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Building #17
Campus Expansion Child
Day-care Center

899 Old Saw Mill River Road
Mount Pleasant, NY 10591

Project No. B17-DAYCARE

Architect

Gensler

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MEP / IT / Security Engineer

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(212) 615-3700 Fax

Civil Engineer

JMC

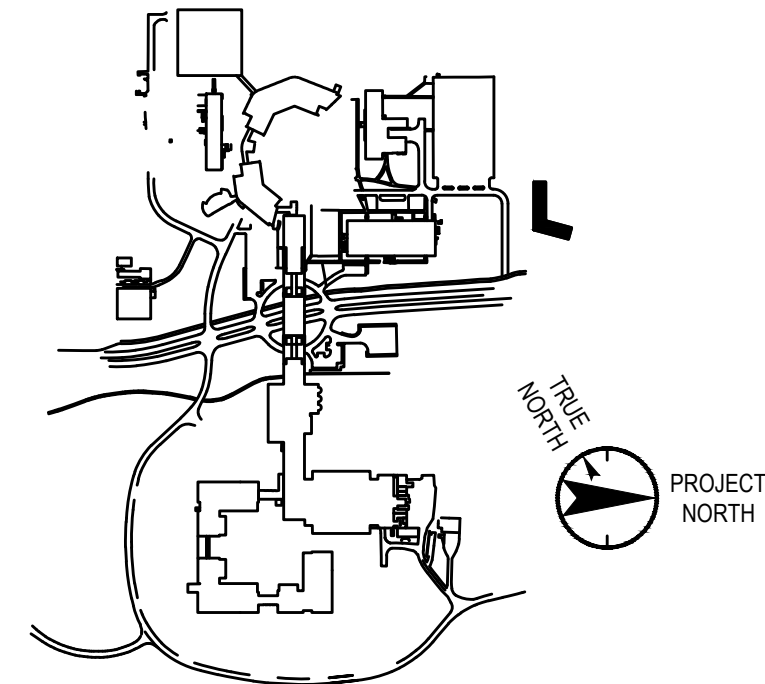
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(914) 273-2102 Fax

Landscape Architect

Langan

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Key Plan



No. Date Description

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1 06.20.2022 100% CONSTRUCTION DOCUMENTS
2 07.01.2022 100% CONSTRUCTION DOCUMENTS-1

Plot Date: 07.01.2022

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Professional Seal and Signature

Vendor Name: COSENTINI

Vendor Project No.: 210104

Discipline: Mechanical Drawn By: BC

MECHANICAL
SYMBOLS,
ABBREVIATIONS, AND
DRAWING LIST

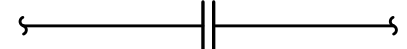




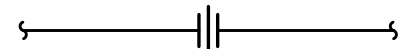









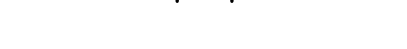














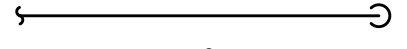



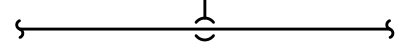































































































Scale: NTS

Foot:

M-000

KEY OF SYMBOLS AND ABBREVIATIONS

NOTE: THE KEY OF SYMBOLS INDICATED IS FOR CONVENIENCE ONLY AND ITEMS INDICATED ARE NOT NECESSARILY WITHIN THE SCOPE OF THE WORK.

 FLANGED CONNECTION	 SQUARE INCHES	 THERMOSTAT	 AIR CONDITIONING UNIT	 FLOOR DRAIN
 UNION FITTING	 SQUARE FEET	 DUCT MOUNTED SMOKE DETECTOR	 ACCESS DOOR	 GENERAL EXHAUST
 VALVED CAPPED OUTLET	 CAPPED OUTLET	 TEMPERATURE SENSOR	 AUTOMATIC LOUVER DAMPER	 GENERAL EXHAUST FAN
 REDUCER	 LEAK DETECTOR	 CARBON DIOXIDE SENSOR	 ABOVE FINISHED FLOOR	 UNLESS OTHERWISE NOTED
 PIPE UP	 SHEET NOTE	 UNDER-CUT DOOR	 AIR FLOW MEASURING STATION	 VOLUME DAMPER
 PIPE DN	 STATIC PRESSURE	 LOUVERED DOOR	 AIR HANDLING UNIT	 GALLONS PER MINUTE
 PIPE BOTTOM CONNECTION		 SEE DETAIL NO. 1 ON DRAWING M-101	 ACOUSTICAL LINING	 HEATING COIL
 PIPE TOP CONNECTION		 SEE SECTION NO. 1 ON DRAWING M-101	 AUTOMATIC LOUVERED DAMPER	 HORSEPOWER
 PIPE STUB UP			 ALUMINUM LOUVER AND ALUMINUM WIRE MESH SCREEN	 KILOWATT
 FLOW DIRECTION			 ACCESS PANEL	 LEAVING AIR TEMPERATURE
 PIPE PITCH UP OR DOWN			 BACKDRAFT DAMPER	 LINEAR DIFFUSER
 CONDENSATE DRAIN			 BLIND FLANGE	 LINEAR FEET
 REFRIGERANT LIQUID LINE			 BOTTOM GRILLE	 1000 BTU PER HOUR
 REFRIGERANT SUCTION LINE			 BREAK HORSEPOWER	 NORMALLY CLOSED
	 FLOOR DESIGNATION	 DUCT SIZE IN INCHES (FIRST FIGURE IS SIDE SHOW)	 BOTTOM GRILLE	 NET FREE AREA
	 TERMINAL NUMBER	 DUCT WITH ACOUSTICAL LINING (SIZE INDICATES CLEAR AREA INSIDE)	 BLANK OFF	 NORMALLY OPEN
	 CEILING DIFFUSER	 FLEXIBLE CONNECTION	 BOTTOM REGISTER	 OUTSIDE AIR
	 RETURN GRILLE /REGISTER	 FLEXIBLE DUCT	 BOTTOM OF STEEL	 OUTSIDE AIR INTAKE
	 SUPPLY AIR	 SQUARE VANED ELBOW	 BRITISH THERMAL UNIT	 OUTLET VELOCITY
	 RETURN/EXHAUST AIR	 RADIUS ELBOW	 COOLING COIL	 PRE-HEAT COIL
	 AIR QUANTITY (200 CFM)	 SUPPLY AIR DUCT	 CEILING DIFFUSER	 PHASE
		 RETURN/EXHAUST AIR DUCT	 CONDENSATE DRAIN	 PRESSURE INDEPENDENT MODULE
		 VOLUME DAMPER	 CUBIC FEET PER MINUTE	 PLUGGED OUTLET
		 AUTOMATIC LOUVERED DAMPER	 CEILING GRILLE	 RETURN AIR
		 TRANSFER OPENING ABOVE HUNG CEILING	 CONDENSING UNIT	 RETURN GRILLE
		 TRANSFER DUCT ABOVE HUNG CEILING WITH ACOUSTICAL LINING	 CABINET UNIT HEATER	 RE-HEAT COIL
		 OPEN END DUCT WITH WIRE MESH SCREEN	 CAPPED OUTLET	 RELATIVE HUMIDITY
		 RISE DUCT WITH WIRE MESH SCREEN	 CLEAN OUT DOOR	 SPLITTER DAMPER
			 CONDENSATE PUMP	 SQUARE
			 CEILING REGISTER	 SQUARE FEET
			 DOWN	 STATIC PRESSURE
			 DIFFERENTIAL PRESSURE SWITCH	 SOUND TRAP
			 ELECTRIC HEATER	 TRANSFER FAN
			 ENTERING AIR TEMPERATURE	 TOP CONNECTION
			 EXHAUST FAN	 TOP GRILLE
			 FILTER	 TOP REGISTER
			 FACE AREA	 TRANSFER OPENING
			 FLEXIBLE CONNECTION	 TRANSFER GRILLE
				 UNDERWRITER'S LABORATORY
				 UNIT HEATER
				 VIBRATION ISOLATOR
				 VERIFY IN FIELD
				 WIRE MESH SCREEN

HVAC GENERAL NOTES:

- CONTRACTOR, WITH OWNER, SHALL PAY ALL FEES AND OBTAIN ALL PERMITS REQUIRED BY LOCAL AND STATES CODES.
- WHERE PIPING, LIGHTS AND DUCTWORK CONFLICT, DUCTWORK SHALL BE COORDINATED IN THE FIELD TO SUIT CONDITIONS.
- ALL DUCTWORK TO BE KEPT AS HIGH AS POSSIBLE SO AS TO MAINTAIN CEILING HEIGHTS SHOWN ON ARCHITECTURAL DRAWINGS.
- ACCESS IS REQUIRED BELOW ALL DAMPERS, VALVES, AND EQUIPMENT. ACCESS DOORS TO BE PROVIDED IN GYPSUM CEILINGS AS REQUIRED.
- FOR EXACT LOCATION OF CEILING DIFFUSERS AND REGISTERS REFER TO THE ARCHITECTURAL REFLECTED CEILING PLAN.
- FOR EXACT LOCATION AND ARRANGEMENT OF ROOM THERMOSTATS AND EXHAUST FAN SWITCHES, SEE THE ARCHITECT'S DRAWINGS. IF NONE IS SHOWN, THERMOSTAT/SWITCH SHALL BE NEXT TO THE LIGHT SWITCH, MAINTAINING A DISTANCE FROM THE LIGHT SWITCHES.
- DUCT SIZES SHOWN ARE CLEAR INSIDE DIMENSIONS.
- DUCTWORK SHALL BE CONSTRUCTED AND INSTALLED PER LATEST EDITION OF THE SMACNA DUCT CONSTRUCTION STANDARDS.
- MOUNT THERMOSTAT ABOVE FINISHED FLOOR PER ARCHITECT. PROVIDE THERMOSTAT WITH HEAVY GUARDS OR LOCKABLE COVER APPROVED BY ARCH-ENGINEER IN COMMON PUBLIC OR UNSUPERVISED AREA.
- FOR EXACT LOCATION OF THERMOSTATS, GRILLES, AND DIFFUSERS REFER TO ARCHITECT DRAWINGS. ALL GRILLES AND DIFFUSERS PAINTED TO MATCH ADJACENT COLORS. COLORS TO BE APPROVED BY ARCH-ENGINEER.
- ALL SUPPLY, RETURN, EXHAUST AND OUTSIDE AIR DUCTWORK SHALL BE GALV. SHEET METAL UNLESS OTHERWISE SPECIFIED IN THE SPECS OR DWGS. WHERE BRANCH DUCTS ARE SERVING "WET" AREAS, ALUMINUM DUCT MATERIAL SHALL BE PROVIDED.
- ALL STRAP HANGER & SUPPORTS FOR FLEXIBLE DUCTWORK SHALL BE SIZES & INSTALLED IN ACCORDANCE W/SMACNA STANDARDS, BUT NOT LESS THAN 1-1/2" WIDE.
- PROVIDE MINIMUM OF R-6 ON DUCTWORK ABOVE CEILING. ALL FLEXIBLE DUCTWORK SHALL BE ALL METAL CONSTRUCTION CONSISTING OF A CORE STANDARD TRIPLE LOCK METAL FLEXIBLE DUCTING FOR STRENGTH AND AIRTIGHTNESS.
- UNITS OVER 2,000 CFM SHALL HAVE SMOKE DETECTORS ON THE SUPPLY AND RETURN DUCTWORK PER MECHANICAL CODE SECTION 606.2.
- ALL EXTERIOR INSULATED DUCTWORK SHALL HAVE POLYISOCYANURATE BOARD WITH EPDM COVER ON DUCTWORK.
- PROVIDE VOLUME DAMPERS IN LOW PRESSURE DUCTWORK FOR ALL SUPPLY, RETURN, AND EXHAUST OUTLETS. PROVIDE VOLUME DAMPERS (VD) AT EVERY DUCTWORK BRANCH, TAP AND SPLIT. DO NOT INSTALL VOLUME DAMPERS ON MEDIUM PRESSURE DUCTWORK.
- PROVIDE ACCESS DOORS IN DUCTWORK WHERE INDICATED OR REQUIRED FOR ACCESS TO SYSTEM COMPONENTS INCLUDING, BUT NOT LIMITED TO THE FOLLOWING:
A. AUTOMATIC DAMPERS
- PROVIDE INSULATED CONDENSATE DRAIN TO NEAREST FLOOR DRAIN FOR ALL AC UNITS. PROVIDE CONDENSATE PUMP WITH A MIN CAPACITY OF 20TODR200GPH, 115V/1/60, 60TFLUID IN. RESERVOIR, COMPLETE VALVE PACKAGE AND ACCESSORIES IF THE CONDENSATE CAN NOT BE DRAINED BY GRAVITY.
- ALL MOTOR STARTERS LOCATED OUTDOORS OR EXPOSED TO WET OR DAMP CONDITIONS SHALL BE NEMA TYPE 4.
- ALL COILS AND FILTERS SHALL BE INSTALLED ON TRACKS FOR EASY REMOVAL. INSTALLATIONS THAT REQUIRE DISASSEMBLY OF THE UNIT OR PLENUM FOR COIL REMOVAL ARE NOT ACCEPTABLE.

COMMISSIONING NOTES

OWNER SHALL ENGAGE A REGISTERED DESIGN PROFESSIONAL OR APPROVED AGENCY TO PROVIDE COMMISSIONING SERVICES IN COMPLIANCE WITH 2020 EECNYS. THE SPECIFICATIONS SHALL BE PROVIDED BY A COMMISSIONING AGENT TO BE SUBMITTED WITH DESIGN DOCUMENTS FOR BID.

- SYSTEMS AND ASSOCIATED CONTROLS TO BE COMMISSIONED:
- HEATING, COOLING, AIR HANDLING AND DISTRIBUTION, VENTILATION, EXHAUST SYSTEMS, AND THEIR RELATED AIR QUALITY MONITORING SYSTEMS.
 - AIR, WATER, AND OTHER ENERGY RECOVERY SYSTEMS.
 - MANUAL OR AUTOMATIC CONTROLS, WHETHER LOCAL OR REMOTE, ON ENERGY USING SYSTEMS INCLUDING BUT NOT LIMITED TO TEMPERATURE CONTROLS, SETBACK SEQUENCES, AND OCCUPANCY BASED CONTROL, INCLUDING ENERGY MANAGEMENT FUNCTIONS OF THE BUILDING MANAGEMENT SYSTEM.
 - PLUMBING, INCLUDING INSULATION OF PIPING AND ASSOCIATED VALVES, DOMESTIC AND PROCESS WATER PUMPING, AND MIXING SYSTEMS.
 - MECHANICAL HEATING SYSTEMS AND SERVICE WATER HEATING SYSTEMS.
 - REFRIGERATION SYSTEMS.
 - RENEWABLE ENERGY AND ENERGY STORAGE SYSTEMS.
 - OTHER SYSTEMS, EQUIPMENT AND COMPONENTS THAT ARE USED FOR HEATING, COOLING OR VENTILATION AND THAT AFFECT ENERGY USE.

COMMISSIONING PLAN SHALL FOLLOW ALL NECESSARY STEPS AS PER 2020 EECNYS.

TRAINING AND MANUALS:

UPON COMPLETION OF THE JOB, ALL APPLICABLE OPERATING AND SPECIFICATION MANUALS TO BE DELIVERED TO THE BUILDING STAFF. CONTRACTOR SHALL PROVIDE TRAINING FOR THE BUILDING MAINTENANCE STAFF TO ASSURE THAT THE SYSTEM IS MAINTAINED AND OPERATED PROPERLY.

ENERGY CODE NOTES

- THE MAXIMUM AIR LEAKAGE RATE FOR ALL TYPES OF FENESTRATION ASSEMBLIES AND THEIR TEST PROCEDURE, FROM AN INDEPENDENT AND ACCREDITED LABORATORY, SHALL FOLLOW SECTION C402.5.2 AND TABLE 402.5.2 OF THE EECNYS.

TO THE BEST OF MY KNOWLEDGE, BELIEF AND PROFESSIONAL JUDGMENT, THESE PLANS AND SPECIFICATIONS ARE IN COMPLIANCE WITH THE 2020 ENERGY CONSERVATION CODE OF NYS

This plan is approved only for work indicated on the application specification sheet. All other matters shown are not to be relied upon, or to be considered as either being approved or in accordance with applicable codes.

Alterations or additions to this engineering document by an unlicensed person is a violation of Chapter 16, Title VIII, Article 145 § 7209.2 of the New York State Education Law.