ADDENDUM NUMBER ONE

CHATTANOOGA PUBLIC LIBRARY – CHILLER AND BOILER IMPROVEMENTS

CONTRACT NO. L-18-001

JANUARY 25, 2019

CITY OF CHATTANOOGA, TENNESSEE

The following changes shall be made to the Request for Bids:

1. **GENERAL INFORMATION**
   - **a.** A list of the people attending the pre-bid meeting on January 17, 2019 is attached to this addendum.
   - **b.** The asbestos abatement work described in the documents will be a separate bid package issued by the City of Chattanooga.
   - **c.** Questions asked during pre-bid meeting
     - **i. Q**. Does the 145 days include lead times for equipment?
       A.The time limit is the number of calendar days from issuing a notice to proceed. The notice to proceed will be issued after all contracts have been signed. The Contractor will have the ability to determine when the notice to proceed is issued but in no case will it be more than thirty days after the contract is signed.
     - **ii. Q.** Does the project include a cooling tower?
       A. An air-cooled chiller is specified and there is no separate cooling tower.
     - **iii. Q.** What are the rules for shutting the system down?
       A.The chiller and boiler systems have been designed to allow installation of equipment while the existing system is operational. The design intent is to make change-over conversions to the new systems during weekends (from Saturday afternoon at 5:00 PM until Monday morning at 7:00 AM)
     - **iv. Q.** Can the housekeeping pads be anything other than concrete?
       A.No. See other items in this addendum for more clarification.

2. **SPECIFICATIONS**
   a. Section 01 32 16 Construction Progress Schedule and Phasing is revised and attached as part of this addendum.
   b. Statement of Bidder's Qualifications is attached.

3. **DRAWINGS**
   a. Sheet A-104 Fourth Floor Plans (Partial) is re-issued at part of this addendum and describes revisions to the housekeeping pads.

b. Sheet A-340 Fourth Floor HVAC Roof Well Plan and Details is re-issued as part of this addendum and indicates the deletion of a housekeeping pad detail.
c. Sheet A-342 Housekeeping Pad Details (new sheet) is issued as part of this addendum and indicates details of the housekeeping pads.
d. Sheet M-206 HVAC Piping Boiler / Chiller is re-issued as part of this addendum and describes changes to the housekeeping pads and piping locations.
e. Sheet M-300 HVAC Schedules is re-issued as part of this addendum and describes changes to the pumps and inertia bases.
f. Sheet M-400 HVAC Details is re-issued as part of this addendum and describes changes to the pump bases.
g. Sheet MD-205 HVAC Piping Demo – Boiler/Chiller is re-issued as part of this addendum and lists changes described in this addendum.
h. Sheet E-104 Electrical Plan-Fourth Floor is re-issued as part of this addendum and adds circuits and receptacles in boiler room and modifies main feed to Basement switchgear.

ATTENDING PRE-BID CONFERENCE

Bid/Proposal Number: 180590 **Public Library Chiller and Boiler Improvements**

Opening Date: 01/31/19 **Pre-Bid Date: 01/17/19**

Name & Company	Email
Jason Payne City of Chatt	jpaync@chattanooga.gov
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JASON Sullivan Jason.Sullivan@Chattanooga.gov

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JASON BLACK / P&C CONSTRUCTION JASON@PC-CONST.com

Mary Jane Spehar Library Assistant Director

Stacy Butler

Natalie Phillips Fiscal Analyst Library

Gary Davis McMahan Mech gdavis mcmahan mech@gmail.com

Nick Thompson " nickmcmahanMech@gmail.com

SECTION 01 32 16

CONSTRUCTION PROGRESS SCHEDULE AND PHASING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Preliminary schedule.

B. A preliminary Phasing and Sequencing Schedule is part of this section and includes activities of contractor and separate asbestos abatement contractor.

C. Contractor's project manger and superintendant shall attend a weekly scheduled meeting where the activities of each party will be discussed. The phasing schedule will be updated monthly by the Architect.

D. The Contractor shall prepare a detailed schedule of the activities required for his work in each phase.

E. The Contractor shall cooperate and coordinate his work with the Owner and the Owner's separate contractors which will include the asbestos abatement contractor, low voltage wiring contractor and floor contractor.

1.02 CURRENT SCHEDULE OF ACTIVITIES

A. The following is an outline of current activities and the maximum time allowed for construction activities. The Contractor is responsilbe for the detailed schedule of construction activities.

B. Advertisement 10 Jan 19

C. Pre-bid 17 Jan 19

D. Questions and Addendums thru 25 Jan 19

E. Final Addendum 28 Jan 19

F. Bid Opening 31 Jan 19

G. Award February 2019

H. Construction thru Substantial Completion 145 days from Notice to Proceed

I. Final Completion, Final Payment 35 days after project completion

1.03 RELATED SECTIONS

A. Section 01 10 00 - Scope of Work and Summary: _____.

1.04 SUBMITTALS

A. Within 10 calendar days after date of Agreement, submit preliminary schedule defining planned operations for the first 60 days of Work, with a general outline for remainder of Work.

B. If preliminary schedule requires revision after review, submit revised schedule within 10 days.

C. Within fourteen calendar days after review of preliminary schedule, submit draft of proposed complete schedule for review.

1. Include written certification that major contractors have reviewed and accepted proposed schedule.

D. Within 10 calendar days after joint review, submit complete schedule.

1.05 PHASING AND SEQUENCEING

A. The following describes the generl phasing and sequencing of events but is not intended to describe Contractor's means and methods of performing the work. Sjub-specialties can be moved to other phases as required to best perform the work.

B. Phase One

1. Asbestos abatement contractor will remove the cement asbestos panels and interior drywall for contractor's access to new boiler room. The abatement contractor will also remove piping insulation from pipes that are inactive and connected to the abandoned chiller on the North end of the roof well.

2. Remove the chiller at the North end of the roof well that is no longer in use and all piping where insulation has been removed in sequence B,1 above.

C. Phase Two
   1. Construct Boiler Room
   2. Construct metal framing and grating for chiller.
   3. Install boiler equipment and attendent piping. Make operational.
   4. Paint exterior walls of roof well and steel support system

D. Phase Three
   1. Install chiller equipment and attendent piping. Make operational.
   2. Asbestos abatement contractor will remove remaining insulation from existing exterior chiller piping.
   3. Remove remaining chiller and all attendent piping in roof well.

E. Phase Four
   1. Install roof

1.06 ACCOMODATION FOR SPECIAL EVENTS

A. Special events will be conducted on the fourth floor on two occasions:
   1. Saturday, March 30, 2019
   2. Tuesday, April 16,2019 through Thursday, April 18, 2019
   3. Wednesday, April 24, 2019
   4. Saturday, May 18, 2019

B. The Contractor shall have limited access to the fourth floor during these events and will be restricted for personnel and materials to the area inside the boiler room and on the roof during weekday hours between 7:00 AM and 9:00 PM. The contractor shall not use tools or other methods that will tranmit noise into the fourth floor general area.

1.07 USE OF ADJACENT PRIVATELY OWNED PARKING DECK

A. It is recommended that Contractor consider contacting Rosa, parking manager for Tallan Properties. She can arrange for monthly parking on the top level of the parking garage immediately West of the building where personnel and materials in standard pick-up trucks can access the existing roof. Rosa can be reached by telephone at (931) 278-5820.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

4.01 PRELIMINARY SCHEDULE

A. Prepare preliminary schedule in the form of a horizontal bar chart.

4.02 CONTENT

A. Show complete sequence of construction by activity, with dates for beginning and completion of each element of construction.

B. Identify each item by specification section number.

C. Show accumulated percentage of completion of each item, and total percentage of Work completed, as of the first day of each month.

D. Provide legend for symbols and abbreviations used.

4.03 BAR CHARTS

A. Include a separate bar for each major portion of Work or operation.

B. Identify the first work day of each week.

4.04 UPDATING SCHEDULE

A. Maintain schedules to record actual start and finish dates of completed activities.

B. Indicate progress of each activity to date of revision, with projected completion date of each activity.

C. Annotate diagrams to graphically depict current status of Work.

D. Identify activities modified since previous submittal, major changes in Work, and other identifiable changes.

E. Indicate changes required to maintain Date of Substantial Completion.

F. Submit reports required to support recommended changes.

4.05 DISTRIBUTION OF SCHEDULE

A. Distribute copies of updated schedules to Contractor's project site file, to subcontractors, suppliers, Architect, Owner, and other concerned parties.

B. Instruct recipients to promptly report, in writing, problems anticipated by projections indicated in schedules.

END OF SECTION

STATEMENT OF BIDDER'S QUALIFICATIONS

All questions must be answered, and the data given must be clear and comprehensive. This statement must be notarized. If necessary, questions may be answered on separate attached sheets. The Bidder may submit any additional information he desires. Attach all additional sheets to these Contract Documents.

1. Name of Bidder.

2. Permanent main office address.

3. When organized.

4. If a corporation, where incorporated.

5. How many years have you been engaged in the contracting business under your present firm or trade name?

6. Contracts on hand: (Schedule these, showing amount of each contract and the appropriate anticipated dates of completion.)

7. General character of work performed by your company.

8. Have you ever failed to or been directed not to complete any work awarded to you? If so, where and why, and which project?

9. Have you ever defaulted on a contract? If so, where and why and which project?

10. List the most important projects recently completed by your company, stating the approximate cost for each, and the month and year completed. (See form 00400-(2))

11. List your major equipment available for this contract.

12. List experience in construction work similar in importance to this project.

13. Background and experience of the principal members of your organization, including officers.

14. Credit available: $_____

15. Give bank reference: _____

16. Will you, upon request, submit a detailed financial statement and furnish any other information that may be required by the City of Chattanooga?

17. The undersigned hereby authorizes and requests any person, firm, or corporation to furnish any information requested by the City of Chattanooga in verification of the recitals comprising this Statement of Bidder's Qualifications.

Dated this _____ day of _____, 20__.

_____
Name of Bidder

By _____

Title _____

State of _____

County of _____

_____ being duly sworn deposes and says that he is

_____ of _____

and that the answers to the foregoing questions and all statements therein contained are true and correct.

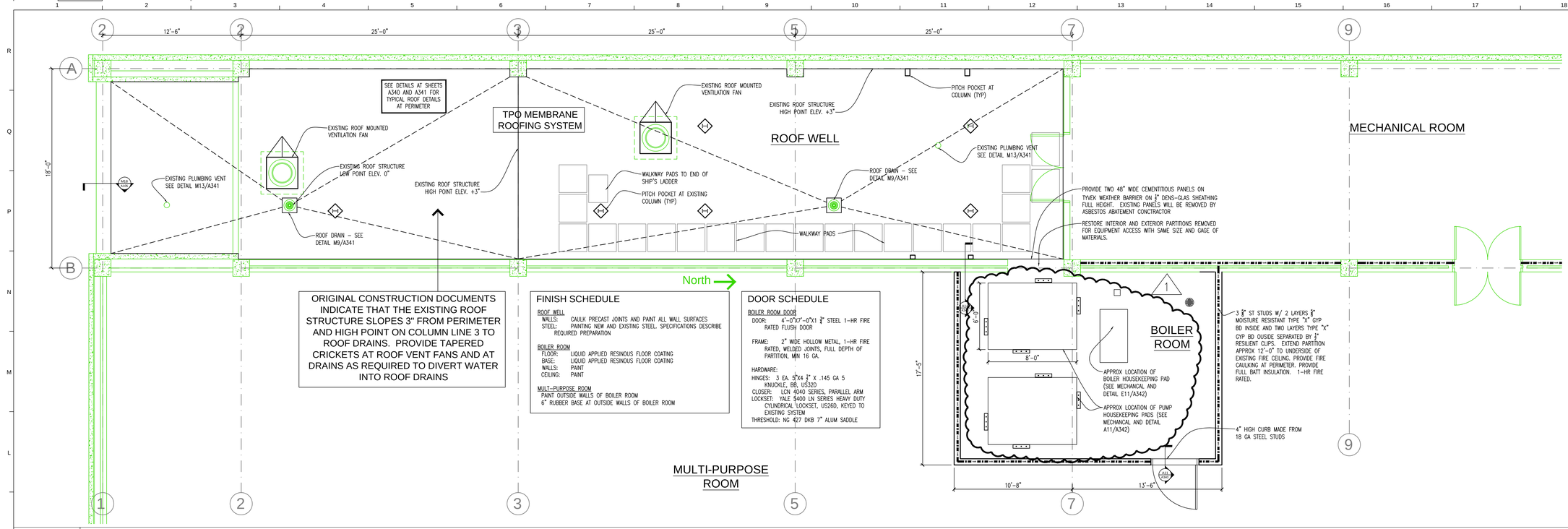
Subscribed and sworn to before me this _____ day of _____ , 20__.

_____
Notary Public (SEAL)

My Commission Expires:

_____
(Date)

END OF DOCUMENT



FINISH SCHEDULE

ROOF WELL
- WALLS: CAULK PRECAST JOINTS AND PAINT ALL WALL SURFACES
- STEEL: PAINTING NEW AND EXISTING STEEL. SPECIFICATIONS DESCRIBE REQUIRED PREPARATION

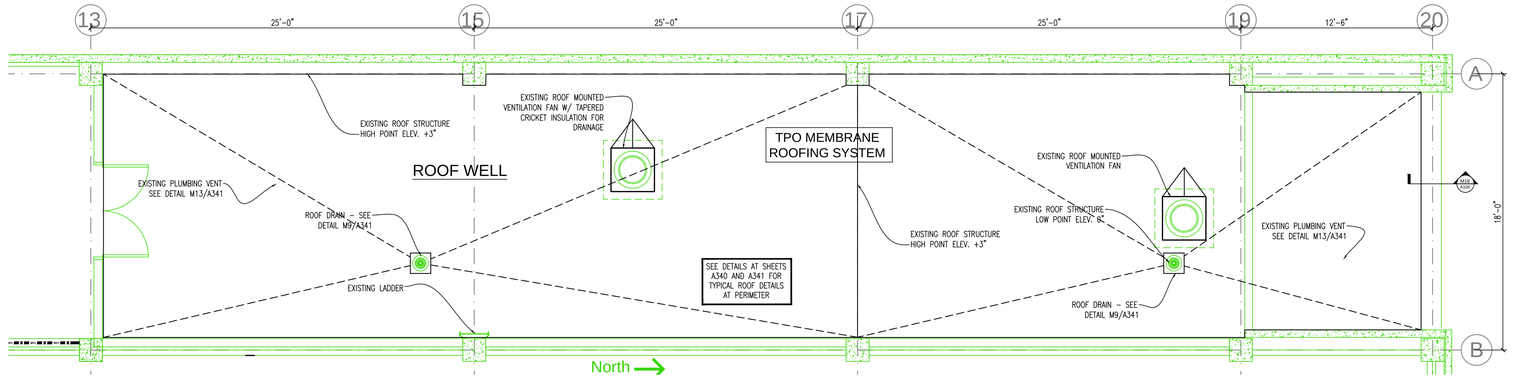
BOILER ROOM
- FLOOR: LIQUID APPLIED RESINOUS FLOOR COATING
- BASE: LIQUID APPLIED RESINOUS FLOOR COATING
- WALLS: PAINT
- CEILING: PAINT

MULTI-PURPOSE ROOM
PAINT OUTSIDE WALLS OF BOILER ROOM 6" RUBBER BASE AT OUTSIDE WALLS OF BOILER ROOM

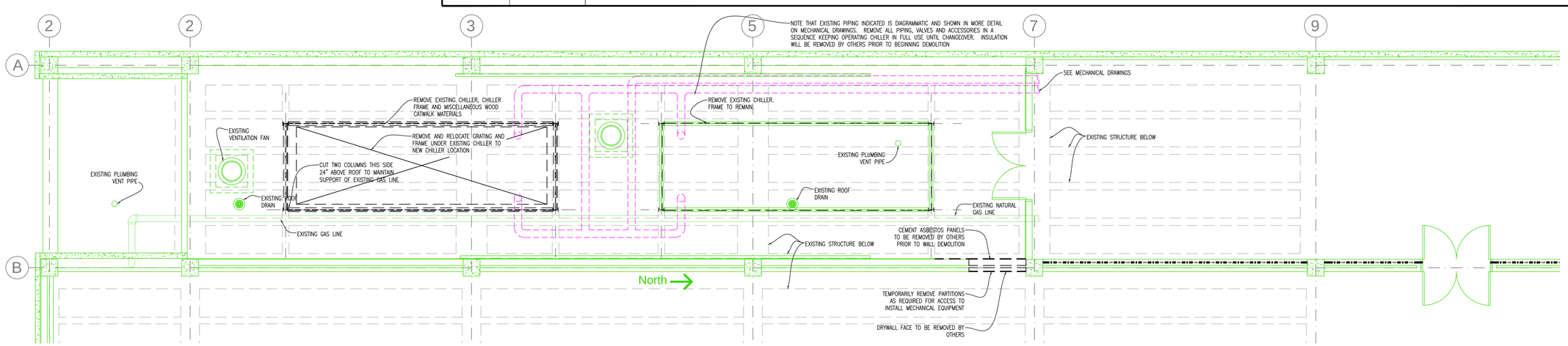
DOOR SCHEDULE

BOILER ROOM DOOR
- DOOR: 4'-0"X7'-0"X1 ¾" STEEL 1-HR FIRE RATED FLUSH DOOR
- FRAME: 2" WIDE HOLLOW METAL, 1-HR FIRE RATED, WELDED JOINTS, FULL DEPTH OF PARTITION, MIN 16 GA.
- HARDWARE:
- HINGES: 3 EA. 5"X4 ½" X .145 GA 5 KNUCKLE, BB, US32D
- CLOSER: LCN 4040 SERIES, PARALLEL ARM
- LOCKSET: YALE 5400 LN SERIES HEAVY DUTY CYLINDRICAL LOCKSET, US26D, KEYED TO EXISTING SYSTEM
- THRESHOLD: NG 427 DKB 7" ALUM SADDLE

J1	Fourth Floor South HVAC Roof Well Plan and Mechanical Room
Scale: ¼" = 1'-0"	details



F5	Fourth Floor North Roof Well Plan (Alternate No. 1)
Scale: ¼" = 1'-0"	details



A1	Fourth Floor Demolition Plan - (South Roof Well)
Scale: ¼" = 1'-0"	details

DH&W
ARCHITECTURE INTERIORS PLANNING

Public Library Chiller and Boiler Improvements

1001 Broad Street
Chattanooga, TN 37402

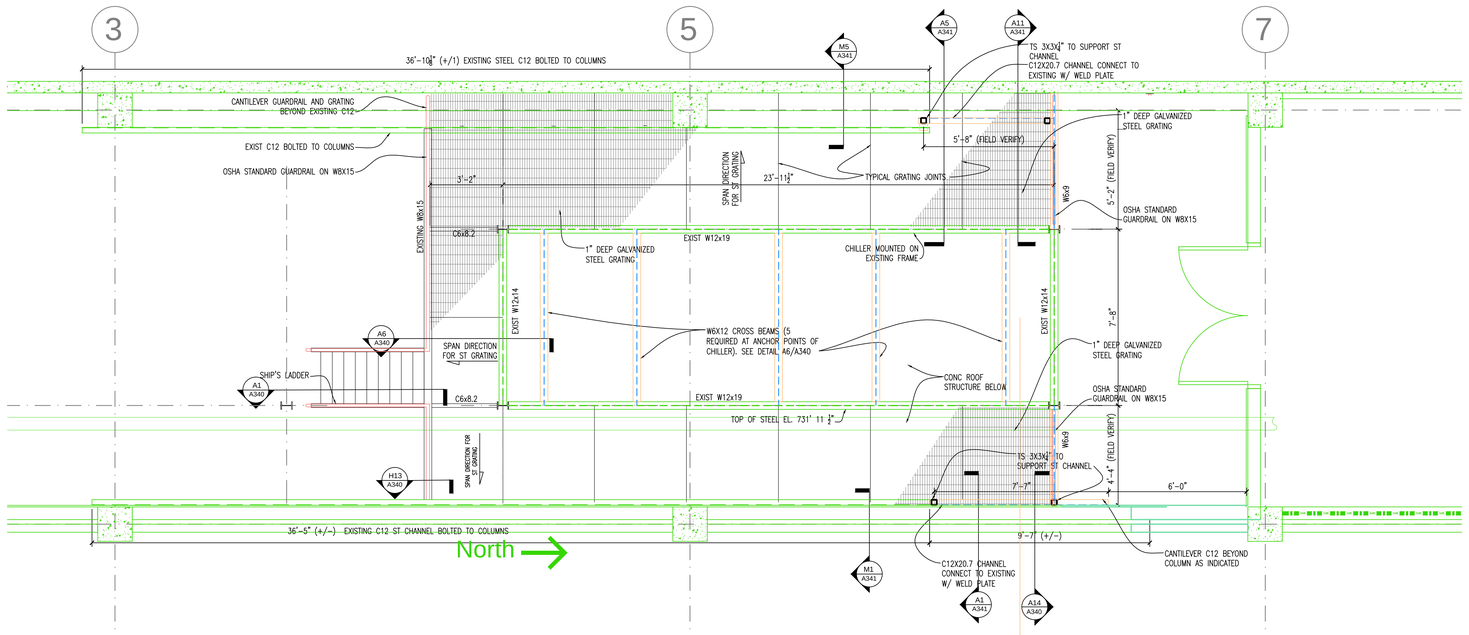
Date: January 4, 2019
Drawn: WHW
City Project L-018-001 DHW #2180

Revisions
1 ADDENDUM 1 23 JAN 19

WILLIAM H. WILKERSON REGISTERED ARCHITECT No. 008710 STATE OF TENNESSEE
4 JAN 2019

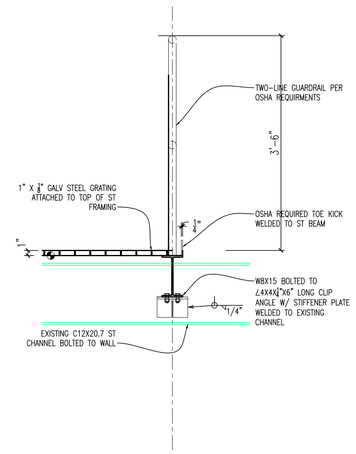
Title:
Fourth Floor Plans (Partial)

Sheet No.
A-104



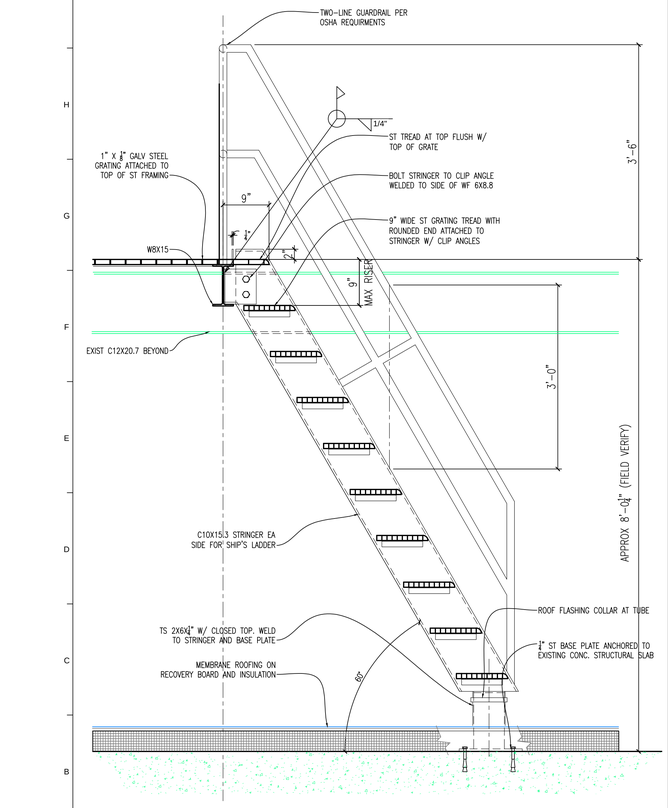
K1 Fourth Floor South HVAC Roof Well - View at Framing for Chiller and Catwalk

Scale: ⅜" = 1'-0" | details



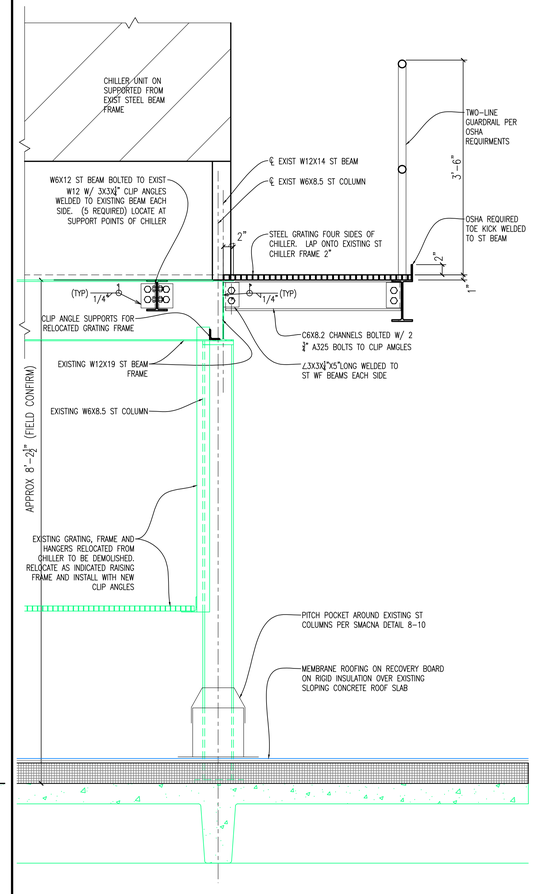
H13 Fourth Floor Catwalk Detail

Scale: 1"=1'-0" | details



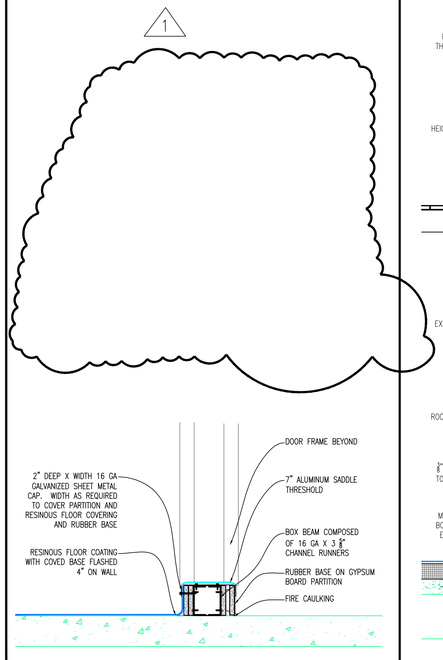
A1 Section thru Ship's Ladder

Scale: 1" = 1'-0" | details



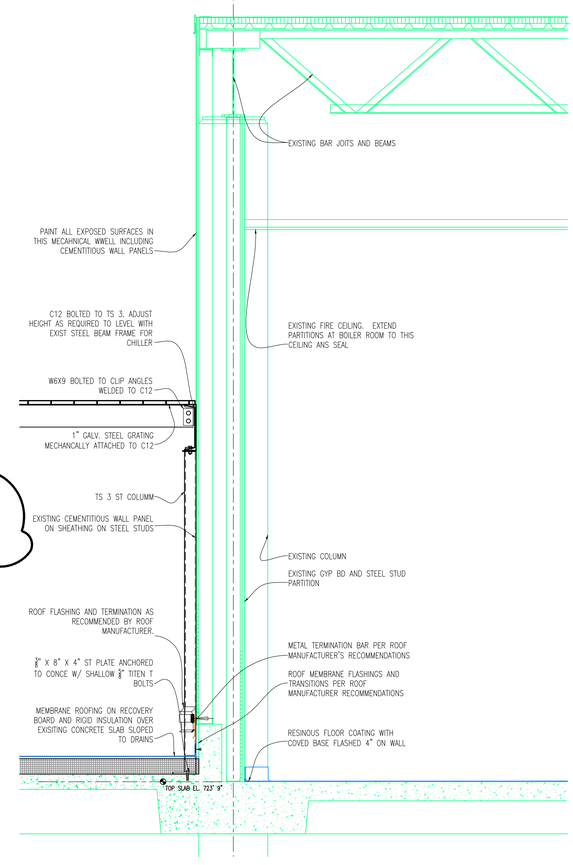
A6 Fourth Floor Section at Catwalk

1"=1'-0" | details



A11 Fourth Flr Detl at Dr Threshold

1 ½"=1'-0" | details



A14 Wall Section @ Boiler Room

¾"=1'-0" | details

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Revisions
1 ADDENDUM 1 23 JAN 19

NOTE THAT THES DRAWINGS ARE PRODUCED IN COLOR. REFER TO COLOR DRAWINGS FOR CLARIFICATION OF NEW AND EXISTING CONDITIONS.

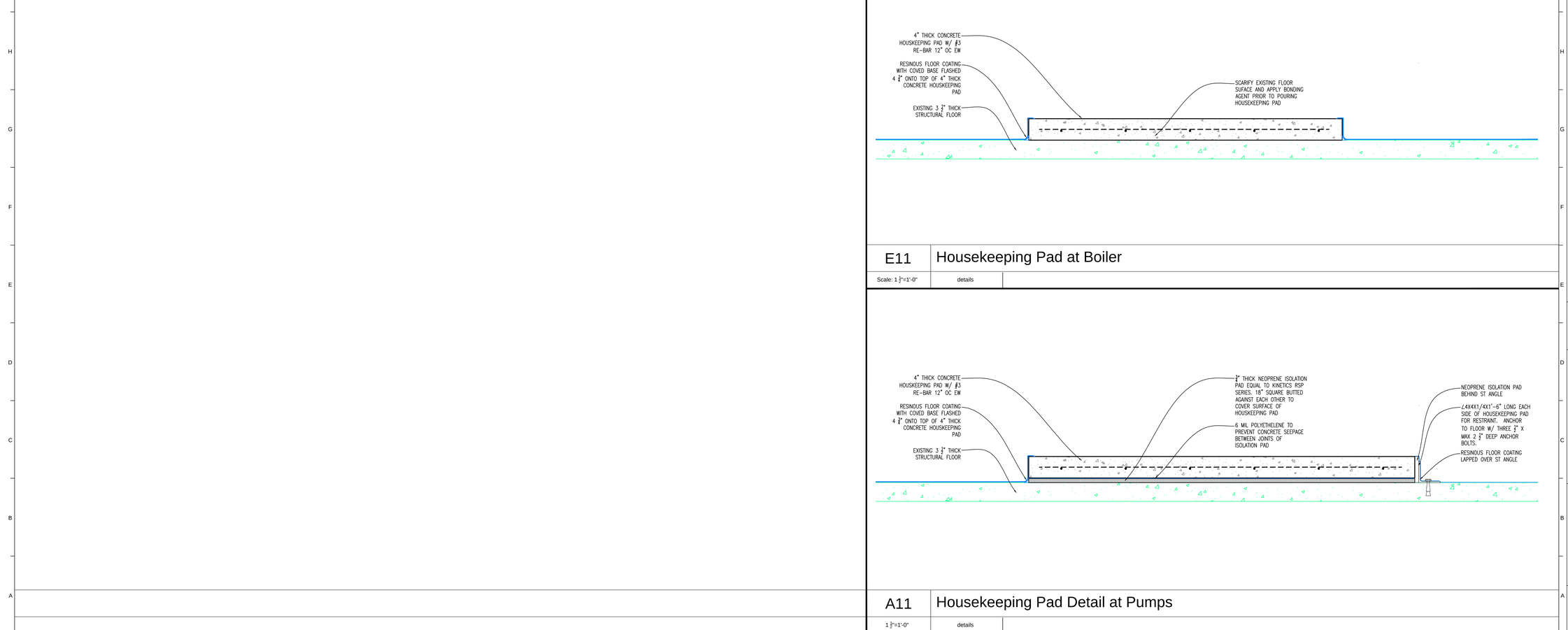
WILLIAM H. WILKERSON REGISTERED ARCHITECT AGENT OF DEPARTMENT No. 008710 STATE OF TENNESSEE
4 JAN 2019

Title:

Fourth Floor HVAC Roof Well Plans and Details

Sheet No.

A-340



E11 Housekeeping Pad at Boiler

Scale: 1 1/2"=1'-0" | details

A11 Housekeeping Pad Detail at Pumps

1 1/2"=1'-0" | details

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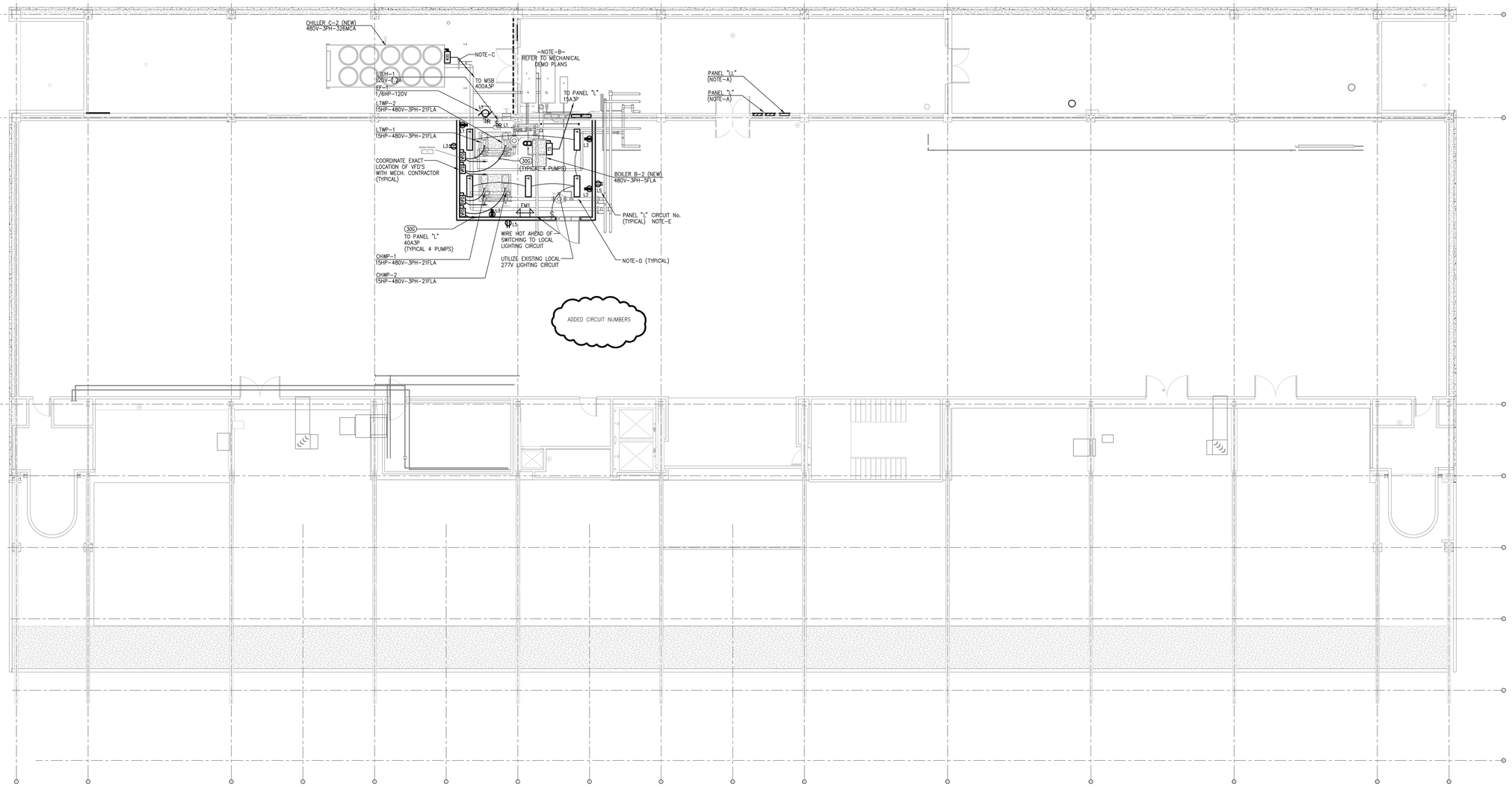
Revisions
1 ADDENDUM 1 23 JAN 19

WILLIAM H. WILKERSON REGISTERED ARCHITECT AGENT No. 008710 STATE OF TENNESSEE
4 JAN 2019

Title: Housekeeping Pad Details

Sheet No. A-342



REVISED NOTE-C
ADD NOTE-E

LEVEL 04 PLAN NOTES:

A. EXISTING PANEL BOARDS/SWITCH BOARDS SHALL BE REPLACED WITH NEW AT EXISTING LOCATIONS. REMOVE EXISTING PANEL, LABEL AND SET BRANCH CIRCUIT CONDUCTORS ASIDE, INSTALL NEW PANEL WITH SAME QUANTITY/SIZE CIRCUIT BREAKERS AS PANEL REMOVED (PLUS THOSE FOR NEW LOADS), CONNECT FOR NEW DEVICES AND RECONNECT (RE-FEED) EXISTING BRANCH CIRCUITS FROM NEW PANEL AND LABEL ACCORDINGLY.

B. DEMO ALL FEEDERS TO HVAC EQUIPMENT SCHEDULE FOR REMOVAL, PROVIDE NEW FEEDERS TO ALL NEW EQUIPMENT AS REQUIRED.

C. UTILIZE EXISTING CONDUIT ORIGINALLY INSTALLED TO SERVE NON-FUNCTIONING CHILLER C-2. CONDUIT IS TERMINATED AT APPROXIMATELY THE LOCATION OF THIS CHILLER, WHICH IS BEING DEMOLISHED, AND EXTENDS TO EXISTING MSB ON GROUND LEVEL (REFER TO SHEET E-100 FOR LOCATION OF MSB). PROVIDE FOR ANY EXTENSION OR RELOCATION OF CONDUIT TERMINATION LOCATION AS REQUIRED TO ACCOMMODATE NEW CHILLER CONNECTION POINT. PROVIDE NEW HEAVY DUTY NEMA 3R 400AMP FUSED DISCONNECT WITH 400AMP FUSES AT UNIT. DEMO EXISTING #750 AL. CONDUCTORS FROM EXISTING 3" CONDUIT. PULL NEW COPPER CONDUCTORS: THREE (3)#500 & ONE (1) #2G IN EXISTING CONDUIT. EXTEND FROM UNIT DISCONNECT TO MSB ON GROUND LEVEL, TERMINATE AT MSB TO EXISTING 600A-3P CIRCUIT BREAKER ORIGINALLY INSTALLED TO SERVE EXISTING CHILLER (CURRENTLY DISCONNECTED). PROVIDE UPDATED LOAD DESIGNATIONS TO MATCH NEW CONDITIONS.

D. COORDINATE INTERIOR LIGHT FIXTURE LOCATIONS WITH MECHANICAL EQUIPMENT, SUSPEND SUCH THAT INTERIOR FIXTURES IS APPROX 7-8' A.F.F. AND AS CLOSE TO EVEN WITH THE BOTTOM OF THE HIGH ELEVATION DUCT/PIPING AS POSSIBLE. (TYPICAL)

E. IN ADDITION TO CIRCUITS FOR EXISTING CIRCUITS TO REMAIN, AND THOSE REQUIRED FOR NEW EQUIPMENT, PROVIDE THREE NEW 20A SINGLE POLE 120V CIRCUITS FOR FANS AND NEW RECEPTACLES AS INDICATED ON PLANS. CIRCUIT NUMBERS SHOWN ARE FOR LOADING PURPOSES ONLY, AND NOT INTENDED TO BE THE ACTUAL CIRCUIT NUMBERS USED.

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C&A No. 18-011

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Revisions

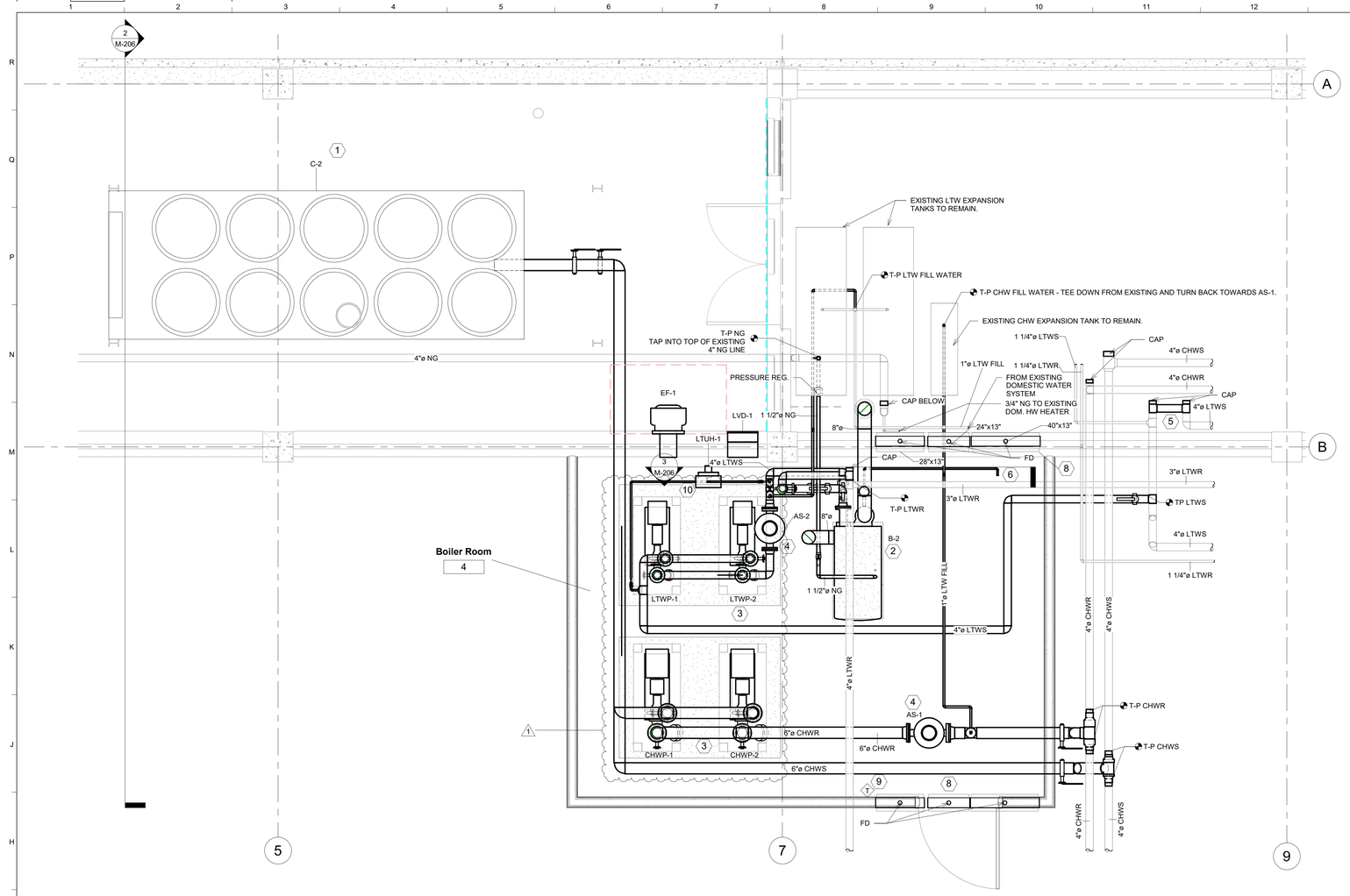
Revision Number	Revision Description	Revision Date
1	ADDENDUM 1	01/23/2019

Title:

ELECTRICAL PLAN-
FOURTH FLOOR

Sheet No.

E-104



PIPE 4TH FLOOR LSRP

1

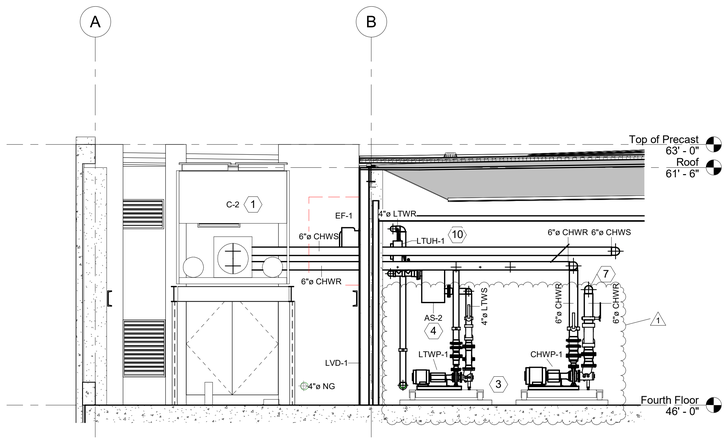
SCALE : 3/8" = 1'-0"

GENERAL NOTES

1. ALL NEW EQUIPMENT SHALL BE INTEGRATED INTO NEW BUILDING AUTOMATION SYSTEM.
2. EXPANSION TANKS (CHW, LTW) SHALL BE REUSED.
3. PIPE BREAK ANNOTATIONS DENOTE CONTINUATION OF EXISTING PIPING SYSTEMS TO REMAIN.
4. SEE ARCHITECTURAL AND STRUCTURAL PLANS FOR CHILLER PLATFORM MODIFICATION - PLATFORM MODIFICATIONS AND CATWALK NOT SHOWN IN THIS DRAWING.
5. MAINTAIN CLEARANCES TO ELECTRICAL EQUIPMENT AS REQUIRED.
6. ALL NEW CHILLED AND HOT WATER PIPING SHALL BE INSULATED (AND HEAT TRACED IN EXTERNAL PIPING) PER SPECIFICATIONS. ENCLOSE NEW INSULATION WITH JACKETING PER SPECIFICATIONS.
7. SEE DETAILS AND SCHEDULES FOR ADDITIONAL PIPING COMPONENTS.
8. CONTRACTOR TO COORDINATE EXTERIOR CHILLED WATER PIPE SUPPORTS WITH THE CHILLER SUPPORT STRUCTURE - NO EXTERNAL WEIGHT SHALL BE APPLIED TO CHILLER FRAME.
9. FIELD COORDINATE THE HEIGHT OF EXISTING PIPING WITH THE HEIGHT OF TIE-IN POINTS AND NEW PIPING.
10. INSTALL NEW COMBUSTION INTAKE/EXHAUST PER SPECIFICATIONS AND APPLICABLE CODE REQUIREMENTS.
11. EQUIPMENT CHANGEOVER SHALL BE COORDINATED WITH OWNER'S SCHEDULE AND INSTALLATION OF NEW BUILDING AUTOMATION SYSTEM. UNDER NO CIRCUMSTANCES SHALL THE NEW BOILER OR CHILLER BE PUT INTO SERVICE WITHOUT INTEGRATION INTO THE CONTROL SYSTEM AND WITH ALL SAFETIES INSTALLED.
12. NEW CHILLER BARREL MUST BE HEAT TRACED.
13. COORDINATE INPUT AND OUTPUTS WITH THE CHILLER,BOILER MANUFACTURER'S REQUIREMENTS. PROVIDE ANY POINTS OR SENSORS AS NEEDED.
14. FIRESTOP SHALL BE REQUIRED FOR ALL PENETRATIONS (EXISTING AND NEW) IN THE NEW BOILER ROOM.
15. PIPE SUSPENDED FROM ABOVE MUST BE ANCHORED TO TOP OF EXISTING BAR JOISTS - PATCH FIRE CEILING AFTER PIPING INSTALLATION.

CALLOUT NOTES

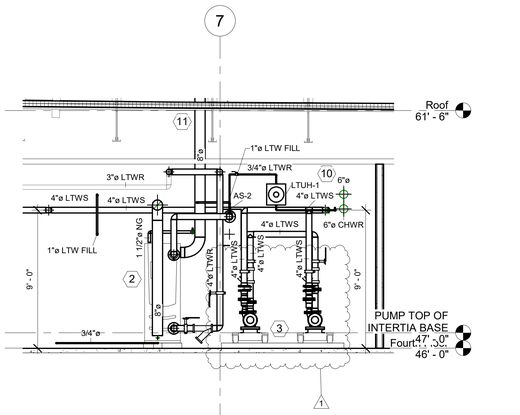
1. NEW AIR COOLED CHILLER C-2.
   - A. NEW CHILLER SHALL BE INSTALLED ON MODIFIED EXISTING STEEL STRUCTURE. CONTRACTOR SHALL COORDINATE PIPE ROUTING WITH NEW CATWALK, STRUCTURAL STEEL PLATFORM MODIFICATIONS. SEE ARCHITECTURAL, STRUCTURAL SHEETS FOR PLATFORM DETAILS.
   - B. CONTRACTOR SHALL INSTALL VALVES, INSTRUMENTS, ACCESSORIES PER DETAIL ON SHEET M400.
2. NEW CONDENSING BOILER B-2
   - A. INSTALL BOILER ON 4" SERVICE PAD. PAD SHALL NOT EXTEND MORE THAN 2-1/2" BEYOND THE REAR OF THE UNIT.
   - B. INSTALL MANUFACTURER'S CONDENSATE COLLECTION DEVICE ON SERVICE PAD. SIZE, LOCATION TO BE DETERMINED IN THE FIELD. ROUTE CONDENSATE FROM COLLECTION VESSEL TO THE NEW FLOOR DRAIN - SEE ARCHITECTURAL SHEETS FOR DRAIN LOCATION.
   - C. NEW 1-1/2" NATURAL GAS LINE TO TIE-IN POINT ON EXISTING NG BOILER HEADER.
     - a. INCLUDE NEW SHUTOFF VALVE, PRESSURE REDUCING VALVE.
     - b. ROUTE PRESSURE REDUCING VALVE VENT TO EXTERIOR.
   - D. 8" COMBUSTION INTAKE TO NEW WEATHER CAP ON ROOF
   - E. 8" COMBUSTION EXHAUST TO NEW WEATHER CAP ON ROOF - ROUTE TO EXISTING PENETRATION.
   - F. INSTALL PRESSURE RELIEF VENT ON LTWS NOZZLE PER MANF. SPECIFICATIONS. ROUTE FULL SIZE RELIEF VENT TO SPLASH BLOCK ON ROOF.
3. NEW CHW AND LTW PUMPS
   - A. INSTALL PUMPS ON BULLDOG MODEL PR INERTIA BASES, SEE SCHEDULE FOR MORE INFO.
   - B. INCLUDE ALL ACCESSORIES, VALVES, FLEXIBLE CONNECTORS, DRAINS AND VENTS AS SHOWN ON DETAILS SHEET M400.
   - C. INTERTA BASE+PUMP SHALL BE INSTALLED ON 4" MIN. SERVICE PAD, EXTENDING 6" ON ALL SIDES OF INERTIA BASE. SERVICE PAD SHALL INCLUDE VIBRATION PAD - SEE ARCHITECTURAL DETAIL FOR MORE INFORMATION ON SERVICE PADS.
   - D. BALANCE PUMPS WITH ISOLATION VALVES, VARIABLE FREQUENCY DRIVES. NO TRIPLE DUTY VALVES OR BALANCING VALVES SHALL BE INSTALLED.
4. NEW CHW, LTW AIR SEPARATORS
   - A. SUSPEND FROM EXISTING STRUCTURE.
   - B. INSTALL NEW BACKFLOW PREVENTER, PRESSURE RELIEF VALVE, AND ALL OTHER ACCESSORIES AS SHOWN ON DETAILS SHEET M400.
5. NEW 4" DIA. PIPE SECTION CONNECTS THE DISCHARGE SIDE HEADERS FROM THE EXISTING PAIR OF LTW PUMPS.
   - A. THE NEW SECTION IS SHOWN IN PLANE FOR SIMPLICITY, FIELD CONDITIONS MAY VARY.
6. ROUTE TO NEW CONDENSATE DRAIN, SLOPE MIN. 18/" PER 1'-0". SEE ARCHITECTURAL SHEETS FOR NEW DRAIN LOCATION.
7. PIPE AT 7'-6" AFF. ALL PIPE MUST BE INSTALLED AT A MINIMUM OF 7'-0" AFF.
8. NEW FIRE DAMPERS REQUIRED IN EXISTING DUCTS. 2X EACH OF 28"X13", 24"X13", 40"X13". CONTRACTOR SHALL FIELD VERIFY SIZED PRIOR TO PURCHASING. DUCTS TRAVERSE E-W ACROSS NEW BOILER ROOM - CONTINUATIONS NOT SHOWN FOR CLARITY.
9. THERMOSTAT FOR EXHAUST FAN EF-1 OPERATION. FAN SHALL ENERGIZE WHEN ROOM TEMPERATURE EXCEEDS 80F. INTERLOCK FAN OPERATION WITH OPERABLE INTAKE DAMPER INLINE WITH LVD-1.
10. NEW HYDRONIC UNIT HEATER - ONBOARD THERMOSTAT OPERATED, UNIT SHALL ENERGIZE WHEN ROOM TEMPERATURE DROPS BELOW 60 F.
11. CONTRACTOR TO PROVIDE ROOF CAPS FOR BOILER COMBUSTION INTAKE AND EXHAUST STACKS.



NEW BOILER ROOM - FACING NORTH

2

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



NEW BOILER ROOM - FACING EAST

3

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

DH&W
ARCHITECTURE INTERIORS PLANNING

Public Library Chiller and Boiler Improvements

1001 Broad Street
Chattanooga, TN 37402

Date: January 4, 2019
Drawn: SAA
City Project L-018-001 DHW #2180

C&A No. 18-011

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Revisions

Revision Number	Revision Description	Revision Date
1	ADDENDUM 1	01/23/2019

Title:

HVAC PIPING - BOILER/CHILLER

Sheet No.

M-206

PUMP SCHEDULE

MARK	SERVICE	MAKE/MODEL	SERVICE	GPM	CONTROL HEAD (FT)	HEAD (FT)	BHP	HP	VOLTS/PH	REMARKS
CWP-1	CHILLED WATER PRIMARY 1	B&G E-1510 3 BD	BASE MOUNTED END SUCTION	355	22	73	8.24	15	460/3	SEE NOTES
CWP-2	CHILLED WATER PRIMARY 2	B&G E-1510 3 BD	BASE MOUNTED END SUCTION	355	22	73	8.24	15	460/3	SEE NOTES
LTWP-1	HEATING HOT WATER PRIMARY 1	B&G E-1510 2.5 AD	BASE MOUNTED END SUCTION	302	30	100	9.85	15	460/3	SEE NOTES
LTWP-2	HEATING HOT WATER PRIMARY 2	B&G E-1510 2.5 AD	BASE MOUNTED END SUCTION	302	30	100	9.85	15	460/3	SEE NOTES

NOTES:

1. CWP-1,2 SHALL BE INTERLOCKED WITH NEW CHILLER C-2
2. PROVIDE TECHNOLOGIC INTELLIGENT PUMP CONTROLLER, B&G SUCTION DIFFUSERS FOR ALL WATER PUMPS. ALTERNATIVES SHALL BE SUBMITTED TO ENGINEER FOR APPROVAL.
3. THE CONTRACTOR IS TO MEASURE AND RECORD EXISTING FLOW RATES AND HEAD FOR EACH EXISTING PUMP PRIOR TO CONSTRUCTION. EXISTING FLOW RATES AND HEAD TO BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO SUBMITTALS.
4. MOUNT PUMP SKIDS ON NEW INERTIA BASES - SEE INERTIA BASE SCHEDULE FOR MORE DETAILS.
6. PUMP MOTORS SHALL BE BALDOR DPPE NEMA PREMIUM EFF. SUPER-E W/AEGIS SGR INVERTER DUTY.
7. PUMP IMPELLERS SHALL BE DYNAMICALLY BALANCED TO G 2.5 OR HIGHER.

PUMPS SHALL BE LASER ALIGNED.

AIR COOLED CHILLER SCHEDULE

MARK	NOMINAL TONNAGE	NET COOLING CAPACITY	MAKE & MODEL	COMPRESSOR TYPE	GPM MIN./DESIGN./MAX	TOTAL PRESSURE DROP @ DESIGN (FT. H2O)	EWT/LWT (F)	ELECTRICAL			TOTAL UNIT POWER (kW)	LWA SOUND PWER AT 100%/50% LOAD (dB)	MIN EER	MIN NPLV	OPERATING WEIGHT (LB)	REFRIGERANT
								VOLTAGE/PH	MCA	MOCP						
C-2	183	176	YORK YVAA0183A0V 46BAVNXX	SCREW	206/300/792	6.6	42/56	408/3	326	400	208.7	102/93	10	17	12960	R134A

NOTES:

1. PROVIDE VIBRATION ISOLATORS, COIL GUARDS
2. PROVIDE WITH LOW SOUND KIT, LOW AMBIENT HEAD PRESSURE CONTROL.
3. PROVIDE 10 YEAR PARTS, REFRIGERANT, AND LABOR WARRANTY FOR THE ENTIRE UNIT.
4. PROVIDE FACTORY STARTUP AND MANUFACTURER'S STARTUP LOG WITH IOM DOCUMENTATION.
5. PROVIDE BACNET OR LONWORKS INTERFACE AS REQUIRED BY CONTROLS CONTRACTOR
6. CHILLER CONTROLS CAPABLE OF VARIABLE PRIMARY FLOW. CHILLER TO STAY ONLINE WITH A 50% DROP OF FLOW IN 60 SECONDS.
7. PROVIDE LOW AMBIENT OPERATION DOWN TO 0° F.
8. INTERLOCK CHILLER PUMP START REQUEST WITH PUMP STARTER
9. PROVIDE FLOW SWITCHES ON THE CHILLED WATER AND CONDENSER WATER PIPING PER DETAIL FOR EACH. INTERLOCK CHILLER OPERATION WITH FLOW SWITCHES SUCH THAT CHILLERS WILL NOT OPERATE WITHOUT PROOF OF FLOW.10. 11. PROVIDE EVAPORATOR HEATERS. HEATERS POWERED BY 115/1 SEPARATE POWER CONNECTION.
12. PROVIDE 65,000 AMP SHORT CIRCUIT PROTECTION RATING
13. COORDINATE EACH CHILLER'S WATERBOX PIPING CONNECTION LOCATIONS WITH PLANS PRIOR TO ORDER. COORDINATE FIELD VERIFIED MINIMUM ENTERING CONDENSER WATER TEMPERATURES WITH CHILLER MANUFACTURER PRIOR TO ORDER.
14. PROVIDE AIR VENTS AND DRAIN VALVES ON EACH WATER BOX OF EACH CHILLER. PROVIDE PRESSURE RELIEF VALVES ON THE DRAIN CONNECTIONS OF EACH WATERBOX OF EACH CHILLER. COORDINATE REQUIRED SIZES AND QUANTITIES WITH CHILLER MANUFACTURER PRIOR TO ORDER.

HEATING WATER BOILER SCHEDULE

MARK	MFG. AND MODEL	TYPE	FLUID TMPERATURE IN/OUT [F]	DESIGN GPM	FUEL	MIN/MAX INLET GAS PRESSURE [PSIG]	GAS INPUT CFH	OUTPUT MBH	VOLTS/PH	FLA	REMARKS
B-2	AERCO BMK-3000	CONDENSING FIRETUBE	110/150	305	NG	4-14	3000	2610-2880	460/3	5	SEE NOTES

NOTES:

1. VENTLESS GAS TRAIN
2. MINIMUM TURNDOWN: 15:1
3. MAX NOX: 20 PPM, 3% O2 CORRECTED
4. BOILER SHALL BE CAPABLE OF UTLIZING NON-METALLIC VENT MATERIAL
5. COMBUSTION SYSTEM SHALL BE CAPABLE OF O2 SENSOR IN ORDER TO ALERT IF THE UNIT IS EXPERIENCING NON-OPTIMUM COMBUSTION CONDITIONS
6. PROVIDE BOILER SEQUENCING WITH HW RESET
7. BOILER STAGING POINT NOT TO EXCEED 40%
8. BOILER MANUFACTURER TO PROVIDE AND CONTROL, FIELD INSTALLED, MOTORIZED ISOLATION VALVES ON EACH BOILER
9. BOILER MANUFACTURE TO PROVIDE 10-YEAR NON-PRORATED HEAT EXCHANGER WARRANTY
10. BOILER MANUFACTURE TO PROVIDE 2-YEAR NON-PRORATED CONTROLLER WARRANTY
11. BOILER MANUFACTURE TO PROVIDE LETTER OF GUARANTEE FOR AS BUILT FLUE AND COMBUSTION AIR INSTALLATION
12. PROVIDE WITH P&T RELIEF VALVE, CONDENSATE TRAP, SILENCER STACK, GAS REGULATOR AND ALL VALVES REQUIRED FOR NEW INSTALLATION - SEE DETAILS SHEET.

AIR/DIRT SEPARATOR SCHEDULE

MARK	MFG. AND MODEL	SERVICE	TYPE	GPM	SIZE	PD (ft)	OPERATIONAL WEIGHT (lb)
AS-1	BELL&GOSSETT SRS-6F	CHILLED WATER	AIR AND DIRT SEPARATOR	355	6"	0.31	530
AS-2	BELL&GOSSETT SRS-6F	HOT WATER	AIR AND DIRT SEPARATOR	305	6"	0.4	530

NOTES:

1. PROVIDE COMPLETE WITH AUTOMATIC AIR VENT, MANUAL BLOWDOWN VALVE, HANGING BRACKET, FLANGED CONNECTIONS,
2. PROVIDE WITH BACKFLOW PREVENTION ASSEMBLY AND PRESSURE REDUCING VALVE - SEE MECHANICAL DETAIL 15510-J.

HYDRONIC UNIT HEATER SCHEDULE

MARK	MFG. AND MODEL	CAPACITY (MBH)	FAN				AIR dT F	LTW				VOLTS/PH
			HP	AMPS	RPM	CFM		EWT F	LWT F	GPM	PD	
LTUH-1	REZNOR C-HU 44/62	32	0.082	1.2	1600	860	30	150	110	.968	.03	115/1

NOTES:

1. PROVIDE UNIT MOUNTED TSTAT, TOP/BOTTOM COIL CONNECTIONS, MOUNTING ACCESSORIES, CONTROL VALVES.
2. INSTALL PER MANUFACTURER'S SPECIFICATIONS AND REQUIRED CLEARANCES.

FAN SCHEDULE

MARK	MANUFAC.	TYPE	MODEL #	CFM	E.S.P. (IN. H20)	BHP	HP	FAN RPM	SONE LEVEL	VOLTS/PH
EF-1	GREENHECK	CENTR. UPBLAST	CUE-095-VG	360	0.5	0.07	1/6	1380	6.8	115/1

NOTES:

1. EF-1 TO RUN ON THERMOSTAT, AND TO BE SHUT OFF BY THE BUILDING ENERGY MANAGEMENT SYSTEM (EMS).
2. PROVIDE WITH BACKDRAFT DAMPER
3. PROVIDE JUNCTION BOX MOUNTED AND WIRED NEMA-1 TOGGLE SWITCH FOR EACH.

CHILLED WATER SYSTEM CONTROL SEQUENCE

COOLING SYSTEM ENABLE:

THE COOLING SYSTEM WILL AUTOMATICALLY START WHEN THE OUTSIDE AIR TEMPERATURE (OA-T) RISES ABOVE THE SYSTEM ENABLE SETPOINT (CLGOATLOCKOUT-SP) WHILE THE SYSTEM ENABLE (SYSTEM-EN) IS "ON". WHEN THE OUTSIDE AIR TEMPERATURE (OA-T) FALLS BELOW THIS SETPOINT (CLGOATLOCKOUT-SP) OR THE SYSTEM ENABLE (SYSTEM-EN) IS "OFF", THE COOLING SYSTEM WILL BE DISABLED.

CHILLER CONTROL:

THIS SYSTEM CONSISTS OF ONE CHILLER. THE CHILLER SHALL BE CONTROLLED VIA ITS OWN INTERNAL CONTROLS TO MAINTAIN A CHILLED WATER SUPPLY TEMPERATURE.

CHILLED WATER PUMP CONTROL:

WHEN ENABLED, THE PUMPS (PCHWPX-C) WILL BE STARTED AND WILL RUN SIMULTANEOUSLY. IF THE PUMP STATUS (PCHWPX-S) DOES NOT MATCH THE COMMAND (PCHWPX-C), AN ALARM WILL BE GENERATED AND THE PUMP WILL BE STOPPED. UPON LOSS OF STATUS (PCHWPX-S), THE PUMP (PCHWPX-C) WILL RESTART AFTER THE SYSTEM RESET (SYS-RESET) IS ACTIVATED. AFTER THE CHILLER IS COMMANDED OFF, THE PUMPS (PCHWPX-C) WILL CONTINUE TO RUN FOR A SHORT TIME (5 MINS ADJ.) TO ALLOW THE EQUIPMENT TO COAST DOWN.

CHILL WATER LOOP PRESSURE CONTROL:

THE CHW PUMP SPEED (PCHWPX-O) SHALL BE CONTROLLED TO MAINTAIN THE SPECIFIED BUILDING-LOOP DIFFERENTIAL PRESSURE SETPOINT (CHWDP-SP) AS RECOMMENDED BY THE BALANCING CONTRACTOR. IF THE PRIMARY FLOW (PCHW-F) BELOW THE MINIMUM FLOW SETPOINT THE SYSTEM BYPASS VALVE (CHWBYP-O) WILL MODULATE OPEN TO PROVIDE MORE FLOW THRU THE CHILLERS.

ADDITIONAL POINTS MONITORED BY THE FMS:

- CHILLER 1 STATUS (CH1-S)
- OUTDOOR AIR TEMPERATURE (OA-T)

Type	Name	Description	Signal
BO	CH1-EN	Chiller 1 Enable	24VAC Maintained
BI	CH1-S	Chiller 1 Status	Dry Contact Maintained
AO	CHWBYPV-O	Chilled Water Bypass Valve Output	0-10VDC
AI	CHW-DP	Chilled Water Differential Pressure	0-10VDC
AI	OA-T	Outdoor Air Temperature	Nickel 1K RTD
AI	PCHW-F	Primary CHW Flow	0-10VDC
BO	PCHWP1-C	Primary CHW Pump 1 Command	24VAC Maintained
AO	PCHWP1-O	Primary CHW Pump 1 Output	0-10VDC
BI	PCHWP1-S	Primary CHW Pump 1 Status	Dry Contact Maintained
BO	PCHWP2-C	Primary CHW Pump 2 Command	24VAC Maintained
AO	PCHWP2-O	Primary CHW Pump 2 Output	0-10VDC
BI	PCHWP2-S	Primary CHW Pump 2 Status	Dry Contact Maintained

HEATING SYSTEM CONTROL SEQUENCE

HEATING SYSTEM ENABLE:

THE HEATING SYSTEM WILL AUTOMATICALLY START WHEN THE OUTSIDE AIR TEMPERATURE (OA-T) FALLS BELOW THE SYSTEM ENABLE SETPOINT (HTGOATLOCKOUT-SP) WHILE THE SYSTEM ENABLE (SYSTEM-EN) IS "ON". WHEN THE OUTSIDE AIR TEMPERATURE (OA-T) RISES ABOVE THIS SETPOINT (HTGOATLOCKOUT-SP) OR THE SYSTEM ENABLE (SYSTEM-EN) IS "OFF", THE HEATING SYSTEM WILL BE DISABLED.

BOILER CONTROL:

THIS SYSTEM CONSISTS OF ONE BOILER (BLR1-EN). THE BURNERS SHALL BE CONTROLLED VIA THEIR OWN INTERNAL CONTROLS.

HOT WATER PUMP CONTROL:

WHEN ENABLED, THE PUMPS (PHWPX-C) WILL BE STARTED AND WILL RUN SIMULTANEOUSLY. IF THE PUMP STATUS (PHWPX-S) DOES NOT MATCH THE COMMAND (PHWPX-C), AN ALARM WILL BE GENERATED AND THE PUMP WILL BE STOPPED. UPON LOSS OF STATUS (PHWPX-S), THE PUMP (PHWPX-C) WILL RESTART AFTER THE SYSTEM RESET (SYS-RESET) IS ACTIVATED. AFTER THE BOILER IS COMMANDED OFF, THE PUMP (PHWPX-C) WILL CONTINUE TO RUN FOR A SHORT TIME (5 MINS ADJ.) TO DISSIPATE THE HEAT.

HOT WATER LOOP PRESSURE CONTROL:

THE HW PUMP SPEED (PHWPX-O) SHALL BE CONTROLLED TO MAINTAIN THE SPECIFIED BUILDING-LOOP DIFFERENTIAL PRESSURE SETPOINT (HWDP-SP) AS RECOMMENDED BY THE BALANCING CONTRACTOR. IF THE PRIMARY FLOW (PHW-F) BELOW THE MINIMUM FLOW SETPOINT THE SYSTEM BYPASS VALVE (BYPV-O) WILL MODULATE OPEN TO PROVIDE MORE FLOW THRU THE BOILERS.

ADDITIONAL POINTS MONITORED BY THE FMS:

- PRIMARY HW SUPPLY TEMPERATURE (PHWS-T)
- PRIMARY HW RETURN TEMPERATURE (PHWR-T)
- OUTDOOR AIR TEMPERATURE (OA-T)

Type	Name	Description	Signal
BO	BLR1-EN	Boiler 1 Enable	24VAC Maintained
AO	BYPV-O	Bypass Valve Output	0-10VDC
AI	HW-DP	Hot Water Differential Pressure	0-10VDC
AI	OA-T	Outdoor Air Temperature	Nickel 1K RTD
AI	PHW-F	Primary HW Flow	0-10VDC
BO	PHWP1-C	Primary HW Pump 1 Command	24VAC Maintained
AO	PHWP1-O	Primary HW Pump 1 Output	0-10VDC
BI	PHWP1-S	Primary HW Pump 1 Status	Dry Contact Maintained
BO	PHWP2-C	Primary HW Pump 2 Command	24VAC Maintained
AO	PHWP2-O	Primary HW Pump 2 Output	0-10VDC
BI	PHWP2-S	Primary HW Pump 2 Status	Dry Contact Maintained
AI	PHWR-T	Primary HW Return Temperature	Nickel 1K RTD
AI	PHWS-T	Primary HW Supply Temperature	Nickel 1K RTD

HYDRONIC SYSTEMS SEQUENCE OF OPERATIONS

PUMP INERTIA BASE SCHEDULE

MARK	MAKE/MODEL	TOTAL WEIGHT OF PUMP+ISOLATION BASE	# UNITS
IB-CWP	BULLDOG PR INERTIA BASE	1700	2
IB-LTWP	BULLDOG PR INERTIA BASE	1400	2

NOTES:

1. BASE SHALL BE MADE FROM WELDED STEEL CHANNEL, MINIMUM DEPTH OF 6". BASE SHALL WEIGHT 1.5 TIME THE PUMP SKID MIN.
2. BASE SHALL INCLUDE PROVISIONS FOR PUMP BASE MOUNTING, SUCTION DIFFUSER SUPPORT, ISOLATOR ATTACHMENT AND HEIGHT SAVING BRACKETS.
3. ISOLATORS SHALL BE PROVIDED WITH EACH BASE AND BE A LATERALLY STABLE STEEL SPRING WITH A 3" NOMINAL DEFLECTION. INCLUDE FOR EACH SPRING A NON-SKID NEOPRENE ACOUSTICAL BARRIER. ALL SPRINGS SHALL BE POWDER COATED.

LOUVER SCHEDULE

MARK	MANUFAC.	TYPE	MODEL #	CFM	DIMENSIONS (WxH)	FREE AREA (SQFT)
LVD-1	UNITED ENERTECH	FL-D-6.1	CUE-095-VG	360	18"X18"	0.76

NOTES:

1. CONTRACTOR TO PROVIDE MOUNTING BRACKET, INSECT SCREEN AND ALL FASTENERS TO INSTALL EQUIPMENT IN EXTERNAL WALL. COLOR BY ARCHITECT.
2. CONTRACTOR TO PROVIDE LOW-LEAK ACTUATED DAMPER INLINE WITH LOUVER - COMPLETE WITH 120VAC BELIMO ACTUATOR. DAMPER TO BE INTERLOCKED WITH EF-1 SUCH THAT THE DAMPER OPENS UPON ENERGIZING OF FAN MOTOR.

DH&W
ARCHITECTURE INTERIORS PLANNING

Public Library Chiller and Boiler Improvements

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Chattanooga, TN 37402

Date: January 4, 2019
Drawn: SAA
City Project L-018-001 DHW #2180

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Revisions

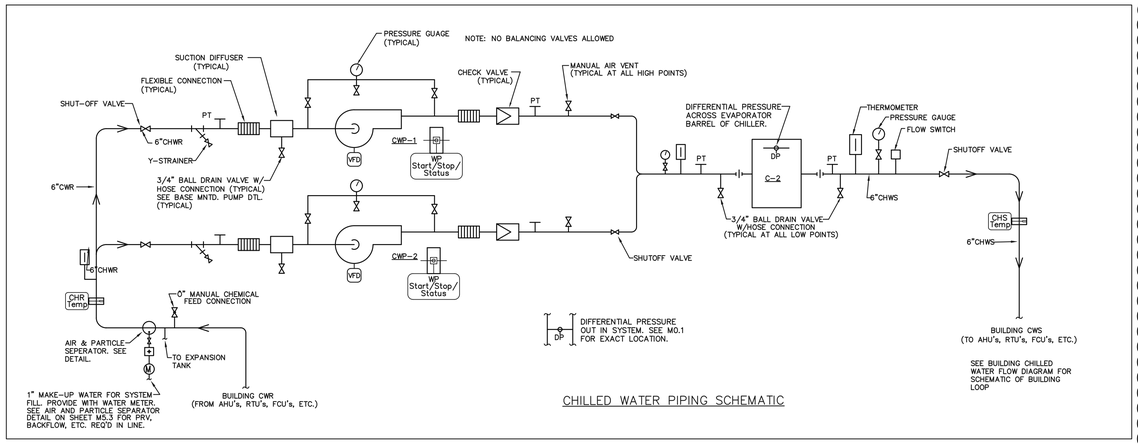
Revision Number	Revision Description	Revision Date
1	ADDENDUM 1	01/23/2019

Title:

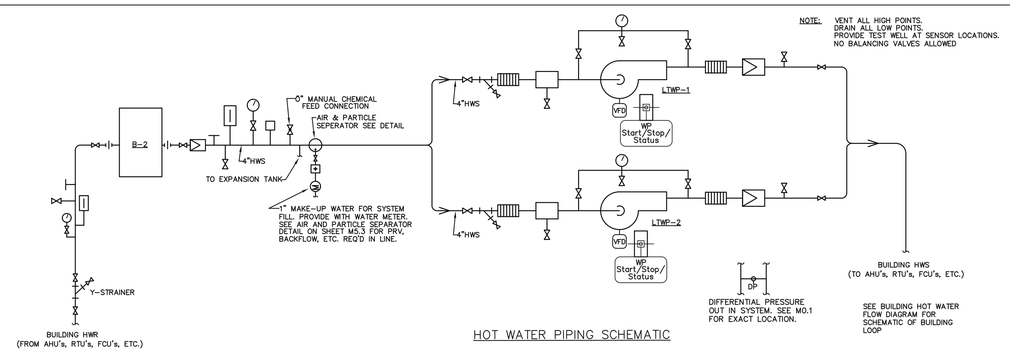
HVAC SCHEDULES

Sheet No.

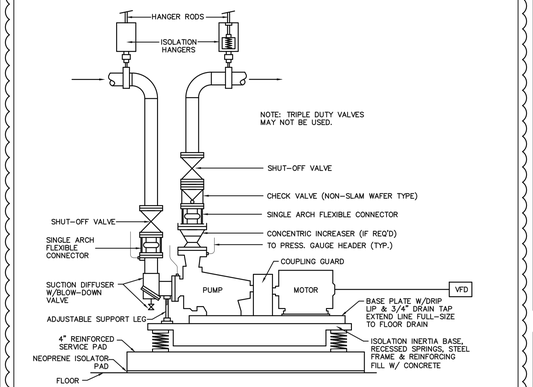
M-300



CHILLED WATER PIPING SCHEMATIC

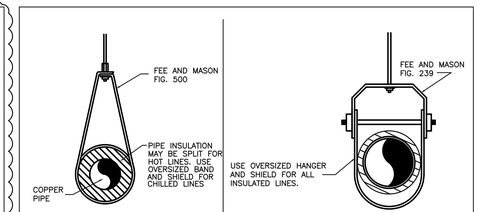


HOT WATER PIPING SCHEMATIC



(CENTRIFUGAL END SUCTION TYPE)

DETAIL–BASEMOUNTED PUMP
15540–D
NO SCALE



PIPE SUPPORT DETAILS
15140–AA
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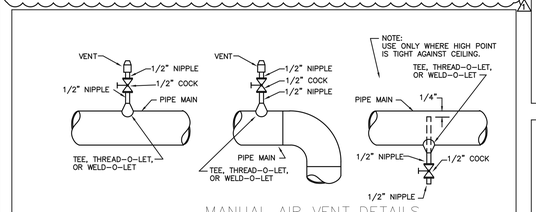

MANUAL AIR VENT DETAILS
15060–A
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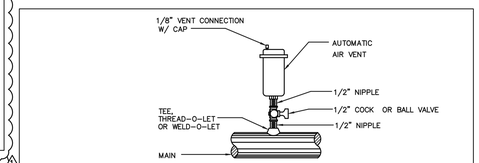
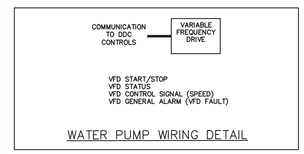
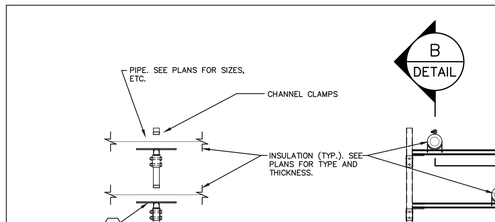


NOTE: WHERE POSSIBLE, EXTEND FULL-SIZE DRAIN LINE FROM VENT CONNECTION TO NEAREST AHU OR FCU DRAIN PAN.

DETAIL – AUTOMATIC AIR VENT
15060–B
NO SCALE



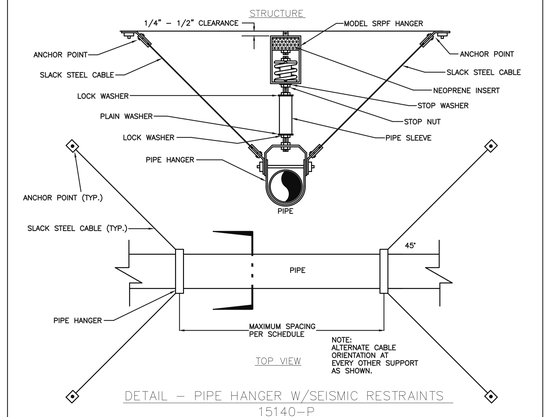
WATER PUMP WIRING DETAIL



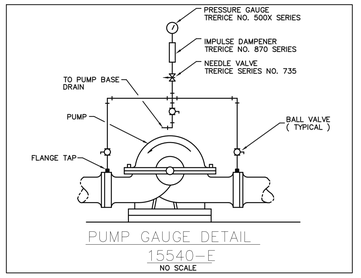
FLOOR MOUNTED PIPE SUPPORT DETAILS
NO SCALE

DETAIL NOTES

TAG	NOTE
1	PROVIDE FIELD FABRICATED UNISTRUT OR EQUIVALENT PIPE SUPPORTS AS SHOWN ON THE PLANS. SEE PLANS FOR LOCATIONS AND COORDINATE REQUIRED HEIGHT WITH PIPE CONNECTIONS AT THE RESPECTIVE EQUIPMENT CONNECTIONS. PROVIDE ADDITIONAL HORIZONTAL CHANNEL AND COMPONENTS FOR SUPPORT OF ADDITIONAL PIPING. VERTICAL CHANNELS TO BE LONGER THAN NORMALLY PROVIDED AND OVERALL HEIGHT TO BE FIELD VERIFIED AND COORDINATED WITH THE MANUFACTURER PRIOR TO ORDER. PROVIDE ALL APPURTENANCES, ACCESSORIES, ETC. AS REQUIRED FOR INSTALLATION. INSTALL PER MANUFACTURER'S RECOMMENDATIONS. SIZE STRUTS PER MANUFACTURER'S RECOMMENDATIONS
2	PROVIDE POST BASE BY TELESTRUT OR EQUIVALENT. SECURE BASES TO FLOOR WITH EXPANSION ANCHORS. SIZE BASE PER MANUFACTURER'S RECOMMENDATIONS



DETAIL – PIPE HANGER W/SEISMIC RESTRAINTS
15140–P
NO SCALE



PUMP GAUGE DETAIL
15540–E
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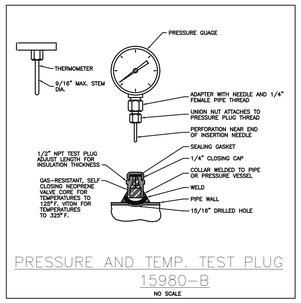

PRESSURE AND TEMP. TEST PLUG
15980–B
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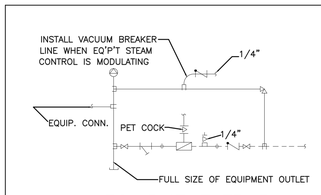
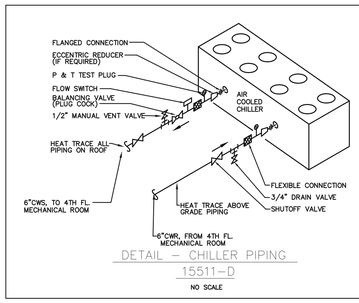
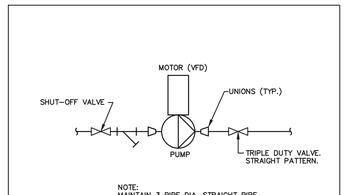


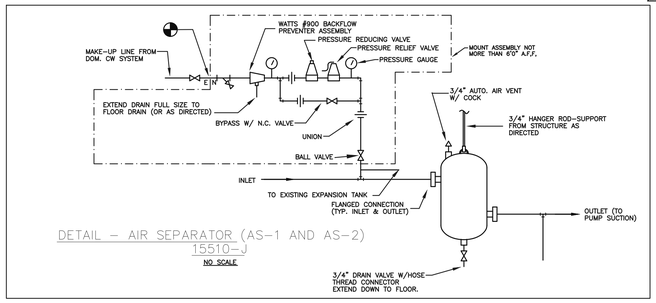
EQUIPMENT TRAP, WITH BY-PASS
15525–C
NO SCALE



DETAIL – CHILLER PIPING
15511–D
NO SCALE



DETAIL–IN LINE PUMP
NO SCALE



DETAIL – AIR SEPARATOR (AS–1 AND AS–2)
15510–J
NO SCALE

DH&W
ARCHITECTURE INTERIORS PLANNING

Public Library Chiller and Boiler Improvements

1001 Broad Street
Chattanooga, TN 37402

Date: January 4, 2019
Drawn: SAA
City Project L-018-001 DHW #2180

C&A No. 18-011

CAMPBELL & ASSOCIATES, INC.
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1401 Carter St, Chattanooga, TN 37402
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Revisions

Revision Number	Revision Description	Revision Date
1	ADDENDUM 1	01/23/2019

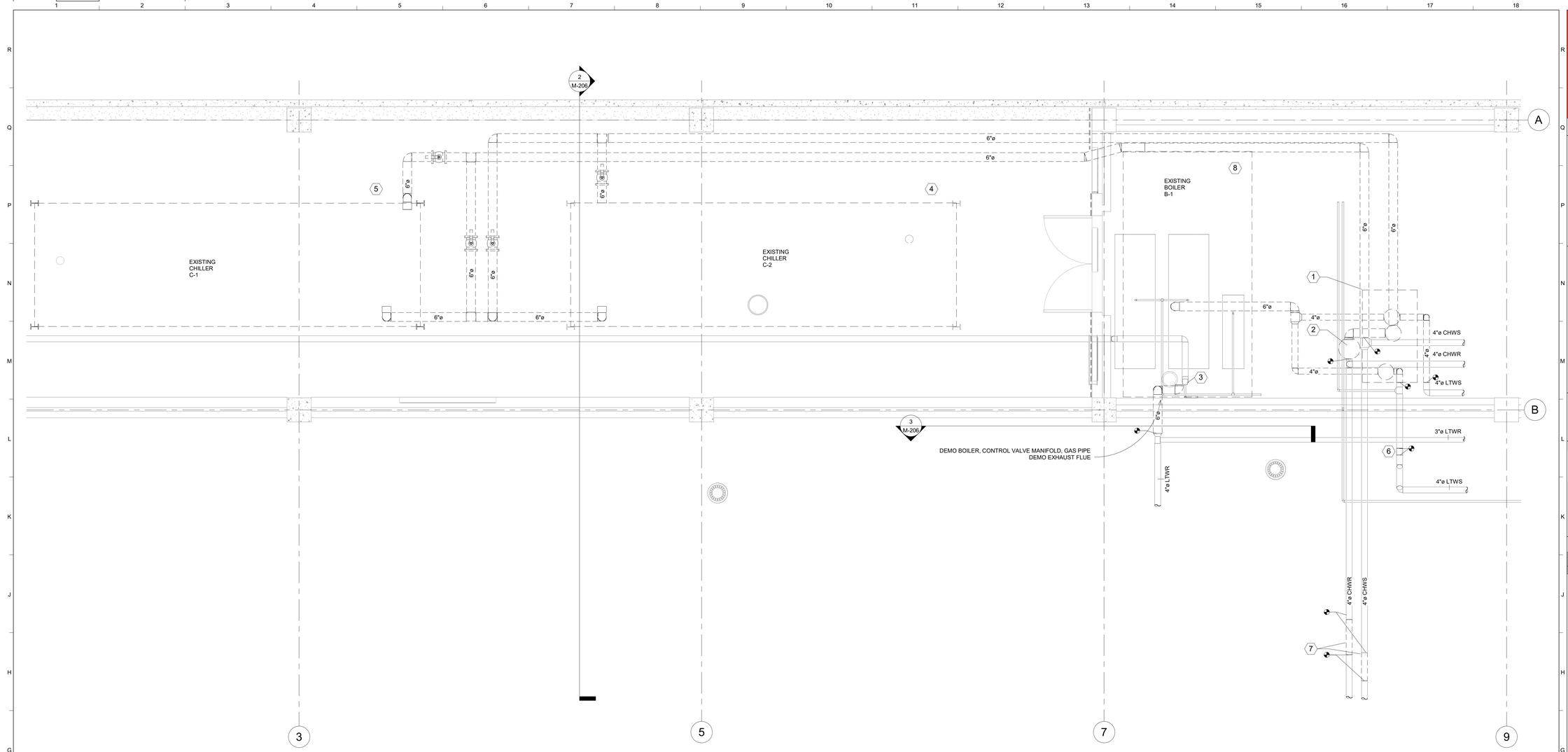
NOTE THAT THES DRAWINGS ARE PRODUCED IN COLOR. REFER TO COLOR DRAWINGS FOR CLARIFICATION OF NEW AND EXISTING CONDITIONS.

Title:

HVAC DETAILS

Sheet No.

M-400



DEMO PIPE 4TH FLOOR BOILER & CHILLER 1

SCALE: 3/8" = 1'-0"

MECHANICAL SHEET LIST

Sheet Number	Sheet Name	Construction Documents 01/04/2019	Addendum 1 01/23/2019
MD-205	HVAC PIPING DEMO - BOILER/CHILLER	X	X
M-206	HVAC PIPING - BOILER/CHILLER	X	X
M-300	HVAC - SCHEDULES	X	X
M-400	HVAC - DETAILS	X	X
M-401	HVAC - DETAILS	X	

PIPING DEMO CALLOUT NOTES

1. DEMO THREE INLINE PUMPS (EXISTING LTW-1,2 AND CHWP-1) AND ASSOCIATED STRUCTURAL FRAMING, CONCRETE PADS, PIPES, INSTRUMENTATION AND ACCESSORIES.
2. DEMO EXISTING AIR SEPARATOR AND ASSOCIATED STRUCTURE. DEMO FILL PIPE BACK TO BLOCK VALVE.
3. DEMO GAS TRAIN, CAP DOWNSTREAM OF EXISTING DIRT LEG.
4. DEMO NON-FUNCTIONING EXISTING CHILLER C-2 AT THE BEGINNING OF PROJECT. PLATFORM SHALL BE REVISED.
5. DEMO FUNCTIONING EXISTING CHILLER C-1 AFTER NEW CHILLER C-2 HAS BEEN INSTALLED AND TIED IN.
6. DEMO SECTION OF 4" LTWS PIPE FOR TIE-IN. CONTRACTOR TO CALCULATED MINIMUM SECTION TO BE REMOVED.
7. DEMO SECTIONS OF 4" CHWS/CHWR PIPES FOR TIE-IN. CONTRACTOR TO CALCULATED MINIMUM SECTION TO BE REMOVED.
8. DEMO EXISTING BOILER, CONTROLS, BMS, VALVING AND ACCESSORIES.

PIPING DEMO GENERAL NOTES

1. CONTRACTOR SHALL REMOVE AND DISPOSE OF ITEMS NOTED IN THIS DRAWING PACKAGE. IF EXISTING CONDITIONS REQUIRE EQUIPMENT OR DISTRIBUTION TO BE RELOCATED TO ACCOMMODATE THESE ACTIVITIES, THE CONTRACTOR SHALL CONSULT THE ENGINEER PRIOR TO ENGAGING IN DEMOLITION.
2. THE INTENT OF THIS PROJECT IS TO INSTALL ALL NEW EQUIPMENT AND PIPING TO TIE-IN POINTS WHILE ALL EXISTING EQUIPMENT IS IN OPERATION.
3. THE CONTRACTOR IS TO CONFIRM THAT DEMOLITION WILL NOT INTERFERE WITH THE OPERATION OR BALANCE OF EXISTING SYSTEMS IN AREAS NOT UNDER CONSTRUCTION PRIOR TO PERFORMING DEMOLITION.
4. COORDINATE DEMOLITION/SWITCHOVER OF EXISTING OPERATIONAL CHILLER AND BOILER WITH BUILDING OWNERS IN ORDER TO ACCOMMODATE BUILDING USAGE & SCHEDULE.
5. SEAL ALL PIPE PENETRATIONS WATER TIGHT ONCE PIPE IS REMOVED PATCH WALL TO MATCH EXISTING AS BEST AS POSSIBLE.
6. MEASURE AND RECORD EXISTING FLOW CONDITIONS PRIOR TO DEMOLITION.
7. DEMOLISH PIPE TO POINTS SHOWN. PERMANENTLY CAP PIPING IF LOCATION IS NOT TO BE REUSED AS A CONNECTION POINT.
8. EXISTING CONTROL VALVES SHALL BE DEMOLISHED.
9. ALL EXISTING PNEUMATIC CONTROLS ASSOCIATED WITH REPLACED EQUIPMENT SHALL BE REMOVED.
10. ALL EXTERIOR PIPING INSULATION CONTAINS TRACE AMOUNTS OF ASBESTOS AND SHALL BE REMOVED BY A THIRD PARTY ABATEMENT CONTRACTOR PRIOR TO THE DEMOLITION OF EXTERIOR PIPING SHOWN ON THIS DRAWING.

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Revisions

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1	ADDENDUM 1	01/23/2019

Title:

HVAC PIPING DEMO - BOILER/CHILLER

Sheet No.

MD-205