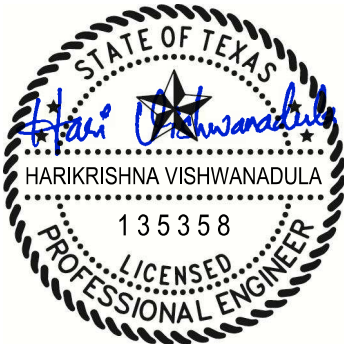
RWB Consulting Engineers

12222 Merit Dr.
Suite 400
Dallas, TX 75251
(972) 788-4222
www.rwb.net
TBPE Registered Firm# 2176



07.23.2024

MECHANICAL ENGINEER OF RECORD

RWB CONSULTING ENGINEERS
MECHANICAL, PLUMBING & ELECTRICAL ADDENDUM 2 ITEMS FOR
WALNUT GROVE MIDDLE SCHOOL CHILLER REPLACEMENT
MIDLOTHIAN I.S.D.

Questions from the Pre-Bid meeting and after:

i. Is the refrigerant monitoring system intended to be furnished and installed under division 23 09 00?

Response: Yes, shall be furnished under mechanical 23 09 00

ii. On drawing MP1.01, should the note at the air separator be Note 2?

Response: Yes, it should be note 2. Will correct in the Addendum.

iii. On drawing MP1.01, Note 3 reads “to be installed under alternate scope”. This is to be included in the base bid correct?

Response: Yes, it should be part of base bid. Will correct it in the Addendum.

iv. Is there an alternate manufacturer allowed for the SCBA? It appears International Safety Instruments (ISI) is no longer in business.

Response: MSA or approved equal can be submitted as an alternate manufacturer for the SCBA that meet/exceed the specifications.

v. Is there a possibility that a second job walk could be scheduled and the bid date extended by a week or so?

Response: Yes, please reach out to Chris Johnson from the district to schedule a site visit. His contact number is # 469 901 8323. Bid date will not be extended and will remain the same.

vi. Is there a bid bond required for this project?

Response: Yes, refer to specifications.

The following items modify the Specifications and Drawings and shall become part of the Contract Documents.

REVISIONS TO THE PROJECT MANUAL

The following specifications have been revised in this addendum. These revisions shall replace previously issued specifications as noted below.

1. SECTION 00 30 00 – Proposal Form

a. Added 20 HP and 30 HP VFDs to the VFD unit pricing list. See attached for revised proposal form.

2. SECTION 23 64 16 – Centrifugal Water Chillers

a. Refer to Article 2.3, Note 'H', revise item 5 to read as follows

5. Acceptable Manufacturer: International Safety Instruments (ISI) "Vanguard", MSA or approved equal.

REVISED & REISSUED DRAWINGS

The following list of drawings notes drawings revised and re-issued in this addendum. Previous versions of these drawings shall be removed and replaced with these revised drawings.

1. REVISED & REISSUED DRAWINGS:

1. COVER SHEET
2. M1.00 – ORIENTATION FLOOR PLAN – LEVEL 1 - MECHANICAL
3. M2.00 - ORIENTATION FLOOR PLAN – LEVEL 2 - MECHANICAL
4. DMP1.01 – DEMOLITION FLOOR PLAN – CENTRAL UTILITY PLANT – MECHANICAL AND PLUMBING
5. DM1.02 – ENLARGED DEMOLITION FLOOR PLANS – LEVEL 1 - MECHANICAL
6. DM2.01 – ENLARGED DEMOLITIONS FLOOR PLANS – LEVEL 1 - MECHANICAL
7. DM3.01 – HYDRONIC FLOW DIAGRAMS DEMOLITION - MECHANICAL
8. MP1.01 – FLOOR PLAN – CENTRAL UTILITY PLANT – MECHANICAL
9. M1.02 – ENLARGED FLOOR PLANS – LEVEL 1 - MECHANICAL
10. M2.01 – ENLARGED FLOOR PLANS – LEVEL 2 - MECHANICAL
11. M3.01 – HYDRONIC FLOW DIAGRAMS - HVAC
12. M4.01 – DETAILS, SCHEDULES, & LEGEND – MECHANICAL

END OF RWB CONSULTING ENGINEERS' ADDENDUM ITEMS

SECTION 00 30 00

PROPOSAL FORM

SUBMITTED BY: _____
(Name of Proposer)

_____
(Address)

Dear Sir:

The undersigned, having examined the drawings, specifications, related documents, and the site of the proposed work, and being familiar with all of the conditions surrounding the work, including the availability of materials and labor, hereby proposes to furnish all labor, materials, and equipment required for the Chiller Replacement at Walnut Grove Middle School, in accordance with the drawings and project manual prepared by RWB Consulting Engineers for the lump sum of:

BASE PROPOSAL amount of:

_____

_____Dollars ($_____).

Under ALTERNATE NO. 1, Provide the added cost to provide replacement Variable Frequency Drives (VFDs) for all VFDs noted in the contract documents. This cost shall include the equipment cost only and shall NOT include any associated cost to remove and install the new VFDs or any associated labor or other cost.

ALTERNATE NO. 1 amount of:

_____

_____ Dollars ($_____).

Under ALTERNATE NO. 2, Provide the added cost to provide an extended four (4) year compressor warranty for the centrifugal chiller, which will result in a total of five (5) years from the date of substantial completion.

ALTERNATE NO. 2 amount of:

_____

_____ Dollars ($_____).

Under ALTERNATE NO. 3, Provide the added cost to provide a five (5) year maintenance contract on the entire Central Plant, to include all associated mechanical and plumbing equipment in the central plant. This will include all annual inspections required to be conducted on all equipment as well. Refer to Section 01 01 01 Annual Maintenance Service Scope, for scope of work to be included in this maintenance contract. This maintenance contract shall start at the conclusion of the required one (1) year warranty for the scope of work for the base proposal work.

ALTERNATE NO. 3 amount of:

_____

_____ Dollars ($_____).

Provide Unit Pricing to install the following Variable Frequency Drives (VFD), which are all located indoors in mechanical rooms and serve either pumps or air handlers:

VFD Size	Unit Pricing to Install One (1) VFD of this associated HP at either an indoor AHU or Pump ($)
1 HP	
2 HP	
3 HP	
5 HP	
10 HP	
20 HP	
30 HP	

Provide the associated equipment lead time of the equipment below and which manufacturer was included in the base bid proposal:

Equipment Type	Manufacturer	Equipment Lead Time (Months)
Centrifugal Chiller		
Variable Frequency Drive		

Notes:

1. Amount shall be shown in both words and figures. In case of discrepancy, the amount shown in words shall govern.
2. Prices listed on Bid Form acknowledge that work for Walnut Grove Middle School cannot begin until Thanksgiving or Winter Break of 2024.
3. The above amount does not include State of Texas Sales Tax.
4. The above amounts do include allowances as stated in Section 01 02 00.
5. The Base Proposal Work is intended to be performed during normal working hours, except for activities that create excessive noise or causes a disruption in building services. In these instances, work shall be performed only when scheduled by the Owner, after hours, or on weekends.
6. Building will not be available to contractors until Thanksgiving or Winter Break. Thanksgiving Break starts Tuesday November 26, 2024 at noon and ends December 1, 2024 at 11:59PM. Phased work will need to be coordinated with the district. Winter Break starts 5:00PM on December 20, 2024 and ends January 5, 2025 at 11:59PM.
7. All Base and Alternate Proposal work shall be substantially completed by 11:00PM January 5, 2025, unless the VFD lead time does not allow for work to be done over Winter Break. If VFD lead time is extended, then ONLY work for VFD replacement scope can be extended to be completed during Spring Break. Spring Break is from Friday March 7, 2025 at 5:00PM until Sunday March 16 at 11:59PM.
8. Contractor shall include cost to work double shifts and/or weekends as required to complete project by required substantial completion date.
9. Contractor shall include any required equipment expediting cost and charges to complete the work within the timeline established based on the associated notice to proceed listed, site availability, and substantial completion date.

10. The following is the associated proposal and award schedule for the project:

    a. Pre-Bid Meeting: July 16, 2024 @ 11am CST @ WGMS.
    b. Questions Due: July 19, 2024 by 12:00pm CST.
    c. Final Addenda: July 23, 2024, posted by 4pm CST.
    d. Proposals Due: August 1, 2024 by 2pm CST.
    e. Board Meeting: August 19, 2024
    f. Notice to Proceed: August 20, 2024.

The undersigned affirms that the above stipulated base Proposal sum represents the entire cost per drawings, specifications, and addenda and that no claim will be made on account of any increase in wage scales, material prices, taxes, insurance, cost indexes, or any other rates affecting the construction industry and/or this project.

The undersigned Proposer agrees that this Proposal shall be good and may not be withdrawn for a period of 45 calendar days after the scheduled closing time for receiving Proposals.

The undersigned Proposer understands that the Owner reserves the right to reject any or all Proposals and to waive any informalities in the Proposal.

The Owner reserves the right to require Bonds of the successful Proposer. If written notice of acceptance of this Proposal is received within 45 days after date designated for opening of Proposals, the undersigned, within 10 days of receipt of the Contract, will sign and deliver to the Owner the contract and any required Performance Bond, Labor and Material Payment Bond and properly executed Insurance Verification Form required by the Owner.

Should the undersigned fail to deliver the signed Contract or the required Bonds or Insurance Form within the 10 day period, the Owner reserves the right to terminate the relationship.

TIME OF COMPLETION AND LIQUIDATED DAMAGES

1. The contract date will be established as the number of consecutive calendar days as set out on the proposal form from the “Notice-to-proceed” date issued by the Owner.

2. Failure of the Contractor to complete the Work by the contract date will result in damages being sustained by the Owner. Such damages are, and will continue to be, impracticable and extremely difficult to determine. Due consideration will be given to delays falling within agreed terms of the contract.

3. The Contractor will pay the Owner Five Hundred Dollars ($500.00) for each calendar day of delay in finishing the Work in excess of time specified for completion, plus authorized time extensions. Execution of the Contract under these specifications shall constitute agreement by the Owner and Contractor that the amount indicated is the minimum value of the costs and actual damage caused by failure of the Contractor to Substantially Complete the Work within the allotted time, that such sum is Liquidated Damages and shall not be construed as a penalty, and that such sum may be deducted from payments due the Contractor if such delay occurs.

Addenda: The undersigned hereby acknowledges receipt of the following addenda to the Drawings and Specifications, all of the provisions and requirements of which addenda have been taken into consideration in the preparation of this Proposal.

Addendum No._____dated_____ Addendum No._____dated

Addendum No._____dated_____ Addendum No._____dated

Addendum No._____dated_____ Addendum No._____dated

Date:_____ Signed _____

Title _____

Name of Firm_____

Organized as a: (Mark one)

Proprietorship_____
Partnership_____
Corporation_____

Under the law of the State Of:

_____

_____
(Date)

Legal Address:

_____

_____

_____

Telephone No._____

Fax No._____

E-mail_____

If Proposal is by a corporation, affix seal above address.

END OF PROPOSAL FORM

MIDLOTHIAN ISD
INSPIRING EXCELLENCE

CSP 2425-01 WGMS CHILLER PROJECT

07/16/24	WGMS Chiller Project	Pre-Bid Date:	July 16, 2024 @ 11 am
Pre-Bid	MISD	Place/Room:	WGMS

Name	Company	Phone	E-Mail
Scott Moore	Infinity	4695784679	scott.moore@infinitycontractors.com
John Keller	NTD Mechanical	469-323-0454	jkeller@ntdmechanical.com
Roger Bauer	DMI Corp	214-412-8247	rbauer@deckermechanical.com
Mark Mikes	Berger Engineering	972-890-1974	mmikes@berger-Engr.com
Nathan Hart	RWB	972-788-4222	nhart@rwb.net
Hari Vishwanadula	RWB	972-788-4222	hari@rwb.net
Chris Johnson	MISD	469.901.8323	Chris.Johnson@Midlothianisd.org
SAM Deere	Compass	214-454-1580	sdeere@compassdallas.com
Jose Martinez	MISD	817-609-2091	Jose.Martinez@Midlothianisd.org
Shana Volentine	MISD	469-856-5032	shana.volentine@midlothianisd.org

MIDLOTHIAN INDEPENDENT SCHOOL DISTRICT
WALNUT GROVE MIDDLE SCHOOL

990 Walnut Grove Rd, Midlothian TX 76065

CHILLER REPLACEMENT
JULY 03, 2024

SHEET INDEX

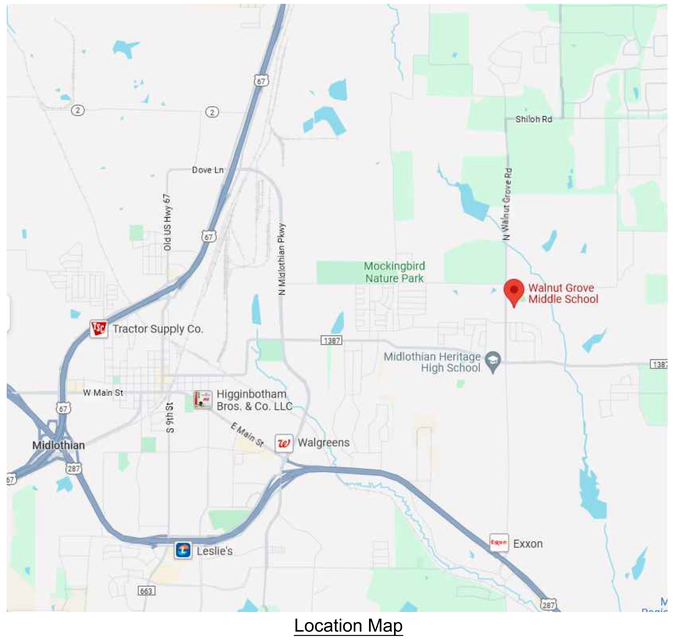
RWB

Reed, Wells, Benson & Company
Consulting Engineers #F-2176

MERIT TOWER, 12222 MERIT DRIVE, SUITE 400
DALLAS, TX 75251

PHONE: (972) 788-4222
FAX: (972) 788-0002
WWW.RWB.NET

RWB PROJECT # 24040.00



Location Map

01 ORIENTATION FLOOR PLAN - LEVEL 1 - HVAC

SCALE: 1/16" = 1'-0"

RWB
Consulting Engineers
12222 Merit Dr
Suite 400
Dallas, TX 75251
TX Firm # F-2176
(972) 788-4222
Project 24040.00

STATE OF TEXAS
HARIKRISHNA VISHWANADULA
135358
LICENSED
PROFESSIONAL ENGINEER
07.23.2024

2024.07.03

ISSUES

01	ISSUE FOR CONSTRUCTION	2024.07.03

REVISIONS

01	ADDENDUM #2	2024.07.23

WALNUT GROVE MS
CHILLER REPLACEMENT

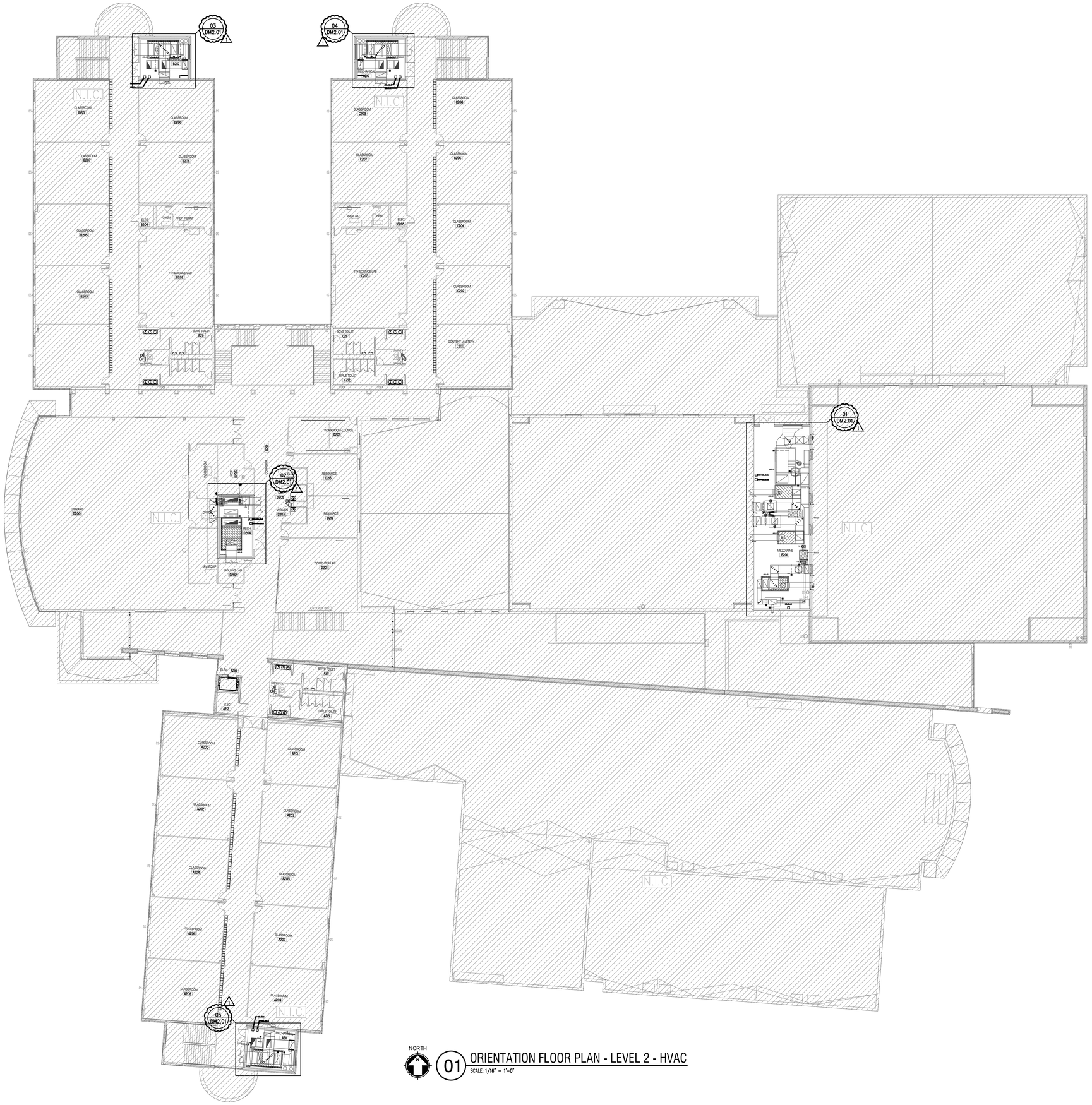
MIDLOTHIAN I.S.D.
990 Walnut Grove Rd, Midlothian, TX 76065

ORIENTATION FLOOR PLAN - LEVEL 1 - HVAC

JOB NO.: 24040-00
DRAWN BY: BM
CHECKED BY: HV

SHEET NO.

M1.00



01 ORIENTATION FLOOR PLAN - LEVEL 2 - HVAC
SCALE: 1/16" = 1'-0"

RWB
Consulting Engineers
12222 Merit Dr
Suite 400
Dallas, TX 75251
TX Firm #F-2176
(972) 788-4222
Project 24040.00

STATE OF TEXAS
HARIKRISHNA VISHWANADULA
135358
LICENSED
PROFESSIONAL ENGINEER
07.23.2024

2024.07.03

ISSUES

01	ISSUE FOR CONSTRUCTION	2024.07.03

REVISIONS

01	ADDENDUM #2	2024.07.23

WALNUT GROVE MS
CHILLER REPLACEMENT

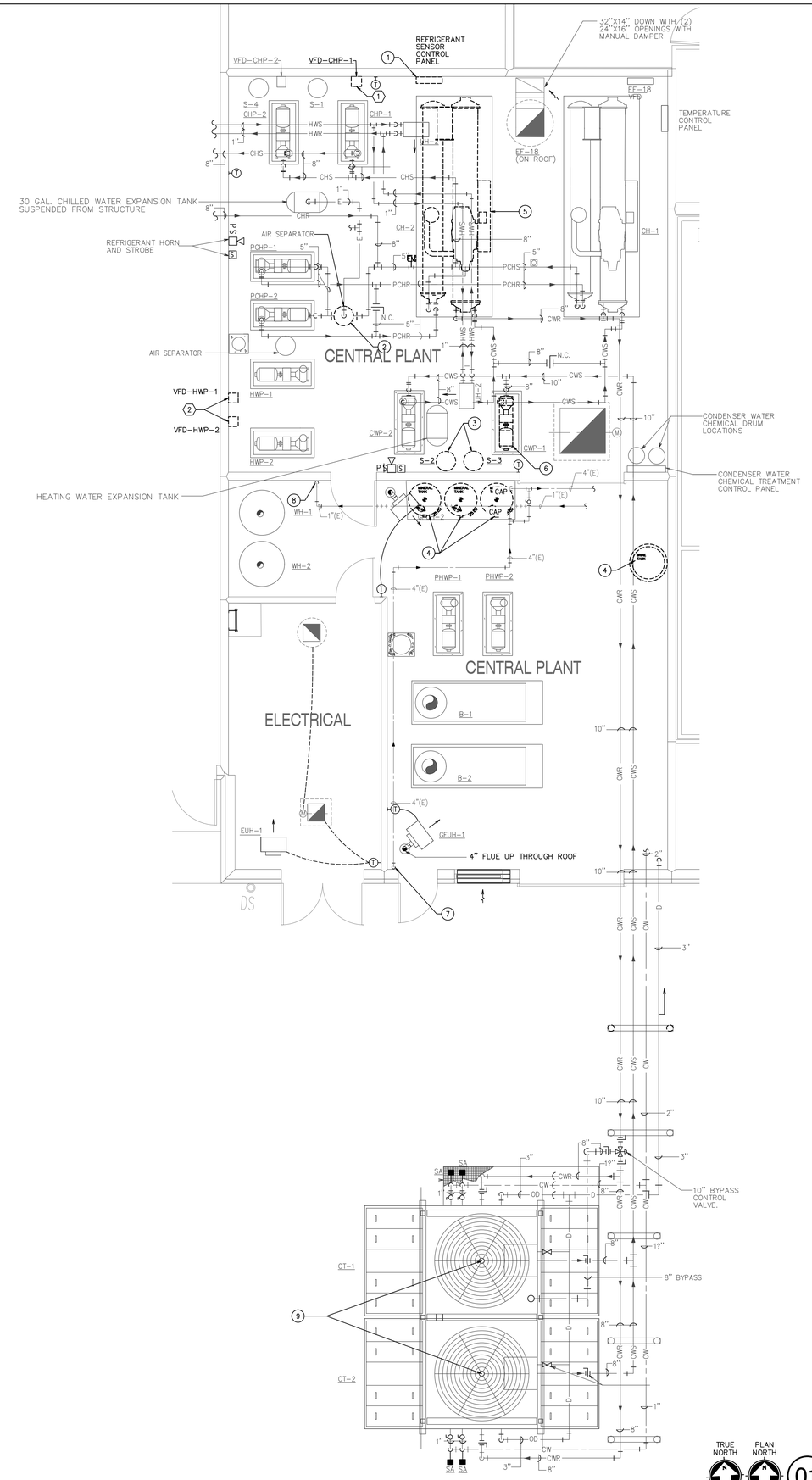
MIDLOTHIAN I.S.D.
990 Walnut Grove Rd, Midlothian, TX 76065

ORIENTATION FLOOR PLAN - LEVEL 2 - HVAC

JOB NO.: 24040-00
DRAWN BY: BM
CHECKED BY: HV

SHEET NO.
M2.00

Drawing: P:\24040 - MIDLOTHIAN ISD WALNUT GROVE MS CHILLER\DRAWINGS\CAD\SHEETS\M2.00.DWG; Plot By:BADER MANOR; Plot Date:7/23/2024 5:23 PM; Plot Scale:1:1; Paper Size:ODE 30" 30X42 IN



GENERAL DEMOLITION NOTES:

1. THE INFORMATION ON THE DEMOLITION DRAWINGS ARE NOT FROM "AS-BUILT" DRAWINGS BUT FROM ORIGINAL DRAWINGS. THIS INFORMATION IS INCLUDED FOR REFERENCE ONLY. CONTRACTOR WILL BE RESPONSIBLE FOR VISITING THE SITE PRIOR TO SUBMITTING A BID TO DETERMINE THE AMOUNT OF WORK THAT WILL BE REQUIRED. CONTRACTOR SHALL EXAMINE THE EXISTING BUILDING AND GENERALLY VERIFY THE LOCATION OF ALL EXISTING WORK AND BECOME INFORMED AS TO THE RELATION TO, AND EFFECT ON, THE WORK REQUIRED BEFORE SUBMITTING A BID. SUBMISSION OF A BID WILL CONSTITUTE EVIDENCE THAT THE CONTRACTOR HAS INSPECTED THE SITE OF THE PROPOSED WORK.
2. EXISTING MPE ITEMS TO BE REMOVED SHALL BE RETURNED TO THE OWNER OR DISPOSED OF AS DIRECTED BY THE DESIGNATED OWNER'S REPRESENTATIVE.
3. COORDINATE DEMOLITION WORK WITH THE BUILDING MAINTENANCE PERSONNEL AND OTHER TRADES PERFORMING WORK IN THE BUILDING PRIOR TO THE REMOVAL OF ANY ITEMS OF EQUIPMENT OR SYSTEMS THAT WILL EFFECT OTHER SYSTEMS WITHIN THE LIMIT OF NEW CONSTRUCTION OR OTHER AREAS OF THE BUILDING. THE BUILDING WILL BE OCCUPIED DURING CONSTRUCTION; AND, THEREFORE, UTILITIES MUST REMAIN IN OPERATION AT ALL TIMES. ANY REQUIRED OUTAGES MUST BE COORDINATED WITH THE OWNER.
4. PRIOR TO THE REMOVAL OF ANY MPE ITEMS OR EQUIPMENT, CONTRACTOR MUST VERIFY THE ORIGIN AND TERMINATION OF THOSE SYSTEMS AND CONFIRM THAT THE ITEMS BEING REMOVED DO NOT SERVE ANY ITEMS THAT ARE TO REMAIN (INCLUDING THOSE IN AREAS OUTSIDE THE CONTRACT LIMITS).
5. CONTRACTOR SHALL CONTACT CONTROLS SYSTEM INSTALLER BEFORE ANY DEMOLITION WORK IS STARTED TO ALLOW THEM TO TAG & IDENTIFY ITEMS TO REMAIN AND BE PROTECTED AND ITEMS TO BE REMOVED. THE CONTROLS SYSTEM INSTALLER SHALL COORDINATE WITH THE OWNER FOR ELEMENTS OF THE EXISTING CONTROLS SYSTEM THAT SHALL BE CAREFULLY REMOVED AND GIVEN TO THE OWNER SUCH AS EXISTING TEMPERATURE SENSORS THAT WILL NOT BE RE-USED. ALL EXISTING TEMPERATURE ONLY SENSORS SERVING EXISTING RTUS SHALL BE CAREFULLY REMOVED, SHRINK WRAPPED, PALLETIZED, AND PROVIDED TO OWNER FOR THEIR USE.
6. DO NOT ABANDON ANY ITEMS IN PLACE, REMOVE ALL COMPONENTS ASSOCIATED WITH EACH ITEM CALLED OUT TO BE REMOVED. WHERE ITEMS ARE REMOVED PATCH/REPLACE ROOF, WALLS, CEILING OR FLOOR, AS APPLICABLE, TO MATCH EXISTING FINISHES, WHERE NEW FINISHES ARE CALLED FOR PATCHING SHALL MATCH THE NEW FINISH.
7. ALL EXISTING FIRE ALARM, SECURITY AND OTHER CEILING MOUNTED DEVICES TO REMAIN IN OPERATION DURING CONSTRUCTION AND BE RE-INSTALLED AS NEEDED. TEMPORARILY SUPPORT AS NEEDED.
8. ALL EXISTING LIGHTS ARE TO BE REUSED AND REMAIN IN PLACE, UNLESS NOTED OTHERWISE. CONTRACTOR TO SUPPORT LIGHTS ABOVE CEILING DURING ANY CEILING DEMOLITION.
9. THE MECHANICAL CONTRACTOR / DEMOLITION CONTRACTOR SHALL COORDINATE WITH ELECTRICAL CONTRACTOR REGARDING THE SCOPE OF DEMOLITION FOR ELECTRICAL CONNECTIONS. THOSE UNITS BEING REMOVED SHALL BE SAFELY DISCONNECTED FROM EXISTING POWER.
10. CONTRACTOR SHALL COORDINATE REMOVAL OF EXISTING UNITS WITH DISTRICT, ALLOWING THE DISTRICT TO REMOVE ANY EXISTING UNIT COMPONENTS FOR SPARE STOCK.
11. PROVIDE FLOOR PROTECTION IN ALL AREAS OF DEMOLITION AND NEW WORK THROUGH OUT THE BUILDING FROM WORK AREA TO EXTERIOR. FLOORING PROTECTION TO BE FULL WIDTH OF CORRIDOR AND BE RAM BOARD OR EQUAL TYPE FLOOR PROTECTION.

GENERAL PHASING NOTES:

1. ISOLATE CHILLED WATER PORTION OF CENTRAL PLANT AT EXISTING CENTRAL PLANT ISOLATION VALVES PRIOR TO ANY WORK.
2. STRICTLY COORDINATE REMOVAL OF DOMESTIC WATER SYSTEM WATER SOFTENER TO BE DURING PERIOD WHEN BUILDING IS UNOCCUPIED.

NOTES BY SYMBOL '◯':

1. EXISTING REFRIGERANT MONITORING STATION TO BE DEMOLISHED AND REPLACED WITH NEW. REMOVE EXISTING LODESTONE TYPE REFRIGERANT SENSORS AND REPLACE WITH ALL NEW. RE-USE EXISTING POWER TO PANEL.
2. EXISTING AIR SEPARATOR TO BE REMOVED AND REPLACED WITH NEW. DISCONNECT EXISTING MAKE UP WATER LINE AND DRAIN LINE AS NEEDED TO ACCOMODATE NEW SEPARATOR.
3. EXISTING CONDENSER WATER CENTRIFUGAL SEPARATOR TO BE REMOVED AND REPLACED WITH NEW. REPLACE EXISTING SEPARATOR, BAG FILTER, INTERCONNECTING PIPING BETWEEN THE TWO AND PIPING TO SEPARATOR FROM CONDENSER WATER MAIN. DISCONNECT AND RE-CONNECT POWER AND CONTROLS.
4. EXISTING WATER SOFTENER SYSTEM AND ASSOCIATED INTERCONNECTED PIPING TO BE DEMOLISHED. CAP PIPING DOWNSTREAM OF THE SYSTEM BY-PASS AND OPEN BY-PASS.
5. EXISTING SCREW CHILLER TO BE DEMOLISHED AND REPLACED WITH A NEW CENTRIFUGAL CHILLER. REMOVE EXISTING CHILLED AND CONDENSER WATER PIPING IN VERTICAL UP TO EXISTING ISOLATION VALVES OR AS FAR BACK AS NEEDED TO ALLOW FOR CHILLER TO BE REMOVED AND RE-INSTALLED. REMOVE EXISTING REFRIGERANT PURGE SYSTEM PIPING UP AT EXISTING CH-1 PURGE PIPING. REMOVE EXISTING CONTROLS BACK TO SOURCE. REMOVE AND RE-INSTALL EXISTING ELECTRICAL.
6. EXISTING CWP-1 TO BE REMOVED AND RE-INSTALLED TO ALLOW FOR THE REMOVAL OF THE EXISTING CHILLER AND THE INSTALLATION OF THE NEW CHILLER. CAREFULLY STORE AND PROTECT THROUGOUT NEW CHILLER INSTALLATION. RE-MOUNT AND RE-ALIGN EXISTING PUMP, LUBE AND SERVICE PRIOR TO RE-INSTALLATION.
7. EXISTING 4" DOMESTIC COLD WATER RISER WITH SHUT-OFF VALVE IN RISER.
8. EXISTING 1" DOMESTIC HOT WATER DN. TO CIRCULATION PUMP.
9. REMOVE EXISTING 10HP COOLING TOWER FAN MOTORS AND REPLACE WITH NEW MOTOR. MATCH EXISTING TYPE OF MOTOR. EXISTING MOTOR IS WEATHERPROOF TOTALLY ENCLOSED TYPE.

ALTERNATE NOTES BY SYMBOL '◯':

1. EXISTING CHP-1 VFD TO BE REMOVED AND REPLACED WITH NEW. EXISTING CONTROLS TO BE REMOVED AND RE-INSTALLED. EXISTING ELECTRICAL TO BE REMOVED AND RE-INSTALLED. VFD EQUIPMENT TO BE PRICED AS ALTERNATE. UNIT INSTALLATION TO BE PROCED AS UNIT PRICE. REFER TO SCHEDULES FOR VFD SIZE.
2. EXISTING HWP-1 & HWP-2 VFDS TO BE REMOVED AND REPLACED WITH NEW. EXISTING CONTROLS TO BE REMOVED AND RE-INSTALLED. EXISTING ELECTRICAL TO BE REMOVED AND RE-INSTALLED. VFD EQUIPMENT TO BE PRICED AS ALTERNATE. UNIT INSTALLATION TO BE PROCED AS UNIT PRICE. REFER TO SCHEDULES FOR VFD SIZE.

TRUE NORTH / PLAN NORTH

01 DEMOLITION FLOOR PLAN - CENTRAL UTILITY PLANT - MECHANICAL
SCALE: 1/4" = 1'-0"

RWB Consulting Engineers
12222 Merit Dr, Suite 400, Dallas, TX 75251
TX Firm #F-2176
(972) 788-4222
Project 24040.00

STATE OF TEXAS — HARIKRISHNA VISHWANADULA — 135358 — LICENSED PROFESSIONAL ENGINEER
07.23.2024

2024.07.03

ISSUES

01	ISSUE FOR CONSTRUCTION	2024.07.03

REVISIONS

01	ADDENDUM #2	2024.07.23

WALNUT GROVE MS CHILLER REPLACEMENT

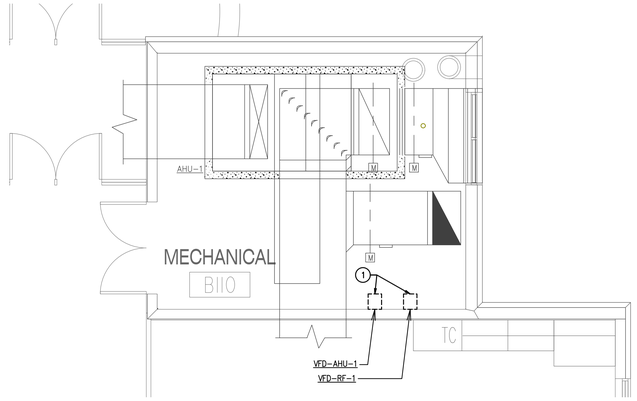
MIDLOTHIAN I.S.D.
990 Walnut Grove Rd, Midlothian, TX 76065

DEMOLITION FLOOR PLAN - CENTRAL UTILITY PLANT - MECHANICAL & PLUMBING

JOB NO.: 24040-00
DRAWN BY: BM
CHECKED BY: HV

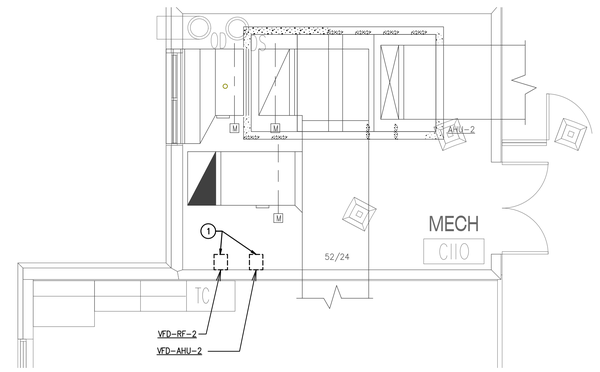
SHEET NO.
DMP1.01

Drawing:P:\24040 - MIDLOTHIAN ISD WALNUT GROVE MS CHILLER\DRAWINGS\CAD\SHEETS\DMP1.01.DWG, Plot By:BAZER MAXIO, Plot Date:7/23/2024 5:23 PM, Plot Scale:1:1, Paper Size:ICE 30" X24" IN



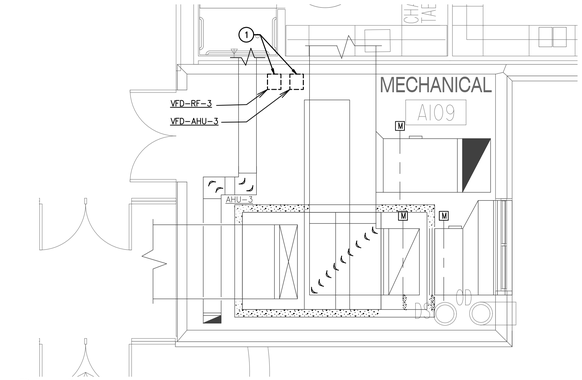
TRUE NORTH PLAN NORTH 01 ENLARGED MECHANICAL ROOM PLAN - LEVEL 1 - AHU-1

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



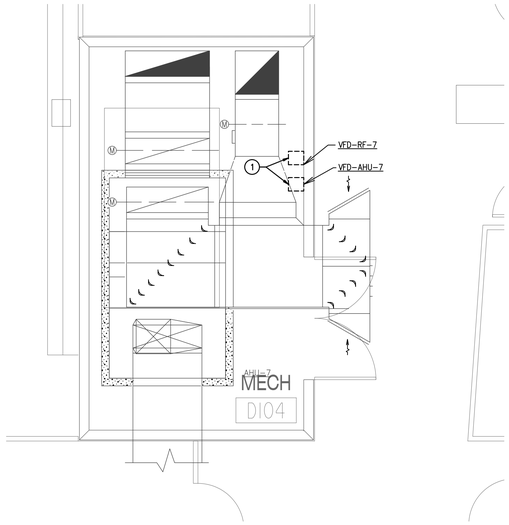
TRUE NORTH PLAN NORTH 02 ENLARGED MECHANICAL ROOM PLAN - LEVEL 1 - AHU-2

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



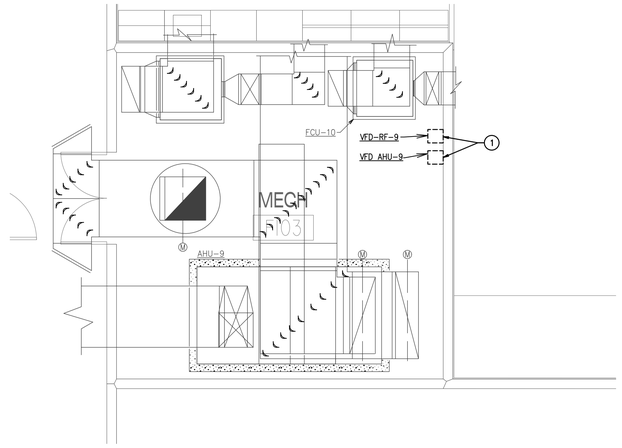
TRUE NORTH PLAN NORTH 03 ENLARGED MECHANICAL ROOM PLAN - LEVEL 1 - AHU-3

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



TRUE NORTH PLAN NORTH 04 ENLARGED MECHANICAL ROOM PLAN - LEVEL 1 - AHU-7

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



TRUE NORTH PLAN NORTH 05 ENLARGED MECHANICAL ROOM PLAN - LEVEL 1 - AHU 9

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

GENERAL DEMOLITION NOTES:

1. THE INFORMATION ON THE DEMOLITION DRAWINGS ARE NOT FROM "AS-BUILT" DRAWINGS BUT FROM ORIGINAL DRAWINGS. THIS INFORMATION IS INCLUDED FOR REFERENCE ONLY. CONTRACTOR WILL BE RESPONSIBLE FOR VISITING THE SITE PRIOR TO SUBMITTING A BID TO DETERMINE THE AMOUNT OF WORK THAT WILL BE REQUIRED. CONTRACTOR SHALL EXAMINE THE EXISTING BUILDING AND GENERALLY VERIFY THE LOCATION OF ALL EXISTING WORK AND BECOME INFORMED AS TO THE RELATION TO, AND EFFECT ON, THE WORK REQUIRED BEFORE SUBMITTING A BID. SUBMISSION OF A BID WILL CONSTITUTE EVIDENCE THAT THE CONTRACTOR HAS INSPECTED THE SITE OF THE PROPOSED WORK.
2. EXISTING MPE ITEMS TO BE REMOVED SHALL BE RETURNED TO THE OWNER OR DISPOSED OF AS DIRECTED BY THE DESIGNATED OWNER'S REPRESENTATIVE.
3. COORDINATE DEMOLITION WORK WITH THE BUILDING MAINTENANCE PERSONNEL AND OTHER TRADES PERFORMING WORK IN THE BUILDING PRIOR TO THE REMOVAL OF ANY ITEMS OF EQUIPMENT OR SYSTEMS THAT WILL EFFECT OTHER SYSTEMS WITHIN THE LIMIT OF NEW CONSTRUCTION OR OTHER AREAS OF THE BUILDING. THE BUILDING WILL BE OCCUPIED DURING CONSTRUCTION; AND, THEREFORE, UTILITIES MUST REMAIN IN OPERATION AT ALL TIMES. ANY REQUIRED OUTAGES MUST BE COORDINATED WITH THE OWNER.
4. PRIOR TO THE REMOVAL OF ANY MPE ITEMS OR EQUIPMENT, CONTRACTOR MUST VERIFY THE ORIGIN AND TERMINATION OF THOSE SYSTEMS AND CONFIRM THAT THE ITEMS BEING REMOVED DO NOT SERVE ANY ITEMS THAT ARE TO REMAIN (INCLUDING THOSE IN AREAS OUTSIDE THE CONTRACT LIMITS).
5. CONTRACTOR SHALL CONTACT CONTROLS SYSTEM INSTALLER BEFORE ANY DEMOLITION WORK IS STARTED TO ALLOW THEM TO TAG & IDENTIFY ITEMS TO REMAIN AND BE PROTECTED AND ITEMS TO BE REMOVED. THE CONTROLS SYSTEM INSTALLER SHALL COORDINATE WITH THE OWNER FOR ELEMENTS OF THE EXISTING CONTROLS SYSTEM THAT SHALL BE CAREFULLY REMOVED AND GIVEN TO THE OWNER SUCH AS EXISTING TEMPERATURE SENSORS THAT WILL NOT BE RE-USED. ALL EXISTING TEMPERATURE ONLY SENSORS SERVING EXISTING RTUS SHALL BE CAREFULLY REMOVED, SHRINK WRAPPED, PALLETIZED, AND PROVIDED TO OWNER FOR THEIR USE.
6. DO NOT ABANDON ANY ITEMS IN PLACE, REMOVE ALL COMPONENTS ASSOCIATED WITH EACH ITEM CALLED OUT TO BE REMOVED. WHERE ITEMS ARE REMOVED PATCH/REPLACE ROOF, WALLS, CEILING OR FLOOR, AS APPLICABLE, TO MATCH EXISTING FINISHES, WHERE NEW FINISHES ARE CALLED FOR PATCHING SHALL MATCH THE NEW FINISH.
7. ALL EXISTING FIRE ALARM, SECURITY AND OTHER CEILING MOUNTED DEVICES TO REMAIN IN OPERATION DURING CONSTRUCTION AND BE RE-INSTALLED AS NEEDED. TEMPORARILY SUPPORT AS NEEDED.
8. ALL EXISTING LIGHTS ARE TO BE REUSED AND REMAIN IN PLACE, UNLESS NOTED OTHERWISE. CONTRACTOR TO SUPPORT LIGHTS ABOVE CEILING DURING ANY CEILING DEMOLITION.
9. THE MECHANICAL CONTRACTOR / DEMOLITION CONTRACTOR SHALL COORDINATE WITH ELECTRICAL CONTRACTOR REGARDING THE SCOPE OF DEMOLITION FOR ELECTRICAL CONNECTIONS. THOSE UNITS BEING REMOVED SHALL BE SAFELY DISCONNECTED FROM EXISTING POWER.
10. CONTRACTOR SHALL COORDINATE REMOVAL OF EXISTING UNITS WITH DISTRICT, ALLOWING THE DISTRICT TO REMOVE ANY EXISTING UNIT COMPONENTS FOR SPARE STOCK.
11. PROVIDE FLOOR PROTECTION IN ALL AREAS OF DEMOLITION AND NEW WORK THROUGH OUT THE BUILDING FROM WORK AREA TO EXTERIOR. FLOORING PROTECTION TO BE FULL WIDTH OF CORRIDOR AND BE RAM BOARD OR EQUAL TYPE FLOOR PROTECTION.

ALTERNATE NOTES BY SYMBOL '◯':

(1) EXISTING VFD TO BE REMOVED AND REPLACED WITH NEW. PROVIDE COST FOR EQUIPMENT UNDER ALTERNATE AND COST FOR INSTALLATION AS UNIT PRICING PER HP SIZE. EXISTING CONTROLS TO BE REMOVED AND RE-INSTALLED. EXISTING ELECTRICAL TO BE REMOVED AND RE-INSTALLED. REFER TO SCHEDULE FOR VFD SIZE.

RWB Consulting Engineers
12222 Merit Dr
Suite 400
Dallas, TX 75251
TX Firm #F-2176
(972) 788-4222
Project 24040.00

STATE OF TEXAS
HARIKRISHNA VISHWANADULA
135358
LICENSED PROFESSIONAL ENGINEER
07.23.2024

2024.07.03

ISSUES

01	ISSUE FOR CONSTRUCTION	2024.07.03

REVISIONS

01	ADDENDUM #2	2024.07.23

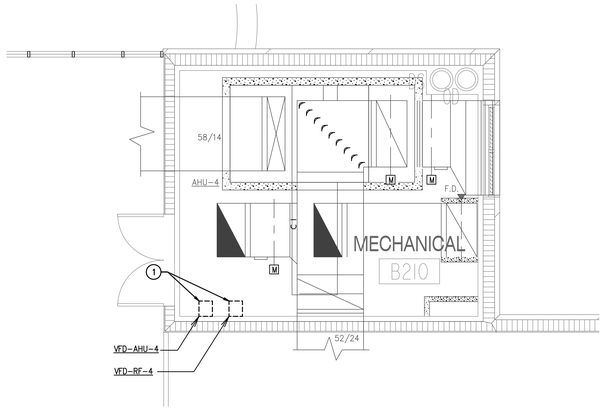
WALNUT GROVE MS
CHILLER REPLACEMENT
MIDLOTHIAN I.S.D.
990 Walnut Grove Rd, Midlothian, TX 76065

ENLARGED DEMOLITION FLOOR PLANS - LEVEL 1 - HVAC

JOB NO.: 24040-00
DRAWN BY: BM
CHECKED BY: HV

SHEET NO.

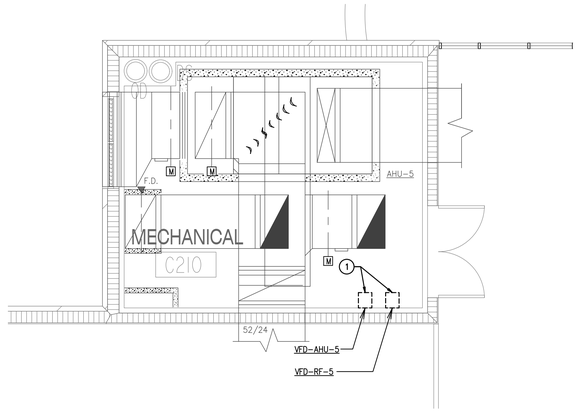
DM1.02



TRUE NORTH / PLAN NORTH

01 ENLARGED MECHANICAL ROOM PLAN - LEVEL 2 - AHU-4

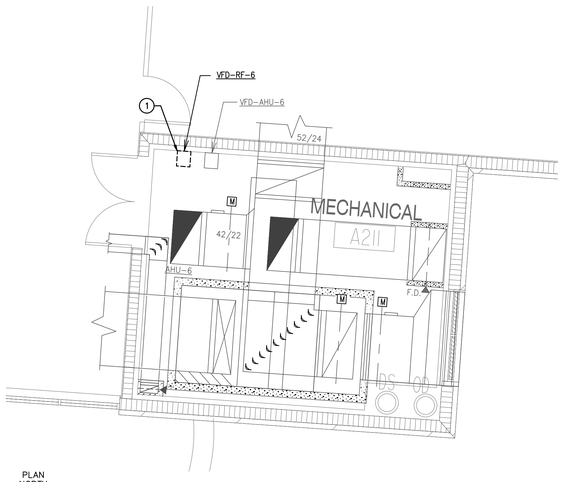
SCALE: 1/4" = 1'-0"



TRUE NORTH / PLAN NORTH

02 ENLARGED MECHANICAL ROOM PLAN - LEVEL 2 - AHU-5

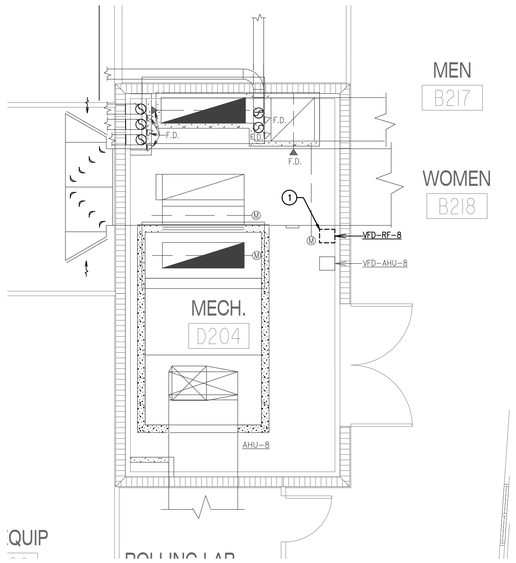
SCALE: 1/4" = 1'-0"



TRUE NORTH / PLAN NORTH

03 ENLARGED MECHANICAL ROOM PLAN - LEVEL 2 - AHU-6

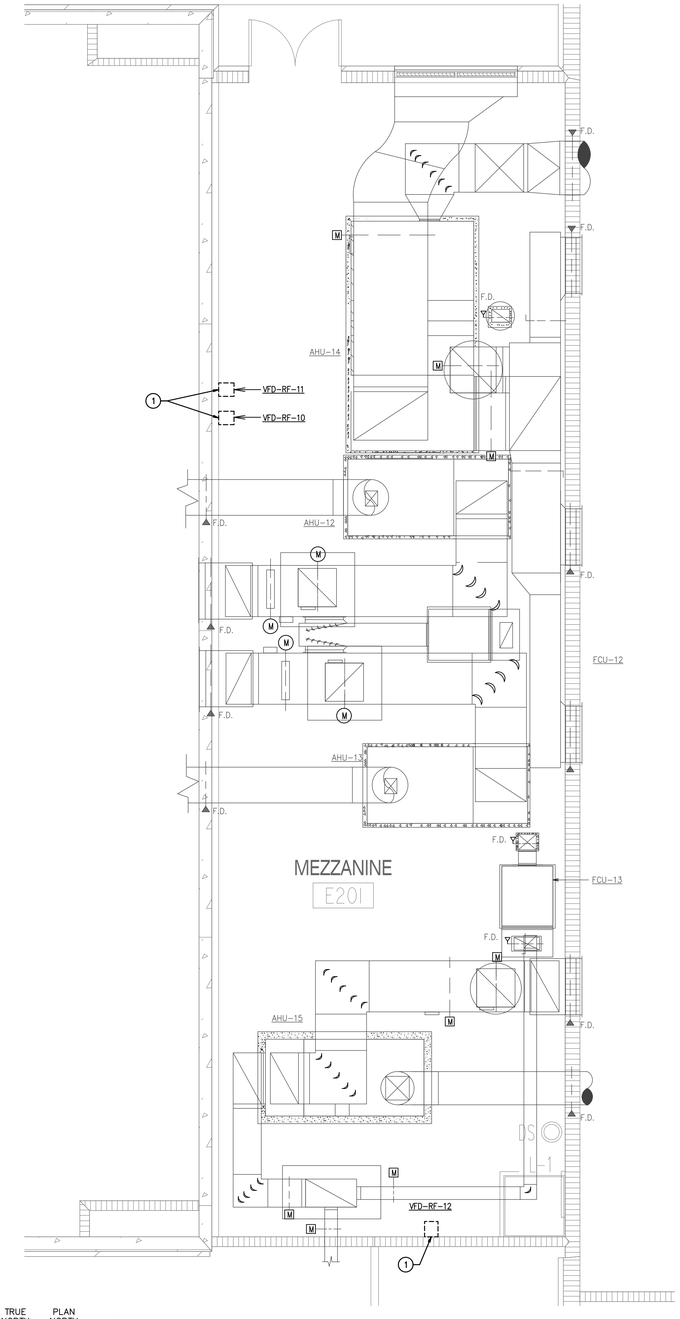
SCALE: 1/4" = 1'-0"



TRUE NORTH / PLAN NORTH

04 ENLARGED MECHANICAL ROOM PLAN - LEVEL 2 - AHU-8

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



TRUE NORTH / PLAN NORTH

05 ENLARGED MECHANICAL ROOM PLAN - LEVEL 2 - AHU 12-15

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

GENERAL DEMOLITION NOTES:

1. THE INFORMATION ON THE DEMOLITION DRAWINGS ARE NOT FROM "AS-BUILT" DRAWINGS BUT FROM ORIGINAL DRAWINGS. THIS INFORMATION IS INCLUDED FOR REFERENCE ONLY. CONTRACTOR WILL BE RESPONSIBLE FOR VISITING THE SITE PRIOR TO SUBMITTING A BID TO DETERMINE THE AMOUNT OF WORK THAT WILL BE REQUIRED. CONTRACTOR SHALL EXAMINE THE EXISTING BUILDING AND GENERALLY VERIFY THE LOCATION OF ALL EXISTING WORK AND BECOME INFORMED AS TO THE RELATION TO, AND EFFECT ON, THE WORK REQUIRED BEFORE SUBMITTING A BID. SUBMISSION OF A BID WILL CONSTITUTE EVIDENCE THAT THE CONTRACTOR HAS INSPECTED THE SITE OF THE PROPOSED WORK.
2. EXISTING MPE ITEMS TO BE REMOVED SHALL BE RETURNED TO THE OWNER OR DISPOSED OF AS DIRECTED BY THE DESIGNATED OWNER'S REPRESENTATIVE.
3. COORDINATE DEMOLITION WORK WITH THE BUILDING MAINTENANCE PERSONNEL AND OTHER TRADES PERFORMING WORK IN THE BUILDING PRIOR TO THE REMOVAL OF ANY ITEMS OF EQUIPMENT OR SYSTEMS THAT WILL EFFECT OTHER SYSTEMS WITHIN THE LIMIT OF NEW CONSTRUCTION OR OTHER AREAS OF THE BUILDING. THE BUILDING WILL BE OCCUPIED DURING CONSTRUCTION; AND, THEREFORE, UTILITIES MUST REMAIN IN OPERATION AT ALL TIMES. ANY REQUIRED OUTAGES MUST BE COORDINATED WITH THE OWNER.
4. PRIOR TO THE REMOVAL OF ANY MPE ITEMS OR EQUIPMENT, CONTRACTOR MUST VERIFY THE ORIGIN AND TERMINATION OF THOSE SYSTEMS AND CONFIRM THAT THE ITEMS BEING REMOVED DO NOT SERVE ANY ITEMS THAT ARE TO REMAIN (INCLUDING THOSE IN AREAS OUTSIDE THE CONTRACT LIMITS).
5. CONTRACTOR SHALL CONTACT CONTROLS SYSTEM INSTALLER BEFORE ANY DEMOLITION WORK IS STARTED TO ALLOW THEM TO TAG & IDENTIFY ITEMS TO REMAIN AND BE PROTECTED AND ITEMS TO BE REMOVED. THE CONTROLS SYSTEM INSTALLER SHALL COORDINATE WITH THE OWNER FOR ELEMENTS OF THE EXISTING CONTROLS SYSTEM THAT SHALL BE CAREFULLY REMOVED AND GIVEN TO THE OWNER SUCH AS EXISTING TEMPERATURE SENSORS THAT WILL NOT BE RE-USED. ALL EXISTING TEMPERATURE ONLY SENSORS SERVING EXISTING RTUS SHALL BE CAREFULLY REMOVED, SHRINK WRAPPED, PALLETIZED, AND PROVIDED TO OWNER FOR THEIR USE.
6. DO NOT ABANDON ANY ITEMS IN PLACE, REMOVE ALL COMPONENTS ASSOCIATED WITH EACH ITEM CALLED OUT TO BE REMOVED. WHERE ITEMS ARE REMOVED PATCH/REPLACE ROOF, WALLS, CEILING OR FLOOR, AS APPLICABLE, TO MATCH EXISTING FINISHES, WHERE NEW FINISHES ARE CALLED FOR PATCHING SHALL MATCH THE NEW FINISH.
7. ALL EXISTING FIRE ALARM, SECURITY AND OTHER CEILING MOUNTED DEVICES TO REMAIN IN OPERATION DURING CONSTRUCTION AND BE RE-INSTALLED AS NEEDED. TEMPORARILY SUPPORT AS NEEDED.
8. ALL EXISTING LIGHTS ARE TO BE REUSED AND REMAIN IN PLACE, UNLESS NOTED OTHERWISE. CONTRACTOR TO SUPPORT LIGHTS ABOVE CEILING DURING ANY CEILING DEMOLITION.
9. THE MECHANICAL CONTRACTOR / DEMOLITION CONTRACTOR SHALL COORDINATE WITH ELECTRICAL CONTRACTOR REGARDING THE SCOPE OF DEMOLITION FOR ELECTRICAL CONNECTIONS. THOSE UNITS BEING REMOVED SHALL BE SAFELY DISCONNECTED FROM EXISTING POWER.
10. CONTRACTOR SHALL COORDINATE REMOVAL OF EXISTING UNITS WITH DISTRICT, ALLOWING THE DISTRICT TO REMOVE ANY EXISTING UNIT COMPONENTS FOR SPARE STOCK.
11. PROVIDE FLOOR PROTECTION IN ALL AREAS OF DEMOLITION AND NEW WORK THROUGH OUT THE BUILDING FROM WORK AREA TO EXTERIOR. FLOORING PROTECTION TO BE FULL WIDTH OF CORRIDOR AND BE RAM BOARD OR EQUAL TYPE FLOOR PROTECTION.

ALTERNATE NOTES BY SYMBOL '⬡':

1. EXISTING VFD TO BE REMOVED AND REPLACED WITH NEW. PROVIDE COST FOR EQUIPMENT UNDER ALTERNATE AND COST FOR INSTALLATION AS UNIT PRICING PER HP SIZE. EXISTING CONTROLS TO BE REMOVED AND RE-INSTALLED. EXISTING ELECTRICAL TO BE REMOVED AND RE-INSTALLED. REFER TO SCHEDULE FOR VFD SIZE.

RWB Consulting Engineers
12222 Merit Dr
Suite 400
Dallas, TX 75251
TX Firm # F-2176
(972) 788-4222
Project 24040.00

STATE OF TEXAS
HARIKRISHNA VISHWANADULA
135358
LICENSED
PROFESSIONAL ENGINEER
07.23.2024

2024.07.03

ISSUES

01	ISSUE FOR CONSTRUCTION	2024.07.03

REVISIONS

01	ADDENDUM #2	2024.07.23

WALNUT GROVE MS
CHILLER REPLACEMENT

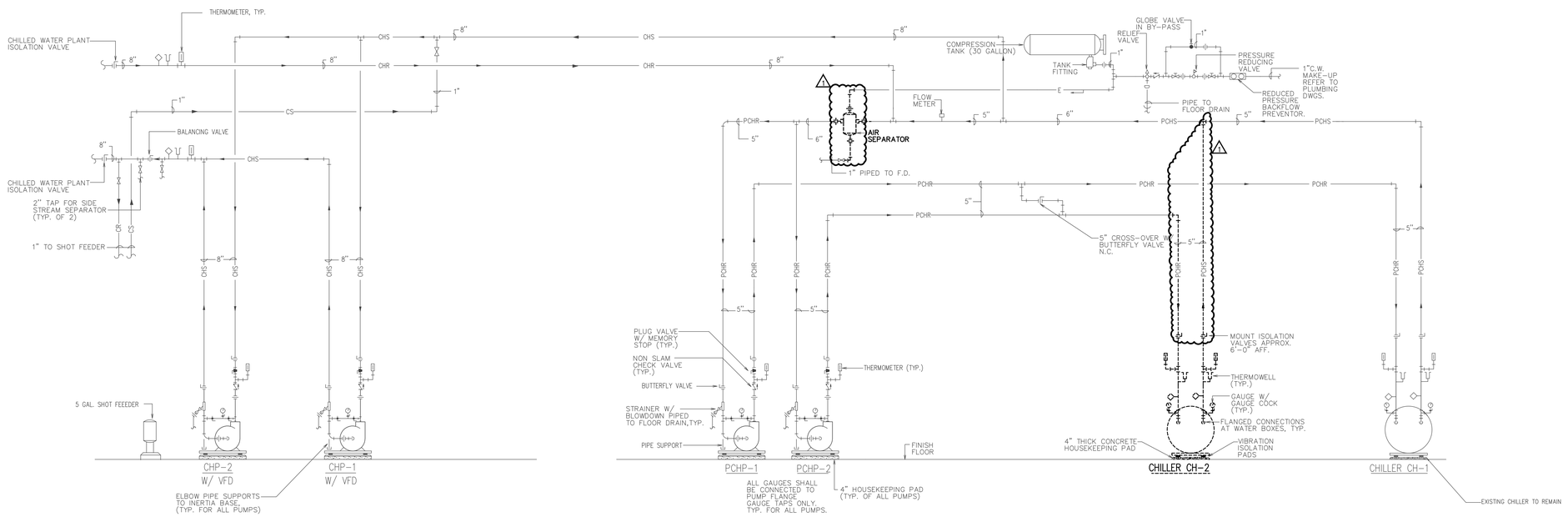
MIDLOTHIAN I.S.D.
990 Walnut Grove Rd, Midlothian, TX 76065

ENLARGED DEMOLITION FLOOR PLANS - LEVEL 2 - HVAC

JOB NO.: 24040-00
DRAWN BY: BM
CHECKED BY: HV

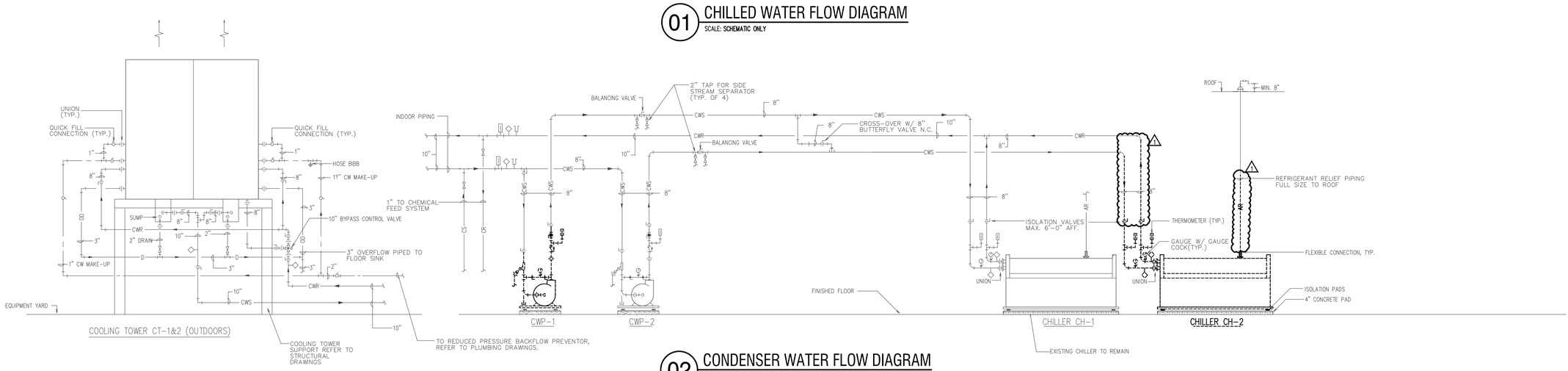
SHEET NO.

DM2.01



01 CHILLED WATER FLOW DIAGRAM

SCALE: SCHEMATIC ONLY



02 CONDENSER WATER FLOW DIAGRAM

SCALE: SCHEMATIC ONLY

RWB
Consulting Engineers
12222 Merit Dr
Suite 400
Dallas, TX 75251
TX Firm #F-2176
(972) 788-4222
Project 24040.00

STATE OF TEXAS
HARIKRISHNA VISHWANADULA
135358
LICENSED
PROFESSIONAL ENGINEER
07.23.2024

2024.07.03

ISSUES

01	ISSUE FOR CONSTRUCTION	2024.07.03

REVISIONS

01	ADDENDUM #2	2024.07.23

WALNUT GROVE MS
CHILLER REPLACEMENT

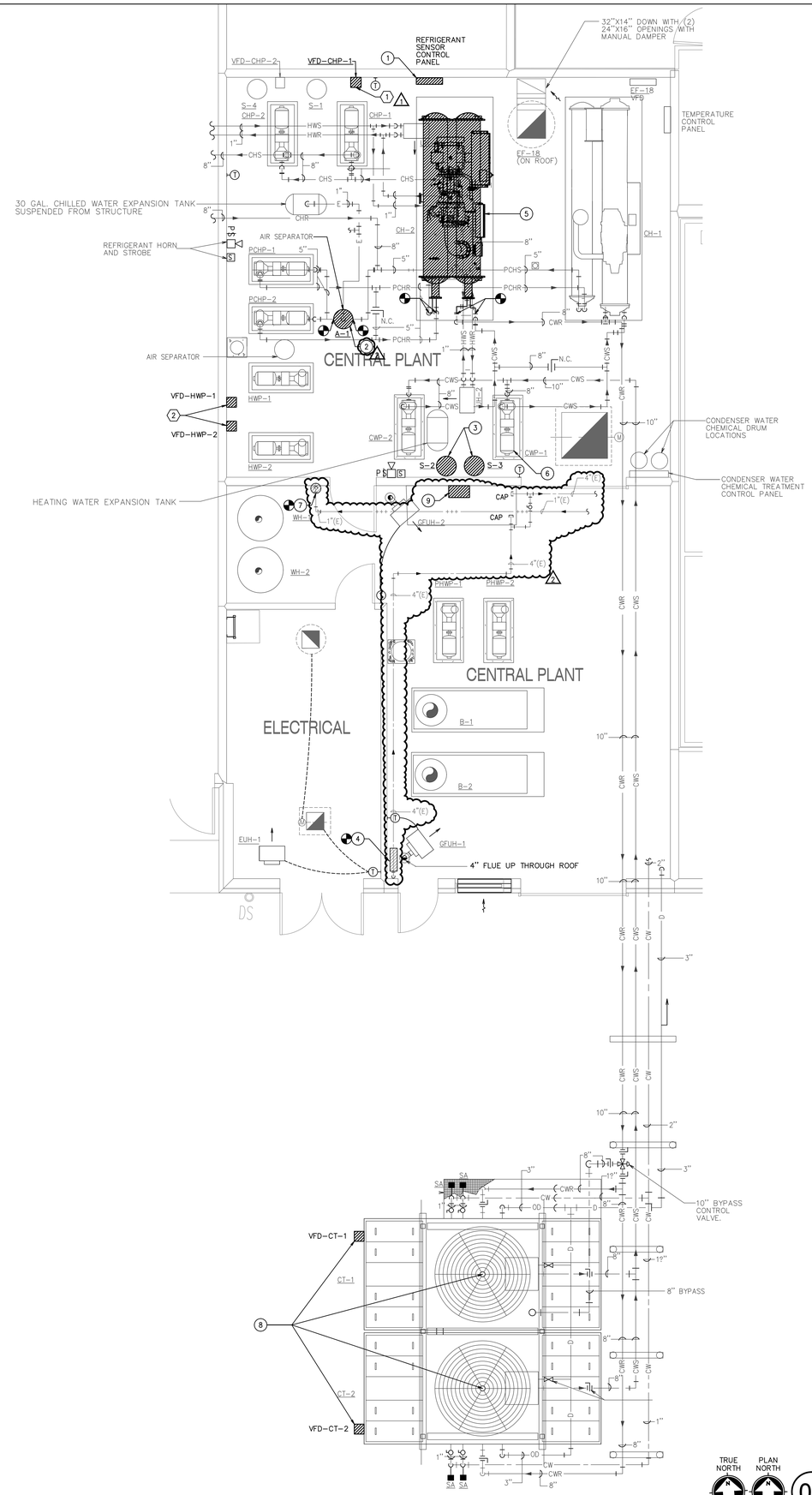
MIDLOTHIAN I.S.D.
990 Walnut Grove Rd, Midlothian, TX 76065

HYDRONIC FLOW DIAGRAMS
DEMOLITION - HVAC

JOB NO.: 24040-00
DRAWN BY: BM
CHECKED BY: HV

SHEET NO.

DM3.01



TRUE NORTH / PLAN NORTH

01 FLOOR PLAN - CENTRAL UTILITY PLANT - MECHANICAL

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

GENERAL MECHANICAL NOTES:

1. RECTANGULAR SUPPLY AIR DUCTWORK IS TO BE LINED WITH 1½" THICK ACOUSTICAL AND THERMAL LINER FOR THE FIRST 10'-0" FROM THE UNIT AND EXTERNALLY WRAPPED WITH MINIMUM 2" INSULATION AFTER THE FIRST 10'-0" TO MEET THE 2018 IECC REQUIREMENTS. RECTANGULAR RETURN DUCT SHALL BE LINED WITH 1" LINER FOR THE FIRST 10'-0" FROM THE UNIT AND EXTERNALLY WRAPPED WITH MINIMUM 2" INSULATION AFTER THE FIRST 10'-0". ALL TRANSFER AIR DUCTS TO BE INTERNALLY LINED WITH 1" LINER. DUCTWORK SIZES SHOWN ARE NET INTERNAL AIR STREAM DIMENSIONS. SHEET METAL SIZES ARE TO BE INCREASED IN SIZE TO MAINTAIN THESE INTERNAL CLEAR DIMENSIONS. ROUND DUCTWORK IS TO BE EXTERNALLY WRAPPED. FLEXIBLE ROUND DUCT SHALL HAVE A MINIMUM R-VALUE OF 6.0.
2. BRANCH RUN-OUTS TO CEILING MOUNTED AIR DEVICES SHALL BE SAME SIZE AS NECK, UNLESS NOTED OTHERWISE. PROVIDE A TWIST-IN FLARED TAP WITH MANUAL VOLUME DAMPER AT MAIN DUCT TAP, AND EXTEND AS SHOWN. EXTEND FLEXIBLE DUCTWORK A MAXIMUM OF 5'-0" FROM DIFFUSERS, INSTALL STRAIGHT AS POSSIBLE WITH LONG RADIUS BENDS WITH CLAMPS TO BE USED AT BOTH ENDS.
3. ALL DUCTWORK AND PIPING SHALL BE RUN CONCEALED ABOVE CEILINGS AS HIGH AS POSSIBLE & CONCEALED IN WALLS, CHASES, OR FURROUTS IN GENERAL LOCATIONS SHOWN, UNLESS NOTED OTHERWISE.
4. LOCATE CEILING MOUNTED AIR DEVICES APPROXIMATELY WHERE SHOWN. VERIFY EXISTING CEILING TYPES TO CONFIRM FRAME MOUNTING TYPES REQUIRED. ALL CEILING DIFFUSERS TO BE FOUR-WAY TYPE UNLESS NOTED OTHERWISE BY AIR FLOW ARROWS ON FLOOR PLAN.
5. EXISTING AND NEW DIFFUSERS FOR ALL DUCTWORK CONNECTED TO UNITS REPLACED OR ADDED TO BE BALANCED TO NEW AIRFLOW VALUES SHOWN. TAB FIRM CONTRACTED DIRECTLY WITH OWNER.
6. WHERE EXISTING DUCTWORK IS REMOVED AND NOT REUSED, INSTALL INSULATED CAPS AND SEAL AIR TIGHT.
7. REMOVE EXISTING CEILING GRID AND TILE AS NEEDED TO REMOVE EXISTING AND INSTALL NEW DUCTWORK, PIPING, AND UNITS. REUSE EXISTING CEILING TILE AND GRID WHERE POSSIBLE. STORE AND STACK EXISTING TILE FOR REUSE AND PROTECT. WHERE NEW CEILING TILE IS REQUIRED, IT SHALL BE ALL NEW THROUGH THE ROOM. DO NOT MIX NEW AND EXISTING CEILING TILE IN THE SAME SPACE. ALL NEW CEILING HEIGHTS TO MATCH EXISTING CEILING HEIGHTS. ANY CEILINGS TO REMAIN THAT ARE DAMAGED DURING CONSTRUCTION SHALL BE REPLACED BY THE CONTRACTOR WITH PRODUCTS AND MATERIALS THAT MATCH EXISTING.
8. EXISTING LIGHTS TO BE REUSED AND REMAIN IN PLACE. CONTRACTOR TO SUPPORT LIGHTS ABOVE CEILING DURING ANY CEILING REMOVAL.
9. WHERE ITEMS ARE REMOVED PATCH WALLS, CEILING, OR FLOOR AS APPLICABLE TO MATCH EXISTING FINISHES.
10. EXISTING SECURITY SYSTEM AND DEVICES TO REMAIN IN PLACE AND ACTIVE DURING CONSTRUCTION. ANY DEVICES IN CEILINGS TO BE REMOVED AND REPLACED TO BE TEMPORARILY SUPPORTED. ALL SECURITY SCOPE OF WORK TO BE CONTRACTED WITH SAS.
11. CLEAN ALL EXISTING REUSED SUPPLY, RETURN, AND EXHAUST AIR GRILLES FREE OF ALL DUST AND DEBRIS. PAINT ALL EXISTING SUPPLY AND RETURN AIR GRILLES WHERE SIGNS OF RUST ARE NOTED ON EXISTING GRILLES TO MATCH EXISTING COLOR OF GRILLE.
12. NEW TEMPERATURE SENSOR TO BE INSTALLED WHERE OLD SENSOR WAS REMOVED, WHEN IN COMPLIANCE WITH ADA HEIGHT REQUIREMENTS. WHEN NOT IN COMPLIANCE PROVIDE NEW SENSOR AT ADA HEIGHT AND PROVIDE STAINLESS STEEL COVER PLATE OVER EXISTING WALL OPENING. RE-USE EXISTING WIRING PATHWAY TO ACCESSIBLE CEILING, UP TO ROOF. PATCH, REPAIR AND PAINT WALL AS NEEDED.
13. PROVIDE FLOOR PROTECTION IN ALL AREAS OF THE DEMOLITION AND NEW WORK THROUGHOUT BUILDING FROM WORK AREA TO EXTERIOR. FLOORING PROTECTION TO BE FULL WIDTH OF CORRIDOR AND STAIRWELL TO BE RAM BOARD OR EQUAL TYPE FLOOR PROTECTION.

GENERAL PLUMBING NOTE:

1. CONTRACTOR SHALL PROVIDE AN EASY WATER SYSTEM AND CONTROLLER ON ALL DOMESTIC HOT WATER RETURN PIPING DOWNSTREAM OF THE CIRCULATION PUMP AND INSTALLED PER THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.

NOTES BY SYMBOL '◯':

(1) NEW REFRIGERANT MONITORING STATION TO BE INSTALLED. PATCH, REPAIR, AND PAINT WALL AS NEEDED AFTER INSTALLATION. PROVIDE ALL NEW REFRIGERANT MONITOR SENSING PIPING AND CONTROLS AND TIE INTO EXISTING EMS SYSTEM.

(2) NEW AIR SEPARATOR TO BE INSTALLED. RE-CONNECT EXISTING DRAIN LINE, MAKE-UP/EXPANSION WATER LINE AND PROVIDE NEW UNIONS AND PIPING IN MAIN CHILLED WATER LINE AS NEEDED.

(3) NEW CENTRIFUGAL SEPARATOR TO BE INSTALLED. REFER TO DETAIL #02 ON SHEET M4.01 FOR ADDITIONAL DETAILS. COORDINATE LOCATION OF NEW EQUIPMENT WITH EXISTING INSTALLATION.

(4) NEW EASY WATER SYSTEM, EF-50-IN W/ TWS-4-4 AND CONTROLLER. PROVIDE 4" PIPE (OR MATCH EXISTING) SIZE WITH FLANGES. PROVIDE FLANGES ON EXISTING COPPER PIPING AND REMOVE SECTION OF DOMESTIC WATER PIPING AS NEEDED TO INSTALL WATER CONDITIONER. PROVIDE INSULATION ON PIPE SECTION REMOVED AND REPLACED WITH FLANGED CONDITIONER PIPE SECTION. PATCH AND SEAL INSULATION.

(5) NEW CENTRIFUGAL CHILLER TO BE INSTALLED. OFFSET CHILLED AND CONDENSER WATER PIPING AS NEEDED TO ACCOMODATE NEW CHILLER CONNECTIONS. RE-INSTALL AND RE-INSULATE PIPING AS NEEDED IN VERTICAL. REPLACE AND RE-WORK EXISTING ⚠1 REFRIGERANT PURGE PIPING AS WELL.

(6) EXISTING CWP-1 TO BE RE-INSTALLED AFTER THE INSTALLATION OF THE NEW CENTRIFUGAL CHILLER. RE-MOUNT PUMP BASE. RE-ALIGN PUMP AND MOTORS, RE-CONNECT ALL PIPING AND REPLACE EXISTING STRAINER BASKET.

(7) NEW EASY WATER NO-SALT WATER CONDITIONER SYSTEM, CS500 W/ TWS-1 AND CONTROLLER. PROVIDE 1" PIPE (OR MATCH EXISTING) SIZE WITH FLANGES. PROVIDE FLANGES ON EXISTING COPPER PIPING AND REMOVE SECTION OF DOMESTIC WATER PIPING AS NEEDED TO INSTALL WATER CONDITIONER. PROVIDE INSULATION ON PIPE SECTION REMOVED AND REPLACED WITH FLANGED CONDITIONER PIPE SECTION. PATCH AND SEAL INSULATION.

(8) REPLACE EXISTING FAN MOTORS WITH NEW 10HP FAN MOTORS. CONFIRM NEW FAN MOTOR POWER TO BE THE SAME AS EXISTING. MOTORS TO BE VFD COMPATIBLE. VFDS TO BE OF NEMA 3R CONSTRUCTION, WITH SUN SHIELDS AND TO BE MOUNTED IN PLACE OF EXISTING FAN MOTOR STARTERS. CONTRACTOR TO REMOVE EXISTING 2-SPEED STARTERS AND REPLACE WITH VFD. ELECTRICAL CONTRACTOR SHALL PROVIDE POWER FROM EXISTING 480V/3PH, 40A/3P CIRCUIT BREAKER IN EXISTING PANEL "HP4" TO NEW VFDS FOR COOLING TOWER FAN MOTORS. IT IS THE ELECTRICAL CONTRACTOR'S RESPONSIBILITY TO FIELD TRACE ALL EXISTING FEEDERS AND BRANCH CIRCUIT WIRING FOR COOLING TOWERS FROM EXISTING ELECTRICAL DISTRIBUTION EQUIPMENT. ANY ABANDONED EQUIPMENT, RACEWAYS, AND CONDUCTORS SHALL BE REMOVED IN THEIR ENTIRETY AS REQUIRED BY CODE. CONTRACTOR TO PROVIDE NEW PULLBOXES, RACEWAYS, AND CONDUCTORS AS REQUIRED TO CONNECT ALL NEW REPLACEMENT HVAC EQUIPMENT, INCLUDING THEIR RESPECTIVE ACCESSORIES, TO EXISTING ELECTRICAL CIRCUITS MADE AVAILABLE BY DEMOLITION OF OLD HVAC EQUIPMENT. REFER TO VFD SCHEDULE FOR VFD SIZE. VFD SIZE TO BE 15HP TO ACCOMODATE THE DE-RATING FOR BEING INSTALLED OUTDOOR. RE-PULL WIRING ANND CONDUIT AS NEEDED FOR LARGER VFD SIZE.

(9) NEW SELF CONTAINED BREATHING APPARATUS TO BE INSTALLED OUTSIDE THE CHILLER ROOM. COORDINATE WITH OWNER FOR THE EXACT MOUNTING LOCATION.

ALTERNATE NOTES BY SYMBOL '⬡':

(1) PROVIDE COST FOR NEW CHP-1 VFD UNDER ALTERNATE. PROVIDE INSTALLATION PRICING PER VFD HP SIZE ANS NOTED ON BID FORM. REFER TO EQUIPMENT SCHEDULE FOR VFD HP SIZE.

(2) PROVIDE COST FOR NEW HWP-1 & HWP-2 VFDS UNDER ALTERNATE. PROVIDE INSTALLATION PRICING PER VFD HP SIZE ANS NOTED ON BID FORM. REFER TO EQUIPMENT SCHEDULE FOR VFD HP SIZE.

RWB Consulting Engineers
12222 Merit Dr, Suite 400, Dallas, TX 75251
TX Firm #F-2176
(972) 788-4222
Project 24040.00

STATE OF TEXAS
HARIKRISHNA VISHWANADULA
135358
LICENSED PROFESSIONAL ENGINEER
07.23.2024

2024.07.03

ISSUES

01	ISSUE FOR CONSTRUCTION	2024.07.03

REVISIONS

01	ADDENDUM #1	2024.07.12
02	ADDENDUM #2	2024.07.23

WALNUT GROVE MS CHILLER REPLACEMENT

MIDLOTHIAN I.S.D.

990 Walnut Grove Rd, Midlothian, TX 76065

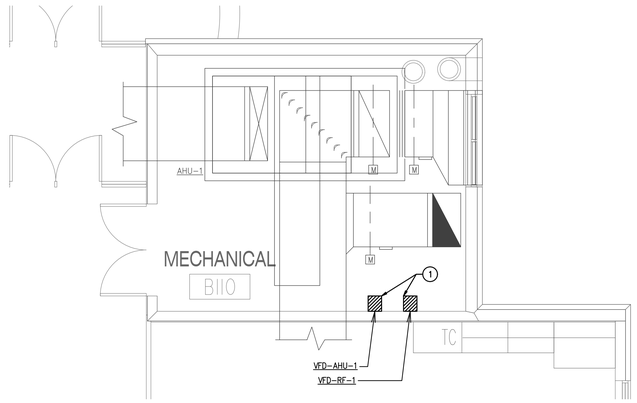
FLOOR PLAN - CENTRAL UTILITY PLANT - MECHANICAL & PLUMBING

JOB NO.: 24040-00
DRAWN BY: BM
CHECKED BY: HV

SHEET NO.

MP1.01

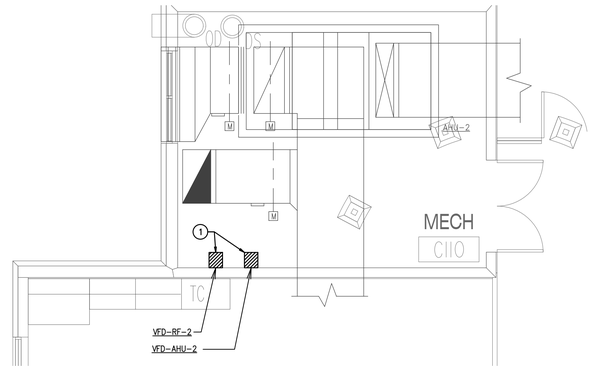
Drawing Path: \24040 - MIDLOTHIAN ISD WALNUT GROVE MS CHILLER\DRAWINGS\CAD\SHEETS\MP1.01.DWG, Plot By:BADER MAXIS, Plot Date:7/23/2024 5:33 PM, Plot Scale:1:1, Paper Size:ISO E 30" X 42" IN



TRUE NORTH / PLAN NORTH

01 ENLARGED MECHANICAL ROOM PLAN - LEVEL 1 - AHU-1

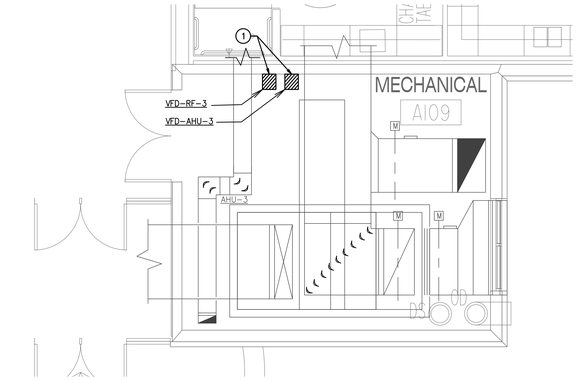
SCALE: 1/4" = 1'-0"



TRUE NORTH / PLAN NORTH

02 ENLARGED MECHANICAL ROOM PLAN - LEVEL 1 - AHU-2

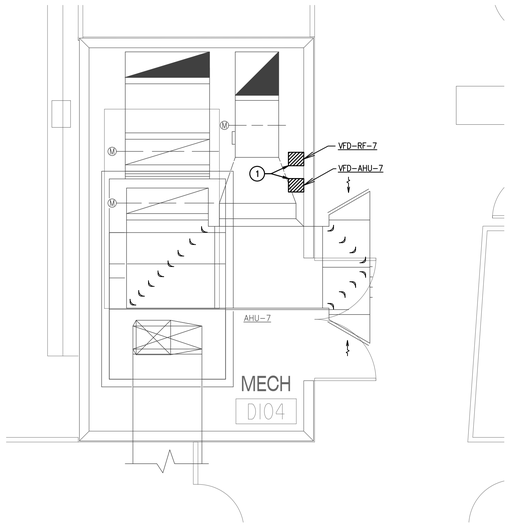
SCALE: 1/4" = 1'-0"



TRUE NORTH / PLAN NORTH

03 ENLARGED MECHANICAL ROOM PLAN - LEVEL 1 - AHU-3

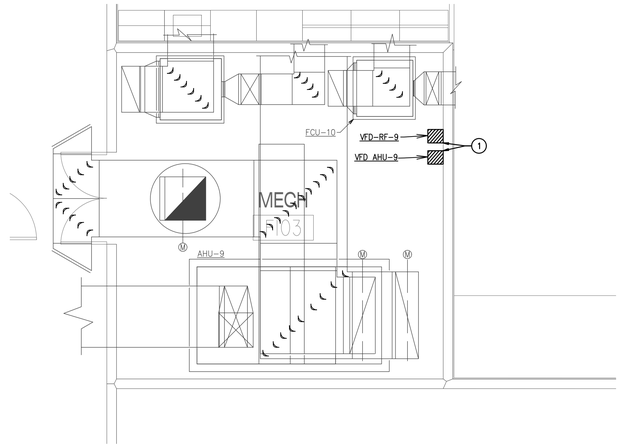
SCALE: 1/4" = 1'-0"



TRUE NORTH / PLAN NORTH

04 ENLARGED MECHANICAL ROOM PLAN - LEVEL 1 - AHU-7

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



TRUE NORTH / PLAN NORTH

05 ENLARGED MECHANICAL ROOM PLAN - LEVEL 1 - AHU 9

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

GENERAL MECHANICAL NOTES:

1. RECTANGULAR SUPPLY AIR DUCTWORK IS TO BE LINED WITH 1½" THICK ACOUSTICAL AND THERMAL LINER FOR THE FIRST 10'-0" FROM THE UNIT AND EXTERNALLY WRAPPED WITH MINIMUM 2" INSULATION AFTER THE FIRST 10'-0" TO MEET THE 2018 IECC REQUIREMENTS. RECTANGULAR RETURN DUCT SHALL BE LINED WITH 1" LINER FOR THE FIRST 10'-0" FROM THE UNIT AND EXTERNALLY WRAPPED WITH MINIMUM 2" INSULATION AFTER THE FIRST 10'-0". ALL TRANSFER AIR DUCTS TO BE INTERNALLY LINED WITH 1" LINER. DUCTWORK SIZES SHOWN ARE NET INTERNAL AIR STREAM DIMENSIONS. SHEET METAL SIZES ARE TO BE INCREASED IN SIZE TO MAINTAIN THESE INTERNAL CLEAR DIMENSIONS. ROUND DUCTWORK IS TO BE EXTERNALLY WRAPPED. FLEXIBLE ROUND DUCT SHALL HAVE A MINIMUM R-VALUE OF 6.0.
2. BRANCH RUN-OUTS TO CEILING MOUNTED AIR DEVICES SHALL BE SAME SIZE AS NECK, UNLESS NOTED OTHERWISE. PROVIDE A TWIST-IN FLARED TAP WITH MANUAL VOLUME DAMPER AT MAIN DUCT TAP, AND EXTEND AS SHOWN. EXTEND FLEXIBLE DUCTWORK A MAXIMUM OF 5'-0" FROM DIFFUSERS, INSTALL STRAIGHT AS POSSIBLE WITH LONG RADIUS BENDS WITH CLAMPS TO BE USED AT BOTH ENDS.
3. ALL DUCTWORK AND PIPING SHALL BE RUN CONCEALED ABOVE CEILINGS AS HIGH AS POSSIBLE & CONCEALED IN WALLS, CHASES, OR FURROUTS IN GENERAL LOCATIONS SHOWN, UNLESS NOTED OTHERWISE.
4. LOCATE CEILING MOUNTED AIR DEVICES APPROXIMATELY WHERE SHOWN. VERIFY EXISTING CEILING TYPES TO CONFIRM FRAME MOUNTING TYPES REQUIRED. ALL CEILING DIFFUSERS TO BE FOUR-WAY TYPE UNLESS NOTED OTHERWISE BY AIR FLOW ARROWS ON FLOOR PLAN.
5. EXISTING AND NEW DIFFUSERS FOR ALL DUCTWORK CONNECTED TO UNITS REPLACED OR ADDED TO BE BALANCED TO NEW AIRFLOW VALUES SHOWN. TAB FIRM CONTRACTED DIRECTLY WITH OWNER.
6. WHERE EXISTING DUCTWORK IS REMOVED AND NOT REUSED, INSTALL INSULATED CAPS AND SEAL AIR TIGHT.
7. REMOVE EXISTING CEILING GRID AND TILE AS NEEDED TO REMOVE EXISTING AND INSTALL NEW DUCTWORK, PIPING, AND UNITS. REUSE EXISTING CEILING TILE AND GRID WHERE POSSIBLE. STORE AND STACK EXISTING TILE FOR REUSE AND PROTECT. WHERE NEW CEILING TILE IS REQUIRED, IT SHALL BE ALL NEW THROUGH THE ROOM. DO NOT MIX NEW AND EXISTING CEILING TILE IN THE SAME SPACE. ALL NEW CEILING HEIGHTS TO MATCH EXISTING CEILING HEIGHTS. ANY CEILINGS TO REMAIN THAT ARE DAMAGED DURING CONSTRUCTION SHALL BE REPLACED BY THE CONTRACTOR WITH PRODUCTS AND MATERIALS THAT MATCH EXISTING.
8. EXISTING LIGHTS TO BE REUSED AND REMAIN IN PLACE. CONTRACTOR TO SUPPORT LIGHTS ABOVE CEILING DURING ANY CEILING REMOVAL.
9. WHERE ITEMS ARE REMOVED PATCH WALLS, CEILING, OR FLOOR AS APPLICABLE TO MATCH EXISTING FINISHES.
10. EXISTING SECURITY SYSTEM AND DEVICES TO REMAIN IN PLACE AND ACTIVE DURING CONSTRUCTION. ANY DEVICES IN CEILINGS TO BE REMOVED AND REPLACED TO BE TEMPORARILY SUPPORTED. ALL SECURITY SCOPE OF WORK TO BE CONTRACTED WITH SAS.
11. CLEAN ALL EXISTING REUSED SUPPLY, RETURN, AND EXHAUST AIR GRILLES FREE OF ALL DUST AND DEBRIS. PAINT ALL EXISTING SUPPLY AND RETURN AIR GRILLES WHERE SIGNS OF RUST ARE NOTED ON EXISTING GRILLES TO MATCH EXISTING COLOR OF GRILLE.
12. NEW TEMPERATURE SENSOR TO BE INSTALLED WHERE OLD SENSOR WAS REMOVED, WHEN IN COMPLIANCE WITH ADA HEIGHT REQUIREMENTS. WHEN NOT IN COMPLIANCE PROVIDE NEW SENSOR AT ADA HEIGHT AND PROVIDE STAINLESS STEEL COVER PLATE OVER EXISTING WALL OPENING. RE-USE EXISTING WIRING PATHWAY TO ACCESSIBLE CEILING, UP TO ROOF. PATCH, REPAIR AND PAINT WALL AS NEEDED.
13. PROVIDE FLOOR PROTECTION IN ALL AREAS OF THE DEMOLITION AND NEW WORK THROUGHOUT BUILDING FROM WORK AREA TO EXTERIOR. FLOORING PROTECTION TO BE FULL WIDTH OF CORRIDOR AND STAIRWELL TO BE RAM BOARD OR EQUAL TYPE FLOOR PROTECTION.

ALTERNATE NOTES BY SYMBOL '1':

1. NEW VFD IN PLACE OF EXISTING. PATCH, REPAIR, AND PAINT WALL TO MATCH EXISTING AS NEEDED AFTER NEW VFD INSTALLATION. EQUIPMENT COST TO BE PRICED AS ALTERNATE AND INSTALLATION COST TO BE PROVIDED AS UNIT PRICING PER HP SIZE. REFER TO VFD SCHEDULES FOR SIZES. RE-CONNECT EXISTING CONTROLS AND POWER.

RWB
Consulting Engineers
12222 Merit Dr
Suite 400
Dallas, TX 75251
TX Firm #F-2176
(972) 788-4222
Project 24040.00

STATE OF TEXAS
HARIKRISHNA VISHWANADULA
135358
LICENSED
PROFESSIONAL ENGINEER
07.23.2024

2024.07.03

ISSUES

01	ISSUE FOR CONSTRUCTION	2024.07.03

REVISIONS

01	ADDENDUM #2	2024.07.23

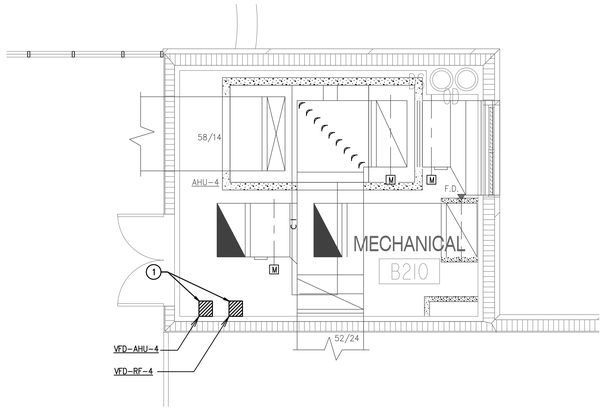
WALNUT GROVE MS
CHILLER REPLACEMENT
MIDLOTHIAN I.S.D.
990 Walnut Grove Rd, Midlothian, TX 76065

ENLARGED FLOOR PLANS - LEVEL 1 - HVAC

JOB NO.: 24040-00
DRAWN BY: BM
CHECKED BY: HV

SHEET NO.

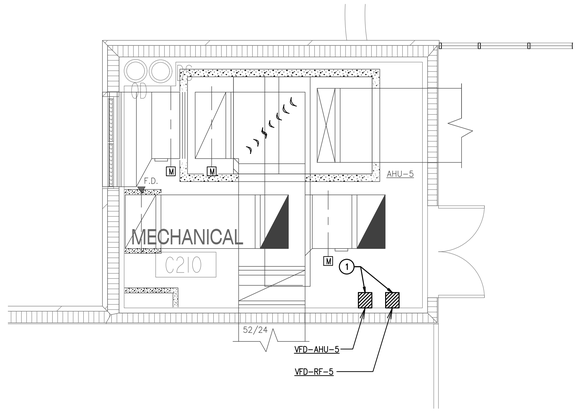
M1.02



TRUE NORTH / PLAN NORTH

01 ENLARGED MECHANICAL ROOM PLAN - LEVEL 2 - AHU-4

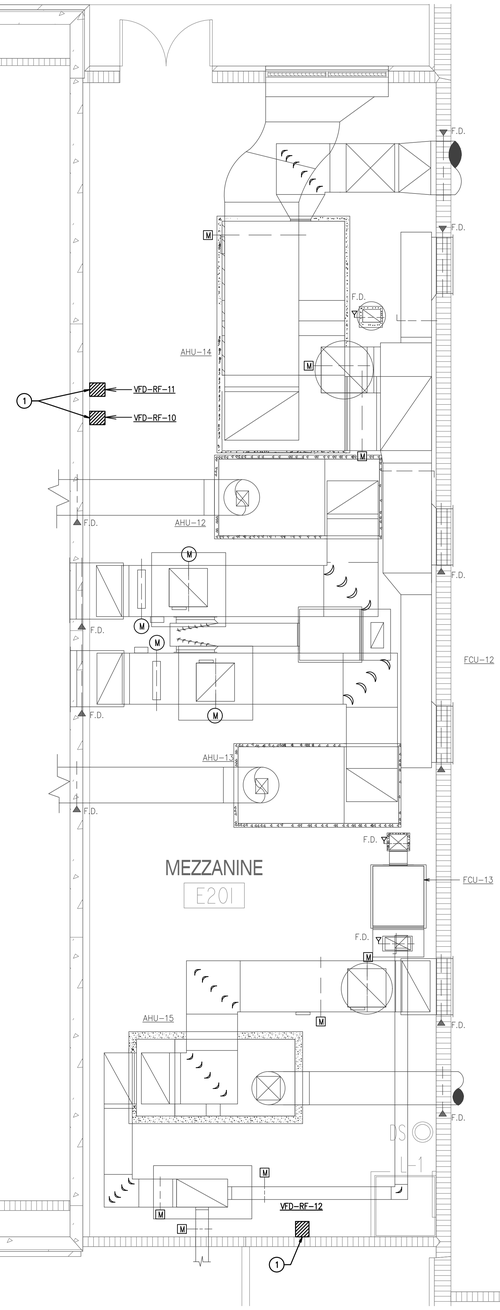
SCALE: 1/4" = 1'-0"



TRUE NORTH / PLAN NORTH

02 ENLARGED MECHANICAL ROOM PLAN - LEVEL 2 - AHU-5

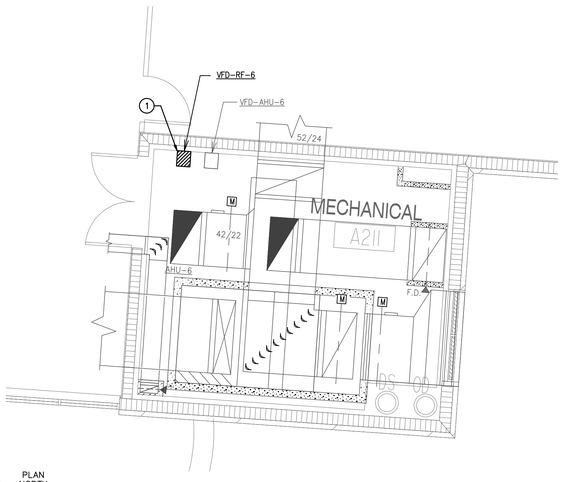
SCALE: 1/4" = 1'-0"



TRUE NORTH / PLAN NORTH

05 ENLARGED MECHANICAL ROOM PLAN - LEVEL 2 - AHU 12-15

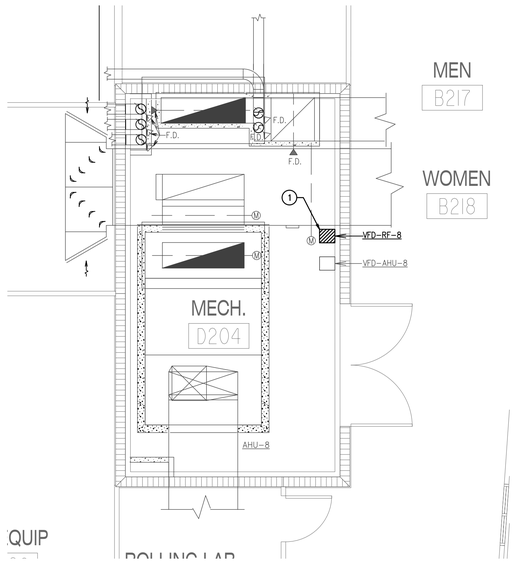
SCALE: 1/4" = 1'-0"



TRUE NORTH / PLAN NORTH

03 ENLARGED MECHANICAL ROOM PLAN - LEVEL 2 - AHU-6

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



TRUE NORTH / PLAN NORTH

04 ENLARGED MECHANICAL ROOM PLAN - LEVEL 2 - AHU-8

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

GENERAL MECHANICAL NOTES:

1. RECTANGULAR SUPPLY AIR DUCTWORK IS TO BE LINED WITH 1½" THICK ACOUSTICAL AND THERMAL LINER FOR THE FIRST 10'-0" FROM THE UNIT AND EXTERNALLY WRAPPED WITH MINIMUM 2" INSULATION AFTER THE FIRST 10'-0" TO MEET THE 2018 IECC REQUIREMENTS. RECTANGULAR RETURN DUCT SHALL BE LINED WITH 1" LINER FOR THE FIRST 10'-0" FROM THE UNIT AND EXTERNALLY WRAPPED WITH MINIMUM 2" INSULATION AFTER THE FIRST 10'-0". ALL TRANSFER AIR DUCTS TO BE INTERNALLY LINED WITH 1" LINER. DUCTWORK SIZES SHOWN ARE NET INTERNAL AIR STREAM DIMENSIONS. SHEET METAL SIZES ARE TO BE INCREASED IN SIZE TO MAINTAIN THESE INTERNAL CLEAR DIMENSIONS. ROUND DUCTWORK IS TO BE EXTERNALLY WRAPPED. FLEXIBLE ROUND DUCT SHALL HAVE A MINIMUM R-VALUE OF 6.0.
2. BRANCH RUN-OUTS TO CEILING MOUNTED AIR DEVICES SHALL BE SAME SIZE AS NECK, UNLESS NOTED OTHERWISE. PROVIDE A TWIST-IN FLARED TAP WITH MANUAL VOLUME DAMPER AT MAIN DUCT TAP, AND EXTEND AS SHOWN. EXTEND FLEXIBLE DUCTWORK A MAXIMUM OF 5'-0" FROM DIFFUSERS, INSTALL STRAIGHT AS POSSIBLE WITH LONG RADIUS BENDS WITH CLAMPS TO BE USED AT BOTH ENDS.
3. ALL DUCTWORK AND PIPING SHALL BE RUN CONCEALED ABOVE CEILINGS AS HIGH AS POSSIBLE & CONCEALED IN WALLS, CHASES, OR FURROUTS IN GENERAL LOCATIONS SHOWN, UNLESS NOTED OTHERWISE.
4. LOCATE CEILING MOUNTED AIR DEVICES APPROXIMATELY WHERE SHOWN. VERIFY EXISTING CEILING TYPES TO CONFIRM FRAME MOUNTING TYPES REQUIRED. ALL CEILING DIFFUSERS TO BE FOUR-WAY TYPE UNLESS NOTED OTHERWISE BY AIR FLOW ARROWS ON FLOOR PLAN.
5. EXISTING AND NEW DIFFUSERS FOR ALL DUCTWORK CONNECTED TO UNITS REPLACED OR ADDED TO BE BALANCED TO NEW AIRFLOW VALUES SHOWN. TAB FIRM CONTRACTED DIRECTLY WITH OWNER.
6. WHERE EXISTING DUCTWORK IS REMOVED AND NOT REUSED, INSTALL INSULATED CAPS AND SEAL AIR TIGHT.
7. REMOVE EXISTING CEILING GRID AND TILE AS NEEDED TO REMOVE EXISTING AND INSTALL NEW DUCTWORK, PIPING, AND UNITS. REUSE EXISTING CEILING TILE AND GRID WHERE POSSIBLE. STORE AND STACK EXISTING TILE FOR REUSE AND PROTECT. WHERE NEW CEILING TILE IS REQUIRED, IT SHALL BE ALL NEW THROUGH THE ROOM. DO NOT MIX NEW AND EXISTING CEILING TILE IN THE SAME SPACE. ALL NEW CEILING HEIGHTS TO MATCH EXISTING CEILING HEIGHTS. ANY CEILINGS TO REMAIN THAT ARE DAMAGED DURING CONSTRUCTION SHALL BE REPLACED BY THE CONTRACTOR WITH PRODUCTS AND MATERIALS THAT MATCH EXISTING.
8. EXISTING LIGHTS TO BE REUSED AND REMAIN IN PLACE. CONTRACTOR TO SUPPORT LIGHTS ABOVE CEILING DURING ANY CEILING REMOVAL.
9. WHERE ITEMS ARE REMOVED PATCH WALLS, CEILING, OR FLOOR AS APPLICABLE TO MATCH EXISTING FINISHES.
10. EXISTING SECURITY SYSTEM AND DEVICES TO REMAIN IN PLACE AND ACTIVE DURING CONSTRUCTION. ANY DEVICES IN CEILINGS TO BE REMOVED AND REPLACED TO BE TEMPORARILY SUPPORTED. ALL SECURITY SCOPE OF WORK TO BE CONTRACTED WITH SAS.
11. CLEAN ALL EXISTING REUSED SUPPLY, RETURN, AND EXHAUST AIR GRILLES FREE OF ALL DUST AND DEBRIS. PAINT ALL EXISTING SUPPLY AND RETURN AIR GRILLES WHERE SIGNS OF RUST ARE NOTED ON EXISTING GRILLES TO MATCH EXISTING COLOR OF GRILLE.
12. NEW TEMPERATURE SENSOR TO BE INSTALLED WHERE OLD SENSOR WAS REMOVED, WHEN IN COMPLIANCE WITH ADA HEIGHT REQUIREMENTS. WHEN NOT IN COMPLIANCE PROVIDE NEW SENSOR AT ADA HEIGHT AND PROVIDE STAINLESS STEEL COVER PLATE OVER EXISTING WALL OPENING. RE-USE EXISTING WIRING PATHWAY TO ACCESSIBLE CEILING, UP TO ROOF. PATCH, REPAIR AND PAINT WALL AS NEEDED.
13. PROVIDE FLOOR PROTECTION IN ALL AREAS OF THE DEMOLITION AND NEW WORK THROUGHOUT BUILDING FROM WORK AREA TO EXTERIOR. FLOORING PROTECTION TO BE FULL WIDTH OF CORRIDOR AND STAIRWELL TO BE RAM BOARD OR EQUAL TYPE FLOOR PROTECTION.

ALTERNATE NOTES BY SYMBOL '◯1':

(1) NEW VFD IN PLACE OF EXISTING. PATCH, REPAIR, AND PAINT WALL TO MATCH EXISTING AS NEEDED AFTER NEW VFD INSTALLATION. EQUIPMENT COST TO BE PRICED AS ALTERNATE AND INSTALLATION COST TO BE PROVIDED AS UNIT PRICING PER HP SIZE. REFER TO VFD SCHEDULES FOR SIZES. RE-CONNECT EXISTING CONTROLS AND POWER.

RWB
Consulting Engineers
12222 Merit Dr
Suite 400
Dallas, TX 75251
TX Firm #F-2176
(972) 788-4222
Project 24040.00

STATE OF TEXAS
HARIKRISHNA VISHWANADULA
135358
LICENSED
PROFESSIONAL ENGINEER
07.23.2024

2024.07.03

ISSUES

01	ISSUE FOR CONSTRUCTION	2024.07.03

REVISIONS

01	ADDENDUM #2	2024.07.23

WALNUT GROVE MS
CHILLER REPLACEMENT
MIDLOTHIAN I.S.D.
990 Walnut Grove Rd, Midlothian, TX 76065

ENLARGED FLOOR PLANS - LEVEL 2 - HVAC

JOB NO.: 24040-00
DRAWN BY: BM
CHECKED BY: HV

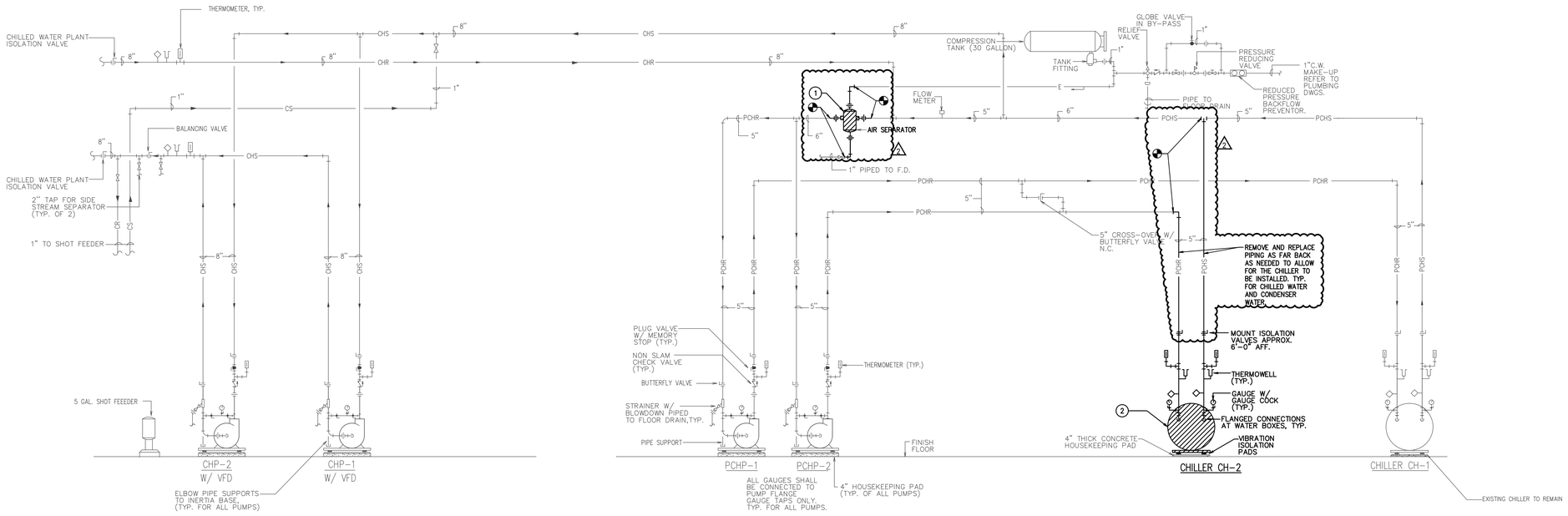
SHEET NO.

M2.01

NOTES BY SYMBOL '◯':

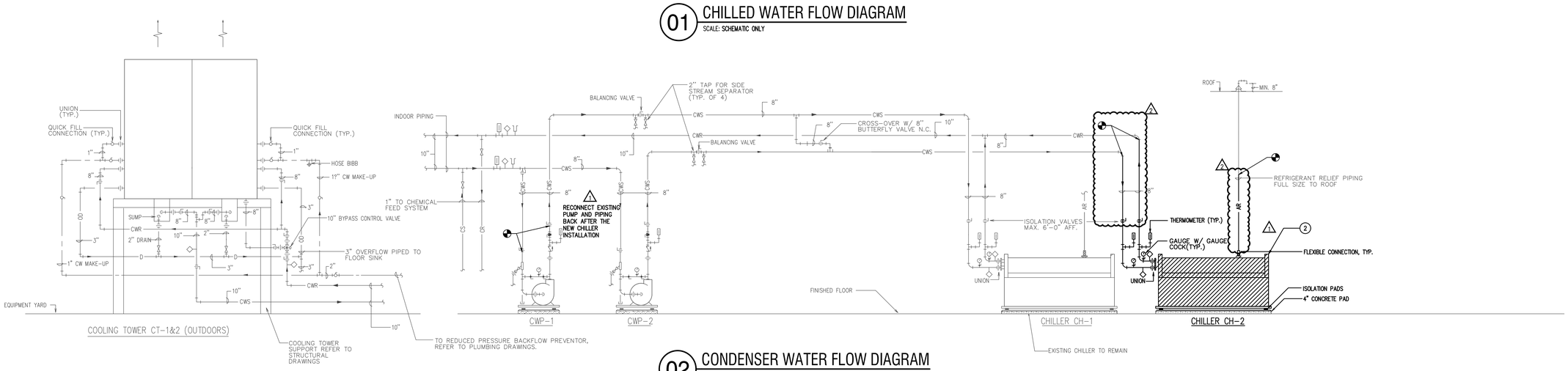
(1) NEW AIR SEPARATOR TO BE INSTALLED.

(2) NEW CENTRIFUGAL CHILLER TO BE INSTALLED.



01 CHILLED WATER FLOW DIAGRAM

SCALE: SCHEMATIC ONLY



02 CONDENSER WATER FLOW DIAGRAM

SCALE: SCHEMATIC ONLY

RWB Consulting Engineers
12222 Merit Dr
Suite 400
Dallas, TX 75251
TX Firm # F-2176
(972) 788-4222
Project 24040.00

STATE OF TEXAS
HARIKRISHNA VISHWANADULA
135358
LICENSED
PROFESSIONAL ENGINEER
07.23.2024

2024.07.03

ISSUES		
01	ISSUE FOR CONSTRUCTION	2024.07.03

REVISIONS		
01	ADDENDUM #1	2024.07.12
02	ADDENDUM #2	2024.07.23

WALNUT GROVE MS
CHILLER REPLACEMENT

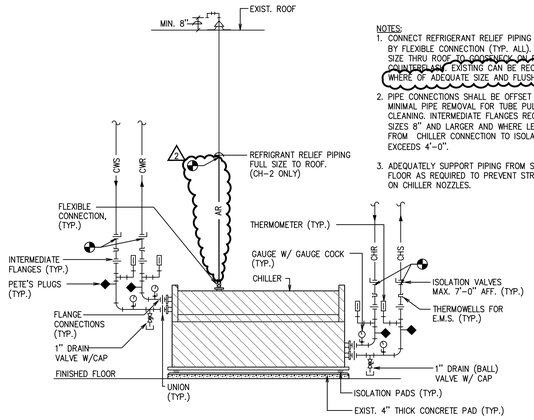
MIDLOTHIAN I.S.D.
990 Walnut Grove Rd, Midlothian, TX 76065

HYDRONIC FLOW DIAGRAMS - HVAC

JOB NO.: 24040-00
DRAWN BY: BM
CHECKED BY: HV

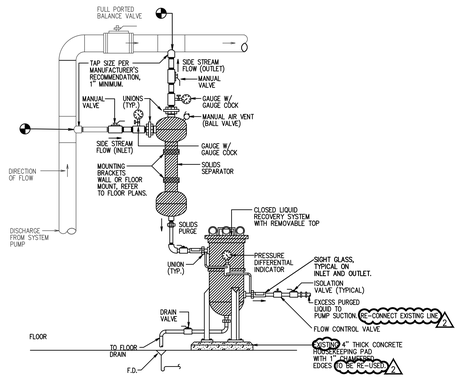
SHEET NO.

M3.01



NOTES:
1. CONNECT REFRIGERANT RELIEF PIPING TO CHILLERS BY FLEXIBLE CONNECTION (TYP. ALL). PIPE FULL SIZE THRU ROOF TO GOOSENECK ON ROOF. FLASH & COUNTERFLASH. EXISTING CAN BE RECONNECTED WHERE OF ADEQUATE SIZE AND FLUSHED. 2
2. PIPE CONNECTIONS SHALL BE OFFSET TO ALLOW FOR MINIMAL PIPE REMOVAL FOR TUBE PULL AND CLEANING. INTERMEDIATE FLANGES REQUIRED ON PIPE SIZES 8" AND LARGER AND WHERE LENGTH OF PIPE FROM CHILLER CONNECTION TO ISOLATION VALVE EXCEEDS 4'-0".
3. ADEQUATELY SUPPORT PIPING FROM STRUCTURE AND FLOOR AS REQUIRED TO PREVENT STRAIN OF PIPING ON CHILLER NOZZLES.

1 CHILLER PIPING DETAIL
NOT TO SCALE



2 SIDE STREAM SEPARATOR AND LIQUID RECOVERY SYSTEM DETAIL
SCALE: NOT TO SCALE

WATER COOLED CHILLER SCHEDULE

GENERAL	DESIGNATION	CH-2
	LOCATION	CENTRAL PLANT
	SERVICE	CHILLED WATER
	TYPE	CENTRIFUGAL
	REFRIGERANT	R-513A
	NOMINAL CAPACITY, TONS	235
	AMBIENT AIR TEMPERARURE, DEG. F.	105
	EFFICIENCY AT FULL LOAD, KW/TON	0.6291
	EFICIENCY AT PART LOAD, KW/TON	0.4199
	MINIMUM UNLOADING, %	25
	MANUFACTURER	YORK
	MODEL	YKAFAGQ3_EHH
	WEIGHT, LBS	13,460
EVAPORATOR DATA	GPM	351.6
	E.W.T., DEG. F.	60.0
	L.W.T., DEG. F.	44.0
	MAX W.P.D, FT.	6.61
CONDENSER DATA	GPM	705.0
	E.W.T., DEG. F.	85.0
	L.W.T., DEG. F.	94.4
	MAX W.P.D, FT.	16.1
ELECTRICAL DATA	VOLTAGE	460
	PHASE	3
	FREQUENCY, HZ	60
	M.C.A.	258
	M.O.C.P.	450
COMMENTS	1	1,2,3,4,5

1. REFER TO PLANS FOR EQUIPMENT ORIENTATION AND PIPE CONNECTION LOCATIONS.
2. PROVIDE BACNET (MS/TP) INTERFACE CARD.
3. ALL PIPE CONNECTIONS TO BE ON PLAN SOUTH SIDE OF CHILLER BARREL.
4. WATER COOLED CHILLERS TO BE DISASSEMBLED (IF REQUIRED) BY FACTORY TRAINED YORK REPRESENTATIVE SO CHILLERS CAN BE BROUGHT INTO PLANT THROUGH EXISTING ROLLING DOORS.
5. UNDER ALTERNATE NO.2 PROVIDE AN EXTENDED FOUR YEAR COMPRESSOR WARRANTY FOR THE CHILLER, RESULTING IN A TOTAL OF FIVE YEARS FROM THE DATE OF SUBSTANTIAL COMPLETION.

1

MECHANICAL/PLUMBING LEGEND

CHS	CHILLED WATER SUPPLY
CHR	CHILLED WATER RETURN
HWS	HEATING WATER SUPPLY
HWR	HEATING WATER RETURN
CWS	CONDENSER WATER SUPPLY
CWR	CONDENSER WATER RETURN
DHW	DOMESTIC HOT WATER SUPPLY
DHWR	DOMESTIC HOT WATER RETURN
CW	DOMESTIC COLD WATER
RS	REFRIGERANT SUCTION
RL	REFRIGERANT LIQUID
CD	CONDENSATE DRAIN
AD	AUXILIARY DRAIN LINE
D	DRAIN LINE
E	EXPANSION LINE
CS	CHEMICAL SUPPLY
CR	CHEMICAL RETURN
PCHS	PRIMARY CHILLED WATER SUPPLY
PCHR	PRIMARY CHILLED WATER RETURN
	FLOW IN DIRECTION OF ARROW
	SLOPE DOWN IN DIRECTION OF ARROW
	RISE AND DROP IN PIPIING
	STRAINER WITH BLOWDOWN VALVE
	GATE VALVE
	BUTTERFLY VALVE
	UNION
	BALL VALVE
	PLUG VALVE
	CHECK VALVE
	FLOW SWITCH
	AUTOMATIC 3-WAY CONTROL VALVE
	AUTOMATIC 2-WAY VALVE
	PRESSURE REDUCING VALVE
	PRESSURE RELIEF VALVE
	GAUGE COCK
	PRESSURE GAUGE WITH GAUGE COCK
	THERMOMETER
	P/T PORT
	CAP
	AUTOMATIC AIR VENT
	RISE AND DROP IN PIPING
	THERMOWELL
T	THERMOSTAT/TEMPERATURE SENSOR
H	HUMIDITY SENSOR
C	CARBON DIOXIDE SENSOR
S	DUCT SMOKE DETECTOR
$	WALL SWITCH
$P	WALL SWITCH WITH PUSH BUTTON
	SUPPLY AIR ARROW
	RETURN AIR ARROW
R	RISE IN DUCT
D	DROP IN DUCT
	SUPPLY DUCT
	RETURN OR EXHAUST DUCT
	MANUAL DAMPER
M	MOTORIZED DAMPER
	CONNECT TO EXISTING
	EXISTING WORK TO REMAIN
	EXISTING WORK TO BE REMOVED
	NEW WORK
	DOMESTIC COLD WATER (CW)
	DOMESTIC HOT WATER (HW)
	DOMESTIC HOT WATER RETURN (HWR)
	140°F DOMESTIC HOT WATER (HW)
	140°F DOMESTIC HOT WATER RETURN (HWR)
G	GAS PIPE
	FLOOR DRAIN
CHS	ROOF PIPE SUPPORT
	GAS COCK

NOTE: NOT ALL SYMBOLS ARE USED

VFD SCHEDULE – AIR HANDLING UNITS – ALTERNATE NO.1 1

DATA GENERAL	DESIGNATION	VFD-AHU-1	VFD-AHU-2	VFD-AHU-3	VFD-AHU-4	VFD-AHU-5	VFD-AHU-7	VFD-AHU-9
	EQUIPMENT SERVED	AHU-1	AHU-2	AHU-3	AHU-4	AHU-5	AHU-7	AHU-9
	LOCATION	MECH B110	MECH C210	MECH A109	MECH B210	MECH A210	MECH D104	MECH F103
	MODEL	ACH580-VCR-014A-4	ACH580-VCR-014A-4	ACH580-VCR-014A-4	ACH580-VCR-014A-4	ACH580-VCR-014A-4	ACH580-VCR-014A-4	ACH580-VCR-014A-4
	MANUFACTURER	ABB	ABB	ABB	ABB	ABB	ABB	ABB
EQUIPMENT SERVED DATA	POWER (HP)	10.0	10.0	10.0	10.0	10.0	10.0	10.0
	VOLTS/Ph/Hz	460/3/60	460/3/60	460/3/60	460/3/60	460/3/60	460/3/60	460/3/60
REMARKS		1	1	1	1	1	1	1

1. PROVIDE VFD WITH MANUFACTURER FURNISHED SERVICE SWITCH.

VFD SCHEDULE – RELIEF FANS – ALTERNATE NO.1 1

DATA GENERAL	DESIGNATION	VFD-RF-1	VFD-RF-2	VFD-RF-3	VFD-RF-4	VFD-RF-5	VFD-RF-6	VFD-RF-7	VFD-RF-8	VFD-RF-9	VFD-RF-10	VFD-RF-11	VFD-RF-12
	EQUIPMENT SERVED	RF-1	RF-2	RF-3	RF-4	RF-5	RF-6	RF-7	RF-8	RF-9	RF-10	RF-11	RF-12
	LOCATION	MECH B110	MECH C210	MECH A109	MECH B210	MECH A210	MECH A211	MECH D104	MCH D204	MECH F103	MEZZANINE E201	MEZZANINE E201	MEZZANINE E201
	MODEL	ACH580-VCR-03A5-4	ACH580-VCR-03A5-4	ACH580-VCR-03A5-4	ACH580-VCR-03A5-4	ACH580-VCR-03A5-4	ACH580-VCR-03A5-4	ACH580-VCR-03A5-4	ACH580-VCR-04A8-4	ACH580-VCR-03A5-4	ACH580-VCR-04A8-4	ACH580-VCR-07A6-4	ACH580-VCR-02A1-4
	MANUFACTURER	ABB	ABB	ABB	ABB	ABB	ABB	ABB	ABB	ABB	ABB	ABB	ABB
EQUIPMENT SERVED DATA	POWER (HP)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	3.0	2.0	3.0	5.0	1.0
	VOLTS/Ph/Hz	460/3/60	460/3/60	460/3/60	460/3/60	460/3/60	460/3/60	460/3/60	460/3/60	460/3/60	460/3/60	460/3/60	460/3/60
REMARKS		1	1	1	1	1	1	1	1	1	1	1	1

1. PROVIDE VFD WITH MANUFACTURER FURNISHED SERVICE SWITCH.

VFD SCHEDULE – HYDRONIC PUMPS – ALTERNATE NO.1 1

DATA GENERAL	DESIGNATION	VFD-CHP-1	VFD-HWP-1	VFD-HWP-2
	EQUIPMENT SERVED	CHP-1	HWP-1	HWP-2
	LOCATION	CENTRAL PLANT F122	CENTRAL PLANT F122	CENTRAL PLANT F122
	MODEL	ACH580-VCR-044A-4	ACH580-VCR-027A-4	ACH580-VCR-027A-4
	MANUFACTURER	ABB	ABB	ABB
EQUIPMENT SERVED DATA	POWER (HP)	30.0	20.0	20.0
	VOLTS/Ph/Hz	460/3/60	460/3/60	460/3/60
REMARKS		1	1	1

1. PROVIDE VFD WITH MANUFACTURER FURNISHED SERVICE SWITCH.

VFD SCHEDULE – COOLING TOWER FANS

DATA GENERAL	DESIGNATION	VFD-CT-1	VFD-CT-2
	EQUIPMENT SERVED	CT-1 FAN MOTOR	CT-2 FAN MOTOR
	LOCATION	COOLING TOWER YARD	COOLING TOWER YARD
	MODEL	ACH580-BCR-023A-4	ACH580-BCR-023A-4
	MANUFACTURER	ABB	ABB 1
EQUIPMENT SERVED DATA	POWER (HP)	15.0	15.0
	VOLTS/Ph/Hz	460/3/60	460/3/60 1
REMARKS		1, 2, 3	1, 2, 3

1. PROVIDE VFD WITH MANUFACTURER FURNISHED SERVICE SWITCH.
2. VFD TO BE OF NEMA 3R CONSTRUCTION RATED FOR OUTDOOR INSTALLATION.
3. PROVIDE SUN SHIELD FOR VFD.
4. VFD OVERSIZED FOR 10 HP MOTOR TO ALLOW FOR OUTDOOR INSTALLATION DE-RATING 2

CENTRIFUGAL SEPARATOR SCHEDULE

DESIGNATION	S-2 & S-3
SERVES	CONDENSER WATER
MANUFACTURER	PUROFLUX
MODEL	PF-61-020
GPM	70.5
MAX. PRESSURE DROP (PSI)	4
INLET SIZE	2"
OUTLET SIZE	2"
REMARKS	W/ CLOSED RECOVERY SYSTEM

AIR SEPARATOR SCHEDULE

DESIGNATION	A-1
LOCATION	CENTRAL PLANT
SERVICE	CHILLED WATER
ORIENTATION	VERTICAL
TYPE	BLADDER
SYSTEM FLOW, GPM	353
WEIGHT, LBS	570
MAXIMUM WATER PRESSURE DROP, FT	0.4
MANUFACTURER	BELL & GOSSETT
MODEL	RL-6F
COMMENTS	

1. AIR SEPARATOR TO BE SUSPENDED FROM CEILING.

RWB Consulting Engineers
12222 Merit Dr Suite 400 Dallas, TX 75251
TX Firm #F-2176
(972) 788-4222
Project 24040.00

HARIKRISHNA VISHWANADULA
135358
LICENSED PROFESSIONAL ENGINEER
07.23.2024

2024.07.03

ISSUES

01	ISSUE FOR CONSTRUCTION	2024.07.03

REVISIONS

01	ADDENDUM #1	2024.07.12
02	ADDENDUM #2	2024.07.23

WALNUT GROVE MS
CHILLER REPLACEMENT
MIDLOTHIAN I.S.D.
990 Walnut Grove Rd, Midlothian, TX 76065

DETAILS, SCHEDULES, & LEGEND - MECHANICAL

JOB NO.: 24040-00
DRAWN BY: BM
CHECKED BY: HV

SHEET NO.
M4.01