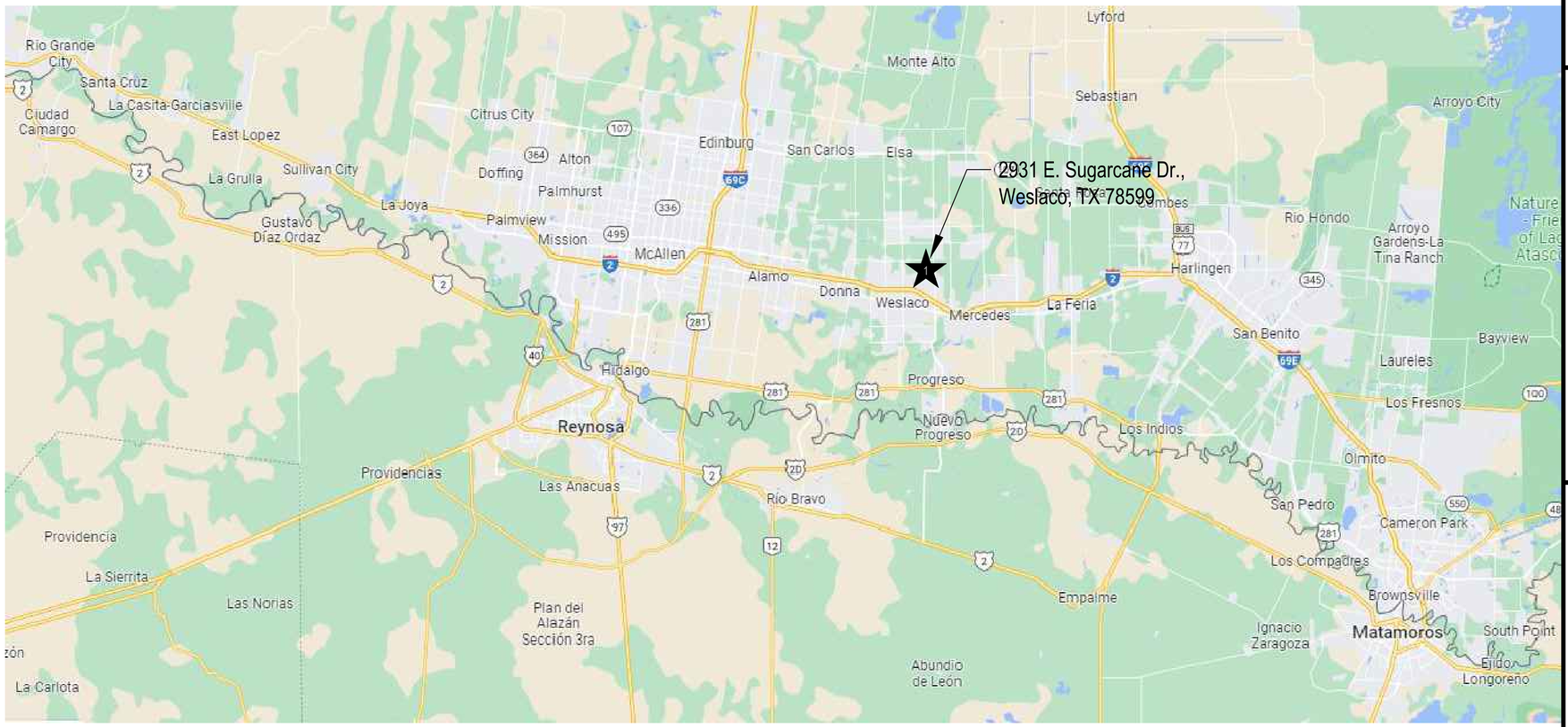
IDEA PUBLIC SCHOOLS
IDEA WESLACO - MECHANICAL UPGRADES

WESLACO, TEXAS



VICINITY MAP - RIO GRANDE VALLEY

NORTH

DATE OF ISSUE

JANUARY 19, 2024

LIST OF DRAWINGS

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. BASE PROPOSAL SCOPE OF WORK INCLUDES THE FOLLOWING:
   a. REPLACEMENT OF AIR-COOLED CHILLER, PUMPS, VFDS, KITCHEN VENTILATION SYSTEM, WALL MOUNTED PACKAGED DX UNITS.
   b. MODIFICATIONS OF CHILLED WATER PIPING, DUCTWORK, CONTROLS, AND ELECTRICAL SYSTEMS.
   c. TESTING, ADJUSTING AND BALANCE.
   d. PROVIDE CUTTING, PATCHING AND TOUCH UP PAINTING AS REQUIRED.
   e. PROVIDE CONCRETE WORK AS NEEDED.
   f. PROVIDE ASSITANCE WITH COMMISIONING SERVICES AS PER SPECIFICATIONS.
2. ALLOWANCES: THE OWNER HAS SET ASIDE ALLOWANCES FOR UNFORESEEN CIRCUMSTANCES. SEE SPECIFICATIONS SECTION 012100.

BOARD OF DIRECTORS

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ED RIVERA	VICE-CHAIR & TREASURER
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RFP # 20-WCTX-0224

IDEA WESLACO MECHANICAL UPGRADES

WESLACO, TEXAS

ethos engineering
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TEXAS REGISTERED
ENGINEERING FIRM
F-15998

DATE:	JAN 19, 2024
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DRAWN BY:	M.O.V.
PROJECT NO.:	23v74
CAD FILE:	
SHEET:	COVER

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. ABOVE CEILING WORK: FIELD VERIFY LOCATIONS OF EXITING LIGHTING FIXTURES, SPEAKERS, HORN STROBES, SMOKE DETECTORS ETC. THAT WILL BE RETAINED. ENSURE THAT THESE ARE IN WORKING CONDITION PRIOR TO DEMOLITION. IF ANY OF THE ABOVE ITEMS ARE IN NON-WORKING CONDITION, SUBMIT A WRITTEN REPORT TO OWNER/ENGINEER.
19. 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.
20. PROVIDE DUCTWORK MODIFICATION AND TRANSITION PIECES PER SMACNA RECOMMENDATION, AND AS REQUIRED TO ACCOMMODATE NEW UNITS. IF APPLICABLE, SEAL DUCT-LINER ON EXISTING DUCTWORK SUCH THAT LOOSE INSULATION IS NOT IN THE AIR STREAM. EXTEND EXTERNAL INSULATION ON NEW DUCT 12" PAST THE CONNECTION POINT OF NEW AND OLD DUCTWORK.
21.

GENERAL NOTES:

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.
6. PLUMBING:
   a. COORDINATE LOCATIONS WITH PLUMBING CONTRACTOR.
   b. PROVIDE INSULATED AND TRAPPED CONDENSATE DRAIN LINES FROM ALL AIR CONDITIONING EQUIPMENT AND TERMINATE TO NEAREST CONDENSATE DRAIN RECEPTORS OR OTHER APPROVED RECEPTACLES. COORDINATE WITH PLUMBING.

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.

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.

   e.

CONTROLS:

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.

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 – 1/2"–3#12 & #12G
   B. 100 LINEAR FEET – 3/4"–3#10 & #10G
   C. 50 LINEAR FEET – 3" – 3#350KCMIL & #4G

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	SH	SPACE HUMIDITY SENSOR
	DIRECTION OF FLOW-RETURN	DH	DUCT HUMIDITY SENSOR
	DIRECTION OF FLOW-SUPPLY	C	SPACE CARBON DIOXIDE SENSOR
		SP	STATIC PRESSURE SENSOR
FD	FIRE DAMPER	C	DUCT CARBON DIOXIDE SENSOR
FCD	FLEXIBLE DUCT	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

NO: REVISION: BY:

RFP # 20-WCTX-0224

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IDEA WESLACO MECHANICAL UPGRADES

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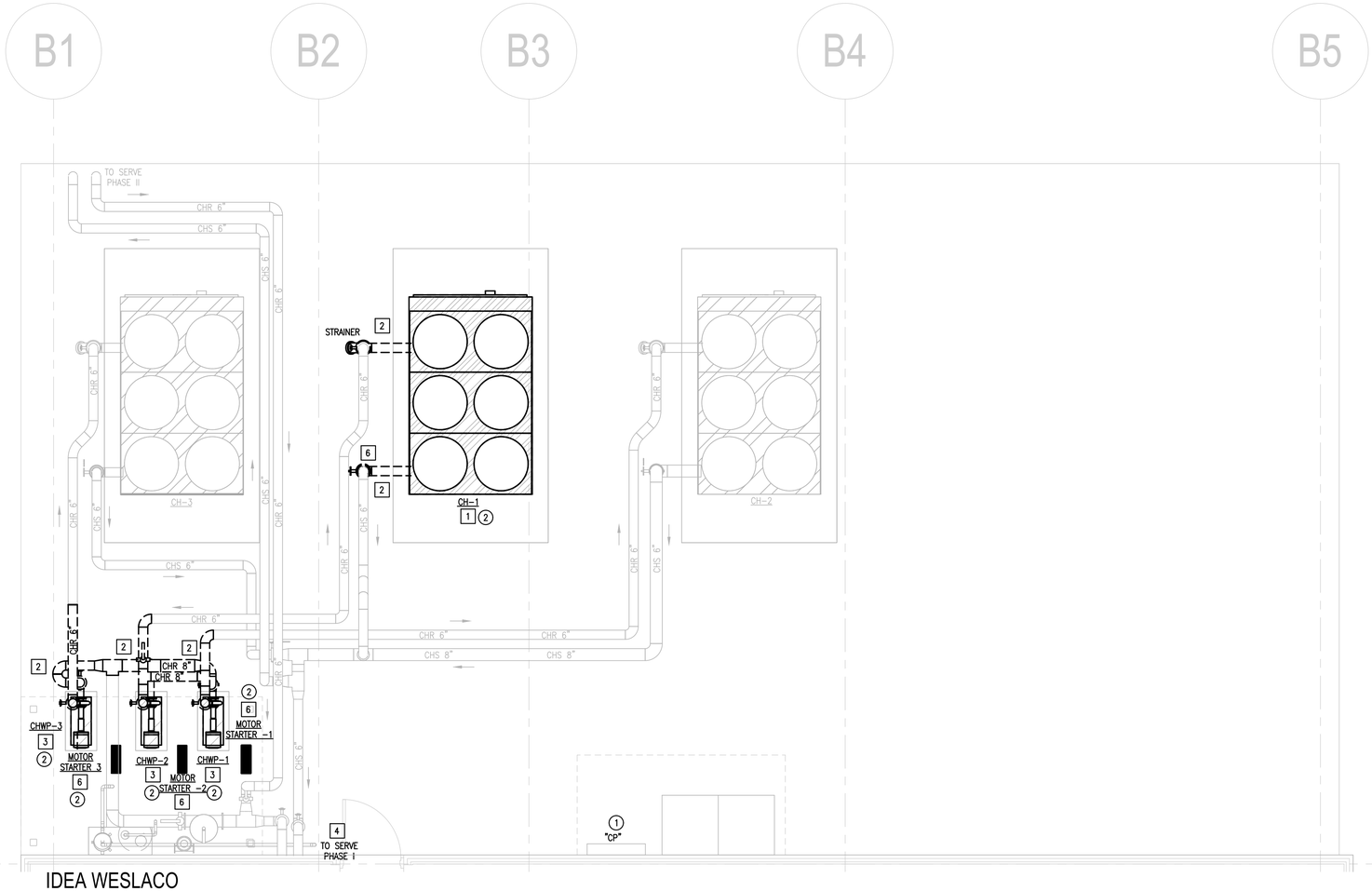
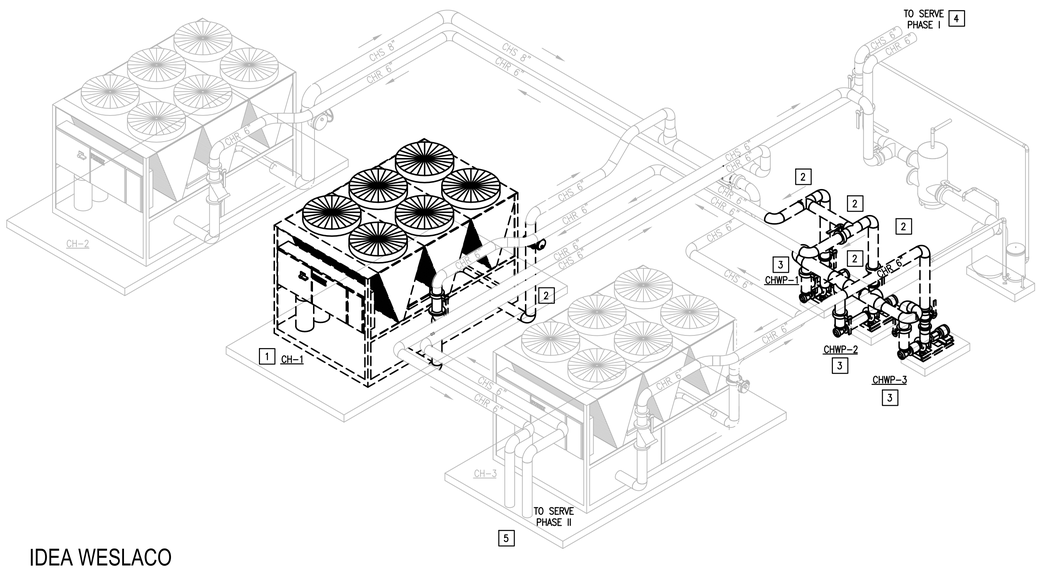
CHECKED BY: R.K.
DRAWN BY: M.O.V.
PROJECT NO.: 23v74
CAD FILE:
SHEET: ME1.0



IDEA WESLACO

01 MECHANICAL & ELECTRICAL DEMOLITION PLAN (SERVICE YARD)

SCALE : 1/4" = 1'-0"



IDEA WESLACO

02 MECHANICAL DEMOLITION ISOMETRIC VIEW (SERVICE YARD)

SCALE : NOT TO SCALE

DEMOLITION GENERAL NOTES:

1. ALL DENOLITION 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.

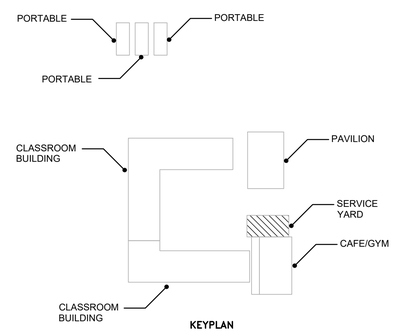
MECHANICAL DEMOLITION KEYED NOTES:

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.
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. REFER TO EXISTING MECHANICAL PLAN FOR CONTINUATION INSIDE THE BUILDING.
5. DEMOLISH EXISTING MOTOR STARTER ASSOCIATED WITH CHILLER PUMP.
6. DEMOLISH EXISTING AUTOMATIC ISOLATION VALVE.

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.

MECHANICAL LEGEND	
	EXISTING CHILLED WATER PIPING TO REMAIN
	EXISTING CHILLED WATER PIPING TO BE DEMOLISHED
	EX. EQUIPMENT TO REMAIN
	EX. EQUIPMENT TO BE DEMOLISHED



KEYPLAN

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RFP # 20-WCTX-0224

STATE OF TEXAS
CESAR A. GONZALEZ
106611
LICENSED
PROFESSIONAL ENGINEER
01.19.2024

TEXAS

IDEA WESLACO MECHANICAL UPGRADES

WESLACO

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

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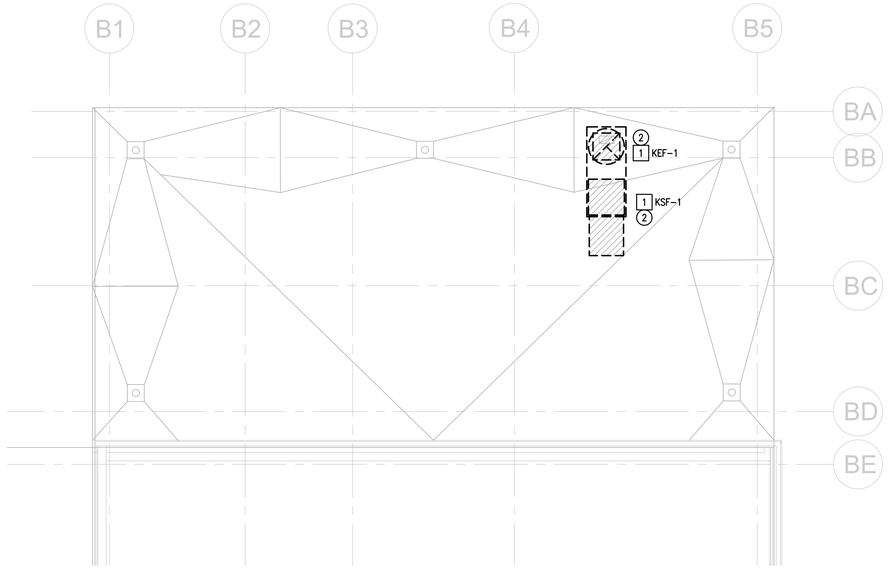
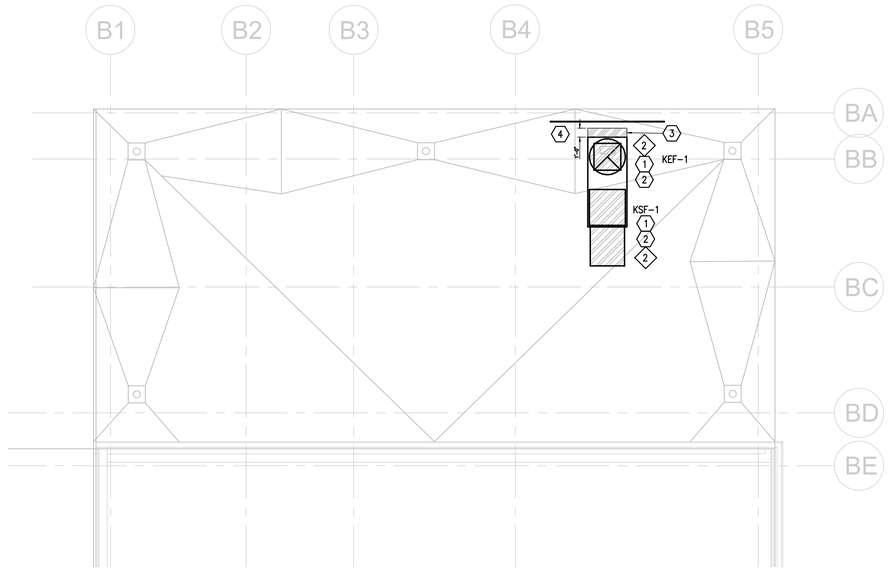


1 "K2"

01 IDEA WESLACO
MECHANICAL DEMOLITION PLAN (KITCHEN)
SCALE : 1/8" = 1'-0"



1 "K2"

02 IDEA WESLACO
MECHANICAL RENOVATION PLAN (KITCHEN)
SCALE : 1/4" = 1'-0"

DEMOLITION GENERAL NOTES:

1. ALL DENOLITION 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.

MECHANICAL DEMOLITION KEYED NOTES

1 DEMOLISH EXISTING KITCHEN EXHAUST FAN (KEF-1), KITCHEN SUPPLY FAN (KSF-1) AND ASSOCIATED CURB, ROOFING MATERIALS, AND STRUCTURAL SUPPORTS.

ELECTRICAL DEMOLITION KEYED NOTES

1. APPROXIMATE LOCATION OF EXISTING PANELBOARD SERVING EXISTING KITCHEN FANS.
2. DISCONNECT EXISTING KITCHEN FAN FOR INSTALLATION OF A NEW KITCHEN FANS. REFER TO EQUIPMENT CONNECTION SCHEDULE.

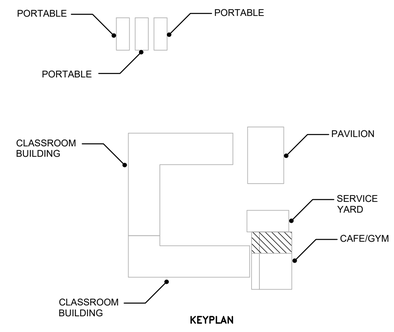
MECHANICAL KEYED NOTES:

1. PROVIDE NEW KITCHEN EXHAUST FAN (KEF-1) AND KITCHEN SUPPLY FAN (KSF-1) AS SCHEDULED AND AT NEW LOCATION WITH NEW CURB, ROOFING, AND STRUCTURAL SUPPORT. MOUNT EQUIPMENT AND SECURE TO ROOF CURB AND ROOF STRUCTURE. ATTACHMENTS SHALL BE CAPABLE OF WITHSTANDING THE LOCAL WIND PRESSURES. REFER TO DIV 7 FOR MORE INFORMATION. REFER TO MECHANICAL SCHEDULES AND STRUCTURAL DRAWINGS FORM MORE INFORMATION.
2. CONTRACTOR SHALL PROVIDE ALL NECESSARY DUCTWORK TRANSITIONS AND FITTINGS TO CONNECT EXISTING DUCTWORK TO INSTALL NEW KITCHEN EXHAUST AND SUPPLY FANS. EXHAUST DUCT SHALL BE DOUBLE WALL RATED FOR GREASE APPLICATIONS. REFER TO SPECIFICATIONS.
3. REPAIR ROOF AS REQUIRED TO SEAL THE OPENING LEFT AS A RESULT OF THE DEMOLITION OF THE EXISTING ROOF CURB. REFER TO STRUCTURAL DRAWINGS FOR MORE INFORMATION.
4. NEW PROTECTION RAIL GUARD AT EDGE OF THE ROOF BY STRUCTURAL. REFER TO STRUCTURAL DRAWINGS.

ELECTRICAL KEYED NOTES

1. APPROXIMATE LOCATION OF EXISTING PANELBOARD SERVING NEW KITCHEN FANS.
2. CONNECT NEW KITCHEN FANS. REFER TO EQUIPMENT CONNECTION SCHEDULE.

MECHANICAL LEGEND	
	EX. EQUIPMENT TO BE DEMOLISHED
	NEW MECHANICAL EQUIPMENT
	ROOF AREA TO BE REPAIRED
	NEW RAIL GUARD



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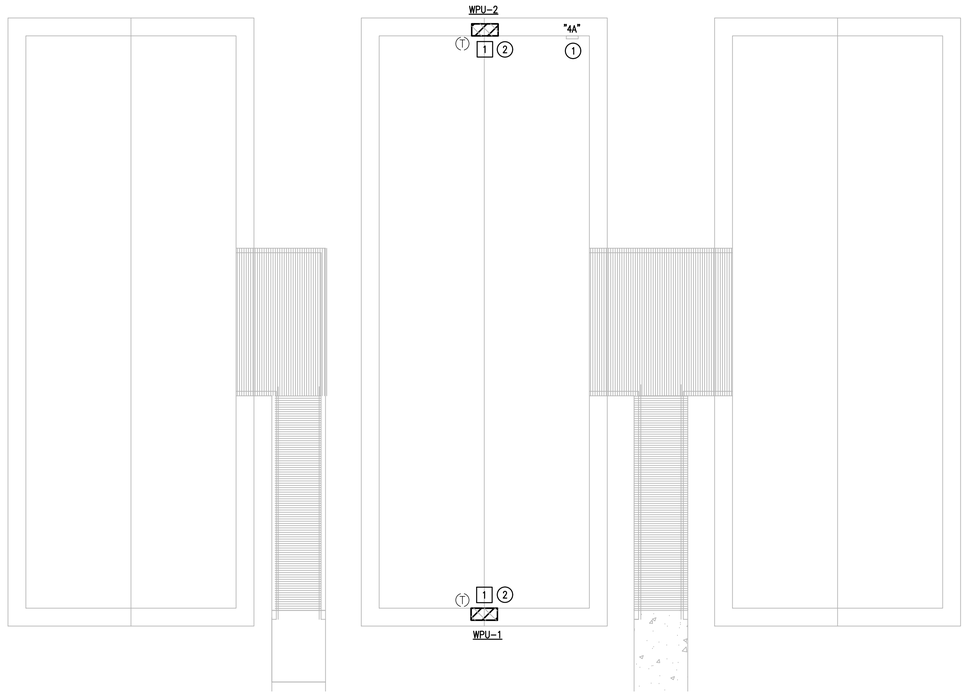
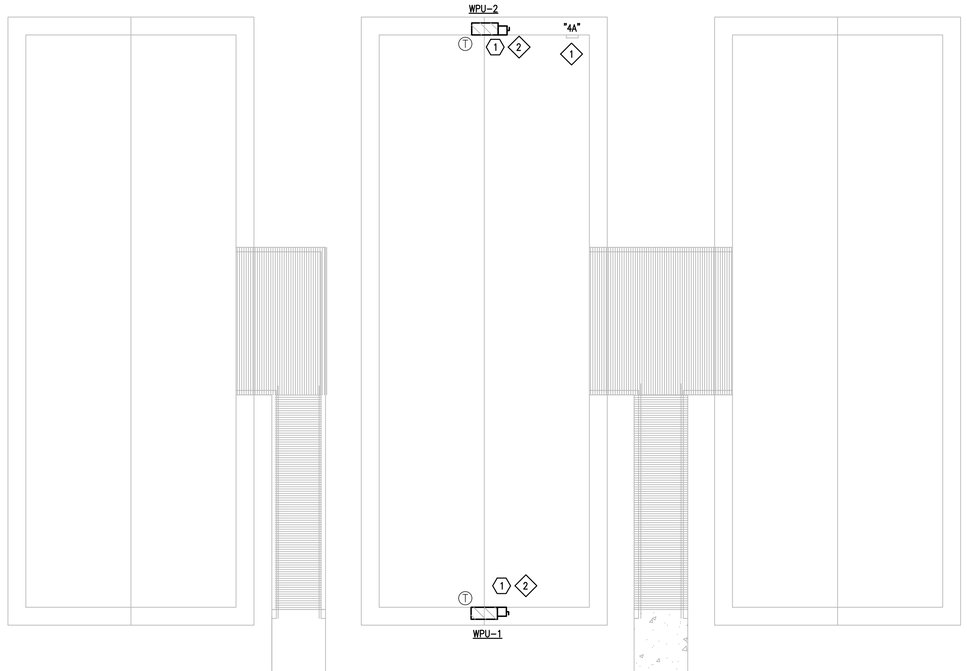


IDEA WESLACO

01 MECHANICAL & ELECTRICAL DEMOLITION PLAN (PORTABLES)

SCALE : 1/8" = 1'-0"



IDEA WESLACO

02 MECHANICAL & ELECTRICAL RENOVATION PLAN (PORTABLES)

SCALE : 1/8" = 1'-0"

DEMOLITION GENERAL NOTES:

1. ALL DENOLITION 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.

MECHANICAL DEMOLITION KEYED NOTES

1 DEMOLISH EXISTING WALL-MOUNTED UNIT AND ITS ASSOCIATED AIR DEVICES, AND THERMOSTAT CONTROLS AS SHOWN.

ELECTRICAL DEMOLITION KEYED NOTES

(1) APPROXIMATE LOCATION OF EXISTING LOAD CENTER SERVING NEW HVAC EQUIPMENT.

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

MECHANICAL LEGEND	
	HVAC EQUIPMENT TO BE DEMOLISHED
(T)	THERMOSTAT TO BE DEMOLISHED
	NEW HVAC EQUIPMENT
(T)	T-STAT TO BE REPLACED

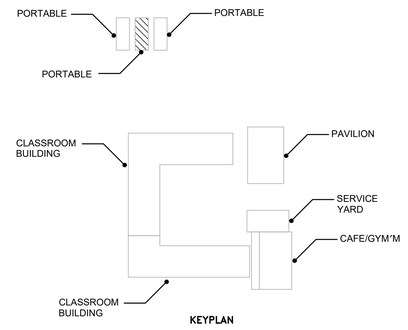
MECHANICAL KEYNOTES

(1) PROVIDE NEW WALL-MOUNTED UNIT AND ASSOCIATED ELECTRICAL DISCONNECTS SWITCHES, AIR DEVICES, AND THERMOSTAT CONTROLS AS SHOWN.

ELECTRICAL KEYED NOTES

(1) APPROXIMATE LOCATION OF EXISTING LOAD CENTER SERVING NEW HVAC EQUIPMENT.

(2) CONNECT NEW HVAC EQUIPMENT. REFER TO EQUIPMENT CONNECTION SCHEDULE.



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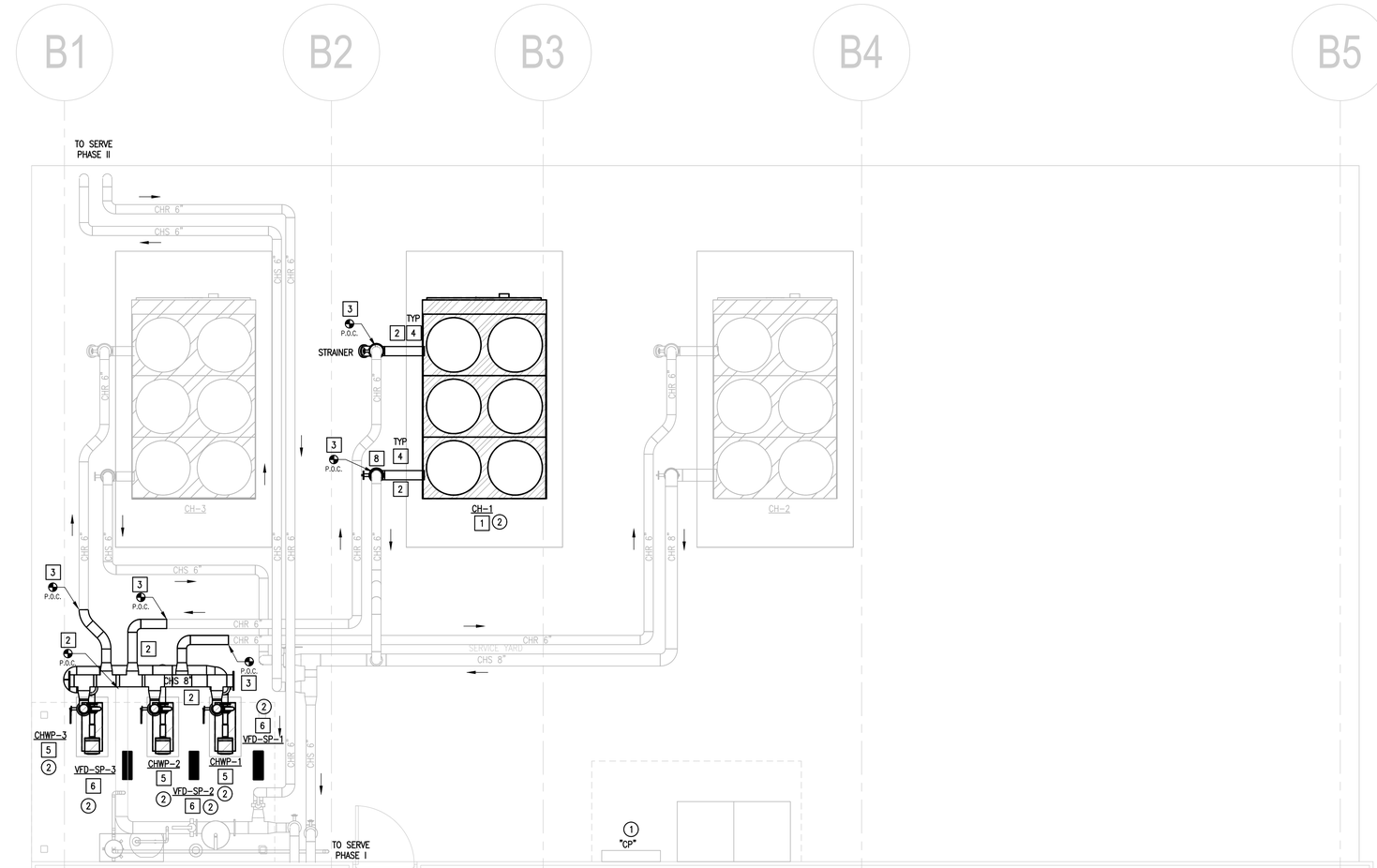
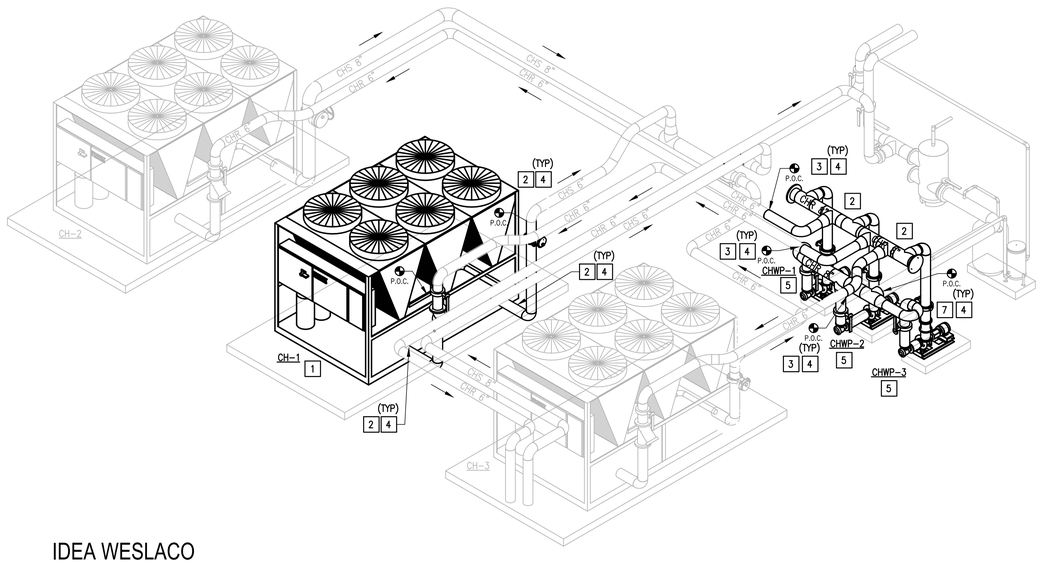


IDEA WESLACO
MECHANICAL & ELECTRICAL RENOVATION PLAN (SERVICE YARD)

01 SCALE : 1/4" = 1'-0"



IDEA WESLACO
MECHANICAL RENOVATION ISOMETRIC VIEW (SERVICE YARD)

02 SCALE : NOT TO SCALE

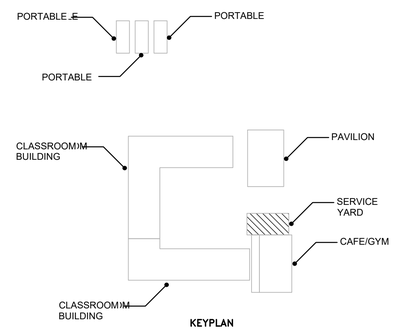
MECHANICAL KEYED NOTES:

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 BLACK STEEL SCHEDULE 40 PIPING AS SHOWN ON PLANS, ENSURE TO PROVIDE EPOXY COATING ON PIPING PRIOR TO NEW INSULATION AS PER SPECIFICATIONS. PROVIDE THERMOWELLS, PRESSURE CAGES, THERMOMETERS, FLOW SWITCHES, MANUAL VALVES, ANCHORS, ETC. REFER TO MECHANICAL DETAILS AND SPECIFICATIONS.
3. CONNECT NEW 6" CHILLED WATER PIPING INTO EXISTING 6" CHILLED WATER PIPING AT THIS APPROXIMATE LOCATION.
4. PROVIDE INSULATION AND ALUMINUM METAL JACKETING FOR ALL CHW PIPING EXPOSED OUTDOORS.
5. PROVIDE NEW CHW PUMP AS SCHEDULED. REUSE EXISTING CONCRETE PAD. SECURE CHW PUMP TO CONCRETE PAD BY BOLTING IT DOWN.
6. PROVIDE VFD PER SCHEDULE WITH NEMA-3R ENCLOSURE FOR MOUNTING OUTDOORS. MAINTAIN MINIMUM 3"-0" CLEARANCE IN FRONT OF VFD.
7. CONNECT NEW 8" CHILLED WATER PIPING INTO EXISTING 8" CHILLED WATER PIPING AT THIS APPROXIMATE LOCATION.
8. PROVIDE NEW AUTOMATIC ISOLATION VALVE.

MECHANICAL LEGEND	
	EXISTING CHILLED WATER PIPING TO REMAIN
	NEW PIPING
	EX. EQUIPMENT TO REMAIN
	NEW EQUIPMENT

ELECTRICAL KEYED NOTES

1. APPROXIMATE LOCATION OF EXISTING PANELBOARD SERVING NEW HVAC EQUIPMENT.
2. CONNECT NEW HVAC EQUIPMENT. REFER TO EQUIPMENT CONNECTION SCHEDULE.



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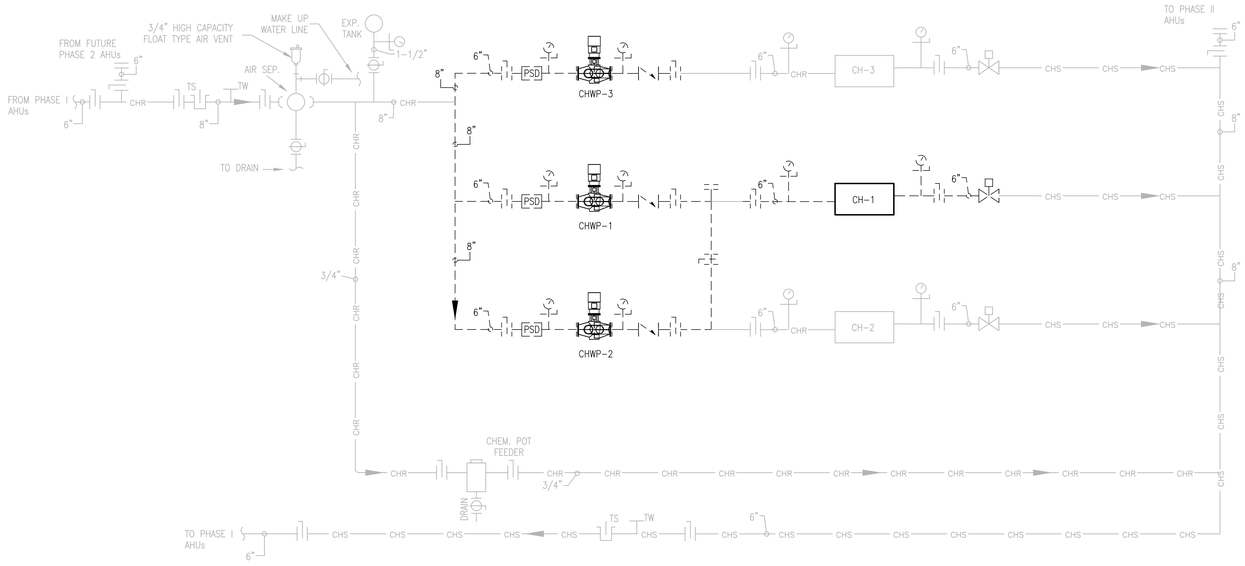
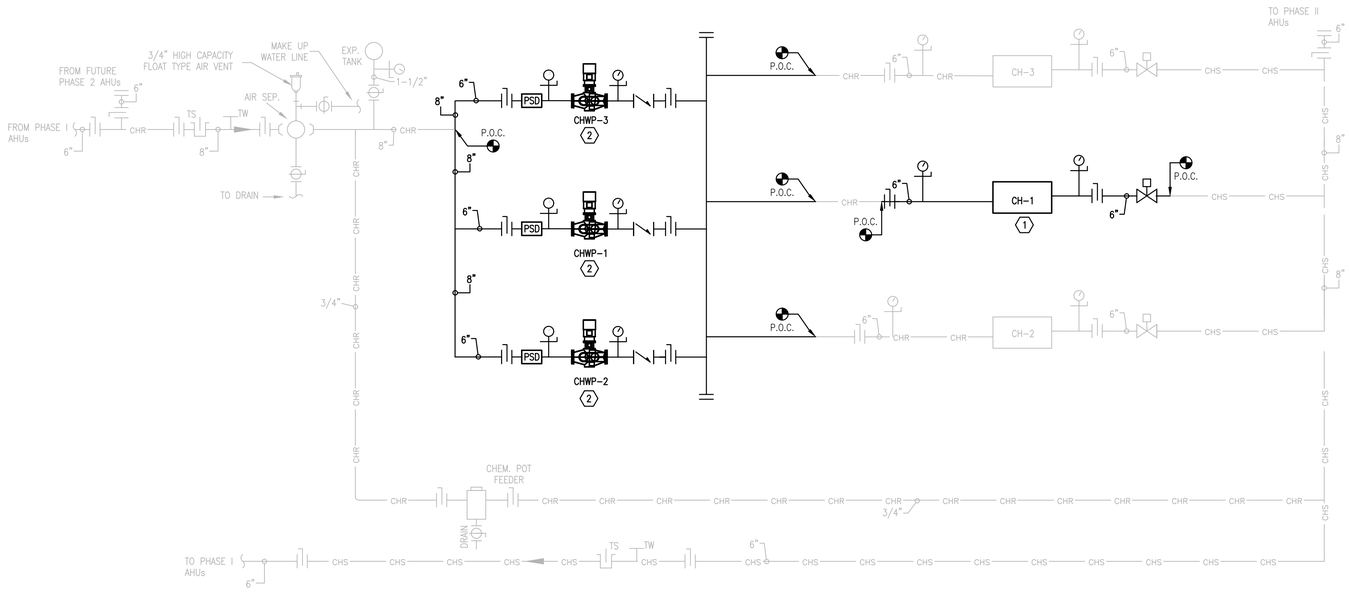


CHILLER YARD
01 DEMO CHILLED WATER PIPING SCHEMATIC
NOT TO SCALE



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.

CHILLER YARD
02 RENO CHILLED WATER PIPING SCHEMATIC
NOT TO SCALE

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	WATER METER		EXISTING PIPING
MANUAL VALVE	BLIND FLANGE		NEW PIPING
MANUAL VALVE	PUMP		DEMOLITION
STRAINER	PRESSURE GAUGE	TS	THERMOWELL FOR DDC TEMPERATURE SENSOR
FLOW METER	FLEXIBLE JOINTS	FS	FLOW SWITCH
PSD PUMP SUCTION DIFFUSER	P.O.C. POINT OF CONNECTION		CHECK VALVE

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KITCHEN HOOD FAN SCHEDULE

MARK	SERVES HOOD	PERFORMANCE												POWER V/P/H	NOTES
		EXHAUST						SUPPLY							
		CFM	SP IN (WC)	FAN MTR. HP	MANUF. MODEL #	SONES	WT. (LBS)	CFM	SP IN (WC)	FAN MTR. HP(W)	MANUF. MODEL #	SONES	WT. (LBS)		
KEF-1, KSF-1	KH-1, KH-2, KH-3	6,660	1	3	COOK 270VH10B	21	505	5,325	0.625	1.5	COOK 200KSP-B	12	1,492	208/3/60	ALL

NOTES:
1. SUPPLY FAN SHALL BE INTERLOCKED WITH FIRE PROTECTION SYSTEM. UPON ACTIVATION, SUPPLY FAN SHALL TURN-OFF, EXHAUST FAN REMAINS ON.
2. EXHAUST FAN: NEMA 3 PRE-WIRED DISCONNECT, HINGED BASE ASSEMBLY, VENTED EXTENSION, BELT TENSIONER, AND KEYWAY GREASE TROUGH.
3. SUPPLY FAN: NEMA 3 PREWIRED DISCONNECT, BELT TENSIONER, INTAKE EXTENSION, AND HINGED BASE ASSEMBLY.
4. MOUNT SUPPLY AND EXHAUST FAN ON COMMON CURB CAP AND INSTALL FANS PER NFPA 96 REQUIREMENTS.
5. MOTOR STARTERS AND CONTROLLERS SHALL BE PROVIDE BY KITCHEN HOOD SUPPLIER. COORDINATE INSTALLATION WITH ELECTRICAL CONTRACTOR.

CHILLER SCHEDULE

MARK	CHILLER OPTIONS	QTY.	NOMINAL (TONS)	CAPACITY (TONS)	AMBIENT TEMP (F)	FLOW (GPM)	MAX PD (FT WG)	EWT (F)	LWT (F)	# OF COMPRESSORS TYPE	MIN % CAPACITY	ELEC. V-PH-HZ	MCA	MOCP	IPLV AT ARI	FULL LOAD EER AT ARI	SOUND POWER OVERALL dBA	DIMENSIONS (LxWxH) IN.	OPERATING WEIGHT (LB)	JCI/YORK MODEL NUMBER
CH-1	High Efficiency Scrolls	1	120	114.6	100	228.1	10	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	YLAA0120SJ46FB

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, 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 TERMINAL BLOCK FOR POWER CONNECTION. DIV. 26 WILL PROVIDE EXTERNALLY MOUNTED NON-FUSED DISCONNECT.
8. PROVIDE DEMAND LIMITING VIA 4-20MA INPUT FEATURE TO LIMIT MACHINE CAPACITY.
9. 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, 3	PUMP ROOM	3	HORZ END SUCTION	BELL&GOSSET E-1510 2.5BB	228	80	10	70.3%	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. FALK T31 SPACER TYPE.
3. FACTORY REPRESENTATIVE SHALL FIELD-VERIFY PUMP ALIGNMENT WITH LASER ALIGNMENT TOOLS.
4. PROVIDE SUCTION DIFFUSERS AND SHAFT GROUNDING 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/P/Hz	MANUFACTURER & MODEL NUMBER	NOTES
VFD-P1	CHWP-1	10	14	480/3/60	DANFOSS VLT-HVAC	1-3
VFD-P2	CHWP-2	10	14	480/3/60	DANFOSS VLT-HVAC	1-3
VFD-P3	CHWP-3	10	14	480/3/60	DANFOSS VLT-HVAC	1-3

NOTES:
1. PROVIDE NEMA 3R ENCLOSURE FOR VFD LOCATED OUTDOORS.
2. PROVIDE INTEGRAL DISCONNECT.
3. PROVIDE BYPASS WITH VFDS.

WALL MOUNTED AC UNIT SCHEDULE

MARK	NOMINAL TONNAGE	COOLING CFM	VENT. CFM	ESP (IN.)	MIN. HP	MCA	MOCP	ELECTRICAL V/P/H	AIR IN COND. TEMP (F)	COOLING				HEATING	MINIMUM EER/ IPLV	WEIGHT LBS.	NOTES	BARD MODEL NUMBER (EXISTING)	BARD MODEL NUMBER (NEW)
										TOTAL BTU/H	SENSIBLE BTU/H	EAT DB/WB	LAT DB/WB	ELEC. HEATER (KW)					
WPU-1	3	1,275	125	0.15	0.5	59	60	208/1/60	95	35,965	27,729	80/67	59.9/58.3	10.0	11.0	425	ALL	BARD W36A2-A10	BARD W36AY-A10VXXX2J
WPU-2	3	1,275	125	0.15	0.5	59	60	208/1/60	95	35,965	27,729	80/67	59.9/58.3	10.0	11.0	425	ALL	BARD W36A2-A10	BARD W36AY-A10VXXX2J

NOTES:
1. ELECTRICAL DISCONNECT BY DIV. 26. COORDINATE WITH ELECTRICAL CONTRACTOR.
2. PROVIDE FACTORY DIPPED E-COATED CONDENSER COIL.
3. PROVIDE 2 STEP COMPRESSOR
4. PROVIDE HOT GAS REHEAT FOR DEHUMIDIFICATION OPERATION.
5. PROVIDE MOTORIZED OUTSIDE AIR DAMPER.
6. PROVIDE PROGRAMMABLE THERMOSTAT WITH BACNET INTERFACE.
7. PROVIDE 2" MERV 13 FILTER

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
SERVICE YARD											
CH-1	–	–	254	300	1) 300	480V/3PHASE	INTEGRAL DISCONNECT	INTEGRAL DISCONNECT	3" – 4#350KCMIL & #4G	RETAIN EXISTING	CP
CHWP-1	10 HP	14	17.5	30	2) 35	480V/3PHASE	REMOVE EXISTING COMBINATION MOTOR STARTER.	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 COMBINATION MOTOR STARTER.	3) VARIABLE FREQUENCY DRIVE	3/4" – 3#10 & #10G	RETAIN EXISTING	CP
CHWP-3	10 HP	14	17.5	30	2) 35	480V/3PHASE	REMOVE EXISTING COMBINATION MOTOR STARTER.	3) VARIABLE FREQUENCY DRIVE	3/4" – 3#10 & #10G	RETAIN EXISTING	CP
KITCHEN											
KEF-1	3 HP	10.6	13.2	30	30	208V/3PHASE	INTEGRAL DISCONNECT	INTEGRAL DISCONNECT	3/4" – 3#10 & #10G	RETAIN EXISTING	K2
KSF-1	1.5 HP	6.6	8.2	20	20	208V/3PHASE	INTEGRAL DISCONNECT	INTEGRAL DISCONNECT	3/4" – 3#12 & #12G	RETAIN EXISTING	K2
PORTABLES											
WPU-1	10 KW	–	59.0	60	1) 60	208V/1PHASE	A/C DISCONNECT	60A, 2PNF, 240V, NEMA 3R	3/4" – 2#6 & #10G	RETAIN EXISTING	4A
WPU-2	10 KW	–	59.0	60	1) 60	208V/1PHASE	A/C DISCONNECT	60A, 2PNF, 240V, NEMA 3R	3/4" – 2#4 & #8G	RETAIN EXISTING	4A

GENERAL NOTES:
A) LOCATE EQUIPMENT MEANS OF DISCONNECT WITHIN EQUIPMENT SIGHT. DO NOT INSTALL BELOW DUCTWORK OR PLUMBING LINES.
B) PROVIDE NEW BRANCH CONNECTION FROM MOTOR STARTER/DISCONNECT/J-BOX TO EQUIPMENT. 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
PANELBOARD "K2" (EXISTING): SIEMENS, TYPE P1, 100A, 277/480V, 3ø, 4W

NO:	REVISION:	BY:

RFP # 20-WCTX-0224

STATE OF TEXAS
CESAR A. GONZALEZ
108611
LICENSED
PROFESSIONAL ENGINEER
01.19.2024

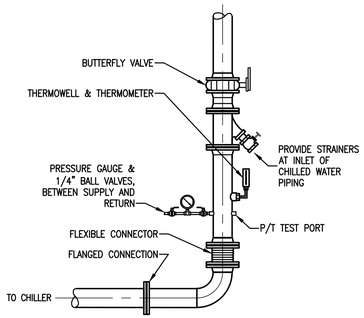
TEXAS

IDEA WESLACO MECHANICAL UPGRADES

WESLACO

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

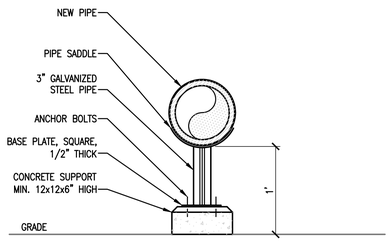
DATE: JAN 19, 2024
CHECKED BY: R.K.
DRAWN BY: M.O.V.
PROJECT NO.: 23v74
CAD FILE:
SHEET: ME5.1



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

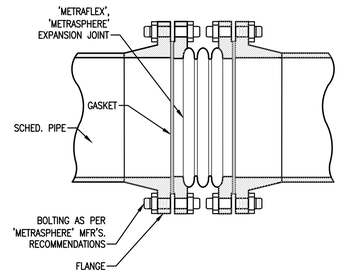


NOTE:

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

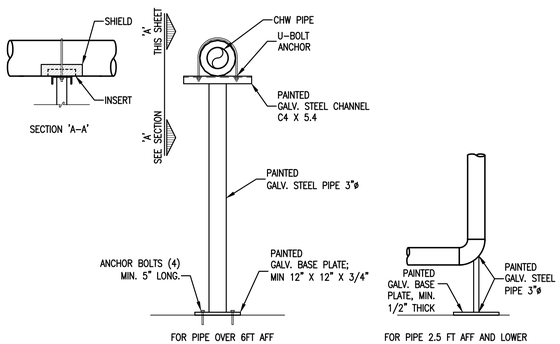
02 CONCRETE PIPE SUPPORT DETAIL

SCALE : NOT TO SCALE



03 TYPICAL EXPANSION JOINT

SCALE : NOT TO SCALE

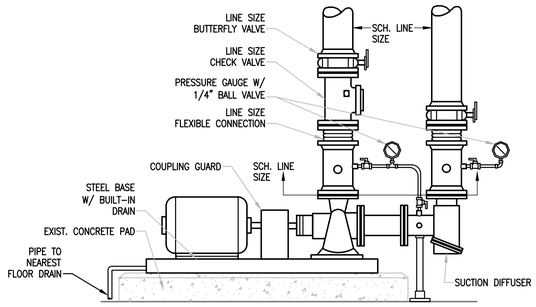


NOTES:

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



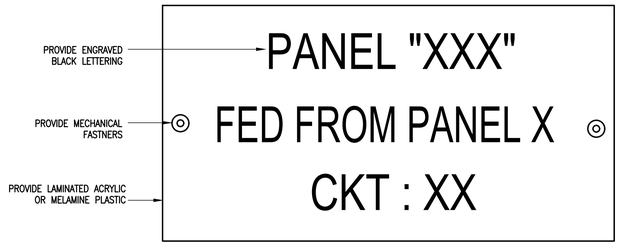
NOTE: PROVIDE SPRING TYPE VIBRATION ISOLATION INERTIA BASE.

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

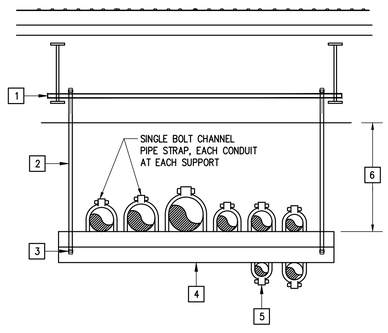
SCALE : NOT TO SCALE



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

06 EQUIPMENT IDENTIFICATION LABEL DETAIL

SCALE : NOT TO SCALE

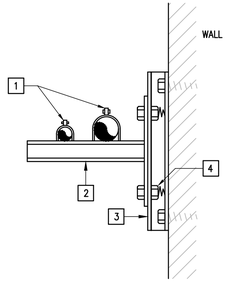


KEYED NOTES:

1. PROVIDE UNISTRUT STRUCTURAL CHANNEL SECURED TO TO JOIST AT BOTH ENDS.
2. PROVIDE 1/2" GALVANIZED ROD MINIMUM.
3. PROVIDE LOCKNUT.
4. PROVIDE GALVANIZED UNISTRUT 8'-0" O/C MAXIMUM.
5. PROVIDE 0'-1" MAXIMUM SIZE ON BOTTOM OF UNISTRUT.
6. VARIES.

07 HORIZONTAL RACEWAYS SUPPORT 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.

08 RACEWAY RUNS SUPPORT DETAIL

SCALE : NOT TO SCALE

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