



AMENDMENT NO. 4

Dated: 9/17/19

**Proposal for: Philadelphia Zoo Animal Hospital and Small Primate Holding
Mechanical Upgrades**

Project No.: 71-19-4365-01

Opening Date: 9/20/19

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A Professional Corporation

NOTICE

It is the sole responsibility of the sellers to ensure that it has received any and all Amendments and the Procurement Commissioner may in his/her sole discretion reject any bid for which all Amendments have not been executed and returned.

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PROPOSAL FOR

Philadelphia Zoo Animal Hospital and Small Primate Holding Mechanical Upgrades

ASSOCIATES

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IS AMENDED AS FOLLOWS:

1. Amendments will be posted in PRA Contracts to all known to have been added to the Bid holder's list or Qualified Sellers after the questionnaire due date. Each Seller shall ascertain prior to submitting Quote that Seller has received all Amendments issued and shall acknowledge their receipt in their Quote on PRA Contracts.

2. Philadelphia Zoo Animal Hospital Mechanical Upgrades:

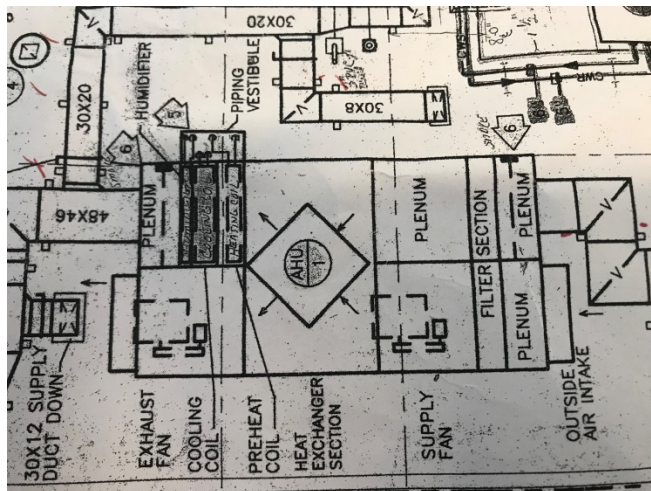
This contract requirement addition is for work to the existing AHU-1 (Custom HRU) that was not part of the original contract requirements.

Add the following note to Specification Section 230000 "SUMMARY OF WORK" Paragraph 1.3- subparagraph "B" section "3" subsection "I" as follows:

- I. Existing Roof Top Unit AHU-1. There is an existing roof top unit "AHU-1" on the roof as noted on Contract Drawing M1.0 Detail #1. This unit is a custom Raycan HRU (Heat Recovery Unit) with a 16,740 cfm supply and 13,810 cfm relief. This unit serves the hospital direct. The following are added contract requirements for this unit of which was not originally in the contract.*

1. **Chilled Water Coil Replacement AHU-1**

There is a 1,292.7 MBH Cooling Coil (575.4 Sensible, 256.8 gpm, 10 degree temperature rise (45-55), 6 row, 15.9 ft pressure drop). 16740 cfm, air pressure drop .58"WG, face velocity 385 fpm, 83.5DB/75WB incoming to 55.8DB/52WB. (4" chilled water supply and return). No apparent turbulators. Contract requirements shall be to isolate the chilled water coil in this unit and replace it. Recover the removed liquid (30% Glycol) for future re-use.



Approximate coil size (86"x72"-6 row). Contractor to verify on site of actual physical size of coil and actual connection sizes. Contractor responsible for opening AHU-1 removing and installing the coil with all required supply and return connections, testing and repairing leaks

Once the coil is replaced, Provide and install new 4" isolation valves (Durachoice VBB01GHD) on both the chilled water supply and return piping below the roof deck. Also provide and install (1) Watts model FV-4M1- 3/4 at the top of the return and supply manifold top cap (total of 2). This to include a tap and sea at the top of the manifold. Once the vents are installed; refill the coil and energize the coil by enabling a chilled water pump. Run for a period of 30 minutes on pump power only. Check for leaks and report to engineer/architect upon completion.

2. **New 3-way valves/actuators for AHU-1 chilled and hot water.**

This same existing HRU (AHU-1) has (2) 3-way control valves as follows (Verify in field-These are in the ceiling space of the washer/dryer room that is accessed through the OR Procedures Room. The ceiling in this room is a drop ceiling.:

- a. 3" Chilled Water: (256.8 gpm)
- b. 1.25" Hot Water: (15.3 gpm)

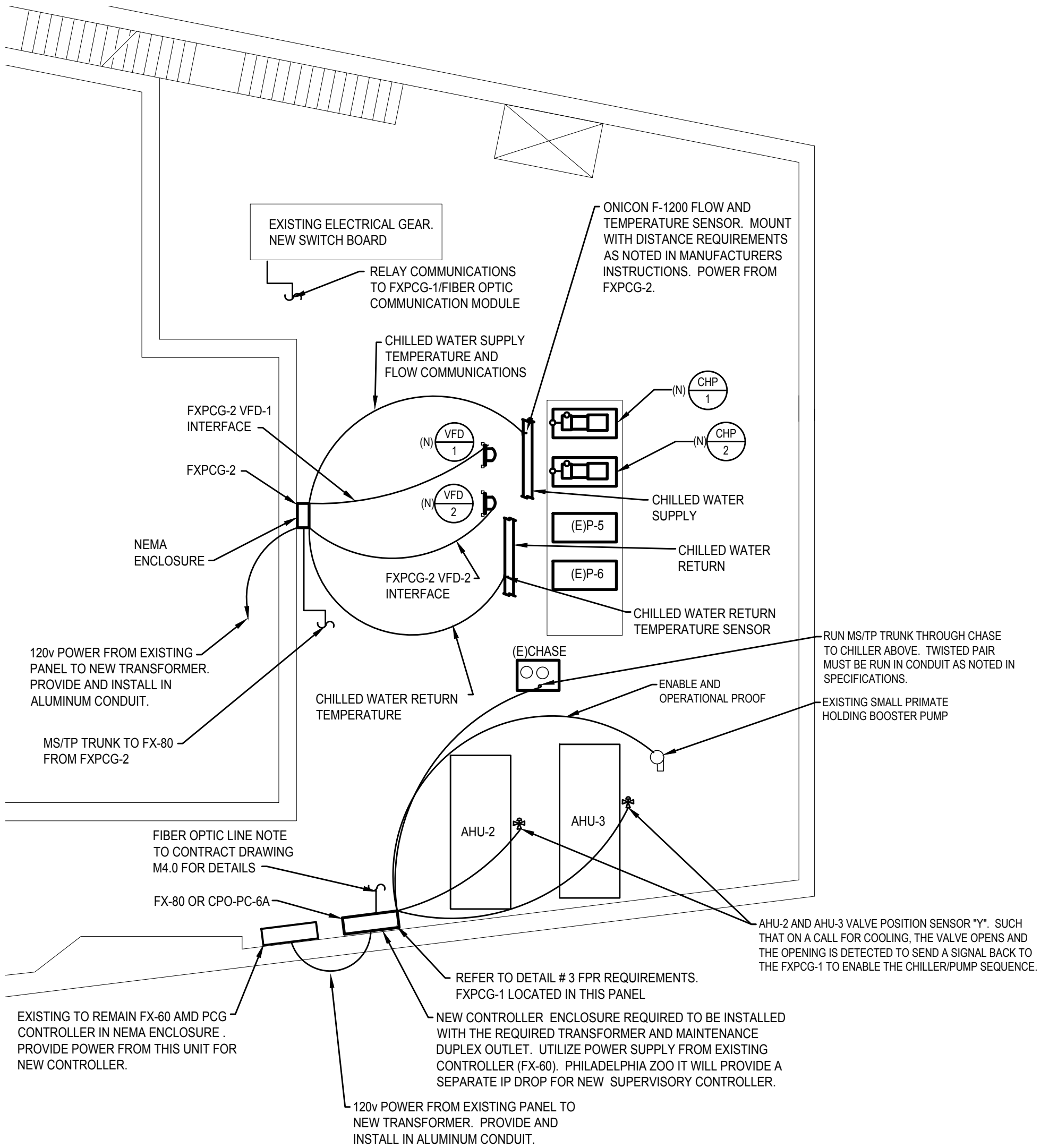
The existing valve actuators are Johnson Controls VA-7152-1001 proportional, 0 to 10VDC) with the 1900 conduit adapter kit. There is a (3") 3-way control diverting valve for the chilled water and a (1.25") hot water 3-way control diverting valve for the hot water. Contract requirements are the replacement of both valves and actuators utilizing the same signal from the existing Johnson Controls PLC (0 to 10Vdc). Note: there shall be a certain amount of discovery. Include in the bid the time to investigate the valves to assure connections. HRU Controls must be tested operational through existing PLC once valve replacement is complete. It is the contractor's responsibility to assure the valves cycle through the existing PLC command structure as they do currently. Replacement equipment shall be either Honeywell or Johnson Controls Products and shall communicate directly with the existing controller through the existing power and communication cabling. It is the contractor's requirement to isolate, drain, refill and test the new valves operational.



3. Philadelphia Zoo Animal Hospital Mechanical Upgrades: Add the attached sketch SKM4.1 as Detail #4 on Contract Drawing M4.1. This sketch indicates locations of controls defined in Contract Specification Section 230993
4. Philadelphia Zoo Small Primate Holding Mechanical Upgrades: Add the attached sketch SKM1.0. This sketch indicates the temporary cooling requirements for the Small Primate Holding building during construction.
5. Philadelphia Zoo Animal Hospital Mechanical Upgrades: The contract completion date for this portion of the work is 4/1/2020.
6. Philadelphia Zoo Small Primate Holding Mechanical Upgrades: The contract site start date is 4/1/2020 and completion date for this portion of the work is 6/30/2020.
7. NOTE: **Small Primate Holding** Specification Section 230993-1.1-J. Indicates **NEW** 3-way valves for both CC-1 and EHC-1. This requirement will be both for actuators and valves. Installation and integration to the new controllers of the valves shall be contract requirement.

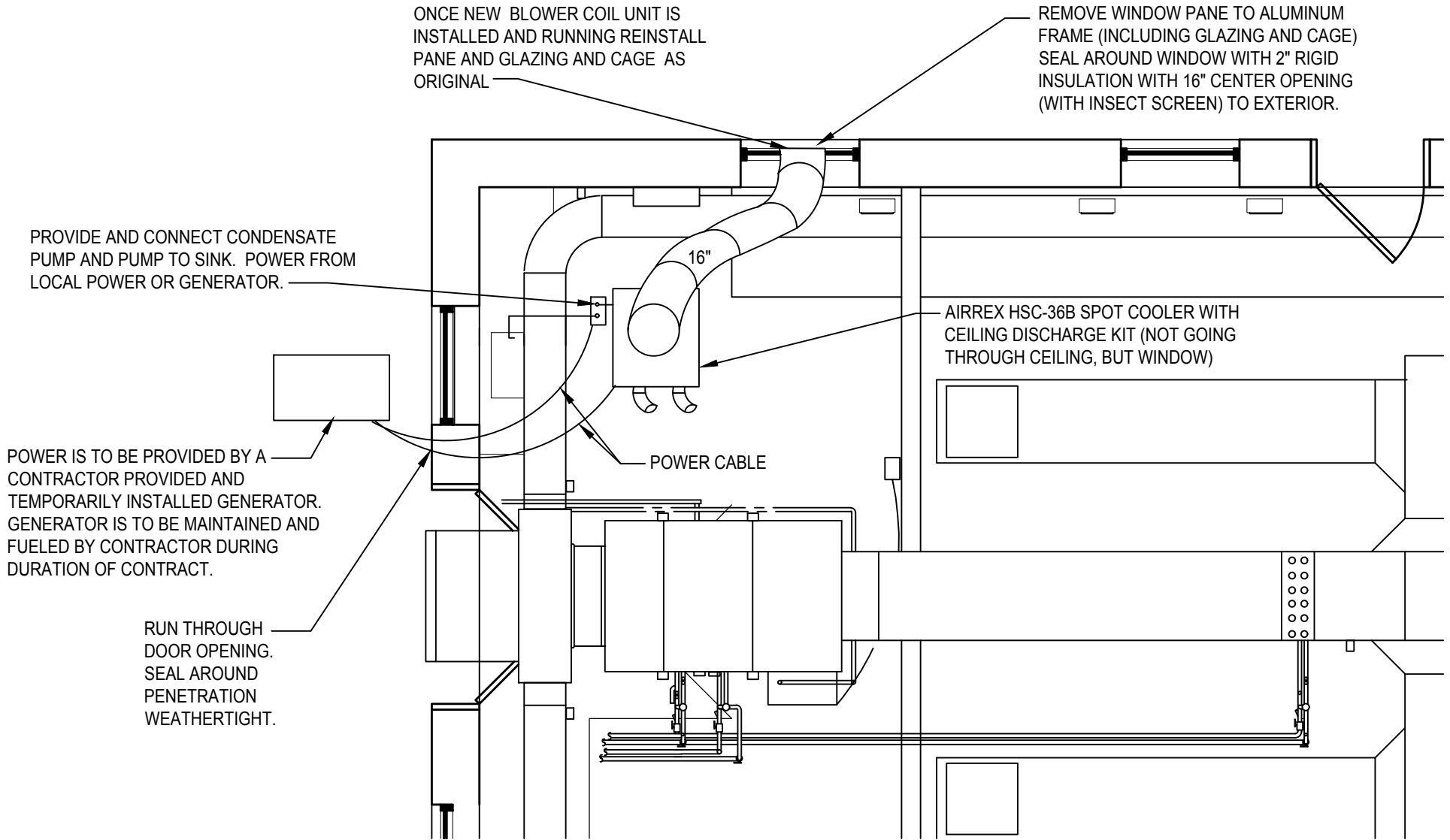
END OF AMENDMENT NO. 4

Seller must acknowledge receipt of Amendments on PRA Contracts.



MECHANICAL PLAN VIEW
1/8" = 1'-0"





MECHANICAL SMALL PRIMATE - TEMPORARY COOLING

1
SKM1.0

1/4" = 1'-0"

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WFW PROJECT # - 190019

PROJECT TITLE
**Animal Hospital
Mechanical Upgrades**

PROJECT NO.
71-19-4365-01

CITY OF PHILADELPHIA
DEPARTMENT OF PUBLIC PROPERTY
1400 JFK BOULEVARD
CITY HALL ROOM 701
PHILADELPHIA PENNSYLVANIA



BHA Job Number: 17-116
Scale: 1/8" = 1'-0"
Drawn By: AO
Sheet(s) Affected: N/A
Date: 09/17/19
Revision: Amendment #4

Sheet Name:
**HOSPITAL
BASEMENT CONTROLS**
Sheet No:
SKM1.0