IDEA PUBLIC SCHOOLS

IDEA SAN JUAN
CHILLER UPGRADES
SAN JUAN, TEXAS

VICINITY MAP

SCOPE OF WORK:

SCOPE OF WORK: PROVIDE ALL MATERIALS AND LABOR ASSOCIATED WITH COMPLETE OPERATIONAL SYSTEMS. MAJOR ITEMS OF WORK INCLUDE, BUT ARE NOT LIMITED TO:

1. CENTRAL PLANT: REPLACE INDICATED EXISTING EQUIPMENT WITH HIGH EFFICIENCY AIR-COOLED CHILLERS, PUMPS, VFDS, EXPANSION TANK, AIR-SEPARATOR, CHEMICAL TREATMENT POT FEEDERS. PROVIDE GAUGES, FITTINGS, VALVES, HARDWARE, HYDRONIC SPECIALITIES, AND CHEMICAL TREATMENT FOR THE SYSTEMS.

2. HYDRONIC DISTRIBUTION SYSTEMS: PAINTED, INSULATED, AND JACKETED CHILLED WATER PIPING, PIPE CONNECTIONS, VALVES, PIPING SPECIALTIES, HOT DIPPED, AND PAINTED PIPING SUPPORTS, AS INDICATED ON PIPING PLANS AND SCHEMATICS. PROVIDE INSULATION ON COLD SURFACES CAPABLE OF GENERATING CONDENSATION. ALUMINUM JACKETING FOR ALL PIPING EXPOSED OUTDOORS AND IN PUMP ROOM.

3. REPLACE EXISTING MANUAL VALVES, PIPING INSULATION AND JACKETING AT EACH AHU CHILLED WATER BRANCH. SEE DRAWINGS.

4. BUILDING AUTOMATION SYSTEM (BAS): PROVIDE CONTROLS UPGRADES.

   A. REPLACE EXISTING NAE4510-2 ENGINE FOR ORIGINAL PHASE I PORTION OF THE CAMPUS WITH NEW "SNE" SUPERVISORY CONTROLLERS.

   B. UPDATE GRAPHICS PACKAGE AT PHASE I PORTION TO "MUI" THAT IS COMPATIBLE WITH THE METASYS SERVER.

   C. ENSURE THAT THE ENTIRE CAMPUS OPERATES UNDER A SEAMLESS AND STANDARDIZED MUI INTERFACE TO ENSURE CONSISTENCY, USABILITY, AND LONG-TERM SUPPORTABILITY ACROSS THE PORTFOLIO.

   D. COORDINATE BACNET POINTS FROM NEW CHILLERS AND UPDATE GRAPHICS.

   E. RE-COMMISSION CONTROLS SEQUENCES FOR LOADING AND UNLOADING CHILLERS.

5. TESTING, ADJUSTING, & BALANCING (TAB).

6. SHOP DRAWING SUBMITTALS FOR ALL MECHANICAL SYSTEMS INCLUDING BUT NOT LIMITED TO EQUIPMENT, DUCTWORK AND PIPING. THESE INCLUDE COORDINATION DRAWINGS FOR PLACING OF MECHANICAL SYSTEMS IN RELATION TO WORK BY OTHER DISCIPLINES.

7. CONTRACTOR IS RESPONSIBLE FOR PROVIDING WINDSTORM CERTIFICATION INSPECTIONS AND CERTIFICATIONS FOR EXTERIOR MOUNTED EQUIPMENT. CONTRACTOR MUST NOTIFY INSPECTOR PRIOR TO INSTALLING EQUIPMENT, AND APPRISE INSPECTOR OF WORK SCHEDULING INVOLVING EQUIPMENT REQUIRING WIND INSPECTION / CERTIFICATION, SO THAT INSPECTIONS MAY BE CARRIED OUT AT REQUIRED STAGE(S) OF CONSTRUCTION. COST FOR INSPECTION SHALL BE BORNE BY THE CONTRACTOR. INSPECTOR SHALL BE CERTIFIED BY THE TEXAS DEPARTMENT OF INSURANCE (SEE WWW.TDI.STATE.TX.US FOR A LIST OF CERTIFIED INSPECTORS).

8. COORDINATE ELECTRICAL WORK WITH DIV. 26 AS REQUIRED.

9. PAINTING: SEE DIVISION 9 SPECIFICATIONS. PAINT ALL EXPOSED PIPING, DUCTWORK, INSULATION, HANGERS, ACCESSORIES IN INTERIOR EXPOSED AREAS. PAINT EXTERIOR PIPE SUPPORTS. COORDINATE PAINT TYPE, COLOR AND SCOPE OF WORK WITH ARCHITECT.

10. COMMISSIONING: PROVIDE ASSISTANCE WITH COMMISSIONING SERVICES PER SPECIFICATIONS. THIS INCLUDES COMPLETING SYSTEMS READINESS CHECKLISTS, PERFORMING FUNCTIONAL TESTING, PROVIDING OPERATOR TRAINING, ETC.

11. ELECTRICAL: PROVIDE ALL MATERIALS AND LABOR ASSOCIATED WITH COMPLETE OPERATIONAL ELECTRICAL DISTRIBUTION SYSTEM. MAJOR ITEMS OF WORK INCLUDE, BUT NOT LIMITED TO:

(a) ELECTRICAL SERVICE: TO REMAIN AS IS WITH MODIFICATIONS.
(b) DEMOLITION: DISCONNECT EXISTING HVAC EQUIPMENT FOR INSTALLATION OF NEW EQUIPMENT AS NOTED ON DRAWINGS.
(c) POWER SYSTEMS: PROVIDE CONNECTIONS FOR NEW HVAC EQUIPMENT.
(d) COMMISSIONING: PROVIDE FOR THE HVAC AS REQUIRED PER IECC 2018.

DATE OF ISSUE

APRIL 03, 2026

LIST OF DRAWINGS

BOARD OF DIRECTORS

COLLIN SEWELL	CHAIR
ED RIVERA	VICE-CHAIR & SECRETARY
ERICH HOLMSTEN	TREASURER
NAJ ATKINSON	MEMBER
THERESA BARRERA -SHAW	MEMBER
NANETTE COCERO	MEMBER
DAVID DUNN	MEMBER
STACY ENG	MEMBER
RYAN GREEN	MEMBER
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LILYA MATOS	MEMBER
CONNIE MINER	MEMBER

NO: REVISION: BY:

COPY NO:

CSP # 40-SJCP-0726

STATE OF TEXAS
CESAR A. GONZALEZ
108611
LICENSED
PROFESSIONAL ENGINEER
04.03.2026

TEXAS

IDEA PUBLIC SCHOOLS
SAN JUAN CHILLER UPGRADES

SAN JUAN

ethos engineering
1126 SOUTH COMMERCE ST.
HARLINGEN, TX
PHONE: 956-230-3435
TEXAS REGISTERED
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F-15998

DATE: APRIL 3, 2026
CHECKED BY: B. BURKE
DRAWN BY: J. RODRIGUEZ
PROJECT NO.: 26v20
CAD FILE:
SHEET: COVER

COORDINATION:

1. GENERAL:
   a. CONTRACTOR SHALL REVIEW COMPLETE DOCUMENTS PRIOR TO SUBMITTAL OF PROPOSAL TO GAIN COMPLETE UNDERSTANDING OF PROJECT SCOPE, WORK BY OTHERS, AND MECHANICAL WORK ASSOCIATED WITH OTHER DISCIPLINES.

   b. TIME OR MONEY ALLOWANCES WILL NOT BE MADE TO ACCOMMODATE UTILITY CONFLICTS THAT CAN BE REASONABLY RESOLVED BY COORDINATION DURING SHOP DRAWING STAGE.

2. SITE:
   a. TIME OR MONEY ALLOWANCES WILL NOT BE MADE TO ACCOMMODATE UTILITY CONFLICTS THAT CAN BE REASONABLY RESOLVED BY COORDINATION DURING SHOP DRAWING STAGE.

3. SPATIAL COORDINATION:
   a. COORDINATE ALL WORK WITH OTHER TRADES; COORDINATE SCHEDULE OF WORK WITH ALL SUB-CONTRACTORS TO ACHIEVE SMOOTH FLOW OF CONSTRUCTION.

   b. IN CASE OF CONFLICTS, ITEMS SHALL BE ARRANGED ACCORDING TO THE FOLLOWING PRIORITIES: LIGHTING, FIRE PROTECTION, HVAC. PROVIDE OFFSETS/RISES/DROPS REQUIRED TO RESOLVE CONFLICTS WITH OTHER UTILITIES, AND TO ACCOMMODATE ALL UTILITIES ABOVE CEILINGS.

   c. IN GENERAL, REROUTE SMALLER DUCTS/PIPES THROUGH JOISTS TO RESOLVE CONFLICTS WITH LARGER. PERFORM REROUTING IN MOST EFFICIENT MANNER POSSIBLE, AND IN ACCORDANCE WITH INDUSTRY STANDARDS.

   d. IN GENERAL ROUTE DUCTS/PIPES IN MOST EFFICIENT MANNER POSSIBLE, AND IN ACCORDANCE WITH INDUSTRY STANDARDS.

   e. SEE ELECTRICAL PLANS FOR EXACT LOCATION OF ELECTRICAL PANELS TO AVOID DUCTWORK AND PIPING RUNNING OVER THESE AREAS. COORDINATE WITH ELECTRICAL CONTRACTOR.

4. CONTROLS:
   a. REFER TO SPECIFICATIONS FOR CONTROL COMPONENTS AND DEVICES TO BE COORDINATED WITH MECHANICAL WORK.

   b. CONTROLS CONTRACTOR SHALL PROVIDE BUILDING AUTOMATION SYSTEM (BAS) THAT CONTROLS EQUIPMENT SHOWN ON DRAWINGS. CONTROLS CONTRACTOR IS RESPONSIBLE FOR INSTALLING LOW VOLTAGE POWER AND COMMUNICATIONS. REFERENCE SPECIFICATIONS FOR CONTROL COMPONENTS AND SEQUENCING TO BE COORDINATED W/ MECH. WORK.

   c. DRAWINGS SHOW GENERAL LOCATION OF DDC SENSORS (T, RH, AND CO2). UNLESS NOTED OTHERWISE, INSTALL SENSORS AT 48" ABOVE FINISHED FLOOR. WIRING SHALL BE IN CONCEALED WALLS. IN CASE OF CONFLICTS WITH FURNITURE, WINDOWS, ETC., COORDINATE EXACT LOCATION WITH ARCHITECT AND ENGINEER.

PIPING:

1. DRAWINGS ARE DIAGRAMMATIC IN NATURE. FOR CLARITY SAKE, MOST PIPING OFFSETS/RISES/DROPS ARE NOT SHOWN IN DRAWINGS.

2. LOCATION OF MECHANICAL SYSTEMS WITH PLUMBING, ELECTRICAL AND OTHER TRADES.

3. ROUTE INSULATED PIPING TIGHT AGAINST CEILING STRUCTURE AND WRAP PIPING BELOW BEAMS. CONCEAL PIPING ABOVE SUSPENDED CEILING TO EXTENT POSSIBLE. DO NOT ROUTE ANY PIPING ABOVE ELECTRICAL AND TELECOMMUNICATION ROOMS. COORDINATE LAYOUT WITH OTHER TRADES SUCH AS DUCTWORK, PLUMBING, LIGHTING, ELECTRICAL, FIRE PROTECTION, ETC. PROVIDE SHOP DRAWINGS TO CLEARLY SHOW PIPING ROUTING AND COORDINATION WITH OTHER ELEMENTS. IN CASE OF CONFLICT, COORDINATE REROUTING OF UTILITIES WITH ENGINEER AND ARCHITECT.

4. INSTALL ALL PIPING PENETRATING WALLS, PERPENDICULAR TO WALL. DRAWINGS INDICATE GENERAL ROUTING ONLY.

EXISTING CONDITIONS &: COORDINATION/RENOVATION:

1. COORDINATE SUMMER SCHOOL SCHEDULES AND PROJECT COMPLETION DATES WITH OWNER. PERFORM WORK IN CLOSE COORDINATION WITH OWNER. MAJORITY OF WORK SHALL BE PERFORMED WHEN SCHOOLS ARE UNOCCUPIED, SUCH AS WEEKENDS, AFTER HOURS, SPRING AND SUMMER BREAK OR AT OWNER APPROVED TIME.
2. COORDINATE WORK AMONG ALL DISCIPLINES. IT IS NOT THE INTENT OF THESE DOCUMENTS TO DICTATE WHO MUST DO THE WORK. ALL WORK SHOWN IS THE RESPONSIBILITY OF THE (PRIME) CONTRACTOR.
3. PROVIDE LIGHTED SAFETY BARRIERS AROUND WORK AREAS AT ALL TIMES.
4. WORK TO BE DONE UNDER ALLOWANCES BECOMES AN INTEGRAL PART OF THE WORK AND THE RESPONSIBILITY OF THE CONTRACTOR ONCE THE ALLOWANCE IS APPROVED.
5. COORDINATE WITH OWNER AND ENGINEER FOR ANY DISRUPTION IN UTILITY SERVICES, PARTICULARLY THOSE THAT MIGHT AFFECT OTHER BUILDINGS ON CAMPUS.
6. CONTRACTOR SHALL NOT PROCEED WITH ANY WORK INVOLVING A CHANGE IN PROJECT SCOPE OR COST WITHOUT FIRST HAVING OBTAINED ENGINEER'S APPROVAL IN WRITING. UNLESS ENGINEER HAS AGREED TO SUCH CHANGE PRIOR TO IT BEING DONE, AND HAS AGREED THAT AN INCREASE IN COST ASSOCIATED WITH SUCH CHANGE IS WARRANTED; CONTRACTOR WILL NOT BE REIMBURSED FOR SUCH CHANGE.
7. OWNER'S EQUIPMENT, MATERIALS, FURNISHINGS, CARPETS, AND INTERIOR SURFACES ARE TO BE PROTECTED FROM DUST ACCUMULATION AND DAMAGE, AND MUST BE THOROUGHLY CLEANED PRIOR TO SUBSTANTIAL COMPLETION. CARPETS ARE TO BE PROTECTED WITH HEAVY DUTY PLASTIC SHEETING. REFER TO SPECIFICATIONS SECTION 01700 EXECUTION REQUIREMENTS FOR FURTHER DETAIL.
8. MAINTAIN PROJECT SITE FREE OF WASTE MATERIALS AND DEBRIS, AND CLEAN SITE AT END OF EACH WORK DAY TO GREATEST EXTENT POSSIBLE.
9. SUBMISSION OF PROPOSAL IS CONSIDERED AN ACKNOWLEDGEMENT THAT CONTRACTOR VISITED SITE, VERIFIED ALL EXISTING CONDITIONS, AND INCLUDED ANY MODIFICATIONS TO EXISTING AND NEW WORK REQUIRED FOR INSTALLATION OF A COMPLETE AND OPERATIONAL SYSTEM.
10. TIME OR MONEY ALLOWANCES WILL NOT BE MADE TO ACCOMMODATE CONDITIONS THAT COULD HAVE BEEN VERIFIED PRIOR TO SUBMITTING PROPOSAL.
11. DRAWINGS SHOWING ALL EQUIPMENT LOCATIONS, DUCT AND PIPE SIZES, ELEVATIONS, AND ELECTRICAL INFORMATION HAVE BEEN RECREATED USING DRAWINGS AND SITE SURVEYS. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL SITE CONDITIONS IN ORDER TO MAKE ANY NECESSARY ADJUSTMENTS, PRIOR TO ORDERING MATERIALS OR COMMENCING INSTALLATION. CHANGE ORDERS WILL NOT BE APPROVED FOR DIMENSIONAL VERIFICATIONS REQUIRING MINOR ADJUSTMENTS NEEDED TO COMPLETE INSTALLATION.
12. PROVIDE SHOP DRAWINGS TO COORDINATE EXISTING AND NEW WORK.
13. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REMOVE AND DISPOSE OF ALL ITEMS INDICATED TO BE REMOVED. ONLY EXPRESSLY DESIGNATED ITEMS SHALL BE TURNED OVER TO OWNER.
14. OWNER SHALL HAVE FIRST RIGHT OF REFUSAL OF ALL MATERIAL REMOVED. CONTRACTOR SHALL DISPOSE OF ALL MATERIALS WHICH THE OWNER DOES NOT WANT.
15. REMOVE ALL EQUIPMENT, MATERIALS, CONTROL DEVICES, BOXES, POWER AND CONTROL WIRING, SAFETY SWITCHES, TUBING, ELECTRICAL CONDUIT, PIPING, SENSORS, ELECTRICAL DISCONNECTS, SUPPORTING DEVICES AND STRUCTURES, AND ALL RELATED AUXILIARY ITEMS ASSOCIATED WITH EQUIPMENT AND MATERIALS WHICH WILL NO LONGER BE USED AFTER THE PROJECT IS COMPLETE.
16. CONTRACTOR IS RESPONSIBLE FOR RESTORING ANY DISTURBED SURFACE TO ITS ORIGINAL CONDITION. ANY ROAD, TRAFFIC, OR OTHER PAINTED OR ERECTED SIGNS DAMAGED AS A RESULT OF WORK PERFORMED IN THOSE AREAS SHALL BE RESTORED TO THEIR ORIGINAL CONDITION.
17. CUTTING AND PATCHING OF WALLS DAMAGED IN THE REMOVAL OF ITEMS SHALL BE DONE, WHETHER OR NOT DRAWINGS SPECIFICALLY CALL FOR SUCH REPAIRS.
18. PRIOR TO DEMOLITION WORK, SUBMIT A DETAILED DEMOLITION AND CONSTRUCTION SCHEDULE TO OWNER AND ENGINEER. DO NOT PROCEED WITH WORK UNTIL PROPOSED SCHEDULE IS APPROVED BY ALL PARTIES. PROVIDE OWNER WITH MINIMUM 10 DAYS ADVANCE NOTICE OF INTENT TO PERFORM ANY WORK WHICH WILL REQUIRE CHILLER, BOILER PLANT OR ELECTRICAL SERVICE TO BE SHUT DOWN.

EQUIPMENT:

1. EQUIPMENT INSPECTION:
   a. FIELD VERIFY ALL CONDITIONS AND MEASURE DIMENSIONS WITHIN THE BUILDING PRIOR TO ORDERING EQUIPMENT AND/OR PROCEEDING WITH INSTALLATION.

   b. ALL EQUIPMENT SHALL BE FACTORY TESTED, AND CONTRACTOR SHALL VERIFY EQUIPMENT CONDITION PRIOR TO INSTALLATION. CONTRACTOR IS RESPONSIBLE FOR EQUIPMENT DAMAGED DURING MOVING AND INSTALLATION.

   c. EQUIPMENT FOUND DEFECTIVE PRIOR TO FINAL ACCEPTANCE SHALL BE REPLACED AT NO COST TO OWNER.

2. EQUIPMENT INSTALLATION:
   a. AFFIX ID TAGS TO ALL MECHANICAL EQUIPMENT PER SPECIFICATIONS.

3. EQUIPMENT INSULATION:
   a. INSULATE ALL SURFACES OF THAT ARE CAPABLE OF BECOMING COLD AND COLLECTING CONDENSATE. THIS INCLUDES SUPPLY DIFFUSERS AND CONNECTING DUCTWORK / TRANSITION PIECES.

4. MECHANICAL:
   a. MECHANICAL CONTRACTOR IS TO COORDINATE WITH TESTING, ADJUSTING, AND BALANCING (TAB) FIRM TO PROVIDE REPLACEMENT SHEAVES / PULLEYS FOR MOTORS IF / AS REQUIRED BY TAB TO ACHIEVE SPECIFIED FLOW RATES FOR EQUIPMENT.

5. ELECTRICAL:
   a. CONTRACTOR IS RESPONSIBLE FOR COORDINATION WITH ELECTRICAL CONTRACTOR REGARDING EQUIPMENT SIZES AND TYPES OF ELECTRICAL INTERFACE EQUIPMENT REQUIRED.

   b. DUE TO VARIATIONS IN EQUIPMENT CHARACTERISTICS BY DIFFERENT EQUIPMENT SUPPLIERS, MECHANICAL EQUIPMENT ULTIMATELY PROVIDED MAY DIFFER IN HORSEPOWER OR AMPERAGE REQUIREMENTS FROM THAT SPECIFIED IN THESE DRAWINGS. COORDINATE WITH GENERAL CONTRACTOR PRIOR TO BIDDING, AND PRIOR TO SUBMITTALS AND ORDERING EQUIPMENT, TO ENSURE THAT EQUIPMENT ELECTRICAL REQUIREMENTS ARE CONVEYED TO ELECTRICAL CONTRACTOR. IT IS SOLELY CONTRACTOR'S RESPONSIBILITY TO ENSURE COMPATIBILITY ISSUES ARE COORDINATED.

ELECTRICAL:

1. ALL ELECTRICAL WORK SHALL BE UNDER THE MASTER ELECTRICIAN WHO PULLED THE PERMIT AND ITS JOURNEYMAN ELECTRICIANS.
2. PERFORM ALL WORK PER ADOPTED N.E.C. AND APPLICABLE STATE STANDARDS, UNLESS DRAWINGS OR SPECIFICATIONS HAVE MORE STRINGENT REQUIREMENTS.
3. UNLESS NOTED OTHERWISE, MINIMUM POWER CIRCUIT IS TO BE #12 THWN WITH #12 GROUND IN 3/4" CONDUIT, WITH THE EXCEPTION THAT ANY CIRCUIT LONGER THAN 100 FEET SHALL BE MINIMUM #10 AWG WITH #10 GROUND WIRE. CIRCUIT LONGER THAN 200 FEET SHALL BE MINIMUM #8 AWG WITH #10 GROUND WIRE MINIMUM.
4. ALL EXISTING ID NAMETAGS AND CIRCUIT IDENTIFICATION MUST BE REVISED TO REFLECT CURRENT CONDITIONS FOR ALL EQUIPMENT WHICH IS NEW, REPLACED, OR DEMOLISHED. REMOVE ID NAMETAGS FOR DEMOLISHED EQUIPMENT. REPLACE EXISTING NAMETAGS WITH NEW FOR REPLACED EQUIPMENT, IF REPLACEMENT EQUIPMENT HAS DIFFERENT NAME. PROVIDE NEW NAMETAGS FOR ALL NEW EQUIPMENT. ALL CIRCUIT BREAKER DIRECTORIES FOR PANELS IN WHICH NEW WORK TAKES PLACE ARE TO BE REPLACED WITH NEW DIRECTORIES WHICH LIST EXISTING CIRCUITS AND NEW. ALL UNUSED CIRCUITS ARE TO BE MARKED AS "SPARE" IN THE DIRECTORIES. DIRECTORIES ARE TO BE COMPUTER GENERATED; NO HAND WRITTEN DIRECTORIES ARE ACCEPTABLE.
5. HAND-WRITTEN CIRCUIT BREAKER DIRECTORIES WILL NOT BE ACCEPTED. DIRECTORIES MUST BE COMPUTER GENERATED AND PRINTED TO REFLECT FINAL INSTALLED CONDITIONS.
6. MARK ALL J-BOXES WITH INDELIBLE INK, INDICATING POWER CIRCUITRY INFORMATION. LABEL ALL EQUIPMENT ITEMS PER SPECIFICATIONS.
7. ALL EXTERIOR RACEWAYS ABOVE GROUND SHALL BE RIGID GALVANIZED.
8. UNDER NO CIRCUMSTANCES SHALL MORE THAN THREE CIRCUITS SHARE THE SAME NEUTRAL, AND SUCH CIRCUITS MUST BE SEPARATE PHASE.
9. SINCE ELECTRICAL CHARACTERISTIC OF EQUIPMENT (SUCH AS HORSEPOWER, KW, AMPERAGE, VOLTAGE, ETC.) SUBMITTED MAY DIFFER FROM THOSE SPECIFIED IN DRAWINGS, CONTRACTOR IS RESPONSIBLE FOR COORDINATION WITH MECHANICAL AND OTHER CONTRACTORS TO ENSURE COMPATIBILITY BETWEEN ELECTRICAL AND MECHANICAL EQUIPMENT SIZES AND TYPES OF ELECTRICAL INTERFACE EQUIPMENT REQUIRED.
10. USE LONG-SWEEPS FOR ALL CHANGES IN DIRECTION ON CONDUIT RUNS.
11. ALL INTERIOR RACEWAYS SHALL BE EMT.
12. FIELD VERIFY PROJECT SITE EXISTING CONDITIONS AND ELEVATIONS PRIOR TO BEGINNING ANY WORK.
13. PHASING AND SEQUENCE OF CONSTRUCTION SHALL BE PER DRAWINGS AND SPECIFICATIONS.
14. ALL MATERIALS AND LABOR, WHETHER SPECIFICALLY INDICATED ON PLANS OR NOT, WHICH ARE NECESSARY FOR THE PROPER INSTALLATION AND FUNCTION OF THE SYSTEM SHALL BE FURNISHED BY THIS CONTRACTOR. INCLUDE ALL COSTS OF CHANGES, IF/AS REQUIRED IN BID PROPOSAL.
15. ELECTRICAL WIRING SHALL NOT BE SPLICED BELOW GRADE.
16. CONTRACTOR IS RESPONSIBLE FOR ALL PERMITS AND FEES ASSOCIATED WITH PROJECT, INCLUDING FEES FOR INSPECTIONS, APPLICATIONS, AND PROVISION OF NEW SERVICES.
17. CONTRACTOR WHO WILL ACTUALLY PERFORM WORK MUST APPLY FOR ALL REQUIRED PERMITS.
18. NOTIFY ENGINEER OF ANY ASPECTS OF DESIGN WHICH ARE THOUGHT TO BE IN NONCOMPLIANCE WITH APPLICABLE CODES.
19. COORDINATE ALL WORK WITH OTHER TRADES; COORDINATE SCHEDULE OF WORK WITH ALL SUB-CONTRACTORS TO ACHIEVE SMOOTH FLOW OF CONSTRUCTION.
20. SEAL AROUND ELECTRICAL RACEWAYS AT ALL WALLS AND WALL LOUVER PENETRATIONS WITH FIREPROOF CAULKING. RE: SPECS. PROVIDE FLASHING AROUND PENETRATION, BOTH INSIDE AND OUTSIDE, TO PROVIDE FINISHED LOOK.
21. CONTRACTOR SHALL REVIEW COMPLETE DOCUMENTS PRIOR TO SUBMITTAL OF PROPOSAL TO GAIN COMPLETE UNDERSTANDING OF PROJECT SCOPE, WORK BY OTHERS, AND ELECTRICAL WORK ASSOCIATED WITH OTHER DISCIPLINES.
22. MAINTAIN MANUFACTURER RECOMMENDED CLEARANCE AROUND ALL EQUIPMENT.
23. AFFIX ID TAGS TO ALL DIVISION 26 EQUIPMENT.
24. CONTRACTOR IS RESPONSIBLE FOR COORDINATION WITH MECHANICAL AND PLUMBING CONTRACTOR REGARDING EQUIPMENT SIZES AND TYPES OF ELECTRICAL INTERFACE EQUIPMENT REQUIRED.
25. FIELD VERIFY ALL CONDITIONS AND MEASURE DIMENSIONS WITHIN THE BUILDING PRIOR TO ORDERING EQUIPMENT AND/OR PROCEEDING WITH INSTALLATION.
26. ALL EQUIPMENT SHALL BE FACTORY TESTED, AND CONTRACTOR SHALL VERIFY THEIR CONDITION PRIOR TO INSTALLATION. CONTRACTOR IS RESPONSIBLE FOR EQUIPMENT DAMAGED DURING MOVING AND INSTALLATION.
27. EQUIPMENT FOUND DEFECTIVE PRIOR TO FINAL ACCEPTANCE SHALL BE REPLACED AT NO COST TO OWNER.
28. SLEEVE ALL EXTERIOR WALL PENETRATIONS.
29. PRIOR TO ANY DEMOLITION, CONTRACTOR SHALL CONDUCT A DETAILED INSPECTION OF EXISTING CONDITIONS AND COMPARE AGAINST DEMOLITION DRAWINGS. CONTRACTOR SHALL REQUEST CLARIFICATION AS TO THE REMOVAL OF ANY ELECTRICAL COMPONENTS FOUND IN THE FIELD THAT ARE NOT SPECIFICALLY NOTED TO BE DEMOLISHED.
30. THE DESIGN INTENT IS TO REUSE TO EXTENT POSSIBLE EXISTING ELECTRICAL AND SAFETY SYSTEMS INCLUDING CIRCUIT BREAKERS, WIRING AND CONDUITS, SAFETY AND OTHER HARD WIRED INTERLOCKS, ETC. EXISTING SYSTEMS TO BE REUSED SHALL BE PROTECTED FROM DAMAGE DURING CONSTRUCTION. SEE PLANS
31. PROVIDE ADDITIONAL SPARE MATERIALS DESCRIBED BELOW. PROVIDE PROTECTIVE COVERING FOR STORAGE & IDENTIFIED WITH LABELS DESCRIBING THE CONTENTS. INCLUDE THE INSTALLATION COST, FITTINGS AND SUPPORTS IN THE BASE BID PROPOSAL:
    A. 100 LINEAR FEET – 3/4"–3#10 & #10G
    B. 50 LINEAR FEET – 3" – 3#350KCMIL & #4G

CONTROLS:

1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE ALL HARDWARE, SOFTWARE, CONTROL AND MONITORING DEVICES, AUXILIARY DEVICES, CABLES AND WIRE, PROGRAMMING AND INSTALLATION SERVICES TO RESULT IN A FULLY FUNCTIONAL SYSTEM WHICH PERFORMS IN MANNER EXPECTED BY OWNER AND ENGINEER.
2. COOPERATE AND COORDINATE FULLY WITH PROVIDER AND INSTALLER OF NEW HVAC UNITS TO ENSURE COMPLETE AND EFFECTIVE CONTROL OF UNITS IS ACHIEVED.
3. CONTRACTOR SHALL COOPERATE AND COORDINATE WORK ACTIVITIES EQUIPMENT SUPPLIER TO ENSURE SMOOTH TROUBLE-FREE INSTALLATION.
4. WHERE NOT SPECIFICALLY INDICATED ON PLANS, CONTRACTOR IS RESPONSIBLE FOR ALL CONTROL RELAYS AND CONTACTORS, POWER TO PANELS, AND OTHER CONTROL ELEMENTS. ALTHOUGH CONTRACTOR MAY COORDINATE WITH OTHER TRADES TO PROVIDE MISCELLANEOUS ELECTRICAL WORK, THE FINAL RESPONSIBILITY FOR ACHIEVEMENT OF CONTROL SEQUENCES LIES WITH CONTRACTOR.
5. REFER TO OPERATING SEQUENCE IN SPECIFICATIONS FOR ALARMS AND SEQUENCES REQUIRED.
6. ALL REFERENCES TO CONTROLLED / MONITORED POINTS AND / OR GRAPHICS WHICH ARE ON A CURRENT CONTROL SYSTEM, AND WHICH WILL BE REMOVED DURING COURSE OF CONSTRUCTION OF THIS PROJECT, MUST BE COMPLETELY REMOVED FROM CONTROL SYSTEM SOFTWARE, CONTROL SYSTEM WIRING AND CONTROLLERS TO SUCH POINTS MUST BE REMOVED AS WELL.
7. RECOMMENDED DIVISION OF RESPONSIBILITIES BETWEEN SUB-CONTRACTORS IS AS FOLLOWS:
   a. WITH OWNER COORDINATE ETHERNET CONNECTION AND EXTEND IT FROM OWNER DESIGNATED LOCATION TO NEW DDC PANELS AS APPLICABLE.

   b. CONTRACTOR SHALL COORDINATE CONTROL WIRING BETWEEN CONTROL PANELS AND UNITARY CONTROLLERS. PROVIDE MEANS TO SUPPORT WIRING (J-HOOKS). DO NOT SUPPORT WIRING FROM EXISTING DATA OR FIRE ALARM WIRING SUPPORTS.

   c. WITH ELECTRICAL SUB CONTRACTOR, CONTRACTOR COORDINATES 120V POWER WIRING AND CONDUIT TO NEW CONTROLLERS (AND CIRCUIT BREAKERS, IF NO SPARES EXIST).

   d. CONTRACTOR IS RESPONSIBLE FOR:
   - VALVES AND ACTUATORS
   - GATEWAY INTERFACES AND ALL RELATED ACCESSORIES FOR FULL COMMUNICATION
   - SOFTWARE, PROGRAMMING.
   - ALL NETWORK CONTROL PANELS, CONTROLLERS, SOFTWARE AND PROGRAMMING.
   - WIRING CONDUIT FOR CONTROL AND MONITORING DEVICES
   - CONTROL RELAYS
   - SHOP DRAWINGS PER SPECIFICATIONS.

INSULATION:

1. FIBERGLASS INSULATION MAY NOT BE USED ON ANY COLD SURFACES; ONLY CLOSED CELL INSULATION IS ACCEPTABLE.
2. PROVIDE INSULATION ON ALL SURFACES CAPABLE OF CREATING CONDENSATION.

GENERAL NOTES:

1. CONTRACT RELATED:
   a. COORDINATE WORK AMONG ALL DISCIPLINES. IT IS NOT THE INTENT OF THESE DOCUMENTS TO DICTATE WHO MUST DO THE WORK. ALL WORK SHOWN IS THE RESPONSIBILITY OF THE (PRIME) CONTRACTOR.

   b. WORK TO BE DONE UNDER ALLOWANCES BECOMES AN INTEGRAL PART OF THE PROJECT AND RESPONSIBILITY OF CONTRACTOR ONCE ALLOWANCE IS APPROVED.

   c. CONTRACTOR SHALL NOT PROCEED WITH ANY WORK INVOLVING A CHANGE IN PROJECT SCOPE OR COST WITHOUT FIRST HAVING OBTAINED ENGINEER'S APPROVAL IN WRITING. UNLESS ENGINEER HAS AGREED TO SUCH CHANGE PRIOR TO IT BEING DONE, AND HAS AGREED THAT AN INCREASE IN COST ASSOCIATED WITH SUCH CHANGE IS WARRANTED, CONTRACTOR WILL NOT BE REIMBURSED FOR SUCH CHANGE.

2. TEST & BALANCE:
   a. TEST & BALANCE SHALL BE PERFORMED UNDER GENERAL CONTRACTOR, SEPARATE FROM MECHANICAL CONTRACT. DURING BIDDING, CONTRACTOR SHALL SUBMIT A COPY OF EVIDENCE THAT TAB AGENT MEETS THE QUALIFICATIONS SPECIFIED UNDER DIV. 23 SECTION 230593 TO PRIME CONTRACTOR.

   b. CONTRACTOR SHALL COORDINATE TAB ACTIVITIES WITH TAB CONTRACTOR.

CODES & ORDINANCES:

1. GENERAL:
   a. UNLESS DRAWINGS OR SPECIFICATIONS HAVE MORE STRINGENT REQUIREMENTS, PERFORM ALL WORK PER APPLICABLE VERSION OF INTERNATIONAL BUILDING CODES, AND LOCAL CODES AND ORDINANCES.

   b. PRIOR TO SUBMITTING PROPOSAL, NOTIFY ENGINEER OF ANY ASPECTS OF DESIGN WHICH ARE THOUGHT TO BE IN NONCOMPLIANCE WITH APPLICABLE CODES.

2. WIND STORM CERTIFICATION:
   a. CONTRACTOR SHALL DESIGN, CONSTRUCT AND INSTALL EXTERIOR AND ROOF MOUNTED EQUIPMENT TO MEET GOVERNING BUILDING CODES.

3. PERMITS:
   a. CONTRACTOR IS RESPONSIBLE FOR ALL PERMITS AND FEES ASSOCIATED WITH PROJECT, INCLUDING FEES FOR INSPECTIONS, APPLICATIONS, AND PROVISION OF NEW SERVICES.

   b. CONTRACTOR WHO WILL ACTUALLY PERFORM WORK MUST APPLY FOR ALL REQUIRED PERMITS.

4. APPROVALS AND INSPECTIONS:
   a. OBTAIN APPROVAL FROM CITY FIRE DEPARTMENT AND BUILDING AND SAFETY DEPARTMENT PRIOR TO INSTALLATION OF ANY FIRE RELATED ITEMS.

   b. COORDINATE PRESSURE TESTS, INSPECTIONS AND APPROVAL FOR ALL SYSTEMS WITH PERMITTING OFFICER, OWNER AND ENGINEER.

NO:	REVISION:	BY:

COPY NO:

CSP # 40-SJCP-0726

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04.03.2026

TEXAS

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SAN JUAN CHILLER UPGRADES

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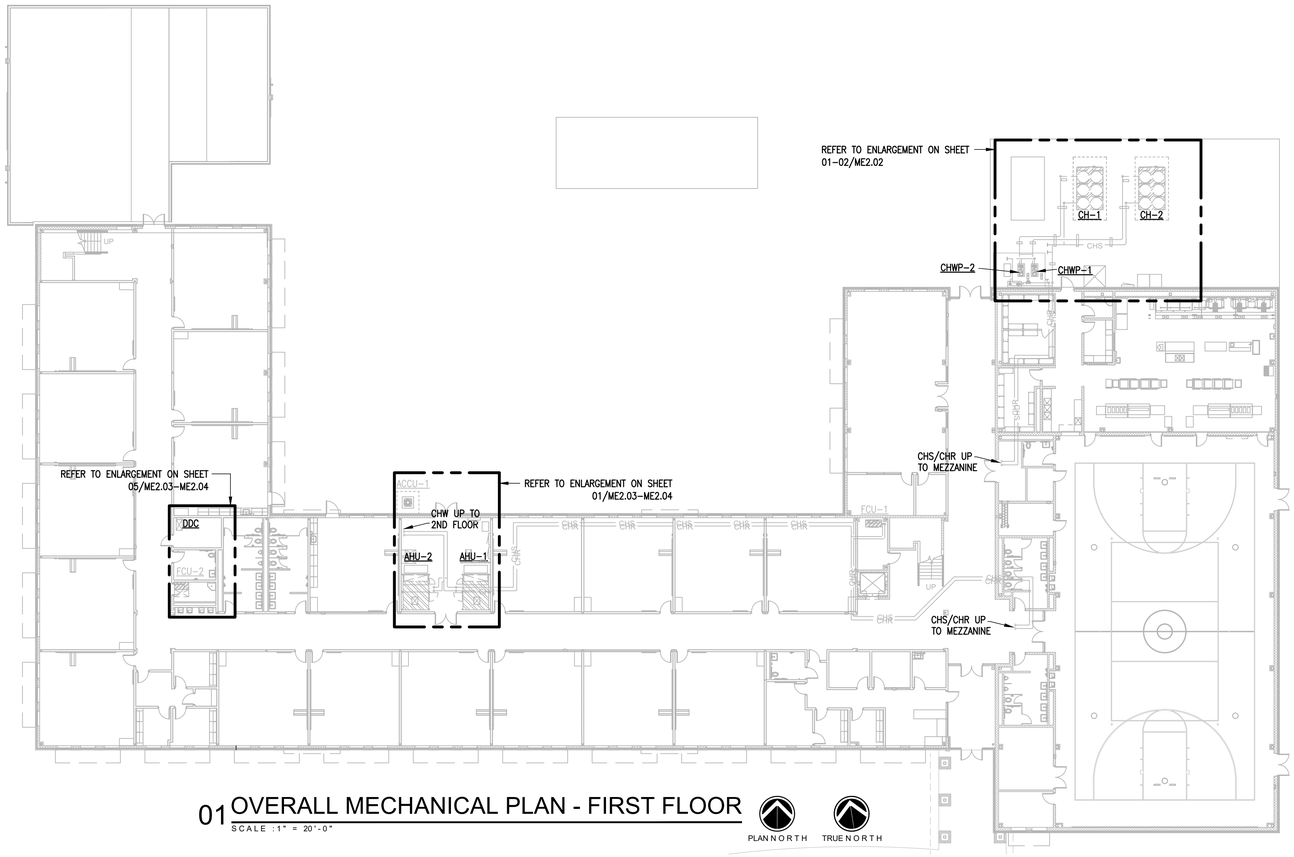
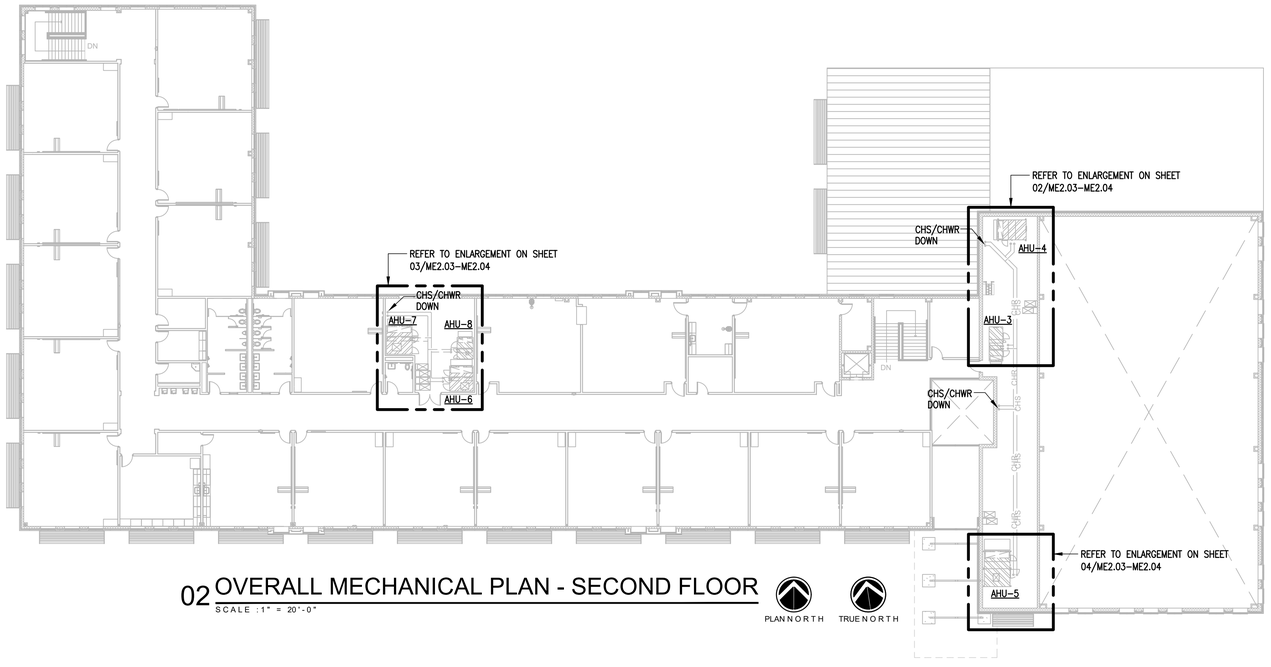
DATE: APRIL 3, 2026
CHECKED BY: B. BURKE
DRAWN BY: J. RODRIGUEZ
PROJECT NO.: 26v20
CAD FILE:
SHEET: ME1.01



01 OVERALL MECHANICAL PLAN - FIRST FLOOR

SCALE : 1" = 20'-0"

PLAN NORTH TRUE NORTH



02 OVERALL MECHANICAL PLAN - SECOND FLOOR

SCALE : 1" = 20'-0"

PLAN NORTH TRUE NORTH

DEMOLITION GENERAL NOTES:

1. ALL DEMOLITION WORK SHALL BE DONE IN ACCORDANCE WITH ALL APPLICABLE CODES INCLUDING THOSE PUBLISHED BY OSHA.
2. PROVIDE ALL DEMOLITION WORK REQUIRED FOR THE REMOVAL OF EQUIPMENT AND ASSOCIATED DEVICES. PROVIDE A COMPLETE AND OPERABLE SYSTEM UPON COMPLETION OF THE PROJECT.
3. COORDINATE DEMOLITION OF DIVISION 23 & 26 SYSTEMS AS REQUIRED WITH ALL OTHER TRADES.
4. ALL EXISTING EQUIPMENT REMOVED DURING CONSTRUCTION, THAT IS NOT TO BE REUSED, SHALL BE REMOVED FROM THE JOB SITE AND PROPERLY RETURNED TO THE OWNER, IF DESIRED BY OWNER.
5. OWNER MAY WISH TO KEEP DEMOLISHED EQUIPMENT AND MATERIALS. COORDINATE WITH OWNER, AND DISPOSE OF EQUIPMENT AND MATERIALS THAT OWNER DOES NOT RETAIN.

ABBREVIATIONS

A	AMPS	ENT.	ENTERING	NO	NORMALLY OPEN
ACCU	AIR COOLED CONDENSING UNIT	EXT.	EXTERNAL OR EXTERIOR	NTS	NOT TO SCALE
ACT	ACTUATOR	FCU	FAN COIL UNIT	OA	OUTSIDE AIR
AFF	ABOVE FINISHED FLOOR	FD	FIRE DAMPER	PH	PHASE
AHU	AIR HANDLING UNIT	FM	FLOW METER	RA	RETURN AIR
B.	BOTTOM	FS	FLOW SWITCH	RAG/RG	RETURN AIR GRILLE
BAS	BUILDING AUTOMATION SYSTEM	FPI	FINS PER INCH	RD	ROOF DRAIN
BOP	BOTTOM OF PIPE	G.	GROUND	RM.	ROOM
BOTT.	BOTTOM	GA.	GAGE	RPZ	REDUCED PRESSURE ZONE
C.	CONDUIT OR COMMON	GALV.	GALVANIZED	SA	SUPPLY AIR
CHR	CHILLED WATER RETURN	GPM	GALLONS PER MINUTE	SD	SUPPLY AIR DIFFUSER
CHS	CHILLED WATER SUPPLY	GRND.	GROUND	SS	STAINLESS STEEL
CHW	CHILLED WATER	HB	HOSE BIBB	SZ	SINGLE ZONE
CHWP	CHILLED WATER PUMP	HP	HORSEPOWER	TAB	TESTING & BALANCING
CR	CONDENSER WATER RETURN	HS	HUMIDITY SENSOR	T.O.L.	TOP OF LOUVER
CS	CONDENSER WATER SUPPLY	HVAC	HEATING, VENTILATION, & AIR CONDITIONING	TS	TEMPERATURE SENSOR
CLG.	CEILING OR COOLING			TSTAT	THERMOSTAT
COMB.	COMBINATION	LVG.	LEAVING	UG	UNDERGROUND
CONC.	CONCRETE	MECH	MECHANICAL	UNO	UNLESS OTHERWISE NOTED
COND.	CONDUIT	MOT. STRTR.	MOTOR STARTER	V	VOLTS
CT	COOLING TOWER	MS	MOTOR STARTER	VAV	VARIABLE AIR VOLUME
CU.	COPPER	MZ	MULTI–ZONE	VFD	VARIABLE FREQUENCY DRIVE
CW	CITY WATER	NC	NORMALLY CLOSED	W	WIRE
DDC	DIRECT DIGITAL CONTROLS				
DMPR.	DAMPER				
DISC.	DISCONNECT				
EAG/EG	EXHAUST AIR GRILLE				
EMS	ENERGY MANAGEMENT SYSTEM				

MECHANICAL SYMBOLS LEGEND

12x12	DUCT SIZE: FIRST FIGURE IS SIDE SHOWN	T	THERMOSTAT
(12x12)	BELOW DUCT SIZE: FIRST FIGURE IS SIDE SHOWN	SHV	SPACE HUMIDITY SENSOR
	DIRECTION OF FLOW–RETURN	RH	DUCT HUMIDITY SENSOR
	DIRECTION OF FLOW–SUPPLY	C	SPACE CARBON DIOXIDE SENSOR
FD	FIRE DAMPER	SP	STATIC PRESSURE SENSOR
8"Ø FLEX	FLEXIBLE DUCT	C	DUCT CARBON DIOXIDE SENSOR
		CHR	CHILLED WATER RETURN
EG–X cfm	EXHAUST AIR GRILLE	CHS	CHILLED WATER SUPPLY
		CD	CONDENSATE PIPING
RG/TG–X cfm	RETURN AIR/TRANSFER AIR GRILLE		BUTTERFLY VALVE
SD–X cfm	SUPPLY AIR DIFFUSER		MANUAL VALVE
	SIDE TAP WITH DAMPER		AUTOMATIC VALVE
	BACKDRAFT DAMPER		CHECK VALVE
AFR	AUTO–FLOW REGULATOR		PRESSURE GAUGE & COCK
	DRAIN VALVE	TS	TEMPERATURE SENSOR
	BALL VALVE	TW	THERMOMETER WELL

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SHEET:

ME2.01

ELECTRICAL KEYED NOTES

⚠1 APPROXIMATE LOCATION OF EXISTING PANELBOARD SERVING NEW HVAC EQUIPMENT.

⚠2 CONNECT NEW HVAC EQUIPMENT. REFER TO EQUIPMENT CONNECTION SCHEDULE.

ELECTRICAL DEMOLITION KEYED NOTES:

1 APPROXIMATE LOCATION OF EXISTING PANELBOARD SERVING EXISTING HVAC EQUIPMENT TO BE REPLACED.

2 DISCONNECT EXISTING HVAC EQUIPMENT FOR INSTALLATION OF NEW HVAC EQUIPMENT. REFER TO EQUIPMENT CONNECTION SCHEDULE.

DEMOLITION GENERAL NOTES:

1. ALL DEMOLITION WORK SHALL BE DONE IN ACCORDANCE WITH ALL APPLICABLE CODES INCLUDING THOSE PUBLISHED BY OSHA.
2. PROVIDE ALL DEMOLITION WORK REQUIRED FOR THE REMOVAL OF EQUIPMENT AND ASSOCIATED DEVICES. PROVIDE A COMPLETE AND OPERABLE SYSTEM UPON COMPLETION OF THE PROJECT.
3. COORDINATE DEMOLITION OF DIVISION 23 & 26 SYSTEMS AS REQUIRED WITH ALL OTHER TRADES.
4. ALL EXISTING EQUIPMENT REMOVED DURING CONSTRUCTION, THAT IS NOT TO BE REUSED, SHALL BE REMOVED FROM THE JOB SITE AND PROPERLY RETURNED TO THE OWNER, IF DESIRED BY OWNER.
5. OWNER MAY WISH TO KEEP DEMOLISHED EQUIPMENT AND MATERIALS. COORDINATE WITH OWNER, AND DISPOSE OF EQUIPMENT AND MATERIALS THAT OWNER DOES NOT RETAIN.

DEMOLITION MECHANICAL KEYED NOTES:

1 DEMOLISH EXISTING AIR COOLED CHILLER AND ASSOCIATED CHW PIPING CONNECTIONS, ISOLATION VALVES, SPECIALTIES, AND ACCESSORIES IN THE MECHANICAL YARD AS INDICATED.

2 DEMOLISH EXISTING CHW PIPING AS SHOWN. REFER TO CHW RISER DIAGRAM.

3 DEMOLISH EXISTING PUMPS AND ASSOCIATED CHW PIPING AS SHOWN ON PLANS. DEMOLISH AND REPLACE EXISTING FLEXIBLE CONNECTORS AND ACCESSORIES. RETAIN AND REUSE THE EXISTING PUMP CONCRETE HOUSEKEEPING PAD. PREPARE AREA FOR INSTALLATION OF NEW PUMPS.

4 DEMOLISH EXISTING MOTOR STARTERS SERVING PUMPS TO BE REPLACED. RETAIN AND REUSE EXISTING SUPPORT STRUCTURE.

5 DEMOLISH EXISTING EXPANSION TANK, CHEMICAL POT FEEDER, AND AIR SEPARATOR. RETAIN AND REUSE EXISTING CONCRETE HOUSEKEEPING PAD SUPPORTING EXPANSION TANK AND CHEMICAL POT FEEDER.

MECHANICAL KEYED NOTES:

1 PROVIDE NEW AIR COOLED CHILLER AS SCHEDULED. INSTALL ON EXISTING CONCRETE HOUSEKEEPING PAD. SECURE CHILLER TO CONCRETE PAD BY BOLTING IT DOWN.

2 PROVIDE NEW SCHEDULE 40 STEEL PIPING AS SHOWN ON PLANS, PROVIDE EPOXY COATING ON PIPING PRIOR TO NEW INSULATION AS PER SPECIFICATIONS. PROVIDE THERMOWELLS, PRESSURE GAGES, THERMOMETERS, FLOW SWITCHES, MANUAL VALVES, ANCHORS, ETC. AS SPECIFIED PER MECHANICAL DETAILS, CHILLED WATER PIPING SCHEMATIC, AND SPECIFICATIONS.

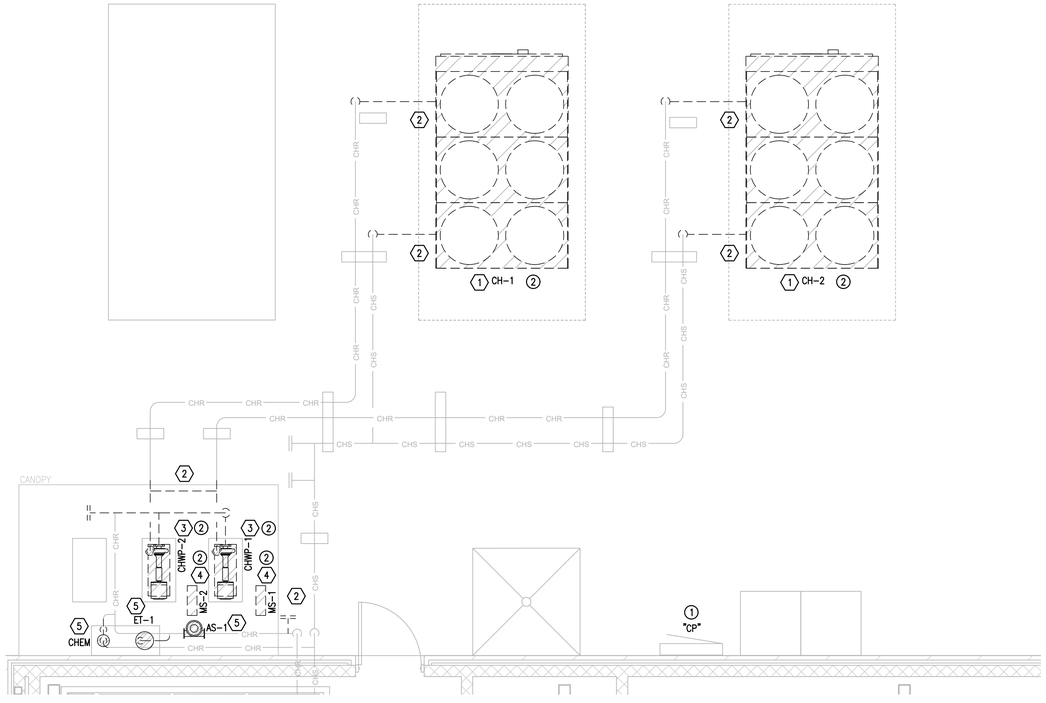
3 CONNECT NEW CHILLED WATER PIPING INTO EXISTING CHILLED WATER PIPING AT THIS APPROXIMATE LOCATION.

4 PROVIDE INSULATION AND ALUMINUM METAL JACKETING FOR ALL CHW PIPING EXPOSED OUTDOORS. (TYPICAL)

5 PROVIDE NEW CHW PUMP AS SCHEDULED. REUSE EXISTING CONCRETE PAD. SECURE CHW PUMP TO CONCRETE PAD BY BOLTING IT DOWN.

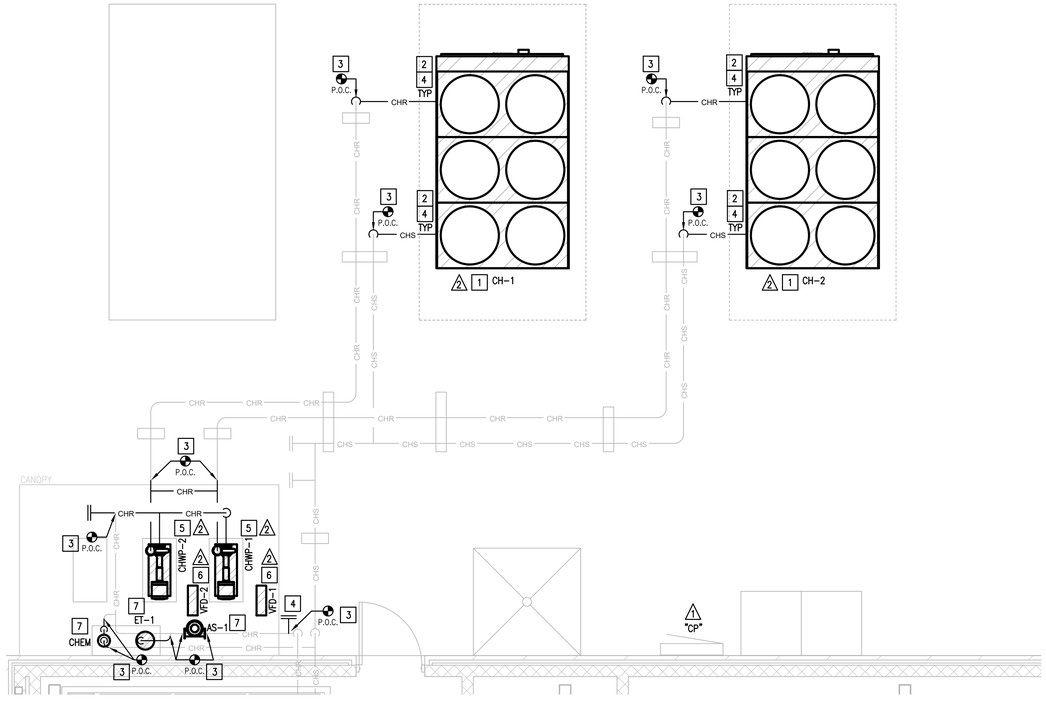
6 PROVIDE NEW VFDS PER SCHEDULE WITH NEMA 4X ENCLOSURE. MOUNT ON EXISTING SUPPORT STRUCTURE.

7 PROVIDE NEW EXPANSION TANK, CHEMICAL POT FEEDER, AND AIR SEPARATOR AS SCHEDULED. SEE ASSOCIATED DETAIL ON DETAIL SHEET.



01 MECHANICAL AND ELECTRICAL YARD - DEMOLITION PLAN
SCALE : 1/4" = 1'-0"

PLAN NORTH TRUE NORTH



02 MECHANICAL AND ELECTRICAL YARD - RENOVATION PLAN
SCALE : 1/4" = 1'-0"

PLAN NORTH TRUE NORTH

LEGEND

	EXISTING EQUIPMENT TO REMAIN
	EQUIPMENT TO BE DEMOLISHED
	NEW EQUIPMENT
CHS / CHR	EXISTING PIPING TO REMAIN
	PIPING TO BE DEMOLISHED
CHS / CHR	PIPING TO BE INSTALLED

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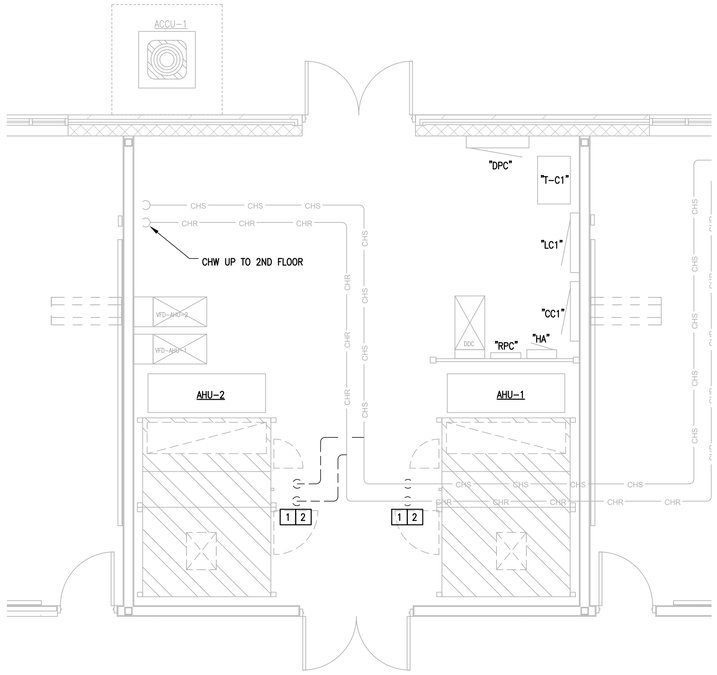
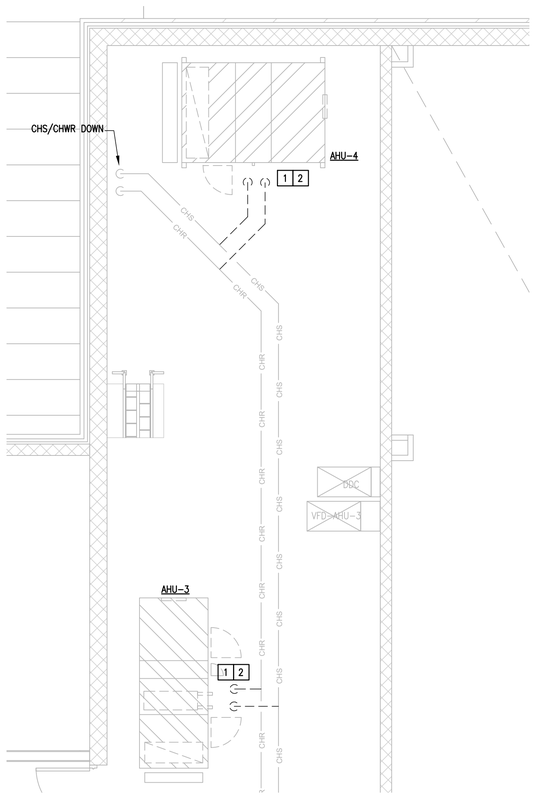


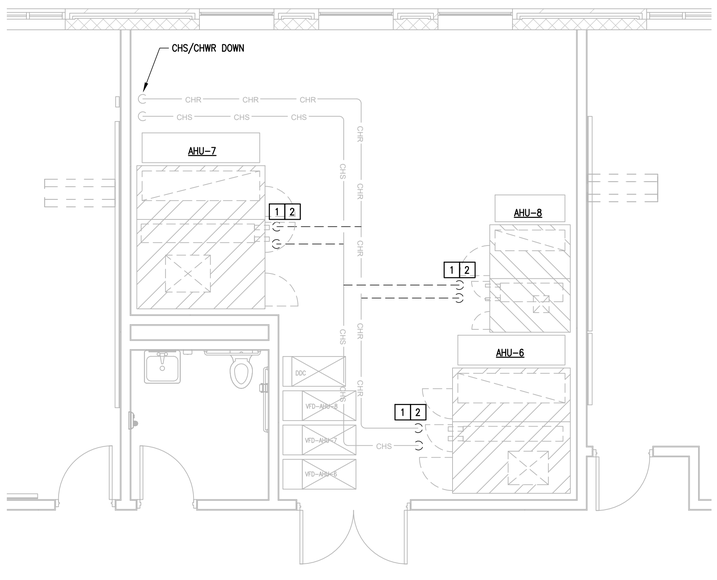
PARTIAL 1ST FLOOR
01 DEMOLITION FLOOR PLAN
SCALE : 1/4" = 1'-0"

PLAN NORTH TRUE NORTH



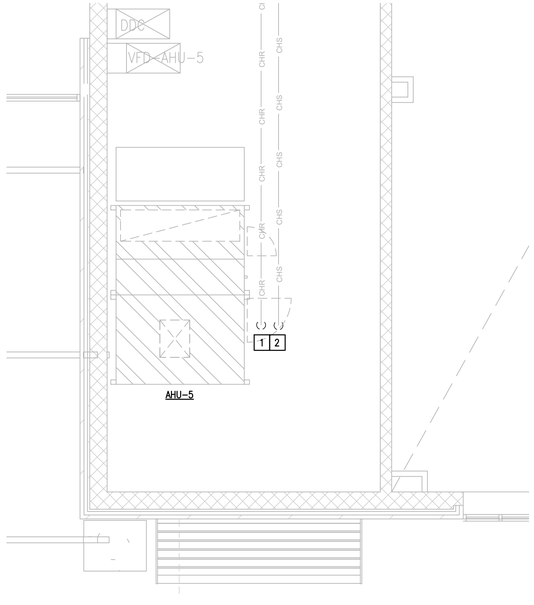
PARTIAL 2ND FLOOR
02 DEMOLITION FLOOR PLAN
SCALE : 1/4" = 1'-0"

PLAN NORTH TRUE NORTH



PARTIAL 2ND FLOOR
03 DEMOLITION FLOOR PLAN
SCALE : 1/4" = 1'-0"

PLAN NORTH TRUE NORTH



PARTIAL 2ND FLOOR
04 DEMOLITION FLOOR PLAN
SCALE : 1/4" = 1'-0"

PLAN NORTH TRUE NORTH

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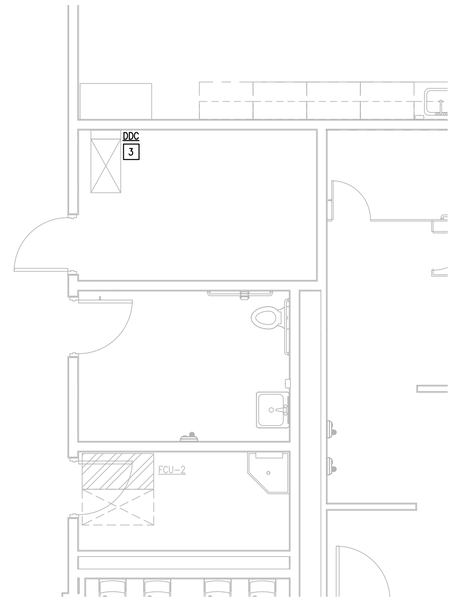
DEMOLITION MECHANICAL KEYED NOTES:

1. RETAIN EXISTING CHW PIPING. DEMOLISH EXISTING INSULATION AND ALUMINUM METAL JACKETING FOR ALL CHW PIPING AT EACH AHU CHW BRANCH DROP. REFER TO AHU CHW RISER DIAGRAM.
2. DEMOLISH MANUAL VALVES ON THE BYPASS, SUPPLY, AND RETURN PIPING AT CHW AHU. REFER TO AHU CHW RISER DIAGRAM.
3. DEMOLISH EXISTING NAE4510-2 ENGINE WITHIN DDC CABINET AS SHOWN. REFER TO SPECIFICATIONS FOR MORE INFORMATION.



PARTIAL 1ST FLOOR
05 DEMOLITION FLOOR PLAN
SCALE : 1/4" = 1'-0"

PLAN NORTH TRUE NORTH

LEGEND

	EXISTING EQUIPMENT TO REMAIN
	EQUIPMENT TO BE DEMOLISHED
	NEW EQUIPMENT
CHS / CHR	EXISTING PIPING TO REMAIN
	INSULATION TO BE DEMOLISHED
CHS / CHR	INSULATION TO BE INSTALLED

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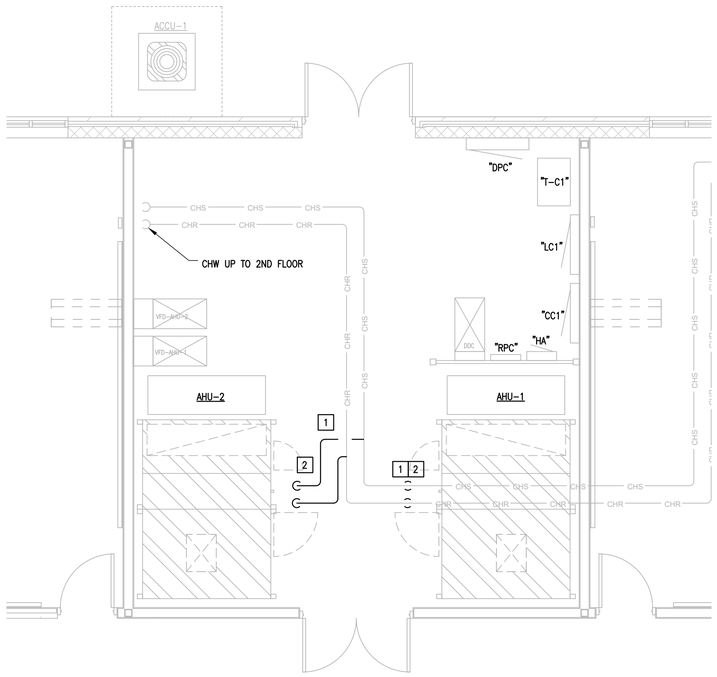
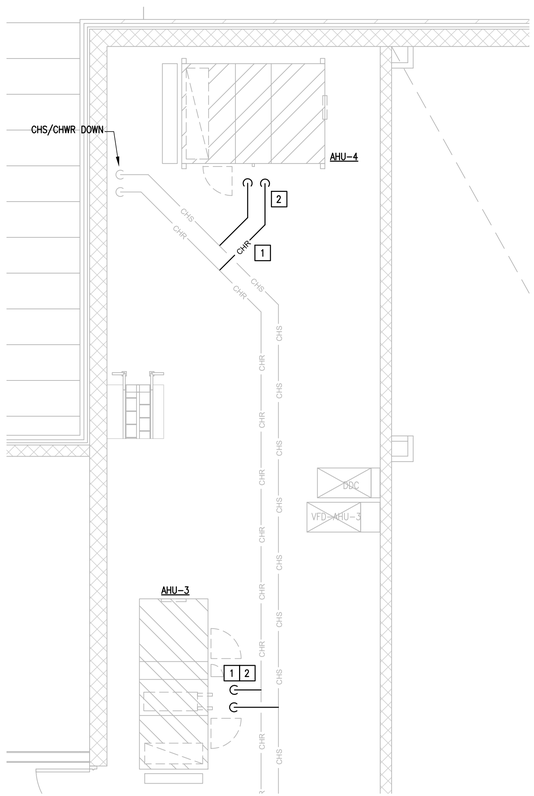


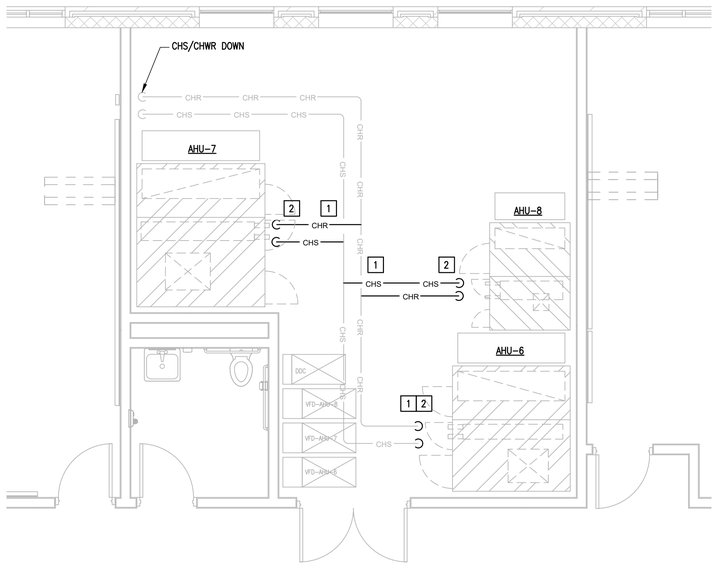
PARTIAL 1ST FLOOR
01 RENOVATION FLOOR PLAN
SCALE : 1/4" = 1'-0"

PLAN NORTH TRUE NORTH



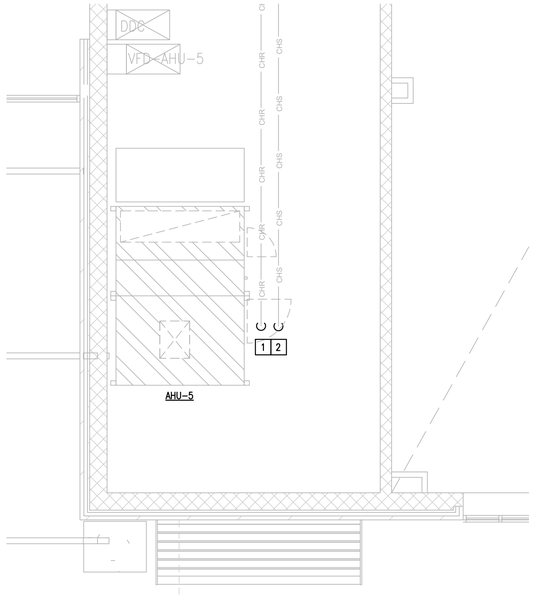
PARTIAL 2ND FLOOR
02 RENOVATION FLOOR PLAN
SCALE : 1/4" = 1'-0"

PLAN NORTH TRUE NORTH



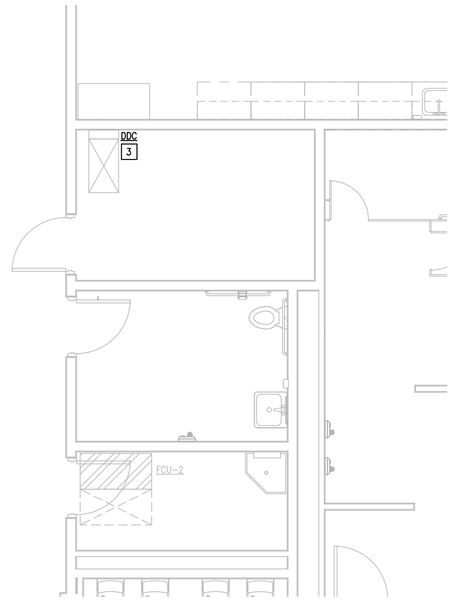
PARTIAL 2ND FLOOR
03 RENOVATION FLOOR PLAN
SCALE : 1/4" = 1'-0"

PLAN NORTH TRUE NORTH



PARTIAL 2ND FLOOR
04 RENOVATION FLOOR PLAN
SCALE : 1/4" = 1'-0"

PLAN NORTH TRUE NORTH



PARTIAL 1ST FLOOR
05 RENOVATION FLOOR PLAN
SCALE : 1/4" = 1'-0"

PLAN NORTH TRUE NORTH

MECHANICAL KEYED NOTES:

1. PROVIDE NEW INSULATION AND ALUMINUM METAL JACKETING FOR ALL CHW PIPING AT EACH AHU CHW BRANCH DROP. REFER TO AHU CHW RISER DIAGRAM.
2. PROVIDE NEW MANUAL VALVES ON THE BYPASS, SUPPLY, AND RETURN PIPING AT CHW AHU. REFER TO AHU CHW RISER DIAGRAM.
3. PROVIDE NEW ENGINE WITHIN DDC CABINET. REFER TO SPECIFICATIONS FOR MORE INFORMATION.

LEGEND

	EXISTING EQUIPMENT TO REMAIN
	EQUIPMENT TO BE DEMOLISHED
	NEW EQUIPMENT
CHS / CHR	EXISTING PIPING TO REMAIN
	INSULATION TO BE DEMOLISHED
CHS / CHR	INSULATION TO BE INSTALLED

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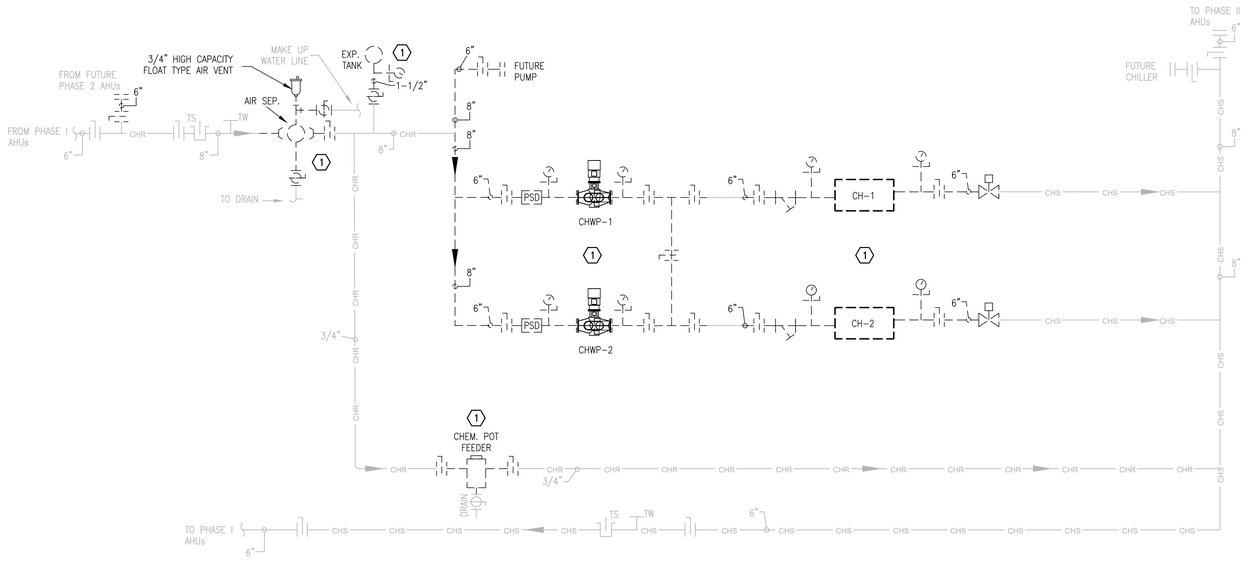
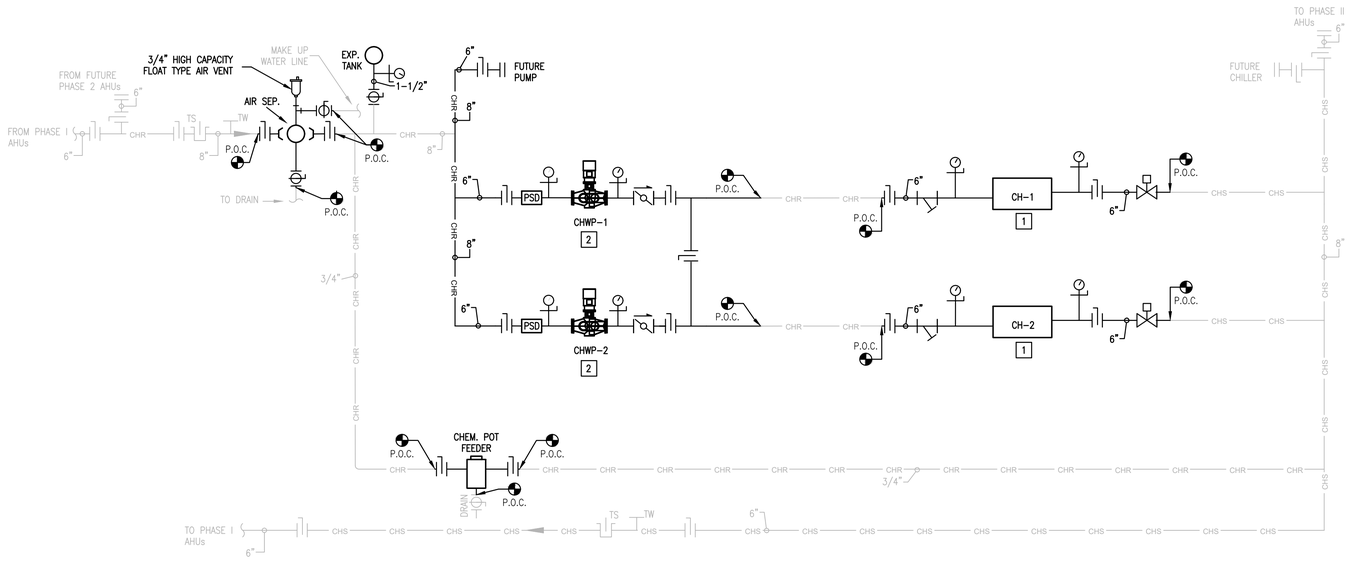


MECHANICAL YARD
01 DEMO CHILLED WATER PIPING SCHEMATIC
NOT TO SCALE



NOTES:

1. PROVIDE MULTIPLE REDUCERS (2-1/2" TO 3", 3" TO 4") AT SUCTION AND DISCHARGE OF PUMPS. ALL VALVES, SUCTION DIFFUSERS, ETC. SHALL BE LINE SIZE. SINGLE PIPE REDUCER WITH FLOW STRAIGHTENING VANES WILL BE ACCEPTED (METRAFLEX OR EQUAL).
2. TEMPERATURE AND PRESSURE GAGES AND PT TEST PORTS ARE NOT SHOWN ON PIPING SCHEMATICS. SEE CONNECTION DETAILS FOR REQUIREMENTS.

MECHANICAL YARD
02 RENO CHILLED WATER PIPING SCHEMATIC
NOT TO SCALE

DEMOLITION MECHANICAL KEYED NOTES:

1. DEMOLISH MECHANICAL EQUIPMENT, ASSOCIATED CHW PIPING CONNECTIONS, ISOLATION VALVES, SPECIALTIES, AND ACCESSORIES TO BE REPLACED AS INDICATED.

MECHANICAL KEYED NOTES:

1. REFER TO CHILLER CHILLED WATER PIPING DETAIL ON DETAILS SHEET.
2. REFER TO END SUCTION PUMP DETAIL ON DETAILS SHEET.

LEGEND:

AIR SEPARATOR	BALL VALVE	CH-1	NEW EQUIPMENT
AUTOMATIC VALVE	BLIND FLANGE		EXISTING PIPING
MANUAL VALVE	PRESSURE GAUGE		NEW PIPING
STRAINER	CHECK VALVE		DEMOLITION
PSD PUMP SUCTION DIFFUSER	TS THERMOWELL FOR DDC TEMPERATURE SENSOR	P.O.C.	POINT OF CONNECTION
PUMP			

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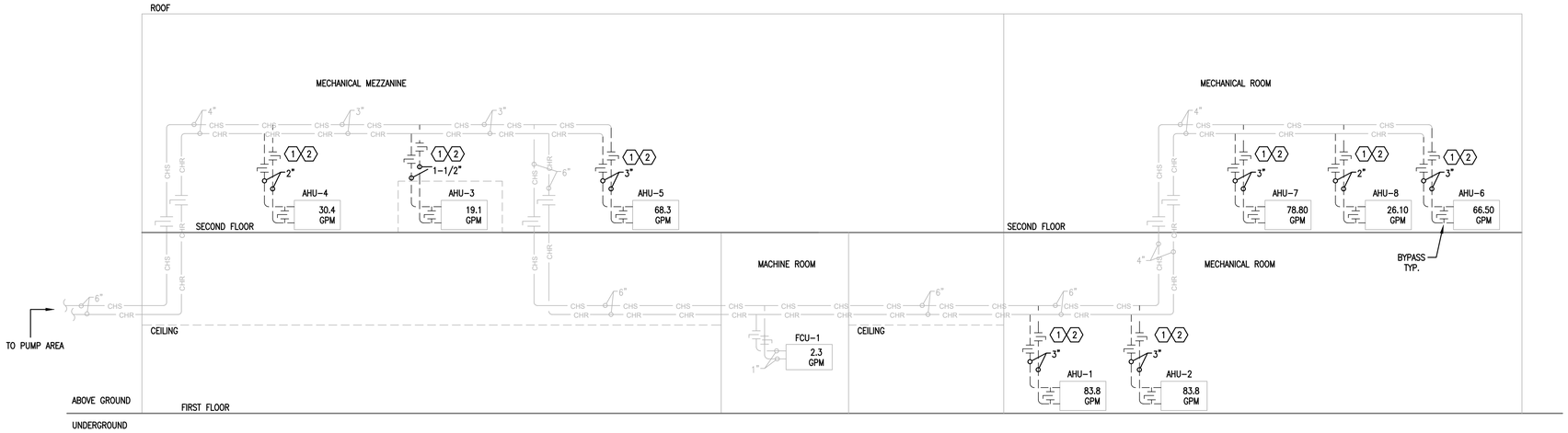
DRAWN BY:	J. RODRIGUEZ
PROJECT NO.:	26v20
CAD FILE:	
SHEET:	ME3.01

MECHANICAL KEYED NOTES:

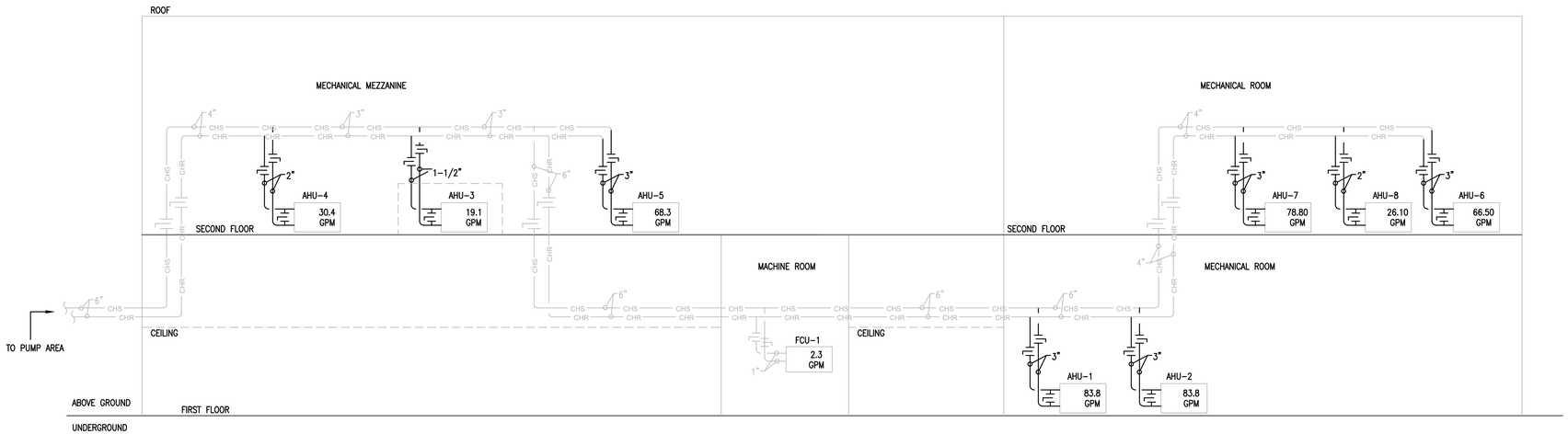
1. RETAIN EXISTING CHW PIPING SERVING AHUS. PROVIDE NEW INSULATION AND ALUMINUM METAL JACKETING ON EXISTING CHW PIPING DROPS AT CHW AHUS AS SHOWN.
2. DEMOLISH EXISTING AND PROVIDE NEW MANUAL VALVES ON THE BYPASS, SUPPLY, AND RETURN PIPING AT CHW AHU AS SHOWN.

LEGEND:

- EXISTING PIPING
- NEW INSULATION/JACKETING
- DEMO INSULATION/JACKETING
- AHU-1 — EXISTING EQUIPMENT
- MANUAL VALVE



PHASE I BUILDING
01 DEMO CHILLED WATER PIPING SCHEMATIC
NOT TO SCALE



PHASE I BUILDING
02 RENO CHILLED WATER PIPING SCHEMATIC
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TEXAS REGISTERED
ENGINEERING FIRM
F-15998

DATE:	APRIL 3, 2026
CHECKED BY:	B. BURKE
DRAWN BY:	J. RODRIGUEZ
PROJECT NO.:	26v20
CAD FILE:	
SHEET:	ME3.02

AIR COOLED CHILLER SCHEDULE

MARK	CHILLER TYPE	QTY.	NOMINAL (TONS)	EXISTING YORK MODEL NUMBER	CAPACITY (TONS)	AMBIENT TEMP (F)	FLOW (GPM)	MAX PD (FT WG)	EWT (F)	LWT (F)	# OF COMPRESSORS TYPE	MIN % CAPACITY	ELECTRICAL V-PH-HZ	MCA	MOCP	IPLV AT ARI	FULL LOAD EER AT ARI	SOUND POWER OVERALL dBA	DIMENSIONS (LxWxH) IN.	OPERATING WEIGHT (LB)	NOTES	MANUFACTURER	MODEL NUMBER
CH-1 & 2	HIGH EFFICIENCY SCROLLS	2	120	YLAA0120SE46XCAD	114.6	100	228.1	13.4	56	44	4 SCROLL TYPE	25%	480-3-60	254.0	300.0	17.09	10.01	95	143 X 89 X 95	5,959	ALL	JCI/YORK	YLAA0120SJ46XFB

NOTES:

1. CONTRACTOR IS RESPONSIBLE FOR CHANGES TO DESIGN RESULTING FROM SELECTION OF OTHER MANUFACTURERS EQUIPMENT.
2. LISTED CAPACITY BASED ON ACTUAL CONDITIONS LISTED ABOVE. EFFICIENCIES LISTED AT ARI CONDITIONS.
3. PROVIDE CHILLER WITH FACTORY INSTALLED HAIL GUARDS, LOW SOUND ACOUSTICAL PACKAGE, FULLY DIPPED CONDENSER COIL COATING (E-COAT)
4. PROVIDE UNIT WITH LOW AMBIENT CONTROL TO 40°F, ACROSS THE LINE STARTER, AND SUCTION SERVICE VALVES.
5. CONDENSER COILS SHALL HAVE MICROCHANNEL WITH FACTORY E-COATING. FIELD APPLIED COATINGS ARE NOT ALLOWED.
6. PROVIDE CHILLER WITH SINGLE POINT POWER CIRCUIT BREAKER CONNECTION, INCLUDING POWER FOR CONTROLS. CHILLER SHALL HAVE A 65,000 AMP SCWR RATING.
7. PROVIDE DEMAND LIMITING VIA CONTACT INPUTS TO LIMIT MACHINE CAPACITY. OR PROVIDE LEAVING WATER TEMPERATURES RESET VIA 4-20MA INPUT FEATURE TO REDUCE MACHINE CAPACITY.
8. PROVIDE FACTORY INSTALLED HOT GAS BYPASS AS NEEDED, TO ALLOW CHILLER TO UNLOAD TO THE SCHEDULED MINIMUM CAPACITY.

PUMP SCHEDULE

MARK	LOCATION	QTY	TYPE	MANUFACTURER & MODEL NUMBER	GPM	HEAD (FT)	MIN. HP	MIN. EFF.	RPM	ELECTRICAL	NOTES
CHWP-1, 2	PUMP ROOM	2	HORZ END SUCTION	BELL&GOSSET E-1510 2.5BB	228	80	10	75.8%	1,800	460V / 3PH / 60HZ	ALL

NOTES:

1. PROVIDE NON-OVERLOADING, PREMIUM EFFICIENCY, TEFC MOTORS, RATED FOR VFD DUTY.
2. PROVIDE COUPLINGS RATED FOR VFD DUTY. REXNORD OMEGA SPACER TYPE.
3. FACTORY REPRESENTATIVE SHALL FIELD-VERIFY PUMP ALIGNMENT WITH LASER ALIGNMENT TOOLS.
4. PROVIDE SUCTION DIFFUSERS AND SHAFT INDUCTIVE ABSORBING RINGS ON MOTORS.
5. PROVIDE ONE SET OF SPARE SEALS FOR EACH PUMP. COORDINATE DELIVERY WITH OWNER.

VFD SCHEDULE

MARK	EQUIPMENT SERVED	MOTOR HP	FL AMPS	ELECTRICAL V-PH-HZ	MANUFACTURER & MODEL NUMBER	NOTES
VFD-P1	CHWP-1	10	14	480-3-60	DANFOSS VLT - HVAC	ALL
VFD-P2	CHWP-2	10	14	480-3-60	DANFOSS VLT - HVAC	ALL

NOTES:

1. PROVIDE NEMA 4X ENCLOSURE FOR VFD LOCATED OUTDOORS.
2. PROVIDE INTEGRAL DISCONNECT.
3. PROVIDE BYPASS WITH VFDS.

AIR SEPARATOR SCHEDULE

MARK	SERVICE	TYPE	MAX. FLOW GPM	(DIAMETER) X (HEIGHT)	LOCATION	NOTES	MANUFACTURER	MODEL NUMBER
AS-1	CH-1,2	CENTRIFUGAL WITH STRAINER	1300	24"x54"	MECHANICAL YARD	ALL	BELL AND GOSSETT	R-8F

NOTES:

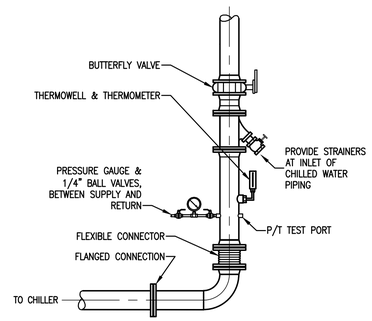
1. PROVIDE LINE SIZE AIR SEPARATOR (AS-1), BELL AND GOSSETT ROLAIRTROL R-8F FOR 8" CONNECTION.

EXPANSION TANK

MARK	SERVICE	TYPE	ACCEPTANCE VOLUME GALLONS	(DIAMETER) X (HEIGHT)	LOCATION	NOTES	MANUFACTURER	MODEL NUMBER
ET-1	CH-1,2	VERTICAL, BLADDER, PRE-CHARGED	13	14"x24"	MECHANICAL YARD	ALL	BELL AND GOSSETT	B-50 ASME

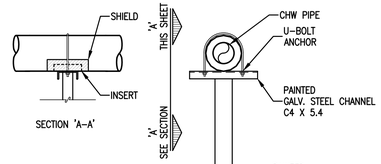
NOTES:

1. PROVIDE FILTER FEEDER (CHEM) AS SHOWN ON PLAN. FILTER FEEDER SHALL BE NEPTUNE FTF MODEL OR APPROVED EQUAL.



NOTE: DO NOT PERFORM WELDING IN CLOSE PROXIMITY TO THE CHILLER BARRELS AND COMPRESSORS. ALL PIPING CONNECTIONS TO THE CHILLER SHALL BE FLANGED OR GROOVED TYPE.

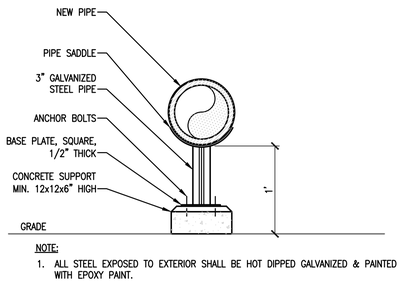
01 CHILLER CHW PIPING DETAIL
SCALE : NOT TO SCALE



NOTES:

1. ALL EXTERIOR SUPPORT STRUCTURE SHALL HAVE 4" CONCRETE PAD UNDER BASE PLATE.
2. ALL STEEL EXPOSED TO EXTERIOR SHALL BE HOT DIPPED GALVANIZED & PAINTED WITH EPOXY PAINT.

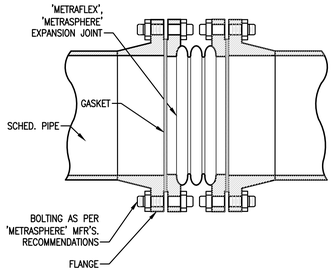
04 PIPE SUPPORT STRUCTURE
SCALE : NOT TO SCALE



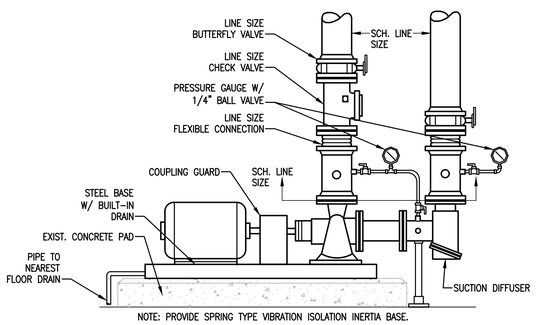
NOTE:

1. ALL STEEL EXPOSED TO EXTERIOR SHALL BE HOT DIPPED GALVANIZED & PAINTED WITH EPOXY PAINT.

02 CONCRETE PIPE SUPPORT DETAIL
SCALE : NOT TO SCALE



03 TYPICAL EXPANSION JOINT
SCALE : NOT TO SCALE

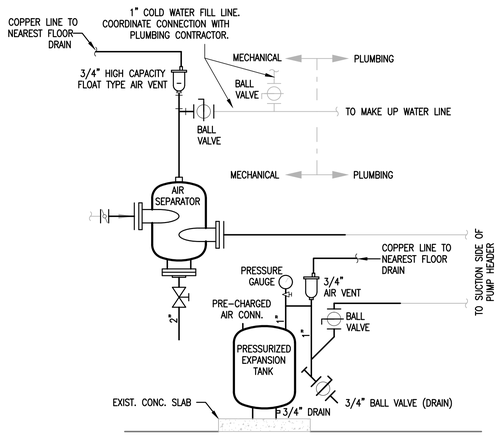


NOTE: PROVIDE SPRING TYPE VIBRATION ISOLATION INERTIA BASE.

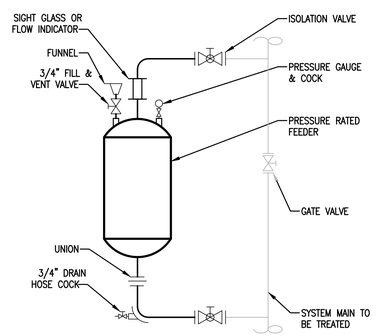
NOTES:

1. PIPE SIZE INDICATED ON DRAWING SHALL BE FULL SIZE TO POINT OF CONNECTION TO PUMP FLANGES. PIPING COMPONENTS SUCH AS VALVES, STRAINERS, FLEXIBLE CONNECTORS SHALL BE SAME SIZE AS PIPING SERVING PUMPS.
2. INSULATE CHILLED WATER PUMPS AS PER SPECIFICATIONS.

05 END SUCTION PUMP DETAIL
SCALE : NOT TO SCALE



06 AIR SEPARATOR & EXPANSION TANK DETAIL
SCALE: NOT TO SCALE



07 CHEMICAL POT FEEDER DETAIL
SCALE: NONE

NO:	REVISION:	BY:

COPY NO:

CSP # 40-SJCP-0726

STATE OF TEXAS
CESAR A. GONZALEZ
108611
LICENSED PROFESSIONAL ENGINEER
04.03.2026

TEXAS

IDEA PUBLIC SCHOOLS
SAN JUAN CHILLER UPGRADES

SAN JUAN

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TEXAS REGISTERED ENGINEERING FIRM
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EQUIPMENT CONNECTION SCHEDULE:

DESIGN	NEW HP	NEW FLA	NEW MCA	EXISTING MOCP	NEW MOCP	VOLTAGE	EXISTING MEANS OF DISCONNECT	NEW MEANS OF DISCONNECT	EXISTING BRANCH CIRCUIT (75° COPPER)	NEW BRANCH CIRCUIT (75° COPPER)	EXISTING POWER SOURCE
CH-1, 2	–	–	254	300	1) 300	480V/3PHASE	REMOVE EXISTING	INTEGRAL DISCONNECT	3" – 3#350KCMIL & #4G	RETAIN EXISTING	CP
CHWP-1	10 HP	14	17.5	30	2) 35	480V/3PHASE	REMOVE EXISTING	3) VARIABLE FREQUENCY DRIVE	3/4" – 3#10 & #10G	RETAIN EXISTING	CP
CHWP-2	10 HP	14	17.5	30	2) 35	480V/3PHASE	REMOVE EXISTING	3) VARIABLE FREQUENCY DRIVE	3/4" – 3#10 & #10G	RETAIN EXISTING	CP

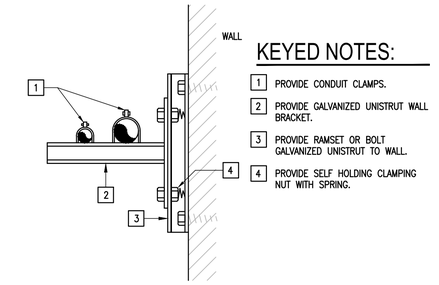
GENERAL NOTES:
A) LOCATE EQUIPMENT MEANS OF DISCONNECT WITHIN EQUIPMENT SIGHT. DO NOT INSTALL BELOW DUCTWORK OR PLUMBING LINES.
B) PROVIDE NEW BRANCH CONNECTION RACEWAY AND FITTINGS FROM VFD AND OR J-BOX TO EQUIPMENT. IF EXISTING BRANCH CIRCUIT WIRING DOES NOT REACH NEW EQUIPMENT POINT OF CONNECTION PROVIDE POLARIS CONNECTERS TO SPLICE AND EXTEND WIRING. TYPICAL FOR ALL NEW HVAC EQUIPMENT.

NOTES:
1) RETAIN AND REUSE EXISTING CIRCUIT BREAKER.
2) REMOVE EXISTING CIRCUIT BREAKER AND PROVIDE NEW TO MATCH NEW MOCP. PROVIDE UL LISTED UNIT FROM EXISTING MANUFACTURER (SIEMENS). MATCH EXISTING KAIC.
3) FURNISHED BY DIV. 23. INSTALLED AND CONNECTED BY DIV. 26.

PANELBOARD "CP" (EXISTING): SIEMENS, TYPE P4, 800A, 277/480V, 3ø, 4W, CAT NO. P4E75ML800EBS, SO. 3003237202, ITEM NO. 034020, DATE 04/06/2011

NOTE: ATTACH NAMEPLATES TO ALL ELECTRICAL GEAR AS NOTED ON SECTION 260553.

01 EQUIPMENT IDENTIFICATION LABEL DETAIL
SCALE : NOT TO SCALE



KEYED NOTES:
1. PROVIDE CONDUIT CLAMPS.
2. PROVIDE GALVANIZED UNISTRUT WALL BRACKET.
3. PROVIDE RAMSET OR BOLT GALVANIZED UNISTRUT TO WALL.
4. PROVIDE SELF HOLDING CLAMPING NUT WITH SPRING.

02 RACEWAY RUNS SUPPORT DETAIL
SCALE : NOT TO SCALE

03 EXISTING PUMPS "CHWP-1" & "CHWP-2" ELECTRICAL CONNECTIONS
SCALE : NOT TO SCALE

04 EXISTING CHILLER "CH-1" ELECTRICAL CONNECTION
SCALE : NOT TO SCALE

05 EXISTING CHILLER "CH-2" ELECTRICAL CONNECTION
SCALE : NOT TO SCALE

06 EXISTING PANELBOARD "CP" IMAGE
SCALE : NOT TO SCALE

NO:	REVISION:	BY:

COPY NO:

CSP # 40-SJCP-0726

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