

**ADDENDUM NO. ONE (1)**

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Date: September 30, 2020 Architect's Project No. 20-19102.10

**PROJECT: GWINNETT COUNTY POLICE TRAINING INDOOR FIRING RANGE HVAC UPGRADE PROJECT, BL089-20**

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Client: Gwinnett County Board of Commissioners

Contract for: Provisions of Gwinnett County Police Training Indoor Firing Range HVAC Upgrade

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*This Addendum forms a part of the Contract Documents and Construction Drawings and modifies the original Bid Documents for the above referenced project.*

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**CHANGES TO THE CONTRACT DOCUMENTS**

**A. CHANGES TO NOTICE OF BID**

1. Sealed bids will be received by the Gwinnett County Purchasing Division, 75 Langley Drive, Lawrenceville, Georgia 30046 until **2:50 P.M. local time on Tuesday, October 20, 2020** and then publicly opened and read aloud at 3:00 P.M.
2. The 100-Yard Firing Range will be available for inspection Wednesday, October 7, 2020 between 9:00 A.M. and 1:00 P.M. No questions are to be asked during the visit.
3. Questions should be submitted to Marlo Puckett, Purchasing Associate III, via email [marlo.puckett@gwinnettcountry.com](mailto:marlo.puckett@gwinnettcountry.com) no later than **3:00 P.M. local time, Friday, October 9, 2020**. Only questions regarding the content of this addendum will be addressed.
4. Refer to attached BL089-20 Pre-Bid Conference Sign-In Sheets for a list of pre-bid conference attendees.

**B. CHANGES TO BIDDING FORM**

1. REPLACE Bidding Form Page 000410-1 and Page 000410-2 with attached Page 000410-1R and Page 000410-2R.

**C. CHANGES TO THE SPECIFICATIONS**

1. **Section 01 12 00 [Contract Responsibilities]**  
REPLACE current specification Section 01 12 00 [Contract Responsibilities] with attached specification Section 01 12 00 [Contract Responsibilities] Last revised September 30, 2020.
2. **Section 01 23 00 [Alternates]**  
REPLACE current specification Section 01 23 00 [Alternates] with attached specification Section 01 23 00 [Alternates] Last revised September 30, 2020.
3. **Section 23 52 15 [Copper-Finned Boilers]**  
REPLACE current specification Section 023 52 15 [Copper-Finned Boilers] with attached specification Section 23 52 15 [Copper-Finned Boilers] Last revised September 30, 2020.

**D. CHANGES TO THE DRAWINGS**

1. **ASK-1: Section D - Partial Plan at Bullet Trap & Firing Range**  
ADD architectural sketch no. ASK-1 [Section D - Partial Plan at Bullet Trap & Firing Range] dated 9/30/2020 to the current project drawing set.
2. **ASK-2: Partial Section at Bullet Trap & Firing Range**

ADD architectural sketch no. ASK-2 [Partial Section at Bullet Trap & Firing Range] dated 9/30/2020 to the current project drawing set.

3. **M0.3: Notes & Schedules**  
REPLACE current sheet number M0.3 with enclosed revised sheet M0.3 with revised date 9/30/2020.
4. **M0.5: Controls**  
REPLACE current sheet number M0.5 with enclosed revised sheet M0.5 with revised date 9/30/2020.
5. **M2.0: Chiller Yard – Mechanical**  
REPLACE current sheet number M2.0 with enclosed revised sheet M2.0 with revised date 9/30/2020.
6. **M2.1: First Floor Part D – HVAC**  
REPLACE current sheet number M2.1 with enclosed revised sheet M2.1 with revised date 9/30/2020.
7. **M2.2: Mezzanine Level Part B - HVAC**  
REPLACE current sheet number M2.2 with enclosed revised sheet M2.2 with revised date 9/30/2020.
8. **M3.0: AHU-6 Ductwork Section**  
REPLACE current sheet number M3.0 with enclosed revised sheet M3.0 with revised date 9/30/2020.

#### **E. CLARIFICATIONS**

1. **Question:** Section 011200 Contract Responsibilities, Part 1 - General Part 1.02 Summary Section A - Will the county be purchasing the equipment for the project or will the awarded contractor be purchasing all equipment?  
**Answer:** The Contractor will be purchasing the equipment specified on the drawings. Specifications will be revised to indicate this.
2. **Question:** Does all equipment need to remain operational during the project while replacing chillers and boilers or will major pieces of equipment need to be replaced during weekend hours?  
**Answer:** Base price to include temporary chilled water. Provide a deductive alternate to remove the temporary cooling scope.
3. **Question:** Will we be providing test & balance for the entire chilled water loop?  
**Answer:** Test and balance for chilled water will include the primary loop, and the secondary loop serving the firing range building. The training Center Loop secondary branch will be balanced during a future project.
4. **Question:** Will there be any airside test and balance for the airside of the project?  
**Answer:** All existing air handlers in the Mechanical Mezzanine (total of 4) are to be commissioned and balanced to restore proper operation and setpoints of the original design. AHU 8 will be balanced on the medium pressure side only. Terminal Units and low pressure ducts in the AHU 8 system are not tested in this scope.
5. **Question:** During the walk through we noticed a 4th roof stack that does not look to be utilized inside the mechanical room for the fresh air intake. Will we be able to utilize the 4th vent/penetration for a fresh air supply for AHU6?  
**Answer:** Yes, Addendum No. 1 drawings are revised to show connection to the existing stack.
6. **Question:** Will we be able to visit the site a second time to look at the job again before the bid is due?

**Answer:** Yes. if possible. Please schedule your site visit with the County.

7. **Question:** In the specs for the job, it was stated "the modulating firing range shall allow a leaving water temperature as low as 105°F without condensation". Flue gases start to condense at 128.5°F. With the outdoor reset schedule requested in the specifications can we present an alternative to the county to consider condensing boilers to gain building efficiency?

**Answer:** Existing heating coils in both buildings are sized based on high HW temperatures. These coils will not be able to maintain the designed capacity at these lower temperatures. We will revise the spec to modulate down to 140°F instead of 105°F.

8. **Question:** The current boiler piping system is not an equalized loop, the drawings say to reuse as much of the existing piping as possible. Does the new boiler piping need to be an equalized pipe system?

**Answer:** No – the boilers are close enough together to not require this.

9. **Question:** The drawings are calling for a new exhaust flue per manufacturers recommendation. Can we reuse existing flue vent if it matches the manufactures recommendation?

**Answer:** Yes. Addendum No. 1 drawings are revised to show connection to the existing stack in.

10. **Question:** The scheduled boiler is a noncondensing boiler. However, page 307 mandate a condensing boiler. (See below) A noncondensing boiler will require more intense modifications where a condensing boiler can meet the requirements without the additional modifications. Is a condensing boiler acceptable?

**Answer:** The Addendum No. 1 specifications are revised to indicate minimum leaving water temperature of 140°F.

11. **Question:** Will there be a separate bid for the electrical work or does the electrical portion need to be part of the HVAC portion and included in the HVAC proposal?

**Answer:** Electrical portion shall be part of the HVAC; this is an all-inclusive bid to be awarded to one service provider.

## **F. SUBSTITUTION REQUESTS**

1. None.

## **G. LIST OF ATTACHMENTS**

1. BL089-20 Pre-Bid Conference Sign-In Sheets
2. Bidding Form Page 000410-1R and Page 000410-2R
3. Specification Section 01 12 00 [Contract Responsibilities]
4. Specification Section 01 23 00 [Alternates]
5. Specification Section 23 52 15 [Copper-Finned Boilers]
6. Drawing sheet ASK-1: Section D - Partial Plan at Bullet Trap & Firing Range
7. Drawing sheet ASK-2: Partial Section at Bullet Trap & Firing Range
8. Drawing sheet M0.3: Notes & Schedules
9. Drawing sheet M0.5: Controls
10. Drawing sheet M2.0: Chiller Yard – Mechanical
11. Drawing sheet M2.1: First Floor Part D – HVAC
12. Drawing sheet M2.2: Mezzanine Level Part B – HVAC
13. Drawing sheet M3.0: AHU-6 Ductwork Section

PLEASE NOTE: Contractors must acknowledge receipt of this Addendum on Page **000410-3** of the Bidding Form.

END OF ADDENDUM NO. ONE (1)

date 9-16-2020

BL089-20 PRE-BID CONFERENCE

Representative Name	Company Name	Phone #	E-Mail Address
1. RICHARD MURRAH	DIUSTRIALCON	771-241-9485	birds@dc.orgia.com
2. Andy Mize	UMI	678-848-1047	AMize@unitedmaintenance.com
3. Andy Deane	UMI	679-314-8408	adeane@unitedmaintenance.com
4. R.J. Theler	The West Man of Atlanta	770-205-1606	DuctmarchAttain@Bellsoe.com
5. Michael Powers	Powers HVAC	770-487-4208	Bids@callpowers.com
6. Rob Pennebaker	John Pennebaker Co	770-231-5776	t.palermo@johnpennebaker.com
7. Robby West	Max Air Mech	404-561-9554	rwest@maxairinc.com
8. Joe Sienarella	MAX AIR	678-491-0420	J.Sienarella@MAXAIRINC.COM
9. BENNY WALSH	MAX AIR	678-801-7476	BWALSH@MAXAIRINC.COM
10. Rashelle White	Waters Mechanical	470-499-2829	Rwhite@watersmechanical.net
11. Eric Scott	Jordan Skala Engineers		escott@jordanskala.com
12. Cedric Johnson	Jordan Skala Eng	770-868-9943	cjohnson@jordanskala.com
13. HONG KANG	POH ARCHITECTS	410-909-1075	HONG.KANG@POHARCHITECTS.COM

Department Representative Name	Department
Doss Travis Tallant	Doss
Willie Bailey	GCPP
JAY MEISTER	Doss

Department Representative Name	Department
Mark Rickett	DOS

date 9-16-2020

BL089-20 PRE-BID CONFERENCE

<u>Representative Name</u>	<u>Company Name</u>	<u>Phone #</u>	<u>E-Mail Address</u>
1. <u>Debra Presley</u>	<u>Presley Inc</u>	<u>770-482-6552</u>	<u>presley@presleyenterprises.com</u>
2. <u>Jason Nieves</u>	<u>J.R. Electrical</u>	<u>678-414-3710</u>	<u>jason@jrelectricalusa.com</u>
3. <u>Laurie Doyle</u>	<u>JR Mechanical &amp; Plb</u>	<u>678-431-8019</u>	<u>Ldoyle@jr-mechplumb.com</u>
4. <u>Don Carroll</u>	<u>B&amp;W Mech</u>	<u>706-296-3349</u>	<u>doncarroll@bwmech.com</u>
5. <u>Abraham Mack</u>	<u>B&amp;W Mech</u>	<u>770-841-8202</u>	<u>abraham.mack@bwmech.com</u>
6. <u>Frank Gulia</u>	<u>Mid Atlantic Ren.</u>	<u>410-336-9360</u>	<u>fgulia@midatlanticrenovation.com</u>
7. <u>Chris Martin</u>	<u>B&amp;W Mechanical</u>	<u>770-845-2326</u>	<u>Chris.martin@bwmech.com</u>
8. <u>COLIN CAMPBELL</u>	<u>MARTIN MECH.</u>	<u>(800)344-5013</u>	<u>CCAMPBELL@MARTINMECHANICAL.COM</u>
9. <u>Brad Barber</u>	<u>Martin's Mechanical</u>	<u>(706)296-9079</u>	<u>bbarber@martinmechanical.com</u>
10. <u>RAND DOERING</u>	<u>IRBAE</u>	<u>404-633-2587</u>	<u>RAND@IRBWARD.COM</u>
11. <u>Chip Payne</u>	<u>B&amp;W Mech</u>	<u>678-217-4449</u>	<u>chip.payne@bwmech.com</u>
12. <u>PETE FOSTER</u>	<u>GACI</u>	<u>404-823-2755</u>	<u>Pfoster@gaci.biz</u>
13.			

<u>Department Representative Name</u>	<u>Department</u>	<u>Department Representative Name</u>	<u>Department</u>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

**BL089-20**

**Gwinnett County Police Training Facility Indoor Firing Range HVAC Upgrade Project**

**COMPANY NAME** \_\_\_\_\_

Bidder submits the following lump sum/unit prices for the **Gwinnett County Police Training Facility Indoor Firing Range HVAC Upgrade Project** identified in Bid Form as part of this Bid. Failure to utilize and return this form as a part of the bidding documents may result in rejection of bid. This project may be awarded by base bid or base bid plus selected alternate(s) as deemed in the best interest of the County.

**BIDDING FORM**

**ITEM**

The undersigned agrees to provide all necessary labor, material, and equipment for the as defined in the Construction Documents for:

**A. BASE BID, Gwinnett County Police Training Facility Indoor Firing Range HVAC Upgrade Project**

LUMP SUM BASE BID

\_\_\_\_\_ Dollars and \_\_\_\_\_ Cents  
(\$ \_\_\_\_\_ )

**B. ALTERNATE BIDS, Gwinnett County Police Training Facility Indoor Firing Range HVAC Upgrade Project**

Alternate Bids are provided in accordance with Alternates, Section 01 23 00, of the Specifications. Scope of Work for the Alternates is more fully described in that Section. The pricing below fully implements the work described.

**ADD**

**Alternate No. 1:** Provide UV System for Air Handling Unit 5A and controls to interlock the UV system with the Building Automation System as documented on HVAC drawings. \$ \_\_\_\_\_

**Alternate No. 2:** Provide UV System for Air Handling Unit 5B and controls to interlock the UV system with the Building Automation System as documented on HVAC drawings. \$ \_\_\_\_\_

**Alternate No. 3:** Provide UV System for Air Handling Unit 6 and controls to interlock the UV system with the Building Automation System as documented on HVAC drawings. \$ \_\_\_\_\_

**Alternate No. 4:** Provide UV System for Air Handling Unit 7 and controls to interlock the UV system with the Building Automation System as documented on HVAC drawings. \$ \_\_\_\_\_

BIDDING FORM  
000410-1R

**BL089-20**

**Gwinnett County Police Training Facility Indoor Firing Range HVAC Upgrade Project**

**COMPANY NAME** \_\_\_\_\_

**ADD**

**Alternate No. 5:** Provide UV System for Air Handling Unit 8 and controls to interlock the UV system with the Building Automation System as documented on HVAC drawings.

\$ \_\_\_\_\_

**Alternate No. 6:** Provide Bipolar Ionization for Air Handler Unit 8 and controls to interlock the Bipolar Ionization system with the Building Automation System as documented on HVAC drawings.

\$ \_\_\_\_\_

**DEDUCT**

**Alternate No. 7:** Remove chiller rental and associated temporary power feeds.

\$ \_\_\_\_\_

**NOTES**

\*Individuals, firms and businesses seeking an award of a Gwinnett County contract may not initiate or continue any verbal or written communications regarding a solicitation with any County officer, elected official, employee or other County representative without permission of the Purchasing Associate named in the solicitation between the date of the issuance of the solicitation and the date of the final contract award by the Board of Commissioners. Violations will be reviewed by the Purchasing Director. If determined that such communication has compromised the competitive process, the offer submitted by the individual, firm or business may be disqualified from consideration for award.

## SECTION 01 12 00

## CONTRACT RESPONSIBILITIES

## PART 1 – GENERAL

## 1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Conditions and other Division Specification Sections apply to this Section.

## 1.02 SUMMARY

- A. Owner will furnish equipment, perform work and award other contracts in addition to general construction contract. This Section itemizes known coordination items. Project Coordination Section indicates Contractor's responsibilities under these conditions. The Owner will have items prepared for pick-up or delivered to the site per the Construction Schedule.
- B. Exclude from Contract Sum items specifically identified in the following schedule as purchased/provided by Owner or purchased/provided and installed by Owner. Where Contractor has responsibility for installation of an Owner purchased/provided item, include in Contract Sum all costs associated with complete installation of the item and necessary coordination with the Owner.
- C. Items provided to Contractor by the Owner are in good repair and working order.
  - 1. Inspect items at time of delivery; immediately notify Owner of any damage.
  - 2. Items not identified as "damaged" at the time of delivery or pick-up are the complete responsibility of the Contractor and shall be maintained without damage through Substantial Completion.
  - 3. Repair or replace immediately items not identified as "damaged" at time of delivery and damaged prior to Date of Substantial Completion.
- D. **Schedule: There is no anticipated Owner furnished equipment, separate Owner awarded contracts or Owner performed scope of work.**

## PART 2 – PRODUCTS (NOT USED)

## PART 3 – EXECUTION

## 3.01 SCHEDULES

Item	Contractor Responsibilities	Owner Responsibilities
A. Soil Testing	N/A	N/A
B. Permits and Fees	Pay all fees not paid by Owner.	N/A
C. Utilities	N/A	N/A

END OF SECTION 01 12 00

## SECTION 01 23 00

## ALTERNATES

## PART 1 – GENERAL

## 1.01 RELATED DOCUMENTS

- A. General provisions of Contract, including General and Supplemental General Conditions and other General Requirement sections, apply to work specified in this section.

## 1.02 REQUIREMENTS

- A. Definitions: Alternates are defined as products, materials, equipment, systems, methods, units of work, or major elements of construction which may, at Owner's option and under terms established by Instruction to Bidders and in the Contract, be selected for work in lieu of requirements of Contract Documents. Selection may occur prior to contract date, or may, by Agreement, be deferred for possible selection at a subsequent date.
- B. Alternates may or may not change scope and general character of the Work.
- C. Requirements of this section may be related to, but shall not be confused with, requirements of the Contract Documents related to "allowances", "unit prices", "change orders", "substitutions", and similar terms.
- D. Refer to Contract and subsequent modifications thereto, if any, for determination of which of several scheduled alternates have been accepted, and therefore are in full force and effect as though included originally in documents for the Base Bid.
- E. Notification: Immediately following award of Contract, prepare and distribute to Owner, Architect, Subcontractors and material suppliers, as applicable, a notification of the status of each alternate. Indicate that alternates have been accepted, rejected, or deferred for consideration at a later date. Indicate dates by which Owner must make decisions on deferred alternates in order not to delay project.

## 1.03 ALTERNATES

- A. General: Description herein for each alternate is recognized to be incomplete and abbreviated, but implies that each change must be complete for scope of work affected. Refer to applicable specifications sections and drawings for specific requirement of the Work. Coordinate related work and modify surrounding work as required to properly integrate with the work of each alternate. It is recognized that descriptions of alternates are primarily scope definitions and do not necessarily detail full range of materials and processes needed to the complete the Work as required.

A. Description of Alternates:

**Alternate No. 1 (Additive):** Provide UV System for Air Handling Unit 5A and controls to interlock the UV system with the Building Automation System as documented on HVAC drawings.

**Alternate No. 2 (Additive):** Provide UV System for Air Handling Unit 5B and controls to interlock the UV system with the Building Automation System as documented on HVAC drawings.

**Alternate No. 3 (Additive):** Provide UV System for Air Handling Unit 6 and controls to interlock the UV system with the Building Automation System as documented on HVAC drawings.

**Alternate No. 4 (Additive):** Provide UV System for Air Handling Unit 7 and controls to interlock the UV system with the Building Automation System as documented on HVAC drawings.

**Alternate No. 5 (Additive):** Provide UV System for Air Handling Unit 8 and controls to interlock the UV system with the Building Automation System as documented on HVAC drawings.

**Alternate No. 6 (Additive):** Provide Bipolar Ionization for Air Handling Unit 8 and controls to interlock the Bipolar Ionization system with the Building Automation System as documented on HVAC drawings.

**Alternate No. 7 (Deductive):** Provide deductive alternate pricing to remove chiller rental and associated temporary power feeds.

END OF SECTION 01 23 00

## SECTION 23 52 15

## COPPER-FINNED BOILERS

## PART 1 - GENERAL

## 1.1 GENERAL REQUIREMENTS

- A. All work specified herein shall be accomplished in accordance with the applicable requirements of Section 23 00 00 - HVAC General.
- B. Furnish and install boilers of the size, type, capacity and characteristics as shown on the equipment schedules and herein described.
- C. Equipment schedules and specifications are based on the one manufacturer listed on the schedule. Other manufacturers of equal quality and performance may be submitted to the Engineer for approval. When substitution of equipment is made, the Contractor shall be responsible for the costs of any item and engineering and construction revisions necessary in his or any other contract or trade that may be required to satisfy plans and specifications.

## 1.2 WORK INCLUDED

- A. The work under this section shall include all labor, materials, accessories, services and equipment necessary to furnish and install the high pressure steam generating system complete as indicated on the Drawings and as specified herein.

## 1.3 RELATED WORK

- A. Refer to Section 23 09 00 - Automatic Controls for additional work required.

## 1.4 ACCEPTABLE MANUFACTURERS

- A. Boiler shall be the make and model number shown on the Drawings or equivalent by Raypak (Model TP), Lochinvar (Model CH), Teledyne Laars (Series H), or RBI (Series 8000).

## PART 2 - PRODUCTS

## 2.1 GENERAL

- A. Packaged boiler shall be natural gas-fired water tube type designed for hot water service, with capacity as shown on the Drawings.
- B. Boiler shall be AGA certified. Burners shall be natural draft, stainless steel, and mounted in a removable drawer for service.
- C. Heat exchanger shall be constructed of solid copper water tubes with extruded integral fins. Tubes shall be vertically set and secured into glass coated cast headers that form the top and bottom of the heat exchanger. The tubes shall be arranged in a circular pattern and shall completely enclose the combustion chamber. Heat exchanger shall carry a 5-year limited warranty.
- D. Combustion chamber shall be insulated with a lightweight cast refractory backed up with fiberglass insulation.

- E. Boiler jacket shall be heavy gauge galvanized (or equal) steel with factory-applied baked enamel.
- F. Boiler controls shall be provided with a 110 to 24-volt transformer. The main gas valve shall be 24 volts.
- G. Boiler controls shall provide for 80% modulation in firing rate and shall allow a leaving water temperature as low as ~~105~~–160 degrees F (~~4071~~ degrees C) without condensation. Provide electronic ignition of the pilot. Gas safety controls shall prove pilot flame prior to opening of the main gas valve. The pilot shall be lit only when the boiler is calling for heat.
- H. Burner capacity reduction shall be controlled by an electric (self-contained) sensing element reset by the outdoor air temperature. At 32 degrees F outside air temperature, the leaving water temperature shall be 200 degrees F (105 degrees C) adjustable, and at 70 degrees F (21 degrees C) outside air temperature, the leaving water temperature shall be ~~110~~–160 degrees F (~~4371~~ degrees C). Provide a mechanical preset high-limit control set at 245 degrees F (118 degrees C) and an electric high-limit automatic reset control set at 242 degrees F (116 degrees C).
- I. Package shall include flow switch, or pressure differential switch, to prove water flow before the controls can be energized. The boiler controls shall be interlocked through the controls of the pump that is providing water flow for the boiler.
- J. Boilers shall be of the sealed combustion type, shall be capable of being staged in multiple boiler arrangements for sequential firing, shall bear the ASME stamp, shall be A.G.A. listed, and shall be approved for a working pressure of 160 psi. Boiler shall be capable of being vented directly “through-wall” or conventionally into a stack. Boiler shall be A.G.A. approved for either indoor or outdoor usage.
- K. NOx rating shall be less than 30 ppm.

## 2.2 AUXILIARY EQUIPMENT

- A. Provide high-pressure gas regulator, or additional gas regulator, where the available gas pressure is above the manufacturer’s standards.
- B. Provide controls to continue pump operation until the heat exchanger is cooled and refractory heat is absorbed. Provide pump interlock wiring with the controls.
- C. Provide pressure gauges for inlet and outlet of boiler and the pump, reading in small increments for measurement of pressure drop.

## PART 3 - EXECUTION

### 3.1 MECHANICAL SPACE AND INSTALLATION

- A. The boiler shall be installed in a space reserved for the boiler and provided with combustion air and ventilation required by the codes and shown on the Drawings.
- B. The boiler flue pipe shall be UL Listed and shall be the full size of the draft hood outlet. Provide a UL Listed vent cap and accessories as required for a complete installation.
- C. The floor of the mechanical space shall be noncombustible, or a noncombustible pad shall be installed under the boiler, as required by the boiler manufacturer’s AGA rating.

- D. Provide city water for make-up to the boiler. Include a water make-up assembly which includes a reduced-pressure type of backflow preventer acceptable to the local authority having jurisdiction. The mechanical room must be provided with an adequate drain and the floor must be waterproofed (or install the boiler in a 20-gauge metal pan with soldered joints, and connect the pan to the drain with a 1" (25-mm) type M copper pipe.)
- E. Connect the gas with a gas cock installed above ground and outside of the mechanical space, in addition to the gas cock furnished with each boiler gas train. Install gas regulator as required to reduce gas pressure to that required by the boiler.
- F. Connect hot water lines and pump to the boiler with adequate drains to flush and drain the system. Install pressure gauges on inlet and outlet of boiler and pump. Install the relief valve and carry full size to a point acceptable for discharge of hot water.
- G. Make the proper electrical connections for the boiler and equipment. Provide a disconnect means for the boiler controls, to turn off power to the main gas valve from an easily accessible point inside the mechanical room door.
- H. Fill the boiler with water, and pressure-test the boiler and system up to the rating of the relief valve. Clean the system with trisodium phosphate or equal cleaner, flush the system to remove all trash and dirt, and refill the system, including inhibitor and antifreeze as specified.
- I. Bleed the gas line in a safe manner and energize the boiler controls.

### 3.2 TEST

- A. Observe the ignition of the pilot and the main burner to make sure they are smooth and complete.
- B. Check out the safety controls and verify that they are functioning properly. Report the actual and design pressure drop through the boiler.
- C. Set the operating controls for the proper temperature.
- D. Operate the boiler for no less than 2 hours or return at the beginning of the heating season for completion of this test. Vary the outdoor sensor temperature from 32 degrees F (0 degrees C) to 70 degrees F (21 degrees C) and observe the reset of the boiler output. Record the pressure drop through the boiler and across the pump.
- E. Observe the pressure increase as the system heats up, and verify that the increase in pressure does not exceed 10%.
- F. Provide a written start-up report on company letterhead stating that ignition is proper, safety controls have been checked, and operating controls are set and functioning properly.

### 3.3 OWNER'S INSTRUCTIONS

- A. Provide on-site training of adequate time to satisfy the Owner in proper operation and maintenance of the boiler and trim.
- B. Provide the Owner's operator with three (3) copies of written instructions for operation and maintenance of the system. A letter shall be included listing the materials given to the operator.

END OF SECTION 23 52 15



**PIEPER  
O'BRIEN  
HERR**  
ARCHITECTS

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NOT VALID UNLESS SIGNED AND SEALED.

**CONSTRUCTION  
DOCUMENTS**



RELEASED FOR CONSTRUCTION

DRAWN BY: FF

CHECKED BY: HK

REVISIONS

REV #	DATE	DESCRIPTION	BY
A	9.30.20	HVAC REVS.	HK

**GWINNETT COUNTY  
POLICE TRAINING  
INDOOR FIRING RANGE  
HVAC UPGRADE  
PROJECT**

854 WINDER  
HWY.  
LAWRENCEVILLE,  
GA 30045

PROJECT NO. 20-19102.10

DATE 9.30.20

SHEET TITLE

**SECTION D  
PART. PLAN AT BULLET  
TRAP & FIRING RANGE**

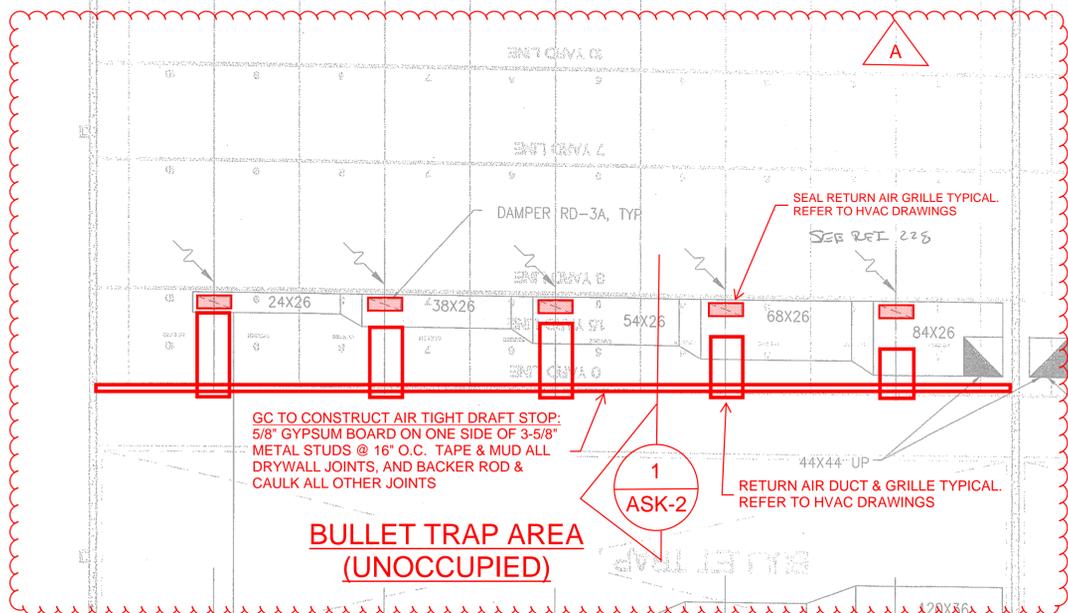
SHEET NO. **ASK-1**

Drawing location: M:\DWG\gwinnett\03075-001-PoliceTraining\DWG\Firing Range\FR-M-103.dwg Date Plotted: 15-JUN-2004 8:16:09 AM

MATCHLINE - SEE SHEET M-101

**100 YARD FIRING RANGE**

**EXISTING STORAGE /  
FUTURE 50 YARD FIRING RANGE**

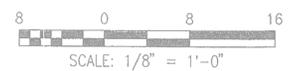
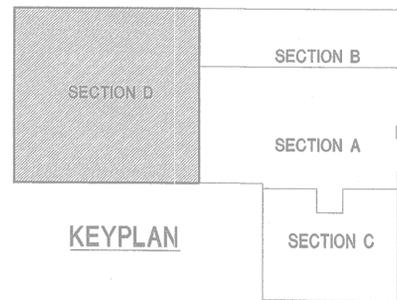


**BULLET TRAP AREA  
(UNOCCUPIED)**

**SECTION D  
PART. PLAN AT BULLET TRAP & FIRING RANGE**

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

PROJECT SCOPE INDICATED IN RED INK ONLY. ALL OTHER INFORMATION SHOWN IN BLACK INK IS EXISTING FOR REFERENCE ONLY.





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REVISIONS

REV#	DATE	DESCRIPTION	BY
A	9.30.20	HVAC REVS.	HK

REV#	DATE	DESCRIPTION	BY

**WINNETT COUNTY  
POLICE TRAINING  
INDOOR FIRING RANGE  
HVAC UPGRADE  
PROJECT**

854 WINDER  
HWY.  
LAWRENCEVILLE,  
GA 30045

PROJECT NO. 20-19102.10

DATE 9.30.20

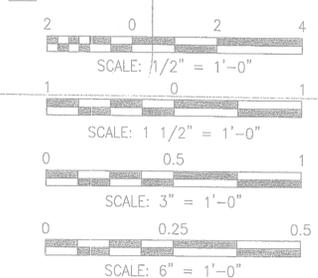
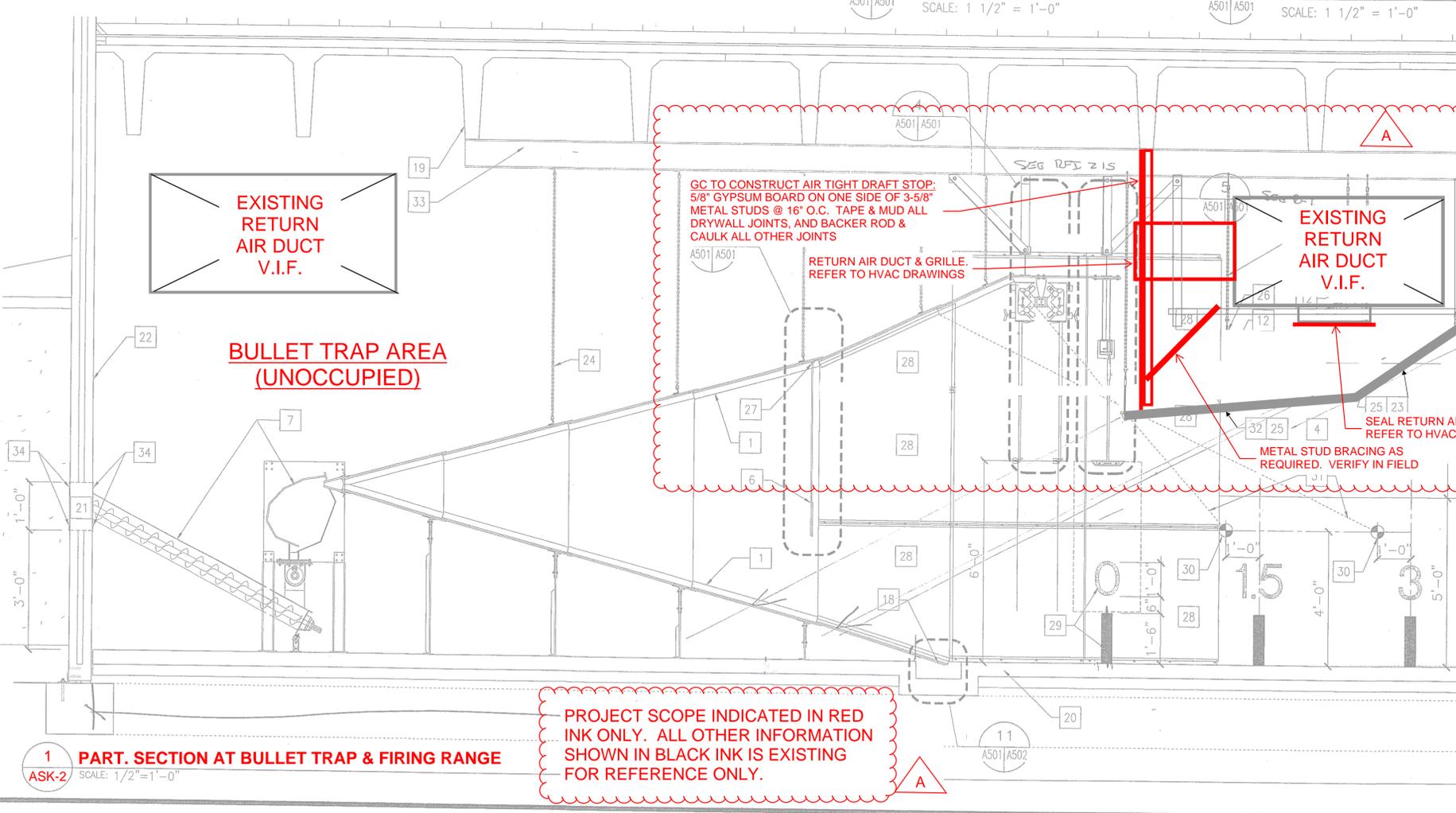
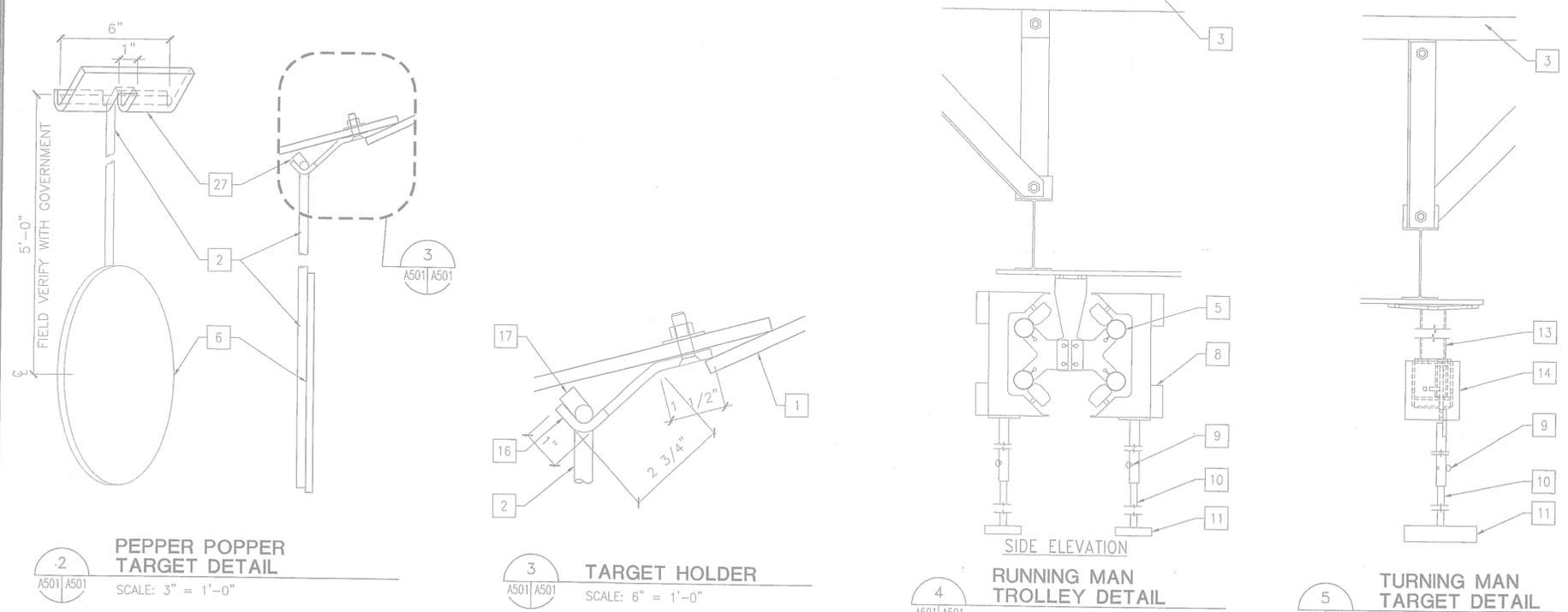
SHEET TITLE

**PART. SECTION AT  
BULLET TRAP & FIRING  
RANGE**

SHEET NO. **ASK-2**

**NOTES: (APPLY TO THIS SHEET ONLY)**

- 1 BULLET TRAP DEFLECTOR
- 2 1/2" DIAMETER STEEL ROD "T" BAR.
- 3 INTERMEDIATE CEILING FRAMING, SEE STRUCTURAL DRAWINGS.
- 4 ACOUSTICAL WALL PANELS ADHERE TO PRECAST WALL PANELS. CONTINUOUS FROM BULLET TRAP TO FARTHEST FIRING LINE.
- 5 MANUFACTURER'S STANDARD TUBE TRACK TARGET SYSTEM.
- 6 12" DIAMETER MANUFACTURER'S STANDARD PEPPER POPPER TARGET WELD CONTINUOUS TO "T" BAR.
- 7 FULLY CONTAINED AUGER STYLE BULLET COLLECTION SYSTEM, SEE SECTION 6/A401.
- 8 TARGETRY MANUFACTURER'S STANDARD TROLLEY SYSTEM FOR RUNNING MAN.
- 9 TIGHTLY FITTED REMOVABLE DETENT PIN AT TARGET HANGER ROD.
- 10 1/2" SQUARE STEEL ROD.
- 11 TARGET CLAMP.
- 12 BAFFLE HANGER CLIP WITH ALLOWABLE TOLERANCE OF 3 3/4". ADJUSTABLE ALONG THE 8 FOOT LENGTH OF THE BAFFLE PANEL.
- 13 STEEL ANGLE SUPPORTS 4" X 4" X 1/4" AT TARGET SYSTEM MANUFACTURER'S STANDARD SPACING.
- 14 TARGET SYSTEM POWER ACTUATOR.
- 15 FASTEN TO TROLLEY SYSTEM (4 HOLES) PER MANUFACTURER'S RECOMMENDATIONS.
- 16 3/8" AR500 STEEL BENT PLATE REACTIVE STEEL TARGET HOLDER.
- 17 WELDED TAB.
- 18 TOE OF BULLET TRAP SYSTEM. SEE STRUCTURAL DRAWING S101.
- 19 PRECAST CONCRETE DOUBLE-TEE CONSTRUCTION, SEE STRUCTURAL DRAWINGS.
- 20 CONCRETE FLOOR SLAB. SEE STRUCTURAL DRAWINGS.
- 21 WALL PENETRATION FOR BULLET COLLECTION SYSTEM 12"x12" CLEAR AND 3'-0" AFF. TO BOTTOM OF OPENING.
- 22 PRECAST INSULATED CONCRETE PANEL, SEE STRUCT. DRAWINGS.
- 23 2" THICK ACOUSTIC CEILING PANEL ADHERED TO STEEL BAFFLE. SEE REFLECTED CEILING PLAN FOR LOCATIONS & EXTENT.
- 24 HANGER PER MANUFACTURER'S RECOMMENDATION. ATTACH TO STRUCTURAL INTERMEDIATE SUPPORT SYSTEM ABOVE.
- 25 4'-0"x 8'-0" 1/4" AR500 STEEL PLATE. FACTORY FABRICATED BAFFLE MODULE.
- 26 PROVIDE TURNBUCKLE AT EACH ATTACHMENT FOR ADJUSTING BAFFLES. A MINIMUM OF 4".
- 27 3/8" STEEL BENT PLATE "PEPPER POPPER" TARGET HOLDER. WELD TO STEEL PLATE AT TOP OF TRAP. PROVIDE ONE FOR EACH FIRING LANE AT CENTERLINE OF LANE.
- 28 STEEL PLATE WALL PROTECTION.
- 29 PAINT SOLID BLACK LINE ON WALL - 4" WIDE TO A HEIGHT OF 18" AFF. AT YARD LINES INDICATED. PROVIDE 12" HIGH LACK, HELVETICA MEDIUM TEXT AT TOP OF EACH LINE, 24" AFF.
- 30 PROJECTED FIRING POINT.
- 31 PATH OF BULLET TRAVEL.
- 32 AT THIS ROW OF BAFFLE ONLY, PROVIDE 12" HIGH HELVETICA MEDIUM PRESSURE GRAPHIC, BLACK LANE NUMBER ADHERED TO BAFFLE AT CENTERLINE OF EACH LANE.
- 33 INTERM. SUPPORT SYSTEM. SEE STRUCTURAL DETAIL 3/S403.
- 34 MANUFACTURER'S STANDARD DUST COVER PLATE; BOTH SIDES.



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Project Number: 20-19102  
Drawn By: WW Checked By: CPJ

**CONSTRUCTION  
DOCUMENTS**



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REVISIONS			
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A	09/30/20	ADDENDUM-1	

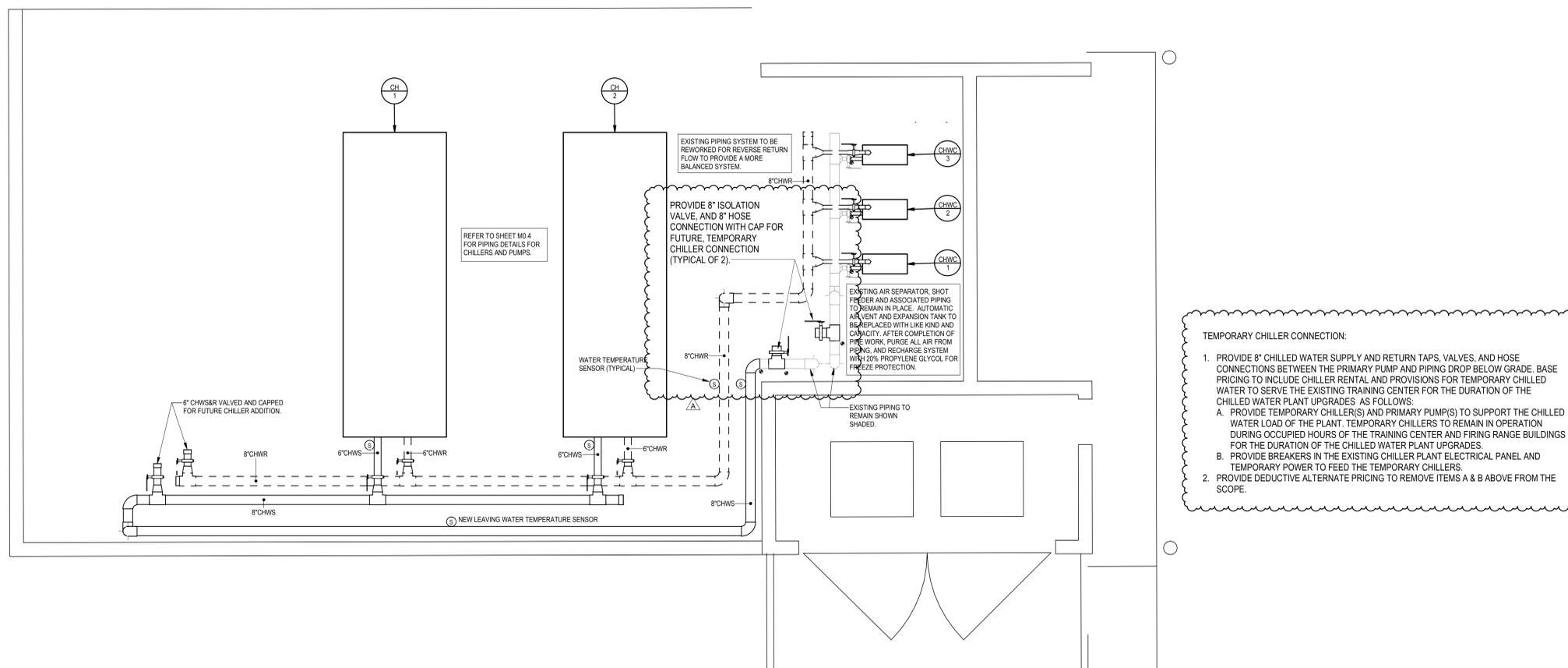
**GWINNETT COUNTY  
POLICE TRAINING  
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HVAC UPGRADE  
PROJECT**

**854 WINDER  
HWY.  
LAWRENCEVILLE,  
GA 30045**

**PROJECT NO.** 20-19102  
**DATE** 31 JULY, 2020

**SHEET TITLE**  
CHILLER YARD -  
MECHANICAL

**SHEET NO.** **M2.0**



**TEMPORARY CHILLER CONNECTION:**

- PROVIDE 8" CHILLED WATER SUPPLY AND RETURN TAPS, VALVES, AND HOSE CONNECTIONS BETWEEN THE PRIMARY PUMP AND PIPING DROP BELOW GRADE. BASE PRICING TO INCLUDE CHILLER RENTAL AND PROVISIONS FOR TEMPORARY CHILLED WATER TO SERVE THE EXISTING TRAINING CENTER FOR THE DURATION OF THE CHILLED WATER PLANT UPGRADES. AS FOLLOWS:
  - PROVIDE TEMPORARY CHILLER(S) AND PRIMARY PUMP(S) TO SUPPORT THE CHILLED WATER LOAD OF THE PLANT. TEMPORARY CHILLERS TO REMAIN IN OPERATION DURING OCCUPIED HOURS OF THE TRAINING CENTER AND FIRING RANGE BUILDINGS FOR THE DURATION OF THE CHILLED WATER PLANT UPGRADES.
  - PROVIDE BREAKERS IN THE EXISTING CHILLER PLANT ELECTRICAL PANEL AND TEMPORARY POWER TO FEED THE TEMPORARY CHILLERS.
- PROVIDE DEDUCTIVE ALTERNATE PRICING TO REMOVE ITEMS A & B ABOVE FROM THE SCOPE.

**1 CHILLER PLANT - MECHANICAL**  
SCALE: 1/4" = 1'-0"

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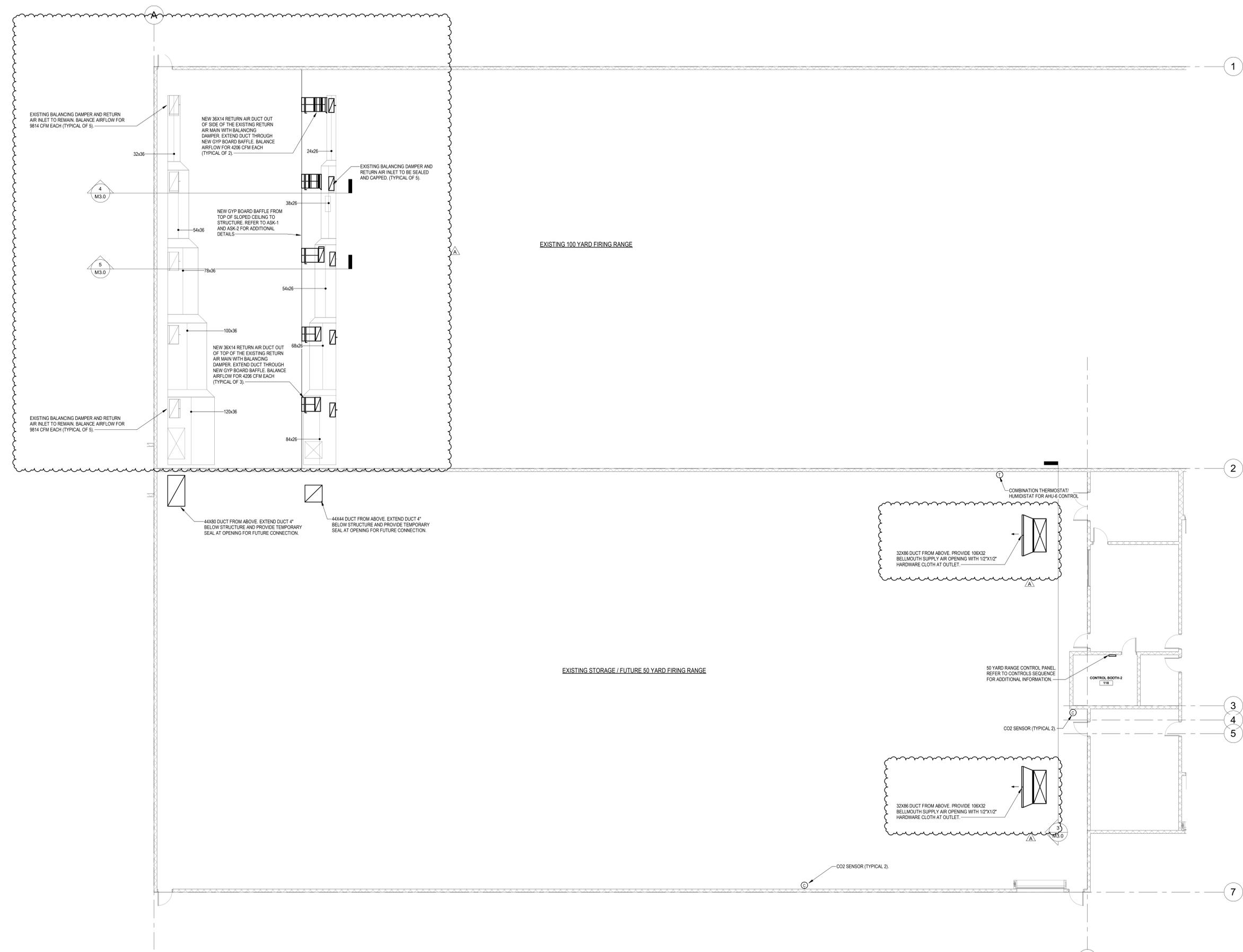
**GWINNETT COUNTY  
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**PROJECT NO.** 20-19102  
**DATE** 31 JULY, 2020

**SHEET TITLE**  
FIRST FLOOR PART D -  
HVAC

**SHEET NO.** **M2.1**



**1** EXISTING STORAGE / FUTURE 50 YARD  
RANGE PART PLAN - HVAC  
Scale: 1/8" = 1'-0"

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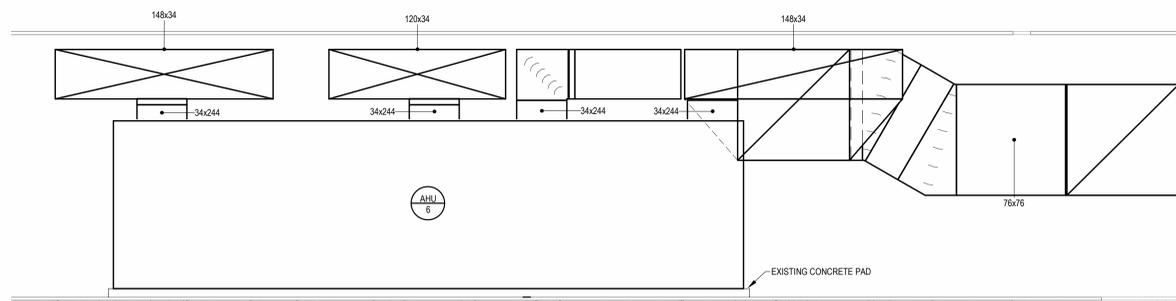




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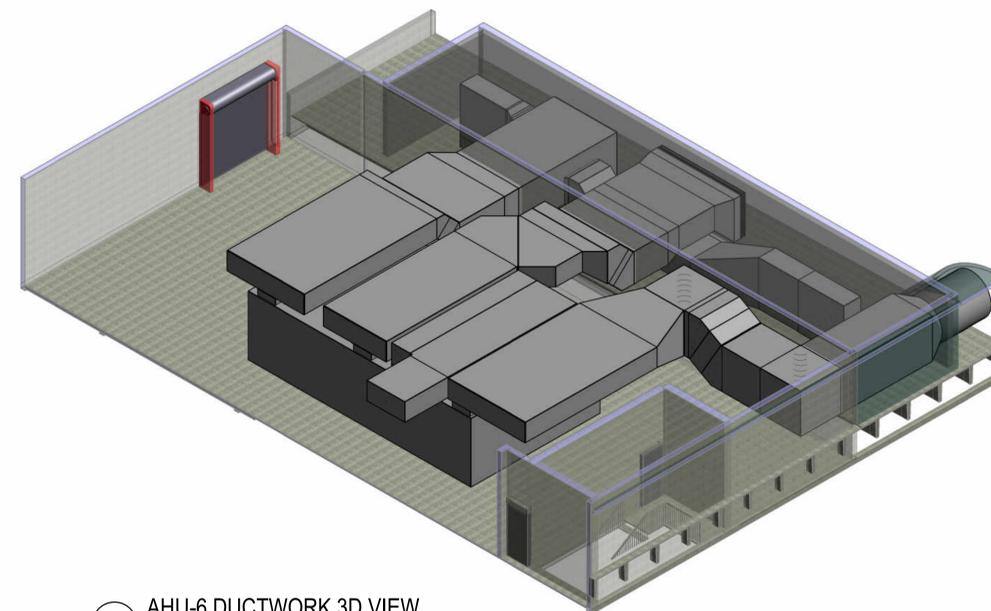
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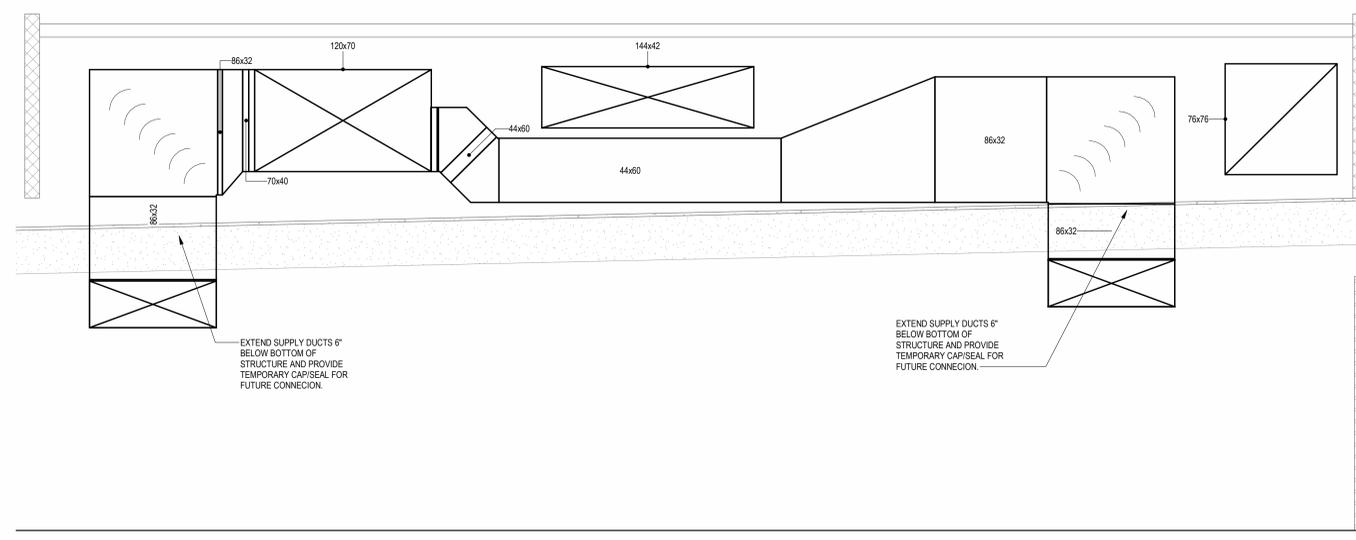
2 DUCT SECTION AT AHU-6

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



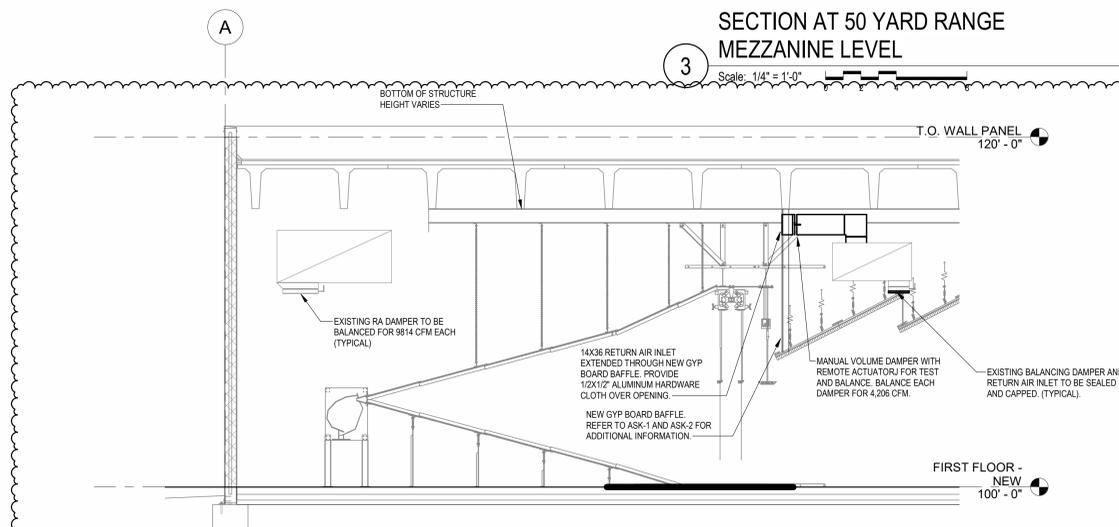
1 AHU-6 DUCTWORK 3D VIEW

Scale: 0 4 8 16



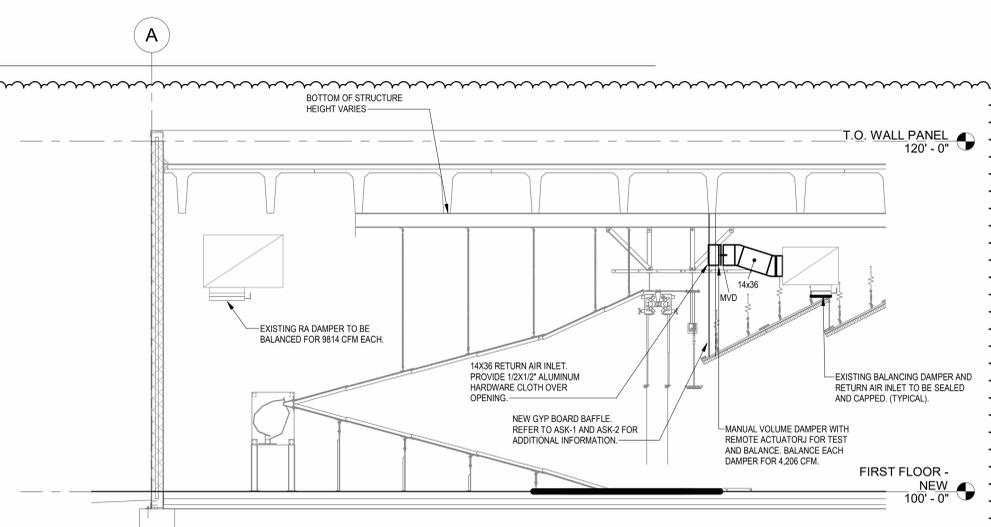
3 SECTION AT 50 YARD RANGE MEZZANINE LEVEL

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



5 100 YARD RANGE DUCT SECTION - HIGH STRUCTURE SIDE

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



4 100 YARD RANGE DUCT SECTION - LOW STRUCTURE SIDE

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

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SHEET TITLE  
AHU-6 DUCTWORK  
SECTIONS

SHEET NO. M3.0

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