

**The Philadelphia Parking Authority
Mellon Independence Center
701 Market Street, Suite 5400
Philadelphia, PA 19106**

**Bid No. 16-01
Fiber Optic Connectivity
Philadelphia International Airport
Addendum Two**

To: See Email Distribution List

From: Mary Wheeler
Manager of Contract Administration

Date: October 25, 2016

No Pages: 5 plus the revised drawings

This addendum is issued on October 25, 2016 prior to the due date to add, delete, modify, clarify and/or to respond to questions submitted by prospective bidders regarding the work included in the above referenced solicitation.

CLARIFICATIONS, CHANGES AND ADDITIONS TO THE BID DOCUMENTS

1. Corning is an approved equal for a fiber optic cable manufacturer.
2. The Cisco 48 port network switch shall be model WS-C3850-48T-E.
3. Regarding plan SS02.006: The Mighty Mo MMC42 is being replaced with APC AR3157 or approved equal.
4. The following revisions have been made to the drawings which are attached:

Addendum 1

SS02.001

- Revised keyed note #3 approximation of new duct footage and destination.
- Revised keyed note #4 to add the installation of a single mode fiber cable between the Economy Lot Comm Shack and the E-F Helix Comm Room.
- Revised keyed note #5 to indicate that the fiber splicing in the IP2 mechanical room would be performed under a separate contract.
- Revised the scale of the overall site plan.

SS02.002

- Revised keyed note #1 to indicate that the fiber splicing in the IP2 mechanical room would be performed under a separate contract.

Addendum 2

SS002.004

- Revised keyed note #4 to add the installation of a single mode fiber cable between the Economy Lot Comm Shack and the E-F Helix Comm Room.

SS02.005

- Revised keyed note #4 to add the installation of a single mode fiber cable between the Economy Lot Comm Shack and the E-F Helix Comm Room.
- Revised detail drawing #6 to show placement of new fiber patch panels in Economy Lot Comm Shack rack.

SS02.006

- Revised keyed note #1 to change network cabinet basis of design to APC AR3157 or equal with perforated doors.
- Revised keyed note #3 to clarify Cisco switch model number by adding “-L” making it WS-3850-48T-L.
- Revised keyed note #5 to clarify the Omnitron media converter chassis and modules models to be installed in the E-F Helix cabinet.

SS04.001

- Revised general note #4 to clarify that all conduits shall be rigid galvanized steel RGS.

SS05.001

- Revised keyed note #8 to indicate that the fiber splicing in the IP2 mechanical room would be performed under a separate contract. Removed associated symbol for “point of new connection” from drawing.
- Revised UCDS fiber drawing to show addition of the new single mode fiber between Economy Lot Comm Shack and E-F Helix Comm Room.

SS05.002

- Revised keyed note #2 to indicate that the fiber splicing in the IP2 mechanical room would be performed under a separate contract.
- Revised SM fiber patch plan drawing to show addition of single mode fiber cable and patch panel from the economy lot Comm Shack to the E-F Helix Comm Room.

SS05.003

- Revised MM fiber patch plan drawing to better show connectivity of multimode fiber cable and patch panel from the economy lot Comm Shack to the E-F Helix Comm Room.

QUESTIONS

1. **Question:** On drawing SS04.001 the details show Rigid Galvanized Steel RGS conduit underground, but Note #4 shows PVC schedule 40. Which conduit do you want?

Response: Note #4 is incorrect. All underground conduit shall be Rigid Galvanized Steel RGS, buried to a minimum depth of 36 inches. Please see the attached Division of Aviation Standard Conduit Requirements for other requirements.

2. **Question:** On page 2 of the specs it is noted only 5 lanes can be closed at one time at the toll plaza, however on SS00.001 it is noted that 10 lanes can be taken at one time. Which amount of lanes are allowed to be taken at a time for the work?
Response: 10 lanes may be closed at one time.
3. **Question:** Are you allowed to start work zone safety related work prior to 11 PM and commence electrical/fiber work at 11 PM, or are you not allowed to start work zone safety work until 11 PM?
Response: Zone safety related work can start prior to 11 PM as long as there are no lane closures and/or impact to normal traffic flow and the parking operations.
4. **Question:** Are flaggers required for all work zone related traffic control when the lanes are taken at the toll plaza?
Response: Flaggers are not required, however other zone related traffic control measures (signs, cones, flashing lights, etc.) are.
5. **Question:** Is there a specific excavation lay down and storage area for the project?
Response: The Authority will provide a storage and excavation lay down and storage area which will be identified at a later date.
6. **Question:** On SS05.001, is keyed note #8 removed from the scope of work?
Response: Yes.
7. **Question:** Is Corning an allowable substitute as a fiber optic cable manufacturer?
Response: Yes. Corning is an allowed manufacturer for the fiber optic cable.
8. **Question:** Are SC connectors an allowable substitute instead of ST, they are easier for the end user to manage from a patching standpoint?
Response: No, all patch panel connections shall be ST.
9. **Question:** The project plans (SS02.006), indicates the installation of a CISCO 48-port network switch (WS-C3850-48T) within Garage E-F Helix. CISCO has three (3) versions of this switch, a WS-C3850-48T-E, WS-C3850-48T-S and WS-C3850-48T-L. Please indicate which switch is to be installed for this project.
Response: The WS-C3850-48T-E is to be installed.
10. **Question:** On plan SS02.006, it indicates the installation of a 48U communications equipment cabinet (Mighty Mo MMC42) within Garage E-F Helix. Is the cabinet a 48U or 442U type cabinet and what is the required depth of the cabinet for the project?
Response: Basis of design has been changed to APC AR3157 or approved equal. Provide a network cabinet 750mm (29.53") W x 1070mm (42.13") D x 48U, with perforated mesh doors.
11. **Question:** On plan SS02.006 it indicates for the contractor to install a rack mounted Omnitron fiber to copper media converter chassis and full populate with part #100FX/TX. Omnitron has various chassis to choose from AC units or VDC units, a 5-unit chassis unit or a 14-unit chassis. Please confirm which is needed for the project?
Response: Provide Omnitron iConverter 19-module AC-powered chassis fully populated with MM ST 100FX/TX modules.

12. **Question:** (Referring to question #11) On this same issue, Omnitron has a Single Mode ST 1300nm media converter and a Single Mode ST 1300nm extended media converter. Please indicate which is recommended for the project. Also please indicate how many 100FX/TX media converters for Single Mode and Multi-mode within the chassis because as it is stated on the project plans, the chassis are to be fully populated.

Response: All optical fiber to the toll booths is multimode therefore MM modules are required. Provide three (3) Omnitron chassis, fully populated with MM ST 100FX/TX converter modules.

13. **Question:** The specifications indicate that the project must be completed within 60 Days from NTP or the PPA will apply liquidated damages of \$500.00 a day. Some of the products included within the project may have lead times such as some of the fiber optic cables which could impact the project timeline. Will the PPA take this into consideration prior to the contractor being charged with the LD's?

Response: The contractor shall make every effort to acquire materials in a timely manner so as not to impede the project scheduling. Any significant lead time delays shall be brought to the attention of the PPA and, if the delay is documentably unavoidable then a ruling shall be made on waiving the liquidated damages penalty.

END OF ADDENDUM TWO

Division of Aviation Standard Conduit Requirements

- **All cable shall be installed in conduit 3/4" min. size GRS for exterior locations and EMT for interior locations.**
- *Underground conduit 2" diameter and smaller shall be: 1) GRS with a minimum depth of 24", or 2) Schedule 40 PVC with a minimum depth of 36".*
- *Underground conduit 2" diameter and above shall be GRS or concrete encased PVC at a minimum depth of 24". A minimum 3" concrete encasement is required for NM conduit. A steel reinforcement cage is required for road crossings, which shall extend two feet beyond either side of the road.*
- *If conduit is subject to physical damage interior/exterior it must be schedule 40 RGS or schedule 80 PVC per NEC Art.305 (C) 4.*
- **Liquid tight flexible metal conduit for short connections is permitted, 6 ft maximum.**
- **Conceal conduit within finished walls, ceilings and floors wherever possible. All conduits shall be painted to match existing surfaces with 1-primer and 2-finish coats.**
- **Expansion fittings are required between buildings and at building expansion joints.**
- **Conduit shall be kept at least 12" away from high temperature radiating surfaces.**
- **Run conduit above water and steam piping.**
- **Double lock nut and bushings are required for terminations of conduit at sheet metal equipment.**
- **Conduit shall be rigidly held in place with pipe straps or approved hangers with not less than one strap or hanger for each 10' of conduit.**
- **All conduit fittings shall be compression type. Screw fittings are not acceptable.**
- **All holes through floor slabs and walls shall be core drilled. All openings shall be sleeved and sealed with fire resistant sealant.**
- **All conduit and boxes shall be labeled in accordance with DOA standards.**
- **All conduits shall be run parallel or perpendicular to the building lines.**
- **All installations shall be in compliance with the following codes and standards:**

ANSI - American National Standards Institute
ICC Electric Code
IES – Illuminating Engineering Society
IEEE - Institute of Electrical & Electronics Engineers
NEC - National Electrical Code
NEC- National Electrical Safety Code
NETA – National Electrical Testing Association
NFPA - National Fire Protection Association
OSHA - Occupational Safety and Health Administration
UL- Underwriters' Laboratories