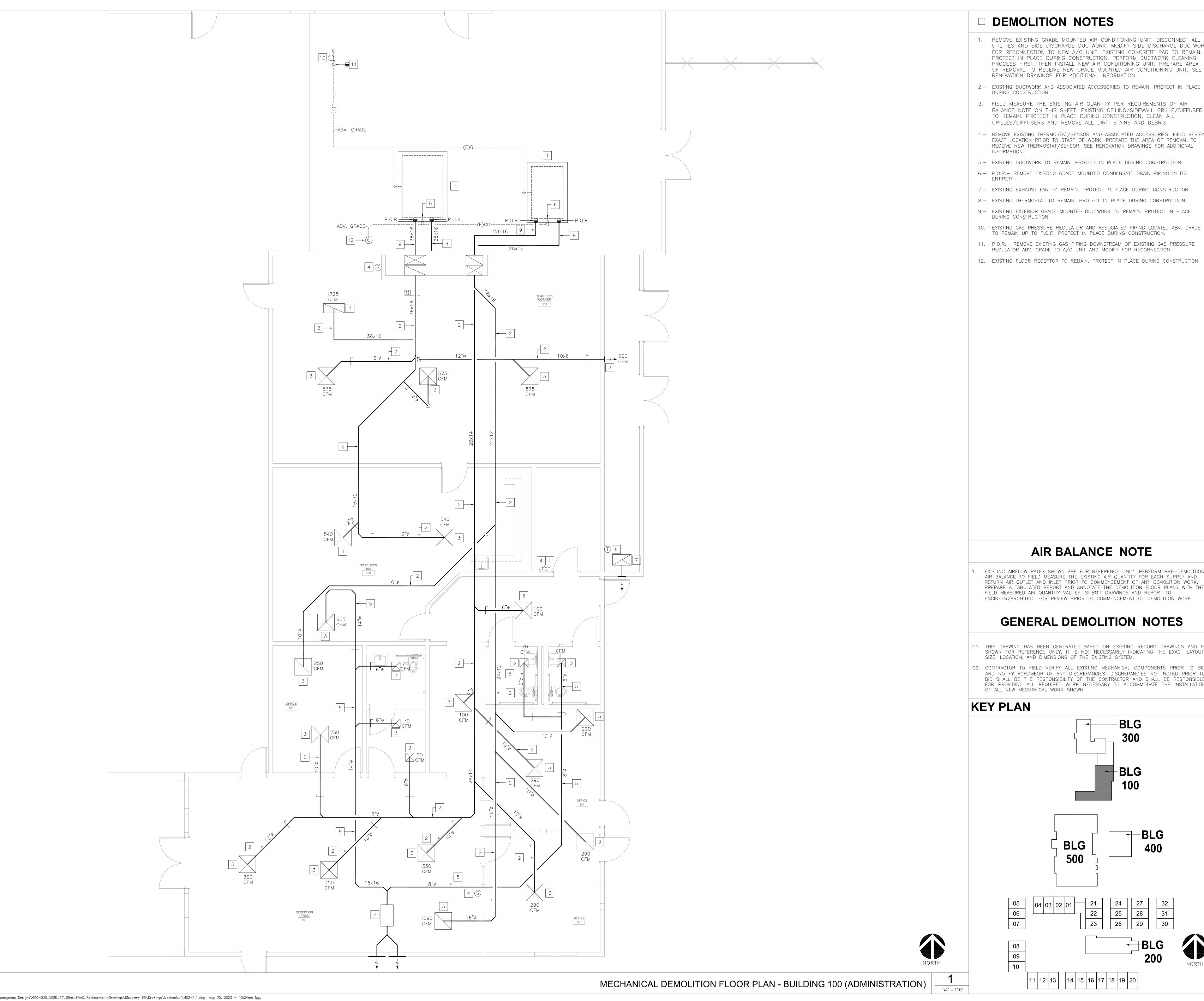
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#### □ DEMOLITION NOTES

- 1.- REMOVE EXISTING GRADE MOUNTED AIR CONDITIONING UNIT. DISCONNECT ALL UTILITIES AND SIDE DISCHARGE DUCTWORK. MODIFY SIDE DISCHARGE DUCTWORK FOR RECONNECTION TO NEW A/C UNIT. EXISTING CONCRETE PAD TO REMAIN, PROTECT IN PLACE DURING CONSTRUCTION. PERFORM DUCTWORK CLEANING PROCESS FIRST, THEN INSTALL NEW AIR CONDITIONING UNIT. PREPARE AREA OF REMOVAL TO RECEIVE NEW GRADE MOUNTED AIR CONDITIONING UNIT. SEE RENOVATION DRAWINGS FOR ADDITIONAL INFORMATION.
- 2.- EXISTING DUCTWORK AND ASSOCIATED ACCESSORIES TO REMAIN. PROTECT IN PLACE DURING CONSTRUCTION.
- 3.- FIELD MEASURE THE EXISTING AIR QUANTITY PER REQUIREMENTS OF AIR BALANCE NOTE ON THIS SHEET. EXISTING CEILING/SIDEWALL GRILLE/DIFFUSER TO REMAIN. PROTECT IN PLACE DURING CONSTRUCTION. CLEAN ALL GRILLES/DIFFUSERS AND REMOVE ALL DIRT, STAINS AND DEBRIS.
- 4.- REMOVE EXISTING THERMOSTAT/SENSOR AND ASSOCIATED ACCESSORIES. FIELD VERIFY EXACT LOCATION PRIOR TO START OF WORK. PREPARE THE AREA OF REMOVAL TO RECEIVE NEW THERMOSTAT/SENSOR. SEE RENOVATION DRAWINGS FOR ADDITIONAL INFORMATION.
- 5.- EXISTING DUCTWORK TO REMAIN. PROTECT IN PLACE DURING CONSTRUCTION.
- 7.- EXISTING EXHAUST FAN TO REMAIN. PROTECT IN PLACE DURING CONSTRUCTION.
- 8.- EXISTING THERMOSTAT TO REMAIN. PROTECT IN PLACE DURING CONSTRUCTION.
- 9.- EXISTING EXTERIOR GRADE MOUNTED DUCTWORK TO REMAIN. PROTECT IN PLACE
- DURING CONSTRUCTION.
- 11.- P.O.R.- REMOVE EXISTING GAS PIPING DOWNSTREAM OF EXISTING GAS PRESSURE REGULATOR ABV. GRADE TO A/C UNIT AND MODIFY FOR RECONNECTION.
- 12.- EXISTING FLOOR RECEPTOR TO REMAIN. PROTECT IN PLACE DURING CONSTRUCTION.



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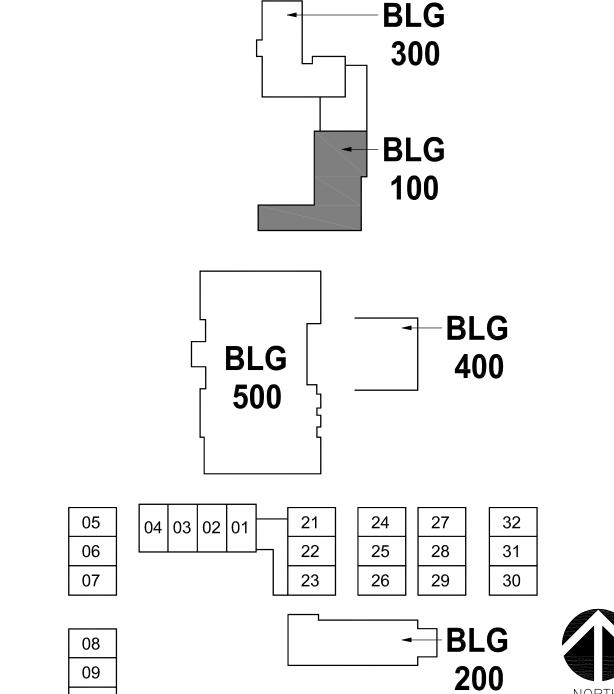
## AIR BALANCE NOTE

EXISTING AIRFLOW RATES SHOWN ARE FOR REFERENCE ONLY. PERFORM PRE-DEMOLITION AIR BALANCE TO FIELD MEASURE THE EXISTING AIR QUANTITY FOR EACH SUPPLY AND RETURN AIR OUTLET AND INLET PRIOR TO COMMENCEMENT OF ANY DEMOLITION WORK. PREPARE A TABULATED REPORT AND ANNOTATE THE DEMOLITION FLOOR PLANS WITH THE FIELD MEASURED AIR QUANTITY VALUES. SUBMIT DRAWINGS AND REPORT TO ENGINEER/ARCHITECT FOR REVIEW PRIOR TO COMMENCEMENT OF DEMOLITION WORK.

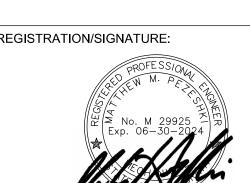
#### **GENERAL DEMOLITION NOTES**

- G1. THIS DRAWING HAS BEEN GENERATED BASED ON EXISTING RECORD DRAWINGS AND IS SHOWN FOR REFERENCE ONLY. IT IS NOT NECESSARILY INDICATING THE EXACT LAYOUT, SIZE, LOCATION, AND DIMENSIONS OF THE EXISTING SYSTEM.
- 32. CONTRACTOR TO FIELD—VERIFY ALL EXISTING MECHANICAL COMPONENTS PRIOR TO BID AND NOTIFY AOR/MEOR OF ANY DISCREPANCIES. DISCREPANCIES NOT NOTED PRIOR TO BID SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE RESPONSIBLE FOR PROVIDING ALL REQUIRED WORK NECESSARY TO ACCOMMODATE THE INSTALLATION OF ALL NEW MECHANICAL WORK SHOWN.





11 12 13 14 15 16 17 18 19 20

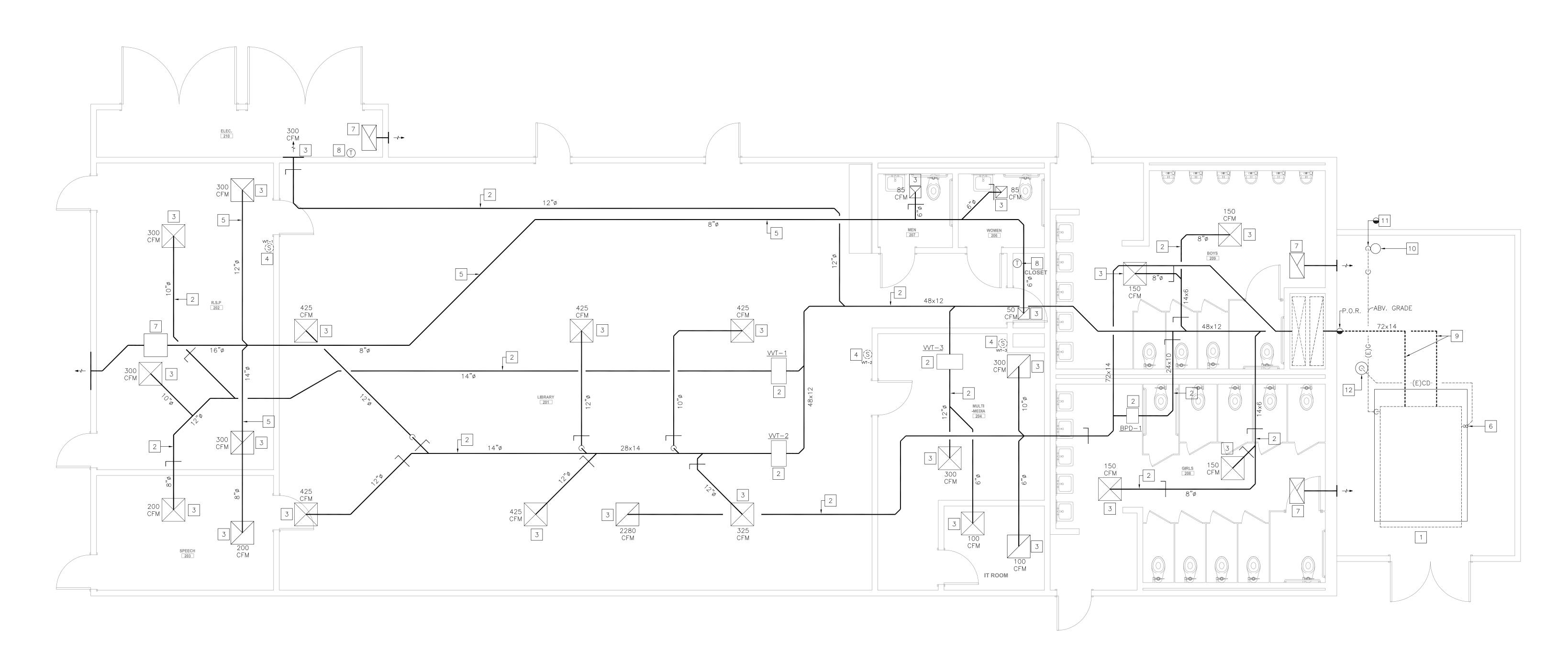


**MECHANICAL DEMOLITION FLOOR PLAN - BUILDING 100** 

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G2. CONTRACTOR TO FIELD-VERIFY ALL EXISTING MECHANICAL COMPONENTS PRIOR TO BID AND NOTIFY AOR/MEOR OF ANY DISCREPANCIES. DISCREPANCIES NOT NOTED PRIOR TO BID SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE RESPONSIBLE FOR PROVIDING ALL REQUIRED WORK NECESSARY TO ACCOMMODATE THE INSTALLATION OF ALL NEW MECHANICAL WORK SHOWN.

#### AIR BALANCE NOTE

EXISTING AIRFLOW RATES SHOWN ARE FOR REFERENCE ONLY. PERFORM PRE-DEMOLITION AIR BALANCE TO FIELD MEASURE THE EXISTING AIR QUANTITY FOR EACH SUPPLY AND RETURN AIR OUTLET AND INLET PRIOR TO COMMENCEMENT OF ANY DEMOLITION WORK. PREPARE A TABULATED REPORT AND ANNOTATE THE DEMOLITION FLOOR PLANS WITH THE FIELD MEASURED AIR QUANTITY VALUES. SUBMIT DRAWINGS AND REPORT TO ENGINEER/ARCHITECT FOR REVIEW PRIOR TO COMMENCEMENT OF DEMOLITION WORK.



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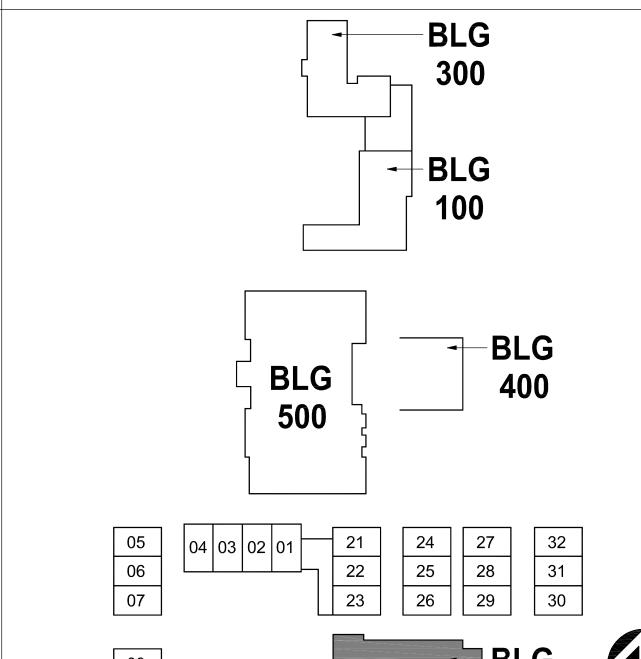
MECHANICAL DEMOLITION FLOOR PLAN - BUILDING 200 (LIBRARY)

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#### □ DEMOLITION NOTES KEY PLAN

- 1.- REMOVE EXISTING GRADE MOUNTED AIR CONDITIONING UNIT. DISCONNECT ALL UTILITIES AND SIDE DISCHARGE DUCTWORK. REMOVE EXISTING PLENUM CURB. EXISTING CONCRETE PAD TO REMAIN, PROTECT IN PLACE DURING CONSTRUCTION. PERFORM DUCTWORK CLEANING PROCESS FIRST, THEN INSTALL NEW AIR CONDITIONING UNIT. PREPARE AREA OF REMOVAL TO RECEIVE NEW GRADE MOUNTED AIR CONDITIONING UNIT. SEE RENOVATION DRAWINGS FOR ADDITIONAL INFORMATION.
- 2.- EXISTING DUCTWORK AND ASSOCIATED ACCESSORIES TO REMAIN. PROTECT IN PLACE DURING CONSTRUCTION.
- 3.- FIELD MEASURE THE EXISTING AIR QUANTITY PER REQUIREMENTS OF AIR BALANCE NOTE ON THIS SHEET. EXISTING CEILING/SIDEWALL GRILLE/DIFFUSER TO REMAIN. PROTECT IN PLACE DURING CONSTRUCTION. CLEAN ALL GRILLES/DIFFUSERS AND REMOVE ALL DIRT, STAINS AND DEBRIS.
- 4.- REMOVE EXISTING THERMOSTAT/SENSOR AND ASSOCIATED ACCESSORIES. FIELD VERIFY EXACT LOCATION PRIOR TO START OF WORK. PREPARE THE AREA OF REMOVAL TO RECEIVE NEW THERMOSTAT/SENSOR. SEE RENOVATION DRAWINGS FOR ADDITIONAL INFORMATION.
- 5.- EXISTING DUCTWORK TO REMAIN. PROTECT IN PLACE DURING CONSTRUCTION.
- 6.- P.O.R.- REMOVE EXISTING GRADE MOUNTED CONDENSATE DRAIN PIPING IN ITS
- 7.- EXISTING EXHAUST FAN TO REMAIN. PROTECT IN PLACE DURING CONSTRUCTION.
- 8.- EXISTING THERMOSTAT TO REMAIN. PROTECT IN PLACE DURING CONSTRUCTION.
- 9.- REMOVE EXISTING EXTERIOR GRADE MOUNTED DUCTWORK AND POWER EXHAUST AS INDICATED. MODIFY EXISTING DUCTWORK AT P.O.R. FOR RECONNECTION TO NEW DUCTWORK. SEE RENOVATION FLOOR PLAN FOR ADDITIONAL INFORMATION.
- 10.- EXISTING GAS PRESSURE REGULATOR LOCATED ABV. GRADE TO REMAIN. PROTECT IN PLACE DURING CONSTRUCTION.
- 11.- P.O.R.- REMOVE EXISTING GAS PIPING DOWNSTREAM OF EXISTING GAS PRESSURE REGULATOR ABV. GRADE TO A/C UNIT AND MODIFY FOR RECONNECTION. SEE RENOVATION DRAWINGS FOR ADDITIONAL INFORMATION.
- 12.- EXISTING FLOOR RECEPTOR TO REMAIN. PROTECT IN PLACE DURING CONSTRUCTION.









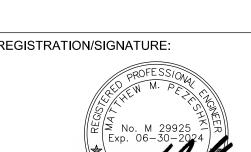
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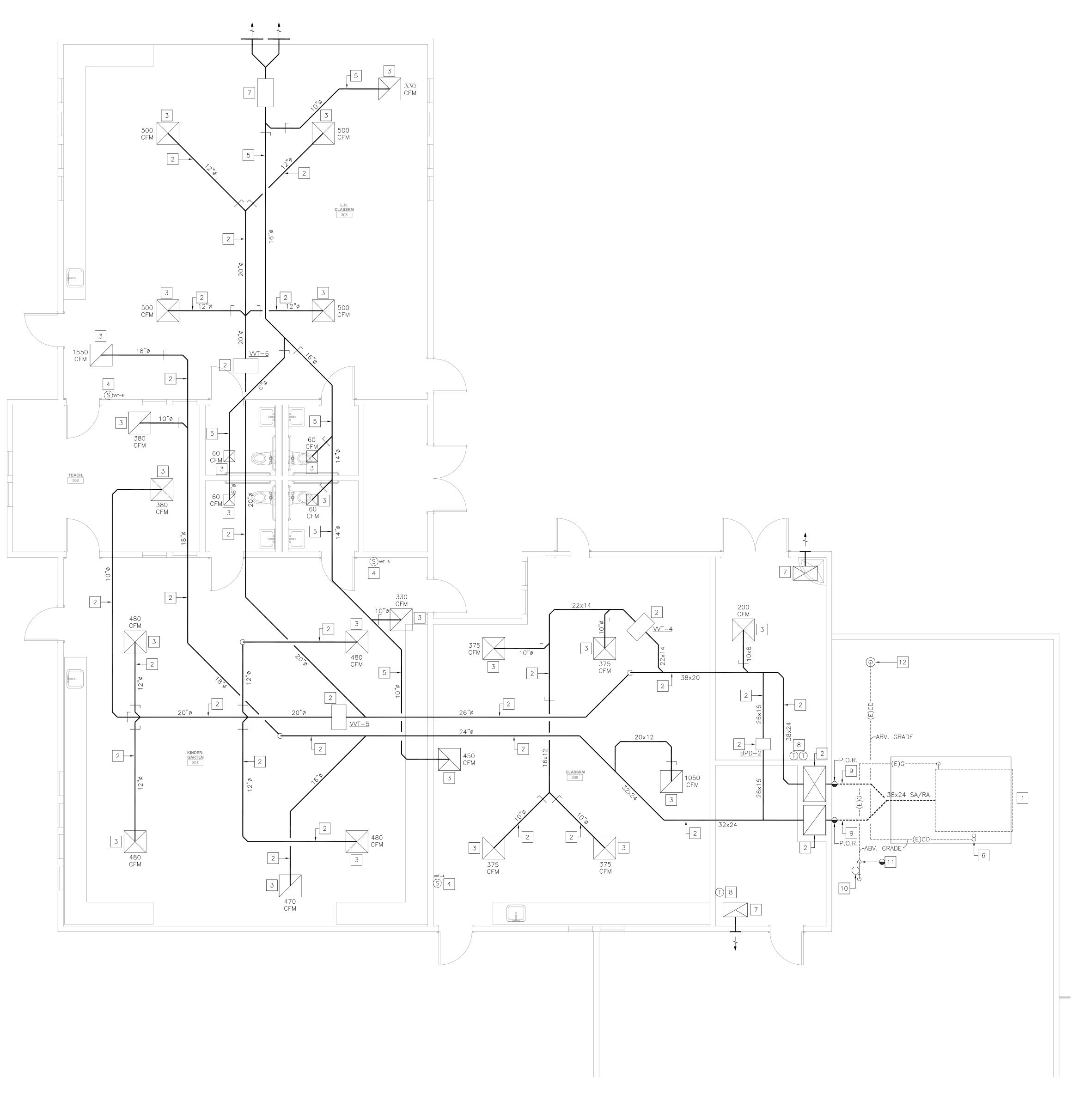


**MECHANICAL DEMOLITION FLOOR PLAN - BUILDING 200** 

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#### □ DEMOLITION NOTES

- 1.- REMOVE EXISTING GRADE MOUNTED AIR CONDITIONING UNIT INCLUDING POWER EXHAUST. DISCONNECT ALL UTILITIES AND SIDE DISCHARGE DUCTWORK. REMOVE EXISTING PLENUM CURB. EXISTING CONCRETE PAD TO REMAIN, PROTECT IN PLACE DURING CONSTRUCTION. PERFORM DUCTWORK CLEANING PROCESS FIRST, THEN INSTALL NEW AIR CONDITIONING UNIT. PREPARE AREA OF REMOVAL TO RECEIVE NEW GRADE MOUNTED AIR CONDITIONING UNIT. SEE RENOVATION DRAWINGS FOR ADDITIONAL INFORMATION.
- 2.- EXISTING DUCTWORK AND ASSOCIATED ACCESSORIES TO REMAIN. PROTECT IN PLACE DURING CONSTRUCTION.
- 3.- FIELD MEASURE THE EXISTING AIR QUANTITY PER REQUIREMENTS OF AIR BALANCE NOTE ON THIS SHEET. EXISTING CEILING/SIDEWALL GRILLE/DIFFUSER TO REMAIN. PROTECT IN PLACE DURING CONSTRUCTION. CLEAN ALL GRILLES/DIFFUSERS AND REMOVE ALL DIRT, STAINS AND DEBRIS.
- 4.- REMOVE EXISTING THERMOSTAT/SENSOR AND ASSOCIATED ACCESSORIES. FIELD VERIFY EXACT LOCATION PRIOR TO START OF WORK. PREPARE THE AREA OF REMOVAL TO RECEIVE NEW THERMOSTAT/SENSOR. SEE RENOVATION DRAWINGS FOR ADDITIONAL
- 5.- EXISTING DUCTWORK TO REMAIN. PROTECT IN PLACE DURING CONSTRUCTION.
- 6.- P.O.R.- REMOVE EXISTING GRADE MOUNTED CONDENSATE DRAIN PIPING IN ITS ENTIRETY.
- 7.- EXISTING EXHAUST FAN TO REMAIN. PROTECT IN PLACE DURING CONSTRUCTION.
- 8.- EXISTING THERMOSTAT TO REMAIN. PROTECT IN PLACE DURING CONSTRUCTION. 9.- REMOVE EXISTING EXTERIOR GRADE MOUNTED DUCTWORK AS INDICATED. MODIFY
- EXISTING DUCTWORK AT P.O.R. FOR RECONNECTION TO NEW DUCTWORK. SEE RENOVATION FLOOR PLAN FOR ADDITIONAL INFORMATION.

10.- EXISTING GAS PRESSURE REGULATOR LOCATED ABV. GRADE TO REMAIN. PROTECT IN

- PLACE DURING CONSTRUCTION. 11.- P.O.R.- REMOVE EXISTING GAS PIPING DOWNSTREAM OF EXISTING GAS PRESSURE
- REGULATOR ABV. GRADE TO A/C UNIT AND MODIFY FOR RECONNECTION.
- 12.- EXISTING FLOOR RECEPTOR TO REMAIN. PROTECT IN PLACE DURING CONSTRUCTION.



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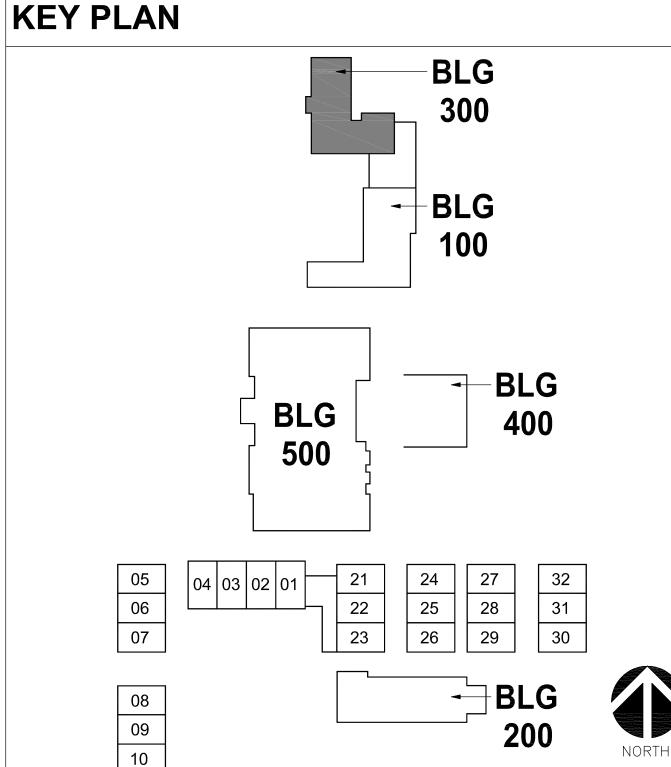
**DISCOVERY** ELEMENTARY SCHOOL VICTOR ELEMENTARY SCHOOL DISTRICT 13247 AMETHYST RD. VICTORVILLE, CA 92392

## AIR BALANCE NOTE

EXISTING AIRFLOW RATES SHOWN ARE FOR REFERENCE ONLY. PERFORM PRE-DEMOLITION AIR BALANCE TO FIELD MEASURE THE EXISTING AIR QUANTITY FOR EACH SUPPLY AND RETURN AIR OUTLET AND INLET PRIOR TO COMMENCEMENT OF ANY DEMOLITION WORK. PREPARE A TABULATED REPORT AND ANNOTATE THE DEMOLITION FLOOR PLANS WITH THE FIELD MEASURED AIR QUANTITY VALUES. SUBMIT DRAWINGS AND REPORT TO ENGINEER/ARCHITECT FOR REVIEW PRIOR TO COMMENCEMENT OF DEMOLITION WORK.

#### **GENERAL DEMOLITION NOTES**

- G1. THIS DRAWING HAS BEEN GENERATED BASED ON EXISTING RECORD DRAWINGS AND IS SHOWN FOR REFERENCE ONLY. IT IS NOT NECESSARILY INDICATING THE EXACT LAYOUT, SIZE, LOCATION, AND DIMENSIONS OF THE EXISTING SYSTEM.
- G2. CONTRACTOR TO FIELD-VERIFY ALL EXISTING MECHANICAL COMPONENTS PRIOR TO BID AND NOTIFY AOR/MEOR OF ANY DISCREPANCIES. DISCREPANCIES NOT NOTED PRIOR TO BID SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE RESPONSIBLE FOR PROVIDING ALL REQUIRED WORK NECESSARY TO ACCOMMODATE THE INSTALLATION OF ALL NEW MECHANICAL WORK SHOWN.



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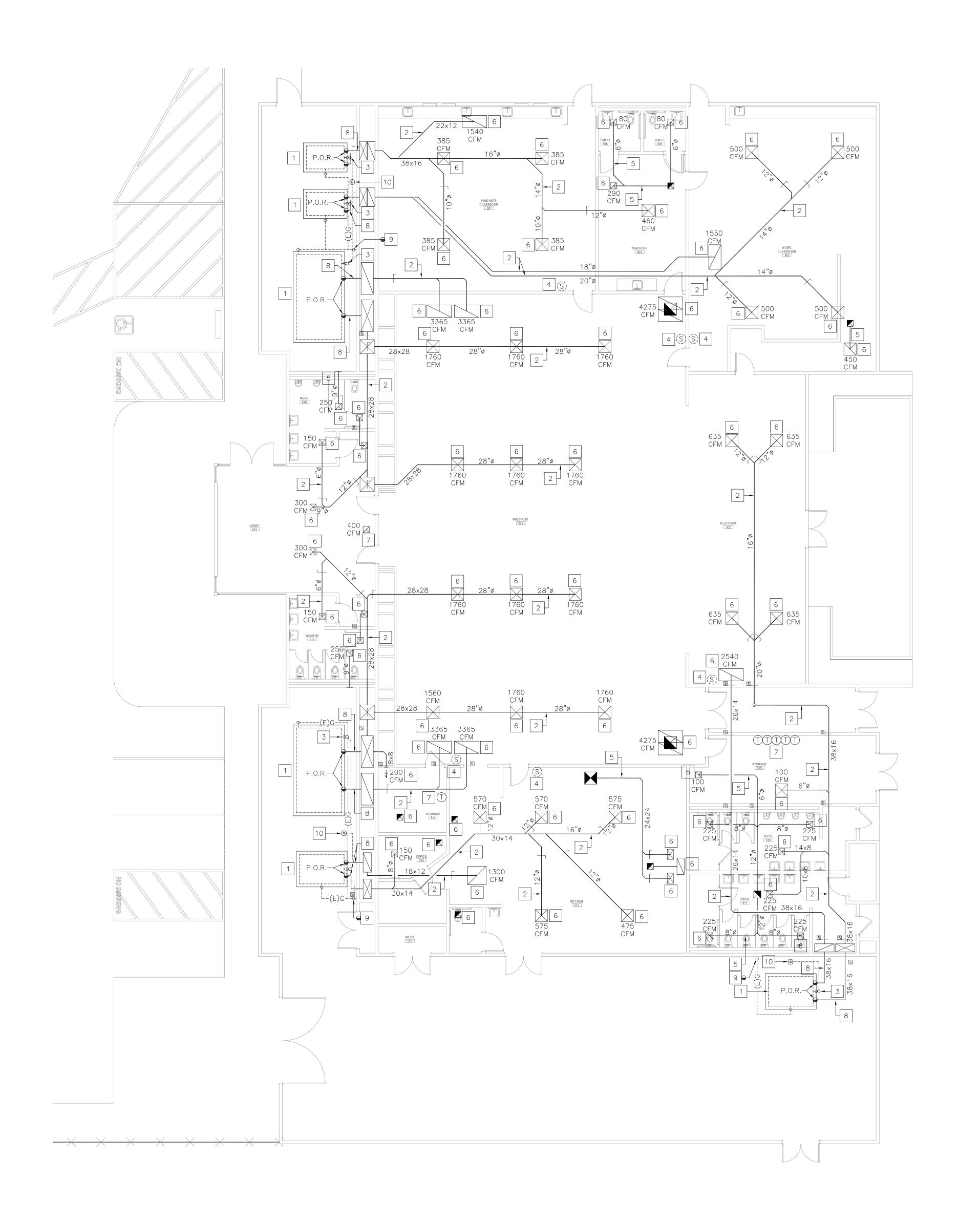


**MECHANICAL DEMOLITION FLOOR PLAN - BUILDING 300** 

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MECHANICAL DEMOLITION FLOOR PLAN - BUILDING 300 (KINDERGARTEN)



#### □ DEMOLITION NOTES

- 1.- REMOVE EXISTING GRADE MOUNTED AIR CONDITIONING UNIT INCLUDING POWER EXHAUST (IF APPLICABLE). DISCONNECT ALL UTILITIES AND SIDE DISCHARGE DUCTWORK. MODIFY SIDE DISCHARGE DUCTWORK FOR RECONNECTION. EXISTING CONCRETE PAD TO REMAIN, PROTECT IN PLACE DURING CONSTRUCTION. PERFORM DUCTWORK CLEANING PROCESS FIRST, THEN INSTALL NEW AIR CONDITIONING UNIT. PREPARE AREA OF REMOVAL TO RECEIVE NEW GRADE MOUNTED AIR CONDITIONING UNIT. SEE RENOVATION DRAWINGS FOR ADDITIONAL INFORMATION.
- 2.- EXISTING DUCTWORK AND ASSOCIATED ACCESSORIES TO REMAIN. PROTECT IN PLACE DURING CONSTRUCTION.
- 3.- P.O.R.- REMOVE EXISTING GRADE MOUNTED CONDENSATE DRAIN PIPING IN ITS ENTIRETY.
- 4.- REMOVE EXISTING THERMOSTAT/SENSOR AND ASSOCIATED ACCESSORIES. FIELD VERIFY EXACT LOCATION PRIOR TO START OF WORK. PREPARE THE AREA OF REMOVAL TO RECEIVE NEW THERMOSTAT/SENSOR. SEE RENOVATION DRAWINGS FOR ADDITIONAL INFORMATION.
- 5.- EXISTING DUCTWORK TO REMAIN. PROTECT IN PLACE DURING CONSTRUCTION.
- 6.- FIELD MEASURE THE EXISTING AIR QUANTITY PER REQUIREMENTS OF AIR BALANCE NOTE ON THIS SHEET. EXISTING CEILING/SIDEWALL GRILLE/DIFFUSER TO REMAIN. PROTECT IN PLACE DURING CONSTRUCTION. CLEAN ALL GRILLES/DIFFUSERS AND REMOVE ALL DIRT, STAINS AND DEBRIS.
- 7.- EXISTING THERMOSTAT TO REMAIN. PROTECT IN PLACE DURING CONSTRUCTION. 8.- EXISTING EXTERIOR GRADE MOUNTED DUCTWORK TO REMAIN. PROTECT IN PLACE

REGULATOR ABV. GRADE TO A/C UNIT AND MODIFY FOR RECONNECTION.

- DURING CONSTRUCTION. 9.- P.O.R.- REMOVE EXISTING GAS PIPING DOWNSTREAM OF EXISTING GAS PRESSURE
- 10.- EXISTING FLOOR RECEPTOR TO REMAIN. PROTECT IN PLACE DURING CONSTRUCTION.



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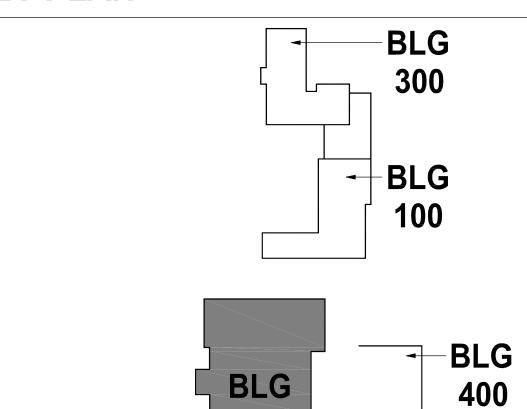
## AIR BALANCE NOTE

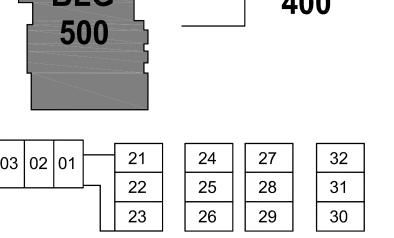
EXISTING AIRFLOW RATES SHOWN ARE FOR REFERENCE ONLY. PERFORM PRE-DEMOLITION AIR BALANCE TO FIELD MEASURE THE EXISTING AIR QUANTITY FOR EACH SUPPLY AND RETURN AIR OUTLET AND INLET PRIOR TO COMMENCEMENT OF ANY DEMOLITION WORK. PREPARE A TABULATED REPORT AND ANNOTATE THE DEMOLITION FLOOR PLANS WITH THE FIELD MEASURED AIR QUANTITY VALUES. SUBMIT DRAWINGS AND REPORT TO ENGINEER/ARCHITECT FOR REVIEW PRIOR TO COMMENCEMENT OF DEMOLITION WORK.

#### **GENERAL DEMOLITION NOTES**

- G1. THIS DRAWING HAS BEEN GENERATED BASED ON EXISTING RECORD DRAWINGS AND IS SHOWN FOR REFERENCE ONLY. IT IS NOT NECESSARILY INDICATING THE EXACT LAYOUT, SIZE, LOCATION, AND DIMENSIONS OF THE EXISTING SYSTEM.
- G2. CONTRACTOR TO FIELD-VERIFY ALL EXISTING MECHANICAL COMPONENTS PRIOR TO BID AND NOTIFY AOR/MEOR OF ANY DISCREPANCIES. DISCREPANCIES NOT NOTED PRIOR TO BID SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE RESPONSIBLE FOR PROVIDING ALL REQUIRED WORK NECESSARY TO ACCOMMODATE THE INSTALLATION OF ALL NEW MECHANICAL WORK SHOWN.

#### **KEY PLAN**





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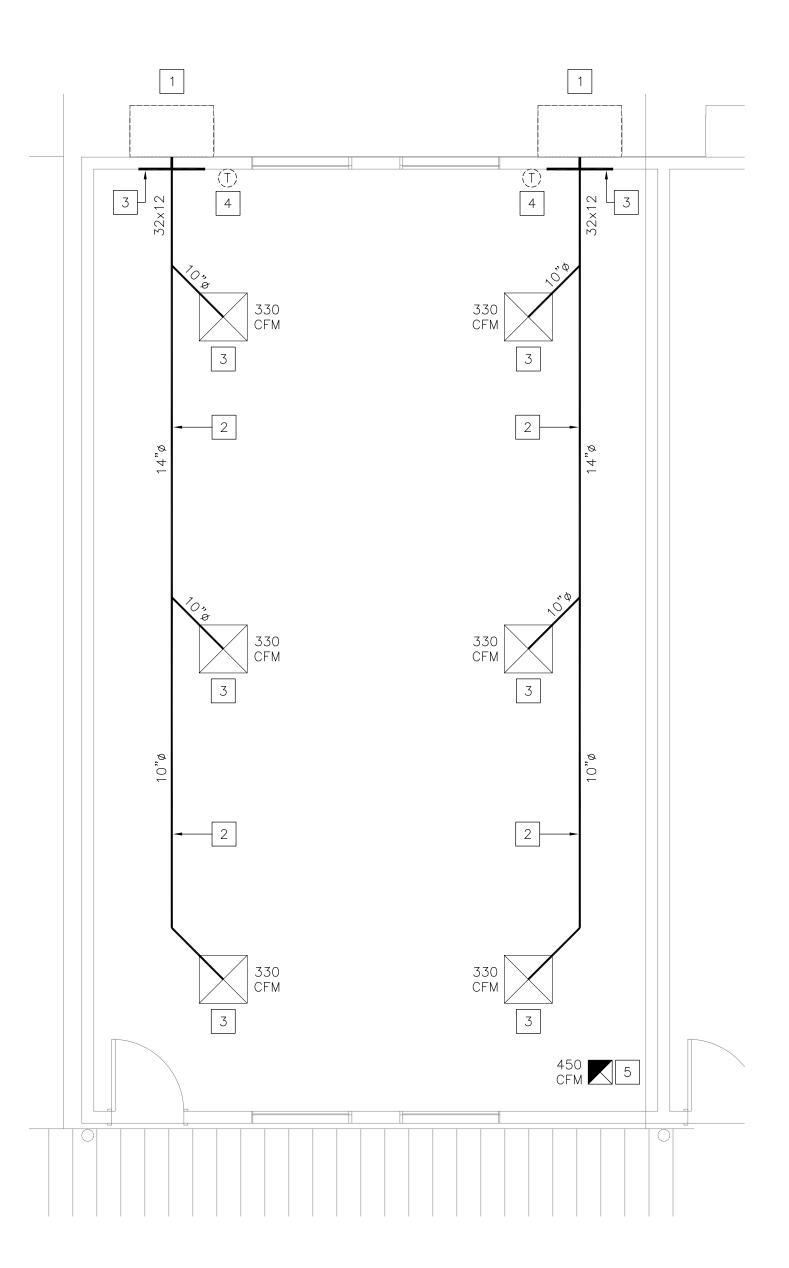


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#### □ DEMOLITION NOTES

- 1.- REMOVE EXISTING WALL MOUNTED GAS-ELECTRIC AIR CONDITIONING UNIT. DISCONNECT ALL UTILITIES AND DUCTWORK. MODIFY EXISTING DUCTWORK FOR RECONNECTION. MODIFY GAS PIPING FOR RECONNECTION. REMOVE EXISTING CONDENSATE DRAIN PIPING IN ITS ENTIRETY. PERFORM DUCTWORK CLEANING PROCESS FIRST, THEN INSTALL NEW WALL MOUNTED GAS-ELECTRIC AIR CONDITIONING UNIT. PREPARE AREA OF REMOVAL TO RECEIVE NEW SOUND CURB AND WALL MOUNTED GAS-ELECTRIC AIR CONDITIONING UNIT. SEE RENOVATION DRAWINGS FOR ADDITIONAL INFORMATION.
- 2.- EXISTING DUCTWORK AND ASSOCIATED ACCESSORIES TO REMAIN. PROTECT IN PLACE DURING CONSTRUCTION.
- 3.- FIELD MEASURE THE EXISTING AIR QUANTITY PER REQUIREMENTS OF AIR BALANCE NOTE ON THIS SHEET. EXISTING CEILING/SIDEWALL GRILLE/DIFFUSER TO REMAIN. PROTECT IN PLACE DURING CONSTRUCTION. CLEAN ALL GRILLES/DIFFUSERS AND REMOVE ALL DIRT, STAINS AND DEBRIS.
- 4.- REMOVE EXISTING THERMOSTAT AND ASSOCIATED ACCESSORIES. FIELD VERIFY EXACT LOCATION PRIOR TO START OF WORK. PREPARE THE AREA OF REMOVAL TO RECEIVE NEW THERMOSTAT. SEE RENOVATION DRAWINGS FOR ADDITIONAL INFORMATION.
- 5.- EXISTING EA DUCTWORK, CEILING DIFFUSER AND ASSOCIATED ROOFTOP EXHAUST FAN TO REMAIN. PROTECT IN PLACE DURING CONSTRUCTION. CLEAN ALL DIFFUSERS AND REMOVE ALL DIRT AND DEBRIS.



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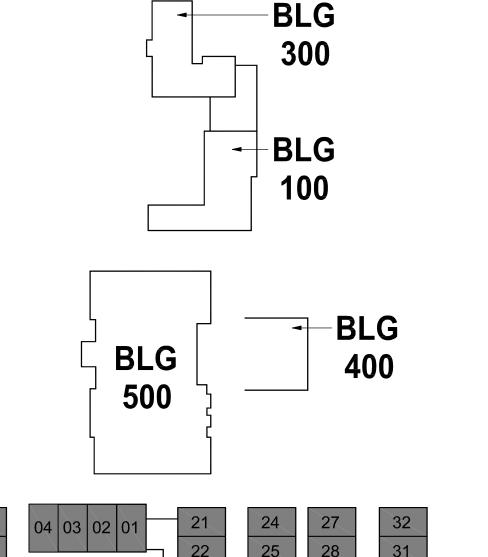
#### AIR BALANCE NOTE

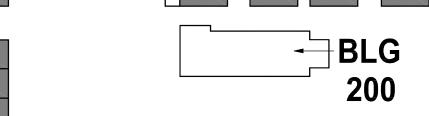
EXISTING AIRFLOW RATES SHOWN ARE FOR REFERENCE ONLY. PERFORM PRE-DEMOLITION AIR BALANCE TO FIELD MEASURE THE EXISTING AIR QUANTITY FOR EACH SUPPLY AND RETURN AIR OUTLET AND INLET PRIOR TO COMMENCEMENT OF ANY DEMOLITION WORK. PREPARE A TABULATED REPORT AND ANNOTATE THE DEMOLITION FLOOR PLANS WITH THE FIELD MEASURED AIR QUANTITY VALUES. SUBMIT DRAWINGS AND REPORT TO ENGINEER/ARCHITECT FOR REVIEW PRIOR TO COMMENCEMENT OF DEMOLITION WORK.

#### **GENERAL DEMOLITION NOTES**

- G1. THIS DRAWING HAS BEEN GENERATED BASED ON EXISTING RECORD DRAWINGS AND IS SHOWN FOR REFERENCE ONLY. IT IS NOT NECESSARILY INDICATING THE EXACT LAYOUT, SIZE, LOCATION, AND DIMENSIONS OF THE EXISTING SYSTEM.
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#### **KEY PLAN**





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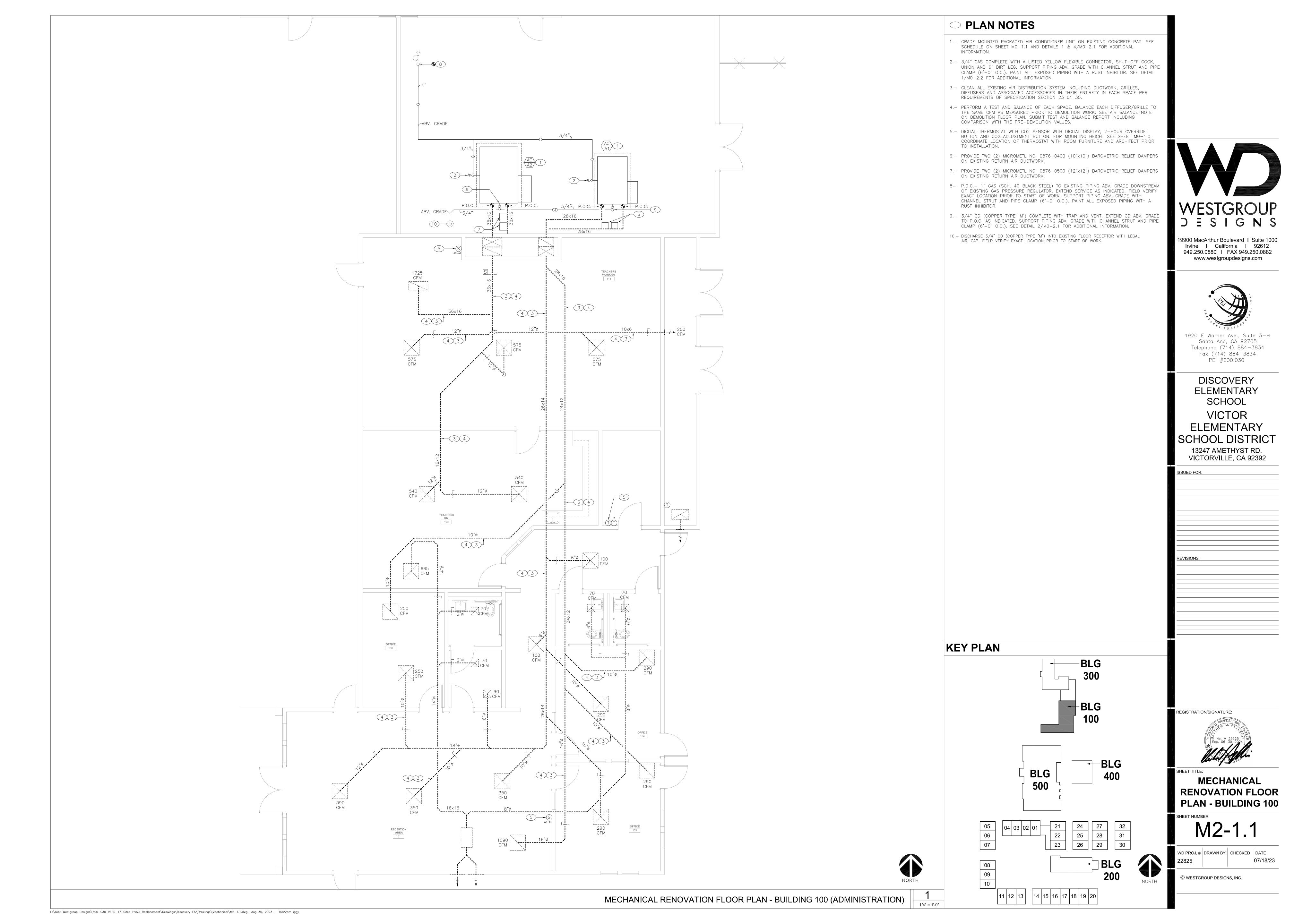
**MECHANICAL** 

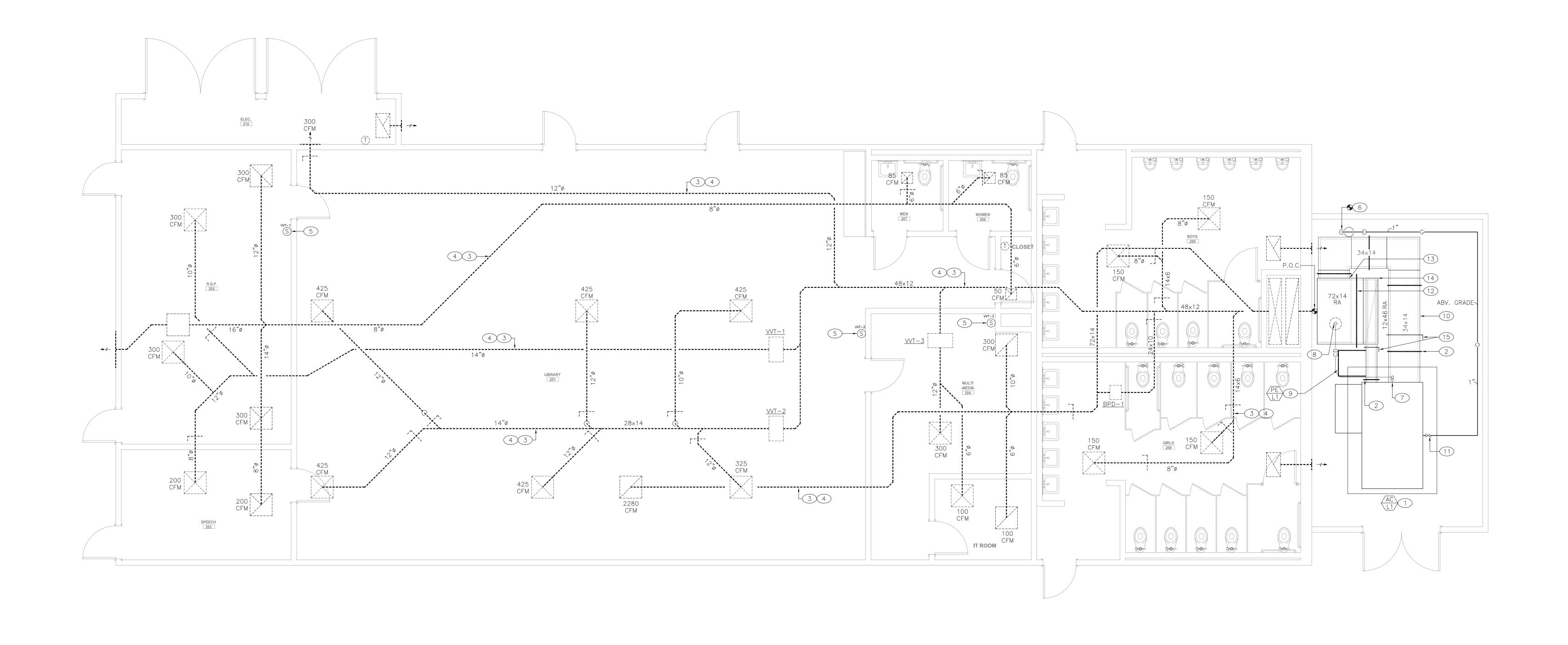
**DEMOLITION FLOOR** 

PLAN - RELOCATABLES

MECHANICAL DEMOLITION FLOOR PLAN - RELOCATABLE (DUAL UNIT)

1/4" = 1'-0"





15.- MANUAL VOLUME DAMPER.



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REVISIONS:

MECHANICAL RENOVATION FLOOR PLAN - BUILDING 200 (LIBRARY)

○ PLAN NOTES | KEY PLAN

1.- GRADE MOUNTED PACKAGED AIR CONDITIONER UNIT ON EXISTING CONCRETE PAD. SEE SCHEDULE ON SHEET MO-1.1 AND DETAILS 1 & 4/MO-2.1 FOR ADDITIONAL

2.- GRADE MOUNTED DUCT SUPPORT, SET AT 6'-0" O.C. MAX. SEE DETAIL 3/M0-2.2 FOR ADDITIONAL INFORMATION. 3.- CLEAN ALL EXISTING AIR DISTRIBUTION SYSTEM INCLUDING DUCTWORK, GRILLES,

REQUIREMENTS OF SPECIFICATION SECTION 23 01 30. 4.- PERFORM A TEST AND BALANCE OF EACH SPACE. BALANCE EACH DIFFUSER/GRILLE TO THE SAME CFM AS MEASURED PRIOR TO DEMOLITION WORK. SEE AIR BALANCE NOTE ON DEMOLITION FLOOR PLAN. SUBMIT TEST AND BALANCE REPORT INCLUDING COMPARISON WITH THE PRE-DEMOLITION VALUES.

DIFFUSERS AND ASSOCIATED ACCESSORIES IN THEIR ENTIRETY IN EACH SPACE PER

5.- DIGITAL THERMOSTAT WITH CO2 SENSOR WITH DIGITAL DISPLAY, 2-HOUR OVERRIDE BUTTON AND CO2 ADJUSTMENT BUTTON. FOR MOUNTING HEIGHT SEE SHEET MO-1.0. COORDINATE LOCATION OF THERMOSTAT WITH ROOM FURNITURE AND ARCHITECT PRIOR TO INSTALLATION.

6.- P.O.C.- 1" GAS (SCH. 40 BLACK STEEL) TO EXISTING PIPING ABV. GRADE DOWNSTREAM OF EXISTING GAS PRESSURE REGULATOR. EXTEND SERVICE AS INDICATED. FIELD VERIF EXACT LOCATION PRIOR TO START OF WORK. SUPPORT PIPING ABV. GRADE WITH CHANNEL STRUT AND PIPE CLAMP (6'-0" O.C.). PAINT ALL EXPOSED PIPING WITH A RUST INHIBITOR.

7.- 3/4" CD (COPPER TYPE 'M') COMPLETE WITH TRAP AND VENT. EXTEND CD ABV. GRADE TO P.O.C. AS INDICATED. SUPPORT PIPING ABV. GRADE WITH CHANNEL STRUT AND PIPE CLAMP (6'-0" O.C.). SEE DETAIL 2/MO-2.1 FOR ADDITIONAL INFORMATION.

8.- DISCHARGE 3/4" CD (COPPER TYPE 'M') INTO EXISTING FLOOR RECEPTOR WITH LEGAL

AIR-GAP. FIELD VERIFY EXACT LOCATION PRIOR TO START OF WORK. 9.- LOCATE POWER EXHAUST MODULE ON RETURN AIR DUCTWORK PER MANUFACTURER'S RECOMMENDATION AND GUIDELINES.

10.- GRADE MOUNTED DUCTWORK. SEE DETAIL 9/MO-2.1 FOR ADDITIONAL INFORMATION. 11.- 1" GAS COMPLETE WITH A LISTED YELLOW FLEXIBLE CONNECTOR, SHUT-OFF COCK, UNION AND 6" DIRT LEG. SUPPORT PIPING ABV. GRADE WITH CHANNEL STRUT AND PIPE CLAMP (6'-0" O.C.). PAINT ALL EXPOSED PIPING WITH A RUST INHIBITOR. SEE DETAIL 1/M0-2.2 FOR ADDITIONAL INFORMATION.

12.- GRADE MOUNTED DUCT SUPPORT, SET AT 6'-0" O.C. MAX. SEE DETAIL 9/MO-2.1 FOR ADDITIONAL INFORMATION.

13.- CONNECT 34x14 SA DUCT TO 72x38x14H SA PLENUM. 14.- CONNECT 46x12 RA DUCT TO BOTTOM OF 72x72x14H RA PLENUM.

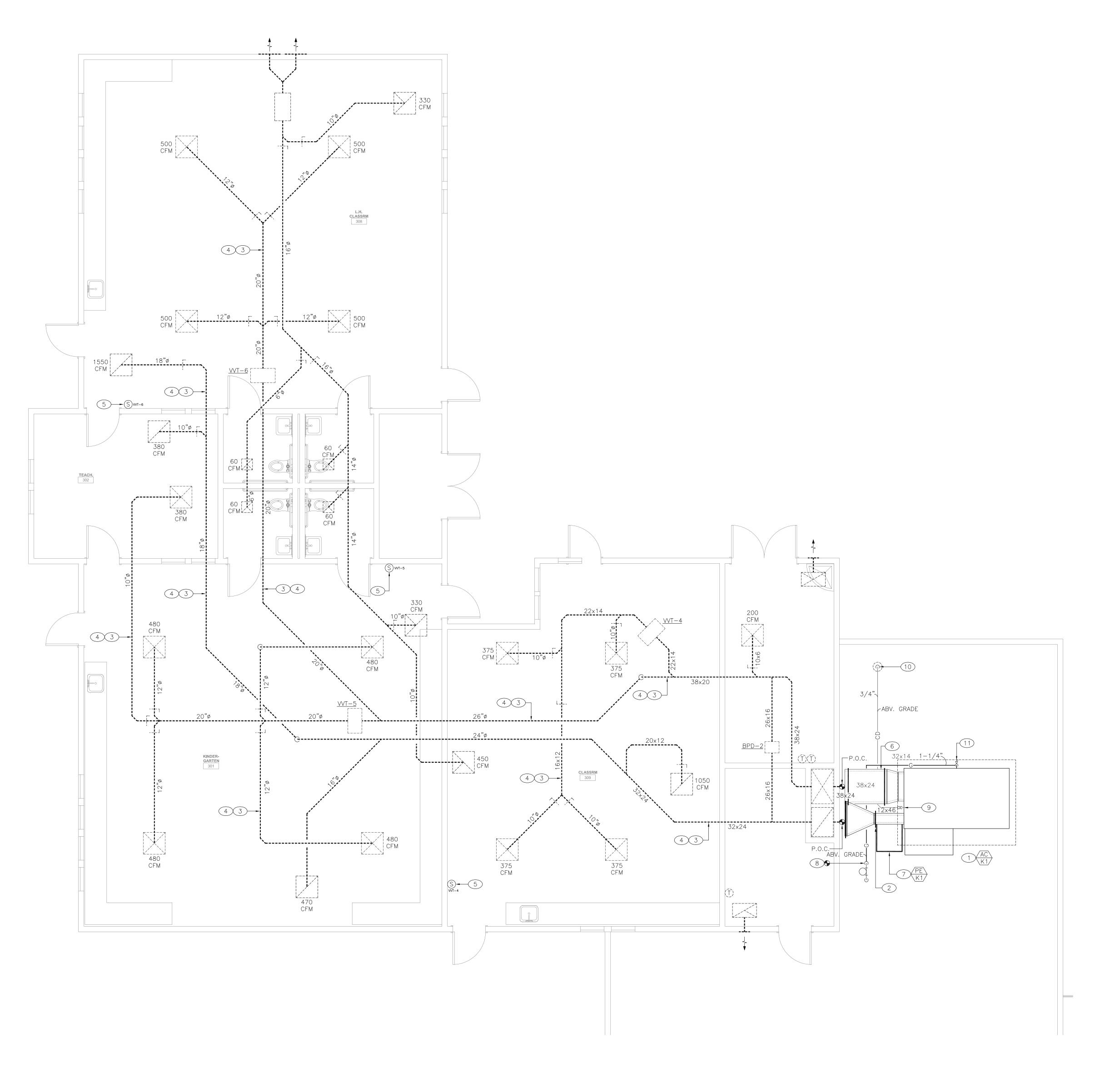
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**MECHANICAL RENOVATION FLOOR PLAN - BUILDING 200** 

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## MECHANICAL RENOVATION FLOOR PLAN - BUILDING 300 (KINDERGARTEN)

#### ○ PLAN NOTES

- 1.— GRADE MOUNTED PACKAGED AIR CONDITIONER UNIT ON EXISTING CONCRETE PAD. SEE SCHEDULE ON SHEET MO-1.1 AND DETAILS 6 & 7/MO-2.1 FOR ADDITIONAL
- 2.— GRADE MOUNTED DUCT SUPPORT (TYP.), SET AT 6'-0'' O.C. MAX. SEE DETAIL 3/M0-2.2 FOR ADDITIONAL INFORMATION.
- 3.— CLEAN ALL EXISTING AIR DISTRIBUTION SYSTEM INCLUDING DUCTWORK, GRILLES, DIFFUSERS AND ASSOCIATED ACCESSORIES IN THEIR ENTIRETY IN EACH SPACE PER REQUIREMENTS OF SPECIFICATION SECTION 23 01 30.
- 4.— PERFORM A TEST AND BALANCE OF EACH SPACE. BALANCE EACH DIFFUSER/GRILLE TO THE SAME CFM AS MEASURED PRIOR TO DEMOLITION WORK. SEE AIR BALANCE NOTE ON DEMOLITION FLOOR PLAN. SUBMIT TEST AND BALANCE REPORT INCLUDING COMPARISON WITH THE PRE—DEMOLITION VALUES.
- 5.— DIGITAL THERMOSTAT WITH CO2 SENSOR WITH DIGITAL DISPLAY, 2—HOUR OVERRIDE BUTTON AND CO2 ADJUSTMENT BUTTON. FOR MOUNTING HEIGHT SEE SHEET MO—1.0. COORDINATE LOCATION OF THERMOSTAT WITH ROOM FURNITURE AND ARCHITECT PRIOR TO INSTALLATION.
- 6.- GRADE MOUNTED DUCTWORK. SEE DETAIL 3/MO-2.2 FOR ADDITIONAL INFORMATION.
- 7.— LOCATE POWER EXHAUST MODULE ON RETURN DUCTWORK PER MANUFACTURER'S RECOMMENDATION AND GUIDELINES.
- 8.— P.O.C.— 1—1/4" GAS (SCH. 40 BLACK STEEL) TO EXISTING PIPING ABV. GRADE DOWNSTREAM OF EXISTING GAS PRESSURE REGULATOR. EXTEND SERVICE AS INDICATED. FIELD VERIFY EXACT LOCATION PRIOR TO START OF WORK. SUPPORT PIPING ABV. GRADE WITH CHANNEL STRUT AND PIPE CLAMP (6'—0" O.C.). PAINT ALL EXPOSED PIPING WITH A RUST INHIBITOR.
- 9.— 3/4" CD (COPPER TYPE 'M') COMPLETE WITH TRAP AND VENT. EXTEND CD ABV. GRADE TO P.O.C. AS INDICATED. SUPPORT PIPING ABV. GRADE WITH CHANNEL STRUT AND PIPE CLAMP (6'-0" O.C.). SEE DETAIL 2/M0-2.1 FOR ADDITIONAL INFORMATION.
- 10.— DISCHARGE 3/4" CD (COPPER TYPE 'M') INTO EXISTING FLOOR RECEPTOR WITH LEGAL AIR—GAP. FIELD VERIFY EXACT LOCATION PRIOR TO START OF WORK.
- 11.-1-1/4" GAS COMPLETE WITH A LISTED YELLOW FLEXIBLE CONNECTOR, SHUT-OFF COCK, UNION AND 6" DIRT LEG. SUPPORT PIPING ABV. GRADE WITH CHANNEL STRUT AND PIPE CLAMP (6'-0" O.C.). PAINT ALL EXPOSED PIPING WITH A RUST INHIBITOR. SEE DETAIL 1/M0-2.2 FOR ADDITIONAL INFORMATION.



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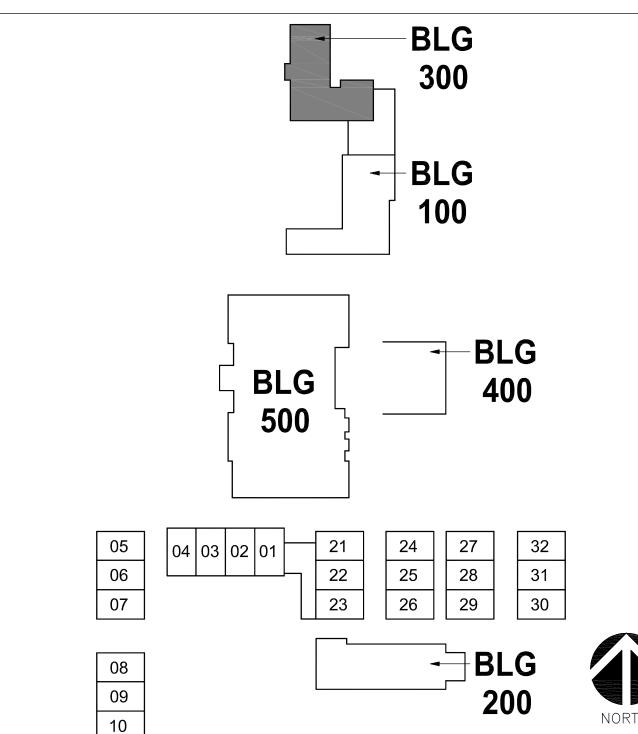
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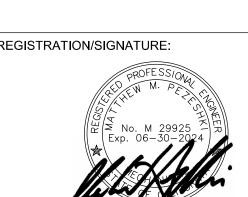
#### SPECIAL NOTE

CARBON MONOXIDE DETECTION SYSTEM IS NOT REQUIRED FOR GROUP "E" BUILDINGS THAT ARE CONSTRUCTED BEFORE ADOPTION OF THE 2016 CALIFORNIA BUILDING STANDARDS CODE PER DSA IR 9-2 2.2.1.2.

#### **KEY PLAN**



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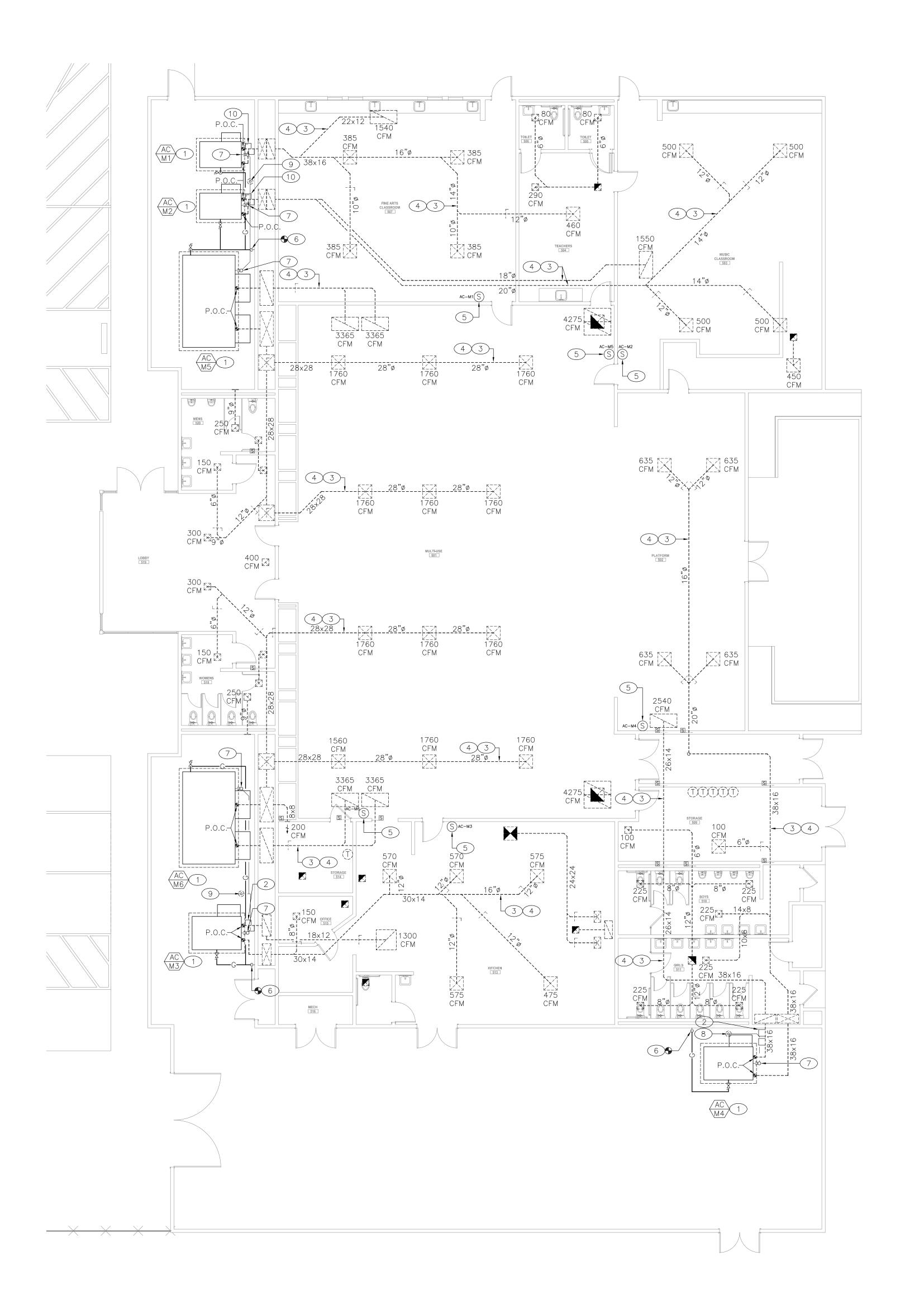


SHEET TITLE:

MECHANICAL RENOVATION FLOOR PLAN - BUILDING 300

HEET NUMBER: 13

WD PROJ. # DRAWN BY: CHECKED DATE 07/18/23



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#### ○ PLAN NOTES

- 1.- GRADE MOUNTED PACKAGED AIR CONDITIONER UNIT ON EXISTING CONCRETE PAD. SEE SCHEDULE ON SHEET MO-1.1 AND DETAILS 1 & 4/MO-2.1 FOR ADDITIONAL
- 2.- PROVIDE TWO (2) MICROMETL NO. 0876-0500 (12"x12") BAROMETRIC RELIEF DAMPERS ON EXISTING RETURN AIR DUCTWORK.
- 3.- CLEAN ALL EXISTING AIR DISTRIBUTION SYSTEM INCLUDING DUCTWORK, GRILLES, DIFFUSERS AND ASSOCIATED ACCESSORIES IN THEIR ENTIRETY IN EACH SPACE PER REQUIREMENTS OF SPECIFICATION SECTION 23 01 30.
- 4.- PERFORM A TEST AND BALANCE OF EACH SPACE. BALANCE EACH DIFFUSER/GRILLE TO THE SAME CFM AS MEASURED PRIOR TO DEMOLITION WORK. SEE AIR BALANCE NOTE ON DEMOLITION FLOOR PLAN. SUBMIT TEST AND BALANCE REPORT INCLUDING COMPARISON WITH THE PRE-DEMOLITION VALUES.
- 5.- DIGITAL THERMOSTAT WITH CO2 SENSOR WITH DIGITAL DISPLAY, 2-HOUR OVERRIDE BUTTON AND CO2 ADJUSTMENT BUTTON. FOR MOUNTING HEIGHT SEE SHEET MO-1.0. COORDINATE LOCATION OF THERMOSTAT WITH ROOM FURNITURE AND ARCHITECT PRIOR TO INSTALLATION.
- 6.- P.O.C.- LINE SIZE GAS (SCH. 40 BLACK STEEL) TO EXISTING PIPING ABV. GRADE. FIELD VERIFY EXACT LOCATION AND SIZE PRIOR TO START OF WORK. EXTEND SERVICE AS INDICATED. PROVIDE A LISTED YELLOW FLEXIBLE CONNECTOR, SHUT-OFF COCK, UNION AND 6" DIRT LEG. PAINT ALL EXPOSED PIPING WITH A RUST INHIBITOR. SEE DETAIL 1/M0-2.2 FOR ADDITIONAL INFORMATION.
- 7.- 3/4" CD (COPPER TYPE 'M') COMPLETE WITH TRAP AND VENT. EXTEND CD ABV. GRADE TO P.O.C. AS INDICATED. SUPPORT PIPING ABV. GRADE WITH CHANNEL STRUT AND PIPE CLAMP (6'-0" O.C.). SEE DETAIL 2/M0-2.1 FOR ADDITIONAL INFORMATION.
- 8.— DISCHARGE 3/4" CD (COPPER TYPE 'M') INTO EXISTING FLOOR RECEPTOR WITH LEGAL AIR—GAP. FIELD VERIFY EXACT LOCATION PRIOR TO START OF WORK.
- 9.- DISCHARGE 1" CD (COPPER TYPE 'M') INTO EXISTING FLOOR RECEPTOR WITH LEGAL AIR-GAP. FIELD VERIFY EXACT LOCATION PRIOR TO START OF WORK.
- 10.- PROVIDE TWO (2) MICROMETL NO. 0876-0400 (10"x10") BAROMETRIC RELIEF DAMPERS ON EXISTING RETURN AIR DUCTWORK.



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#### SPECIAL NOTE

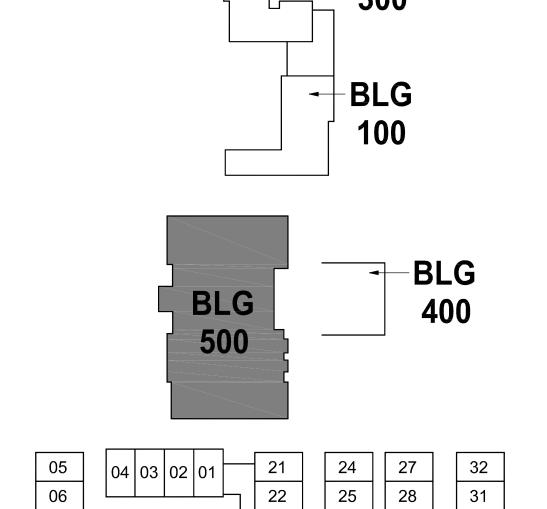
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CARBON MONOXIDE DETECTION SYSTEM IS NOT REQUIRED FOR GROUP "E" BUILDINGS THAT ARE CONSTRUCTED BEFORE ADOPTION OF THE 2016 CALIFORNIA BUILDING STANDARDS CODE PER DSA IR 9-2 2.2.1.2.

-BLG

#### **KEY PLAN**



 
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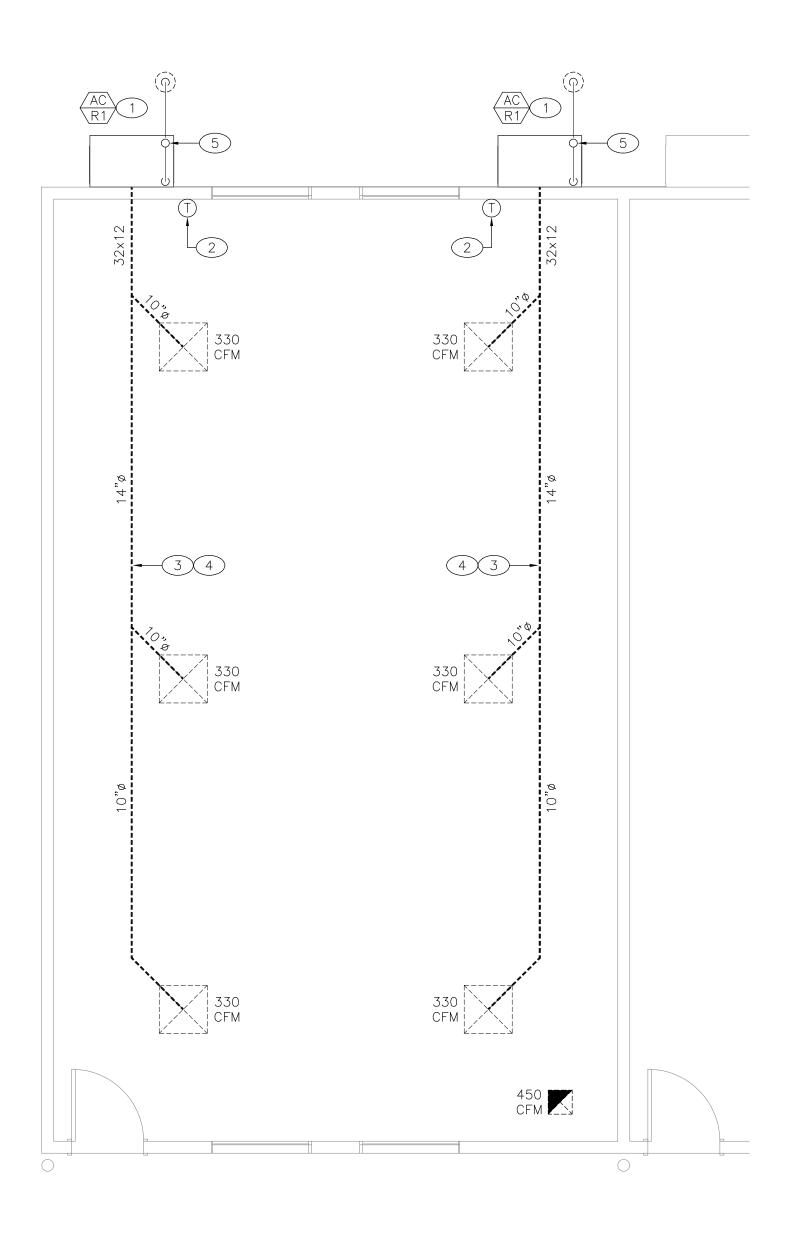


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**RENOVATION FLOOR PLAN - BUILDING 500** 

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#### PLAN NOTES

1.- WALL MOUNTED GAS-ELECTRIC AIR CONDITIONING UNIT COMPLETE WITH SOUND CURB. RECONNECT TO EXISTING DUCTWORK. THE NEW BARD UNIT IS SHORTER IN LENGTH (BY 2") THAN THE EXISTING UNIT. AFTER INSTALLATION OF THE REPLACEMENT UNIT, PATCH, RÉPAIR AND PAINT THE AREA OF REMOVAL OF THE OLDER UNIT INCLUDING THE ANCHOR HOLES TO MATCH THE SURROUND WALL SURFACE TO THE SATISFACTION OF THE OWNER. SEE SCHEDULE ON SHEET MO-1.2, DETAIL 5/MO-2.1 AND GENERAL NOTE ON THIS SHEET FOR ADDITIONAL INFORMATION. RECONNECT LINE SIZE GAS (SCH. 40 BLACK STEEL) COMPLETE WITH A LISTED YELLOW FLEXIBLE CONNECTOR, S.O.C., UNION AND 6" DIRT LEG.

- 2.- DIGITAL THERMOSTAT WITH CO2 SENSOR WITH DIGITAL DISPLAY, 2-HOUR OVERRIDE BUTTON AND CO2 ADJUSTMENT BUTTON. FOR MOUNTING HEIGHT SEE SHEET MO-1.0. COORDINATE LOCATION OF THERMOSTAT WITH ROOM FURNITURE AND ARCHITECT PRIOR TO INSTALLATION.
- 3.- CLEAN ALL EXISTING AIR DISTRIBUTION SYSTEM INCLUDING DUCTWORK, GRILLES, DIFFUSERS AND ASSOCIATED ACCESSORIES IN THEIR ENTIRETY IN EACH SPACE PER REQUIREMENTS OF SPECIFICATION SECTION 23 01 30.
- 4.- PERFORM A TEST AND BALANCE OF EACH SPACE. BALANCE EACH DIFFUSER/GRILLE TO THE SAME CFM AS MEASURED PRIOR TO DEMOLITION WORK. SEE AIR BALANCE NOTE ON DEMOLITION FLOOR PLAN. SUBMIT TEST AND BALANCE REPORT INCLUDING COMPARISON WITH THE PRE-DEMOLITION VALUES.
- 5.— <u>FOR CLASSROOM RELOCATABLES 1, 2, 3 AND 4:</u> 3/4" CD (COPPER TYPE 'M') FROM OUTDOOR A/C UNIT DN. TO BEL. GRADE AND DISCHARGE INTO DRYWELL. PATCH GRADE TO MATCH EXISTING. SEE DETAIL 3/MO-2.1 FOR ADDITIONAL INFORMATION.

FOR CLASSROOM RELOCATABLE 21: 3/4" CD (COPPER TYPE 'M') FROM OUTDOOR A/C UNIT, EXTEND ON FACE OF WALL THRU ADJACENT WALL GAP AND TERMINATE WITH A 90° ELBOW AT +6" ABV. GRADE.

FOR THE REST OF THE CLASSROOM RELOCATABLES: 3/4" CD (COPPER TYPE 'M') FROM OUTDOOR A/C UNIT DN. FACE OF WALL AND TERMINATE WITH A 90° ELBOW AT +6" ABV. GRADE.



19900 MacArthur Boulevard I Suite 1000 Irvine I California I 92612 949.250.0880 I FAX 949.250.0882 www.westgroupdesigns.com



Santa Ana, CA 92705 Telephone (714) 884-3834 Fax (714) 884-3834 PEI #600.030

DISCOVERY ELEMENTARY SCHOOL VICTOR ELEMENTARY SCHOOL DISTRICT 13247 AMETHYST RD. VICTORVILLE, CA 92392

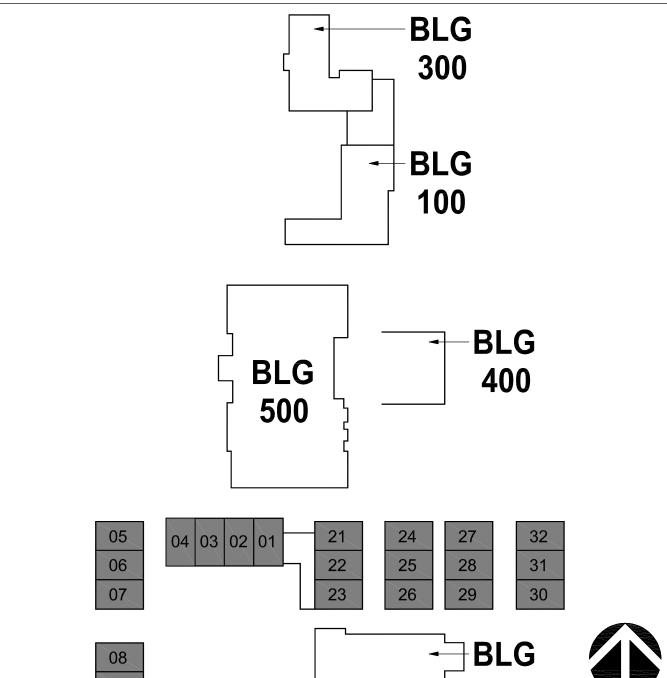
#### SPECIAL NOTE

CARBON MONOXIDE DETECTION SYSTEM IS NOT REQUIRED FOR GROUP "E" BUILDINGS THAT ARE CONSTRUCTED BEFORE ADOPTION OF THE 2016 CALIFORNIA BUILDING STANDARDS CODE PER DSA IR 9-2 2.2.1.2.

#### **GENERAL NOTE**

1.- LAYOUT SHOWN ON THIS SHEET IS TYPICAL FOR ALL RELOCATABLE BUILDINGS. FOR THE ACTUAL UNIT TAG, MODEL AND SIZE FOR EACH RELOCATABLE BUILDING, REFER TO SHEET M1-1.1 AND UNIT SCHEDULE ON SHEET M0-1.2.

#### **KEY PLAN**





**MECHANICAL** 

**RENOVATION FLOOR** PLAN - RELOCATABLES

M2-1.5

WD PROJ. # DRAWN BY: CHECKED DATE

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MECHANICAL RENOVATION FLOOR PLAN - RELOCATABLE (DUAL UNIT)

200

# VICTOR ELEMENTARY SCHOOL DISTRICT DISCOVERY SCHOOL OF THE ARTS - HVAC UPGRADE

VICTORVILLE, CALIFORNIA

THE ROLL LECTION INC.

**VICINITY MAP** 

CODE REQUIREMENTS APPLICABLE CODES AND REGULATIONS ALL WORK PERTAINING TO AND ALL MATERIALS SUPPLIED FOR EXECUTING AND COMPLETING THIS CONTRACT SHALL COMPLY WITH PROVISIONS SPECIFIED IN THE CONTRACT DOCUMENTS AND WITH APPLICABLE LAWS. REGULATIONS, AND ORDINANCES GOVERNING WORK INCLUDING, BUT NOT NECESSARILY LIMITED TO THOSE OF THE FOLLOWING: 2022 California Administrative Code (CAC), Part 1, Title 24 CCR 2022 California Building Code (CBC), Part 2, Title 24 CCR 2022 California Electrical Code (CEC), Part 3, Title 24 CCR 2022 California Plumbing Code (CPC), Part 5, Title 24 CCR 2022 California Energy Code (CEC), Part 6, Title 24 CCR 2022 California Fire Code (CFC), Part 9, Title 24 CCR 2022 California Existing Building Code (CEBC), Part 10, Title 24 CCR 2022 California Green Building Standards Code (CALGreen), Part 11, Title 24 CCR 2022 California Referenced Standards Code, Part 12, Title 24 CCR Title 19 CCR, Public Safety, State Fire Marshal Regulations APPLICABLE STANDARDS
FOR A LIST OF APPLICABLE STANDARDS, INCLUDING CALIFORNIA AMENDMENTS TO THE NFPA STANDARDS, REFER TO CBC CHAPTER 35 AND CFC CHAPTER 80.

NOTES

#### CONSTRUCTION GENERAL NOTES

- WHENEVER CUTTING, PATCHING, ETC. IS REQUIRED; ALL ADJACENT SURFACES SHALL BE FINISHED TO ACHIEVE A
- IT IS HEREBY UNDERSTOOD THAT THE ARMC MUST MAINTAIN IT'S REGULAR SERVICE DURING THE TIME WORK IS IN PROGRESS. ADVANCE SCHEDULING WITH THE COUNTY OFFICE SHALL BE ARRANGED BY THE CONTRACTOR TO ENSURE NO DISRUPTION TO FACILITY SERVICES.
- UPON COMPLETION OF EACH PHASE OF THE WORK AND AT SUCH TIMES AS DIRECTED BY THE OWNER, REMOVE ALL SURPLUS MATERIAL, TOOLS AND DEBRIS AND LEAVE THE SITE IN A CLEAN AND NEAT CONDITION. PROVIDE PROTECTION FROM DUST, DIRT AND MOISTURE FOR THE PROTECTION OF THE WORKMEN, STAFF, VISITORS AND EXISTING COMPUTER EQUIPMENT AS REQUIRED BY ALL PERTINENT CODES AND REGULATIONS.
- EXERCISE EXTREME CARE TO PREVENT DAMAGE TO EXISTING EQUIPMENT, STRUCTURES AND SERVICES. DAMAGE AS A RESULT OF THIS WORK SHALL BE REPAIRED OR REPLACED AT NO ADDITIONAL COST TO THE OWNER. VERIFY THE PRECISE LOCATIONS OF ALL EQUIPMENT WITH THE OWNER PRIOR TO THE INSTALLATION OF THAT EQUIPMENT OR THE
- DEMOLITION PLAN AND NOTES ARE INCLUDED FOR GENERAL INFORMATION ONLY AND ARE NOT INTENDED TO REPRESENT ALL CONDITIONS PRESENT AT THE SITE. THE CONTRACTOR IS RESPONSIBLE FOR PREPARING THE SITE
- THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING COMPLETE AND LEGIBLE AS-BUILT DRAWINGS DOCUMENTS TO THE OWNER AT THE COMPLETION OF THE PROJECT. AS-BUILT DRAWINGS ARE THE FINAL SET OF DRAWINGS PRODUCED AT THE COMPLETE OF A CONSTRUCTION PROJECT. THEY INCLUDE ALL THE CHANGES THAT HAVE BEEN MADE TO THE ORIGINAL CONSTRUCTION DRAWINGS INCLUSIVE OF NOTES, MODIFICATIONS, REVISIONS AND ANY OTHER INFORMATION THAT HAS BEEN MODIFIED OR OTHERWISE CHANGED. AS-BUILD DRAWINGS SHOULD NOT CHANGE OR ALTER THE DESIGN INTENT BUT SHOULD DEPICT THE ACTUAL AS-BUILT CONDITIONS OF THE COMPLETED

E000

# TO POWER EXHAUST TO HVAC UNIT POWER

SWITCH. REFER TO ROOF PLANS FOR TYPE, QUANTITIES AND LOCATIONS (TYP.) -REFER TO ROOF PLANS FOR CONDUIT AND CONDUCTOR SIZES. CONDUIT & CONDUCTORS FOR HVAC UNIT POWER SHALL BE THE SAME PROVIDE JUNCTION BOX SIZED — FOR POWER EXHAUST POWER. PER CEC 314.16 LOCATED BELOW FINISHED CEILING. SPLICE CONDUCTORS IN BOX TO ALLOW CONDUCTORS TO BE ROUTED AS SHOWN. HOMERUN TO POWER PANEL. REFER TO ROOF PLANS FOR PANEL DESIGNATION AND CIRCUITS.

SHEET INDEX DWG. NO. DESCRIPTION **ELECTRICAL GENERAL NOTES & SYMBOLS LIST** EXISTING SITE PLAN AREA A E0-1.1B EXISTING SITE PLAN AREA B ENLARGED FLOOR PLAN BUILDING 100 ENLARGED PLAN BUILDING 200 E5-1.3 ENLARGED PLAN BUILDING 300 E5-1.4 DEMOLITION PLAN BUILDING 500 IMPROVEMENT PLAN BUILDING 500

> DISCOVERY SCHOOL OF THE ARTS

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#### **ELEMENTARY** SCHOOL DISTRICT 13247 AMETHYST RD.

VICTORVILLE, CA 92395

PROJECT DESCRIPTION

HVAC REPLACEMENT

E5-1.6 ENLARGED PLAN - RELOCATABLES

SINGLE-LINE DIAGRAM

#### PROJECT TEAM

PROJECT ADDRESS

VEUSD DISCOVERY SCHOOL OF THE ARTS

13247 AMETHYST RD.

VICTORVILLE, CALIFORNIA 92395

#### ELECTRICAL ENGINEER

AG DESIGN, INC

2100 W ORANGEWOOD AVE, SUITE 165

ORANGE, CALIFORNIA 92868

PHONE | 714.769.9900

REGISTRATION/SIGNATURE:

TITLE SHEET

E000

WD PROJ. # DRAWN BY: CHECKED DATE DL, AM GM 03/14/23

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**VICINITY MAP** 

HVAC UNIT POWER EXHAUST CONNECTION DETAIL

NOT TO

#### **GENERAL NOTES**

THE ELECTRICAL CONTRACTOR (EC) SHALL INCLUDE AND PROVIDE IN BID ALL LABOR AND MATERIALS NECESSARY FOR A COMPLETE AND OPERATIONAL INSTALLATION OF ALL ELECTRICAL SYSTEMS.

RIGID GALVANIZED STEEL IS TO BE INSTALLED IN ALL AREAS WHICH ARE EXPOSED TO WEATHER AND/OR

- 2. EC SHALL COORDINATE AND OBTAIN ALL APPROVALS, PERMITS, AND DOCUMENTS FROM REGULATORY AGENCIES AND UTILITY COMPANIES.
- 3. ALL CONDUIT RACEWAY SYSTEMS ARE TO BE INSTALLED AS FOLLOWS:
- FLEXIBLE METALLIC CONDUIT I S PERMITTED FOR SHORT CONNECTIONS TO LIGHT FIXTURES (6'-0" MAX).
- FLEXIBLE CONDUIT SHALL ALSO BE INSTALLED FOR EQUIPMENT REQUIRING VIBRATION ISOLATION AND HORIZONTAL RUNS IN WOODEN STUD WALLS. ELECTRICAL METALLIC TUBING (EMT) WITH COMPRESSION TYPE FITTINGS SHALL BE USED FOR BUILDING
- P.V.C. CONDUIT SHALL BE USED FOR UNDERGROUND CONDUITS. ROUTE CODE SIZED GROUND WIRE INSIDE OF
- CONDUIT. CONDUIT RISERS AND STUBS ABOVE GRADE SHALL BE I.M.C. WITH HALF-LAPPED TAPE COVERING OR
- 4. UNLESS OTHERWISE NOTED OR REFERENCED ON THE DRAWINGS ALL NEW ELECTRICAL WIRING IS TO BE 600V RATED COPPER WITH TYPE "THHN/THWN" INSULATION.
- 5. ALL MOUNTING HEIGHTS REFERENCED ON DRAWINGS ARE MEASURED FROM FINISHED FLOOR UNLESS OTHERWISE REFERENCED OR INDICATED ON THE DRAWINGS.
- 6. ALL ELECTRICAL EQUIPMENT LOCATIONS (LIGHTING, RECEPTACLE, FLOOR BOX, ETC.) ARE TO BE VERIFIED WITH THE ARCHITECT AND/OR EQUIPMENT SUPPLIER PRIOR TO BEGINNING ANY ROUGH-IN.
- ALL LIGHTING FIXTURES SHALL BE MOUNTED AND SUPPORTED IN ACCORDANCE WITH OSHA STANDARDS, AND ALL STATE, LOCAL, SEISMIC, AND NATIONAL ELECTRIC CODES.
- 8. THE DRAWINGS INCLUDED IN THIS DOCUMENT SET ARE DIAGRAMMATIC. THEY ARE REPRESENTATIVE OF THE ENGINEER OF RECORDS DESIGN INTENT FOR ALL ELECTRICAL DEVICES/EQUIPMENT AND THE INDIVIDUAL POWER FEEDS THEY ARE TO BE CONNECTED TO. THE SELECTED EC SHALL BE RESPONSIBLE FOR PROVIDING ALL J-BOXES, CONDUIT, WIRING/ CABLING, ETC. AS REQUIRED FOR A COMPLETE AND OPERATIONAL ELECTRICAL INSTALLATION.
- 9. ALL ELECTRICAL EQUIPMENT (PANELS, RECEPTACLES, J-BOXES, ETC.) SHALL BE WEATHERPROOF AND/OR INSTALLED IN

A NEMA 3R ENCLOSURE WHERE APPLICABLE OR INSTALLED OUTDOORS.

- 10. ALL ELECTRICAL WORK SHALL BE PERFORMED ACCORDING TO STATE, LOCAL, NATIONAL, AND DISTRICT STANDARDS AND CODES. COORDINATE SPECIFIC REQUIREMENTS WITH DISTRICT STANDARDS AND AUTHORITY HAVING JURISDICTION.
- 11. ALL ELECTRICAL EQUIPMENT SHALL BE NEW AND IS TO BE CLEARLY LABELED/IDENTIFIED AS UNDERWRITER LABORATORIES (UL) COMPLIANT UNLESS OTHERWISE NOTED OR REFERENCED IN THE DRAWINGS OR SPECIFICATIONS. ANY EQUIPMENT WITH A LISTING OTHER THAN "UL" OR OTHER NATIONALLY RECOGNIZED TESTING LABORATORY (NRTL) LISTING AS REFERENCED IN CEC 110.2 (I.E. EQUIPMENT WITH A RECOGNIZED "UR/"RU" LISTING) ARE NOT PERMITTED FOR USE.
- 12. EC IS RESPONSIBLE FOR SECURING ALL REQUIRED BUILDING PERMITS AND SHALL INCLUDE THE COST TO SECURE BUILDING PERMITS IN THEIR FINAL BID.
- 13. UNLESS OTHERWISE WRITTEN, STATED, OR REFERENCED IN DRAWINGS OR SPECIFICATIONS CONTRACTOR SHALL GUARANTEE THE COMPLETE ELECTRICAL INSTALLATION FOR A PERIOD OF 1-YEAR.
- 14. ALL ELECTRICAL DISTRIBUTION EQUIPMENT (PANELS, DISTRIBUTION BOARDS, TRANSFORMERS, ETC), FEEDERS (CONDUIT, CONDUCTOR SIZE, AND QUANTITY), MECHANICAL EQUIPMENT, ELEVATORS, VARIABLE FREQUENCY DRIVES (VFD'S), ETC. MAY ONLY BE REFERENCED ON THE SINGLE-LINE DRAWING AND NOT INDIVIDUAL PLAN SHEETS. EC SHALL REVIEW AND VERIFY ALL REFERENCED INFORMATION ON THE SINGLE-LINE DRAWING.
- 15. EC SHALL BE RESPONSIBLE FOR ALL REQUIRED SAW-CUTTING, CORE DRILLING, PATCHING, REFINISHING, ETC. AS REQUIRED FOR INSTALLATION OF ELECTRICAL EQUIPMENT AND SYSTEMS. ANY PENETRATIONS OR OPENINGS MADE IN WALLS OR STRUCTURES SHALL BE PATCHED AND/OR SEALED AS REQUIRED TO MAINTAIN THE INTEGRITY AND/OR RATING OF THE WALL OR STRUCTURE.
- 16. EC SHALL VISIT THE SITE PRIOR TO SUBMISSION OF THEIR FINAL BID TO VERIFY ALL EXISTING SITE CONDITIONS WHICH MAY AFFECT THE COMPLETION OF THE ELECTRICAL INSTALLATION. ALL METHODS AND REQUIREMENTS FOR \ INSTALLATION SHALL BE DETERMINED PRIOR TO BID DATE. ELECTRICAL EC SHALL NOTIFY THE ENGINEER OF RECORD OF ANY REQUIRED MODIFICATIONS WHICH ARE NOT REFERENCED ON THESE ELECTRICAL PLANS. SUBMITTAL OF THE EC'S BID DEMONSTRATES THE CONTRACTOR'S AWARENESS OF ALL SITE CONDITIONS AND REQUIRED WORK TO BE PERFORMED.
- 17. ALL CEILINGS AND CEILING SYSTEMS AS A RULE ARE CONSIDERED TO BE INACCESSIBLE. ALL ELECTRICAL DEVICES AND EQUIPMENT INSTALLED ABOVE CEILINGS ARE TO BE MOUNTED IN A LOCATION WHICH IS ACCESSIBLE. IN SITUATIONS WHERE ELECTRICAL DEVICES AND EQUIPMENT MUST BE INSTALLED IN AN AREA WHICH IS INACCESSIBLE. EC SHALL INSTALL AN ADEQUATELY SIZED, CODE COMPLIANT ACCESS PANEL AS REQUIRED BY CURRENT CODES LOCATION OF THE REQUIRED ACCESS PANEL SHALL BE COORDINATE WITH THE ARCHITECT AND INTERIOR DESIGNER PRIOR TO ROUGH-IN.
- 18. EC IS RESPONSIBLE FOR COMPLETING ALL FINAL ELECTRICAL CONNECTIONS TO OWNER FURNISHED EQUIPMENT AND SHALL PROVIDE ALL MOTOR START SWITCHES, DISCONNECTS, ETC. AS REQUIRED.
- 19. ALL ELECTRICAL EQUIPMENT CONNECTIONS, MOUNTING LOCATIONS, ELECTRICAL REQUIREMENTS, ETC. ARE TO BE COORDINATED AND VERIFIED PRIOR TO COMMENCEMENT OF ELECTRICAL ROUGH-IN.
- 20. EC TO SUBMIT SHOP DRAWINGS FOR THE APPROVAL OF THE ELECTRICAL ENGINEER OF RECORD FOR ALL ELECTRICAL EQUIPMENT AND MATERIALS TO BE UTILIZED IN THE ELECTRICAL INSTALLATION. ALL APPROVALS BY THE ENGINEER OF RECORD MUST BE SECURED PRIOR TO COMPLETION OF ANY PURCHASE ORDERS OR ROUGH-IN WORK.
- 21. THESE ELECTRICAL DRAWINGS AND ASSOCIATED SPECIFICATIONS ARE TO BE CONSIDERED CONTRACT DOCUMENTS FOR AGENCY REVIEW/APROVAL AND EC BIDDING PURPOSES.
- 22. THE COMPLETE ELECTRICAL SYSTEM SHALL BE GROUNDED IN ACCORDANCE WITH NEC/CEC ARTICLE 250. ALL POWER AND LIGHTING CIRCUITS SHALL BE INSTALLED WITH A MINIMUM #12AWG CU GROUND WIRE UNLESS OTHERWISE NOTED
- 23. EC TO PROVIDE ENGRAVED PHENOLIC NAMEPLATES ON ALL DISCONNECT SWITCHES, DISTRIBUTION EQUIPMENT, J-BOXES ETC. WITH METALLIC COVERS. SEE GENERAL NOTES ON SINGLE-LINE DIAGRAM FOR SPECIFIC INFORMATION REGARDING NAMEPLATE REQUIREMENTS.
- 24. ALL COVER PLATES FOR LIGHT SWITCHES AND OUTLETS SHALL BE STAINLESS STEEL WITH PANEL AND CIRCUIT ENGRAVED NAMEPLATES - UNLESS OTHERWISE NOTED.
- 25. AT THE COMPLETION OF THE PROJECT THE EC SHALL PROVIDE THE OWNER WITH A COMPLETE SET OF AS-BUILT ELECTRICAL DRAWINGS.
- 26. ANY AND ALL WORK THAT REQUIRES AN INTERRUPTION TO A BUILDING(S) ELECTRICAL SERVICE MUST BE COORDINATED WITH THE DISTRICT A MINIMUM OF 48 HOURS IN ADVANCE. ANY SERVICE DOWNTOWN SHALL NOT OCCUR DURING
- 27. EC SHALL BE RESPONSIBLE FOR FOR ENSURING THAT ALL LOW VOLTAGE SYSTEMS ARE COMPATIBLE AND ARE COMPLETE AND OPERATIONAL.
- 28. EC SHALL PERMANENTLY TAG ALL CONDUCTORS IN EACH ELECTRICAL AND LOW VOLTAGE SYSTEM AS REFERENCED IN
- 29. ANY SURFACE MOUNTED EXPOSED CONDUIT IN VIEW OF THE PUBLIC SHALL BE PAINTED TO MATCH THE FINISH OF THE SURFACE TO WHICH IT IS MOUNTED WITH TWO (2) COATS OF PAINT. ALL EXTERIOR SURFACE MOUNTED EXPOSED CONDUITS ARE TO BE PAINTED WITH TWO (2) COATS OF WEATHERPROOF LATEX PAINT.
- 30. EC TO PROVIDE ALL CONDUIT ONLY (C.O.) INFRASTRUCTURE WITH A 3/16" NYLON PULL ROPE. LABEL PULL ROPE AT EACH END WITH THE LOCATIONS OF ORIGIN AND TERMINATION.
- 31. IN INSTANCES WHERE A CONFLICT BETWEEN THE ELECTRICAL DRAWINGS AND THE SPECIFICATIONS FOR THE PROJECT EXISTS, THE EC SHALL ADHERE TO THE MORE STRINGENT REQUIREMENT.
- 32. SUPPORTS AND ATTACHMENTS OF ALL EQUIPMENT TO BE INSTALLED AS A PART OF THIS PROJECT SHALL BE DETAILED ON CONSTRUCTION DOCUMENTS, EXCEPT THOSE EXEMPTED BY THE 2022 CBC SECTION 1617A. EQUIPMENT SUPPORTS AND ATTACHMENTS SHALL BE APPROVED BY THE APPROPRIATE REGISTERED DESIGN PROFESSIONAL (RDP) AND OSHPD AS A PART OF FIELD REVIEWS/OBSERVATIONS. THE INSPECTOR OF RECORD (IOR) SHALL ASSURE THAT THE ABOVE REQUIREMENTS
- 33. ELECTRICAL DRAWINGS ARE DIAGRAMMATIC. AS SUCH. ALL ELECTRICAL EQUIPMENT LOCATIONS. CONDUIT ROUTING. ETC. ARE NOT PRECISE AND SHALL BE COORDINATED, VERIFIED, AND DETERMINED IN THE FIELD. EC TO INSTALL ALL ELECTRICAL EQUIPMENT AND ROUTE ALL CONDUITS IN LOCATIONS WHICH MEET CODE REQUIREMENTS FOR ACCESSIBILITY/MOUNTING AND DO NOT INTERFERE WITH ANY BUILDING STRUCTURES, UTILITIES, OR OTHER TRADE EQUIPMENT.
- 34. ALL EXISTING SITE RELATED ELECTRICAL EQUIPMENT (I.E. UNDERGROUND UTILITIES, DUCTS, STRUCTURES, PULL BOXES, ETC.) LOCATIONS ARE DIAGRAMMATIC IN NATURE AND ONLY REFLECT APPROXIMATE LOCATIONS. QUANTITIES. AND/OR ROUTING INFORMATION. ALL REFERENCED INFORMATION HAS EITHER BEEN SURVEYED, REPORTED BY THE OWNER/ OWNERS REP, AND/OR REFERENCED ON AN AS-BUILT RECORD DOCUMENTS. ALL EXISTING ELECTRICAL EQUIPMENT REFERENCE D ON THESE DRAWINGS IS TO BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO COMMENCEMENT OF WORK. BY ACCEPTING THESE PLANS OR PROCEEDING WITH ELECTRICAL SCOPE OF WORK, AGREES TO ACCEPT LIABILITY AND SHALL RENDER THE ENGINEER OF RECORD HARMLESS FOR ANY ELECTRICAL EQUIPMENT NOT REPORTED TO THE ENGINEER DURING THE DESIGN PROCESS. THE CONTRACT TO TAKE THE REQUIRED PRECAUTIONARY MEASURES TO ENSURE ALL EXISTING ELECTRICAL EQUIPMENT IS PROTECTED IN PLACE.
- ANY EXISTING BUILDING STRUCTURES OR SURFACES DAMAGED BY DEMOLITION OR DURING INSTALLATION ACTIVITIES SHALL BE REPAIRED, PATCHED, AND/OR REFINISHED TO THE SATISFACTION OF THE OWNER.
- 36. ALL EXISTING ELECTRICAL EQUIPMENT INDICATED TO BE DEMOLISHED SHALL BE REMOVED ENTIRELY AND ALL AFFECTED SURFACES OR STRUCTURES SHALL BE REPAIRED, REPLACED, AND/OR REFINISHED TO MATCH THE ADJACENT SURFACES OR DAMAGED ITEM(S).
- 37. FOR CLARITY ONLY RECONSTRUCTION OR NEW WORK RELATED ELEMENTS AND SELECT EXISTING FACILITIES SPECIFICALLY REQUIRING COORDINATION WITH ANY NEW WORK.
- 38. ALL CONDUITS, BOXES, SURFACE MOUNTED RACEWAYS, SUPPORT DEVICES, AND ASSOCIATED FITTINGS SHALL BE MOUNTED IN CONCEALED LOCATIONS ABOVE CEILINGS, DUCTS, TRUSSES, BEAMS, ETC. IN AREAS WHERE A CONCEALED MOUNTING LOCATION IS NOT AVAILABLE EQUIPMENT SHALL BE PAINTED TO MATCH THE ADJACENT
- 39. ANY PENETRATIONS BY CONDUITS OR OTHER ELECTRICAL EQUIPMENT THROUGH A FIRE RATED WALL WHETHER EXISTING OR NEW - SHALL MAINTAIN THE APPROPRIATE FIRE RATING BY SEALING THE PENETRATION WITH THE APPROPRIATE UL-LISTED FIRE-STOP MATERIAL/SYSTEM.
- 40. CONTRACTOR TO INCLUDE IN BASE BID INSTALLATION OF A MINIMUM OF 24" OF LIQUID-TITE FLEXIBLE CONDUIT BEING INSTALLED ON ALL CONDUITS AT THE ENTRANCE TO ALL SWITCHGEAR, GENERATOR, TRANSFORMERS. PANELBOARDS AND OTHER ELECTRICAL EQUIPMENT, AS WELL AS THE TRANSITION FROM LIQUID-TITE TO EMT.
- 41. ALL WORK ON EMERGENCY EQUIPMENT IS TO BE PERFORMED LIVE. CONTRACTOR IS RESPONSIBLE FOR INCLUDING ALL REQUIRED COSTS, EQUIPMENT PERMITS, AUTHORIZATIONS, ETC. AS REQUIRED TO PERFORM THE WORK HOT.
- 42. PROVIDE ARC FLASH LABELING AS REQUIRED PER 110.16.

ABBREVIATIONS						
4S/DP	4" SQUARE BY 2 1/8" DEEP BOX	LTG, LTS	LIGHTING			
ADA	AMERICAN WITH DISABILITIES ACT	LPS	LOW PRESSURE SODIUM			
A.F.F.	ABOVE FINISH FLOOR	MAX.	MAXIMUM			
A.F.G.	ABOVE FINISH GRADE	MDF	MAIN DISTRIBUTION FRAME			
AWG	AMERICAN WIRE GAUGE	MOCP	MAXIMUM OVERCURRENT PROTECTION			
AMP, A	AMPERE	MCB	MAIN CIRCUIT BREAKER			
A.I.C.	AMPERES INTERRUPTING CAPACITY	MLO	MAIN LUGS ONLY			
	(SYMMETRICAL)	M.C.	MECHANICAL CONTRACTOR			
AF/AT	AMP FRAME, AMP TRIP	M	METER			
AHJ	AUTHORITY HAVING JURISDICTION	M/M	METER MAIN			
AS/AF	AMP SWITCH, AMP FUSE	MV	MERCURY VAPOR			
ATS	AUTOMATIC TRANSFER SWITCH	MH	METAL HALIDE			
AVG	AVERAGE	MIN.	MINIMUM			
BDF	BUILDING DISTRIBUTION FRAME	MCA	MINIMUM CIRCUIT AMPS			
BR	BRANCH	MCC	MOTOR CONTROL CENTER			
BLDG	BUILDING	MCM	THOUSAND CIRCULAR MILS			
CEC	CALIFORNIA ELECTRICAL CODE	MCP	MOTOR CIRCUIT PROTECTOR			
CIRC., CKT.	CIRCUIT	MFR.	MANUFACTURER			
СВ	CIRCUIT BREAKER	MTD	MOUNTED			
CSFD	COMBINATION SMOKE FIRE DAMPER	MW	MICROWAVE			
С	CONDUIT	N	NEW EQUIP.			
C.O.	CONDUIT ONLY, COMPLETE WITH	NATS	NON AUTOMATIC DISCONNECT			
	PULLSTRING	NEC	NATIONAL ELECTRICAL CODE			
CONN	CONNECTED	NEMA	NATIONAL ELECTRICAL			
CPT	CONTROL POWER TRANSFORMER		MANUFACTURERS' ASSOCIATION			
CLCB	CURRENT LIMITING CIRCUIT BREAKER	NC	NORMALLY CLOSED			
CLF	CURRENT LIMITING FUSE	NO	NORMALLY OPENED			
CT	CURRENT TRANSFORMER	NF	NON-FUSED			
DIA	DIAMETER	NIC	NOT IN CONTRACT			
DISC	DISCONNECT	N.T.S.	NOT TO SCALE			
DIST	DISTRIBUTION	NL "	NIGHT LIGHT			
E	EXISTING EQUIP. TO REMAIN	NO. or #	NUMBER			
E.C.	ELECTRICAL CONTRACTOR	OFCI	OWNER FURNISHED, CONTRACTOR			
EMS	ENERGY MANAGEMENT CONTROL	0/ 7	INSTALLED.			
	SYSTEM	%Z	PERCENT IMPEDANCE			
EMT	ELECTRICAL METALLIC TUBING	PH. or Ø	PHASE			
ENT	ELECTRICAL NON-METALLIC TUBING	PC	PHOTOCELL PLANTING CONTRACTOR			
EWC E.P.O.	ELECTRIC WATER COOLER EMERGENCY POWER OFF	P.C. P	PLUMBING CONTRACTOR POLE			
E-O-L	END-OF-LINE CIRCUIT TERMINATOR.	PVC	POLE POLY VINYL CHLORIDE			
EF	EXHAUST FAN	PDU	POWER DISTRIBUTION UNIT			
E/G	EQUIPMENT GROUND (GREEN)	PRIMARY	OVER 600 VOLTS			
EP	EXPLOSION PROOF	PROVIDE	FURNISH, INSTALL AND CONNECT.			
ER*	EXISTING EQUIP. TO BE REOLCATED	PT	POTENTIAL TRANSFORMER			
LIX	(* CORRESPONDS TO NEW LOCATION)	PA	PUBLIC ADDRESS			
ERT*	NEW LOCATION FOR REOLCATED EQUIP.	REC, RECEPT	RECEPTACLE			
	(* CORRESPONDS TO PREVIOUS LOCATION)	REF	REFRIGERATOR			
FT or '	FEET	RGS	RIGID GALVANIZED STEEL			
FA	FIRE ALARM	RMS	ROOT MEAN SQUARE			
FLA	FULL LOAD AMPS	SCC	SHORT CIRCUIT CURRENT			
GRD	GROUND	SCS	STRUCTURED CABLING SYSTEM			
GFCI	GROUND FAULT CIRCUIT INTERRUPTER.	SFD	SMOKE FIRE DAMPER			
GFP	GROUND FAULT PROTECTION	SECONDARY	600 VOLTS AND LESS			
GEC	GROUNDING ELECTRODE CONDUCTOR	SMACNA	SHEET METAL & AIR COND.			
HACR	HEATING AIR CONDITIONING	- *	CONTRACTORS' NAT'L ASSOC.			
	REFRIGERATION	SQ.	SQUARE			
HOA	HAND-OFF-AUTO	TC	TIMECLOCK			
HVAC	HEATING, VENTILATING AND AIR	TEL/DATA	TELEPHONE AND DATA			
	CONDITIONING	TV	TELEVISION			
H.,W.,D.,L.	HEIGHT, WIDTH, DEPTH, LENGTH	T.V.S.S.	TRANSIENT VOLTAGE SURGE			
HID	HIGH INTENSITY DISCHARGE		SUPPRESSION			
UD	HODSEDOWED	TVD	TYDICAL			

U.G.P.S.

U.O.N.

U.P.S.

XFMR

XX

UNDERGROUND PULL SECTION

EXISTING EQUIP. TO BE DEMO'D

UNINTERRUPTABLE POWER SYSTEM

UNLESS OTHERWISE NOTED

VARIABLE AIR VOLUME

VOLT AMPERES

**VOLTAGE DROP** 

TRANSFORMER

WEATHERPROOF

VOLTS

WIRE

HORSEPOWER

JUNCTION BOX

KILOWATT

DEGREE KELVIN

KILOWATT HOUR

INCHES

IN. or "

I/G

JBOX

KCMIL

KW

KWH

LCL

HIGH PRESSURE SODIUM

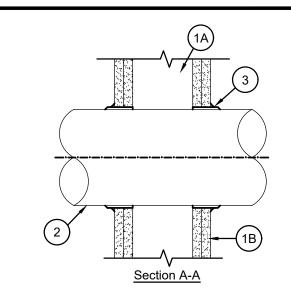
THOUSAND CIRCULAR MILS

LONG CONTINUOUS LOAD

INTERMEDIATE DISTRIBUTION FRAME

ISOLATED GROUND

KILOVOLT AMPERES



SYSTEM NO. W-L-1001 F RATINGS - 1, 2, 3 AND 4 HR (SEE ITEMS 2 AND 3) T RATINGS - 0, 1, 2, 3, AND 4 HR (SEE ITEM 3) L RATING AT AMBIENT - LESS THAN 1 CFM/SQ FT L RATING AT 400 F - LESS THAN 1 CFM/SQ FT

- WALL ASSEMBLY- THE 1, 2, 3 OR 4 HR FIRE-RATED GYPSUM WALLBOARD/STUD WALL ASSEMBLY SHALL BE CONSTURCTED OF THE MATERIALS AND IN THE MANNER DESCRIBED IN THE INDIVIDUAL U300 AND U400 SERIES WALL OR PARTITION DESIGNS IN THE UL FIRE RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION FEATURES:
- A. STUDS WALL FRAMING MAY CONSIST OF EITHER WOOD STUDS (MAX 2 HR FIRE RATED ASSEMBLIES) OR STEEL CHANNEL STUDS. WOOD STUDS TO CONSIST OF NOM 2 BY 4 IN. LUMBER SPACED 16 IN. OC. WITH NOM 2 BY 4 IN. LUMBER END PLATES AND CROSS BRACES. STEEL STUDS TO BE MIN 3-5/8 IN. WIDE BY 1-3/8 IN. DEEP CHANNELS SPACED MAX 24 IN. OC.
- B. WALLBOARD, GYPSUM \* NOM 1/2 OR 5/8 IN. THICK, 4 FT. WIDE WITH SQUARE OR TAPERED EDGES. THE GYPSUM WALLBOARD TYPE, THICKNESS, NUMBER OF LAYERS, FASTENER TYPE AND SHEET ORIENTATION SHALL BE AS SPECIFIED IN THE INDIVIDUAL U300 OR U400 SERIES DESIGN IN THE UL FIRE RESISTANCE DIRECTORY. MAX DIAMETER OF OPENING IS 13-1/2 IN. PIPE OR CONDUIT - NOM 12 IN. DIAM (OR SMALLER) SCHEDULE 10 (OR HEAVIER) STEEL PIPE, NOM 12 IN
- DIAM (OR SMALLER) SERVICE WEIGHT (OR HEAVIER) CAST IRON SOIL PIPE, NOM 12 IN, DIAM (OR SMALLER) CLASS 50 (OR HEAVIER) DUCTILE IRON PRESSURE PIPE, NOM 6 IN. DIAM (OR SMALLER) STEEL CONDUIT, NOM 4 IN. DIAM (OR SMALLER) STEEL ELECTRICAL METALLIC TUBING, NOM 6 IN. DIAM (OR SMALLER) TYPE L OR (OR HEAVIER) COPPER TUBING OR NOM 1 IN. DIAM (OR SMALLER) FLEXIBLE STEEL CONDUIT. WHEN COPPER PIPE IS USED, MAX F RATING OF FIRESTOP SYSTEM (ITEM 3) IS 2 HR. STEEL PIPES OR CONDUITS LARGER THAN NOM 4 IN. DIAM MAY ONLY BE USED IN WALLS CONSTRUCTED USING STEEL CHANNEL STUDS. A MAX OF ONE PIPE OR CONDUIT IS PERMITTED IN THE FIRESTOP SYSTEM. PIPE OR CONDUIT TO BE INSTALLED NEAR CENTER OF STUD CAVITY WIDTH AND TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF WALL ASSEMBLY.
- FILL, VOID OR CAVITY MATERIAL\* CAULK FILL MATERIAL INSTALLED TO COMPLETELY FILL ANNULAR SPACE BETWEEN PIPE OR CONDUIT AND GYPSUM WALLBOARD AND WITH A MIN 1/4 IN. DIAM BEAD OF CAULK APPLIED TO PERIMETER OF PIPE OR CONDUIT AT TIS EGRESS FROM THE WALL. CAULK INSTALLED SYMMETRICALLY ON BOTH SIDES OF WALL ASSEMBLY. THE HOURLY F RATING OF THE FIRESTOP SYSTEM IS DEPENDENT UPON THE HOURLY FIRE RATING OF THE WALL ASSEMBLY IN WHICH IT IS INSTALLED, AS SHOWN IN THE FOLLOWING TABLE. THE HOURLY T RATING OF THE FIRESTOP SYSTEM IS DEPENDENT UPON THE TYPE OR SIZE OF THE PIPE OR CONDUIT AND THE HOURLY FIRE RATING OF THE WALL ASSEMBLY IN WHICH IT IS INSTALLED, AS TABULATED BELOW:

BELOW:			
MAX PIPE	ANNULAR	F	Т
OR CONDUIT	SPACE,	RATING	RATING
DIAM, IN	IN	HR	HR
1	0 TO 3/16	1 OR 2	0+, 1 OR 2
1	1/4 TO 1/2	3 OR 4	3 OR 4
4	0 TO 1/4	1 OR 2	0
4	0 TO 1-1/2#	1 OR 2	0
6	1/4 TO 1/2	3 OR 4	0
12	3/16 TO 3/8	1 OR 2	0

+WHEN COPPER PIPE IS USED, T RATING IS 0 HR. #0 TO 1-1/2 IN. ANNULAR SPACE APPLIES ONLY WHEN TYPE CP-25 WB+ CAULK IS USED AND ONLY WHEN THE MIN THICKNESS OF THE GYPSUM WALLBOARD IS 5/8 IN. FOR 1 HR RATED WALLS AND 1-1/4 IN. FOR 2 HR RATED WALLS.

MINNESOTA MINING & MFG. CO. - CP 25WB+ \* BEARING THE UL CLASSIFICATION MARKING

NOTE: WHERE PROVIDED, THROUGH-PENETRATION FIRESTOP SYSTEM AND MEMBRANE PENETRATION DETAILS ARE FOR REFERENCE ONLY. THROUGH-PENETRATIONS AND MEMBRANE PENETRATIONS SHALL BE PROTECTED BY AN APPROVED PENETRATION FIRESTOP SYSTEM OR MEMBRANE PENETRATION FIRESTOP SYSTEM INSTALLED AS TESTED IN ACCORDANCE WITH ASTM E 814 OR UL 1479, WITH A MINIMUM POSITIVE PRESSURE DIFFERENTIAL OF 0.01 INCH (2.49 PA) OF WATER OR AS OTHERWISE PERMITTED BY CBC, SECTION 714. LISTED THROUGH-PENETRATION FIRESTOP SYSTEMS AND MEMBRANE PENETRATIONS SHALL BE INSTALLED IN ACCORDANCE WITH THE INSTALLATION DETAILS FOR LISTED SYSTEMS. LISTED THROUGH-PENETRATION FIRESTOP SYSTEMS, MEMBRANE PENETRATION PROTECTION AND OTHER PERMITTED MEANS AND METHODS OF PENETRATION PROTECTION SHALL BE SUBMITTED FOR OSHPD FIELD REVIEW AND APPROVAL PRIOR TO INSTALLATION. CBC 714.1

#### POWER SYMBOLS

- DUPLEX RECEPTACLE. MOUNTING HEIGHT PER ADA DEVICE MOUNTING REQUIREMENTS OR AS NOTED. "TV" ADJACENT TO DEVICE INDICATES RECEPTACLE IS TO BE MOUNTED AT 96" (OR HEIGHT REFERENCED). COORDINATE LOCATIONS AND MOUNTING REQUIREMENTS WITH SIGNAL DRAWINGS WHEN APPLICABLE.
- DUPLEX, GFCI RECEPTACLE, MOUNTING HEIGHT PER ADA DEVICE MOUNTING REQUIREMENTS OR AS NOTED. WP INDICATES WEATHERPROOF, REFER TO THE GENERAL PRODUCT SPECIFICATIONS.
- WALL MOUNTED JUNCTION BOX. MOUNTING HEIGHT AS NOTED. 4S/DP MINIMUM OR AS REQUIRED BY N.E.C..
- JUNCTION BOX, MOUNTED IN ACCESSIBLE CEILING FOR APPLICATION DENOTED ON PLAN. 4S/DP MINIMUM OR AS REQUIRED BY N.E.C..
- SINGLE POLE SWITCHES, MOUNTING HEIGHT PER ADA DEVICE MOUNTING REQUIREMENTS. SUBSCRIPTS AT SYMBOL INDICATE THE FOLLOWING:
  - 2 DOUBLE POLE LV - LOW VOLTAGE 3 - THREE WAY P - PILOT LIGHT 4 - FOUR WAY R - REMOTE CONTROL
  - K KEY OPERATED M - 20A MOTOR RATED START SWITCH WITH THERMAL OVERLOAD PROTECTION NOTE: ALL WALL SWITCHES CONTROLLING EMERGENCY CIRCUITS SHALL BE ENGRAVED WITH "EMERGENCY"

NOTE: PROVIDE AND INSTALL ONLY HEAVY DUTY HOSPITAL GRADE TAMPER RESISTANT DEVICES AND EQUIPMENT SUITABLE FOR USE AND INSTALLATION IN A BEHAVIORAL HEALTH FACILITY. ALL COVER PLATES FOR LIGHTING SWITCHES, J-BOXES, RECEPTACLES, ETC. ARE TO TO BE CONSTRUCTED OF STAINLESS STEEL ANTI-MICROBIAL AND ANTI-MRSA FINISHES.

NOTE: ALL LIFE SAFETY AND CRITICAL FEEDER/BRANCH CIRCUITS WILL NEED TO BE MECHANICALLY PROTECTED TO COMPLY WITH CEC 517.30(C)(3).

#### **BRANCH CIRCUIT SYMBOLS**

HOME RUN TO PANEL. LETTER DESIGNATES PANEL, NUMBERS INDICATE CIRCUITS AND NUMBER OF 

CONDUIT STUB OUT, CAP, MARK AND RECORD ON AS-BUILT DRAWINGS CONDUIT CONTINUATION.

> FLEXIBLE CONNECTION AS REQUIRED. NUMBER OF CONDUCTORS AS REQUIRED. VERIFY CONNECTION REQUIREMENTS WITH MANUFACTURER PRIOR TO ROUGH-IN.

CONDUIT/ BRANCH CIRCUIT/FEEDER CONTINUATION DOWN WALL TO FLOOR BELOW CONDUIT/ BRANCH CIRCUIT/FEEDER CONTINUATION UP WALL TO FLOOR ABOVE

#### **ANNOTATIONS**

MECHANICAL EQUIPMENT CALLOUT, "AC" INDICATES UNIT TYPE AND "2" INDICATES UNIT NUMBER. REFER TO MECHANICAL DRAWINGS FOR EXACT LOCATION AND ELECTRICAL REQUIREMENTS.

DETAIL CALLOUT, "3" INDICATES DETAIL NUMBER "E-1" INDICATES SHEET NUMBER.

LIGHTING FIXTURE DESIGNATION

PLAN NOTE REFERENCE, REFER TO NOTES ON SHEET, OR AS DIRECTED REVISION REFERENCE.

WYE CONFIGURATION GROUND

#### PIPING, DUCTWORK AND ELEC. DIST. SYSTEM BRACING NOTE

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7 CHAPTER 13 AS DEFINED IN ASCE 7-16 SECTION 13.6, AND 2022 CBC, SECTIONS 1613A AND 1617A.

THE METHOD OF SHOWING BRACING AND ATTACHMENTS TO THE STRUCTURE FOR THE IDENTIFIED DISTRIBUTION SYSTEM ARE AS NOTED BELOW. WHEN BRACING AND ATTACHMENTS ARE BASED ON A PRE-APPROVED INSTALLATION GUIDE (E.G. OSHPD OPM), COPIES OF THE BRACING SYSTEM INSTALLATION GUIDE OR MANUAL SHALL BE AVAILABLE ON THE JOBSITE PRIOR TO THE START OF AND DURING THE HANGING AND BRACING OF THE DISTRIBUTION SYSTEMS. THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS.

MECHANICAL PIPING (MP, MECHANICAL DUCTS (MD), PLUMING PIPING (PP), ELECTRICAL DISTRIBUTION SYSTEMS (E): MP□MD□PP□E☑ OPTION 1: DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS

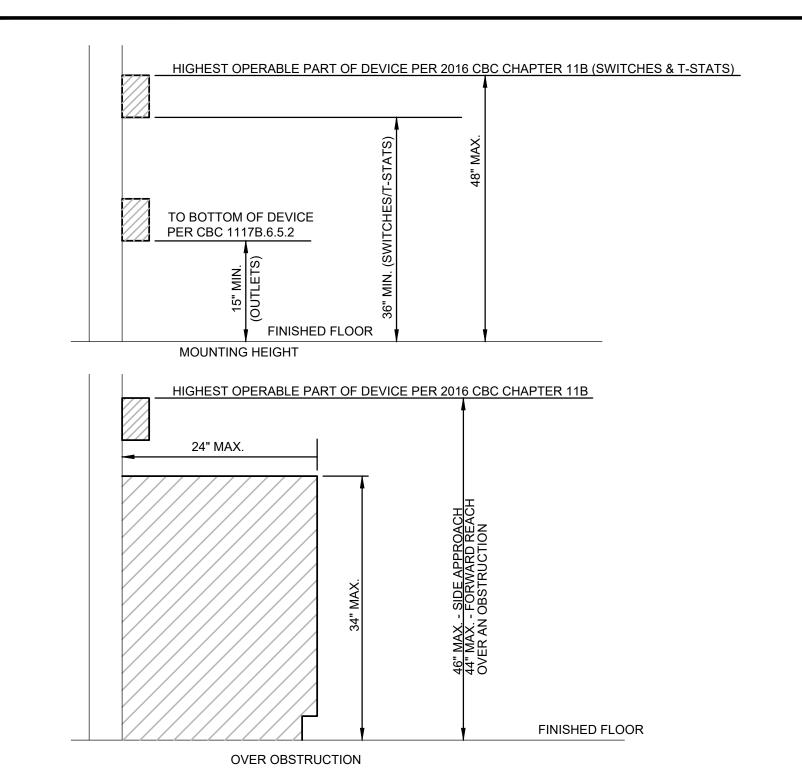
MP□MD□PP□E□ OPTION 2: SHALL COMPLY WITH THE APPLICABLE OSHPD PRE-APPROVAL (OPM #) #\_0043 or 0052 ALL CONDUITS 3" AND LARGER ARE TO BE SEISMICALLY BRACED/ANCHORED. CONTRACTOR TO REFER TO STRUCTURAL

#### DRAWINGS FOR ANCHORAGE DETAILS AND REQUIREMENTS. SEISMIC BRACING NOTES FOR DEFERRED SUBMITTALS

- SUPPORT AND BRACING FOR CONDUIT INSTALLED WITH THIS SCOPE OF SERVICES IS TO BE PROVIDED AND INSTALLED PER OPM-0043 MASON SEISMIC RESTRAINT COMPONENTS FOR SUSPENDED UTILITIES OR OTHER
- LAYOUT DRAWINGS IDENTIFYING/DEMONSTRATING THE BRACING/SUPPORT LOCATIONS AND REFERENCES TO DETAILS FROM THE RELEVANT OSHPD PRE-APPROVALS ARE TO BE SUBMITTED FOR USE BY THE INSPECTOR OF RECORD AND OSHPD FIELD STAFF. THE LAYOUT DRAWINGS ARE TO BE PREPARED BY THE SUBCONTRACTOR AND SIGNED BY A LICENSED STRUCTURAL ENGINEER PER ASCE 7 CHAPTER 13 AS MODIFIED BY 2022 CBC SECTIONS 1613A AND 1617A. REFERENCES TO DETAILS FROM THE OSHPD PRE-APPROVAL ARE TO BE FOR AN ENTIRE DETAIL AS SUBMITTED OR REFERENCE ARE TO BE PREPARED FOR EACH ASPECT OF A SUBMITTED DETAIL. CUSTOM DETAILS ARE TO BE PROVIDED FOR SITUATIONS WHERE OSHPD PRE-APPROVALS DO NOT APPLY. AT LEAST 4-WEEKS PRIOR TO BEGINNING INSTALLATION FOUR COPIES OF THE PLANS ARE TO BE SUBMITTED TO THE ARCHITECT OF RECORD WHO WILL SUBMIT THEM TO THE STRUCTURAL ENGINEER OF RECORD FOR REVIEW AND APPROVAL. AFTER THIS APPROVAL DRAWINGS WILL BE SUBMITTED TO THE OSHPD DISTRICT STRUCTURAL ENGINEER FOR REVIEW AND APPROVAL. THE PLANS SHALL BE COORDINATED WITH THE PLANS AND OTHER TRADES. A COPY OF THE CHOSEN BRACING SYSTEM INSTALLATION GUYED/MANUAL IS
- THE STRUCTURAL ENGINEER WILL DETERMINE THE APPROPRIATE SEISMIC FORCES BASED ON THE DESIGN CRITERIA INCLUDED IN THE STRUCTURAL DRAWINGS.

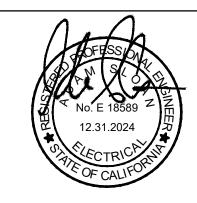
REQUIRED TO BE ON THE JOBSITE PRIOR TO THE START OF INSTALLATION.

ONCE THE LOCATIONS OF ALL CONDUIT HAVE BEEN ESTABLISHED, THE STRUCTURAL ENGINEER MUST CHECK THE ADEQUACY OF THE SUPPORTING STRUCTURE TO ENSURE THAT THE ORIGINAL DESIGN IS STILL ADEQUATE. THE INSPECTOR OF RECORD IS TO ENSURE THAT ALL WORK IS PROPERLY INSTALLED PER THE APPLICABLE OSHPD PRE-APPROVAL.





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**DISCOVERY SCHOOL** OF THE ARTS

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HEET NUMBER:

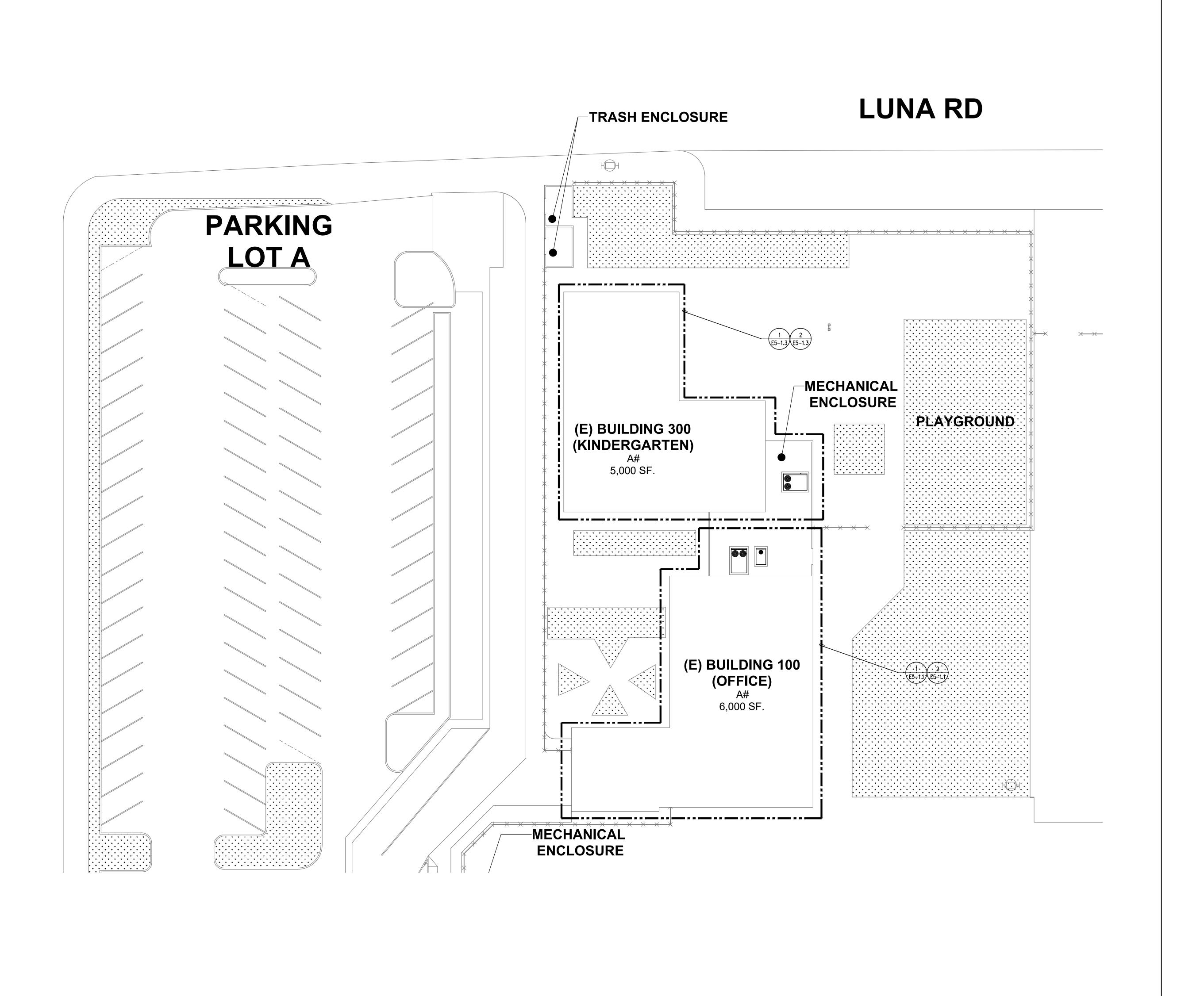
WD PROJ. # | DRAWN BY: | CHECKED | DATE

DL, AM | GM | 03/14/23

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ADA DEVICE MOUNTING DETAIL

FIRE RATED PENETRATION DETAIL (TYP.) | 02



SHEET NOTE:

(E) ELECTRICAL GEAR TO REMAIN.

DISCONNECT EXISTING MECHANICAL UNIT, REMOVE FUSED DISCONNECT SWITCH, PREPARE CIRCUITRY FOR REUSE.







DISCOVERY SCHOOL OF THE ARTS

VICTOR ELEMENTARY SCHOOL DISTRICT 13247 AMETHYST RD. VICTORVILLE, CA 92395

ISSUED FOR:
REVISIONS:

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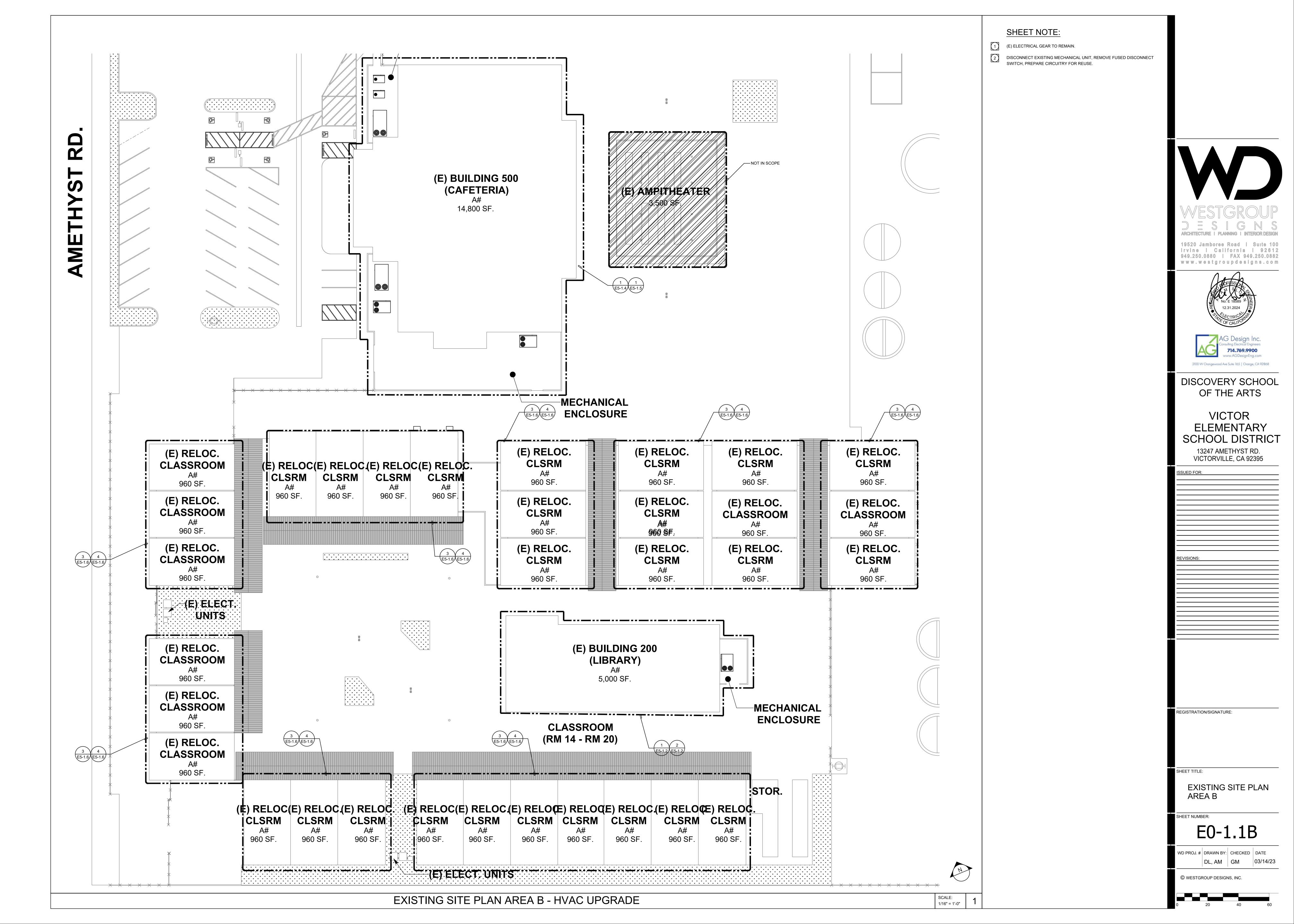
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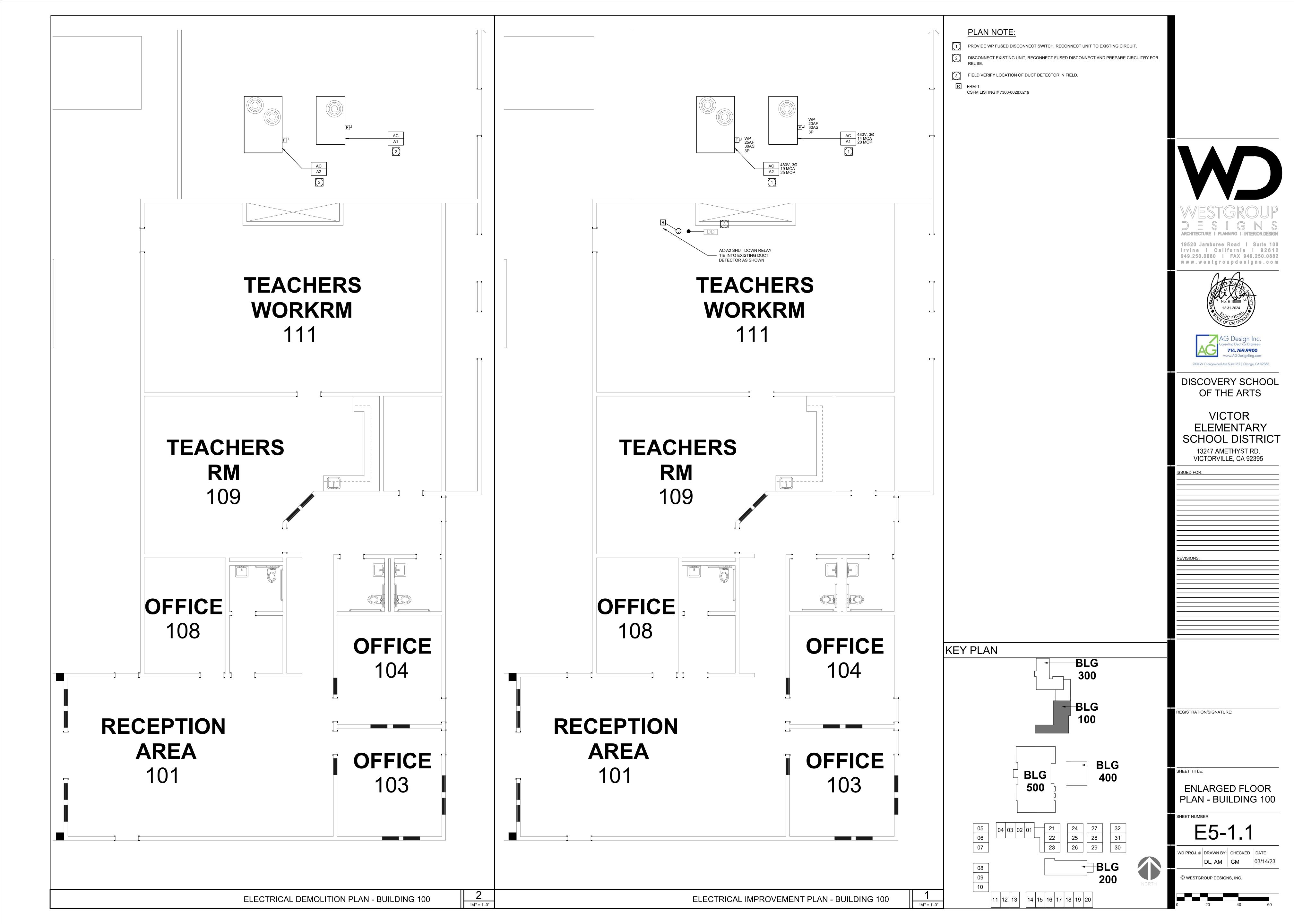
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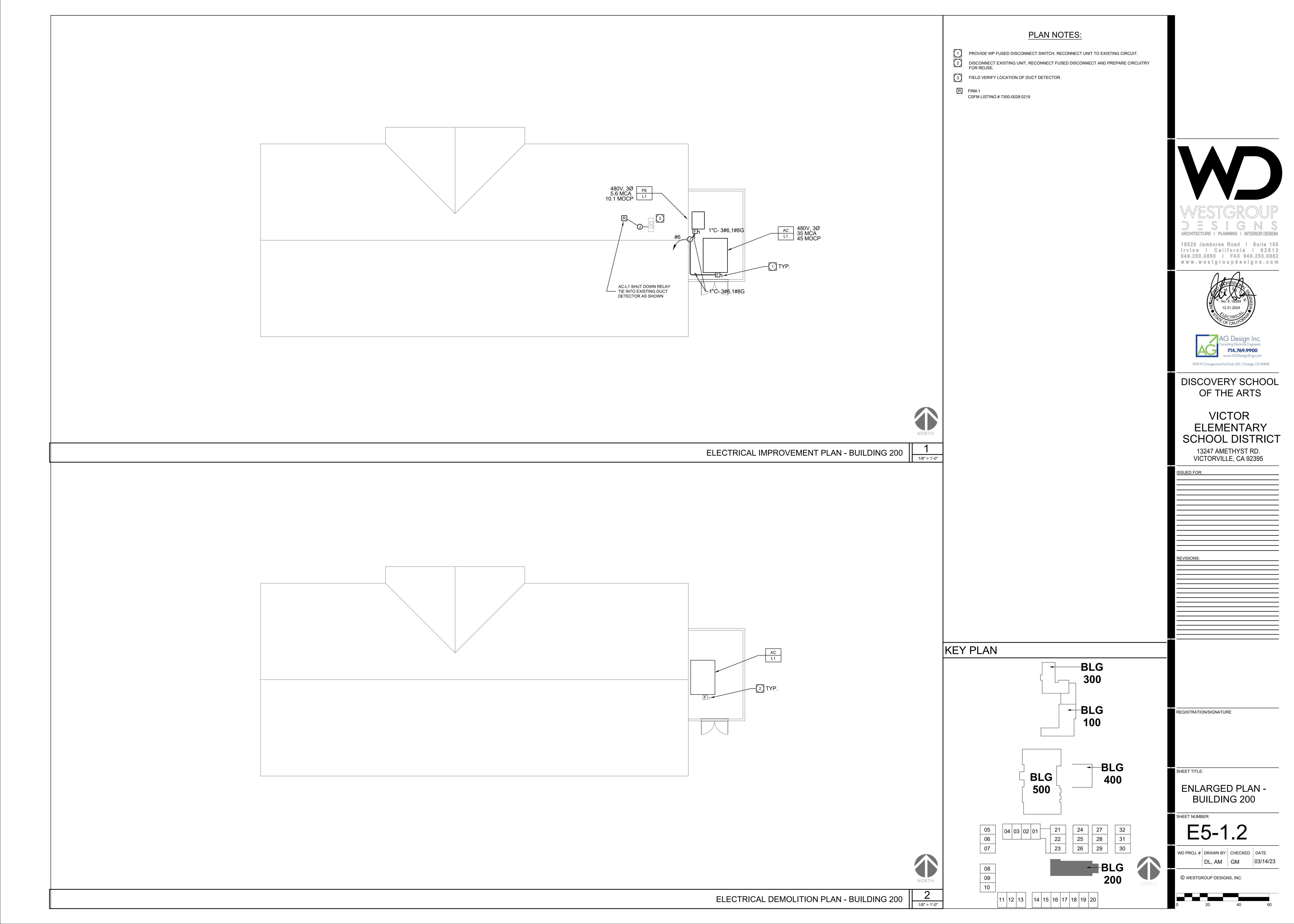
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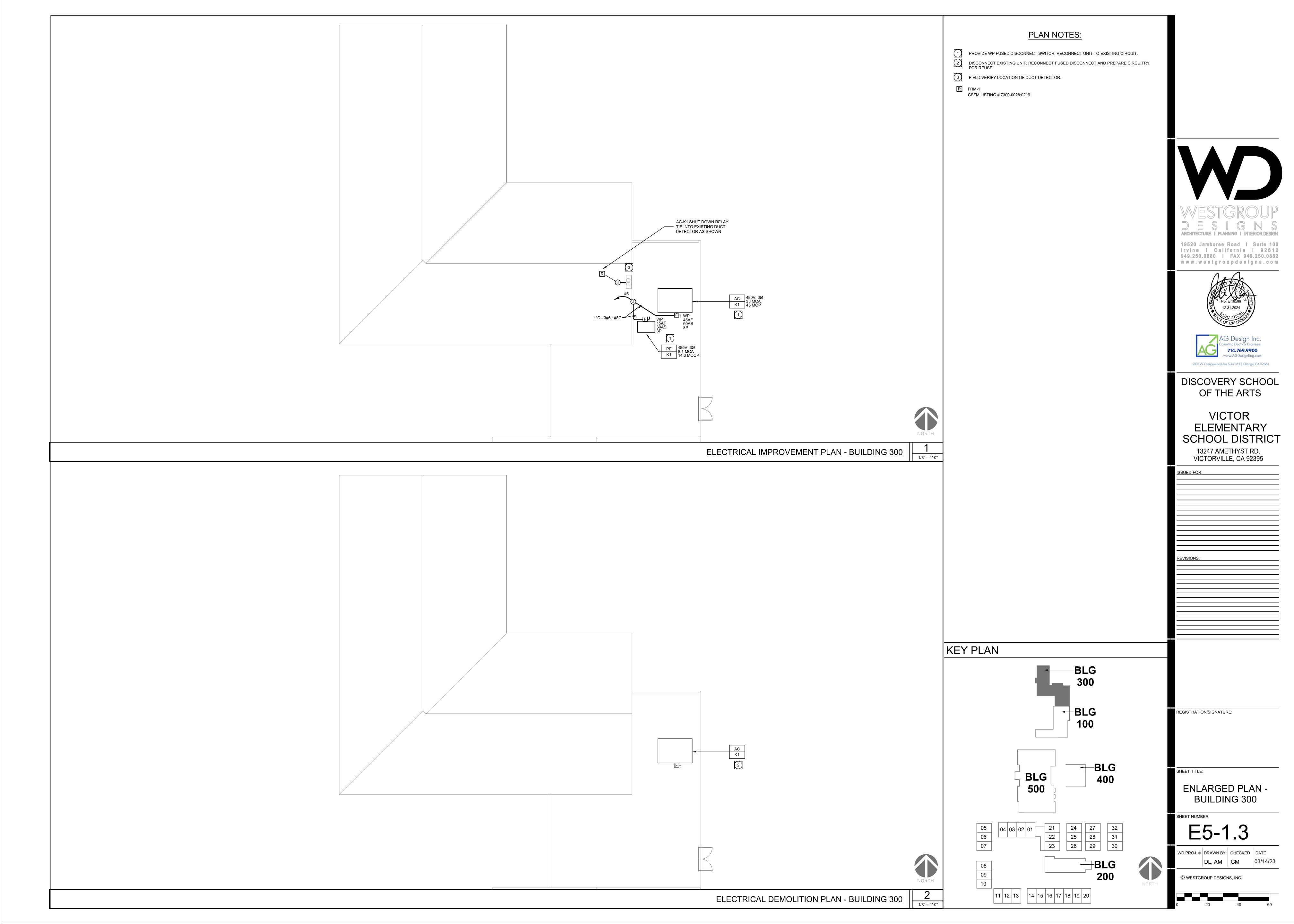
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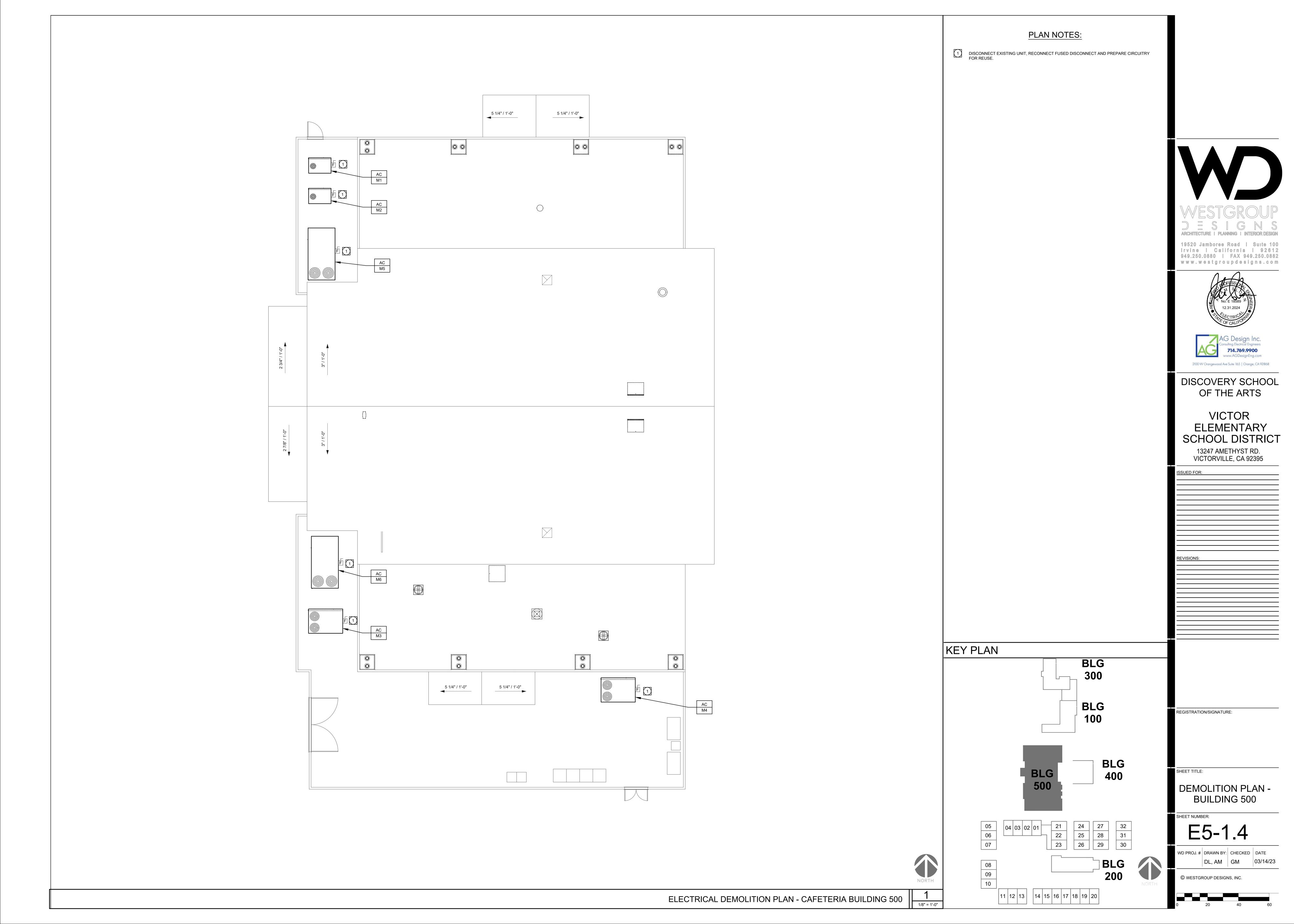
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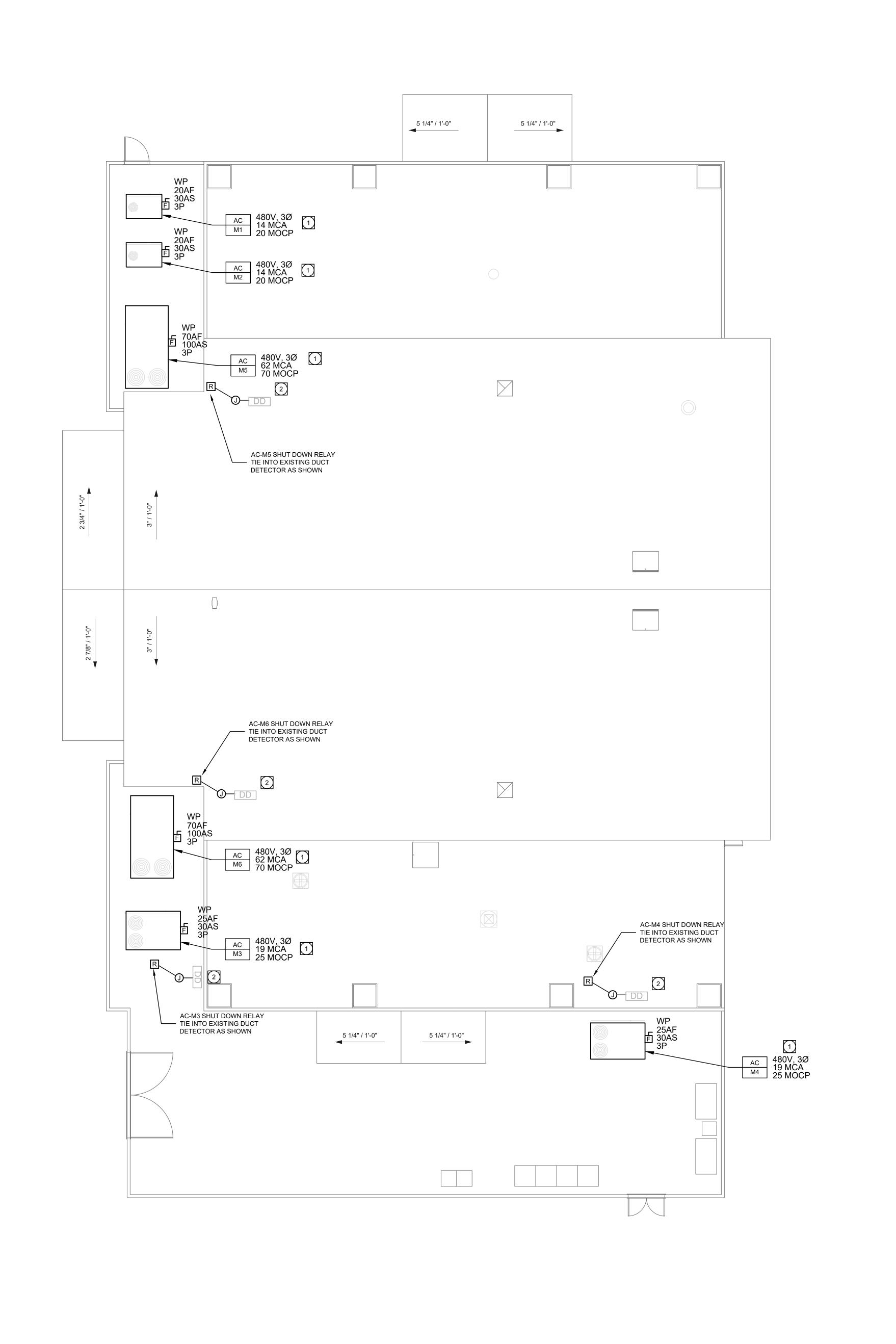


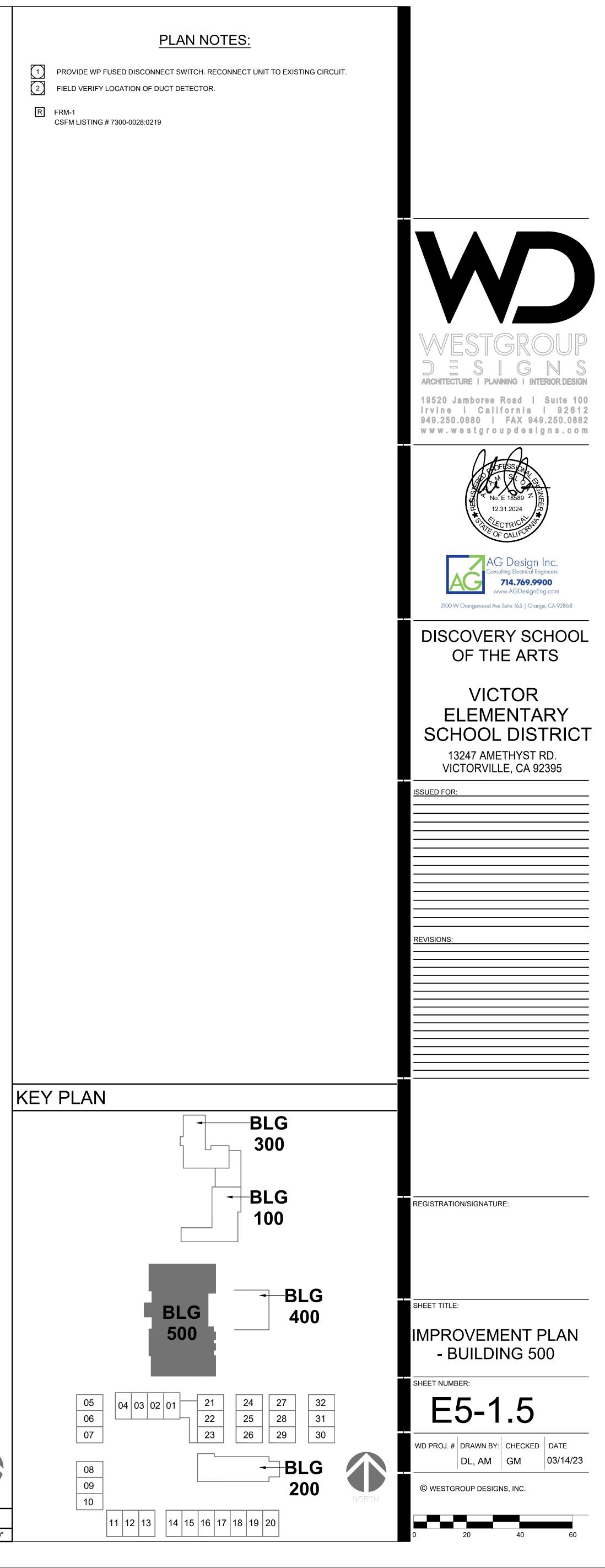












NORTH

