



Invitation For Bid

[Federal]

Electrical and Data Cable Installation

RFP No.: FQ15233/ER

Volume 4 – Reports

Date: August 17, 2015



Project Name: 15-NEPP-01 In-Floor Duct Inspections
Task: Mezzanine Inspection Reports
Date of Inspection: August 22, 2014
Mezzanine Inspected: A01 - Metro Center East
Report Includes:
- Mezzanine Inspection Checklist
- Field Photos
- Existing AFC Installation Plan with field notes

Review Phase <u>Final</u>		Date <u>12/17/14</u>
REVIEW PRINT		
Discipline <u>Civil</u>	Reviewer <u>MAP</u>	Date <u>12/17/14</u>
<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>
Discipline Leader <u>Meghan Powell</u>	Date <u>12/17/14</u>	

Mezzanine Inspection Report (Scoping)


Date: 08/22/2014	Station Name: A01 Metro Center East	Mezzanine #: 019	Completed By: Mike Butler
------------------	-------------------------------------	------------------	---------------------------

Summary

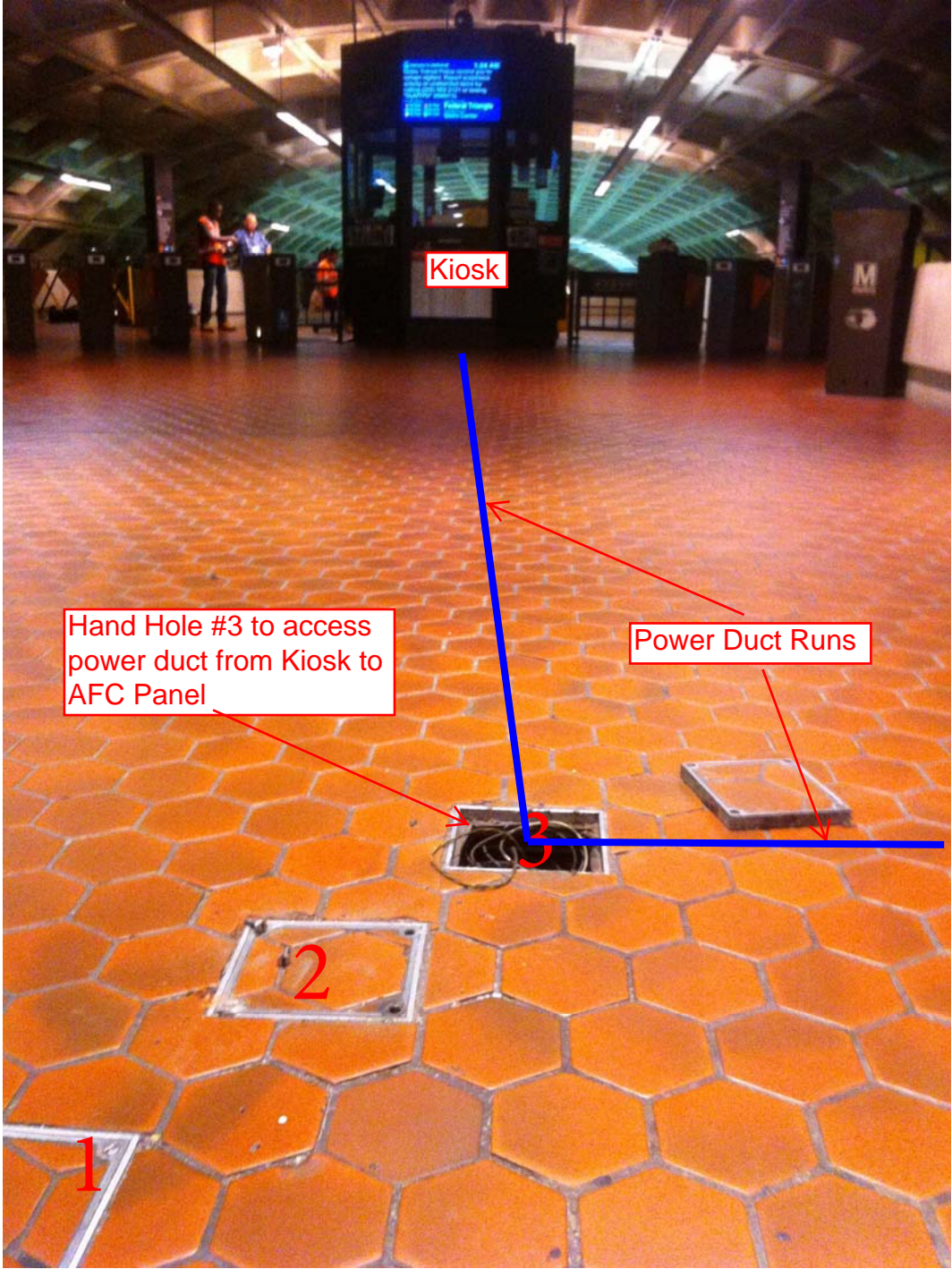
All ducts/conduits were video scoped and pull string installed as per the scope of works. No obstructions were found and ducts are not at capacity.
 Since pull string was successfully installed in all ducts, scanning will not be necessary at this mezzanine.

Scoping of Faregate Array(s)

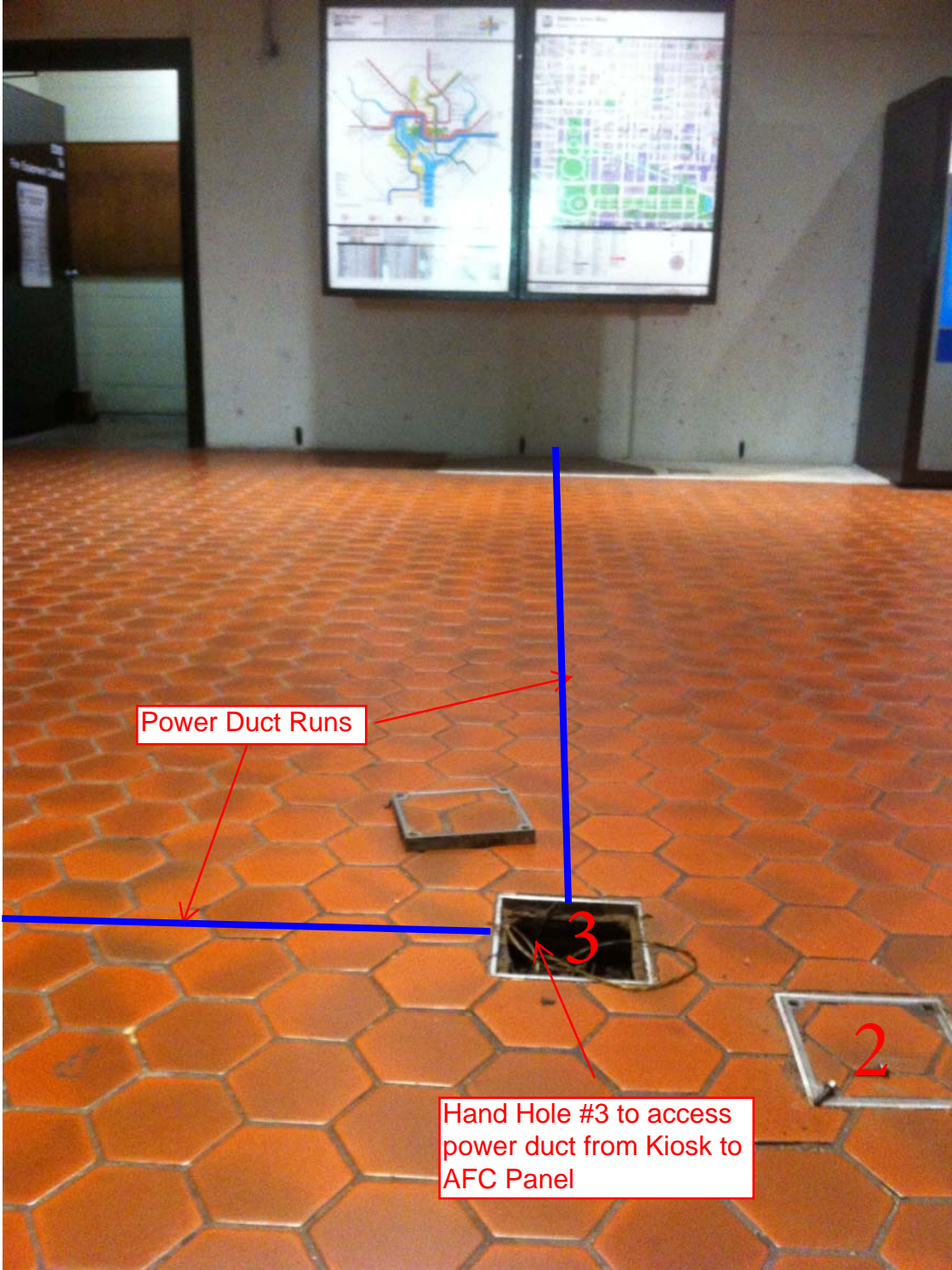
Task	Yes/No	Notes
Communications Duct – Upper Faregate Array (4 Gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to WMATA Metro Center East Station G St. Upper Comm Fair Gate Video.avi file.
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	
Communications Duct - Lower Faregate Array (5 Gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to WMATA Metro Center East Station G St. Lower Comm Fair Gate Video.avi file.
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	
Power Duct - Upper Faregate Array (4 Gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to WMATA Metro Center East Station G St. Power Upper Fair Gate Video.avi file.
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	
Power Duct - Lower Faregate Array (5 Gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to WMATA Metro Center East Station G St. Lower Power Fair Gate Video.avi file.
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	

Scoping of Power Duct - Kiosk to AFC Panel		
Task	Yes/No	Notes
Run 1 (Kiosk to Hand Hole #3 – 45 foot straight section)		
Was video scoping completed for the entire duct / conduit run?	Yes	Refer to WMATA Metro Center East Station G St. Power Kiosk to Handhole Video.avi file.
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	12 wires in duct
Run 2 (Hand Hole #3 to AFC Panel – 20 foot straight section)		
Was video scoping completed for the entire duct / conduit run?	Yes	Refer to WMATA Metro Center East Station G St. Power Handhole to AFC Panel Video.avi file.
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	12 wires in duct
Observations / Issues / Next Steps		
Refer to photos and as-built drawing for details of faregate and duct layouts.		
Sign Off		
	GFP Representative	WMATA PRGM
Name:	Mike Butler	
Signature:		
Date:	09/04/2014	

Metro Center East Photo #1 – Hand Hole #3 to access power duct from Kiosk to AFC Panel - duct run from Kiosk to hand hole confirmed.



Metro Center East Photo #2 – Hand Hole #3 to access power duct from Kiosk to AFC Panel - duct run from Kiosk to hand hole confirmed.



Metro Center East Photo #3 – Close-up of Hand Hole #3 to access power duct from Kiosk to AFC Panel
– 12 wires counted, therefore duct is not at capacity.



NOTES:

1. ALL INFORMATION CONCERNING DUCTS AND CONDUITS IS BASED ON INFORMATION SUPPLIED TO CUBIC WESTERN DATA BY WMATA

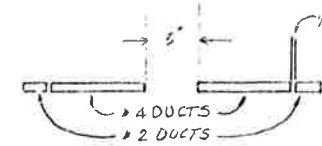
2. TOTAL MACHINE INVENTORY IS DEPICTED ON THIS DRAWING

3. THE MINIMUM OPERATIONAL MACHINE IS REFERENCED ON THIS DRAWING BY THE 'X' DRAWN THRU THE DRAWING

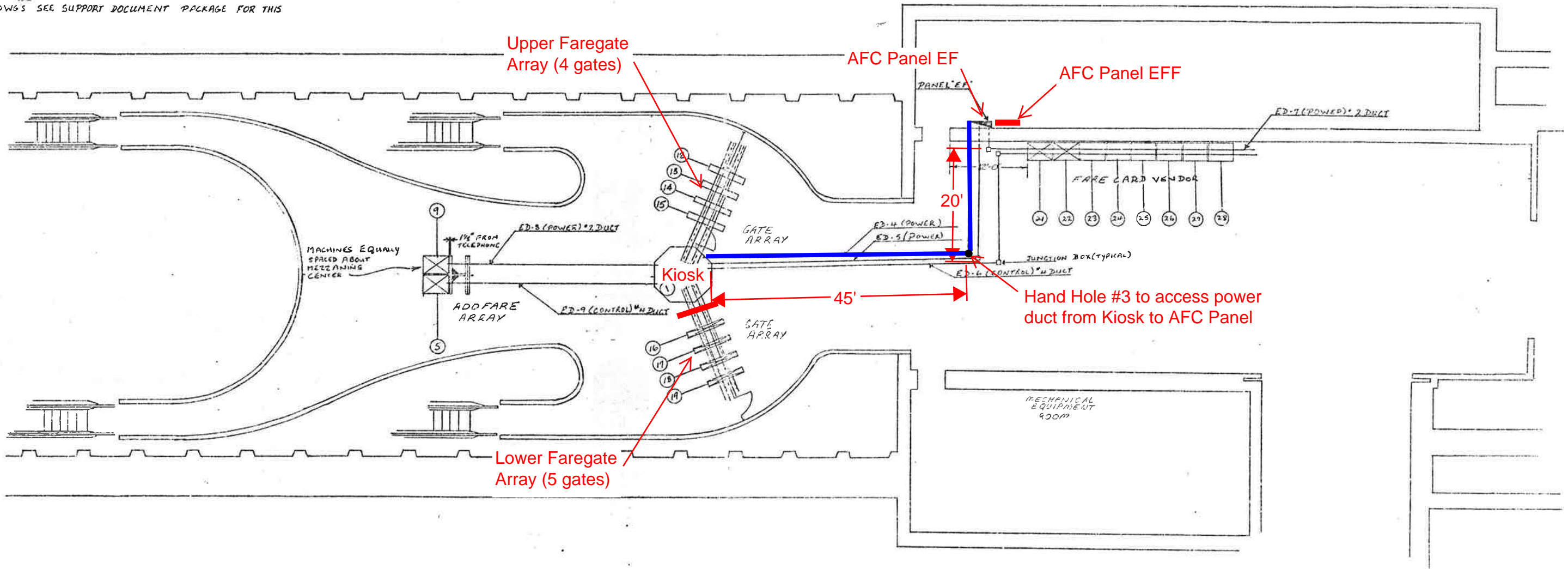
4. FOR AS BUILT CONDITIONS SEE SHEET 2

5. FOR REFERENCE DWGS SEE SUPPORT DOCUMENT PACKAGE FOR THIS MEZZANINE

REVISIONS		
DESCRIPTION	DATE	APVD
AS BUILT DRAWING REV. A	5-10-77	



VIEW A-A



2-INSTALLATION PLAN
(AS BUILT CONDITIONS)

19

PRIORITY REQUESTS ARE HEREBY GIVEN FOR BOTH ESCALATORS TO RUN FROM THE STREET LEVEL TO THE MEZZANINE EL.

CONTRACT NUMBER		CUBIC WESTERN DATA <small>A Subsidiary of Cubic Corporation 5650 HEATHY MESA ROAD • POST OFFICE BOX 80787 • SAN DIEGO, CA 92138</small>	
DATE	SCALE	DRAWING NUMBER	REV
DESIGN ACTIVITY APPROVAL	APPROVED	93-0575	19
		SHEET	OF

Mezzanine Inspection Report (Scoping)

Date: 09/25/2014	Station Name: A01 Metro Center West	Mezzanine #: 001	Completed By: Tino Sahoo
------------------	-------------------------------------	------------------	--------------------------

Summary

Video scoping was completed and pull string was installed for the power duct between the kiosk and AFC panel. Video scoping was completed for the upper and lower faregate array power ducts. No video scoping was completed and no pull string was installed for the upper and lower faregate array communications duct. Cat6 cable has already been installed in the communications ducts.

Scanning is not required at this mezzanine.

Scoping of Faregate Array(s)

Task	Yes/No	Notes
Communications Duct – Upper Faregate Array (4 Gates)		
Was video scoping completed for the entire duct run?	No	Cat6 cable previously installed, video scoping not completed
Were pull strings installed at all faregates in the array?	No	Cat6 cable previously installed, pull strings not installed
Were there any obstructions or blockages? Provide details of type and specific location.	N/A	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	
Communications Duct - Lower Faregate Array (4 Gates)		
Was video scoping completed for the entire duct run?		Cat6 cable previously installed, video scoping not completed
Were pull strings installed at all faregates in the array?		Cat6 cable previously installed, pull strings not installed
Were there any obstructions or blockages? Provide details of type and specific location.		
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.		
Power Duct - Upper Faregate Array (4 Gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to WMATA Metro Center West Upper Power Duct Fairgate Video.avi file.
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	
Power Duct - Lower Faregate Array (4 Gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to WMATA Metro Center West Lower Power Fair gate Video.avi file.
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	


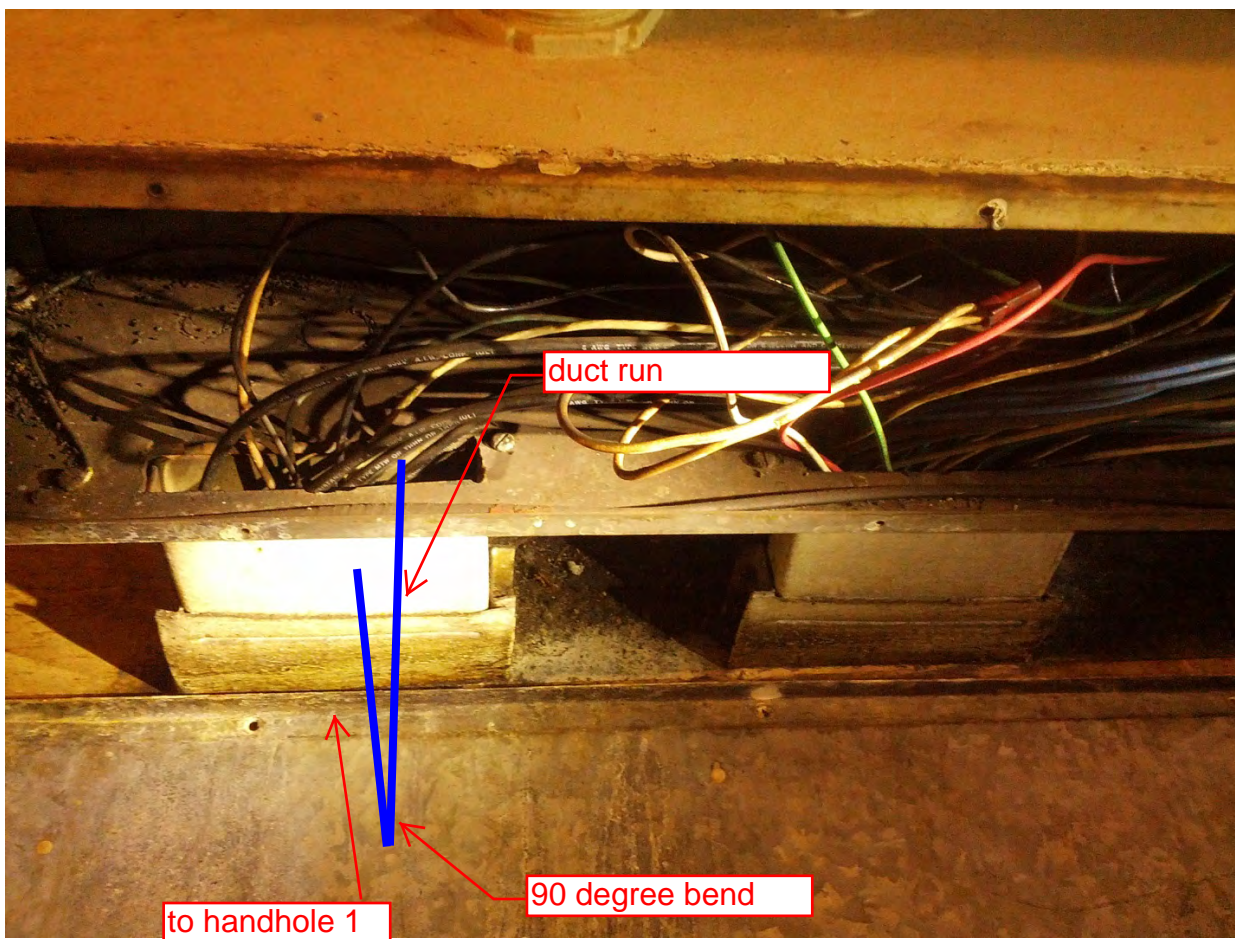
Scoping of Power Duct - Kiosk to AFC Panel		
Task	Yes/No	Notes
Kiosk to Handhole 1 (50 foot run)		
Was video scoping completed for the entire duct / conduit run?	Yes	Refer to WMATA Metro Center West Power Handhole to Kiosk Video.avi file.
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	
Handhole 1 to AFC Panel (20 foot run)		
Was video scoping completed for the entire duct / conduit run?	Yes	Refer to WMATA Metro Center West Power Handhole to AFC Panel Video.avi file.
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	
Observations / Issues / Next Steps		
Sign Off		
	GFP Representative	WMATA PRGM
Name:	Tino Sahoo	
Signature:		
Date:	09/25/2014	

Photo #1 – A01 Metro Center West: Mezzanine level handholes



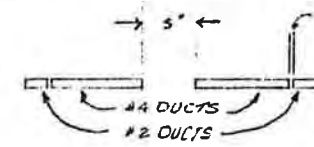
Photo #2 – A01 Metro Center West: Ducts to leading from ground level up to AFC Panel



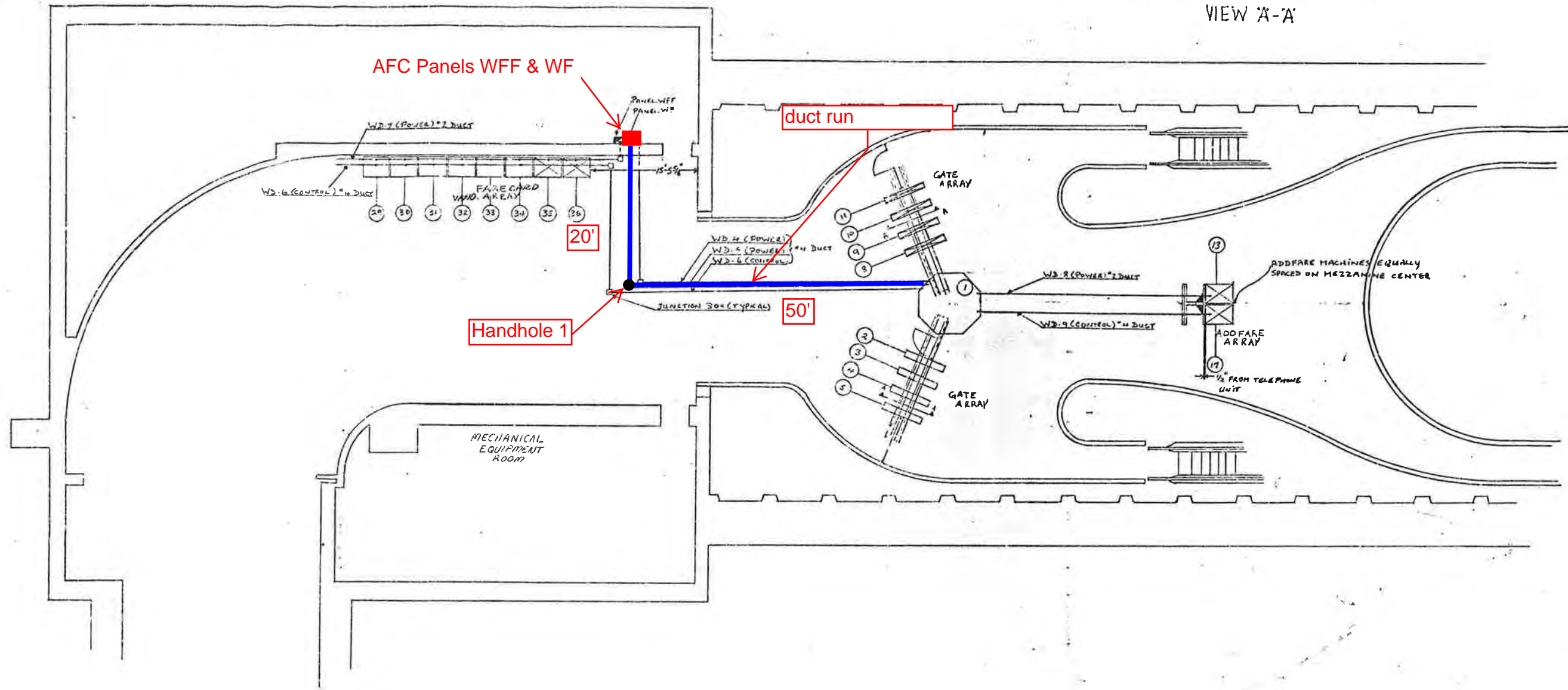
NOTES:

1. ALL INFORMATION CONCERNING DUCTS AND CONDUITS IS BASED ON INFORMATION SUPPLIED CUBIC WESTERN DATA BY WMATA

REVISIONS		
DESCRIPTION	DATE	APVD
AS BUILT DRAWING REV. A	5-10-77	[Signature]



VIEW 'A-A'



2. TOTAL MACHINE INVENTORY IS DEPICTED ON THIS DRAWING

3. THE MINIMUM OPERATIONAL MACHINE IS REFERENCED ON THIS DRAWING BY THE 'X' DRAWN THRU THE DRAWING

4. FOR AS BUILT CONDITIONS SEE SHEET 2

5. FOR REF DWGS SEE SUPPORT DOCUMENT PACKAGES FOR THIS MEZZANINE

1- INSTALLATION PLAN
(AS BUILT CONDITIONS)

PRIORITY REQUESTS ARE HEREBY GIVEN FOR BOTH ESCALATORS IF RUN FROM THE STREET LEVEL TO THE MEZZANINE FL.

WASHINGTON METRO RAILWAY
ATTN: TELEPHONE ROOM

CONTRACT NUMBER		CUBIC WESTERN DATA A subsidiary of Cubic Corporation 5100 KAPLAN MESA ROAD • POST OFFICE BOX 80787 • SAN DIEGO, CA 92138	
REL		METRO CENTER PHASE 2 MEZZANINE AFC MACHINES	
ENGRG			
DESIGN			
CHECK			
DRAWN			
DESIGN ACTIVITY APPROVAL	SIZE	DRAWING NUMBER	REV
APPROVED [Signature]	D	456-0313	01
SCALE		SHEET	OF 2

Mezzanine Inspection Report (Scoping)

Date: 11/03/14	Station Name: A02 Farragut North NE	Mezzanine #: 004	Completed By: Mike Butler
-----------------------	--	-------------------------	----------------------------------

Summary

Pull string installation completed in communication ducts for upper and lower faregate arrays; ducts are viable for future use. Video scoping could not be completed in communication ducts for upper and lower faregate arrays due to the camera size. Video scoping could not be completed in power ducts for upper and lower faregate arrays due to energized wires.

Video scoping and pull string installation could not be completed in power duct between Kiosk, Handhole 1, Handhole 2, Handhole 3 and Junction Box in Room 254 due to energized wires. However, pull string was successfully installed in conduit between Junction Box (Room 254) and Trough (Room 256). Pull string was also installed in conduit between Trough and AFC Panel in Room 256.

A new overhead conduit is proposed between the Kiosk and existing Junction Box in Room 254 because an in-floor duct is not feasible based on the results of the scanning. The proposed conduit will run along the ceiling from the Kiosk to the wall adjacent to Room 254 in the hallway. Core drilling is needed to allow the conduit to pass through the wall and feed into existing Junction Box. Refer to attached photos and drawings for more information.

Scoping of Faregate Array(s)

Task	Yes/No	Notes
Communications Duct – Upper Faregate Array (5 gates)		
Was video scoping completed for the entire duct run?	No	Camera was too large to get through the entire duct, therefore visual inspection was performed.
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	3" walker duct with less than 8 wires.
Communications Duct - Lower Faregate Array (3 gates)		
Was video scoping completed for the entire duct run?	No	Camera was too large to get through the entire duct, therefore visual inspection was performed.
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	6" walker duct with less than 10 wires.
Power Duct - Upper Faregate Array (5 gates)		
Was video scoping completed for the entire duct run?	No	Could not be completed due to energized wires - no further work was completed as directed by WMATA.
Were there any obstructions or blockages? Provide details of type and specific location.	N/A	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	N/A	
Power Duct - Lower Faregate Array (3 gates)		
Was video scoping completed for the entire duct run?	No	Could not be completed due to energized wires - no further work was completed as directed by WMATA.
Were there any obstructions or blockages? Provide details of type and specific location.	N/A	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	N/A	


Scoping of Power Duct - Kiosk to AFC Panel		
Task	Yes/No	Notes
Kiosk to Handhole 1, Handhole 2, Handhole 3 and Junction Box (Distance: 70')		
Was video scoping completed for the entire duct / conduit run?	No	Could not be completed due to energized wires - no further work was completed as directed by WMATA.
Was pull string installed?	No	
Were there any obstructions or blockages? Provide details of type and specific location.	N/A	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	N/A	
Junction Box to Trough (Distance: 60')		
Was video scoping completed for the entire duct / conduit run?	No	Scoping of conduits not required.
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	2" conduit with less than 8 wires.
Trough to AFC Panel (Distance: 20')		
Was video scoping completed for the entire duct / conduit run?	No	Scoping of conduits not required.
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	2" conduit with less than 8 wires.
Observations / Issues / Next Steps		
<p>Proposed conduit run is 75' from Kiosk to Junction Box (Room 254).</p> <p>Existing conduit run is 80' between Junction Box (Room 254), Trough and AFC Panel (Room 256).</p>		
Sign Off		
	GFP Representative	WMATA PRGM
Name:	Mike Butler	
Signature:		
Date:	02/24/15	

Photo #1 – Proposed overhead conduit from Kiosk

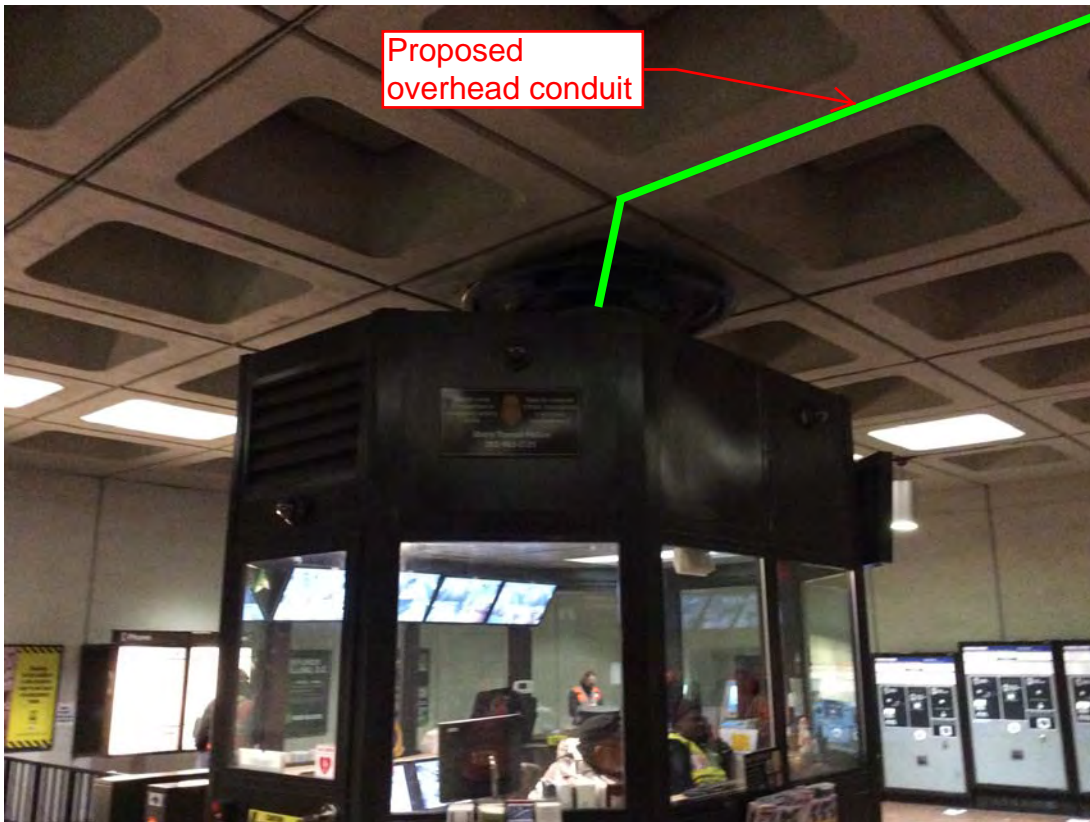


Photo #2 – Proposed overhead conduit from Kiosk

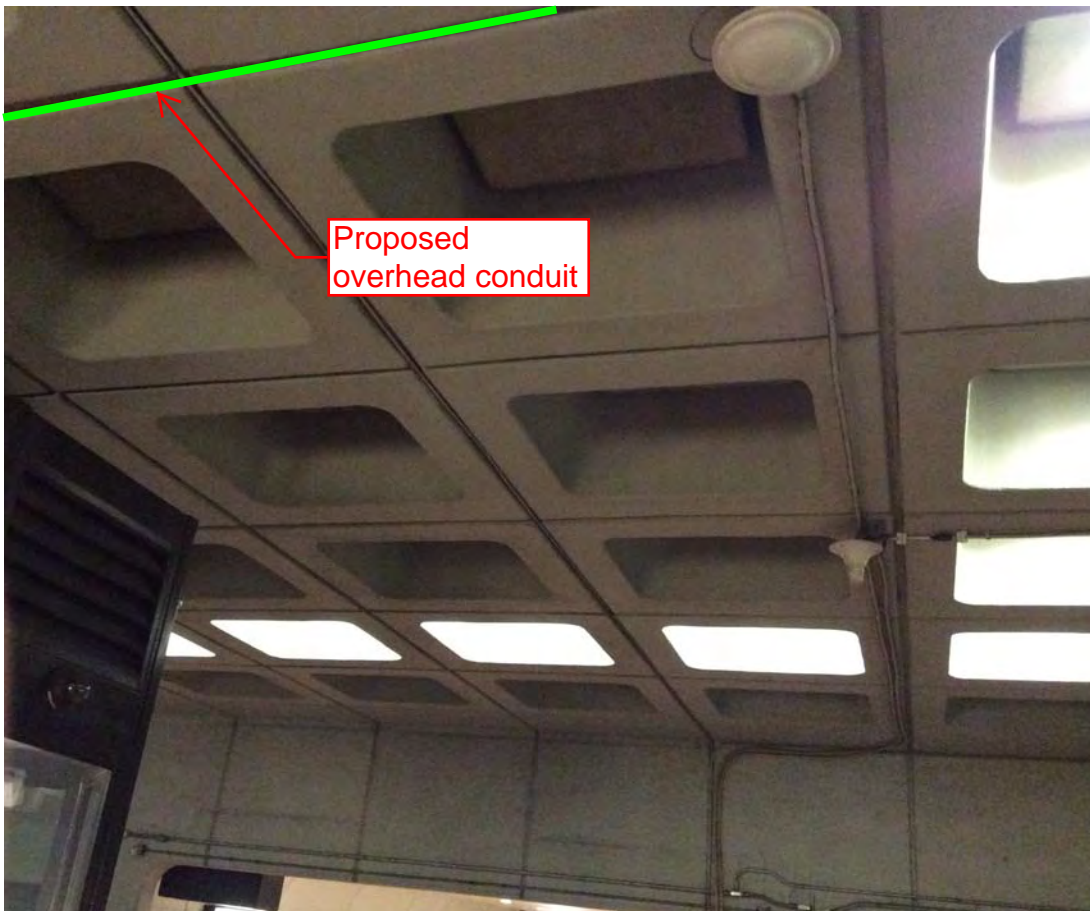
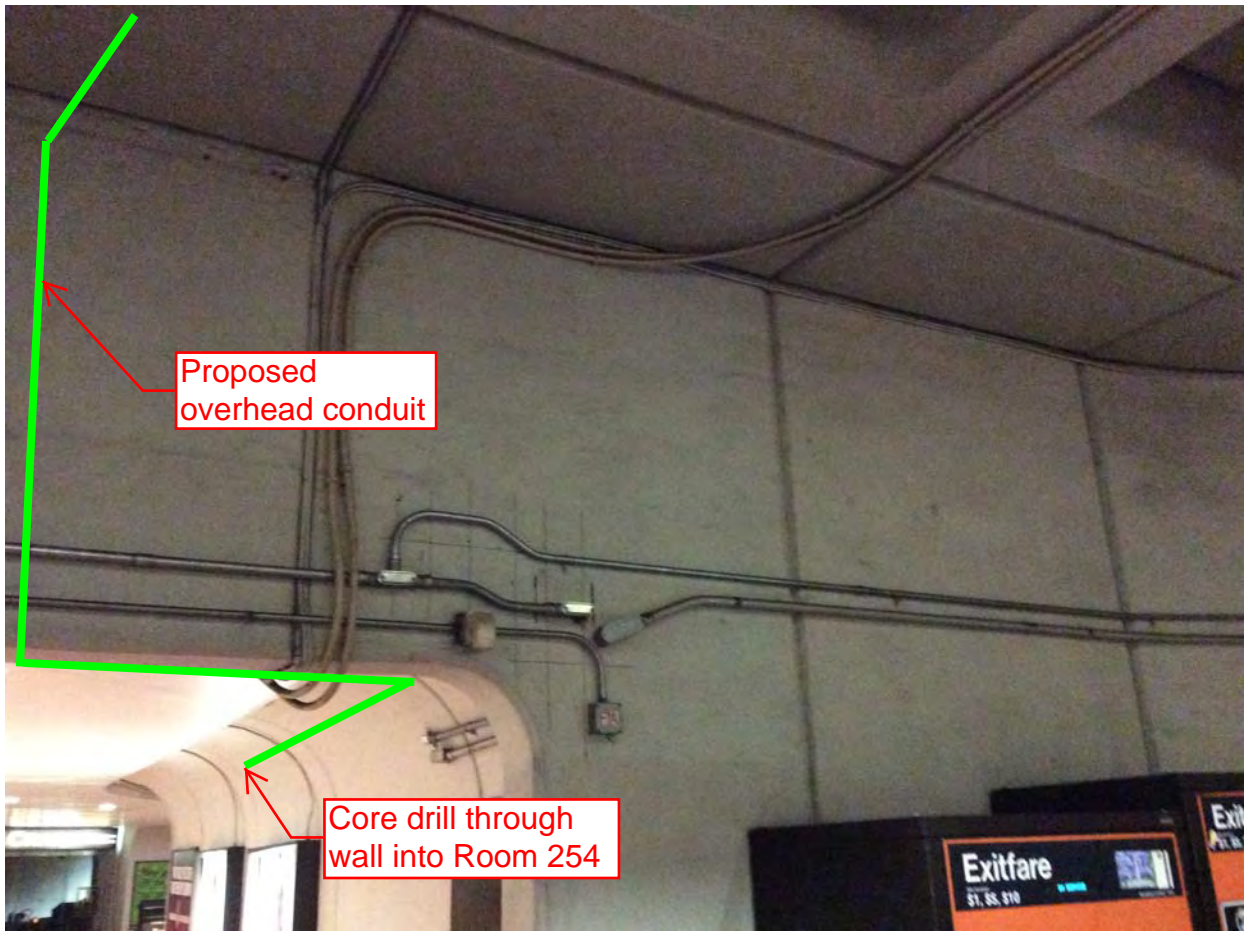


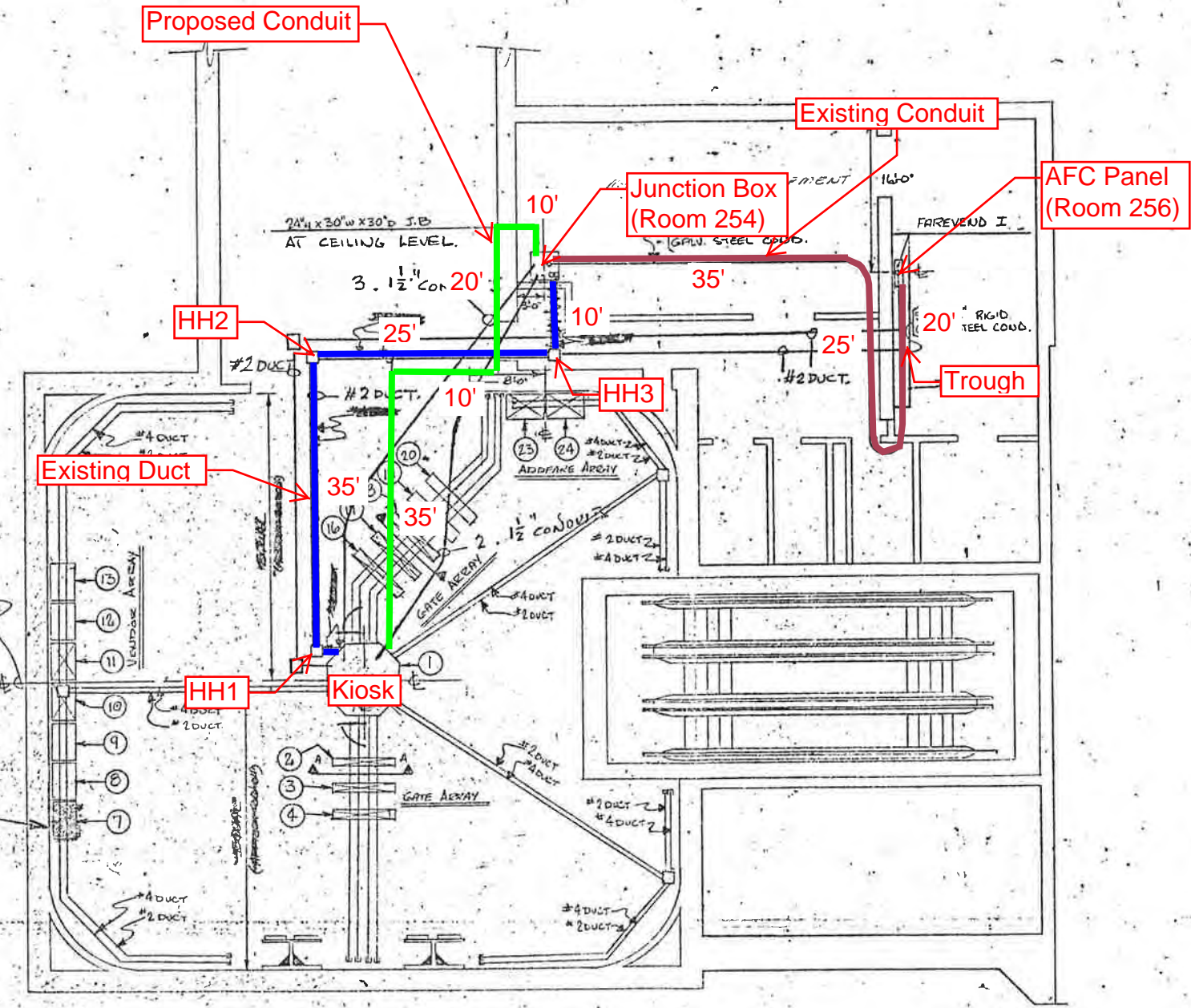
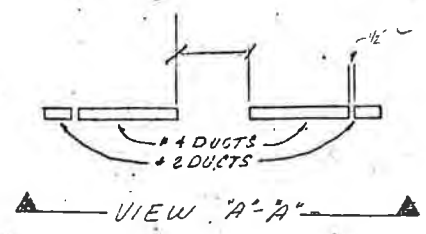
Photo #3 – Proposed overhead conduit heading towards back rooms



REVISIONS	DATE	APVD
DESCRIPTION		

NOTES:

- ALL INFORMATION CONCERNING DUCTS AND CONDUITS IS BASED ON INFORMATION SUPPLIED TO CUBIC WESTERN DATA BY W.M.A.T.A.
- IF MACHINE INVENTORY IS DEPICTED ON THIS DRAWING, THE MINIMUM OPERATIONAL MACHINE INVENTORY IS REFERENCED ON THIS DRAWING BY THE 'X' DRAWN THRU THE MACHINE.
- FOR AS BUILT CONTINUATION, SEE DRAWING #2 INSTALLMENT PLAN.
- FOR REFERENCE DRAWINGS SEE SUPPORT DOCUMENT PACKAGE FOR THIS MEZZANINE.



VENDOR ARRAY EQUIP EQUAL SPACED ON Q OF ROOM

THIS MACHINE NOT IN C-WD CONTRACT.

PRIORITY REQUESTS ARE HEREBY GIVEN FOR ESCALATORS (STREET TO MEZZANINE) AND THE ELEVATORS THAT RUN FROM THE STREET LEVEL TO THE MEZZANINE.

No 1 INSTALLATION PLAN

SCALE: 1/8" = 1'-0" U.O.N.

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

APPROVED AS CORRECTED (RESUBMITTAL REQUIRED)

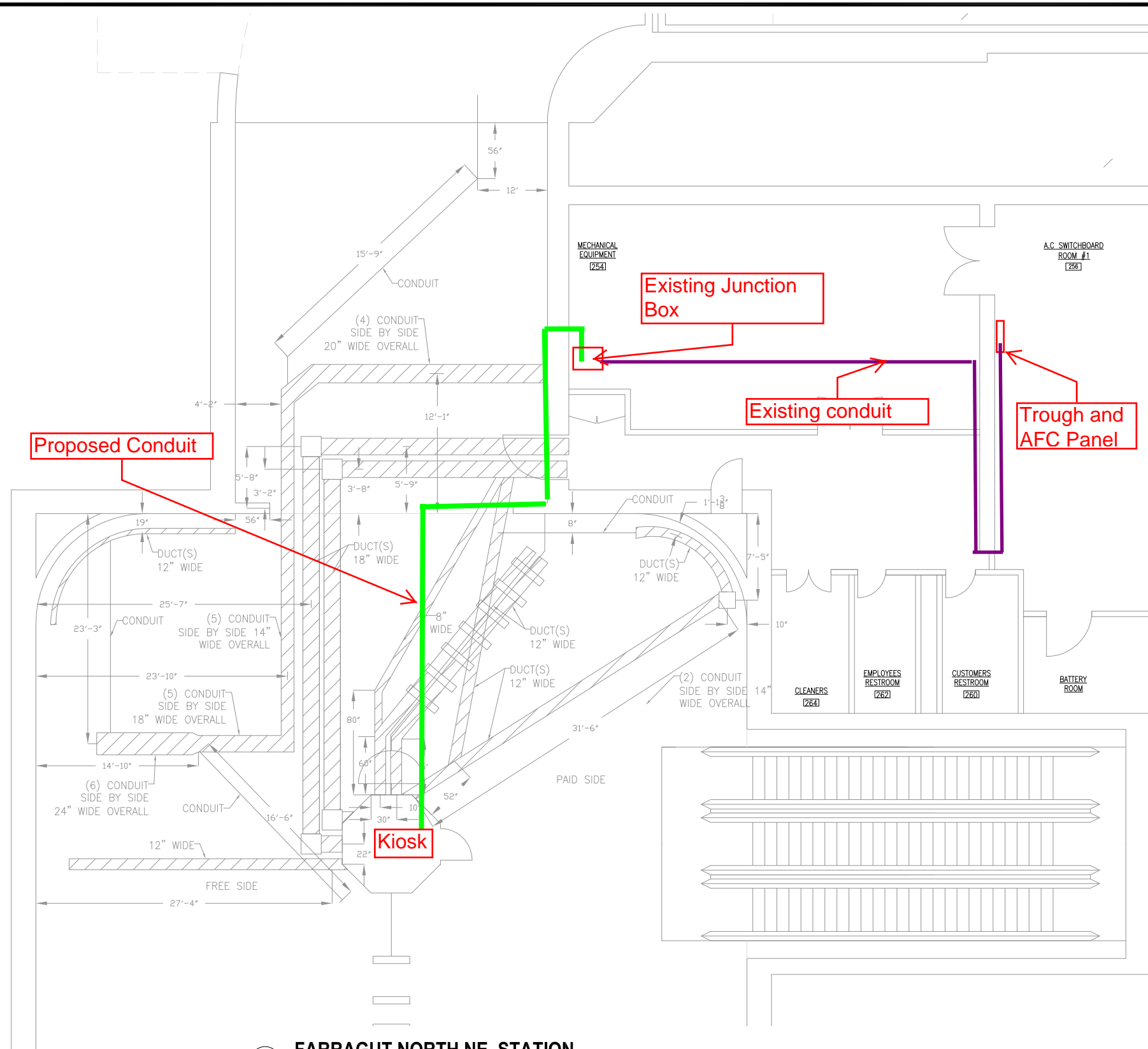
Approval Does Not Relieve the Contractor of the Responsibility for the Accuracy of this Document or for Full Compliance with the Contract Requirements.

BY: *Patrick S. Stouin*
For Contracting Director

DATE: 12/7/16

CP-22007A-120-4-0
WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

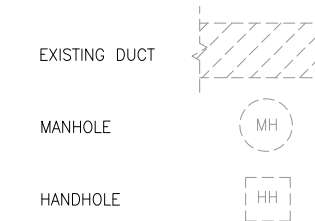
CONTRACT NUMBER 22007A		CUBIC WESTERN DATA <small>A Subsidiary of Cubic Corporation 3450 NEARBY MESA ROAD • POST OFFICE BOX 80161 • SAN DIEGO, CALIF. 92181</small>	
REL		FARRAGUT NORTH NORTHEAST STATION AFC MACHINES	
ENGRG			
DESIGN			
CHECK			
DRAWN		DRAWING NUMBER 926-0395	
DESIGN ACTIVITY APPROVAL		SIZE D	REV 0
APPROVED <i>BM</i> 1/10/17		SCALE 1/8" = 1'-0"	SHEET 1 OF 3



PLAN NOTES:

1. DIMENSIONS ARE IN FEET AND INCHES.
2. DIMENSIONS ARE FOR REFERENCE ONLY.
3. EXISTING IN-FLOOR DUCTS/CONDUITS WERE IDENTIFIED USING A PORTABLE GPR SCANNING DEVICE.
4. THE SCANNING COVERAGE IS LIMITED TO THE MEZZANINE FLOOR ONLY.
5. GPR SCANNING HAS THE FOLLOWING LIMITATIONS: (i) 12 INCHES VISIBLE SCANNING DEPTH; (ii) VISIBILITY BEYOND CONGESTED OR NEAR SURFACE REINFORCEMENT LAYERS; (iii) DETECTION OF PVC AND OTHER NON-METALLIC OBJECTS (iv) DETERMINATION OF SIZE AND EXTENTS OF SUBSURFACE ANOMALIES SUCH AS SLAB VOIDS OR REBAR SIZES; AND (v) VISIBILITY WHEN VARIABLE MOISTURE CONDITIONS EXIST IN THE SUBSTRATE.

LEGEND:



1
E-100 **FARRAGUT NORTH NE STATION**
SCALE: NOT TO SCALE

CONTRACT NO.
XXXXXX

DESIGNED	C. LOOSE	11-14
		DATE
DRAWN	C. LOOSE	11-14
		DATE
CHECKED	M. BUTLER	11-14
		DATE
APPROVED		
		DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

APPROVED _____

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY
DEPARTMENT OF TRANSIT INFRASTRUCTURE
AND ENGINEERING SERVICES
OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM

GFP A Gannett Fleming/Parsons
JOINT VENTURE

SUBMITTED _____
PROJECT MANAGER

15-NEPP-01
IN - FLOOR DUCT INSPECTIONS
A02 Farragut North NE
PROPOSED POWER CONDUIT RUN

SCALE
NOT TO SCALE

DRAWING NO.
A02-E-100

XXX

Mezzanine Inspection Report

REVISION 1

Date: 11/06/2014	Station Name: A02 Farragut North NW	Mezzanine #: 003	Completed By: Mike Butler
------------------	-------------------------------------	------------------	---------------------------

Summary


Scoping and pull string installation was partially completed. Pull string was installed in both the upper and lower faregate array communications duct; however, video scoping was not completed due to obstructions. Video scoping was completed for both the upper and lower faregate array power ducts. The power run between the Kiosk and AFC Panel is conduit; therefore, video scoping is not required. Pull string was installed from the AFC Panel to the junction box in the service hallway. Pull string could not be installed from the junction box to the Kiosk due to an obstruction.

A proposed overhead conduit path from the Kiosk to the junction box has been identified (see photos 6-10 below) since the existing conduit from the Kiosk to the junction box is deemed to be unusable. There is no room for installation of new in-floor duct based on the location of the existing manhole and the existing ducts. It is recommended to install overhead conduit from the kiosk along the recessed channel along the ceiling of the mezzanine and transition into the existing junction box located in the service hallway. There is already an existing core drill hole, so a core drill may not be required.

Scanning is not required at this location.

Scoping of Faregate Array(s)

Task	Yes/No	Notes
Communications Duct – Upper Faregate Array (5 gates)		
Was video scoping completed for the entire duct run?	No	Refer to WMATA Farragut NW Station Upper Comm Video.avi file.
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	Hit insert/coupling on walker duct at 3 rd faregate
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	
Communications Duct - Lower Faregate Array (5 gates)		
Was video scoping completed for the entire duct run?	No	Refer to WMATA Farragut NW Station Lower Comm Video.avi file.
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	Apron skirt made it difficult to scope; scoped to about entrance of comm. duct on 1 st faregate.
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	
Power Duct - Upper Faregate Array (5 gates)		
Was video scoping completed for the entire duct run?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	
Power Duct - Lower Faregate Array (5 gates)		
Was video scoping completed for the entire duct run?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	

Scoping of Power Duct - Kiosk to AFC Panel		
Task	Yes/No	Notes
Kiosk to Junction Box (Approximately 40 foot run)		
Was video scoping completed for the entire duct / conduit run?	No	Refer to WMATA Farragut North NW Power Feed 2inch conduit Video (1).avi
Was pull string installed?	No	
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	90 degree bend into floor. Could not get past obstruction at bend.
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	2" conduit
Junction Box to AFC Panel (20 foot run)		
Was video scoping completed for the entire duct / conduit run?	No	Conduit – no scoping required
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	2" conduit
Observations / Issues / Next Steps		
<p>Obstruction was found at 90 degree bend where power conduits sweep into the ground from overhead junction box before proceeding to the kiosk. Access to the power conduits from kiosk is not possible due to apron skirt obstruction within the kiosk.</p> <p>Proposed conduit run is approximately 70 feet total between the Kiosk and the junction box. Refer to attached as-built plan for additional details.</p>		
Sign Off		
	GFP Representative	WMATA PRGM
Name:	Mike Butler	
Signature:		
Date:	11/06/2014	

Farragut North NW Photo # 1 – 90 degree bend where conduit sweeps underground to junction box



Farragut North NW Photo # 2 – Overhead conduit runs in Room #200



Farragut North NW Photo # 3 – Kiosk apron skirt



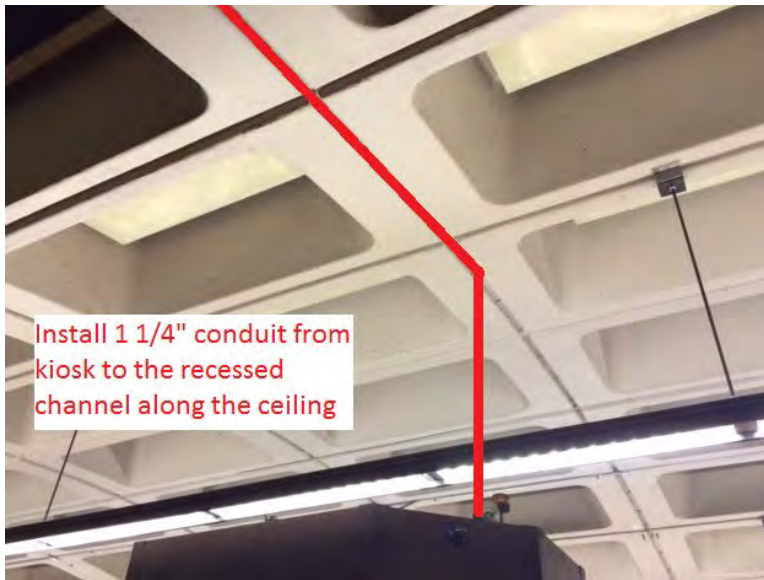
Farragut North NW Photo # 4 – Kiosk floor, there is a skirt obstruction inside Kiosk and a narrow gap for wires



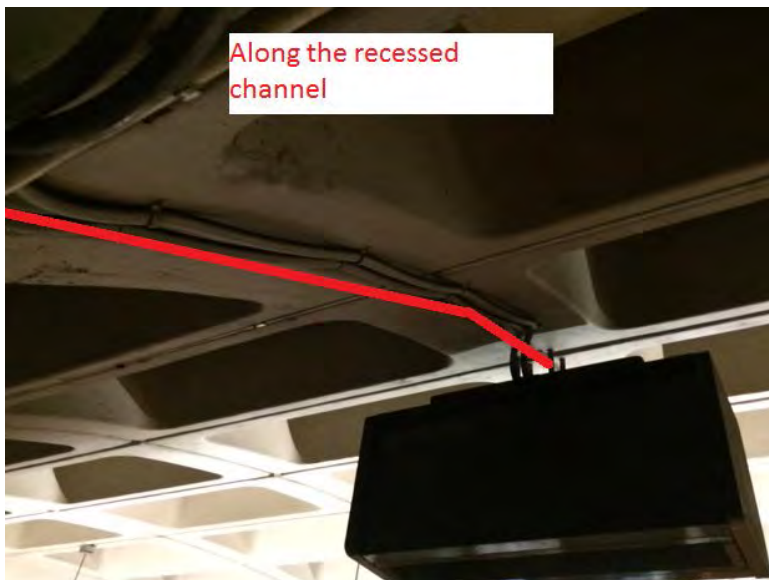
Farragut North NW Photo # 5 – Entrance to Room 200, junction box located behind door



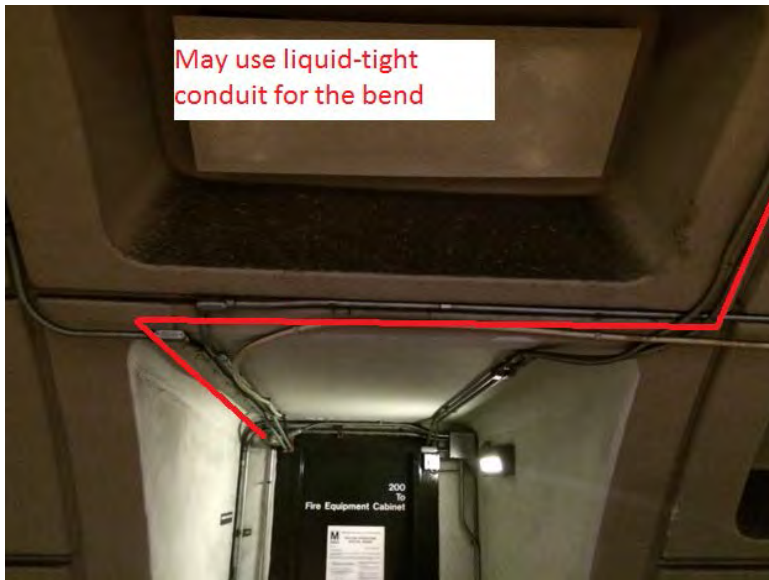
Farragut North NW Photo # 6 - Proposed conduit run



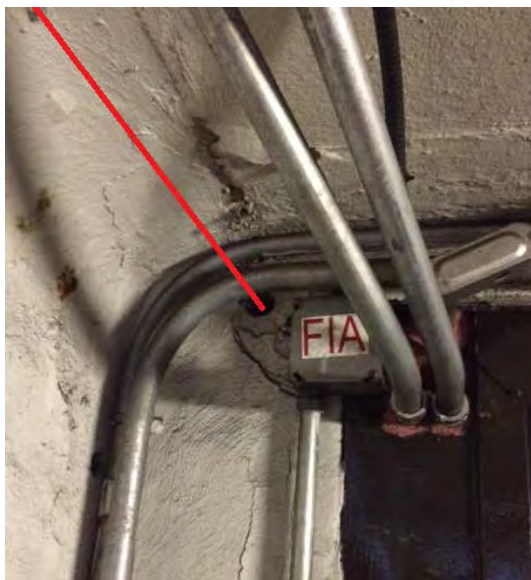
Farragut North NW Photo # 7 - Proposed conduit run



Farragut North NW Photo # 8 - Proposed conduit run



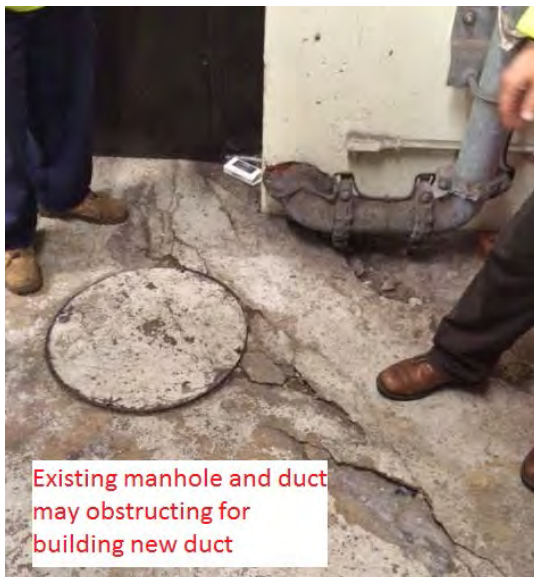
Farragut North NW Photo # 9 – Proposed conduit run through existing core drill

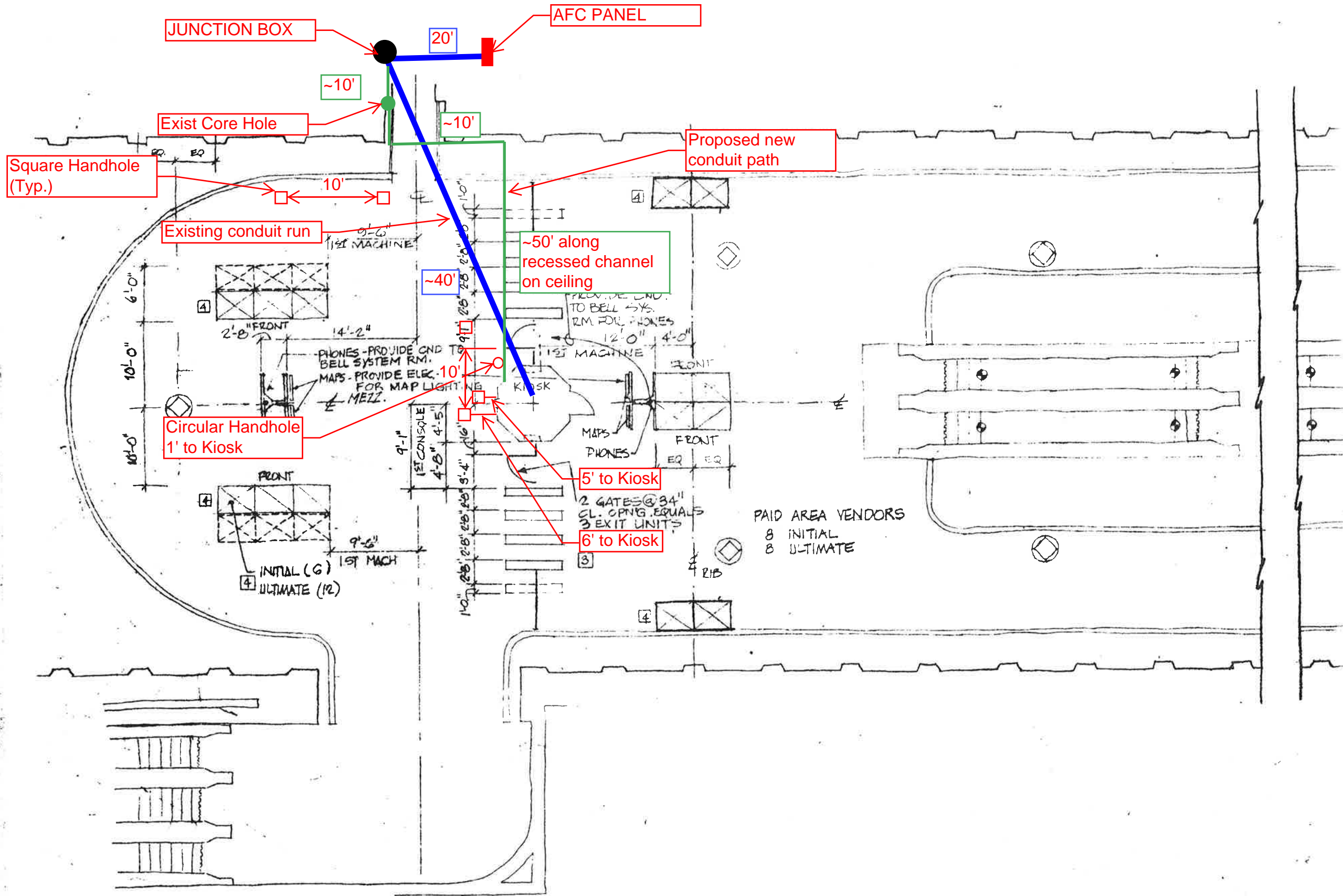


Farragut North NW Photo # 10 – Proposed conduit transition into existing junction box



Farragut North NW Photo # 11 – Existing manhole and duct may be in the way of any proposed duct installation





DESIGNED	HWA	2-20-73
		DATE
DRAWN	JJK	2-20-73
		DATE
CHECKED		6-5-73
		DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION
10-1-73	JK	ADD LOCATION DIMENSIONS 1
10-9-73	am	ADD ADDITIONAL DIMENSIONS 2
10-20-74	JK	REVISED SERVICE GATE LOCATION 3
2-17-75	K	REV AFC EQUIP QUANTITIES 4

03

WASHINGTON

WMATA

APPROVED *[Signature]* DIRECTOR

Mezzanine Inspection Report

Date: 09/19/2014	Station Name: A02 - Farragut North (SE)	Mezzanine #: 002	Completed By: Mike Butler
-------------------------	--	-------------------------	----------------------------------

Summary

Video scoping and pull string installation was only partially completed for this mezzanine. Scanning was conducted to identify existing duct / conduit layouts as a basis for the proposed run between the Kiosk and the AFC Panel.

All communication ducts in Upper and Lower Faregate Arrays were successfully scoped with pull strings installed. It was only possible to video scope the power duct in the upper faregate array, due to there being an energized emergency power feed in the lower faregate power duct. Pull string installation was completed in the power duct between Kiosk and Handhole 1 - video scoping showed that the duct is generally free from obstructions apart from a 45-degree bend which prohibited scope passage. Pull string installation could not be installed between Handhole 1 and Handhole 2, due to excessive corrosion and collapses. Likewise, pull string installation could not be completed between Handhole 2 and AFC Panel, due to the presence of energized wired in shared raceway.

Scanning of the mezzanine floor was completed to determine the existing layout of in-floor ducts and a proposed power duct run between the Kiosk and AFC Panel. The results of the scanning (attached) showed that the mezzanine floor is congested with in-floor ducts and conduits, making it difficult to place a new duct directly from the Kiosk to AFC Panel. Therefore, a 75' overhead conduit from the Kiosk to AFC Panel is proposed (see attached drawings and photos).

Scoping of Faregate Array(s)

Task	Yes/No	Notes
Communications Duct – Upper Faregate Array (8 faregates)		
Was video scoping completed for the entire duct run?	Yes	Refer to "WMATA Farragut North SE Upper Comm Video.avi"
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	4" walker duct with less than 15 wires
Communications Duct - Lower Faregate Array (5 faregates)		
Was video scoping completed for the entire duct run?	Yes	Refer to "WMATA Farragut North SE Lower Comm Video.avi"
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	4" walker duct with less than 12 wires
Power Duct - Upper Faregate Array (8 faregates)		
Was video scoping completed for the entire duct run?	Yes	Refer to "WMATA Farragut North SE Upper Power Video.avi"
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	6" walker duct with less than 15 wires
Power Duct - Lower Faregate Array (5 faregates)		
Was video scoping completed for the entire duct run?	No	Faregate #10 was still energized by power feed from kiosk emergency panel.
Were there any obstructions or blockages? Provide details of type and specific location.	N/A	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	N/A	6" walker duct with less than 12 wires


Scoping of Power Duct - Kiosk to AFC Panel		
Task	Yes/No	Notes
Kiosk to Handhole 1 (Distance: 16')		
Was video scoping completed for the entire duct / conduit run?	Partially	Refer to "WMATA Farragut North SE Handhole to Kiosk Video.avi"
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	There were no other obstructions or blockages other than the 45-degree bend in walker duct, although corrosion was clearly evident.
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	4" walker duct with less than 15 wires
Handhole 1 to Handhole 2 (Distance: 15')		
Was video scoping completed for the entire duct / conduit run?	No	Not possible due to collapse.
Was pull string installed?	No	
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	Duct is heavily corroded and collapsed in multiple locations. Handhole 2 is also collapsed and in poor condition.
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	N/A	
Handhole 2 to AFC Panel (Distance: 20')		
Was video scoping completed for the entire duct / conduit run?	No	It was not possible to complete video scoping or pull string installation due to the presence of energized wires in a shared raceway.
Was pull string installed?	No	
Were there any obstructions or blockages? Provide details of type and specific location.	N/A	Although video scoping did not take place, a visual inspection confirmed that the duct is in poor condition with corrosion evident at each entry point.
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	N/A	
Observations / Issues / Next Steps		
Conductor Run for Proposed Overhead Conduit is approx. 75' from Kiosk to AFC Panel (Fare Vend 2)		
Sign Off		
	GFP Representative	WMATA PRGM
Name:	Mike Butler	
Signature:		
Date:	01/03/2015	

Photo #1: Kiosk on mezzanine floor



Photo #2: Handhole 1



Photo #3: Handhole 2



Photo #4: Entrance to backrooms and shared raceway



Photo #5: Proposed overhead conduit run from Kiosk to AFC Panel

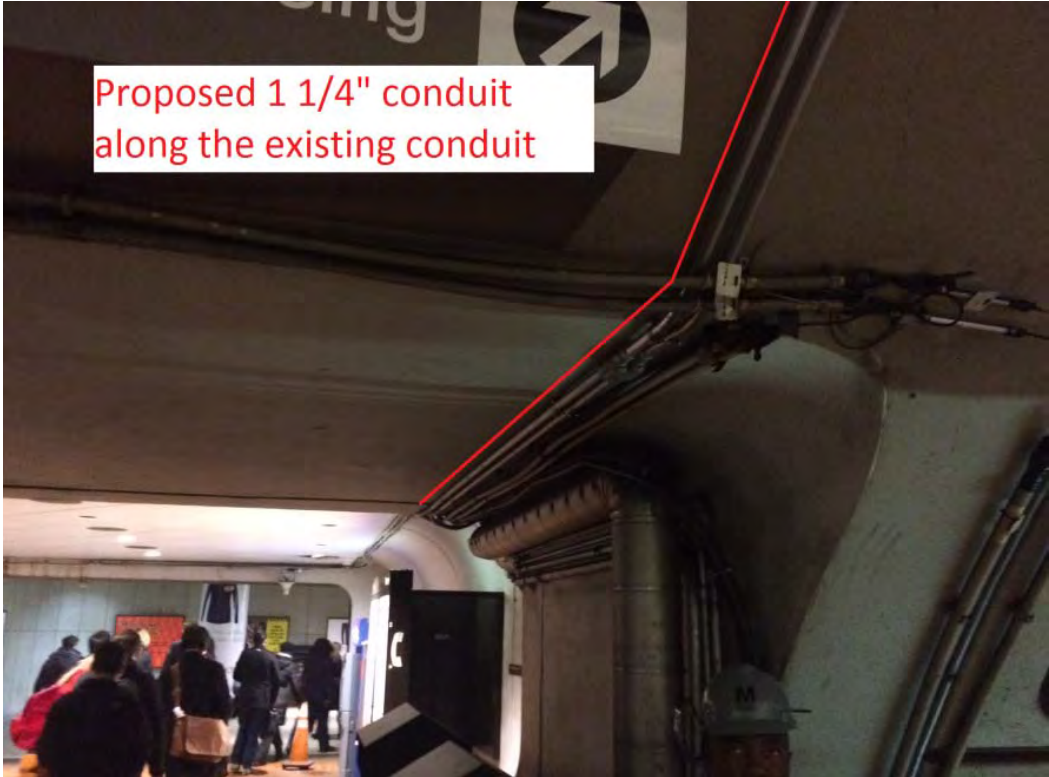
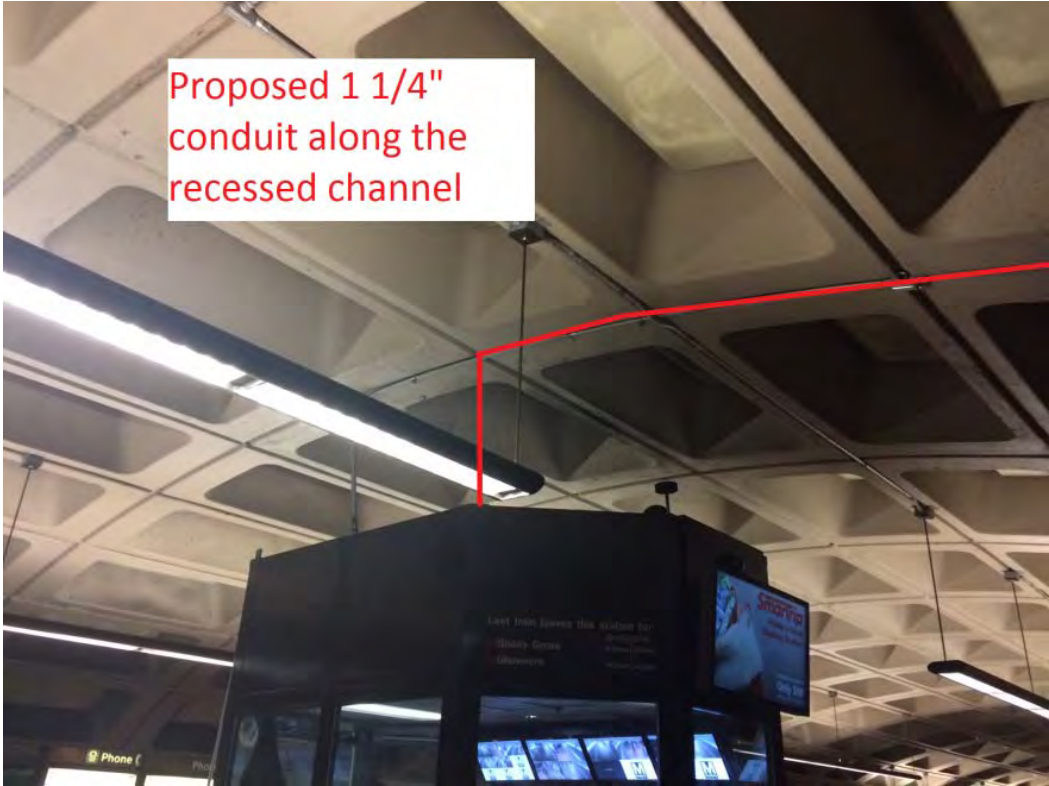


Photo #6: Proposed overhead conduit run from Kiosk to AFC Panel (continued)

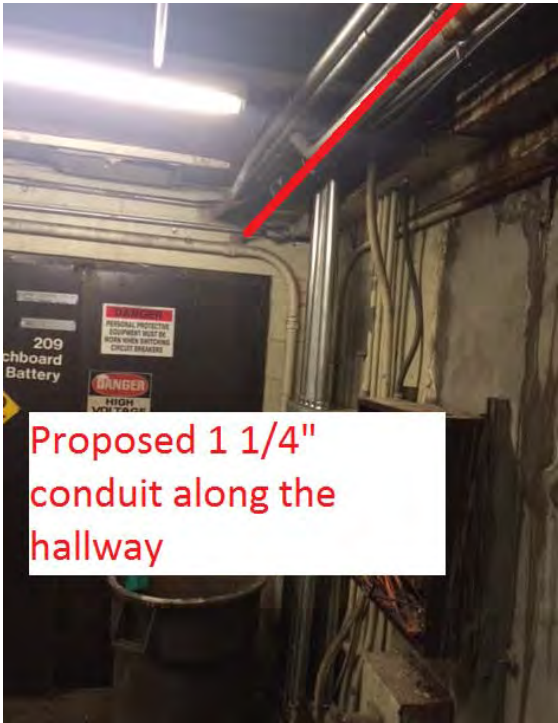


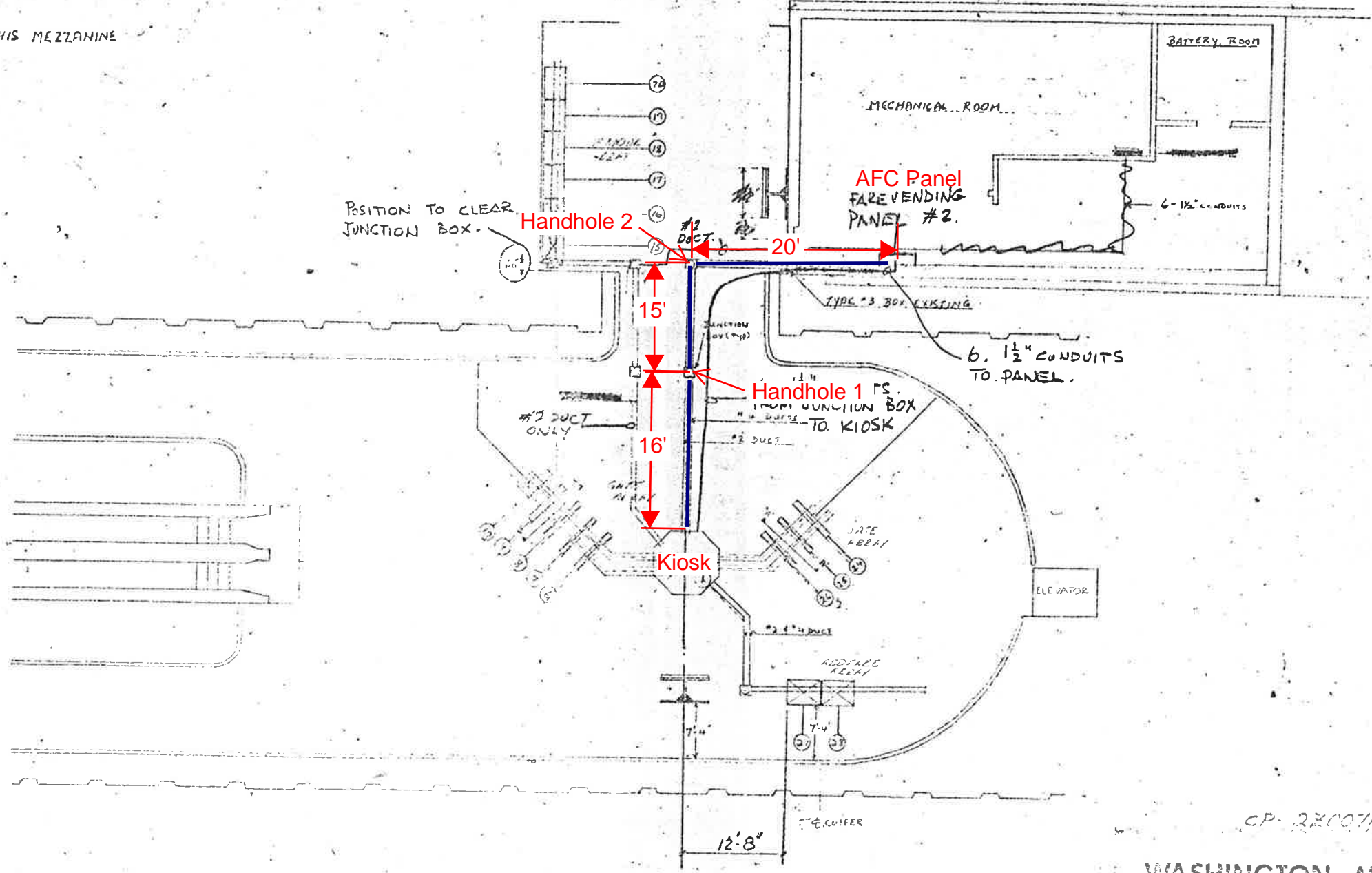
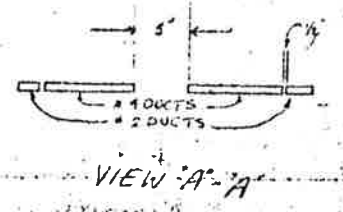
Photo #7: Proposed overhead conduit run from Kiosk to AFC Panel (continued)



Proposed 1 1/4" conduit into RM 209. The AFC panel is sitting right

REVISIONS	DESCRIPTION	DATE	APVD

- NOTES:
1. ALL INFORMATION ON CABLES, WIRES AND CONDUITS IS BASED ON INFORMATION PROVIDED TO US BY THE FIELD WITH THE CONTRACT DOCUMENTS.
 2. TOTAL MACHINE INVENTORY IS DEPICTED ON THIS DRAWING.
 3. THE MINIMUM OPERATIONAL MACHINE INVENTORY IS REFERENCED ON THIS DRAWING BY THE 'X' DRAWN THRU THE MACHINE.
 4. FOR AS BUILT CONDITIONS SEE SHEET 2.
 5. FOR REF DWGS SEE SUPPORT DOCUMENT PACKAGE FOR THIS MEZZANINE.



-3- INSTALLATION PLAN

CP-22007A-120-5-0

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

PRIORITY REQUESTS ARE HEREBY GIVEN FOR BOTH WORKSHEETS TO RUN FROM THE STREET LEVEL TO THE MEZZANINE LEVEL.

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

CORRECTED

CONTRACTOR'S RESPONSIBILITY

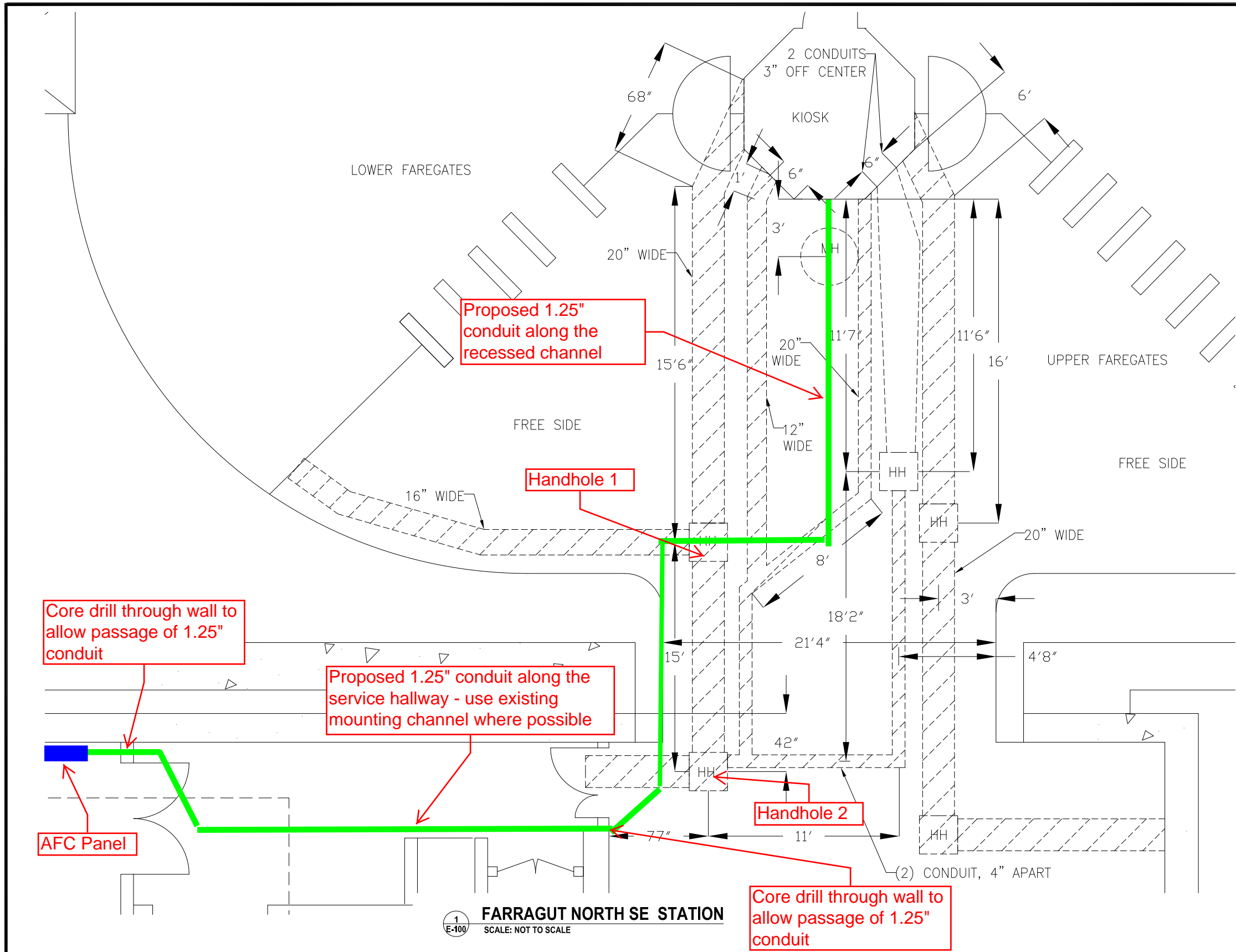
DATE: 8.76

CONTRACT NUMBER

CUBIC WESTERN DATA

PROJECT NUMBER

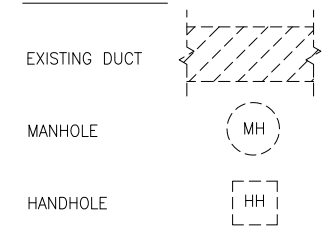
02



PLAN NOTES:

1. DIMENSIONS ARE IN FEET AND INCHES.
2. DIMENSIONS ARE FOR REFERENCE ONLY.
3. EXISTING IN-FLOOR DUCTS/CONDUITS WERE IDENTIFIED USING A PORTABLE GPR SCANNING DEVICE.
4. THE SCANNING COVERAGE IS LIMITED TO THE MEZZANINE FLOOR ONLY.
5. GPR SCANNING HAS THE FOLLOWING LIMITATIONS: (i) 12 INCHES VISIBLE SCANNING DEPTH; (ii) VISIBILITY BEYOND CONGESTED OR NEAR SURFACE REINFORCEMENT LAYERS; (iii) DETECTION OF PVC AND OTHER NON-METALLIC OBJECTS (iv) DETERMINATION OF SIZE AND EXTENTS OF SUBSURFACE ANOMALIES SUCH AS SLAB VOIDS OR REBAR SIZES; AND (v) VISIBILITY WHEN VARIABLE MOISTURE CONDITIONS EXIST IN THE SUBSTRATE.

LEGEND:



FARRAGUT NORTH SE STATION
SCALE: NOT TO SCALE

CONTRACT NO. XXXXXX

DESIGNED	C. LOOSE	11-14	REFERENCE DRAWINGS		REVISIONS		
			NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION
DATE							
DRAWN	C. LOOSE	11-14					
CHECKED	M. BUTLER	11-14					
APPROVED							

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY
DEPARTMENT OF TRANSIT INFRASTRUCTURE AND ENGINEERING SERVICES
OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM

GFP A Gannett Fleming/Parsons JOINT VENTURE

APPROVED _____ SUBMITTED _____ PROJECT MANAGER

15-NEPP-01
IN - FLOOR DUCT INSPECTIONS
A02 Farragut North SE (M002)
PROPOSED POWER CONDUIT RUN

SCALE: NOT TO SCALE DRAWING NO. A02-E-100 XXX

Mezzanine Inspection Report (Scoping)

Date: 12/09/2014	Station Name: A03 Dupont Circle South	Mezzanine #: 005	Completed By: Mike Butler
Summary			
<p>Video scoping and pull string installation was completed for the faregate array communications ducts. Video scoping was completed for the faregate array power ducts.</p> <p>Scoping and pull string installation of the duct run from kiosk to shared pull box and pull string installation between the shared pull box and AFC panel could not be completed due to energized lines. WMATA has requested a proposed conduit run from the kiosk to the AFC panel. This run would consist of two 1 ¼" conduits from the kiosk, overhead in the recessed channels along the mezzanine ceiling, into room #201. The two conduits would need to penetrate the metal above the door. The run would then continue down the hall and turn across the room towards room #215. The conduit would then need to be cored into the wall near the door to room #215 and run into an existing box and continue down into the AFC Panel. This proposed run is outlined in the photos below.</p> <p>Scanning is not required at this mezzanine.</p>			
Scoping of Faregate Array(s)			
Task	Yes/No	Notes	
Communications Duct – Upper Faregate Array (4 Gates)			
Was video scoping completed for the entire duct run?	Yes	Refer to WMATA Dupont circle South Upper Comm Duct Video.avi file.	
Were pull strings installed at all faregates in the array?	Yes		
Were there any obstructions or blockages? Provide details of type and specific location.	No		
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	2" duct – less than 5 wires	
Communications Duct - Lower Faregate Array (4 Gates)			
Was video scoping completed for the entire duct run?	Yes	Refer to WMATA Dupont circle South Lower Comm Duct Video.avi file.	
Were pull strings installed at all faregates in the array?	Yes		
Were there any obstructions or blockages? Provide details of type and specific location.	No		
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	2" duct – less than 5 wires	
Power Duct - Upper Faregate Array (4 Gates)			
Was video scoping completed for the entire duct run?	Yes	Refer to WMATA Dupont circle South Upper Power Duct Video.avi file.	
Were there any obstructions or blockages? Provide details of type and specific location.	No		
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	4" duct – less than 5 wires	
Power Duct - Lower Faregate Array (4 Gates)			
Was video scoping completed for the entire duct run?	Yes	Refer to WMATA Dupont circle South Lower Power Duct Video.avi file.	
Were there any obstructions or blockages? Provide details of type and specific location.	No		
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	4" duct – less than 5 wires	


Scoping of Power Duct - Kiosk to AFC Panel		
Task	Yes/No	Notes
Kiosk to Shared Pull Box (60' run)		
Was video scoping completed for the entire duct / conduit run?	No	Hot wires prevented scoping
Was pull string installed?	No	Hot wires prevented pull string installation
Were there any obstructions or blockages? Provide details of type and specific location.	N/A	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	
Shared Pull Box to Shared Electrical Trough (30 foot run)		
Was video scoping completed for the entire duct / conduit run?	No	Conduit – no scoping required
Was pull string installed?	No	Hot wires prevented pull string installation
Were there any obstructions or blockages? Provide details of type and specific location.	N/A	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	
Shared Electrical Trough to AFC Panel (15 foot run)		
Was video scoping completed for the entire duct / conduit run?	No	Conduit – no scoping required
Was pull string installed?	No	Hot wires prevented pull string installation
Were there any obstructions or blockages? Provide details of type and specific location.	N/A	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	
Observations / Issues / Next Steps		
Total proposed overhead conduit run of 173 feet from kiosk to AFC panel.		
Sign Off		
	GFP Representative	WMATA PRGM
Name:	Mike Butler	
Signature:		
Date:	10/34/14	

Photo #1 – A03 Dupont Circle South: Shared pull box in Verizon room #203



existing run

to kiosk

to electrical trough

Photo #2 – A03 Dupont Circle South: AFC Panel and under floor trough in room #215

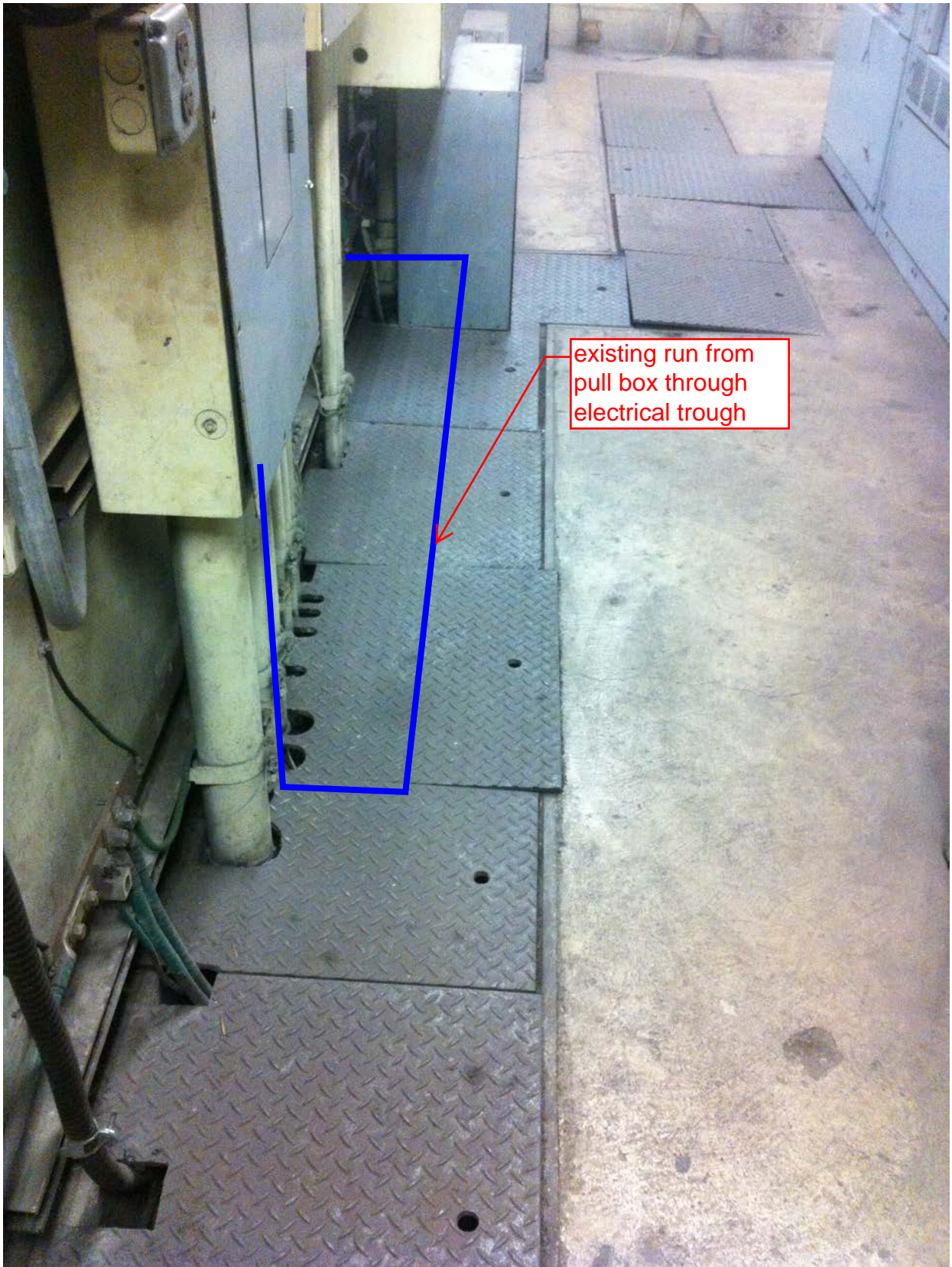


Photo #3 – A03 Dupont Circle South: Proposed overhead conduit in mezzanine area

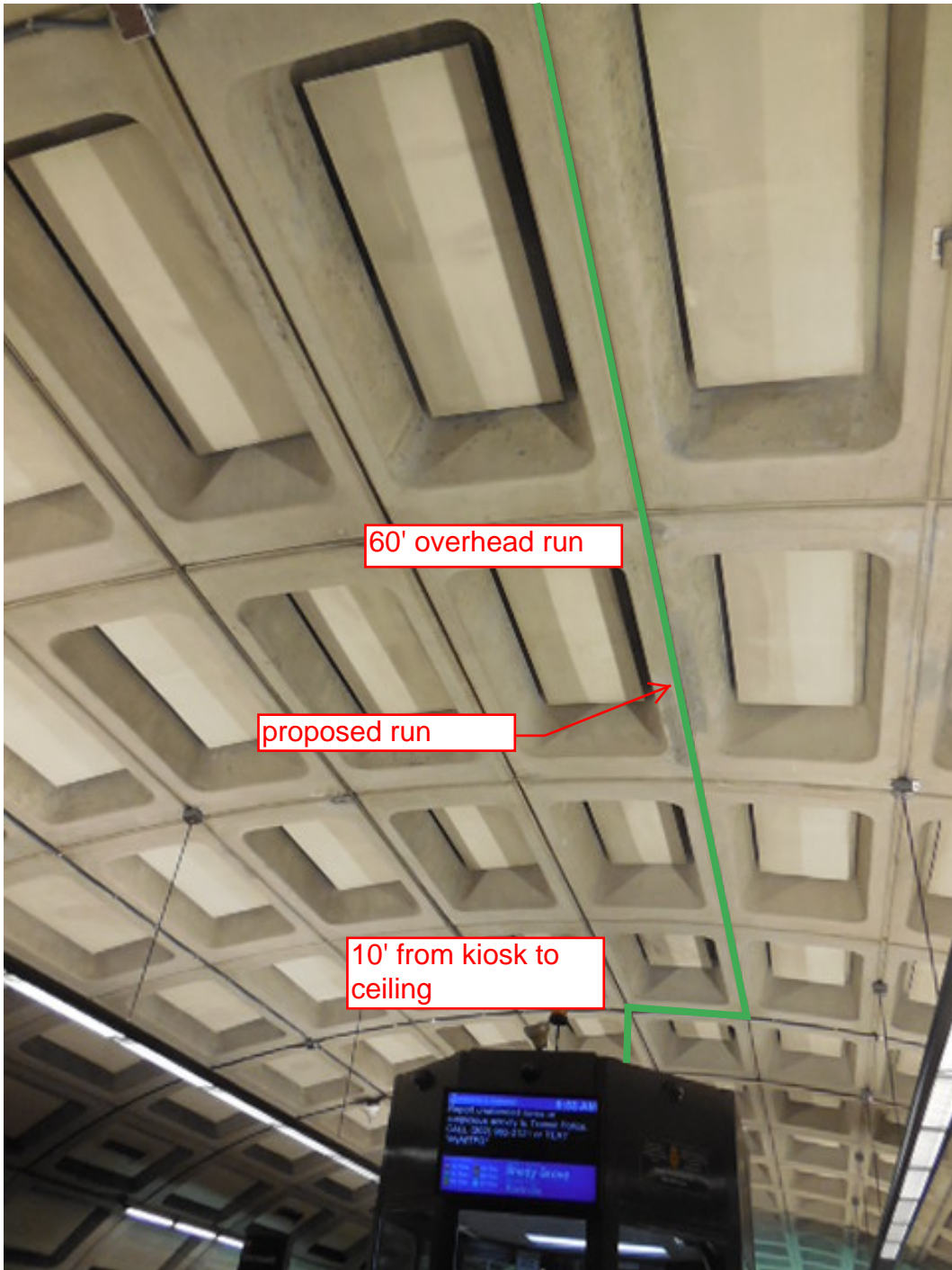


Photo #4 – A03 Dupont Circle South: Proposed overhead conduit in mezzanine area continued

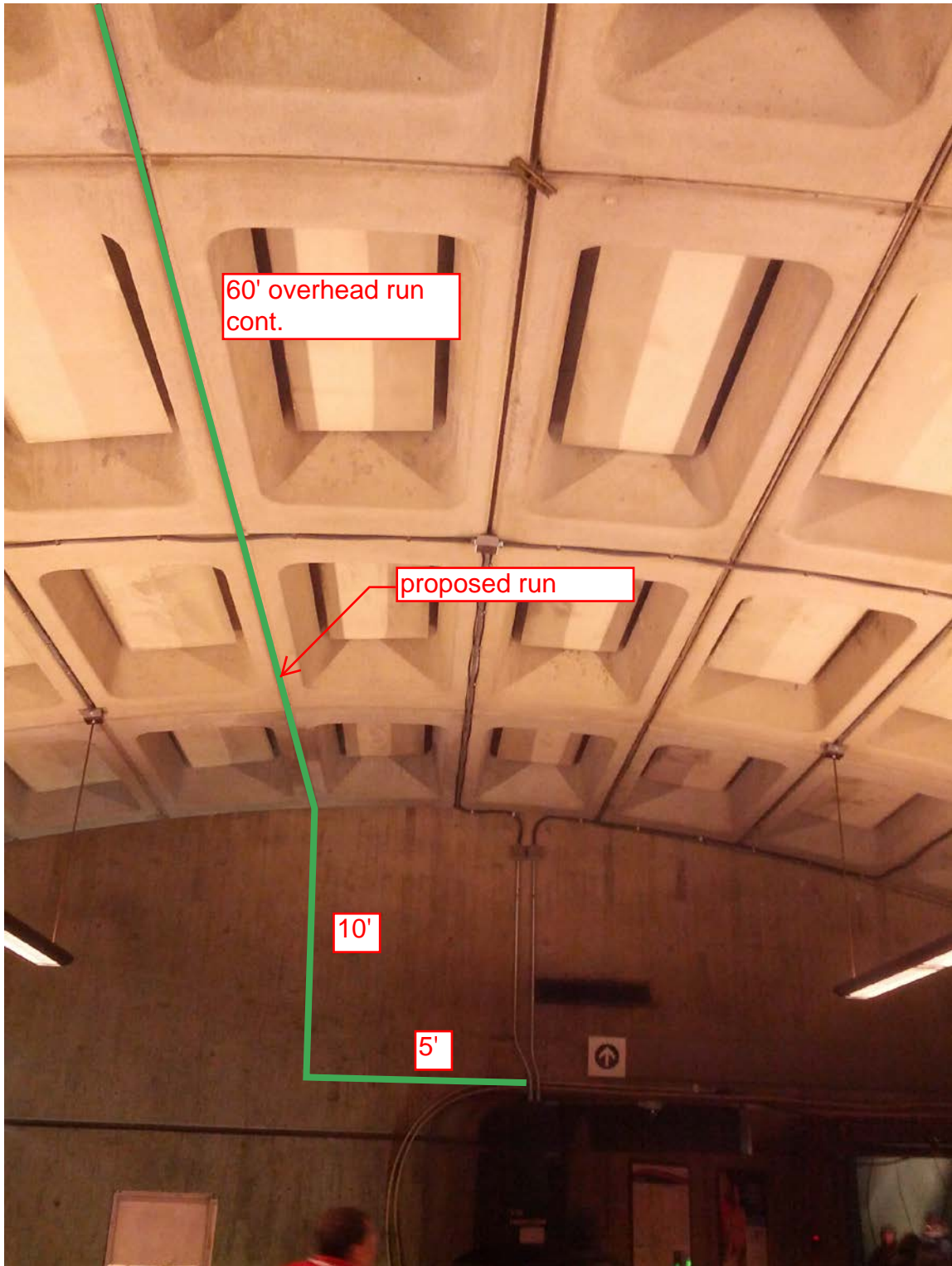


Photo #5 – A03 Dupont Circle South: Proposed overhead conduit running into Room #201. Run will need to penetrate metal over door.

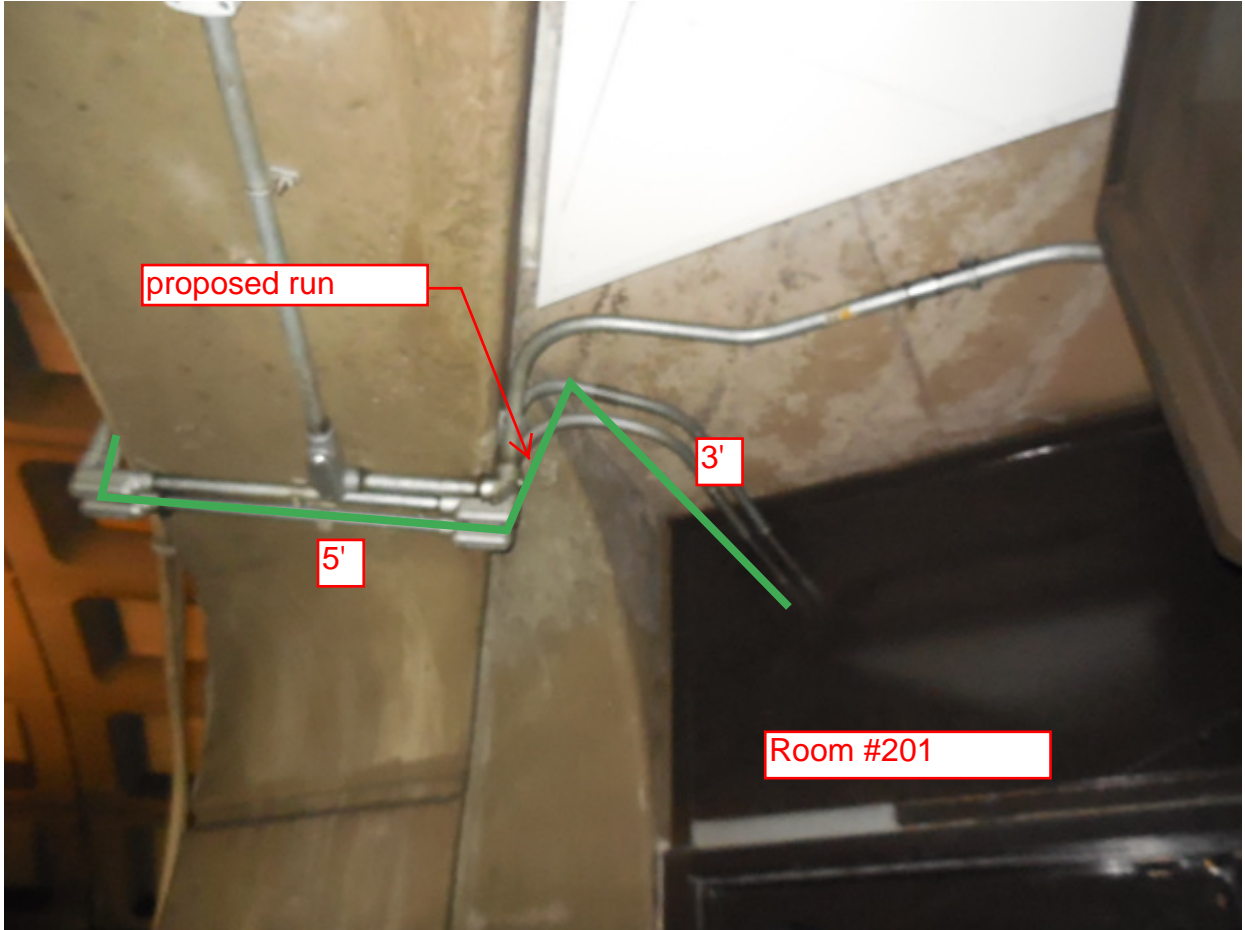


Photo #6 – A03 Dupont Circle South: Proposed overhead conduit on other side of door for room #201

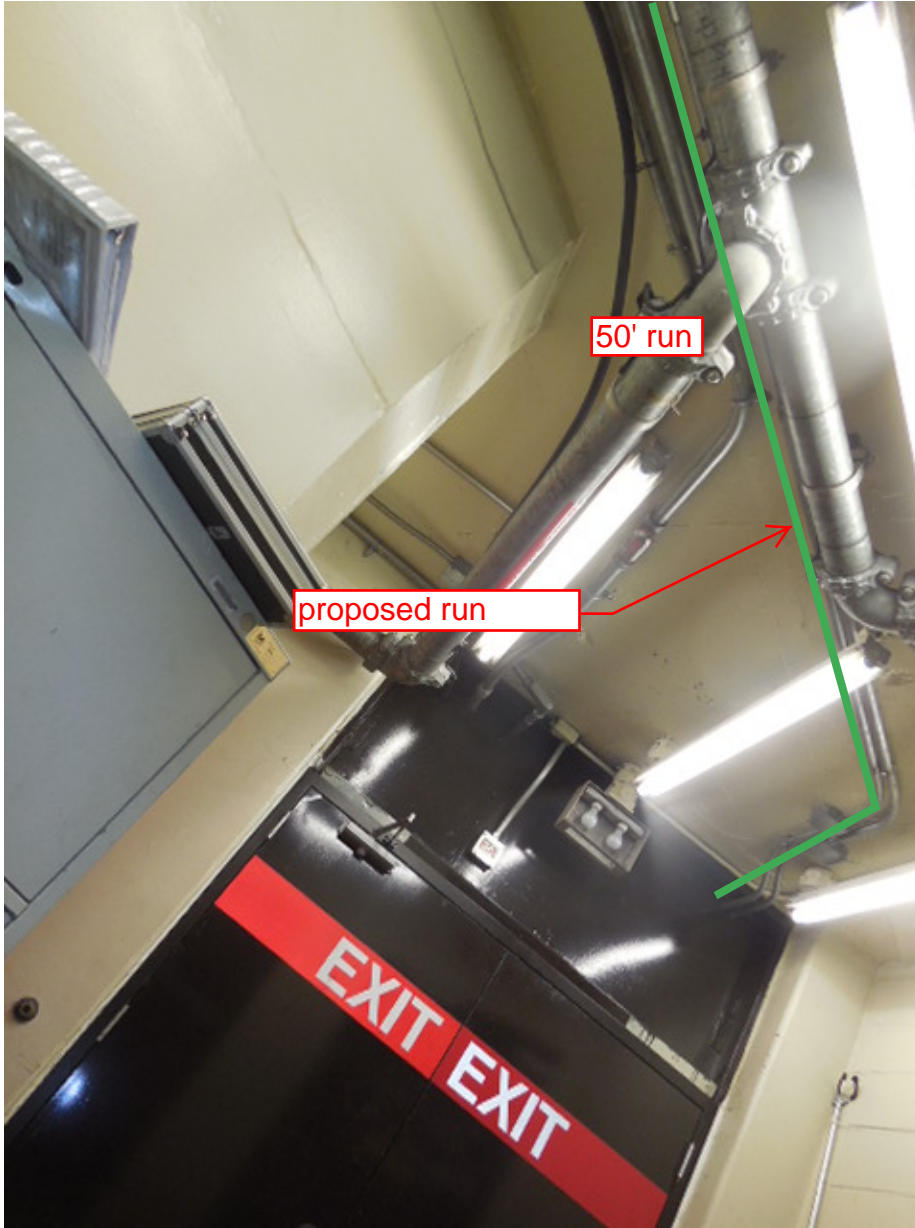


Photo #7 – A03 Dupont Circle South: Proposed conduit run continuing down hallway of room #201 and towards room #215



Picture #8 and #9 – A03 Dupont Circle South: Area in wall where proposed conduit will need to be cored through into room #215 to access AFC Panel

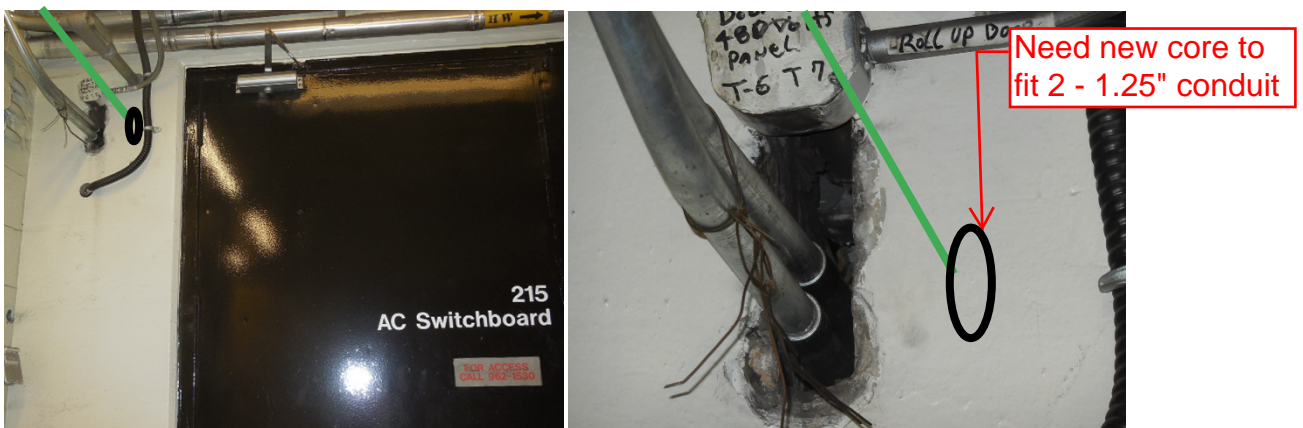
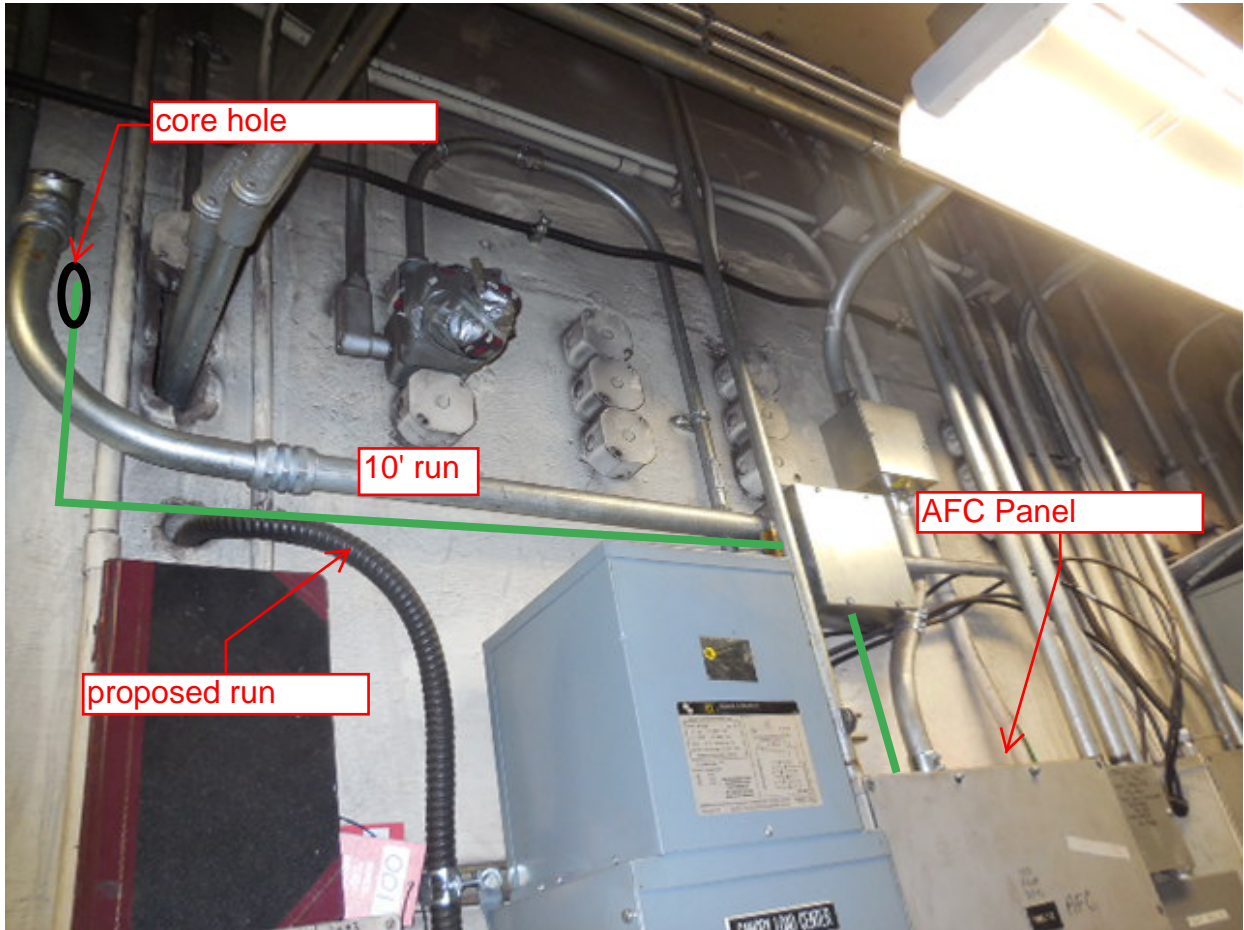


Photo #10 – A03 Dupont Circle South: Proposed conduit run penetrating wall into room #215 to access AFC panel through existing box.



NOTES:

1. ALL INFORMATION CONCERNING DUCTS AND CONDUITS IS BASED ON INFORMATION SUPPLIED TO CUBIC WESTERN DATA BY WHATA.

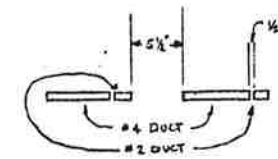
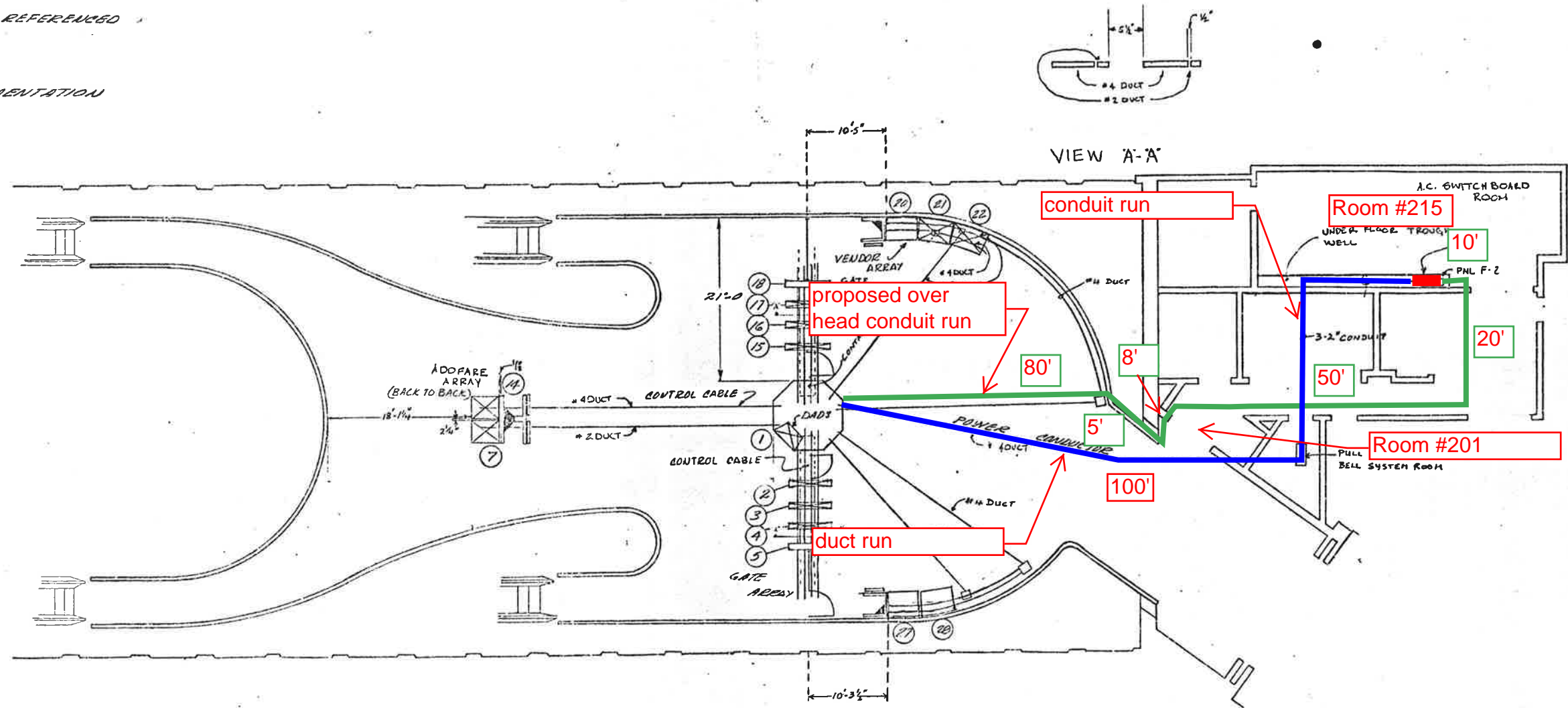
2. TOTAL MACHINE INVENTORY IS DEPICTED ON THIS DRAWING.

3. THE MINIMUM OPERATIONAL MACHINE INVENTORY IS REFERENCED ON THIS DRAWING BY THE 'X' DRAWN THRU THE MACHINES.

4. FOR AS BUILT CONDITIONS SEE SHEETS.

5. FOR REFERENCE DRAWINGS SEE SUPPORT DOCUMENTATION PACKAGE FOR THIS MEZZANINE.

REVISIONS	
DESCRIPTION	DATE
AS BUILT DRAWING REV. A	5-10-77



-2 INSTALLATION PLAN (AS BUILT CONDITIONS)

WASHINGTON METROPOLITAN AREA TRANSIT SYSTEM

CONTRACT NUMBER 22007A		CUBIC WESTERN DATA A subsidiary of C. Inc. Corporation 560 NEARBY MESA ROAD • POST OFFICE BOX 8078 • SAN DIEGO, CA 92161	
REL		DUPONT BIKERZ STA SOUTH MEZZANINE AFC MACHINES	
ENGRG		DESIGN ACTIVITY APPROVAL	SIZE
DESIGN		APPROVED	0
CHECK		SCALE	
DRAWN		DRAWING NUMBER	926-0391 DS
			SHEET

Mezzanine Inspection Report (Scoping)

Date: 11/13/2014	Station Name: A04 Woodley Park	Mezzanine #: 007	Completed By: Mike Butler
-------------------------	---------------------------------------	-------------------------	----------------------------------

Summary

The majority of video scoping and pull string installation was completed at this mezzanine. This included the scoping and pull string installation for communication duct in the faregate array and scoping of power duct in the faregate array. Video scoping and pull string installation was completed between Kiosk, Handhole 1 and Handhole 2. Pull string was also installed between Handhole 2 and Shared Trench.

It was not possible to install pull string in the remaining section from Shared Trench to AFC Panel (Room C208), due to standing water and hot wires. Therefore, a proposed overhead conduit is recommended for the remaining section as shown in the attached drawing and photos.

No scanning was needed at this mezzanine.

Scoping of Faregate Array(s)

Task	Yes/No	Notes
Communications Duct – Faregate Array (8 Gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to "WMATA Woodley Park Comm Duct Video.avi" file.
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	Minor dust and debris
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	3" duct, less than 15 wires
Power Duct - Faregate Array (8 Gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to "WMATA Woodley Park Power 3inch Duct Video.avi and WMATA Woody Park Power 6inch Duct Video.avi" files.
Were there any obstructions or blockages? Provide details of type and specific location.	No	Has a 45 degree bend.
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	3" duct, less than 10 wires


Scoping of Power Duct - Kiosk to AFC Panel		
Task	Yes/No	Notes
Kiosk to Handhole 1 (Distance = 70')		
Was video scoping completed for the entire duct / conduit run?	Yes	Refer to "WMATA Woodley Park Power Kiosk to H.H.1 Duct Video.avi" file.
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	3" and 6" ducts, 2 wires
Handhole 1 to Handhole 2 (Distance = 15')		
Was video scoping completed for the entire duct / conduit run?	Yes	Refer to "WMATA Woodly Park Power HH1 to HH2 Duct Video.avi" file.
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	6" duct, 2 wires
Handhole 2 to Trough (Distance = 15')		
Was video scoping completed for the entire duct / conduit run?	No	Energized cables laying in standing water
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	6" duct, 2 wires
Trough to AFC Panel (Distance = 27')		
Was video scoping completed for the entire duct / conduit run?	No	Conduit – no scoping required
Was pull string installed?	No	Energized wires laying in standing water
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	4" conduit, 2 wires
Observations / Issues / Next Steps		
Total power run from kiosk to AFC panel is approximately 127'.		
Sign Off		
	GFP Representative	WMATA PRGM
Name:	Mike Butler	
Signature:		
Date:	11/13/2014	

Photo #1 – A04 Woodley Park: Kiosk to handhole 1

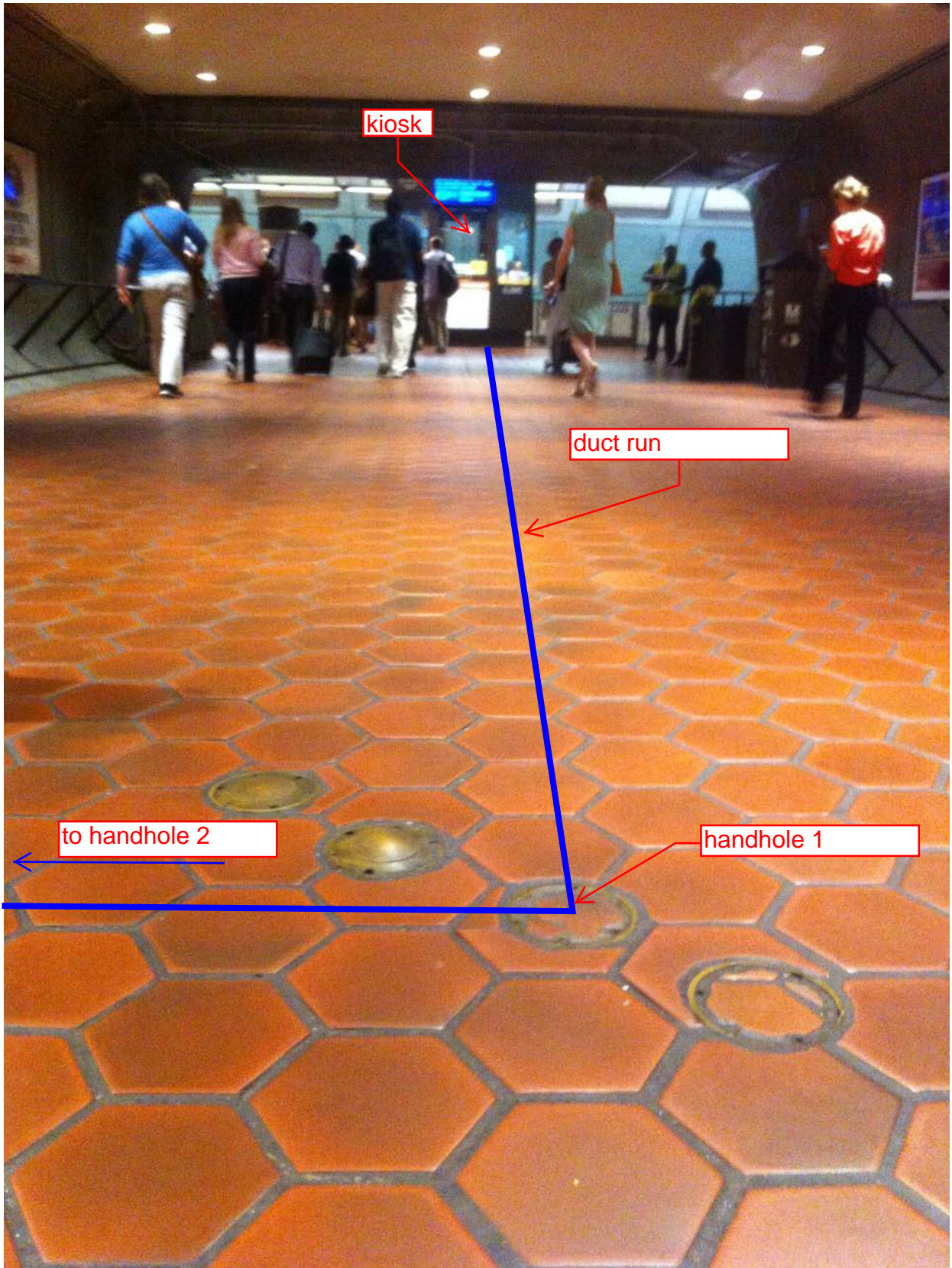


Photo #2 – A04 Woodley Park: handhole 1 to handhole 2

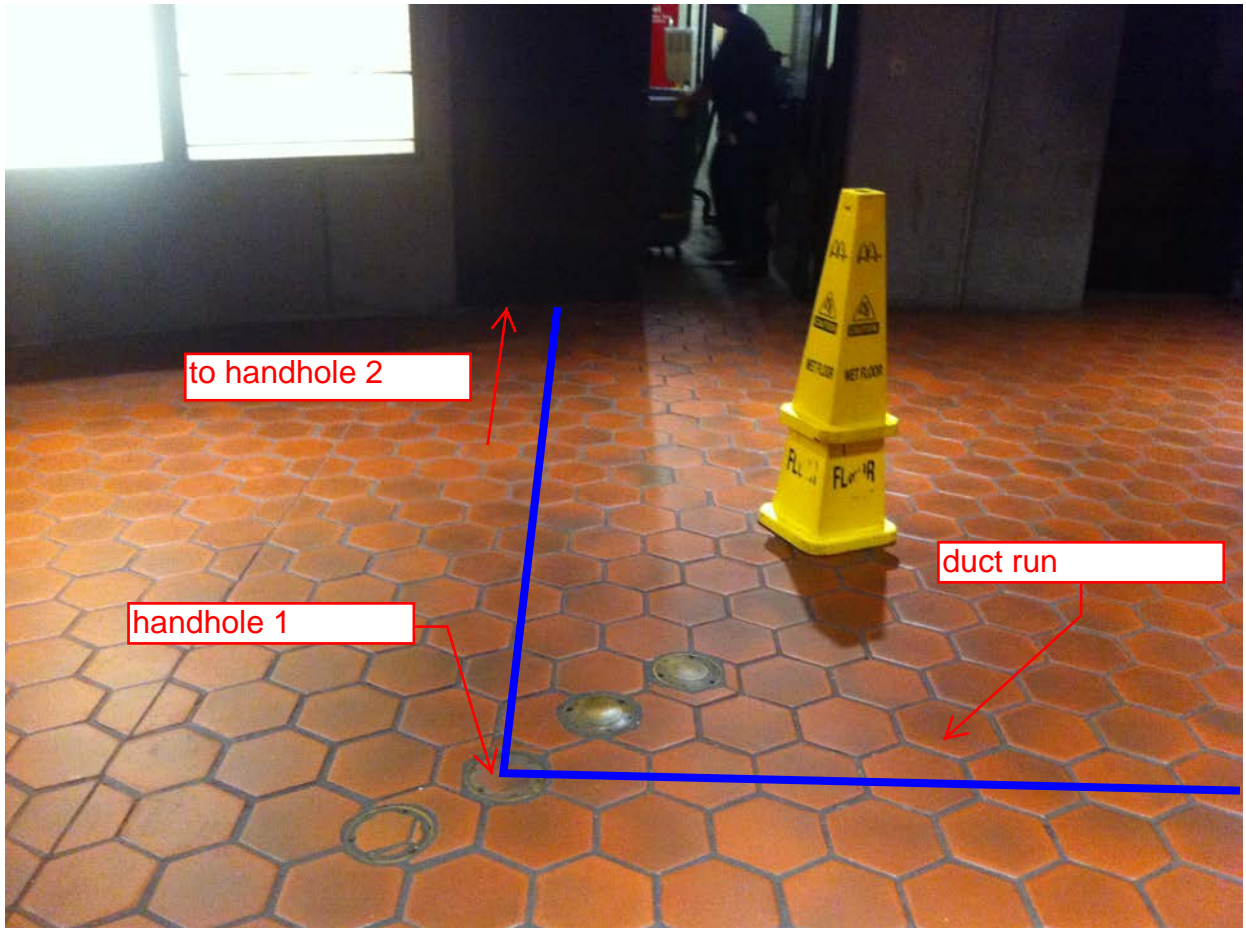
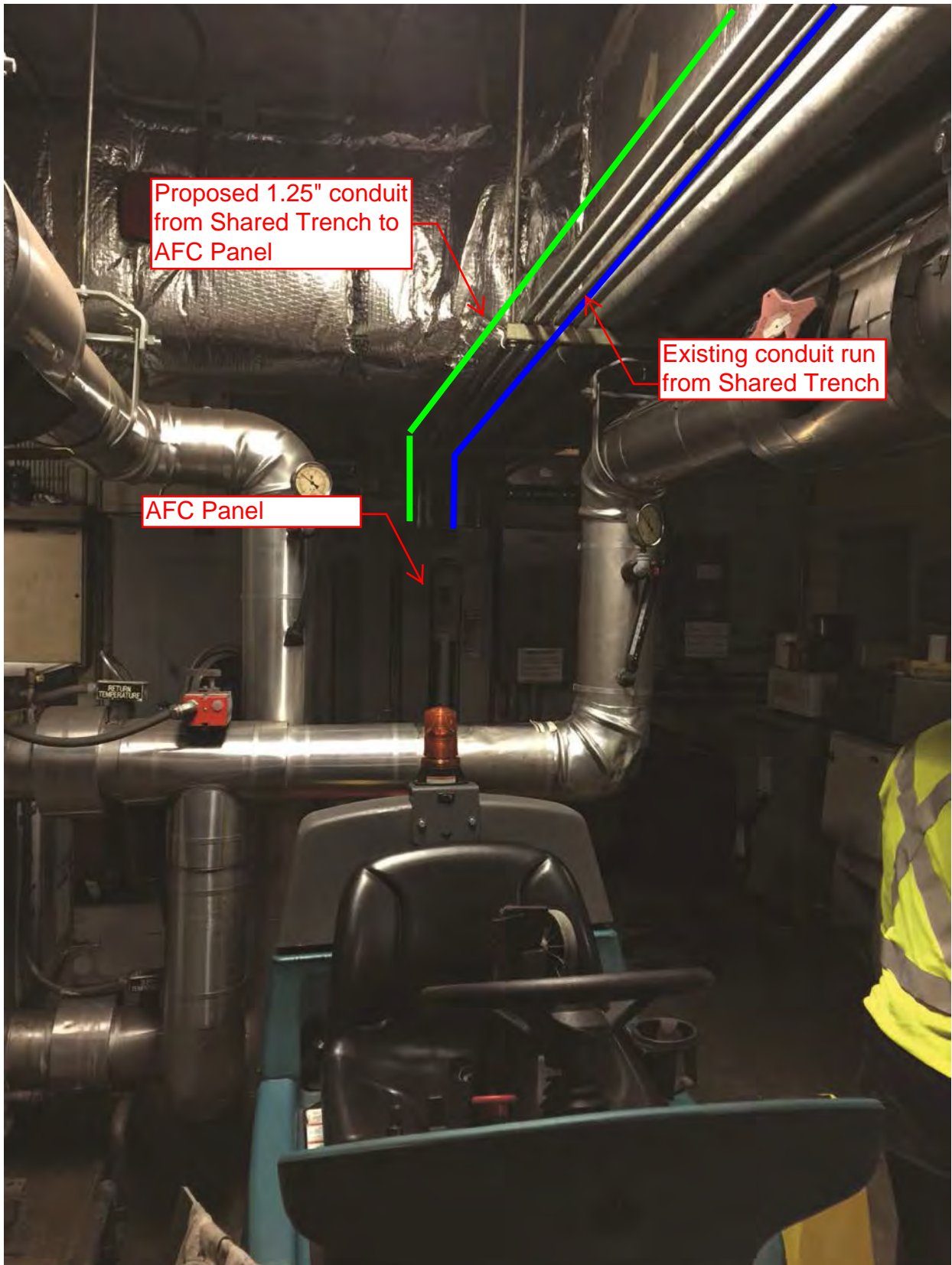


Photo #3 – A04 Woodley Park: Standing water in electrical trough

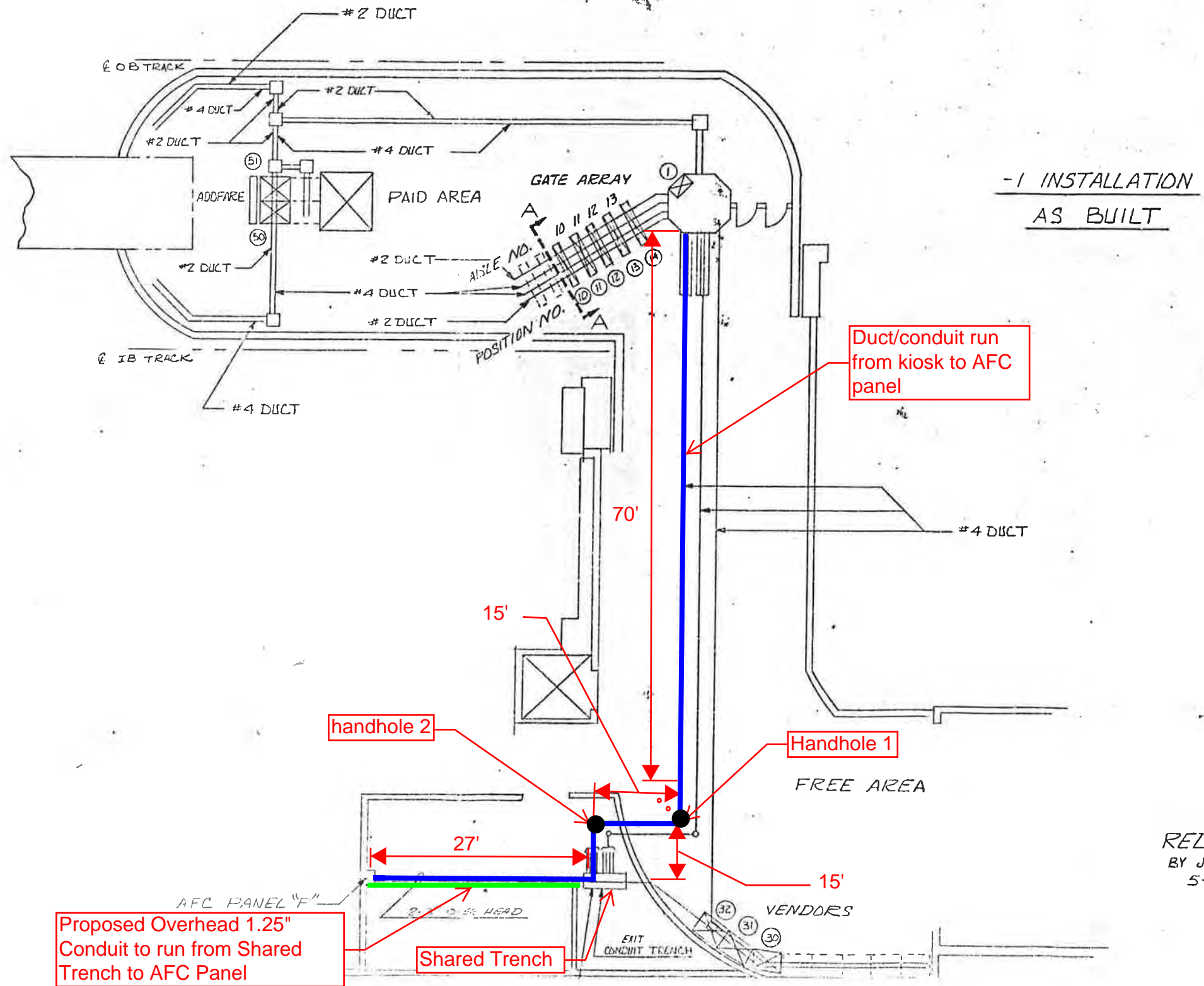
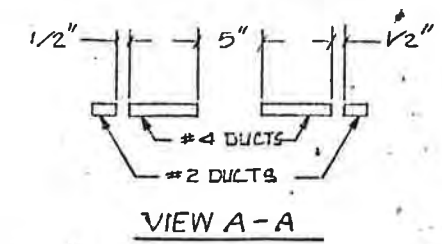


Photo #4 – A04 Woodley Park: Overhead conduit run from electrical trough to AFC Panel



NOTES:

1. THE MINIMUM OPERATIONAL MACHINE INVENTORY IS REFERENCED ON THIS DRAWING BY THE "X" DRAWN THROUGH THE MACHINE.
2. FOR REFERENCE DRAWINGS USED SEE SUPPORT DOCUMENTATION PACKAGE FOR THIS MEZZANINE.



PANEL F						
POSITION NO.	MACHINE TYPE	SERIAL NO.	CIRCUIT BREAKER NO.	BREAKER SIZE (AMPS)	WIRE SIZE (AWG)	
1	DADS	DS 8059	N/A	N/A	N/A	
10	EXIT GATE	GX 4064	10	20	8	
11	REV GATE	GR 7128	4			
12	REV GATE	GR 7248	6			
13	REV GATE	GR 7247	2			
14	ENTRY GATE	GN 3065	8		8	
30	VENDOR	FV 1305	5		10	
31	VENDOR	FV 1304	3		10	
32	VENDOR	FV 1306	1		10	
50	ADDFARE	AM 2117	19		6	
51	ADDFARE	AM 2118	17	20	6	

REDRAWN.
BY J. ETHERIDGE
5-7-82

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
BREAK SHARP EDGES .010 MAX
TOLERANCES ON
DECIMALS: .XX ±.03 .XXX ±.010
ANGLES: ±0.5 DEG.
HOLES
.251 THRU .500 ±.006 - .001
.501 THRU .750 ±.008 - .001
.751 THRU 1.000 ±.010 - .001

CONTRACT NUMBER
DRAWING NUMBER
926-0416
SHEET / OF /

CUBIC WEST
INSTALLATION PLAN
WOODLEY ZOO PARK

CODE IDENT NO.
94987

DRAWN: WELLS
CHECKED: [Signature]
DESIGN: [Signature]
ENGINEER: [Signature]
APPROVAL: [Signature]

CP-2007A-145-2-1

Mezzanine Inspection Report

REVISION 1

Date: 11/13/2014	Station Name: A05 Cleveland Park	Mezzanine #: 008	Completed By: Mike Butler
------------------	----------------------------------	------------------	---------------------------

Summary

Pull string was installed in the upper and lower faregate array communication ducts. Video scoping and pull string installation was completed between the Kiosk, Handhole 1, Handhole 2 and the open trench. However, it was not possible to install pull string between the open trench and AFC Panel due to energized wires. Existing duct runs appear to be in adequate condition and are not at capacity.

A proposed conduit run has been identified between the open trench and the AFC Panel (see attached drawing and photos). The existing vacant conduit and junction box on the wall of Room #200 will be utilized as part of this run. From the junction box a new conduit would be installed parallel to the existing conduits on the South wall in Room #200. The conduit will then wrap onto the West wall in Room #200, and a core drill through the West wall into Room #218 is proposed. The new conduit would then run along the middle of the ceiling in Room #218 to avoid interference with the batteries, and then run along the South wall in Room #218, parallel to the existing conduits. A core drill through the wall in to Room #216 is also proposed. The new conduit would run along the wall in Room #216 and connect to the AFC Panel.

No scanning was required at this mezzanine.

Scoping of Faregate Array(s)

Task	Yes/No	Notes
Communications Duct – Upper Faregate Array (4 Gates)		
Was video scoping completed for the entire duct run?	No	Camera malfunction and no scoping done on subsequent visit
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	N/A	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	4" duct with less than 10 wires.
Communications Duct - Lower Faregate Array (4 Gates)		
Was video scoping completed for the entire duct run?	No	Camera malfunction and no scoping done on subsequent visit
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	N/A	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	4" duct with less than 10 wires.
Power Duct - Upper Faregate Array (4 Gates)		
Was video scoping completed for the entire duct run?	No	Camera malfunction and no scoping done on subsequent visit
Were there any obstructions or blockages? Provide details of type and specific location.	N/A	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	6" duct with less than 12 wires.
Power Duct - Lower Faregate Array (4 Gates)		
Was video scoping completed for the entire duct run?	No	Camera malfunction and no scoping done on subsequent visit
Were there any obstructions or blockages? Provide details of type and specific location.	N/A	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	6" duct with less than 12 wires.


Scoping of Power Duct - Kiosk to AFC Panel		
Task	Yes/No	Notes
Kiosk to Handhole 1 (Distance: 60')		
Was video scoping completed for the entire duct / conduit run?	Yes	Refer to "WMATA Cleveland Park Power Kiosk to HH1 Duct Video.avi" file.
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	
Handhole 1 to Handhole 2 (Distance: 13')		
Was video scoping completed for the entire duct / conduit run?	Yes	Refer to "WMATA Cleveland Park Power HH1 to HH2 Duct Video.avi" file.
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	
Handhole 2 to Open Trench (Distance: 10')		
Was video scoping completed for the entire duct / conduit run?	Yes	Refer to "WMATA Cleveland Park Power HH2 to Trench in Room 200 Video.avi" file.
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	
Open Trench to AFC Panel (Distance: 60')		
Was video scoping completed for the entire duct / conduit run?	No	Could not video scope or install pull string in open trench due to live wires
Was pull string installed?	No	
Were there any obstructions or blockages? Provide details of type and specific location.	N/A	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	N/A	
Observations / Issues / Next Steps		
The total distance of power run between Kiosk and AFC Panel is 138', including 83' of existing duct and 55' of proposed conduit from open trench to AFC Panel (see photos and drawings for more information).		
Sign Off		
	GFP Representative	WMATA PRGM
Name:	Mike Butler	
Signature:		
Date:	01/06/15	

Photo #1 – A05 Cleveland Park: Mezzanine Kiosk

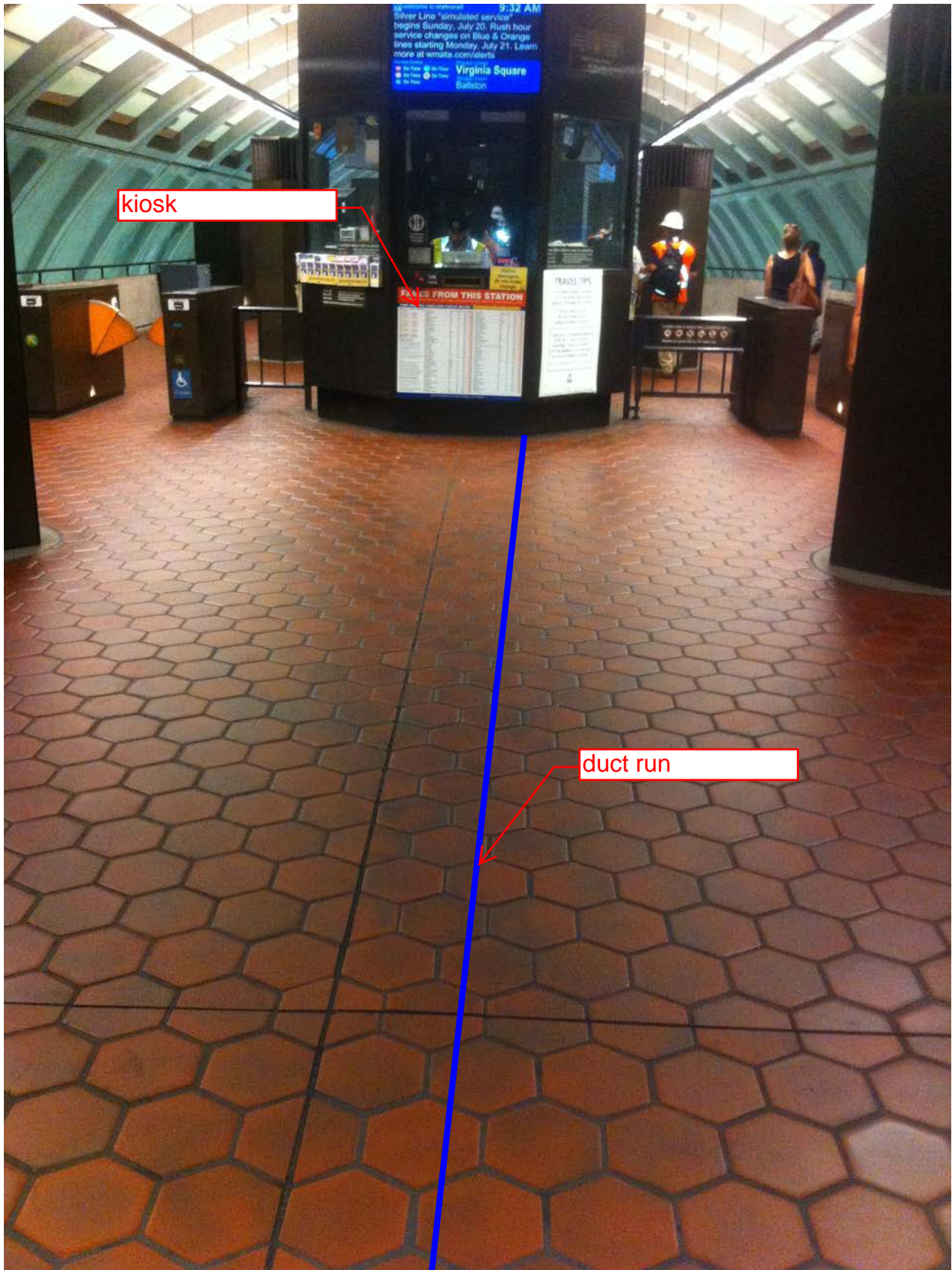


Photo #2 – A05 Cleveland Park: Handhole 1 and Handhole 2



Photo #3 – A05 Cleveland Park: Existing power run in open trench



Photo #4 – A05 Cleveland Park: Conduit from junction box to open trench

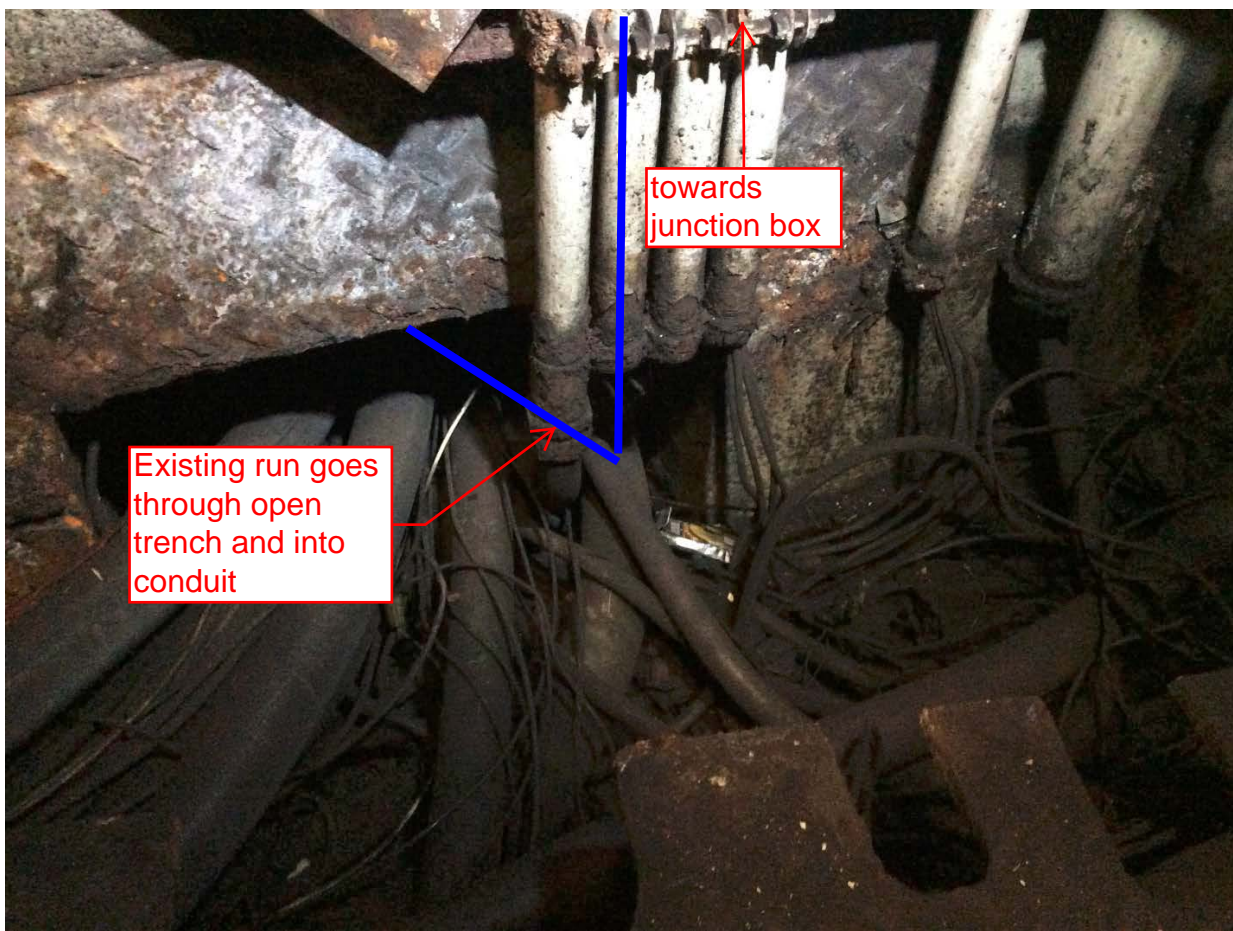


Photo #5 – A05 Cleveland Park: Vacant junction box and conduit to open trench

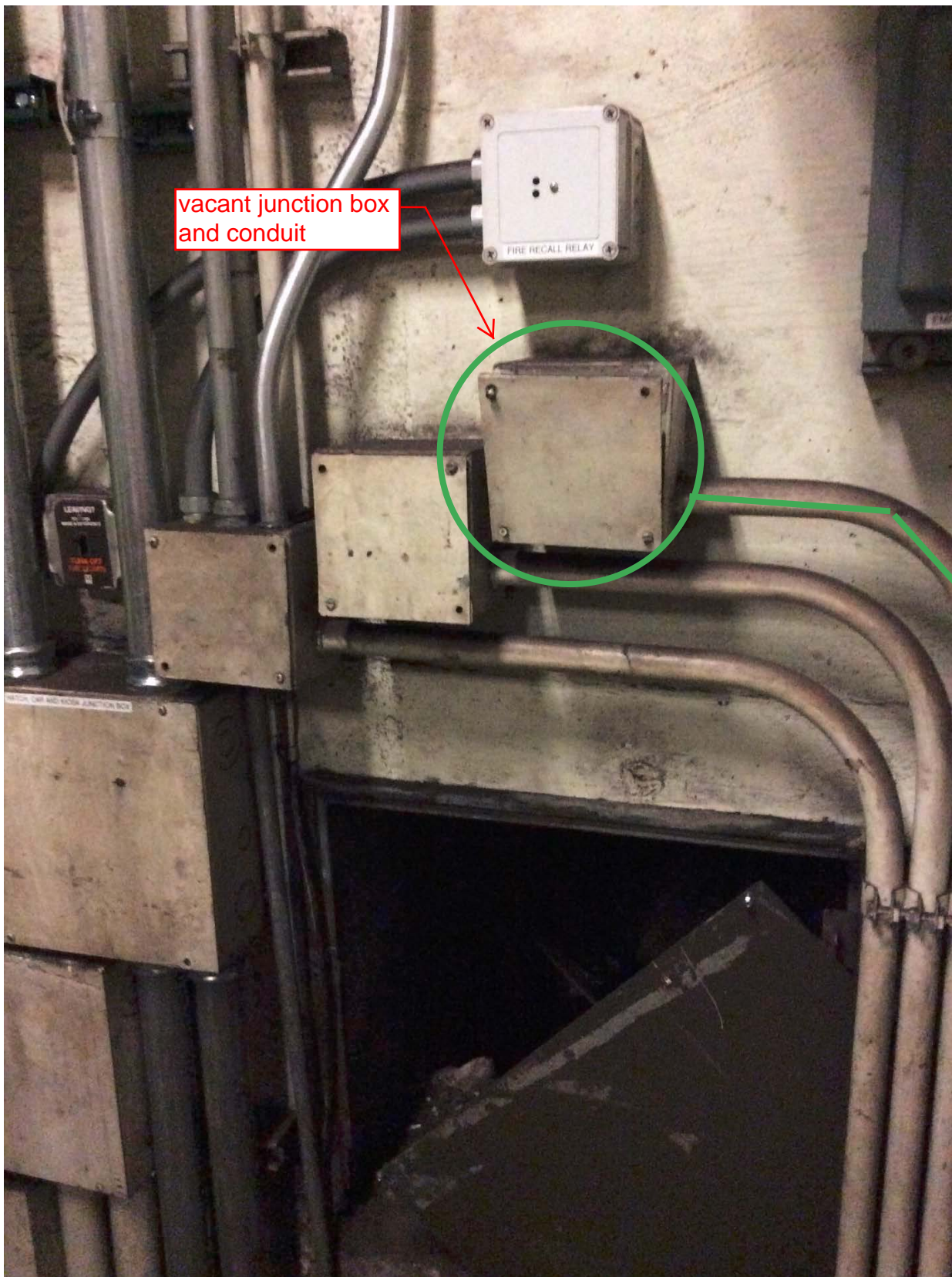


Photo #6 – A05 Cleveland Park: Elevator Machine Room #200, proposed conduit run between open trench and Battery Room #218

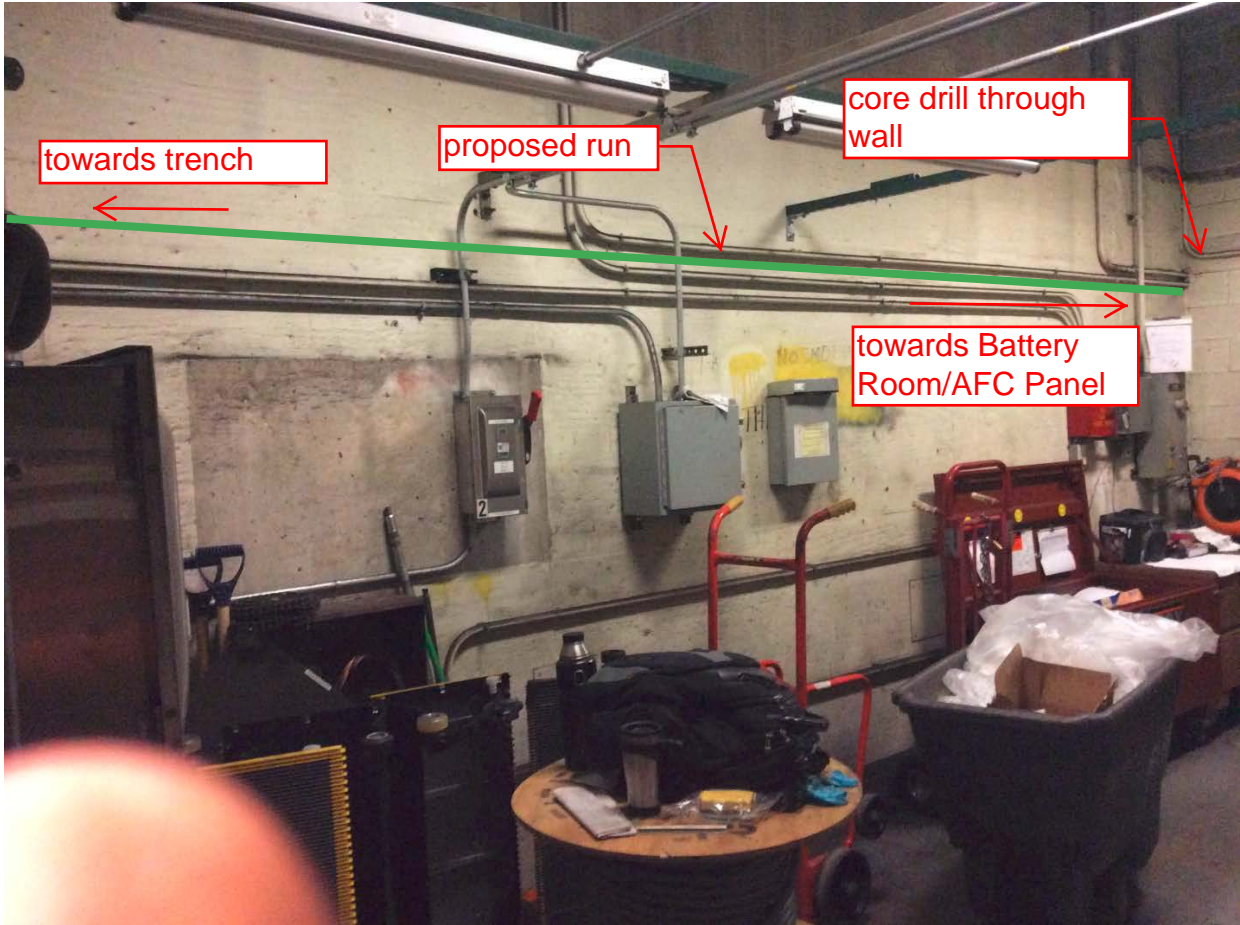


Photo #7 – A05 Cleveland Park: Battery Room #218, proposed conduit routed along right side wall at ceiling

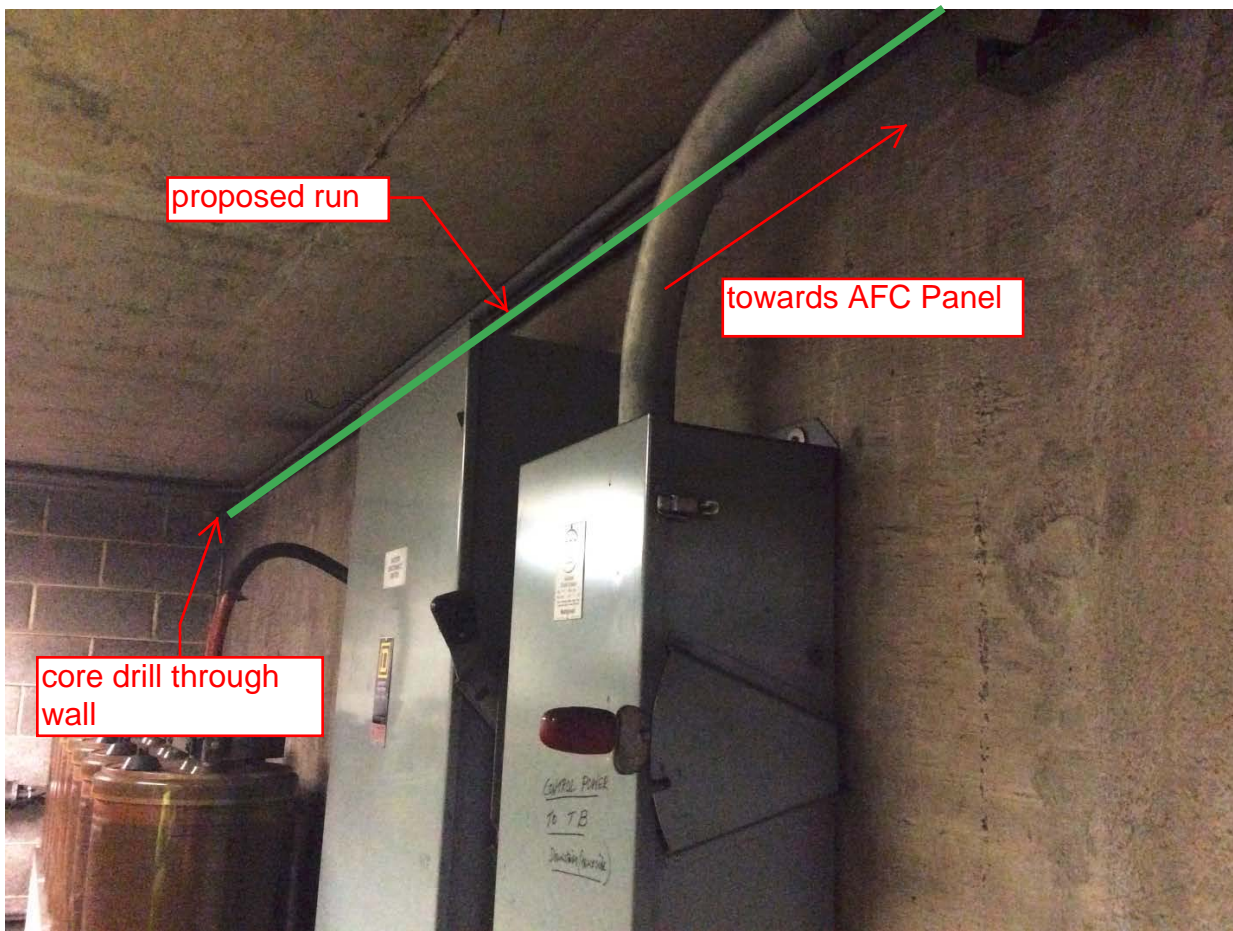
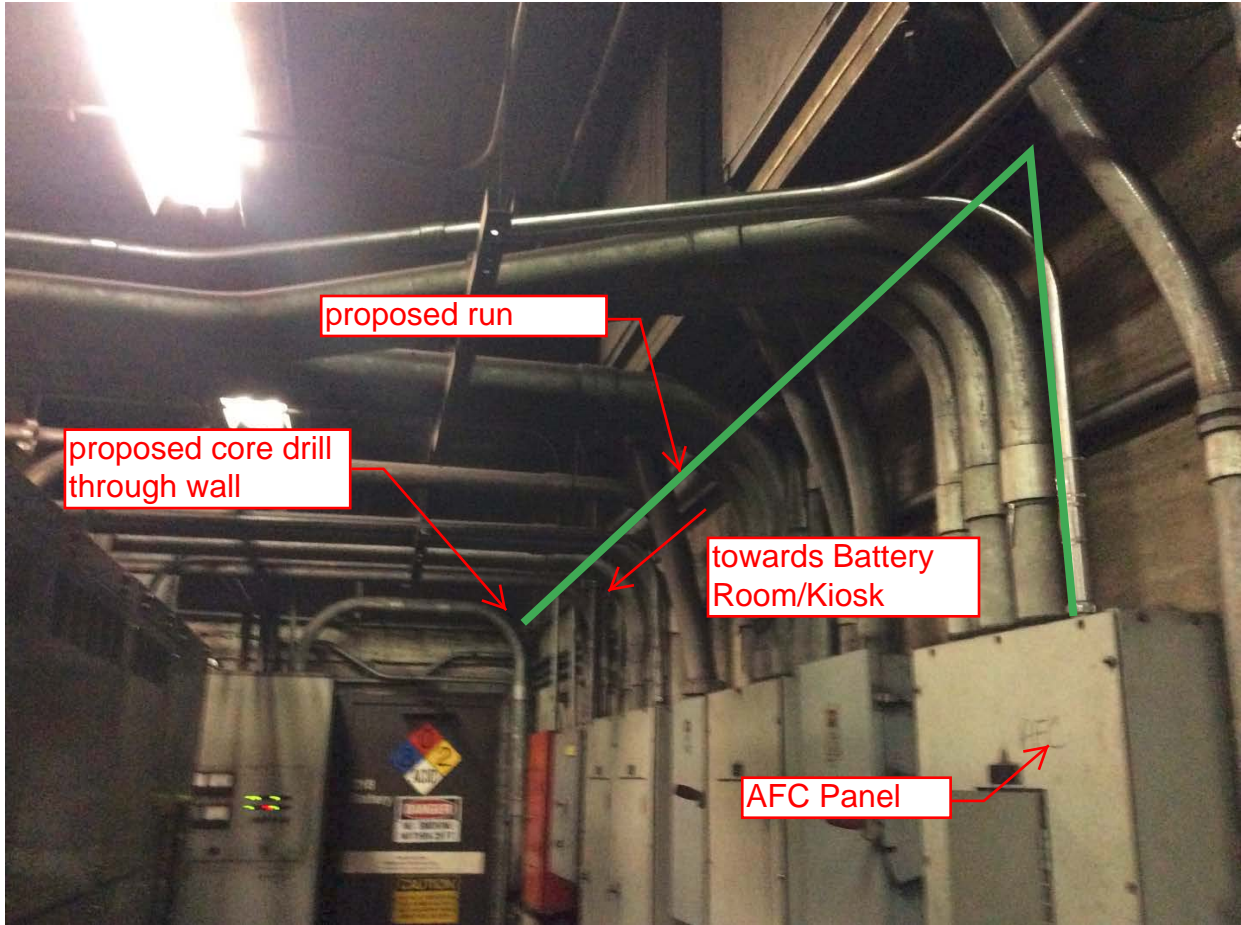
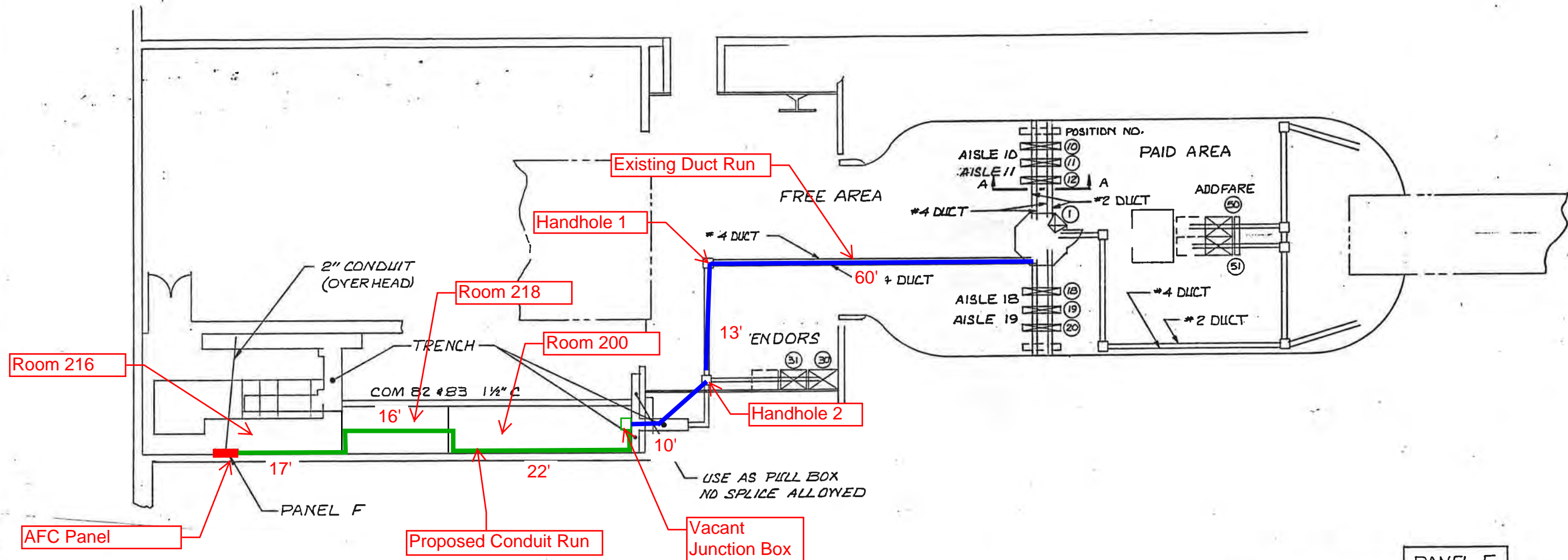
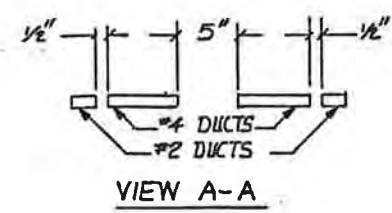


Photo # 8 – A05 Cleveland Park: Electrical Room #216, proposed conduit run along right side of wall between AFC Panel and Battery Room #218





- NOTES**
1. THE OPERATIONAL MACHINE INVENTORY IS INDICATED ON THIS DRAWING BY THE LETTER "X" DRAWN THRU THE MACHINE.
 2. FOR REFERENCE DRAWINGS USED SEE SUPPORT DOCUMENTATION PACKAGE FOR THIS MEZZANINE. SERVICE GATE AND RAILING DRAWING SEE 926-0358.

**-1 INSTALLATION PLAN
(AS BUILT DRAWING)**

REDRAWN BY
J. ETHERIDGE
4-23-82

PANEL F

POSITION NO.	MACHINE TYPE	SERIAL NO.	CIRCUIT BREAKER NO.	BREAKER SIZE (AMPS)	WIRE SIZE AWG.
1	DADS	DS8003	N/A	N/A	N/A
10	EXIT GATE	GX4065	12	20	8
11	REV GATE	GR7241	6		
12	END GATE	GA5051	8		
18	END GATE	GB6059	4		
19	REV GATE	GR7036	10		
20	EXIT GATE	EX3066	2		8
30	VENDOR	FY1308	1		10
31	VENDOR	FY1307	3		10
50	ADDFARE	AM2120	19		6
51	ADDFARE	AM2121	21	20	6

DO NOT SCALE DRAWING
UNLESS OTHERWISE SPECIFIED
BREAK SHARP EDGES .010 MAX
TOLERANCES ON ANGLES: 1/4 DEG.
HOLES
.125 THRU .500: +.006 - .001
.501 THRU .750: +.008 - .001
.751 THRU 1.000: +.010 - .001

UNLESS OTHERWISE SPECIFIED
BREAK SHARP EDGES .010 MAX
TOLERANCES ON ANGLES: 1/4 DEG.
HOLES
.125 THRU .500: +.006 - .001
.501 THRU .750: +.008 - .001
.751 THRU 1.000: +.010 - .001

CONTRACT NUMBER
DRAWING NUMBER
926-0414
SHEET / OF /

TITLE
INSTALLATION PLAN
CLEVELAND PARK STATION

CODE IDENT NO.
94987

DRAWN: J. WELLS
CHECK: []
DESIGN: []
SENIOR DESIGNER APPROVAL
AUTOMATIC W. CIVIL
APPROVAL: []

926-0414

(08)

Mezzanine Inspection Report

Date: 08/25/14	Station Name: A06 Van Ness - UDC	Mezzanine #: 009	Completed By: Mike Butler
-----------------------	---	-------------------------	----------------------------------

Summary

Video scoping and pull string installation was completed in Upper/ Lower Faregate Array (pull string only in comm. ducts) and power duct between Kiosk – Handhole 1 – Handhole 2 – Trench 1 in Room #200. There were no obstructions found and ducts are not at capacity, however there was dirt and debris found at duct entries – cleaning is recommended.

It was not possible to complete pull string installation in 2" conduit between Trench 1 (Room # 200); Trench 2 and AFC panel F (Room # 206). There are hot wires in both trenches, and there is standing water inside Trench 1 (see photos).

An overhead conduit run is proposed between Trench 1 and AFC Panel. The proposed conduit will run from Trench 1 in Room #200 overhead through to Battery Room 218 and then continue through to AFC Panel in Room #206. Core drilling of walls is required at two locations to allow the passage of the proposed conduit . Refer to attached as-built drawing and photos for further information.

Scanning is not required at this mezzanine.

Scoping of Faregate Array(s)

Task	Yes/No	Notes
Communications Duct – Upper Faregate Array (4 gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to "Van Ness Upper Gate Array Comm Duct.avi"
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	4" Duct with less than 10 wires
Communications Duct - Lower Faregate Array (4 gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to "Van Ness Lower Gate Array Comm Duct.avi"
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	4" Duct with less than 10 wires
Power Duct - Upper Faregate Array (4 gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to "Van Ness Upper Gate Array Power Duct.avi"
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	4" Duct with less than 12 wires
Power Duct - Lower Faregate Array (4 gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to "Van Ness Lower Gate Array Power Duct.avi"
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	4" Duct with less than 12 wires


Scoping of Power Duct - Kiosk to AFC Panel		
Task	Yes/No	Notes
Kiosk to Handhole 1 (Distance: 45')		
Was video scoping completed for the entire duct / conduit run?	Yes	Refer to "WMATA Van Ness Power Handhole 1 to Kiosk Video.avi"
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	Some debris identified inside Handhole 1
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	4" Duct with less than 15 wires
Handhole 1 to Handhole 2 (Distance: 15')		
Was video scoping completed for the entire duct / conduit run?	Yes	Refer to "WMATA Van Ness Power Handhole 1 to Handhole 2 Video.avi".
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	Some debris identified inside Handhole 2
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	4" Duct with less than 15 wires
Handhole 2 to Trench inside Room #200 (Distance: 15')		
Was video scoping completed for the entire duct / conduit run?	Yes	Refer to "WMATA Van Ness Power Handhole 2 to Trench Video.avi".
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	4" Duct with less than 15 wires
Trench to AFC Panel (Distance: 60' existing, 95' proposed)		
Was video scoping completed for the entire duct / conduit run?	No	Video scoping not possible
Was pull string installed?	No	Could not install pull string due to hot wires and standing water.
Were there any obstructions or blockages? Provide details of type and specific location.	N/A	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	N/A	Proposed conduit run to be utilized.
Observations / Issues / Next Steps		
<ul style="list-style-type: none"> - Pull string installed between Kiosk, Handhole 1, Handhole 2 and Trench 1 - total run: 75'. - Proposed conduit run is 95' between Trench 1 and AFC Panel. 		
Sign Off		
	GFP Representative	WMATA PRGM
Name:	Mike Butler	
Signature:		
Date:	11/14/14	

Photo #1 – Power duct run from Kiosk to Handhole 1 on mezzanine floor.

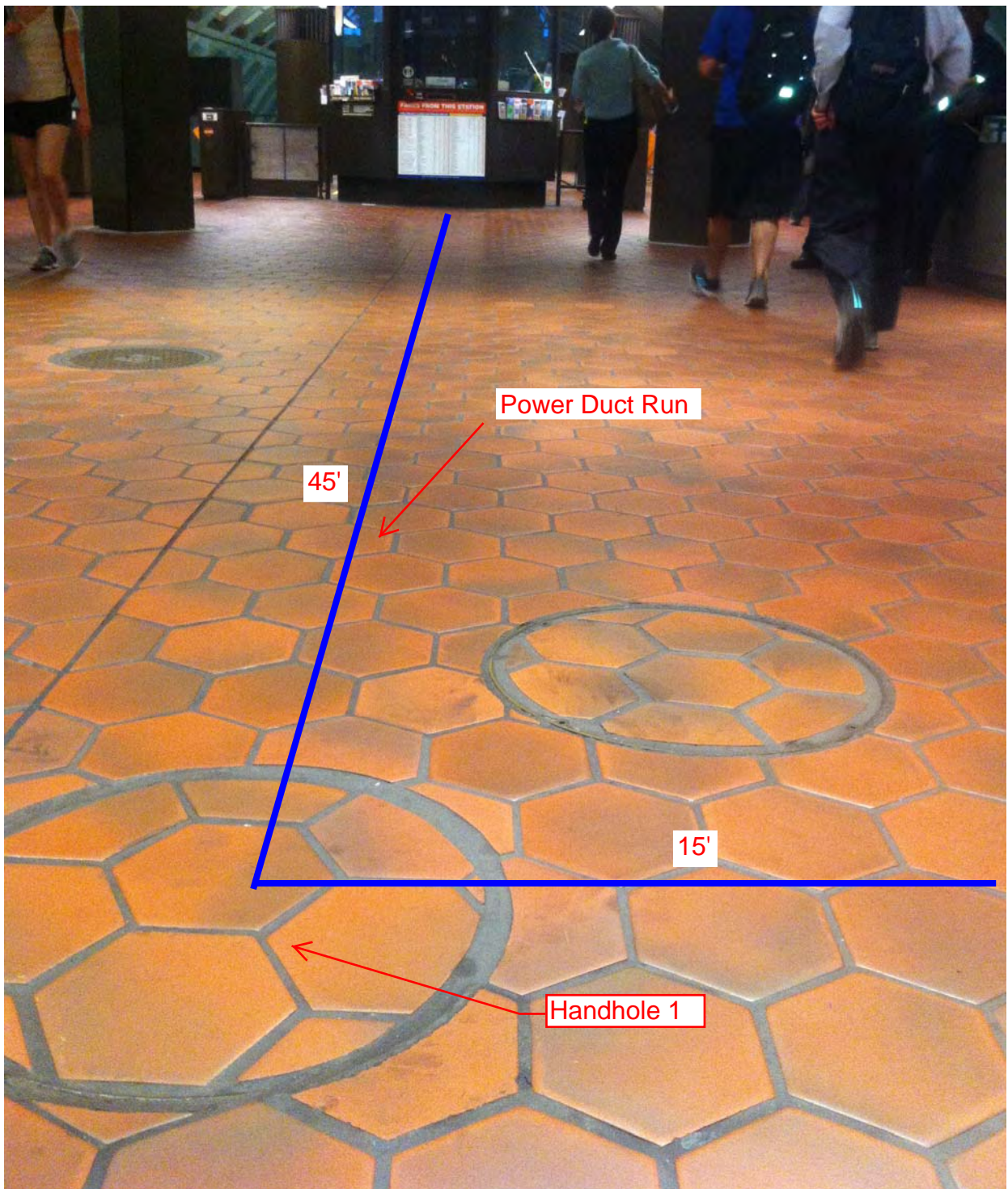


Photo #2 – Power duct run from Handhole 1 to Handhole 2 on mezzanine floor.

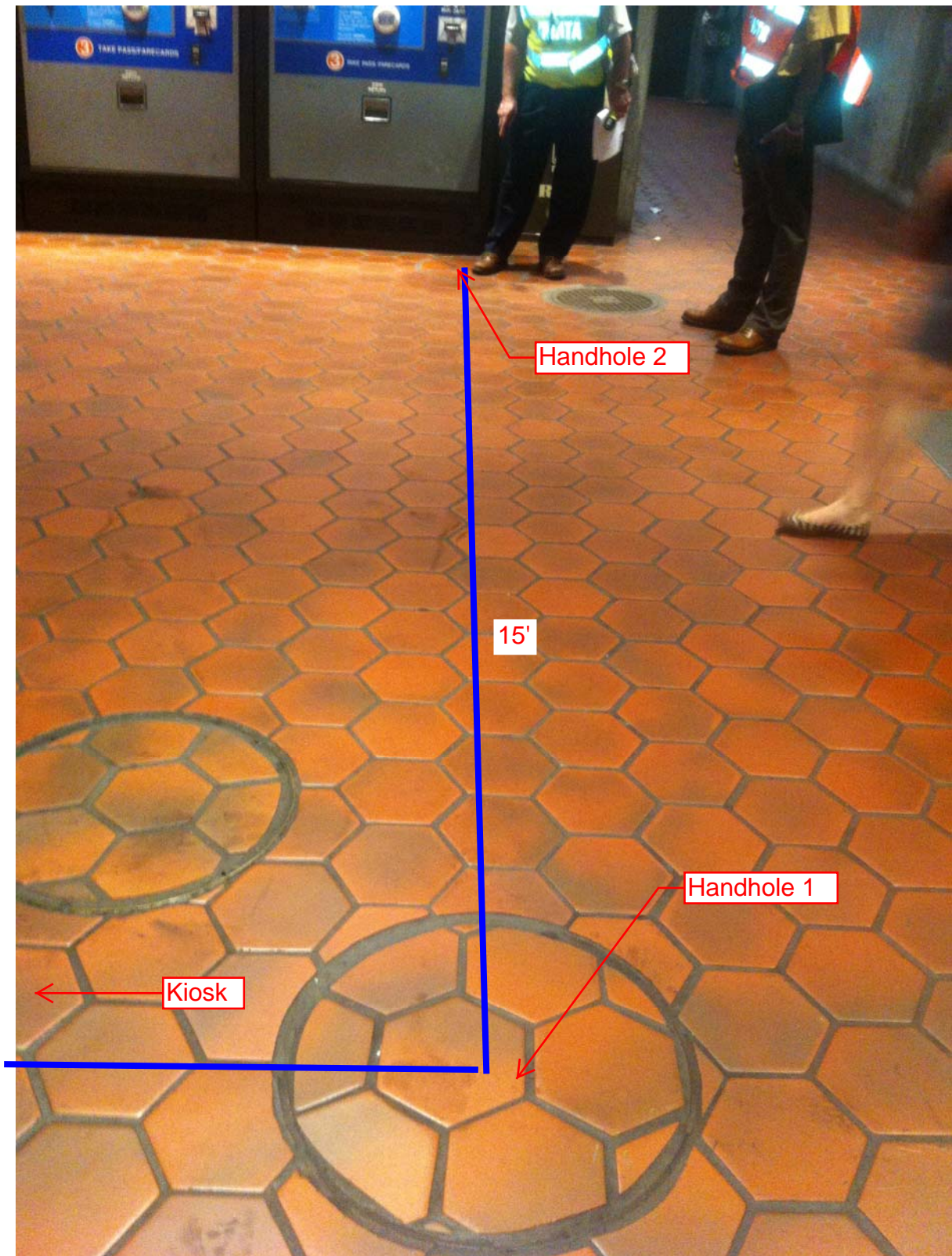


Photo #3 – Ducts from Handhole 2 entering Trench 1 in Room # 200



Photo #4 –Trench 1 in Room # 200 with overhead conduit transition, standing water evident.



Photo #5 – Proposed Overhead Conduit from Trench 1 in Room # 200

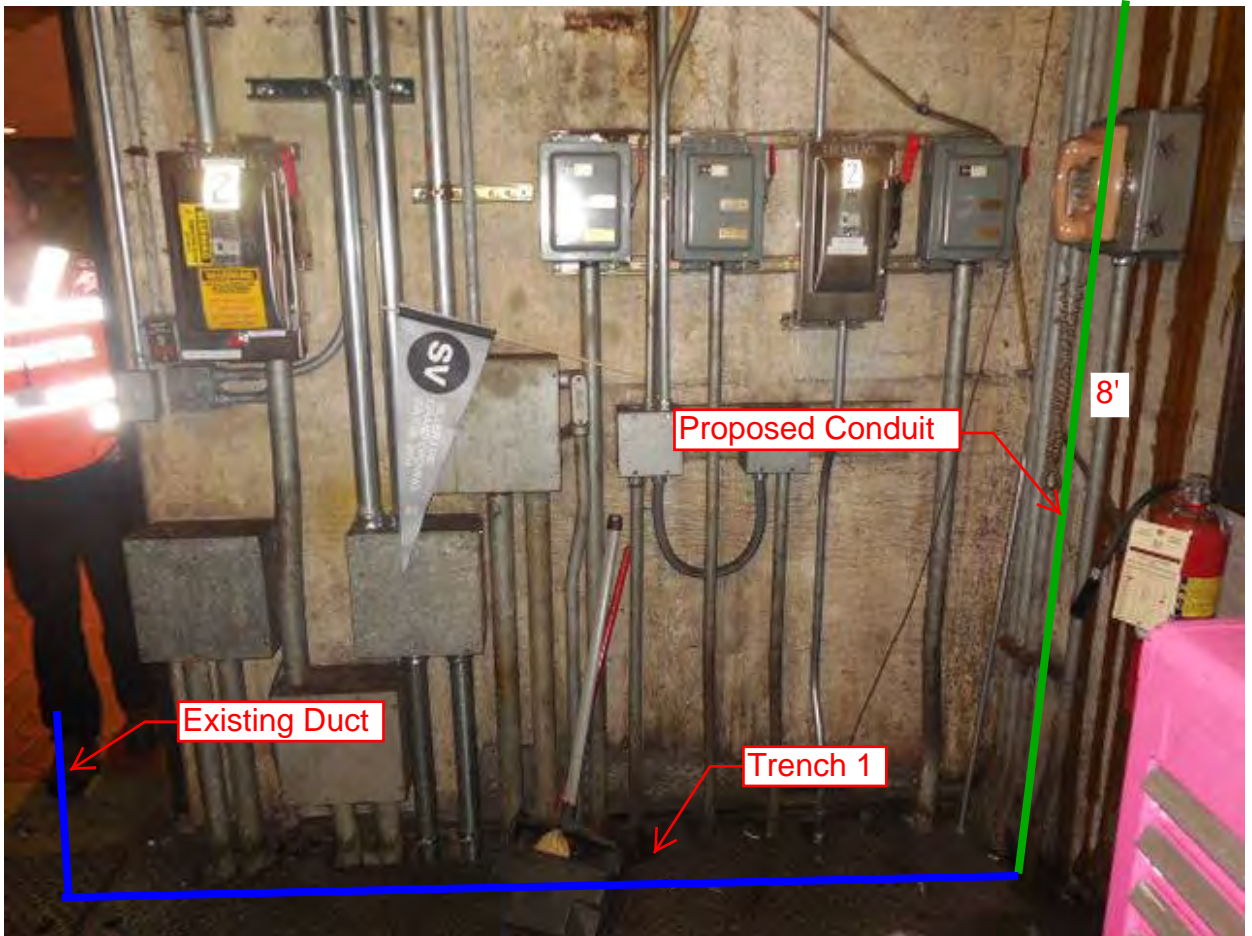


Photo #6 – Proposed Overhead Conduit from Trench 1 in Room # 200

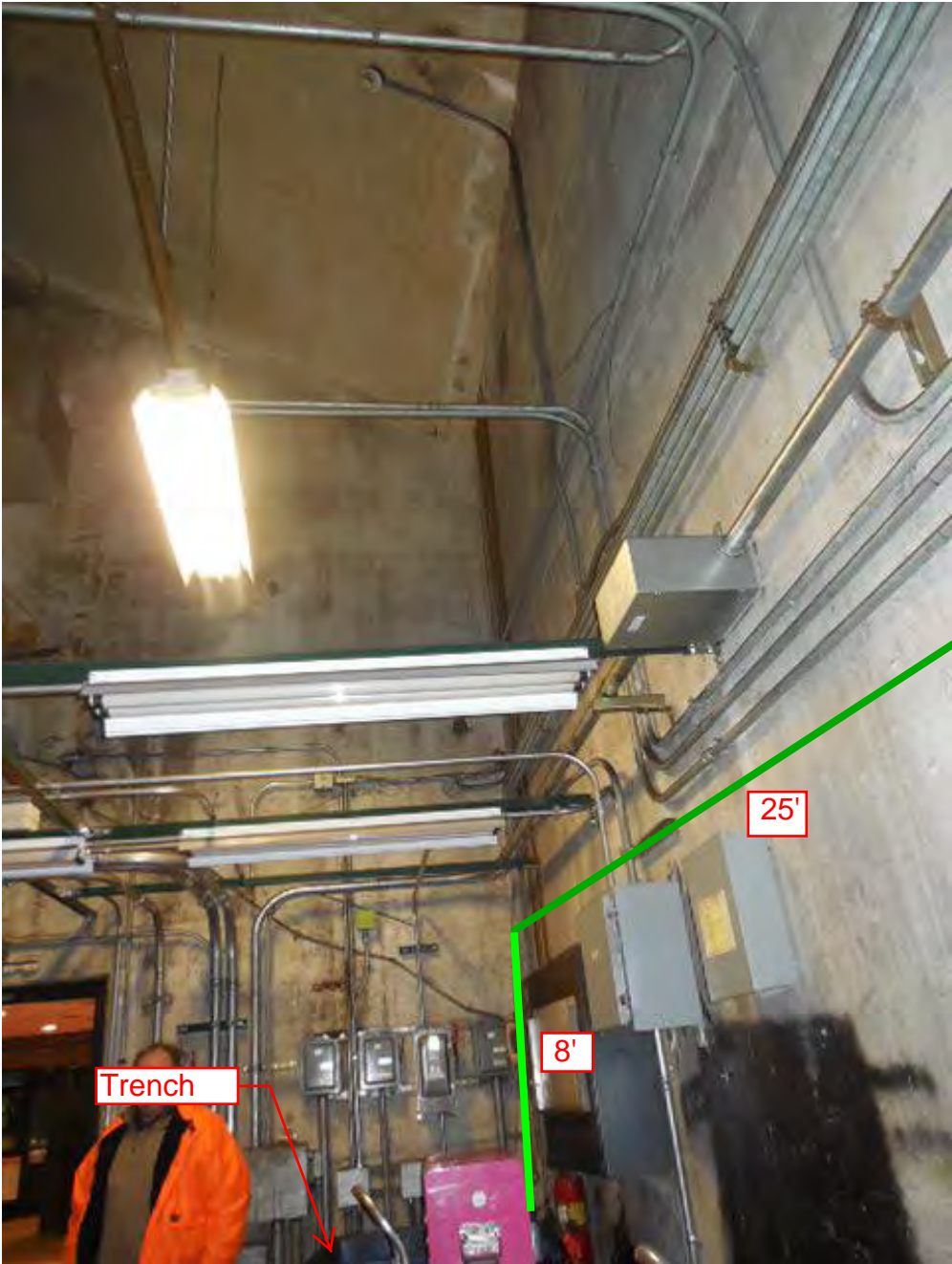


Photo #7 – Proposed Overhead Conduit in Room 200

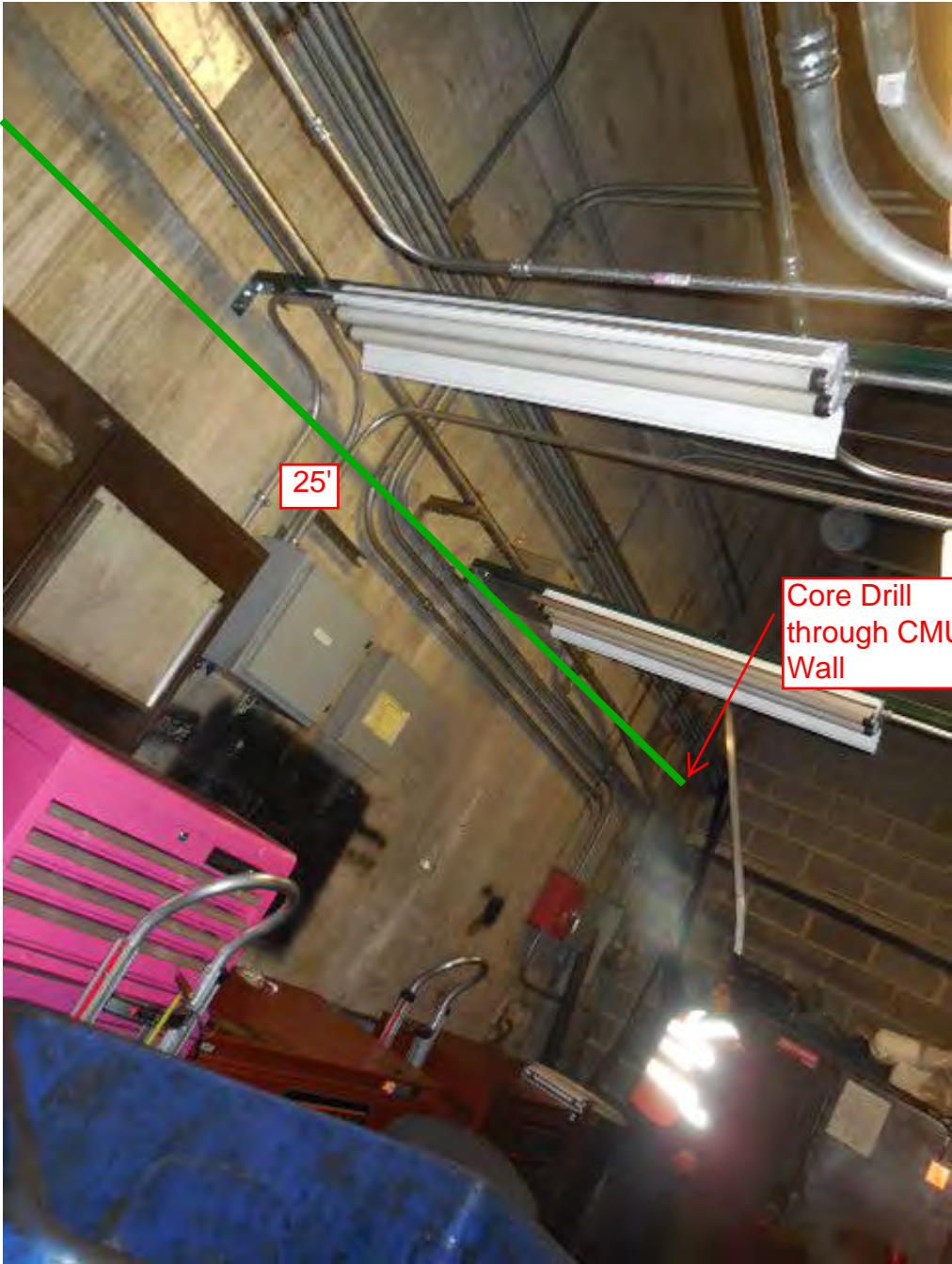


Photo #8 – Proposed Overhead Conduit in Battery Room 218



Photo #9 – Proposed Overhead Conduit in Battery Room 218



Photo #10 – Proposed Overhead Conduit in Room 206

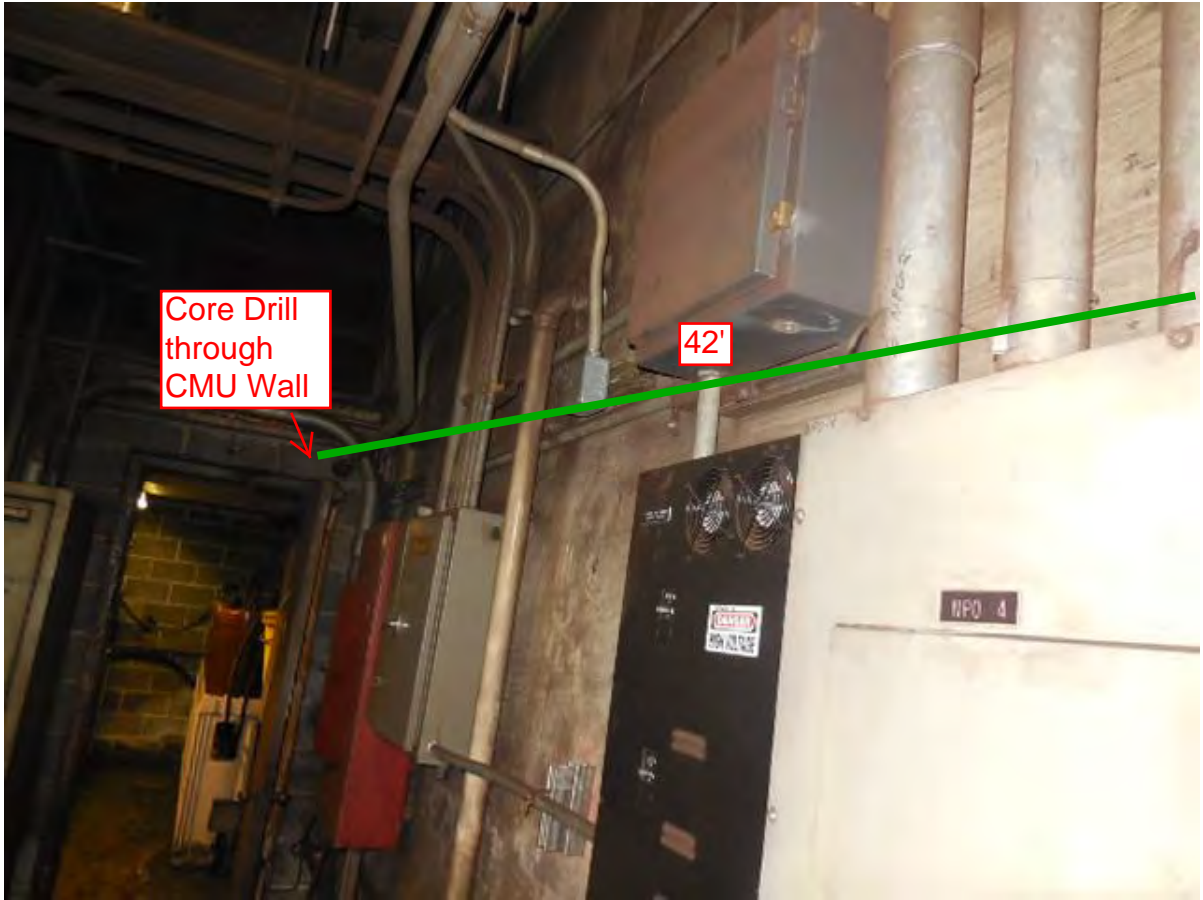
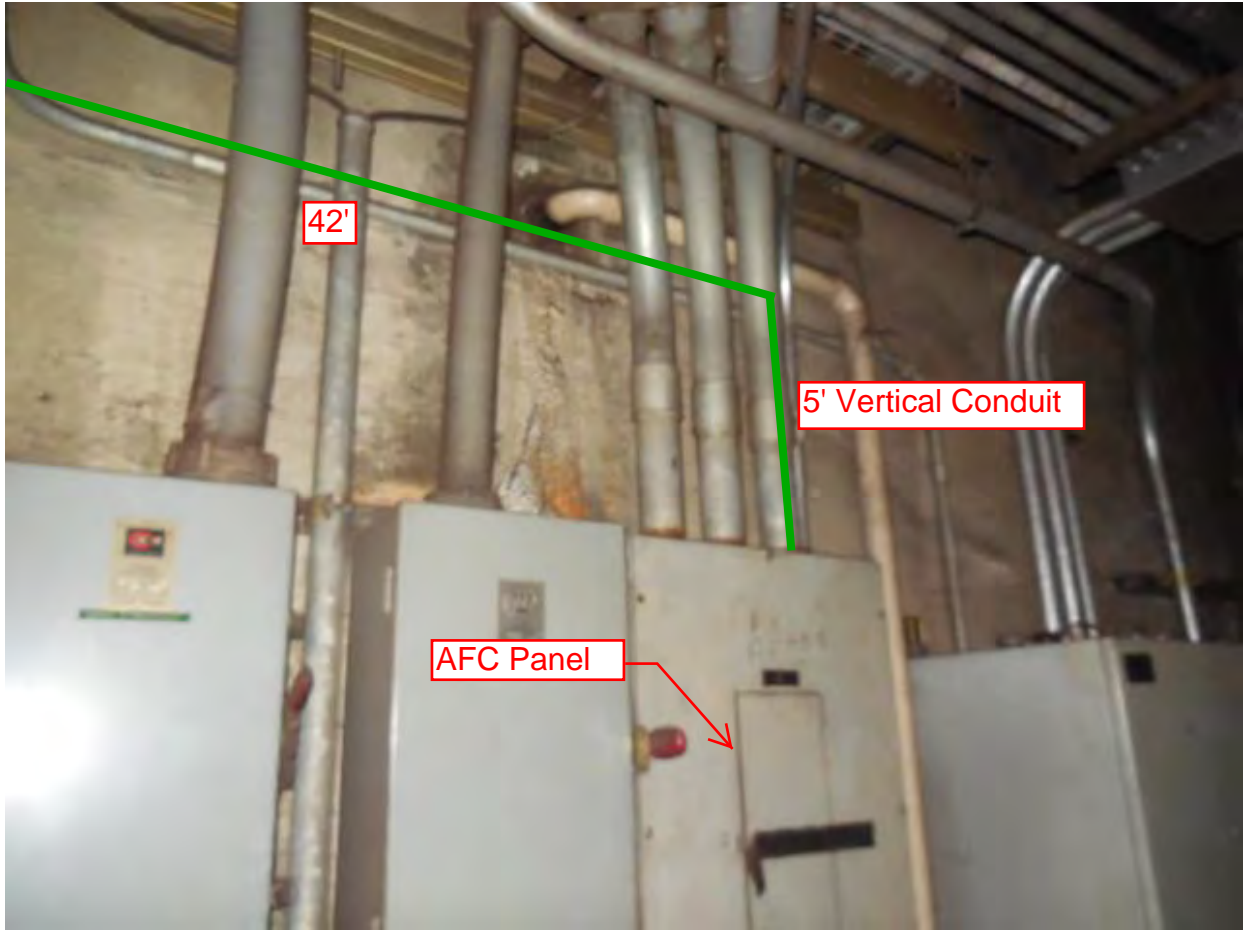
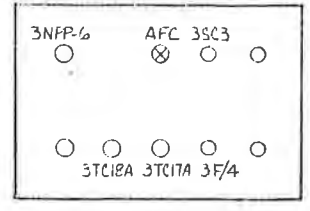
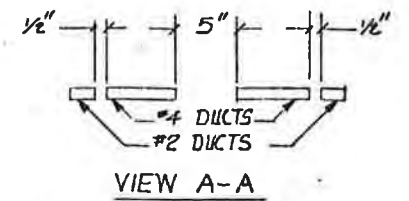


Photo #11 – Proposed Overhead Conduit feeding AFC Panel in Room 206

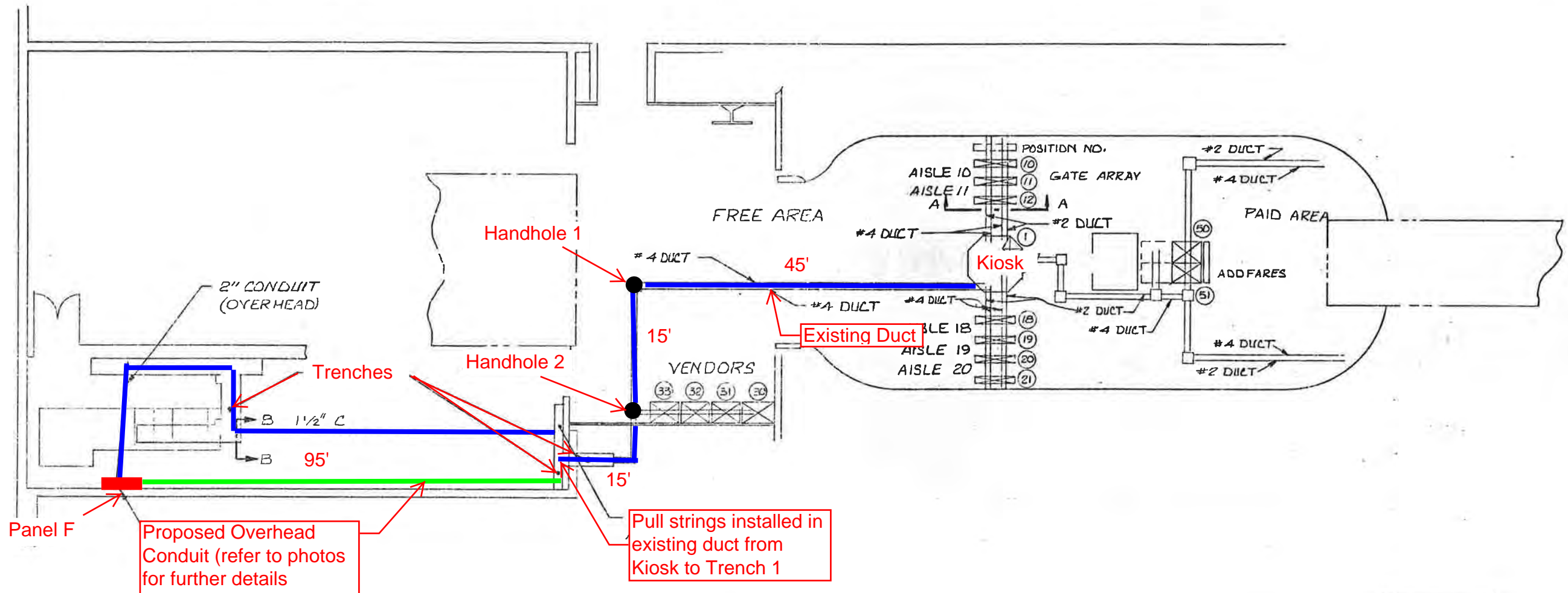




VIEW B-B



VIEW A-A



NOTES:

1. THE OPERATIONAL MACHINE INVENTORY IS INDICATED ON THIS DRAWING BY THE LETTER "X" DRAWN THRU THE MACHINE.
2. FOR REFERENCE DRAWINGS USED SEE SUPPORT DOCUMENTATION PACKAGE FOR THIS MEZZANINE.

-1 INSTALLATION PLAN
(AS BUILT DRAWING)

REDRAWN BY
J. ETHERIDGE
5-10-82

PANEL F

POSITION NO.	MACHINE TYPE	SERIAL NO.	CIRCUIT BREAKER NO.	BREAKER SIZE (AMPS)	WIRE SIZE AWG.
1	DADS	D38058	N/A	N/A	N/A
10	EXITGATE	GX4062	13	20	8
11	REVGATE	GR7244	12		
12	ENDGATE	GA5050	10		
18	END BLATE	GB6060	2		
17	REVGATE	GR7246	4		
20	REVGATE	GR7245	6		
21	EXITGATE	GX3064	8		8
30	VENDOR	FV1303	7		10
31	VENDOR	FV1299	5		10
32	VENDOR	FV1300	3		10
33	VENDOR	FV1302	1		10
50	ADDFARE	AM2115	21		6
51	ADDFARE	AM2116	19	20	6

DO NOT SCALE DRAWING
UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON BREAK SHARP EDGES .010 MAX
DECIMALS: .XX ± .03 .XXX ± .010
HOLES ANGLES: ± 0.5 DEG.
DIMENSIONS: .135 THRU .125: +.004 - .001
.135 THRU .250: +.005 - .001
.251 THRU .500: +.006 - .001
.501 THRU .750: +.008 - .001
.751 THRU 1.000: +.010 - .001

CONTRACT NUMBER
DRAWING NUMBER
926-0415
SHEET / OF /

CUBIC WESTERN DATA
A Subsidiary of Cubic Corporation
5650 KENNEDY MESA ROAD • CHANDLER, AZ 85008 • SAN JUAN, CA 94738

INSTALLATION PLAN
VAN NESS STATION

CODE IDENT NO.
94987

DRAWN BY: T. ELLS
CHECKED BY: J. ELLS
DESIGN: J. ELLS
ENGRG. NO.: 6122
DESIGN ACTIVITY APPROVAL
APPROVAL

926-0415

Mezzanine Inspection Report

Date: 02/02/15	Station Name: A07 Tenleytown-AU	Mezzanine #: 010	Completed By: Mike Butler
-----------------------	--	-------------------------	----------------------------------

Summary

Video scoping completed for power / communication ducts in faregate array; pull strings were installed in communication duct. Video scoping and pull string installation completed for power duct between Kiosk, Handhole 1 and Handhole 2. However, it was not possible to complete works between Handhole 2 and AFC Panel due to a collapsed duct.

Scanning identified an alternate walker duct from the Kiosk to Room C206; the duct stubs up through the ground and is exposed showing no wires inside. Pull string was installed in the alternate duct from Kiosk to Room C206. A proposed junction box and conduit is proposed between the exit to the alternate duct and AFC Panel in Room C206, thus completing the connection between the Kiosk and AFC Panel.

Scoping of Faregate Array(s)

Task	Yes/No	Notes
Communications Duct –Faregate Array (8 gates)		
Was video scoping completed for the entire duct run?	Yes	WMATA Tenleytown Station Upper Comm Video (1).avi
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	Minor obstructions due to debris and stuffed rags.
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	
Power Duct - Faregate Array (8 gates)		
Was video scoping completed for the entire duct run?	Yes	WMATA Tenleytown Station Upper Power Video.avi
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	Minor obstructions due to debris and stuffed rags.
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	
Scoping of Existing Power Duct - Kiosk to AFC Panel		
Kiosk to Handhole 1 (3') to Handhole 2 (115')		
Was video scoping completed for the entire duct / conduit run?	Yes	Refer to "WMATA Tenleytown Station Power Kiosk to Handhole 1 Video.avi" and "Tenleytown power duct Handhole 1 to Handhole 2.avi"
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	6" walker duct with less than 12 wires.
Handhole 2 to AFC Panel (25')		
Was video scoping completed for the entire duct / conduit run?	No	Refer to "WMATA Tenleytown Station Power Manhole to AFC Panel Video.avi"
Was pull string installed?	No	
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	There is a collapse in the duct, 9' from Handhole 2.
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	6" walker duct with less than 12 wires.


Scoping of Alternate Power Duct - Kiosk to AFC Panel		
Task	Yes/No	Notes
Kiosk to Handhole 1A (Distance: 3')		
Was video scoping completed for the entire duct / conduit run?	No	
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	This is an empty 6" duct (refer to attached drawing for route details).
Handhole 1A to Duct Stub-up in Room C206 (Distance: 137')		
Was video scoping completed for the entire duct / conduit run?	No	
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	This is an empty 6" duct (refer to attached drawing for route details).
Observations / Issues / Next Steps		
<p>The total distance of alternate duct run is 140' and proposed conduit is 30'.</p> <p>Refer to attached drawings and photos for further details of existing ducts and proposed conduit runs.</p>		
Sign Off		
	GFP Representative	WMATA PRGM
Name:	Mike Butler	
Signature:		
Date:	02/09/15	

Photo #1: Existing & alternate power duct from to Kiosk to Room C206.

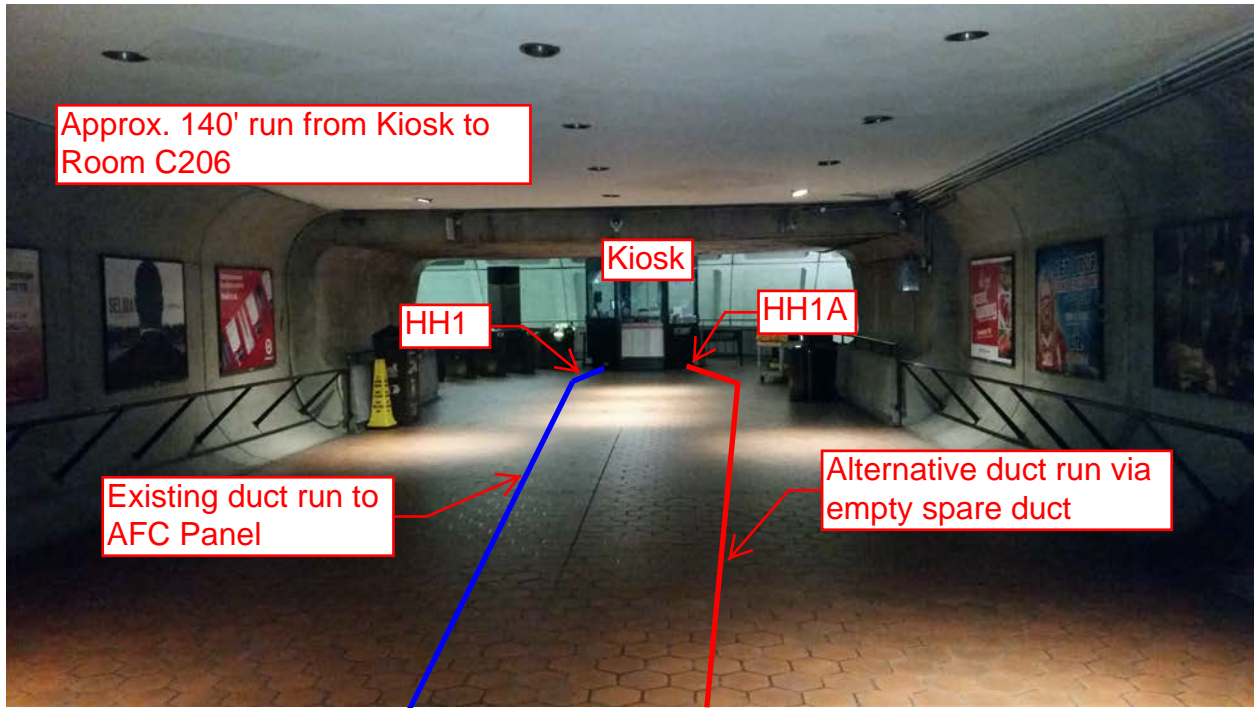


Photo #2: Existing & alternate power duct from to Kiosk to handholes.



Photo #3: Existing power duct run – Handhole 2

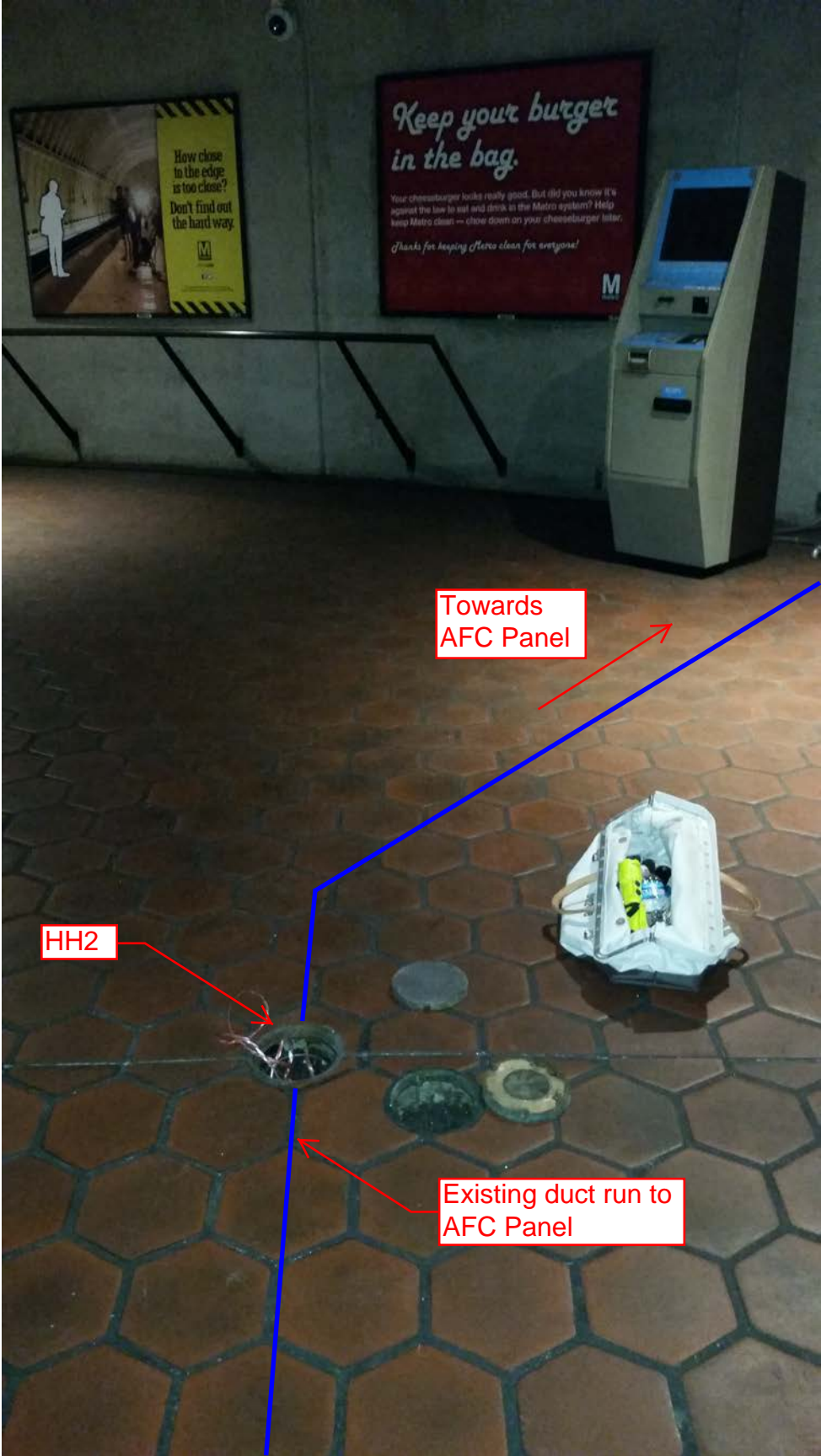


Photo #4: AFC Panel in room C206

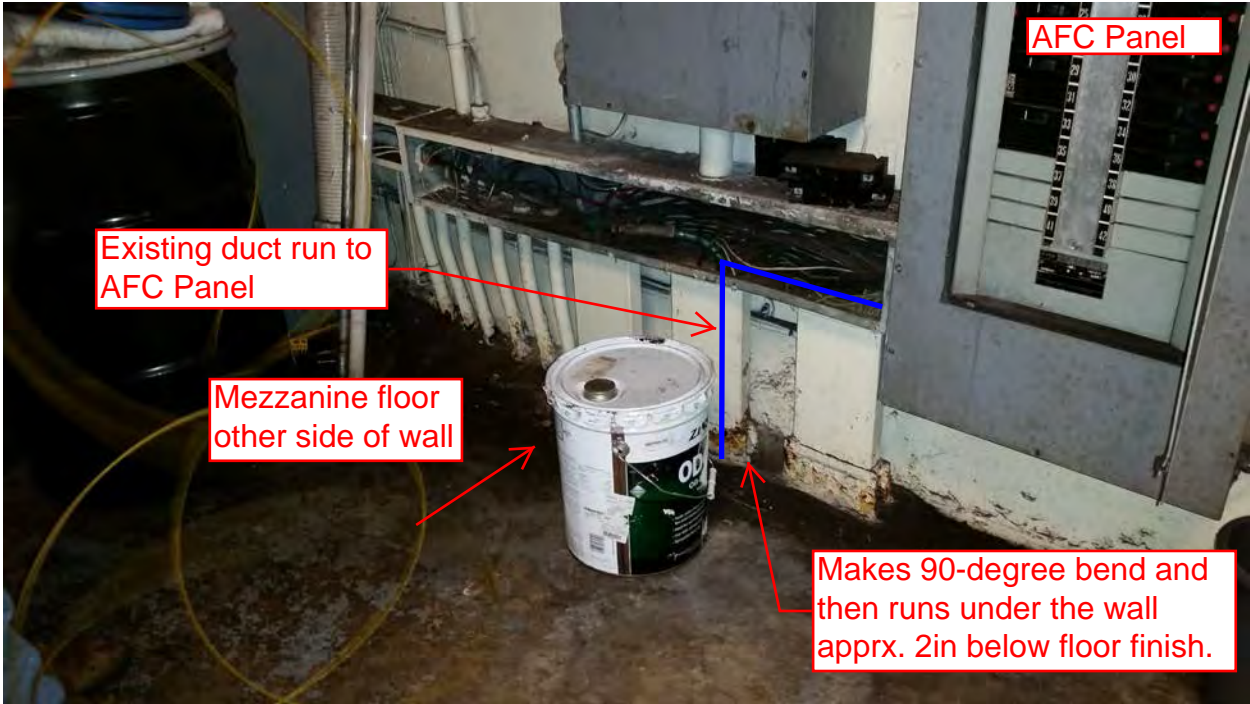


Photo #5: Alternate duct with stub-up in room C206 with proposed junction box and conduit run to AFC panel

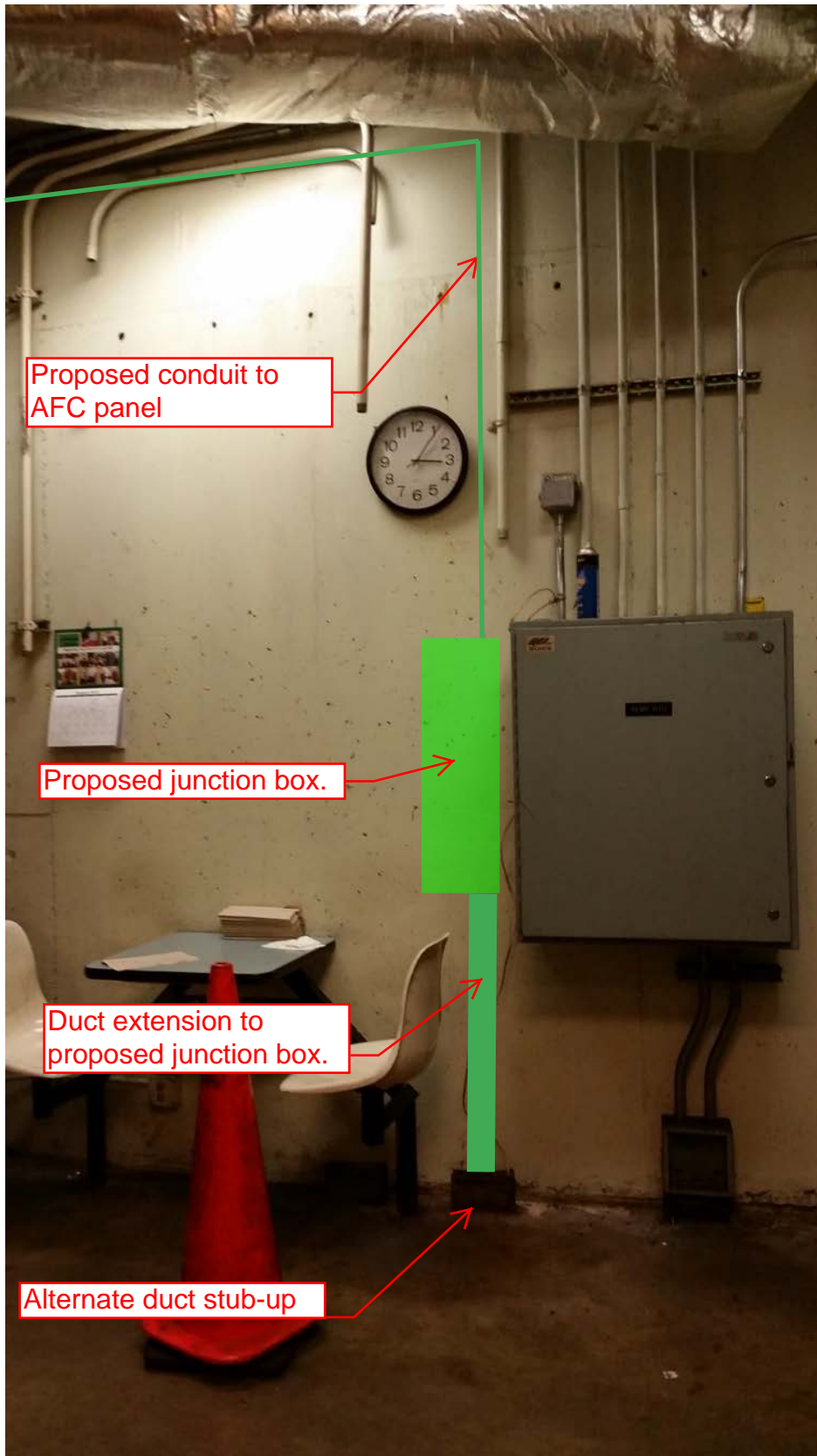


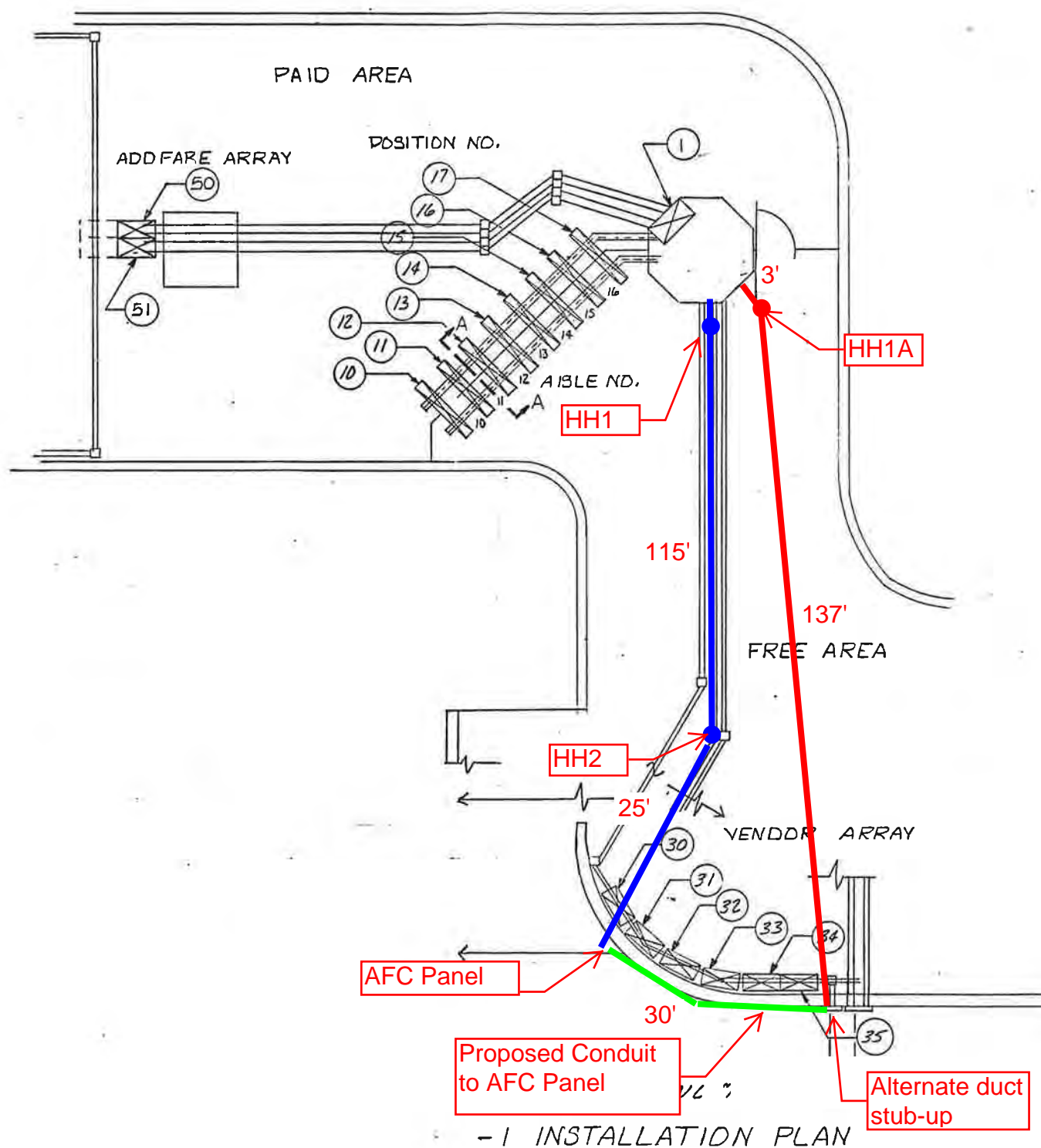
Photo #6: Proposed conduit run to AFC panel



NOTES

1. THE MINIMUM OPERATION MACHINE INVENTORY IS REFERENCED ON THIS DRAWING BY THE "X" DRAWN THROUGH THE MACHINE.
2. FOR REFERENCE DRAWINGS USED SEE SUPPORT DOCUMENTATION PACKAGE FOR THIS MEZZANINE.

MACH. LOCATION INVENTORS	C.W.D SERIAL NO	C/B NO	BREAKER SIZE	WIRE SIZE
1 DADS	1 DS8501	1	20 AMP	
2 ENTRY	17 GN3504	1		* 6
3 REV	10	3		
4 REV	15	5		
5 REV	14	7		
6 REV	13	9		
7 REV	12	11		
8 REV	11	13		
9 EXIT	10	15	20 AMPS	* 6
10				
11				
12				
13 VENDOR	30 FV1236	2	20 AMPS	* 8
14	31 FV1331	4		
15	32 FV1332	6		
16	33 FV1317	8		
17	34 FV1324	10		
18 VENDOR	35 FV1330	12	20 AMPS	* 6
19				
20				
21				
22				
23				
24 ADDFARE	50 AM2133	19	20 AMPS	* 4
25 ADDFARE	51 AM2134	17	20 AMPS	* 4



- 1 INSTALLATION PLAN

DO NOT SCALE DRAWING	
UNLESS OTHERWISE SPECIFIED BREAK SHARP EDGES .010 MAX TOLERANCES ON ANGLES: ± 0.5 DEG.	
DECIMALS: XX ± .03	HOLES
.015 THRU .125: +.004 - .001	.251 THRU .500: +.008 - .001
.128 THRU .250: +.005 - .001	.501 THRU .750: +.008 - .001
.751 THRU 1.000: +.010 - .001	

REV	DATE	BY	CHKD	APP'D

CONTRACT NUMBER	
DRAWING NUMBER	926-0449

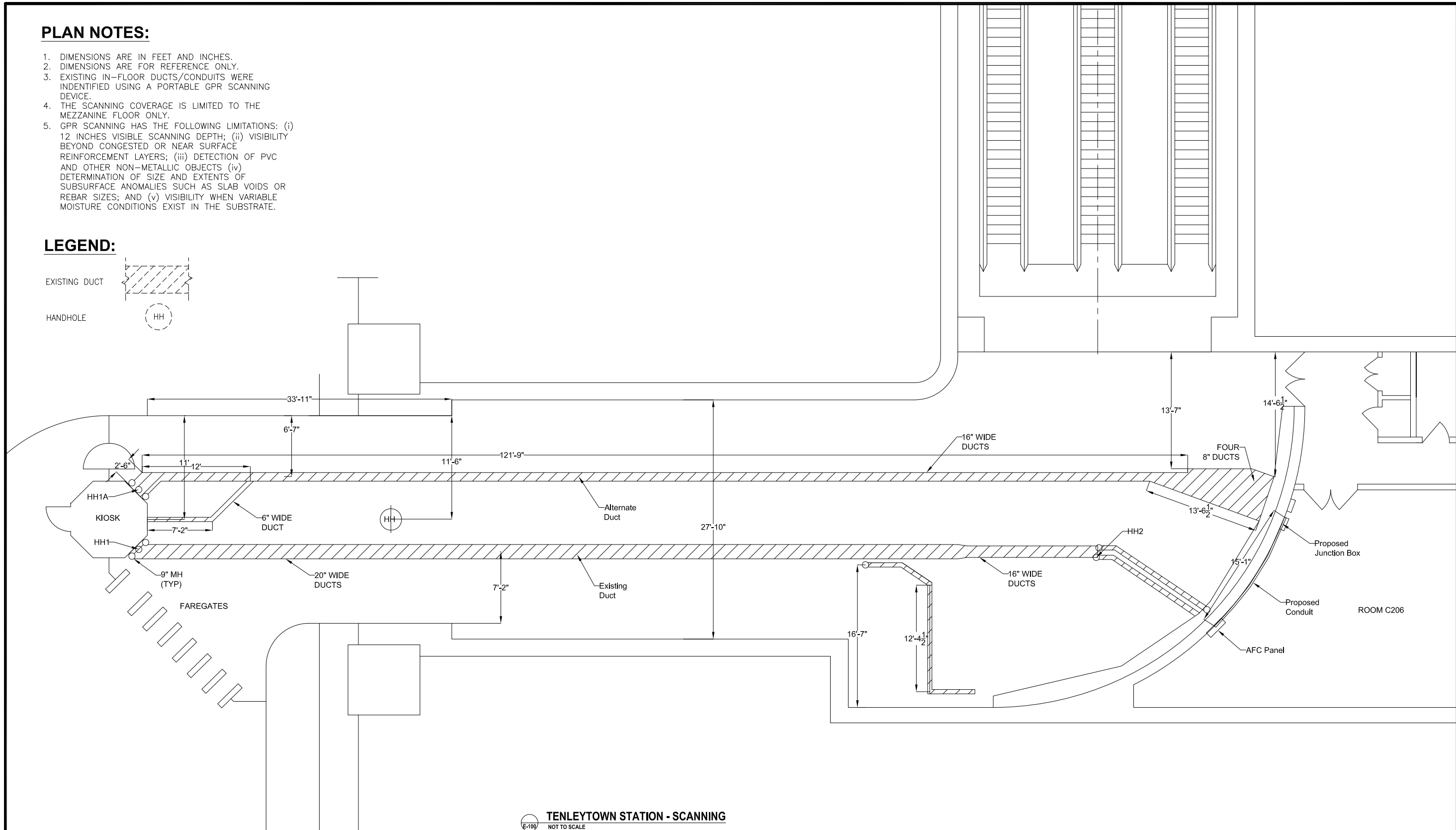
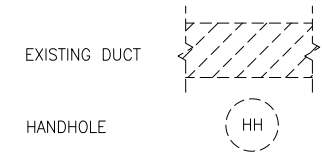
TITLE	INSTALLATION PLAN
TENLEY TOWN STATION	
CUBIC WESTERN DATA	
560 KEARNY MESA ROAD • POST OFFICE BOX 8078 • SAN DIEGO, CA 92114	

CODE IDENT NO.	94987
DRAWN:	LETTER/2/P/10/20
CHECK:	
DESIGN:	
ENGR:	
DESIGN ACTIVITY APPROVAL	

PLAN NOTES:

1. DIMENSIONS ARE IN FEET AND INCHES.
2. DIMENSIONS ARE FOR REFERENCE ONLY.
3. EXISTING IN-FLOOR DUCTS/CONDUITS WERE IDENTIFIED USING A PORTABLE GPR SCANNING DEVICE.
4. THE SCANNING COVERAGE IS LIMITED TO THE MEZZANINE FLOOR ONLY.
5. GPR SCANNING HAS THE FOLLOWING LIMITATIONS: (i) 12 INCHES VISIBLE SCANNING DEPTH; (ii) VISIBILITY BEYOND CONGESTED OR NEAR SURFACE REINFORCEMENT LAYERS; (iii) DETECTION OF PVC AND OTHER NON-METALLIC OBJECTS (iv) DETERMINATION OF SIZE AND EXTENTS OF SUBSURFACE ANOMALIES SUCH AS SLAB VOIDS OR REBAR SIZES; AND (v) VISIBILITY WHEN VARIABLE MOISTURE CONDITIONS EXIST IN THE SUBSTRATE.

LEGEND:



TENLEYTOWN STATION - SCANNING
E-100 NOT TO SCALE

CONTRACT NO. XXXXXX

DESIGNED	C. LOOSE	11-14	REFERENCE DRAWINGS		REVISIONS		
			NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION
DRAWN	C. LOOSE	11-14					
CHECKED		11-14					
APPROVED		11-14					

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY
DEPARTMENT OF TRANSIT INFRASTRUCTURE AND ENGINEERING SERVICES
OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM

GFP A Gannett Fleming/Parsons JOINT VENTURE

APPROVED _____ SUBMITTED _____
PROJECT MANAGER

15-NEPP-01
IN - FLOOR DUCT INSPECTIONS
A07 TENLEYTOWN (M010)
EXISTING LAYOUT

SCALE NOT TO SCALE DRAWING NO. A07-E-100 XXX

Mezzanine Inspection Report (Scoping)

Date: 08/29/2014	Station Name: A08 Friendship Heights (N)	Mezzanine #: 011	Completed By: Tino Sahoo
------------------	--	------------------	--------------------------

Summary

This station was revisited on 8/29/2014 to complete works started on 8/1/2014. This station is 100% complete. Both upper and lower comm array ducts were video-scoped and are under capacity; pull strings were installed to all faregates. Both upper and lower power array ducts were video-scoped and are under capacity. The power ducts from the kiosk to the AFC panel (via 2 mezzanine handholes) were video-scoped and are under capacity. Obstructions were encountered on the power duct run from the kiosk to the first mezzanine handhole. The 90-degree walker duct sweep to the cable trough connected to the AFC panel could not be video-scoped due to the tight radius. Pull strings were installed from the kiosk to the cable trough connected to the AFC panel.

Scanning is not required.

Scoping of Faregate Array(s)

Task	Yes/No	Notes
Communications Duct – Upper Faregate Array (5 Gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to FRIENDSHIP HGTS-COM_UPPER ARRAY.avi file.
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	
Communications Duct - Lower Faregate Array (5 Gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to FRIENDSHIP HGTS-COM_LOWER ARRAY.avi file.
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	
Power Duct - Upper Faregate Array (5 Gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to FRIENDSHIP HGTS-PWR_UPPER ARRAY.avi file.
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	
Power Duct - Lower Faregate Array (5 Gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to FRIENDSHIP HGTS-PWR_LOWER ARRAY.avi file.
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	

Scoping of Power Duct - Kiosk to AFC Panel		
Task	Yes/No	Notes
Kiosk to Handhole 1		
Was video scoping completed for the entire duct / conduit run?	No	Duct was video-scoped successfully to kiosk on reverse run from handhole to kiosk. Refer to FRIENDSHIP HGTS-PWR_KIOSK - MANHOLE.avi file and to FRIENDSHIP HGTS-PWR_MANHOLE - KIOSK.avi files.
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	Scope hit obstruction at 18' in walker duct from kiosk.
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	
Handhole 1 to Handhole 2		
Was video scoping completed for the entire duct / conduit run?	Yes	Refer to FRIENDSHIP HGTS-PWR_MANHOLE - MANHOLE (MID).avi file.
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	
Handhole 2 to AFC Panel		
Was video scoping completed for the entire duct / conduit run?	No	Video-scope could not negotiate 90-degree sweep in walker duct. Refer to FRIENDSHIP HGTS-PWR_MANHOLE TO 90.avi file.
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	
Observations / Issues / Next Steps		
Total duct run from Kiosk to AFC Panel is 120 feet.		
Sign Off		
	GFP Representative	WMATA PRGM
Name:	Tino Sahoo	
Signature:	<i>Tanmaya Sahoo</i>	
Date:	08/29/2014	

Photo #1: A08 Friendship Heights – Lock-out tag-out of AFC Panel main breaker

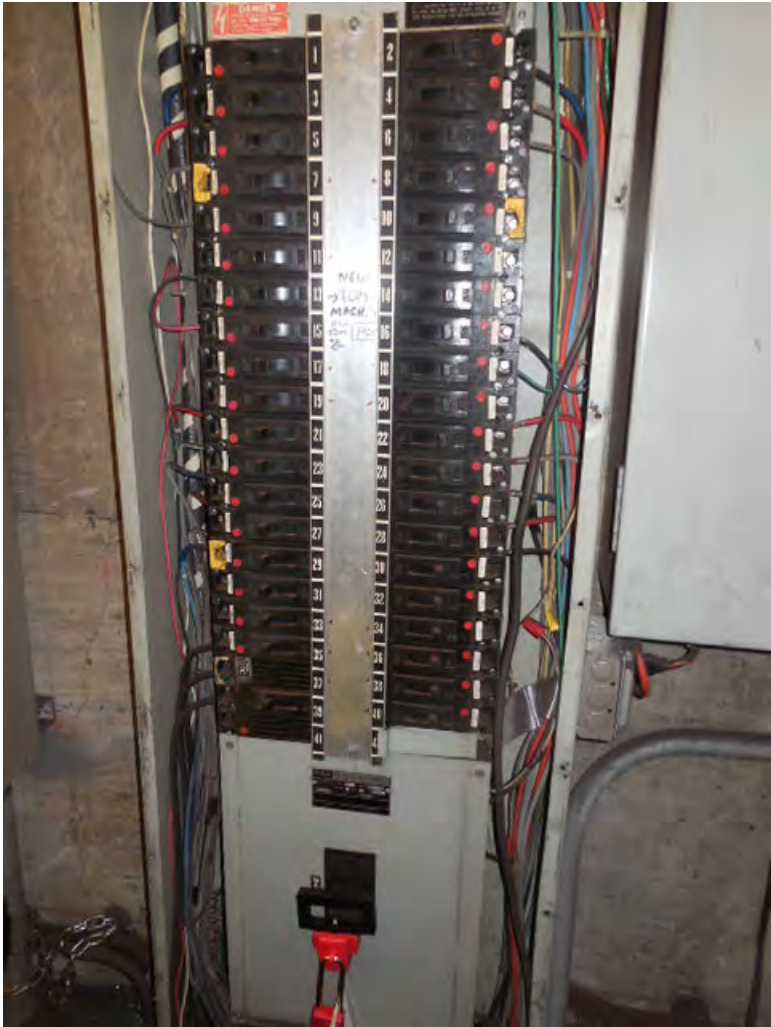


Photo #2: A08 Friendship Heights – AFC Panel MNCC Schedule

PANEL BOARD - MNCC

FCD FROM	LOAD DESCRIPTION
1	Fare Vending-Lower Passageway #30
2	Fare Vending-Lower Passageway #31
3	Fare Vending-Lower Passageway #32
4	Fare Vending-Lower Passageway #33
5	Fare Vending-Lower Passageway #34
6	Fare Vending-Lower Passageway #35
7	Fare Vending-Lower Passageway
8	Fare Vending-Lower Passageway
9	Fare Vending-Lower Passageway ATM
10	Fare Vending-Lower Passageway
11	Fare Vending-Lower Passageway
12	Fare Vending-Lower Passageway
13	Fare Vending-Lower Passageway
14	Fare Vending-Lower Passageway
15	Fare Vending-Lower Passageway
16	Fare Vending-Lower Passageway MEZZ PIDS
17	Fare Vending-Lower Passageway
18	Fare Vending-Lower Passageway
19	Fare Vending-Lower Passageway
20	Fare Vending-Lower Passageway
21	Fare Gates-Mezz. Level #10
22	Fare Gates-Mezz. Level #11
23	Fare Gates-Mezz. Level #12
24	Fare Gates-Mezz. Level #13
25	Fare Gates-Mezz. Level #14
26	Fare Gates-Mezz. Level #15
27	Fare Gates-Mezz. Level #16
28	Fare Gates-Mezz. Level #17
29	Fare Gates-Mezz. Level #18
30	Fare Gates-Mezz. Level ADPARE 51
31	Space BUREAU 50
32	Fare Gates-Mezz. Level
33	Spare
34	Transfer Machines SPARE
35	Fare Gates-Mezz. Level
36	Transfer Machines SPARE
37	Spare ELAM
38	Transfer Machines SPARE
39	Spare ELAM
40	Transfer Machines SPARE
41	Spare ELAM
42	Spare

FEDERAL PACIFIC ELECTRIC CO. 340124

Photo #3: A08 Friendship Heights – Pull string installed in faregate array duct



Photo #4: A08 Friendship Heights – Installing pull string between kiosk and AFC panel

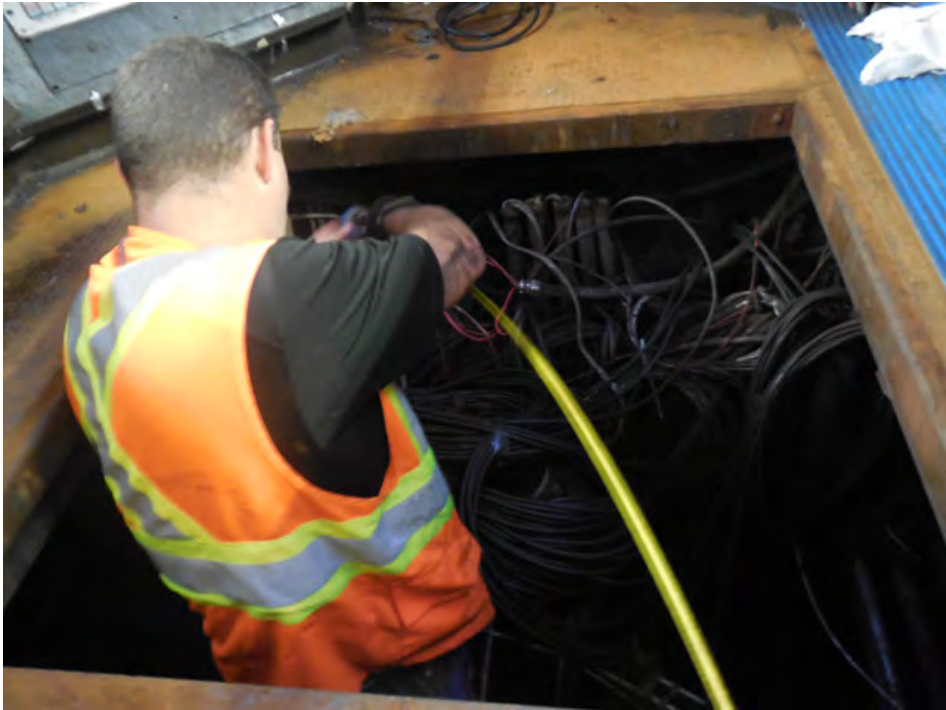


Photo #5: A08 Friendship Heights – Installing pull string in handholes between kiosk and AFC panel



Photo #6: A08 Friendship Heights – Video-scoping the power ducts between kiosk and AFC panel

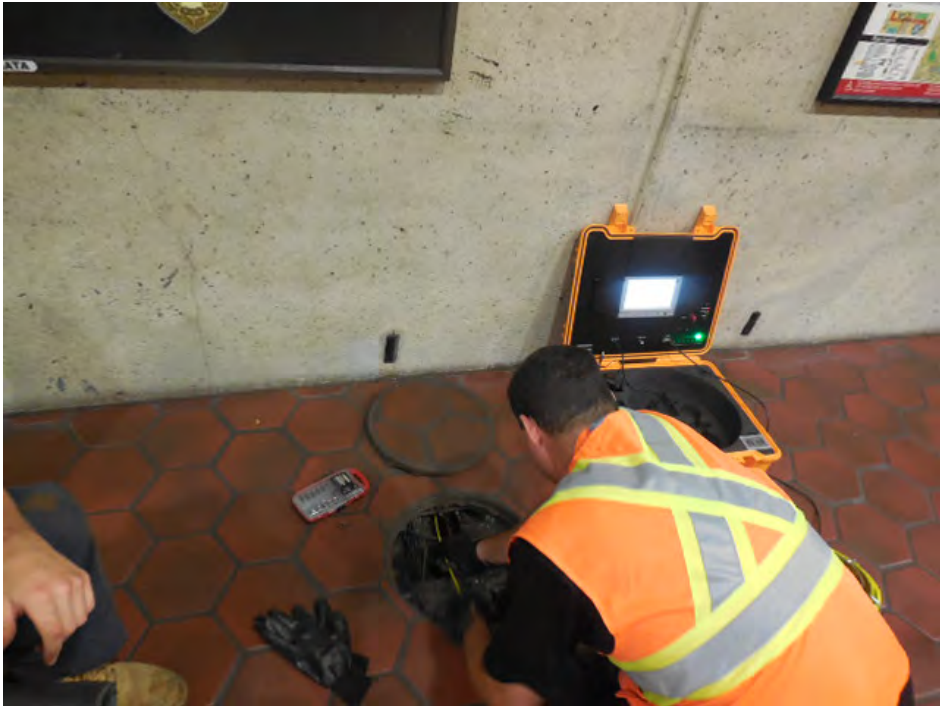


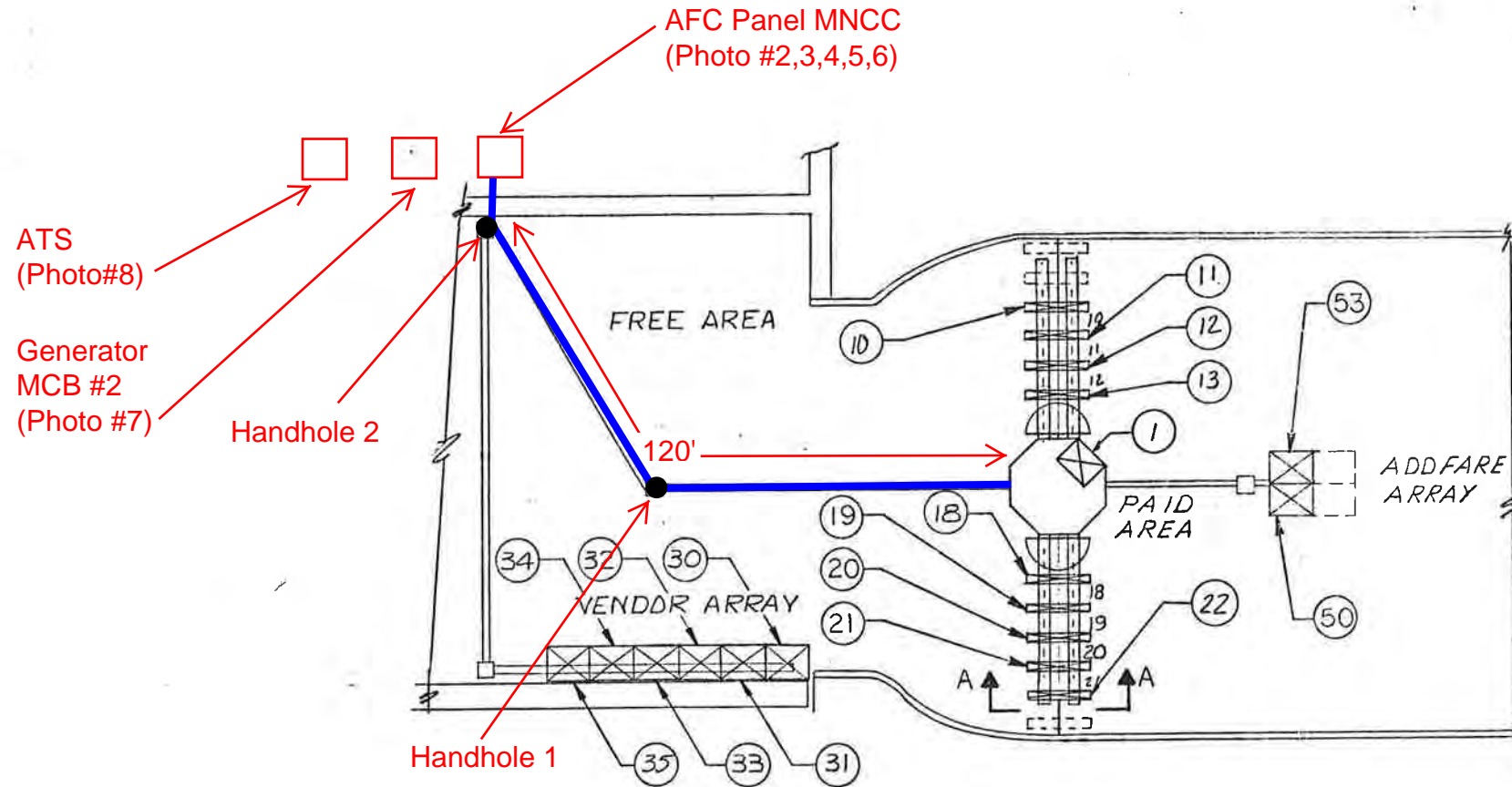
Photo #7: A08 Friendship Heights – Cable trough below AFC Panel. Power ducts from kiosk feed into bottom of trough



NOTES:

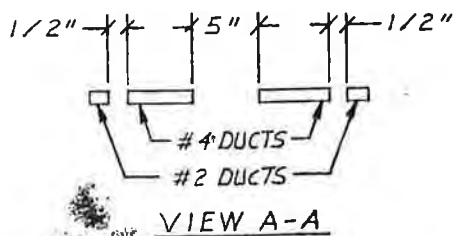
1. THE MINIMUM OPERATIONAL MACHINE INVENTORY IS REFERENCED ON THIS DRAWING BY THE "X" DRAWN THROUGH THE MACHINE.
2. FOR REFERENCE DRAWINGS USED SEE SUPPORT DOCUMENTATION PACKAGE FOR THIS MEZZANINE.

Pre-inspection Field Verification
7/14/2014



-1 INSTALLATION PLAN

Photo #1 is on platform level at north end
Photo #9 is in Room 216/218



MACH	LOCATION	INVENTOR	CWD SERIAL NO'S	C/B NO'S	BREAKER SIZE	WIRE SIZE
1	DAPS		DEB505	EMERG	20 AMPS	#12
2	END, A	13	GA5502	24		
3	REV	12	GR7B11	23		
4	REV	11	GR7502	22		
5	EXIT	10	GX4503	21		
6	END, B	18	GB6502	25		
7	REV	19	GR7503	26		
8	REV	20	GR7518	27		
9	REV	21	GR7501	28		
10	ENTRY	22	GN3505	29	20 AMPS	#6
11						
12						
13	VENDOR	30	FV1118	1	20 AMPS	#10
14	VENDOR	31	FV1323	2		
15	VENDOR	32	FV1268	3		
16	VENDOR	33	FV1183	4		
17	VENDOR	34	FV1340	5		
18	VENDOR	35	FV1164	6	20 AMPS	#10
19						
20						
21						
22						
23	ADD FARE	50	AM2135	31	20 AMPS	#6
24	ADD FARE	51	AM2130	30	20 AMPS	#6
25						
26						
27						
28						
29						
30						
31						
32						
33						
34						

DO NOT SCALE DRAWING
UNLESS OTHERWISE SPECIFIED
BREAK SHARP EDGES .010 MAX
TOLERANCES ON HOLES ANGLES: ±0.5 DEG.
DECIMALS: .XX ±.03 .XXX ±.010
HOLE THRU: .500 ±.006 - .001
BREAK THRU: .750 ±.008 - .001
HOLE THRU: 1.000 ±.010 - .001

CONTRACT NUMBER
DRAWING NUMBER
926-0446
SHEET 1 OF 1

TITLE
INSTALLATION PLAN -
FRIENDSHIP HEIGHTS STATION - NORTH

CUBIC WESTERN DATA
A subsidiary of Cubic Corporation
5650 NE ARMY MEA ROAD - POST OFFICE BOX 8078 - SAN DIEGO, CA 92118

CODE IDENT NO.
94987

DRAWN: [Signature]
CHECKED: [Signature]
DESIGN: [Signature]
ENGINEER: [Signature]
DESIGNER: [Signature]
APPROVAL: [Signature]

926-0446

Mezzanine Inspection Report

REVISION 1

Date: 02/06/15	Station Name: A08 Friendship Heights South	Mezzanine #: 104	Completed By: Mike Butler
-----------------------	---	-------------------------	----------------------------------

Summary

Video scoping and pull string installation completed for communication duct in upper faregate array; respective power duct in upper faregate array also video scoped. Faregate ducts in good condition and not at capacity.

Video scoping and pull sting installation could not be completed in existing 2" conduit between Kiosk and AFC Panel due to multiple obstructions. However, pull string was installed in 2" conduit between AFC Panel and overhead trough. An empty 1" conduit was also found between the overhead trough and northern end wall of platform ceiling plenum.

New conduit is proposed between Kiosk and the northern end wall. The full run between the Kiosk and AFC Panel will utilize the existing empty 1" conduit passing through the northern end wall and 2" conduit between overhead trough and AFC Panel (pull string installed). The proposed conduit will run vertically down from the Kiosk to proposed Junction Box 1 and then along the platform ceiling plenum until it reaches the northern end wall. The conduit will transition to a proposed liquidtight conduit (in order to get past ceiling obstructions) before feeding into proposed Junction Box 2. The existing empty 1" conduit feeds from Junction Box 2 through the northern end wall and into the electrical room. Once inside the electrical room, additional liquidtight conduit is proposed from 1" empty conduit to overhead trough above the AFC Panel.

Refer to photos and drawings for more information.

Scoping of Faregate Array(s)

Task	Yes/No	Notes
Communications Duct – Upper Faregate Array (5 gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to "WMATA Friendship Heights South Upper Comm Video (2).avi"
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	4" walker duct with less than 10 wires.
Power Duct - Upper Faregate Array (5 gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to "WMATA Friendship Heights South Upper Power Video.avi"
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	6" walker duct with less than 12 wires.


Scoping of Power Duct - Kiosk to AFC Panel		
Task	Yes/No	Notes
Kiosk to AFC Panel (Distance Unknown)		
Was video scoping completed for the entire duct / conduit run?	No	Refer to "WMATA Friendship Heights Left 2inch conduit to open space Video.avi" and "WMATA Friendship Heights Middle 2inch conduit to open space Video.avi"
Was pull string installed?	No	
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	2" conduit with less than 10 wires.
Observations / Issues / Next Steps		
<p>The proposed conduit run is 95' from Kiosk to AFC Panel, including 50' of new conduit in ceiling plenum, 10' of new liquidtight conduit, 5' of existing 1" conduit through the wall and 30' of existing 2" conduit in Room 201 (please refer to attached photos).</p> <p>The AFC Panel is located on the mezzanine level in Room 201, but access is wayside from the platform level.</p>		
Sign Off		
	GFP Representative	WMATA PRGM
Name:	Mike Butler	
Signature:		
Date:	02/17/15	

Photo #1: Proposed conduit in ceiling plenum at platform level beneath Kiosk

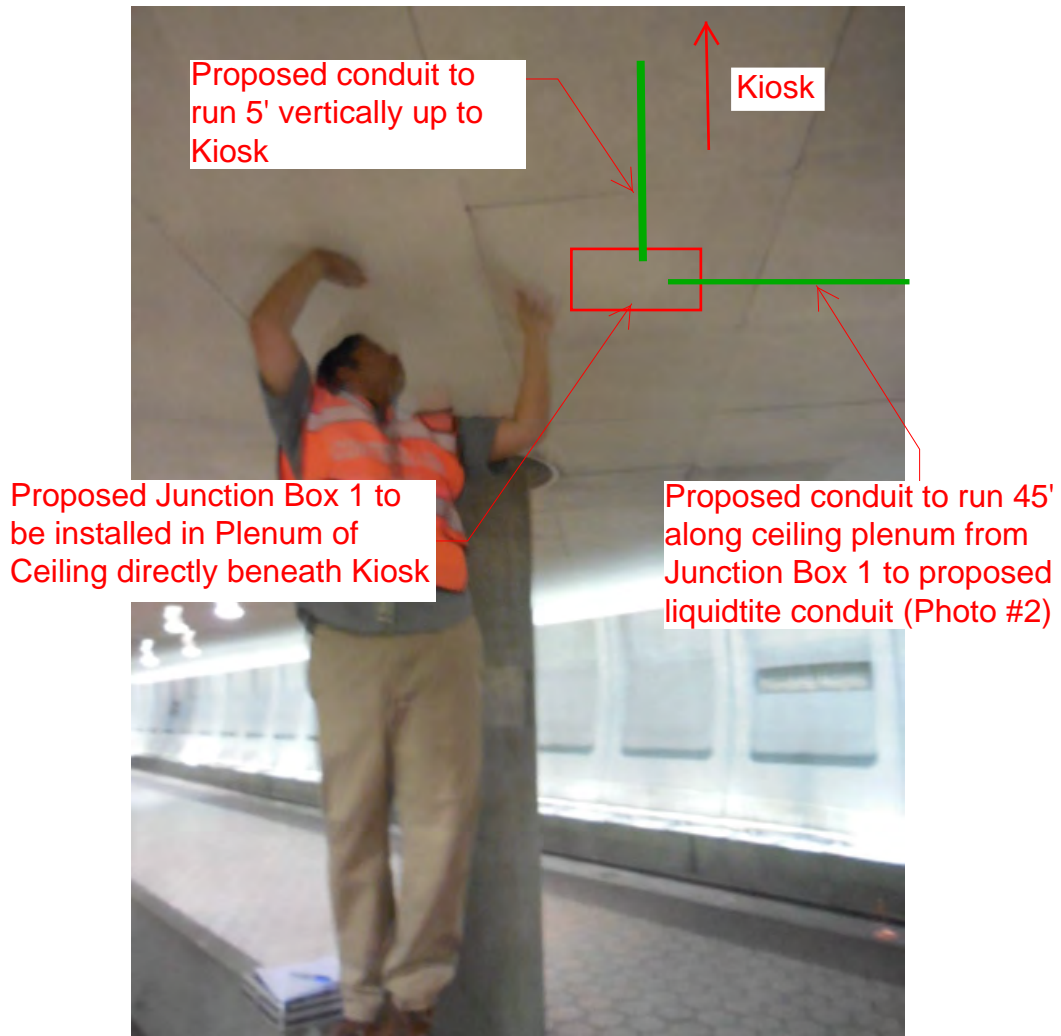
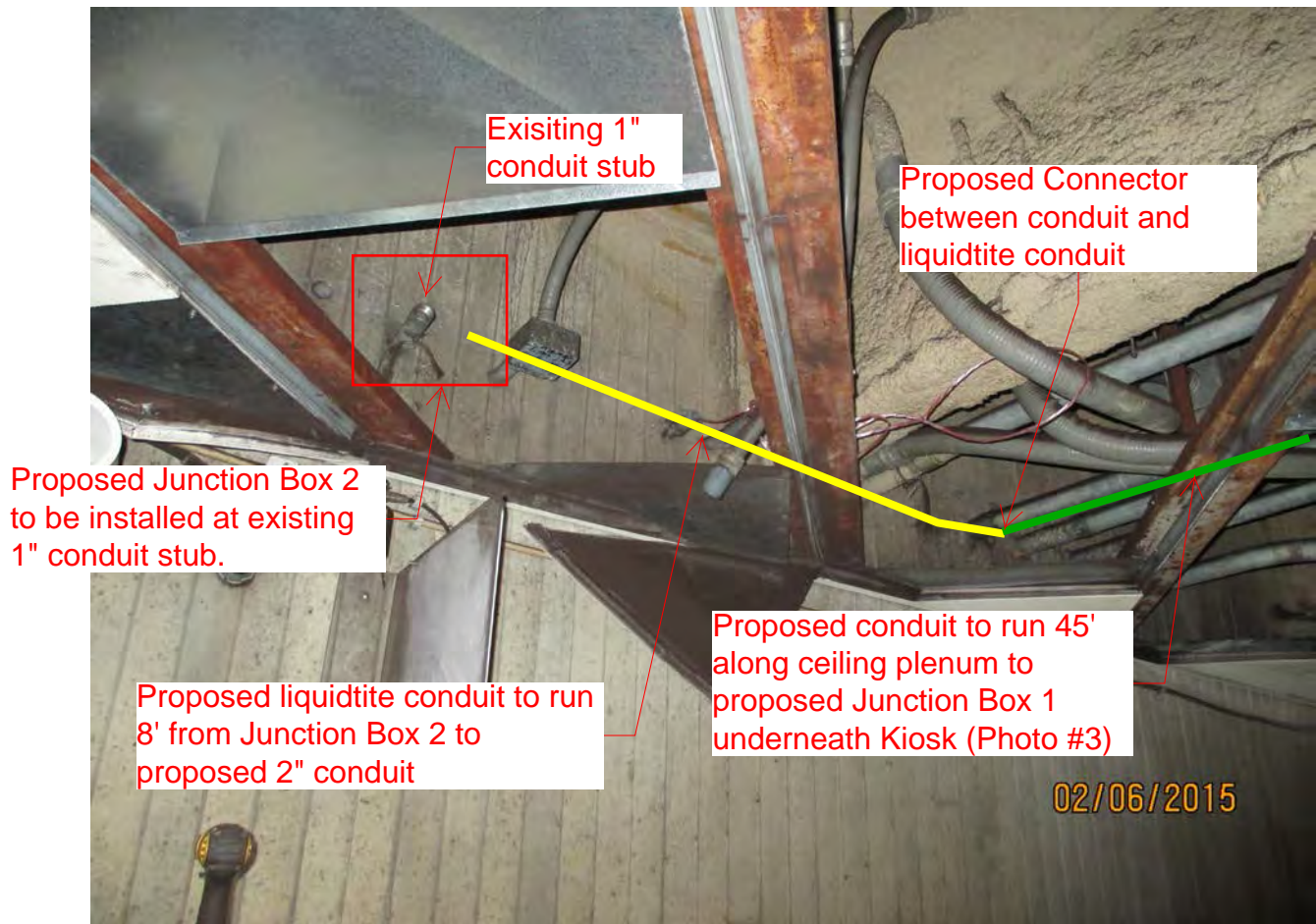
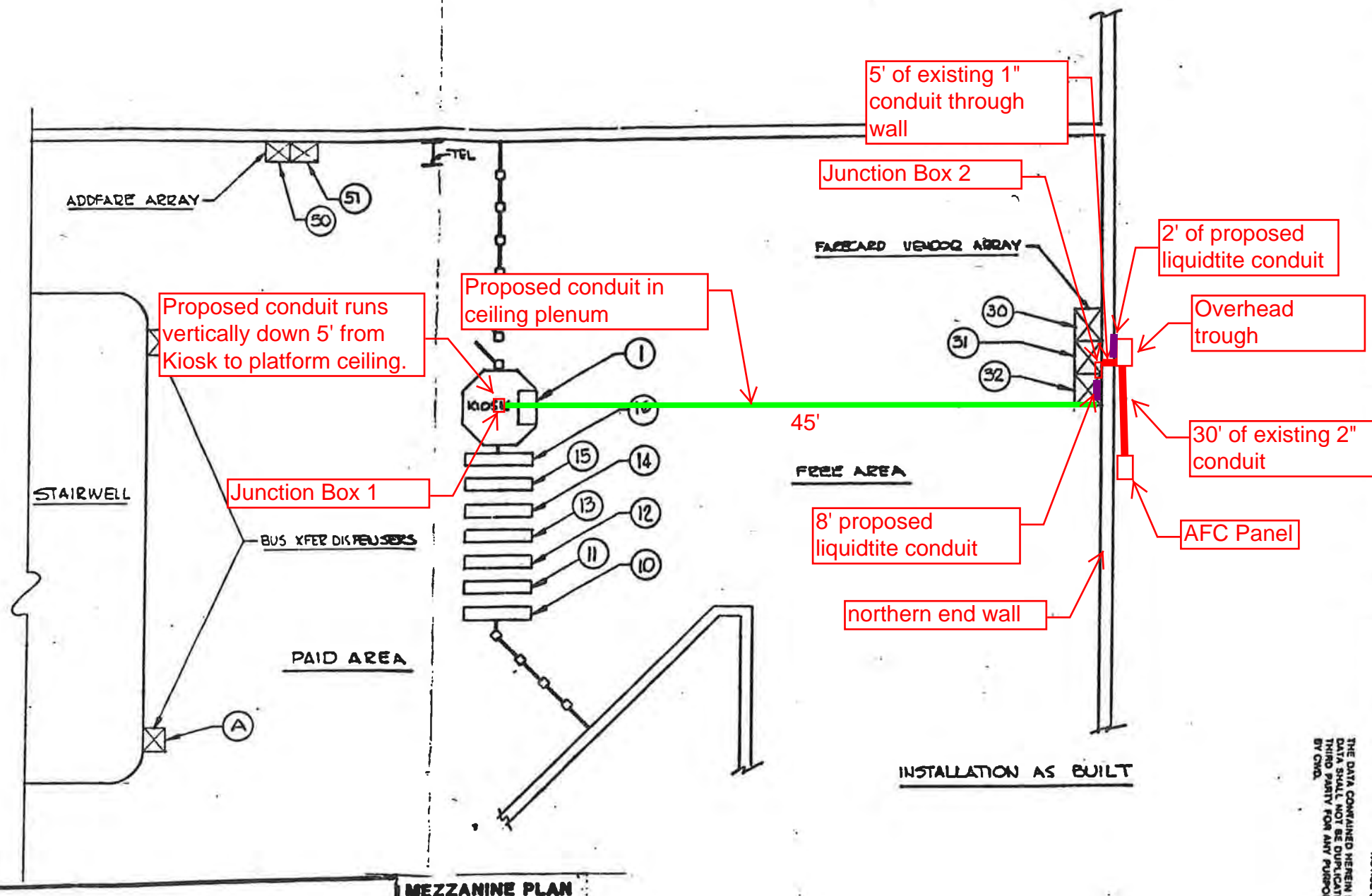


Photo #2: Proposed conduit in ceiling plenum at platform level beneath Kiosk



OK

PANEL * MSA A				
POSITION NUMBER	MACHINE TYPE	SERIAL NUMBER	CIRCUIT BREAKER NUMBER	WIRE SIZE AWG
A	XFER DISPENSER		1 FG 10	22
B	XFER DISPENSER		2 FG 11	
1	ECADS	DS 8040	3 FG 12	
10	EXIT GATE	GX 4531	4 FG 13	
11	REV. GATE	GR 7524	5 FG 14	
12	"	GR 7520	6 FG 15	
13	"	GR 7525	7 FG 16	
14	"	GR 7554	8 SPARE	
15	"	GR 7551	9 VF 30	
16	ENTRY GATE	GN 3533	10 VF 31	31 XFER B
30	FARECARD VEND	FV 1310	11 VF 32	
31	"	FV 1086	12 FUTURE 33	
32	"	FV 1503	13 SPARE	
50	ADDFARE	AM 2700	14 AM 51	
51	ADDFARE	AM 2701	15 XFER A	
			16 AM 50	
			17 SPARE	
			18 SPARE	
			21	42



M WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

APPROVED AS CORRECTED
(RESUBMITTAL NOT REQUIRED)

Approval Does Not Relieve the Contractor of the Responsibility for the Accuracy of this Document or for Full Compliance with the Contract Requirements.

BY: [Signature]
For Contracting Officer

DATE: 1-11-07

CP-26007E-101-1-0

NOTICE OF PROPRIETARY RIGHTS IN DATA
THE DATA CONTAINED HEREIN IS PROPRIETARY TO CH2M HILL. THIS DATA SHALL NOT BE DUPLICATED, TRANSMITTED, MADE AVAILABLE TO ANY THIRD PARTY FOR ANY PURPOSE EXCEPT AS SPECIFICALLY AUTHORIZED IN WRITING BY CH2M.

TOLERANCES: .11 : .03 .111 : .010 ANGLE: 2.08 DEG.
MOLES
0138 THRU 1731 : .004 - .001
128 THRU 1901 : .004 - .001
731 THRU 10001 : .010 - .001

CONTRACT NO. D
DRAWING NO. 926-044
SHEET 1 OF 1
TITLE: **FRIENDSHIP H.S. STATION INSTALLATION PLAN**
CODE INDEX: 57510

Mezzanine Inspection Report

REVISION 1

Date: 01/08/2015	Station Name: A11 Grosvenor	Mezzanine #: 014	Completed By: Tino Sahoo
------------------	-----------------------------	------------------	--------------------------

Summary

Video scoping for communications and power ducts in upper and lower faregate arrays was completed. Pull string was installed in communications duct for upper and lower faregate arrays. Video scoping of the power duct from the kiosk to the AFC panel was attempted in both 6" walker duct runs. Power duct run 1 was at 90% capacity and could not be scoped. Power duct run 2 could not be scoped from the kiosk to the handhole due to welded metal plate obstruction under the kiosk. Power duct run 2 was scoped from the first handhole towards the AFC panel but could not be completed due to the duct being collapsed at the expansion joint near the electrical rooms.

Scanning was completed at this station. Due to the amount of existing ducts and conduit runs in the mezzanine level floor, a new in-floor duct run is not feasible. A proposed overhead conduit run has been identified. The proposed conduit will run vertically up from the kiosk, along the ceiling of the mezzanine and core into backroom (Room 207). A new junction box is proposed at core drill location. Once inside the Room 207, the conduit will snake around the internal wall and then run vertically down to the floor. The proposed conduit will core drill through the floor and feed into a proposed junction box on the ceiling of Room 107 at platform level. The proposed conduit will continue overhead from proposed junction box to the AFC panel in Room 107.

Refer to photos and drawings for further information.

Scoping of Faregate Array(s)

Task	Yes/No	Notes
Communications Duct – Upper Faregate Array (3 Gates)		
Was video scoping completed for the entire duct run?	No	Refer to WMATA Grosvenor Station Upper Comm Duct Video.avi file. Video scoping could not continue to far end of gate 3 due to existing wires blocking path of camera
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	6" duct less than 10 wires
Communications Duct - Lower Faregate Array (3 Gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to WMATA Grosvenor Station Lower Comm Duct Video.avi file.
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	6" duct less than 10 wires
Power Duct - Upper Faregate Array (3 Gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to WMATA Grosvenor 6inch Upper Power Video.avi file.
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	6" duct less than 10 wires
Power Duct - Lower Faregate Array (3 Gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to WMATA Grosvenor 6inch Lower Power Video.avi and WMATA Grosvenor 3inch Lower Power Video.avi files.
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	6" and 3" ducts less than 10 wires

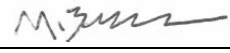
Scoping of Power Duct - Kiosk to AFC Panel		
Task	Yes/No	Notes
Kiosk to Handhole 1 (15' run)		
Was video scoping completed for the entire duct / conduit run?	No	
Was pull string installed?	No	
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	Welded metal plate obstruction under kiosk at the entrance of the duct and the other duct was at capacity
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	6" duct less than 15 wires
Handhole 1 to Expansion Joint (80' run)		
Was video scoping completed for the entire duct / conduit run?	No	
Was pull string installed?	No	
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	Duct was collapsed approximately 90' into the run at the expansion joint.
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	6" duct less than 15 wires
Observations / Issues / Next Steps		
Total distance of proposed conduit run is 142' from Kiosk to AFC panel.		
Sign Off		
	GFP Representative	WMATA PRGM
Name:	Mike Butler	
Signature:		
Date:	4/20/2015	

Photo #1 – Existing duct and proposed overhead conduit on mezzanine floor

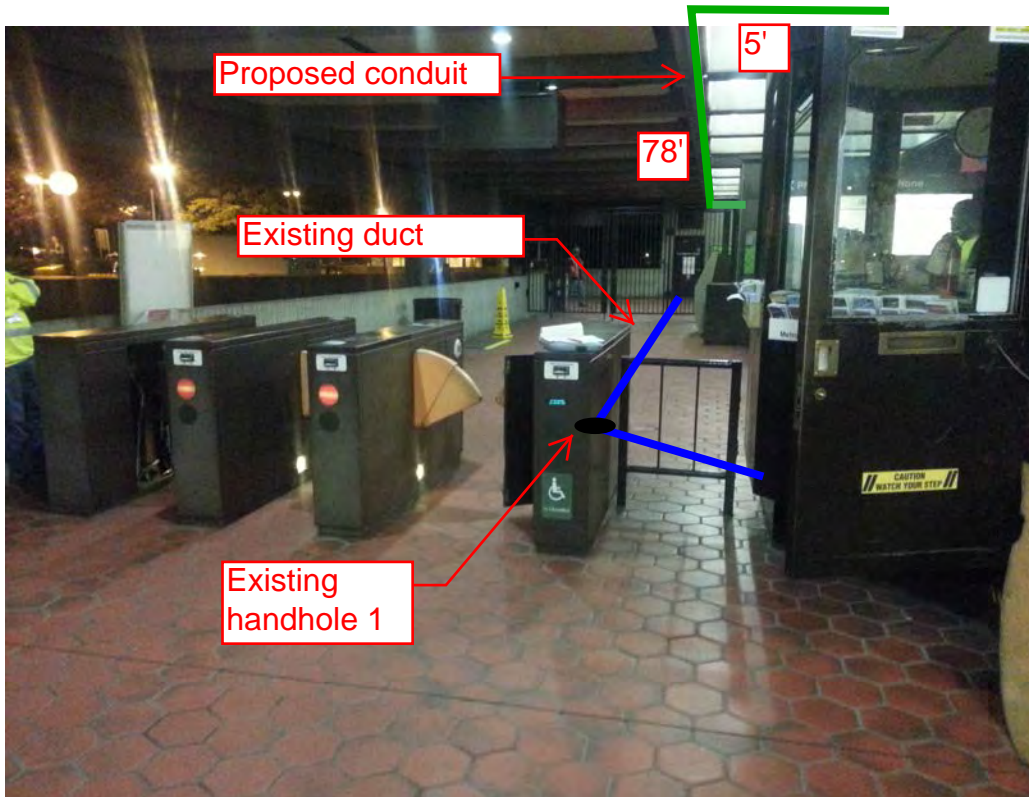


Photo #2 – Existing duct and proposed overhead conduit on mezzanine floor

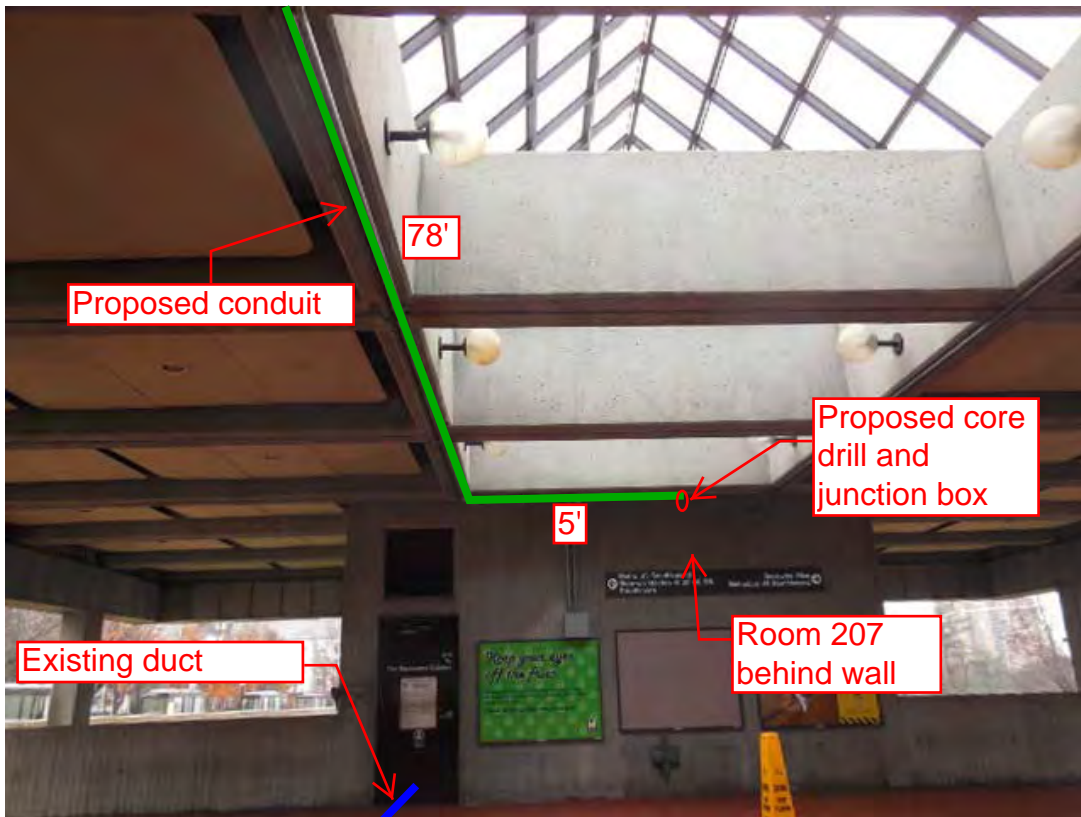


Photo #3 – Existing and proposed conduits to AFC Panel in AC Switchboard Room 107

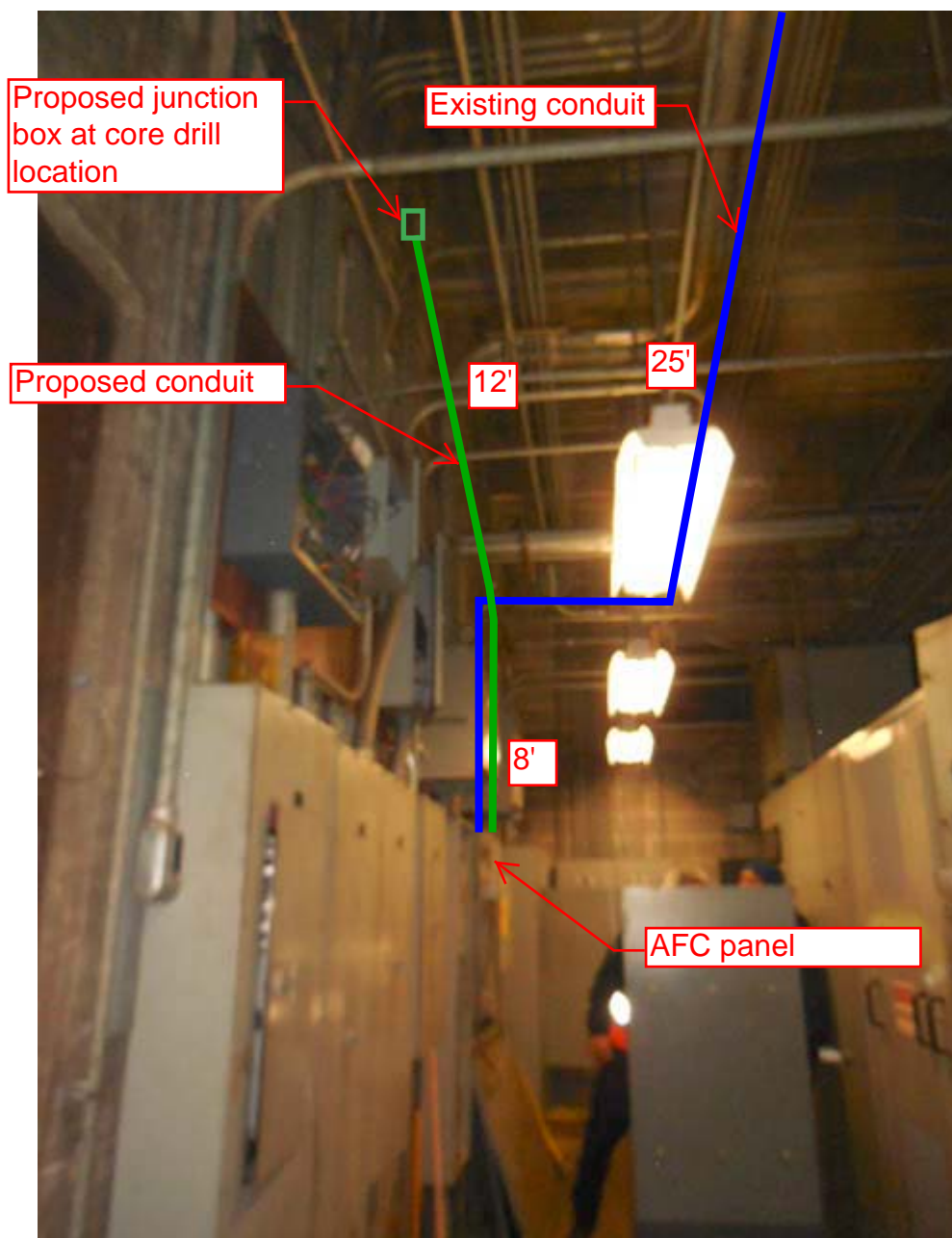
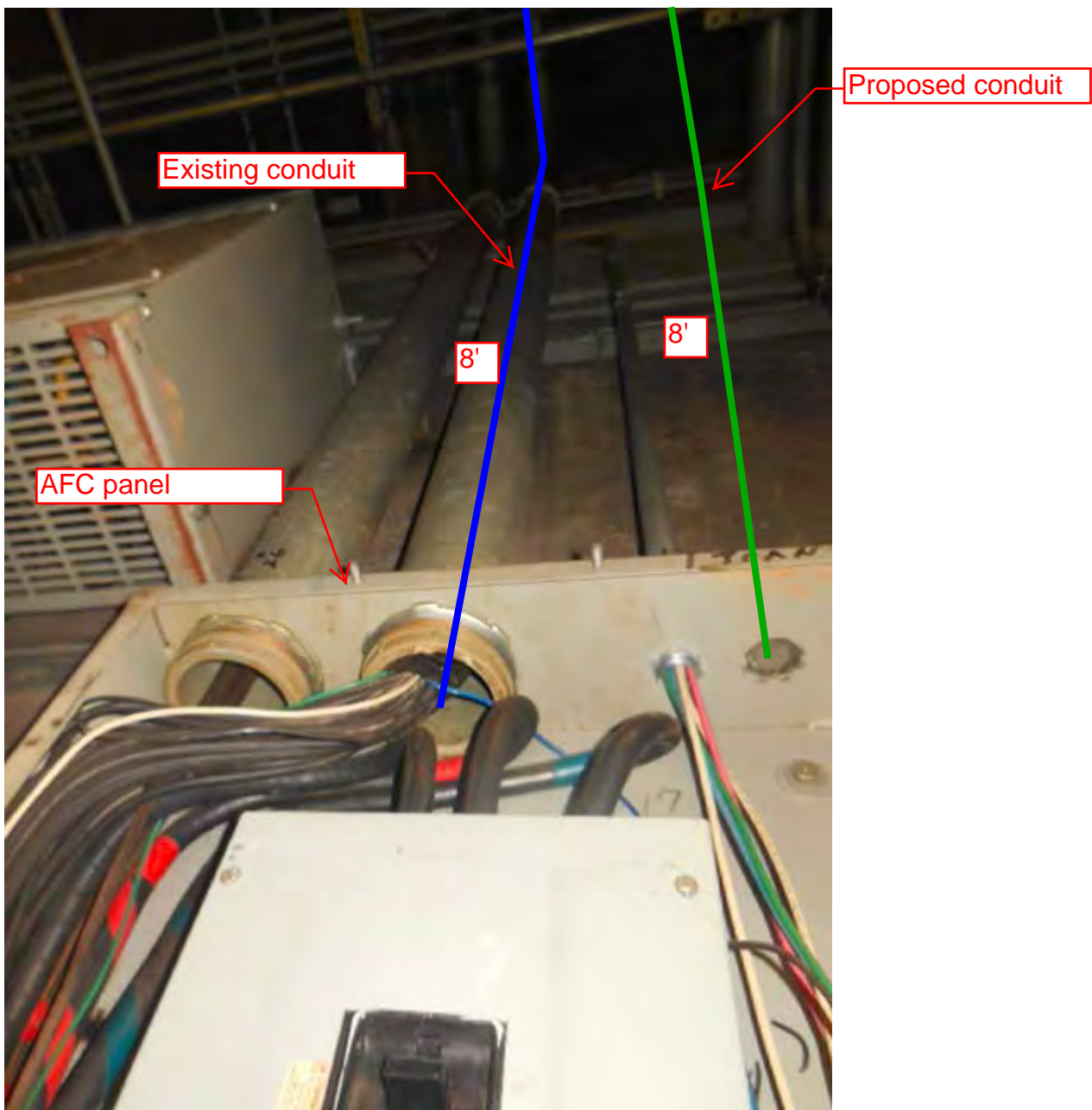


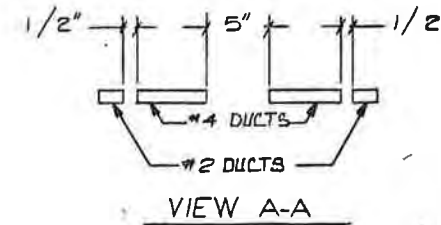
Photo #4 – Existing and proposed conduits to AFC Panel in AC Switchboard Room 107



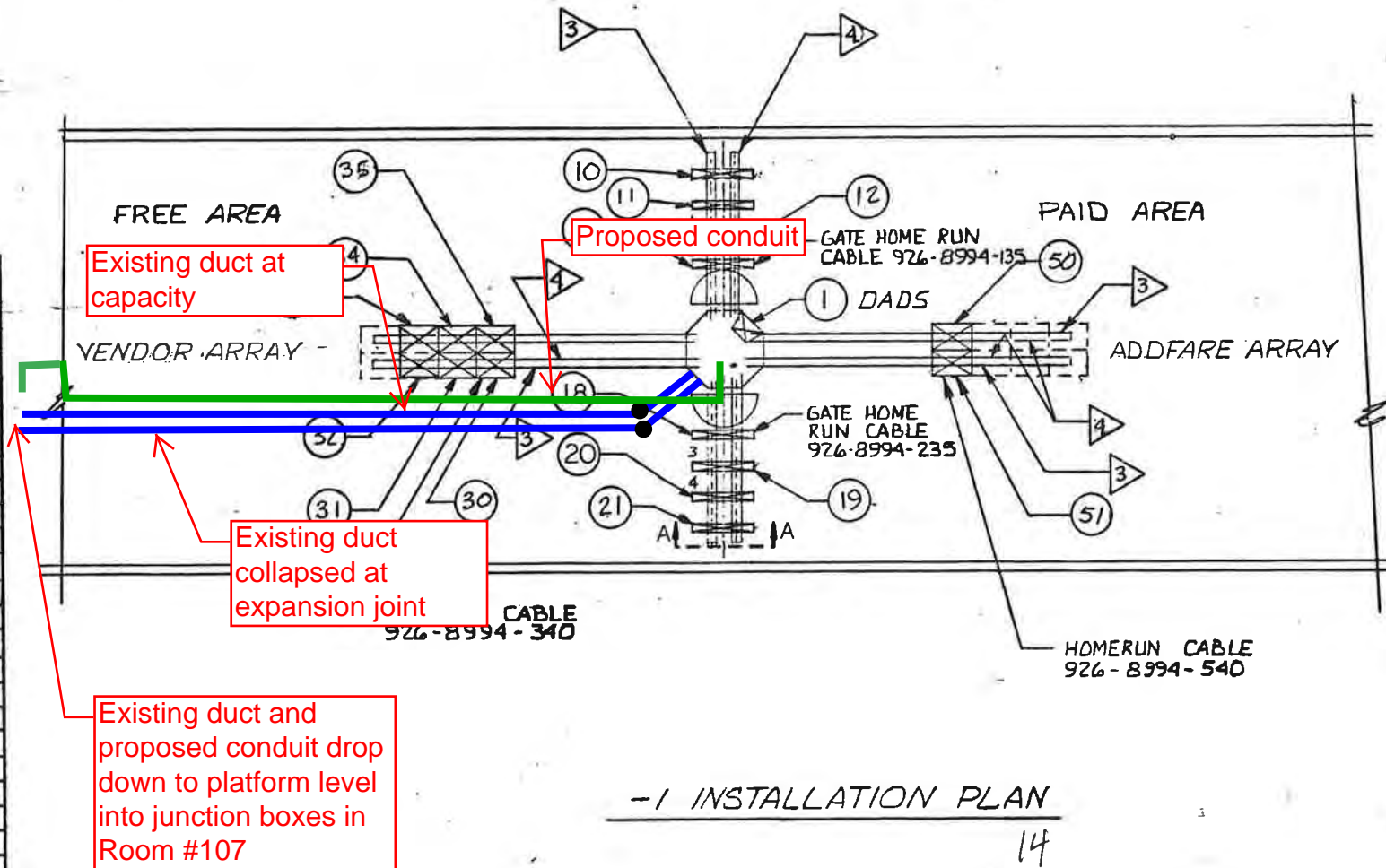
NOTES:

1. THE MINIMUM OPERATIONAL MACHINE INVENTORY IS REFERENCED ON THIS DRAWING BY THE "X" DRAWN THROUGH THE MACHINE.
2. FOR REFERENCE DRAWINGS USED SEE SUPPORT DOCUMENTATION PACKAGE FOR THIS MEZZANINE.

- 3 UNDER FLOOR DUCT - CONTROL
3/8" X 1/4"
- 4 UNDER FLOOR DUCT - POWER
6/2" X 1/2"



MACHINE LOCATION INVENTORY	C/B NOS	CWD MACHINE NO.	CWD SERIAL NO.	CIRCUIT BREAKER NO.	CIRCUIT BREAKER SIZE	WIRE SIZE
1 DADS	1	EMERG	DS8051		20	#12
2 END A	13	25	GA5501			#6
3 REV	12	21	GR7503			
4 REV	11	17	GR7507			
5 EXIT	10	19	GX4502			
6 ENDB	18	29	GB6501			
7 REV	19	27	GR7504		20	#6
8 REV	20	28	GR7508			
9 ENTRY	21	23	GN3501			
10						
11 VENDOR	30	1	30	FV1515	20	#6
12 VENDOR	31	3	31	FV1507		
13 VENDOR	32	11	32	FV1502		
14 VENDOR	33	5	33	FV1505	20	#6
15 VENDOR	34	9		FV1503		
16 VENDOR	35	7		FV1501		
17						
18 ADDFARE	50	15	50	AM2505	20	#6
19 ADDFARE	51	13	51	AM2506	20	#6
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						



DO NOT SCALE DRAWING
UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON BREAK SHARP EDGES .010 MAX
DECIMALS: .XX ± .03 .XXX ± .010
HOLES
.015 THRU .125: +.004 - .001
.126 THRU .250: +.005 - .001
.251 THRU .500: +.006 - .001
.501 THRU .750: +.008 - .001
.751 THRU 1.000: +.010 - .001

CONTRACT NUMBER
DRAWING NUMBER
926-0447
SHEET / OF /

TITLE
INSTALLATION PLAN
GROSVENOR STATION

CODE IDENT NO.
94987

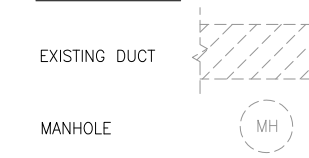
DRAWN: J. [Signature]
CHECK: [Signature]
DESIGN: [Signature]
APPROVAL: [Signature]

926-0447
14

PLAN NOTES:

1. DIMENSIONS ARE IN FEET AND INCHES.
2. DIMENSIONS ARE FOR REFERENCE ONLY.
3. EXISTING IN-FLOOR DUCTS/CONDUITS WERE IDENTIFIED USING A PORTABLE GPR SCANNING DEVICE.
4. THE SCANNING COVERAGE IS LIMITED TO THE MEZZANINE FLOOR ONLY.
5. GPR SCANNING HAS THE FOLLOWING LIMITATIONS: (i) 12 INCHES VISIBLE SCANNING DEPTH; (ii) VISIBILITY BEYOND CONGESTED OR NEAR SURFACE REINFORCEMENT LAYERS; (iii) DETECTION OF PVC AND OTHER NON-METALLIC OBJECTS (iv) DETERMINATION OF SIZE AND EXTENTS OF SUBSURFACE ANOMALIES SUCH AS SLAB VOIDS OR REBAR SIZES; AND (v) VISIBILITY WHEN VARIABLE MOISTURE CONDITIONS EXIST IN THE SUBSTRATE.

LEGEND:



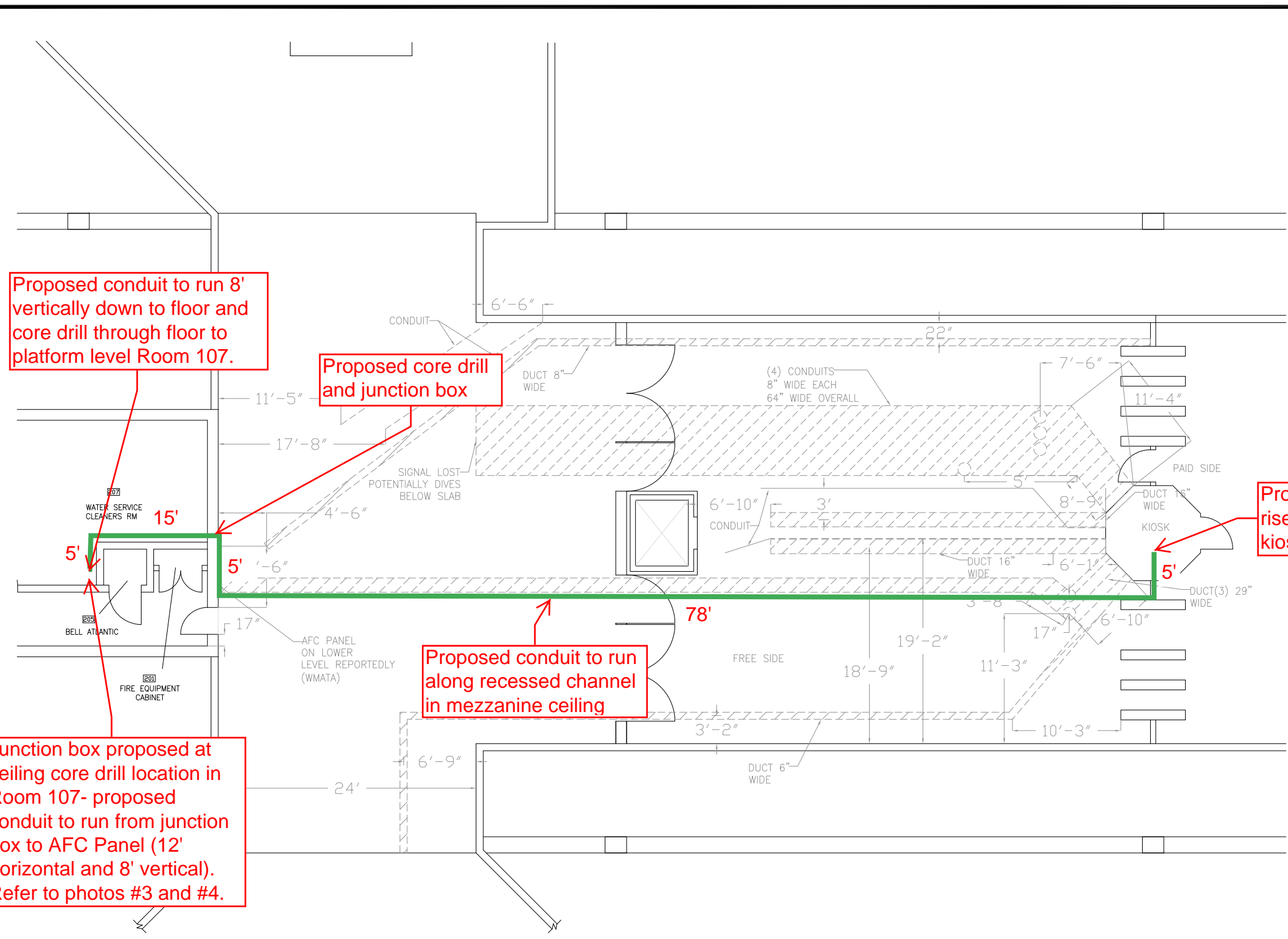
Proposed conduit to run 8' vertically down to floor and core drill through floor to platform level Room 107.

Proposed core drill and junction box

Proposed conduit to rise 6' vertically from kiosk to ceiling

Proposed conduit to run along recessed channel in mezzanine ceiling

Junction box proposed at ceiling core drill location in Room 107- proposed conduit to run from junction box to AFC Panel (12' horizontal and 8' vertical). Refer to photos #3 and #4.



GROSVENOR STATION
SCALE: NOT TO SCALE

CONTRACT NO. XXXXXX

DESIGNED	C. LOOSE	02-14	DATE	NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION
DRAWN	C. LOOSE	02-14	DATE					
CHECKED	M. BUTLER	02-14	DATE					
APPROVED			DATE					

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY
DEPARTMENT OF TRANSIT INFRASTRUCTURE AND ENGINEERING SERVICES
OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM

GFP A Gannett Fleming/Parsons JOINT VENTURE

APPROVED _____ SUBMITTED _____
PROJECT MANAGER

15-NEPP-01
IN - FLOOR DUCT INSPECTIONS
A11 GROSVENOR
PROPOSED CONDUIT PATH

SCALE: NOT TO SCALE

DRAWING NO. A11-E-100

XXX

Mezzanine Inspection Report (Scoping)

Date: 09/10/2014	Station Name: A12 White Flint	Mezzanine #: 015	Completed By: Tino Sahoo
------------------	-------------------------------	------------------	--------------------------

Summary

Scoping was completed at station where possible (see details below). Pull string was installed in the faregate communication ducts and the power duct between the Kiosk and AFC Panel. An emergency power feed precluded scoping of the upper faregate array power duct.

Scanning is not necessary.

Scoping of Faregate Array(s)

Task	Yes/No	Notes
Communications Duct – Upper Faregate Array (4 Gates)		
Was video scoping completed for the entire duct run?	No	Refer to WMATA White Flint Upper Fairgate Comm Video.avi file.
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	Scoping completed only 8 feet from kiosk due to insert and cables.
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	8 wires in duct.
Communications Duct - Lower Faregate Array (3 Gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to WMATA White Flint Lower Fairgate Comm Video.avi file.
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	
Power Duct - Upper Faregate Array (4 Gates)		
Was video scoping completed for the entire duct run?	No	Refer to WMATA White Flint Upper Fairgate Power Video.avi file.
Were there any obstructions or blockages? Provide details of type and specific location.	No	Left duct: Energized wire due to emergency feed. Right duct: Scope hit insert after 4 feet.
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	Left duct: 7 wires Right duct: 8 wires
Power Duct - Lower Faregate Array (3 Gates)		
Was video scoping completed for the entire duct run?	No	Refer to WMATA White Flint Lower Fairgate Power Video.avi file.
Were there any obstructions or blockages? Provide details of type and specific location.	No	Scope hit insert after 6 feet.
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	


Scoping of Power Duct - Kiosk to AFC Panel		
Task	Yes/No	Notes
Kiosk to AFC Panel (75 foot section)		
Was video scoping completed for the entire duct / conduit run?	No	Refer to WMATA White Flint Power Kiosk to AFC Panel Video.avi file.
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	Video scoping completed 23 feet. Scope hit 45 degree bend in walker duct run. Minimal debris
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	
Handhole 1 to Handhole 2 / AFC Panel (N/A)		
Was video scoping completed for the entire duct / conduit run?	N/A	
Was pull string installed?	N/A	
Were there any obstructions or blockages? Provide details of type and specific location.	N/A	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	N/A	
Handhole 2 to Handhole 3 / AFC Panel (N/A)		
Was video scoping completed for the entire duct / conduit run?	N/A	
Was pull string installed?	N/A	
Were there any obstructions or blockages? Provide details of type and specific location.	N/A	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	N/A	
Observations / Issues / Next Steps		
Emergency feed from Panel KE runs through the left power duct (upper array) which causes faregate #18 to remain energized.		
Sign Off		
	GFP Representative	WMATA PRGM
Name:	Tino Sahoo	
Signature:		
Date:	09/10/2014	

Photo #1: A12 White Flint – Lock-out tag-out of AFC Panel source breaker



Photo #2: A12 White Flint – Pull string installation in faregate array duct



Photo #3: A12 White Flint – Power duct under kiosk floor under capacity



Photo #4: A12 White Flint – Pull string installation in faregate



Photo #5: A12 White Flint – Video-scoping faregate array ducts



Photo #6: A12 White Flint – Pull string installation in AFC panel from kiosk



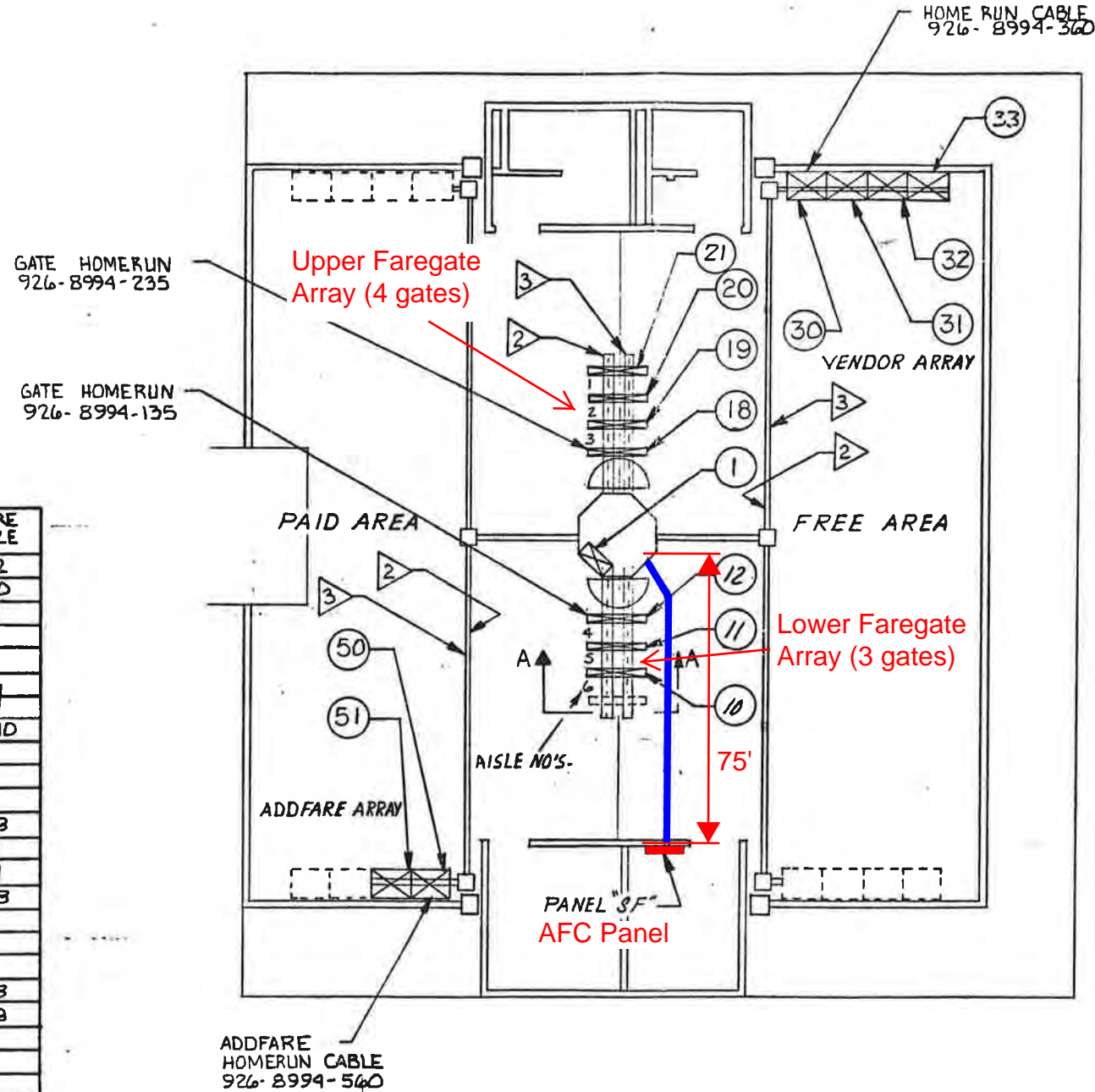
NOTES :

1. THE MINIMUM OPERATIONAL MACHINE INVENTORY IS REFERENCED ON THIS DRAWING BY THE "X" DRAWN THROUGH THE MACHINE.

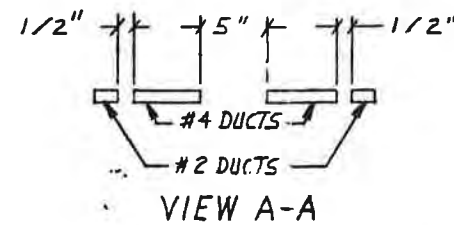
2. UNDER FLOOR DUCT - POWER
6 1/2" X 1 1/2"

3. UNDER FLOOR DUCT - CONTROL
3 1/8" X 1 1/4"

MACHINE LOCATION INVENTORY	C/B No's	CWD MACHINE NUMBERS	CWD SERIAL NUMBERS	BREAKER NO.	BREAKER SIZE	WIRE SIZE
1 DAD	1	EMERG.	1	DS8062		20 AMPS #12
2 END A	12	9	12	GA5054		#10
3 REV	11	11	11	GR7292		
4 EXIT	10	13	10	GX4071		
5 END B	18	1	18	GB6050		
6 REV	19	3	19	GR7297		
7 REV	20	5	20	GR7287		
8 ENTRY	21	7	21	GR3077	20 A	#10
9						
10						
11						
12 VENDOR	30	2	30	FV1524	20 A	#8
13 VENDOR	31	4	31	FV1519		
14 VENDOR	32	6	32	FV1522		
15 VENDOR	33	8	33	FV1520	20 A	#8
16						
17						
18						
19 ADDFARE	50	10	50	AM2509	20 A	#8
20 ADDFARE	51	12	51	AM2504	20 A	#8
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						



-1 INSTALLATION PLAN
15



DO NOT SCALE DRAWING
UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON ANGLES: ± 0.5 DEG.
TOLERANCES ON HOLES: ± 0.010
± 0.015 THRU 1.250 ± 0.004 - 0.001
± 0.01 THRU 2.500 ± 0.005 - 0.001
± 0.01 THRU 1.0000 ± 0.010 - 0.001

REVISIONS

CONTRACT NUMBER

DRAWING NUMBER
926-0444

SHEET OF

TITLE
INSTALLATION PLAN -
WHITE FLINT STATION

CODE IDENT NO.
94987

DRAWN: L. DIN
CHECKED: J. S. [Signature]
DESIGN: [Signature]
ENGR: [Signature]
APPROVAL: [Signature]

926-0444

Mezzanine Inspection Report (Scoping)

REVISION 1

Date: 08/07/2014	Station Name: A13 - Twinbrook	Mezzanine #: 016	Completed By: Tino Sahoo
------------------	-------------------------------	------------------	--------------------------

Summary

Pull string installation was completed for communication ducts in upper / lower faregate arrays. Video scoping was completed for lower comm. duct, however there was an obstruction in the upper comm. duct that prevented the passage of video scope. Video scoping was completed for the power ducts in the upper / lower faregate arrays.

Pull string installation was completed in power duct between Kiosk, Handhole and AFC Panel. However, video scoping could not be completed due to an obstruction between Kiosk and Handhole, and the 90-degree vertical bend below the AFC Panel.

Scanning was not required at this mezzanine.

Scoping of Faregate Array(s)

Task	Yes/No	Notes
Communications Duct – Upper Faregate Array (4 gates)		
Was video scoping completed for the entire duct run?	No	Refer to TWIN BROOK-COM_UPPER ARRAY.avi file.
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	Scope was obstructed by a cluster of wires near the end of duct.
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	4" duct with less than 12 wires.
Communications Duct - Lower Faregate Array (3 gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to TWIN BROOK-COM_LOWER ARRAY.avi file.
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	4" duct with less than 12 wires.
Power Duct - Upper Faregate Array (4 gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to TWINBROOK-PWR UPPER ARRAY.avi file.
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	Far right power duct was obstructed; middle power duct was scoped successfully.
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	6" ducts with less than 14 wires.
Power Duct - Lower Faregate Array (3 gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to TWIN BROOK-PWR_LOWER ARRAY.avi file.
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	6" ducts with less than 14 wires.

Scoping of Power Duct - Kiosk to AFC Panel		
Task	Yes/No	Notes
Kiosk to Handhole 1 (Distance: 60')		
Was video scoping completed for the entire duct / conduit run?	No	Refer to TWIN BROOK-PWR_KIOSK – MANHOLE.avi file.
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	Scope was obstructed at 23 feet from the kiosk.
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	6" power duct with less than 12 wires.
Handhole 1 AFC Panel (Distance: 5')		
Was video scoping completed for the entire duct / conduit run?	No	Refer to TWIN BROOK-PWR_AFC PANEL TO MANHOLE.avi file.
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	Scope could not negotiate 90-degree walker duct bend below AFC Panel.
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	6" power duct with less than 12 wires.
Observations / Issues / Next Steps		
The total distance of existing power duct between Kiosk and AFC Panel is 65'.		
Sign Off		
	GFP Representative	WMATA PRGM
Name:	Tino Sahoo	
Signature:	<i>Tanmaya Sahoo</i>	
Date:	08/07/2014	

Photo #1: A13 Twinbrook – Lock-out tag-out of feeder breaker to AFC Panel



Photo #2: A13 Twinbrook – Open AFC Panel

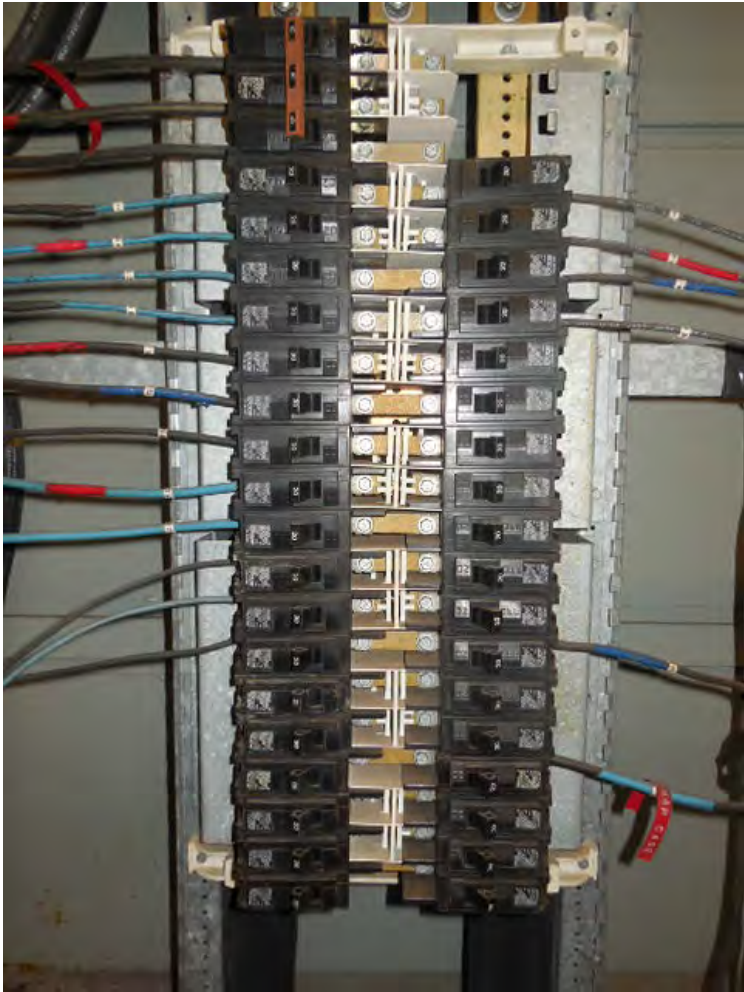


Photo #3: A13 Twinbrook – Pull string installation to AFC Panel



Photo #4: A13 Twinbrook – AFC Panel Schedule

PANEL F1

1. Kiosk - Panel	2. Buss Spare
123. Fare Gate Console	4. Free Area Vendor
115. Free Area Vendor	6. " " " -32
107. " " " -12	8. " " " -34
189. " " " -11	10. " " " -30
1911. " " " -10	12. " " "
13. " " " -18	14. " " "
15. " " " -19	16. " " "
17. Fare Gate Console	18. " " "
19. " " " -21	20. " " "
21. Smart Trip 60	22. Bus Spare DISP SPACE
23. Smart Trip 51	24. " Spare "
25. PIDS "mezz" stow	26. Map Case
27. " " "	28. Bus Frame - Disp.
29. " " "	30. " Spare "
31. " " "	32. Map Case
33. Spare	34. Spare
35. Spare	36. Spare
37. Spare	38. Spare

Photo #5: A13 Twinbrook – Pull string installation to mezzanine handhole



Photo #6: A13 Twinbrook – Video-scoping between kiosk and mezzanine handhole



Photo #7: A13 Twinbrook – Video-scoping of faregate array ducts

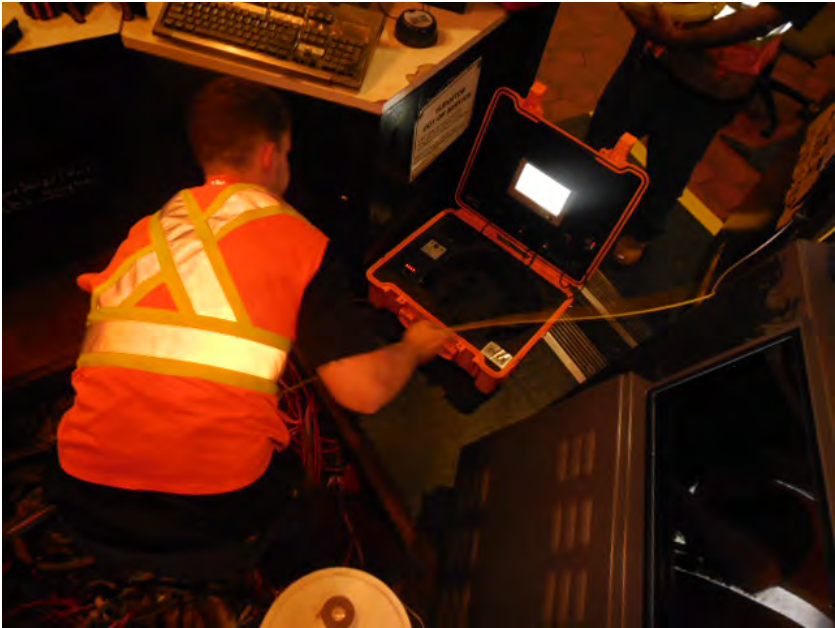


Photo #8: A13 Twinbrook – Inserting fish tape into faregate array ducts



Photo #9: A13 Twinbrook – Installation of pull string in faregate array ducts



Mezzanine Inspection Report (Scoping)

Date: 09/08/14	Station Name: A14 Rockville	Mezzanine #: 017	Completed By: Mike Butler
----------------	-----------------------------	------------------	---------------------------

Summary


All video scoping and pull string installation was completed for this mezzanine. Both Upper and Lower faregate array communication ducts were successfully video scoped and pull string installed. Both Upper and Lower faregate array power ducts were successfully video scoped. The power duct between Kiosk, Handhole 1, Handhole 2 and AFC Panel was also video scoped and pull string installed.

Walker ducts are not at capacity and appear to be good condition and viable for further use, however there was a partial obstruction between Handhole 1 and Handhole 2, which appears to be a dip in the bottom side of the duct where a previous handhole may have been. Since pull string was installed without any problem and the duct is in good condition, scanning is not required at this mezzanine.

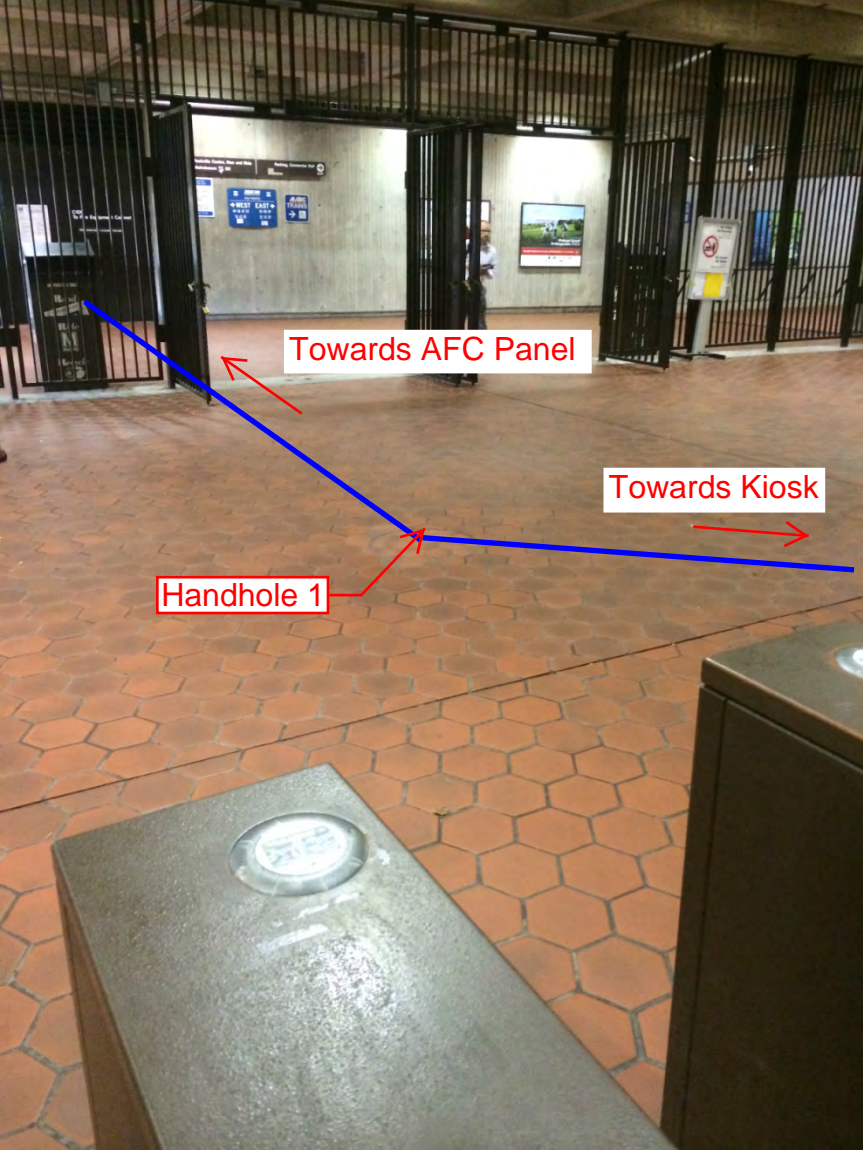
Total power duct run from Kiosk to AFC Panel is 90 feet.

Scoping of Faregate Array(s)

Task	Yes/No	Notes
Communications Duct – Upper Faregate Array (4 gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to WMATA Rockville Upper Fairgate Comm Video.avi.
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	4" Duct with less than 10 wires – not at capacity.
Communications Duct - Lower Faregate Array (4 gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to WMATA Rockville Lower Fairgate Comm Video.avi
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	4" Duct with less than 10 wires – not at capacity.
Power Duct - Upper Faregate Array (4 gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to WMATA Rockville Upper Fairgate Power Video.avi.
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	6" Duct with less than 12 wires – not at capacity.
Power Duct - Lower Faregate Array (4 gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to WMATA Rockville Lower Fairgate Power Video.avi.
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	6" Duct with less than 12 wires – not at capacity.

Scoping of Power Duct - Kiosk to AFC Panel		
Task	Yes/No	Notes
Kiosk to Handhole 1 (Distance: 12')		
Was video scoping completed for the entire duct / conduit run?	Yes	Refer to WMATA Rockville Power Kiosk to handhole1 Video.avi
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	6" Duct with less than 15 wires – not at capacity.
Handhole 1 to Handhole 2 (Distance: 70')		
Was video scoping completed for the entire duct / conduit run?	Yes	Refer to WMATA Rockville Power handhole2 to handhole1 Video.avi and WMATA Rockville Power handhole 1 to handhole2 video.avi.
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	Partial obstruction 48' from Handhole 1 (see details below)
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	6" Duct with less than 15 wires – not at capacity.
Handhole 2 to AFC Panel (Distance: 8')		
Was video scoping completed for the entire duct / conduit run?	Yes	
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	6" Duct with less than 15 wires – not at capacity.
Observations / Issues / Next Steps		
<p>A minor obstruction was encountered, between Handhole 1 and Handhole 2, 48' from Handhole 1 after the duct passes through backroom entryway adjacent to room C113. The concrete floor appears to have been repaired, and possibly a handhole removed. When scoping the camera head got stuck on a dip, which looked like a circular cut-out in the bottom of the duct. This occurred when scoping from both directions. However, the obstruction did not affect the pull string installation and overall the duct appears in good condition.</p>		
Sign Off		
	GFP Representative	WMATA PRGM
Name:	Mike Butler	
Signature:		
Date:	31/12/14	

Rockville Photo #1 – Duct route between Kiosk and Electrical Room



Rockville Photo #2 – Duct route between Kiosk and Electrical Room



Rockville Photo #3 – Concrete repair to floor in back hallway outside Room C113



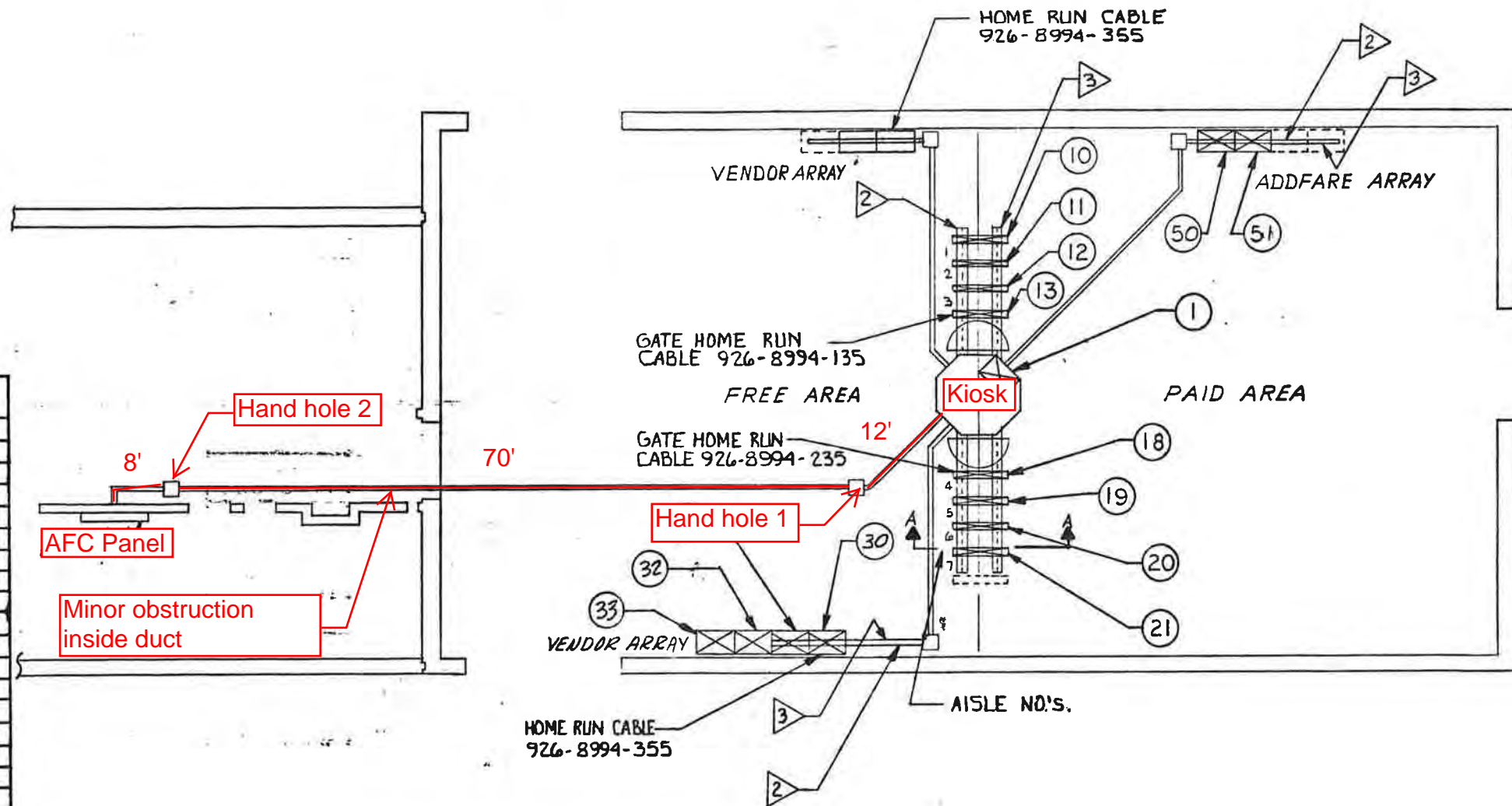
NOTES:

1. THE MINIMUM OPERATIONAL MACHINE INVENTORY IS REFERENCED ON THIS DRAWING BY THE "X" DRAWN THROUGH THE MACHINE.

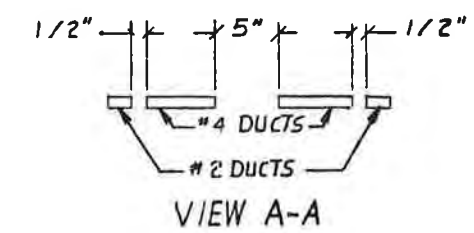
2 UNDER FLOOR DUCT - POWER
6 1/2" X 1 1/2"

3 UNDER FLOOR DUCT - CONTROL
3 1/8" X 1 1/4"

MACHINE LOCATION % INVENTORY	C/B NOS.	CWD MACHINE NUMBER	CWD SERIAL NUMBER	CIRCUIT BREAKER NO.	CIRCUIT BREAKER SIZE	WIRE SIZE
1 DAD	EMER	1	8065		20 AMPS	#12
2 END A	13	13	GA5061		20 AMPS	#8
3 REV	11	12	GR7295			
4 REV	9	11	GR7300			
5 EXIT	7	10	GX4501			
6 END B	15	18	GB6061			
7 REV	17	19	GR7286			
8 REV	19	20	GR7242			
9 ENTRY	21	21	GN3503		20 AMPS	#8
10						
11						
12						
13 VENDOR	8	30	FV1352		20 AMPS	#6
14 VENDOR	10	31	FV1506			#6
15 VENDOR	12	32	FV1509			#6
16 VENDOR	14	33	FV1504		20 AMPS	#6
17						
18						
19						
20						
21 ADDFARE	10	50	AM2503		20 AMPS	#10
22 ADDFARE	18	51	AM2038		20 AMPS	#10
23						
24						
25						
26						
27						
28						
29						
30						



-1 INSTALLATION PLAN
17



DO NOT SCALE DRAWING

UNLESS OTHERWISE SPECIFIED BREAK SHARP EDGES .010 MAX TOLERANCES ON HOLES ANGLES 1/2 0.5 DEG.

DIMENSIONS ARE IN INCHES

.0156 THRU .125: +.004 - .001 .751 THRU .500: +.008 - .001
.126 THRU .250: +.005 - .001 .501 THRU .750: +.008 - .001
.751 THRU 1.000: +.010 - .001

CONTRACT NUMBER

DRAWING NUMBER
926-0443

SHEET 1 OF 1

TITLE
INSTALLATION PLAN -
ROCKVILLE STATION

CUBIC WESTERN DATA
A Subsidiary of Cubic Corporation
5600 KEBBY MESA ROAD • POST OFFICE BOX 8071 • SAN DIEGO, CA 92118

CODE IDENT NO.
94987

DRAWN: I. D/W 6/14/92
CHECK:
DESIGN:
APPROVAL:

926-0443

Mezzanine Inspection Report (MIR)

REVISION 1

Date : 06/01/2015	Station Name : B01 Gallery Place (West)	Mezzanine #: 020	Completed By: Mike Butler
-------------------	---	------------------	---------------------------

Summary

NEPP-01: Video scoping completed for power / communication ducts in faregate arrays; pull strings installed in communication ducts. Video scoping could not be completed between Kiosk, Handhole 1, Handhole 2 and Handhole 3 due to multiple collapses in the power duct. However, pull string was installed between Handhole 2 and Handhole 3 despite a collapsed duct. Pull string was also installed in the power conduit between Handhole 3, a junction box and the AFC Panel. Scanning was conducted to identify a proposed duct route between the Kiosk and AFC Panel. The scanning results showed that the mezzanine floor has multiple ducts between the Kiosk and the back rooms, and no space to install a new in-floor duct.

NEPP-02: Video scoping and pull string installation was completed in Alternate Duct between Kiosk, Handhole 4, Handhole 5, Handhole 6 and Shared Trough in Room W202. Alternate Duct is in good condition, not at capacity and viable for use. A proposed overhead conduit will run from Shared Trough to AFC Panel in Room W202, thus completing the power run from Kiosk to AFC Panel.

Refer to attached photos and drawings for further details about existing and proposed ducts / conduits.

NEPP-01: Scoping of Faregate Arrays (01/09/15)5

Task	Yes/No	Notes
Communication Duct - Upper Faregate Array (4 gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to "WMATA Gallery Place Mezz 20 Upper Comm Fair Gate Video.avi"
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	3" walker duct, not at capacity (< 12 wires).
Communication Duct - Lower Faregate Array (3 gates)		
Was video scoping completed for the entire duct run?	Yes	Refer "WMATA Gallery Place Mezz 20 Lower Comm Fair Gate Video.avi"
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	3" walker duct, not at capacity (< 12 wires).
Power Duct - Upper Faregate Array (4 gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to "WMATA Gallery Place West 6inch Upper Power Faregate.avi"
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	6" walker duct, not at capacity (< 10 wires).
Power Duct - Lower Faregate Array (3 gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to "WMATA Gallery Place Mezz 20 Lower Power Fair Gate Video.avi"
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	6" walker duct, not at capacity (< 10 wires).

NEPP-01: Scoping of Existing Power Duct (01/09/15)		
Task	Yes/No	Notes
Kiosk to Handhole 1 (Distance: 10')		
Was video scoping completed for the entire duct / conduit run?	No	Refer to "WMATA Gallery Place West Power Kiosk to HH1.avi"
Was pull string installed?	No	
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	Duct collapsed.
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	N/A	
Handhole 1 to Handhole 2 (Distance: 42')		
Was video scoping completed for the entire duct / conduit run?	No	Refer to "WMATA Gallery Place West Power HH1 to HH2.avi"
Was pull string installed?	No	
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	Duct collapsed.
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	N/A	
Handhole 2 to Handhole 3 (Distance: 20')		
Was video scoping completed for the entire duct / conduit run?	No	
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	Duct collapsed shortly after opening, no scoping completed.
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	N/A	
Handhole 3 to Junction Box to AFC Panel (Distance: 25')		
Was video scoping completed for the entire duct / conduit run?	No	Scoping not required for conduits.
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	3" conduit with less than 8 wires.
NEPP-01: Scanning of Existing Ducts / Conduits (01/20/15)		
<ul style="list-style-type: none"> - Scanning was conducted to identify a proposed duct route between the Kiosk and AFC Panel. - The scanning results showed that the mezzanine floor has multiple ducts between the Kiosk and the back rooms, and there is no space to install a new in-floor duct. - Refer to scanning drawing for the layout of existing ducts on the mezzanine floor. 		


NEPP-02: Scoping of Alternate Duct (06/01/15)		
Task	Yes/No	Notes
Kiosk to Handhole 4 (Distance: 5')		
Was video scoping completed for the entire duct / conduit run?	Yes	Refer to "B01_MZ020_Gallery Place West_Kiosk to HH4.avi"
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	6" walker duct with less than 15 wires.
Handhole 4 to Handhole 5 (Distance: 40')		
Was video scoping completed for the entire duct / conduit run?	Yes	Refer to "B01_MZ020_Gallery Place West_HH4 to HH5.avi"
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	6" walker duct with less than 15 wires.
Handhole 5 to Handhole 6 (Distance: 40' approx.)		
Was video scoping completed for the entire duct / conduit run?	Yes	Refer to "B01_MZ020_Gallery Place West_HH6 to HH5.avi"
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	6" walker duct with less than 15 wires.
Handhole 6 to Shared Trough in Room W202 (Distance: 1')		
Was video scoping completed for the entire duct / conduit run?	Yes	Refer to "B01_MZ020_Gallery Place West_HH6 to Trough.avi"
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	6" walker duct with less than 15 wires.
Additional Comments		
<ul style="list-style-type: none"> - The distance of proposed power route from Kiosk to AFC Panel is 136', including 86' of existing alternate duct and 50' of proposed conduit. - Alternate duct is in good condition and not at capacity. 		
Sign Off		
	GFP Representative	WMATA PRGM
Name:	Mike Butler	
Signature:		
Date:	06/01/15	

Photo #1: Mezzanine layout showing existing / alternate duct runs.

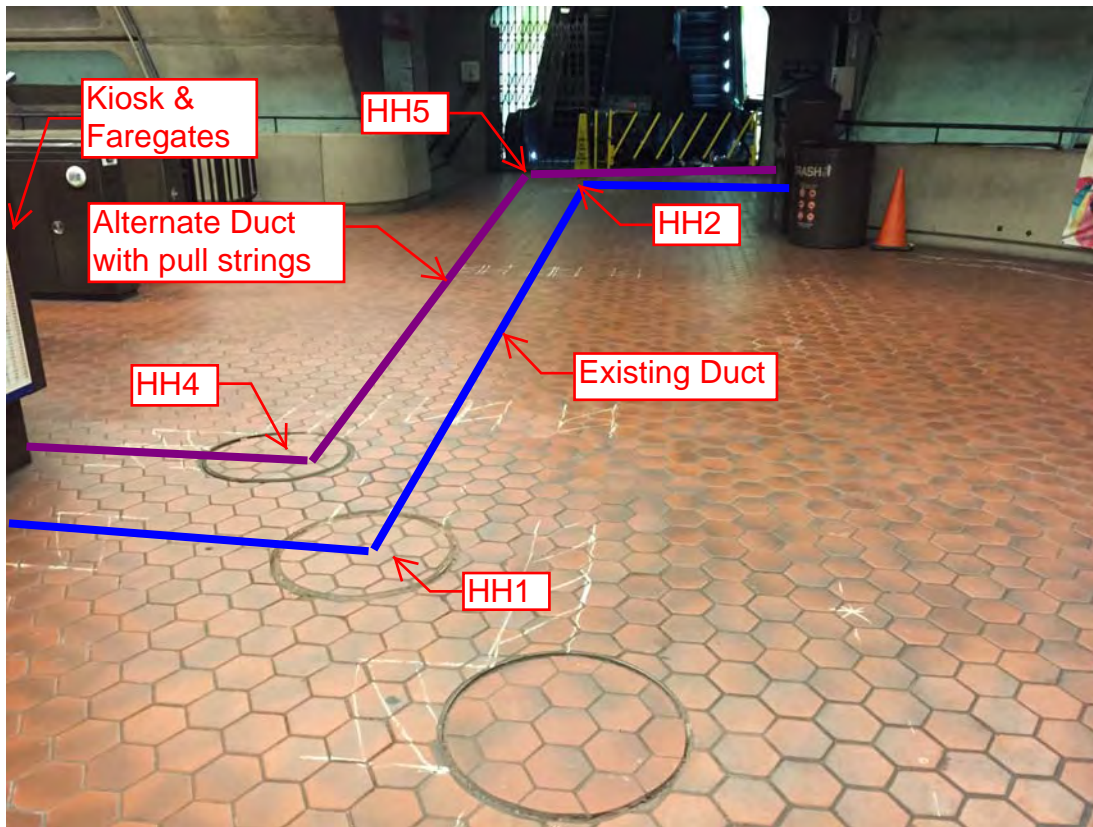


Photo #2: Mezzanine layout showing existing / alternate duct runs.

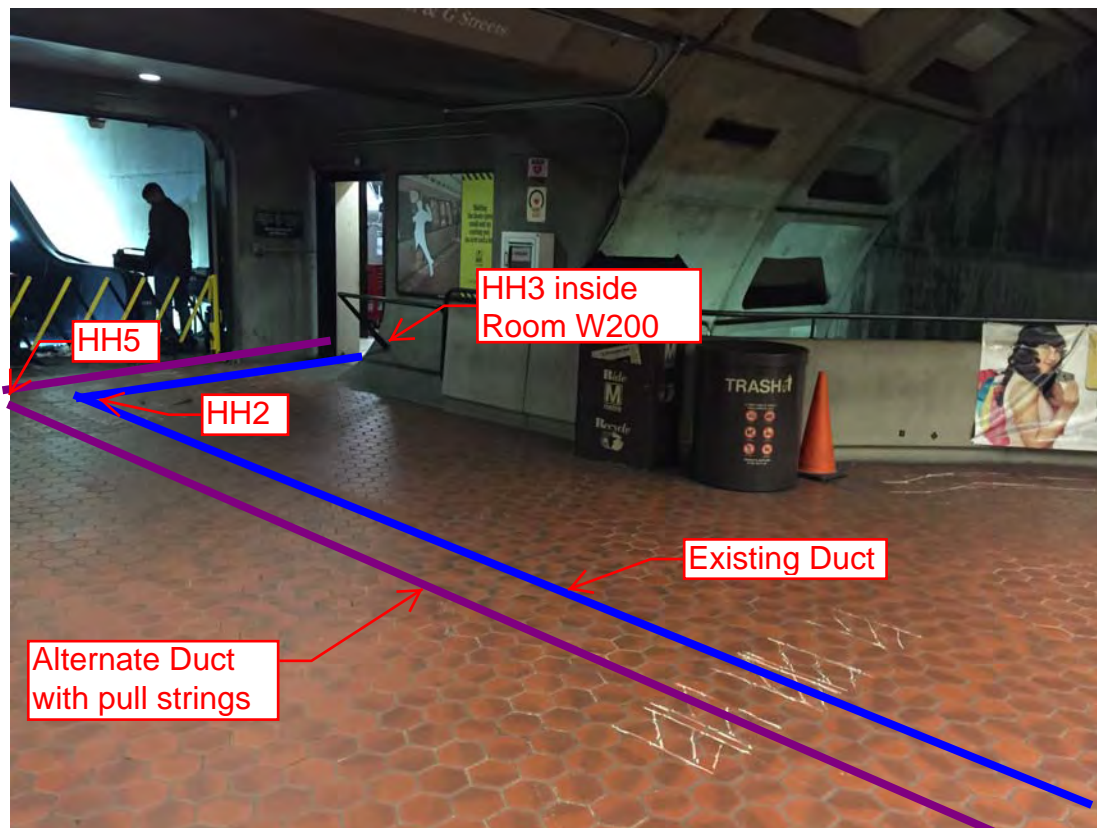


Photo #3: Alternate duct path in Room W200.



Photo #4: Handhole 6 for alternate duct in Room W200.

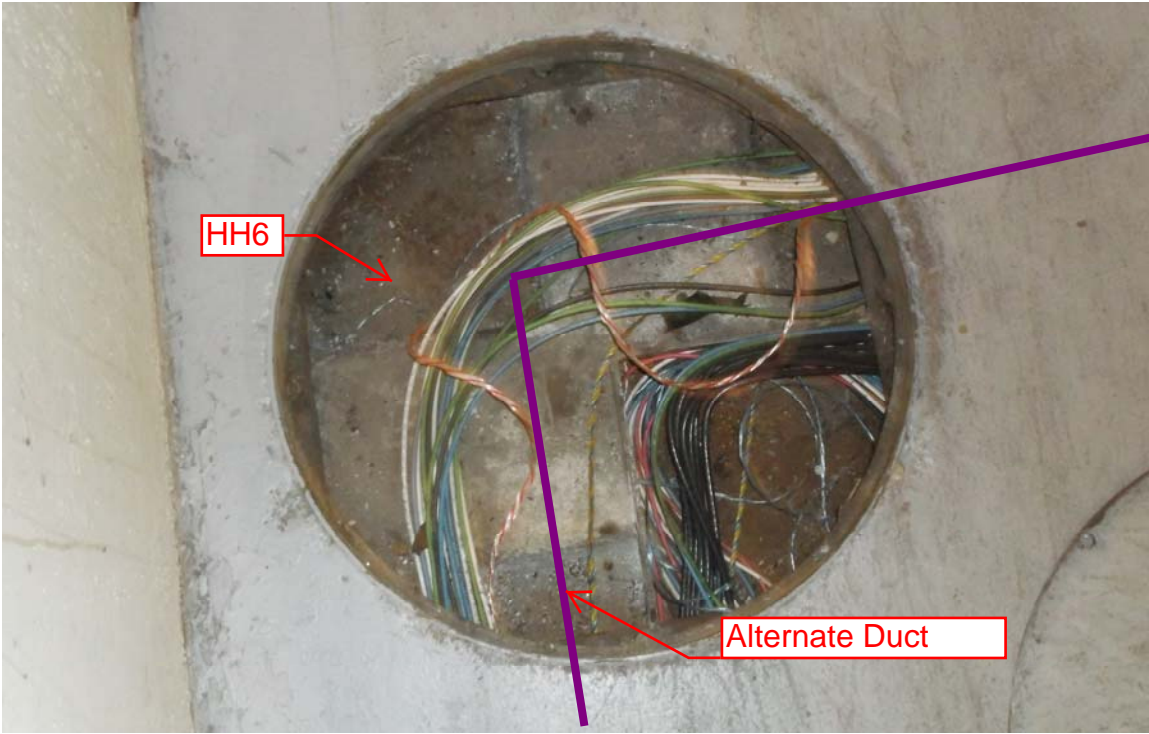


Photo #5: Alternate Duct entry to Shared Trough in Room W202.

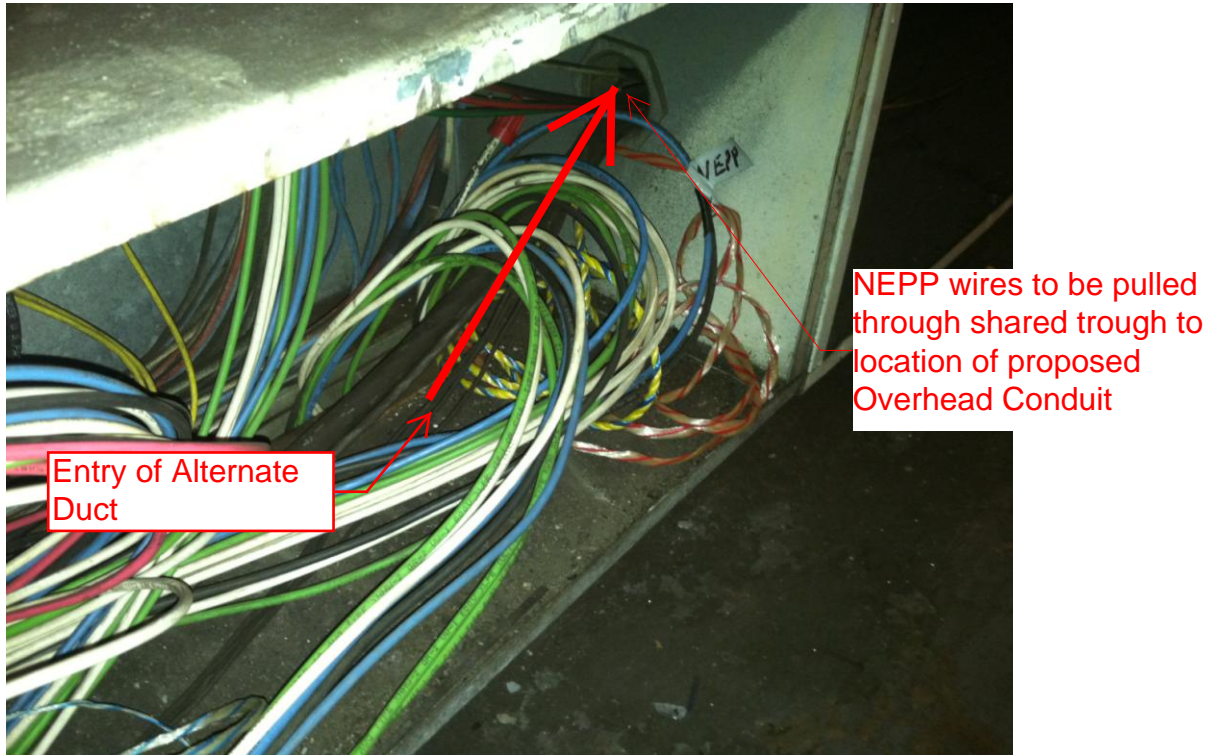


Photo #6: NEPP wires to be pulled through Shared Trough in Room W202.

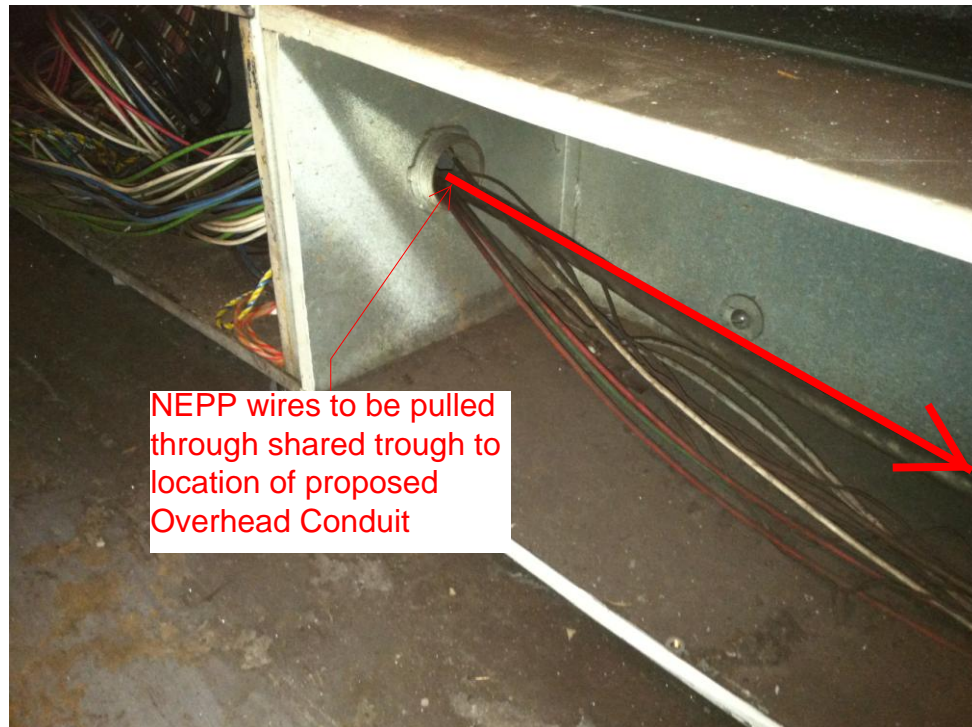
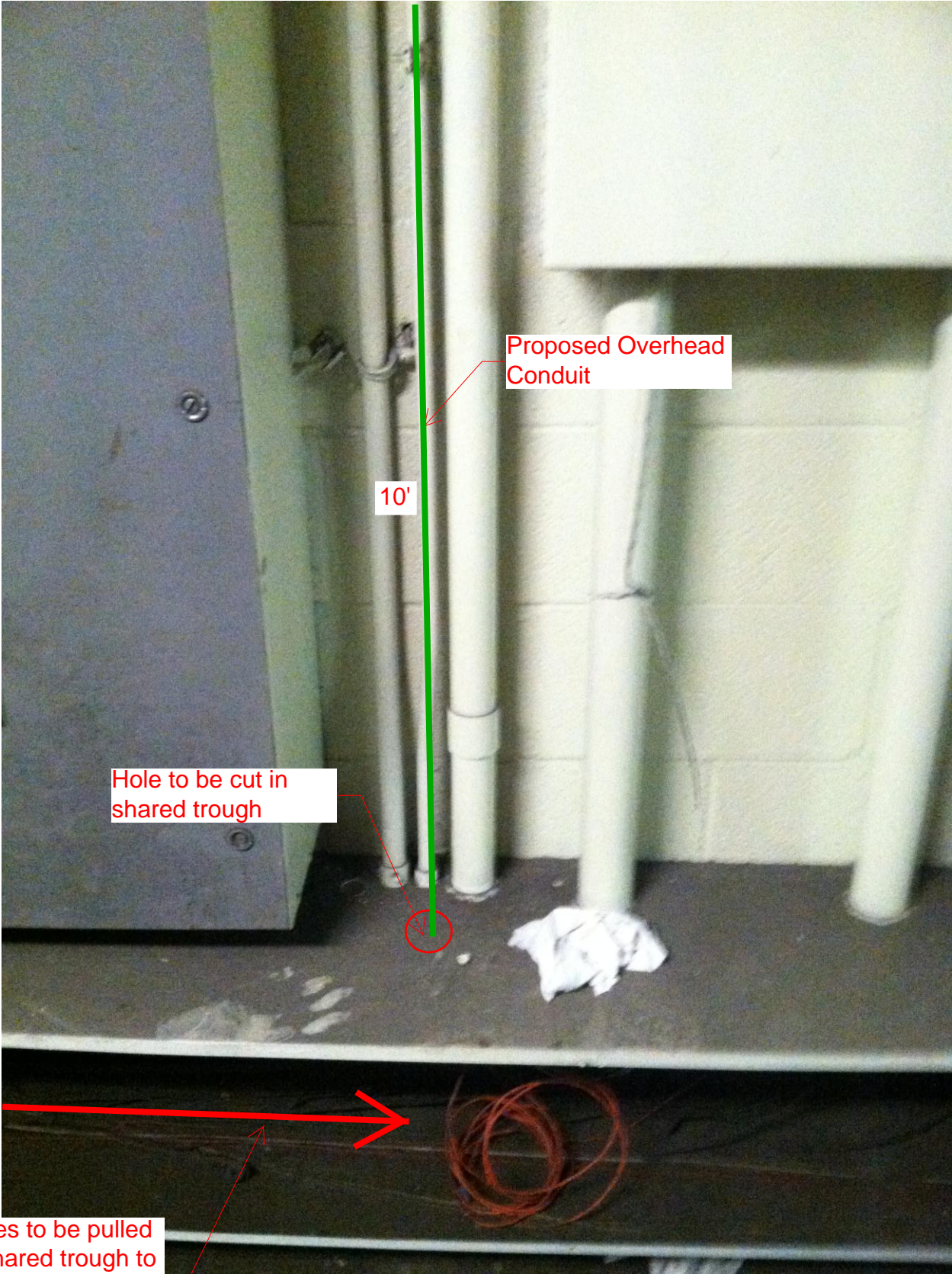


Photo #7: Proposed Overhead Conduit from Shared Trough in Room W202.



Proposed Overhead Conduit

10'

Hole to be cut in shared trough

NEPP wires to be pulled through shared trough to location of proposed Overhead Conduit

Photo #8: Proposed Overhead Conduit in Room W202.



Photo #9: Proposed Overhead Conduit in Room W202.

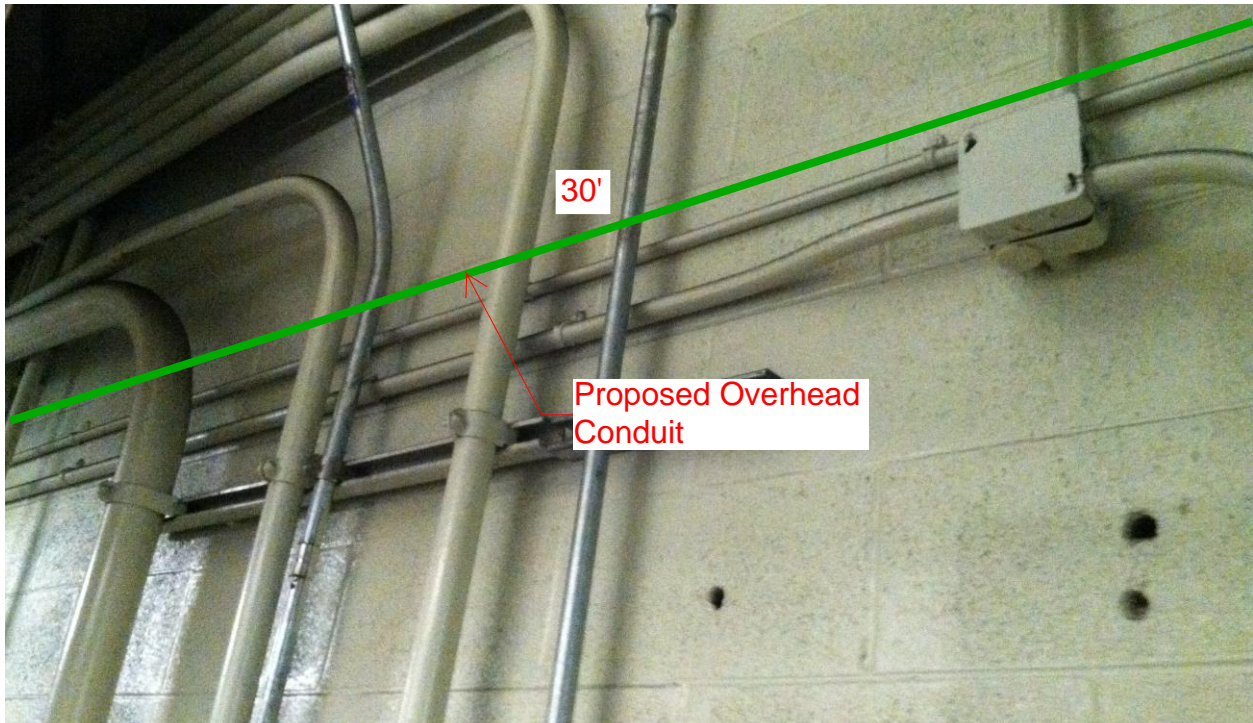


Photo #10: Proposed Overhead Conduit in Room W202.

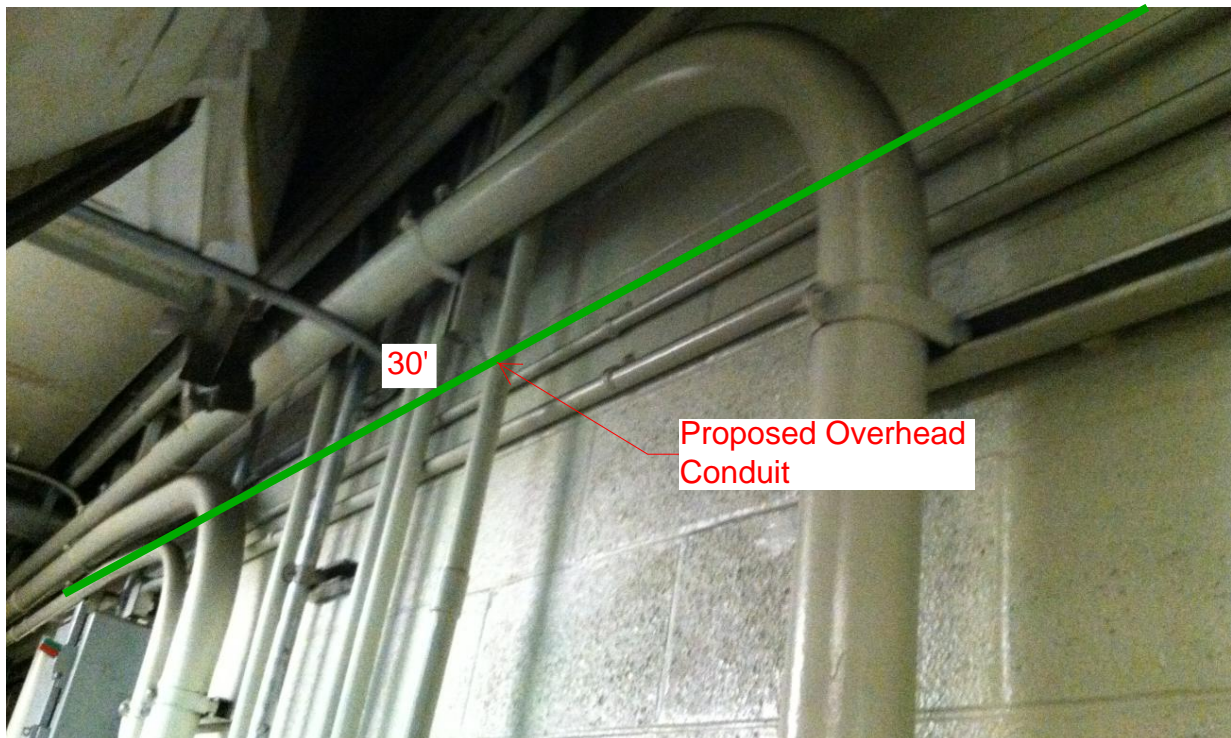


Photo #11: Proposed Overhead Conduit in Room W202.

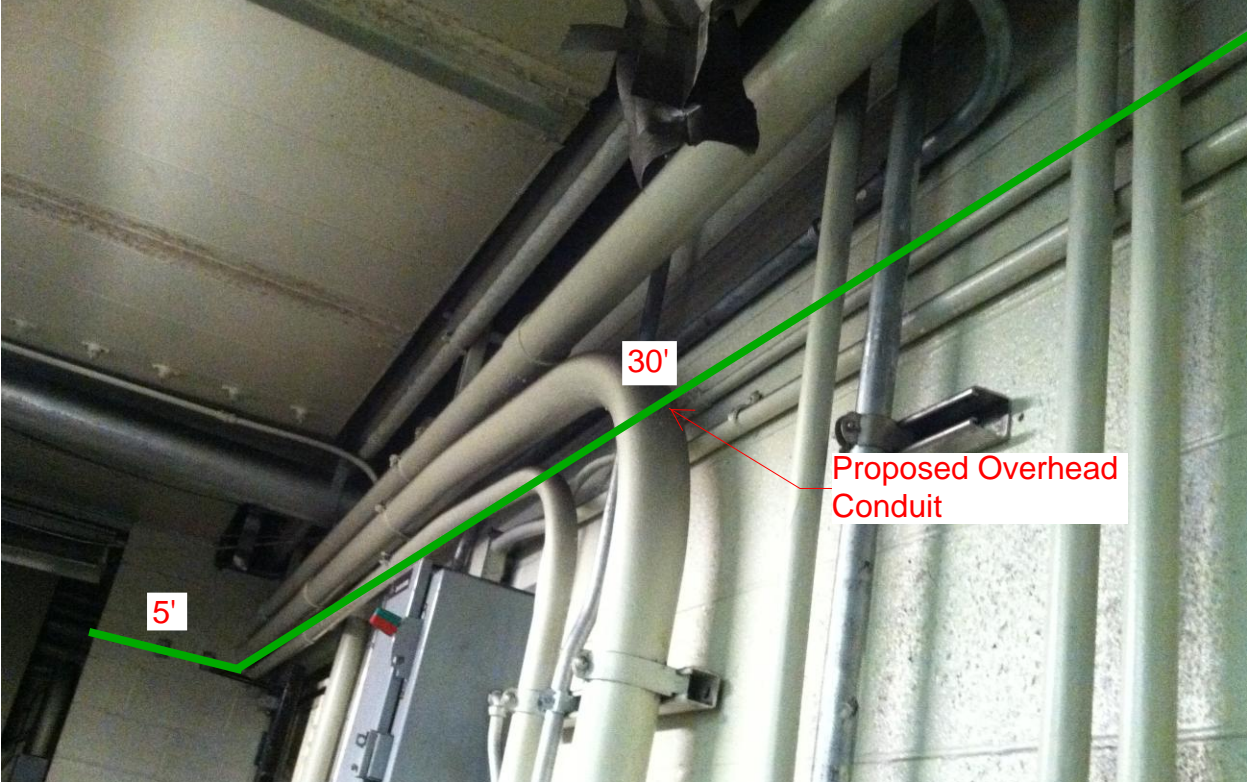
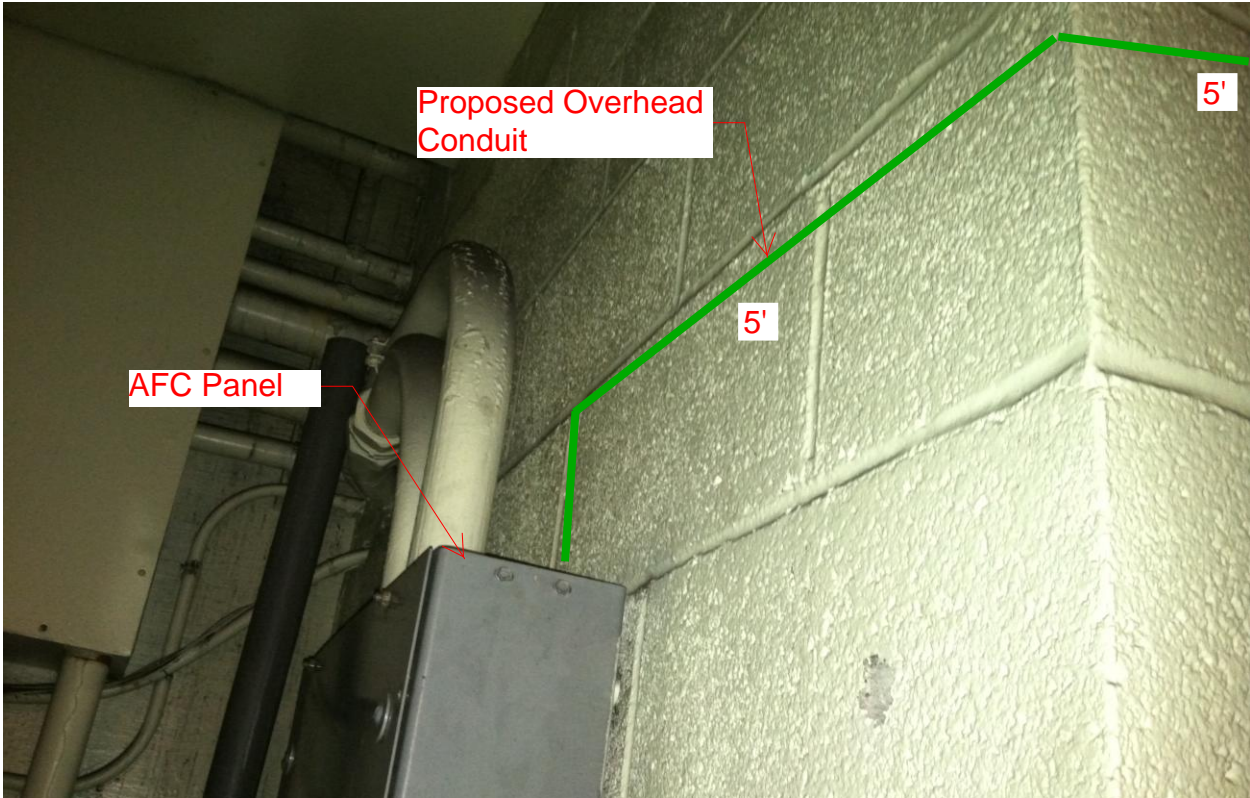


Photo #12: Proposed Overhead Conduit feeding AFC Panel in Room W202.

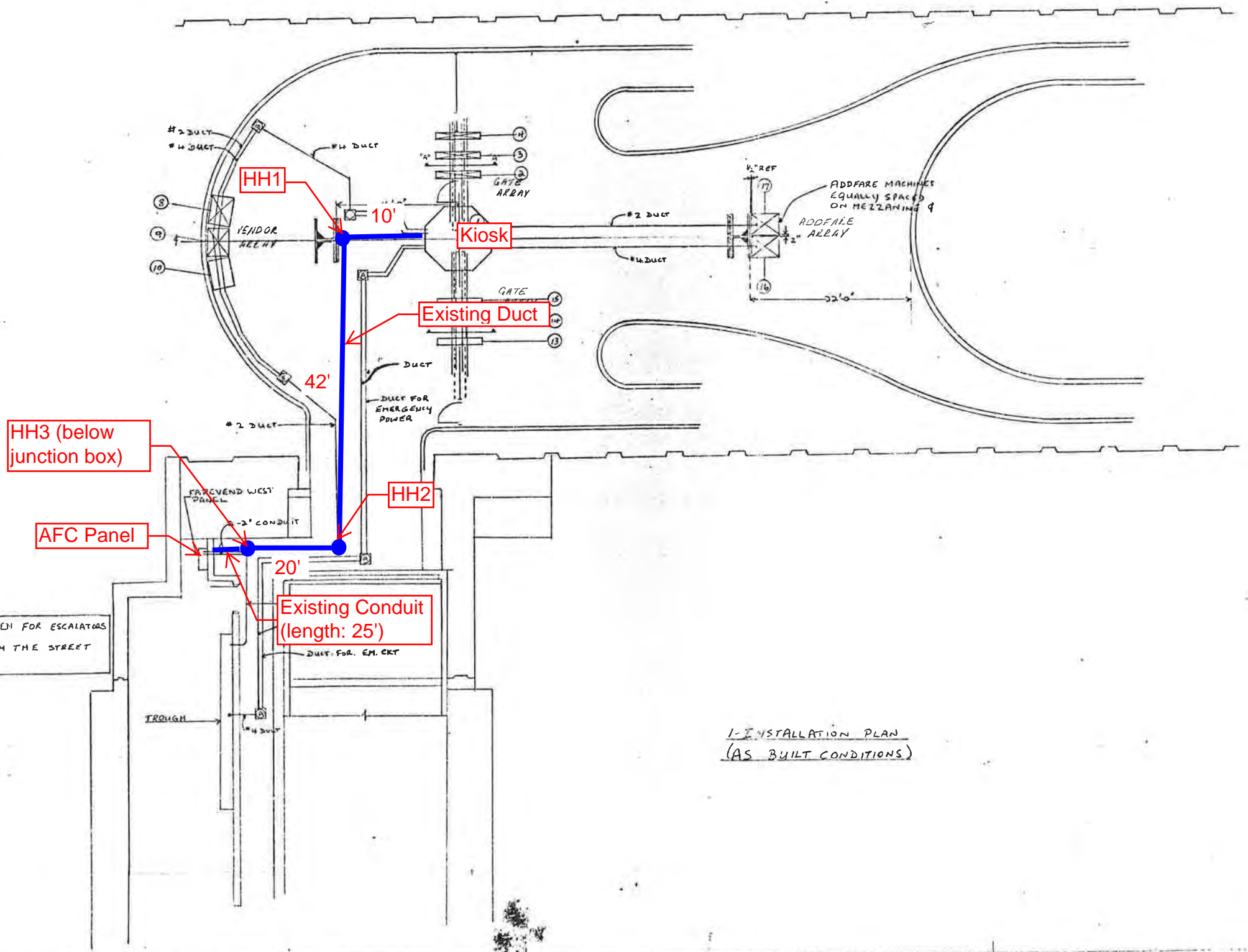
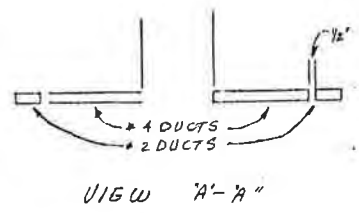


NOTES:

1. ALL INFORMATION CONCERNING DUCTS AND CONDUITS IS BASED ON INFORMATION SUPPLIED TO CUBIC WESTERN DATA BY BEENTEL.
2. TOTAL MACHINE INVENTORY IS DEPICTED ON THIS DRAWING
3. THE MINIMUM OPERATIONAL MACHINE INVENTORY IS REFERENCED ON THIS DRAWING BY THE "X" DRAWN THRU THE MACHINE SYMBOL
4. FOR AS BUILT CONDITIONS SEE SHEET 2
5. FOR REF DWGS SEE SUPPRT DOCUMENT PACKAGE FOR THIS MEZZANINE

REVISIONS		
DESCRIPTION	DATE	APVD
AS BUILT DRAWING REV. A	5-10-77	[Signature]

EXISTING DUCT / CONDUIT LAYOUT



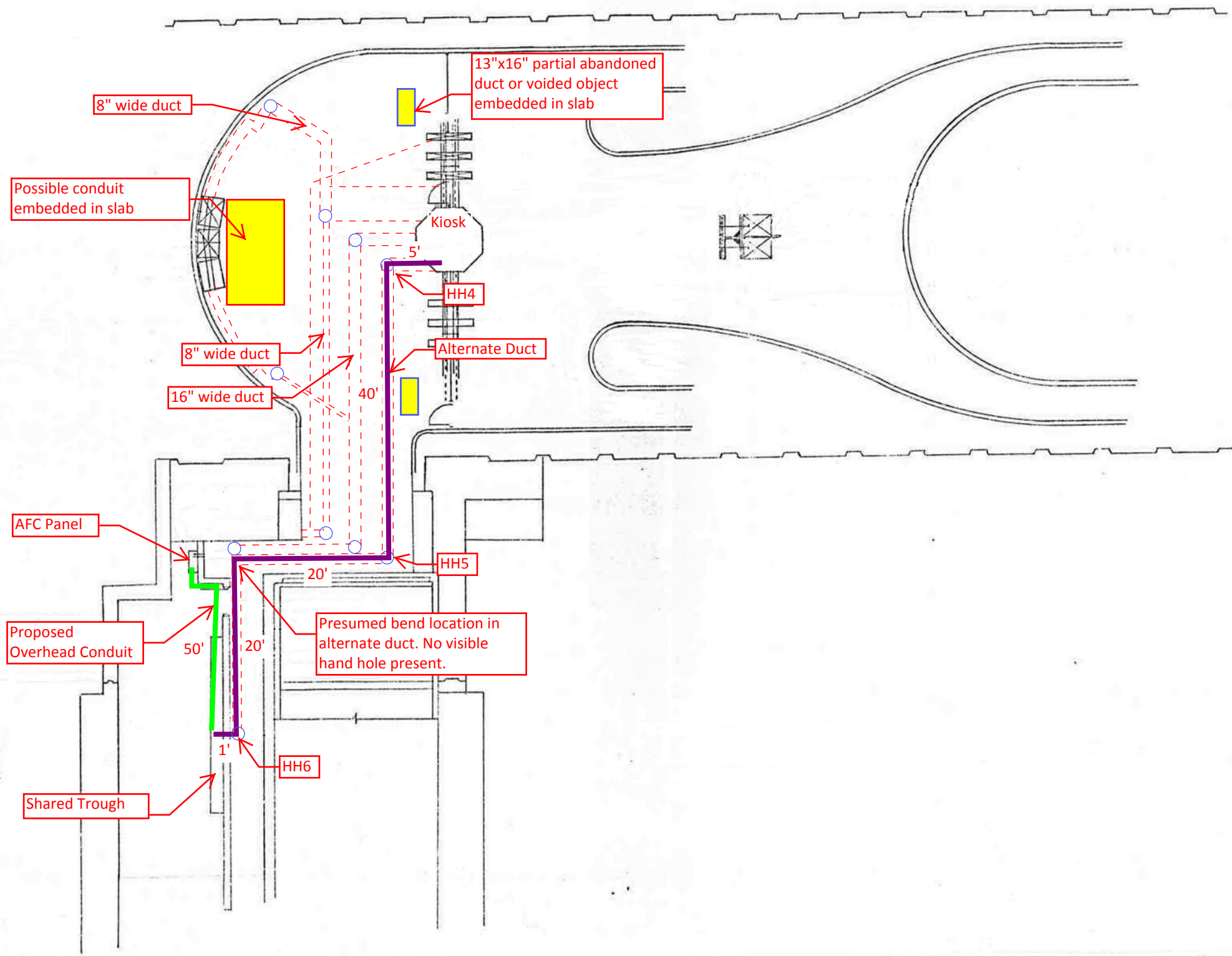
PRIORITY REQUESTS ARE HEREBY GIVEN FOR ESCALATORS AND THE ELEVATORS THAT RUNS FROM THE STREET LEVEL TO MEZZANINE

INSTALLATION PLAN
(AS BUILT CONDITIONS)

CONTRACT NUMBER		CUBIC WESTERN DATA A SUBSIDIARY OF CUBIC CORPORATION 1650 KEARNEY MESA ROAD • POST OFFICE BOX 80787 • SAN DIEGO, CA 92118	
DESIGN ACTIVITY APPROVAL		SIZE	DRAWING NUMBER
APPROVED		SCALE	026-0323
SHEET		REV. F	

20

PROPOSED POWER ROUTE
FROM KIOSK TO AFC PANEL



Mezzanine Inspection Report (Scoping)

Date: 10/08/2014	Station Name: B02 Judiciary Square (East)	Mezzanine #: 023	Completed By: Mike Butler
------------------	---	------------------	---------------------------

Summary

Scoping of power ducts in both Upper and Lower faregate arrays was completed. Pull strings were already installed in Upper/Lower communication ducts under a separate contract for CAT6 wire installation; therefore, no scoping was completed or pull strings installed in the communication ducts. Scoping was completed between Kiosk and Shared Trough (adjacent to AFC Panel). Pull string in power duct between Kiosk and Shared Trough was installed previously under a separate contract and was checked and tested to confirm the strings' routing and integrity. It was not possible to scope or install pull string between the Shared Trough and AFC Panel because there were energized wires that posed a safety hazard to contractor.

Total power conductor run is approximately 75 feet between Kiosk and AFC Panel.

Scanning is not required at this mezzanine.

Scoping of Faregate Array(s)

Task	Yes/No	Notes
Communications Duct – Upper Faregate Array (3 faregates)		
Was video scoping completed for the entire duct run?	N/A	
Were pull strings installed at all faregates in the array?	Yes	New communication duct, wires, and pull strings (labeled 'AFC') were installed for upper faregate array prior to inspection work (Photos 1 & 2).
Were there any obstructions or blockages? Provide details of type and specific location.	N/A	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	Communication ducts are not at capacity.
Communications Duct - Lower Faregate Array (3 faregates)		
Was video scoping completed for the entire duct run?	N/A	
Were pull strings installed at all faregates in the array?	Yes	New communication duct, wires, and pull strings (labeled 'AFC') were installed for lower faregate array prior to inspection work.
Were there any obstructions or blockages? Provide details of type and specific location.	N/A	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	Communication ducts are not at capacity.
Power Duct - Upper Faregate Array (3 faregates)		
Was video scoping completed for the entire duct run?	Yes	WMATA Judiciary Square East Upper Power Duct Video.avi
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	Eight (8) wires were identified in 4" wide / 1" deep ducts.
Power Duct - Lower Faregate Array (3 faregates)		
Was video scoping completed for the entire duct run?	Yes	WMATA Judiciary Square East Lower Power Duct Video.avi
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	Eight (8) wires were identified in 4" wide / 1" deep ducts.


Scoping of Power Duct - Kiosk to AFC Panel		
Task	Yes/No	Notes
Kiosk to Handhole 1 (length: 45 feet)		
Was video scoping completed for the entire duct / conduit run?	Yes	WMATA Judiciary Square East Power Kiosk to Handhole1 Video.avi
Was pull string installed?	Yes	Pull string in power duct was installed previously under a separate contract and was checked and tested to confirm the strings' routing and integrity.
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	Ten (10) wires were identified in 4" wide / 1" deep ducts.
Handhole 1 to Handhole 2 (length: 15 feet)		
Was video scoping completed for the entire duct / conduit run?	Yes	WMATA Judiciary Square East Power Handhole 1 to Handhole 2 Video.avi
Was pull string installed?	Yes	Pull string in power duct was installed previously under a separate contract and was checked and tested to confirm the strings' routing and integrity.
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	Ten (10) wires were identified in 4" wide / 1" deep ducts.
Handhole 2 to Shared Trough (length: 10 feet)		
Was video scoping completed for the entire duct / conduit run?	No	Energized wires in shared trough prevented video scoping.
Was pull string installed?	Yes	Pull string in power duct was installed previously under a separate contract and was checked and tested to confirm the strings' routing and integrity.
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	Ten (10) wires were identified in 4" wide / 1" deep ducts.
Shared Trough/Conduit to AFC Panel (length: 5 feet)		
Was video scoping completed for the entire duct / conduit run?	No	Energized wires in shared trough prevented video scoping.
Was pull string installed?	No	There is currently no pull string between shared trough and AFC Panel.
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	The conduit between the Shared Trough and AFC Panel is not at capacity.
Observations / Issues / Next Steps		
Power conductor run is approximately 75' between the Kiosk and AFC Panel. N/A - Not Applicable		
Sign Off		
	GFP Representative	WMATA PRGM
Name:	Mike Butler	
Signature:		
Date:	10/29/2014	

Photo #1: B02 Judiciary Square (East) – Faregate with new comm. duct and cable installed



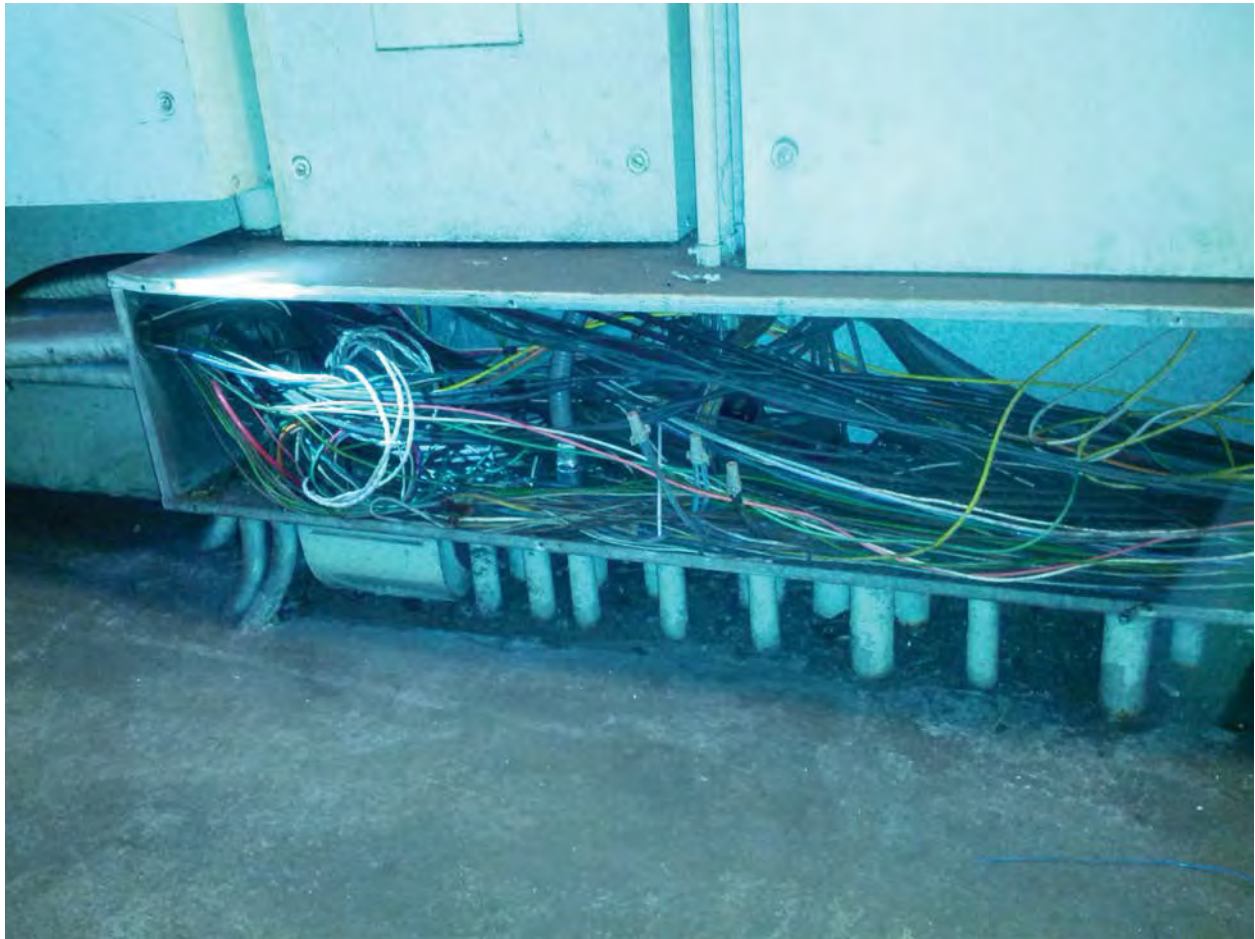
Photo #2: B02 Judiciary Square (East) – Faregate with new comm. duct and cable installed



Photo #3: B02 Judiciary Square (East) – Mezzanine level handholes. Power duct run is through handholes at the bottom center and center-right of photo. Handhole near the center of photo is not part of power duct run.



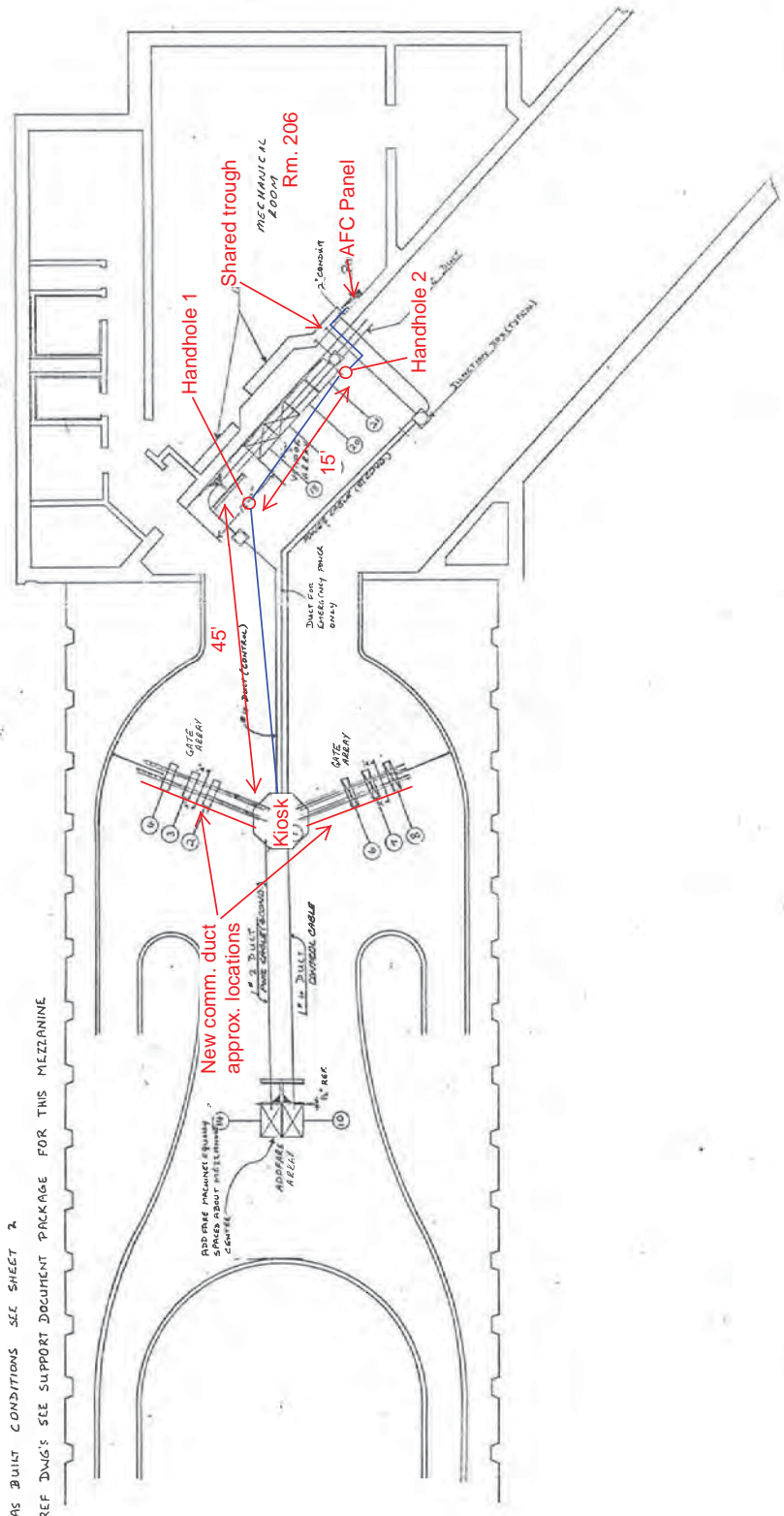
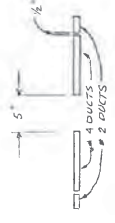
Photo #4: B02 Judiciary Square (East) – Shared cable trough in room 206. Power duct enters trough from the bottom at left.



NOTES:

1. ALL INFORMATION CONCERNING DUCTS AND CHANGES IS BASED ON INFORMATION SUPPLIED TO CUBIC WESTERN DATA BY WABATA.
2. TOTAL MACHINE INVENTORY IS DEPICTED ON THIS DRAWING
3. THE MINIMUM OPERATIONAL MACHINE INVENTORY IS REFERENCED ON THIS DRAWING BY THE 'X' DRAWN THRU THE MACHINE.
4. FOR AS BUILT CONDITIONS SEE SHEET 2.
5. FOR REF DWGS SEE SUPPORT DOCUMENT PACKAGE FOR THIS MEZZANINE.

REVISIONS	DESCRIPTION	DATE	APPROVED
AS BUILT DRAWING REV A		5-10-77	N.B.



2. INSTALLATION PLAN
(AS BUILT CONDITIONS)

CLARITY REQUESTS ARE HEREBY GIVEN FOR BOTH ESCALATORS THAT RUN FROM THE STREET LEVEL TO THE MEZZANINE LEVEL & THE ELEVATIONS FROM STREET TO MEZZANINE.

CONTRACT NUMBER		CUBIC WESTERN DATA	
PZ2407A		MECHANICAL ROOM Rm. 206	
APPROVED	APPROVAL	SCALE	SHEET OF

Mezzanine Inspection Report (Scoping)

Date: 11/05/14	Station Name: B02 Judiciary Square West	Mezzanine #: 022	Completed By: Mike Butler
-----------------------	--	-------------------------	----------------------------------

Summary

The completion of video scoping and pull string installation was partially completed for this mezzanine. Video scoping and pull string installation was successfully completed for Upper and Lower Faregate Arrays – ducts are in good condition and not at capacity. However, video scoping and pull string installation could not be completed between Kiosk and AFC Panel. There were energized wires found in Handhole 1 and Shared Trough adjacent to AFC Panel. Due to the number of wires in the shared trough, it was not possible to determine the origin of the energized wires. WEAA, WMP, WMPB, WME, WMPA, WMPP, and WEA all feed into the shared trough (refer to photos). In addition, it was not possible to identify Handhole 2 as it appears to have been removed or covered up, prohibiting access and verification of duct route.

A proposed conduit run has been identified between the Kiosk and the AFC Panel (see attached photos and drawing). The proposed conduit would run along the ceiling in the mezzanine area and then drop down and run along the wall. The conduit would be core drilled through the concrete walls above the door for Room 201 and Room 203. A third core drill would be used to enter Room 205. The proposed conduit would run along the top of the wall in Room 205 and then drop down to the AFC Panel.

Scanning was not required at this mezzanine.

Scoping of Faregate Array(s)

Task	Yes/No	Notes
Communications Duct – Upper Faregate Array (2 gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to "WMATA Judiciary Square West Upper Comm Duct Video.avi"
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	4" Power Duct with less than 8 wires.
Communications Duct - Lower Faregate Array (3 gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to "WMATA Judiciary Square West Lower Comm Duct Video.avi"
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	4" Power Duct with less than 8 wires.
Power Duct - Upper Faregate Array (2 gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to "WMATA Judiciary Square West Upper Power Duct Video.avi"
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	6" Power Duct with less than 8 wires.
Power Duct - Lower Faregate Array (3 gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to "WMATA Judiciary Square West Lower Power Duct Video.avi"
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	6" Power Duct with less than 8 wires.


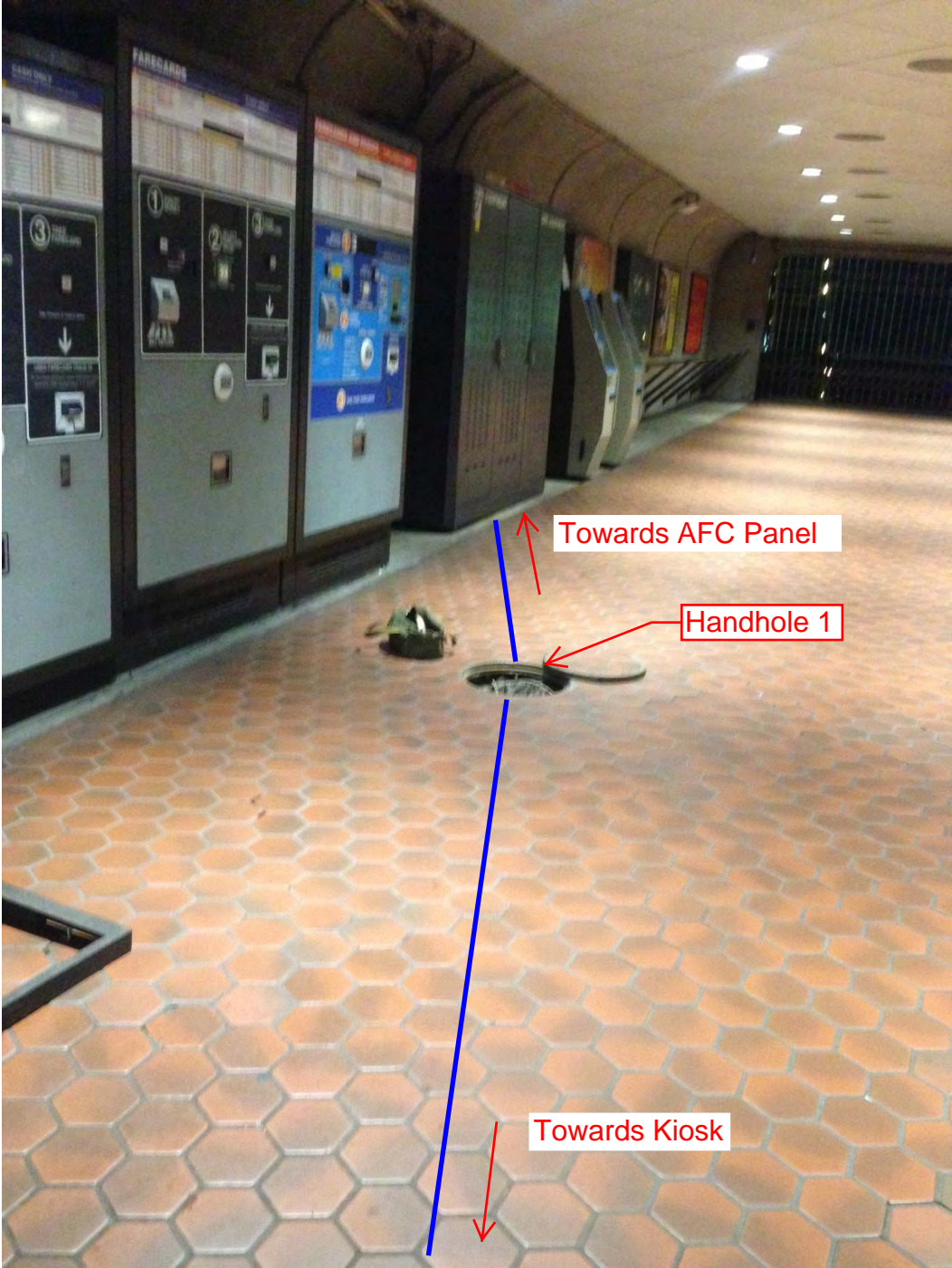
Scoping of Power Duct - Kiosk to AFC Panel		
Task	Yes/No	Notes
Kiosk to Handhole 1 (Distance: 60')		
Was video scoping completed for the entire duct / conduit run?	No	Could not video scope or install pull strings due to energized wires.
Was pull string installed?	No	
Were there any obstructions or blockages? Provide details of type and specific location.	N/A	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	N/A	6" Power Duct
Handhole 1 to Handhole 2 (Distance: Unknown)		
Was video scoping completed for the entire duct / conduit run?	No	Could not video scope or install pull strings due to energized wires.
Was pull string installed?	No	
Were there any obstructions or blockages? Provide details of type and specific location.	N/A	Location of Handhole 2 is not visible on the mezzanine floor.
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	N/A	6" Power Duct
Handhole 2 to Shared Trough (Distance: Unknown)		
Was video scoping completed for the entire duct / conduit run?	No	Could not video scope or install pull strings due to energized wires.
Was pull string installed?	No	
Were there any obstructions or blockages? Provide details of type and specific location.	N/A	Location of Handhole 2 is not visible on the mezzanine floor.
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	N/A	6" Power Duct
Shared Trough to AFC Panel (Distance: 25')		
Was video scoping completed for the entire duct / conduit run?	No	Could not video scope or install pull strings due to energized wires.
Was pull string installed?	No	
Were there any obstructions or blockages? Provide details of type and specific location.	N/A	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	N/A	25' long trough
Observations / Issues / Next Steps		
- The proposed overhead power conduit run from the Kiosk to the AFC Panel is 185'. Refer to AFC As-built and photos for details.		
Sign Off		
	GFP Representative	WMATA PRGM
Name:	Mike Butler	
Signature:		
Date:	01/02/2015	

Photo # 1 – Existing Duct run from Kiosk to Hand Hole 1 on mezzanine floor.



Towards AFC Panel

Handhole 1

Towards Kiosk

Photo # 2 – Shared Trough in Room 205.

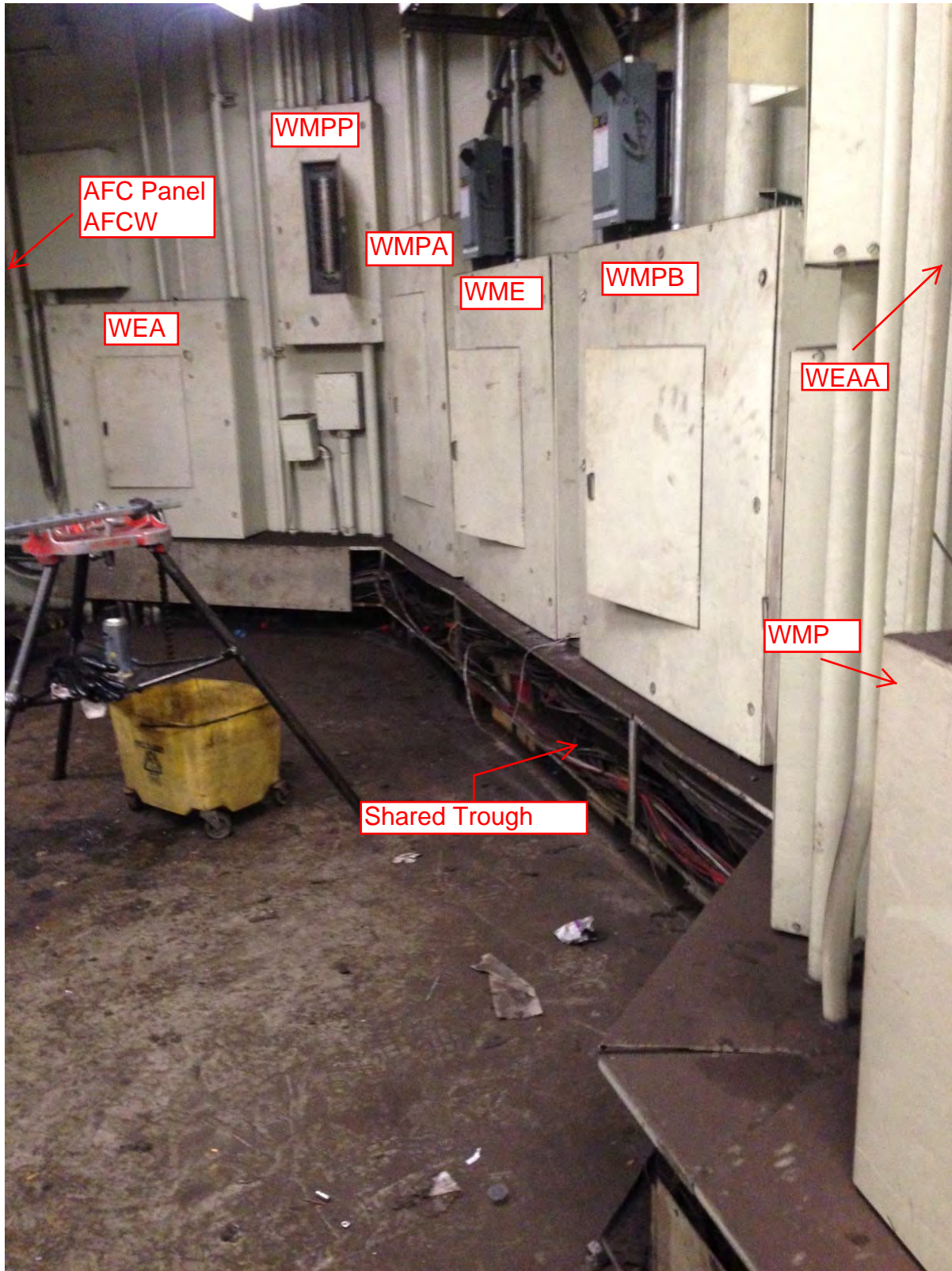


Photo # 3 – Proposed Conduit Run



Photo # 4 – Proposed Conduit Run

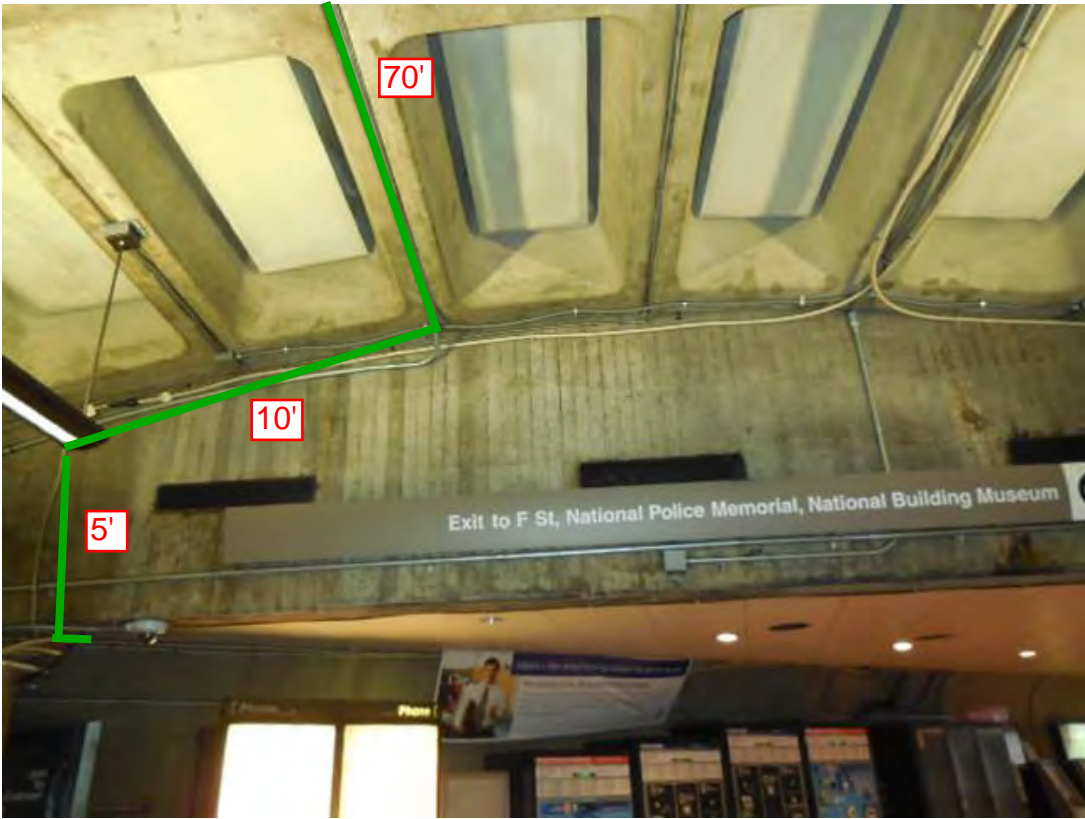


Photo # 5 – Proposed Conduit Run from mezzanine to Room 201

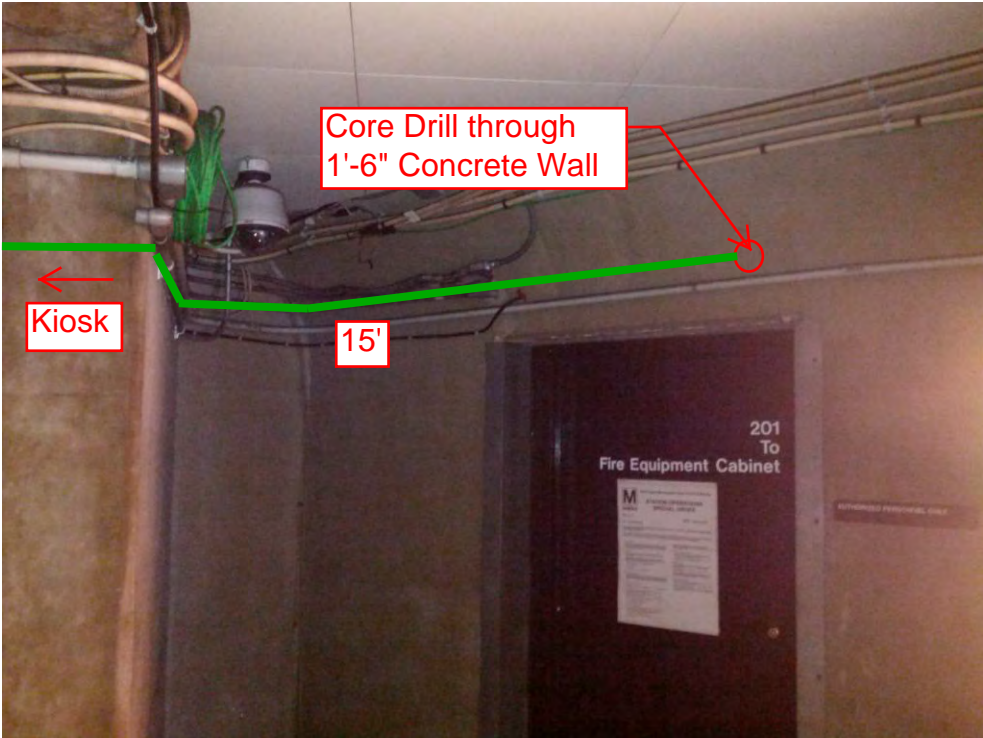


Photo # 6– Proposed Conduit Run between Room 201 and Room 203

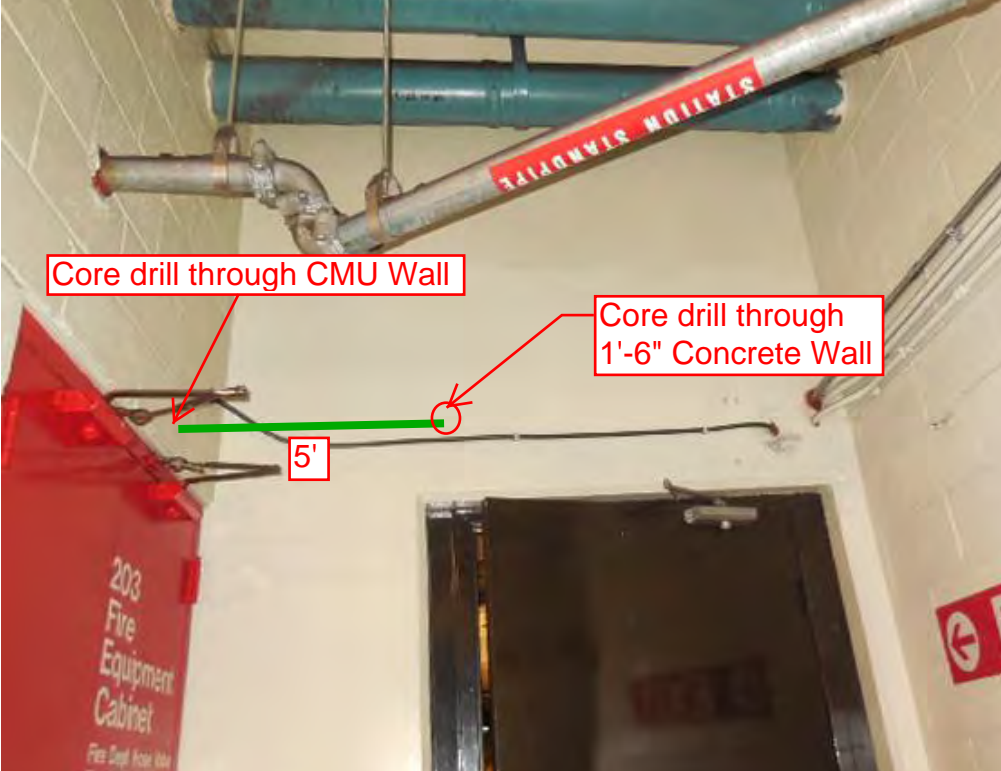


Photo # 7 – Proposed Conduit Run (Room 203 and Room 205) - looking up at ceiling inside Fire Equipment Room 203.

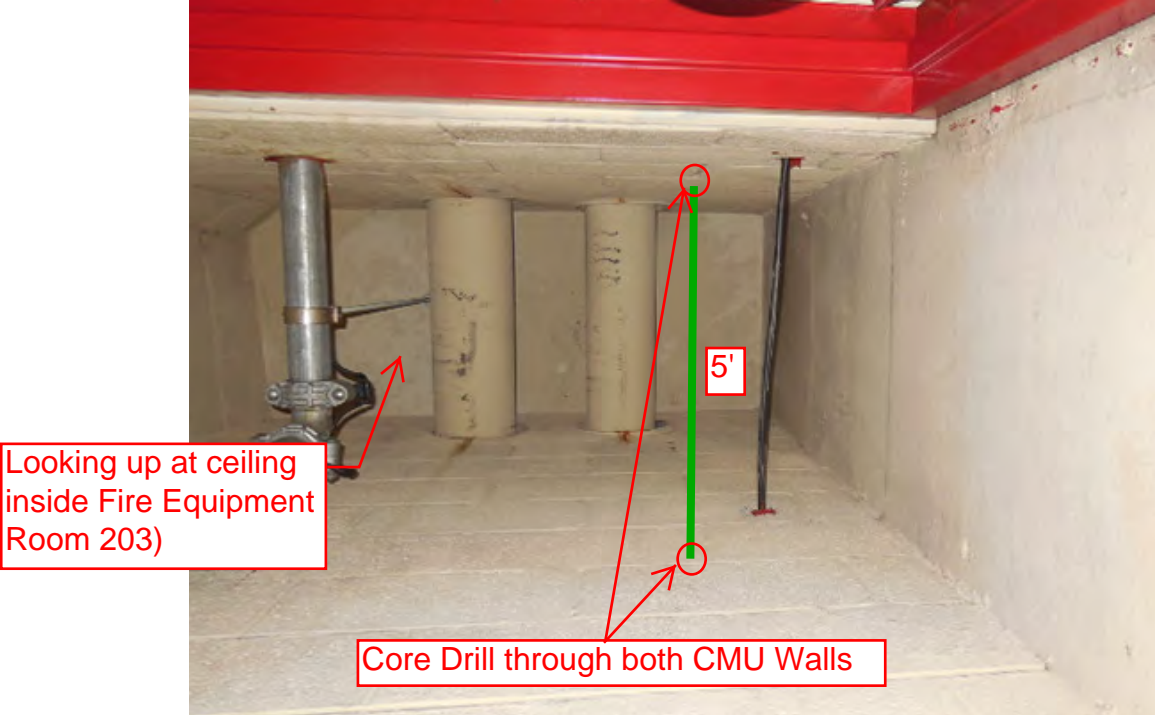


Photo # 8 – Proposed Conduit Run in Room 205

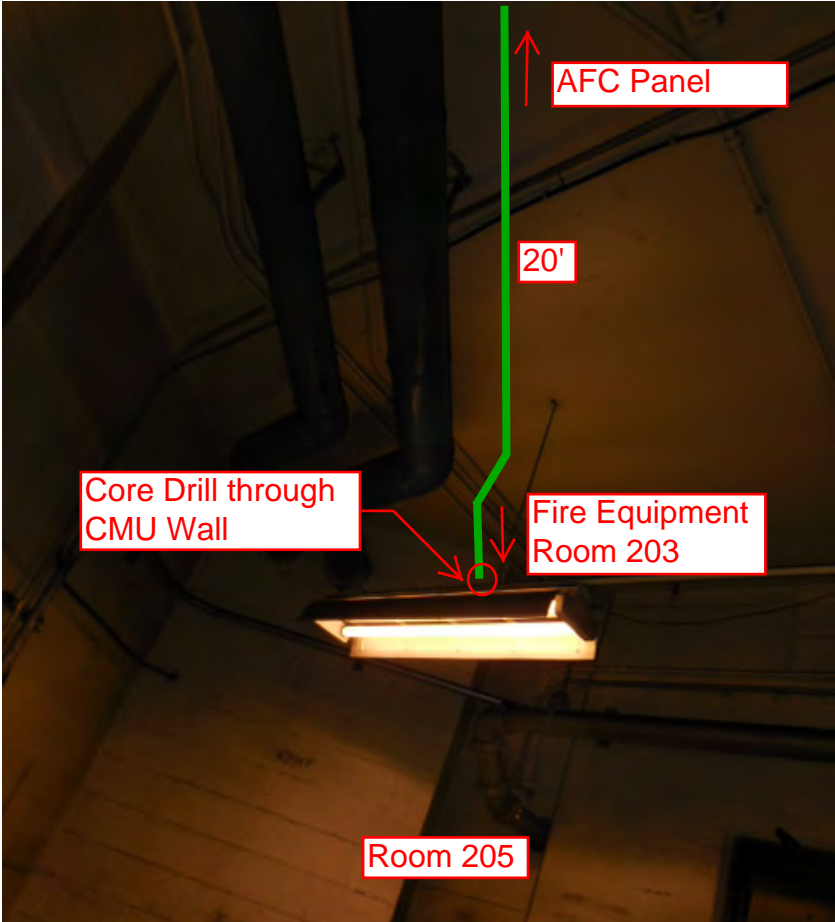


Photo # 9 – Proposed Conduit Run in Room 205

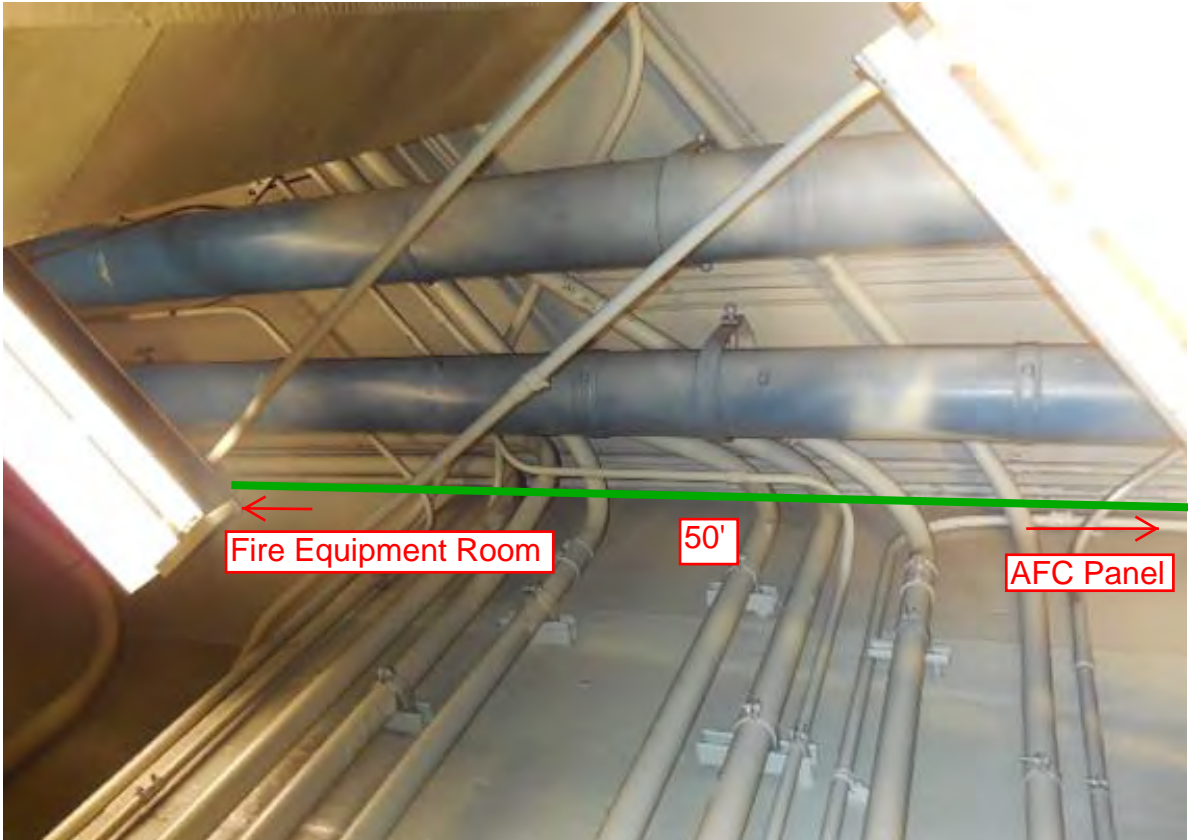
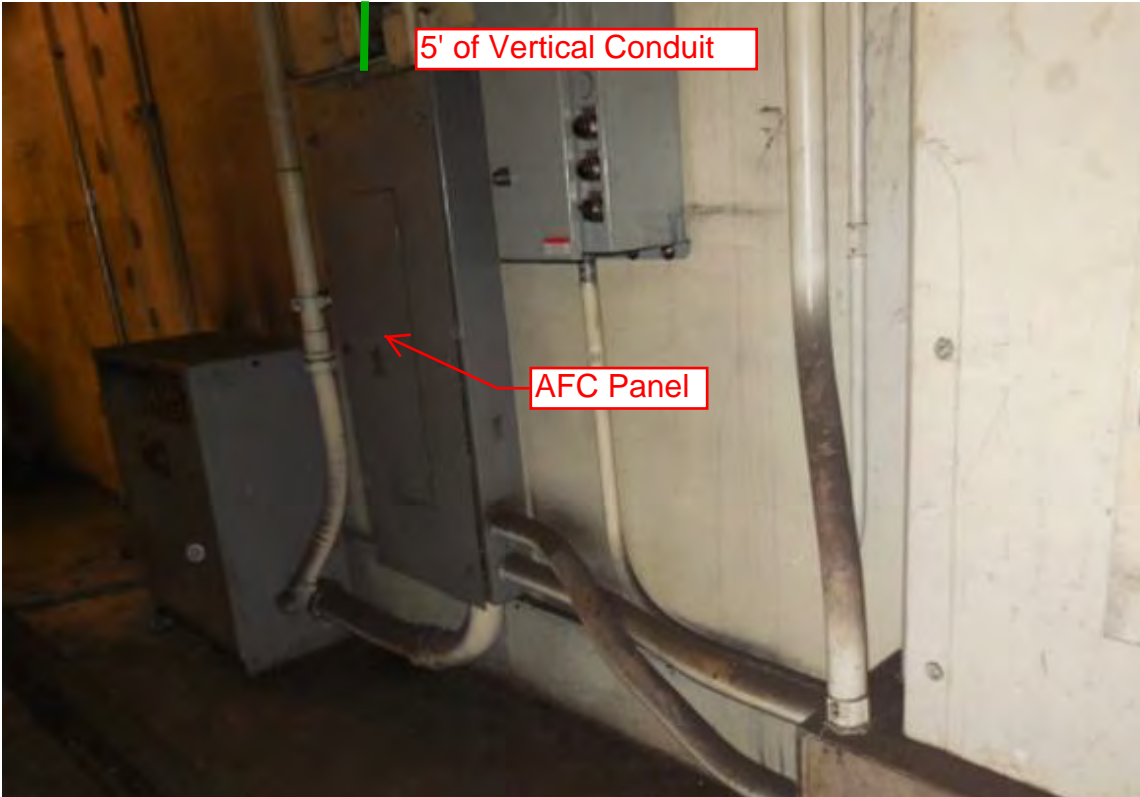


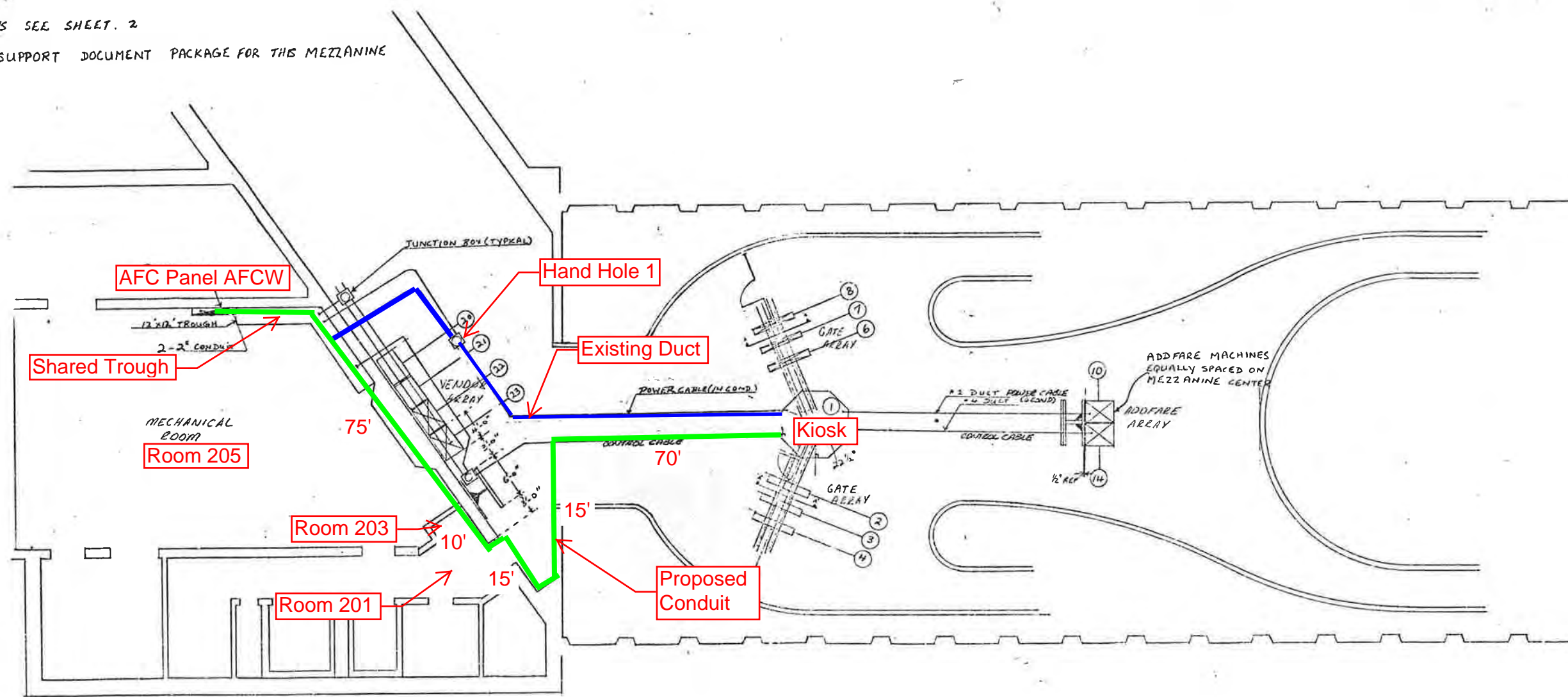
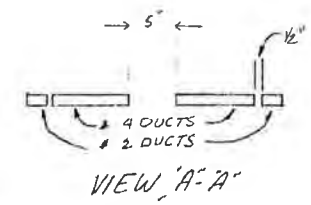
Photo # 10 – Proposed Conduit Run in Room 205



NOTES:

1. ALL INFORMATION CONCERNING DUCTS AND CONDUITS IS BASED ON INFORMATION SUPPLIED TO CUBIC WESTERN DATA BY WMATA.
2. TOTAL MACHINE INVENTORY IS DEPICTED ON THIS DRAWING
3. THE MINIMUM OPERATIONAL MACHINE INVENTORY IS REFERENCED ON THIS DRAWING BY THE 'X' DRAWN THRU THE MACHINE
4. FOR AS BUILT CONDITIONS SEE SHEET 2
5. FOR REF DWGS SEE SUPPORT DOCUMENT PACKAGE FOR THIS MEZZANINE

REVISIONS		
DESCRIPTION	DATE	APVD
AS BUILT DRAWING REV A	5-10-17	J.P.



PRIORITY REQUESTS ARE HEREBY GIVEN FOR BOTH ESCALATORS THAT RUN FROM THE STREET LEVEL TO THE MEZZANINE LEVEL.

-1 INSTALLATION PLAN
(AS BUILT CONDITIONS)

CONTRACT NUMBER 22007A		CUBIC WESTERN DATA <small>A Subsidiary of Cubic Corporation 1670 KERRY MESA ROAD • POST OFFICE BOX 80787 • SAN DIEGO, CA 92118</small>	
DESIGN ACTIVITY APPROVAL	SIZE	DRAWING NUMBER	REV
APPROVED	SCALE	22	A
		SHEET	OF

Mezzanine Inspection Report (Scoping)

Date: 01/06/15	Station Name: B03 Union Station North	Mezzanine #: 025	Completed By: Mike Butler
Summary			
<p>Pull string installation was completed in communication ducts for Upper and Lower Faregate Arrays. Video scoping was completed in the Upper and Lower communication ducts, as well as the Lower power duct. However, it was not possible to scope the Upper power duct due to an apron skirt obstruction at the entrance to the duct. The power duct from the Kiosk to the AFC Panel could not be scoped due to the presence of energized wires; subsequent scoping attempts were not completed as per direction from WMATA.</p> <p>A conduit run has been proposed between the Kiosk and AFC Panel (refer to attached drawings and photos). The proposed conduit will run from the Kiosk to the adjacent wall via an overhead beam and then continue along the wall until it reaches the wall outside of Mechanical Room 214. The wall needs to be core drilled to allow the conduit to enter Room 214 and continue to the AFC Panel.</p>			
Scoping of Faregate Array(s)			
Task	Yes/No	Notes	
Communications Duct – Upper Faregate Array (5 faregates)			
Was video scoping completed for the entire duct run?	Yes	Refer to "WMATA Union Station N Upper Comm Fairgate Video.avi"	
Were pull strings installed at all faregates in the array?	Yes		
Were there any obstructions or blockages? Provide details of type and specific location.	No		
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	4"walker duct with less than 8 wires	
Communications Duct - Lower Faregate Array (8 faregates)			
Was video scoping completed for the entire duct run?	Yes	Refer to "WMATA Union Station N Lower Comm Fairgate Video.avi"	
Were pull strings installed at all faregates in the array?	Yes		
Were there any obstructions or blockages? Provide details of type and specific location.	No	No obstructions, but there was limited space around the 45 degree bend in the duct.	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	4"walker duct with less than 12 wires	
Power Duct - Upper Faregate Array (5 faregates)			
Was video scoping completed for the entire duct run?	No	Video scoping not completed as per direction from WMATA.	
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	Duct was inaccessible due to skirt obstruction.	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	N/A		
Power Duct - Lower Faregate Array (8 faregates)			
Was video scoping completed for the entire duct run?	Yes	Refer to "WMATA Union Station N Lower Power Fairgate Video.avi"	
Were there any obstructions or blockages? Provide details of type and specific location.	No	No obstructions, but there was limited space around the 45 degree bend in the duct.	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	6"walker duct with less than 12 wires	


Scoping of Power Duct - Kiosk to AFC Panel		
Task	Yes/No	Notes
Kiosk to AFC Panel (Distance: 75')		
Was video scoping completed for the entire duct / conduit run?	No	Video scoping not completed as per direction from WMATA.
Was pull string installed?	No	
Were there any obstructions or blockages? Provide details of type and specific location.	N/A	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	N/A	
Observations / Issues / Next Steps		
The proposed overhead conduit run is approximately 125' from the Kiosk to the AFC Panel (refer to photos and drawing).		
Sign Off		
	GFP Representative	WMATA PRGM
Name:	Mike Butler	
Signature:		
Date:	01/09/15	

Photo #1 - Proposed conduit run from Kiosk

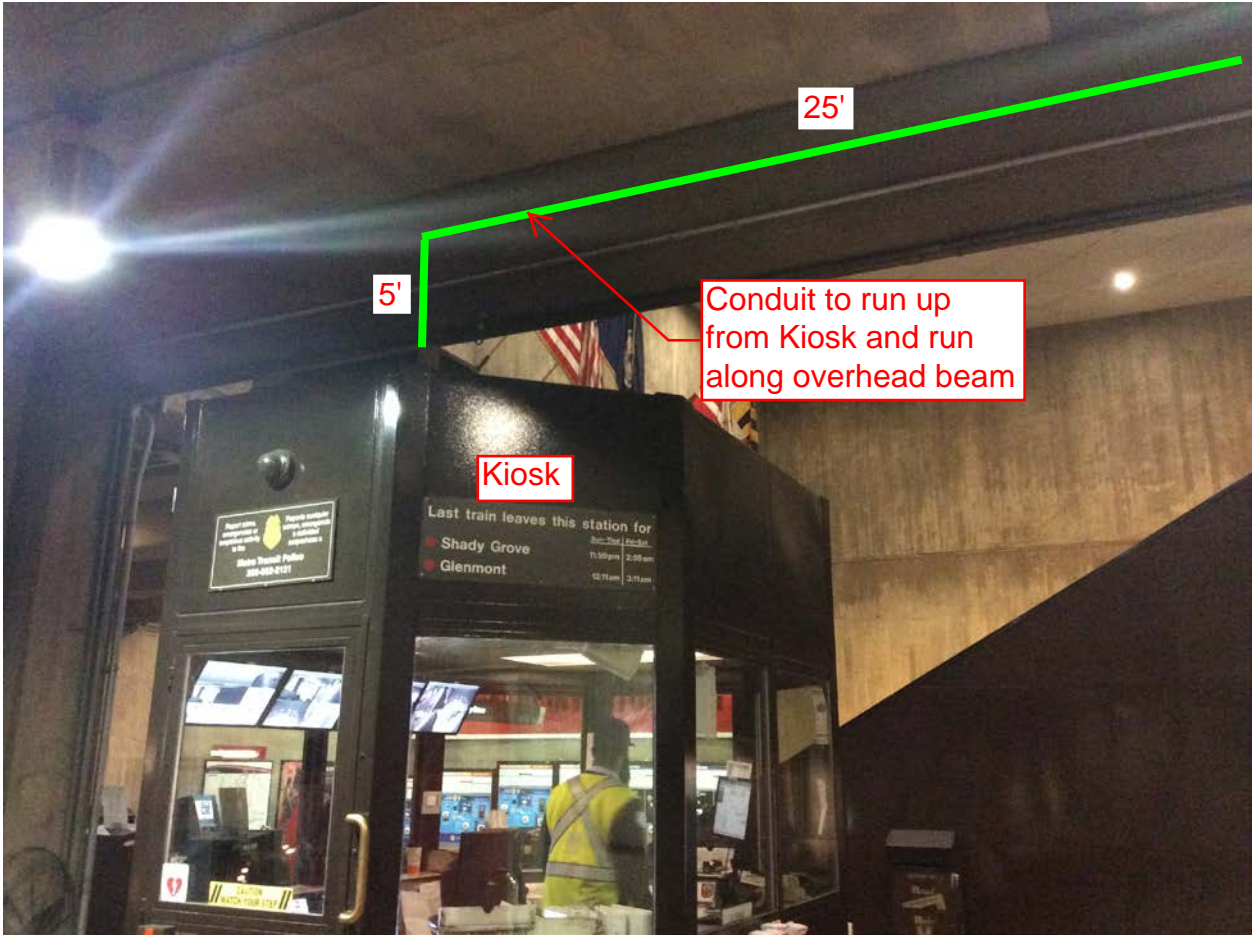


Photo #2 - Proposed conduit run along overhead beam to adajcent wall

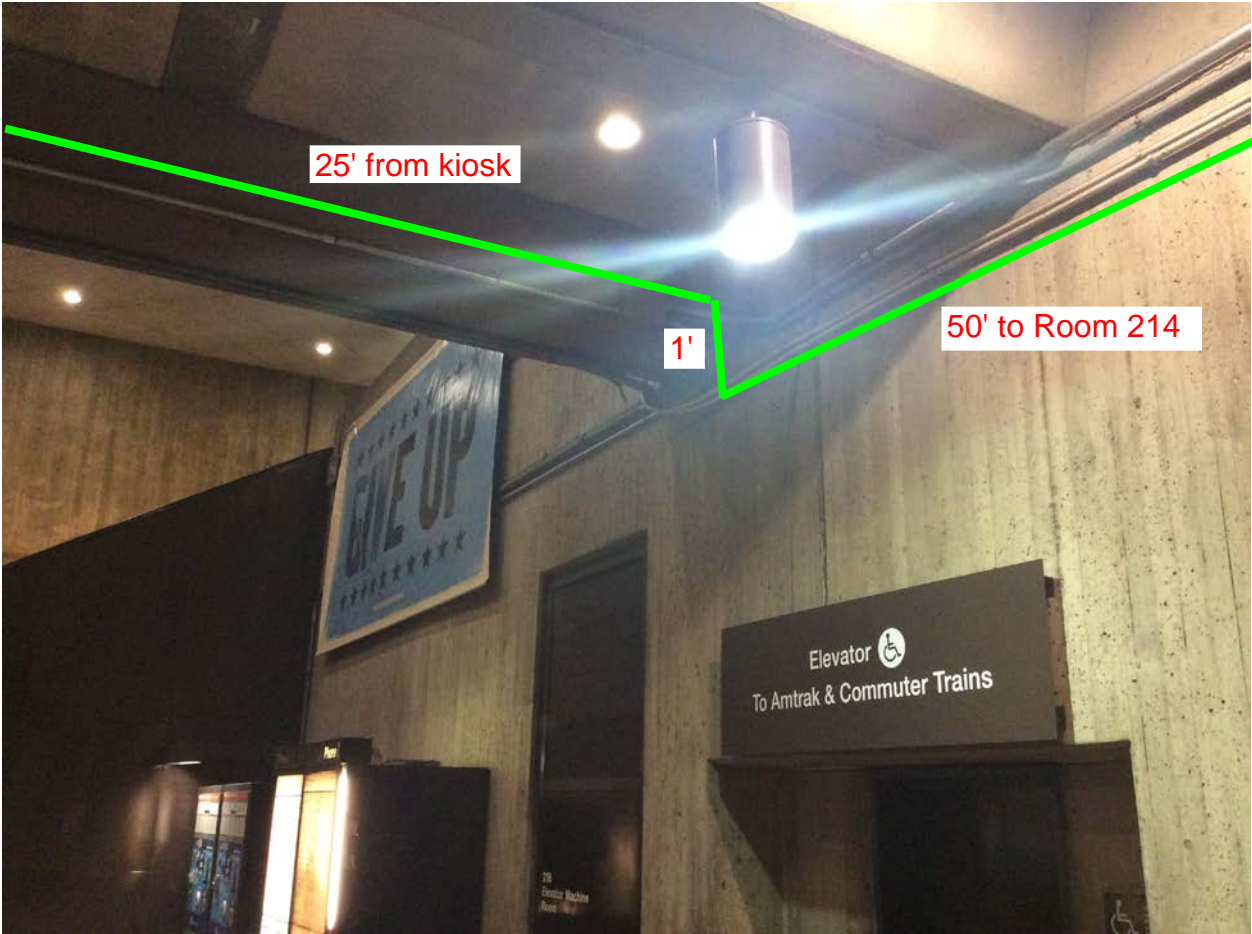


Photo #3 - Proposed conduit run along adjacent wall to Mechanical Room 214

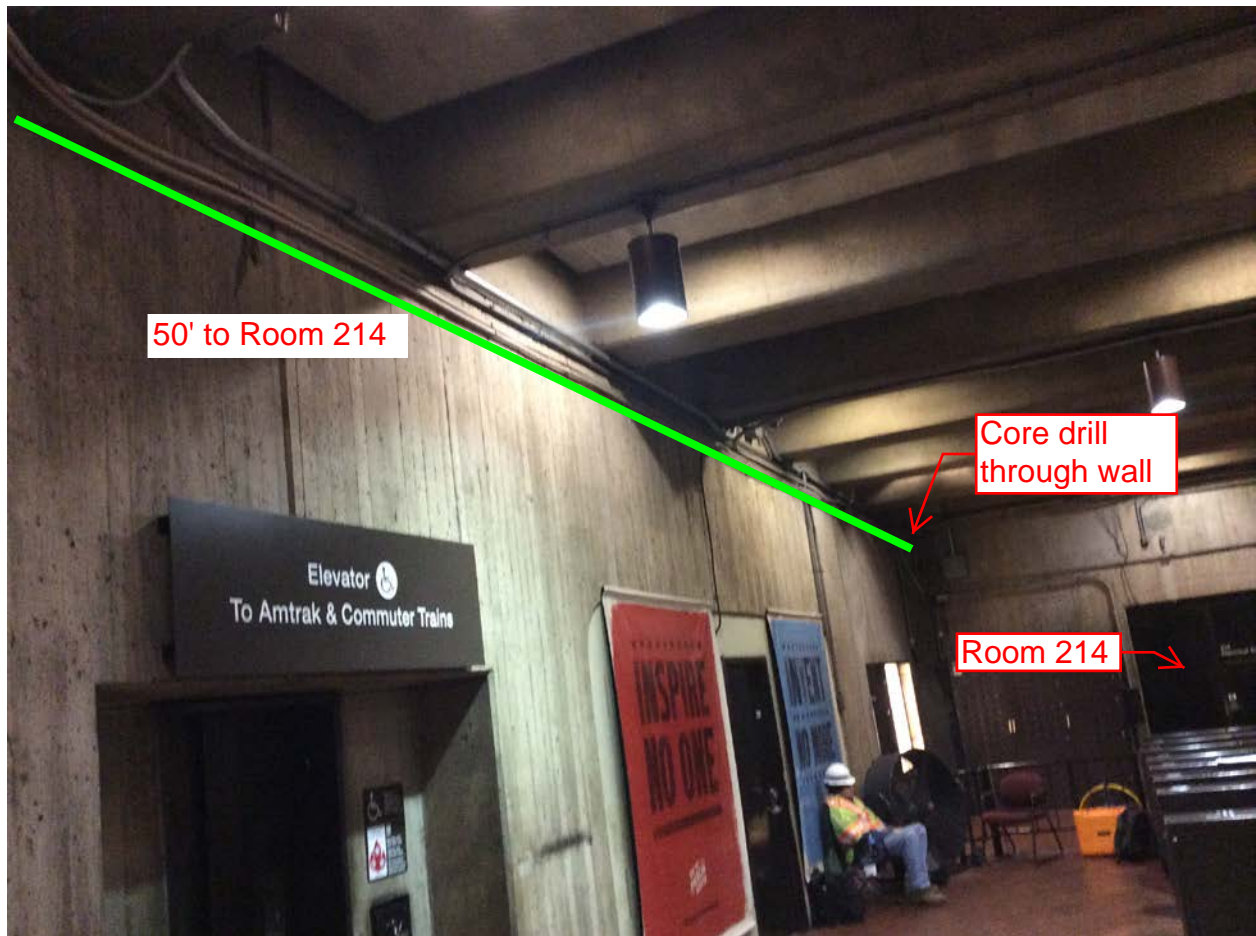


Photo #4 - Proposed conduit run along wall to Mechanical Room 214 (core drill required)

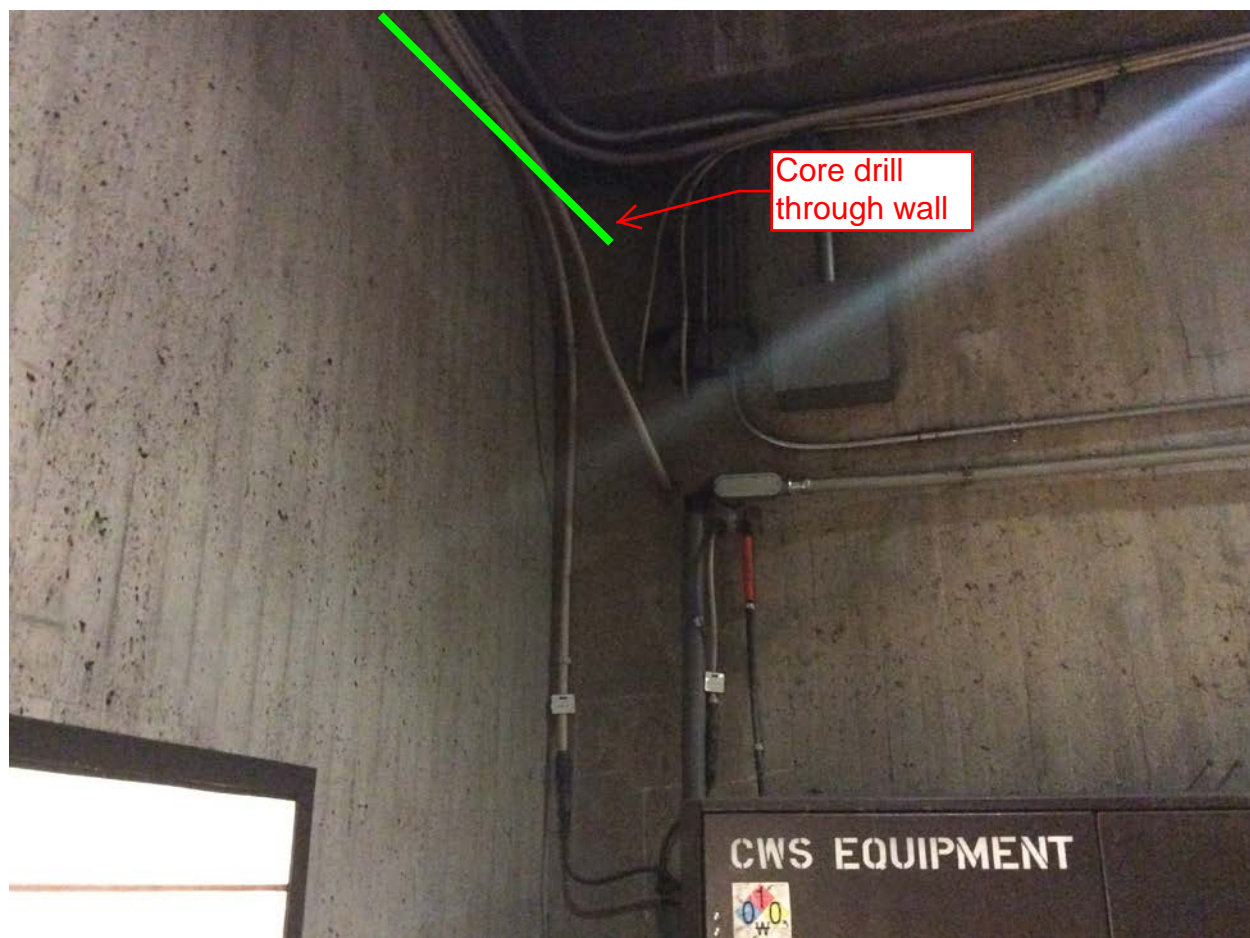


Photo #5 - Proposed conduit run along wall inside Mechanical Room 214 (core drill required)

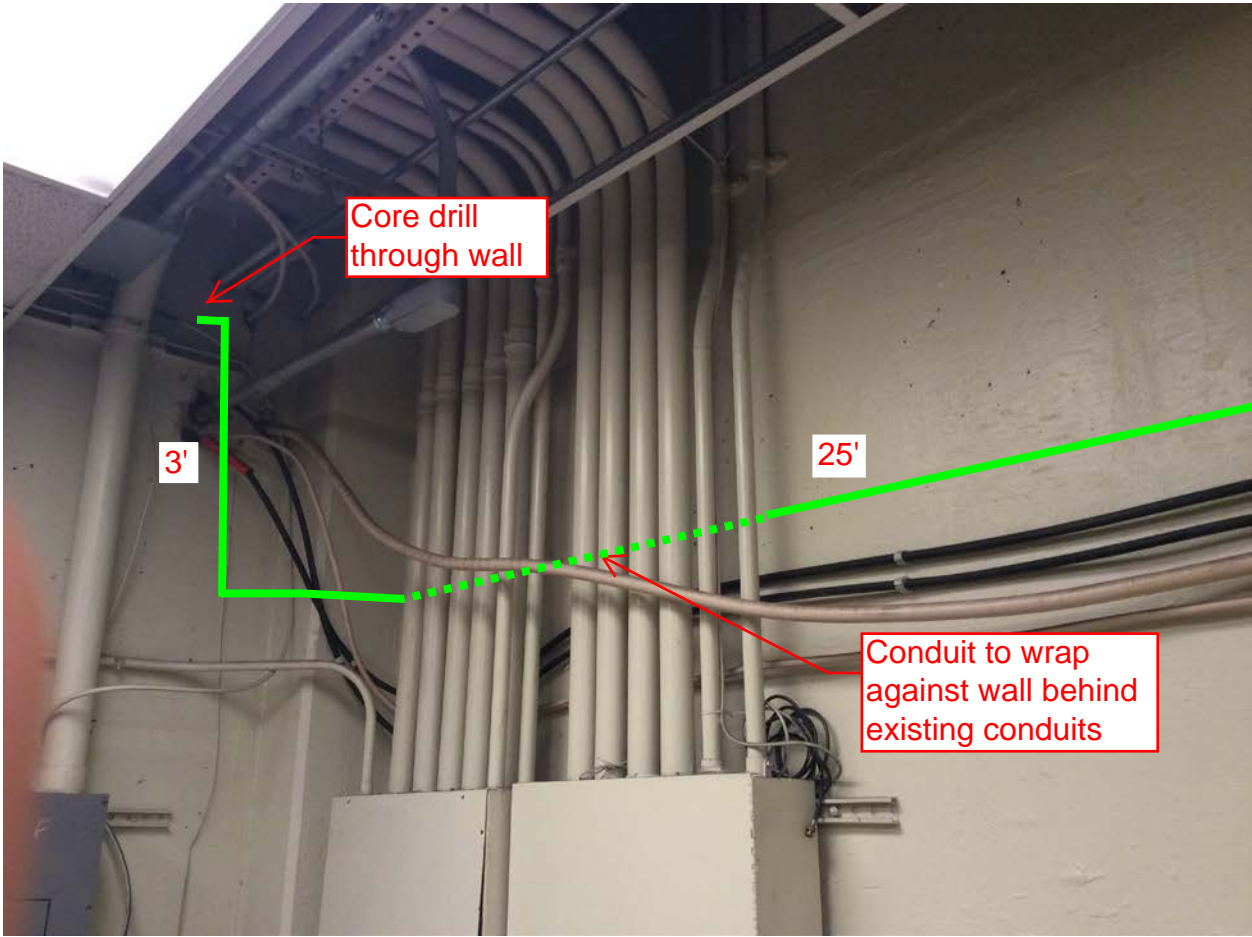


Photo #6 - Proposed conduit run along wall inside Mechanical Room 214

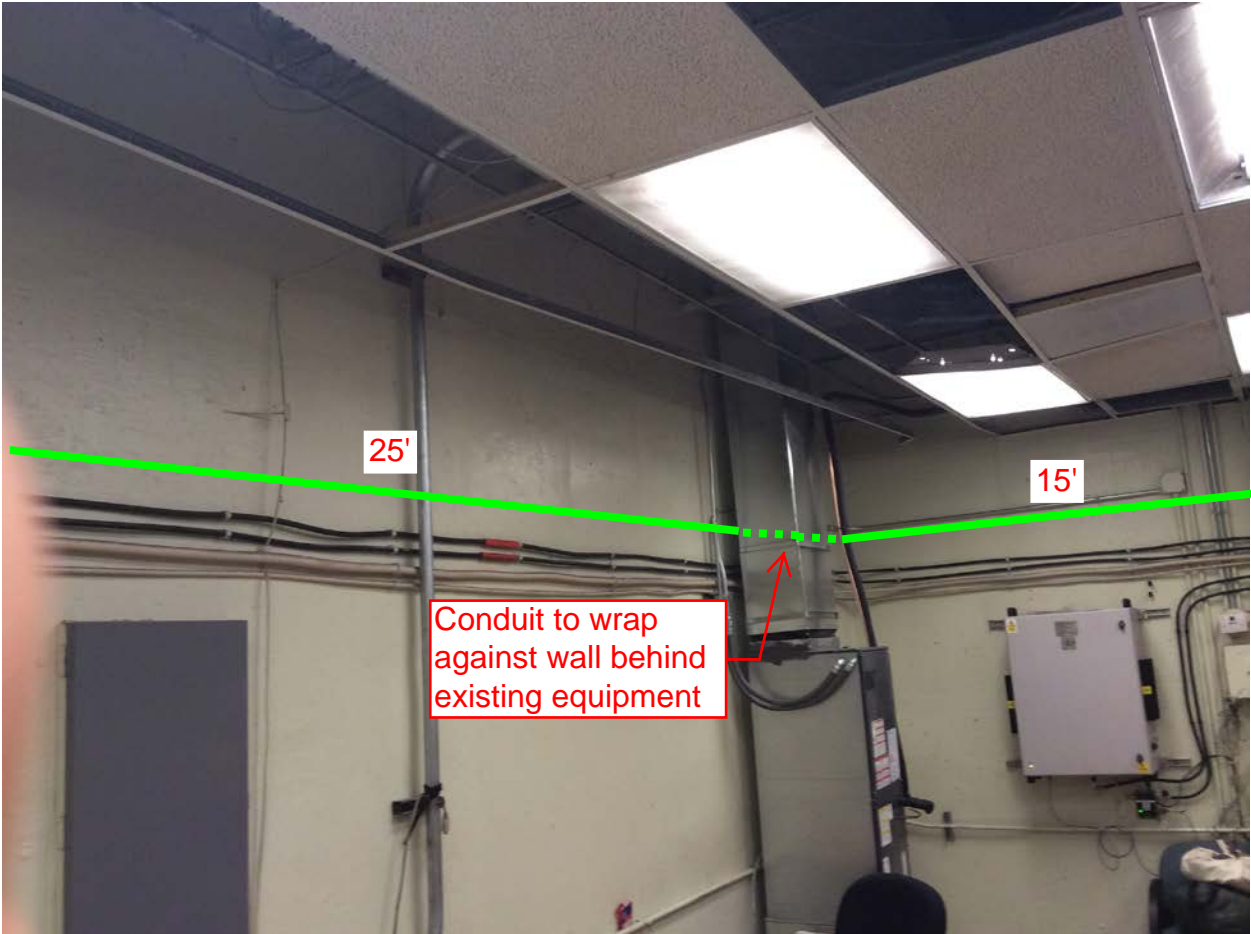
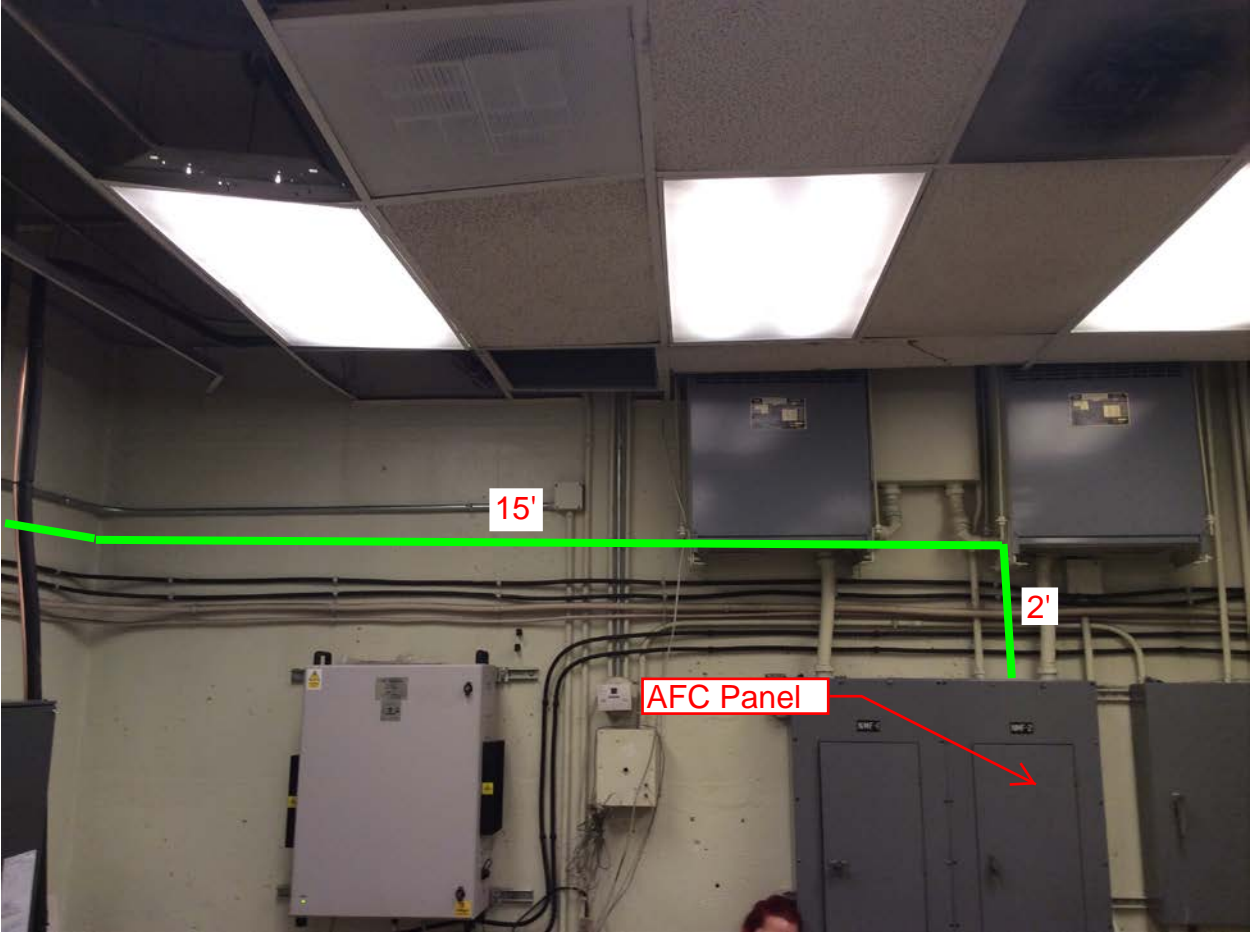


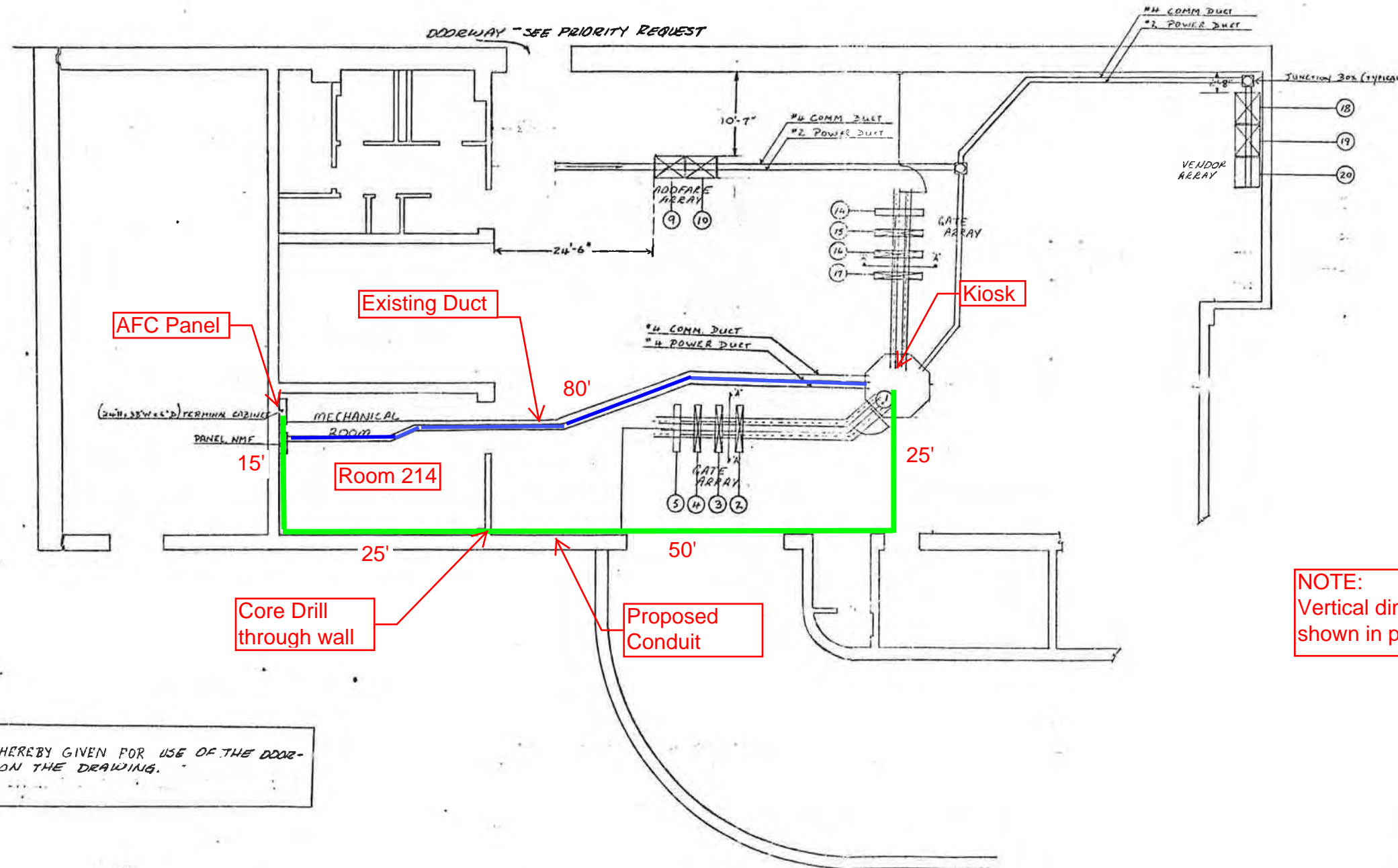
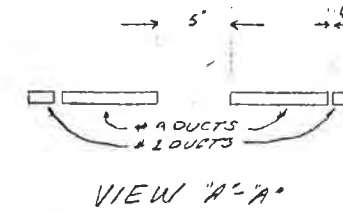
Photo #7 - Proposed conduit run connecting to AFC Panel inside Mechanical Room 214



NOTES:

1. ALL INFORMATION CONCERNING DUCTS AND CONDUITS IS BASED ON INFORMATION SUPPLIED TO CUBIC WESTERN DATA BY WATA.
2. TOTAL MACHINE INVENTORY IS DEPICTED ON THIS DRAWING
3. THE MINIMUM OPERATIONAL MACHINE INVENTORY IS REFERENCED ON THE DRAWING BY THE 'X' DRAWN THRU THE MACHINE
4. FOR AS BUILT CONDITIONS SEE SHEET 2
5. FOR REF DWGS SEE SUPPORT DOCUMENT PACKAGE FOR THIS MEZZANINE

REVISIONS		
DESCRIPTION	DATE	APVD
AS BUILT DRAWING REV A	5-10-77	2/7/77



NOTE:
Vertical dimensions for proposed conduit not shown in plan view. Refer to photographs.

PRIORITY REQUESTS ARE HEREBY GIVEN FOR USE OF THE DODGEWAY THAT IS DENOTED ON THE DRAWING.

1. INSTALLATION PLAN
(AS BUILT CONDITIONS)

CONTRACT NUMBER		CUBIC WESTERN DATA A subsidiary of Cubic Corporation 3650 KEARNY MESA ROAD • POST OFFICE BOX 97187 • SAN DIEGO CA 92138	
DESIGN ACTIVITY APPROVAL	SIZE	DRAWING NUMBER	REV
APPROVED		752-0000	25
SCALE		SHEET 05	

Mezzanine Inspection Report (Scoping)

Date: 09/18/2014	Station Name: B04 Rhode Island Avenue	Mezzanine #: 026	Completed By: Mike Butler
------------------	---------------------------------------	------------------	---------------------------

Summary

Scoping of power/ communication ducts in Upper and Lower faregates completed; pull string installed in communication ducts. Scoping and pull string installation completed for power duct between Kiosk and AFC Panel. All ducts are not at capacity. A minor obstruction was found at the kiosk entrance to the lower faregate array - there appears to be mortar and debris blocking the entrance to one of the power ducts. However, this did not impact the scoping and pull string installation as there was an alternative parallel duct that had a clear pathway.

Total power conductor run is approximately 95 feet between Kiosk and AFC Panel.

Scanning is not required at this mezzanine.

Scoping of Faregate Array(s)

Task	Yes/No	Notes
Communications Duct – Upper Faregate Array (4 faregates)		
Was video scoping completed for the entire duct run?	Yes	WMATA Rhode Island Upper Comm Video.avi
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	Duct is 4" wide and 1" deep with less than 10 wires inside.
Communications Duct - Lower Faregate Array (4 faregates)		
Was video scoping completed for the entire duct run?	Yes	WMATA Rhode Island Lower Comm Video.avi
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	Duct is 4" wide and 1" deep with less than 10 wires inside.
Power Duct - Upper Faregate Array (4 faregates)		
Was video scoping completed for the entire duct run?	Yes	WMATA Rhode Island Upper Power Left Video.avi
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	Duct is 4" wide and 1" deep with less than 10 wires inside.
Power Duct - Lower Faregate Array (4 faregates)		
Was video scoping completed for the entire duct run?	Yes	WMATA Rhode Island Power Left Video.avi
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	Minor obstruction was found at the kiosk entrance to the lower faregate array - there appears to be mortar and debris blocking the entrance to one of the power ducts. An alternate power duct with clear pathway was used.
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	Duct is 4" wide and 1" deep with less than 10 wires inside.


Scoping of Power Duct - Kiosk to AFC Panel		
Task	Yes/No	Notes
Kiosk to AFC Panel (length: 95 feet)		
Was video scoping completed for the entire duct / conduit run?	Yes	WMATA Rhode Island Kiosk to AFC Panel.avi This is a direct run from the Kiosk to the AFC Panel (see photos 1, 2 & 3)
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	Duct is 4" wide and 1" deep with less than 10 wires inside.
Observations / Issues / Next Steps		
<p>It is advisable to clean and remove the mortar / debris found at the entry to the power duct in the kiosk.</p> <p>Power conductor run from kiosk to AFC Panel is 95 feet.</p>		
Sign Off		
	GFP Representative	WMATA PRGM
Name:	Mike Butler	
Signature:		
Date:	10/29/2014	

Photo #2: B04 Rhode Island Ave. - View of free side of mezzanine; presumed duct path from kiosk (behind) to AFC panel (past door on far wall).

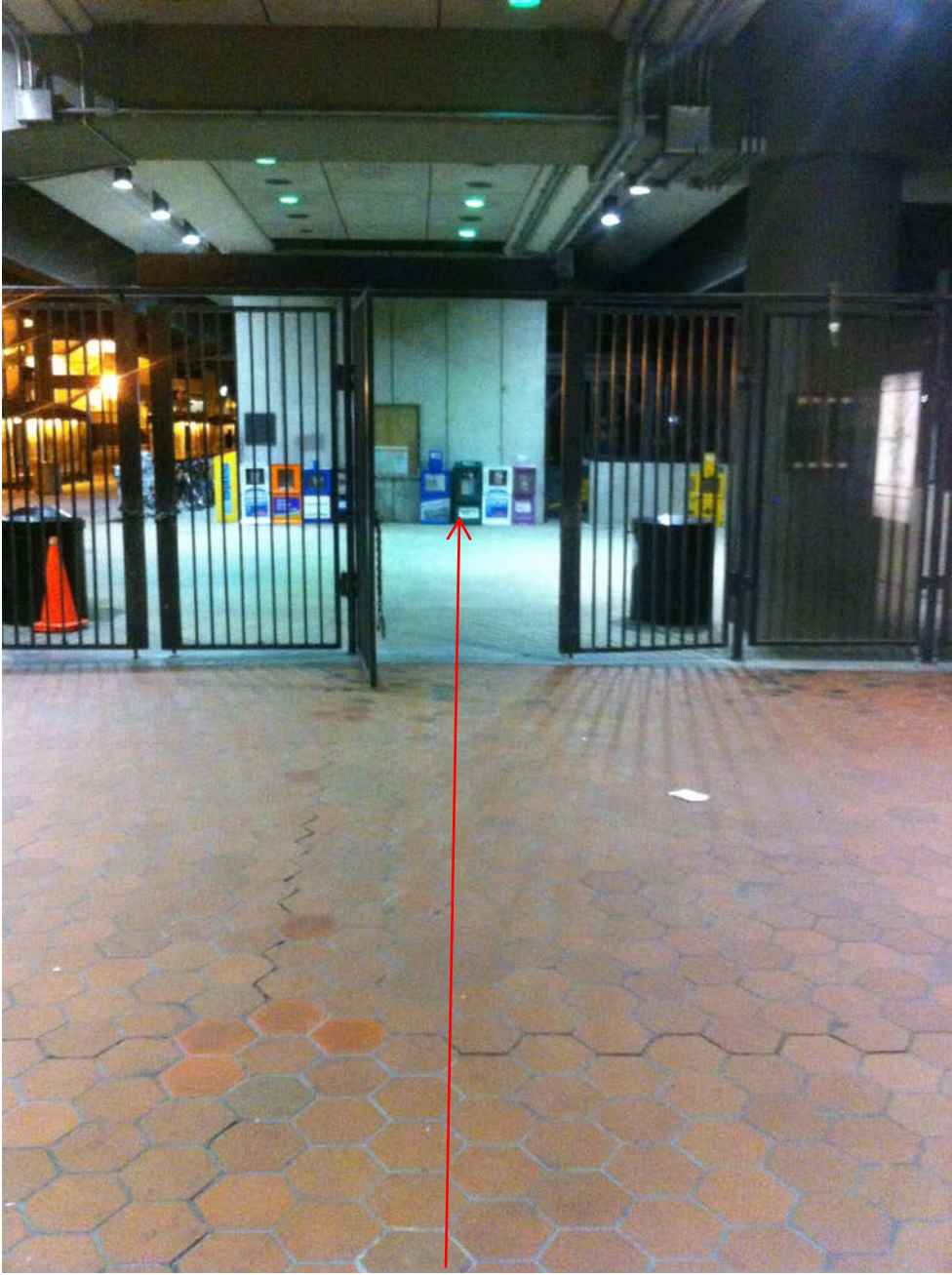
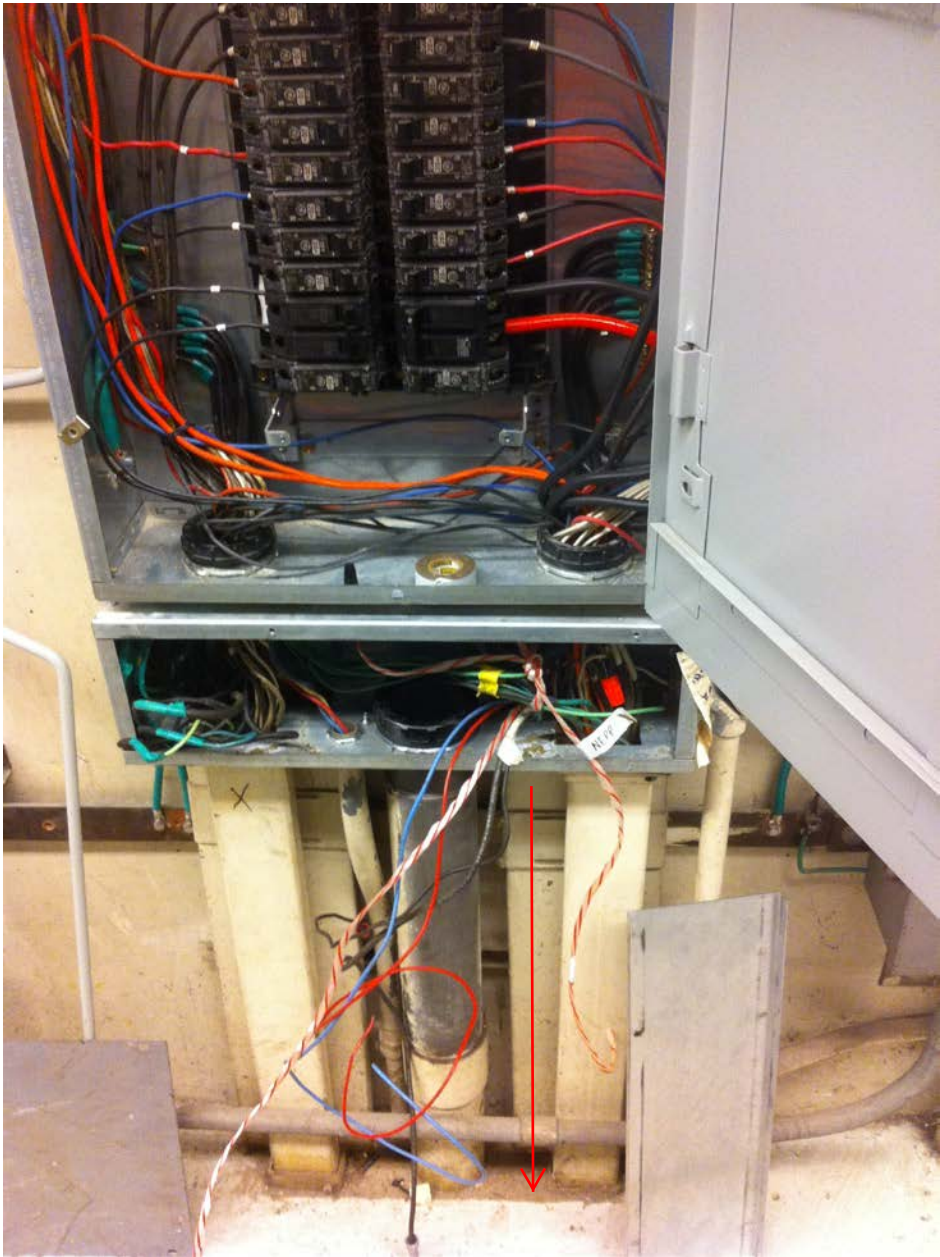


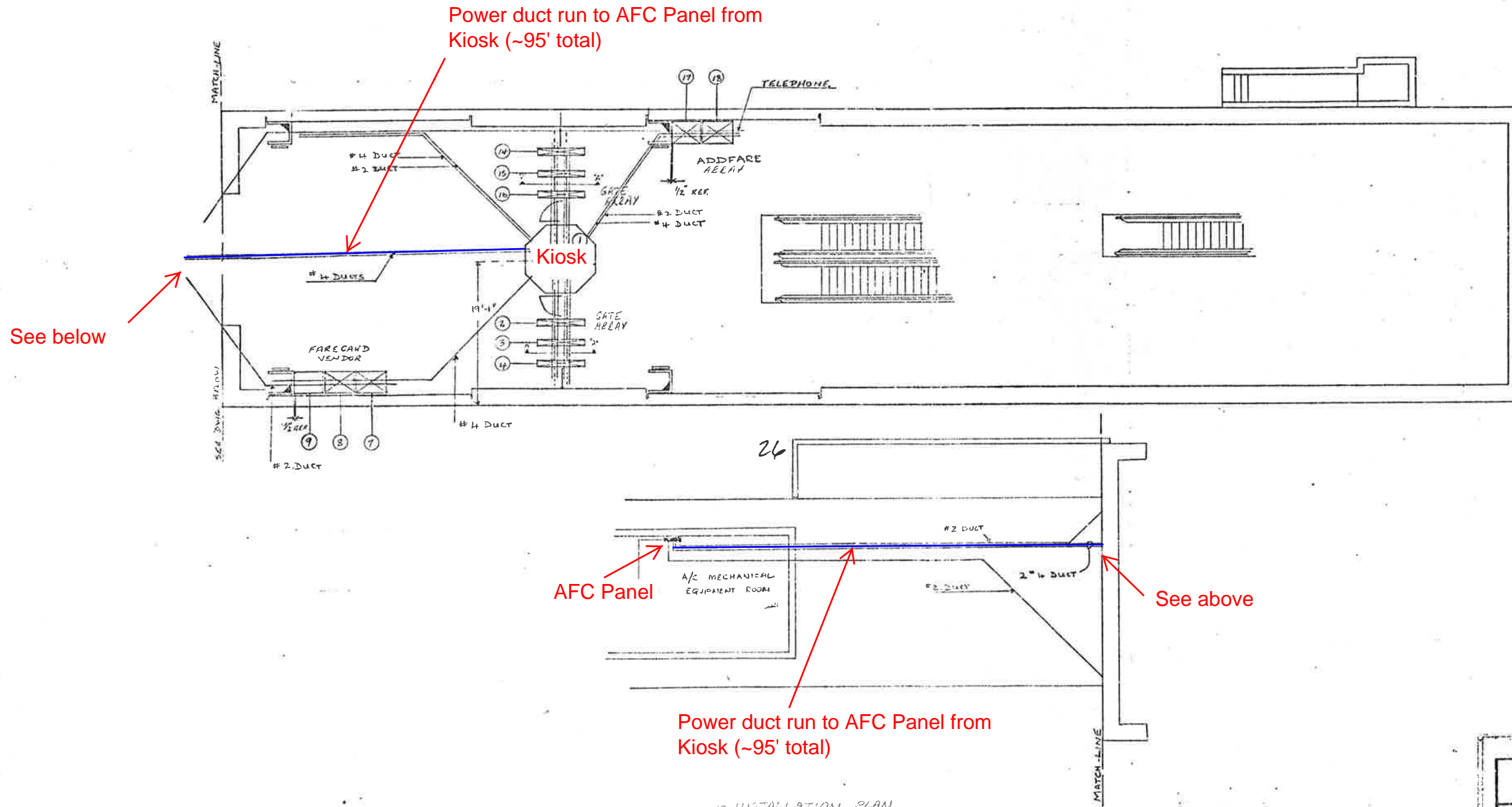
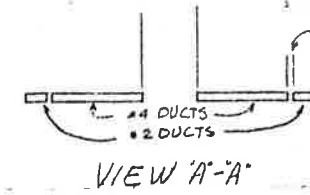
Photo #3: B04 Rhode Island Ave. – Installation of pull string in AFC Panel.



NOTES:

1. ALL INFORMATION CONCERNING CONDUITS & DUCTS IS BASED ON INFORMATION SUPPLIED TO CUBIC WESTERN DATA BY WMATA.
2. VITAL MACHINE INVENTORY IS DEPICTED ON THIS DWG. PEDESTALS FOR VENDORS AND BASEPLATES FOR FAREGATES FOR INITIAL QUANTITIES WILL BE INSTALLED DURING SITE PREPARATION FOR MIN. OF QUANTITIES. INITIAL QUANTITIES WERE GIVEN TO CWD BY BM 4/88
3. THE MINIMUM OPERATIONAL MACHINE INVENTORY IS REFERENCED ON THIS DRAWING BY THE "X" DRAWN THRU THE MACHINE
4. FOR AS BUILT CONDITIONS SEE SHEET 2.
5. FOR REF DWG'S SEE SUPPORT DOCUMENT PACKAGE FOR THIS MEZZANINE

REVISIONS		
DESCRIPTION	DATE	APVD
AS BUILT CONDITIONS REV. A	5-10-77	270-P



INSTALLATION PLAN
(AS BUILT CONDITIONS)

CONTRACT NUMBER 22007A		CUBIC WESTERN DATA A Subsidiary of Cubic Corporation 5650 NEARBY MESA ROAD • POST OFFICE BOX 80787 • SAN DIEGO, CA 92138	
DESIGN ACTIVITY APPROVAL		SIZE	DRAWING NUMBER 92000000
APPROVED			REV A

Rhode Island Ave.
AFC Machines (26)

Mezzanine Inspection Report

Date: 10/16/14	Station Name: B05 Brookland-CUA	Mezzanine #: 027	Completed By: Mike Butler
-----------------------	--	-------------------------	----------------------------------

Summary

Video scoping and pull string installation was only partially completed for this mezzanine. Video scoping and pull string installation was completed for communication ducts in Upper and Lower Faregate Arrays; respective power ducts were also video scoped. It should be noted that extensive rust and corrosion was found in upper/lower faregate ducts, however there appears to be sufficient capacity for new wires. Contractor was unable to install pull string in power duct between Kiosk and AFC Panel due to an obstruction found at 40' from kiosk entrance; the obstruction was recorded by video scoping.

Scanning of the mezzanine floor was completed to determine the existing layout of in-floor ducts and a proposed power duct / conduit run between the Kiosk and AFC Panel. A proposed power duct, that will run along a different path than the original duct run due to space constraints (see drawing), is proposed from the Kiosk to just outside Room C101 (Elevator Machine room). A proposed handhole is located in the mezzanine floor just outside Room C101. The duct will transition to conduit inside Room C101 via a junction box. The conduit will proceed up the west wall of Room C101 and across the ceiling before exiting the room through the wall next to door (wall to be core drilled). The conduit will continue along the hallway until it reaches the entrance to Room C106 (see photo #6 and7), where it will then pass through the wall (wall to be core drilled) and proceed to the AFC Panel.

Scoping of Faregate Array(s)

Task	Yes/No	Notes
Communications Duct – Upper Faregate Array (4 faregates)		
Was video scoping completed for the entire duct run?	Yes	Refer to WMATA Brookland Upper Comm Fairgate Video.avi"
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	Extensive duct corrosion evident.
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	4" walker duct with less than 10 wires
Communications Duct - Lower Faregate Array (4 faregates)		
Was video scoping completed for the entire duct run?	Yes	Refer to WMATA Brookland Lower Comm FairgateVVideo.avi "
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	Extensive duct corrosion evident.
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	4" walker duct with less than 10 wires
Power Duct - Upper Faregate Array (4 faregates)		
Was video scoping completed for the entire duct run?	Yes	Refer to WMATA Brookland Upper Power Fairgate Video.avi "
Were there any obstructions or blockages? Provide details of type and specific location.	No	Extensive duct corrosion evident.
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	6" walker duct with less than 12 wires
Power Duct - Lower Faregate Array (4 faregates)		
Was video scoping completed for the entire duct run?	Yes	Refer to WMATA Brookland Lower Power Fairgate Video.avi "
Were there any obstructions or blockages? Provide details of type and specific location.	No	Extensive duct corrosion evident.
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	6" walker duct with less than 12 wires


Scoping of Power Duct - Kiosk to AFC Panel		
Task	Yes/No	Notes
Kiosk to AFC Panel (Distance: 110')		
Was video scoping completed for the entire duct / conduit run?	Partially	Refer to "WMATA BrooklandLLeft Power duct Kiosk to AFC Video.avi" and "WMATA Brookland Right Power duct Kiosk to AFC Video.avi"
Was pull string installed?	No	
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	An obstruction, which appears to be a collapsed duct was found in the power duct at 40' from the Kiosk. The scoping showed that the duct also has extensive corrosion and is in bad condition.
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	N/A	6" walker duct with less than 15 wires
Observations / Issues / Next Steps		
<p>There were no hand holes found on the mezzanine floor related to the existing power duct run from the Kiosk to the AFC Panel.</p> <p>The proposed power duct run is approximately 65' from Kiosk to Room C101.</p> <p>The proposed conduit run is approximately 65' from Room C101 to AFC Panel (Fare Vend 2) in Room C106.</p>		
Sign Off		
	GFP Representative	WMATA PRGM
Name:	Mike Butler	
Signature:		
Date:	01/03/2015	

Photo # 1 – Existing and proposed duct run from Kiosk (Angle 1).

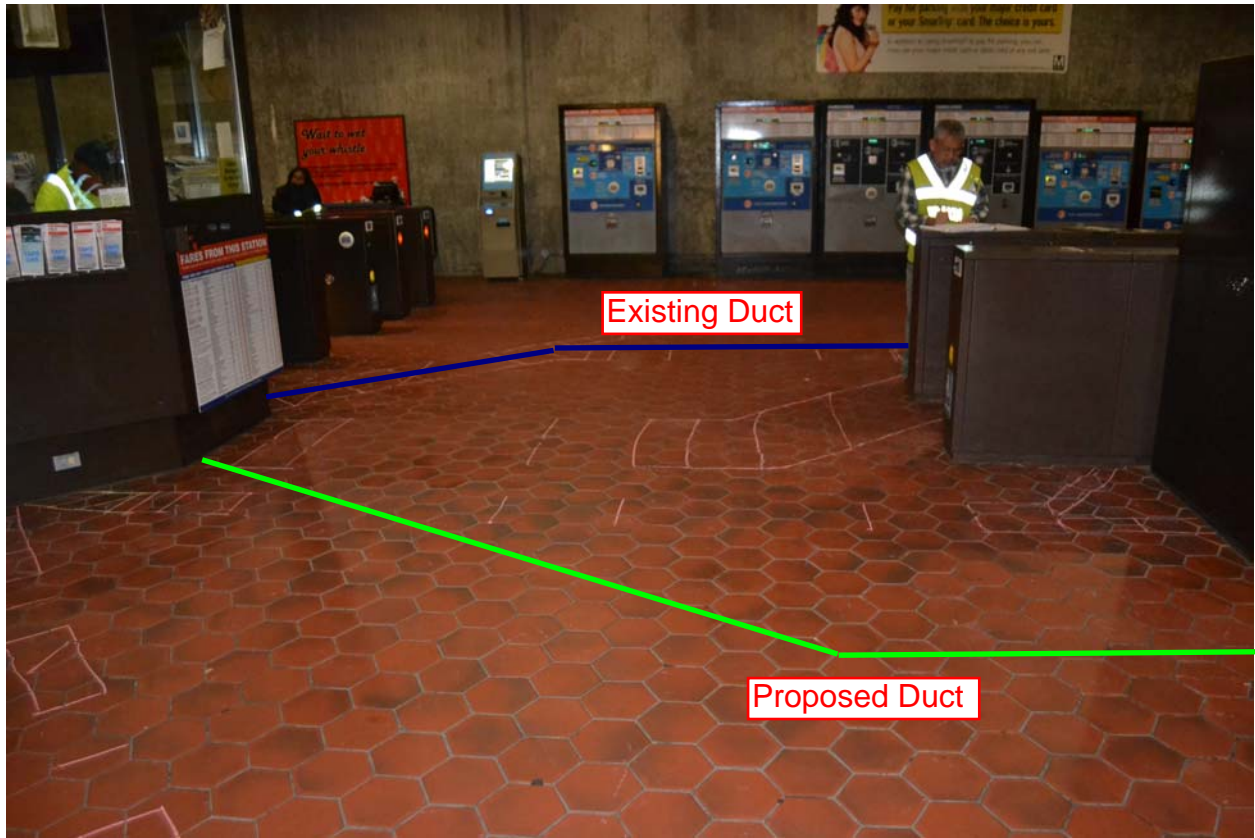


Photo # 2 – Existing and proposed duct run from Kiosk (Angle 2).

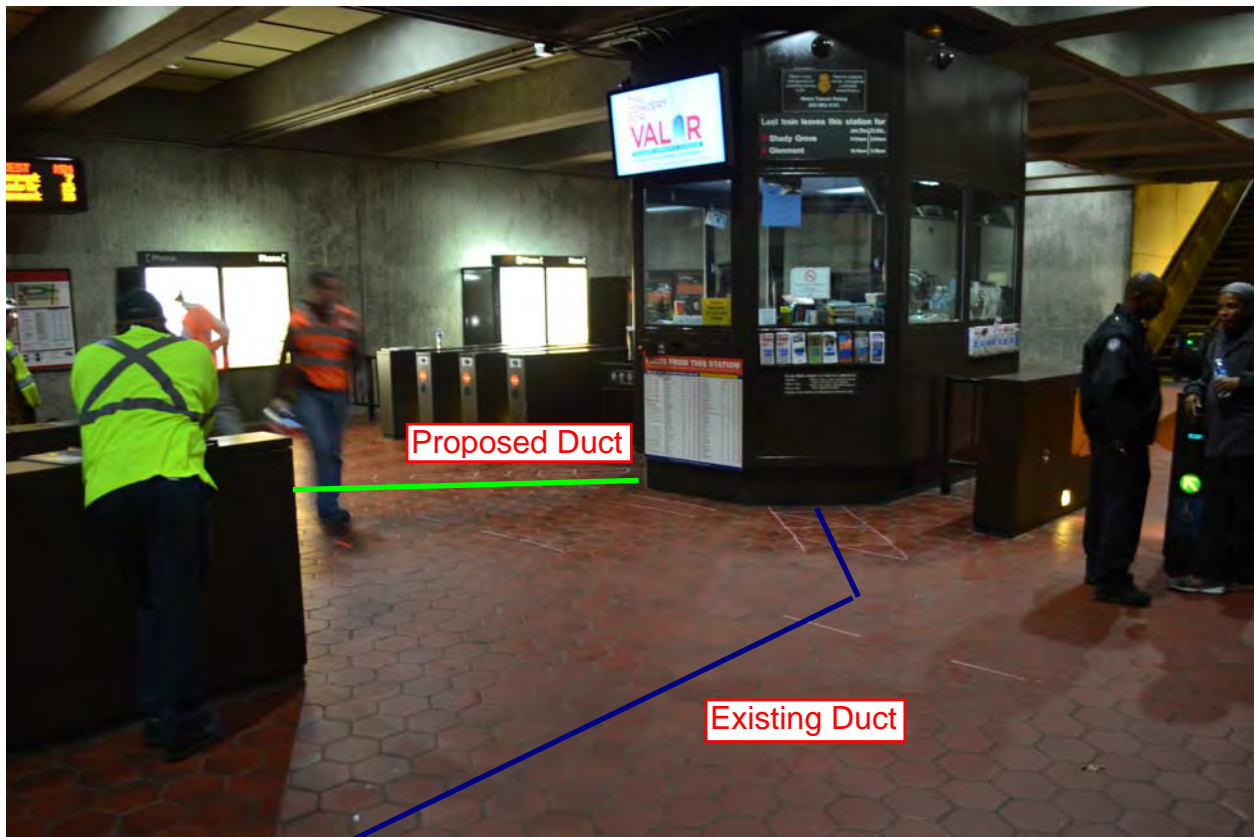


Photo # 3 – Continuation of existing and proposed duct run from Kiosk (Angle 1).

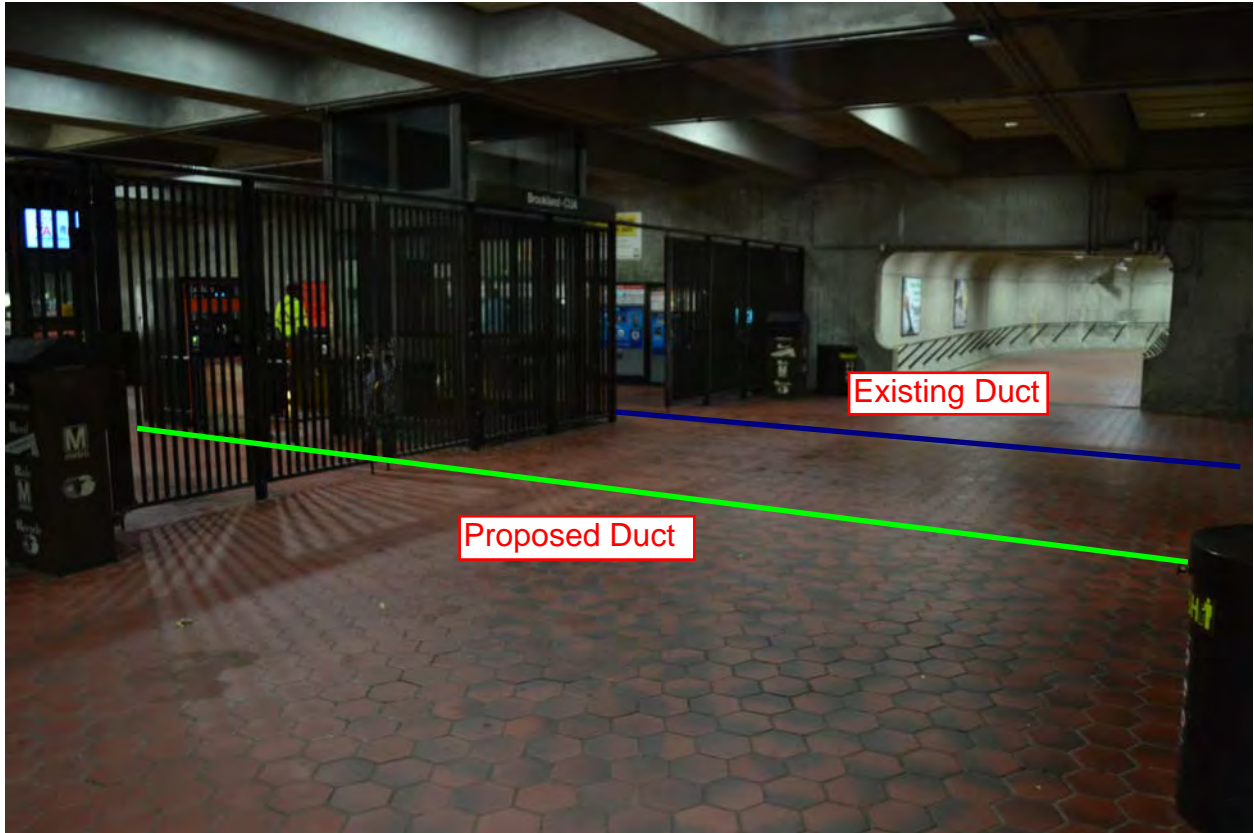


Photo # 4– Continuation of proposed duct run from Kiosk (Angle 2)



Photo # 5 – Proposed duct approach to back rooms



Photo #6 - Proposed conduit from Elevator Machine Room C101

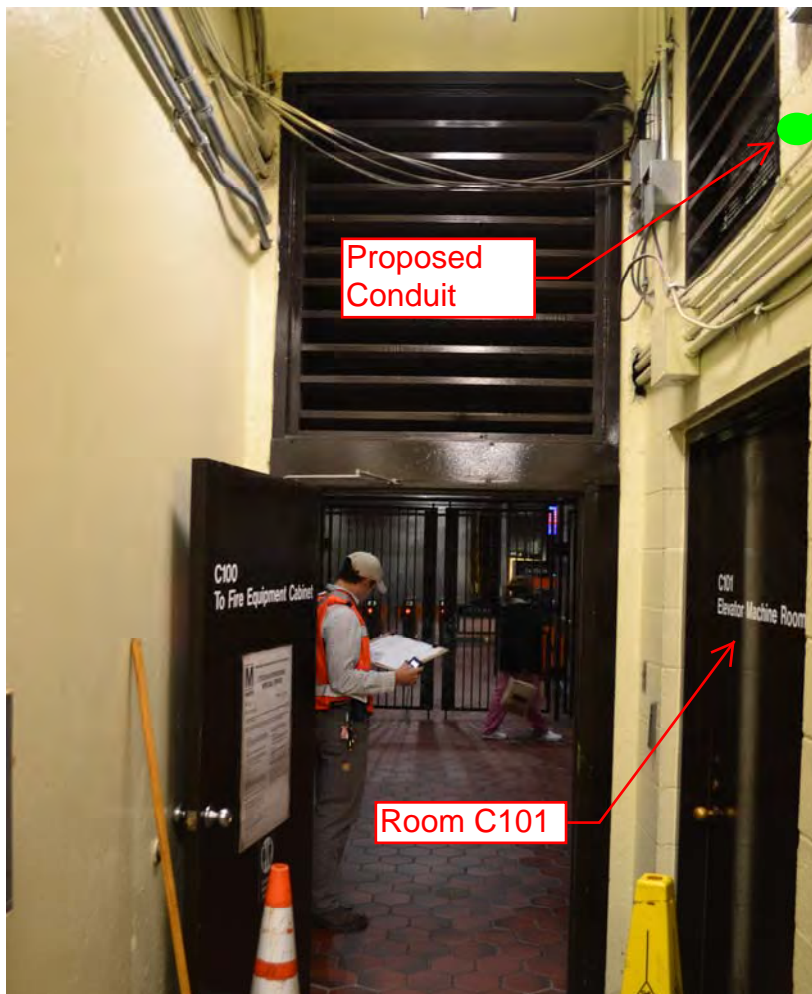
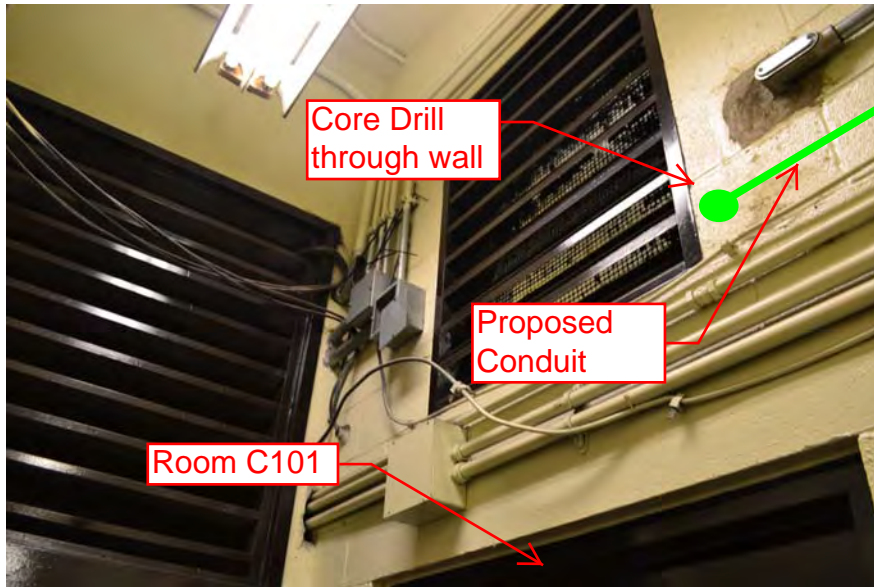
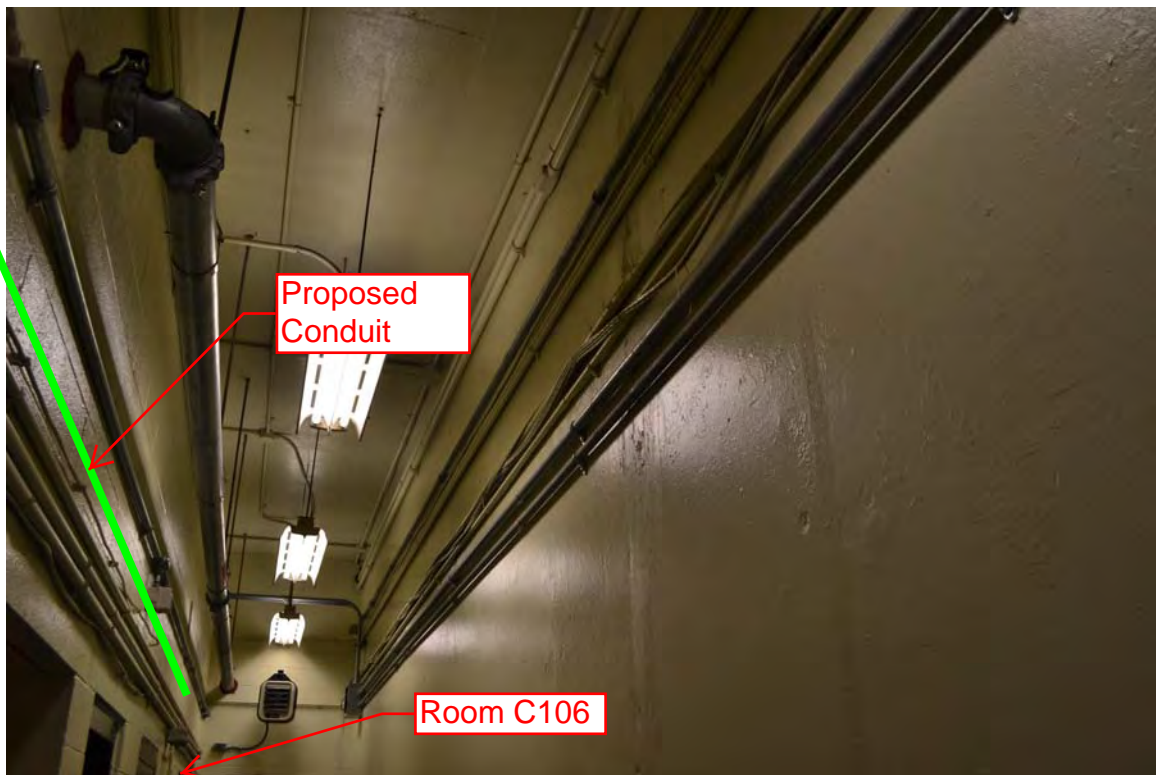
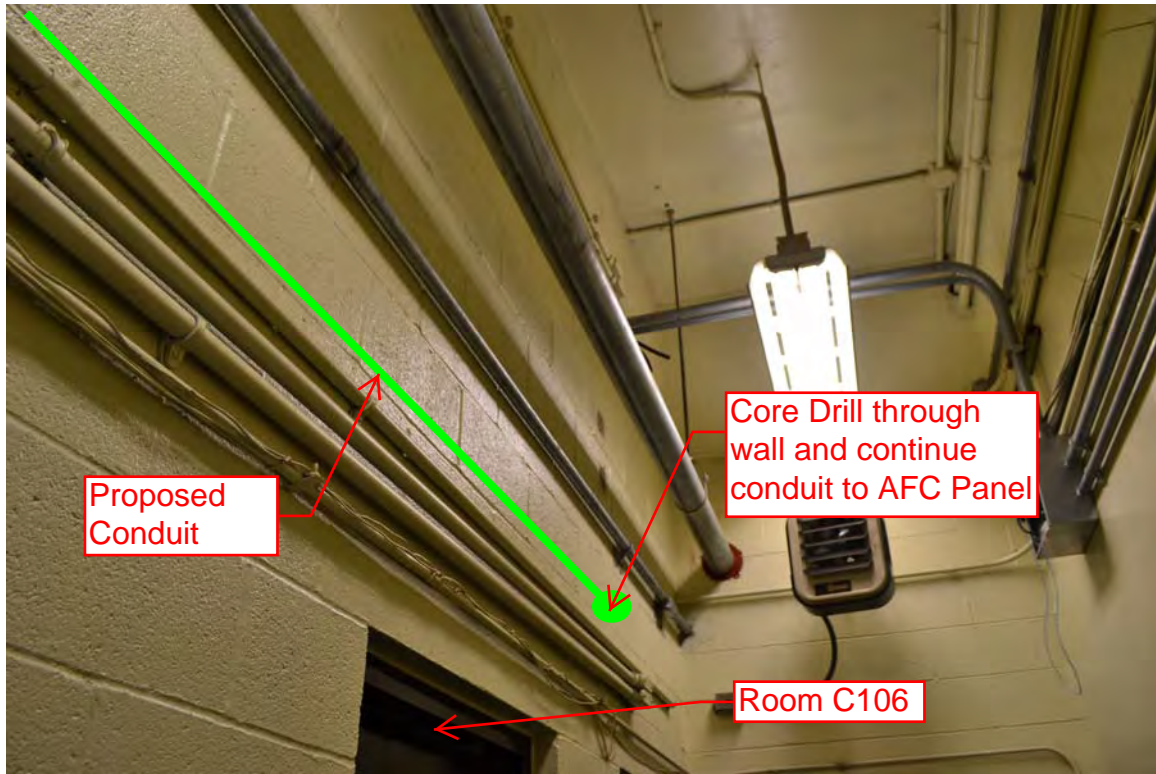


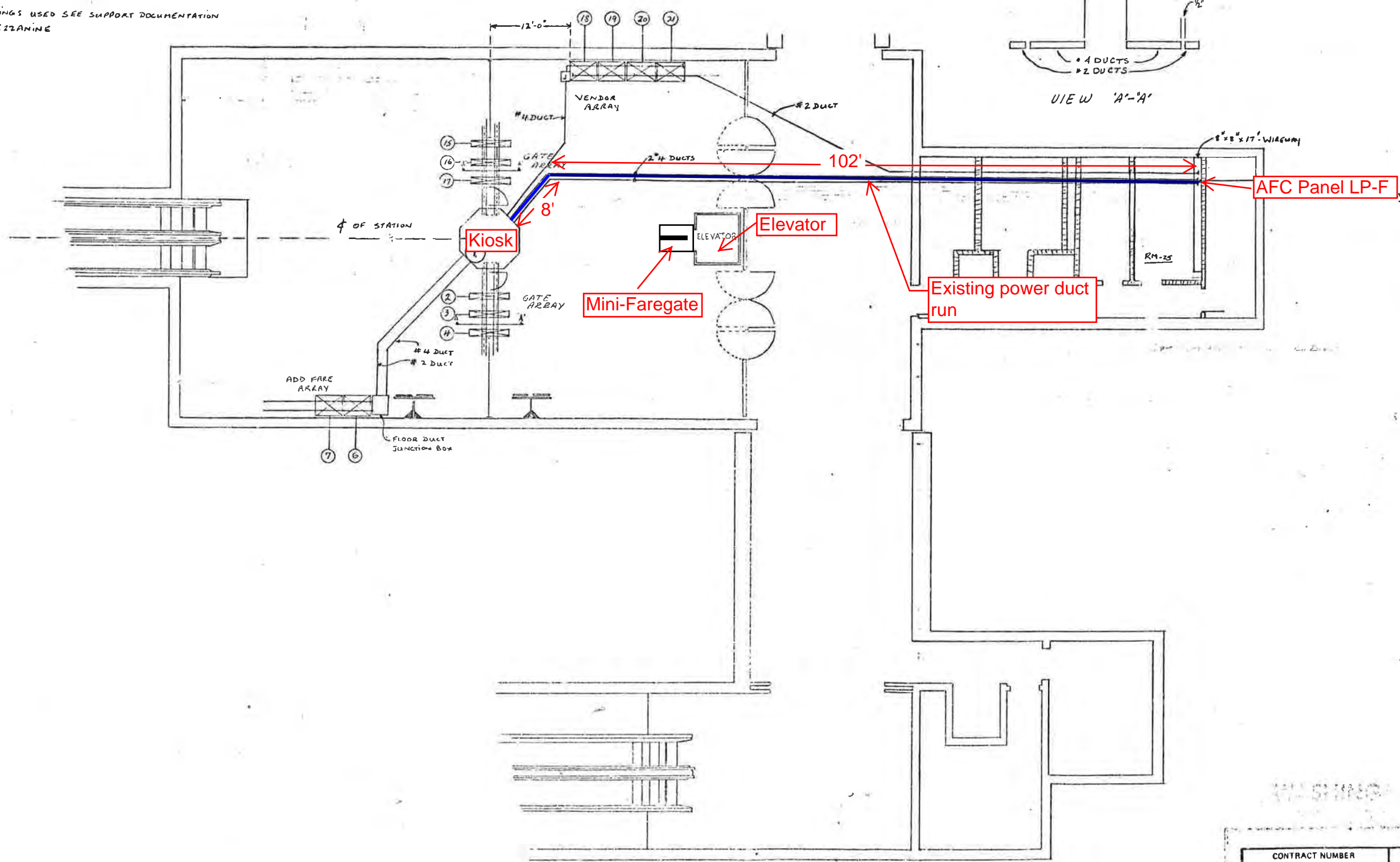
Photo #7 - Proposed conduit along hallway leading to Electrical Equipment Room C106



NOTES:

1. ALL INFORMATION CONCERNING DUCTS AND CONDUITS IS BASED ON INFORMATION SUPPLIED TO CUBIC WESTERN DATA BY WMATA.
2. TOTAL MACHINE INVENTORY IS DEPICTED ON THIS DRAWING. THE MINIMUM OPERATIONAL MACHINE INVENTORY IS REFERENCED ON THIS DRAWING BY THE X DRAWN THRU THE MACHINE.
4. FOR AS BUILT CONDITIONS SEE SHEET #2.
5. FOR REFERENCE DRAWINGS USED SEE SUPPORT DOCUMENTATION PACKAGE FOR THIS MEZZANINE.

REVISIONS		
DESCRIPTION	DATE	APVD



1- INSTALLATION PLAN

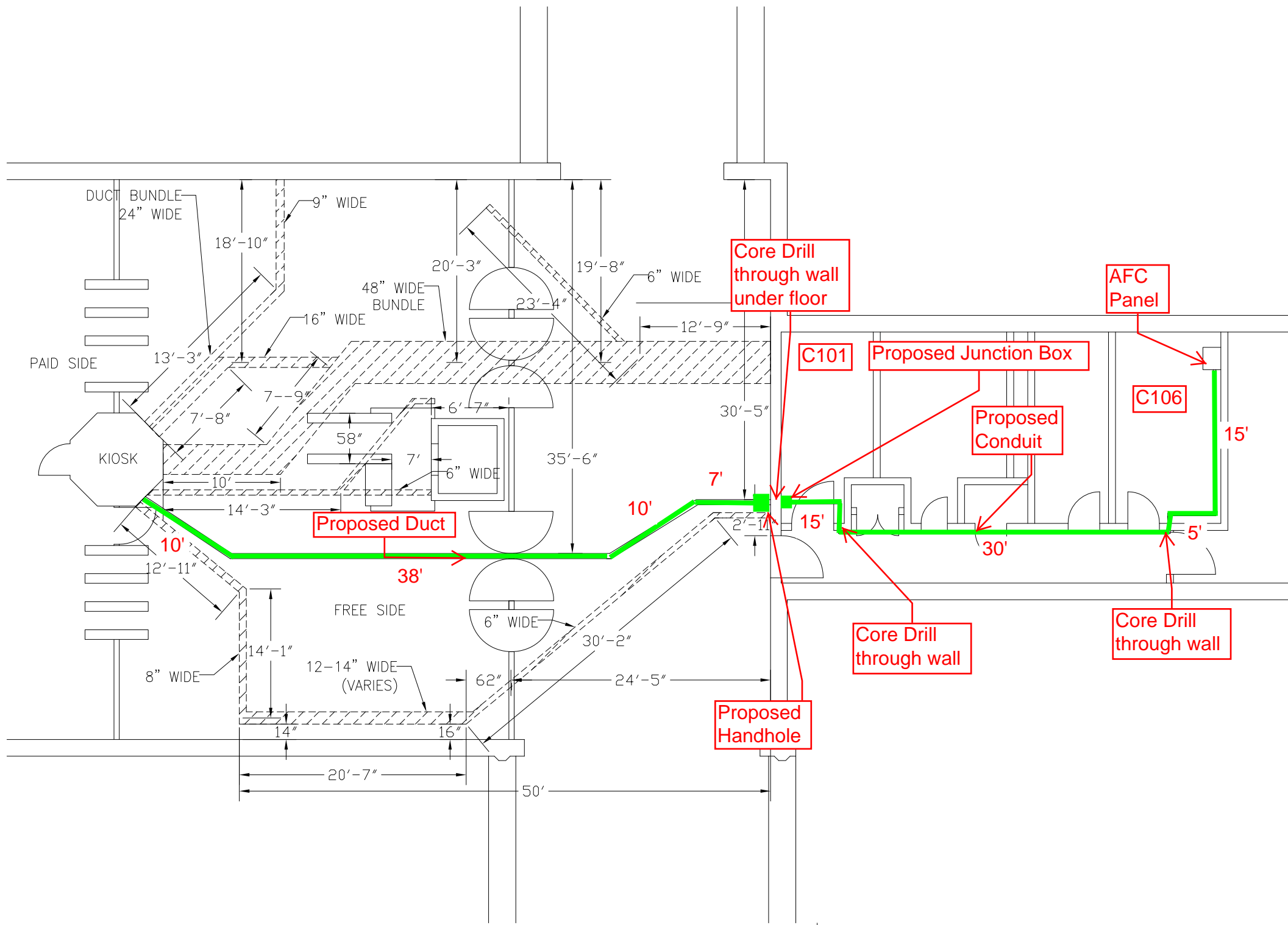
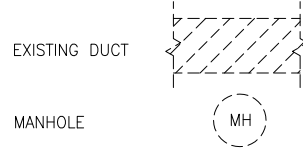
REFERENCE DRAWINGS USED
 BECHTEL REF. SK.#
 BECHTEL REF. DWG.#
 CWD REF. DWG.#

CONTRACT NUMBER 22007A		CUBIC WESTERN DATA <small>A Subsidiary of Cubic Corporation</small> <small>5650 KEARNY MESA ROAD • POST OFFICE BOX 80187 • SAN DIEGO, CA 92138</small>	
REL _____ ENGRG _____ DESIGN _____ CHECK _____ DRAWN _____		BROOKLAND STATION AFC MACHINES 27	
DESIGN ACTIVITY APPROVAL	SIZE 11	DRAWING NUMBER 026-0401	REV
APPROVED			

PLAN NOTES:

1. DIMENSIONS ARE IN FEET AND INCHES.
2. DIMENSIONS ARE FOR REFERENCE ONLY.
3. EXISTING IN-FLOOR DUCTS/CONDUITS WERE IDENTIFIED USING A PORTABLE GPR SCANNING DEVICE.
4. THE SCANNING COVERAGE IS LIMITED TO THE MEZZANINE FLOOR ONLY.
5. GPR SCANNING HAS THE FOLLOWING LIMITATIONS: (i) 12 INCHES VISIBLE SCANNING DEPTH; (ii) VISIBILITY BEYOND CONGESTED OR NEAR SURFACE REINFORCEMENT LAYERS; (iii) DETECTION OF PVC AND OTHER NON-METALLIC OBJECTS (iv) DETERMINATION OF SIZE AND EXTENTS OF SUBSURFACE ANOMALIES SUCH AS SLAB VOIDS OR REBAR SIZES; AND (v) VISIBILITY WHEN VARIABLE MOISTURE CONDITIONS EXIST IN THE SUBSTRATE.

LEGEND:



BROOKLAND CUA STATION
E-100 NOT TO SCALE

CONTRACT NO.
XXXXXX

DESIGNED	C. LOOSE	11-14
DRAWN	C. LOOSE	11-14
CHECKED	M. BUTLER	11-14
APPROVED		

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY
DEPARTMENT OF TRANSIT INFRASTRUCTURE AND ENGINEERING SERVICES
OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM

GFP A Gannett Fleming/Parsons JOINT VENTURE

APPROVED _____ SUBMITTED _____
PROJECT MANAGER

15-NEPP-01
IN - FLOOR DUCT INSPECTIONS
B05 BROOKLAND CUA (M027)
PROPOSED ELECTRICAL DUCT PATH

SCALE: NOT TO SCALE
DRAWING NO.: B05-E-100
XXX

Mezzanine Inspection Report

Date: 09/17/14	Station Name: B06 Fort Totten	Mezzanine #: 026	Completed By: Mike Butler
-----------------------	--------------------------------------	-------------------------	----------------------------------


Summary

Overall, the walker ducts at this mezzanine are in poor condition due to extensive corrosion caused by water intrusion. Collapses were found both in both the faregate communication and power ducts and the power duct between the Kiosk and AFC Panel. Pull string could not be installed in faregate communication ducts due to collapses and inaccessibility issues. A pull string was installed in the power duct between the Kiosk and Handhole by utilizing an existing pull string, however it is not advisable to re-use this duct as there were multiple collapses found during video scoping.

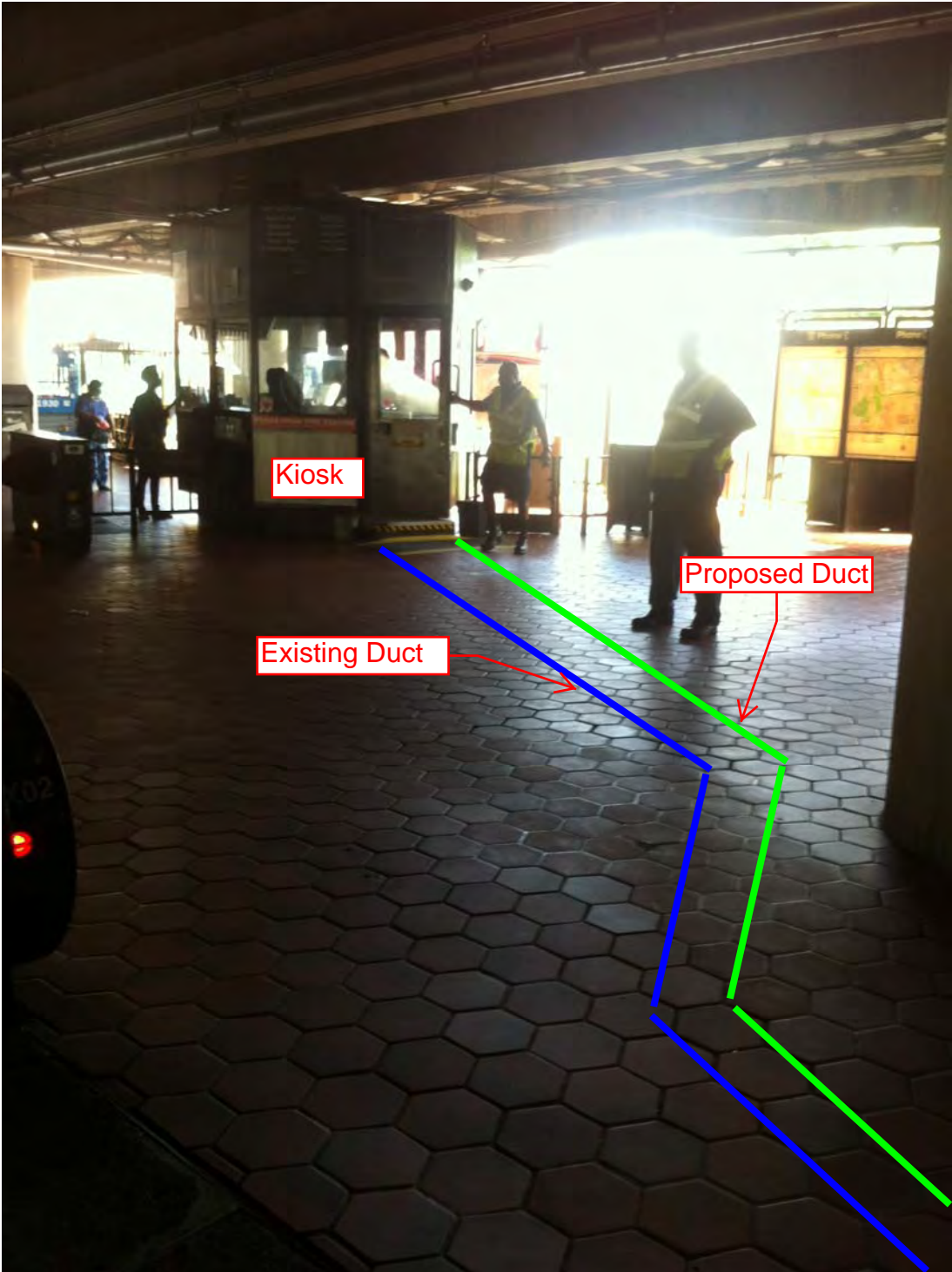
Scanning of the mezzanine floor was completed to determine layout of existing in-floor ducts and a proposed duct / conduit route. The attached drawing shows the proposed duct / conduit route, which comprises a 150' duct run from the Kiosk to backrooms (including two handholes) followed by a transition to an overhead conduit running for 10' through a partition wall and then into AFC Panel.

Scoping of Faregate Array(s)

Task	Yes/No	Notes
Communications Duct – Upper Faregate Array (5 faregates)		
Was video scoping completed for the entire duct run?	No	Array could not be reached; only accessible through lower faregate array ducts.
Were pull strings installed at all faregates in the array?	No	
Were there any obstructions or blockages? Provide details of type and specific location.	N/A	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	N/A	
Communications Duct - Lower Faregate Array (4 faregates)		
Was video scoping completed for the entire duct run?	Partially	
Were pull strings installed at all faregates in the array?	No	
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	Left duct is collapsed at 2 feet from kiosk; right duct has heavy debris after first faregate.
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	N/A	4" walker duct with less than 10 wires
Power Duct - Upper Faregate Array (5 faregates)		
Was video scoping completed for the entire duct run?	No	Array could not be reached; only accessible through lower faregate array ducts.
Were there any obstructions or blockages? Provide details of type and specific location.	N/A	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	N/A	
Power Duct - Lower Faregate Array (4 faregates)		
Was video scoping completed for the entire duct run?	Partially	
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	Left duct is collapsed at duct entrance; right duct is collapsed at 4 feet from kiosk.
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	N/A	6" walker duct with less than 12 wires

Scoping of Power Duct - Kiosk to AFC Panel		
Task	Yes/No	Notes
Kiosk to Handhole (Distance: 140')		
Was video scoping completed for the entire duct / conduit run?	Partially	Not possible due to collapsed duct
Was pull string installed?	Yes	Existing pull string used to install new pull string, however it is not advisable to install new wires due to compromised condition of existing duct and limited available capacity.
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	Right duct: Obstruction at 50 feet from handhole towards kiosk Left duct: Obstruction at 80 feet from handhole towards kiosk
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	Yes	6" walker duct with 21 wires in right duct; 20 wires in left duct
Handhole to AFC Panel (Distance: 5')		
Was video scoping completed for the entire duct / conduit run?	No	Not possible due to collapsed duct.
Was pull string installed?	No	
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	Collapsed duct close to handhole.
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	Yes	6" walker duct with 21 wires in right duct; 20 wires in left duct
Observations / Issues / Next Steps		
Sign Off		
	GFP Representative	WMATA PRGM
Name:	Mike Butler	
Signature:		
Date:	01/03/2015	

Photo# 1: B06 Fort Totten – Existing and proposed duct runs on mezzanine level (towards Kiosk)



Photo# 2: B06 Fort Totten – Existing and proposed duct runs near AFC Panel

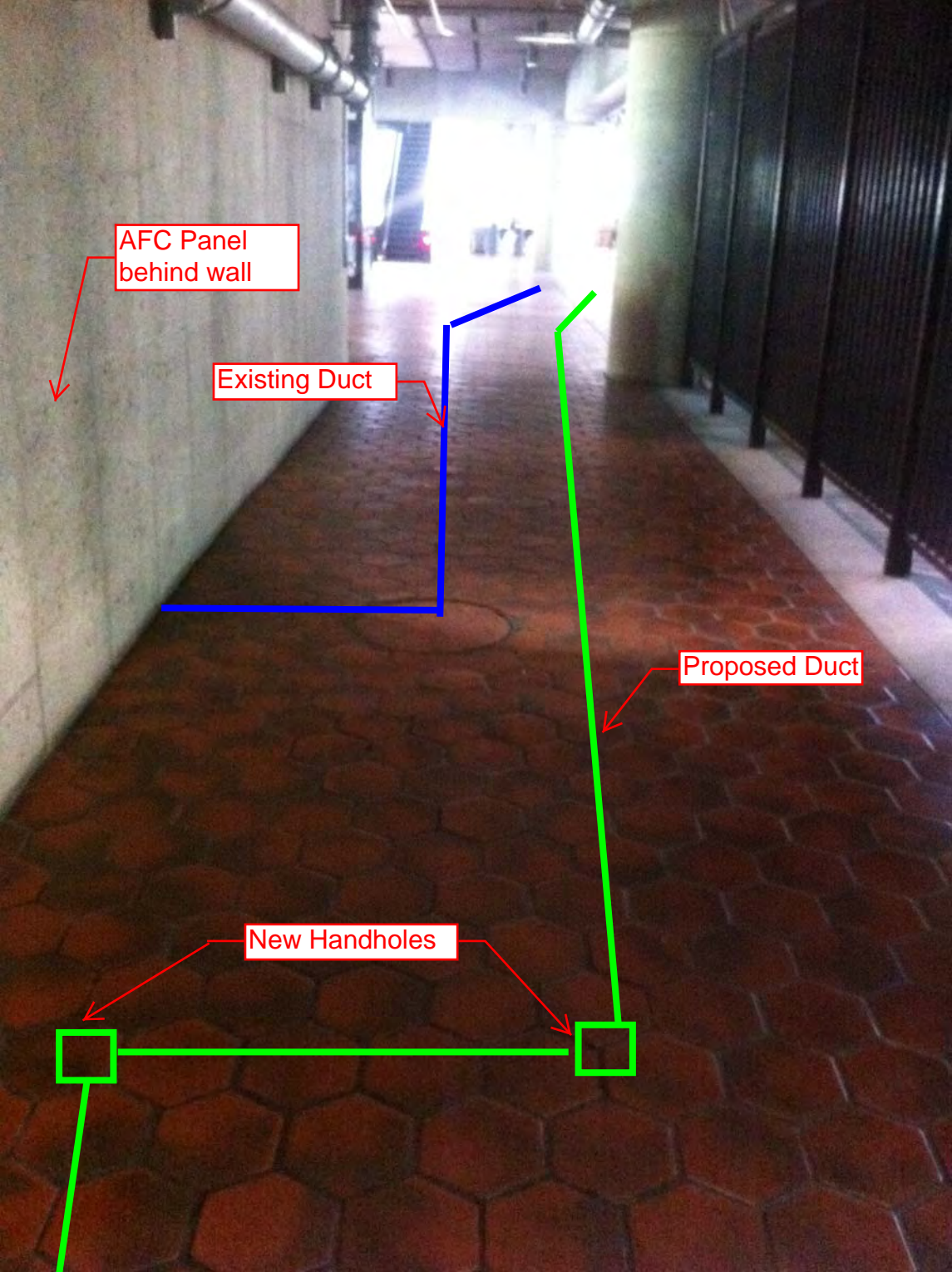


Photo #3: B06 Fort Totten – Poor condition of Handhole on mezzanine floor



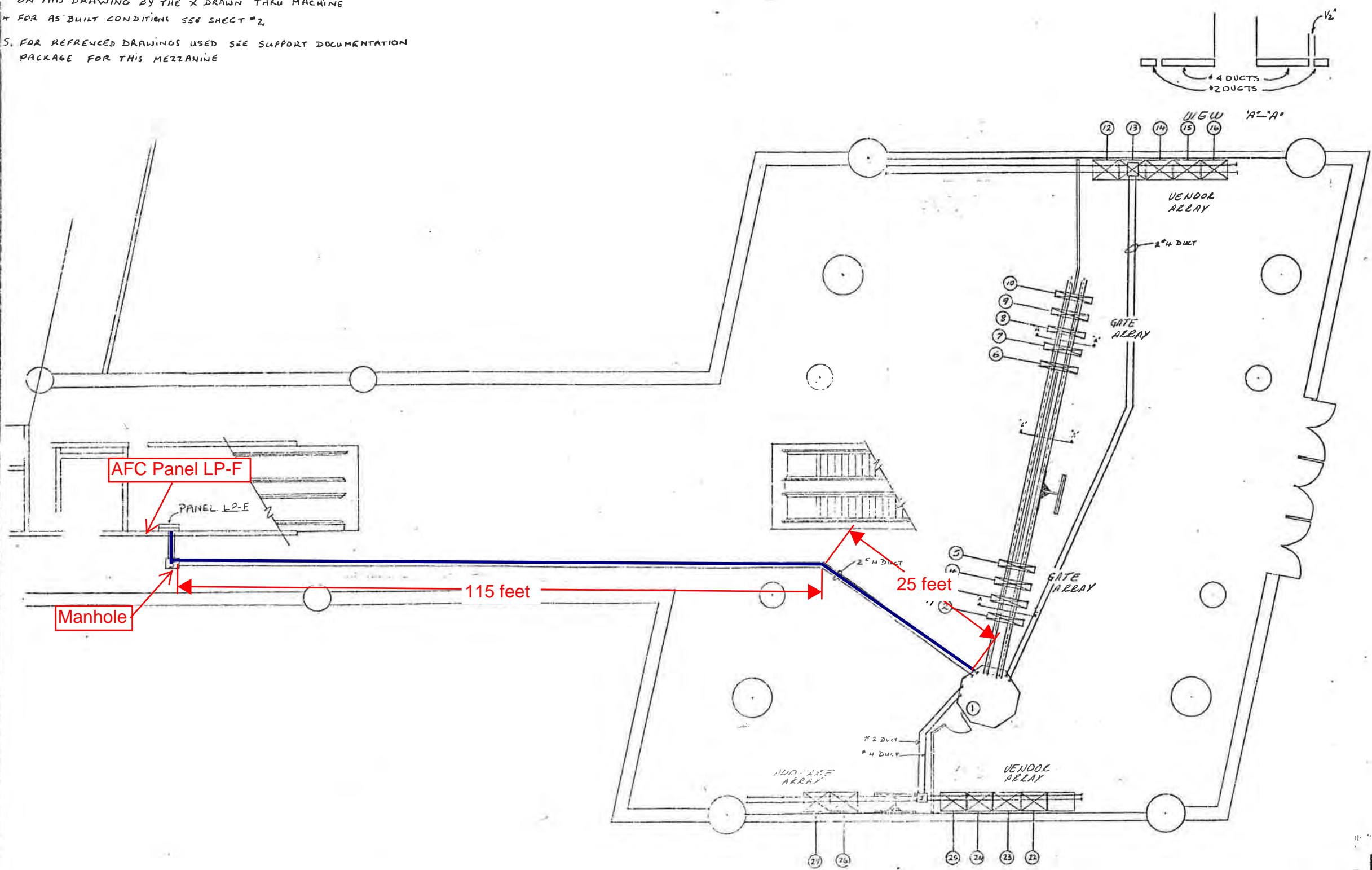
Photo #4: B06 Fort Totten – Pull string installed in power duct run from handhole to kiosk



NOTES:

1. ALL INFORMATION CONCERNING DUCTS AND CONDUITS IS BASED ON INFORMATION SUPPLIED TO CUBIC WESTERN DATA BY WMATA
2. TOTAL MACHINE INVENTORY IS DEPICTED ON THIS DRAWING THE MINIMUM OPERATIONAL MACHINE INVENTORY IS REFERENCED ON THIS DRAWING BY THE X DRAWN THRU MACHINE
3. FOR AS-BUILT CONDITIONS SEE SHEET #2
5. FOR REFERENCED DRAWINGS USED SEE SUPPORT DOCUMENTATION PACKAGE FOR THIS MEZZANINE

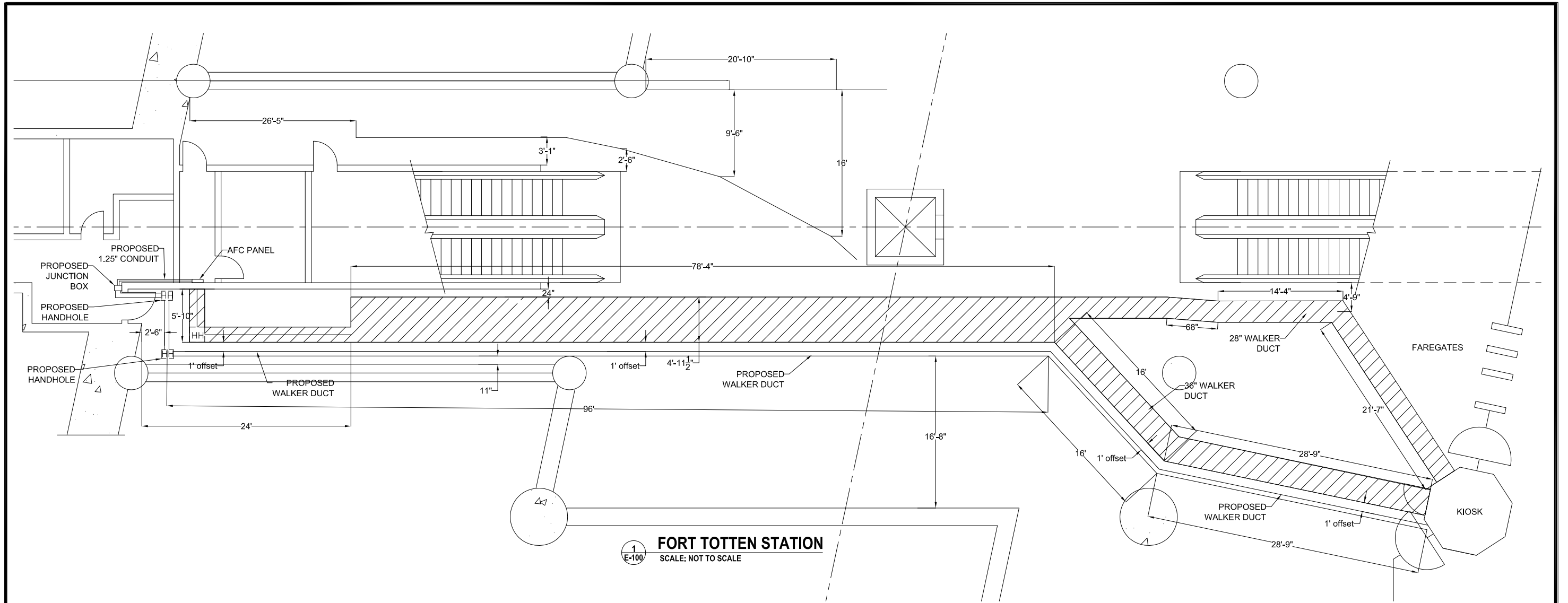
REVISIONS		
DESCRIPTION	DATE	APVD



1- INSTALLATION PLAN
28

REFERENCE DRAWINGS USED
 BECHTEL REF SK.# 825
 BECHTEL REF DWG.#
 CWO REF DWG.#

CONTRACT NUMBER 22007A		 A subsidiary of Cubic Corporation 5650 KEARNY MESA ROAD • POST OFFICE BOX 90781 • SAN DIEGO, CA 92115	
REL _____ ENGR _____ DESIGN _____ CHECK _____ DRAWN _____		FORT TOTTEN STATION AFC MACHINES	
DESIGN ACTIVITY APPROVAL	SIZE C	DRAWING NUMBER 926-0402	REV 28
APPROVED			

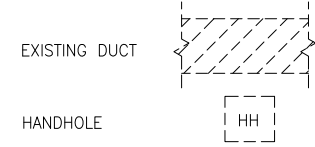


1
E-100
FORT TOTTEN STATION
SCALE: NOT TO SCALE

PLAN NOTES:

1. DIMENSIONS ARE IN FEET AND INCHES.
2. DIMENSIONS ARE FOR REFERENCE ONLY.
3. EXISTING IN-FLOOR DUCTS/CONDUITS WERE IDENTIFIED USING A PORTABLE GPR SCANNING DEVICE.
4. THE SCANNING COVERAGE IS LIMITED TO THE MEZZANINE FLOOR ONLY.
5. GPR SCANNING HAS THE FOLLOWING LIMITATIONS: (i) 12 INCHES VISIBLE SCANNING DEPTH; (ii) VISIBILITY BEYOND CONGESTED OR NEAR SURFACE REINFORCEMENT LAYERS; (iii) DETECTION OF PVC AND OTHER NON-METALLIC OBJECTS (iv) DETERMINATION OF SIZE AND EXTENTS OF SUBSURFACE ANOMALIES SUCH AS SLAB VOIDS OR REBAR SIZES; AND (v) VISIBILITY WHEN VARIABLE MOISTURE CONDITIONS EXIST IN THE SUBSTRATE.

LEGEND:



CONTRACT NO.
XXXXXX

DESIGNED	C. LOOSE	11-14
		DATE
DRAWN	C. LOOSE	11-14
		DATE
CHECKED	M. BUTLER	11-14
		DATE
APPROVED		
		DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

APPROVED _____

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY
DEPARTMENT OF TRANSIT INFRASTRUCTURE AND ENGINEERING SERVICES
OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM

GFP A Gannett Fleming/Parsons JOINT VENTURE
SUBMITTED _____
PROJECT MANAGER

15 NEPP METRO SCANNING
TAKOMA PARK STATION
B06 Fort Totten (M026)
PROPOSED POWER DUCT / CONDUIT RUN

SCALE
NOT TO SCALE

DRAWING NO.
B06-E-100.dwg smaller XXX

Mezzanine Inspection Report (MIR)

Date: 09/15/2014	Station Name: B07 Takoma	Mezzanine #: 029	Completed By: Mike Butler
-------------------------	---------------------------------	-------------------------	----------------------------------

Summary

Scoping was completed as much as possible with multiple obstructions found in all walker ducts. Due to the obstructions and substantial corrosion from water intrusion, it was not possible to fully complete any scoping or pull string installation. Obstructions are shown in the attached photos.

Scanning of the mezzanine was completed on 10/20/2014 and existing in-floor ducts were identified. A new route for proposed duct replacement is shown in Drawing B07-E-100, which is attached to this report. The proposed in-floor walker duct runs parallel to the existing duct to a new hand hole in Room C100 before transitioning to a conduit that feeds directly into AFC Panel LP-F.

The total length of the new walker duct is approximately 34' from Kiosk to proposed Hand Hole; the new conduit is approximately 4' from Hand Hole to AFC Panel.

Scoping of Faregate Array(s)

Task	Yes/No	Notes
Communications Duct – Upper Faregate Array (6 turnstiles)		
Was video scoping completed for the entire duct run?	Partially	Video scoping and pull string installation could not be completed due to obstruction.
Were pull strings installed at all faregates in the array?	No	
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	An obstruction (possibly collapsed duct) observed by video scoping approximately 2 feet from the Kiosk (see photo #1)
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	N/A	4" wide duct.
Communications Duct - Lower Faregate Array		
Was video scoping completed for the entire duct run?	N/A	
Were pull strings installed at all faregates in the array?	N/A	
Were there any obstructions or blockages? Provide details of type and specific location.	N/A	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	N/A	
Power Duct - Upper Faregate Array (6 turnstiles)		
Was video scoping completed for the entire duct run?	Partially	Video scoping could not be completed due to obstruction.
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	An obstruction (possibly collapsed duct) observed by video scoping approximately 1 foot from the Kiosk (see photo #2)
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	N/A	4" wide duct.
Power Duct - Lower Faregate Array		
Was video scoping completed for the entire duct run?	N/A	
Were there any obstructions or blockages? Provide details of type and specific location.	N/A	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	N/A	


Scoping of Power Duct - Kiosk to AFC Panel		
Task	Yes/No	Notes
Kiosk to Hand hole 1 (35 feet)		
Was video scoping completed for the entire duct / conduit run?	Partially	Video scoping and pull string installation could not be completed due to obstruction.
Was pull string installed?	No	
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	Obstructions were found at 4 and 15 feet from the kiosk (photos #3 and 4, respectively), possibly collapsed duct. Attempts were made to scope from both ends of the run.
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	N/A	4" wide duct.
Hand hole 1 to Hand hole 2 (7 feet)		
Was video scoping completed for the entire duct / conduit run?	No	Video scoping and pull string installation could not be completed due to obstruction.
Was pull string installed?	No	
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	Obstruction at entry to hand hole (photo #5)
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	N/A	4" wide duct.
Hand hole 2 to AFC Panel (3 feet)		
Was video scoping completed for the entire duct / conduit run?	No	Video scoping and pull string installation could not be completed due to obstruction.
Was pull string installed?	No	
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	Obstruction at entry to hand hole (photo #6)
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	N/A	4" wide duct.
Observations / Issues		
Substantial corrosion and broken parts of existing ducts observed (see attached photos), due to extensive water intrusion throughout the mezzanine level. Unable to install pull strings due to condition of existing duct.		
Sign Off		
	GFP Representative	WMATA PRGM
Name:	Mike Butler	
Signature:		
Date:	11/12/2014	

Photo #1: B07 Takoma - Still image of obstruction in faregate array comm. duct



Photo #2: B07 Takoma - Still image of obstruction in faregate array power duct

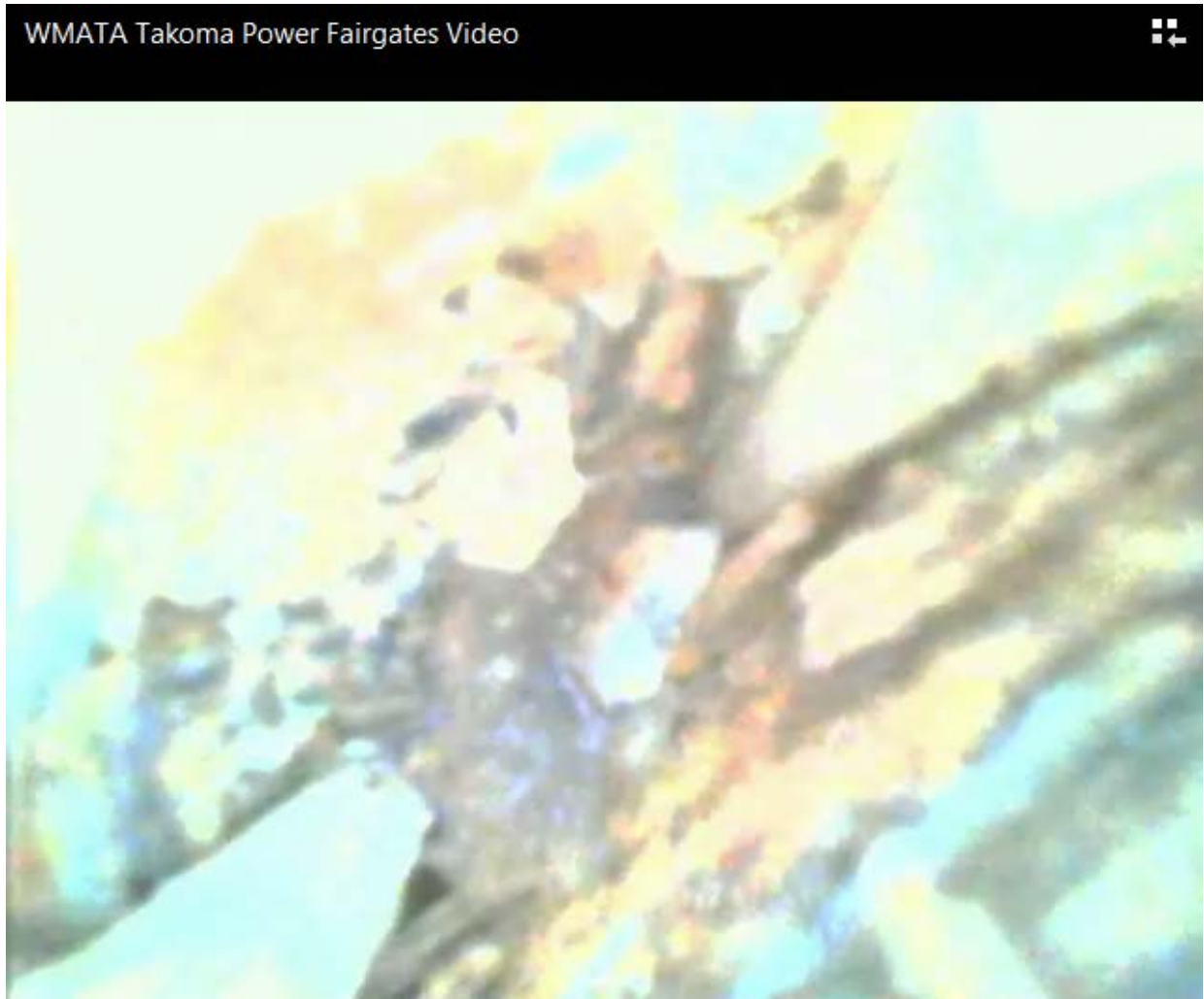


Photo #3: B07 Takoma - Still image of obstruction in power duct from kiosk to handhole



Photo #4: B07 Takoma - Still image of obstruction in power duct from handhole to kiosk

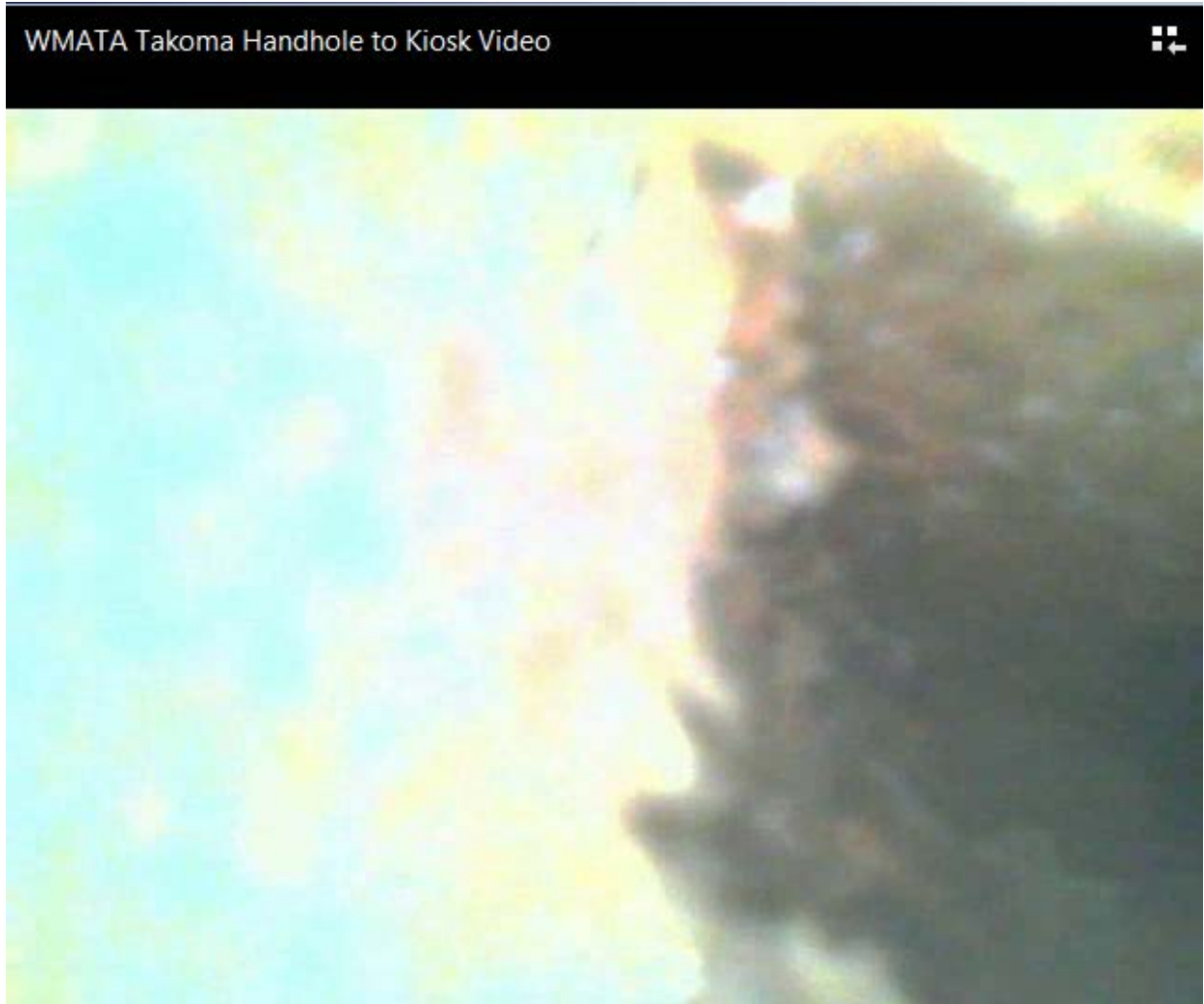


Photo 5: B07 Takoma – Standing water in first handhole



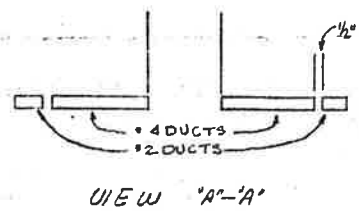
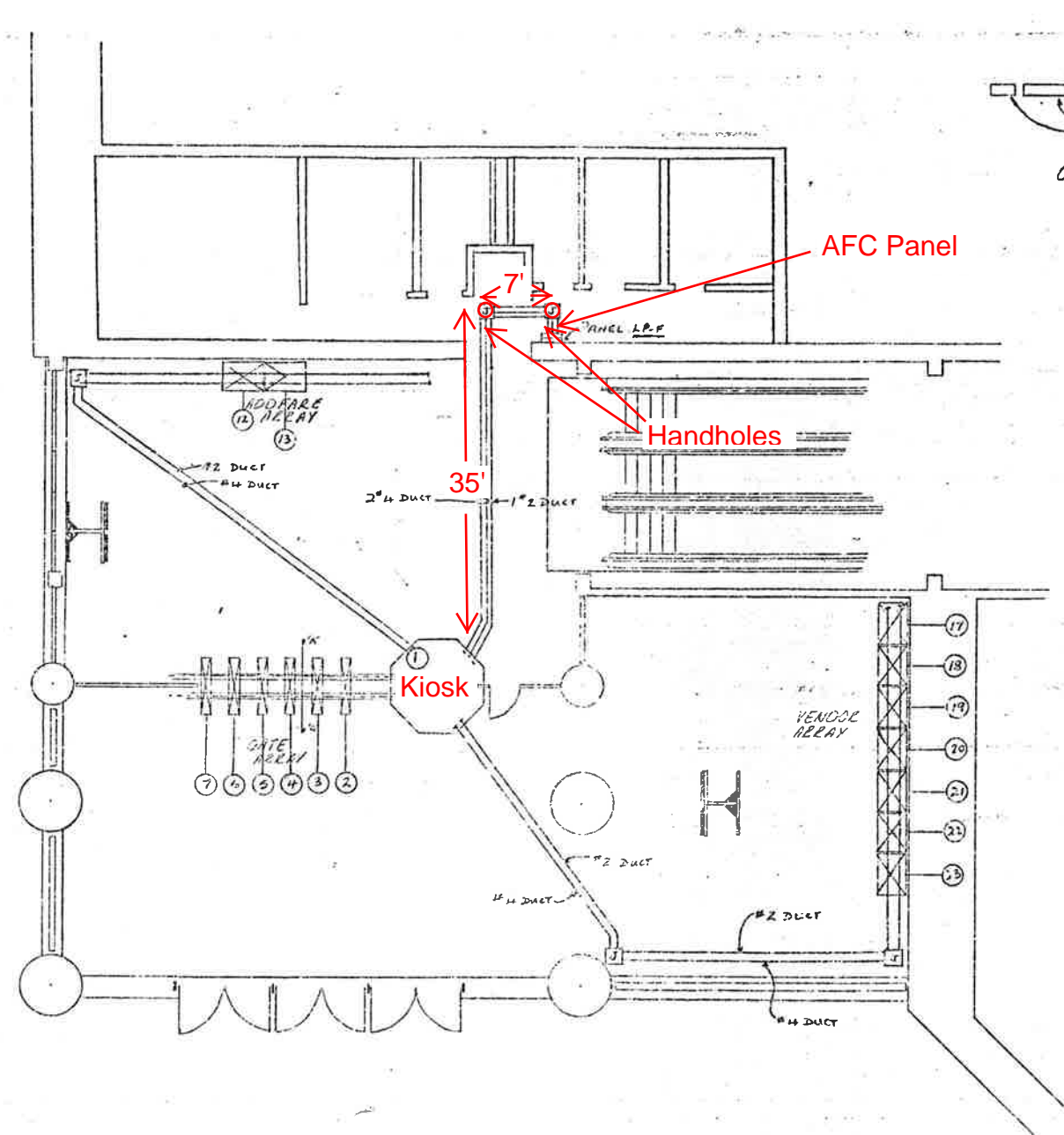
Photo #6: B07 Takoma – Poor conditions in second handhole



NOTES:

1. ALL INFORMATION CONCERNING DUCTS AND CONDUITS IS BASED ON INFORMATION SUPPLIED TO CUBIC WESTERN DATA BY WMATA
2. TOTAL MACHINE INVENTORY IS DEPICTED ON THIS DRAWING
3. THE MINIMUM OPERATIONAL MACHINE INVENTORY IS REFERENCED ON THIS DRAWING BY THE X DRAWN THRU THE MACHINE
4. FOR AS BUILT CONDITIONS SEE SHEET #2
5. FOR REFERENCED DRAWINGS USED SEE SUPPORT DOCUMENTATION PACKAGE FOR THIS MEZZANINE

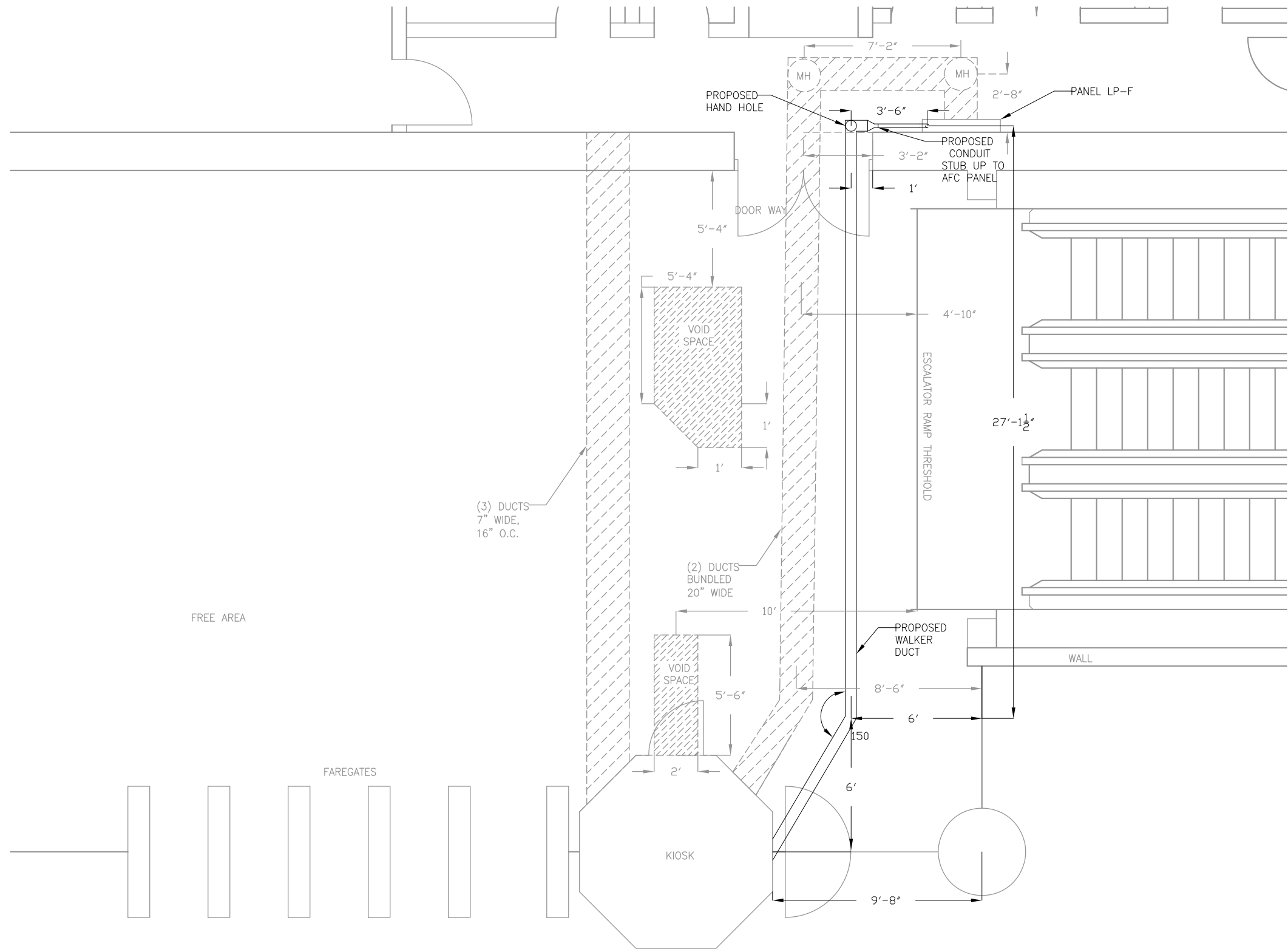
REVISIONS		
DESCRIPTION	DATE	APVD
APPROVED AS BUILT	6-15-77	



1- INSTALLATION PLAN
29

REFERENCE DRAWINGS USED
 BECHTEL REF. SK.#
 BECHTEL REF. DWG.#
 CWD REF. DWG.#

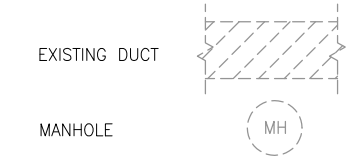
CONTRACT NUMBER 22007A		CUBIC WESTERN DATA A Subsidiary of Cubic Corporation 5650 KEARNY MESA ROAD • POST OFFICE BOX 3073 • SAN DIEGO, CA 92138	
DESIGN	CHECK	TAKOMA STATION AFC MACHINES	
DESIGN ACTIVITY APPROVAL	SIZE		
		DRAWING NUMBER 926-0422	(29)



PLAN NOTES:

1. DIMENSIONS ARE IN FEET AND INCHES.
2. DIMENSIONS ARE FOR REFERENCE ONLY.
3. EXISTING IN-FLOOR DUCTS/CONDUITS WERE IDENTIFIED USING A PORTABLE GPR SCANNING DEVICE.
4. THE SCANNING COVERAGE IS LIMITED TO THE MEZZANINE FLOOR ONLY.
5. GPR SCANNING HAS THE FOLLOWING LIMITATIONS: (i) 12 INCHES VISIBLE SCANNING DEPTH; (ii) VISIBILITY BEYOND CONGESTED OR NEAR SURFACE REINFORCEMENT LAYERS; (iii) DETECTION OF PVC AND OTHER NON-METALLIC OBJECTS (iv) DETERMINATION OF SIZE AND EXTENTS OF SUBSURFACE ANOMALIES SUCH AS SLAB VOIDS OR REBAR SIZES; AND (v) VISIBILITY WHEN VARIABLE MOISTURE CONDITIONS EXIST IN THE SUBSTRATE.

LEGEND:



FREE AREA

FAREGATES

PAID AREA

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

CONTRACT NO.
 XXXXXX

DESIGNED	C. LOOSE	11-14
		DATE
DRAWN	C. LOOSE	11-14
		DATE
CHECKED	M. BUTLER	11-14
		DATE
APPROVED		
		DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY
 DEPARTMENT OF TRANSIT INFRASTRUCTURE AND ENGINEERING SERVICES
 OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM

GFP A Gannett Fleming/Parsons JOINT VENTURE

APPROVED _____ SUBMITTED _____
 PROJECT MANAGER

15-NEPP-01
 IN - FLOOR DUCT INSPECTIONS
 B07 TAKOMA (M029)
 PROPOSED ELECTRICAL DUCT PATH

SCALE: NOT TO SCALE
 DRAWING NO.: B07-E-100
 XXX

Mezzanine Inspection Report (Scoping)

Date: 09/12/2014	Station Name: B08 – Silver Spring North	Mezzanine #: 031	Completed By: Tino Sahoo
-------------------------	--	-------------------------	---------------------------------

Summary

Video scoping was completed as much as possible, and pull string was installed for the upper and lower faregate array communications duct and power duct between the kiosk and AFC Panel. Video scoping was also completed as much as possible for the upper and lower faregate array power ducts.

There were some minor obstructions encountered while video scoping the lower faregate array communications duct and the upper faregate array power duct.

Scanning is not required.

Scoping of Faregate Array(s)

Task	Yes/No	Notes
Communications Duct – Upper Faregate Array (3 Gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to WMATA Silver Spring North Upper Comm Duct Video.avi file.
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	
Communications Duct - Lower Faregate Array (3 Gates)		
Was video scoping completed for the entire duct run?	No	26 of 29 feet of the lower comm. array run was successfully video scoped. Refer to WMATA Silver Spring North Lower Comm Duct Video.avi file.
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	Insert/riser to faregate creates a partial obstruction
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	
Power Duct - Upper Faregate Array (3 Gates)		
Was video scoping completed for the entire duct run?	No	12 of 25 feet of the upper array power duct was successfully video scoped. Refer to WMATA Silver Spring North Upper Power A Duct.avi and WMATA Silver Spring North Upper Power B Duct.avi files.
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	Duct is full of rust and debris and possibly collapsed; Should be able to get new wiring through existing ducts.
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	
Power Duct - Lower Faregate Array (3 Gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to WMATA Silver Spring Lower Power Video.avi file.
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	


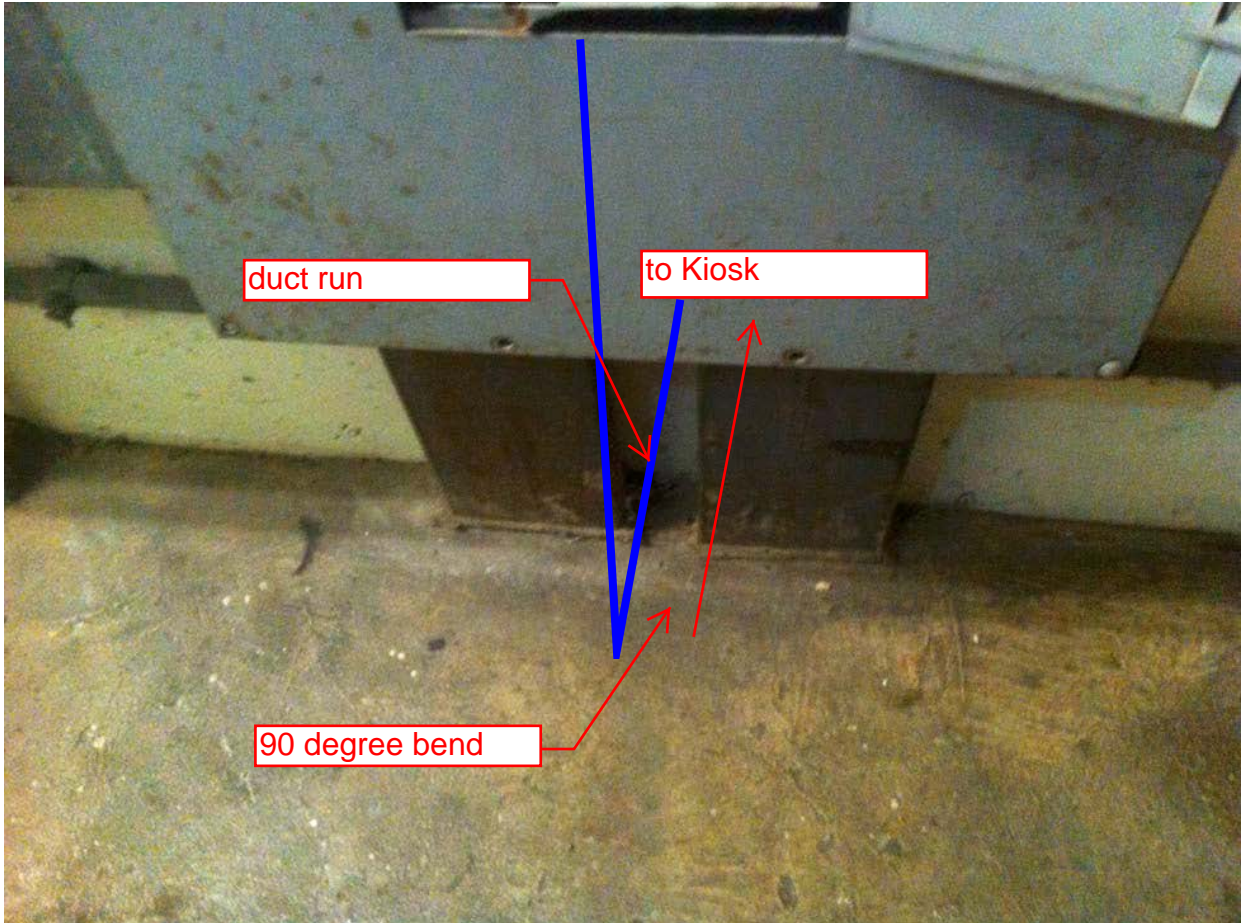
Scoping of Power Duct - Kiosk to AFC Panel		
Task	Yes/No	Notes
Kiosk to AFC Panel (50 foot run)		
Was video scoping completed for the entire duct / conduit run?	No	Scoping of power duct from kiosk to AFC Panel was completed to 90 degree walker duct bend at AFC Panel. Refer to WMATA Silver Spring North Kiosk to AFC Video.avi file.
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	
Observations / Issues / Next Steps		
Sign Off		
	GFP Representative	WMATA PRGM
Name:	Tino Sahoo	
Signature:		
Date:	9/12/2014	

Photo #1 – B08 Silver Spring North: Kiosk on Mezzanine level



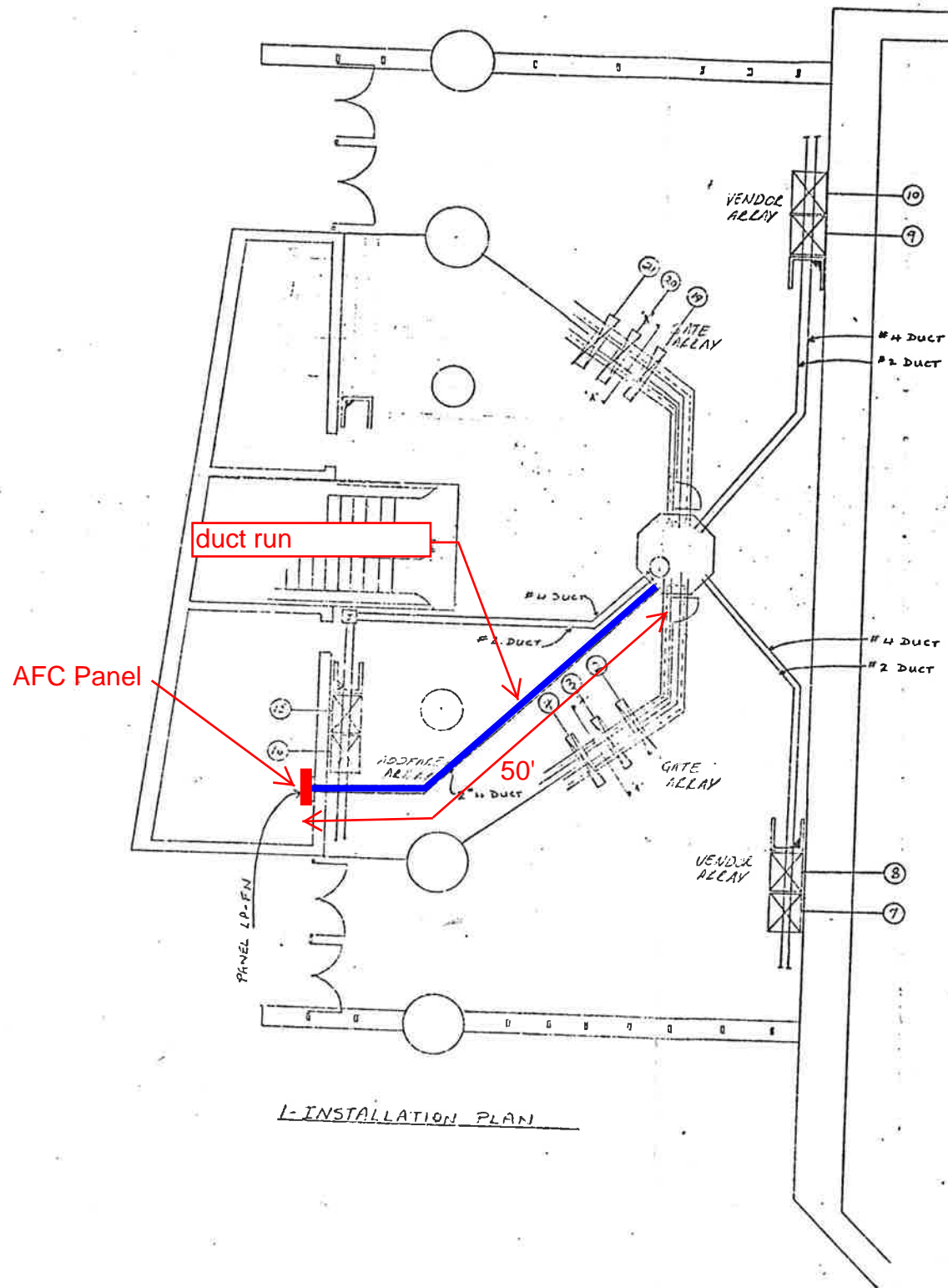
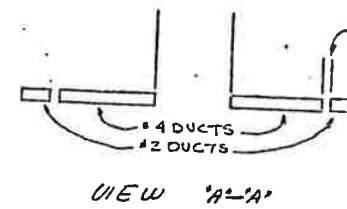
Photo #2 – B08 Silver Spring North: Duct run into AFC Panel



NOTES:

1. ALL INFORMATION CONCERNING DUCTS AND EQUIPTS IS BASED ON INFORMATION SUPPLIED TO CUBIC WESTERN DATA BY WPMATA
2. TOTAL MACHINE INVENTORY IS DEPICTED ON THIS DRAWING
3. THE MINIMUM OPERATIONAL MACHINE INVENTORY IS REFERENCED ON THIS DRAWING BY THE X DRAWN THRU THE MACHINE
4. FOR AS BUILT CONDITIONS SEE SHEET 'A'
5. FOR REFERENCED DRAWINGS USED SEE SUPPORT DOCUMENTATION PACKAGE FOR THIS MEZZANINE

REVISIONS		
DESCRIPTION	DATE	AP



I-INSTALLATION PLAN

WASHINGTON METRO
 AREA TREATMENT AUTHORITY

REFERENCE DRAWINGS USED
 BECHTEL REF. SK.#
 BECHTEL REF. DWG.#
 CWD REF. DWG.#

CONTRACT NUMBER 22 007A		CUBIC WESTERN DATA <small>A subsidiary of C.W.D. Corporation 5600 KATY MESA ROAD • POST OFFICE BOX 62762 • SAN ANTONIO, TX 78262</small>
SILVER SPRING NORTH STATION AFC MACHINES (31)		
TEL _____ ENGRG _____ DESIGN _____ CHECK _____ DRAWN _____	DESIGN ACTIVITY APPROVAL _____	SIZE _____

0403

Mezzanine Inspection Report

REVISION 1

Date: 09/11/14	Station Name: B08 Silver Spring South	Mezzanine #: 030	Completed By: Mike Butler
----------------	---------------------------------------	------------------	---------------------------

Summary

Video scoping completed for power / communication ducts in faregate array; pull strings were installed in communication duct. Video scoping and pull string installation was completed between Kiosk and AFC Panel; however there was a partial collapse in the walker duct 15' from the Kiosk. Mini-faregates on mezzanine floor were successfully video scoped and pull string installed in communication duct. Refer to Photo #3 and as-built drawing for location.

Scanning was conducted to identify a new route from the Kiosk to AFC Panel. A new duct is proposed to run parallel to existing duct from Kiosk to AFC Panel. When the proposed duct reaches the wall, there will be a proposed handhole and then the duct will core drill through the base of the wall between the mezzanine and Room 119. Once inside Room 119, the duct will stub-up vertically and transition to an overhead conduit (via a junction box) that will feed into the top of the AFC Panel.

Scoping of Faregate Array(s)

Task	Yes/No	Notes
Communications Duct – Upper Faregate Array (6 gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to "WMATA Silver Spring South Upper Faregate Comm Video.avi".
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	3" walker duct, not at capacity (< 10 wires).
Communications Duct - Lower Faregate Array (6 gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to "WMATA Silver Spring South Lower Faregate Comm Video.avi".
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	3" walker duct, not at capacity (< 10 wires).
Power Duct - Upper Faregate Array (6 gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to "WMATA Silver Spring South Upper Faregate Power Video.avi"
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	6" walker duct, not at capacity (< 8 wires).
Power Duct - Lower Faregate Array (6 gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to "WMATA Silver Spring South Lower Faregate Power Video.avi"
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	6" walker duct, not at capacity (< 8 wires).


Scoping of Power Duct - Kiosk to AFC Panel		
Task	Yes/No	Notes
Kiosk to AFC Panel (Distance: 46')		
Was video scoping completed for the entire duct / conduit run?	Yes	Refer to "WMATA Silver Spring South Kiosk to AFC Panel Video.avi".
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	Duct collapsed 15' from Kiosk.
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	N/A	6" walker duct, not at capacity (< 8 wires).
Observations / Issues / Next Steps		
<p>The proposed duct / conduit run is 54' from Kiosk to AFC Panel (44' of duct and 10' of conduit) - refer to photos and drawings for more information.</p> <p>The mini-faregates (4 gates) had video scoping and pull string installation completed in 3" communication duct; video scoping was also completed in 6" power duct. Both ducts are not at capacity (less than 10 wires) and have no obstructions. Refer to video files: "WMATA Silver Spring South Mini Fairgate Comm Video.avi" and "WMATA Silver Spring South Mini Fairgate Power Video.avi".</p>		
Sign Off		
	GFP Representative	WMATA PRGM
Name:	Mike Butler	
Signature:		
Date:	02/06/15	

Photo #1 – Proposed and existing ducts on mezzanine floor



Photo #2 – Proposed and existing ducts on mezzanine floor

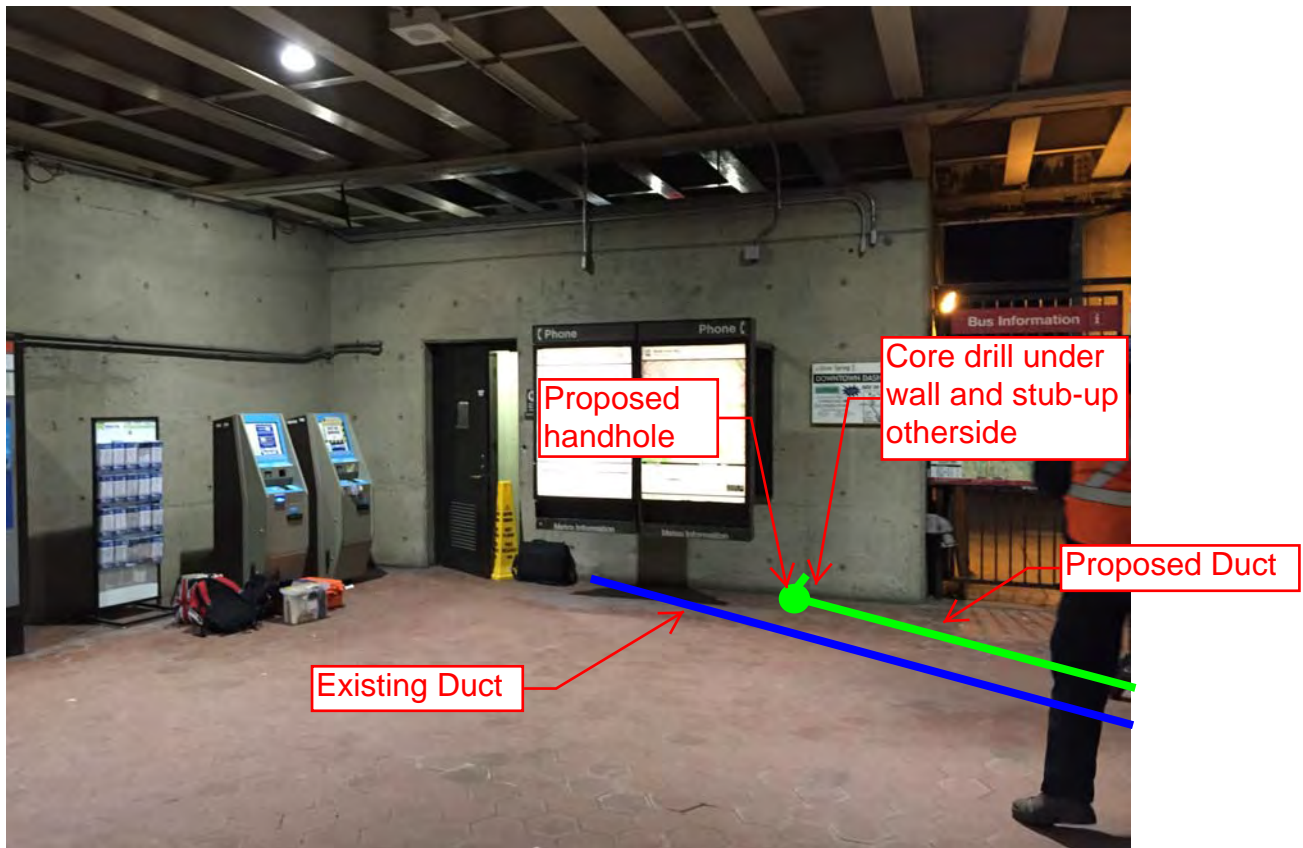


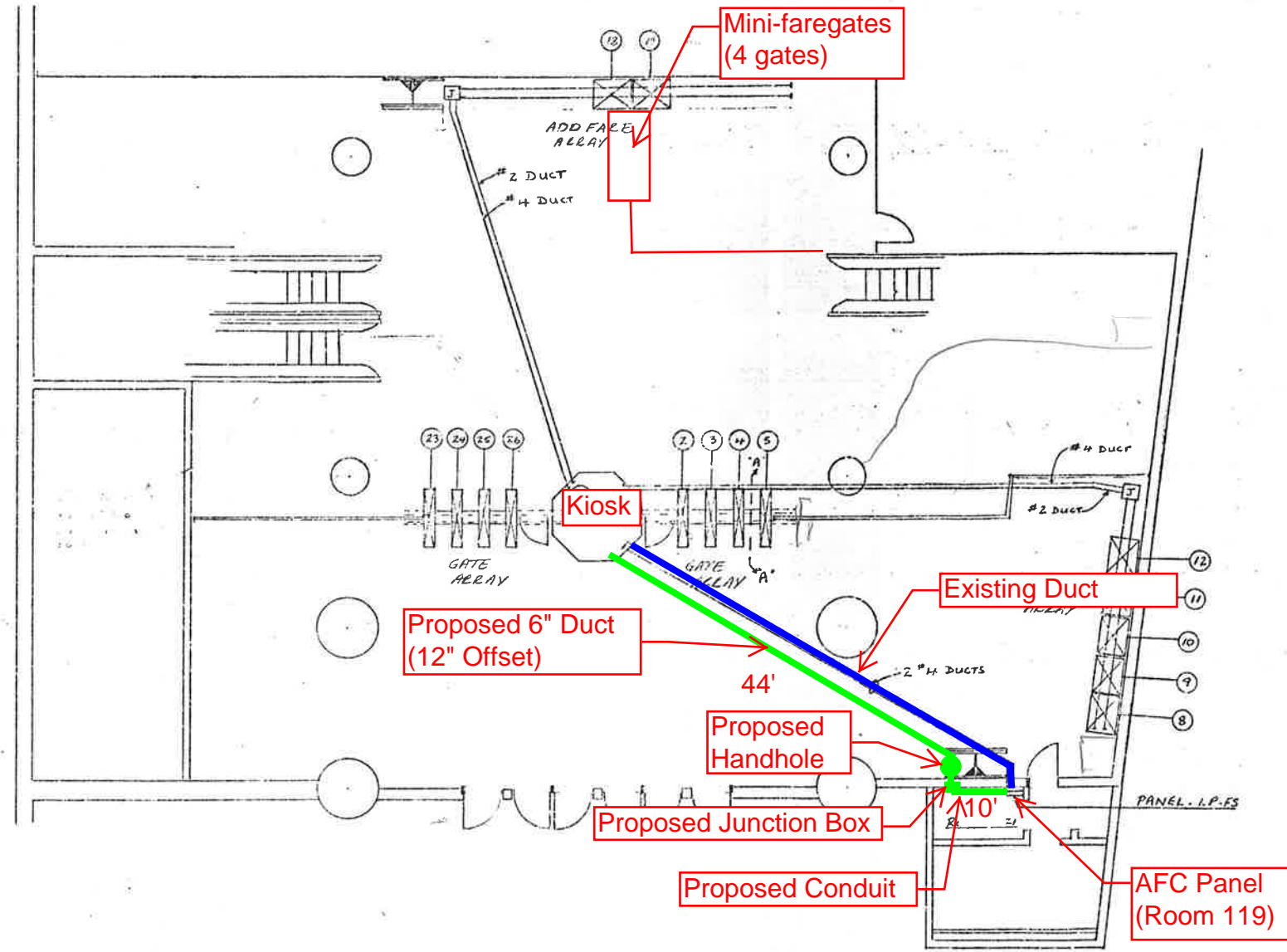
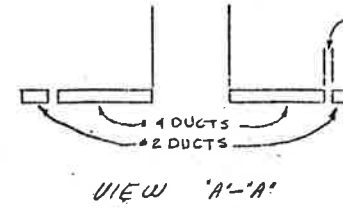
Photo #3 – Mini-faregates on mezzanine floor



NOTES:

1. ALL INFORMATION CONCERNING DUCTS AND CONDUITS IS BASED ON INFORMATION SUPPLIED TO CUBIC WESTERN DATA BY WMATA.
2. TOTAL MACHINE INVENTORY IS DEPICTED ON THIS DRAWING. IE MINIMUM OPERATIONAL MACHINE INVENTORY IS REFERENCED ON THIS DRAWING BY THE 'X' DRAWN THRU THE MACHINE.
3. FOR AS BUILT CONDITIONS SEE SHEET #2.
4. FOR REFERENCED DRAWINGS USED SEE SUPPORT DOCUMENTATION PACKAGE FOR THIS MEZZANINE.

REVISIONS		
DESCRIPTION	DATE	APVD



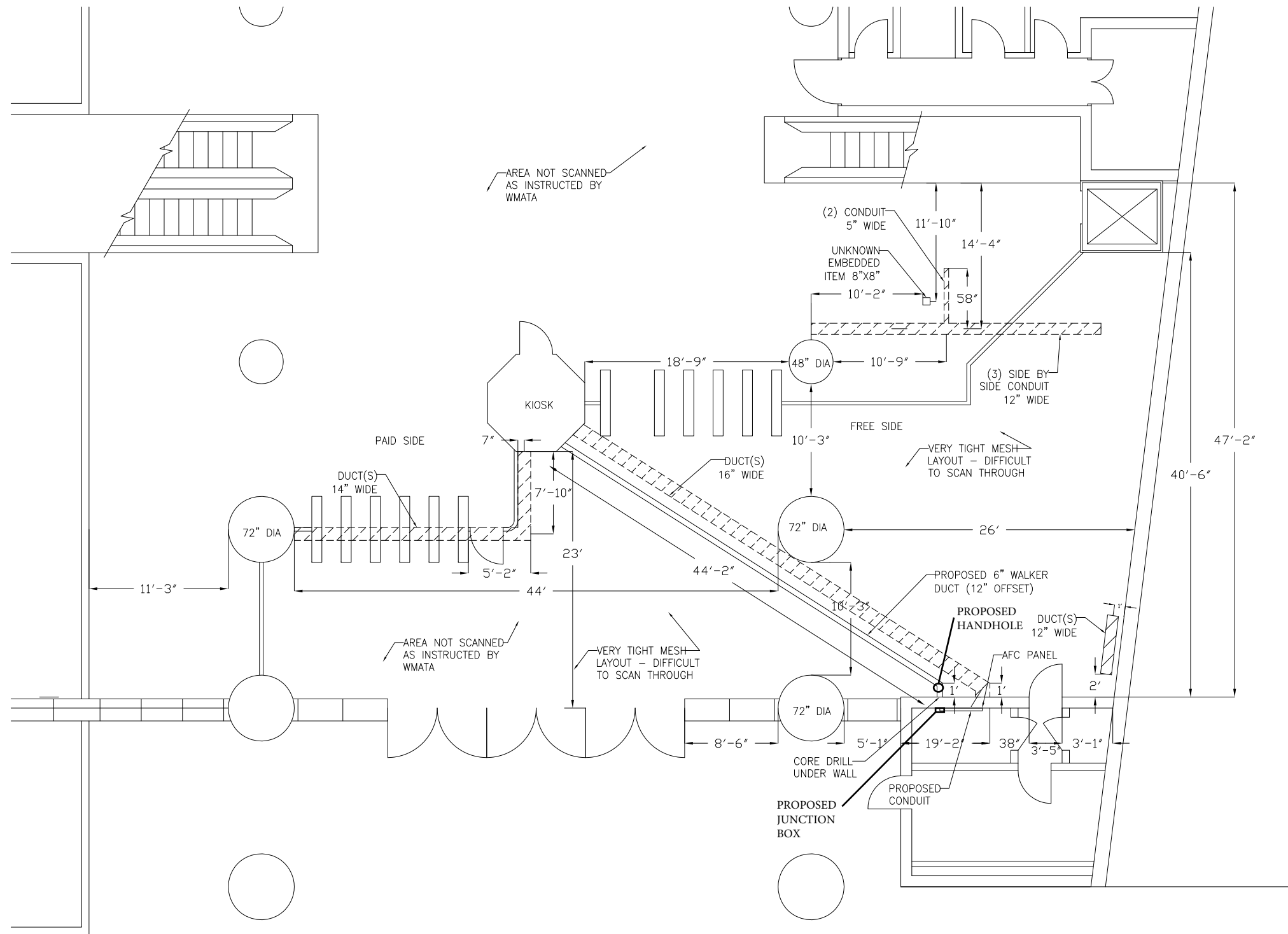
1- INSTALLATION PLAN

REFERENCE DRAWINGS USED

BECHTEL REF. SK.#
 BECHTEL REF. DWG.#
 CWD REF. DWG.#

WASHINGTON METRO POLICE
 AREA TRAINING AND...

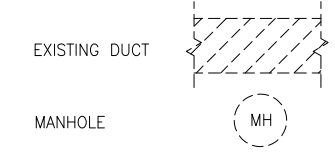
CONTRACT NUMBER 22007A		CUBIC WESTERN DATA A subsidiary of Cubic Corporation 5650 KEARNY MESA ROAD • POST OFFICE BOX 00787 • SAN DIEGO, CA 92108	
DESIGN ACTIVITY APPROVAL		SILVER SPRING SOUTH STATION AFC MACHINES	
APPROVED		SIZE	DRAWING NUMBER 926-0404-2
			REV 30



PLAN NOTES:

1. DIMENSIONS ARE IN FEET AND INCHES.
2. DIMENSIONS ARE FOR REFERENCE ONLY.
3. EXISTING IN-FLOOR DUCTS/CONDUITS WERE IDENTIFIED USING A PORTABLE GPR SCANNING DEVICE.
4. THE SCANNING COVERAGE IS LIMITED TO THE MEZZANINE FLOOR ONLY.
5. GPR SCANNING HAS THE FOLLOWING LIMITATIONS: (i) 12 INCHES VISIBLE SCANNING DEPTH; (ii) VISIBILITY BEYOND CONGESTED OR NEAR SURFACE REINFORCEMENT LAYERS; (iii) DETECTION OF PVC AND OTHER NON-METALLIC OBJECTS (iv) DETERMINATION OF SIZE AND EXTENTS OF SUBSURFACE ANOMALIES SUCH AS SLAB VOIDS OR REBAR SIZES; AND (v) VISIBILITY WHEN VARIABLE MOISTURE CONDITIONS EXIST IN THE SUBSTRATE.

LEGEND:



SILVER SPRING STATION
 E-100 SCALE: 3/16" = 1'-0"

CONTRACT NO.
 XXXXXX

DESIGNED C. LOOSE 11-14
 DATE 11-14
 DRAWN C. LOOSE 11-14
 DATE 11-14
 CHECKED M. BUTLER 11-14
 DATE 11-14
 APPROVED _____
 DATE _____

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

APPROVED _____

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY
 DEPARTMENT OF TRANSIT INFRASTRUCTURE
 AND ENGINEERING SERVICES
 OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM
 APPROVED _____

GFP A Gannett Fleming/Parsons
 JOINT VENTURE
 SUBMITTED _____
 PROJECT MANAGER

15-NEPP-01
 IN - FLOOR DUCT INSPECTIONS
 B08 SILVER SPRING SOUTH
 PROPOSED ELECTRICAL DUCT PATH
 SCALE NOT TO SCALE
 DRAWING NO. B08-E-100
 XXX

Mezzanine Inspection Report (Scoping)

Date: 11/17/2014	Station Name: B09 Forest Glen	Mezzanine #: 032	Completed By: Mike Butler
-------------------------	--------------------------------------	-------------------------	----------------------------------

Summary

Video scoping and pull string installation for the communication duct array was successfully completed. Video scoping for the power duct in the faregate array was also successfully completed. Scoping and pull string installation for the power run from the kiosk to the AFC panel was not completed due to issues identifying the existing run from the junction box to the AFC panel, as well as hot wires from other panels. It appears the existing conduit runs vertically down from the AFC panel across two levels to the kiosk through multiple shared raceways including junction boxes, troughs, etc. A proposed run has been established from the kiosk to the AFC panel. The run would utilize the existing duct from the kiosk through handholes 1 and 2 and continue into the junction box in room C100. From the junction box, a proposed conduit run would then continue down the hall, and wrap the walls of the two staircases up to room C101 where it would be cored through the wall above the door. It would then continue down the small hallway from where it would be cored again into room C106. Once inside C106, it would turn and run overhead along the wall to the AFC panel. See photos below for details.

Scanning is not required at this mezzanine.

Scoping of Faregate Array(s)

Task	Yes/No	Notes
Communications Duct – Faregate Array (8 Gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to WMATA Forest Glen Comm Video.avi file
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	
Power Duct - Faregate Array (8 Gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to WMATA Forest Glen Power Duct Video.avi file
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	

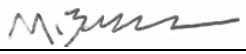
Scoping of Power Duct - Kiosk to AFC Panel		
Task	Yes/No	Notes
Kiosk to Handhole 1 (15' run)		
Was video scoping completed for the entire duct / conduit run?	No	Live wires prevented scoping
Was pull string installed?	No	
Were there any obstructions or blockages? Provide details of type and specific location.	N/A	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	
Handhole 1 to Handhole 2 (20' run)		
Was video scoping completed for the entire duct / conduit run?	No	Live wires prevented scoping
Was pull string installed?	No	
Were there any obstructions or blockages? Provide details of type and specific location.	N/A	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	
Handhole 2 to Junction box (20' run)		
Was video scoping completed for the entire duct / conduit run?	No	Live wires prevented scoping
Was pull string installed?	No	
Were there any obstructions or blockages? Provide details of type and specific location.	N/A	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	
Junction box to AFC Panel (Length of existing run undetermined)		
Was video scoping completed for the entire duct / conduit run?	No	
Was pull string installed?	No	
Were there any obstructions or blockages? Provide details of type and specific location.	N/A	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	N/A	Existing conduit run could not be traced between the Junction Box and AFC Panel. A proposed conduit option was identified.
Observations / Issues / Next Steps		
Total proposed run is approximately 210' from Kiosk to AFC panel. This includes 65' of existing duct from the duct from the kiosk to the junction box, and 145' of proposed conduit between the junction box and AFC panel.		
Sign Off		
	GFP Representative	WMATA PRGM
Name:	Mike Butler	
Signature:		
Date:	11/17/14	

Photo #1 - Existing run from kiosk to handhole 1

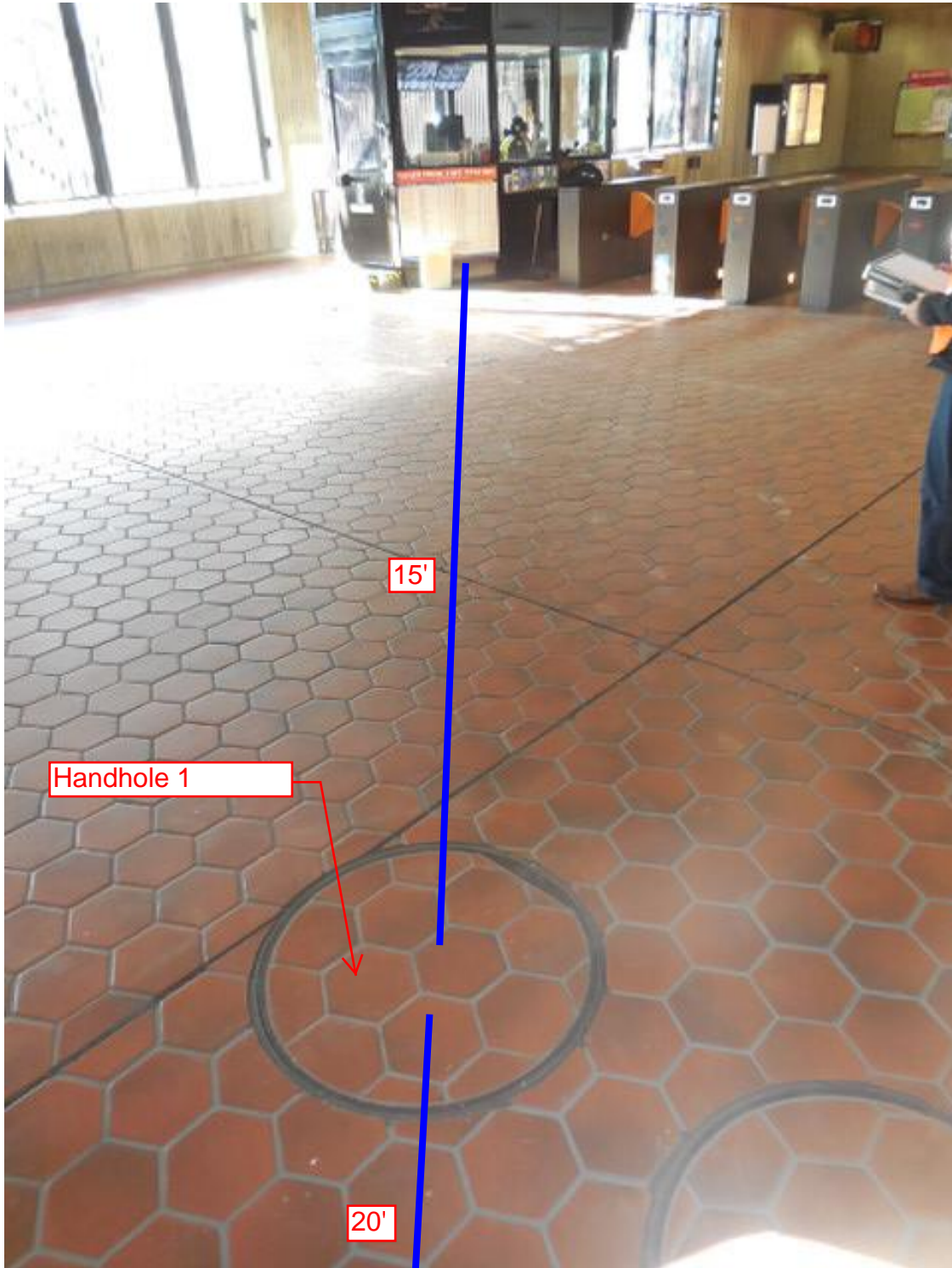


Photo #2 - Existing duct run from handhole 2 to junction box

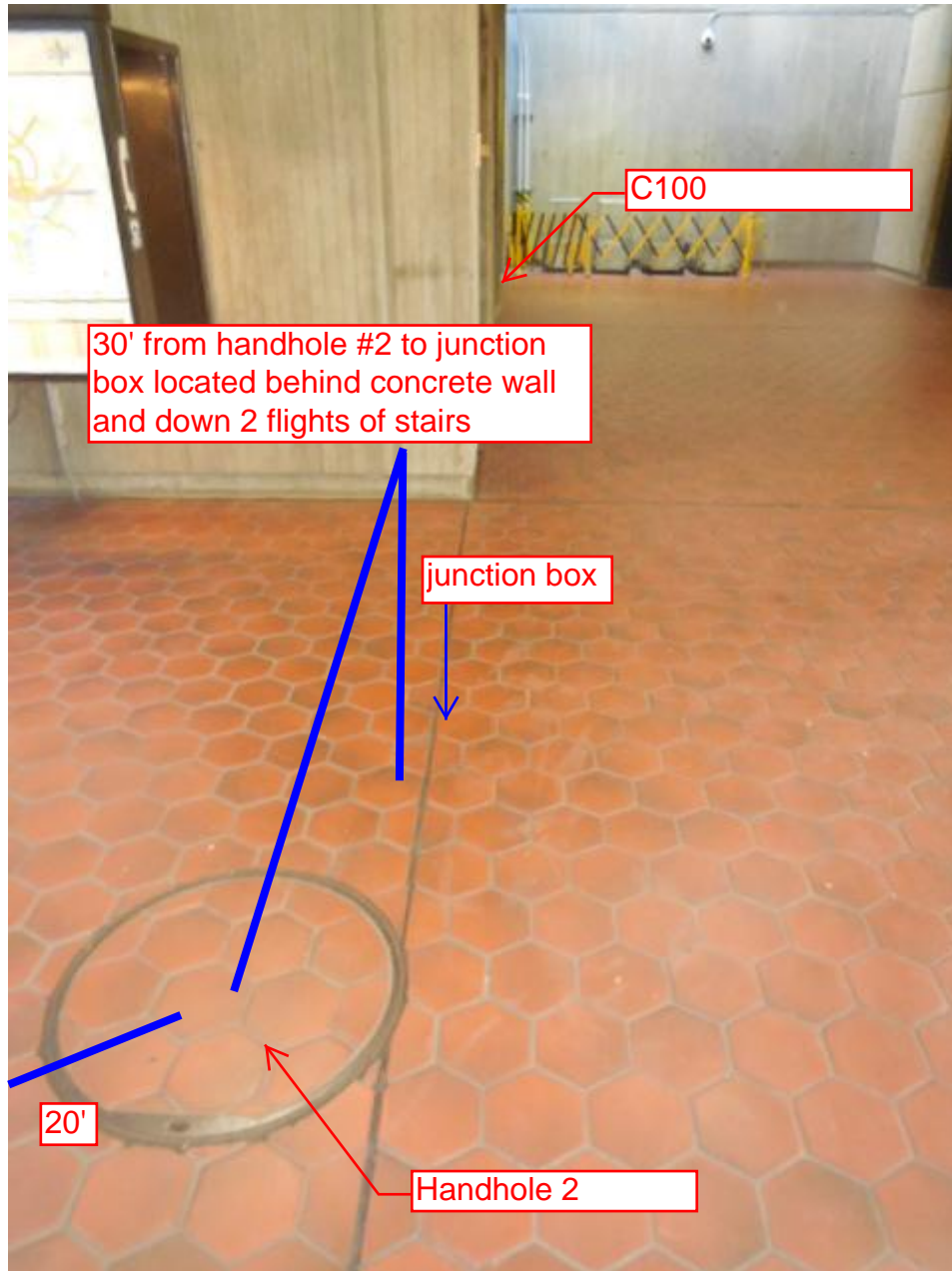


Photo #3 - Proposed conduit run from junction box towards AFC panel

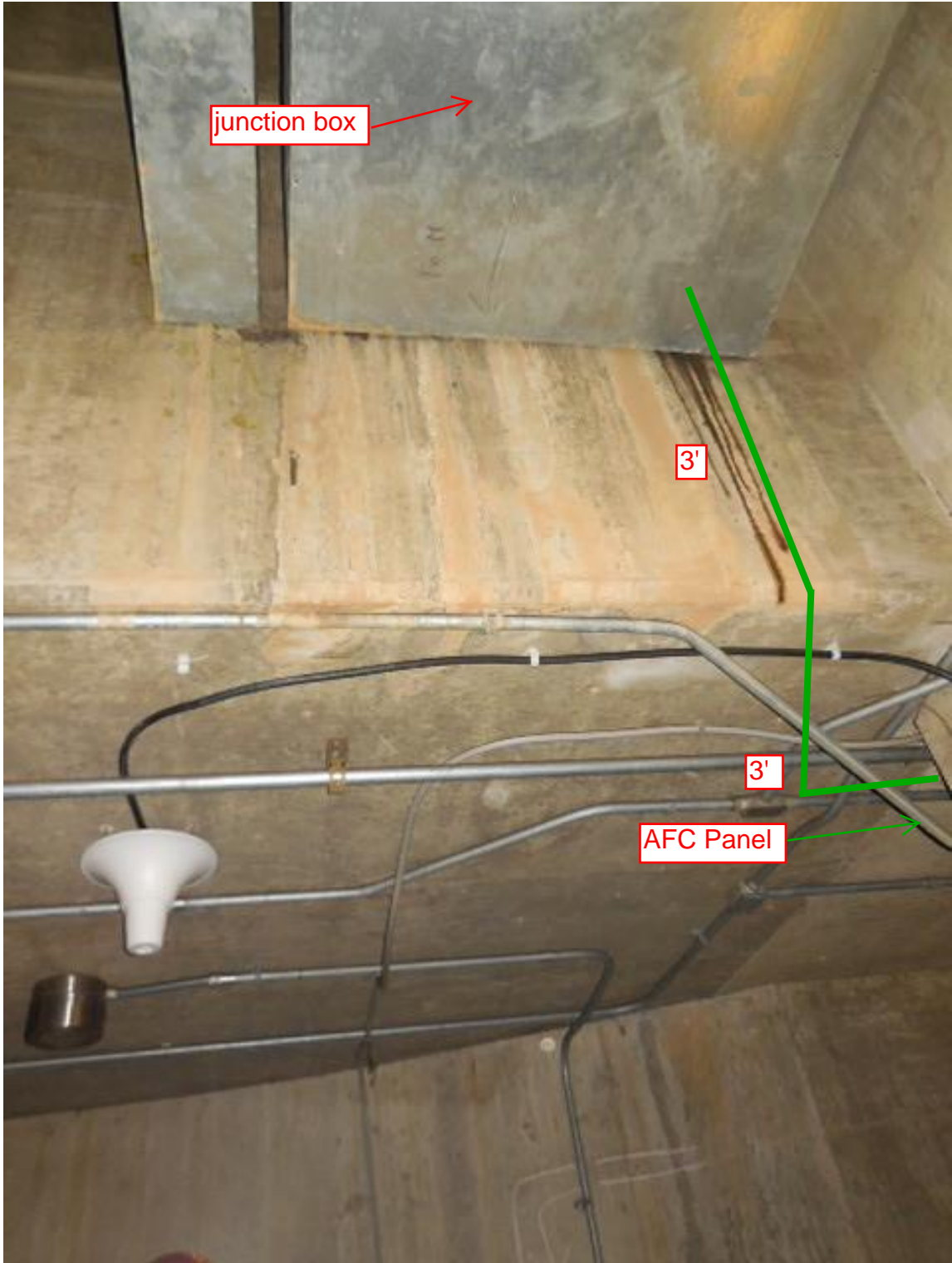


Photo #4 - Proposed conduit run in hallway between junction box and Room C101

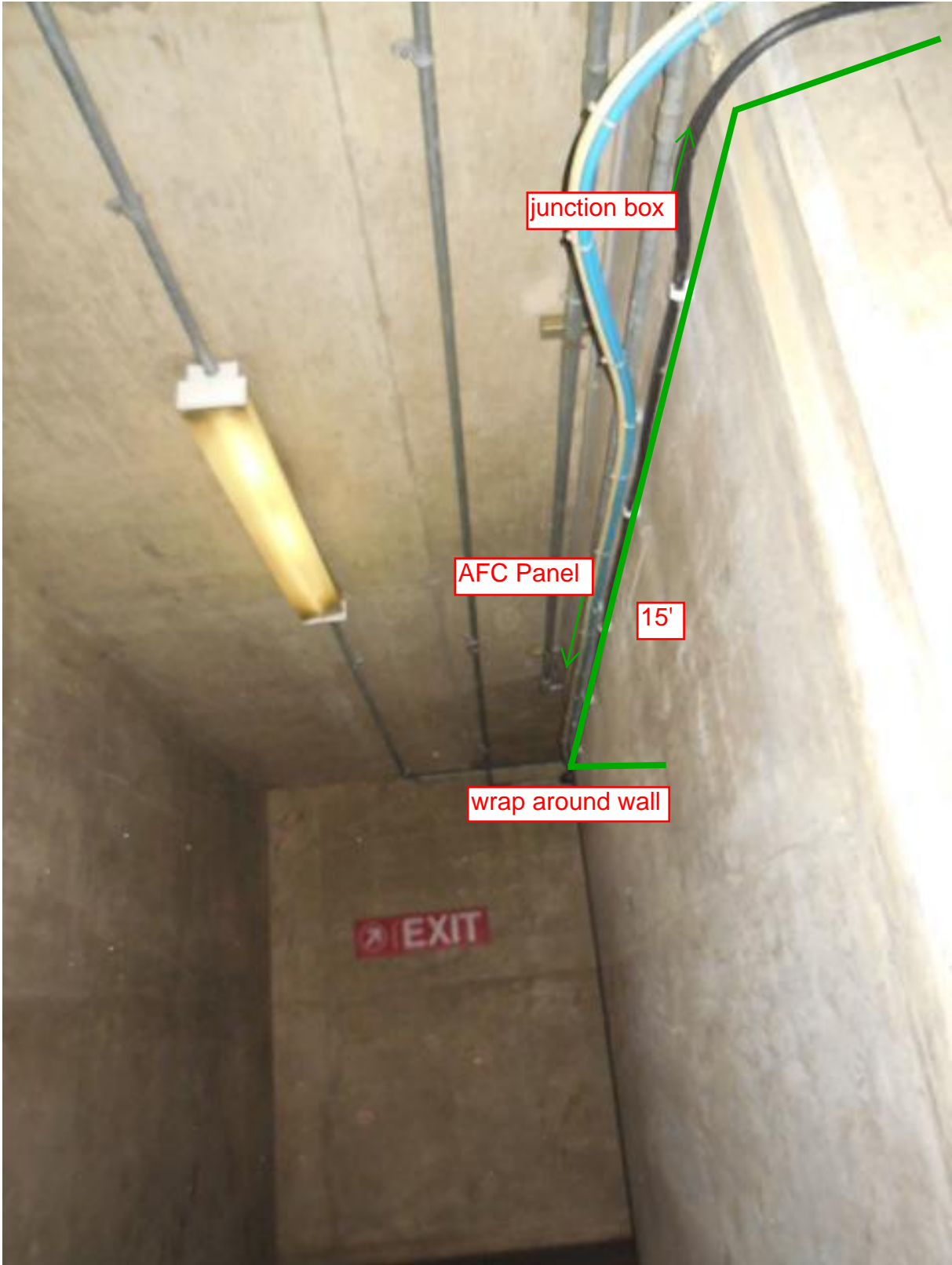


Photo #5 - Proposed conduit run in hallway between junction box and Room C101

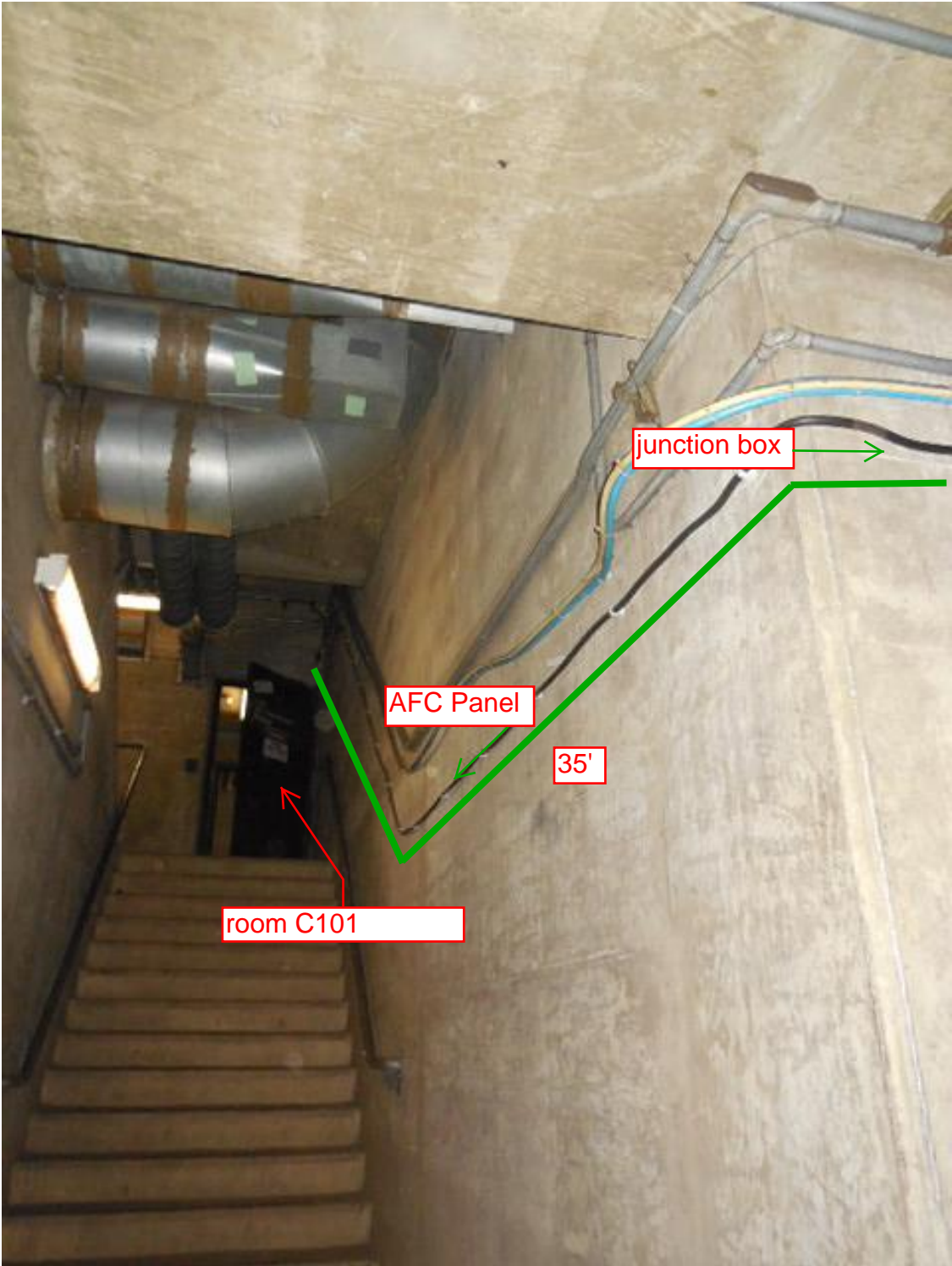


Photo #6 - Proposed conduit run showing core drill entering Room C101

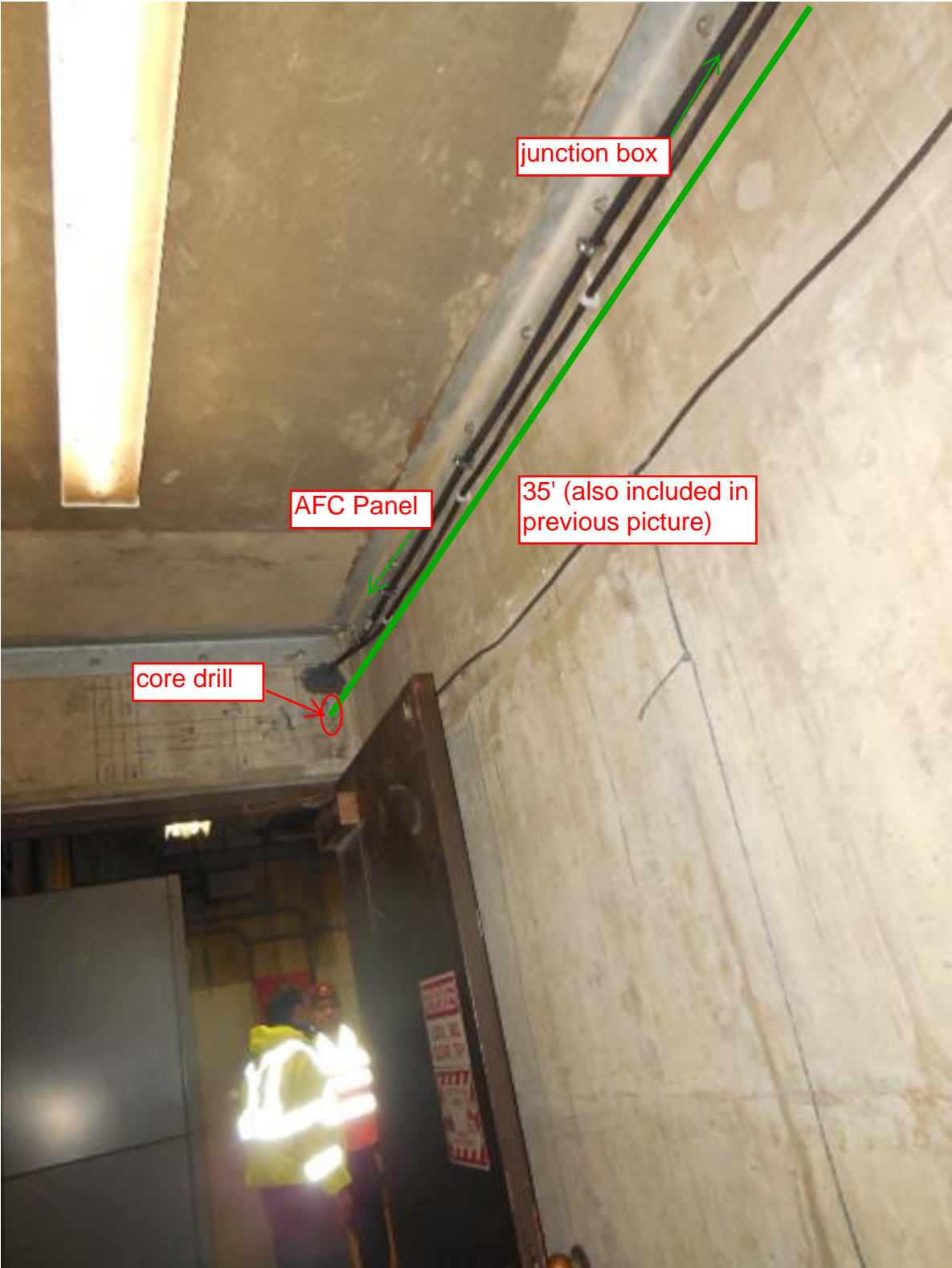


Photo #7 - Proposed conduit run from Room C101 entering Room C106

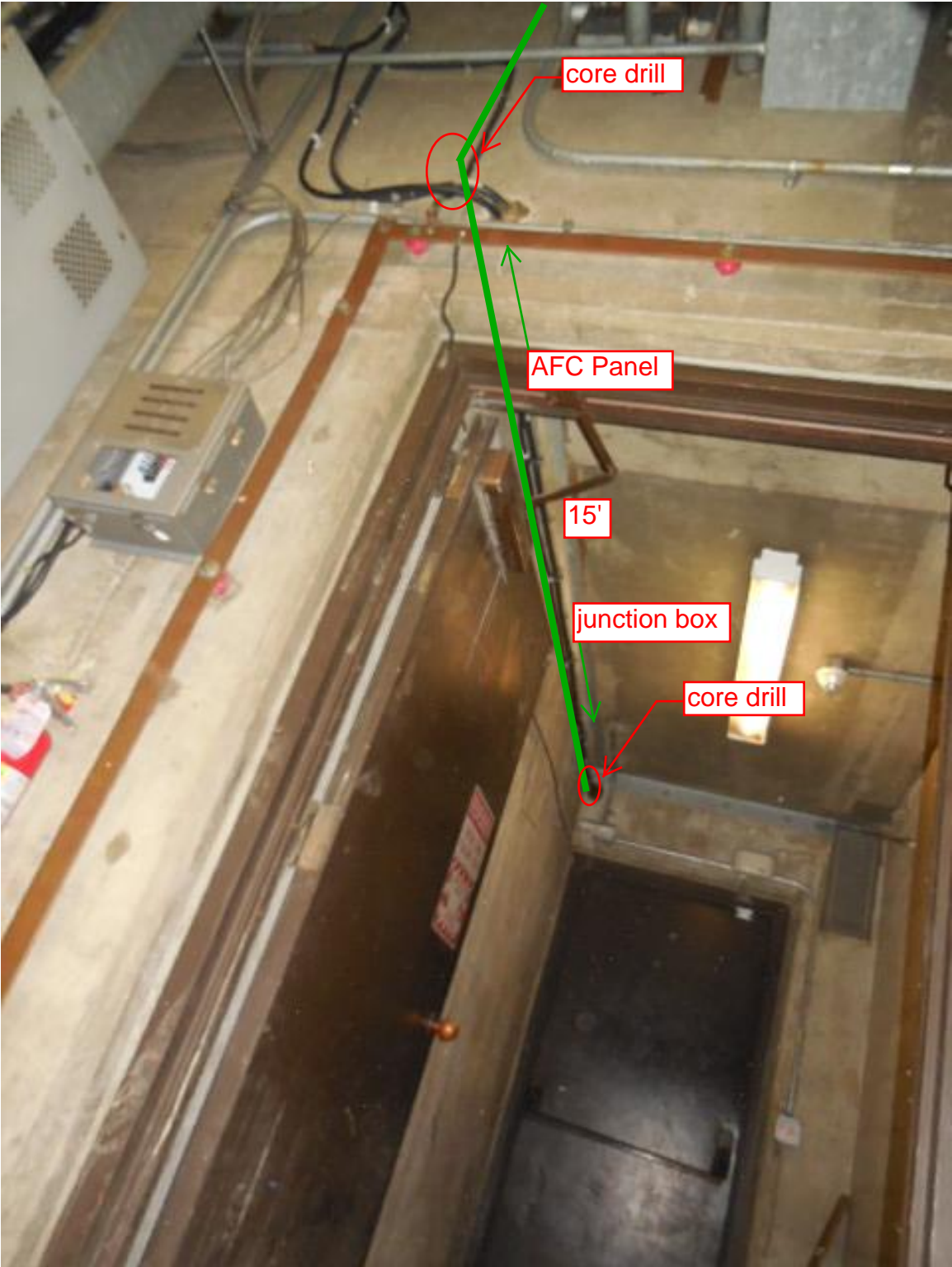


Photo #8 - Proposed conduit run inside Room C106

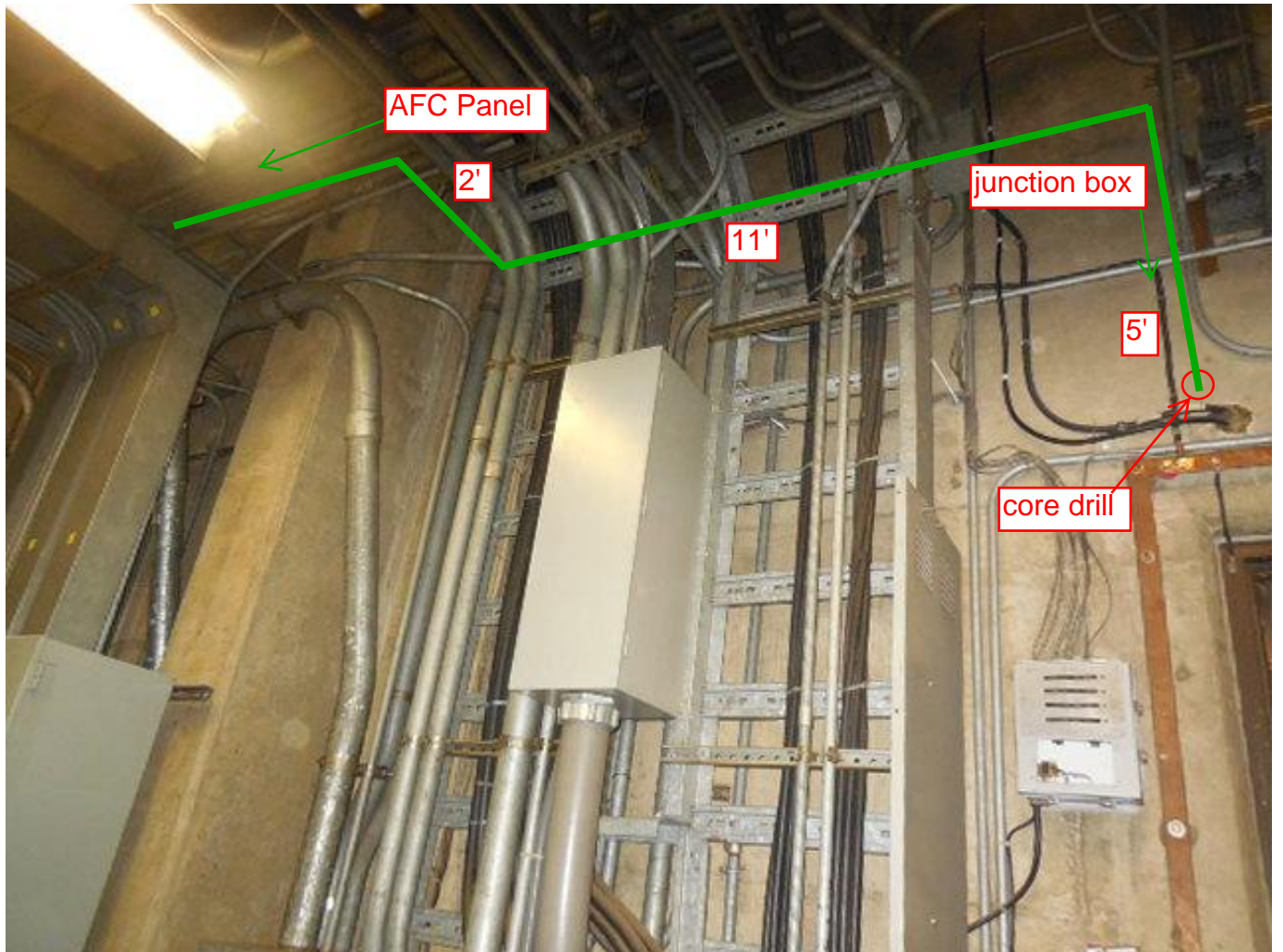


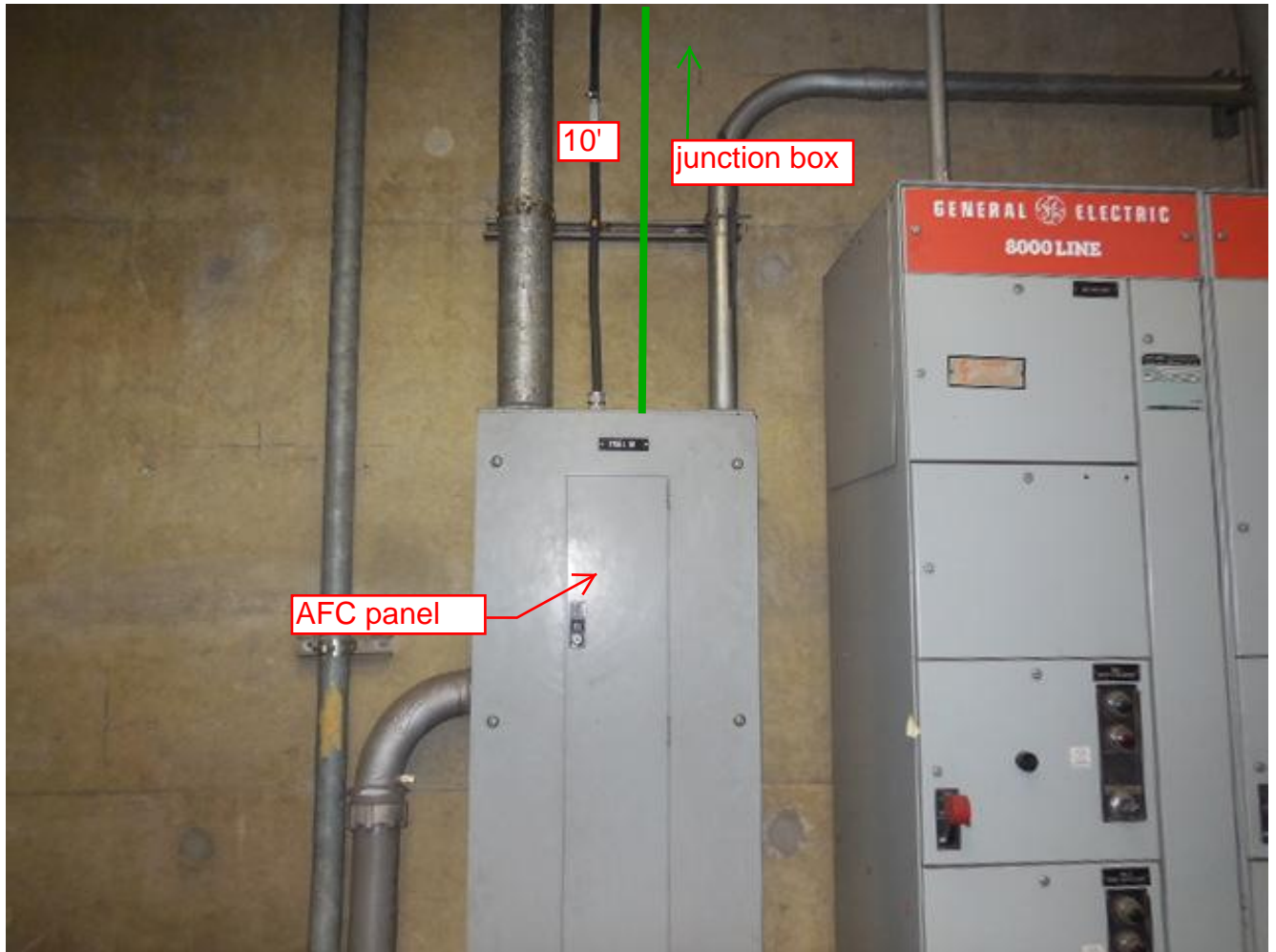
Photo #9 - Proposed conduit run inside Room C106



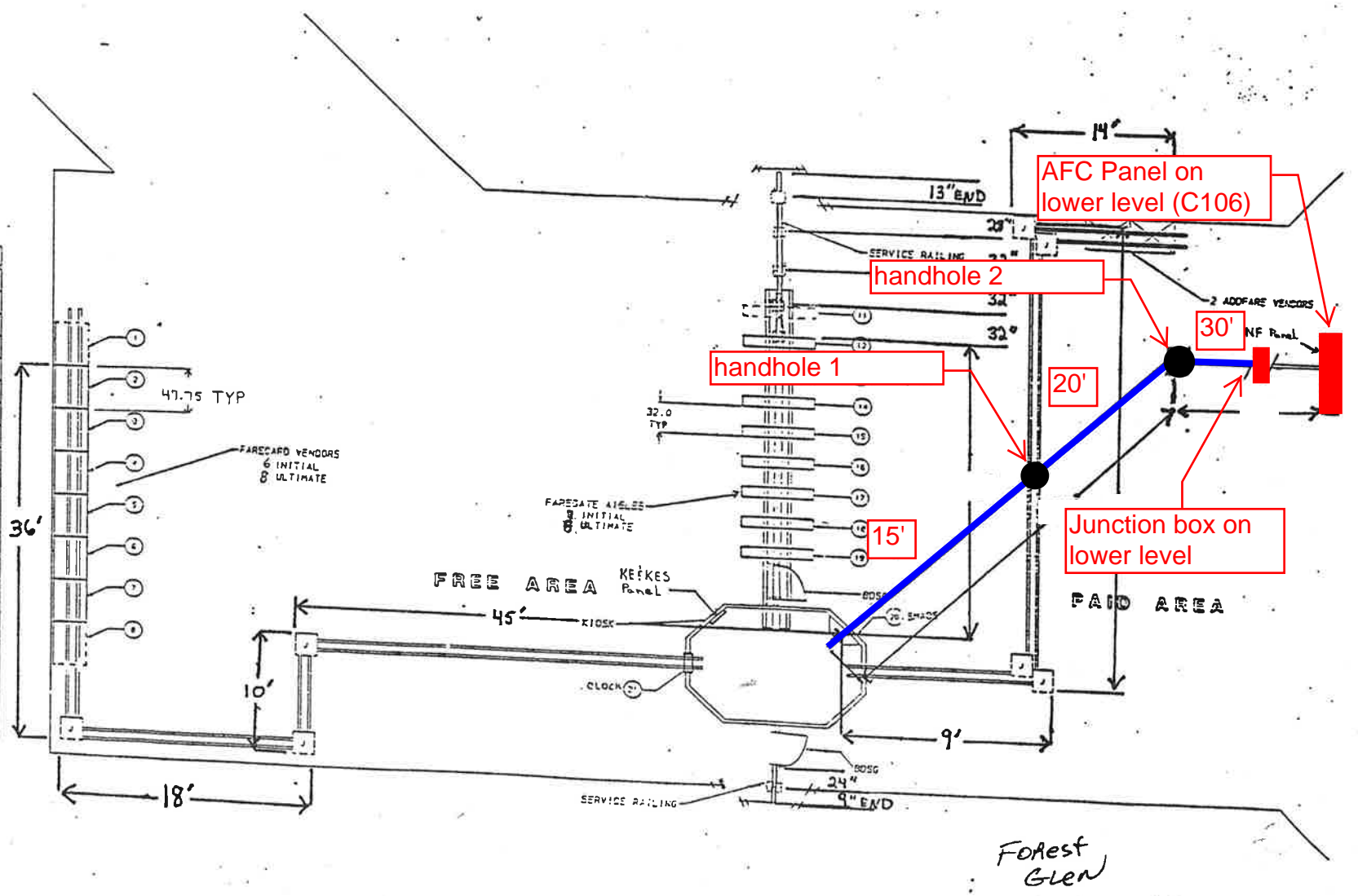
Photo #10 - Proposed conduit run inside Room C106



Photo #11 - Proposed conduit run connection to AFC Panel



NO.	NAME	SN	PANEL AFC	TYPE
1	IVF	FUTURE	NF	
2	VENDOR	1842	11	3
3	VENDOR	1844	11	5
4	VENDOR	1834	11	7
5	VENDOR	1827	11	9
6	VENDOR	1822	11	11
7	VENDOR	1829	11	13
8	VENDOR	FUTURE	11	
9	ADDFARE	2810	11	17
10	ADDFARE	2811	11	19
11	GATE	FUTURE	11	
12	EXIT GATE	4811	11	
13	REV. GATE	7854	11	6
14	REV. GATE	7829	11	9
15	REV. GATE	7832	11	10
16	REV. GATE	7836	11	12
17	REV. GATE	7845	11	14
18	REV. GATE	7839	11	15
19	ENTRY GATE	3816	11	18
20	SHACS	8810	KE	1
21	S. CLOCK	98990	KES	9



Forest Glen

DATE	10/1/00
BY	...
CHECKED	...
APPROVED	...
DESIGNED	...
DRAWN	...
SCALE	...
TITLE	...

Mezzanine Inspection Report

REVISION 1

Date: 09/03/2014	Station Name: B10 Wheaton	Mezzanine #: 033	Completed By: Tino Sahoo
------------------	---------------------------	------------------	--------------------------

Summary

Scoping was completed to the extent possible. Video scoping and pull string installation was not completed for the comm. and power faregate array ducts due to obstructions. The power ducts from the kiosk to (PANEL AFC) via two mezzanine level handholes were successfully video scoped and had pull strings installed.

Scanning is not required per scope of work, but it is recommended for the comm. and power faregate array ducts..

Scoping of Faregate Array(s)

Task	Yes/No	Notes
Communications Duct – Upper Faregate Array (10 Gates)		
Was video scoping completed for the entire duct run?	No	Refer to WMATA Wheaton Fairgate Comm Left Duct Video.avi and WMATA Wheaton Fairgate Comm Right duct ZVideo.avi files.
Were pull strings installed at all faregates in the array?	No	No faregates had pull strings installed.
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	Video scope reached 10 feet into the run before hitting an obstruction. Possible collapsed duct; duct is heavily corroded from sitting in water.
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	N/A	
Communications Duct - Lower Faregate Array (N/A)		
Was video scoping completed for the entire duct run?	N/A	
Were pull strings installed at all faregates in the array?	N/A	
Were there any obstructions or blockages? Provide details of type and specific location.	N/A	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	N/A	
Power Duct - Upper Faregate Array (10 gates)		
Was video scoping completed for the entire duct run?	No	Refer to WMATA Wheaton Fairgate Power Left Duct Video.avi and WMATA Wheaton Fairgate Power Right duct Video.avi files.
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	Video scope reached 10 feet into the run before hitting an obstruction. Possible collapsed duct; duct is heavily corroded from sitting in water.
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	N/A	
Power Duct - Lower Faregate Array (N/A)		
Was video scoping completed for the entire duct run?	N/A	
Were there any obstructions or blockages? Provide details of type and specific location.	N/A	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	N/A	


Scoping of Power Duct - Kiosk to AFC Panel		
Task	Yes/No	Notes
Kiosk to Handhole 1 (12 foot section)		
Was video scoping completed for the entire duct / conduit run?	Yes	Refer to WMATA Wheaton Power Kiosk to Mandhole Video.avi file.
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	
Handhole 1 to Handhole 2 (21 foot section)		
Was video scoping completed for the entire duct / conduit run?	Yes	Refer to WMATA Wheaton Power Handhole to Handhole.avi file.
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	
Handhole 2 to AFC Panel (33 foot section)		
Was video scoping completed for the entire duct / conduit run?	No	Bends prevented video scoping from being completed. Refer to WMATA Wheaton Power Handhole to 90 into JBox Video (1).avi file.
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	
Observations / Issues / Next Steps		
Sign Off		
	GFP Representative	WMATA PRGM
Name:	Tino Sahoo	
Signature:		
Date:	09/03/2014	

Photo #1: B10 Wheaton: Lock-out Tag-out of the feed breakers for the AFC Panel



Photo #2: B10 Wheaton: Lock-out Tag-out of the feed breakers for the AFC Panel

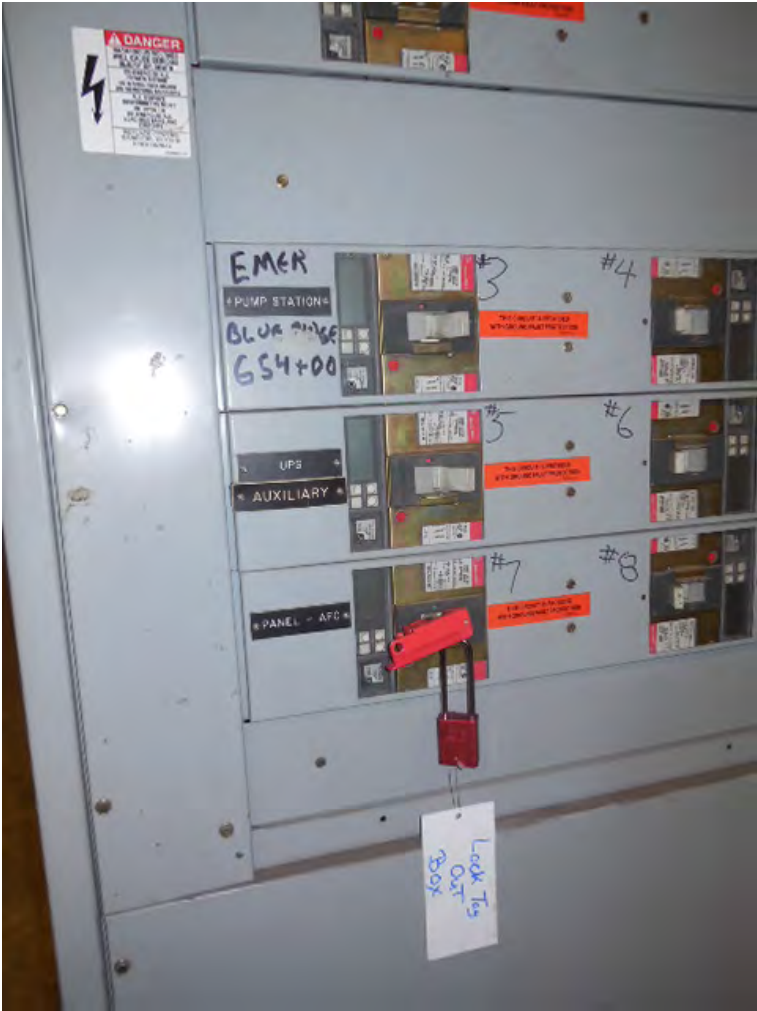


Photo #3: B10 Wheaton: Pushing in fish tape for the faregate array ducts



Photo #4: B10 Wheaton: Attempting to video-scope the faregate array ducts



Photo #5: B10 Wheaton: Attempting to rod the faregate array ducts



Photo #6: B10 Wheaton: Corroded communications duct opening in kiosk



Photo #7: B10 Wheaton: Corroded communications duct opening in kiosk



Photo #8: B10 Wheaton: Installing pull strings between the kiosk and AFC panel via the mezzanine handholes

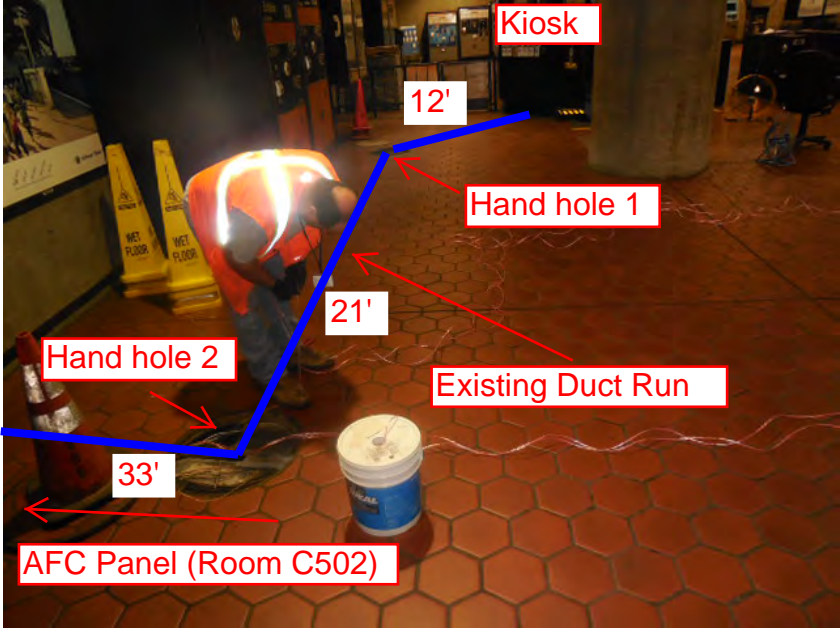


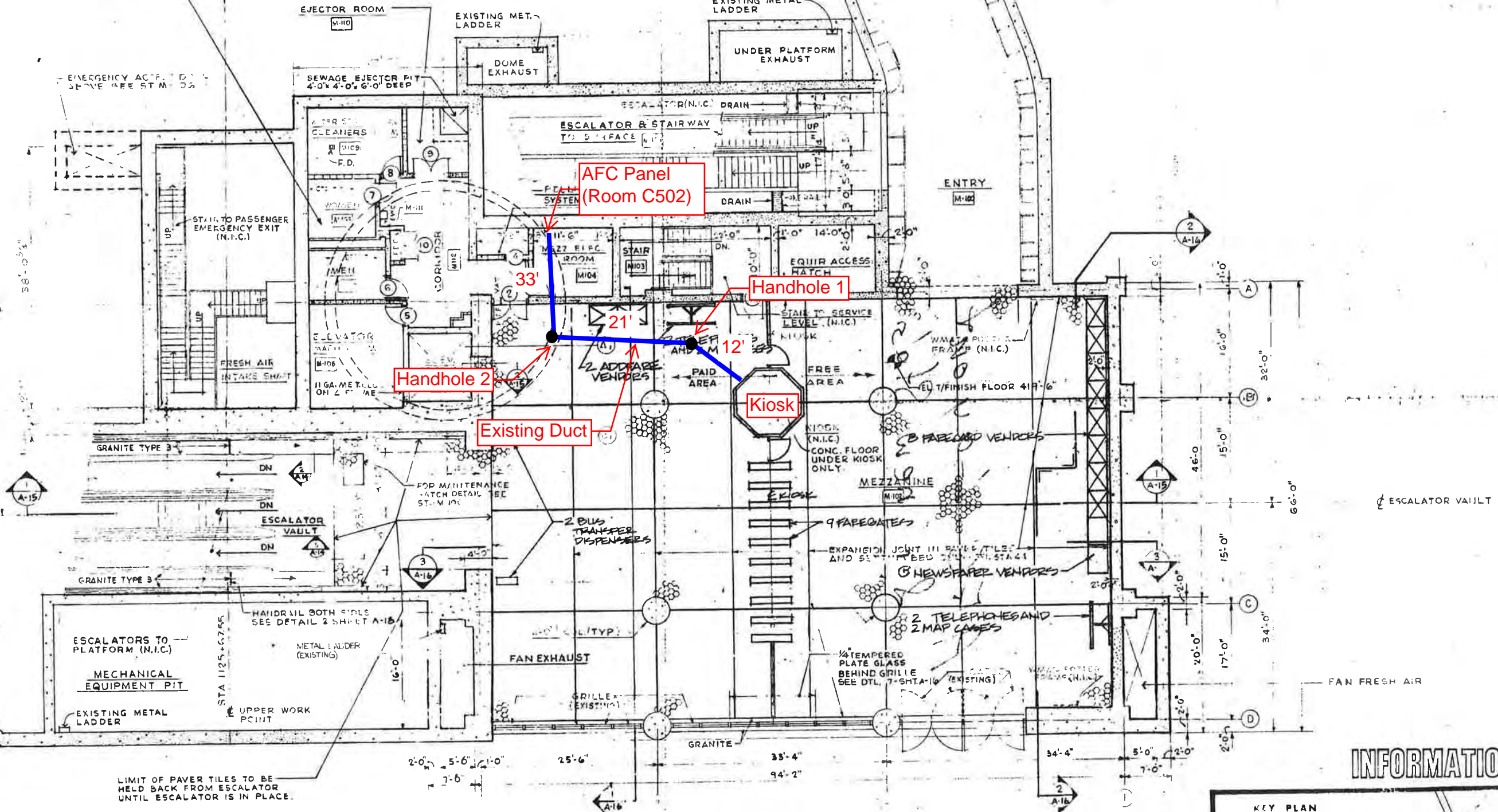
Photo #9: B10 Wheaton: Junction box near the AFC panel



Photo #10: B10 Wheaton: Installing the pull string in the junction box near the AFC panel

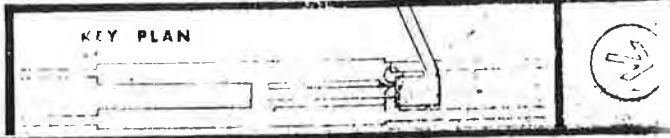


FOR 1/4" PLAN DETAIL OF ANCILLARY ROOMS SEE SHEET A-17



MEZZANINE PLAN EL. 7' FINISH FLOOR 419'-6"
SCALE 1/4" = 1'-0"

INFORMATION ONLY



DESIGNED	H.W.A.	6-20-86
DRAWN	A.J.D.	6-20-86
CHECKED		
APPROVED		

REFERENCE DRAWINGS		REVISIONS	
NUMBER	DESCRIPTION	DATE	DESCRIPTION

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

WMATA

APPROVED _____ DIRECTOR OF ARCHITECTURE

APPROVED _____ ASSISTANT GENERAL MANAGER FOR DESIGN & CONSTRUCTION

DE LEUW, CATHER & COMPANY
GENERAL ENGINEERING CONSULTANT

HARRY WEESE & ASSOCIATES
GENERAL ARCHITECTURAL CONSULTANT

SUBMITTED _____

WHEATON STATION

A.F.C. LAYOUT

SCALE AS SHOWN

DRAWING NO. _____

33

Mezzanine Inspection Report

Revision 1

Date: 06/03/15	Station Name: B11 Glenmont	Mezzanine #: 034	Completed By: Mike Butler
----------------	----------------------------	------------------	---------------------------

Summary

NEPP-01: Video scoping and pull string installation was completed in lower faregate communication duct and 15' power duct run from Handhole 1 to AFC Panel. Video scoping was also completed in lower faregate power duct. However, it was not possible to complete video scoping or pull string installation in upper faregate communication duct due to obstructions and water intrusion. Nor was it possible to video scope the upper faregate power duct due to obstructions and water intrusion. Video scoping and pull string installation for the 140' power duct run from Kiosk to Handhole 1 could not be completed due to multiple obstructions, which appear to have been caused by water damage.

Scanning of the mezzanine floor was completed to determine the existing layout of in-floor ducts and a proposed power duct run between the Kiosk and Handhole 1. The scanning results showed that there is space for a proposed duct run; however alternate parallel ducts between the Kiosk and AFC Panel were also identified during scanning.

NEPP-02: Video scoping and pull string installation was completed in an empty alternate duct between Kiosk, Handhole 2 and AFC Panel. The alternate duct runs parallel with the existing duct. Duct is in good condition and viable for future use.

NEPP-01: Scoping of Faregate Arrays (09/03/14)

Task	Yes/No	Notes
Communications Duct – Upper Faregate Array (6 faregates)		
Was video scoping completed for the entire duct run?	No	Video scoping and pull string installation was not possible due to water intrusion and obstructions.
Were pull strings installed at all faregates in the array?	No	
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	Rodder hit an obstruction at the apron of the kiosk in duct; further rodding attempts from the faregate end of duct were also unsuccessful. In addition, 75% of duct appears to be under water and corroded.
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	N/A	4" walker duct with less than 12 wires
Communications Duct - Lower Faregate Array (6 faregates)		
Was video scoping completed for the entire duct run?	Yes	Refer to "WMATA Glenmont Lower Fairgate Comm Video.avi"
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	There were no obstructions or blockages, however some water intrusion and corrosion was visible.
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	4" walker duct with less than 12 wires.
Power Duct - Upper Faregate Array (6 faregates)		
Was video scoping completed for the entire duct run?	No	Video scoping was not possible due to water intrusion and obstructions.
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	Rodder hit an obstruction at the apron of the kiosk in duct; further rodding attempts from the faregate end of duct were also unsuccessful. In addition, 75% of duct appears to be under water and corroded.
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	N/A	4" walker duct with less than 12 wires.
Power Duct - Lower Faregate Array (6 faregates)		
Was video scoping completed for the entire duct run?	Yes	Refer to "WMATA Glenmont Lower Fairgate Power Video.avi"
Were there any obstructions or blockages? Provide details of type and specific location.	No	There were no obstructions or blockages, however some water intrusion and corrosion was visible.
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	4" walker duct with less than 12 wires.

NEPP-01: Scoping of Existing Power Duct (09/03/14)		
Task	Yes/No	Notes
Kiosk to Handhole 1 (Distance: 140')		
Was video scoping completed for the entire duct / conduit run?	No	Video scoping and pull string installation was not possible due to water intrusion and obstructions.
Was pull string installed??	No	
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	Obstruction in duct was encountered almost immediately from the kiosk end, and at 20' from the handhole end. Duct has extensive corrosion with clear signs of water intrusion.
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	Yes	6" walker duct with less than 15 wires
Handhole 1 to AFC Panel (Distance: 15')		
Was video scoping completed for the entire duct / conduit run?	Yes	Refer to "WMATA Glenmont Power Kiosk to Handhole Video.avi"
Was pull string installed??	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	6" walker duct with less than 15 wires
NEPP-01: Scanning of Mezzanine Floor (10/22/14)		
<ul style="list-style-type: none"> - Scanning was conducted to identify a proposed duct route between the Kiosk and AFC Panel. - The scanning results showed that there are multiple ducts running side-by-side from the Kiosk to AFC Panel. - Refer to scanning drawing for the layout of existing ducts on the mezzanine floor. - An AFC as-built drawing does not exist for this mezzanine. 		


NEPP-02: Scoping of Alternate Power Duct (06/03/15)		
Task	Yes/No	Notes
Kiosk to Handhole 2 (Distance: 140')		
Was video scoping completed for the entire duct / conduit run?	Partially	Refer to "B11_MZ034_Glenmont_Kiosk to HH2.avi" and "B11_MZ034_Glenmont_HH2 to Kiosk.avi"
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	The video scope could not get past the two 45-degree bends.
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	Empty 6" walker duct
Handhole 2 to AFC Panel (Distance: 15')		
Was video scoping completed for the entire duct / conduit run?	Yes	Refer to "B11_MZ034_Glenmont_HH2 to AFC Panel.avi"
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	Empty 6" walker duct
Observations / Issues / Next Steps		
<ul style="list-style-type: none"> - The distance of alternate power duct from Kiosk to AFC Panel is 155'. 		
Sign Off		
	GFP Representative	WMATA PRGM
Name:	Mike Butler	
Signature:		
Date:	06/03/15	

Photo #1: B11 Glenmont - Existing and Alternate Duct Runs from Kiosk

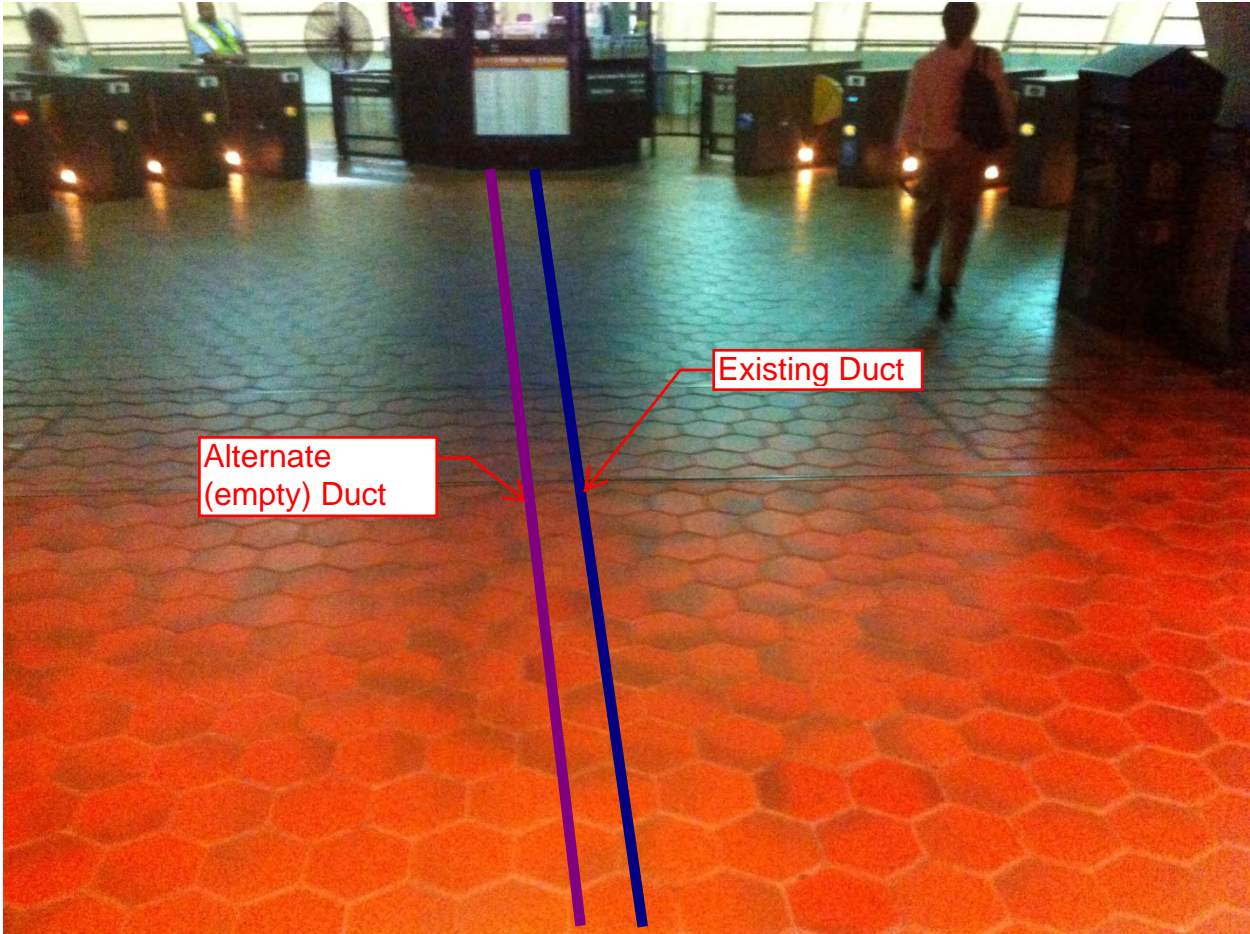


Photo #2: B11 Glenmont – Existing and Alternate Duct Runs from Kiosk to AFC Panel in Room #103, including hand hole locations.

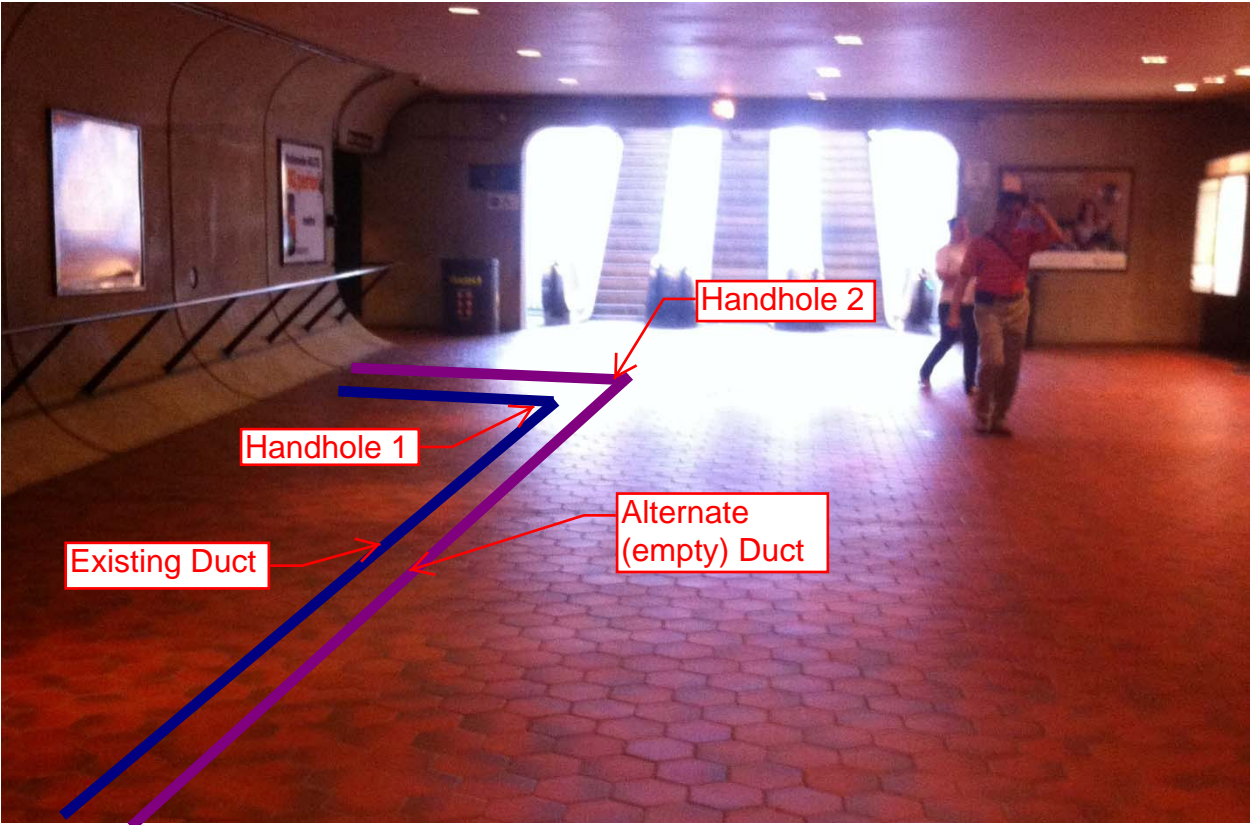
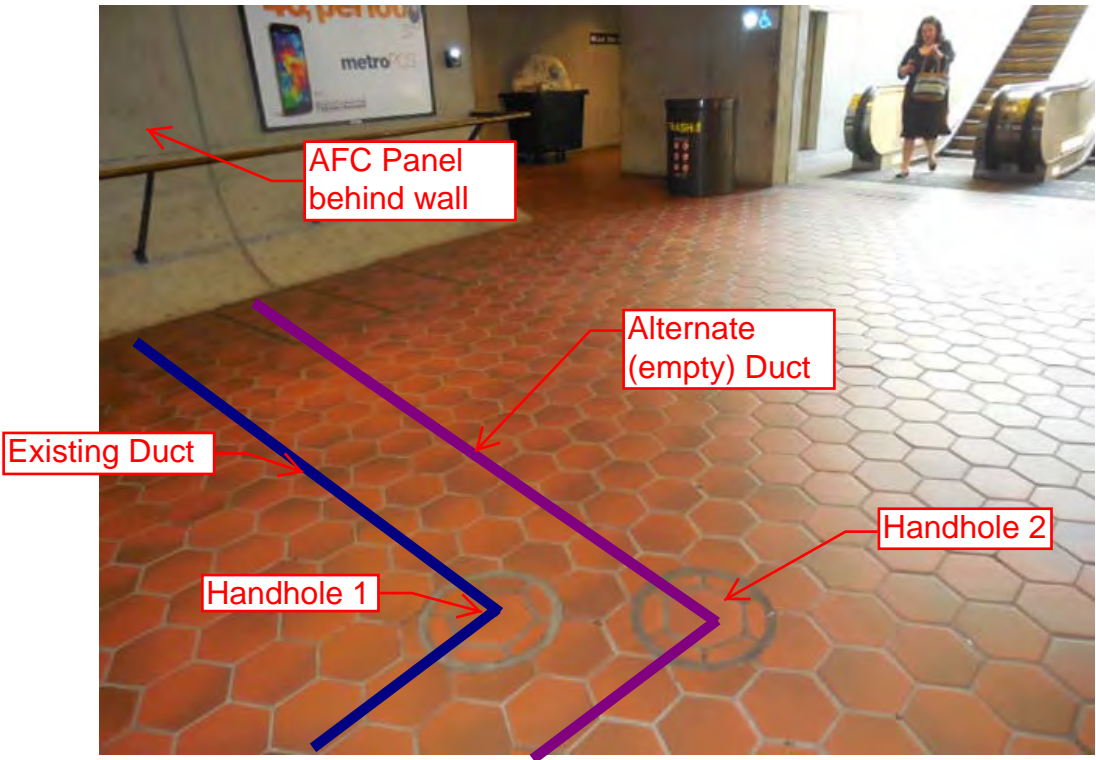


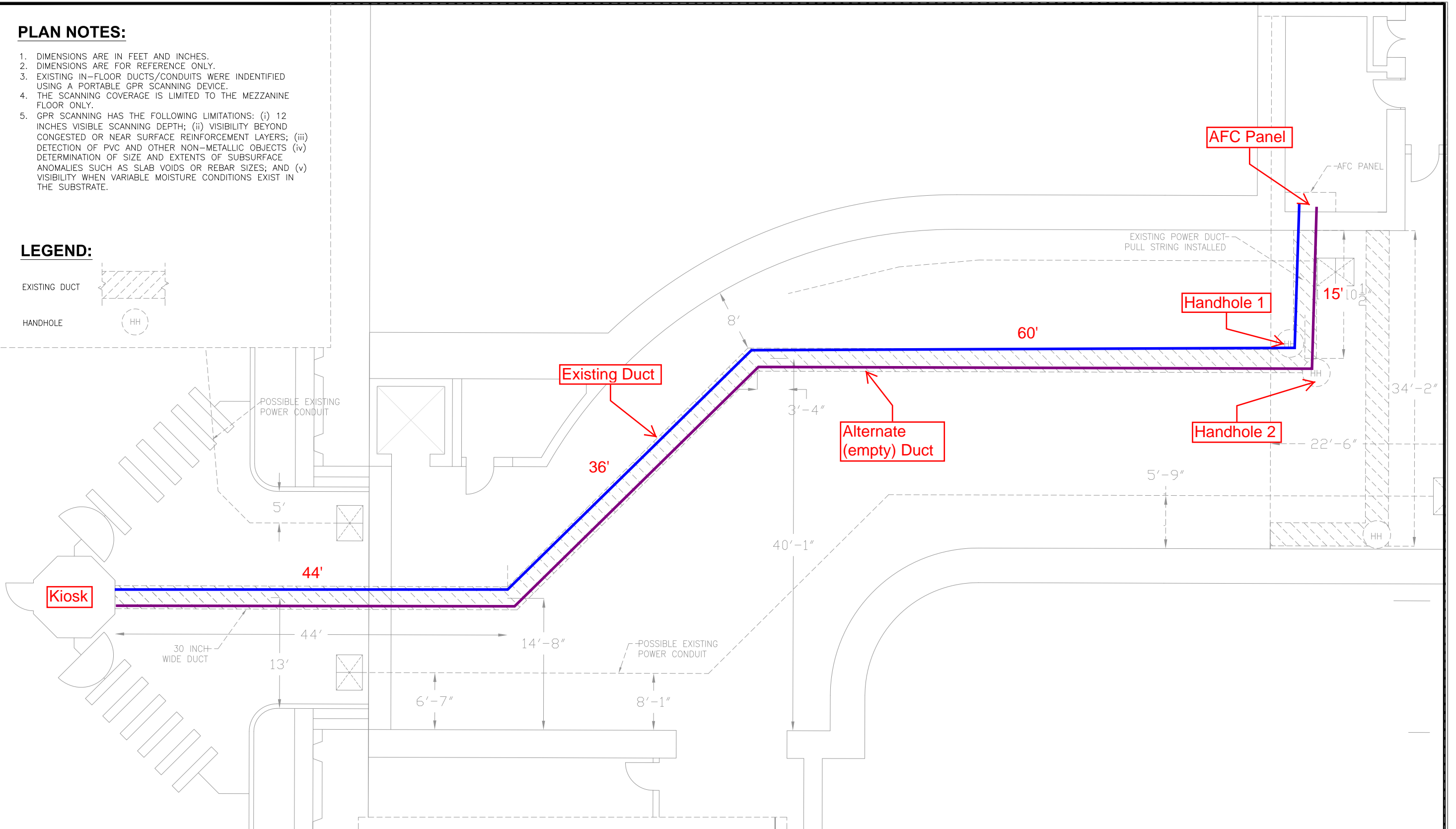
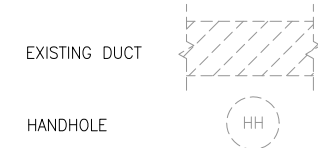
Photo #3: B11 Glenmont – Existing and Alternate Duct Runs from Kiosk to AFC Panel in Room #103, including hand hole locations.



PLAN NOTES:

1. DIMENSIONS ARE IN FEET AND INCHES.
2. DIMENSIONS ARE FOR REFERENCE ONLY.
3. EXISTING IN-FLOOR DUCTS/CONDUITS WERE IDENTIFIED USING A PORTABLE GPR SCANNING DEVICE.
4. THE SCANNING COVERAGE IS LIMITED TO THE MEZZANINE FLOOR ONLY.
5. GPR SCANNING HAS THE FOLLOWING LIMITATIONS: (i) 12 INCHES VISIBLE SCANNING DEPTH; (ii) VISIBILITY BEYOND CONGESTED OR NEAR SURFACE REINFORCEMENT LAYERS; (iii) DETECTION OF PVC AND OTHER NON-METALLIC OBJECTS (iv) DETERMINATION OF SIZE AND EXTENTS OF SUBSURFACE ANOMALIES SUCH AS SLAB VOIDS OR REBAR SIZES; AND (v) VISIBILITY WHEN VARIABLE MOISTURE CONDITIONS EXIST IN THE SUBSTRATE.

LEGEND:



1
E-100 **GLENMONT STATION**
SCALE: NOT TO SCALE

CONTRACT NO.
XXXXXX

DESIGNED	C. LOOSE	11-14
DRAWN	C. LOOSE	11-14
CHECKED	M. BUTLER	11-14
APPROVED		

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

APPROVED _____

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY
DEPARTMENT OF TRANSIT INFRASTRUCTURE AND ENGINEERING SERVICES
OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM

GFP A Gannett Fleming/Parsons JOINT VENTURE
SUBMITTED _____
PROJECT MANAGER

SCALE
NOT TO SCALE

15-NEPP-01
IN - FLOOR DUCT INSPECTIONS
B11 GLENMONT (M034)
PROPOSED ELECTRICAL DUCT PATH
DRAWING NO.
B11-E-100
XXX

Mezzanine Inspection Report (Scoping)

Date: 10/02/2014	Station Name: B35 New York Ave North	Mezzanine #: 109	Completed By: Mike Butler
------------------	--------------------------------------	------------------	---------------------------

Summary

Video scoping and pull string installed in power and comm. ducts. Pull string installed in power conduit from kiosk to electrical room. A transition from power conduit to smaller 'armored flexible cables' in the electrical room next to the AFC Panel prevented scoping and pull string installation (see photos). For consistency, it is recommended to install new NEPP wires inside new armored flex cable between conduit stub up and AFC Panel.

Scanning is not required at this station.

Scoping of Faregate Array(s)

Task	Yes/No	Notes
Communications Duct – Upper Faregate Array (6 Gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to WMATA New York North Mezz Comm Fairgate Video.avi file.
Were pull strings installed at all faregates in the array?	Yes	Pull strings installed and labeled "NEPP"
Were there any obstructions or blockages? Provide details of type and specific location.	No	Water and mud was observed inside walker ducts
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	4" duct with less than 8 wires
Communications Duct - Lower Faregate Array (N/A)		
Was video scoping completed for the entire duct run?	N/A	
Were pull strings installed at all faregates in the array?	N/A	
Were there any obstructions or blockages? Provide details of type and specific location.	N/A	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	N/A	
Power Duct - Upper Faregate Array (6 Gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to WMATA New York North Mezz Power Right Fairgate Video (1).avi file.
Were there any obstructions or blockages? Provide details of type and specific location.	No	Water and mud was observed inside walker ducts
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	4" duct with less than 12 wires
Power Duct - Lower Faregate Array (N/A)		
Was video scoping completed for the entire duct run?	N/A	
Were there any obstructions or blockages? Provide details of type and specific location.	N/A	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	N/A	


Scoping of Power Duct - Kiosk to AFC Panel		
Task	Yes/No	Notes
Kiosk to Conduit 'Stub-up' in Electrical Room #110 (80 foot run)		
Was video scoping completed for the entire duct / conduit run?	No	Conduit does not require scoping
Was pull string installed?	Yes	Pull strings installed and labeled "NEPP"
Were there any obstructions or blockages? Provide details of type and specific location.	No	Conduit has 90 degree bends
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	2" conduit with less than 10 wires
Conduit 'Stub-up' to AFC Panel(15 foot run)		
Was video scoping completed for the entire duct / conduit run?	No	Conduit could not be scoped or pulled due to small armored flex cables (see photos).
Was pull string installed?	No	
Were there any obstructions or blockages? Provide details of type and specific location.	N/A	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	N/A	
Observations / Issues / Next Steps		
No existing as-built available.		
Sign Off		
	GFP Representative	WMATA PRGM
Name:	Mike Butler	
Signature:		
Date:	10/02/2014	

Photo #1 – Kiosk and Faregates on Mezzanine Floor



Photo #2 – Power Conduit transition to Armored Flex Cables leading to AFC Panel (Electrical Room 110)



Photo #3 –Armored Flex Cables leading to AFC Panel (Electrical Room 110)



Mezzanine Inspection Report (Scoping)

Date: 11/05/2014	Station Name: B35 New York Ave South	Mezzanine #: 108	Completed By: Mike Butler
-------------------------	---	-------------------------	----------------------------------

Summary

Video scoping and pull string installation was completed for the communications duct for the faregate array. Video scoping was completed for the power duct for the faregate array.

A proposed route was identified for the power conduit run from the kiosk to the AFC panel. A 4 inch conduit runs from the kiosk to the cable chase room #109, behind elevator room #107, and pull string was installed to a stub up. There were four available 1 inch ground conduits not being used inside room #109 approximately 35 feet down the hall from the 4 inch stub up, and these 1 inch conduits run and stub up inside the power room #101 next to the AFC panel. The 4 inch and 1 inch stub ups could be connected by a proposed conduit run along the wall. The 1 inch ground conduit was used to bridge the run from the cable chase room to the AFC panel and pull string was installed. Both the 4 inch and 1 inch conduits were vacant.

No scanning is required at this mezzanine.

Scoping of Faregate Array(s)

Task	Yes/No	Notes
Communications Duct – Faregate Array (4 Gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to WMATA New York Ave South Comm Fair Gate Video.avi file.
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	
Power Duct - Upper Faregate Array (4 Gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to WMATA New York Ave South Right Power Fair Gate Video.avi file.
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	

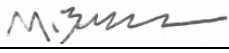
Scoping of Power Duct - Kiosk to AFC Panel		
Task	Yes/No	Notes
Kiosk to 4" stub up (~60 foot run)		
Was video scoping completed for the entire duct / conduit run?	No	Conduit – no scoping required
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	Conduit vacant
1" stub up to AFC Panel (~130 foot run)		
Was video scoping completed for the entire duct / conduit run?	No	Conduit – no scoping required
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	Conduit vacant
Observations / Issues / Next Steps		
<p>No existing As-builts available.</p> <p>A proposed conduit run, approximately 35 feet long, will be needed between the 4 inch and 1 inch stub ups.</p>		
Sign Off		
	GFP Representative	WMATA PRGM
Name:	Mike Butler	
Signature:		
Date:	11/05/2014	

Photo #1 – B35 New York Ave South: 4 inch stub up at first run from kiosk

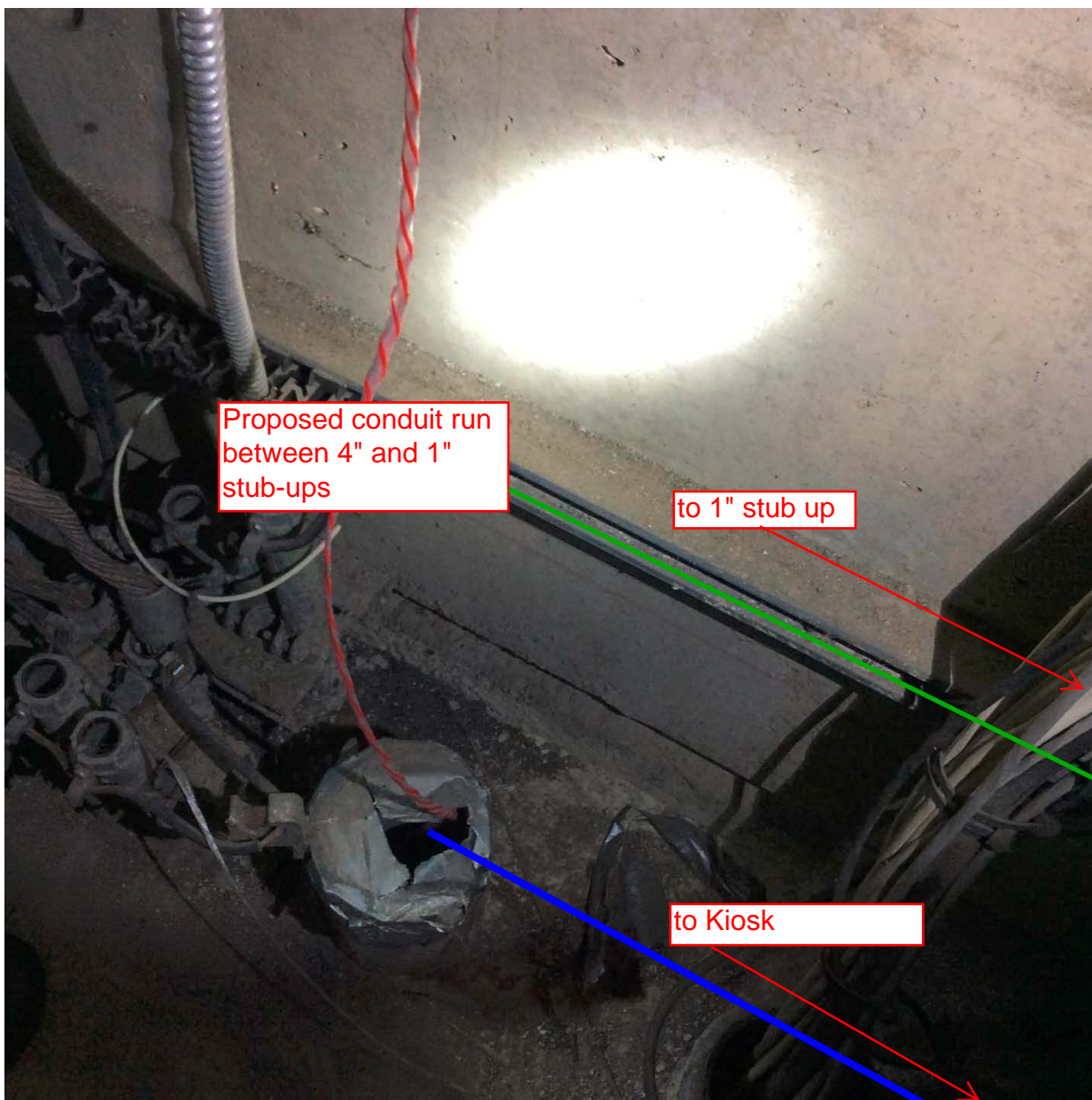
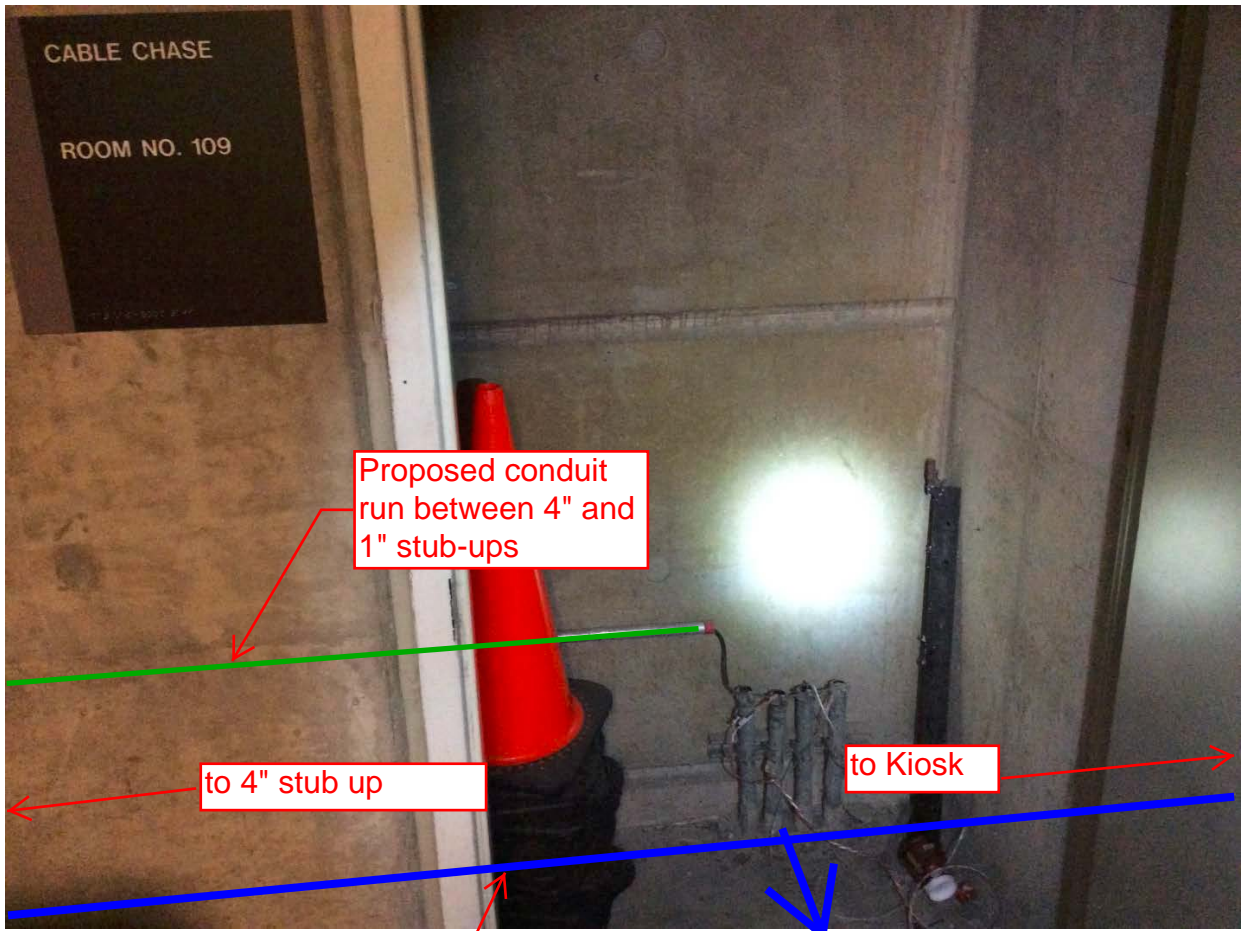


Photo #2 – B35 New York Ave South: 1 inch stub up starting run to AFC Panel



Proposed conduit run between 4" and 1" stub-ups

to 4" stub up

to Kiosk

4" conduit run between kiosk and stub-up

1" conduit run towards AFC panel

Photo #3 – B35 New York Ave South: AFC Panel near 1 inch stub up



1" stub up near
AFC Panel

1" conduit towards
proposed
connection to 4"
stub up

Mezzanine Inspection Report

Date: 2/25/2015	Station Name: C01 – Metro Center North	Mezzanine #: 035	Completed By: Mike Butler
------------------------	---	-------------------------	----------------------------------

Summary

Pull string installation was completed in communication duct for upper faregate array. However, pull string installation was not possible in communication duct for lower faregate array due to an obstruction, potentially a collapsed duct 10' from kiosk. Video scoping in comm. and power ducts for upper / lower faregates was not possible due to skirt obstruction.

Video scoping and pull string installation was completed between Kiosk, Handhole and AFC Panel in Room N206; ducts are not at capacity and are viable for future use.

Scanning is not required at this mezzanine.

Scoping of Faregate Array(s)

Task	Yes/No	Notes
Communications Duct – Upper Faregate Array (4 gates)		
Was video scoping completed for the entire duct run?	No	Video scoping was not possible due to skirt obstruction.
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	N/A	
Communications Duct - Lower Faregate Array (4 gates)		
Was video scoping completed for the entire duct run?	No	Video scoping was not possible due to skirt obstruction.
Were pull strings installed at all faregates in the array?	No	
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	An obstruction, potentially a collapse 10' away from kiosk.
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	N/A	
Power Duct - Upper Faregate Array (4 gates)		
Was video scoping completed for the entire duct run?	No	Video scoping was not possible due to skirt obstruction.
Were there any obstructions or blockages? Provide details of type and specific location.	N/A	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	N/A	
Power Duct - Lower Faregate Array (4 gates)		
Was video scoping completed for the entire duct run?	No	Video scoping was not possible due to skirt obstruction.
Were there any obstructions or blockages? Provide details of type and specific location.	N/A	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	N/A	


Scoping of Power Duct - Kiosk to AFC Panel		
Task	Yes/No	Notes
Kiosk to Handhole 1 (Distance =25')		
Was video scoping completed for the entire duct / conduit run?	Yes	Refer to "WMATA Metro Center North 6inch Power HH1 to Kiosk.avi"
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	6" walker duct with less than 10 wires.
Hanhole 1 to AFC panel (Distance = approx. 40')		
Was video scoping completed for the entire duct / conduit run?	Yes	Refer to "WMATA Metro Center North 6inch Power HH1 to AFC Panel.avi"
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	6" walker duct with less than 10 wires
Observations / Issues / Next Steps		
<ul style="list-style-type: none"> - The power duct run from Kiosk to AFC Panel is approximately 65'. - There are two power duct runs from Kiosk to AFC Panel, however the alternate run is at capacity. - An existing AFC installation plan is not available for this mezzanine - refer to attached photos and sketch instead. 		
Sign Off		
	GFP Representative	WMATA PRGM
Name:	Mike Butler	
Signature:		
Date:	2/26/2015	

Photo #1 - Existing duct run on mezzanine floor.

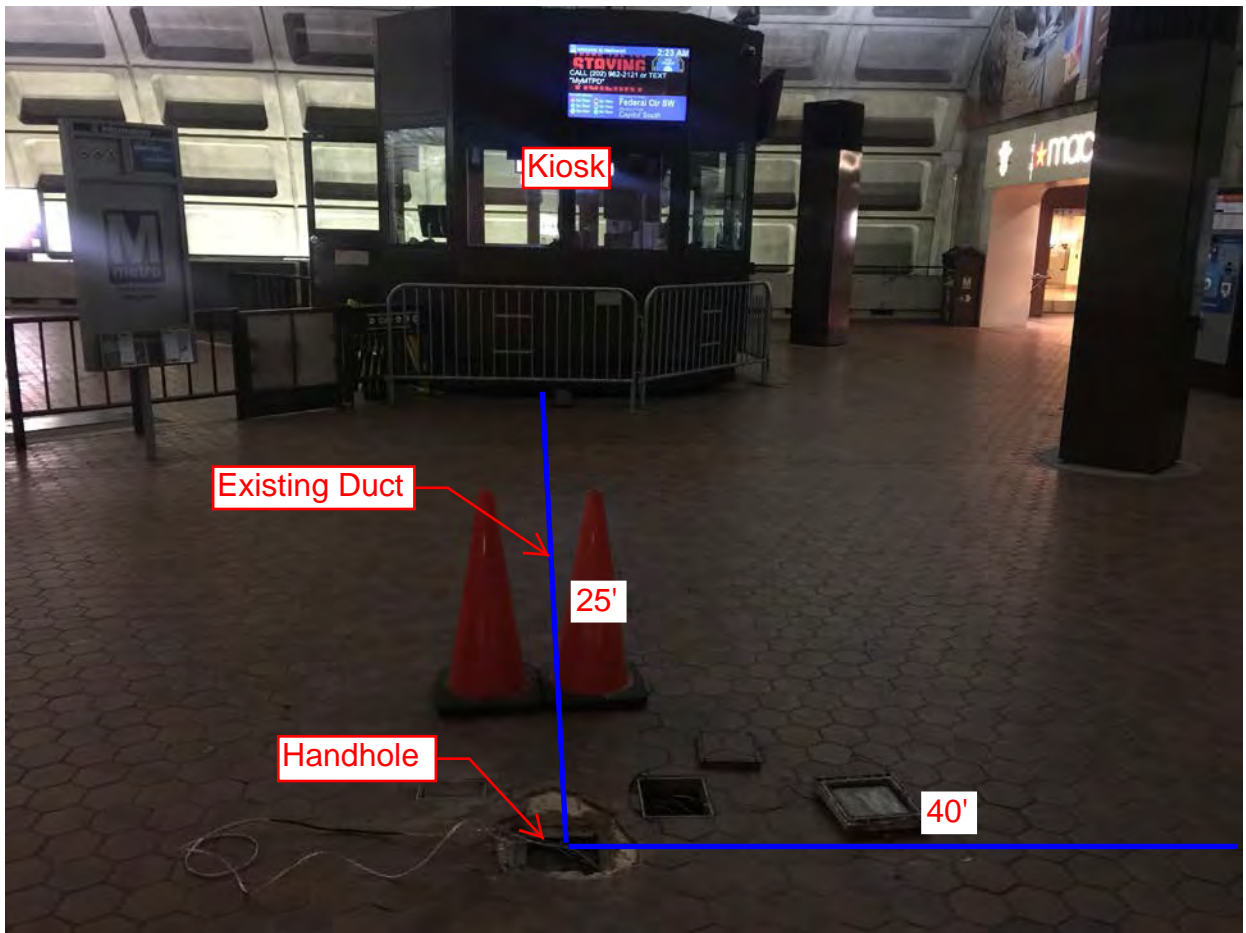


Photo #2 - Existing duct run on mezzanine floor.

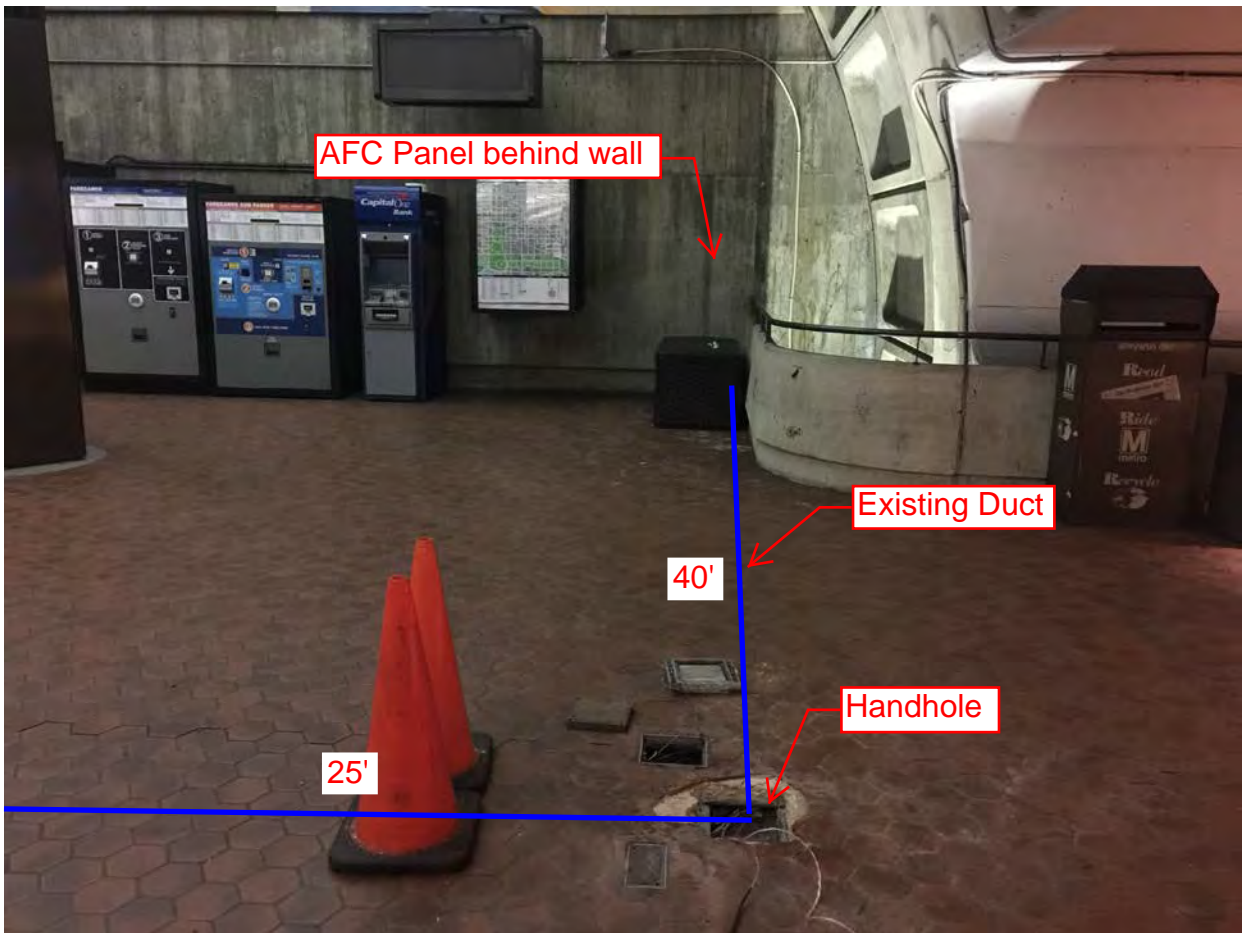
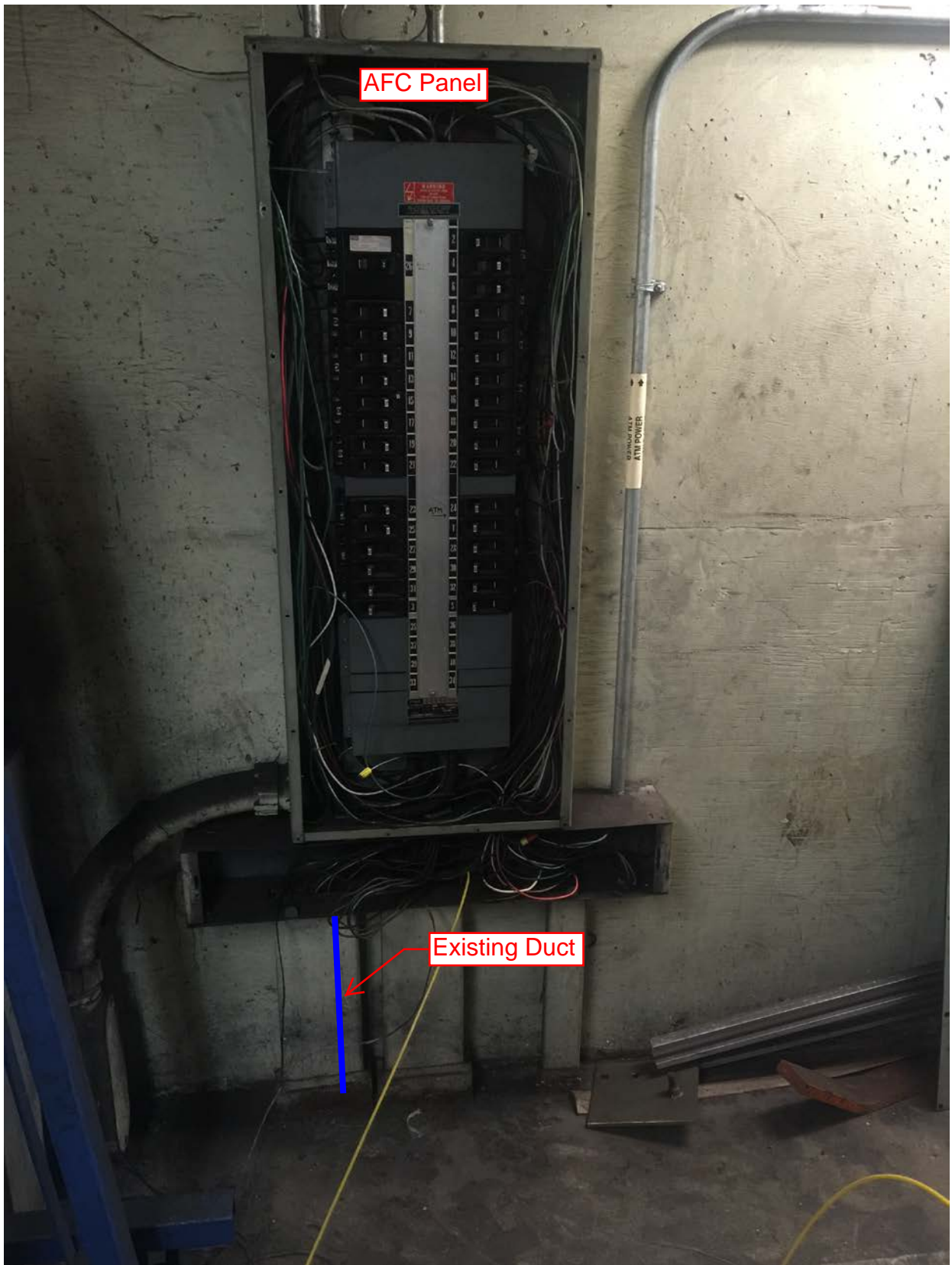
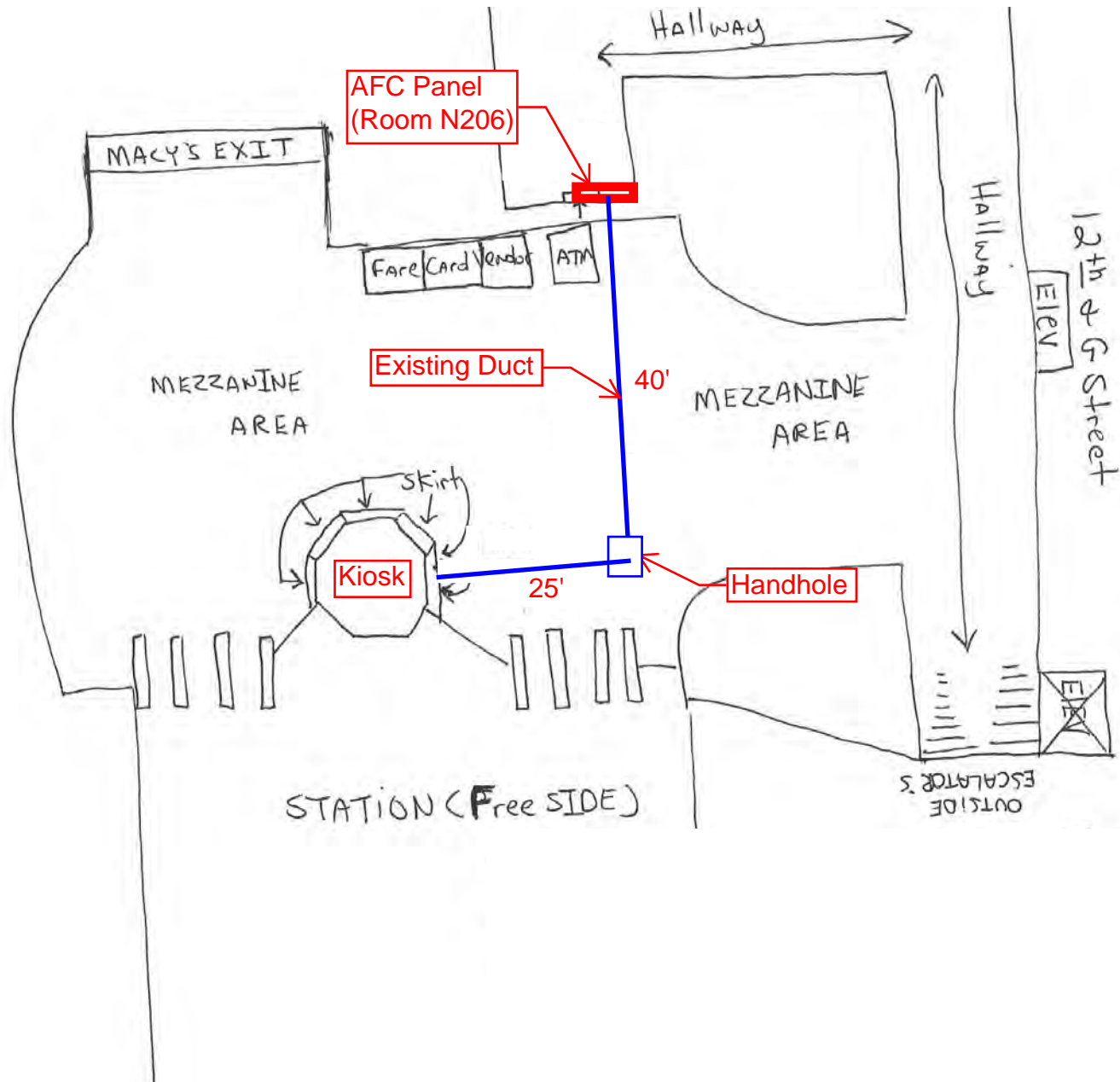


Photo #3 - AFC Panel and duct connection in Room N206.





DRAWING NOT TO SCALE

Mezzanine Inspection Report

Date: 10/29/14	Station Name: C01 Metro Center South	Mezzanine #: 052	Completed By: Mike Butler
-----------------------	---	-------------------------	----------------------------------

Summary

Video scoping and pull string installation at Metro Center South was partially completed. The power duct between the Kiosk and AFC Panel was scoped and pull string was installed; duct is clear from obstructions and not at capacity. Scoping and pull string installation was not completed for the communication duct in the faregate array due to apron skirt obstruction. However, CAT6 is already installed in the communication duct. In addition, scoping was not completed for the power duct in the faregate array due to apron skirt obstruction. As per WMATA's direction, additional scoping is not needed at this mezzanine.

Scanning is not required at this mezzanine.

Scoping of Faregate Array(s)

Task	Yes/No	Notes
Communications Duct – Upper Faregate Array (8 faregates)		
Was video scoping completed for the entire duct run?	No	Could not be completed due to kiosk skirt apron obstruction.
Were pull strings installed at all faregates in the array?	No	
Were there any obstructions or blockages? Provide details of type and specific location.	N/A	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	N/A	
Power Duct - Upper Faregate Array (8 faregates)		
Was video scoping completed for the entire duct run?	No	Could not be completed due to kiosk skirt apron obstruction.
Were there any obstructions or blockages? Provide details of type and specific location.	N/A	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	N/A	


Scoping of Power Duct - Kiosk to AFC Panel		
Task	Yes/No	Notes
Kiosk to Handhole 1 (Distance: 80')		
Was video scoping completed for the entire duct / conduit run?	Yes	Refer to "WMATA Metro Center South Power Handhole to Kiosk Video.avi"
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	6" walker duct with less than 12 wires
Hanhole 1 to AFC Panel (Distance: 30')		
Was video scoping completed for the entire duct / conduit run?	Yes	Refer to "WMATA Metro Center South Power Handhole to AFC Panel Video.avi"
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	6" walker duct with less than 12 wires
Observations / Issues / Next Steps		
<ul style="list-style-type: none"> - CAT6 cables already installed inside Faregate cabinets #10 thru #16 under CIP-092 project. - The power duct run between the Kiosk and AFC Panel is approximately 110'. - An AFC installation plan is not available for this mezzanine. 		
Sign Off		
	GFP Representative	WMATA PRGM
Name:	Mike Butler	
Signature:		
Date:	01/15/15	

Photo #1 – Handholes located on Mezzanine Level outside Mechanical Room Room 211

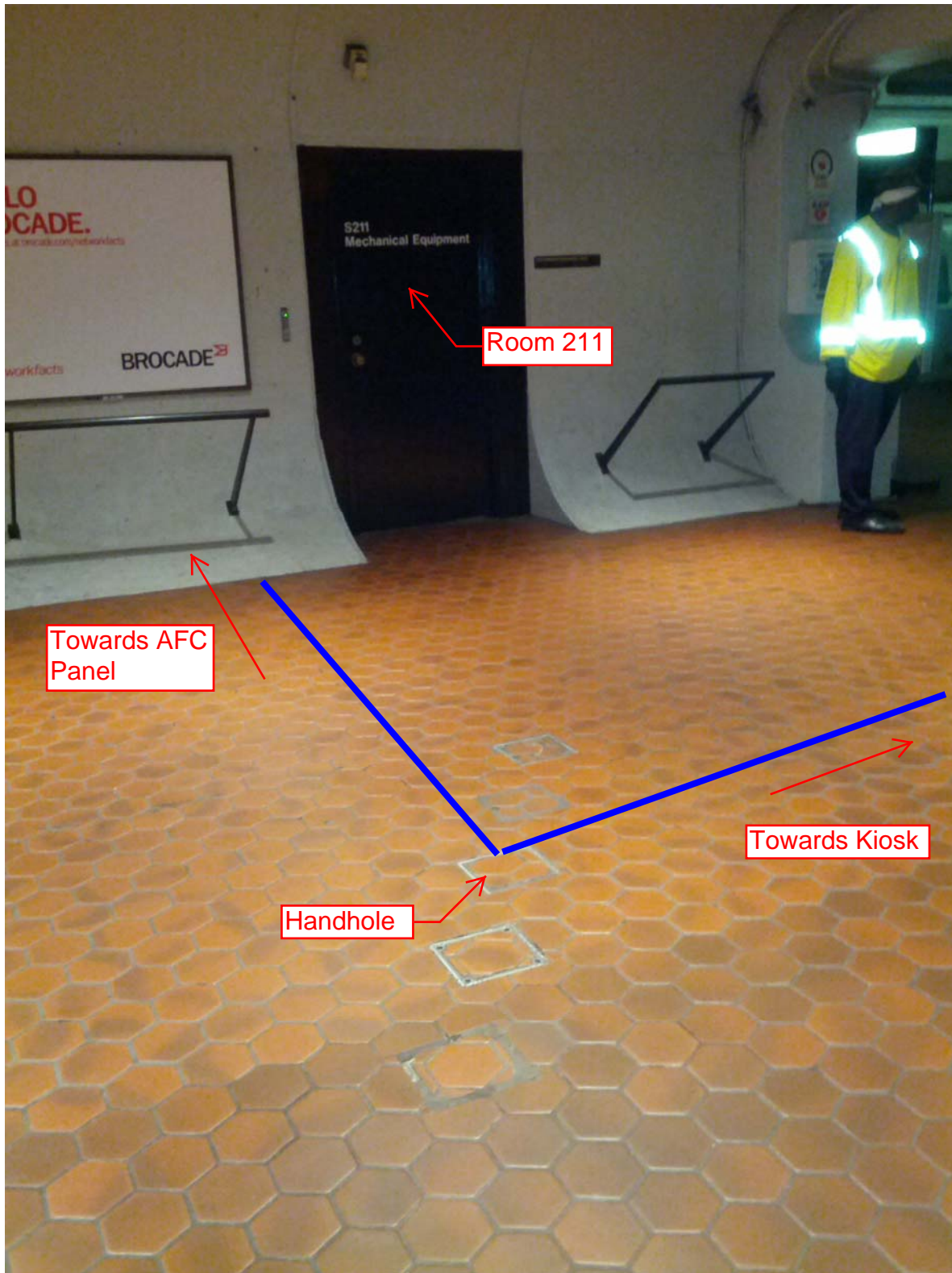
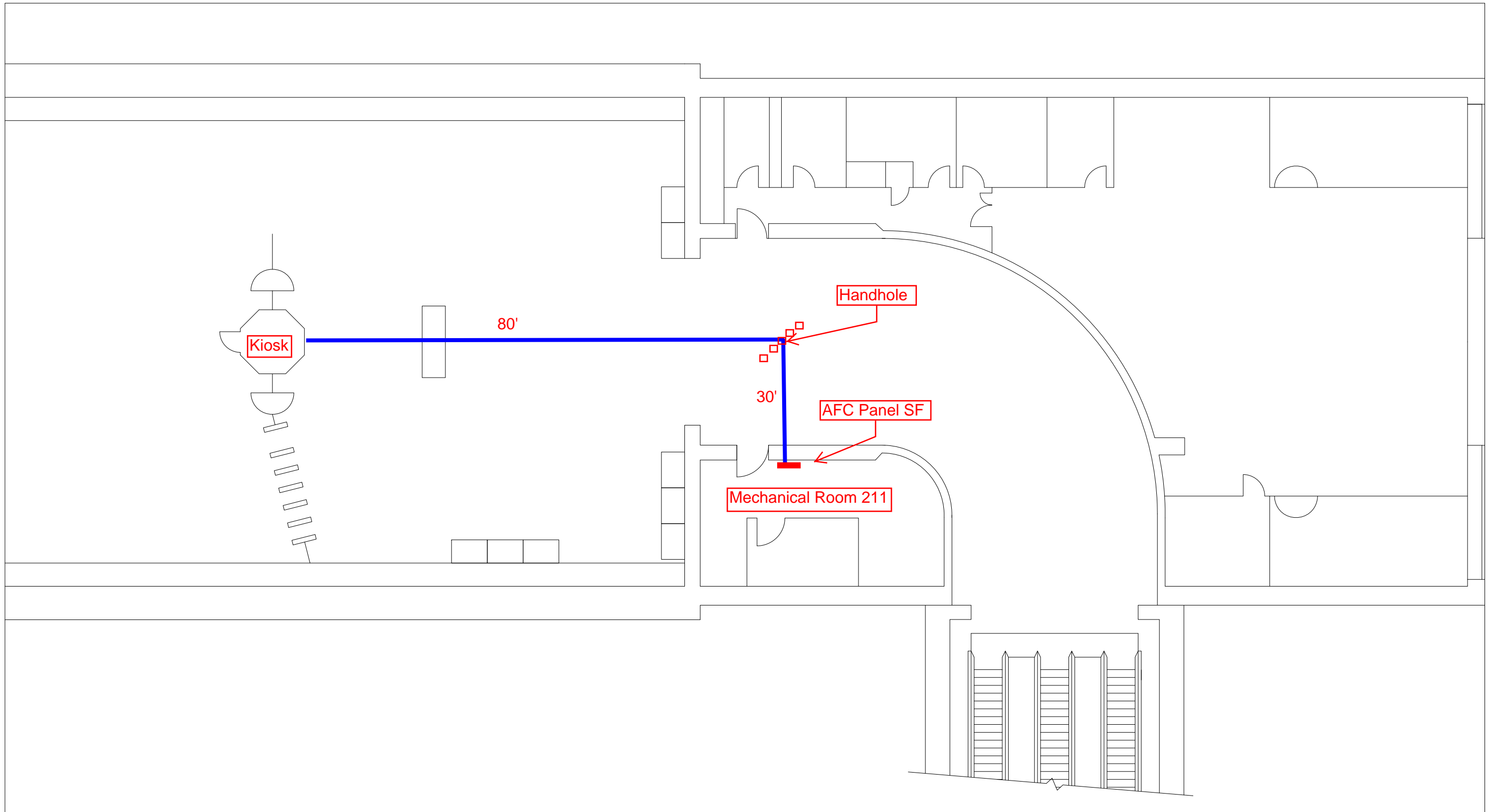


Photo #2 – Kiosk and faregates on mezzanine level.



Sketch - Metro Center South (M052)



Mezzanine Inspection Report (Scoping)

REVISION 1

Date: 10/31/14	Station Name: F01 Gallery Place North	Mezzanine #: 069	Completed By: Mike Butler
----------------	---------------------------------------	------------------	---------------------------

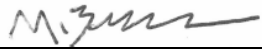
Summary

Video scoping is complete for this station. The ducts are not at capacity and they are free from obstructions. However, pull string installation is could not be completed between Kiosk and AFC Panel due to inaccessibility of junction box (see photo #2) on the ceiling of Room N101 on the platform level. The junction box is 20' above the ground and is not safely reachable by ladders (see photo #1) – there is no safe place to secure the ladder with the junction box in reach. Scaffolding is required to reach the Junction Box.

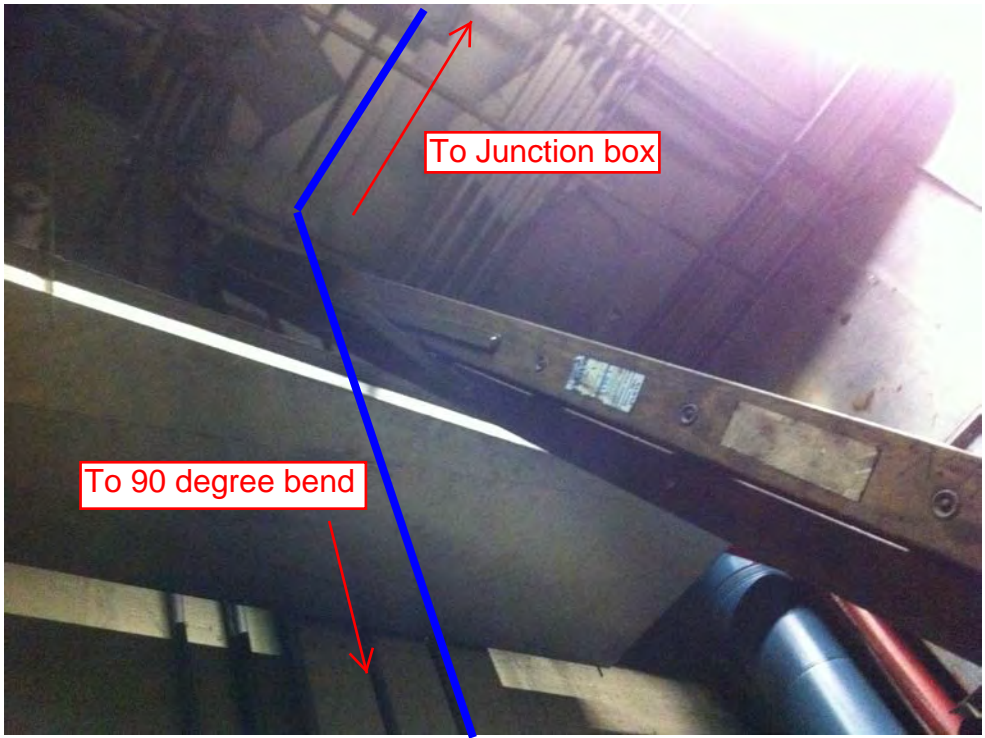
Scanning is not necessary.

Scoping of Faregate Array(s)

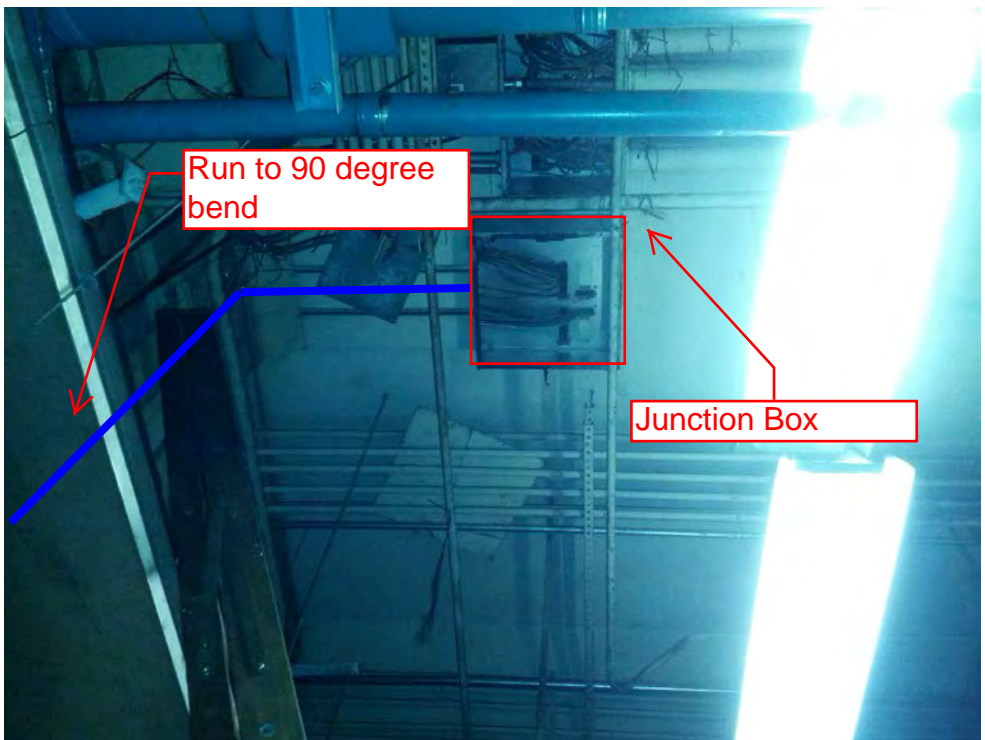
Task	Yes/No	Notes
Communications Duct – Upper Faregate Array (5 Gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to WMATA Gallery Place Upper Comm Fairgate Video.avi file.
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	
Communications Duct - Lower Faregate Array (5 Gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to WMATA Gallery Place Lower Comm Fairgate Video.avi file.
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	
Power Duct - Upper Faregate Array (5 Gates)		
Was video scoping completed for the entire duct run?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	
Power Duct - Lower Faregate Array (5 Gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to WMATA Gallery Place Lower Power Fairgate Video.avi file.
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	

Scoping of Power Duct - Kiosk to AFC Panel		
Task	Yes/No	Notes
Kiosk to Junction Box (Room N101) – 45'		
Was video scoping completed for the entire duct / conduit run?	Yes	Refer to WMATA Gallery Place Handhole to Kiosk Video.avi file.
Was pull string installed?	No	Camera light could be seen inside the junction box from the ground level 20' below. However, it was not possible to access box and install pull string.
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	
Junction Box (Room N101) to AFC Panel – 35'		
Was video scoping completed for the entire duct / conduit run?	No	90 degree bend was encountered where the duct transitions from wall to the ceiling (see photo).
Was pull string installed?	No	Need safe access to Junction Box 20' above ground level
Were there any obstructions or blockages? Provide details of type and specific location.	No	No obstructions in vertical duct run from AFC panel to ceiling. Assuming no obstructions in horizontal duct run on ceiling between 90 degree bend and junction box.
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	
Observations / Issues / Next Steps		
There is no secure location to place a ladder and access the junction box safely. The junction box is centrally positioned on the ceiling, away from the surrounding walls, making it difficult to reach. Scaffolding or some other temporary support is needed to safely access the junction box.		
Sign Off		
	GFP Representative	WMATA PRGM
Name:	Mike Butler	
Signature:		
Date:	10/31/14	

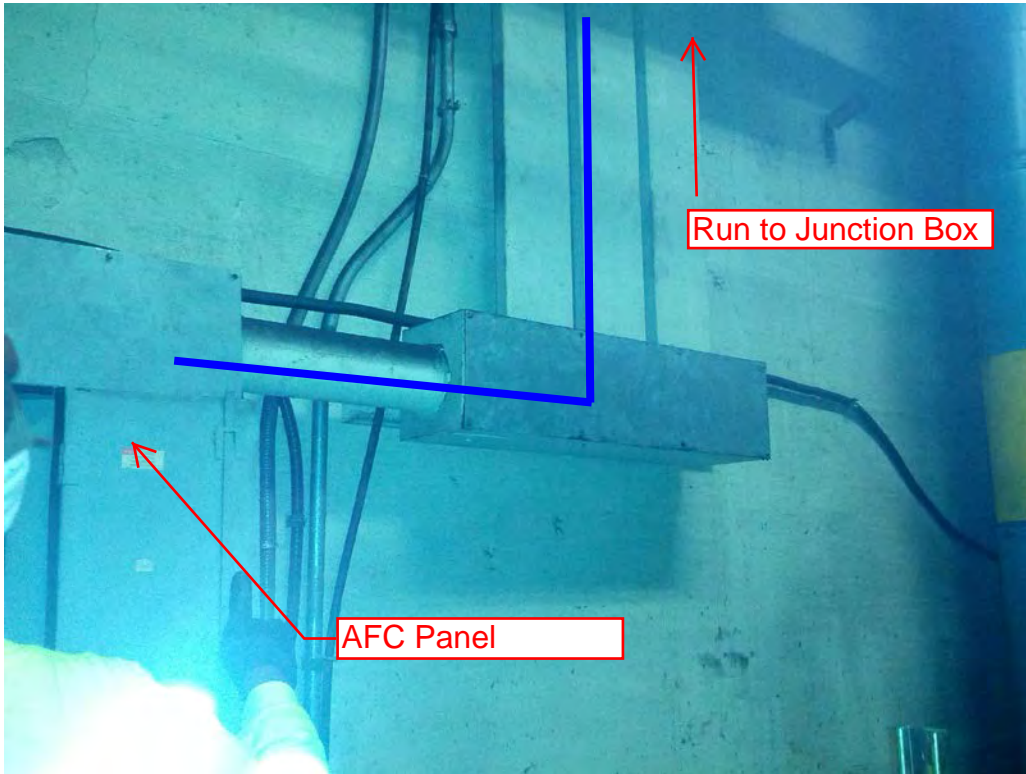
Gallery Place North Photo #1 – Due to obstructions on the wall and limited space in Room N101, there is no secure area to place the ladder and have access to the Junction Box in the ceiling.



Gallery Place North Photo #2 – Junction box 20' above ground level under Mezzanine level.



Gallery Place North Photo #3 – Wires from Junction Box come down in ducts and converge into larger conduit leading to AFC Panel.

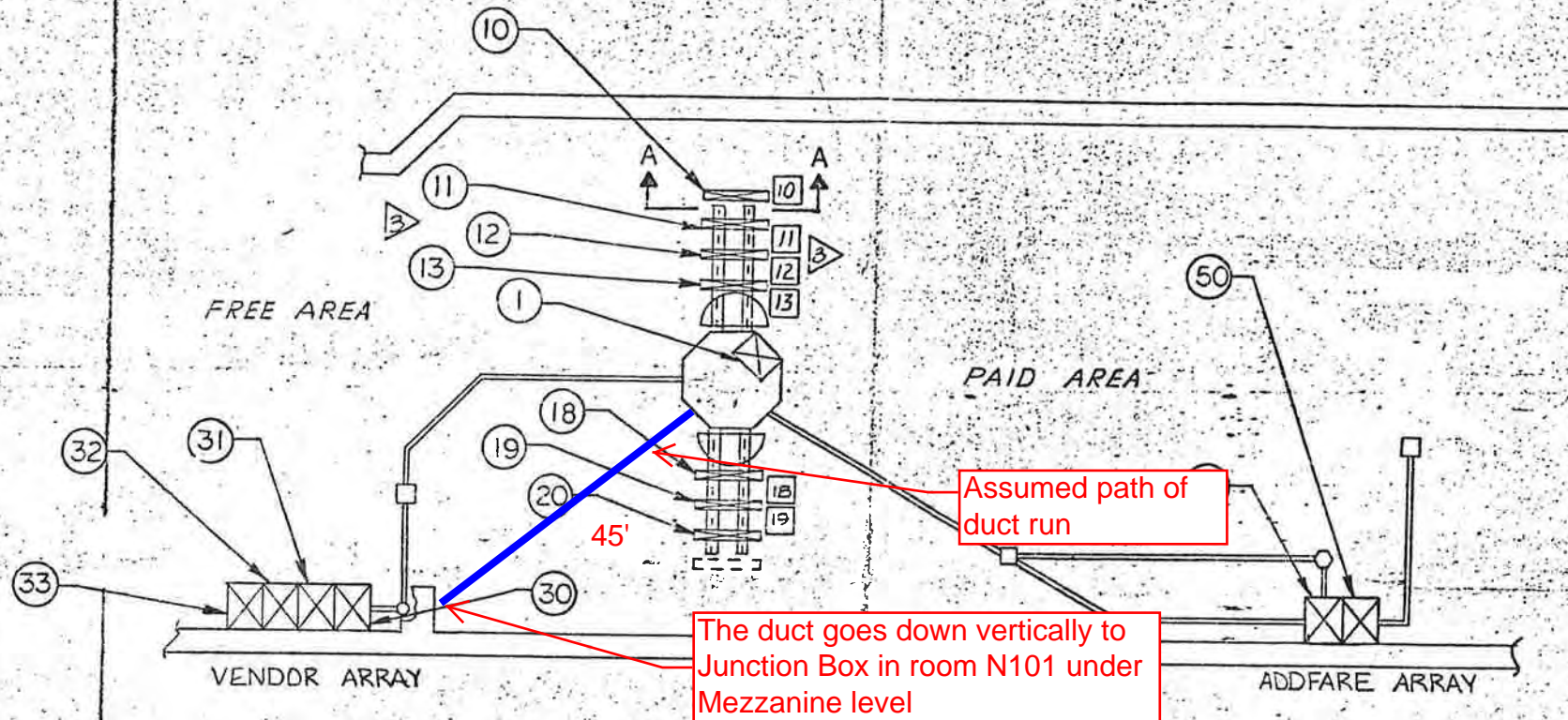


Gallery Place North Photo #4 – Wires coming from conduit inside of AFC Panel.

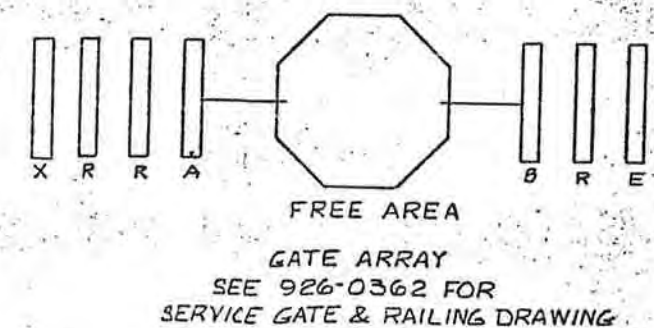
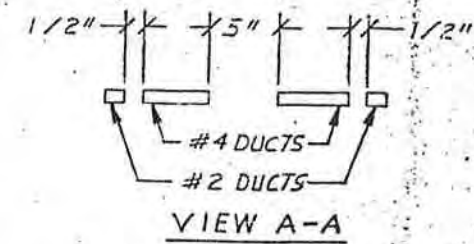


NOTES:

1. THE MINIMUM OPERATIONAL MACHINE INVENTORY IS REFERENCED ON THIS DRAWING BY THE "X" DRAWN THROUGH THE MACHINE.
 2. FOR REFERENCE DRAWINGS USED SEE SUPPORT DOCUMENTATION PACKAGE FOR THIS MEZZANINE.
- (3) (X) INDICATES POSITION NO. (X) INDICATES AISLE NO.



- 1 INSTALLATION PLAN



PANEL F					
POSITION NO.	MACHINE TYPE	SERIAL NO.	CIRCUIT BREAKER NO.	BREAKER SIZE (AMPS)	WIRE SIZE (AWG)
1	DADS	DS-8066		20	
10	EXITGATE	EX 4069	1	20	See Schedule 999999
11	REVGATE	ER-7264	3	20	
12	REVGATE	ER-7265	5	20	
13	A GATE	EA-5053	7	20	
18	B GATE	EB-6047	2	20	
19	REVGATE	ER 7305	4	20	
20	ENTRYGATE	EN 3062	6	20	
30	VENDOR	FV 1322	9	20	
31	VENDOR	FV 1313	11	20	
32	VENDOR	FV 1316	13	20	
33	VENDOR	FV 1314	8	20	
50	ADDFARE	AA 2126	10	20	
51	ADDFARE	AA-2128	12	20	

DO NOT SCALE DRAWING
UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON DIMENSIONS:
DECIMALS: .XX ± .03 .XXX ± .010
ANGLES: ± 0.5 DEG.
HOLES: .251 THRU .500 ± .006 - .001
.501 THRU .750 ± .008 - .001
.751 THRU 1.000 ± .010 - .001

CONTRACT NUMBER: S-D A1
DRAWING NUMBER: 926-0454
SHEET 1 OF 1

TITLE: CUBIC WESTERN DATA
INSTALLATION PLAN -
GALLERY PLACE STATION

CODE IDENT NO. 94987

DRAWN: T. DIN
CHECKED: [Signature]
DESIGN: [Signature]
APPROVAL: [Signature]

D1926-0454

MEZZ 69

(N 2)



ELECTRICAL AND DATA CABLE INSTALLATION

For

Washington Metropolitan Area Transit Authority

Contract Number FQ 15233

VOLUME 4

Mezzanine Inspection Report

July 15, 2015

Final Submission

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

VOLUME 4 – MEZZANINE INSPECTION REPORTS TABLE OF

CONTENTS		PAGE NO.
VOLUME 4, PART 1 – MEZZANINE INSPECTION REPORTS, A LINE		
1	MIR_A01_Metro_Center_West_MZ001	3
2	MIR_A01_Metro Center East_MZ019	8
3	MIR_A02_Farragut North NE_MZ004	14
4	MIR_A02_Farragut North NW_MZ003	23
5	MIR_A02_Farragut North SE_MZ002	31
6	MIR_A03_Dupont Circle_MZ005	37
7	MIR_A04_Woodley Park_MZ007	48
8	MIR_A05_Cleveland Park_MZ008	55
9	MIR_A06_Van Ness_MZ009	66
10	MIR_A07_Tenleytown_MZ010	79
11	MIR_A08_Friendship Heights North_MZ011	88
12	MIR_A08_Friendship Heights South_MZ104	96
13	MIR_A11_Grosvenor_MZ014	101
14	MIR_A12_White Flint_MZ015	108
15	MIR_A13_Twinbrook_MZ016	116
16	MIR_A14_Rockville_MZ017	126
17	MIR_C01_Metro Center North_MZ035	131
18	MIR_C01_Metro Center South_MZ052	137
VOLUME 4, PART 2 – MEZZANINE INSPECTION REPORTS, B LINE		
19	MIR_B01_Gallery Place West_MZ020	3
20	MIR_B02_Judiciary Sq East_MZ023	15
21	MIR_B02_Judiciary Square West_MZ022	22
22	MIR_B03_Union Station North_MZ025	31
23	MIR_B04_Rhode Island Ave_MZ026	41
24	MIR_B05_Brookland CUA_M027	50
25	MIR_B06_Fort Totten_MZ026	59
26	MIR_B07_Takoma_MZ029	66
27	MIR_B08_Silver Spring North_MZ031	76
28	MIR_B08_Silver Spring South_MZ030	81
29	MIR_B09_Forest Glen_MZ032	87
30	MIR_B10_Wheaton_MZ033	101
31	MIR_B11_Glenmont_MZ034	112
32	MIR_B35_New York Ave North_MZ109	118
33	MIR_B35_New York Ave South_MZ108	123
34	MIR_F01_Gallery Place North_MZ069	128

Mezzanine Inspection Report (Scoping)

Date: 09/25/2014	Station Name: A01 Metro Center West	Mezzanine #: 001	Completed By: Tino Sahoo
------------------	-------------------------------------	------------------	--------------------------

Summary

Video scoping was completed and pull string was installed for the power duct between the kiosk and AFC panel. Video scoping was completed for the upper and lower faregate array power ducts. No video scoping was completed and no pull string was installed for the upper and lower faregate array communications duct. Cat6 cable has already been installed in the communications ducts.

Scanning is not required at this mezzanine.

Scoping of Faregate Array(s)

Task	Yes/No	Notes
Communications Duct – Upper Faregate Array (4 Gates)		
Was video scoping completed for the entire duct run?	No	Cat6 cable previously installed, video scoping not completed
Were pull strings installed at all faregates in the array?	No	Cat6 cable previously installed, pull strings not installed
Were there any obstructions or blockages? Provide details of type and specific location.	N/A	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	
Communications Duct - Lower Faregate Array (4 Gates)		
Was video scoping completed for the entire duct run?		Cat6 cable previously installed, video scoping not completed
Were pull strings installed at all faregates in the array?		Cat6 cable previously installed, pull strings not installed
Were there any obstructions or blockages? Provide details of type and specific location.		
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.		
Power Duct - Upper Faregate Array (4 Gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to WMATA Metro Center West Upper Power Duct Fairgate Video.avi file.
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	
Power Duct - Lower Faregate Array (4 Gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to WMATA Metro Center West Lower Power Fair gate Video.avi file.
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	


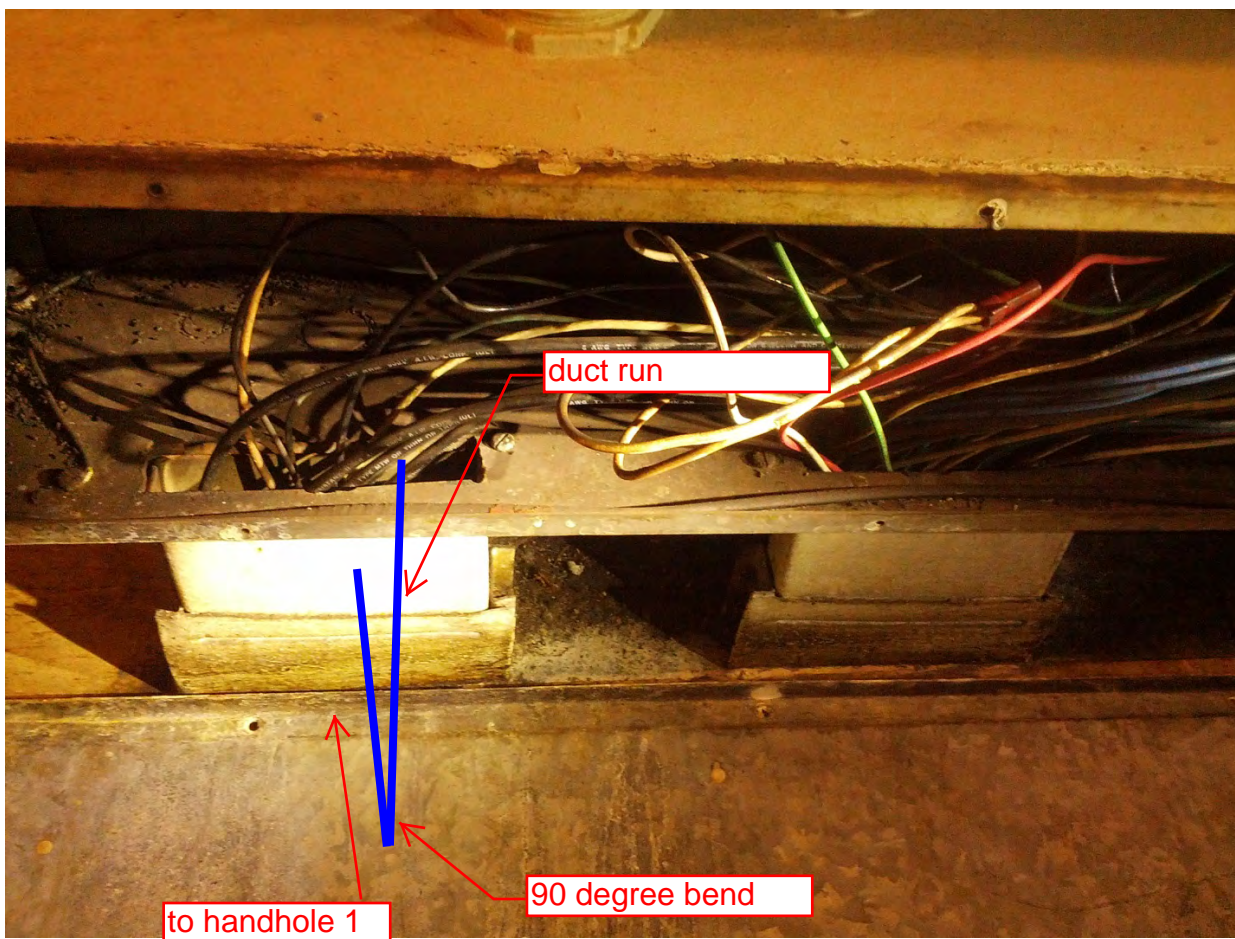
Scoping of Power Duct - Kiosk to AFC Panel		
Task	Yes/No	Notes
Kiosk to Handhole 1 (50 foot run)		
Was video scoping completed for the entire duct / conduit run?	Yes	Refer to WMATA Metro Center West Power Handhole to Kiosk Video.avi file.
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	
Handhole 1 to AFC Panel (20 foot run)		
Was video scoping completed for the entire duct / conduit run?	Yes	Refer to WMATA Metro Center West Power Handhole to AFC Panel Video.avi file.
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	
Observations / Issues / Next Steps		
Sign Off		
	GFP Representative	WMATA PRGM
Name:	Tino Sahoo	
Signature:		
Date:	09/25/2014	

Photo #1 – A01 Metro Center West: Mezzanine level handholes



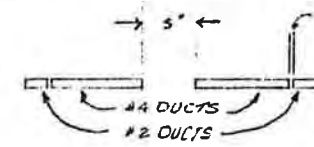
Photo #2 – A01 Metro Center West: Ducts to leading from ground level up to AFC Panel



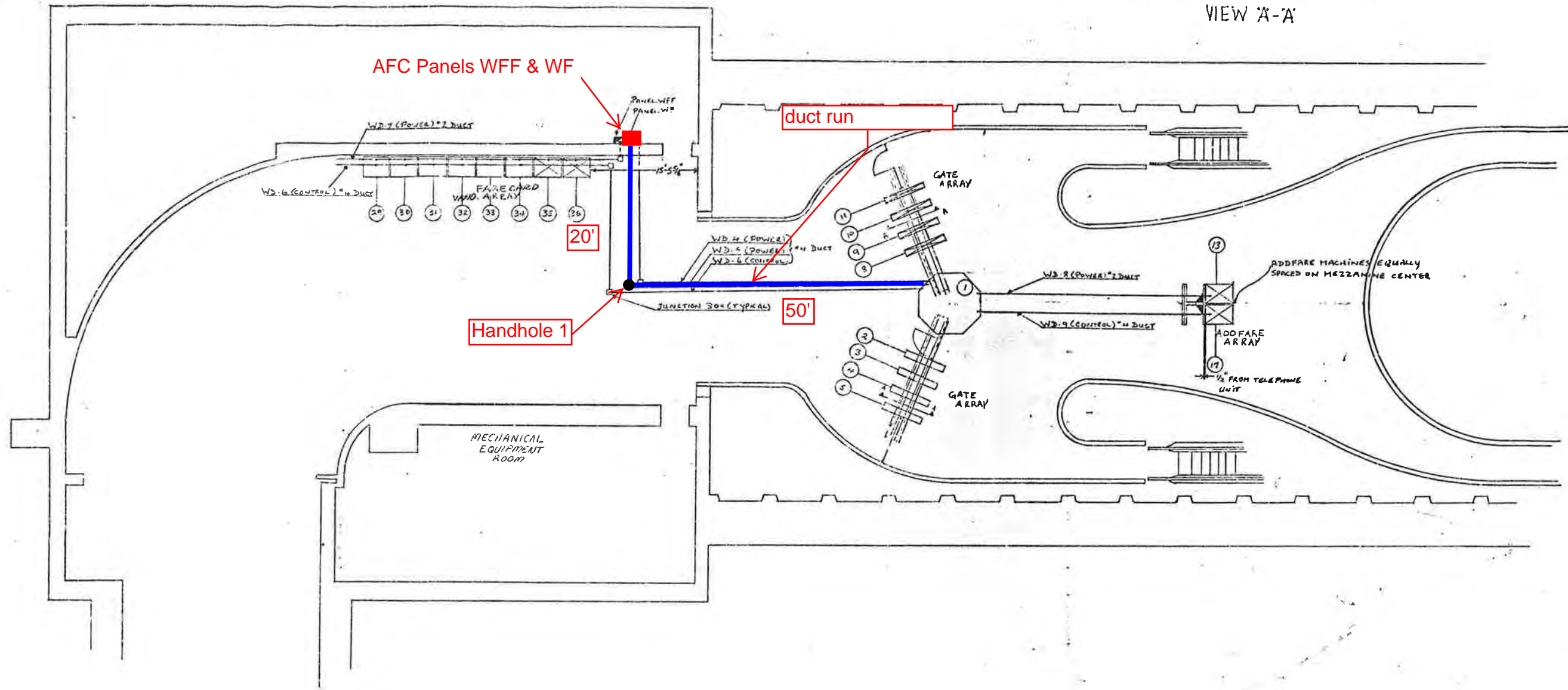
NOTES:

1. ALL INFORMATION CONCERNING DUCTS AND CONDUITS IS BASED ON INFORMATION SUPPLIED CUBIC WESTERN DATA BY WMATA

REVISIONS		
DESCRIPTION	DATE	APVD
AS BUILT DRAWING REV. A	5-10-77	[Signature]



VIEW 'A-A'



2. TOTAL MACHINE INVENTORY IS DEPICTED ON THIS DRAWING

3. THE MINIMUM OPERATIONAL MACHINE IS REFERENCED ON THIS DRAWING BY THE 'X' DRAWN THRU THE DRAWING

4. FOR AS BUILT CONDITIONS SEE SHEET 2

5. FOR REF DWGS SEE SUPPORT DOCUMENT PACKAGES FOR THIS MEZZANINE

1- INSTALLATION PLAN
(AS BUILT CONDITIONS)

PRIORITY REQUESTS ARE HEREBY GIVEN FOR BOTH ESCALATORS IF RUN FROM THE STREET LEVEL TO THE MEZZANINE FL.

WASHINGTON METRO RAILWAY
ATTN: TELEPHONE ROOM

CONTRACT NUMBER		CUBIC WESTERN DATA A subsidiary of Cubic Corporation 5100 KAPLAN MESA ROAD • POST OFFICE BOX 80787 • SAN DIEGO, CA 92138	
REF		METRO CENTER PHASE 2 STATION AFC MACHINES	
ENGRG			
DESIGN			
CHECK			
DRAWN			
DESIGN ACTIVITY APPROVAL	SIZE	DRAWING NUMBER	REV
APPROVED	D	456-0313	01
SCALE		SHEET	OF 2

Mezzanine Inspection Report (Scoping)


Date: 08/22/2014	Station Name: A01 Metro Center East	Mezzanine #: 019	Completed By: Mike Butler
------------------	-------------------------------------	------------------	---------------------------

Summary

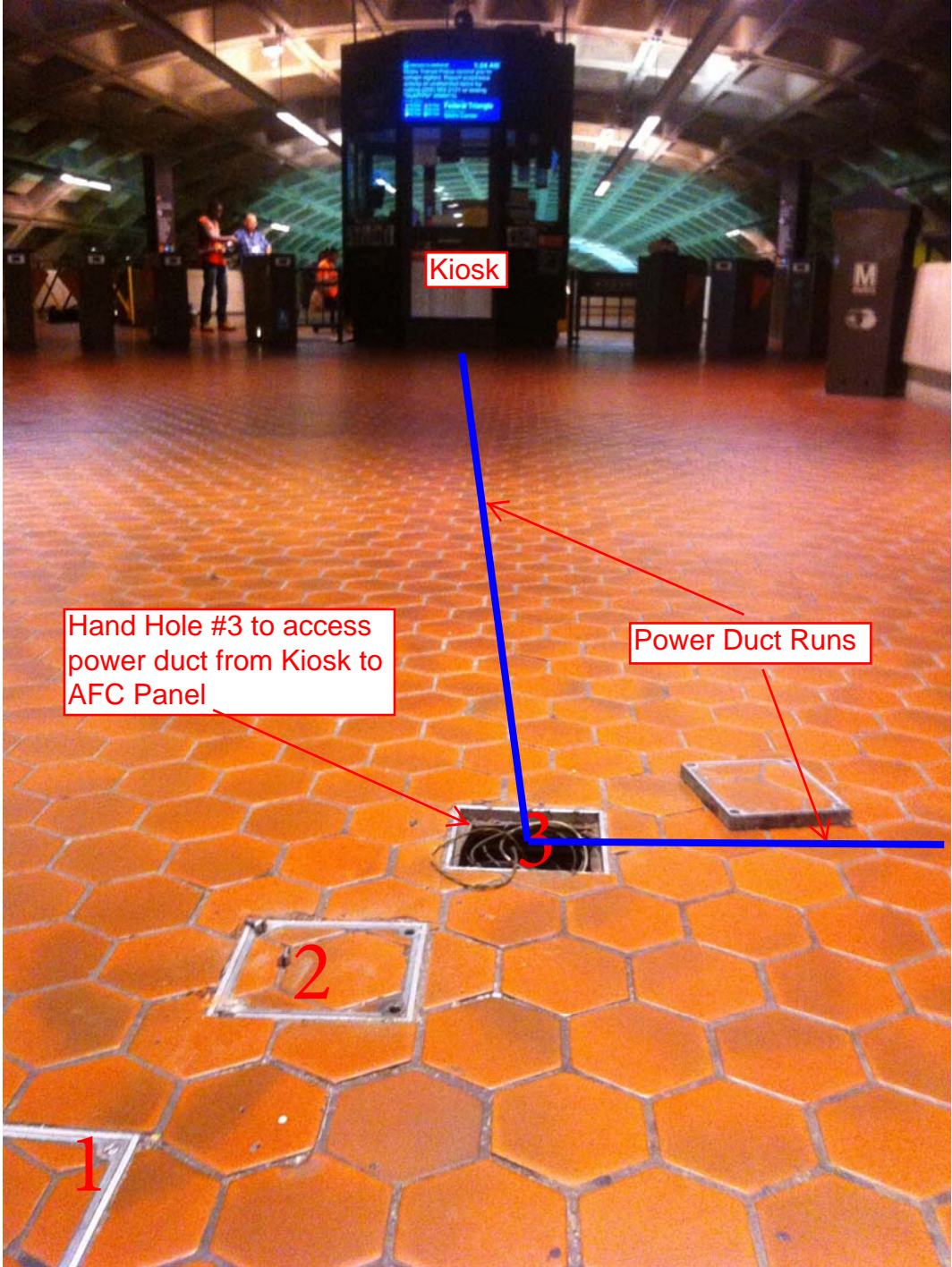
All ducts/conduits were video scoped and pull string installed as per the scope of works. No obstructions were found and ducts are not at capacity.
 Since pull string was successfully installed in all ducts, scanning will not be necessary at this mezzanine.

Scoping of Faregate Array(s)

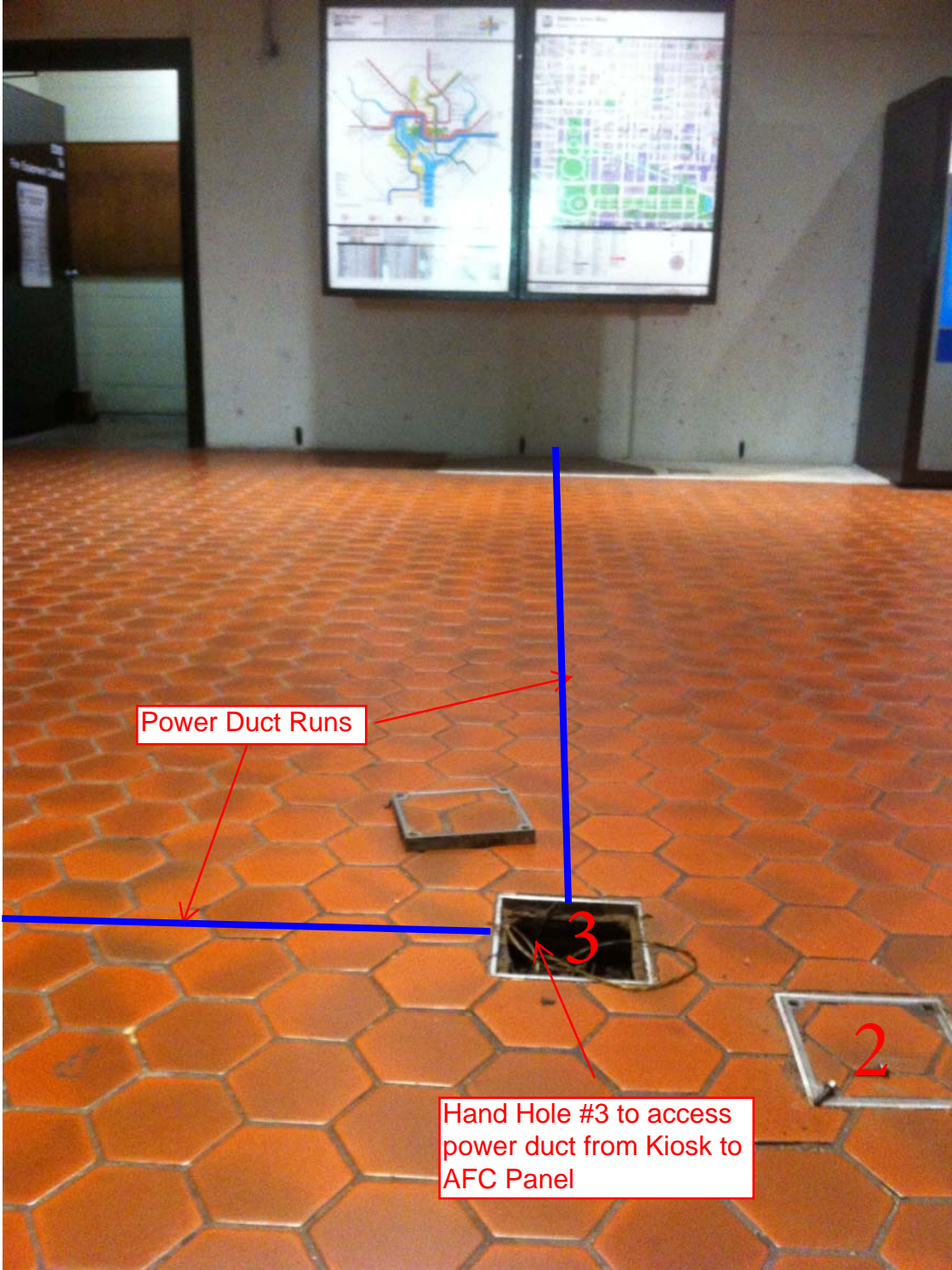
Task	Yes/No	Notes
Communications Duct – Upper Faregate Array (4 Gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to WMATA Metro Center East Station G St. Upper Comm Fair Gate Video.avi file.
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	
Communications Duct - Lower Faregate Array (5 Gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to WMATA Metro Center East Station G St. Lower Comm Fair Gate Video.avi file.
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	
Power Duct - Upper Faregate Array (4 Gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to WMATA Metro Center East Station G St. Power Upper Fair Gate Video.avi file.
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	
Power Duct - Lower Faregate Array (5 Gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to WMATA Metro Center East Station G St. Lower Power Fair Gate Video.avi file.
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	

Scoping of Power Duct - Kiosk to AFC Panel		
Task	Yes/No	Notes
Run 1 (Kiosk to Hand Hole #3 – 45 foot straight section)		
Was video scoping completed for the entire duct / conduit run?	Yes	Refer to WMATA Metro Center East Station G St. Power Kiosk to Handhole Video.avi file.
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	12 wires in duct
Run 2 (Hand Hole #3 to AFC Panel – 20 foot straight section)		
Was video scoping completed for the entire duct / conduit run?	Yes	Refer to WMATA Metro Center East Station G St. Power Handhole to AFC Panel Video.avi file.
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	12 wires in duct
Observations / Issues / Next Steps		
Refer to photos and as-built drawing for details of faregate and duct layouts.		
Sign Off		
	GFP Representative	WMATA PRGM
Name:	Mike Butler	
Signature:		
Date:	09/04/2014	

Metro Center East Photo #1 – Hand Hole #3 to access power duct from Kiosk to AFC Panel - duct run from Kiosk to hand hole confirmed.



Metro Center East Photo #2 – Hand Hole #3 to access power duct from Kiosk to AFC Panel - duct run from Kiosk to hand hole confirmed.



Metro Center East Photo #3 – Close-up of Hand Hole #3 to access power duct from Kiosk to AFC Panel
– 12 wires counted, therefore duct is not at capacity.



NOTES:

1. ALL INFORMATION CONCERNING DUCTS AND CONDUITS IS BASED ON INFORMATION SUPPLIED TO CUBIC WESTERN DATA BY WMATA

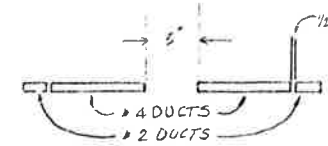
2. TOTAL MACHINE INVENTORY IS DEPICTED ON THIS DRAWING

3. THE MINIMUM OPERATIONAL MACHINE IS REFERENCED ON THIS DRAWING BY THE 'X' DRAWN THRU THE DRAWING

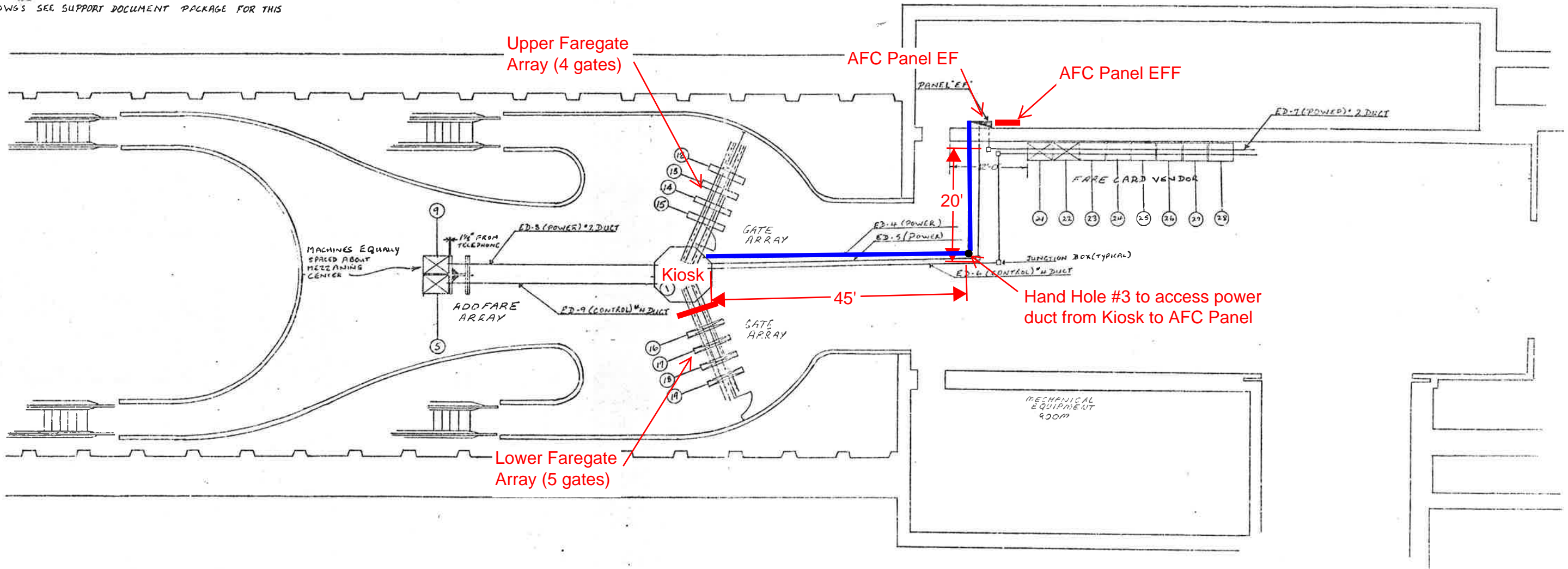
4. FOR AS BUILT CONDITIONS SEE SHEET 2

5. FOR REFERENCE DWGS SEE SUPPORT DOCUMENT PACKAGE FOR THIS MEZZANINE

REVISIONS		
DESCRIPTION	DATE	APVD
AS BUILT DRAWING REV. A	5-10-77	



VIEW A-A



2-INSTALLATION PLAN
(AS BUILT CONDITIONS)

19

PRIORITY REQUESTS ARE HEREBY GIVEN FOR BOTH ESCALATORS TO RUN FROM THE STREET LEVEL TO THE MEZZANINE EL.

CONTRACT NUMBER		 <small>A Subsidiary of Cubic Corporation 5650 HEATHY MESA ROAD • POST OFFICE BOX 80787 • SAN DIEGO, CA 92138</small>	
DATE	SCALE	DRAWING NUMBER	REV
DESIGN ACTIVITY APPROVAL	SCALE	93-0575	19
APPROVED	SCALE	SHEET	OF

Mezzanine Inspection Report

Date: 09/19/2014	Station Name: A02 - Farragut North (SE)	Mezzanine #: 002	Completed By: Mike Butler
-------------------------	--	-------------------------	----------------------------------

Summary

Video scoping and pull string installation was only partially completed for this mezzanine. Scanning was conducted to identify existing duct / conduit layouts as a basis for the proposed run between the Kiosk and the AFC Panel.

All communication ducts in Upper and Lower Faregate Arrays were successfully scoped with pull strings installed. It was only possible to video scope the power duct in the upper faregate array, due to there being an energized emergency power feed in the lower faregate power duct. Pull string installation was completed in the power duct between Kiosk and Handhole 1 - video scoping showed that the duct is generally free from obstructions apart from a 45-degree bend which prohibited scope passage. Pull string installation could not be installed between Handhole 1 and Handhole 2, due to excessive corrosion and collapses. Likewise, pull string installation could not be completed between Handhole 2 and AFC Panel, due to the presence of energized wired in shared raceway.

Scanning of the mezzanine floor was completed to determine the existing layout of in-floor ducts and a proposed power duct run between the Kiosk and AFC Panel. The results of the scanning (attached) showed that the mezzanine floor is congested with in-floor ducts and conduits, making it difficult to place a new duct directly from the Kiosk to AFC Panel. Therefore, a 75' overhead conduit from the Kiosk to AFC Panel is proposed (see attached drawings and photos).

Scoping of Faregate Array(s)

Task	Yes/No	Notes
Communications Duct – Upper Faregate Array (8 faregates)		
Was video scoping completed for the entire duct run?	Yes	Refer to "WMATA Farragut North SE Upper Comm Video.avi"
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	4" walker duct with less than 15 wires
Communications Duct - Lower Faregate Array (5 faregates)		
Was video scoping completed for the entire duct run?	Yes	Refer to "WMATA Farragut North SE Lower Comm Video.avi"
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	4" walker duct with less than 12 wires
Power Duct - Upper Faregate Array (8 faregates)		
Was video scoping completed for the entire duct run?	Yes	Refer to "WMATA Farragut North SE Upper Power Video.avi"
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	6" walker duct with less than 15 wires
Power Duct - Lower Faregate Array (5 faregates)		
Was video scoping completed for the entire duct run?	No	Faregate #10 was still energized by power feed from kiosk emergency panel.
Were there any obstructions or blockages? Provide details of type and specific location.	N/A	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	N/A	6" walker duct with less than 12 wires


Scoping of Power Duct - Kiosk to AFC Panel		
Task	Yes/No	Notes
Kiosk to Handhole 1 (Distance: 16')		
Was video scoping completed for the entire duct / conduit run?	Partially	Refer to "WMATA Farragut North SE Handhole to Kiosk Video.avi"
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	There were no other obstructions or blockages other than the 45-degree bend in walker duct, although corrosion was clearly evident.
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	4" walker duct with less than 15 wires
Handhole 1 to Handhole 2 (Distance: 15')		
Was video scoping completed for the entire duct / conduit run?	No	Not possible due to collapse.
Was pull string installed?	No	
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	Duct is heavily corroded and collapsed in multiple locations. Handhole 2 is also collapsed and in poor condition.
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	N/A	
Handhole 2 to AFC Panel (Distance: 20')		
Was video scoping completed for the entire duct / conduit run?	No	It was not possible to complete video scoping or pull string installation due to the presence of energized wires in a shared raceway.
Was pull string installed?	No	
Were there any obstructions or blockages? Provide details of type and specific location.	N/A	Although video scoping did not take place, a visual inspection confirmed that the duct is in poor condition with corrosion evident at each entry point.
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	N/A	
Observations / Issues / Next Steps		
Conductor Run for Proposed Overhead Conduit is approx. 75' from Kiosk to AFC Panel (Fare Vend 2)		
Sign Off		
	GFP Representative	WMATA PRGM
Name:	Mike Butler	
Signature:		
Date:	01/03/2015	

Photo #1: Kiosk on mezzanine floor



Photo #2: Handhole 1



Photo #3: Handhole 2



Photo #4: Entrance to backrooms and shared raceway



Photo #5: Proposed overhead conduit run from Kiosk to AFC Panel

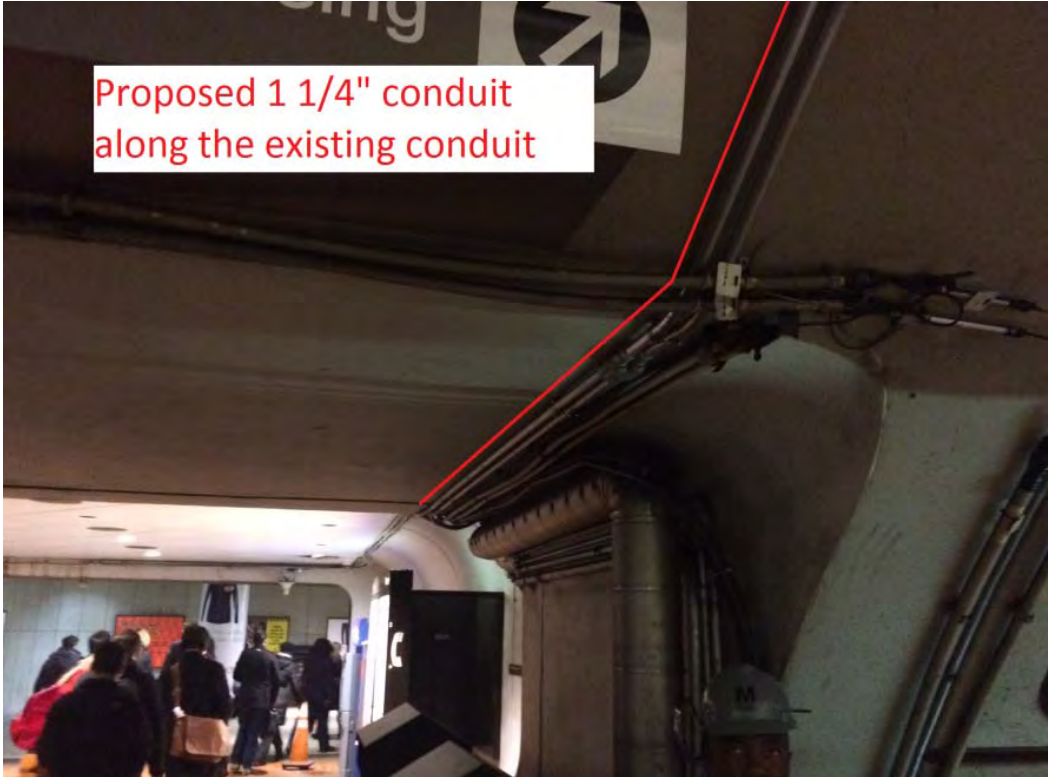
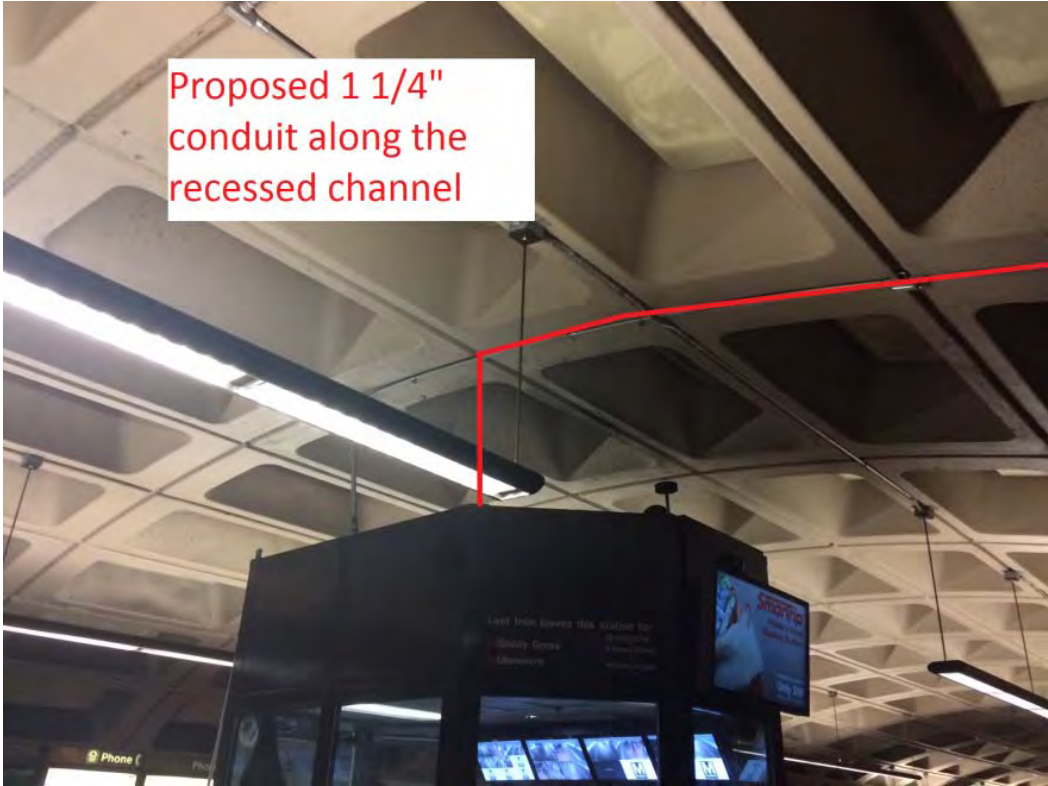


Photo #6: Proposed overhead conduit run from Kiosk to AFC Panel (continued)

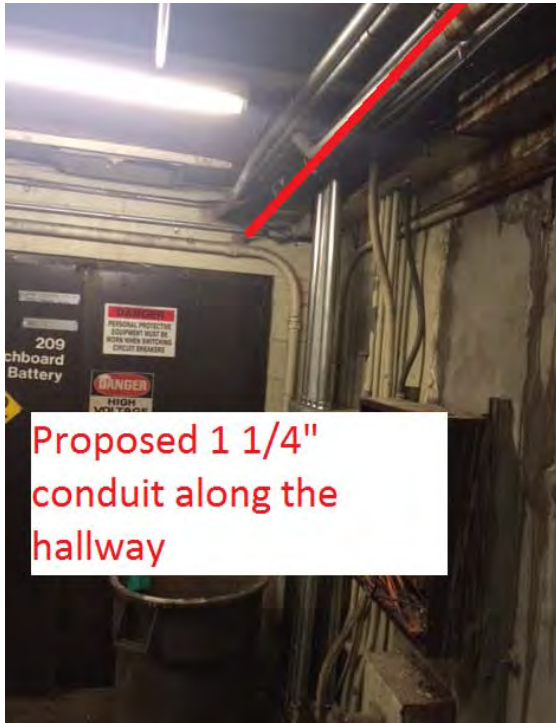


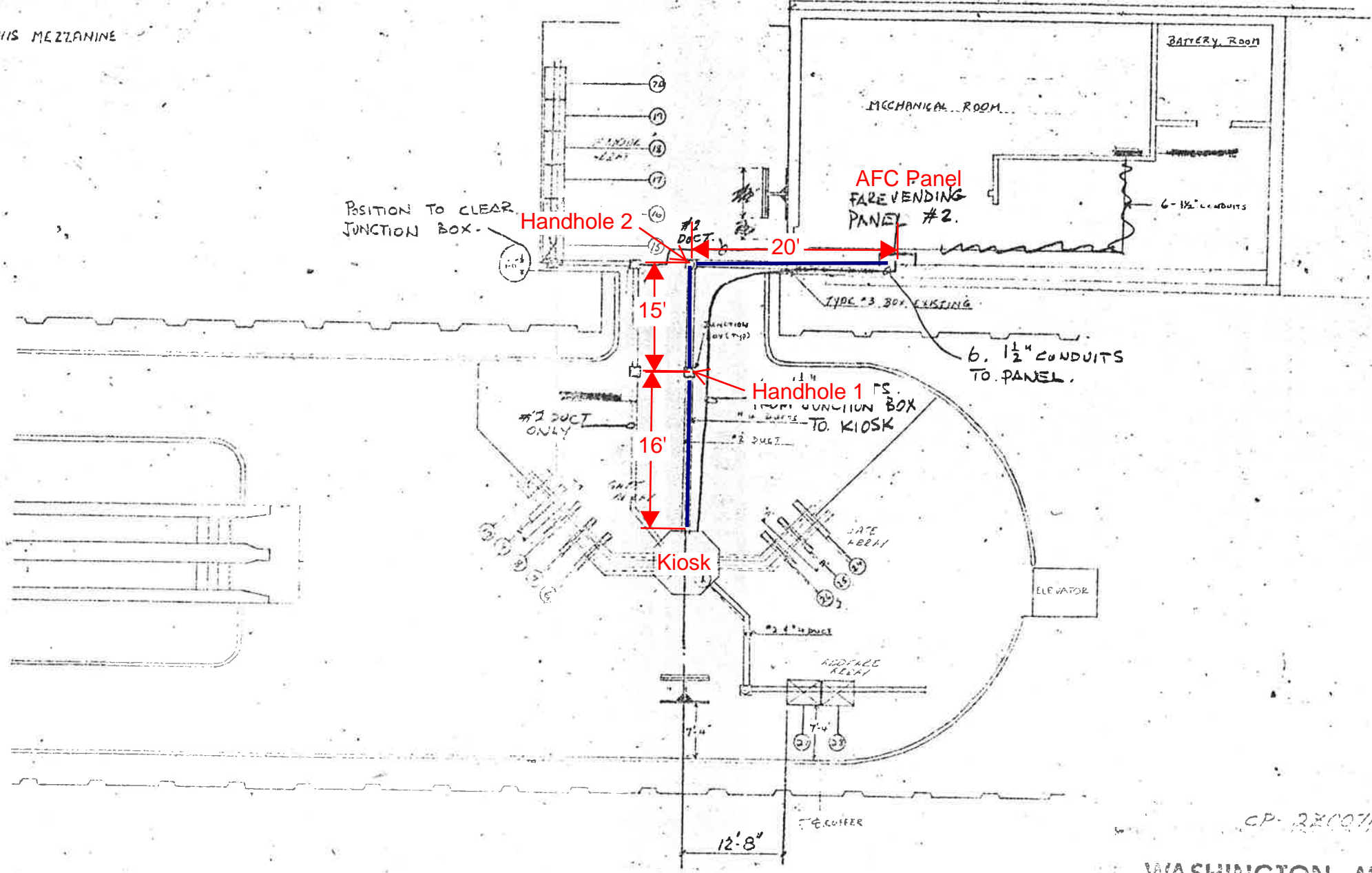
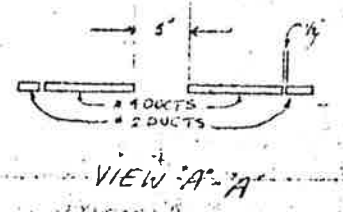
Photo #7: Proposed overhead conduit run from Kiosk to AFC Panel (continued)



Proposed 1 1/4" conduit into RM 209. The AFC panel is sitting right

REVISIONS	DESCRIPTION	DATE	APVD

- NOTES:
1. ALL INFORMATION ON TERMINAL BUILTS AND CONDUITS IS BASED ON INFORMATION PROVIDED TO US BY THE TRAIL WITH BY WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY.
 2. TOTAL MACHINE INVENTORY IS DEPICTED ON THIS DRAWING.
 3. THE MINIMUM OPERATIONAL MACHINE INVENTORY IS REFERENCED ON THIS DRAWING BY THE 'X' DRAWN THRU THE MACHINE.
 4. FOR AS BUILT CONDITIONS SEE SHEET 2.
 5. FOR REF DWGS SEE SUPPORT DOCUMENT PACKAGE FOR THIS MEZZANINE.



-3- INSTALLATION PLAN

CP-22007A-120-5-0

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

PRIORITY REQUESTS ARE HEREBY GIVEN FOR BOTH TERMINALS TO RUN FROM THE STREET LEVEL TO THE MEZZANINE LEVEL.

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

CORRECTED

By Contractor

For Accuracy of Construction

5/18/76

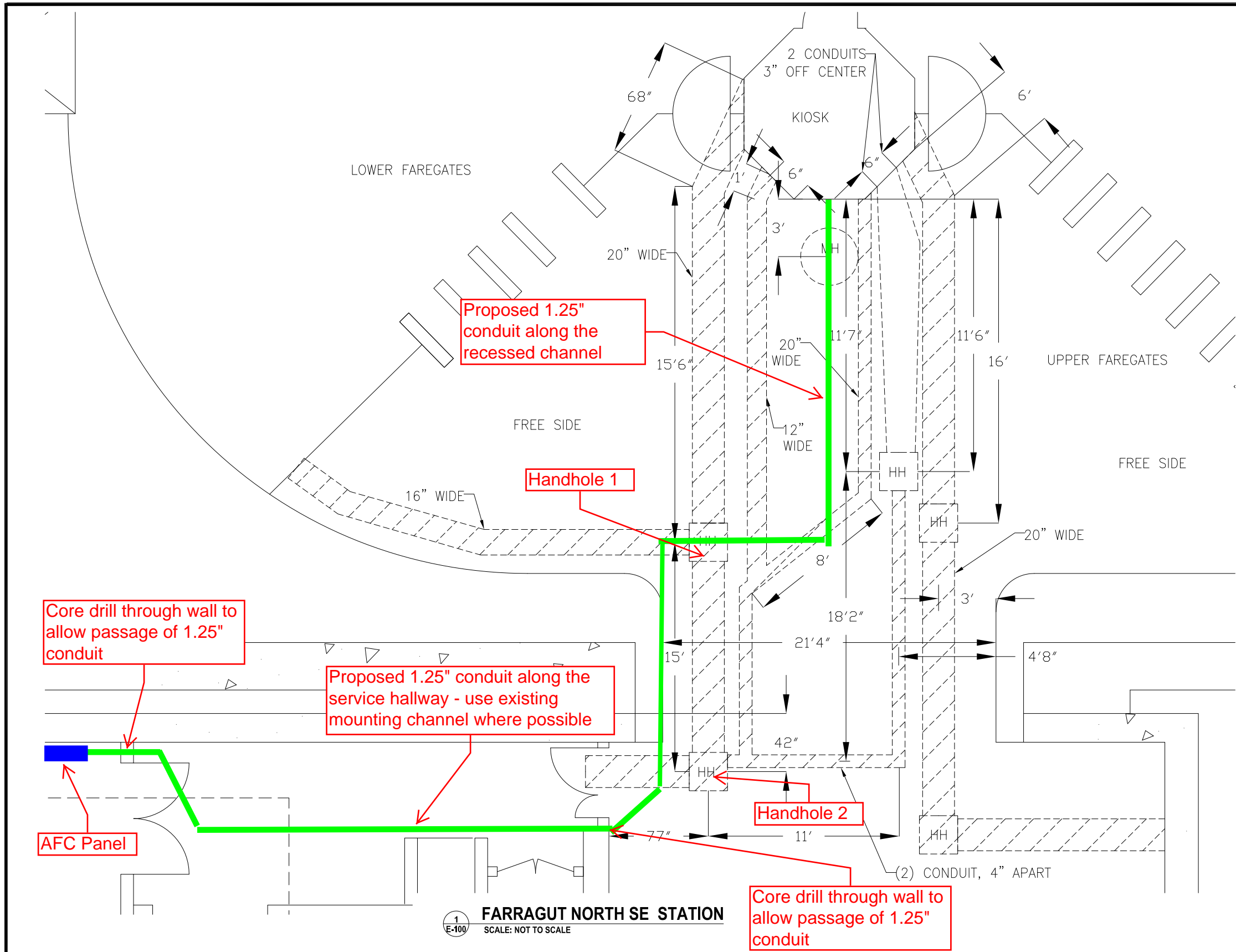
CONTRACT NUMBER

CUBIC WESTERN DATA

100 YEARS OF SERVICE

100

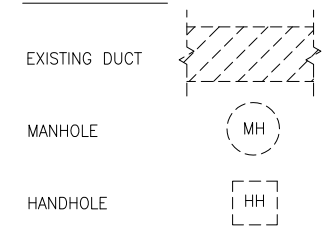
02



PLAN NOTES:

1. DIMENSIONS ARE IN FEET AND INCHES.
2. DIMENSIONS ARE FOR REFERENCE ONLY.
3. EXISTING IN-FLOOR DUCTS/CONDUITS WERE IDENTIFIED USING A PORTABLE GPR SCANNING DEVICE.
4. THE SCANNING COVERAGE IS LIMITED TO THE MEZZANINE FLOOR ONLY.
5. GPR SCANNING HAS THE FOLLOWING LIMITATIONS: (i) 12 INCHES VISIBLE SCANNING DEPTH; (ii) VISIBILITY BEYOND CONGESTED OR NEAR SURFACE REINFORCEMENT LAYERS; (iii) DETECTION OF PVC AND OTHER NON-METALLIC OBJECTS (iv) DETERMINATION OF SIZE AND EXTENTS OF SUBSURFACE ANOMALIES SUCH AS SLAB VOIDS OR REBAR SIZES; AND (v) VISIBILITY WHEN VARIABLE MOISTURE CONDITIONS EXIST IN THE SUBSTRATE.

LEGEND:



FARRAGUT NORTH SE STATION
SCALE: NOT TO SCALE

CONTRACT NO. XXXXXX

DESIGNED	C. LOOSE	11-14	REFERENCE DRAWINGS		REVISIONS			
			DATE	NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION
DRAWN	C. LOOSE	11-14						
CHECKED	M. BUTLER	11-14						
APPROVED								

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY
DEPARTMENT OF TRANSIT INFRASTRUCTURE AND ENGINEERING SERVICES
OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM

GFP A Gannett Fleming/Parsons JOINT VENTURE

APPROVED _____ SUBMITTED _____ PROJECT MANAGER

15-NEPP-01
IN - FLOOR DUCT INSPECTIONS
A02 Farragut North SE (M002)
PROPOSED POWER CONDUIT RUN

SCALE: NOT TO SCALE

DRAWING NO. A02-E-100

XXX

Mezzanine Inspection Report

REVISION 1

Date: 11/06/2014	Station Name: A02 Farragut North NW	Mezzanine #: 003	Completed By: Mike Butler
------------------	-------------------------------------	------------------	---------------------------

Summary


Scoping and pull string installation was partially completed. Pull string was installed in both the upper and lower faregate array communications duct; however, video scoping was not completed due to obstructions. Video scoping was completed for both the upper and lower faregate array power ducts. The power run between the Kiosk and AFC Panel is conduit; therefore, video scoping is not required. Pull string was installed from the AFC Panel to the junction box in the service hallway. Pull string could not be installed from the junction box to the Kiosk due to an obstruction.

A proposed overhead conduit path from the Kiosk to the junction box has been identified (see photos 6-10 below) since the existing conduit from the Kiosk to the junction box is deemed to be unusable. There is no room for installation of new in-floor duct based on the location of the existing manhole and the existing ducts. It is recommended to install overhead conduit from the kiosk along the recessed channel along the ceiling of the mezzanine and transition into the existing junction box located in the service hallway. There is already an existing core drill hole, so a core drill may not be required.

Scanning is not required at this location.

Scoping of Faregate Array(s)

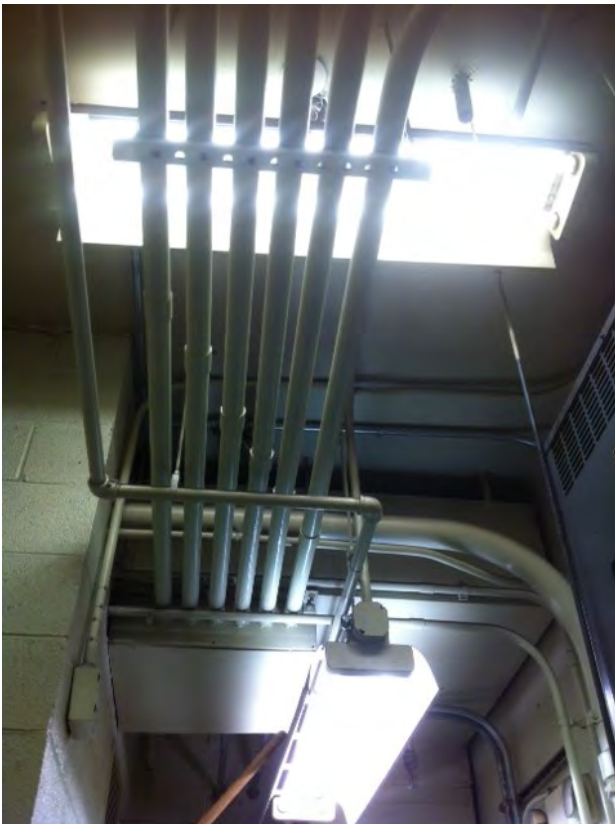
Task	Yes/No	Notes
Communications Duct – Upper Faregate Array (5 gates)		
Was video scoping completed for the entire duct run?	No	Refer to WMATA Farragut NW Station Upper Comm Video.avi file.
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	Hit insert/coupling on walker duct at 3 rd faregate
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	
Communications Duct - Lower Faregate Array (5 gates)		
Was video scoping completed for the entire duct run?	No	Refer to WMATA Farragut NW Station Lower Comm Video.avi file.
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	Apron skirt made it difficult to scope; scoped to about entrance of comm. duct on 1 st faregate.
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	
Power Duct - Upper Faregate Array (5 gates)		
Was video scoping completed for the entire duct run?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	
Power Duct - Lower Faregate Array (5 gates)		
Was video scoping completed for the entire duct run?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	

Scoping of Power Duct - Kiosk to AFC Panel		
Task	Yes/No	Notes
Kiosk to Junction Box (Approximately 40 foot run)		
Was video scoping completed for the entire duct / conduit run?	No	Refer to WMATA Farragut North NW Power Feed 2inch conduit Video (1).avi
Was pull string installed?	No	
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	90 degree bend into floor. Could not get past obstruction at bend.
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	2" conduit
Junction Box to AFC Panel (20 foot run)		
Was video scoping completed for the entire duct / conduit run?	No	Conduit – no scoping required
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	2" conduit
Observations / Issues / Next Steps		
<p>Obstruction was found at 90 degree bend where power conduits sweep into the ground from overhead junction box before proceeding to the kiosk. Access to the power conduits from kiosk is not possible due to apron skirt obstruction within the kiosk.</p> <p>Proposed conduit run is approximately 70 feet total between the Kiosk and the junction box. Refer to attached as-built plan for additional details.</p>		
Sign Off		
	GFP Representative	WMATA PRGM
Name:	Mike Butler	
Signature:		
Date:	11/06/2014	

Farragut North NW Photo # 1 – 90 degree bend where conduit sweeps underground to junction box



Farragut North NW Photo # 2 – Overhead conduit runs in Room #200



Farragut North NW Photo # 3 – Kiosk apron skirt



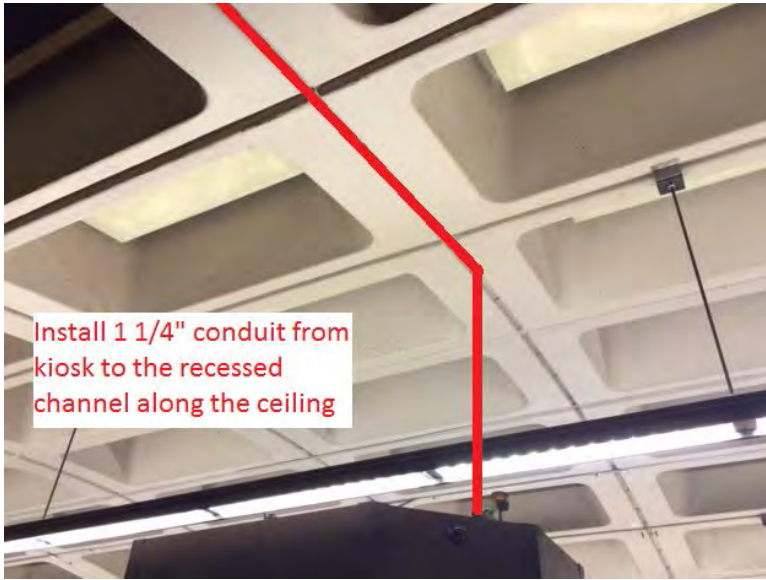
Farragut North NW Photo # 4 – Kiosk floor, there is a skirt obstruction inside Kiosk and a narrow gap for wires



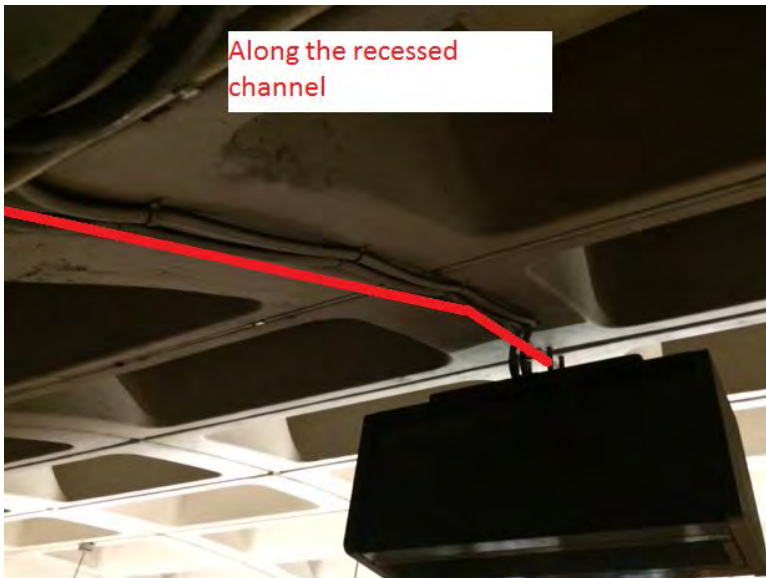
Farragut North NW Photo # 5 – Entrance to Room 200, junction box located behind door



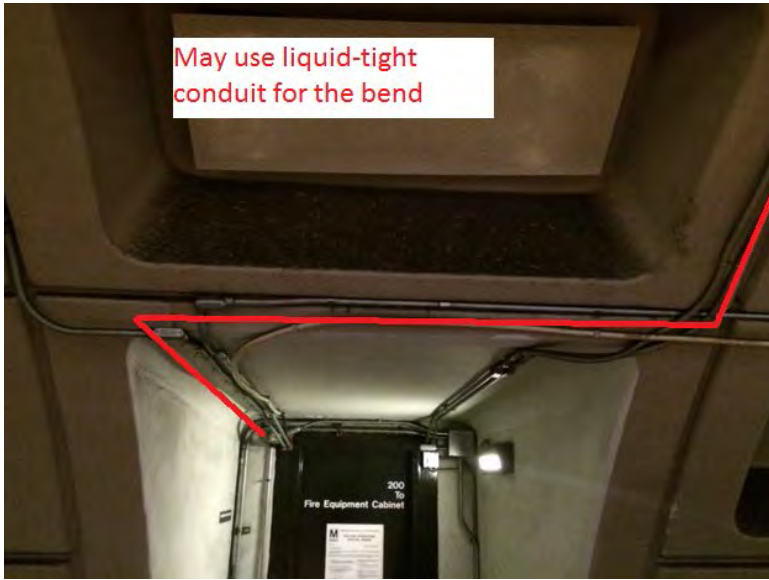
Farragut North NW Photo # 6 - Proposed conduit run



Farragut North NW Photo # 7 - Proposed conduit run



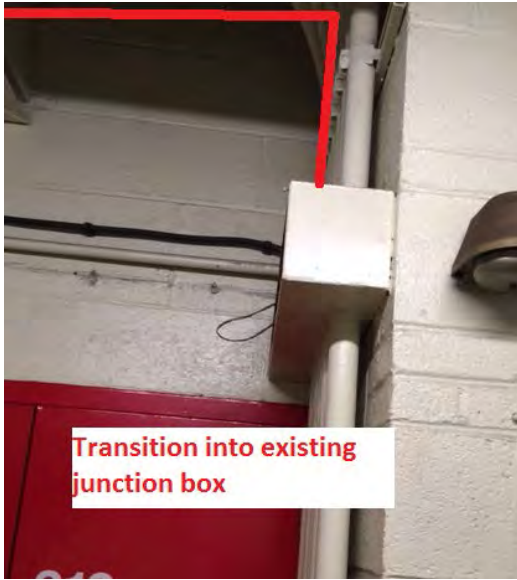
Farragut North NW Photo # 8 - Proposed conduit run



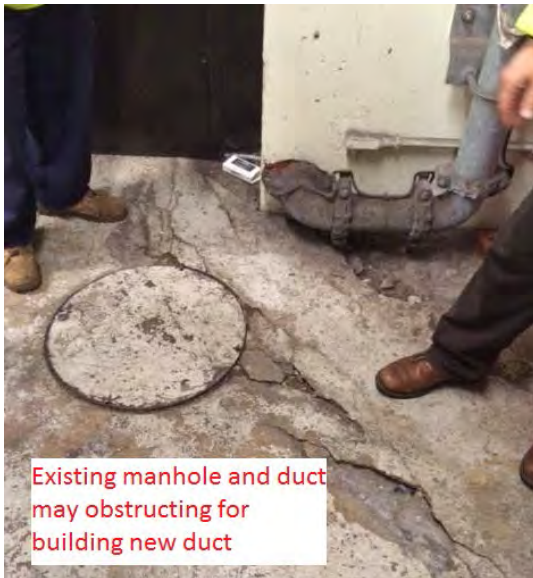
Farragut North NW Photo # 9 – Proposed conduit run through existing core drill

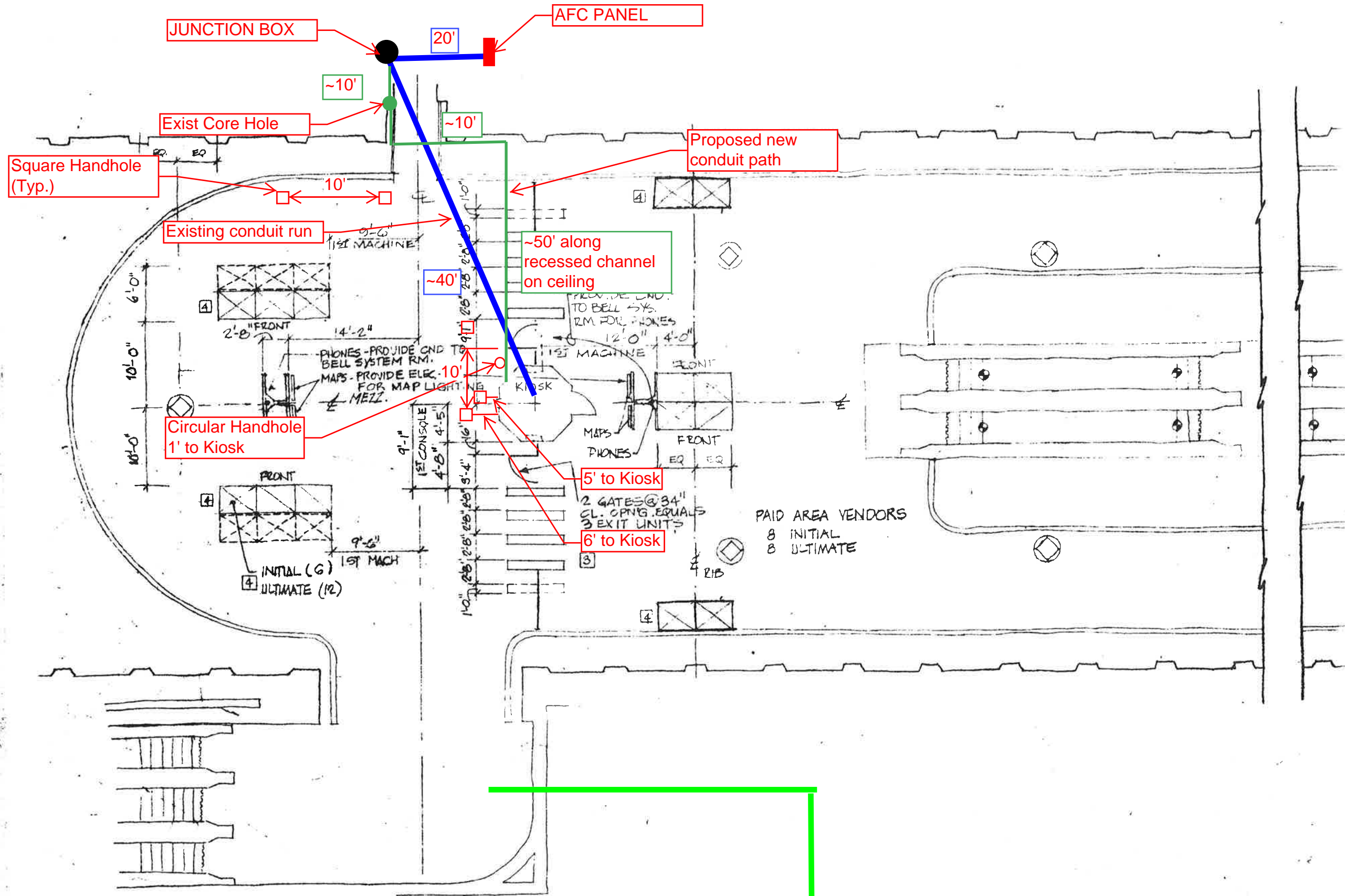


Farragut North NW Photo # 10 – Proposed conduit transition into existing junction box



Farragut North NW Photo # 11 – Existing manhole and duct may be in the way of any proposed duct installation





DESIGNED	HWA	2-20-73	REFERENCE DRAWINGS		REVISIONS		
			NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION
DRAWN	JJK	2-20-73			10-1-73	AK	ADD LOCATION DIMENSIONS
CHECKED		6-5-73		30	10-19-73	am	ADD ADDITIONAL DIMENSIONS
					10-22-74	ST	REVISED SERVICE GATE LOCATION
					2-17-75	K	REV AFC EQUIP QUANTITIES

WASHINGTON
 WMATA
 APPROVED *[Signature]* DIRECTOR

03

Mezzanine Inspection Report (Scoping)

Date: 11/03/14	Station Name: A02 Farragut North NE	Mezzanine #: 004	Completed By: Mike Butler
-----------------------	--	-------------------------	----------------------------------

Summary

Pull string installation completed in communication ducts for upper and lower faregate arrays; ducts are viable for future use. Video scoping could not be completed in communication ducts for upper and lower faregate arrays due to the camera size. Video scoping could not be completed in power ducts for upper and lower faregate arrays due to energized wires.

Video scoping and pull string installation could not be completed in power duct between Kiosk, Handhole 1, Handhole 2, Handhole 3 and Junction Box in Room 254 due to energized wires. However, pull string was successfully installed in conduit between Junction Box (Room 254) and Trough (Room 256). Pull string was also installed in conduit between Trough and AFC Panel in Room 256.

A new overhead conduit is proposed between the Kiosk and existing Junction Box in Room 254 because an in-floor duct is not feasible based on the results of the scanning. The proposed conduit will run along the ceiling from the Kiosk to the wall adjacent to Room 254 in the hallway. Core drilling is needed to allow the conduit to pass through the wall and feed into existing Junction Box. Refer to attached photos and drawings for more information.

Scoping of Faregate Array(s)

Task	Yes/No	Notes
Communications Duct – Upper Faregate Array (5 gates)		
Was video scoping completed for the entire duct run?	No	Camera was too large to get through the entire duct, therefore visual inspection was performed.
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	3" walker duct with less than 8 wires.
Communications Duct - Lower Faregate Array (3 gates)		
Was video scoping completed for the entire duct run?	No	Camera was too large to get through the entire duct, therefore visual inspection was performed.
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	6" walker duct with less than 10 wires.
Power Duct - Upper Faregate Array (5 gates)		
Was video scoping completed for the entire duct run?	No	Could not be completed due to energized wires - no further work was completed as directed by WMATA.
Were there any obstructions or blockages? Provide details of type and specific location.	N/A	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	N/A	
Power Duct - Lower Faregate Array (3 gates)		
Was video scoping completed for the entire duct run?	No	Could not be completed due to energized wires - no further work was completed as directed by WMATA.
Were there any obstructions or blockages? Provide details of type and specific location.	N/A	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	N/A	


Scoping of Power Duct - Kiosk to AFC Panel		
Task	Yes/No	Notes
Kiosk to Handhole 1, Handhole 2, Handhole 3 and Junction Box (Distance: 70')		
Was video scoping completed for the entire duct / conduit run?	No	Could not be completed due to energized wires - no further work was completed as directed by WMATA.
Was pull string installed?	No	
Were there any obstructions or blockages? Provide details of type and specific location.	N/A	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	N/A	
Junction Box to Trough (Distance: 60')		
Was video scoping completed for the entire duct / conduit run?	No	Scoping of conduits not required.
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	2" conduit with less than 8 wires.
Trough to AFC Panel (Distance: 20')		
Was video scoping completed for the entire duct / conduit run?	No	Scoping of conduits not required.
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	2" conduit with less than 8 wires.
Observations / Issues / Next Steps		
<p>Proposed conduit run is 75' from Kiosk to Junction Box (Room 254).</p> <p>Existing conduit run is 80' between Junction Box (Room 254), Trough and AFC Panel (Room 256).</p>		
Sign Off		
	GFP Representative	WMATA PRGM
Name:	Mike Butler	
Signature:		
Date:	02/24/15	

Photo #1 – Proposed overhead conduit from Kiosk

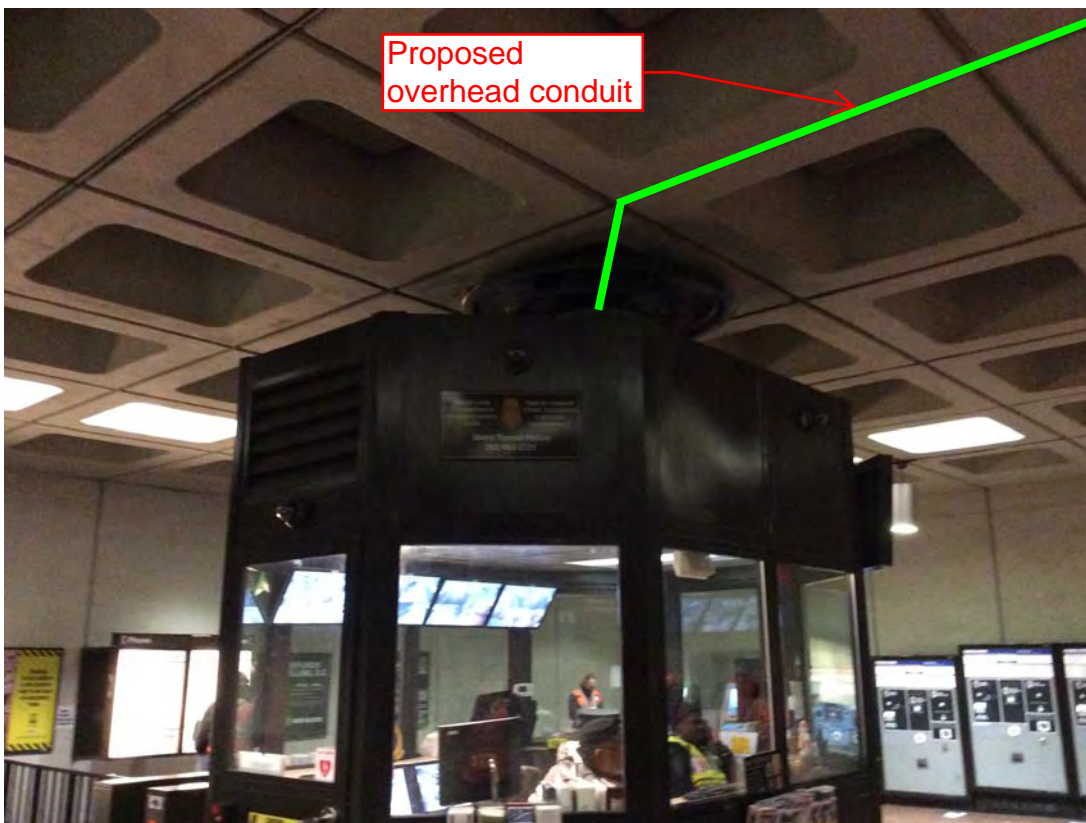


Photo #2 – Proposed overhead conduit from Kiosk

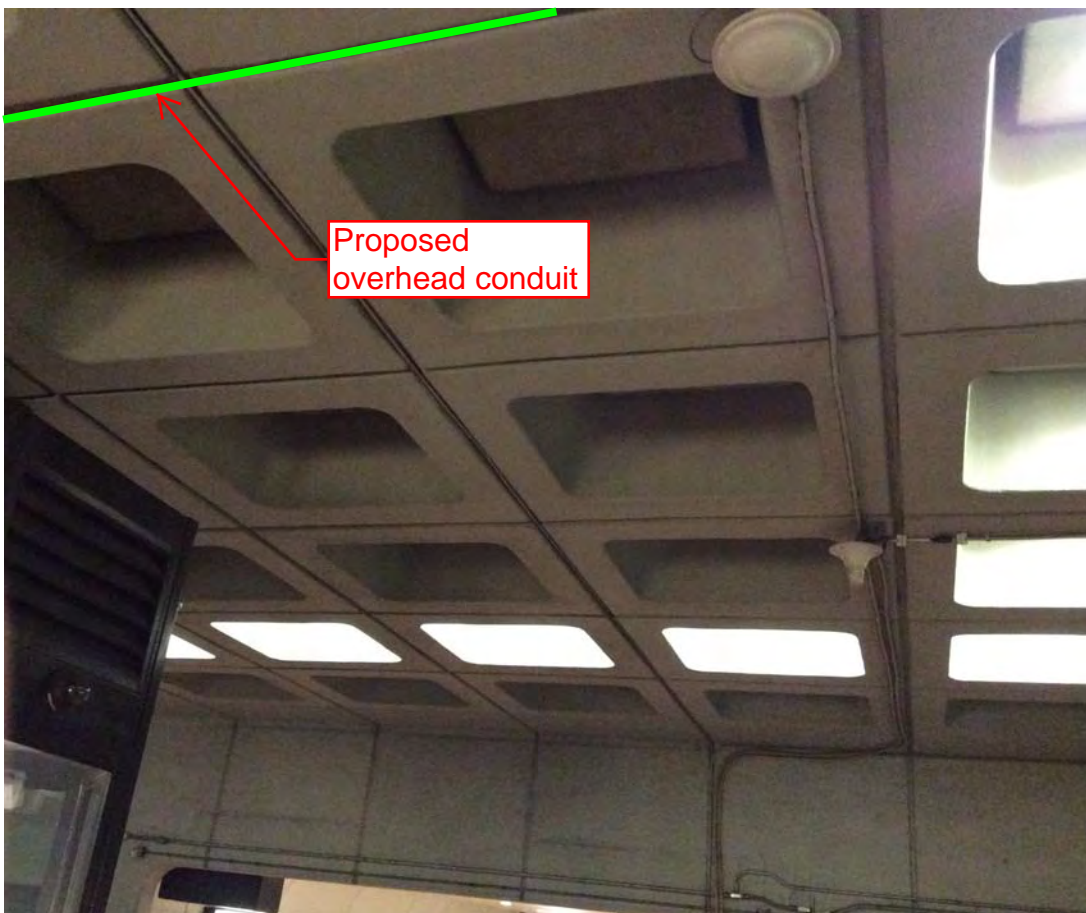
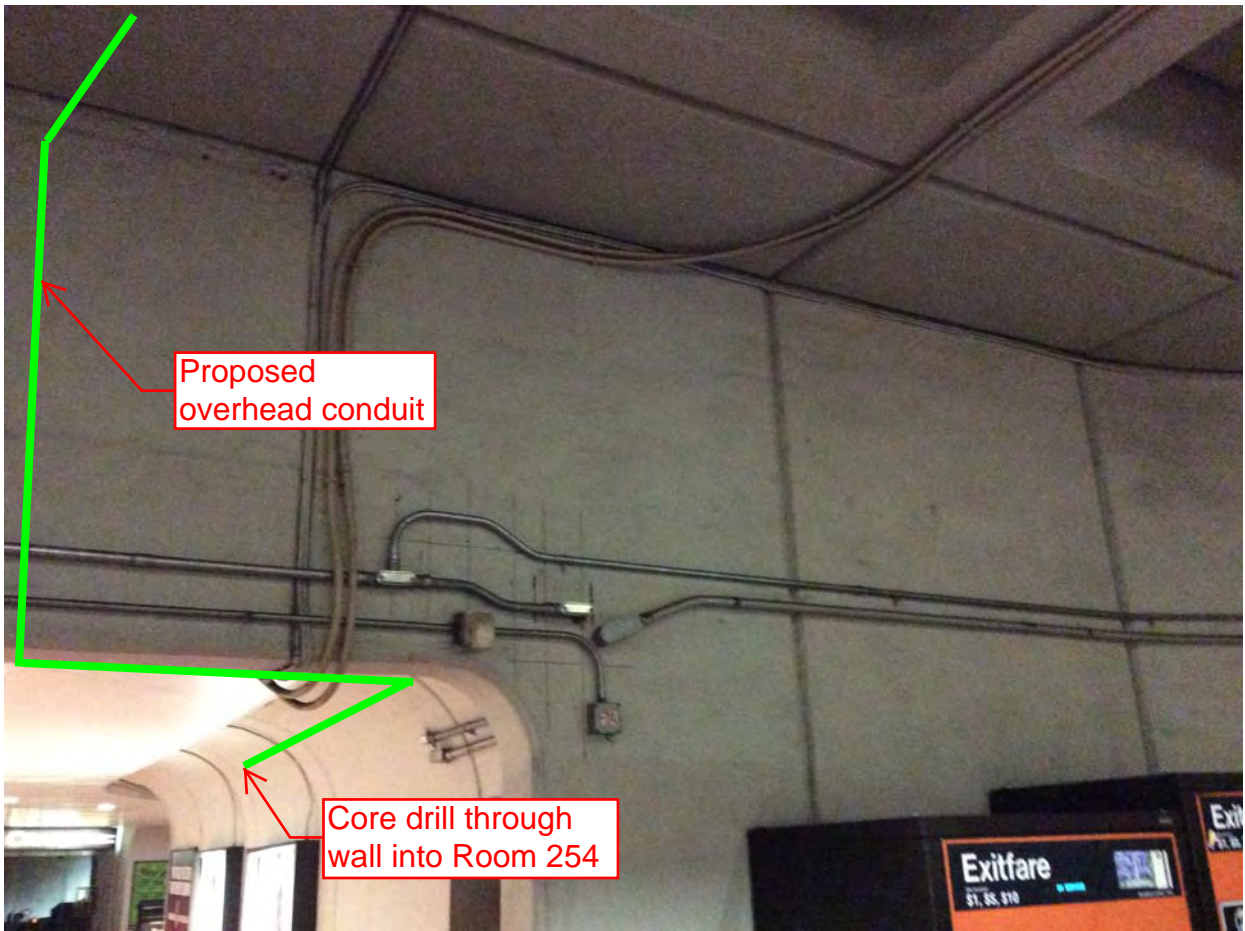


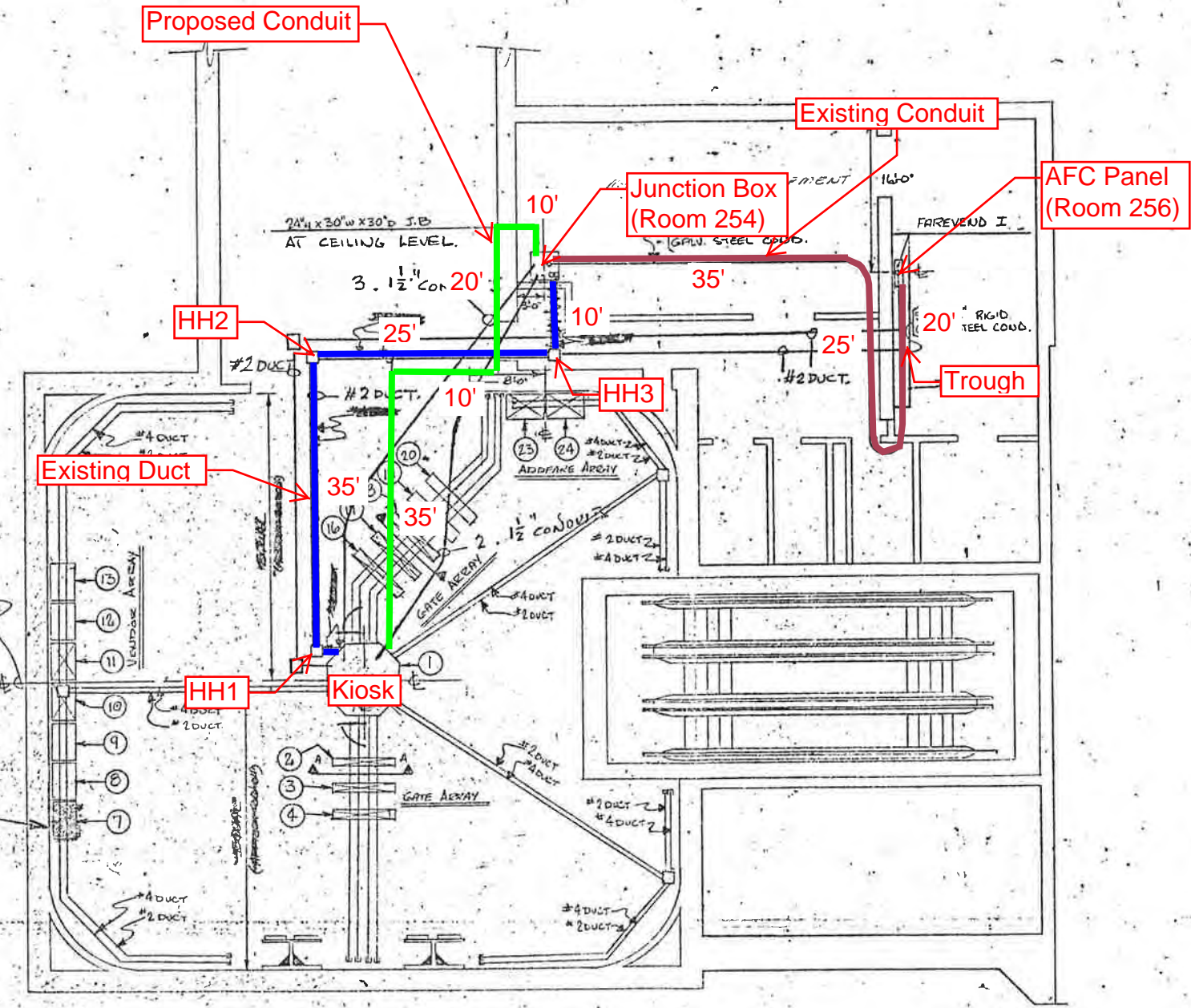
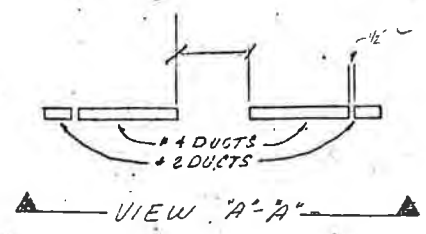
Photo #3 – Proposed overhead conduit heading towards back rooms



REVISIONS	DATE	APVD
DESCRIPTION		

NOTES:

- ALL INFORMATION CONCERNING DUCTS AND CONDUITS IS BASED ON INFORMATION SUPPLIED TO CUBIC WESTERN DATA BY W.M.A.T.A.
- IF MACHINE INVENTORY IS DEPICTED ON THIS DRAWING.
- THE MINIMUM OPERATIONAL MACHINE INVENTORY IS REFERENCED ON THIS DRAWING BY THE 'X' DRAWN THRU THE MACHINE.
- FOR AS BUILT CONTINUATION, SEE DRAWING #2 INSTALLMENT PLAN.
- FOR REFERENCE DRAWINGS SEE SUPPORT DOCUMENT PACKAGE FOR THIS MEZZANINE.



VENDOR ARRAY EQUIP EQUAL SPACED ON Q OF ROOM

THIS MACHINE NOT IN C-WD CONTRACT.

PRIORITY REQUESTS ARE HEREBY GIVEN FOR ESCALATORS (STREET TO MEZZANINE) AND THE ELEVATORS THAT RUN FROM THE STREET LEVEL TO THE MEZZANINE.

No 1 INSTALLATION PLAN

SCALE: 1/8" = 1'-0" U.O.N.

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

APPROVED AS CORRECTED (RESUBMITTAL REQUIRED)
Approval Does Not Relieve the Contractor of the Responsibility for the Accuracy of this Document or for Full Compliance with the Contract Requirements.

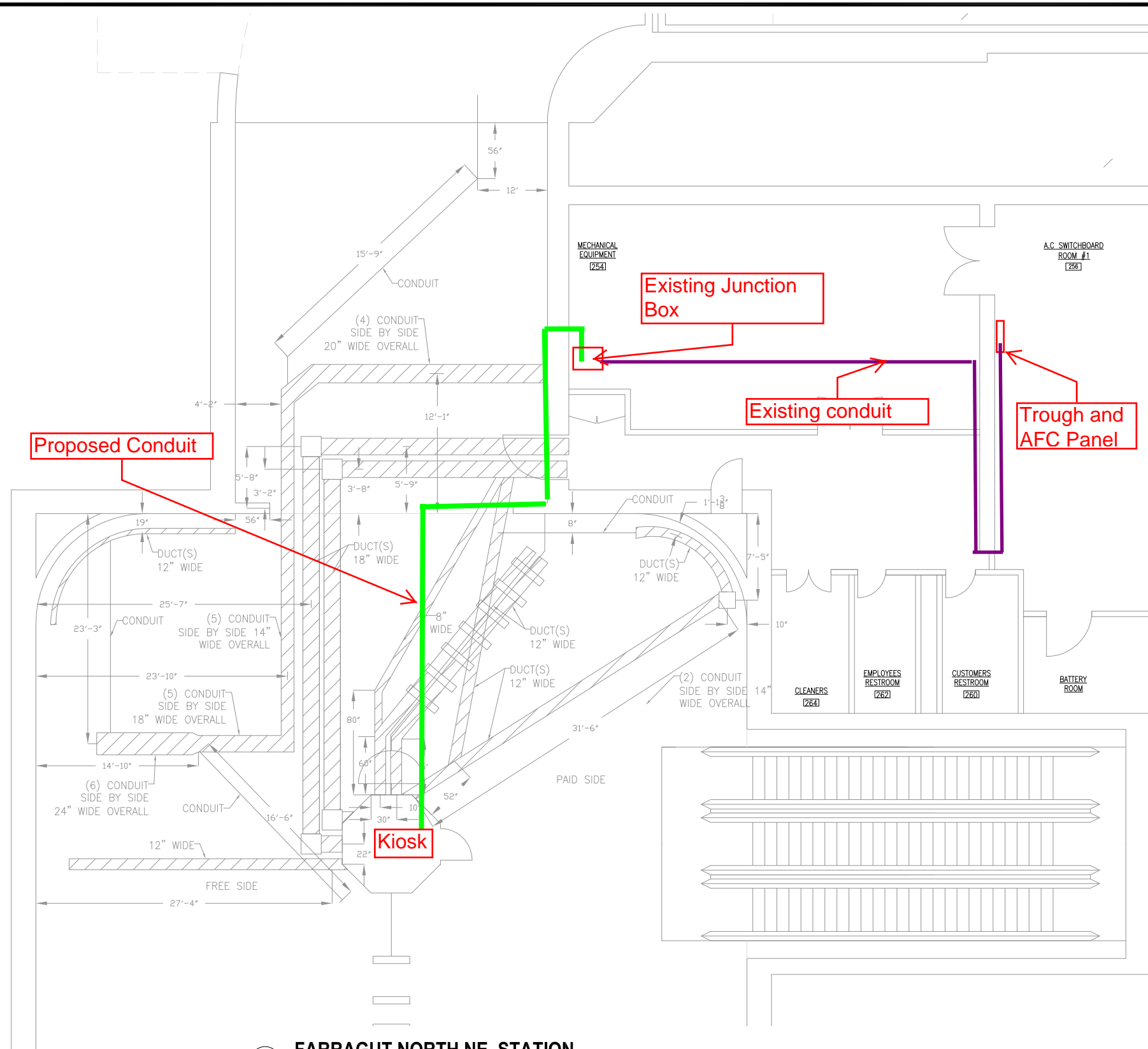
BY: *Patrick S. Stouin*
For Contracting Director

DATE: 12-7-16

35

CP-22007A-120-4-0
WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

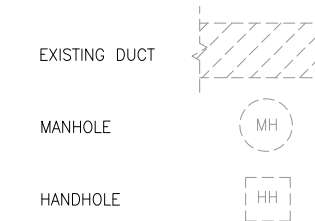
CONTRACT NUMBER 22007A		CUBIC WESTERN DATA <small>A Subsidiary of Cubic Corporation 3450 NEARBY MESA ROAD • POST OFFICE BOX 80161 • SAN DIEGO, CALIFORNIA</small>	
REL		FARRAGUT NORTH NORTHEAST STATION AFC MACHINES	
ENGRG		DRAWING NUMBER 926-0395	
DESIGN			
CHECK		REV 04	
DESIGN ACTIVITY APPROVAL	SIZE D	REV 0	
APPROVED <i>BM</i>	SCALE 1/8" = 1'-0"	SHEET 1 OF 3	



PLAN NOTES:

1. DIMENSIONS ARE IN FEET AND INCHES.
2. DIMENSIONS ARE FOR REFERENCE ONLY.
3. EXISTING IN-FLOOR DUCTS/CONDUITS WERE IDENTIFIED USING A PORTABLE GPR SCANNING DEVICE.
4. THE SCANNING COVERAGE IS LIMITED TO THE MEZZANINE FLOOR ONLY.
5. GPR SCANNING HAS THE FOLLOWING LIMITATIONS: (i) 12 INCHES VISIBLE SCANNING DEPTH; (ii) VISIBILITY BEYOND CONGESTED OR NEAR SURFACE REINFORCEMENT LAYERS; (iii) DETECTION OF PVC AND OTHER NON-METALLIC OBJECTS (iv) DETERMINATION OF SIZE AND EXTENTS OF SUBSURFACE ANOMALIES SUCH AS SLAB VOIDS OR REBAR SIZES; AND (v) VISIBILITY WHEN VARIABLE MOISTURE CONDITIONS EXIST IN THE SUBSTRATE.

LEGEND:



1
E-100 **FARRAGUT NORTH NE STATION**
SCALE: NOT TO SCALE

CONTRACT NO.
XXXXXX

DESIGNED	C. LOOSE	11-14
		DATE
DRAWN	C. LOOSE	11-14
		DATE
CHECKED	M. BUTLER	11-14
		DATE
APPROVED		
		DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

APPROVED _____

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY
DEPARTMENT OF TRANSIT INFRASTRUCTURE
AND ENGINEERING SERVICES
OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM

GFP A Gannett Fleming/Parsons
JOINT VENTURE
SUBMITTED _____
PROJECT MANAGER

15-NEPP-01
IN - FLOOR DUCT INSPECTIONS
A02 Farragut North NE
PROPOSED POWER CONDUIT RUN
SCALE
NOT TO SCALE
DRAWING NO.
A02-E-100
XXX

Mezzanine Inspection Report (Scoping)

Date: 12/09/2014	Station Name: A03 Dupont Circle South	Mezzanine #: 005	Completed By: Mike Butler
-------------------------	--	-------------------------	----------------------------------

Summary

Video scoping and pull string installation was completed for the faregate array communications ducts. Video scoping was completed for the faregate array power ducts.

Scoping and pull string installation of the duct run from kiosk to shared pull box and pull string installation between the shared pull box and AFC panel could not be completed due to energized lines. WMATA has requested a proposed conduit run from the kiosk to the AFC panel. This run would consist of two 1 ¼" conduits from the kiosk, overhead in the recessed channels along the mezzanine ceiling, into room #201. The two conduits would need to penetrate the metal above the door. The run would then continue down the hall and turn across the room towards room #215. The conduit would then need to be cored into the wall near the door to room #215 and run into an existing box and continue down into the AFC Panel. This proposed run is outlined in the photos below.

Scanning is not required at this mezzanine.

Scoping of Faregate Array(s)

Task	Yes/No	Notes
Communications Duct – Upper Faregate Array (4 Gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to WMATA Dupont circle South Upper Comm Duct Video.avi file.
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	2" duct – less than 5 wires
Communications Duct - Lower Faregate Array (4 Gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to WMATA Dupont circle South Lower Comm Duct Video.avi file.
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	2" duct – less than 5 wires
Power Duct - Upper Faregate Array (4 Gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to WMATA Dupont circle South Upper Power Duct Video.avi file.
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	4" duct – less than 5 wires
Power Duct - Lower Faregate Array (4 Gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to WMATA Dupont circle South Lower Power Duct Video.avi file.
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	4" duct – less than 5 wires


Scoping of Power Duct - Kiosk to AFC Panel		
Task	Yes/No	Notes
Kiosk to Shared Pull Box (60' run)		
Was video scoping completed for the entire duct / conduit run?	No	Hot wires prevented scoping
Was pull string installed?	No	Hot wires prevented pull string installation
Were there any obstructions or blockages? Provide details of type and specific location.	N/A	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	
Shared Pull Box to Shared Electrical Trough (30 foot run)		
Was video scoping completed for the entire duct / conduit run?	No	Conduit – no scoping required
Was pull string installed?	No	Hot wires prevented pull string installation
Were there any obstructions or blockages? Provide details of type and specific location.	N/A	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	
Shared Electrical Trough to AFC Panel (15 foot run)		
Was video scoping completed for the entire duct / conduit run?	No	Conduit – no scoping required
Was pull string installed?	No	Hot wires prevented pull string installation
Were there any obstructions or blockages? Provide details of type and specific location.	N/A	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	
Observations / Issues / Next Steps		
Total proposed overhead conduit run of 173 feet from kiosk to AFC panel.		
Sign Off		
	GFP Representative	WMATA PRGM
Name:	Mike Butler	
Signature:		
Date:	10/34/14	

Photo #1 – A03 Dupont Circle South: Shared pull box in Verizon room #203



to electrical trough

existing run

to kiosk

Photo #2 – A03 Dupont Circle South: AFC Panel and under floor trough in room #215

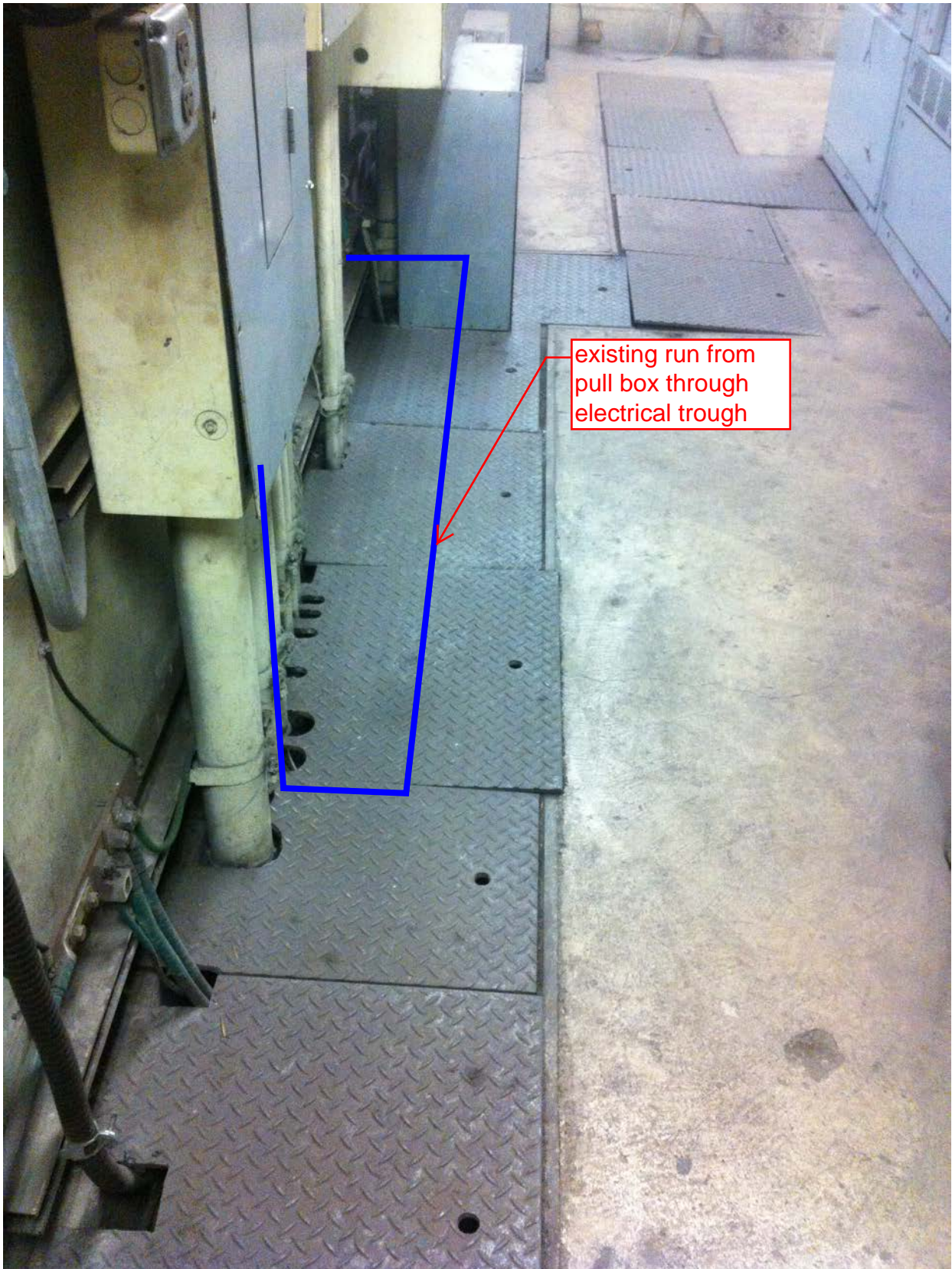


Photo #3 – A03 Dupont Circle South: Proposed overhead conduit in mezzanine area

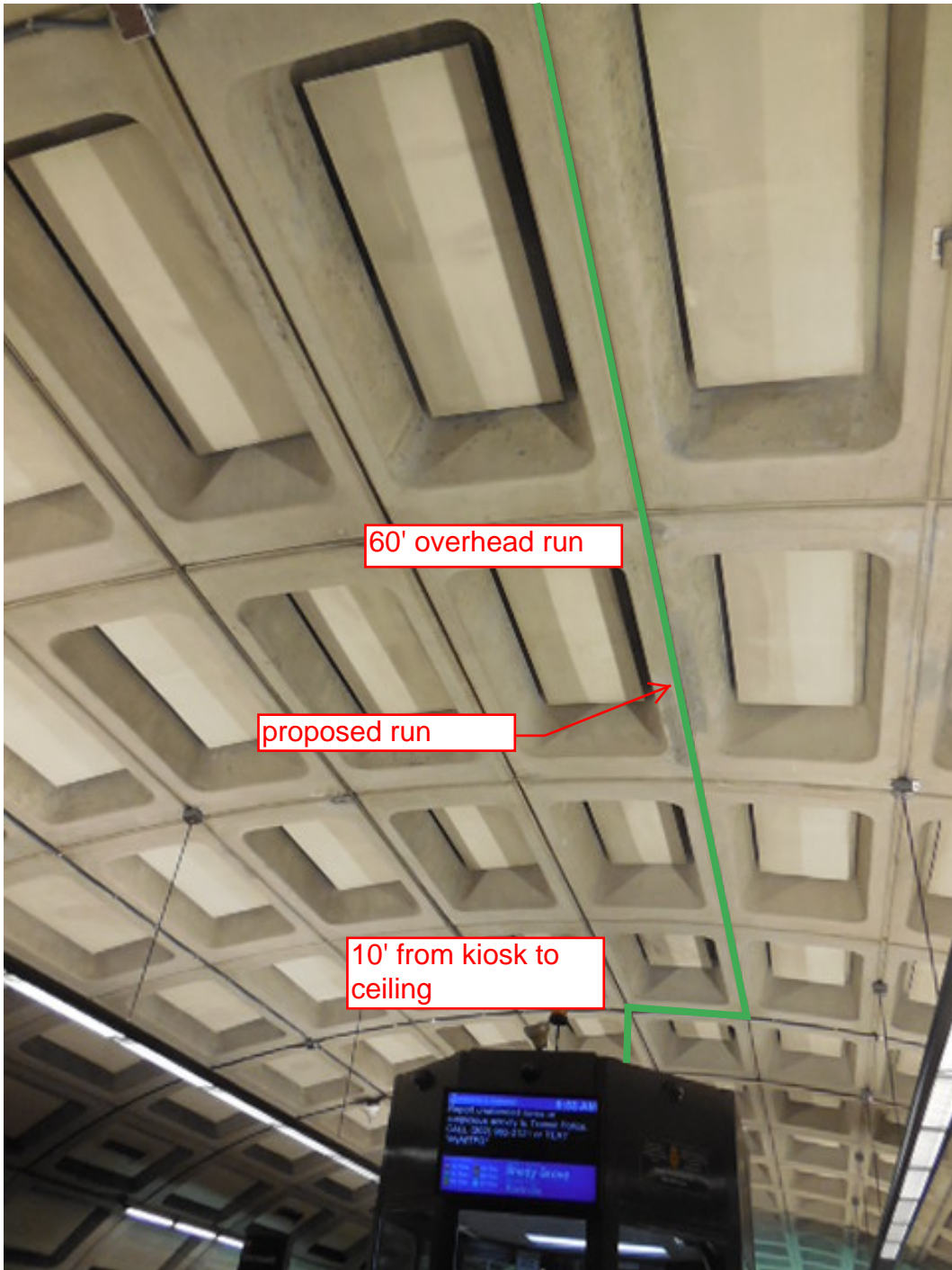


Photo #4 – A03 Dupont Circle South: Proposed overhead conduit in mezzanine area continued

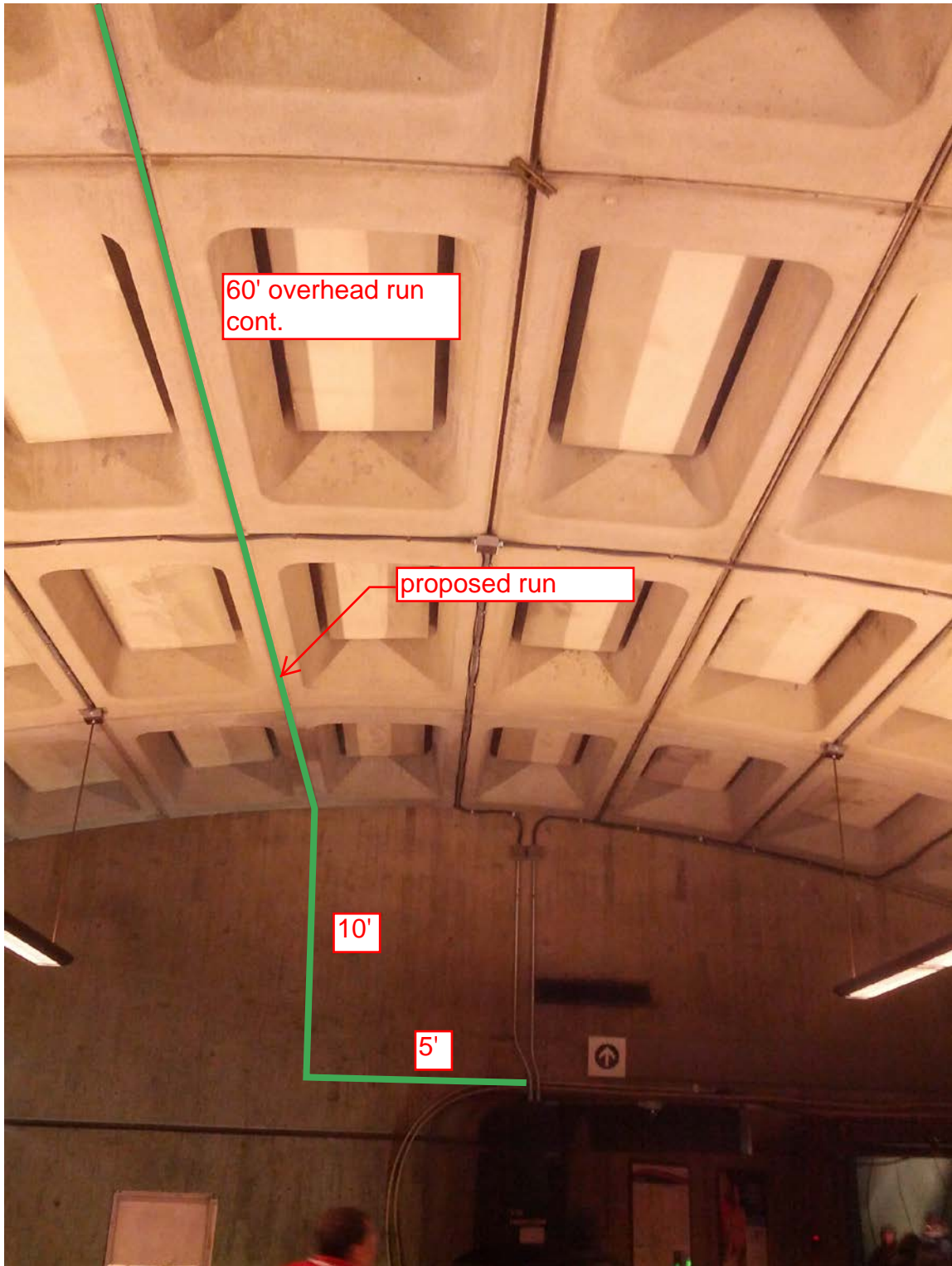


Photo #5 – A03 Dupont Circle South: Proposed overhead conduit running into Room #201. Run will need to penetrate metal over door.

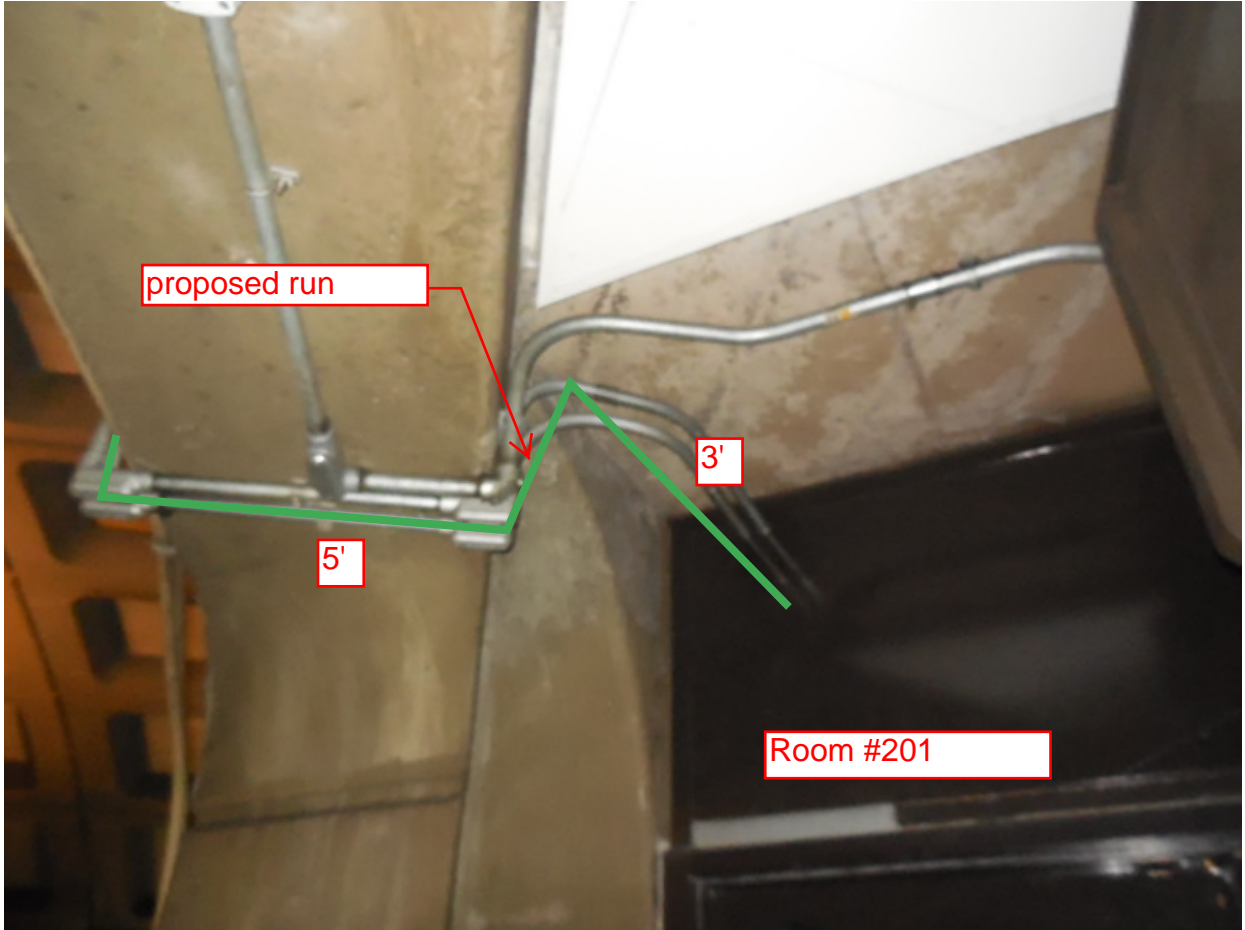


Photo #6 – A03 Dupont Circle South: Proposed overhead conduit on other side of door for room #201

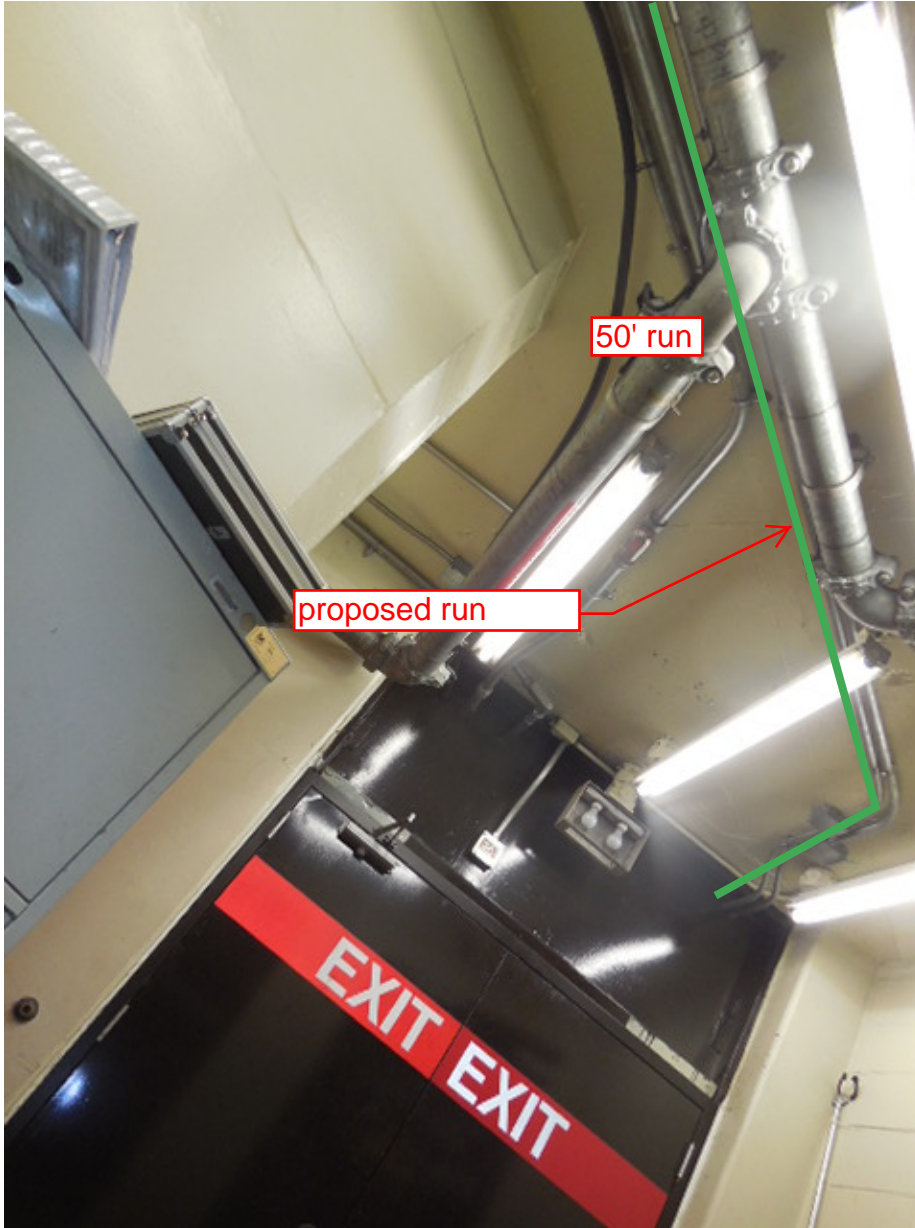


Photo #7 – A03 Dupont Circle South: Proposed conduit run continuing down hallway of room #201 and towards room #215



Picture #8 and #9 – A03 Dupont Circle South: Area in wall where proposed conduit will need to be cored through into room #215 to access AFC Panel

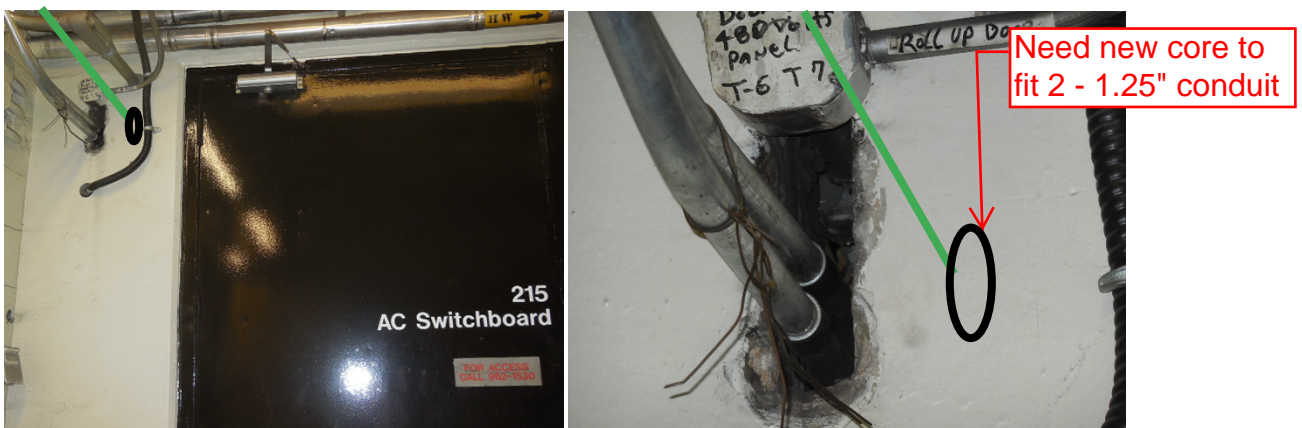
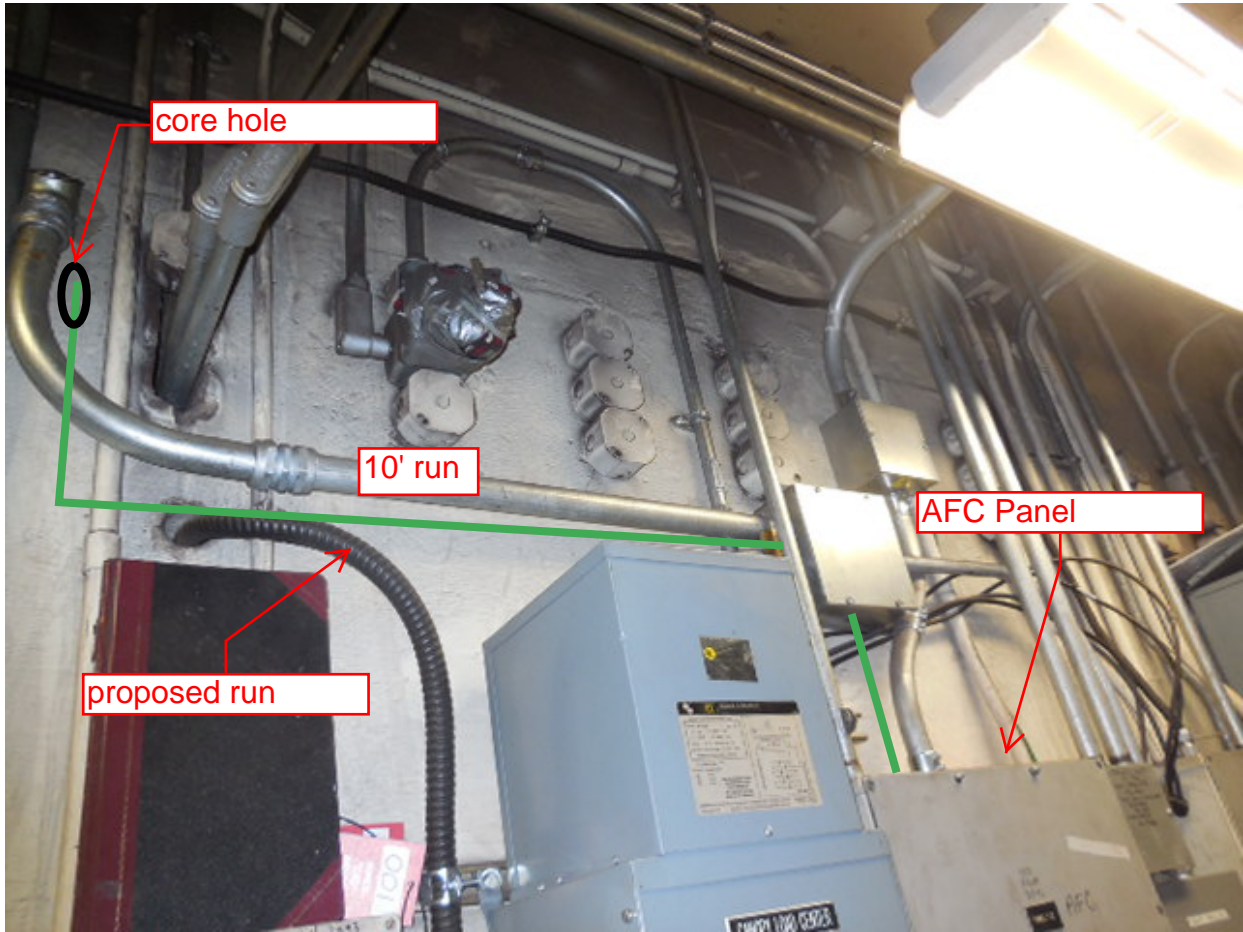


Photo #10 – A03 Dupont Circle South: Proposed conduit run penetrating wall into room #215 to access AFC panel through existing box.



NOTES:

1. ALL INFORMATION CONCERNING DUCTS AND CONDUITS IS BASED ON INFORMATION SUPPLIED TO CUBIC WESTERN DATA BY WHATA.

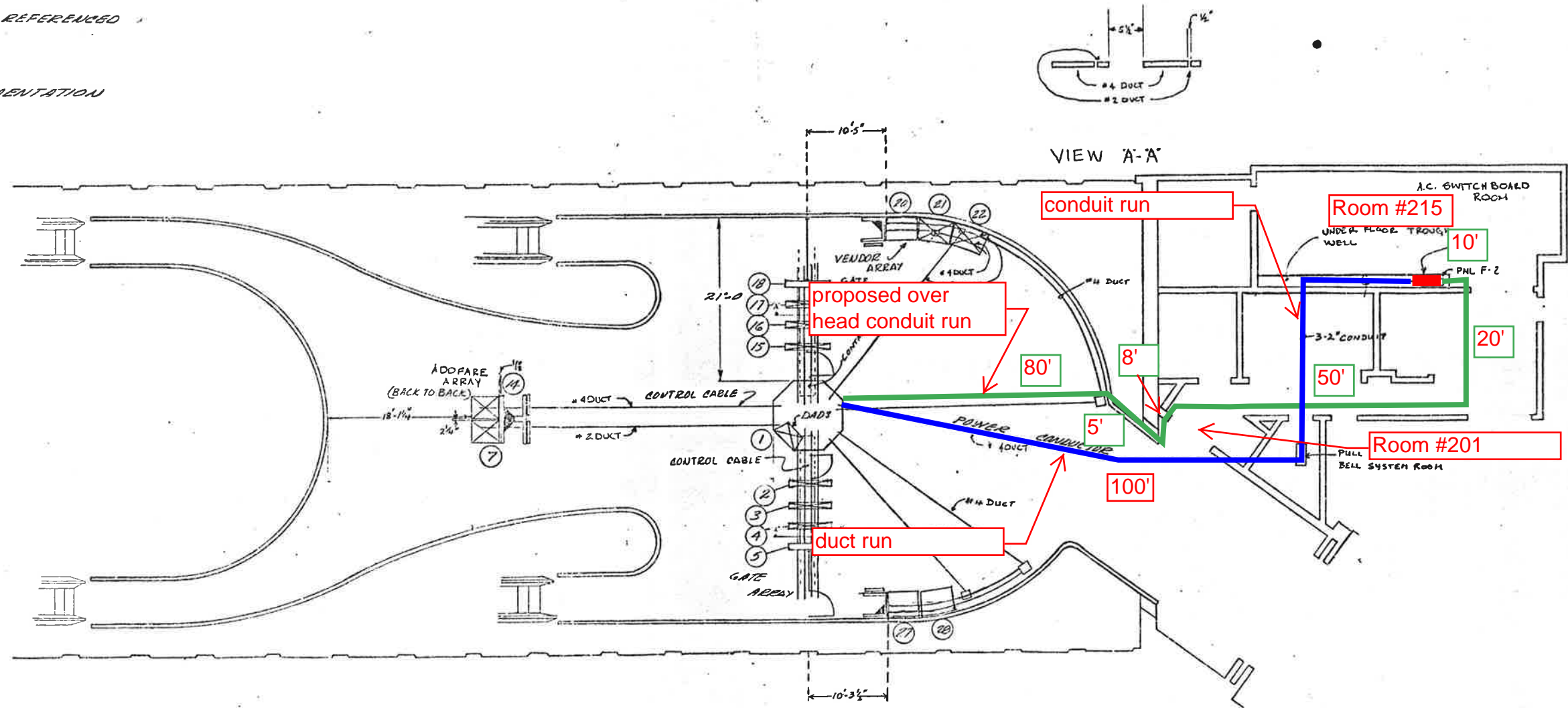
2. TOTAL MACHINE INVENTORY IS DEPICTED ON THIS DRAWING.

3. THE MINIMUM OPERATIONAL MACHINE INVENTORY IS REFERENCED ON THIS DRAWING BY THE 'X' DRAWN THRU THE MACHINES.

4. FOR AS BUILT CONDITIONS SEE SHEETS.

5. FOR REFERENCE DRAWINGS SEE SUPPORT DOCUMENTATION PACKAGE FOR THIS MEZZANINE.

REVISIONS	
DESCRIPTION	DATE
AS BUILT DRAWING REV. A	5-10-77



-2 INSTALLATION PLAN
(AS BUILT CONDITIONS)

WASHINGTON METROPOLITAN
TRANSIT SYSTEM

CONTRACT NUMBER 22007A		CUBIC WESTERN DATA A subsidiary of C. Inc. Corporation 560 NEARBY MESA ROAD • POST OFFICE BOX 8078 • SAN DIEGO, CA 92161	
REL		DUPONT BIKER STA SOUTH MEZZANINE AFC MACHINES	
ENGRG		DESIGN ACTIVITY APPROVAL	SIZE
DESIGN		CHECK	DRAWING NUMBER
CHECK		DRAWN	926-0391 DS
APPROVED		SCALE	SHEET

Mezzanine Inspection Report (Scoping)

Date: 11/13/2014	Station Name: A04 Woodley Park	Mezzanine #: 007	Completed By: Mike Butler
-------------------------	---------------------------------------	-------------------------	----------------------------------

Summary

The majority of video scoping and pull string installation was completed at this mezzanine. This included the scoping and pull string installation for communication duct in the faregate array and scoping of power duct in the faregate array. Video scoping and pull string installation was completed between Kiosk, Handhole 1 and Handhole 2. Pull string was also installed between Handhole 2 and Shared Trench.

It was not possible to install pull string in the remaining section from Shared Trench to AFC Panel (Room C208), due to standing water and hot wires. Therefore, a proposed overhead conduit is recommended for the remaining section as shown in the attached drawing and photos.

No scanning was needed at this mezzanine.

Scoping of Faregate Array(s)

Task	Yes/No	Notes
Communications Duct – Faregate Array (8 Gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to "WMATA Woodley Park Comm Duct Video.avi" file.
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	Minor dust and debris
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	3" duct, less than 15 wires
Power Duct - Faregate Array (8 Gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to "WMATA Woodley Park Power 3inch Duct Video.avi and WMATA Woody Park Power 6inch Duct Video.avi" files.
Were there any obstructions or blockages? Provide details of type and specific location.	No	Has a 45 degree bend.
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	3" duct, less than 10 wires


Scoping of Power Duct - Kiosk to AFC Panel		
Task	Yes/No	Notes
Kiosk to Handhole 1 (Distance = 70')		
Was video scoping completed for the entire duct / conduit run?	Yes	Refer to "WMATA Woodley Park Power Kiosk to H.H.1 Duct Video.avi" file.
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	3" and 6" ducts, 2 wires
Handhole 1 to Handhole 2 (Distance = 15')		
Was video scoping completed for the entire duct / conduit run?	Yes	Refer to "WMATA Woodly Park Power HH1 to HH2 Duct Video.avi" file.
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	6" duct, 2 wires
Handhole 2 to Trough (Distance = 15')		
Was video scoping completed for the entire duct / conduit run?	No	Energized cables laying in standing water
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	6" duct, 2 wires
Trough to AFC Panel (Distance = 27')		
Was video scoping completed for the entire duct / conduit run?	No	Conduit – no scoping required
Was pull string installed?	No	Energized wires laying in standing water
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	4" conduit, 2 wires
Observations / Issues / Next Steps		
Total power run from kiosk to AFC panel is approximately 127'.		
Sign Off		
	GFP Representative	WMATA PRGM
Name:	Mike Butler	
Signature:		
Date:	11/13/2014	

Photo #1 – A04 Woodley Park: Kiosk to handhole 1

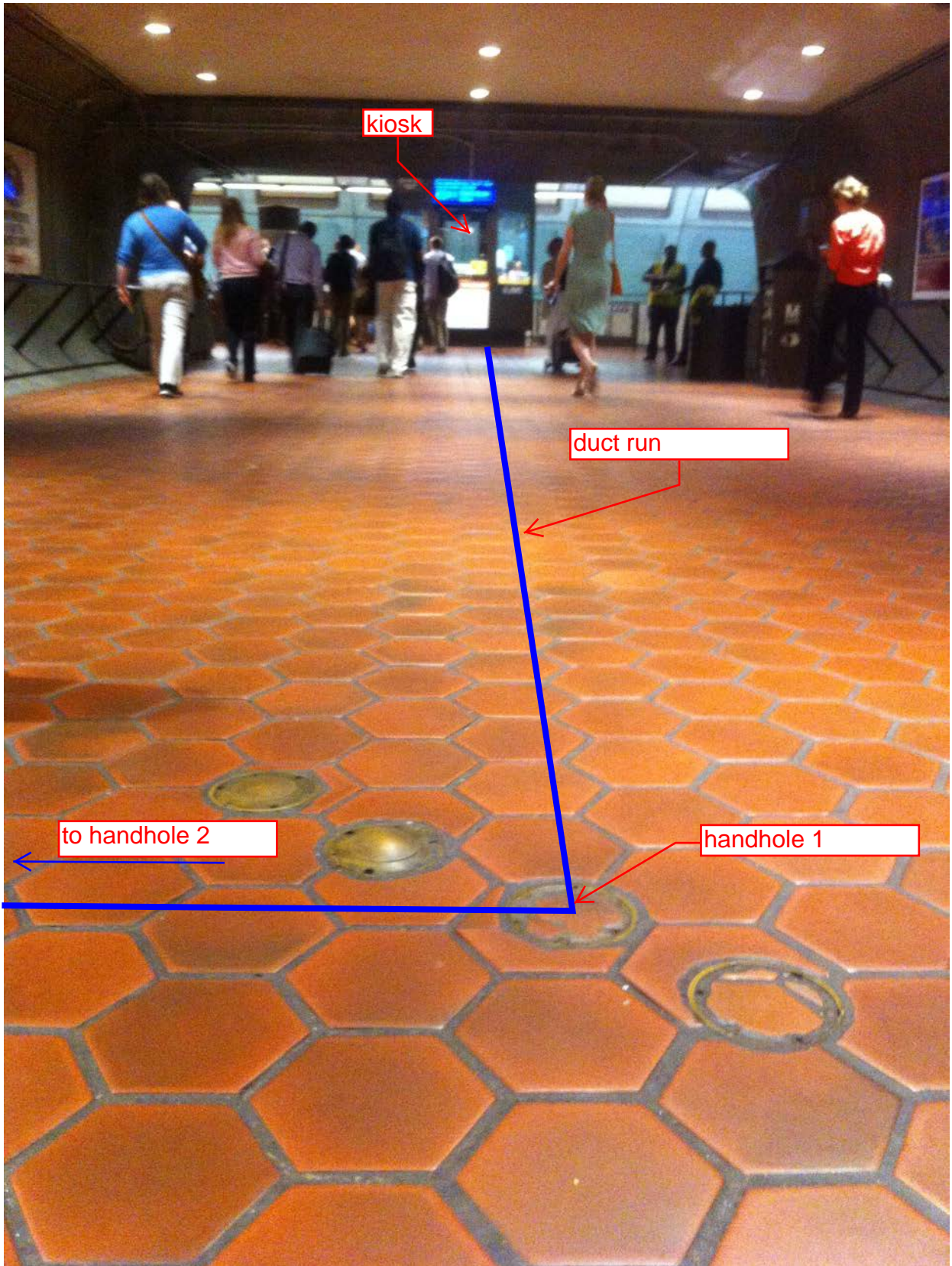


Photo #2 – A04 Woodley Park: handhole 1 to handhole 2

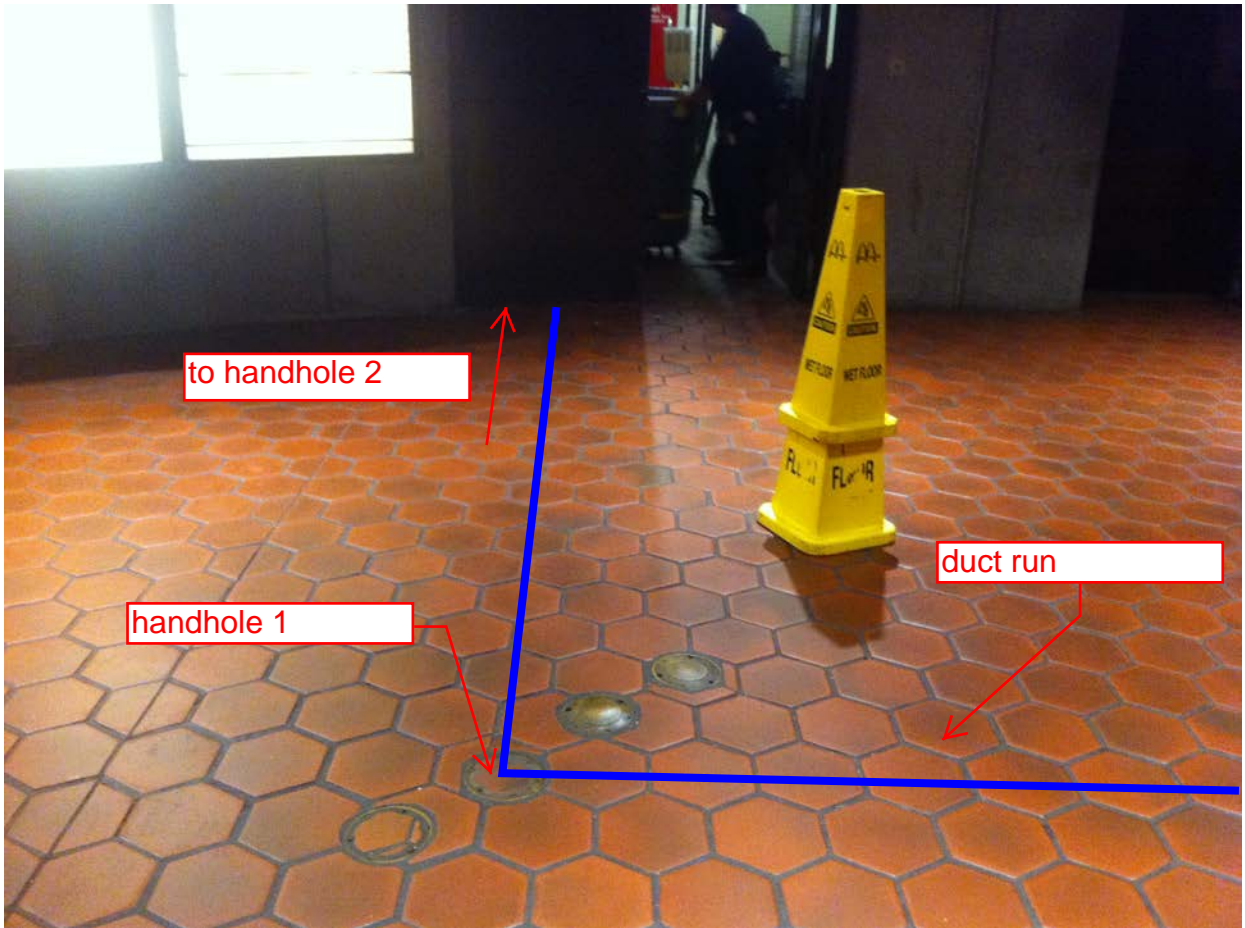
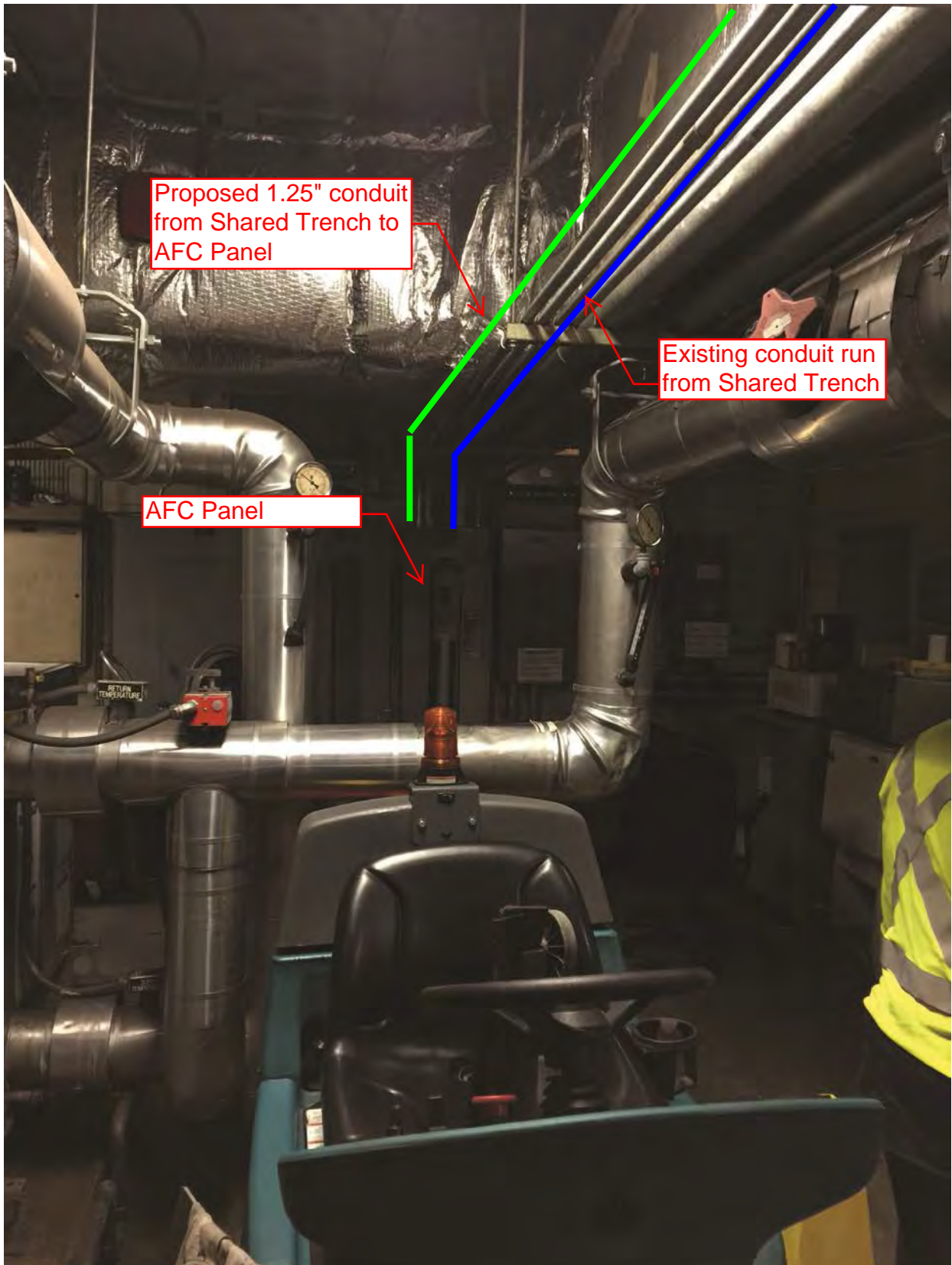


Photo #3 – A04 Woodley Park: Standing water in electrical trough

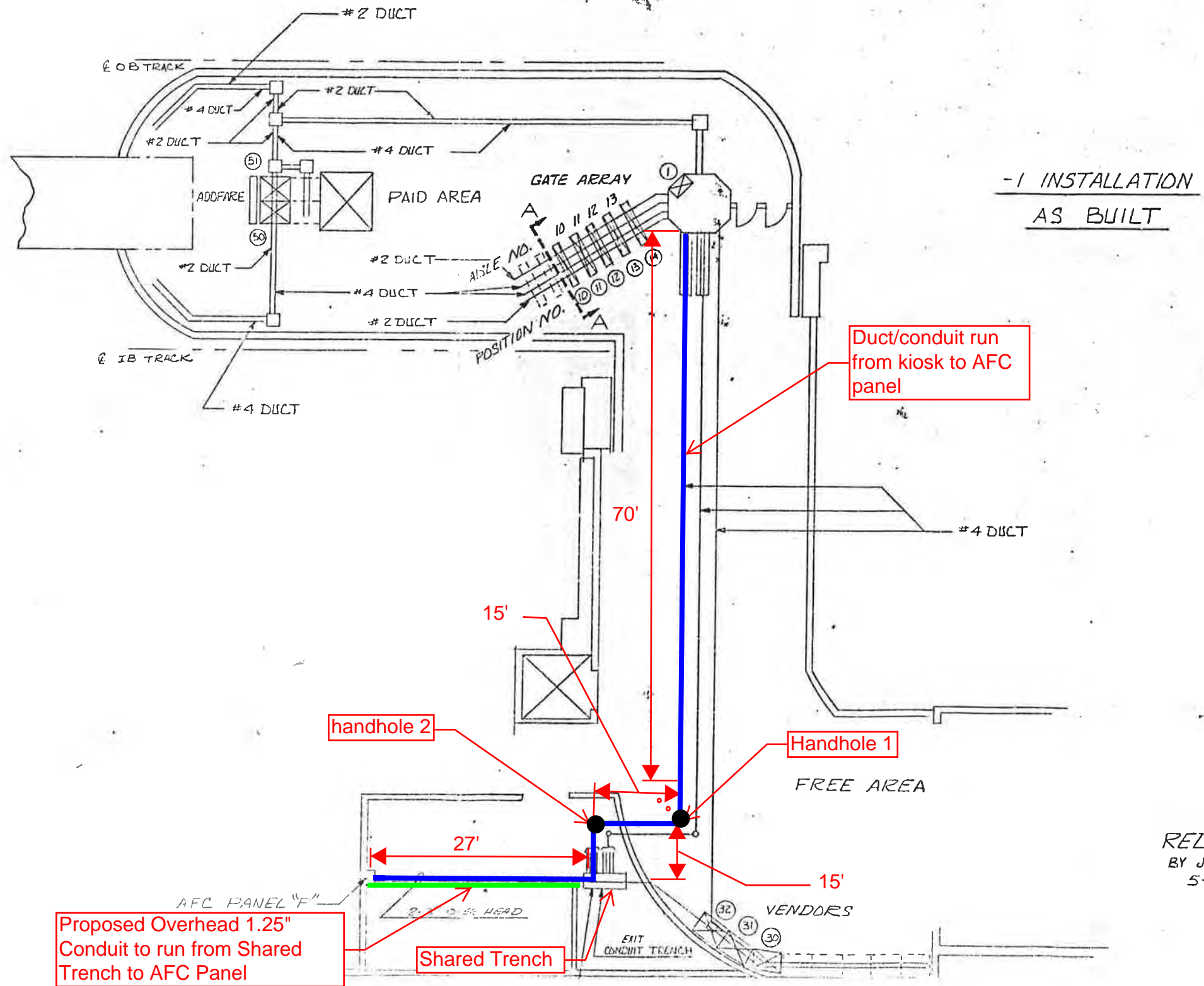
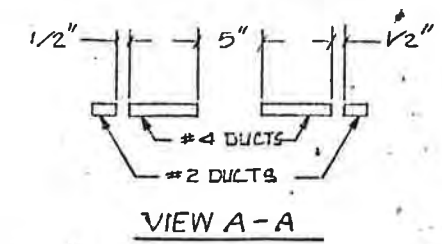


Photo #4 – A04 Woodley Park: Overhead conduit run from electrical trough to AFC Panel



NOTES:

1. THE MINIMUM OPERATIONAL MACHINE INVENTORY IS REFERENCED ON THIS DRAWING BY THE "X" DRAWN THROUGH THE MACHINE.
2. FOR REFERENCE DRAWINGS USED SEE SUPPORT DOCUMENTATION PACKAGE FOR THIS MEZZANINE.



-1 INSTALLATION
AS BUILT

AS BUILT

PANEL F					
POSITION NO	MACHINE TYPE	SERIAL NO.	CIRCUIT BREAKER NO.	BREAKER SIZE (AMPS)	WIRE SIZE (AWG)
1	DADS	DS 8059	N/A	N/A	N/A
10	EXIT GATE	GX 4064	10	20	8
11	REV GATE	GR 7128	4		
12	REV GATE	GR 7248	6		
13	REV GATE	GR 7247	2		
14	ENTRY GATE	GN 3065	8		8
30	VENDOR	FV 1305	5		10
31	VENDOR	FV 1304	3		10
32	VENDOR	FV 1306	1		10
50	ADDFARE	AM 2117	19		6
51	ADDFARE	AM 2118	17	20	6

Proposed Overhead 1.25" Conduit to run from Shared Trench to AFC Panel

Shared Trench

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON BREAK SHARP EDGES .010 MAX
DECIMALS: .XX ± .03 .XXX ± .010
HOLES ANGLES: 1.05 DEG.
.015 THRU .125: +.004 - .001
.126 THRU .250: +.005 - .001
.251 THRU .500: +.006 - .001
.501 THRU .750: +.008 - .001
.751 THRU 1.000: +.010 - .001

CONTRACT NUMBER
DRAWING NUMBER
926-0416
SHEET / OF /

CUBIC WEST
INSTALLATION PLAN
WOODLEY ZOO PARK
A subsidiary of Code Corporation
3601 KERN WASH ROAD POST OFFICE BOX 8070 SAN DIEGO CA 92178

CODE IDENT NO.
94987

DRAWN: WELLS
CHECKED: [Signature]
DESIGN: A.J. BOTE
ENGINEER: [Signature]
APPROVAL: [Signature]

REDRAWN.
BY J. ETHERIDGE
5-7-82

CP-2007A-145-2-1

Mezzanine Inspection Report

REVISION 1

Date: 11/13/2014	Station Name: A05 Cleveland Park	Mezzanine #: 008	Completed By: Mike Butler
------------------	----------------------------------	------------------	---------------------------

Summary

Pull string was installed in the upper and lower faregate array communication ducts. Video scoping and pull string installation was completed between the Kiosk, Handhole 1, Handhole 2 and the open trench. However, it was not possible to install pull string between the open trench and AFC Panel due to energized wires. Existing duct runs appear to be in adequate condition and are not at capacity.

A proposed conduit run has been identified between the open trench and the AFC Panel (see attached drawing and photos). The existing vacant conduit and junction box on the wall of Room #200 will be utilized as part of this run. From the junction box a new conduit would be installed parallel to the existing conduits on the South wall in Room #200. The conduit will then wrap onto the West wall in Room #200, and a core drill through the West wall into Room #218 is proposed. The new conduit would then run along the middle of the ceiling in Room #218 to avoid interference with the batteries, and then run along the South wall in Room #218, parallel to the existing conduits. A core drill through the wall in to Room #216 is also proposed. The new conduit would run along the wall in Room #216 and connect to the AFC Panel.

No scanning was required at this mezzanine.

Scoping of Faregate Array(s)

Task	Yes/No	Notes
Communications Duct – Upper Faregate Array (4 Gates)		
Was video scoping completed for the entire duct run?	No	Camera malfunction and no scoping done on subsequent visit
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	N/A	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	4" duct with less than 10 wires.
Communications Duct - Lower Faregate Array (4 Gates)		
Was video scoping completed for the entire duct run?	No	Camera malfunction and no scoping done on subsequent visit
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	N/A	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	4" duct with less than 10 wires.
Power Duct - Upper Faregate Array (4 Gates)		
Was video scoping completed for the entire duct run?	No	Camera malfunction and no scoping done on subsequent visit
Were there any obstructions or blockages? Provide details of type and specific location.	N/A	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	6" duct with less than 12 wires.
Power Duct - Lower Faregate Array (4 Gates)		
Was video scoping completed for the entire duct run?	No	Camera malfunction and no scoping done on subsequent visit
Were there any obstructions or blockages? Provide details of type and specific location.	N/A	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	6" duct with less than 12 wires.


Scoping of Power Duct - Kiosk to AFC Panel		
Task	Yes/No	Notes
Kiosk to Handhole 1 (Distance: 60')		
Was video scoping completed for the entire duct / conduit run?	Yes	Refer to "WMATA Cleveland Park Power Kiosk to HH1 Duct Video.avi" file.
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	
Hanhole 1 to Handhole 2 (Distance: 13')		
Was video scoping completed for the entire duct / conduit run?	Yes	Refer to "WMATA Cleveland Park Power HH1 to HH2 Duct Video.avi" file.
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	
Handhole 2 to Open Trench (Distance: 10')		
Was video scoping completed for the entire duct / conduit run?	Yes	Refer to "WMATA Cleveland Park Power HH2 to Trench in Room 200 Video.avi" file.
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	
Open Trench to AFC Panel (Distance: 60')		
Was video scoping completed for the entire duct / conduit run?	No	Could not video scope or intall pull string in open trench due to live wires
Was pull string installed?	No	
Were there any obstructions or blockages? Provide details of type and specific location.	N/A	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	N/A	
Observations / Issues / Next Steps		
The total distance of power run between Kiosk and AFC Panel is 138', including 83' of existing duct and 55' of proposed conduit from open trench to AFC Panel (see photos and drawings for more information).		
Sign Off		
	GFP Representative	WMATA PRGM
Name:	Mike Butler	
Signature:		
Date:	01/06/15	

Photo #1 – A05 Cleveland Park: Mezzanine Kiosk

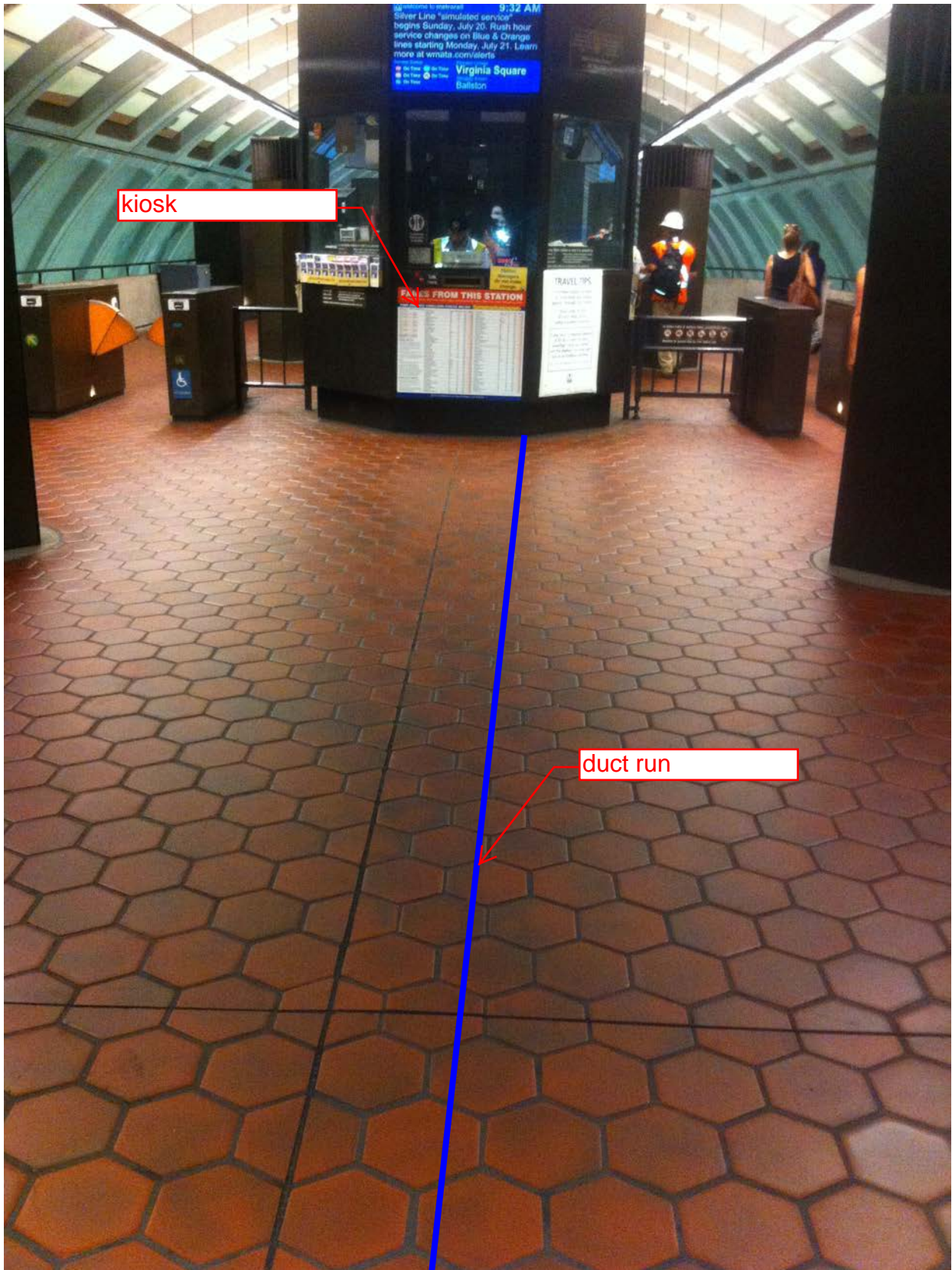


Photo #2 – A05 Cleveland Park: Handhole 1 and Handhole 2



Photo #3 – A05 Cleveland Park: Existing power run in open trench



Photo #4 – A05 Cleveland Park: Conduit from junction box to open trench

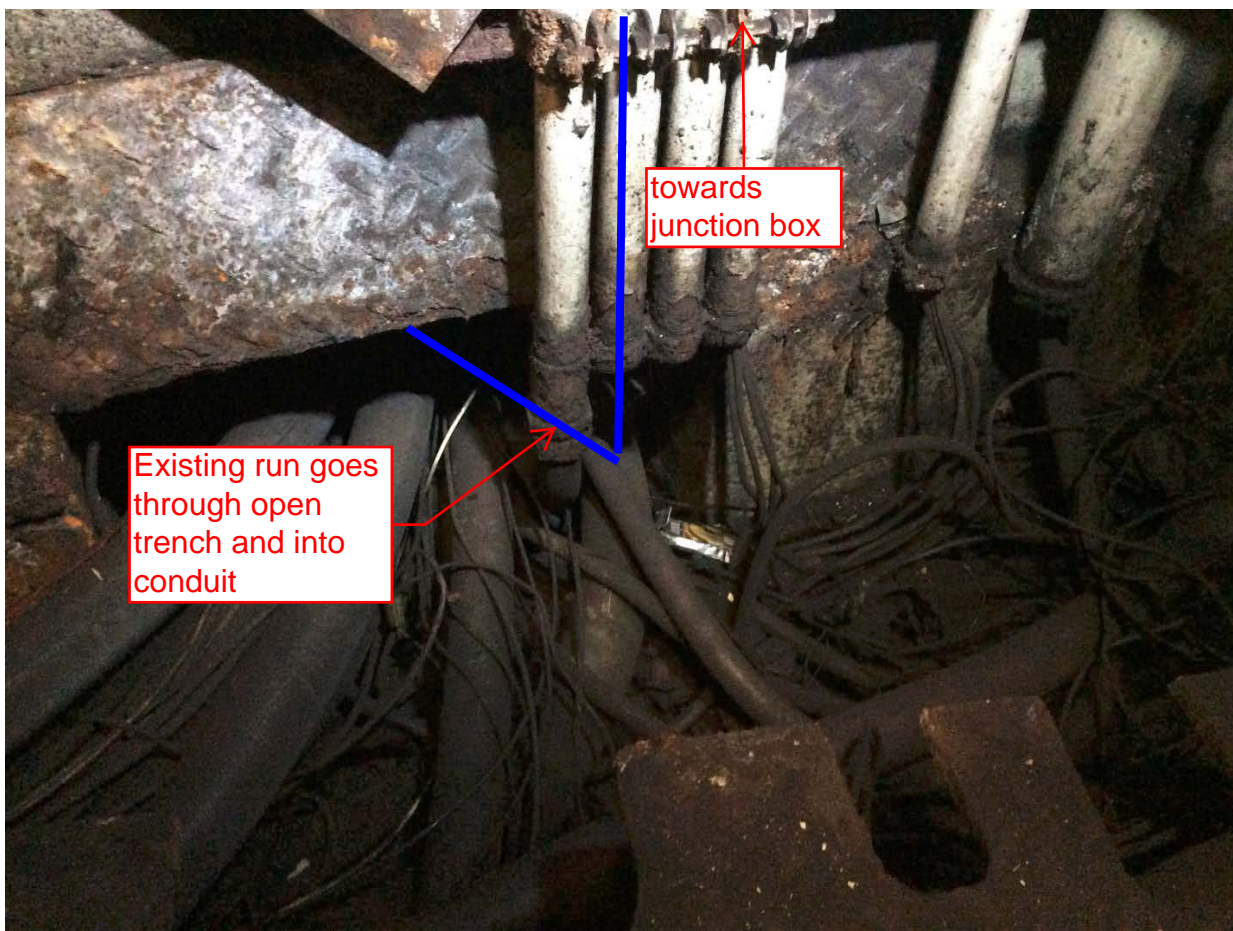


Photo #5 – A05 Cleveland Park: Vacant junction box and conduit to open trench

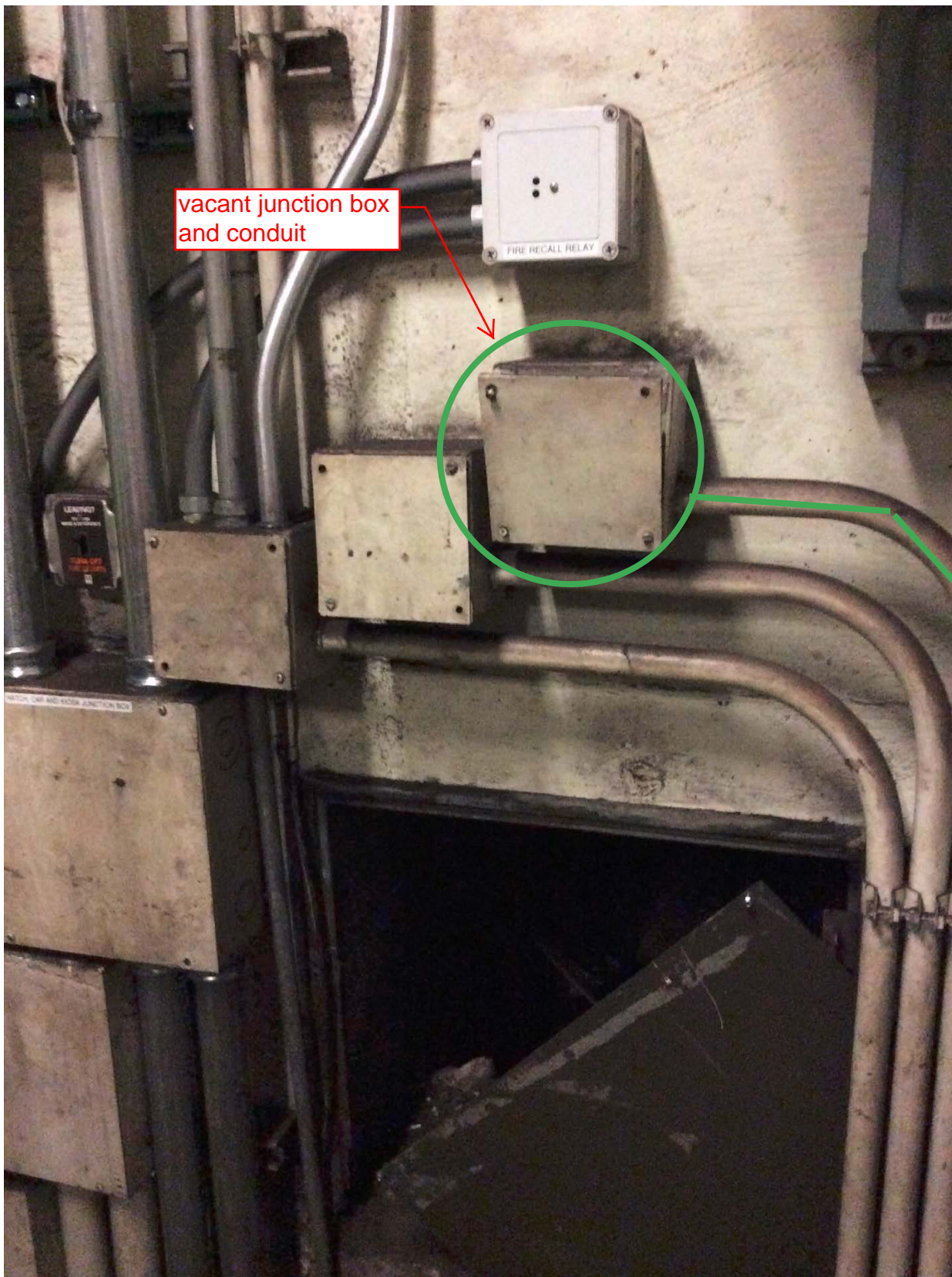


Photo #6 – A05 Cleveland Park: Elevator Machine Room #200, proposed conduit run between open trench and Battery Room #218

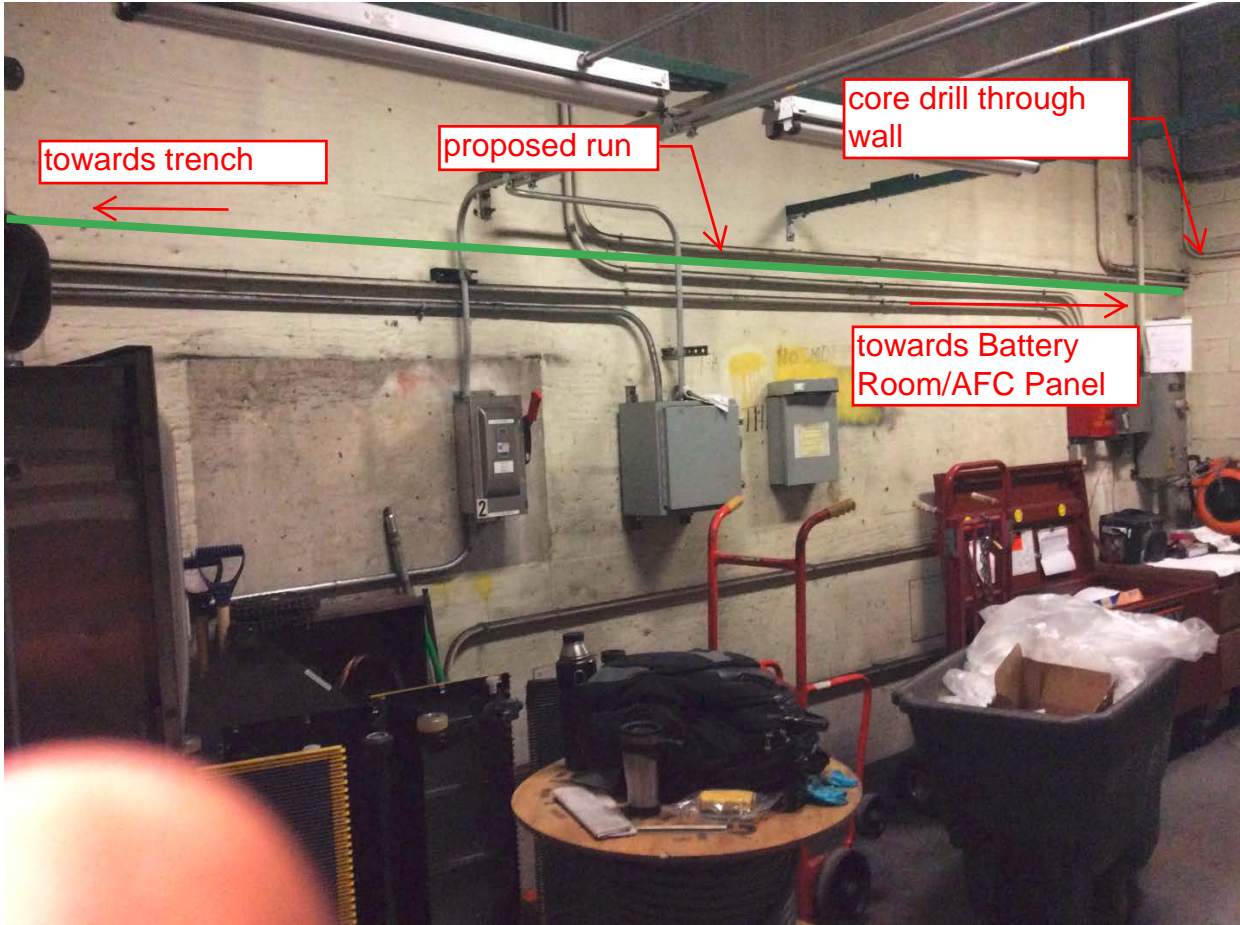


Photo #7 – A05 Cleveland Park: Battery Room #218, proposed conduit routed along right side wall at ceiling

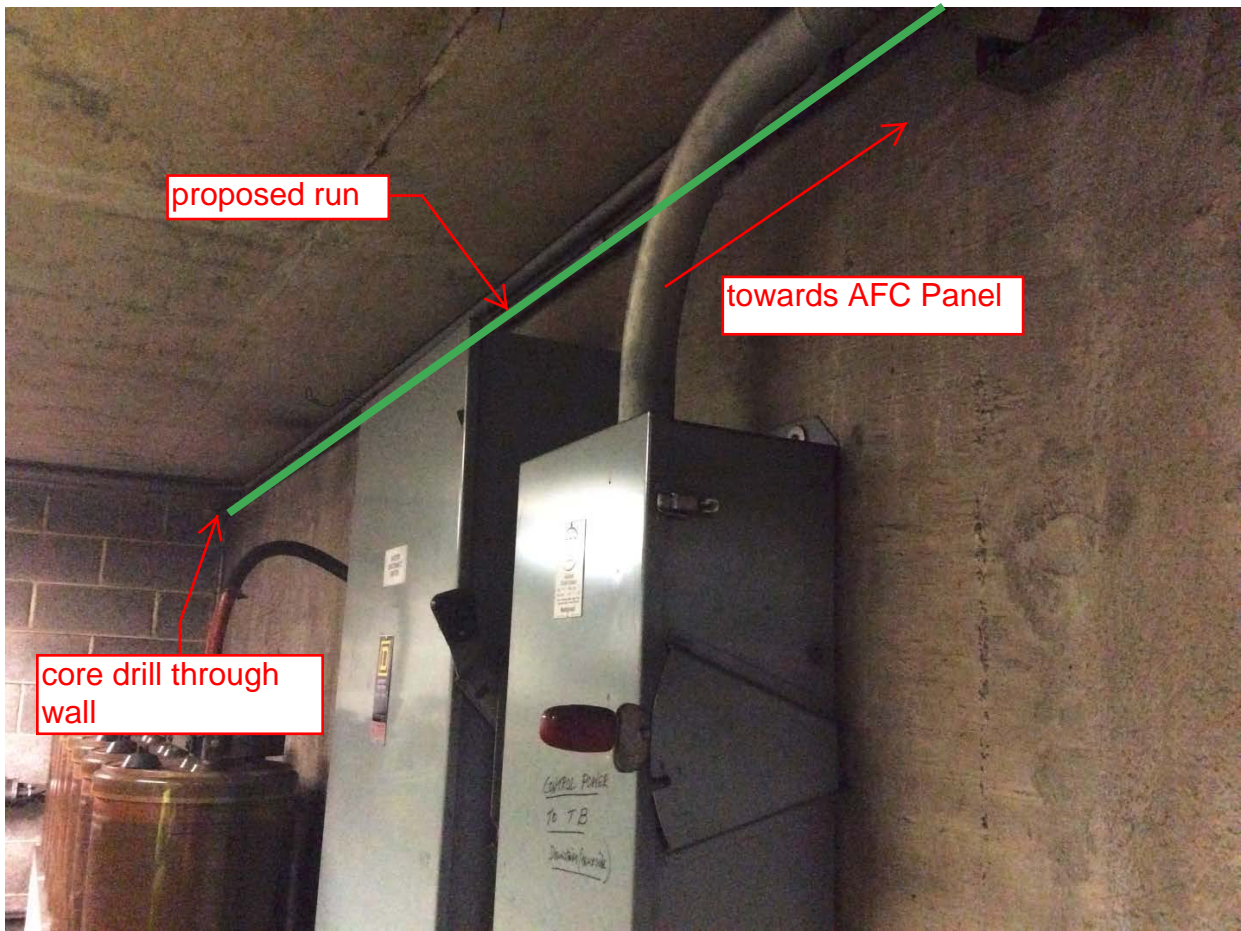
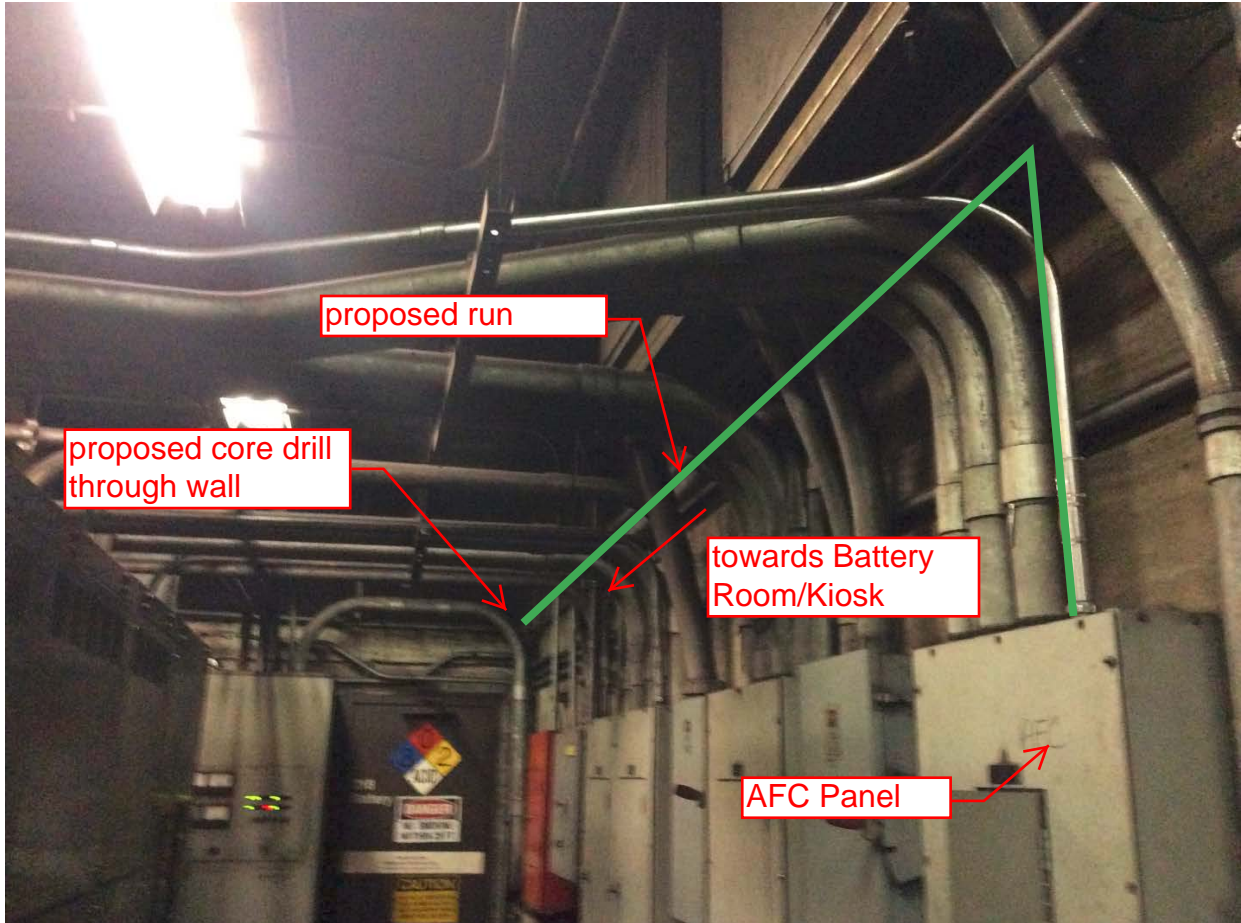
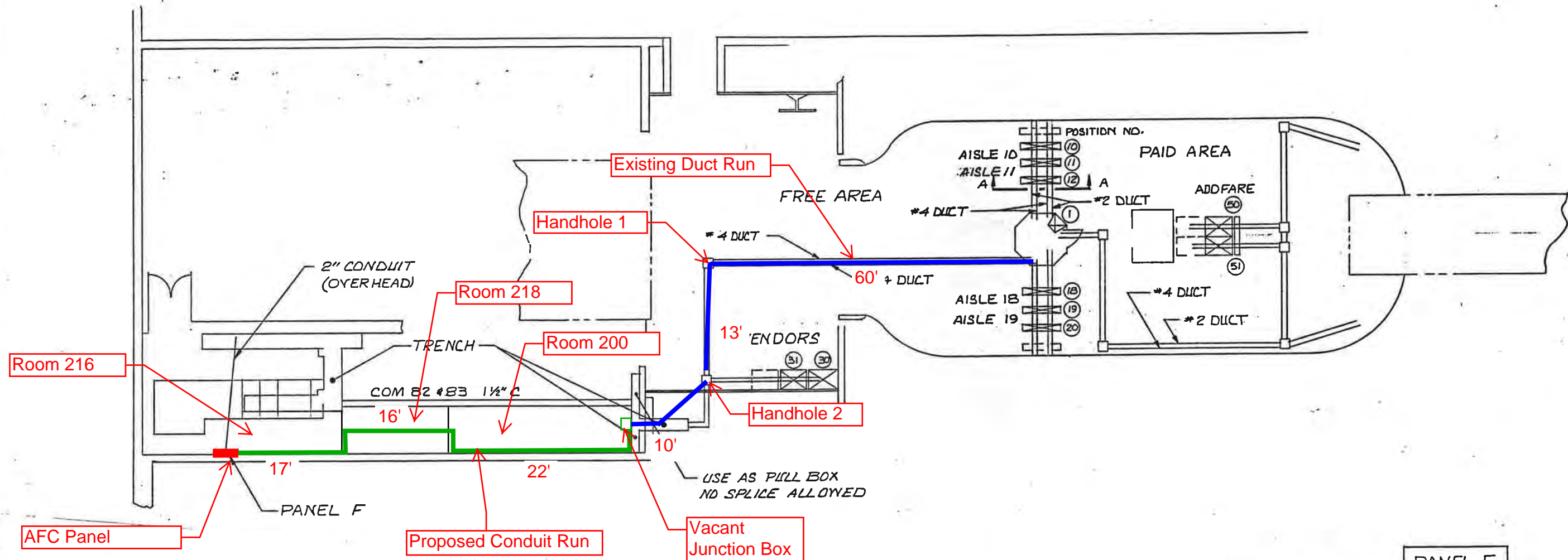
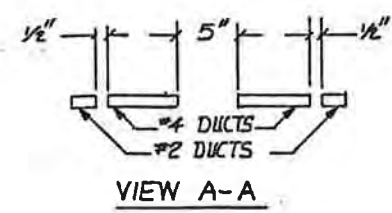


Photo # 8 – A05 Cleveland Park: Electrical Room #216, proposed conduit run along right side of wall between AFC Panel and Battery Room #218





- NOTES**
1. THE OPERATIONAL MACHINE INVENTORY IS INDICATED ON THIS DRAWING BY THE LETTER "X" DRAWN THRU THE MACHINE.
 2. FOR REFERENCE DRAWINGS USED SEE SUPPORT DOCUMENTATION PACKAGE FOR THIS MEZZANINE. SERVICE GATE AND RAILING DRAWING SEE 926-0358.

**-1 INSTALLATION PLAN
(AS BUILT DRAWING)**

REDRAWN BY
J. ETHERIDGE
4-23-82

PANEL F

POSITION NO.	MACHINE TYPE	SERIAL NO.	CIRCUIT BREAKER NO.	BREAKER SIZE (AMPS)	WIRE SIZE AWG.
1	DADS	DS8003	N/A	N/A	N/A
10	EXIT GATE	GX4065	12	20	8
11	REV GATE	GR7241	6		
12	END GATE	GA5051	8		
18	END GATE	GB6059	4		
19	REV GATE	GR7036	10		
20	EXIT GATE	EX3066	2		8
30	VENDOR	FY1308	1		10
31	VENDOR	FY1307	3		10
50	ADDFARE	AM2120	19		6
51	ADDFARE	AM2121	21	20	6

DO NOT SCALE DRAWING
UNLESS OTHERWISE SPECIFIED
BREAK SHARP EDGES .010 MAX
TOLERANCES ON ANGLES: 1/4 DEG.
DIMENSIONS ARE IN INCHES
TOLERANCES ON HOLES
.015 THRU .125: +.004 - .001
.126 THRU .250: +.005 - .001
.251 THRU .500: +.006 - .001
.501 THRU .750: +.008 - .001
.751 THRU 1.000: +.010 - .001

CONTRACT NUMBER
D B

DRAWING NUMBER
926-0414

SHEET / OF /
3

TITLE
**INSTALLATION PLAN
CLEVELAND PARK STATION**

CODE IDENT NO.
94987

DRAWN: J. WELLS
CHECK: []
DESIGN: []
SENIOR DESIGNER APPROVAL: []
AUTOMATIC W. CLIND APPROVAL: []

926-0414

(08)

Mezzanine Inspection Report

Date: 08/25/14	Station Name: A06 Van Ness - UDC	Mezzanine #: 009	Completed By: Mike Butler
-----------------------	---	-------------------------	----------------------------------

Summary

Video scoping and pull string installation was completed in Upper/ Lower Faregate Array (pull string only in comm. ducts) and power duct between Kiosk – Handhole 1 – Handhole 2 – Trench 1 in Room #200. There were no obstructions found and ducts are not at capacity, however there was dirt and debris found at duct entries – cleaning is recommended.

It was not possible to complete pull string installation in 2" conduit between Trench 1 (Room # 200); Trench 2 and AFC panel F (Room # 206). There are hot wires in both trenches, and there is standing water inside Trench 1 (see photos).

An overhead conduit run is proposed between Trench 1 and AFC Panel. The proposed conduit will run from Trench 1 in Room #200 overhead through to Battery Room 218 and then continue through to AFC Panel in Room #206. Core drilling of walls is required at two locations to allow the passage of the proposed conduit . Refer to attached as-built drawing and photos for further information.

Scanning is not required at this mezzanine.

Scoping of Faregate Array(s)

Task	Yes/No	Notes
Communications Duct – Upper Faregate Array (4 gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to "Van Ness Upper Gate Array Comm Duct.avi"
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	4" Duct with less than 10 wires
Communications Duct - Lower Faregate Array (4 gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to "Van Ness Lower Gate Array Comm Duct.avi"
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	4" Duct with less than 10 wires
Power Duct - Upper Faregate Array (4 gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to "Van Ness Upper Gate Array Power Duct.avi"
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	4" Duct with less than 12 wires
Power Duct - Lower Faregate Array (4 gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to "Van Ness Lower Gate Array Power Duct.avi"
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	4" Duct with less than 12 wires


Scoping of Power Duct - Kiosk to AFC Panel		
Task	Yes/No	Notes
Kiosk to Handhole 1 (Distance: 45')		
Was video scoping completed for the entire duct / conduit run?	Yes	Refer to "WMATA Van Ness Power Handhole 1 to Kiosk Video.avi"
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	Some debris identified inside Handhole 1
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	4" Duct with less than 15 wires
Handhole 1 to Handhole 2 (Distance: 15')		
Was video scoping completed for the entire duct / conduit run?	Yes	Refer to "WMATA Van Ness Power Handhole 1 to Handhole 2 Video.avi".
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	Some debris identified inside Handhole 2
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	4" Duct with less than 15 wires
Handhole 2 to Trench inside Room #200 (Distance: 15')		
Was video scoping completed for the entire duct / conduit run?	Yes	Refer to "WMATA Van Ness Power Handhole 2 to Trench Video.avi".
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	4" Duct with less than 15 wires
Trench to AFC Panel (Distance: 60' existing, 95' proposed)		
Was video scoping completed for the entire duct / conduit run?	No	Video scoping not possible
Was pull string installed?	No	Could not install pull string due to hot wires and standing water.
Were there any obstructions or blockages? Provide details of type and specific location.	N/A	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	N/A	Proposed conduit run to be utilized.
Observations / Issues / Next Steps		
<ul style="list-style-type: none"> - Pull string installed between Kiosk, Handhole 1, Handhole 2 and Trench 1 - total run: 75'. - Proposed conduit run is 95' between Trench 1 and AFC Panel. 		
Sign Off		
	GFP Representative	WMATA PRGM
Name:	Mike Butler	
Signature:		
Date:	11/14/14	67

Photo #1 – Power duct run from Kiosk to Handhole 1 on mezzanine floor.

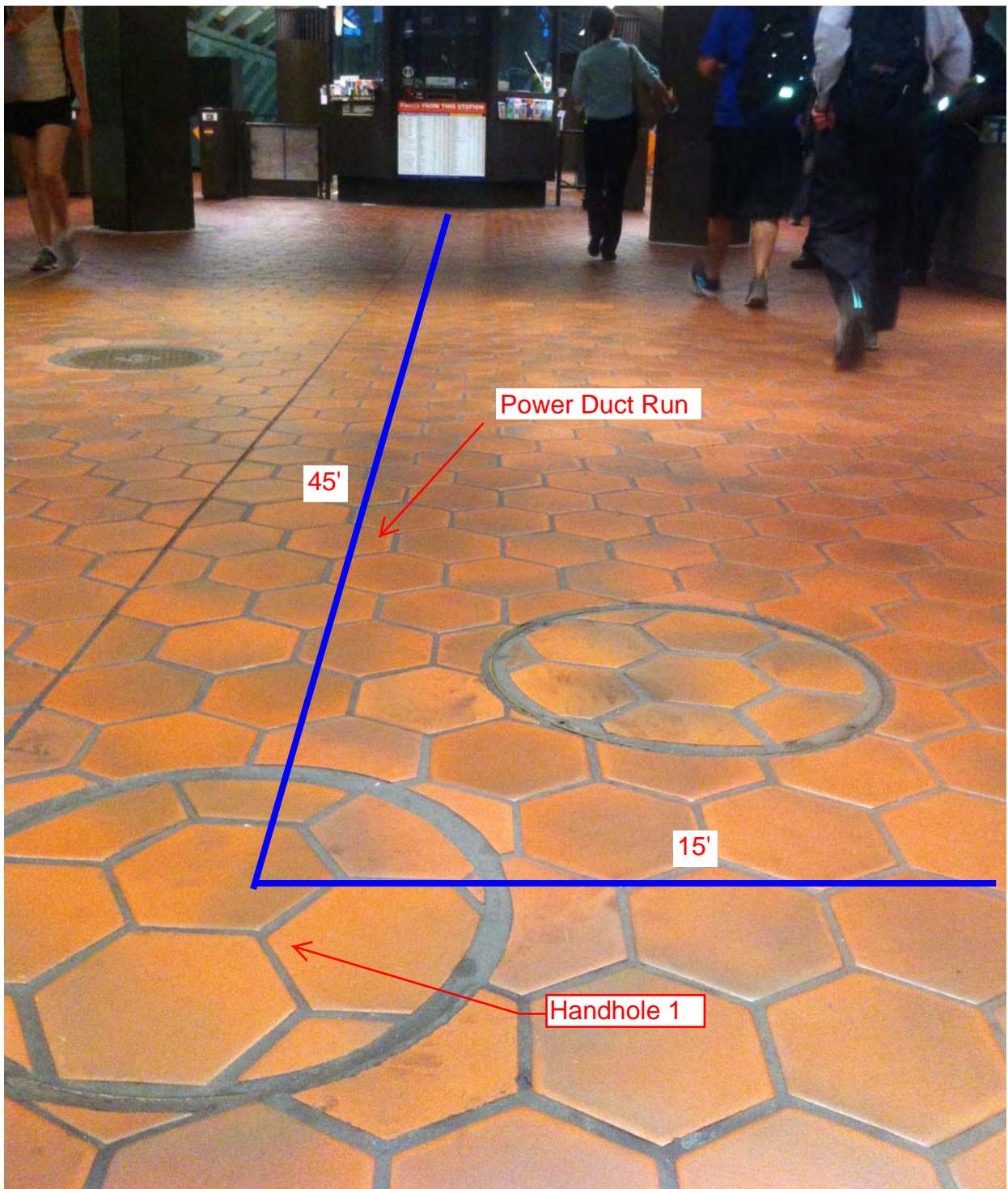


Photo #2 – Power duct run from Handhole 1 to Handhole 2 on mezzanine floor.

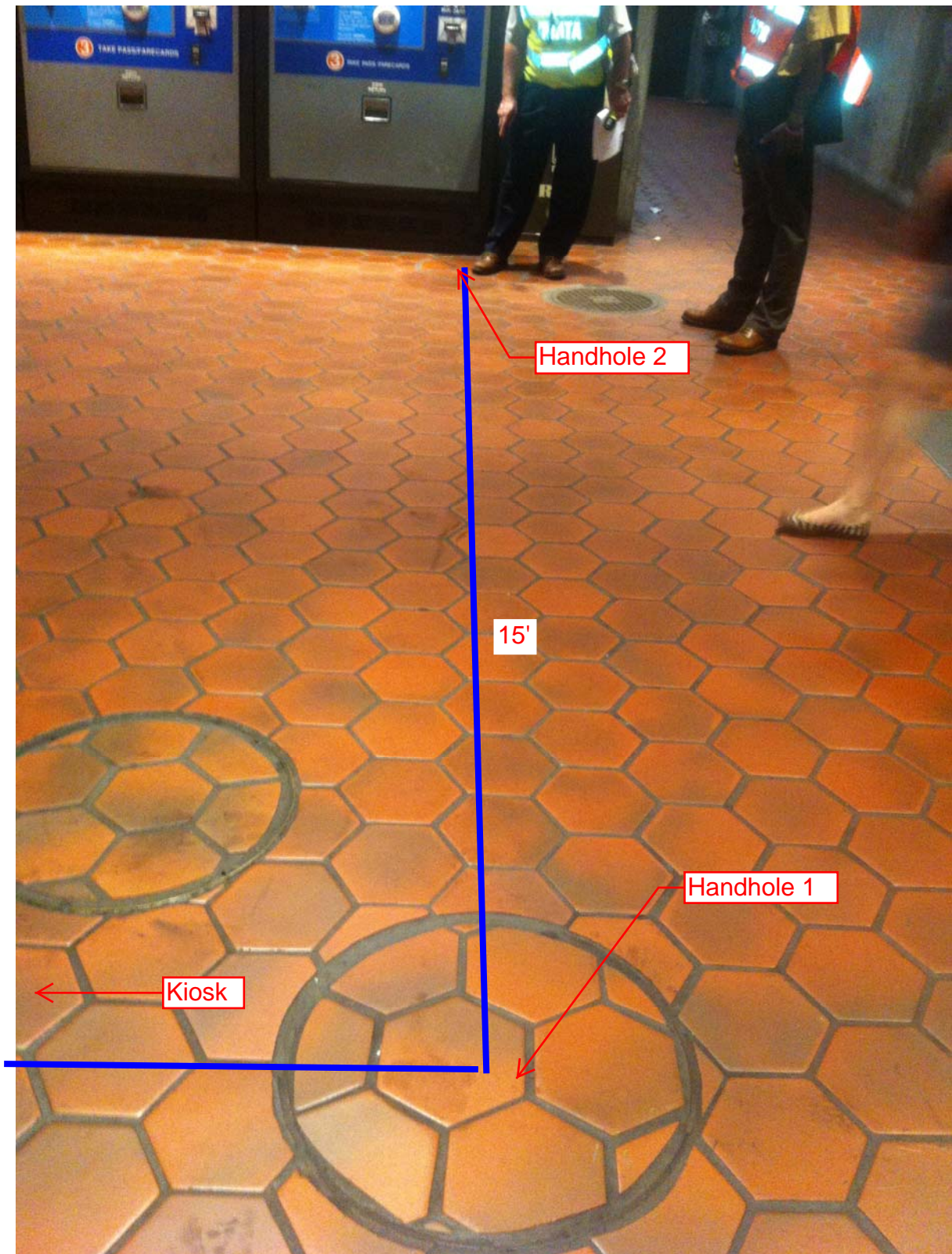


Photo #3 – Ducts from Handhole 2 entering Trench 1 in Room # 200



Photo #4 –Trench 1 in Room # 200 with overhead conduit transition, standing water evident.



Photo #5 – Proposed Overhead Conduit from Trench 1 in Room # 200

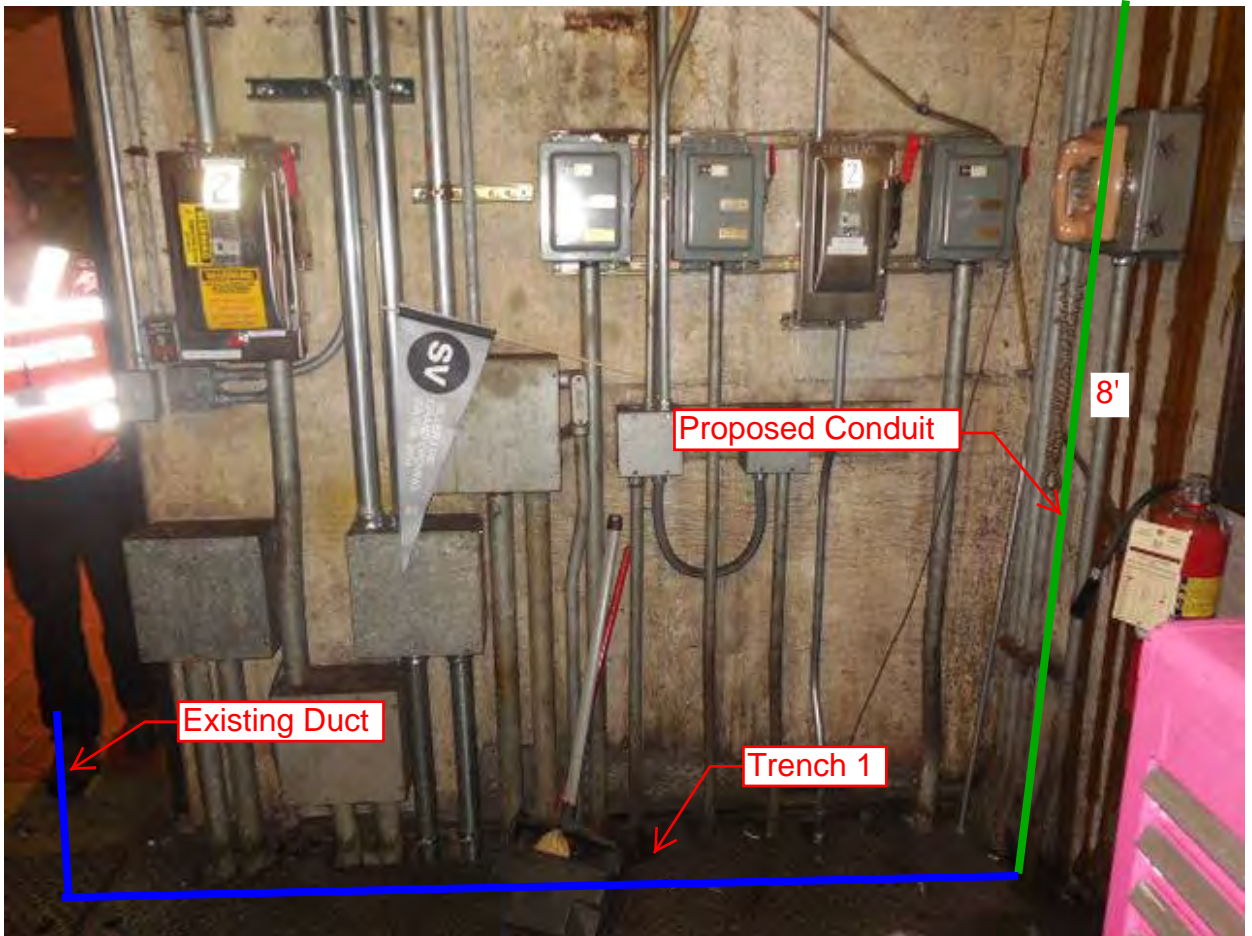


Photo #6 – Proposed Overhead Conduit from Trench 1 in Room # 200

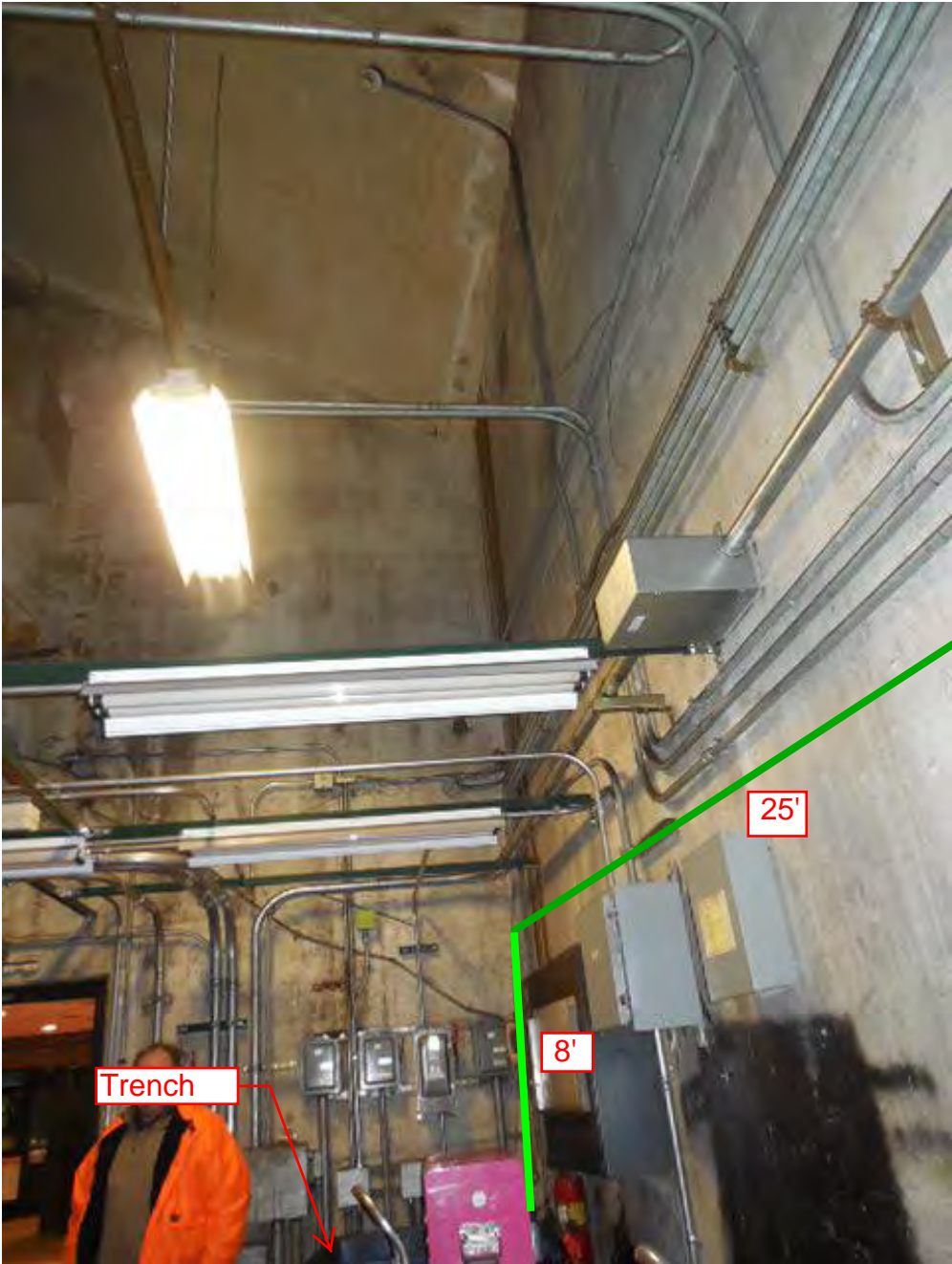


Photo #7 – Proposed Overhead Conduit in Room 200

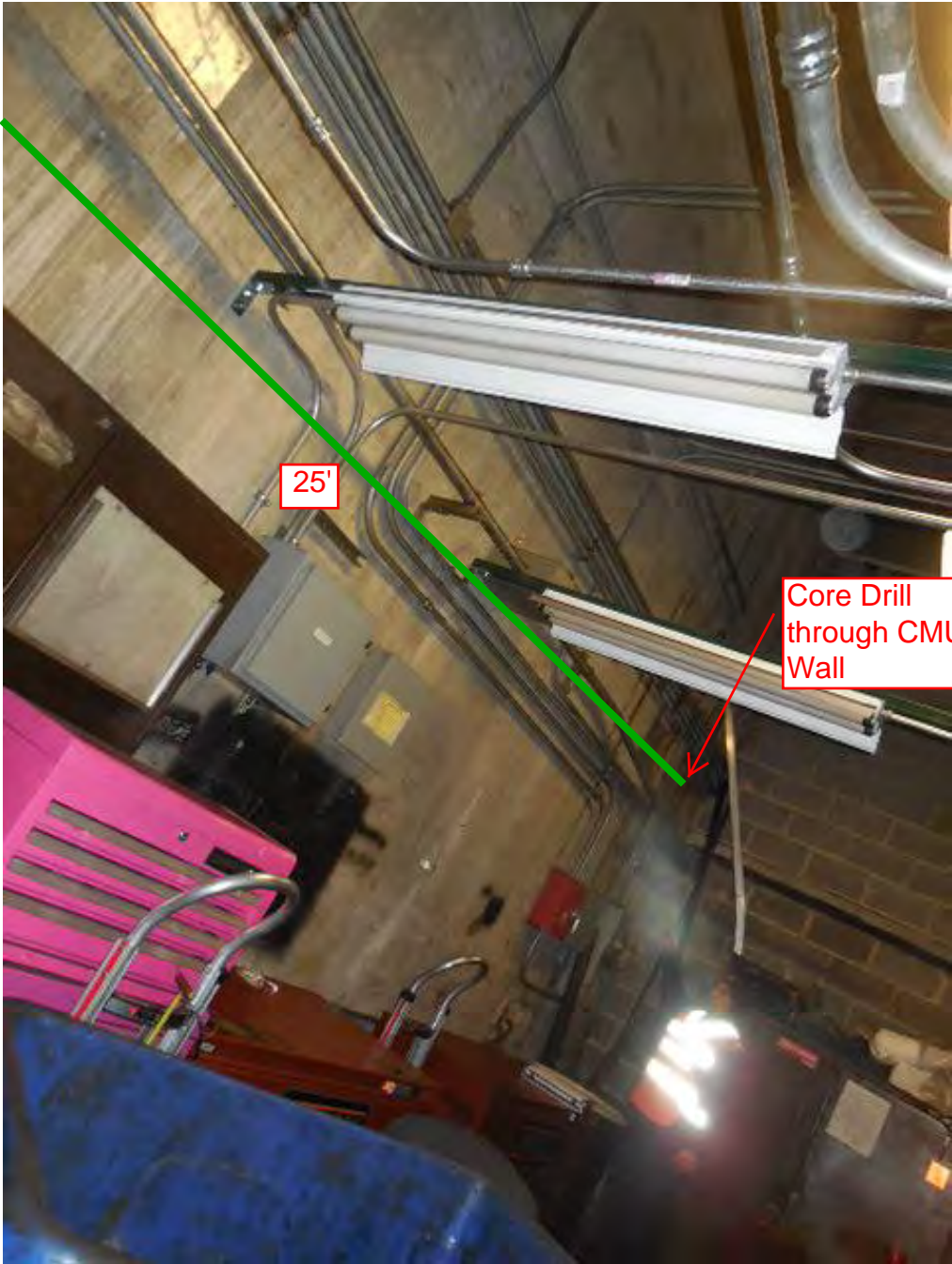


Photo #8 – Proposed Overhead Conduit in Battery Room 218



Photo #9 – Proposed Overhead Conduit in Battery Room 218



Photo #10 – Proposed Overhead Conduit in Room 206

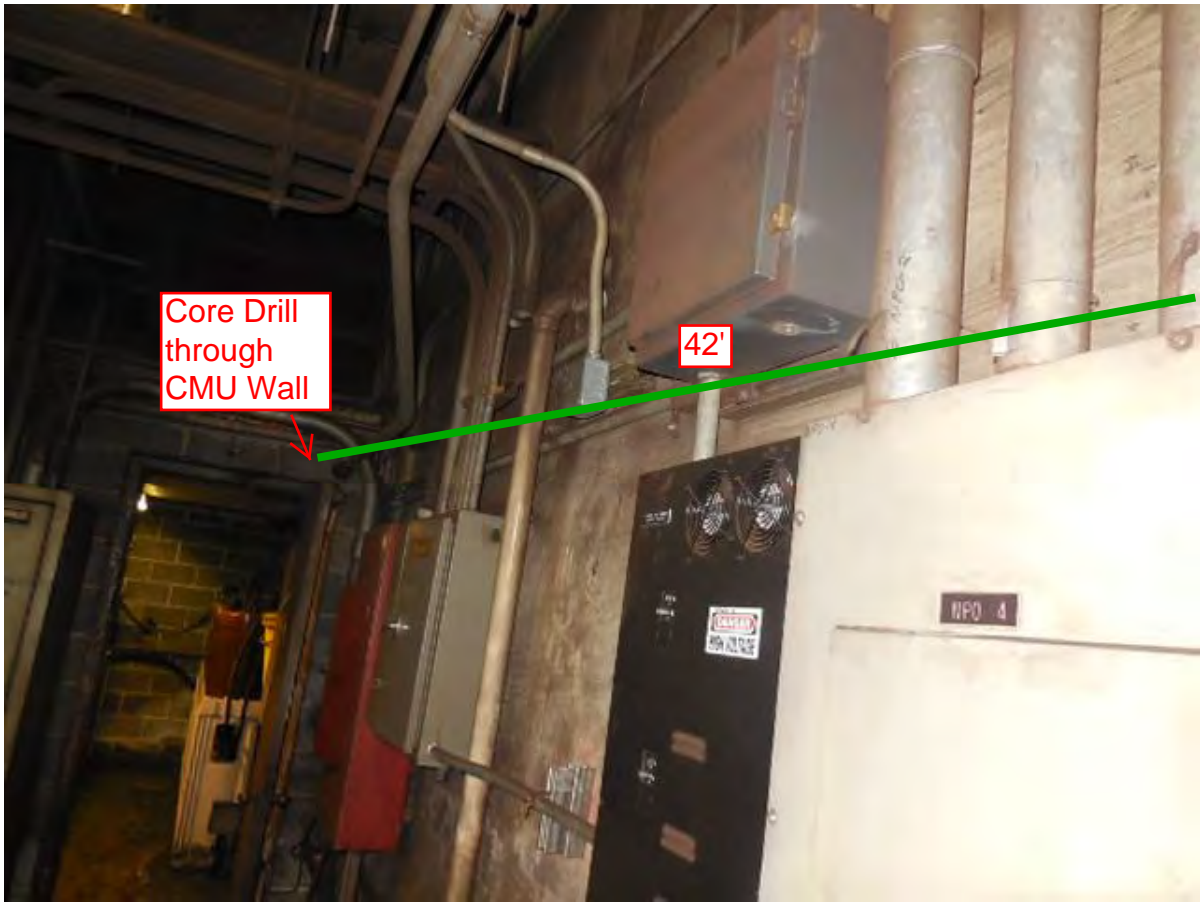
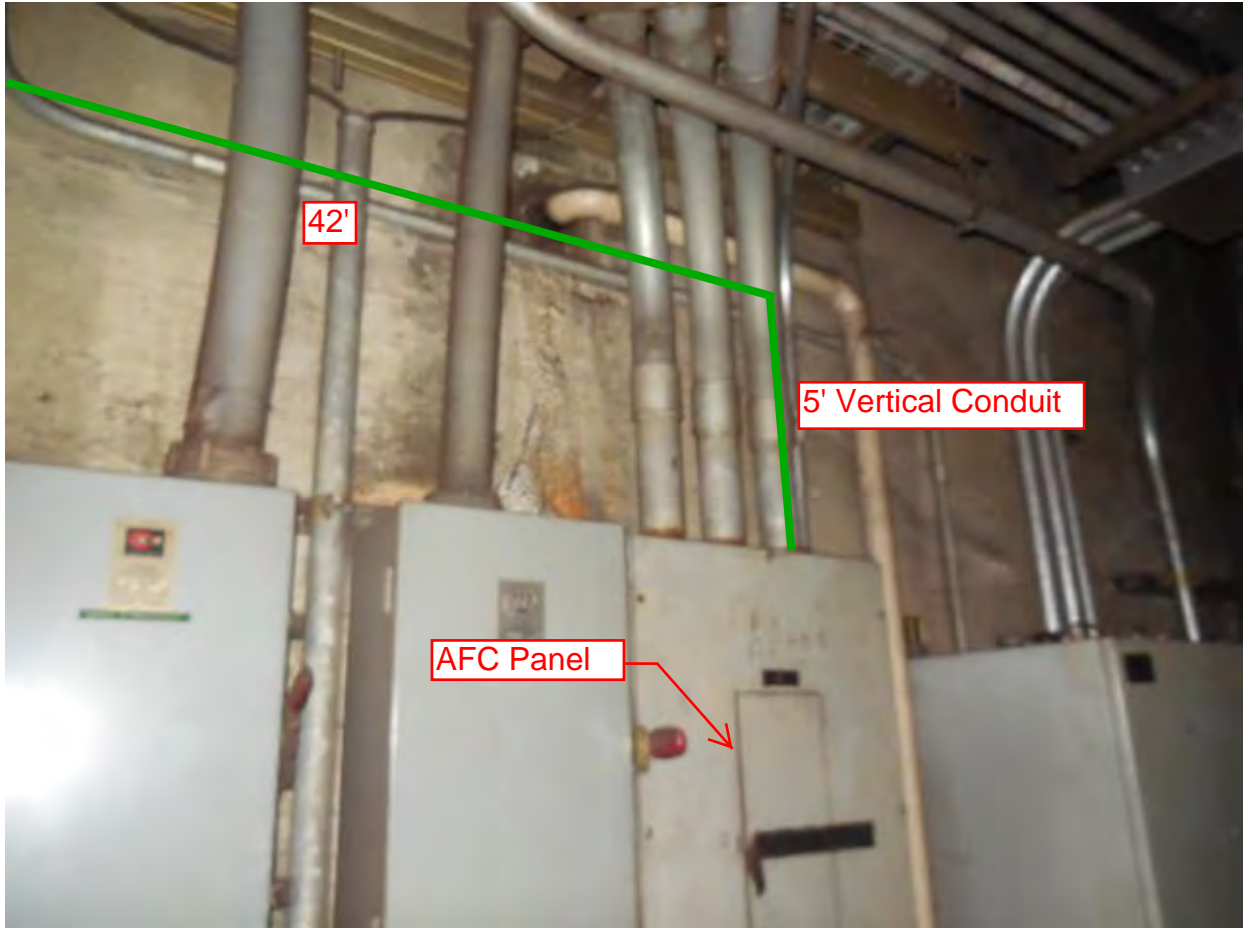
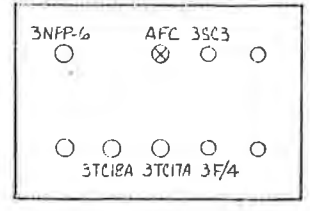
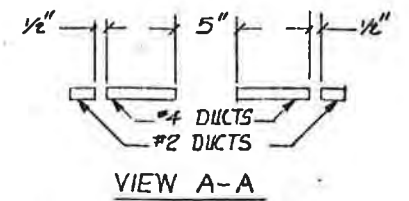


Photo #11 – Proposed Overhead Conduit feeding AFC Panel in Room 206

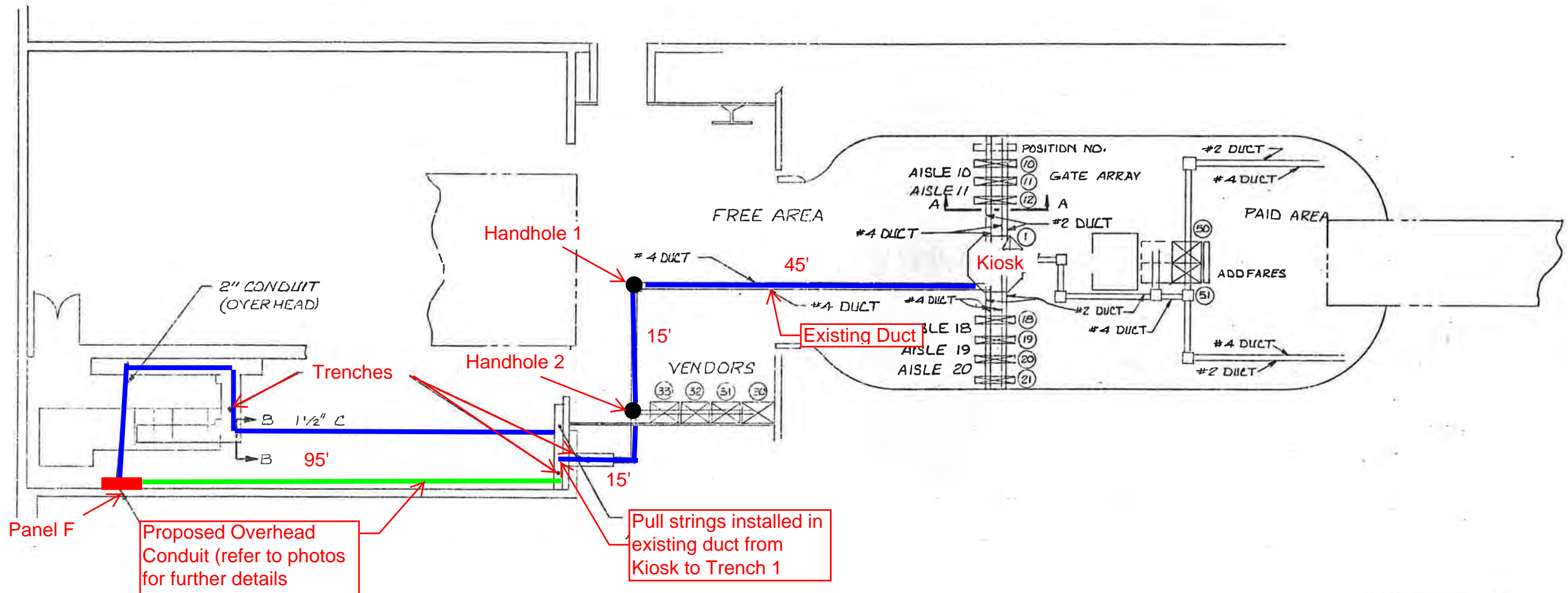




VIEW B-B



VIEW A-A



Proposed Overhead Conduit (refer to photos for further details)

Pull strings installed in existing duct from Kiosk to Trench 1

NOTES:

1. THE OPERATIONAL MACHINE INVENTORY IS INDICATED ON THIS DRAWING BY THE LETTER "X" DRAWN THRU THE MACHINE.
2. FOR REFERENCE DRAWINGS USED SEE SUPPORT DOCUMENTATION PACKAGE FOR THIS MEZZANINE.

-1 INSTALLATION PLAN
(AS BUILT DRAWING)

REDRAWN BY
J. ETHERIDGE
5-10-82

PANEL F

POSITION NO.	MACHINE TYPE	SERIAL NO.	CIRCUIT BREAKER NO.	BREAKER SIZE (AMPS)	WIRE SIZE AWG.
1	DADS	D38058	N/A	N/A	N/A
10	EXITGATE	GX4062	13	20	8
11	REVGATE	GR7244	12		
12	ENDGATE	GA5050	10		
18	END BLATE	GB6060	2		
19	REVGATE	GR7246	4		
20	REVGATE	GR7245	6		
21	EXITGATE	GX3064	8		8
30	VENDOR	FV1303	7		10
31	VENDOR	FV1299	5		10
32	VENDOR	FV1300	3		10
33	VENDOR	FV1302	1		10
50	ADDFARE	AM2115	21		6
51	ADDFARE	AM2116	19	20	6

DO NOT SCALE DRAWING
UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON BREAK SHARP EDGES .010 MAX
DECIMALS: .XX ± .03 .XXX ± .010
HOLES ANGLES: ± 0.5 DEG.
DIMENSIONS ARE IN INCHES
TOLERANCES ON BREAK SHARP EDGES .010 MAX
DECIMALS: .XX ± .03 .XXX ± .010
HOLES ANGLES: ± 0.5 DEG.
DIMENSIONS ARE IN INCHES
TOLERANCES ON BREAK SHARP EDGES .010 MAX
DECIMALS: .XX ± .03 .XXX ± .010
HOLES ANGLES: ± 0.5 DEG.

CONTRACT NUMBER
DRAWING NUMBER
926-0415
SHEET / OF /

CUBIC WESTERN DATA
A Subsidiary of Cubic Corporation
5650 KILBURN MESA ROAD • CHANDLER, AZ 85226
VAN NESS STATION

INSTALLATION PLAN
TITLE
VAN NESS STATION

CODE IDENT NO.
94987

DRAWN BY: T. ELLS
CHECKED BY: J. ETHERIDGE
DESIGN: J. ETHERIDGE
ENGINEER: J. ETHERIDGE
DATE: 5-10-82
APPROVAL: J. ETHERIDGE

926-0415

Mezzanine Inspection Report

Date: 02/02/15	Station Name: A07 Tenleytown-AU	Mezzanine #: 010	Completed By: Mike Butler
----------------	---------------------------------	------------------	---------------------------

Summary

Video scoping completed for power / communication ducts in faregate array; pull strings were installed in communication duct. Video scoping and pull string installation completed for power duct between Kiosk, Handhole 1 and Handhole 2. However, it was not possible to complete works between Handhole 2 and AFC Panel due to a collapsed duct.

Scanning identified an alternate walker duct from the Kiosk to Room C206; the duct stubs up through the ground and is exposed showing no wires inside. Pull string was installed in the alternate duct from Kiosk to Room C206. A proposed junction box and conduit is proposed between the exit to the alternate duct and AFC Panel in Room C206, thus completing the connection between the Kiosk and AFC Panel.

Scoping of Faregate Array(s)

Task	Yes/No	Notes
Communications Duct –Faregate Array (8 gates)		
Was video scoping completed for the entire duct run?	Yes	WMATA Tenleytown Station Upper Comm Video (1).avi
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	Minor obstructions due to debris and stuffed rags.
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	
Power Duct - Faregate Array (8 gates)		
Was video scoping completed for the entire duct run?	Yes	WMATA Tenleytown Station Upper Power Video.avi
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	Minor obstructions due to debris and stuffed rags.
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	
Scoping of Existing Power Duct - Kiosk to AFC Panel		
Kiosk to Handhole 1 (3') to Handhole 2 (115')		
Was video scoping completed for the entire duct / conduit run?	Yes	Refer to "WMATA Tenleytown Station Power Kiosk to Handhole 1 Video.avi" and "Tenleytown power duct Handhole 1 to Handhole 2.avi"
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	6" walker duct with less than 12 wires.
Handhole 2 to AFC Panel (25')		
Was video scoping completed for the entire duct / conduit run?	No	Refer to "WMATA Tenleytown Station Power Manhole to AFC Panel Video.avi"
Was pull string installed?	No	
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	There is a collapse in the duct, 9' from Handhole 2.
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	6" walker duct with less than 12 wires.


Scoping of Alternate Power Duct - Kiosk to AFC Panel		
Task	Yes/No	Notes
Kiosk to Handhole 1A (Distance: 3')		
Was video scoping completed for the entire duct / conduit run?	No	
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	This is an empty 6" duct (refer to attached drawing for route details).
Handhole 1A to Duct Stub-up in Room C206 (Distance: 137')		
Was video scoping completed for the entire duct / conduit run?	No	
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	This is an empty 6" duct (refer to attached drawing for route details).
Observations / Issues / Next Steps		
<p>The total distance of alternate duct run is 140' and proposed conduit is 30'.</p> <p>Refer to attached drawings and photos for further details of existing ducts and proposed conduit runs.</p>		
Sign Off		
	GFP Representative	WMATA PRGM
Name:	Mike Butler	
Signature:		
Date:	02/09/15	

Photo #1: Existing & alternate power duct from to Kiosk to Room C206.

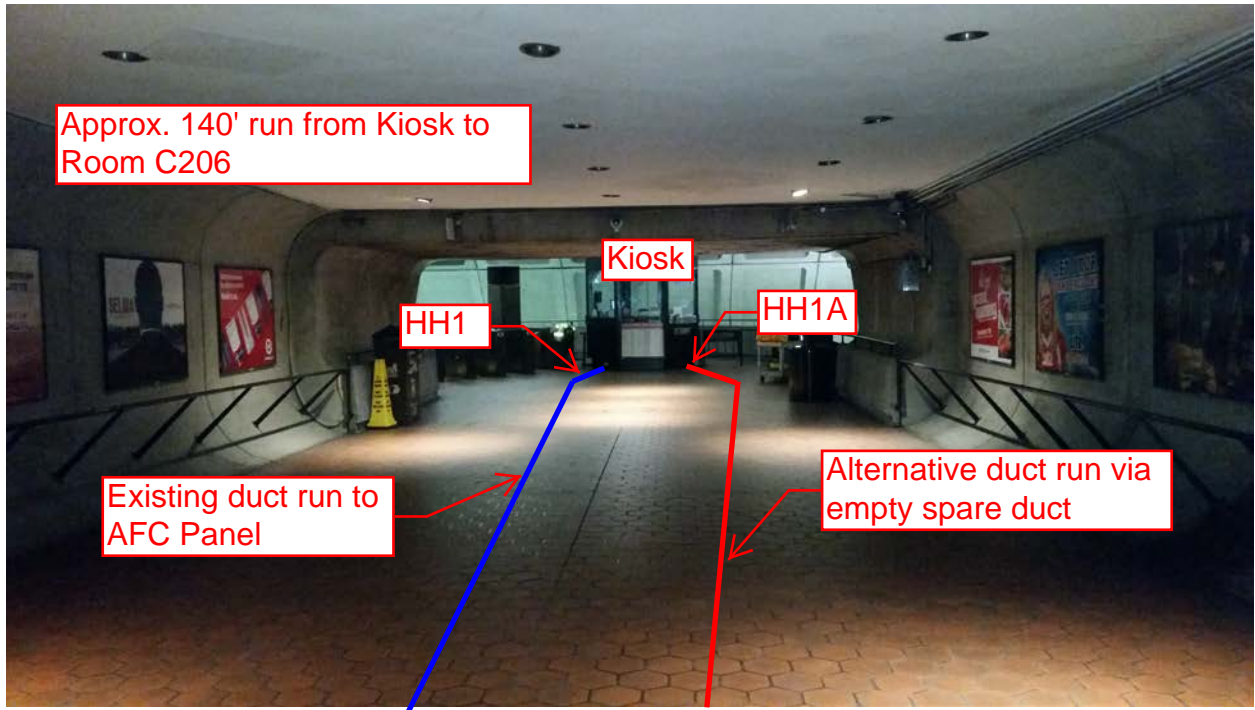


Photo #2: Existing & alternate power duct from to Kiosk to handholes.



Photo #3: Existing power duct run – Handhole 2

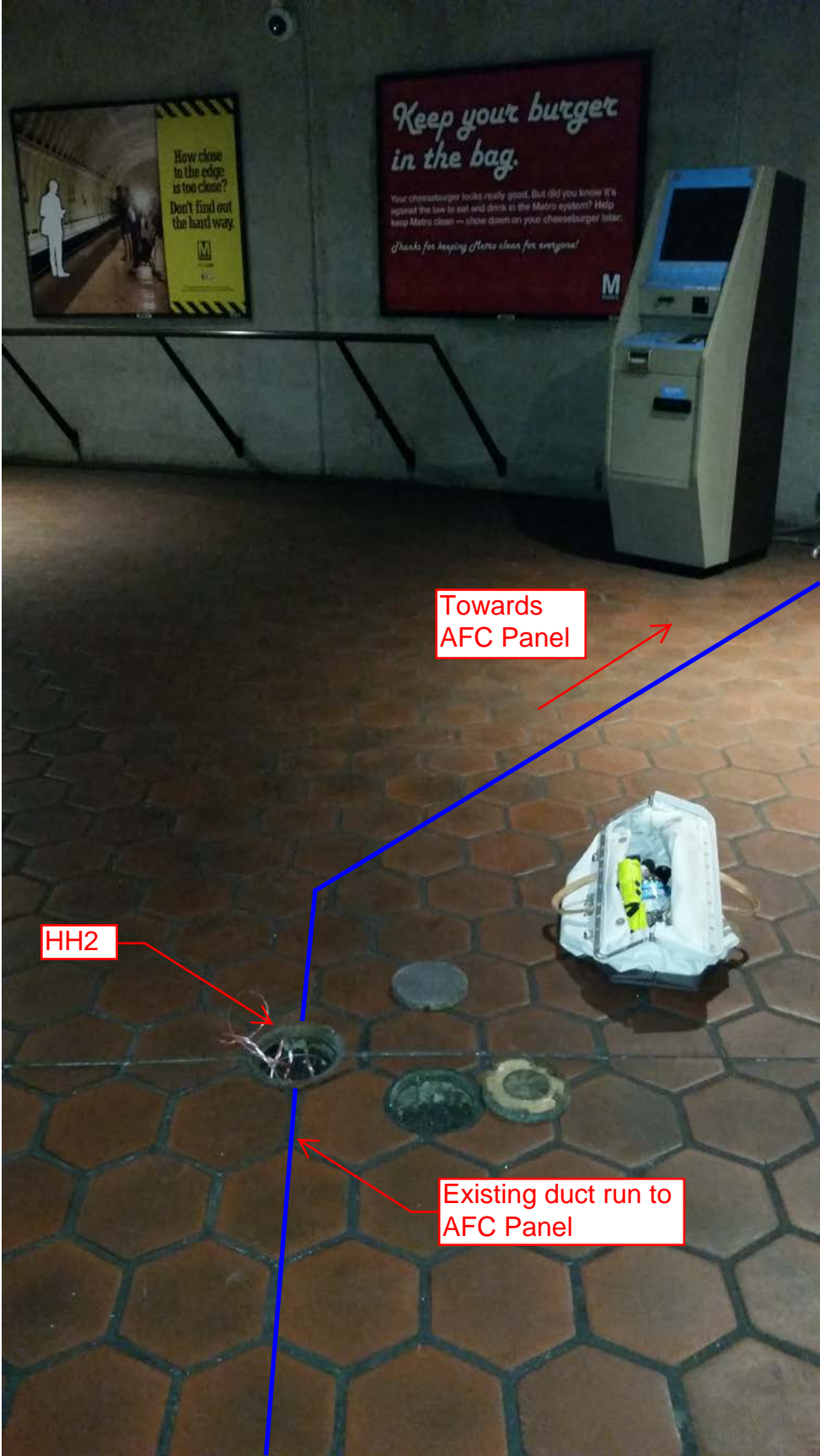


Photo #4: AFC Panel in room C206

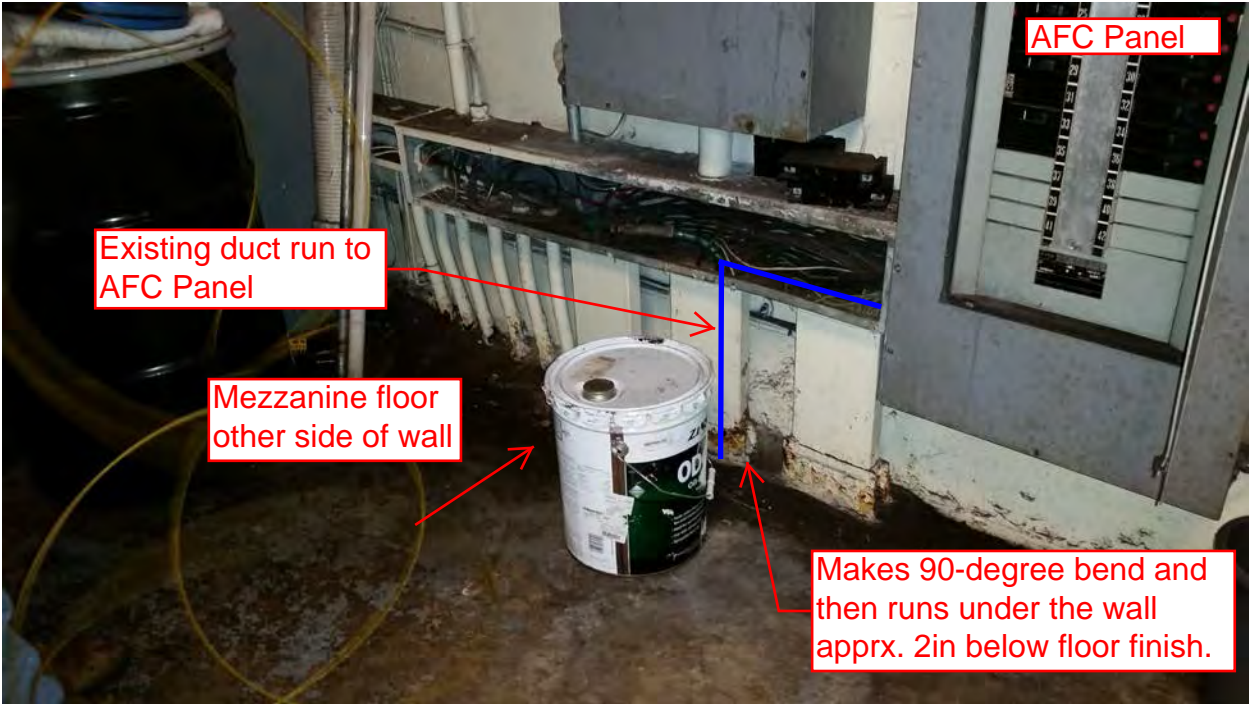


Photo #5: Alternate duct with stub-up in room C206 with proposed junction box and conduit run to AFC panel

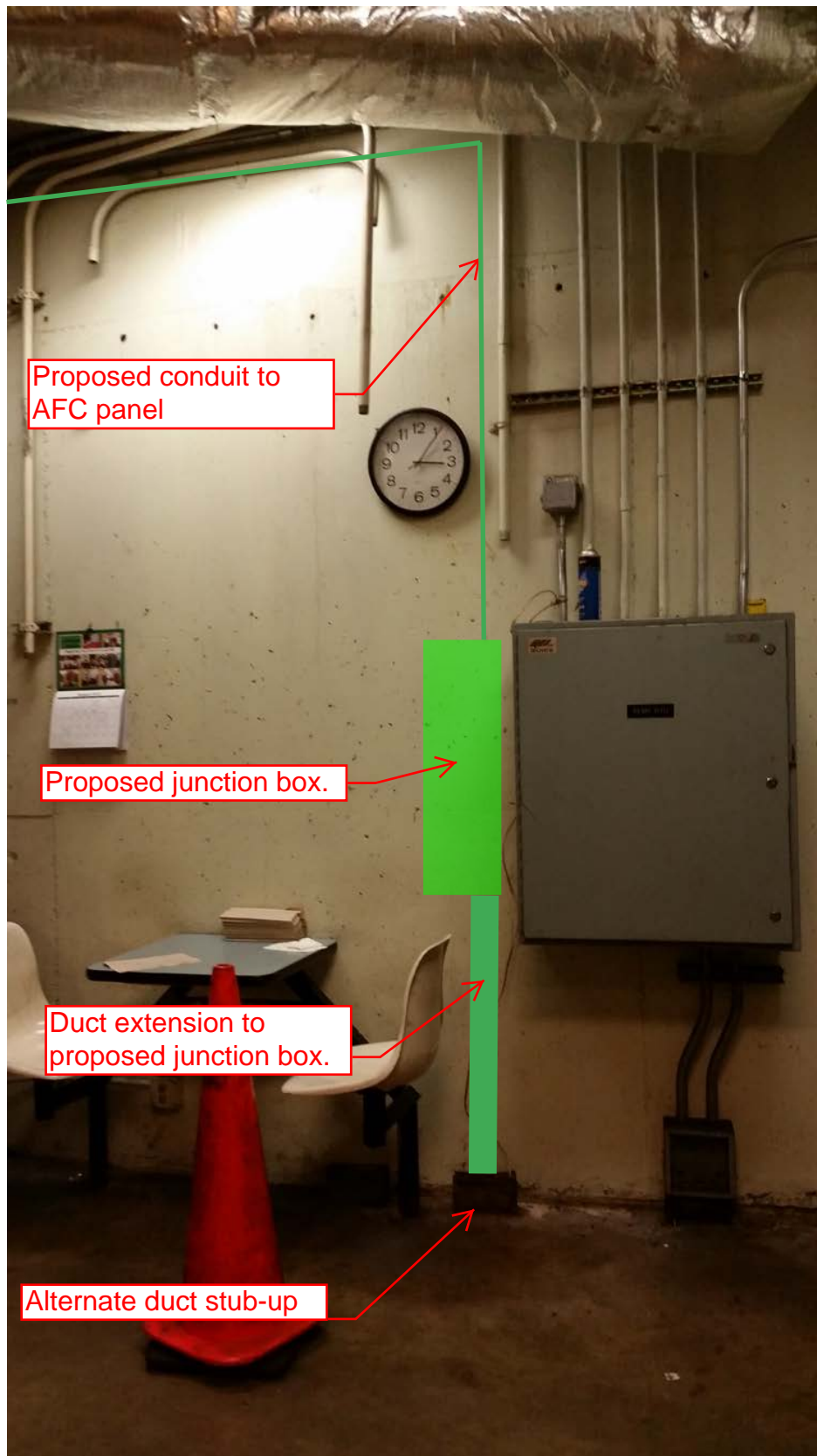


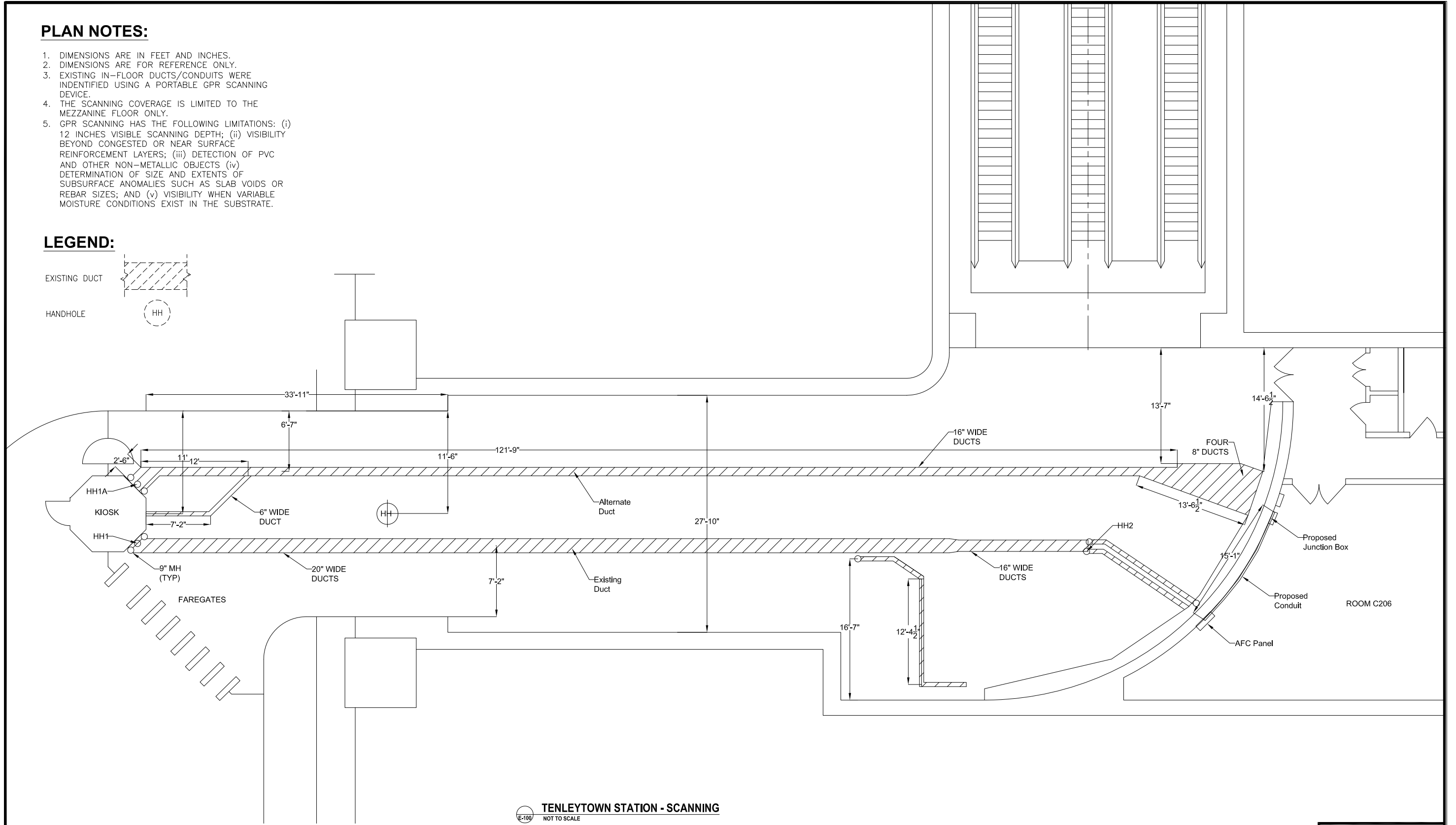
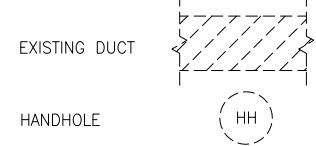
Photo #6: Proposed conduit run to AFC panel



PLAN NOTES:

1. DIMENSIONS ARE IN FEET AND INCHES.
2. DIMENSIONS ARE FOR REFERENCE ONLY.
3. EXISTING IN-FLOOR DUCTS/CONDUITS WERE IDENTIFIED USING A PORTABLE GPR SCANNING DEVICE.
4. THE SCANNING COVERAGE IS LIMITED TO THE MEZZANINE FLOOR ONLY.
5. GPR SCANNING HAS THE FOLLOWING LIMITATIONS: (i) 12 INCHES VISIBLE SCANNING DEPTH; (ii) VISIBILITY BEYOND CONGESTED OR NEAR SURFACE REINFORCEMENT LAYERS; (iii) DETECTION OF PVC AND OTHER NON-METALLIC OBJECTS (iv) DETERMINATION OF SIZE AND EXTENTS OF SUBSURFACE ANOMALIES SUCH AS SLAB VOIDS OR REBAR SIZES; AND (v) VISIBILITY WHEN VARIABLE MOISTURE CONDITIONS EXIST IN THE SUBSTRATE.

LEGEND:



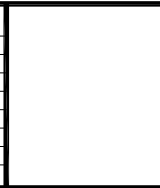
TENLETTOWN STATION - SCANNING
E-100 NOT TO SCALE

CONTRACT NO.
XXXXXX

DESIGNED	C. LOOSE	11-14
		DATE
DRAWN	C. LOOSE	11-14
		DATE
CHECKED		11-14
		DATE
APPROVED		11-14
		DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION



WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY
DEPARTMENT OF TRANSIT INFRASTRUCTURE AND ENGINEERING SERVICES
OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM
APPROVED _____

GFP A Gannett Fleming/Parsons JOINT VENTURE
SUBMITTED _____
PROJECT MANAGER

15-NEPP-01
IN - FLOOR DUCT INSPECTIONS
A07 TENLETTOWN (M010)
EXISTING LAYOUT
SCALE NOT TO SCALE
DRAWING NO. A07-E-100
XXX

Mezzanine Inspection Report (Scoping)

Date: 08/29/2014	Station Name: A08 Friendship Heights (N)	Mezzanine #: 011	Completed By: Tino Sahoo
------------------	--	------------------	--------------------------

Summary

This station was revisited on 8/29/2014 to complete works started on 8/1/2014. This station is 100% complete. Both upper and lower comm array ducts were video-scoped and are under capacity; pull strings were installed to all faregates. Both upper and lower power array ducts were video-scoped and are under capacity. The power ducts from the kiosk to the AFC panel (via 2 mezzanine handholes) were video-scoped and are under capacity. Obstructions were encountered on the power duct run from the kiosk to the first mezzanine handhole. The 90-degree walker duct sweep to the cable trough connected to the AFC panel could not be video-scoped due to the tight radius. Pull strings were installed from the kiosk to the cable trough connected to the AFC panel.

Scanning is not required.

Scoping of Faregate Array(s)

Task	Yes/No	Notes
Communications Duct – Upper Faregate Array (5 Gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to FRIENDSHIP HGTS-COM_UPPER ARRAY.avi file.
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	
Communications Duct - Lower Faregate Array (5 Gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to FRIENDSHIP HGTS-COM_LOWER ARRAY.avi file.
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	
Power Duct - Upper Faregate Array (5 Gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to FRIENDSHIP HGTS-PWR_UPPER ARRAY.avi file.
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	
Power Duct - Lower Faregate Array (5 Gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to FRIENDSHIP HGTS-PWR_LOWER ARRAY.avi file.
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	


Scoping of Power Duct - Kiosk to AFC Panel		
Task	Yes/No	Notes
Kiosk to Handhole 1		
Was video scoping completed for the entire duct / conduit run?	No	Duct was video-scoped successfully to kiosk on reverse run from handhole to kiosk. Refer to FRIENDSHIP HGTS-PWR_KIOSK - MANHOLE.avi file and to FRIENDSHIP HGTS-PWR_MANHOLE - KIOSK.avi files.
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	Scope hit obstruction at 18' in walker duct from kiosk.
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	
Handhole 1 to Handhole 2		
Was video scoping completed for the entire duct / conduit run?	Yes	Refer to FRIENDSHIP HGTS-PWR_MANHOLE - MANHOLE (MID).avi file.
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	
Handhole 2 to AFC Panel		
Was video scoping completed for the entire duct / conduit run?	No	Video-scope could not negotiate 90-degree sweep in walker duct. Refer to FRIENDSHIP HGTS-PWR_MANHOLE TO 90.avi file.
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	
Observations / Issues / Next Steps		
Total duct run from Kiosk to AFC Panel is 120 feet.		
Sign Off		
	GFP Representative	WMATA PRGM
Name:	Tino Sahoo	
Signature:		
Date:	08/29/2014	

Photo #1: A08 Friendship Heights – Lock-out tag-out of AFC Panel main breaker

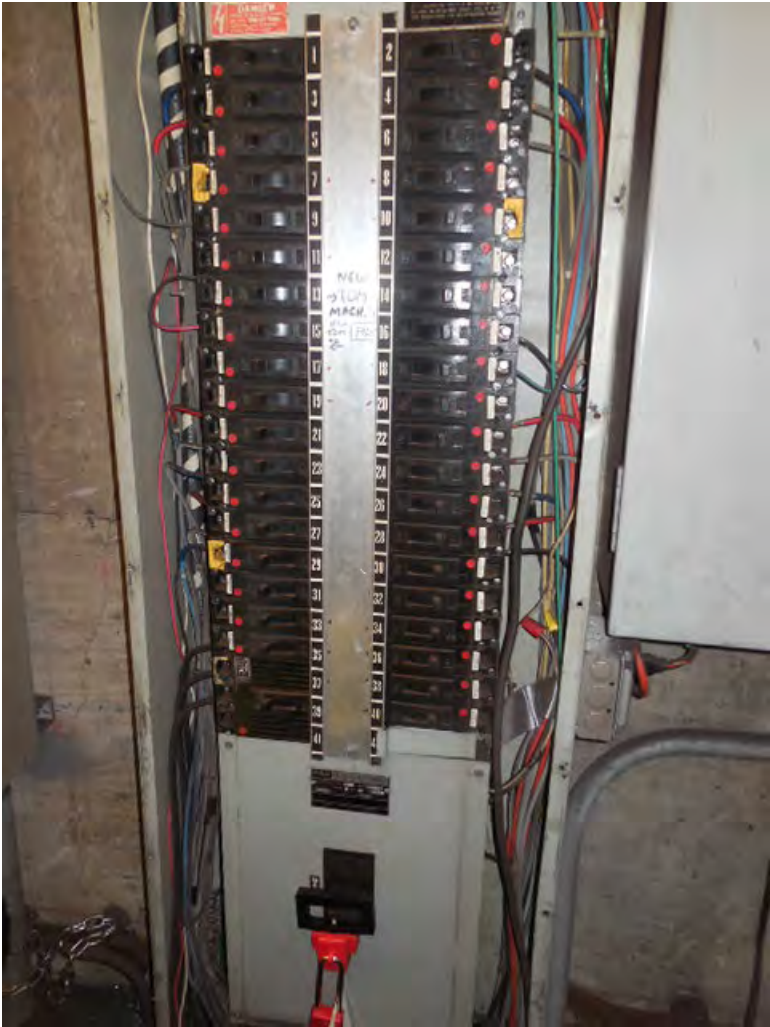


Photo #2: A08 Friendship Heights – AFC Panel MNCC Schedule

PANEL BOARD - MNCC

FCD FROM	LOAD DESCRIPTION
1	Fare Vending-Lower Passageway #30
2	Fare Vending-Lower Passageway #31
3	Fare Vending-Lower Passageway #32
4	Fare Vending-Lower Passageway #33
5	Fare Vending-Lower Passageway #34
6	Fare Vending-Lower Passageway #35
7	Fare Vending-Lower Passageway
8	Fare Vending-Lower Passageway
9	Fare Vending-Lower Passageway ATM
10	Fare Vending-Lower Passageway
11	Fare Vending-Lower Passageway
12	Fare Vending-Lower Passageway
13	Fare Vending-Lower Passageway
14	Fare Vending-Lower Passageway
15	Fare Vending-Lower Passageway
16	Fare Vending-Lower Passageway MEZZ PIDS
17	Fare Vending-Lower Passageway
18	Fare Vending-Lower Passageway
19	Fare Vending-Lower Passageway
20	Fare Vending-Lower Passageway
21	Fare Gates-Mezz. Level #10
22	Fare Gates-Mezz. Level #11
23	Fare Gates-Mezz. Level #12
24	Fare Gates-Mezz. Level #13
25	Fare Gates-Mezz. Level #14
26	Fare Gates-Mezz. Level #15
27	Fare Gates-Mezz. Level #16
28	Fare Gates-Mezz. Level #17
29	Fare Gates-Mezz. Level #18
30	Fare Gates-Mezz. Level #19
31	Spare
32	Fare Gates-Mezz. Level #20
33	Spare
34	Transfer Machines SPARE
35	Fare Gates-Mezz. Level
36	Transfer Machines SPARE
37	Spare ELAM
38	Transfer Machines SPARE
39	Spare ELAM
40	Transfer Machines SPARE
41	Spare ELAM
42	Spare

FEDERAL PACIFIC ELECTRIC CO. 340101

Photo #3: A08 Friendship Heights – Pull string installed in faregate array duct



Photo #4: A08 Friendship Heights – Installing pull string between kiosk and AFC panel



Photo #5: A08 Friendship Heights – Installing pull string in handholes between kiosk and AFC panel



Photo #6: A08 Friendship Heights – Video-scoping the power ducts between kiosk and AFC panel



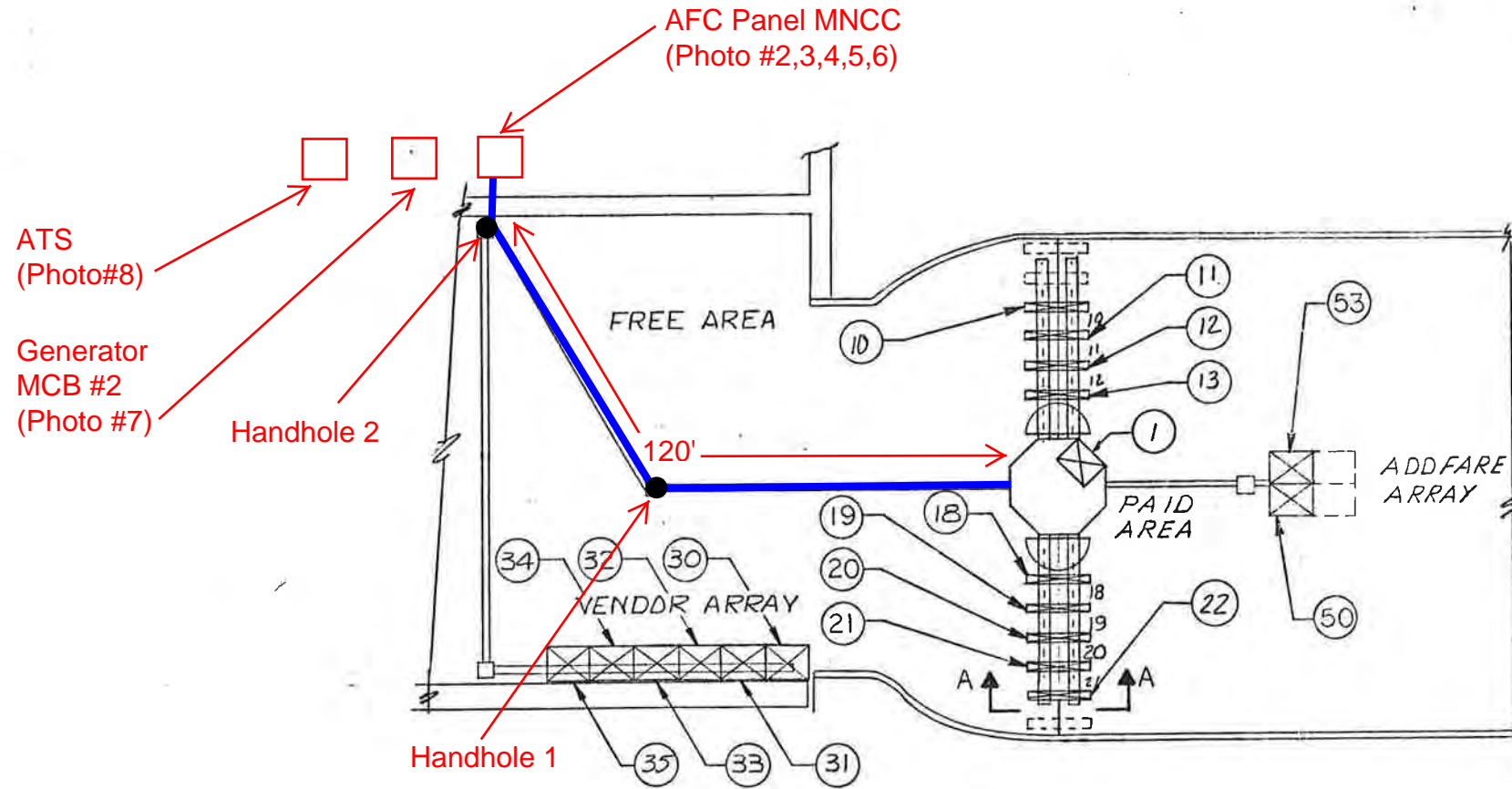
Photo #7: A08 Friendship Heights – Cable trough below AFC Panel. Power ducts from kiosk feed into bottom of trough



NOTES:

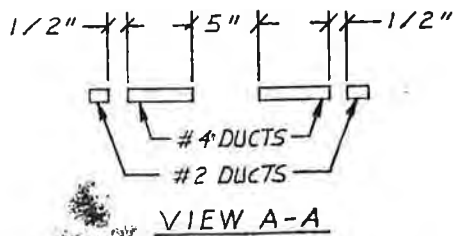
1. THE MINIMUM OPERATIONAL MACHINE INVENTORY IS REFERENCED ON THIS DRAWING BY THE "X" DRAWN THROUGH THE MACHINE.
2. FOR REFERENCE DRAWINGS USED SEE SUPPORT DOCUMENTATION PACKAGE FOR THIS MEZZANINE.

Pre-inspection Field Verification
7/14/2014



-1 INSTALLATION PLAN

Photo #1 is on platform level at north end
Photo #9 is in Room 216/218



MACH	LOCATION	INVENTOR	CWD SERIAL NO'S	C/B NO'S	BREAKER SIZE	WIRE SIZE
1	DADS		DES 505	EMERG	20 AMPS	#12
2	END, A	13	GA5502	24		
3	REV	12	GR7511	23		
4	REV	11	GR7502	22		
5	EXIT	10	GX4503	21		
6	END, B	18	GB6502	25		
7	REV	19	GR7509	26		
8	REV	20	GR7518	27		
9	REV	21	GR7501	28		
10	ENTRY	22	GN3505	29	20 AMPS	#6
11						
12						
13	VENDOR	30	FV1118	1	20 AMPS	#10
14	VENDOR	31	FV1323	2		
15	VENDOR	32	FV1268	3		
16	VENDOR	33	FV1183	4		
17	VENDOR	34	FV1340	5		
18	VENDOR	35	FV1164	6	20 AMPS	#10
19						
20						
21						
22						
23	ADD FARE	50	AM2135	31	20 AMPS	#6
24	ADD FARE	51	AM2130	30	20 AMPS	#6
25						
26						
27						
28						
29						
30						
31						
32						
33						
34						

DO NOT SCALE DRAWING
UNLESS OTHERWISE SPECIFIED
BREAK SHARP EDGES .010 MAX
TOLERANCES ON HOLES ANGLES: ±0.5 DEG.
DECIMALS: .XX ±.03 .XXX ±.010
HOLE .251 THRU .500: +.006 - .001
.501 THRU .750: +.008 - .001
.751 THRU 1.000: +.010 - .001

REV	DATE	BY	APP'D	REASON
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				
31				
32				
33				
34				

CONTRACT NUMBER: **D B**

DRAWING NUMBER: **926-0446**

SHEET 1 OF 1

TITLE: **INSTALLATION PLAN - FRIENDSHIP HEIGHTS STATION - NORTH**

CUBIC WESTERN DATA
A subsidiary of Cubic Corporation
5650 NE ARMY MEA ROAD - POST OFFICE BOX 8078 - SAN DIEGO, CA 92118

CODE IDENT NO. **94987**

DRAWN: [Signature]
CHECKED: [Signature]
DESIGN: [Signature]
ENGINEER: [Signature]
DESIGN: [Signature]
ACTIVITY APPROVAL: [Signature]

926-0446

Mezzanine Inspection Report

REVISION 1

Date: 02/06/15	Station Name: A08 Friendship Heights South	Mezzanine #: 104	Completed By: Mike Butler
----------------	--	------------------	---------------------------

Summary

Video scoping and pull string installation completed for communication duct in upper faregate array; respective power duct in upper faregate array also video scoped. Faregate ducts in good condition and not at capacity.

Video scoping and pull sting installation could not be completed in existing 2" conduit between Kiosk and AFC Panel due to multiple obstructions. However, pull string was installed in 2" conduit between AFC Panel and overhead trough. An empty 1" conduit was also found between the overhead trough and northern end wall of platform ceiling plenum.

New conduit is proposed between Kiosk and the northern end wall. The full run between the Kiosk and AFC Panel will utilize the existing empty 1" conduit passing through the northern end wall and 2" conduit between overhead trough and AFC Panel (pull string installed). The proposed conduit will run vertically down from the Kiosk to proposed Junction Box 1 and then along the platform ceiling plenum until it reaches the northern end wall. The conduit will transition to a proposed liquidtight conduit (in order to get past ceiling obstructions) before feeding into proposed Junction Box 2. The existing empty 1" conduit feeds from Junction Box 2 through the northern end wall and into the electrical room. Once inside the electrical room, additional liquidtight conduit is proposed from 1" empty conduit to overhead trough above the AFC Panel.

Refer to photos and drawings for more information.

Scoping of Faregate Array(s)

Task	Yes/No	Notes
Communications Duct – Upper Faregate Array (5 gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to "WMATA Friendship Heights South Upper Comm Video (2).avi"
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	4" walker duct with less than 10 wires.
Power Duct - Upper Faregate Array (5 gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to "WMATA Friendship Heights South Upper Power Video.avi"
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	6" walker duct with less than 12 wires.


Scoping of Power Duct - Kiosk to AFC Panel		
Task	Yes/No	Notes
Kiosk to AFC Panel (Distance Unknown)		
Was video scoping completed for the entire duct / conduit run?	No	Refer to "WMATA Friendship Heights Left 2inch conduit to open space Video.avi" and "WMATA Friendship Heights Middle 2inch conduit to open space Video.avi"
Was pull string installed?	No	
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	2" conduit with less than 10 wires.
Observations / Issues / Next Steps		
<p>The proposed conduit run is 95' from Kiosk to AFC Panel, including 50' of new conduit in ceiling plenum, 10' of new liquidtight conduit, 5' of existing 1" conduit through the wall and 30' of existing 2" conduit in Room 201 (please refer to attached photos).</p> <p>The AFC Panel is located on the mezzanine level in Room 201, but access is wayside from the platform level.</p>		
Sign Off		
	GFP Representative	WMATA PRGM
Name:	Mike Butler	
Signature:		
Date:	02/17/15	

Photo #1: Proposed conduit in ceiling plenum at platform level beneath Kiosk

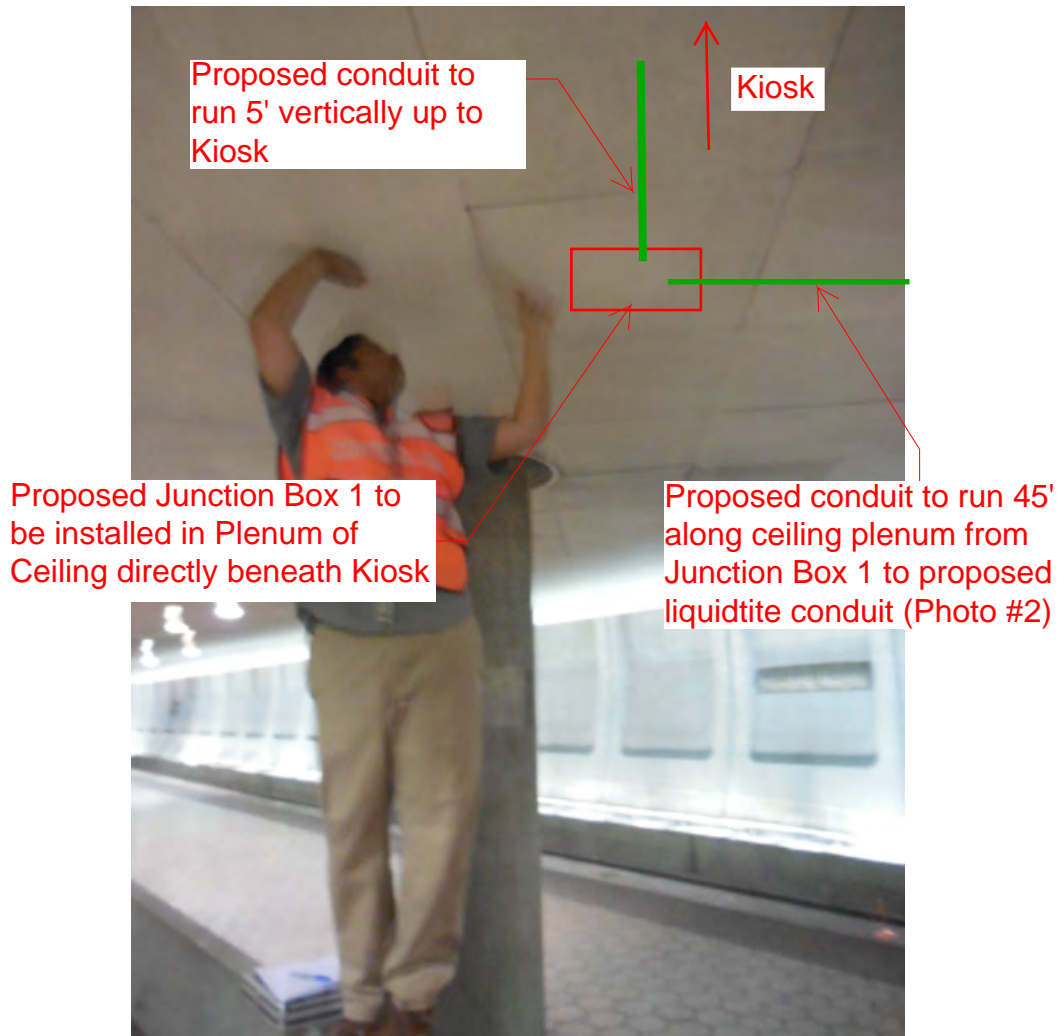
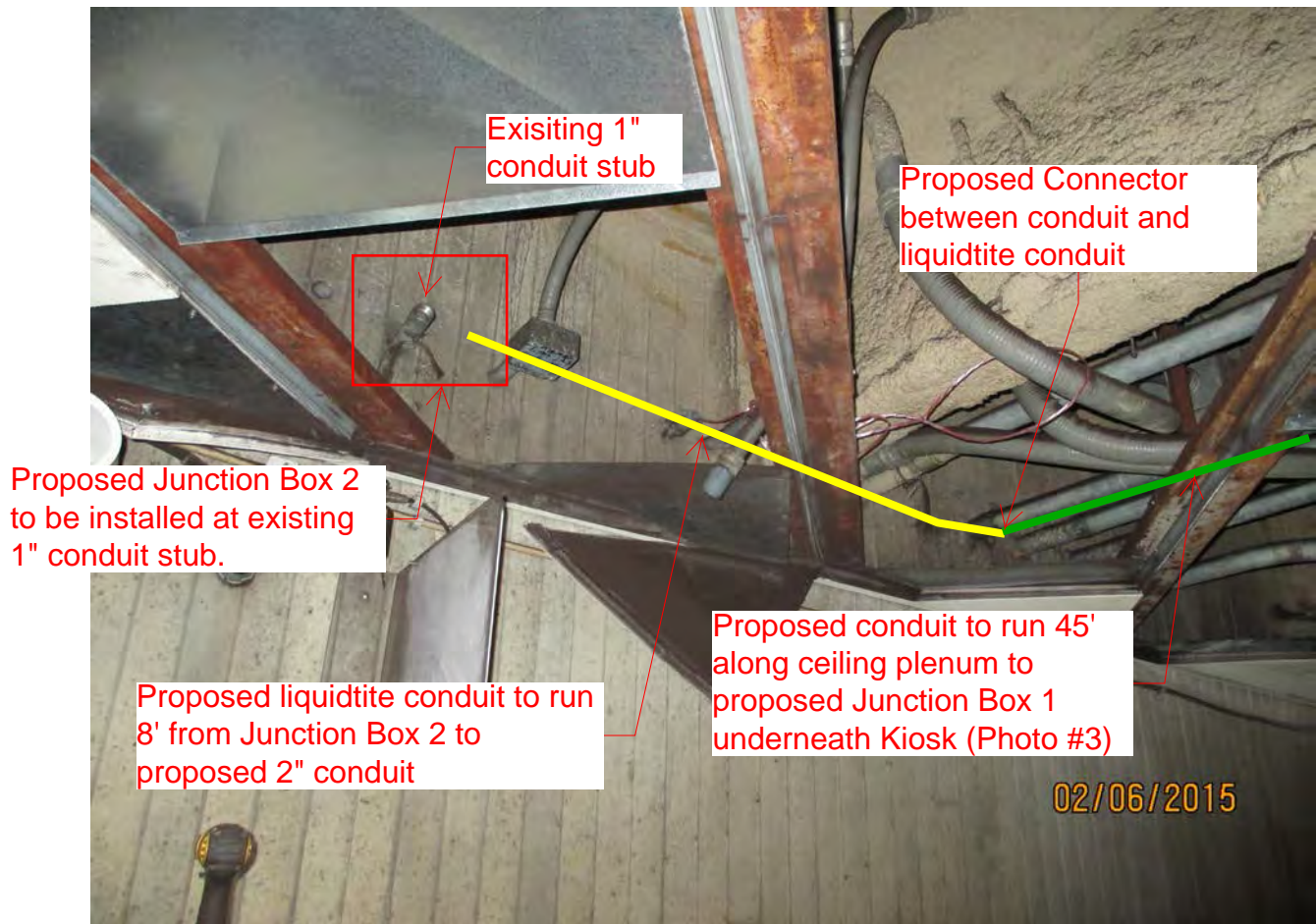
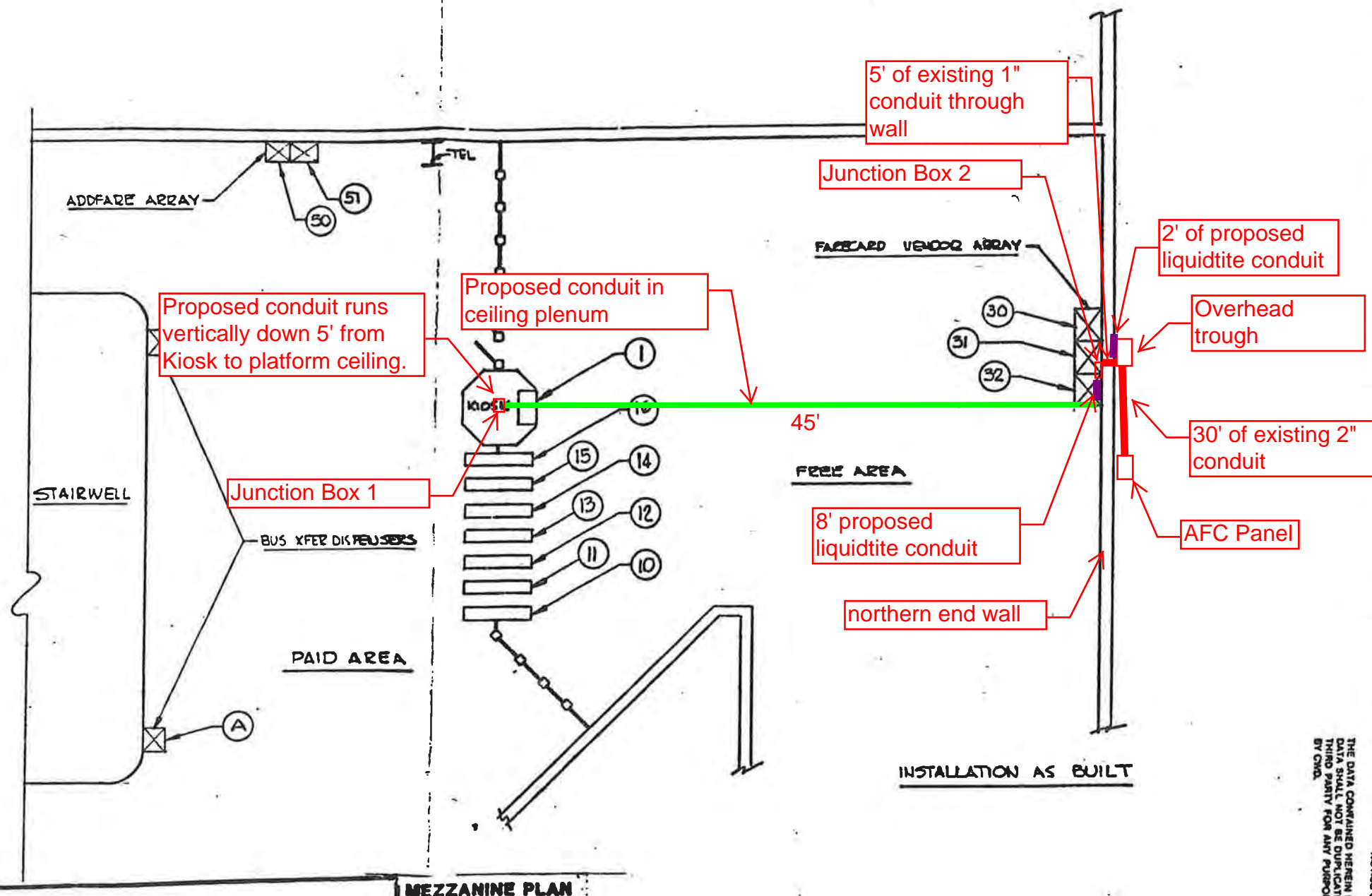


Photo #2: Proposed conduit in ceiling plenum at platform level beneath Kiosk



OK

PANEL * MSAA				
POSITION NUMBER	MACHINE TYPE	SERIAL NUMBER	CIRCUIT BREAKER NUMBER	WIRE SIZE AWG
A	XFER DISPENSER		1 FG 10 22	
B	XFER DISPENSER		2 FG 11	
1	ECADS	DS 8040	3 FG 12	
10	EXIT GATE	GX 4531	4 FG 13	
11	REV. GATE	GR 7524	5 FG 14	
12	"	GR 7520	6 FG 15	
13	"	GR 7525	7 FG 16	
14	"	GR 7554	8 SPARE	
15	"	GR 7551	9 VF 30	
16	ENTRY GATE	GN 3533	10 VF 31 31 XFER B	
30	FARECARD VEND	FV 1310	11 VF 32	
31	"	FV 1086	12 FUTURE 33	
32	"	FV 1503	13 SPARE	
50	ADDFARE	AM 2700	14 AM 51	
51	ADDFARE	AM 2701	15 XFER A	
			16 AM 50	
			17 SPARE	
			18 SPARE	
			21	42



M WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

APPROVED AS CORRECTED
(RESUBMITTAL NOT REQUIRED)

Approval Does Not Relieve the Contractor of the Responsibility for the Accuracy of this Document or for Full Compliance with the Contract Requirements.

BY: [Signature]
For Contracting Officer

DATE: 1-11-07

CP-2007E-101-1-0

NOTICE OF PROPRIETARY RIGHTS IN DATA
THE DATA CONTAINED HEREIN IS PROPRIETARY TO CH2M HILL. THIS DATA SHALL NOT BE DUPLICATED, TRANSMITTED, MADE AVAILABLE TO ANY THIRD PARTY FOR ANY PURPOSE EXCEPT AS SPECIFICALLY AUTHORIZED IN WRITING BY CH2M.

DATE: 11/01/07	SCALE: AS SHOWN
TITLE: FRIENDSHIP H/S. STATION INSTALLATION PLAN	DRAWING NUMBER: 926-044
SHEET 1 OF 1	CONTRACT NUMBER: 2007-101-1-0
PROJECT: FRIENDSHIP H/S. STATION	CONTRACTOR: [Name]
DESIGNER: [Name]	DATE: 11/01/07
CHECKED: [Name]	SCALE: AS SHOWN
APPROVED: [Name]	DATE: 11/01/07
CODE INDEX: 57510	

Mezzanine Inspection Report

REVISION 1

Date: 01/08/2015	Station Name: A11 Grosvenor	Mezzanine #: 014	Completed By: Tino Sahoo
------------------	-----------------------------	------------------	--------------------------

Summary

Video scoping for communications and power ducts in upper and lower faregate arrays was completed. Pull string was installed in communications duct for upper and lower faregate arrays. Video scoping of the power duct from the kiosk to the AFC panel was attempted in both 6" walker duct runs. Power duct run 1 was at 90% capacity and could not be scoped. Power duct run 2 could not be scoped from the kiosk to the handhole due to welded metal plate obstruction under the kiosk. Power duct run 2 was scoped from the first handhole towards the AFC panel but could not be completed due to the duct being collapsed at the expansion joint near the electrical rooms.

Scanning was completed at this station. Due to the amount of existing ducts and conduit runs in the mezzanine level floor, a new in-floor duct run is not feasible. A proposed overhead conduit run has been identified. The proposed conduit will run vertically up from the kiosk, along the ceiling of the mezzanine and core into backroom (Room 207). A new junction box is proposed at core drill location. Once inside the Room 207, the conduit will snake around the internal wall and then run vertically down to the floor. The proposed conduit will core drill through the floor and feed into a proposed junction box on the ceiling of Room 107 at platform level. The proposed conduit will continue overhead from proposed junction box to the AFC panel in Room 107.

Refer to photos and drawings for further information.

Scoping of Faregate Array(s)

Task	Yes/No	Notes
Communications Duct – Upper Faregate Array (3 Gates)		
Was video scoping completed for the entire duct run?	No	Refer to WMATA Grosvenor Station Upper Comm Duct Video.avi file. Video scoping could not continue to far end of gate 3 due to existing wires blocking path of camera
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	6" duct less than 10 wires
Communications Duct - Lower Faregate Array (3 Gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to WMATA Grosvenor Station Lower Comm Duct Video.avi file.
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	6" duct less than 10 wires
Power Duct - Upper Faregate Array (3 Gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to WMATA Grosvenor 6inch Upper Power Video.avi file.
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	6" duct less than 10 wires
Power Duct - Lower Faregate Array (3 Gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to WMATA Grosvenor 6inch Lower Power Video.avi and WMATA Grosvenor 3inch Lower Power Video.avi files.
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	6" and 3" ducts less than 10 wires

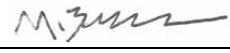
Scoping of Power Duct - Kiosk to AFC Panel		
Task	Yes/No	Notes
Kiosk to Handhole 1 (15' run)		
Was video scoping completed for the entire duct / conduit run?	No	
Was pull string installed?	No	
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	Welded metal plate obstruction under kiosk at the entrance of the duct and the other duct was at capacity
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	6" duct less than 15 wires
Handhole 1 to Expansion Joint (80' run)		
Was video scoping completed for the entire duct / conduit run?	No	
Was pull string installed?	No	
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	Duct was collapsed approximately 90' into the run at the expansion joint.
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	6" duct less than 15 wires
Observations / Issues / Next Steps		
Total distance of proposed conduit run is 142' from Kiosk to AFC panel.		
Sign Off		
	GFP Representative	WMATA PRGM
Name:	Mike Butler	
Signature:		
Date:	4/20/2015	

Photo #1 – Existing duct and proposed overhead conduit on mezzanine floor

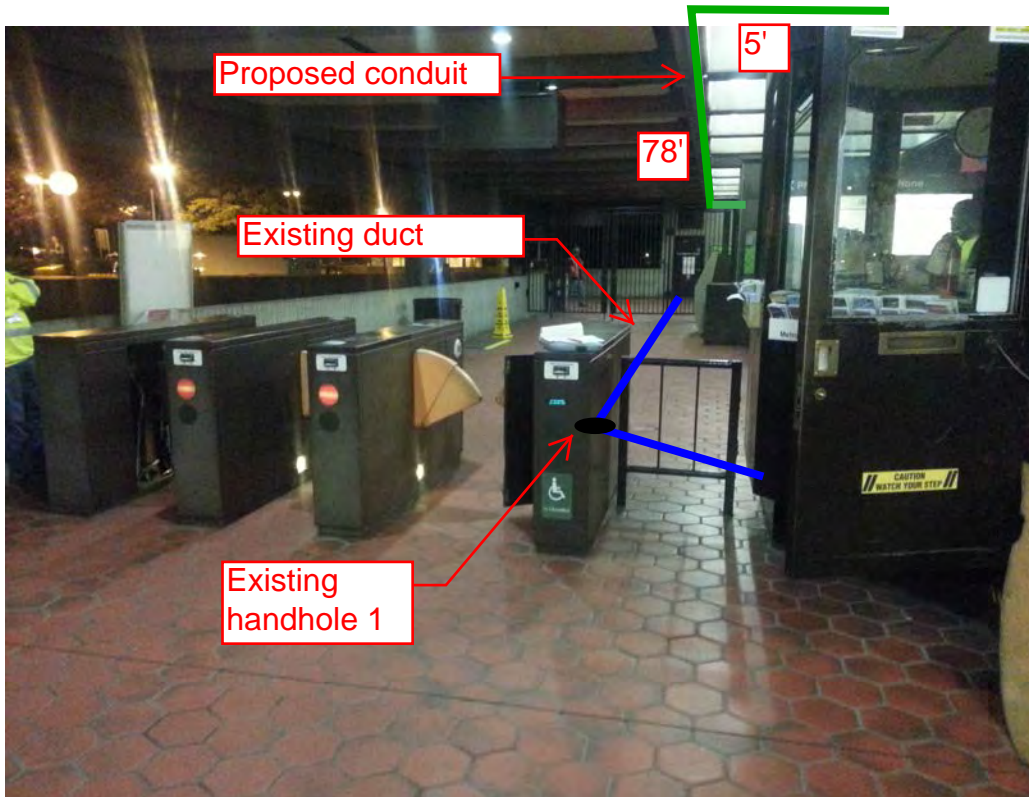


Photo #2 – Existing duct and proposed overhead conduit on mezzanine floor

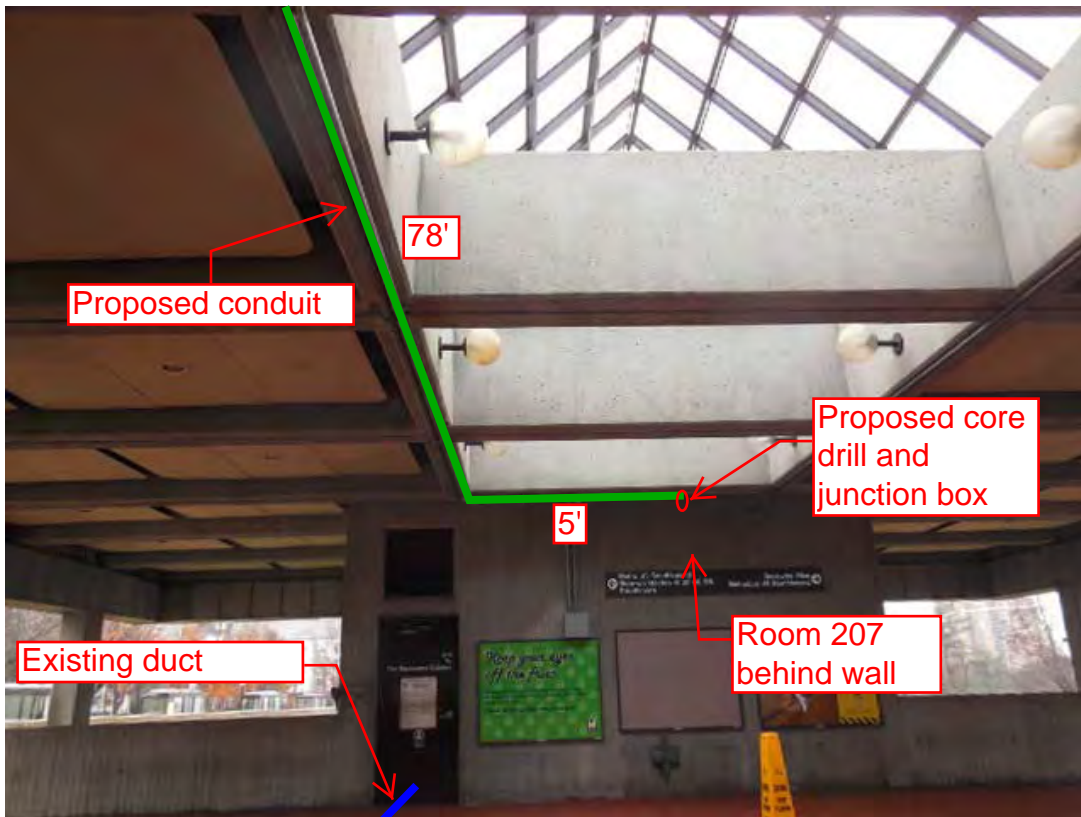


Photo #3 – Existing and proposed conduits to AFC Panel in AC Switchboard Room 107

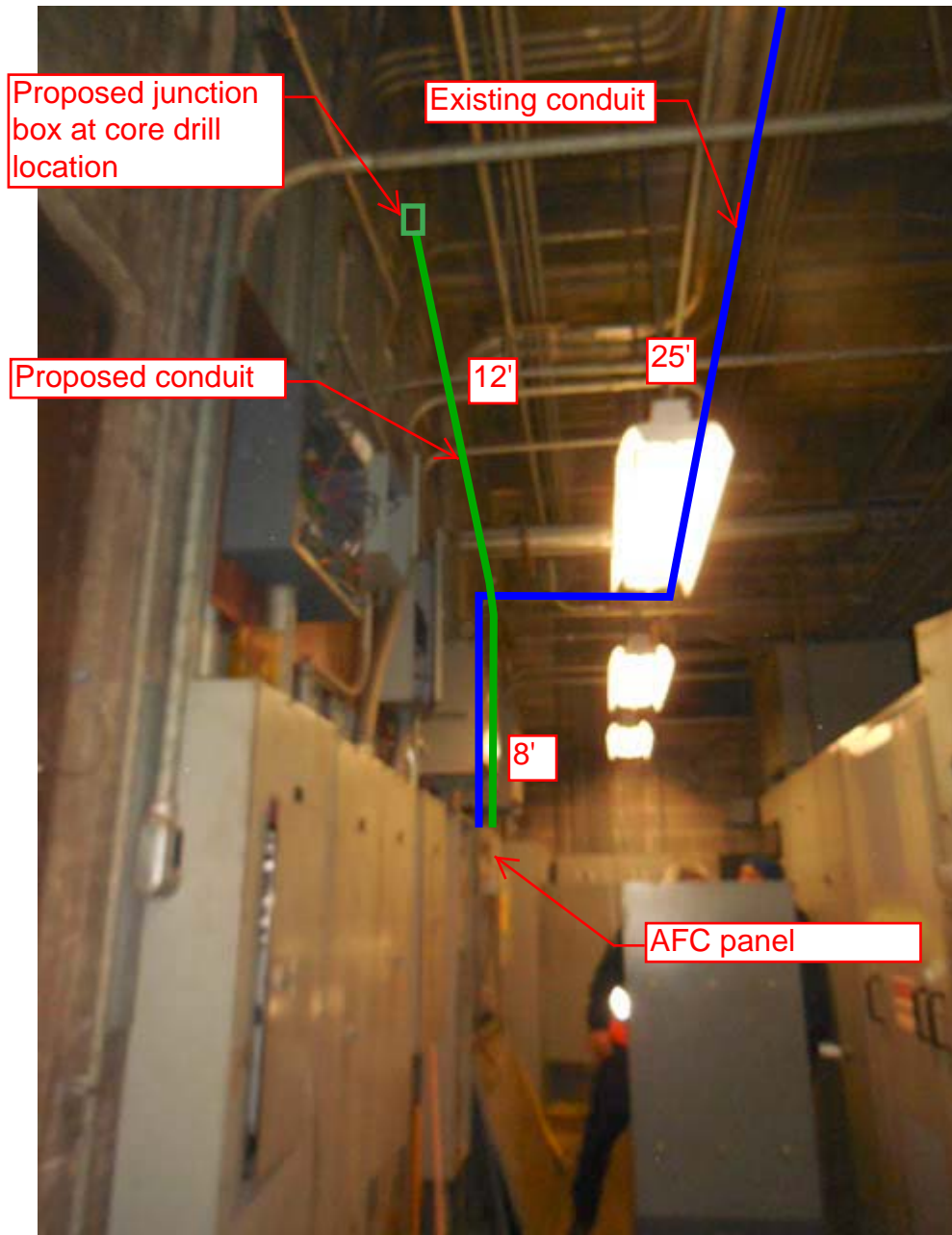
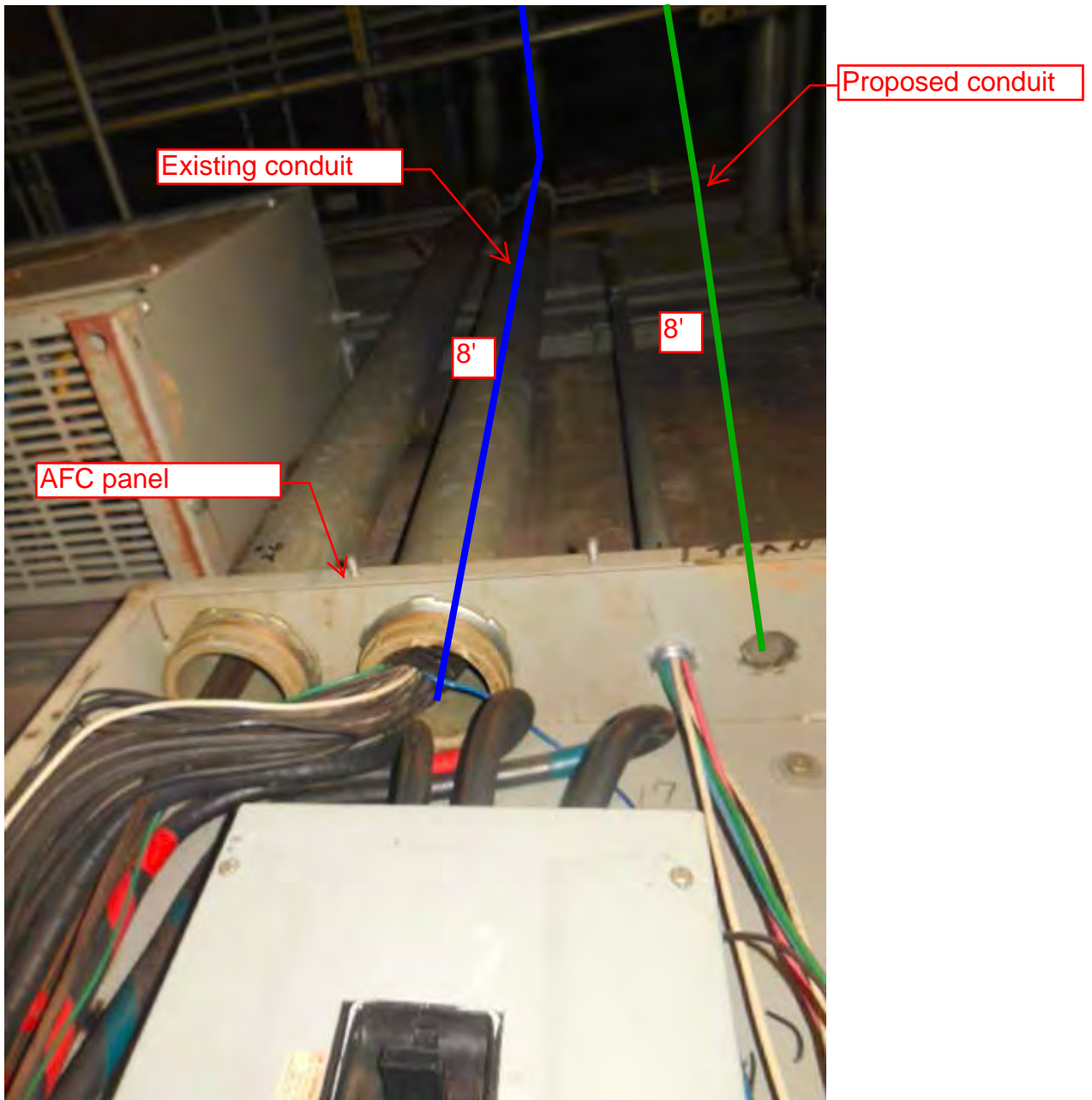


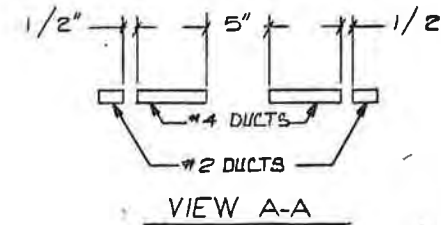
Photo #4 – Existing and proposed conduits to AFC Panel in AC Switchboard Room 107



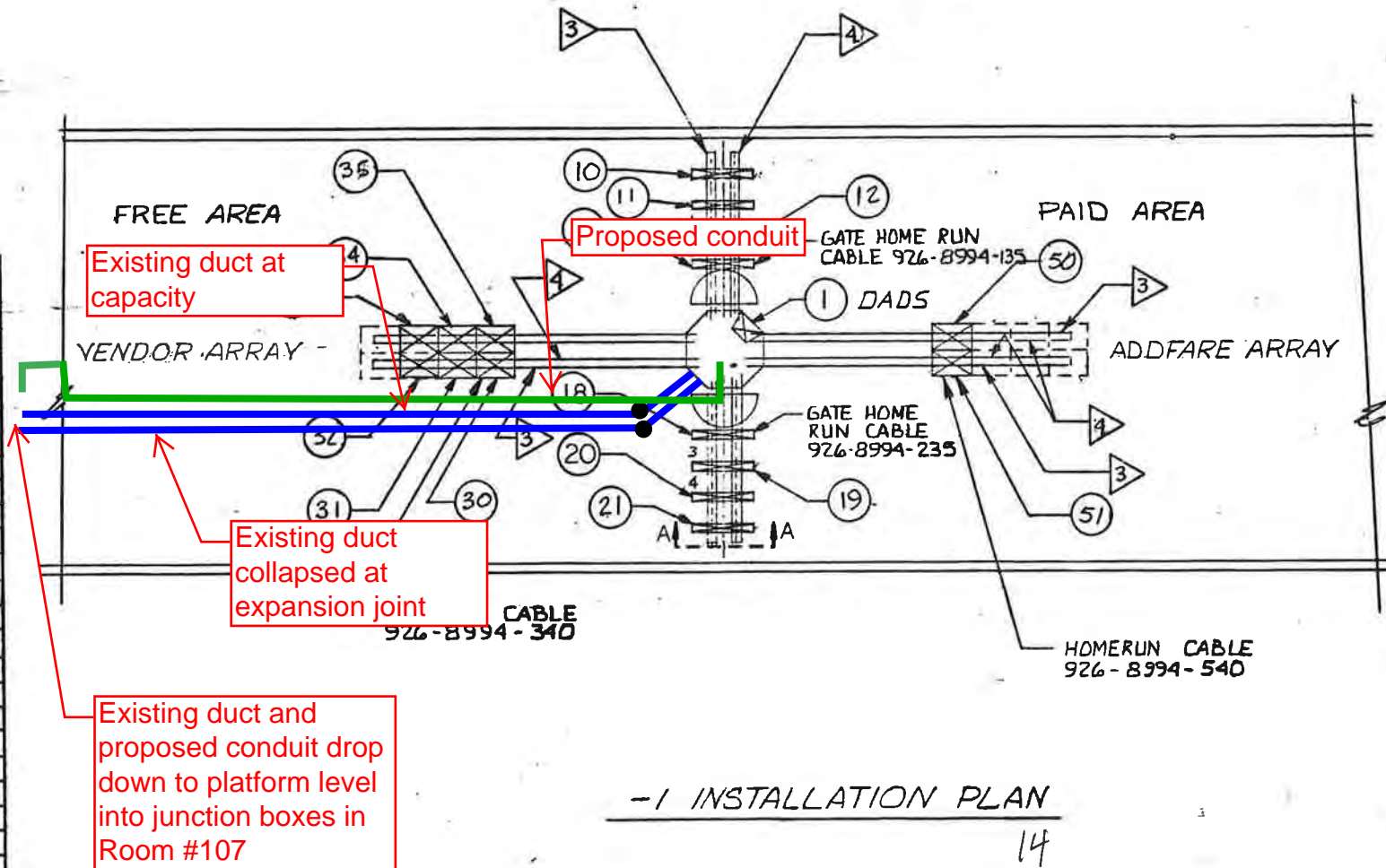
NOTES:

1. THE MINIMUM OPERATIONAL MACHINE INVENTORY IS REFERENCED ON THIS DRAWING BY THE "X" DRAWN THROUGH THE MACHINE.
2. FOR REFERENCE DRAWINGS USED SEE SUPPORT DOCUMENTATION PACKAGE FOR THIS MEZZANINE.

- 3 UNDER FLOOR DUCT - CONTROL
3/8" X 1/4"
- 4 UNDER FLOOR DUCT - POWER
6/2" X 1/2"



MACHINE LOCATION INVENTORY	C/B NOS	CWD MACHINE NO.	CWD SERIAL NO.	CIRCUIT BREAKER NO.	CIRCUIT BREAKER SIZE	WIRE SIZE
1 DADS	1	EMERG	DS8051		20	#12
2 END A	13	25	GA 5501			#6
3 REV	12	21	GR7503			
4 REV	11	17	GR7507			
5 EXIT	10	19	GX4502			
6 ENDB	18	29	GB6501			
7 REV	19	27	GR7504		20	#6
8 REV	20	28	GR7508			
9 ENTRY	21	23	GN3501			
10						
11 VENDOR	30	1	30	FV1515	20	#6
12 VENDOR	31	3	31	FV1507		
13 VENDOR	32	11	32	FV1502		
14 VENDOR	33	5	33	FV1505	20	#6
15 VENDOR	34	9		FV1503		
16 VENDOR	35	7		FV1501		
17						
18 ADDFARE	50	15	50	AM2505	20	#6
19 ADDFARE	51	13	51	AM2506	20	#6
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						



DO NOT SCALE DRAWING
UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON BREAK SHARP EDGES .010 MAX
DECIMALS: .XX ± .03 .XXX ± .010
HOLES: .251 THRU .5001 ± .006 - .001
.126 THRU .250 ± .005 - .001
.501 THRU .750 ± .006 - .001
.751 THRU 1.000 ± .010 - .001

CONTRACT NUMBER
DRAWING NUMBER
926-0447
SHEET / OF /

TITLE
INSTALLATION PLAN
GROSVENDOR STATION

CODE IDENT NO.
94987

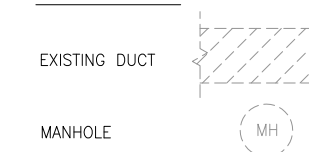
DRAWN: J. [Signature]
CHECK: [Signature]
DESIGN: [Signature]
APPROVAL: [Signature]

926-0447
14

PLAN NOTES:

1. DIMENSIONS ARE IN FEET AND INCHES.
2. DIMENSIONS ARE FOR REFERENCE ONLY.
3. EXISTING IN-FLOOR DUCTS/CONDUITS WERE IDENTIFIED USING A PORTABLE GPR SCANNING DEVICE.
4. THE SCANNING COVERAGE IS LIMITED TO THE MEZZANINE FLOOR ONLY.
5. GPR SCANNING HAS THE FOLLOWING LIMITATIONS: (i) 12 INCHES VISIBLE SCANNING DEPTH; (ii) VISIBILITY BEYOND CONGESTED OR NEAR SURFACE REINFORCEMENT LAYERS; (iii) DETECTION OF PVC AND OTHER NON-METALLIC OBJECTS (iv) DETERMINATION OF SIZE AND EXTENTS OF SUBSURFACE ANOMALIES SUCH AS SLAB VOIDS OR REBAR SIZES; AND (v) VISIBILITY WHEN VARIABLE MOISTURE CONDITIONS EXIST IN THE SUBSTRATE.

LEGEND:



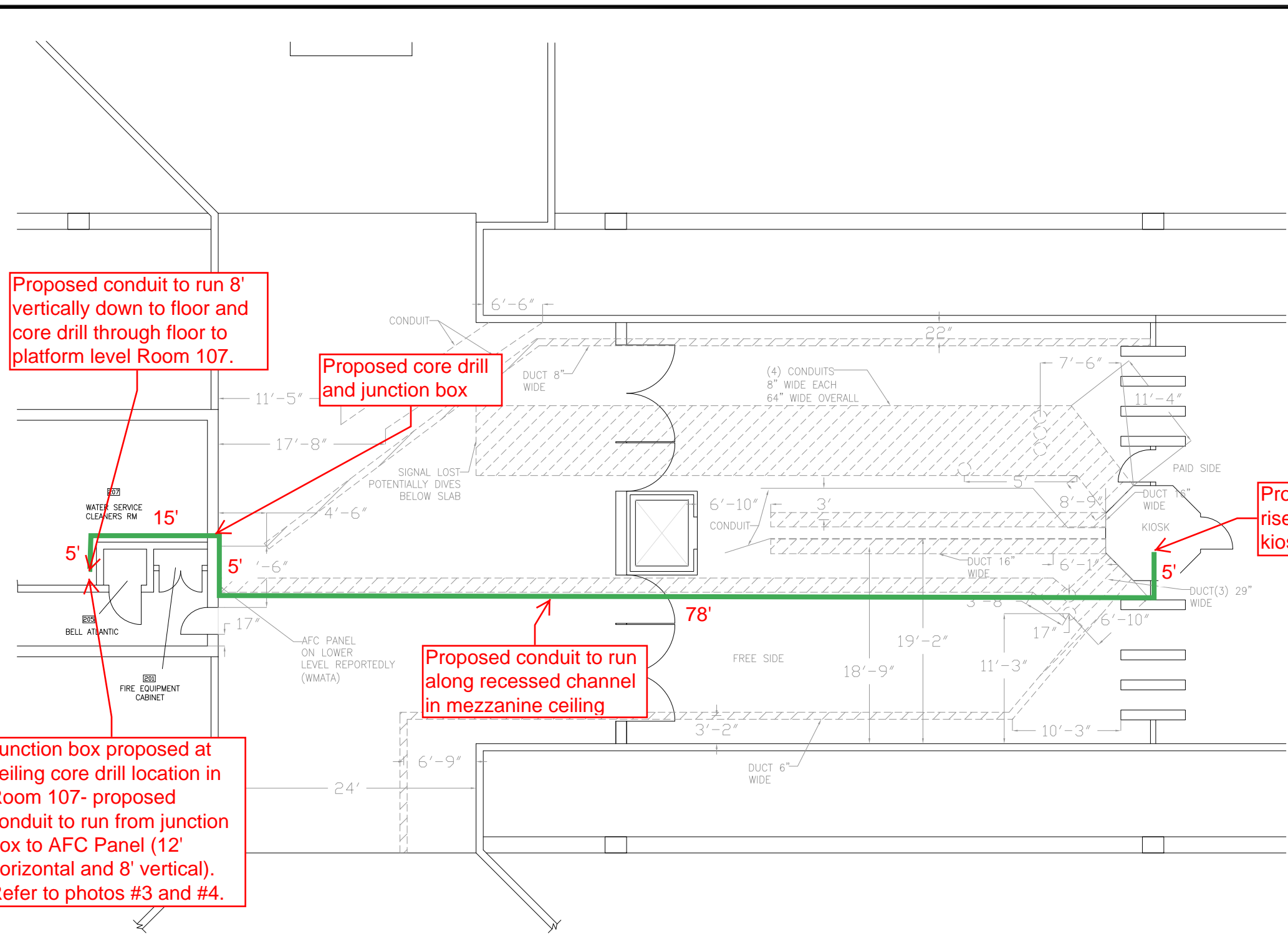
Proposed conduit to run 8' vertically down to floor and core drill through floor to platform level Room 107.

Proposed core drill and junction box

Proposed conduit to rise 6' vertically from kiosk to ceiling

Proposed conduit to run along recessed channel in mezzanine ceiling

Junction box proposed at ceiling core drill location in Room 107- proposed conduit to run from junction box to AFC Panel (12' horizontal and 8' vertical). Refer to photos #3 and #4.



GROSVENOR STATION
SCALE: NOT TO SCALE

CONTRACT NO.
XXXXXX

DESIGNED	C. LOOSE	02-14	REFERENCE DRAWINGS		REVISIONS		
			NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION
DRAWN	C. LOOSE	02-14					
CHECKED	M. BUTLER	02-14					
APPROVED							

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY
DEPARTMENT OF TRANSIT INFRASTRUCTURE AND ENGINEERING SERVICES
OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM

GFP A Gannett Fleming/Parsons JOINT VENTURE

APPROVED _____ SUBMITTED _____
PROJECT MANAGER

15-NEPP-01
IN - FLOOR DUCT INSPECTIONS
A11 GROSVENOR
PROPOSED CONDUIT PATH

SCALE: NOT TO SCALE
DRAWING NO. A11-E-100
XXX

Mezzanine Inspection Report (Scoping)

Date: 09/10/2014	Station Name: A12 White Flint	Mezzanine #: 015	Completed By: Tino Sahoo
Summary			
<p>Scoping was completed at station where possible (see details below). Pull string was installed in the faregate communication ducts and the power duct between the Kiosk and AFC Panel. An emergency power feed precluded scoping of the upper faregate array power duct.</p> <p>Scanning is not necessary.</p>			
Scoping of Faregate Array(s)			
Task	Yes/No	Notes	
Communications Duct – Upper Faregate Array (4 Gates)			
Was video scoping completed for the entire duct run?	No	Refer to WMATA White Flint Upper Fairgate Comm Video.avi file.	
Were pull strings installed at all faregates in the array?	Yes		
Were there any obstructions or blockages? Provide details of type and specific location.	No	Scoping completed only 8 feet from kiosk due to insert and cables.	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	8 wires in duct.	
Communications Duct - Lower Faregate Array (3 Gates)			
Was video scoping completed for the entire duct run?	Yes	Refer to WMATA White Flint Lower Fairgate Comm Video.avi file.	
Were pull strings installed at all faregates in the array?	Yes		
Were there any obstructions or blockages? Provide details of type and specific location.	No		
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No		
Power Duct - Upper Faregate Array (4 Gates)			
Was video scoping completed for the entire duct run?	No	Refer to WMATA White Flint Upper Fairgate Power Video.avi file.	
Were there any obstructions or blockages? Provide details of type and specific location.	No	Left duct: Energized wire due to emergency feed. Right duct: Scope hit insert after 4 feet.	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	Left duct: 7 wires Right duct: 8 wires	
Power Duct - Lower Faregate Array (3 Gates)			
Was video scoping completed for the entire duct run?	No	Refer to WMATA White Flint Lower Fairgate Power Video.avi file.	
Were there any obstructions or blockages? Provide details of type and specific location.	No	Scope hit insert after 6 feet.	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No		


Scoping of Power Duct - Kiosk to AFC Panel		
Task	Yes/No	Notes
Kiosk to AFC Panel (75 foot section)		
Was video scoping completed for the entire duct / conduit run?	No	Refer to WMATA White Flint Power Kiosk to AFC Panel Video.avi file.
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	Video scoping completed 23 feet. Scope hit 45 degree bend in walker duct run. Minimal debris
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	
Handhole 1 to Handhole 2 / AFC Panel (N/A)		
Was video scoping completed for the entire duct / conduit run?	N/A	
Was pull string installed?	N/A	
Were there any obstructions or blockages? Provide details of type and specific location.	N/A	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	N/A	
Handhole 2 to Handhole 3 / AFC Panel (N/A)		
Was video scoping completed for the entire duct / conduit run?	N/A	
Was pull string installed?	N/A	
Were there any obstructions or blockages? Provide details of type and specific location.	N/A	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	N/A	
Observations / Issues / Next Steps		
Emergency feed from Panel KE runs through the left power duct (upper array) which causes faregate #18 to remain energized.		
Sign Off		
	GFP Representative	WMATA PRGM
Name:	Tino Sahoo	
Signature:		
Date:	09/10/2014	

Photo #1: A12 White Flint – Lock-out tag-out of AFC Panel source breaker



Photo #2: A12 White Flint – Pull string installation in faregate array duct



Photo #3: A12 White Flint – Power duct under kiosk floor under capacity



Photo #4: A12 White Flint – Pull string installation in faregate



Photo #5: A12 White Flint – Video-scoping faregate array ducts



Photo #6: A12 White Flint – Pull string installation in AFC panel from kiosk



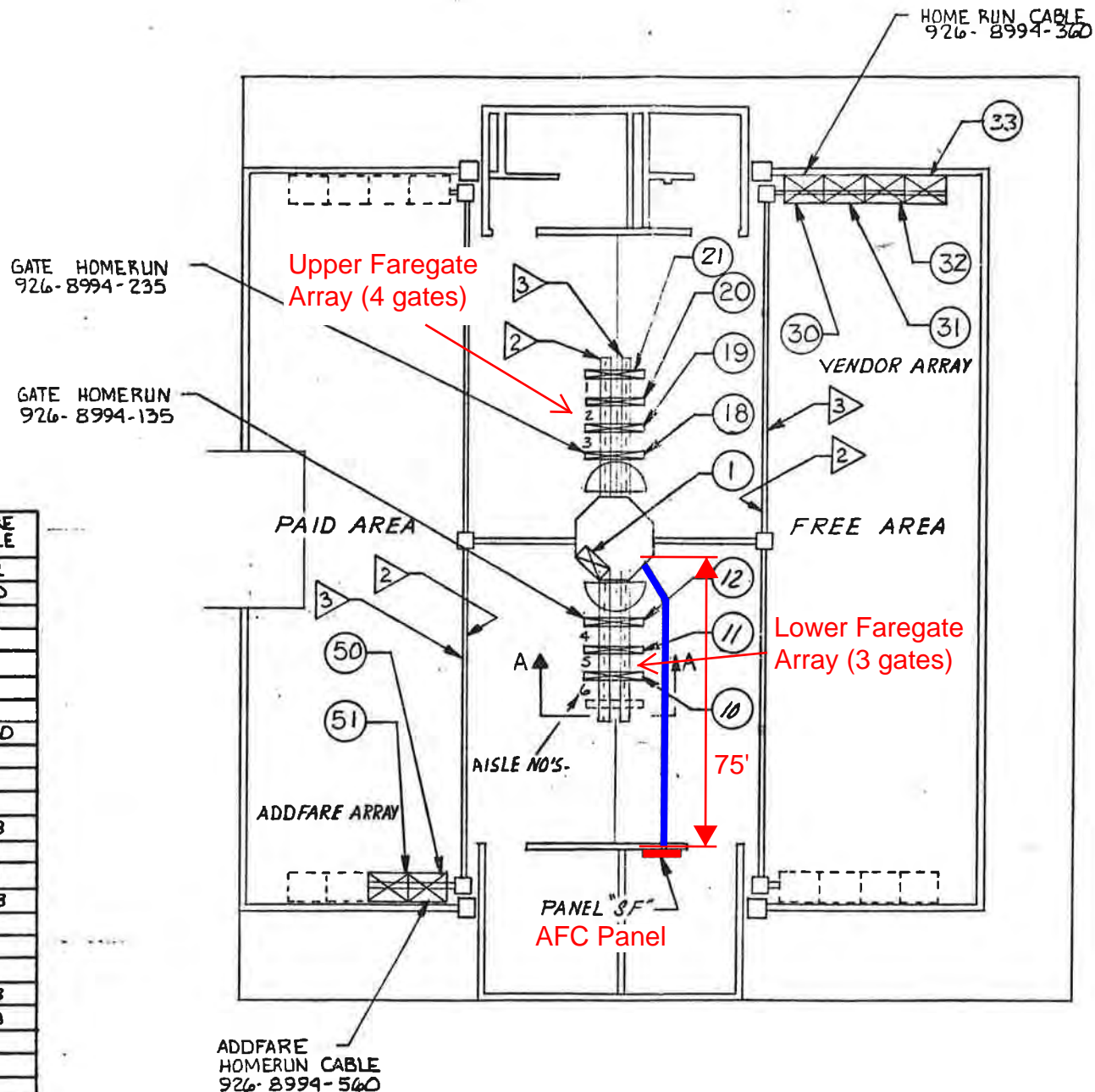
NOTES :

1. THE MINIMUM OPERATIONAL MACHINE INVENTORY IS REFERENCED ON THIS DRAWING BY THE "X" DRAWN THROUGH THE MACHINE.

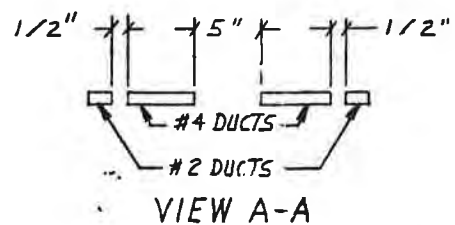
2. UNDER FLOOR DUCT - POWER
6 1/2" X 1 1/2"

3. UNDER FLOOR DUCT - CONTROL
3 1/8" X 1 1/4"

MACHINE LOCATION INVENTORY	C/B No's	CWD MACHINE NUMBERS	CWD SERIAL NUMBERS	BREAKER NO.	BREAKER SIZE	WIRE SIZE
1 DAD	1	EMERG.				
2 END A	12	9	12	GA5054	20 AMPS	# 12
3 REV	11	11	11	GR7292		
4 EXIT	10	13	10	GX4071		
5 END B	18	1	18	GB6050		
6 REV	19	3	19	GR7297		
7 REV	20	5	20	GR7287		
8 ENTRY	21	7	21	GR3077	20 A	# 10
9						
10						
11						
12 VENDOR	30	2	30	FV1524	20 A	# B
13 VENDOR	31	4	31	FV1519		
14 VENDOR	32	6	32	FV1522		
15 VENDOR	33	8	33	FV1520	20 A	# B
16						
17						
18						
19 ADDFARE	50	10	50	AM2509	20 A	# B
20 ADDFARE	51	12	51	AM2504	20 A	# B
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						



-1 INSTALLATION PLAN
15



DO NOT SCALE DRAWING
UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON DIMENSIONS: .XX ± .03 .XXX ± .010 .XXX THRU .500 ± .008 .501 THRU 1.000 ± .010 .010 ± .001 .011 THRU .500 ± .008 .501 THRU 1.000 ± .010 .010 ± .001

REVISIONS

CONTRACT NUMBER

DRAWING NUMBER
926-0444

SHEET OF

TITLE
INSTALLATION PLAN
WHITE FLINT STATION

CODE IDENT NO.
94987

DRAWN: L. DIN
CHECKED: J. S. [Signature]
DESIGN: [Signature]
ENGR: [Signature]
APPROVAL: [Signature]

926-0444

Mezzanine Inspection Report (Scoping)

REVISION 1

Date: 08/07/2014	Station Name: A13 - Twinbrook	Mezzanine #: 016	Completed By: Tino Sahoo
------------------	-------------------------------	------------------	--------------------------

Summary

Pull string installation was completed for communication ducts in upper / lower faregate arrays. Video scoping was completed for lower comm. duct, however there was an obstruction in the upper comm. duct that prevented the passage of video scope. Video scoping was completed for the power ducts in the upper / lower faregate arrays.

Pull string installation was completed in power duct between Kiosk, Handhole and AFC Panel. However, video scoping could not be completed due to an obstruction between Kiosk and Handhole, and the 90-degree vertical bend below the AFC Panel.

Scanning was not required at this mezzanine.

Scoping of Faregate Array(s)

Task	Yes/No	Notes
Communications Duct – Upper Faregate Array (4 gates)		
Was video scoping completed for the entire duct run?	No	Refer to TWIN BROOK-COM_UPPER ARRAY.avi file.
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	Scope was obstructed by a cluster of wires near the end of duct.
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	4" duct with less than 12 wires.
Communications Duct - Lower Faregate Array (3 gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to TWIN BROOK-COM_LOWER ARRAY.avi file.
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	4" duct with less than 12 wires.
Power Duct - Upper Faregate Array (4 gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to TWINBROOK-PWR UPPER ARRAY.avi file.
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	Far right power duct was obstructed; middle power duct was scoped successfully.
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	6" ducts with less than 14 wires.
Power Duct - Lower Faregate Array (3 gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to TWIN BROOK-PWR_LOWER ARRAY.avi file.
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	6" ducts with less than 14 wires.


Scoping of Power Duct - Kiosk to AFC Panel		
Task	Yes/No	Notes
Kiosk to Handhole 1 (Distance: 60')		
Was video scoping completed for the entire duct / conduit run?	No	Refer to TWIN BROOK-PWR_KIOSK – MANHOLE.avi file.
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	Scope was obstructed at 23 feet from the kiosk.
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	6" power duct with less than 12 wires.
Handhole 1 AFC Panel (Distance: 5')		
Was video scoping completed for the entire duct / conduit run?	No	Refer to TWIN BROOK-PWR_AFC PANEL TO MANHOLE.avi file.
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	Scope could not negotiate 90-degree walker duct bend below AFC Panel.
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	6" power duct with less than 12 wires.
Observations / Issues / Next Steps		
The total distance of existing power duct between Kiosk and AFC Panel is 65'.		
Sign Off		
	GFP Representative	WMATA PRGM
Name:	Tino Sahoo	
Signature:		
Date:	08/07/2014	

Photo #1: A13 Twinbrook – Lock-out tag-out of feeder breaker to AFC Panel



Photo #2: A13 Twinbrook – Open AFC Panel

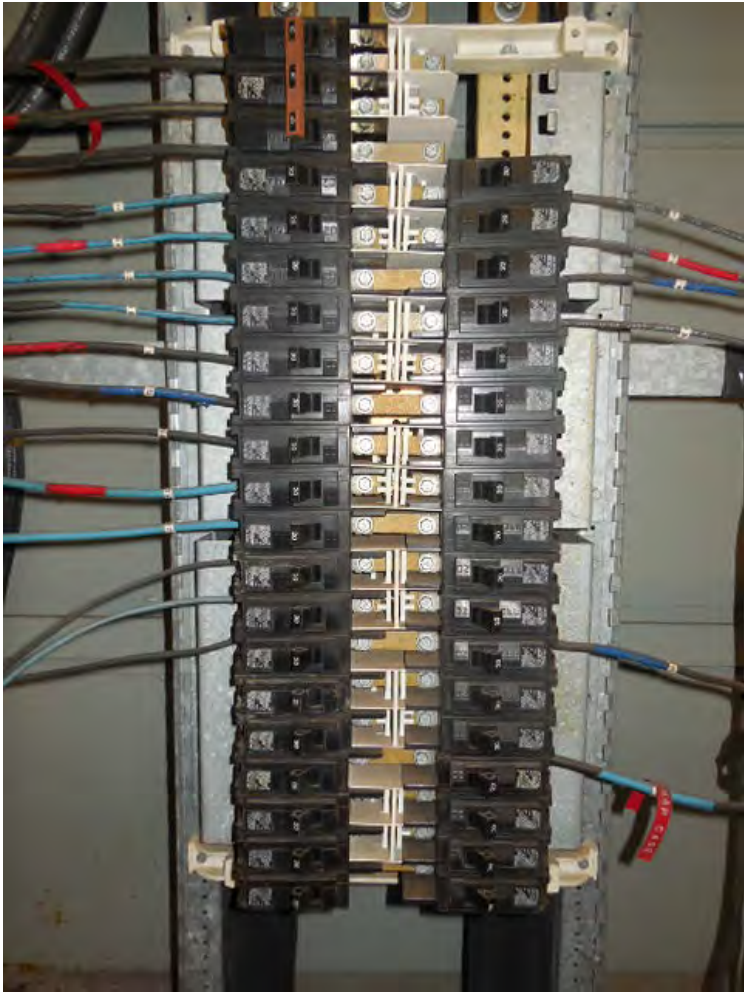


Photo #3: A13 Twinbrook – Pull string installation to AFC Panel



Photo #4: A13 Twinbrook – AFC Panel Schedule

PANEL F1

1. Kiosk - Panel	2. Buss Spare
123. Fare Gate Console	4. Free Area Vendor
115. Free Area Vendor	6. " " " - 32
107. " " " - 12	8. " " " - 34
189. " " " - 11	10. " " " - 30
1911. " " " - 10	12. " " "
2013. " " " - 18	14. " " "
2015. " " " - 19	16. " " "
517. Fare Gate Console	18. " " "
5019. " " " - 21	20. " " "
21. Smart Trip 60	22. Bus Spare DISP SPACE
23. Smart Trip 51	24. " Spare "
25. PIDS "mezz" stow	26. Map Case
27. " " "	28. Bus Frame - Disp.
29. " " "	30. " Spare "
31. " " "	32. Map Case
33. Spare	34. Spare
35. Spare	36. Spare
37. Spare	38. Spare

Photo #5: A13 Twinbrook – Pull string installation to mezzanine handhole



Photo #6: A13 Twinbrook – Video-scoping between kiosk and mezzanine handhole



Photo #7: A13 Twinbrook – Video-scoping of faregate array ducts

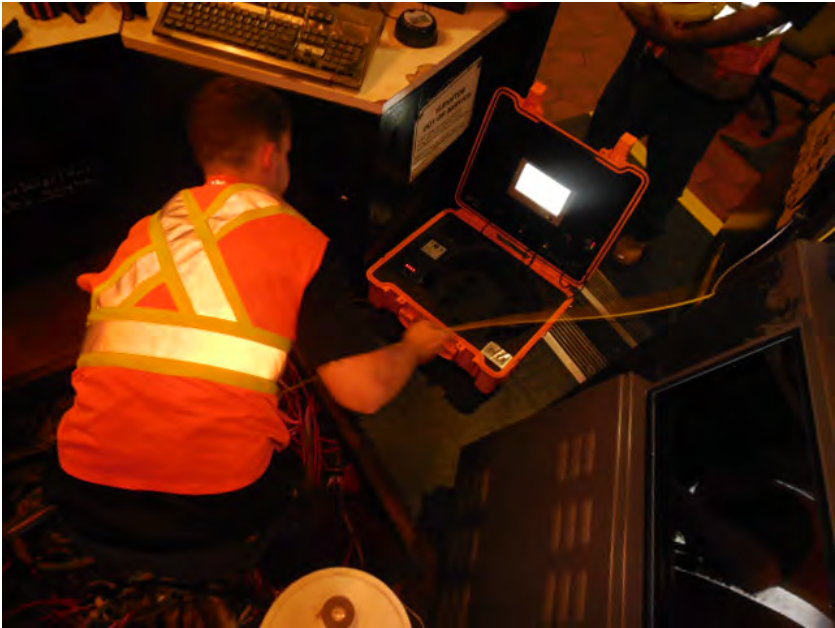


Photo #8: A13 Twinbrook – Inserting fish tape into faregate array ducts



Photo #9: A13 Twinbrook – Installation of pull string in faregate array ducts



Mezzanine Inspection Report (Scoping)

Date: 09/08/14	Station Name: A14 Rockville	Mezzanine #: 017	Completed By: Mike Butler
-----------------------	------------------------------------	-------------------------	----------------------------------

Summary


All video scoping and pull string installation was completed for this mezzanine. Both Upper and Lower faregate array communication ducts were successfully video scoped and pull string installed. Both Upper and Lower faregate array power ducts were successfully video scoped. The power duct between Kiosk, Handhole 1, Handhole 2 and AFC Panel was also video scoped and pull string installed.

Walker ducts are not at capacity and appear to be good condition and viable for further use, however there was a partial obstruction between Handhole 1 and Handhole 2, which appears to be a dip in the bottom side of the duct where a previous handhole may have been. Since pull string was installed without any problem and the duct is in good condition, scanning is not required at this mezzanine.

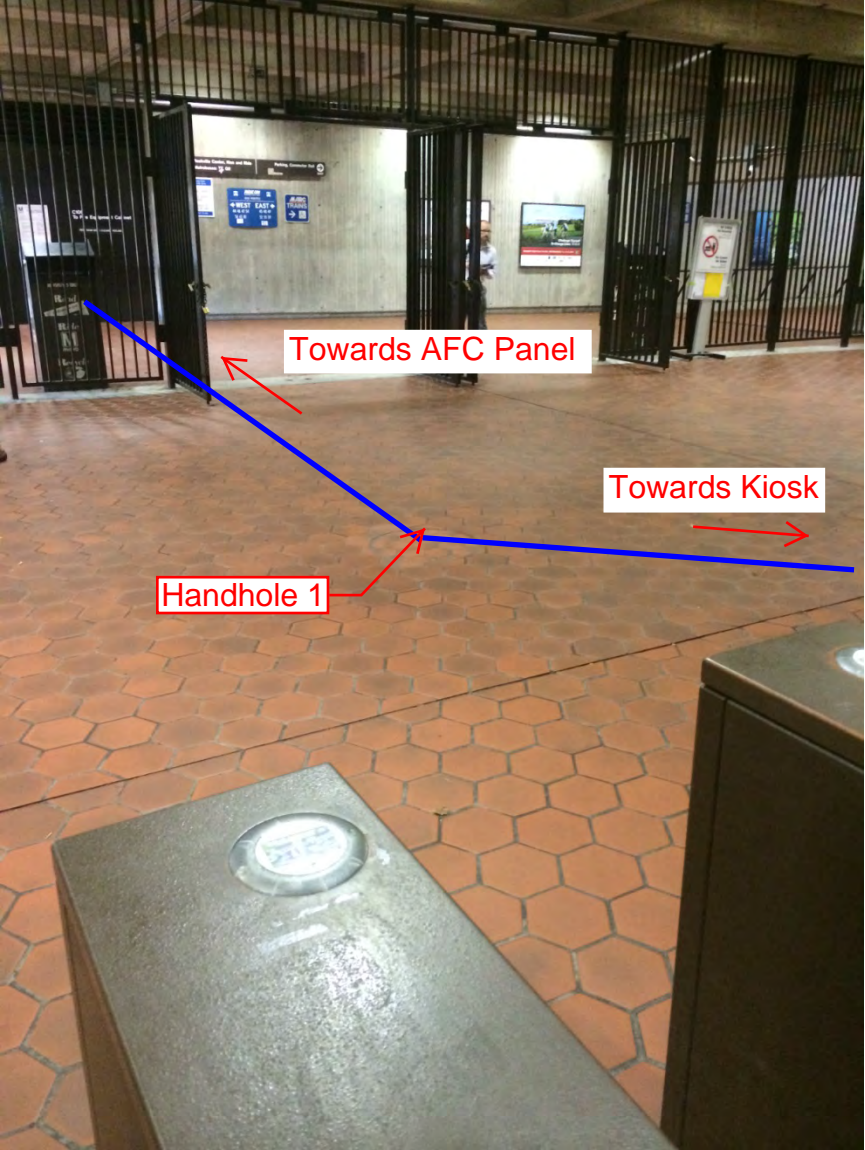
Total power duct run from Kiosk to AFC Panel is 90 feet.

Scoping of Faregate Array(s)

Task	Yes/No	Notes
Communications Duct – Upper Faregate Array (4 gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to WMATA Rockville Upper Fairgate Comm Video.avi.
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	4" Duct with less than 10 wires – not at capacity.
Communications Duct - Lower Faregate Array (4 gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to WMATA Rockville Lower Fairgate Comm Video.avi
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	4" Duct with less than 10 wires – not at capacity.
Power Duct - Upper Faregate Array (4 gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to WMATA Rockville Upper Fairgate Power Video.avi.
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	6" Duct with less than 12 wires – not at capacity.
Power Duct - Lower Faregate Array (4 gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to WMATA Rockville Lower Fairgate Power Video.avi.
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	6" Duct with less than 12 wires – not at capacity.

Scoping of Power Duct - Kiosk to AFC Panel		
Task	Yes/No	Notes
Kiosk to Handhole 1 (Distance: 12')		
Was video scoping completed for the entire duct / conduit run?	Yes	Refer to WMATA Rockville Power Kiosk to handhole1 Video.avi
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	6" Duct with less than 15 wires – not at capacity.
Handhole 1 to Handhole 2 (Distance: 70')		
Was video scoping completed for the entire duct / conduit run?	Yes	Refer to WMATA Rockville Power handhole2 to handhole1 Video.avi and WMATA Rockville Power handhole 1 to handhole2 video.avi.
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	Partial obstruction 48' from Handhole 1 (see details below)
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	6" Duct with less than 15 wires – not at capacity.
Handhole 2 to AFC Panel (Distance: 8')		
Was video scoping completed for the entire duct / conduit run?	Yes	
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	6" Duct with less than 15 wires – not at capacity.
Observations / Issues / Next Steps		
A minor obstruction was encountered, between Handhole 1 and Handhole 2, 48' from Handhole 1 after the duct passes through backroom entryway adjacent to room C113. The concrete floor appears to have been repaired, and possibly a handhole removed. When scoping the camera head got stuck on a dip, which looked like a circular cut-out in the bottom of the duct. This occurred when scoping from both directions. However, the obstruction did not affect the pull string installation and overall the duct appears in good condition.		
Sign Off		
	GFP Representative	WMATA PRGM
Name:	Mike Butler	
Signature:		
Date:	31/12/14	

Rockville Photo #1 – Duct route between Kiosk and Electrical Room



Rockville Photo #2 – Duct route between Kiosk and Electrical Room



Rockville Photo #3 – Concrete repair to floor in back hallway outside Room C113



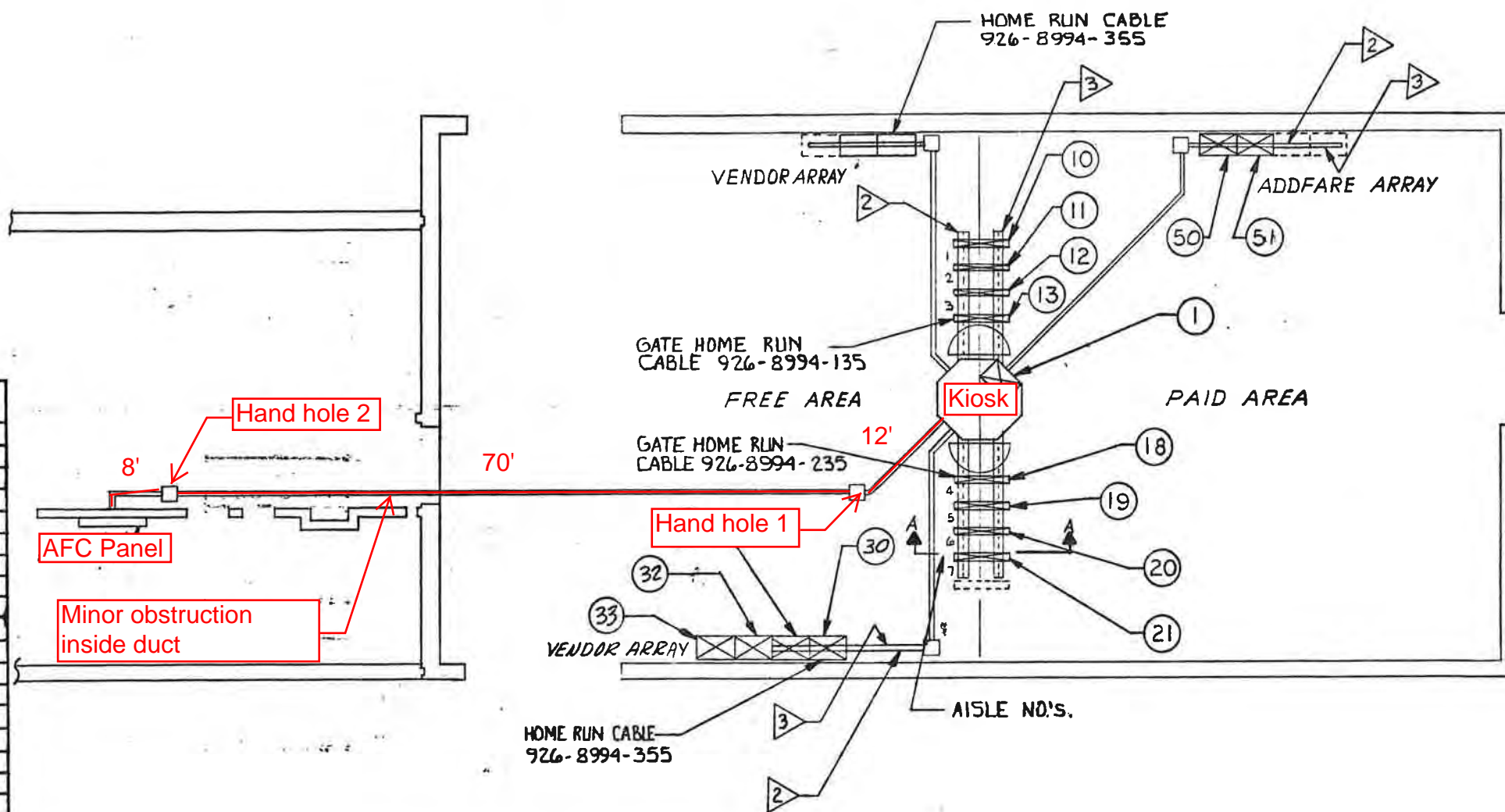
NOTES:

1. THE MINIMUM OPERATIONAL MACHINE INVENTORY IS REFERENCED ON THIS DRAWING BY THE "X" DRAWN THROUGH THE MACHINE.

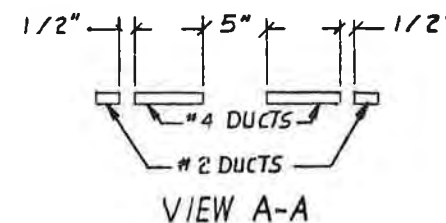
2 UNDER FLOOR DUCT - POWER
6 1/2" X 1 1/2"

3 UNDER FLOOR DUCT - CONTROL
3 1/8" X 1 1/4"

MACHINE LOCATION % INVENTORY	C/B NOS.	CWD MACHINE NUMBER	CWD SERIAL NUMBER	CIRCUIT BREAKER NO.	CIRCUIT BREAKER SIZE	WIRE SIZE
1 DAD	EMER	1	8065		20 AMPS	#12
2 END A	13	13	GA5061		20 AMPS	#8
3 REV	11	12	GR7295			
4 REV	9	11	GR7300			
5 EXIT	7	10	GK4501			
6 END B	15	18	GB6061			
7 REV	17	19	GR7286			
8 REV	19	20	GR7242			
9 ENTRY	21	21	GN3503		20 AMPS	#8
10						
11						
12						
13 VENDOR	8	30	FV1352		20 AMPS	#6
14 VENDOR	10	31	FV1506			#6
15 VENDOR	12	32	FV1509			#6
16 VENDOR	14	33	FV1504		20 AMPS	#6
17						
18						
19						
20						
21 ADDFARE	10	50	AM2503		20 AMPS	#10
22 ADDFARE	18	51	AM2038		20 AMPS	#10
23						
24						
25						
26						
27						
28						
29						
30						



-1 INSTALLATION PLAN



DO NOT SCALE DRAWING
 UNLESS OTHERWISE SPECIFIED
 DIMENSIONS ARE IN INCHES
 TOLERANCES ON BREAK SHARP EDGES .010 MAX
 .015 THRU .125: +.004 - .001
 .126 THRU .250: +.005 - .001
 .251 THRU .500: +.006 - .001
 .501 THRU .750: +.008 - .001
 .751 THRU 1.000: +.010 - .001
 HOLES ANGLES: 2 0.5 DEG.

CONTRACT NUMBER
 SIZE D R A
 DRAWING NUMBER
 926-0443
 SHEET 1 OF 1
 TITLE
 INSTALLATION PLAN
 ROCKVILLE STATION
 CUBIC WESTERN DATA
 A Subsidiary of Cubic Corporation
 5600 KEBBY MESA ROAD • POST OFFICE BOX 8071 • SAN DIEGO, CA 92118
 CODE IDENT NO.
 94987
 DRAWN: I. D/W
 CHECK: G/W
 DESIGN: G/W
 APPROVAL:

Mezzanine Inspection Report

Date: 2/25/2015	Station Name: C01 – Metro Center North	Mezzanine #: 035	Completed By: Mike Butler
------------------------	---	-------------------------	----------------------------------

Summary

Pull string installation was completed in communication duct for upper faregate array. However, pull string installation was not possible in communication duct for lower faregate array due to an obstruction, potentially a collapsed duct 10' from kiosk. Video scoping in comm. and power ducts for upper / lower faregates was not possible due to skirt obstruction.

Video scoping and pull string installation was completed between Kiosk, Handhole and AFC Panel in Room N206; ducts are not at capacity and are viable for future use.

Scanning is not required at this mezzanine.

Scoping of Faregate Array(s)

Task	Yes/No	Notes
Communications Duct – Upper Faregate Array (4 gates)		
Was video scoping completed for the entire duct run?	No	Video scoping was not possible due to skirt obstruction.
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	N/A	
Communications Duct - Lower Faregate Array (4 gates)		
Was video scoping completed for the entire duct run?	No	Video scoping was not possible due to skirt obstruction.
Were pull strings installed at all faregates in the array?	No	
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	An obstruction, potentially a collapse 10' away from kiosk.
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	N/A	
Power Duct - Upper Faregate Array (4 gates)		
Was video scoping completed for the entire duct run?	No	Video scoping was not possible due to skirt obstruction.
Were there any obstructions or blockages? Provide details of type and specific location.	N/A	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	N/A	
Power Duct - Lower Faregate Array (4 gates)		
Was video scoping completed for the entire duct run?	No	Video scoping was not possible due to skirt obstruction.
Were there any obstructions or blockages? Provide details of type and specific location.	N/A	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	N/A	


Scoping of Power Duct - Kiosk to AFC Panel		
Task	Yes/No	Notes
Kiosk to Handhole 1 (Distance =25')		
Was video scoping completed for the entire duct / conduit run?	Yes	Refer to "WMATA Metro Center North 6inch Power HH1 to Kiosk.avi"
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	6" walker duct with less than 10 wires.
Hanhole 1 to AFC panel (Distance = approx. 40')		
Was video scoping completed for the entire duct / conduit run?	Yes	Refer to "WMATA Metro Center North 6inch Power HH1 to AFC Panel.avi"
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	6" walker duct with less than 10 wires
Observations / Issues / Next Steps		
<ul style="list-style-type: none"> - The power duct run from Kiosk to AFC Panel is approximately 65'. - There are two power duct runs from Kiosk to AFC Panel, however the alternate run is at capacity. - An existing AFC installation plan is not available for this mezzanine - refer to attached photos and sketch instead. 		
Sign Off		
	GFP Representative	WMATA PRGM
Name:	Mike Butler	
Signature:		
Date:	2/26/2015	

Photo #1 - Existing duct run on mezzanine floor.

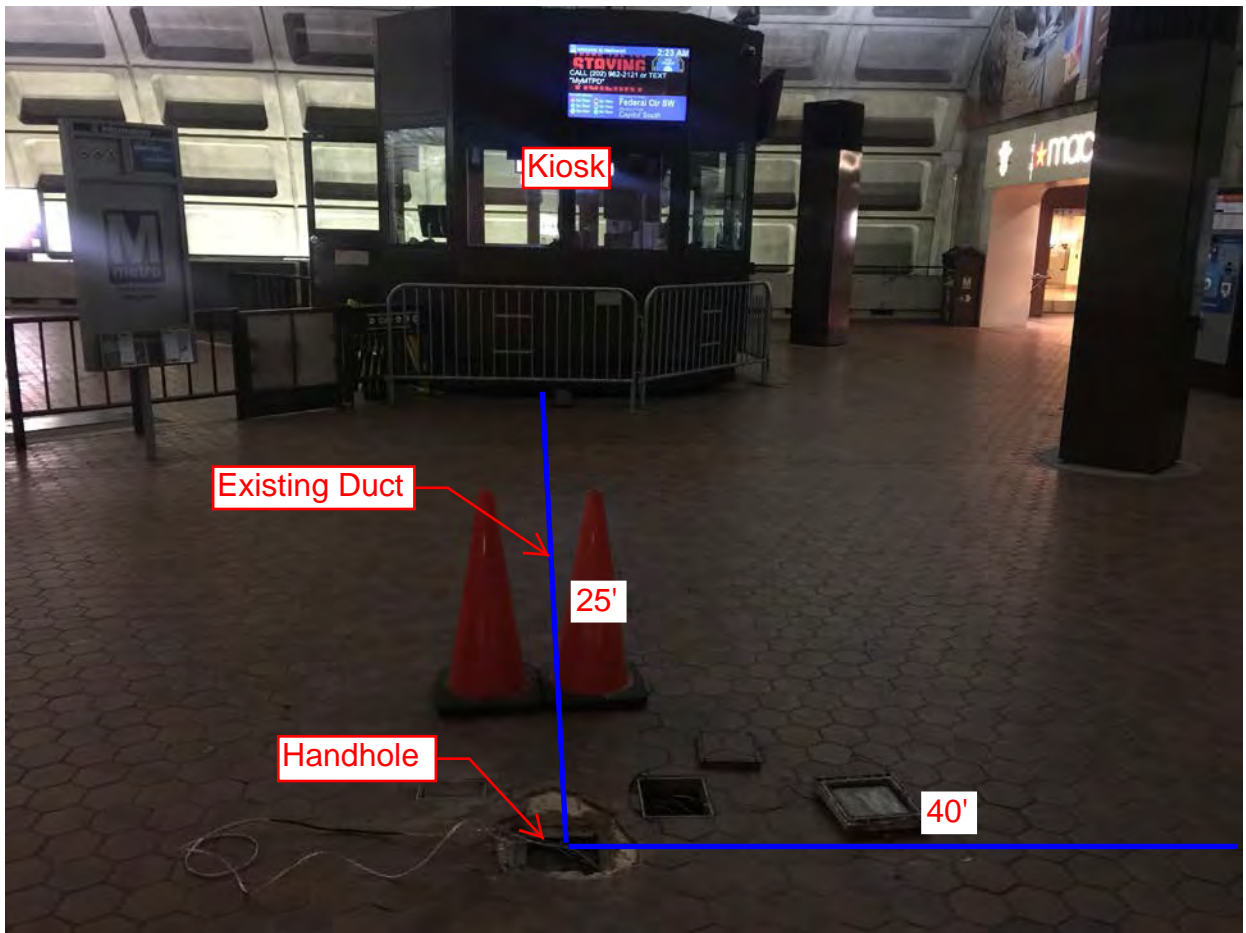


Photo #2 - Existing duct run on mezzanine floor.

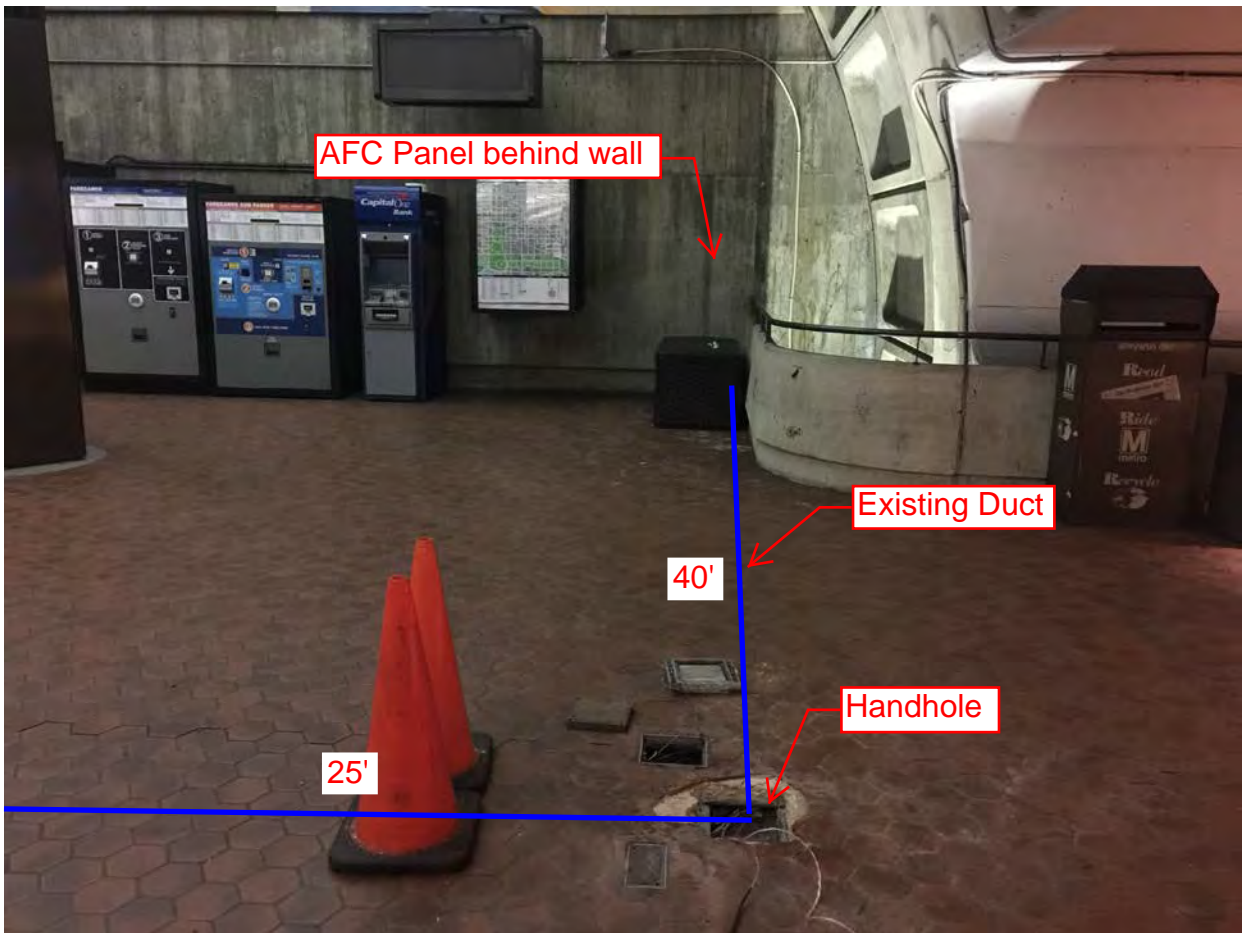
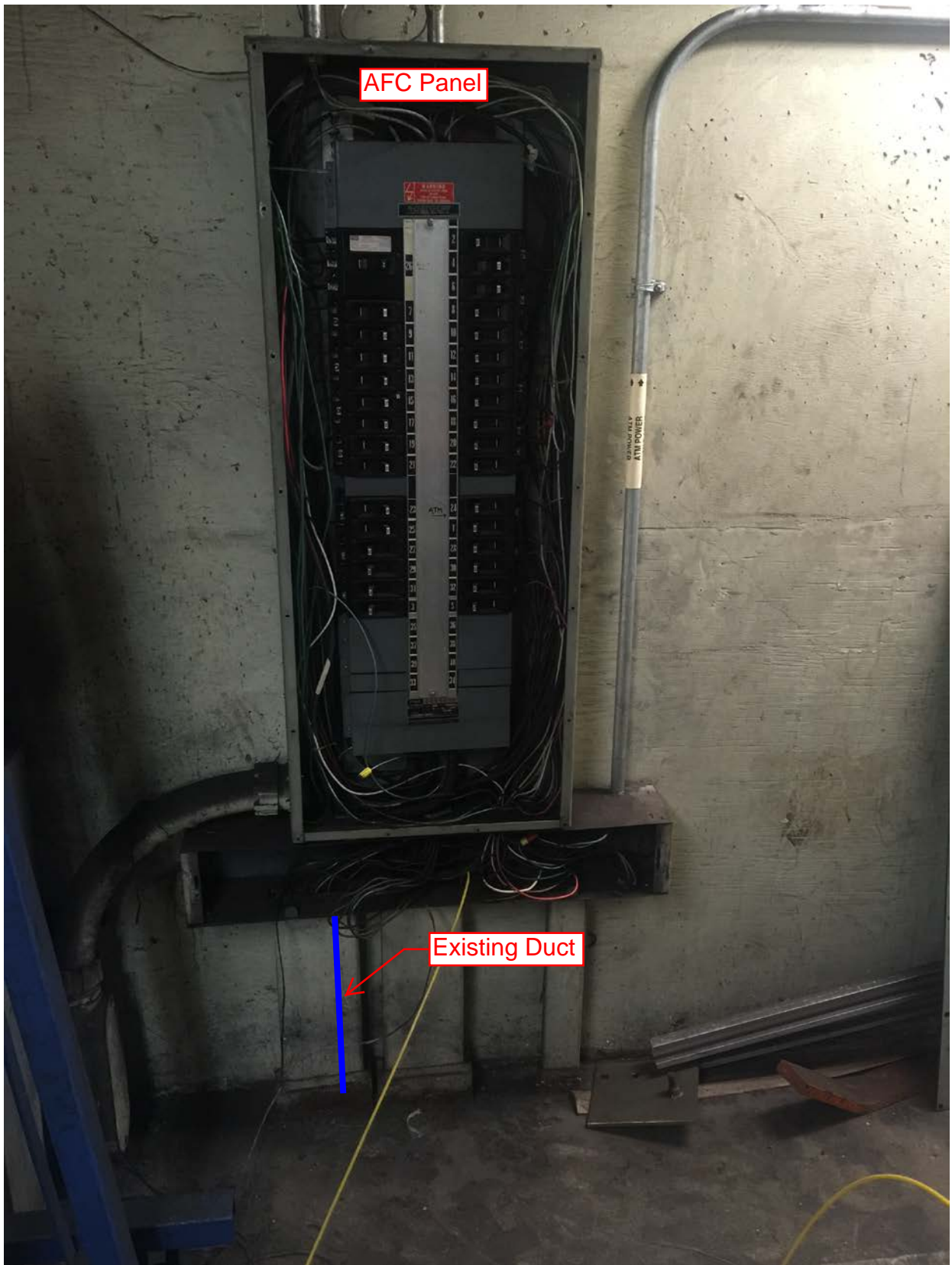
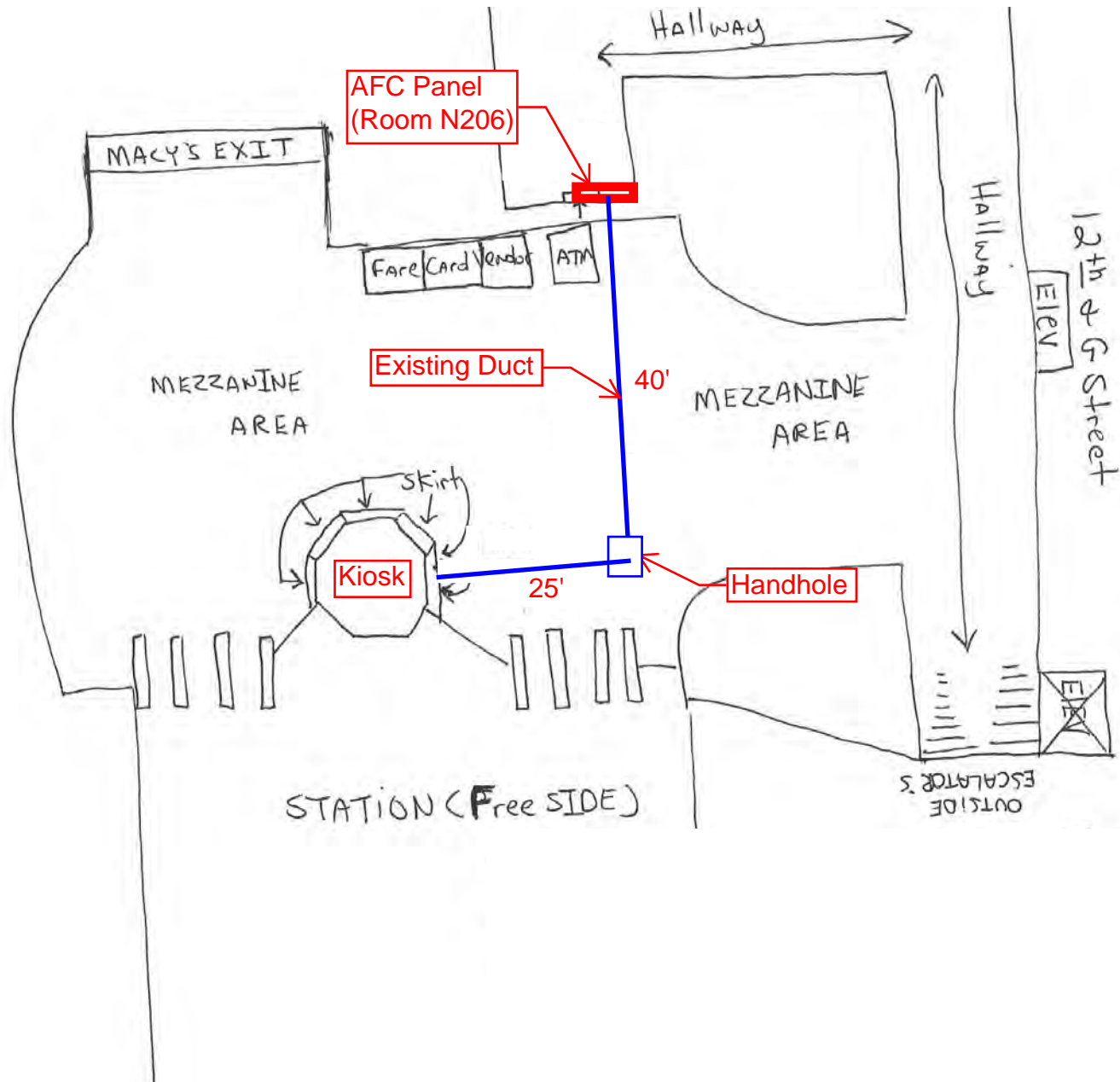


Photo #3 - AFC Panel and duct connection in Room N206.





DRAWING NOT TO SCALE

Mezzanine Inspection Report

Date: 10/29/14	Station Name: C01 Metro Center South	Mezzanine #: 052	Completed By: Mike Butler
-----------------------	---	-------------------------	----------------------------------

Summary

Video scoping and pull string installation at Metro Center South was partially completed. The power duct between the Kiosk and AFC Panel was scoped and pull string was installed; duct is clear from obstructions and not at capacity. Scoping and pull string installation was not completed for the communication duct in the faregate array due to apron skirt obstruction. However, CAT6 is already installed in the communication duct. In addition, scoping was not completed for the power duct in the faregate array due to apron skirt obstruction. As per WMATA's direction, additional scoping is not needed at this mezzanine.

Scanning is not required at this mezzanine.

Scoping of Faregate Array(s)

Task	Yes/No	Notes
Communications Duct – Upper Faregate Array (8 faregates)		
Was video scoping completed for the entire duct run?	No	Could not be completed due to kiosk skirt apron obstruction.
Were pull strings installed at all faregates in the array?	No	
Were there any obstructions or blockages? Provide details of type and specific location.	N/A	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	N/A	
Power Duct - Upper Faregate Array (8 faregates)		
Was video scoping completed for the entire duct run?	No	Could not be completed due to kiosk skirt apron obstruction.
Were there any obstructions or blockages? Provide details of type and specific location.	N/A	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	N/A	


Scoping of Power Duct - Kiosk to AFC Panel		
Task	Yes/No	Notes
Kiosk to Handhole 1 (Distance: 80')		
Was video scoping completed for the entire duct / conduit run?	Yes	Refer to "WMATA Metro Center South Power Handhole to Kiosk Video.avi"
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	6" walker duct with less than 12 wires
Handhole 1 to AFC Panel (Distance: 30')		
Was video scoping completed for the entire duct / conduit run?	Yes	Refer to "WMATA Metro Center South Power Handhole to AFC Panel Video.avi"
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	6" walker duct with less than 12 wires
Observations / Issues / Next Steps		
<ul style="list-style-type: none"> - CAT6 cables already installed inside Faregate cabinets #10 thru #16 under CIP-092 project. - The power duct run between the Kiosk and AFC Panel is approximately 110'. - An AFC installation plan is not available for this mezzanine. 		
Sign Off		
	GFP Representative	WMATA PRGM
Name:	Mike Butler	
Signature:		
Date:	01/15/15	

Photo #1 – Handholes located on Mezzanine Level outside Mechanical Room Room 211

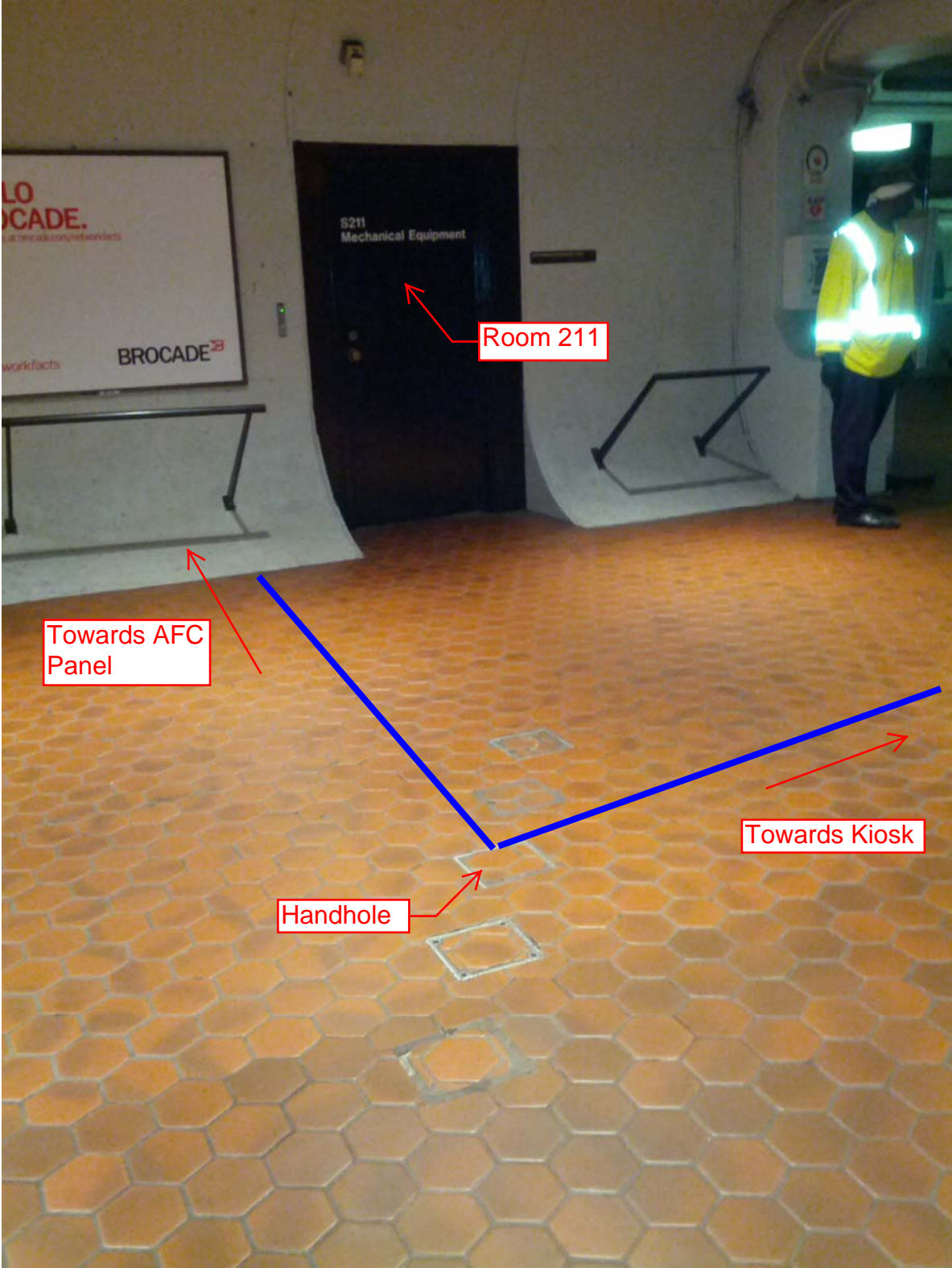
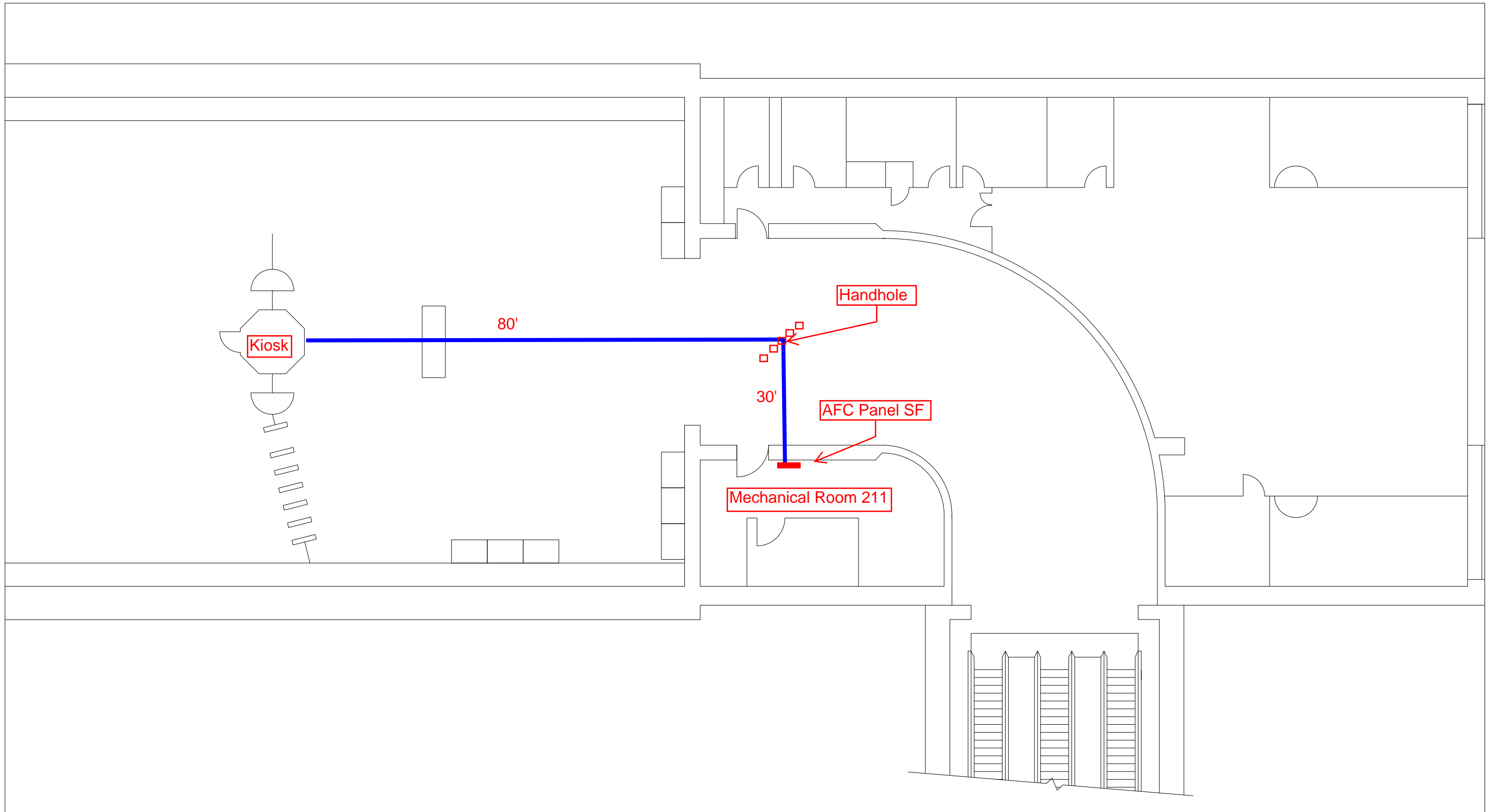


Photo #2 – Kiosk and faregates on mezzanine level.



Sketch - Metro Center South (M052)





ELECTRICAL AND DATA CABLE INSTALLATION

For

Washington Metropolitan Area Transit Authority

Contract Number FQ 15233

VOLUME 4

Mezzanine Inspection Report

July 15, 2015

Final Submission

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

VOLUME 4 – MEZZANINE INSPECTION REPORTS TABLE OF

CONTENTS		PAGE NO.
VOLUME 4, PART 1 – MEZZANINE INSPECTION REPORTS, A LINE		
1	MIR_A01_Metro_Center_West_MZ001	3
2	MIR_A01_Metro Center East_MZ019	8
3	MIR_A02_Farragut North NE_MZ004	14
4	MIR_A02_Farragut North NW_MZ003	23
5	MIR_A02_Farragut North SE_MZ002	31
6	MIR_A03_Dupont Circle_MZ005	37
7	MIR_A04_Woodley Park_MZ007	48
8	MIR_A05_Cleveland Park_MZ008	55
9	MIR_A06_Van Ness_MZ009	66
10	MIR_A07_Tenleytown_MZ010	79
11	MIR_A08_Friendship Heights North_MZ011	88
12	MIR_A08_Friendship Heights South_MZ104	96
13	MIR_A11_Grosvenor_MZ014	101
14	MIR_A12_White Flint_MZ015	108
15	MIR_A13_Twinbrook_MZ016	116
16	MIR_A14_Rockville_MZ017	126
17	MIR_C01_Metro Center North_MZ035	131
18	MIR_C01_Metro Center South_MZ052	137
VOLUME 4, PART 2 – MEZZANINE INSPECTION REPORTS, B LINE		
19	MIR_B01_Gallery Place West_MZ020	3
20	MIR_B02_Judiciary Sq East_MZ023	15
21	MIR_B02_Judiciary Square West_MZ022	22
22	MIR_B03_Union Station North_MZ025	31
23	MIR_B04_Rhode Island Ave_MZ026	41
24	MIR_B05_Brookland CUA_M027	50
25	MIR_B06_Fort Totten_MZ026	59
26	MIR_B07_Takoma_MZ029	66
27	MIR_B08_Silver Spring North_MZ031	76
28	MIR_B08_Silver Spring South_MZ030	81
29	MIR_B09_Forest Glen_MZ032	87
30	MIR_B10_Wheaton_MZ033	101
31	MIR_B11_Glenmont_MZ034	112
32	MIR_B35_New York Ave North_MZ109	118
33	MIR_B35_New York Ave South_MZ108	123
34	MIR_F01_Gallery Place North_MZ069	128

Mezzanine Inspection Report (MIR)

REVISION 1

Date : 06/01/2015	Station Name : B01 Gallery Place (West)	Mezzanine #: 020	Completed By: Mike Butler
-------------------	---	------------------	---------------------------

Summary

NEPP-01: Video scoping completed for power / communication ducts in faregate arrays; pull strings installed in communication ducts. Video scoping could not be completed between Kiosk, Handhole 1, Handhole 2 and Handhole 3 due to multiple collapses in the power duct. However, pull string was installed between Handhole 2 and Handhole 3 despite a collapsed duct. Pull string was also installed in the power conduit between Handhole 3, a junction box and the AFC Panel. Scanning was conducted to identify a proposed duct route between the Kiosk and AFC Panel. The scanning results showed that the mezzanine floor has multiple ducts between the Kiosk and the back rooms, and no space to install a new in-floor duct.

NEPP-02: Video scoping and pull string installation was completed in Alternate Duct between Kiosk, Handhole 4, Handhole 5, Handhole 6 and Shared Trough in Room W202. Alternate Duct is in good condition, not at capacity and viable for use. A proposed overhead conduit will run from Shared Trough to AFC Panel in Room W202, thus completing the power run from Kiosk to AFC Panel.

Refer to attached photos and drawings for further details about existing and proposed ducts / conduits.

NEPP-01: Scoping of Faregate Arrays (01/09/15)5

Task	Yes/No	Notes
Communication Duct - Upper Faregate Array (4 gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to "WMATA Gallery Place Mezz 20 Upper Comm Fair Gate Video.avi"
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	3" walker duct, not at capacity (< 12 wires).
Communication Duct - Lower Faregate Array (3 gates)		
Was video scoping completed for the entire duct run?	Yes	Refer "WMATA Gallery Place Mezz 20 Lower Comm Fair Gate Video.avi"
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	3" walker duct, not at capacity (< 12 wires).
Power Duct - Upper Faregate Array (4 gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to "WMATA Gallery Place West 6inch Upper Power Faregate.avi"
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	6" walker duct, not at capacity (< 10 wires).
Power Duct - Lower Faregate Array (3 gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to "WMATA Gallery Place Mezz 20 Lower Power Fair Gate Video.avi"
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	6" walker duct, not at capacity (< 10 wires).

NEPP-01: Scoping of Existing Power Duct (01/09/15)		
Task	Yes/No	Notes
Kiosk to Handhole 1 (Distance: 10')		
Was video scoping completed for the entire duct / conduit run?	No	Refer to "WMATA Gallery Place West Power Kiosk to HH1.avi"
Was pull string installed?	No	
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	Duct collapsed.
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	N/A	
Handhole 1 to Handhole 2 (Distance: 42')		
Was video scoping completed for the entire duct / conduit run?	No	Refer to "WMATA Gallery Place West Power HH1 to HH2.avi"
Was pull string installed?	No	
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	Duct collapsed.
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	N/A	
Handhole 2 to Handhole 3 (Distance: 20')		
Was video scoping completed for the entire duct / conduit run?	No	
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	Duct collapsed shortly after opening, no scoping completed.
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	N/A	
Handhole 3 to Junction Box to AFC Panel (Distance: 25')		
Was video scoping completed for the entire duct / conduit run?	No	Scoping not required for conduits.
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	3" conduit with less than 8 wires.
NEPP-01: Scanning of Existing Ducts / Conduits (01/20/15)		
<ul style="list-style-type: none"> - Scanning was conducted to identify a proposed duct route between the Kiosk and AFC Panel. - The scanning results showed that the mezzanine floor has multiple ducts between the Kiosk and the back rooms, and there is no space to install a new in-floor duct. - Refer to scanning drawing for the layout of existing ducts on the mezzanine floor. 		


NEPP-02: Scoping of Alternate Duct (06/01/15)		
Task	Yes/No	Notes
Kiosk to Handhole 4 (Distance: 5')		
Was video scoping completed for the entire duct / conduit run?	Yes	Refer to "B01_MZ020_Gallery Place West_Kiosk to HH4.avi"
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	6" walker duct with less than 15 wires.
Handhole 4 to Handhole 5 (Distance: 40')		
Was video scoping completed for the entire duct / conduit run?	Yes	Refer to "B01_MZ020_Gallery Place West_HH4 to HH5.avi"
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	6" walker duct with less than 15 wires.
Handhole 5 to Handhole 6 (Distance: 40' approx.)		
Was video scoping completed for the entire duct / conduit run?	Yes	Refer to "B01_MZ020_Gallery Place West_HH6 to HH5.avi"
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	6" walker duct with less than 15 wires.
Handhole 6 to Shared Trough in Room W202 (Distance: 1')		
Was video scoping completed for the entire duct / conduit run?	Yes	Refer to "B01_MZ020_Gallery Place West_HH6 to Trough.avi"
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	6" walker duct with less than 15 wires.
Additional Comments		
<ul style="list-style-type: none"> - The distance of proposed power route from Kiosk to AFC Panel is 136', including 86' of existing alternate duct and 50' of proposed conduit. - Alternate duct is in good condition and not at capacity. 		
Sign Off		
	GFP Representative	WMATA PRGM
Name:	Mike Butler	
Signature:		
Date:	06/01/15	

Photo #1: Mezzanine layout showing existing / alternate duct runs.

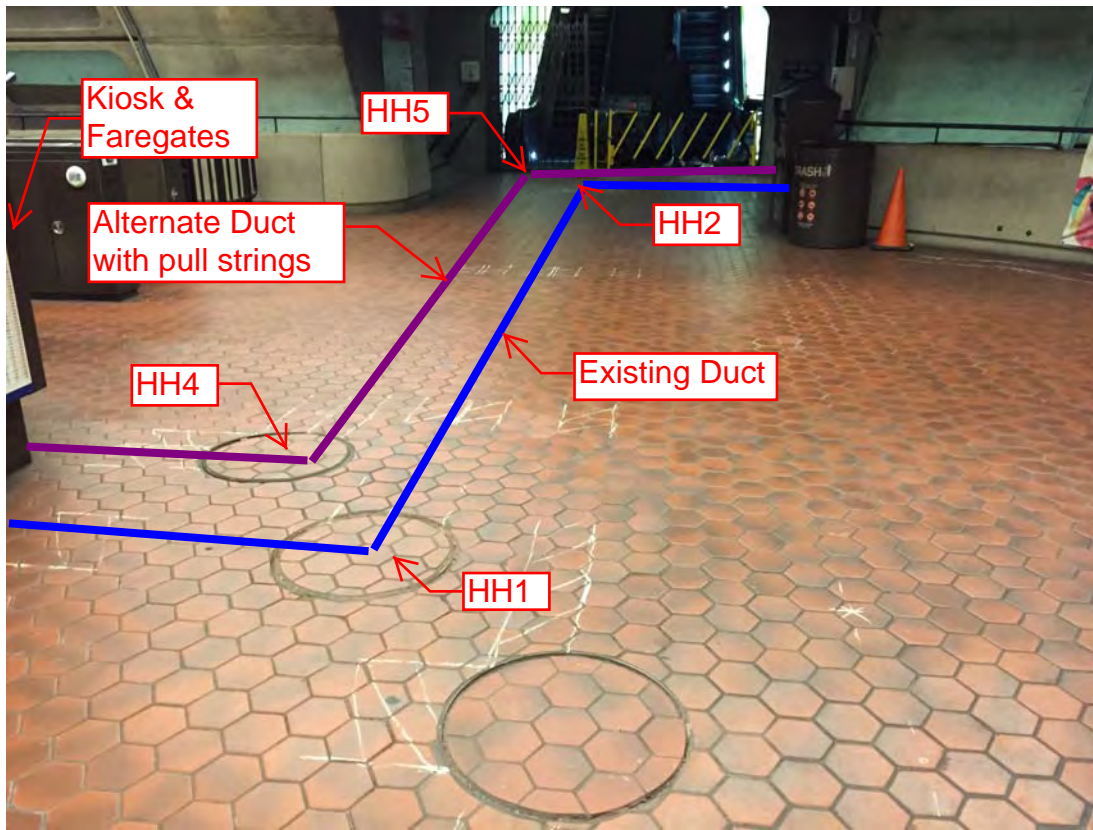


Photo #2: Mezzanine layout showing existing / alternate duct runs.

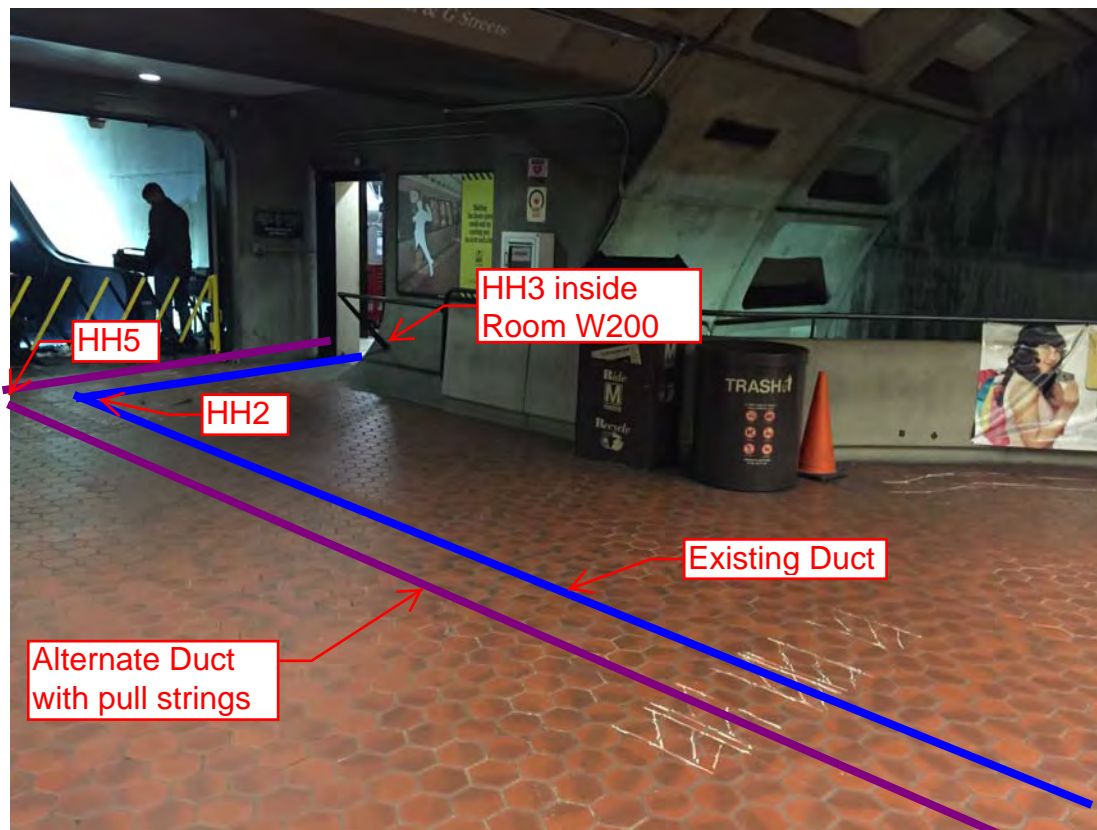


Photo #3: Alternate duct path in Room W200.

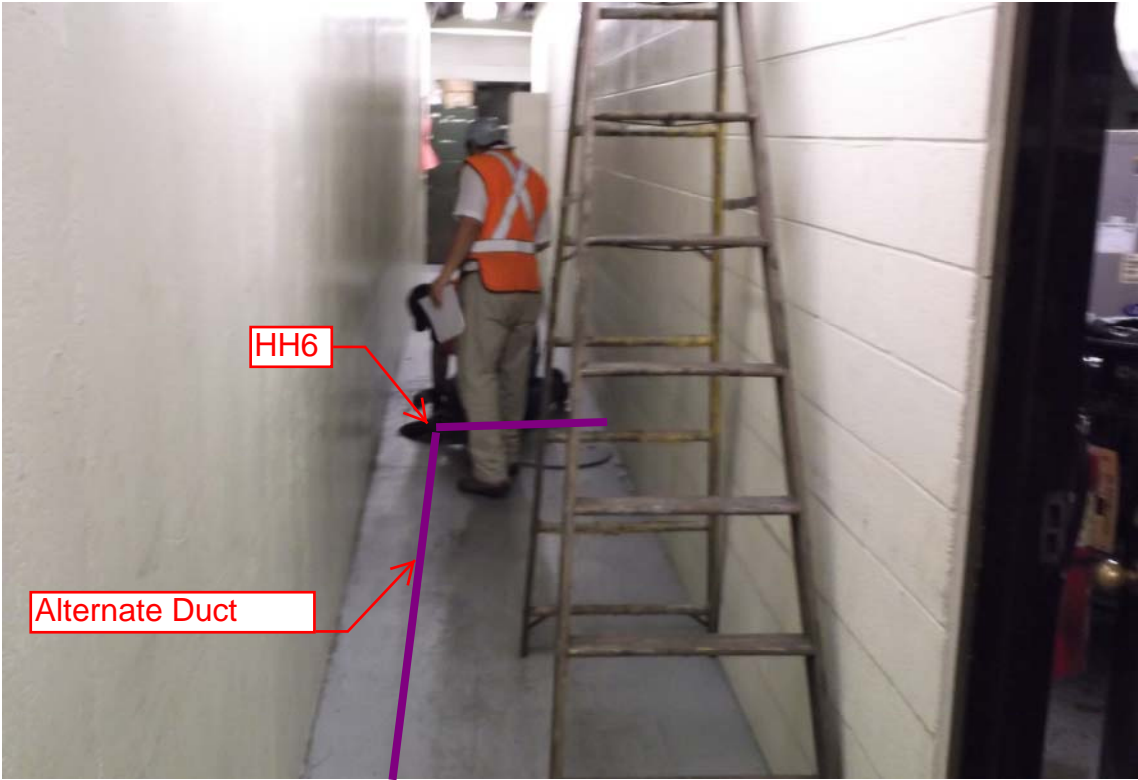


Photo #4: Handhole 6 for alternate duct in Room W200.

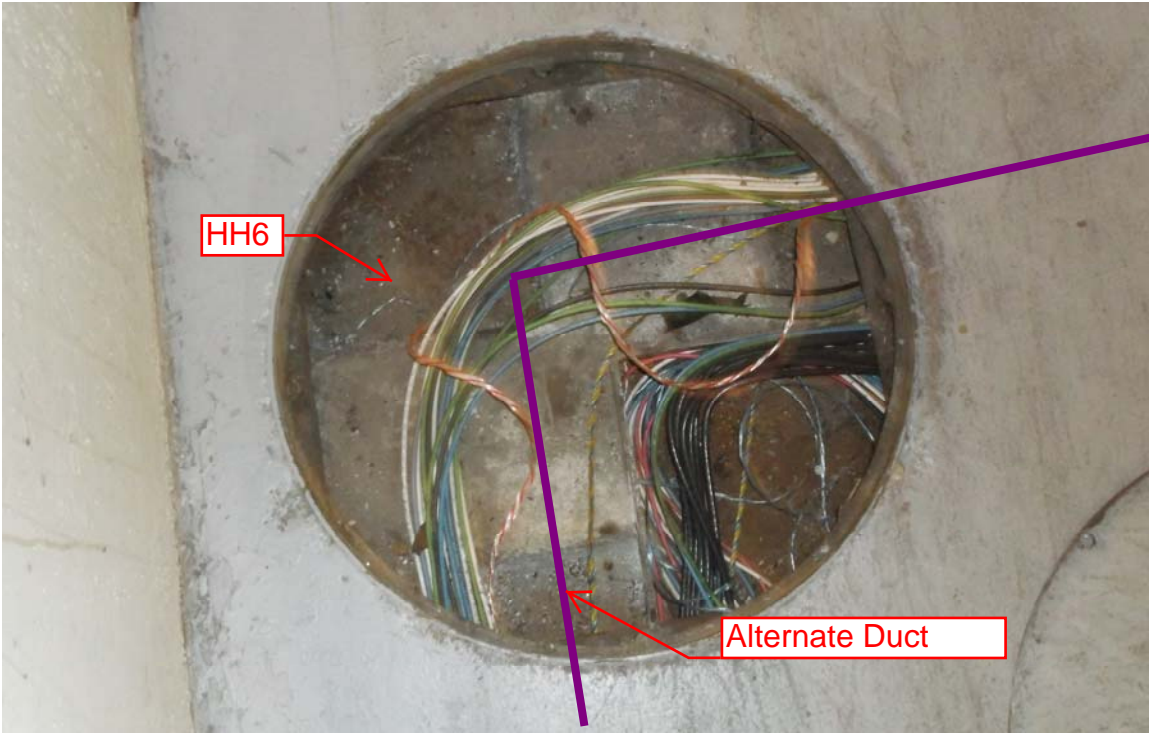


Photo #5: Alternate Duct entry to Shared Trough in Room W202.

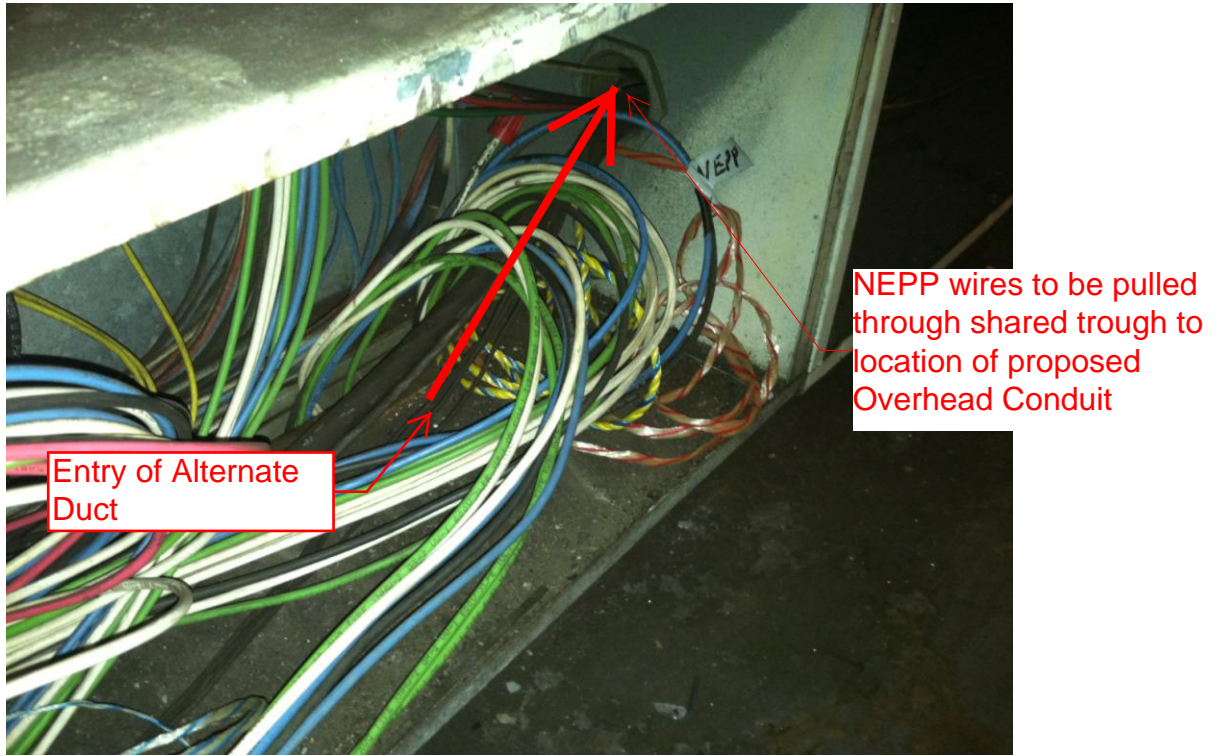
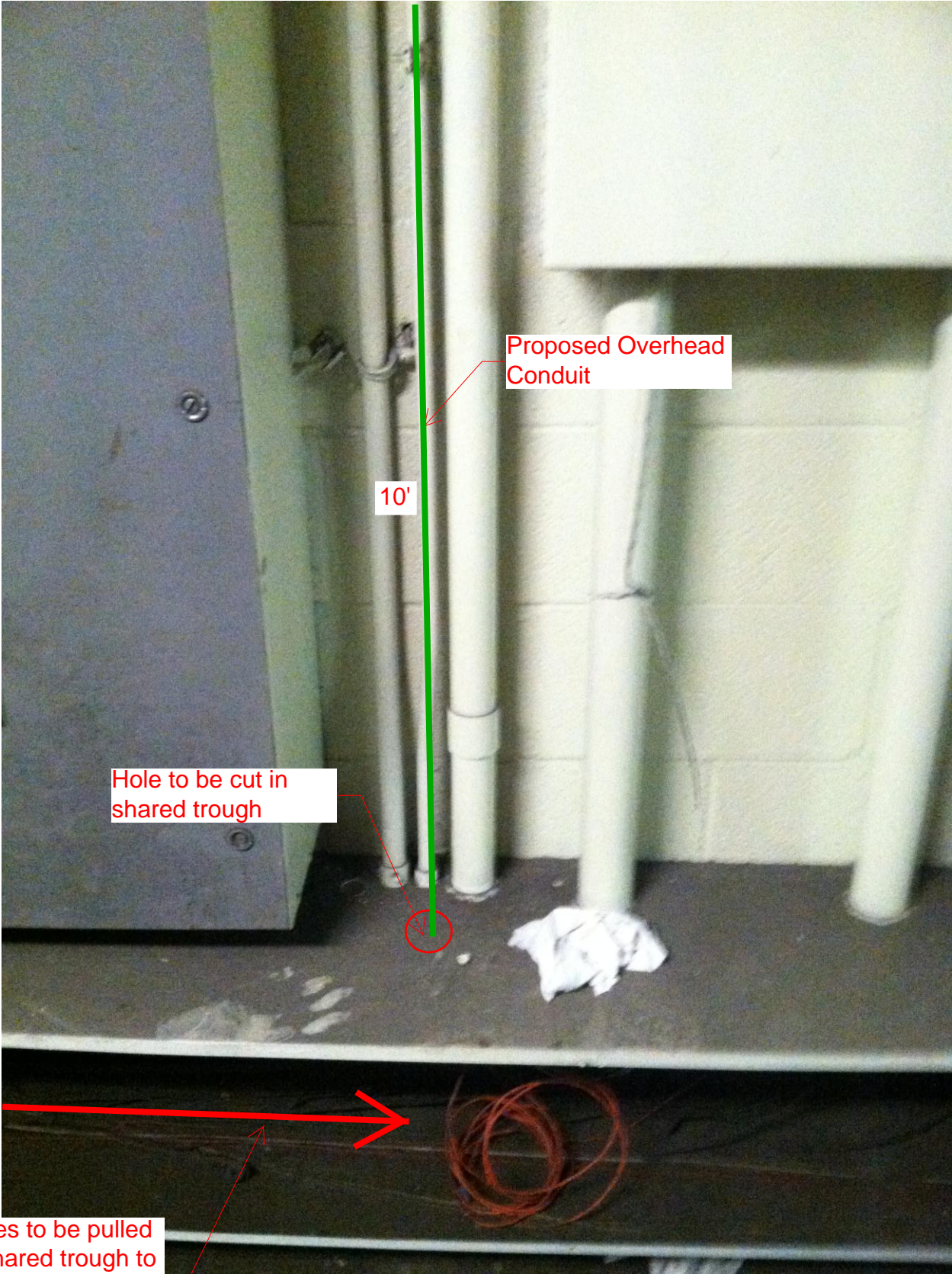


Photo #6: NEPP wires to be pulled through Shared Trough in Room W202.



Photo #7: Proposed Overhead Conduit from Shared Trough in Room W202.



Hole to be cut in shared trough

Proposed Overhead Conduit

10'

NEPP wires to be pulled through shared trough to location of proposed Overhead Conduit

Photo #8: Proposed Overhead Conduit in Room W202.



Photo #9: Proposed Overhead Conduit in Room W202.

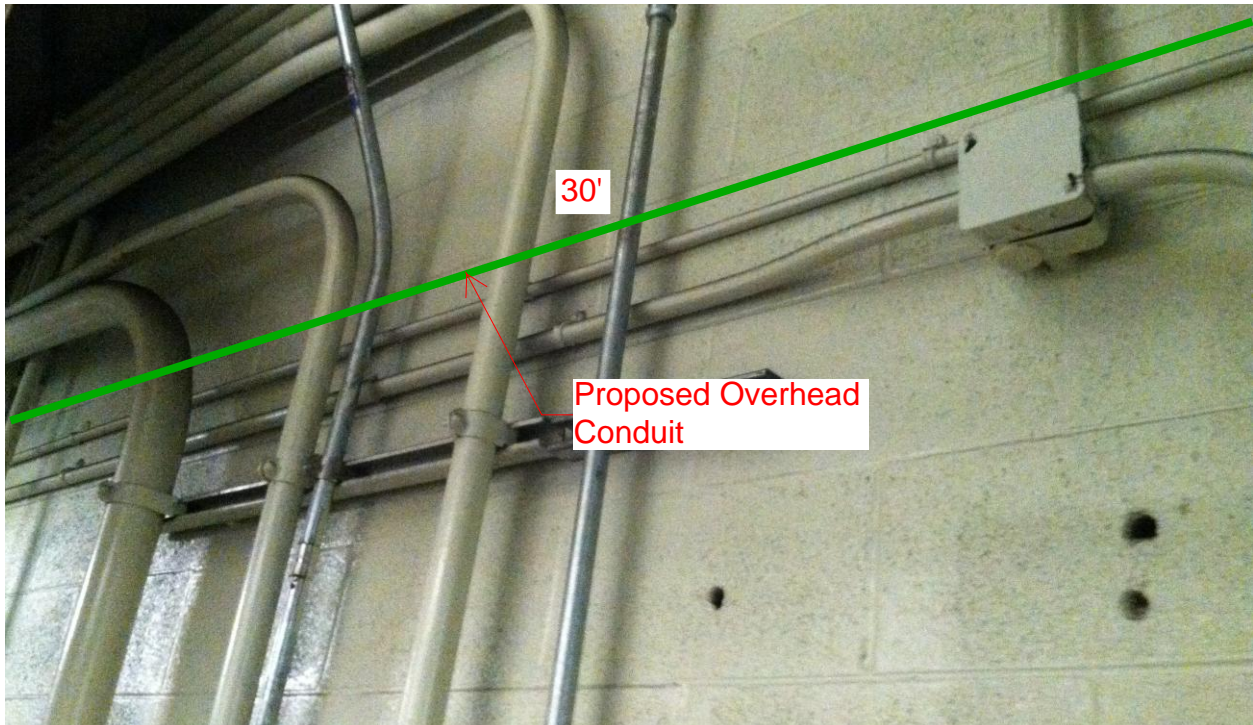


Photo #10: Proposed Overhead Conduit in Room W202.

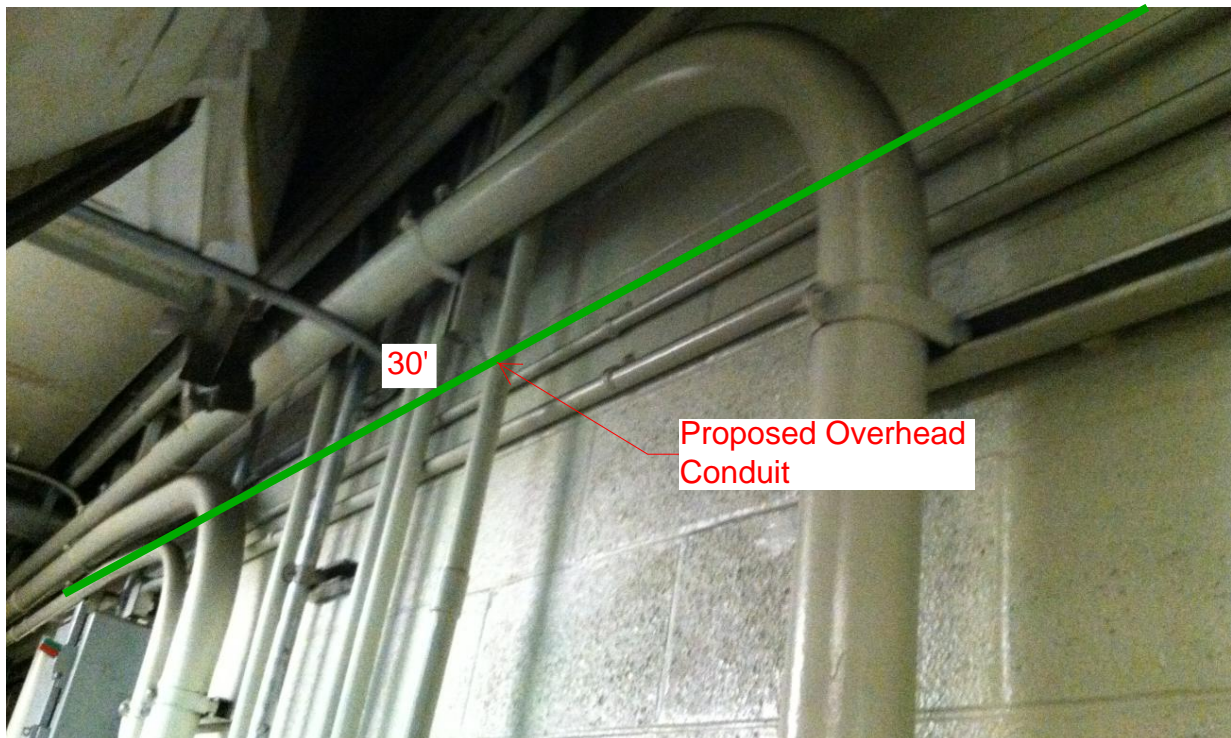


Photo #11: Proposed Overhead Conduit in Room W202.

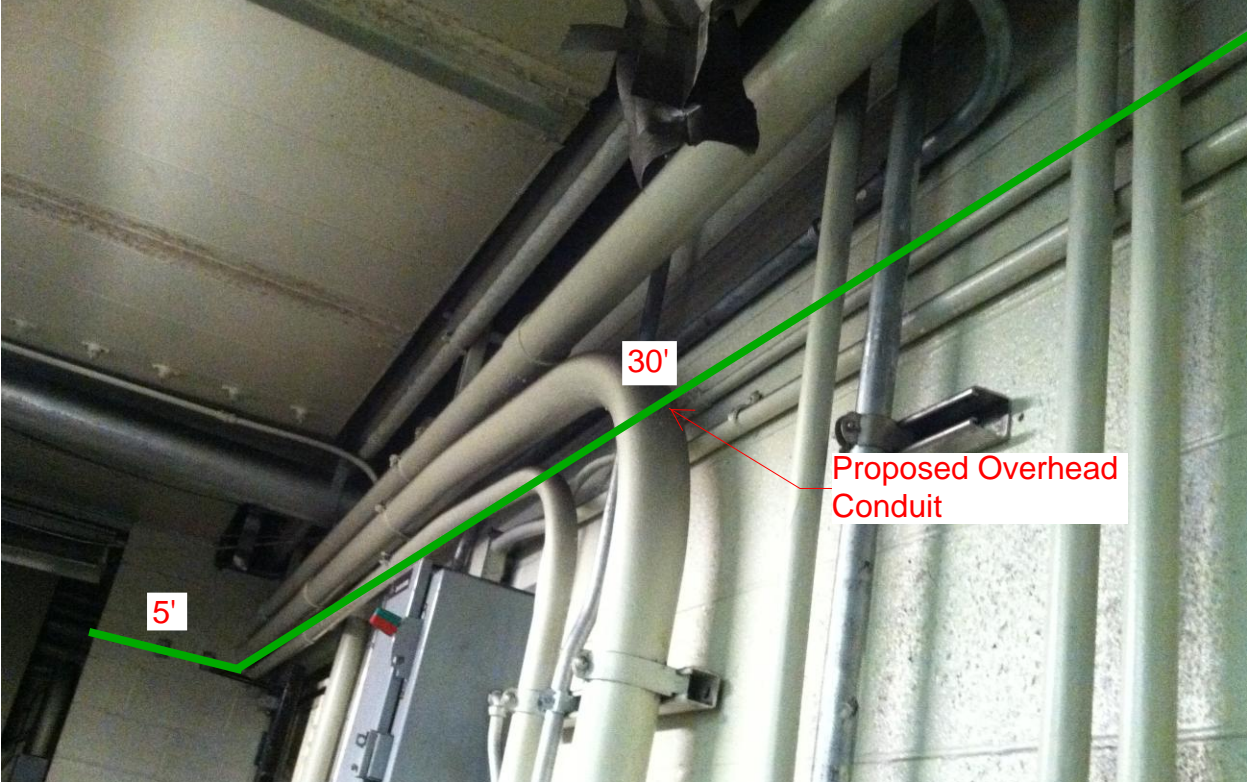
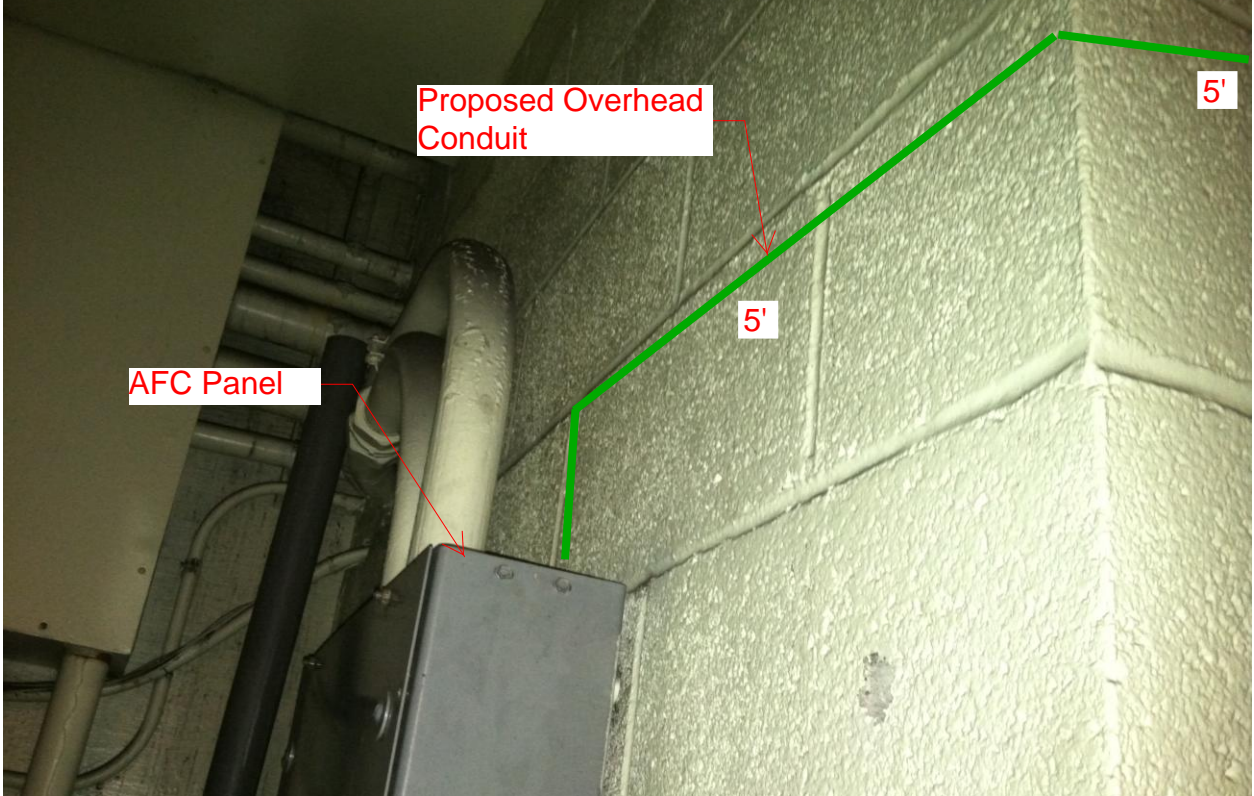


Photo #12: Proposed Overhead Conduit feeding AFC Panel in Room W202.

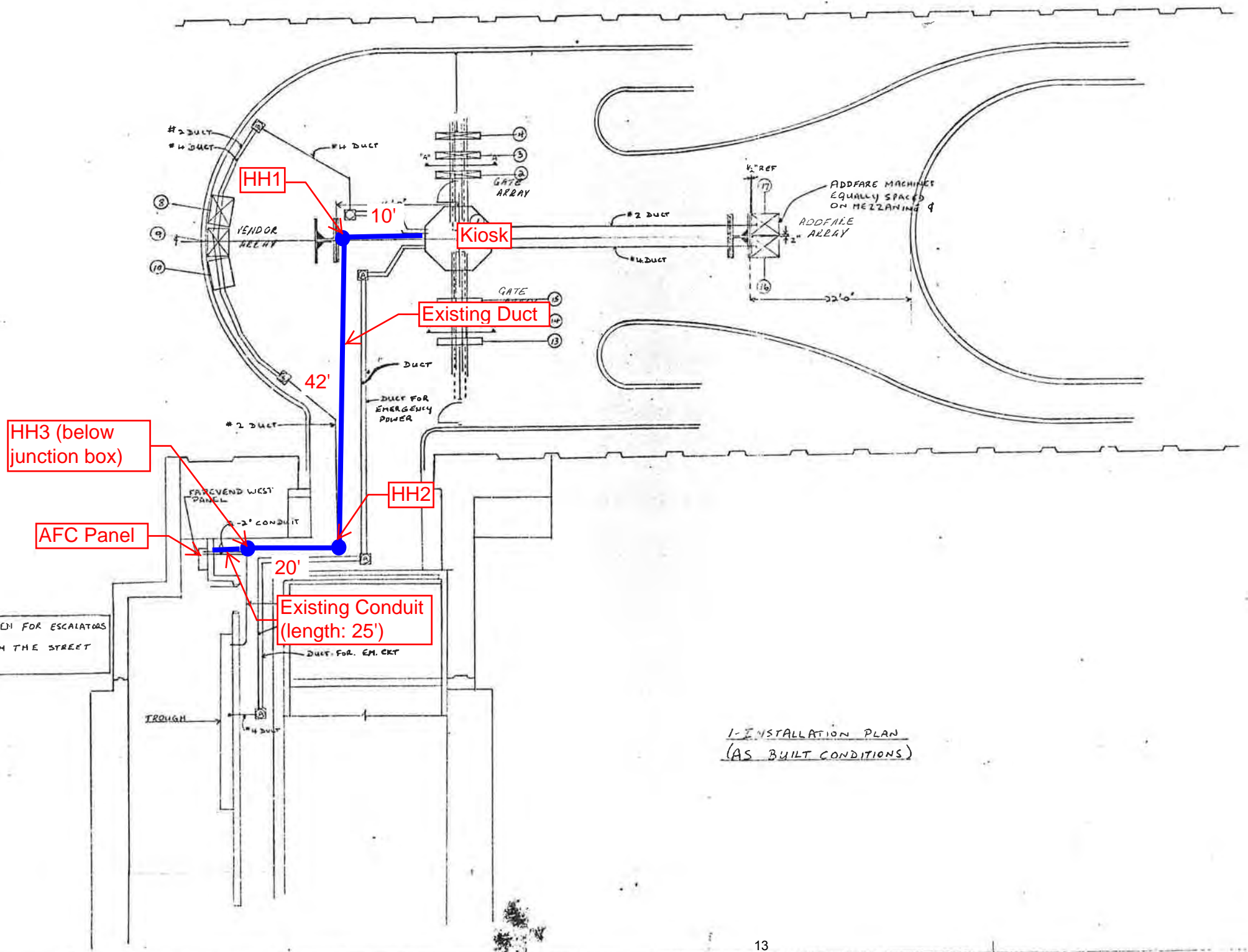
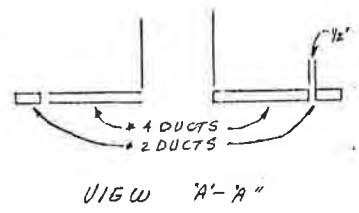


NOTES:

1. ALL INFORMATION CONCERNING DUCTS AND CONDUITS IS BASED ON INFORMATION SUPPLIED TO CUBIC WESTERN DATA BY BEENTEL.
2. TOTAL MACHINE INVENTORY IS DEPICTED ON THIS DRAWING
3. THE MINIMUM OPERATIONAL MACHINE INVENTORY IS REFERENCED ON THIS DRAWING BY THE "X" DRAWN THRU THE MACHINE SYMBOL
4. FOR AS BUILT CONDITIONS SEE SHEET 2
5. FOR REF DWGS SEE SUPPRT DOCUMENT PACKAGE FOR THIS MEZZANINE

REVISIONS	DATE	APVD
DESCRIPTION		
AS BUILT DRAWING REV. A	5-10-77	MP

EXISTING DUCT / CONDUIT LAYOUT

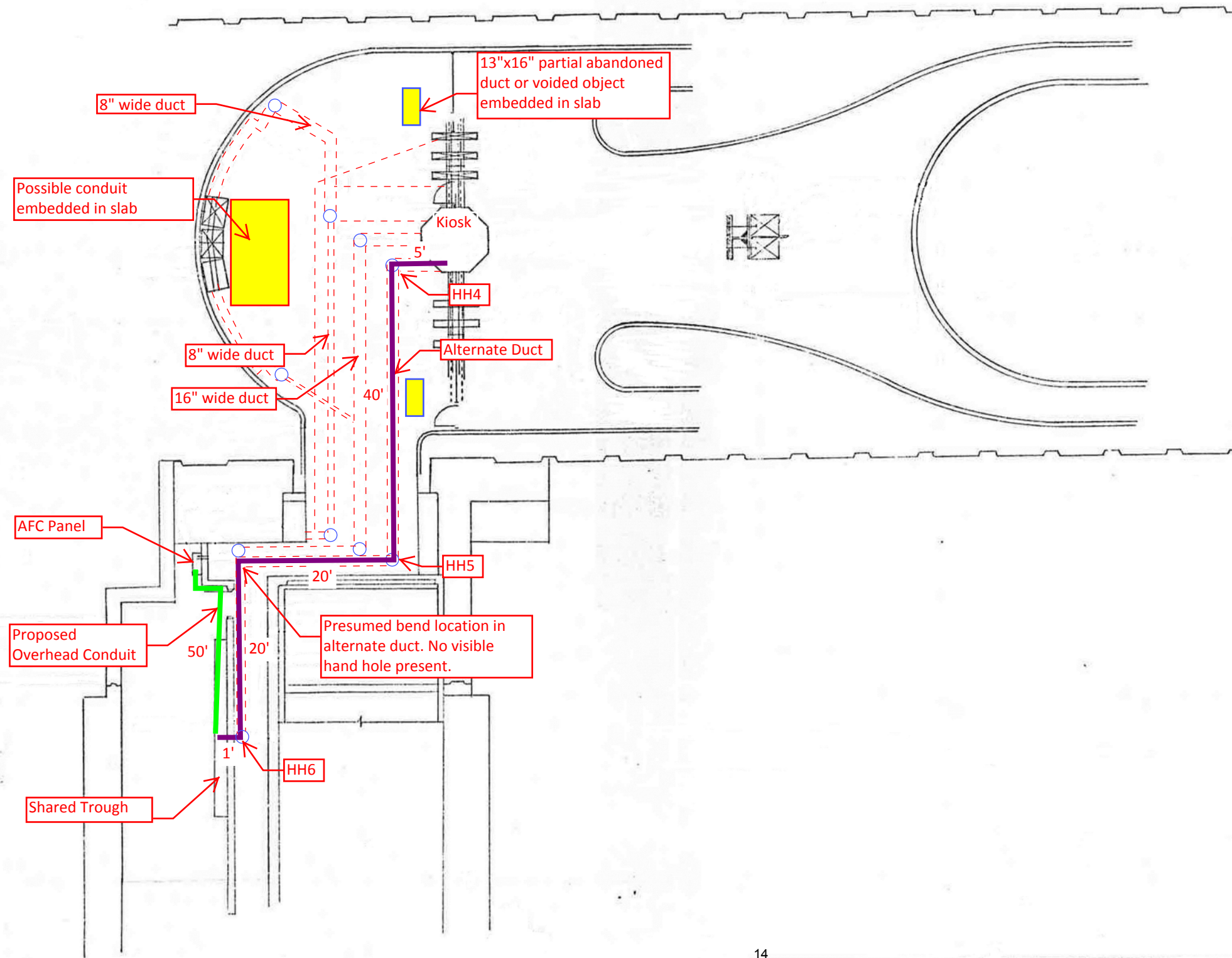


PRIORITY REQUESTS ARE HEREBY GIVEN FOR ESCALATORS AND THE ELEVATORS THAT RUNS FROM THE STREET LEVEL TO MEZZANINE

INSTALLATION PLAN (AS BUILT CONDITIONS)

CONTRACT NUMBER		CUBIC WESTERN DATA A SUBSIDIARY OF CUBIC CORPORATION 1650 KEARNEY MESA ROAD • POST OFFICE BOX 80787 • SAN DIEGO, CA 92118	
PROJECT NAME		GALLEY PLACE WEST STATION AFC MACHINES	
DESIGN	CHECK	DESIGN NUMBER	REV
APPROVAL	APPROVED	026-0323	f
SCALE	SHEET	20	

PROPOSED POWER ROUTE
FROM KIOSK TO AFC PANEL



Mezzanine Inspection Report (Scoping)

Date: 10/08/2014	Station Name: B02 Judiciary Square (East)	Mezzanine #: 023	Completed By: Mike Butler
------------------	---	------------------	---------------------------

Summary

Scoping of power ducts in both Upper and Lower faregate arrays was completed. Pull strings were already installed in Upper/Lower communication ducts under a separate contract for CAT6 wire installation; therefore, no scoping was completed or pull strings installed in the communication ducts. Scoping was completed between Kiosk and Shared Trough (adjacent to AFC Panel). Pull string in power duct between Kiosk and Shared Trough was installed previously under a separate contract and was checked and tested to confirm the strings' routing and integrity. It was not possible to scope or install pull string between the Shared Trough and AFC Panel because there were energized wires that posed a safety hazard to contractor.

Total power conductor run is approximately 75 feet between Kiosk and AFC Panel.

Scanning is not required at this mezzanine.

Scoping of Faregate Array(s)

Task	Yes/No	Notes
Communications Duct – Upper Faregate Array (3 faregates)		
Was video scoping completed for the entire duct run?	N/A	
Were pull strings installed at all faregates in the array?	Yes	New communication duct, wires, and pull strings (labeled 'AFC') were installed for upper faregate array prior to inspection work (Photos 1 & 2).
Were there any obstructions or blockages? Provide details of type and specific location.	N/A	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	Communication ducts are not at capacity.
Communications Duct - Lower Faregate Array (3 faregates)		
Was video scoping completed for the entire duct run?	N/A	
Were pull strings installed at all faregates in the array?	Yes	New communication duct, wires, and pull strings (labeled 'AFC') were installed for lower faregate array prior to inspection work.
Were there any obstructions or blockages? Provide details of type and specific location.	N/A	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	Communication ducts are not at capacity.
Power Duct - Upper Faregate Array (3 faregates)		
Was video scoping completed for the entire duct run?	Yes	WMATA Judiciary Square East Upper Power Duct Video.avi
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	Eight (8) wires were identified in 4" wide / 1" deep ducts.
Power Duct - Lower Faregate Array (3 faregates)		
Was video scoping completed for the entire duct run?	Yes	WMATA Judiciary Square East Lower Power Duct Video.avi
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	Eight (8) wires were identified in 4" wide / 1" deep ducts.


Scoping of Power Duct - Kiosk to AFC Panel		
Task	Yes/No	Notes
Kiosk to Handhole 1 (length: 45 feet)		
Was video scoping completed for the entire duct / conduit run?	Yes	WMATA Judiciary Square East Power Kiosk to Handhole1 Video.avi
Was pull string installed?	Yes	Pull string in power duct was installed previously under a separate contract and was checked and tested to confirm the strings' routing and integrity.
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	Ten (10) wires were identified in 4" wide / 1" deep ducts.
Handhole 1 to Handhole 2 (length: 15 feet)		
Was video scoping completed for the entire duct / conduit run?	Yes	WMATA Judiciary Square East Power Handhole 1 to Handhole 2 Video.avi
Was pull string installed?	Yes	Pull string in power duct was installed previously under a separate contract and was checked and tested to confirm the strings' routing and integrity.
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	Ten (10) wires were identified in 4" wide / 1" deep ducts.
Handhole 2 to Shared Trough (length: 10 feet)		
Was video scoping completed for the entire duct / conduit run?	No	Energized wires in shared trough prevented video scoping.
Was pull string installed?	Yes	Pull string in power duct was installed previously under a separate contract and was checked and tested to confirm the strings' routing and integrity.
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	Ten (10) wires were identified in 4" wide / 1" deep ducts.
Shared Trough/Conduit to AFC Panel (length: 5 feet)		
Was video scoping completed for the entire duct / conduit run?	No	Energized wires in shared trough prevented video scoping.
Was pull string installed?	No	There is currently no pull string between shared trough and AFC Panel.
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	The conduit between the Shared Trough and AFC Panel is not at capacity.
Observations / Issues / Next Steps		
Power conductor run is approximately 75' between the Kiosk and AFC Panel. N/A - Not Applicable		
Sign Off		
	GFP Representative	WMATA PRGM
Name:	Mike Butler	
Signature:		
Date:	10/29/2014	16

Photo #1: B02 Judiciary Square (East) – Faregate with new comm. duct and cable installed



Photo #2: B02 Judiciary Square (East) – Faregate with new comm. duct and cable installed

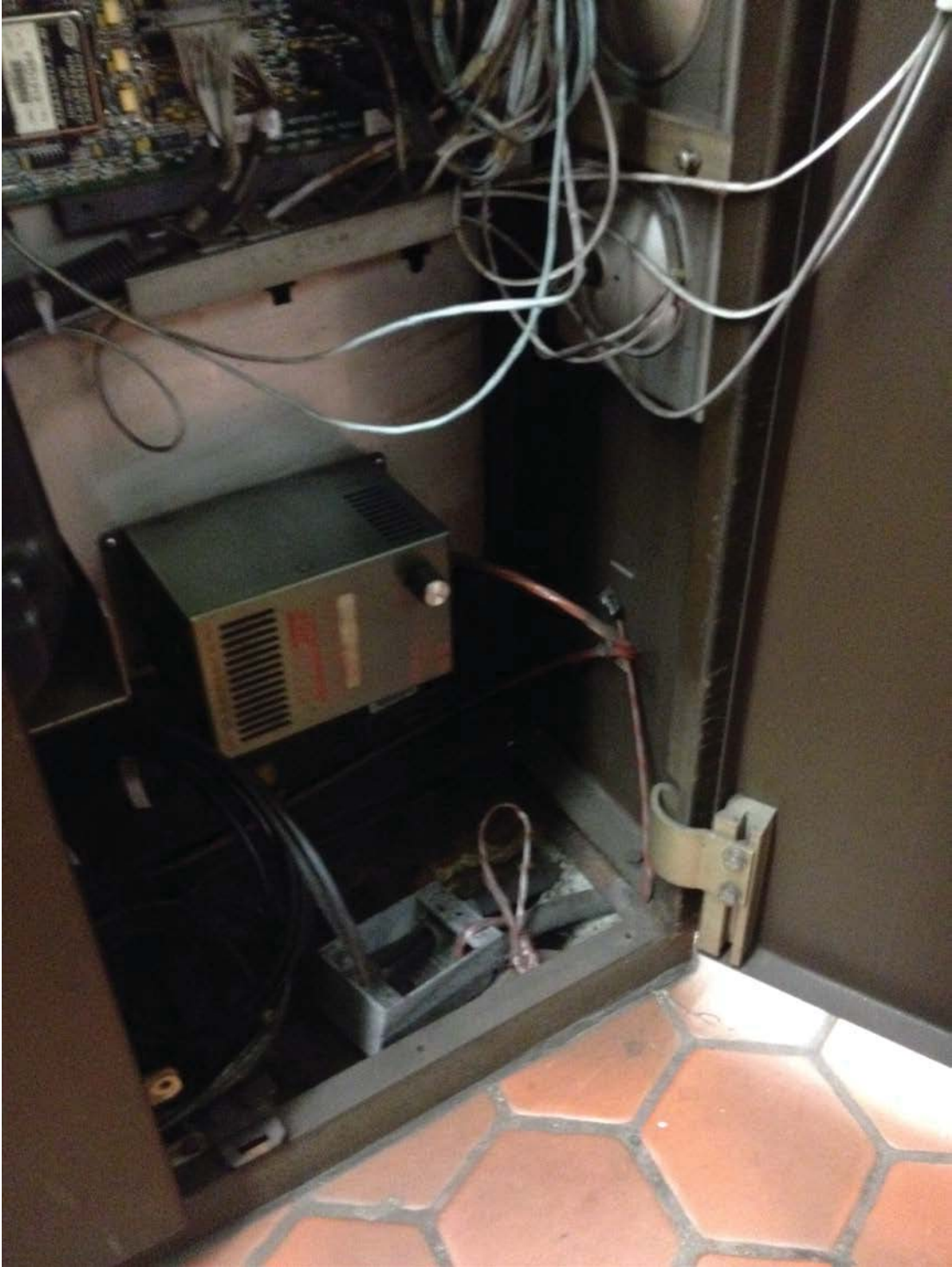


Photo #3: B02 Judiciary Square (East) – Mezzanine level handholes. Power duct run is through handholes at the bottom center and center-right of photo. Handhole near the center of photo is not part of power duct run.



Photo #4: B02 Judiciary Square (East) – Shared cable trough in room 206. Power duct enters trough from the bottom at left.



Mezzanine Inspection Report (Scoping)

Date: 11/05/14	Station Name: B02 Judiciary Square West	Mezzanine #: 022	Completed By: Mike Butler
-----------------------	--	-------------------------	----------------------------------

Summary

The completion of video scoping and pull string installation was partially completed for this mezzanine. Video scoping and pull string installation was successfully completed for Upper and Lower Faregate Arrays – ducts are in good condition and not at capacity. However, video scoping and pull string installation could not be completed between Kiosk and AFC Panel. There were energized wires found in Handhole 1 and Shared Trough adjacent to AFC Panel. Due to the number of wires in the shared trough, it was not possible to determine the origin of the energized wires. WEAA, WMP, WMPB, WME, WMPA, WMPP, and WEA all feed into the shared trough (refer to photos). In addition, it was not possible to identify Handhole 2 as it appears to have been removed or covered up, prohibiting access and verification of duct route.

A proposed conduit run has been identified between the Kiosk and the AFC Panel (see attached photos and drawing). The proposed conduit would run along the ceiling in the mezzanine area and then drop down and run along the wall. The conduit would be core drilled through the concrete walls above the door for Room 201 and Room 203. A third core drill would be used to enter Room 205. The proposed conduit would run along the top of the wall in Room 205 and then drop down to the AFC Panel.

Scanning was not required at this mezzanine.

Scoping of Faregate Array(s)

Task	Yes/No	Notes
Communications Duct – Upper Faregate Array (2 gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to "WMATA Judiciary Square West Upper Comm Duct Video.avi"
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	4" Power Duct with less than 8 wires.
Communications Duct - Lower Faregate Array (3 gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to "WMATA Judiciary Square West Lower Comm Duct Video.avi"
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	4" Power Duct with less than 8 wires.
Power Duct - Upper Faregate Array (2 gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to "WMATA Judiciary Square West Upper Power Duct Video.avi"
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	6" Power Duct with less than 8 wires.
Power Duct - Lower Faregate Array (3 gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to "WMATA Judiciary Square West Lower Power Duct Video.avi"
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	6" Power Duct with less than 8 wires.


Scoping of Power Duct - Kiosk to AFC Panel		
Task	Yes/No	Notes
Kiosk to Handhole 1 (Distance: 60')		
Was video scoping completed for the entire duct / conduit run?	No	Could not video scope or install pull strings due to energized wires.
Was pull string installed?	No	
Were there any obstructions or blockages? Provide details of type and specific location.	N/A	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	N/A	6" Power Duct
Handhole 1 to Handhole 2 (Distance: Unknown)		
Was video scoping completed for the entire duct / conduit run?	No	Could not video scope or install pull strings due to energized wires.
Was pull string installed?	No	
Were there any obstructions or blockages? Provide details of type and specific location.	N/A	Location of Handhole 2 is not visible on the mezzanine floor.
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	N/A	6" Power Duct
Handhole 2 to Shared Trough (Distance: Unknown)		
Was video scoping completed for the entire duct / conduit run?	No	Could not video scope or install pull strings due to energized wires.
Was pull string installed?	No	
Were there any obstructions or blockages? Provide details of type and specific location.	N/A	Location of Handhole 2 is not visible on the mezzanine floor.
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	N/A	6" Power Duct
Shared Trough to AFC Panel (Distance: 25')		
Was video scoping completed for the entire duct / conduit run?	No	Could not video scope or install pull strings due to energized wires.
Was pull string installed?	No	
Were there any obstructions or blockages? Provide details of type and specific location.	N/A	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	N/A	25' long trough
Observations / Issues / Next Steps		
- The proposed overhead power conduit run from the Kiosk to the AFC Panel is 185'. Refer to AFC As-built and photos for details.		
Sign Off		
	GFP Representative	WMATA PRGM
Name:	Mike Butler	
Signature:		
Date:	01/02/2015	

Photo # 1 – Existing Duct run from Kiosk to Hand Hole 1 on mezzanine floor.

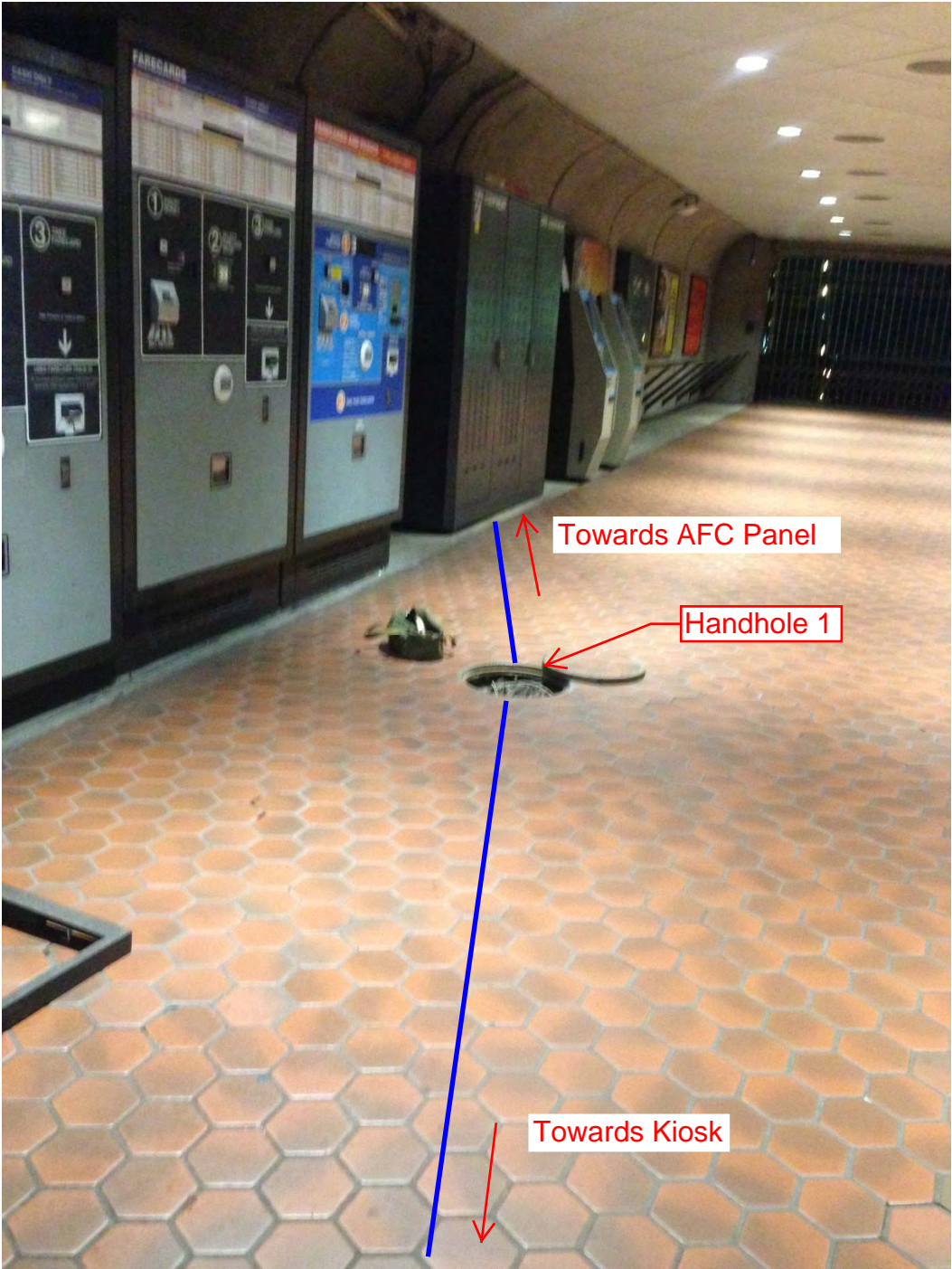


Photo # 2 – Shared Trough in Room 205.

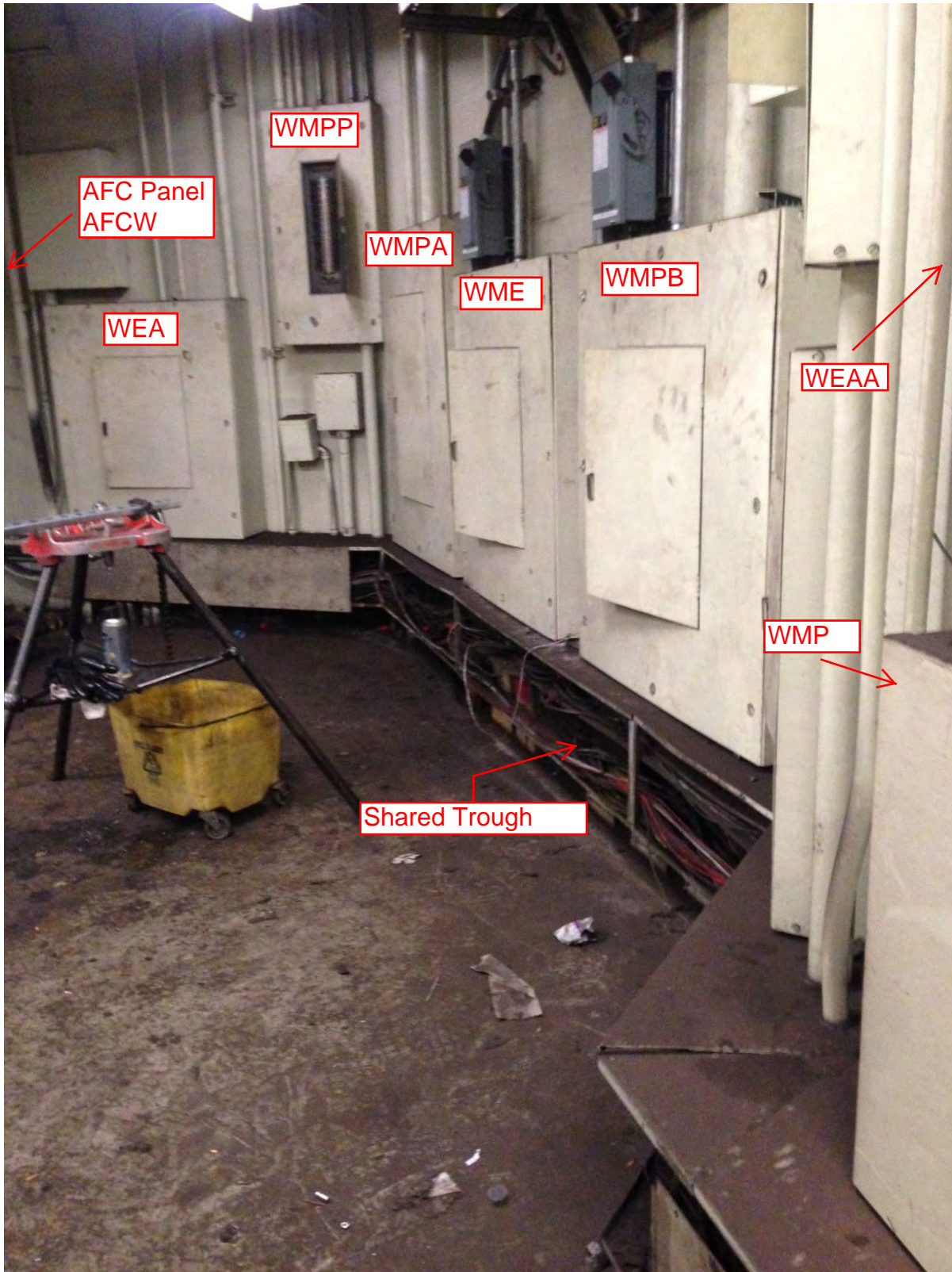


Photo # 3 – Proposed Conduit Run



Photo # 4 – Proposed Conduit Run

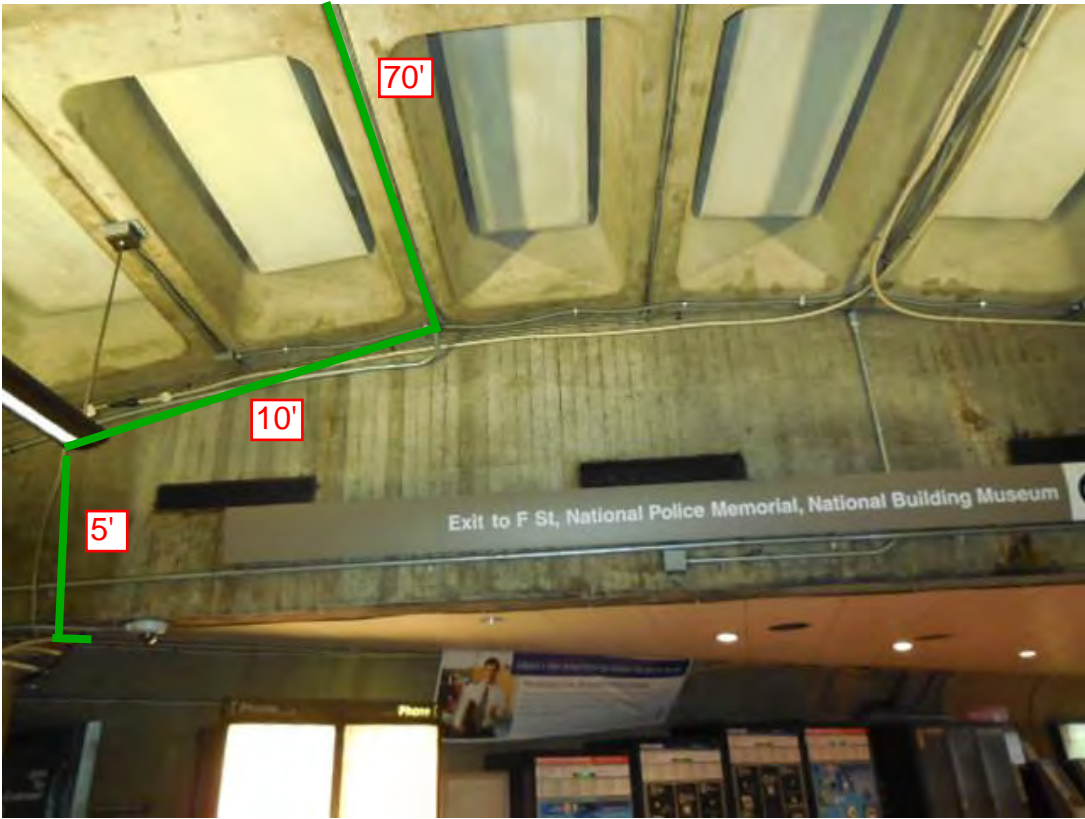


Photo # 5 – Proposed Conduit Run from mezzanine to Room 201

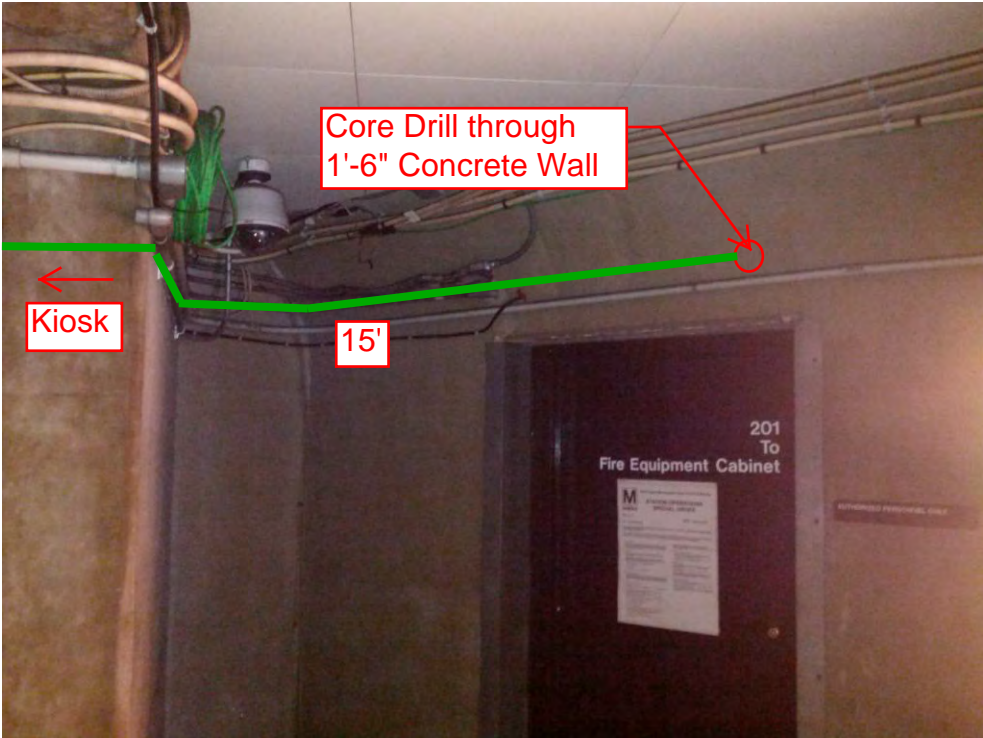


Photo # 6– Proposed Conduit Run between Room 201 and Room 203

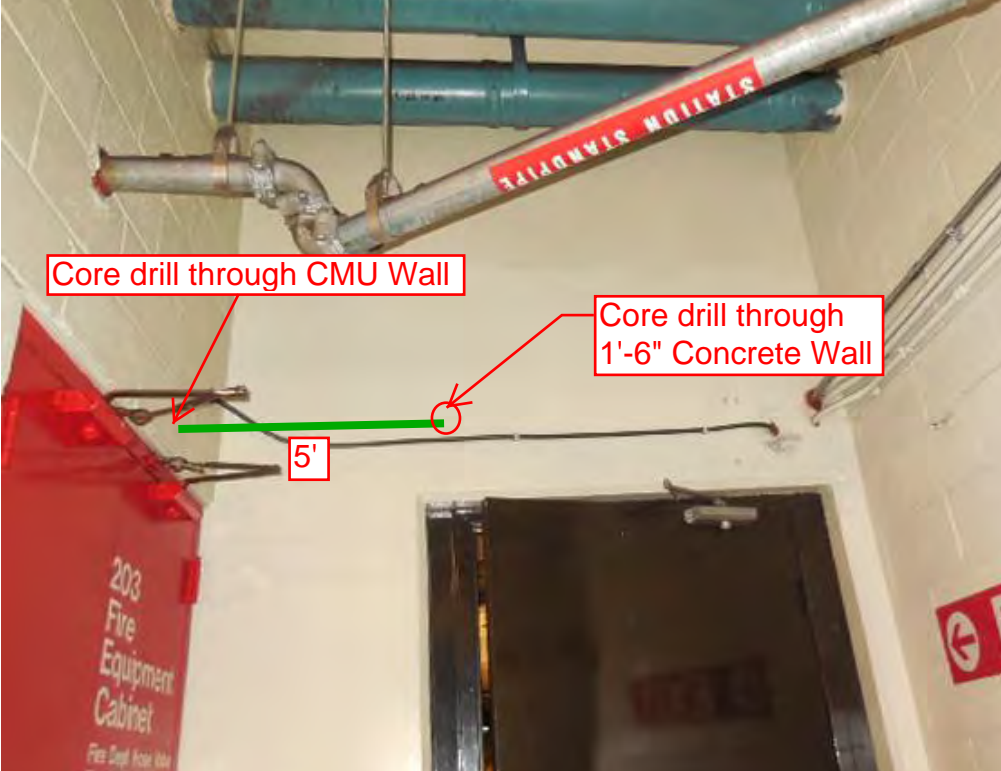


Photo # 7 – Proposed Conduit Run (Room 203 and Room 205) - looking up at ceiling inside Fire Equipment Room 203.

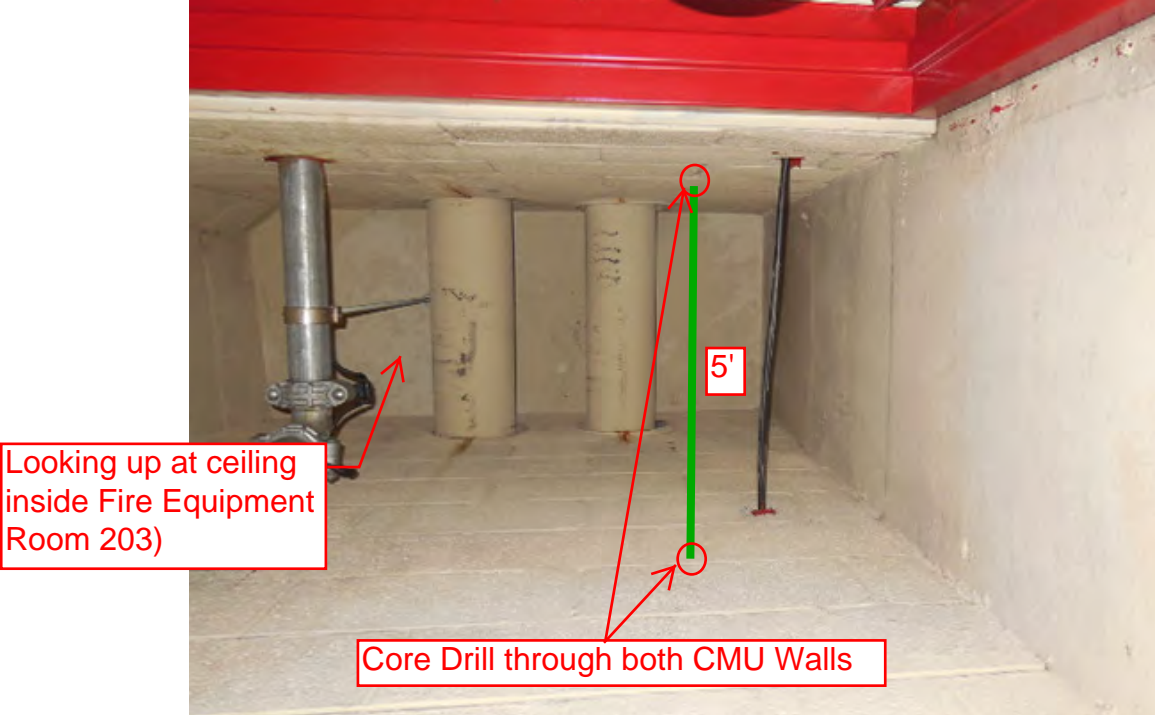


Photo # 8 – Proposed Conduit Run in Room 205

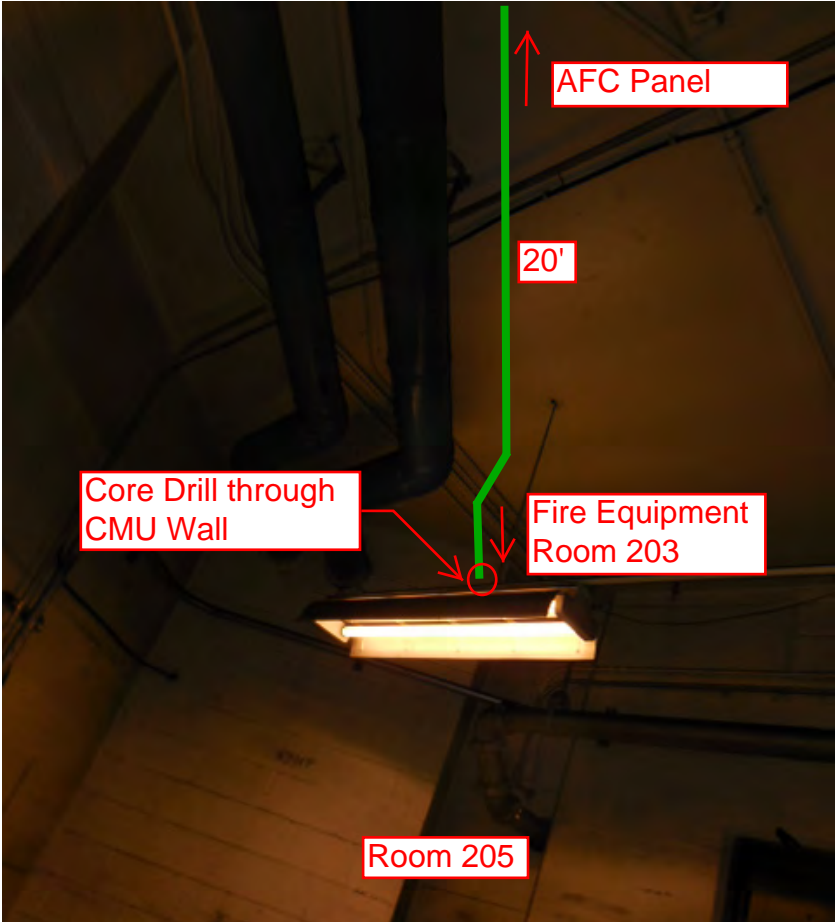


Photo # 9 – Proposed Conduit Run in Room 205

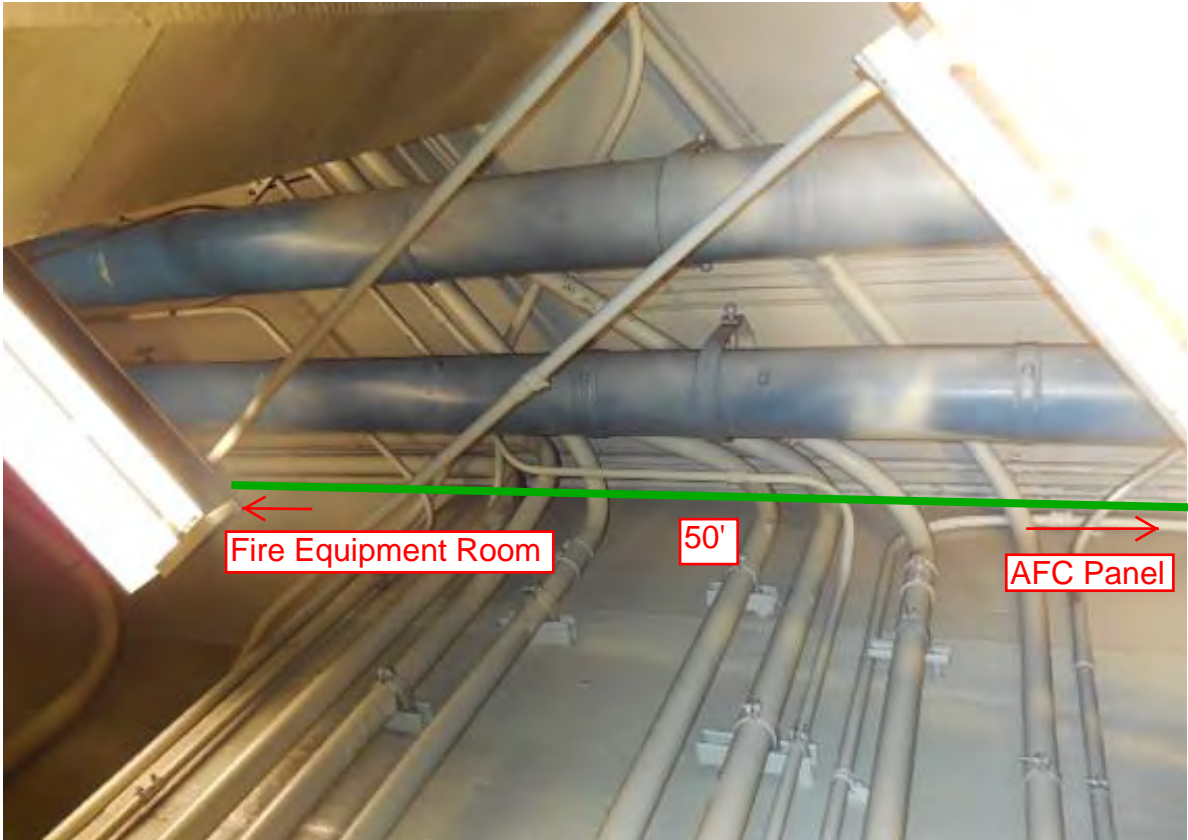
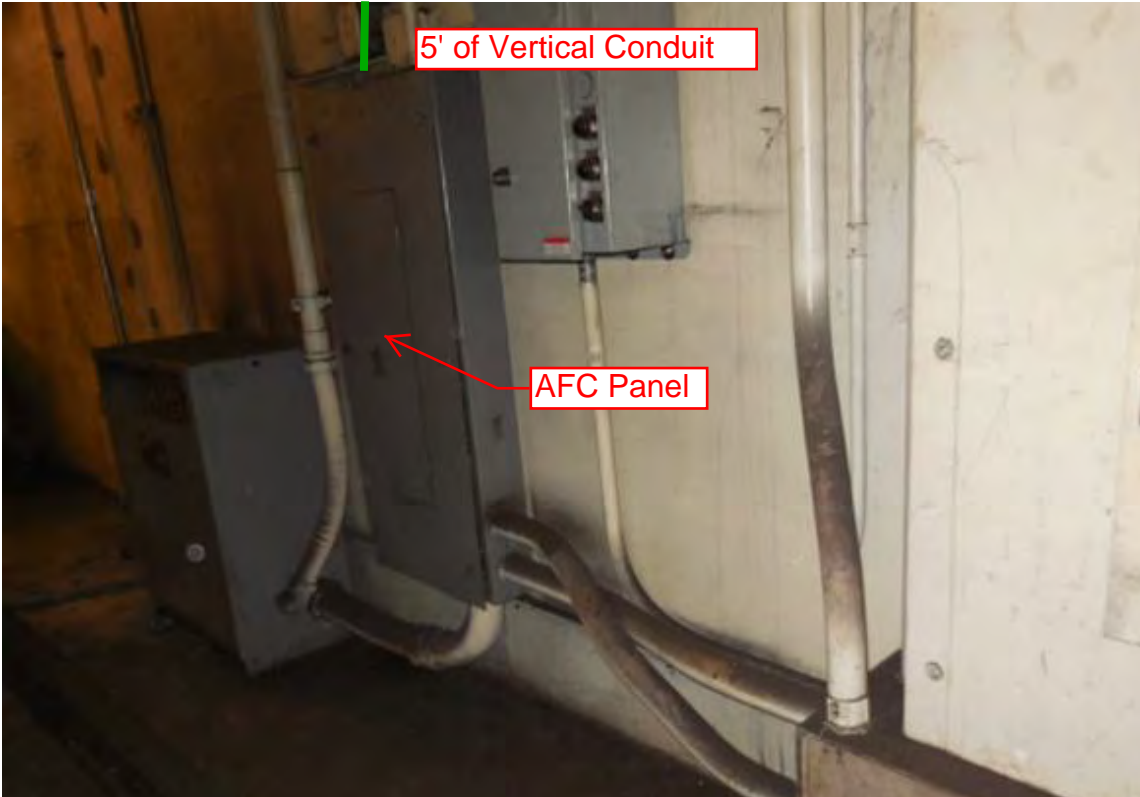


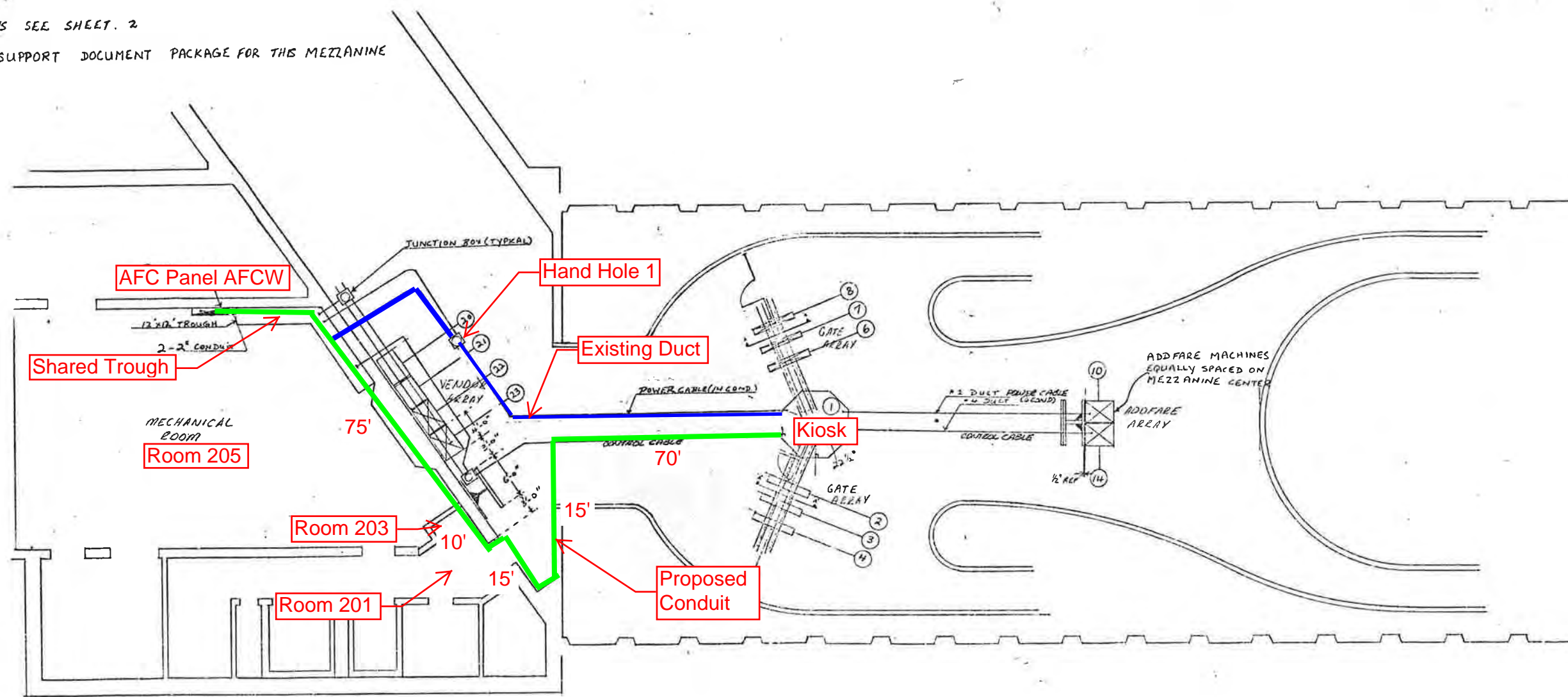
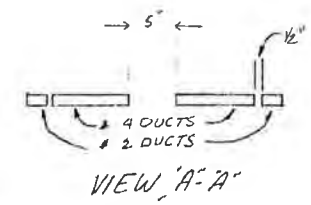
Photo # 10 – Proposed Conduit Run in Room 205



NOTES:

1. ALL INFORMATION CONCERNING DUCTS AND CONDUITS IS BASED ON INFORMATION SUPPLIED TO CUBIC WESTERN DATA BY WMATA.
2. TOTAL MACHINE INVENTORY IS DEPICTED ON THIS DRAWING
3. THE MINIMUM OPERATIONAL MACHINE INVENTORY IS REFERENCED ON THIS DRAWING BY THE 'X' DRAWN THRU THE MACHINE
4. FOR AS BUILT CONDITIONS SEE SHEET 2
5. FOR REF DWGS SEE SUPPORT DOCUMENT PACKAGE FOR THIS MEZZANINE

REVISIONS		
DESCRIPTION	DATE	APVD
AS BUILT DRAWING REV A	5-10-17	J.P.



PRIORITY REQUESTS ARE HEREBY GIVEN FOR BOTH ESCALATORS THAT RUN FROM THE STREET LEVEL TO THE MEZZANINE LEVEL.

-1 INSTALLATION PLAN
(AS BUILT CONDITIONS)

CONTRACT NUMBER 22007A		CUBIC WESTERN DATA A Subsidiary of Cubic Corporation 1670 KERRY MESA ROAD • POST OFFICE BOX 80787 • SAN DIEGO, CA 92118	
DESIGN ACTIVITY APPROVAL	SIZE	DRAWING NUMBER	REV
APPROVED	SCALE	22	A
		SHEET	OF

Mezzanine Inspection Report (Scoping)

Date: 01/06/15	Station Name: B03 Union Station North	Mezzanine #: 025	Completed By: Mike Butler
Summary			
<p>Pull string installation was completed in communication ducts for Upper and Lower Faregate Arrays. Video scoping was completed in the Upper and Lower communication ducts, as well as the Lower power duct. However, it was not possible to scope the Upper power duct due to an apron skirt obstruction at the entrance to the duct. The power duct from the Kiosk to the AFC Panel could not be scoped due to the presence of energized wires; subsequent scoping attempts were not completed as per direction from WMATA.</p> <p>A conduit run has been proposed between the Kiosk and AFC Panel (refer to attached drawings and photos). The proposed conduit will run from the Kiosk to the adjacent wall via an overhead beam and then continue along the wall until it reaches the wall outside of Mechanical Room 214. The wall needs to be core drilled to allow the conduit to enter Room 214 and continue to the AFC Panel.</p>			
Scoping of Faregate Array(s)			
Task	Yes/No	Notes	
Communications Duct – Upper Faregate Array (5 faregates)			
Was video scoping completed for the entire duct run?	Yes	Refer to "WMATA Union Station N Upper Comm Fairgate Video.avi"	
Were pull strings installed at all faregates in the array?	Yes		
Were there any obstructions or blockages? Provide details of type and specific location.	No		
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	4"walker duct with less than 8 wires	
Communications Duct - Lower Faregate Array (8 faregates)			
Was video scoping completed for the entire duct run?	Yes	Refer to "WMATA Union Station N Lower Comm Fairgate Video.avi"	
Were pull strings installed at all faregates in the array?	Yes		
Were there any obstructions or blockages? Provide details of type and specific location.	No	No obstructions, but there was limited space around the 45 degree bend in the duct.	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	4"walker duct with less than 12 wires	
Power Duct - Upper Faregate Array (5 faregates)			
Was video scoping completed for the entire duct run?	No	Video scoping not completed as per direction from WMATA.	
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	Duct was inaccessible due to skirt obstruction.	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	N/A		
Power Duct - Lower Faregate Array (8 faregates)			
Was video scoping completed for the entire duct run?	Yes	Refer to "WMATA Union Station N Lower Power Fairgate Video.avi"	
Were there any obstructions or blockages? Provide details of type and specific location.	No	No obstructions, but there was limited space around the 45 degree bend in the duct.	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	6"walker duct with less than 12 wires	


Scoping of Power Duct - Kiosk to AFC Panel		
Task	Yes/No	Notes
Kiosk to AFC Panel (Distance: 75')		
Was video scoping completed for the entire duct / conduit run?	No	Video scoping not completed as per direction from WMATA.
Was pull string installed?	No	
Were there any obstructions or blockages? Provide details of type and specific location.	N/A	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	N/A	
Observations / Issues / Next Steps		
The proposed overhead conduit run is approximately 125' from the Kiosk to the AFC Panel (refer to photos and drawing).		
Sign Off		
	GFP Representative	WMATA PRGM
Name:	Mike Butler	
Signature:		
Date:	01/09/15	

Photo #1 - Proposed conduit run from Kiosk

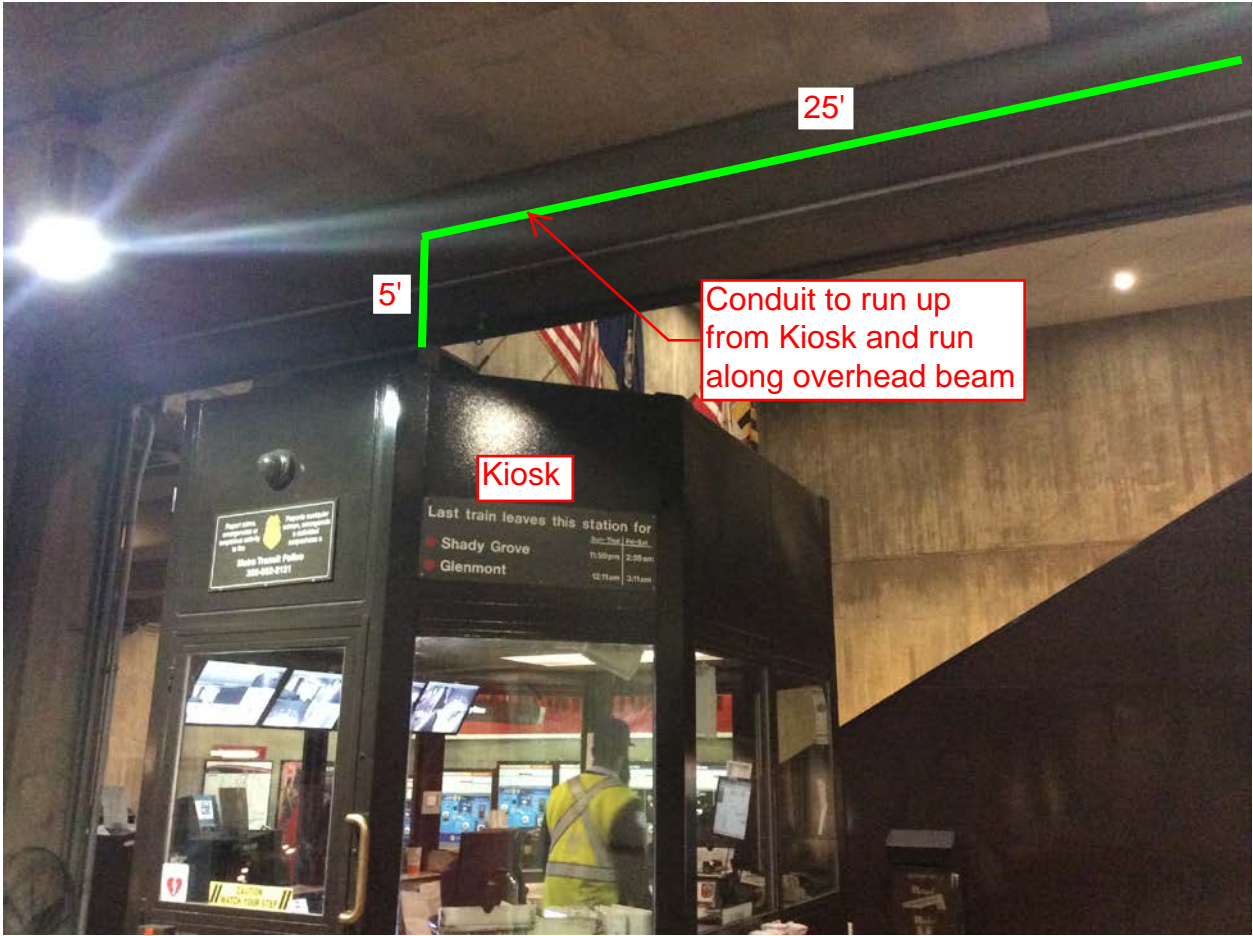


Photo #2 - Proposed conduit run along overhead beam to adajcent wall

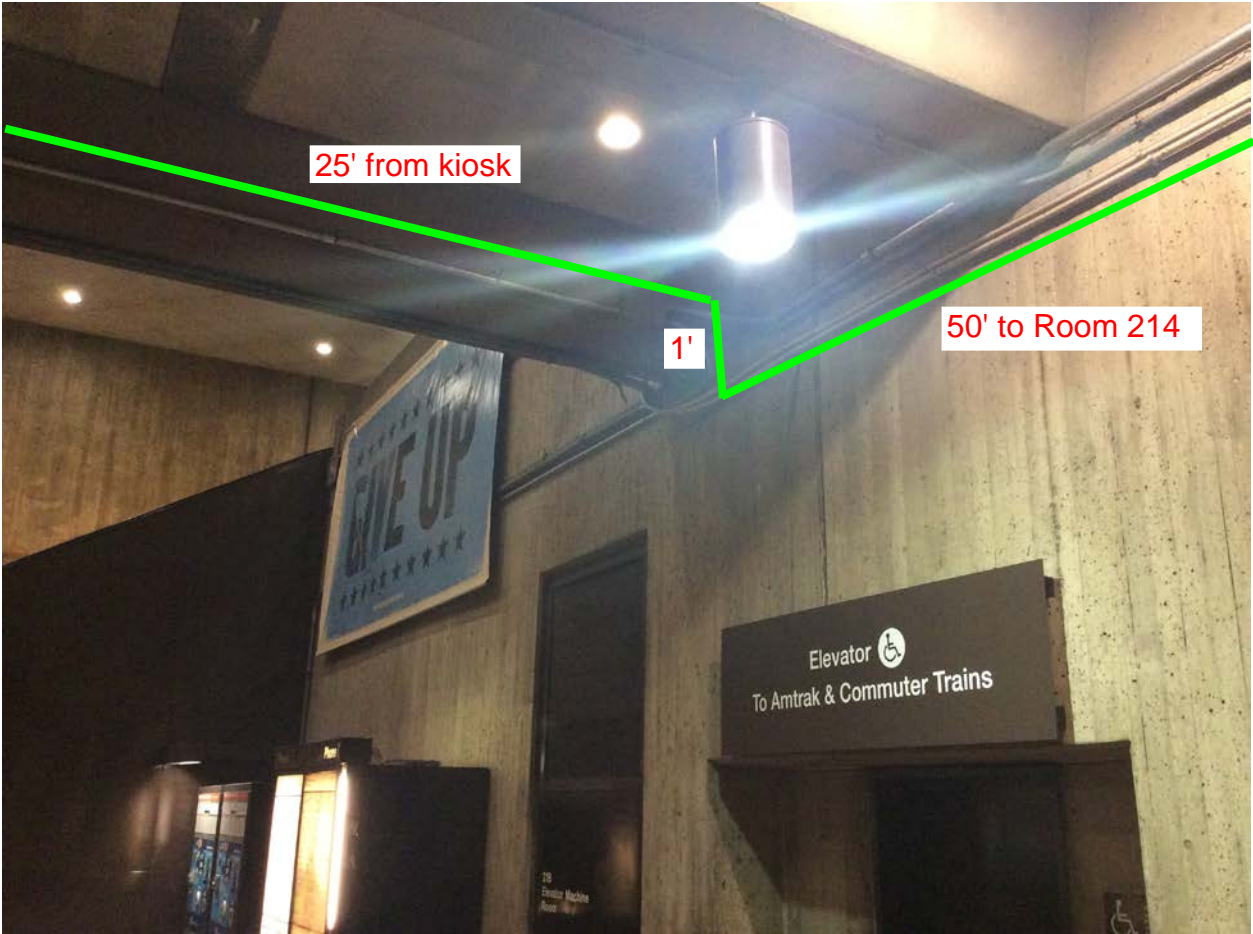


Photo #3 - Proposed conduit run along adjacent wall to Mechanical Room 214

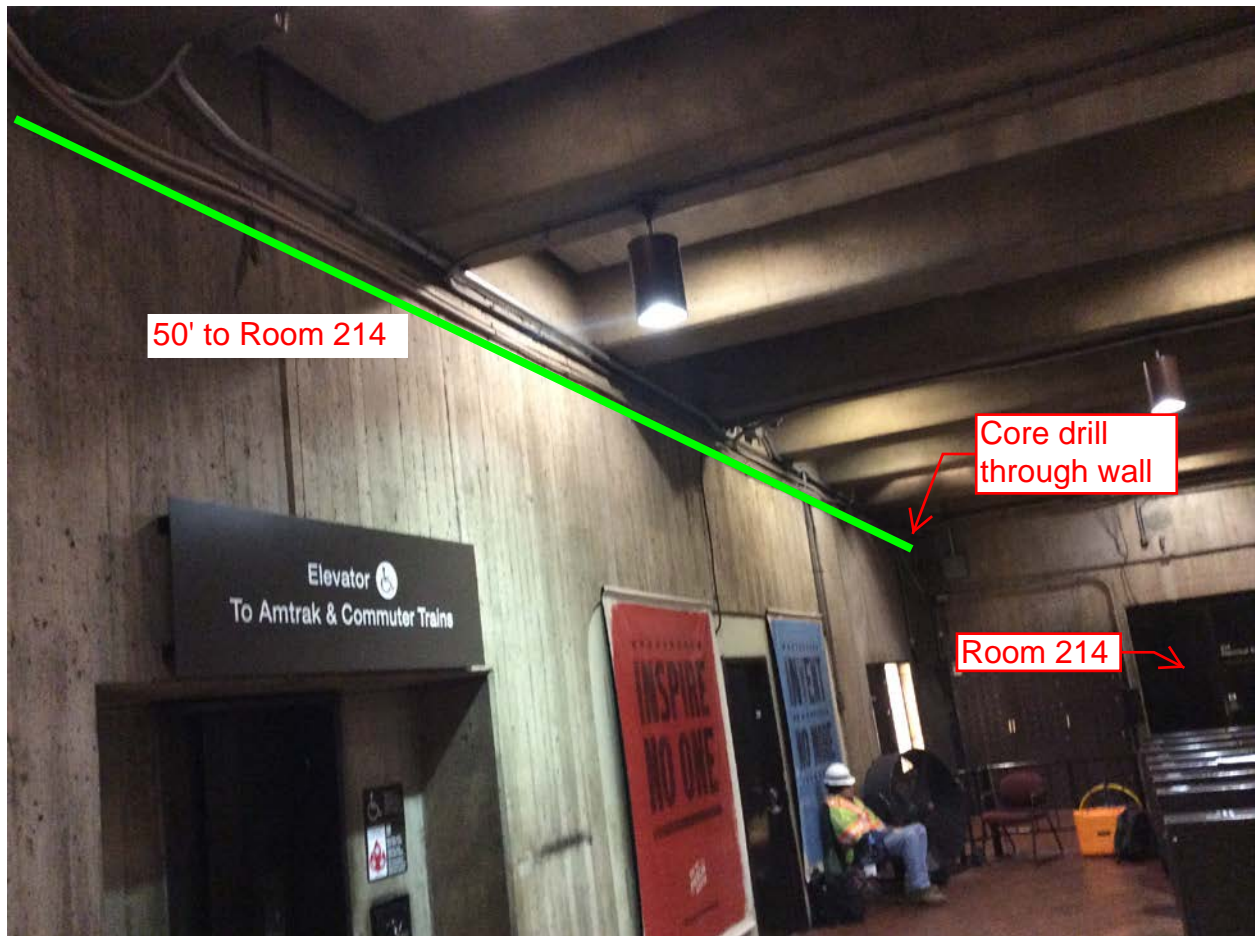


Photo #4 - Proposed conduit run along wall to Mechanical Room 214 (core drill required)

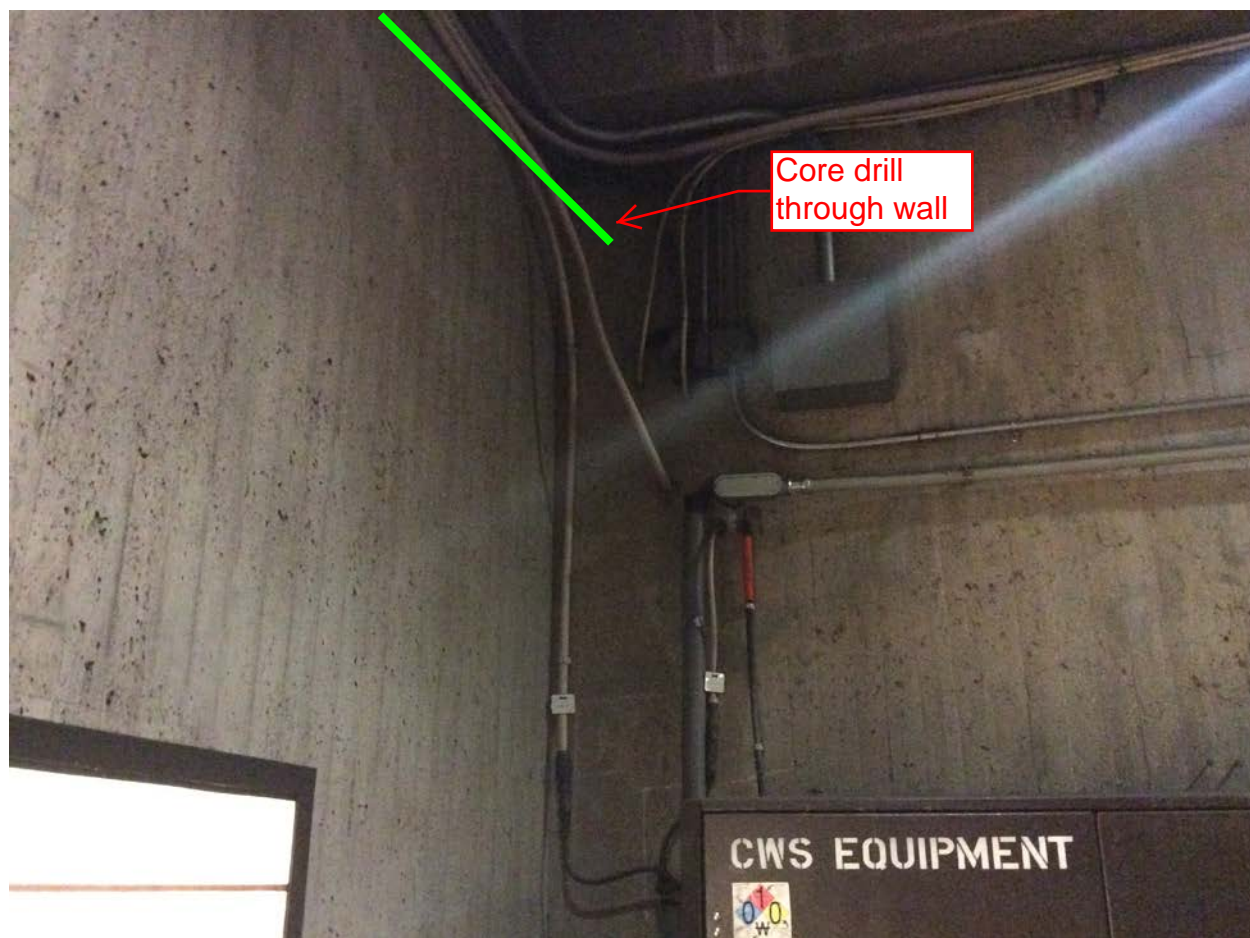


Photo #5 - Proposed conduit run along wall inside Mechanical Room 214 (core drill required)

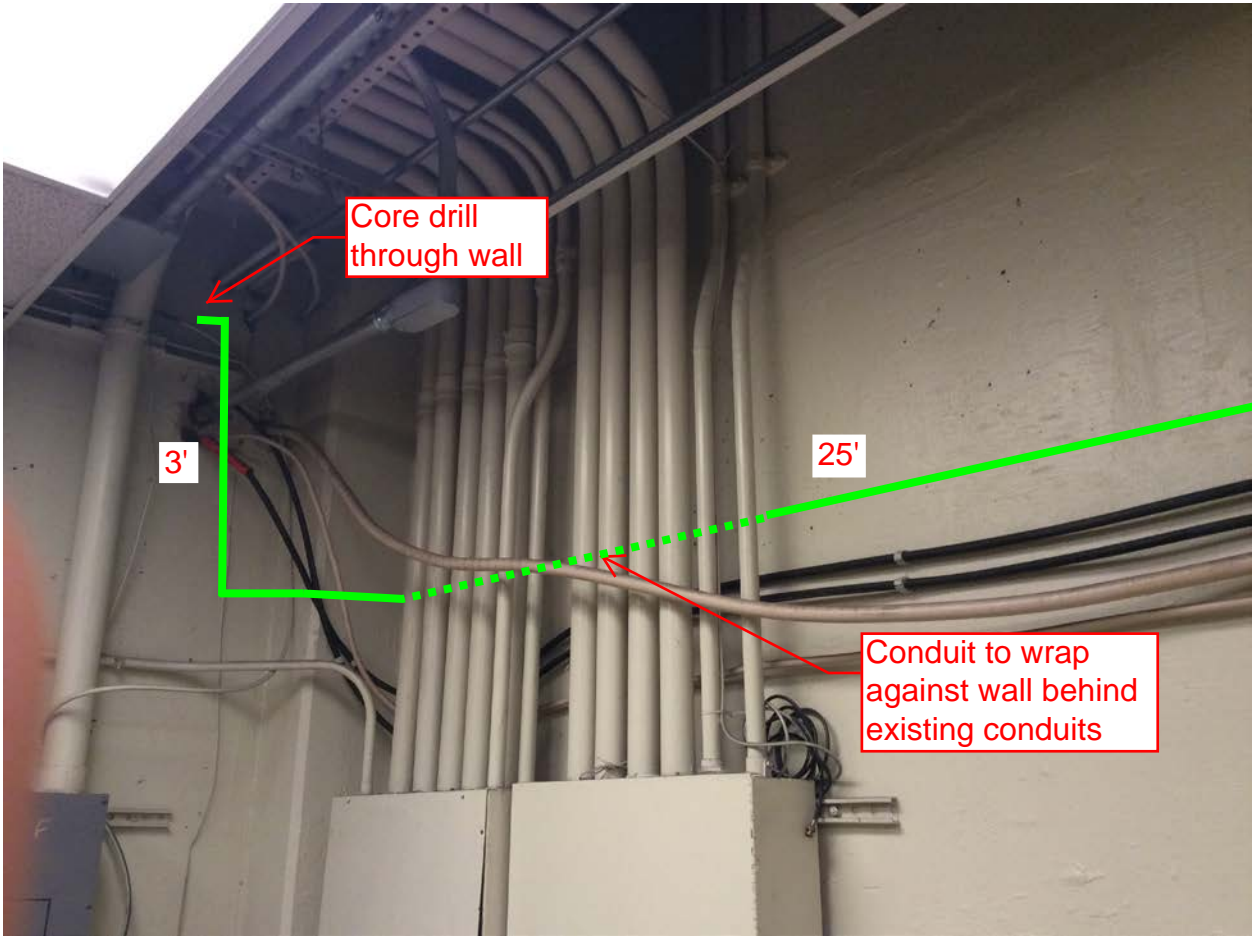


Photo #6 - Proposed conduit run along wall inside Mechanical Room 214

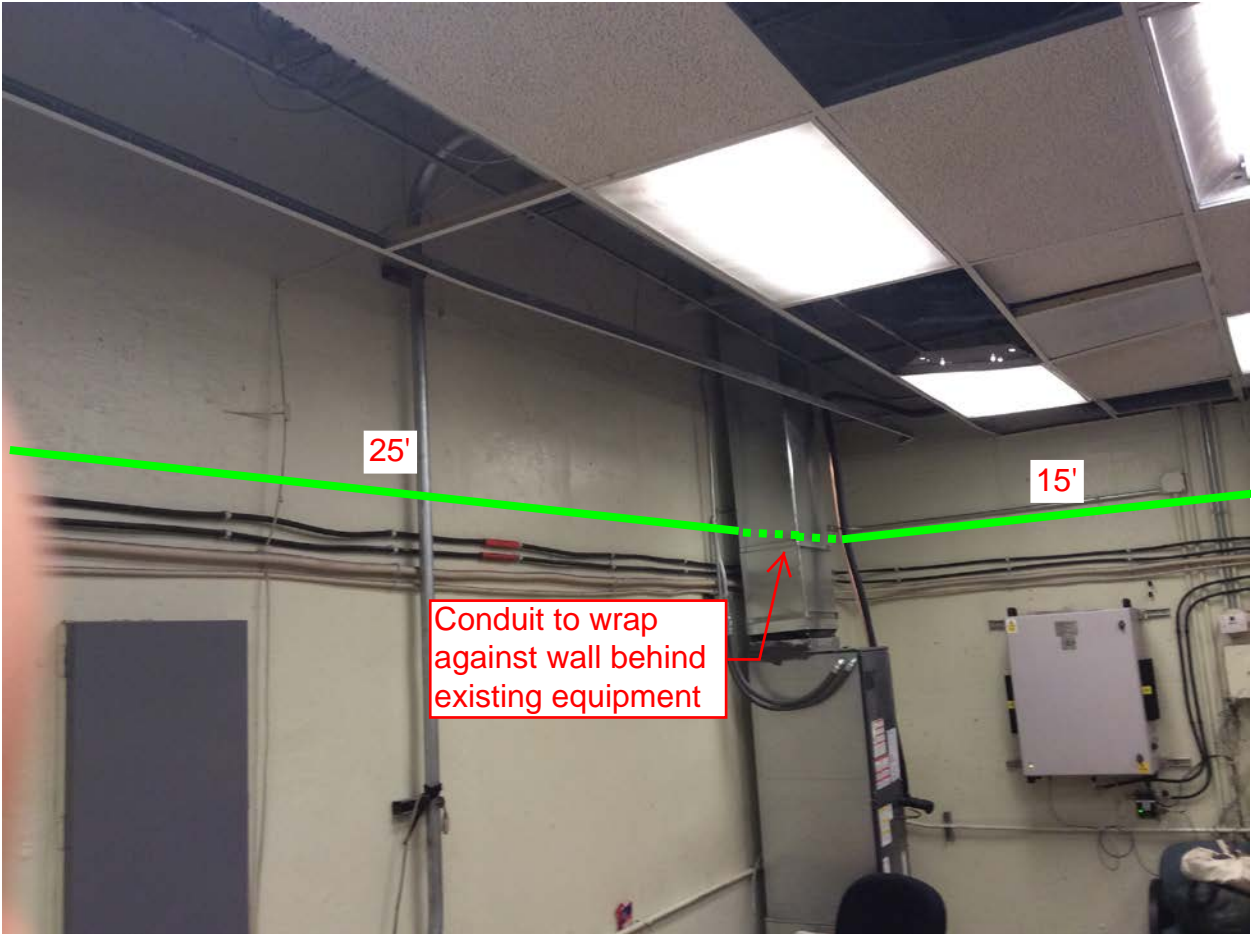
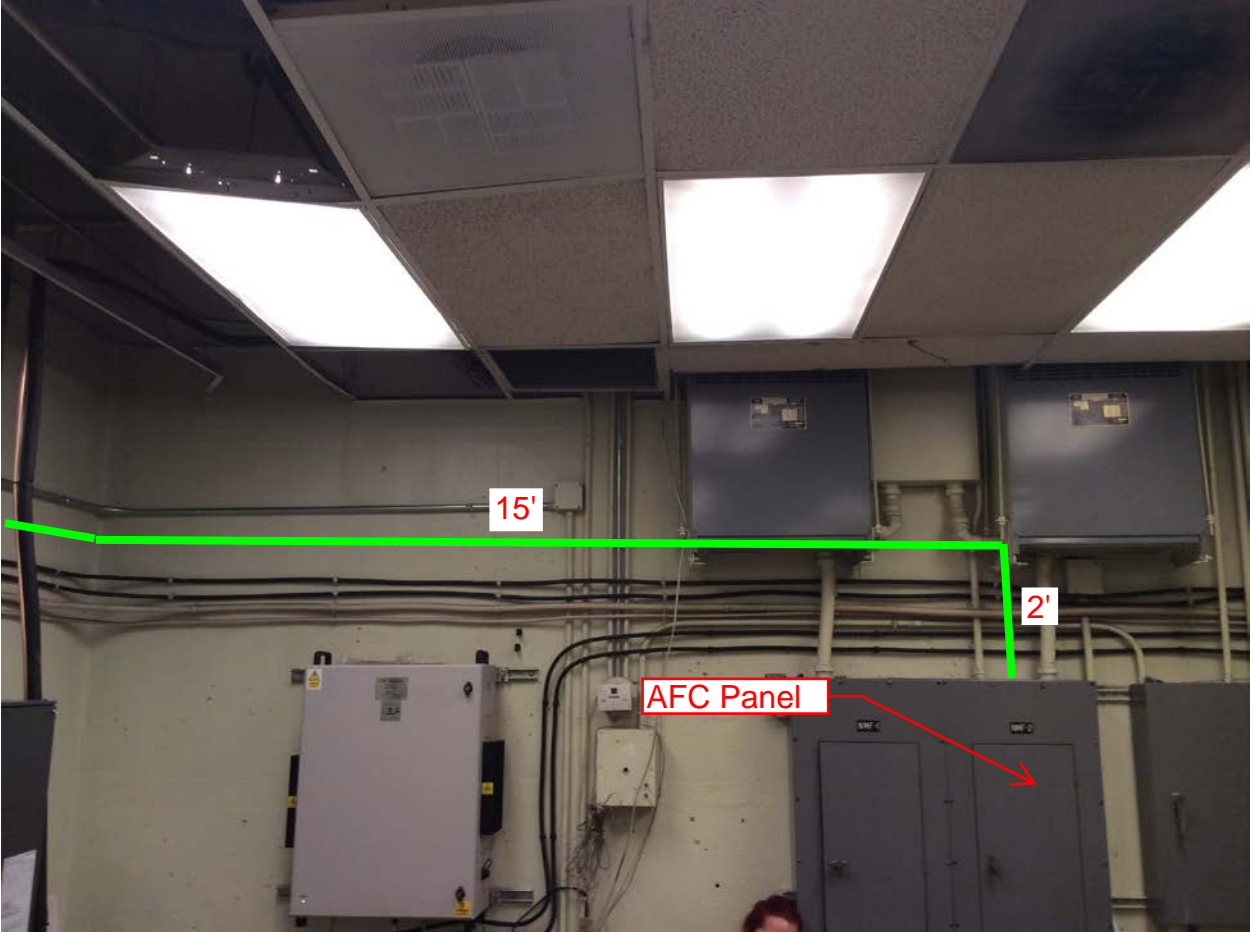


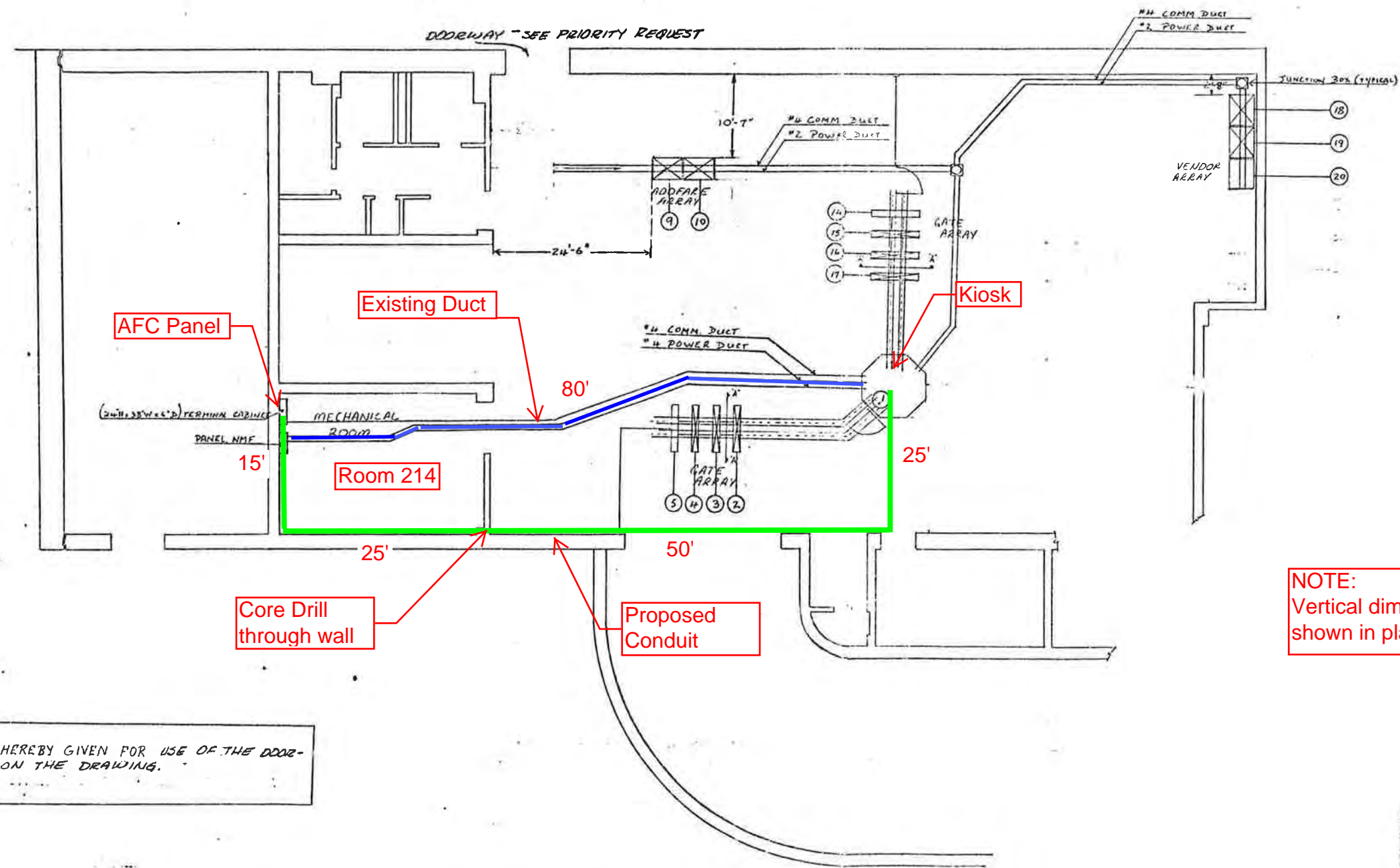
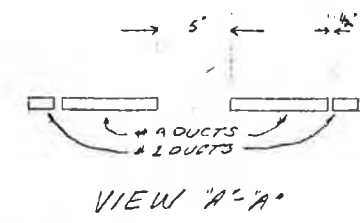
Photo #7 - Proposed conduit run connecting to AFC Panel inside Mechanical Room 214



NOTES:

1. ALL INFORMATION CONCERNING DUCTS AND CONDUITS IS BASED ON INFORMATION SUPPLIED TO CUBIC WESTERN DATA BY WATA.
2. TOTAL MACHINE INVENTORY IS DEPICTED ON THIS DRAWING
3. THE MINIMUM OPERATIONAL MACHINE INVENTORY IS REFERENCED ON THE DRAWING BY THE 'X' DRAWN THRU THE MACHINE
4. FOR AS BUILT CONDITIONS SEE SHEET 2
5. FOR REF DWGS SEE SUPPORT DOCUMENT PACKAGE FOR THIS MEZZANINE

REVISIONS		
DESCRIPTION	DATE	APVD
AS BUILT DRAWING REV A	5-10-77	2/25/77



NOTE:
Vertical dimensions for proposed conduit not shown in plan view. Refer to photographs.

PRIORITY REQUESTS ARE HEREBY GIVEN FOR USE OF THE DODGEWAY THAT IS DENOTED ON THE DRAWING.

1. INSTALLATION PLAN
(AS BUILT CONDITIONS)

CONTRACT NUMBER		CUBIC WESTERN DATA A subsidiary of Cubic Corporation 3650 KEARNY MESA ROAD • POST OFFICE BOX 97187 • SAN DIEGO, CA 92138	
DESIGN ACTIVITY APPROVAL	SCALE	DRAWING NUMBER	REV
APPROVED		752-0000	25
SHEET		OF	

Mezzanine Inspection Report (Scoping)

Date: 09/18/2014	Station Name: B04 Rhode Island Avenue	Mezzanine #: 026	Completed By: Mike Butler
------------------	---------------------------------------	------------------	---------------------------

Summary

Scoping of power/ communication ducts in Upper and Lower faregates completed; pull string installed in communication ducts. Scoping and pull string installation completed for power duct between Kiosk and AFC Panel. All ducts are not at capacity. A minor obstruction was found at the kiosk entrance to the lower faregate array - there appears to be mortar and debris blocking the entrance to one of the power ducts. However, this did not impact the scoping and pull string installation as there was an alternative parallel duct that had a clear pathway. Total power conductor run is approximately 95 feet between Kiosk and AFC Panel.

Scanning is not required at this mezzanine.

Scoping of Faregate Array(s)

Task	Yes/No	Notes
Communications Duct – Upper Faregate Array (4 faregates)		
Was video scoping completed for the entire duct run?	Yes	WMATA Rhode Island Upper Comm Video.avi
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	Duct is 4" wide and 1" deep with less than 10 wires inside.
Communications Duct - Lower Faregate Array (4 faregates)		
Was video scoping completed for the entire duct run?	Yes	WMATA Rhode Island Lower Comm Video.avi
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	Duct is 4" wide and 1" deep with less than 10 wires inside.
Power Duct - Upper Faregate Array (4 faregates)		
Was video scoping completed for the entire duct run?	Yes	WMATA Rhode Island Upper Power Left Video.avi
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	Duct is 4" wide and 1" deep with less than 10 wires inside.
Power Duct - Lower Faregate Array (4 faregates)		
Was video scoping completed for the entire duct run?	Yes	WMATA Rhode Island Power Left Video.avi
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	Minor obstruction was found at the kiosk entrance to the lower faregate array - there appears to be mortar and debris blocking the entrance to one of the power ducts. An alternate power duct with clear pathway was used.
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	Duct is 4" wide and 1" deep with less than 10 wires inside.


Scoping of Power Duct - Kiosk to AFC Panel		
Task	Yes/No	Notes
Kiosk to AFC Panel (Distance: 110')		
Was video scoping completed for the entire duct / conduit run?	Partially	Refer to "WMATA BrooklandLLeft Power duct Kiosk to AFC Video.avi" and "WMATA Brookland Right Power duct Kiosk to AFC Video.avi"
Was pull string installed?	No	
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	An obstruction, which appears to be a collapsed duct was found in the power duct at 40' from the Kiosk. The scoping showed that the duct also has extensive corrosion and is in bad condition.
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	N/A	6" walker duct with less than 15 wires
Observations / Issues / Next Steps		
<p>There were no hand holes found on the mezzanine floor related to the existing power duct run from the Kiosk to the AFC Panel.</p> <p>The proposed power duct run is approximately 65' from Kiosk to Room C101.</p> <p>The proposed conduit run is approximately 65' from Room C101 to AFC Panel (Fare Vend 2) in Room C106.</p>		
Sign Off		
	GFP Representative	WMATA PRGM
Name:	Mike Butler	
Signature:		
Date:	01/03/2015	

Photo # 1 – Existing and proposed duct run from Kiosk (Angle 1).

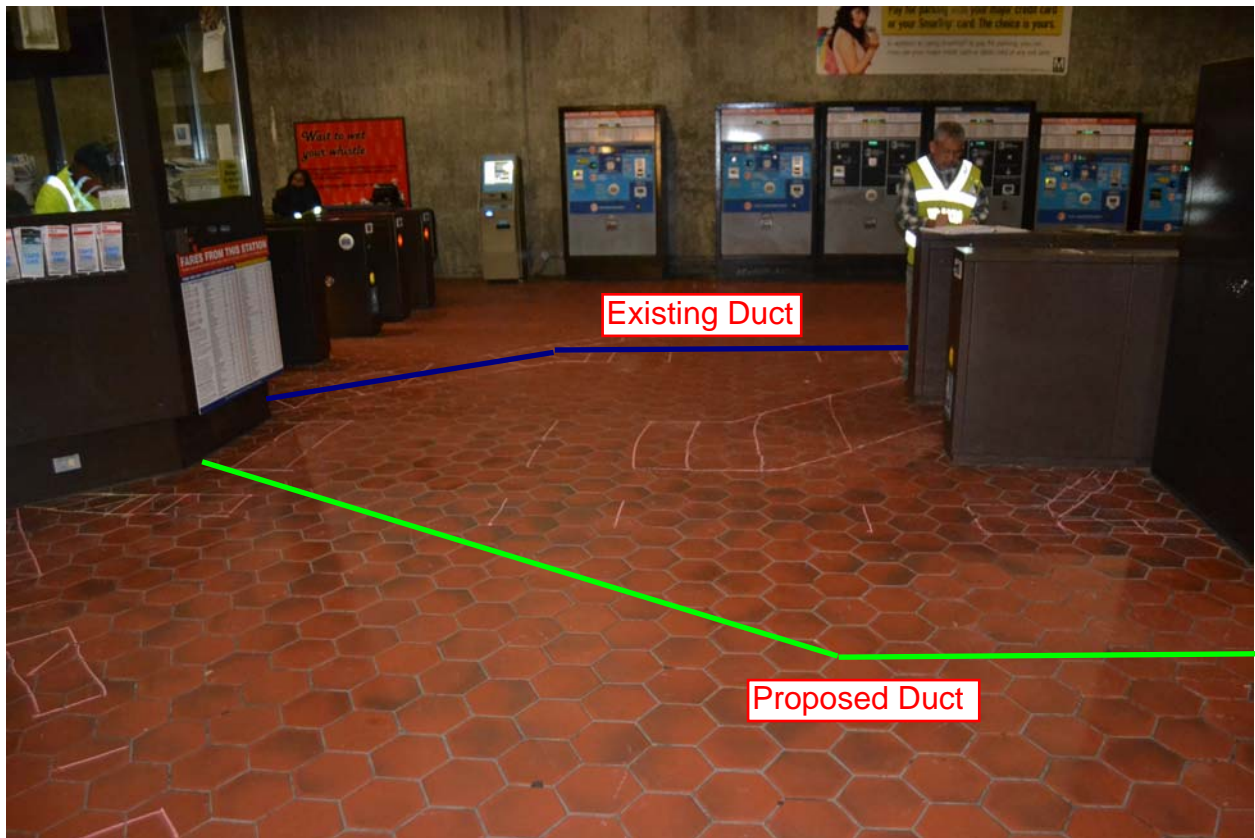


Photo # 2 – Existing and proposed duct run from Kiosk (Angle 2).

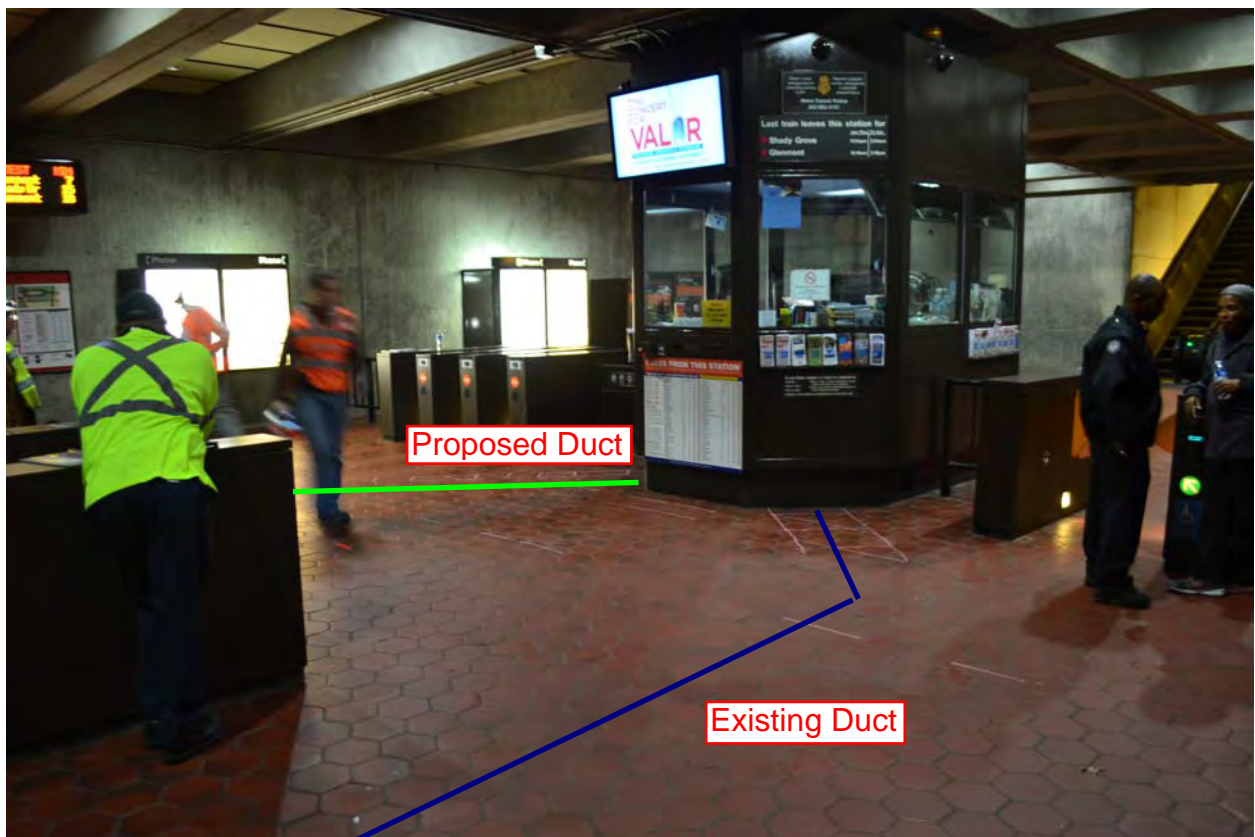


Photo # 3 – Continuation of existing and proposed duct run from Kiosk (Angle 1).

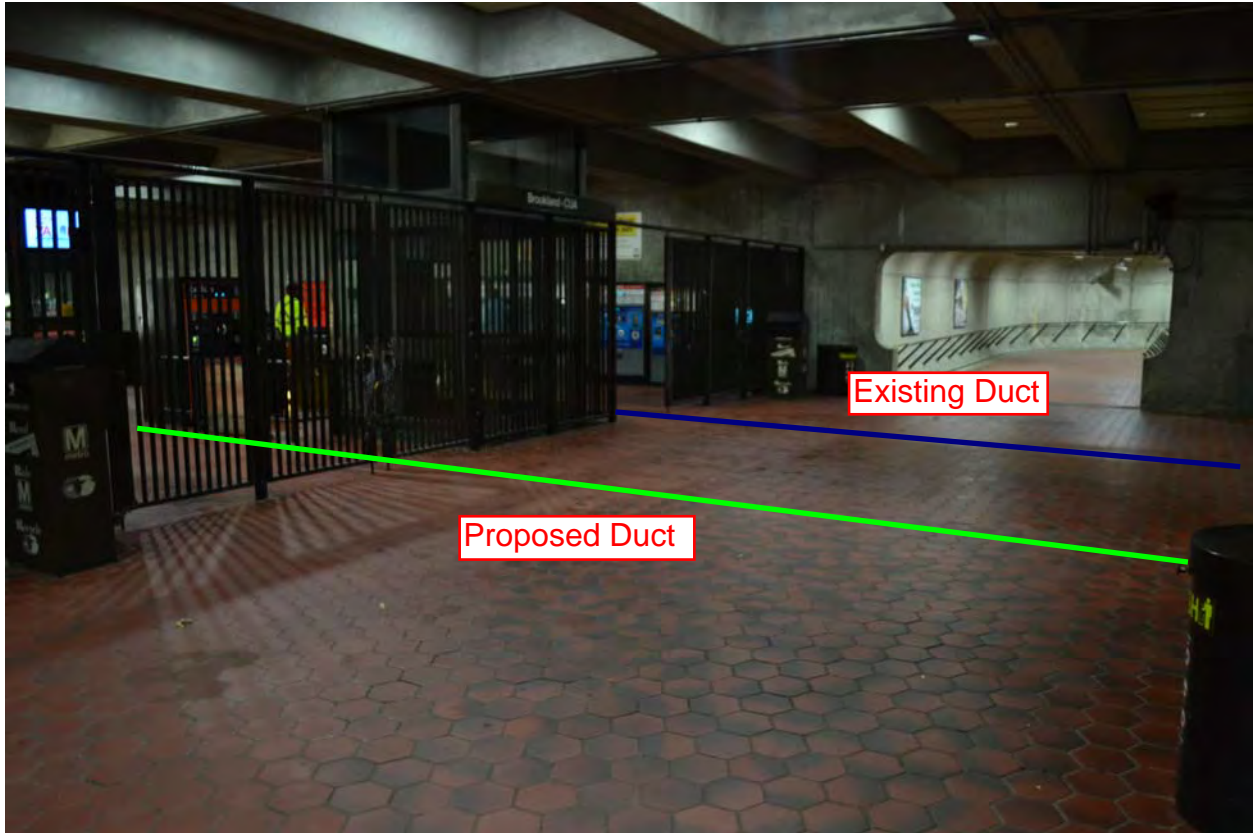


Photo # 4– Continuation of proposed duct run from Kiosk (Angle 2)



Photo # 5 – Proposed duct approach to back rooms



Proposed Handhole in mezzanine floor, core drill through wall (under floor) and transition to conduit

Proposed Duct

Photo #6 - Proposed conduit from Elevator Machine Room C101

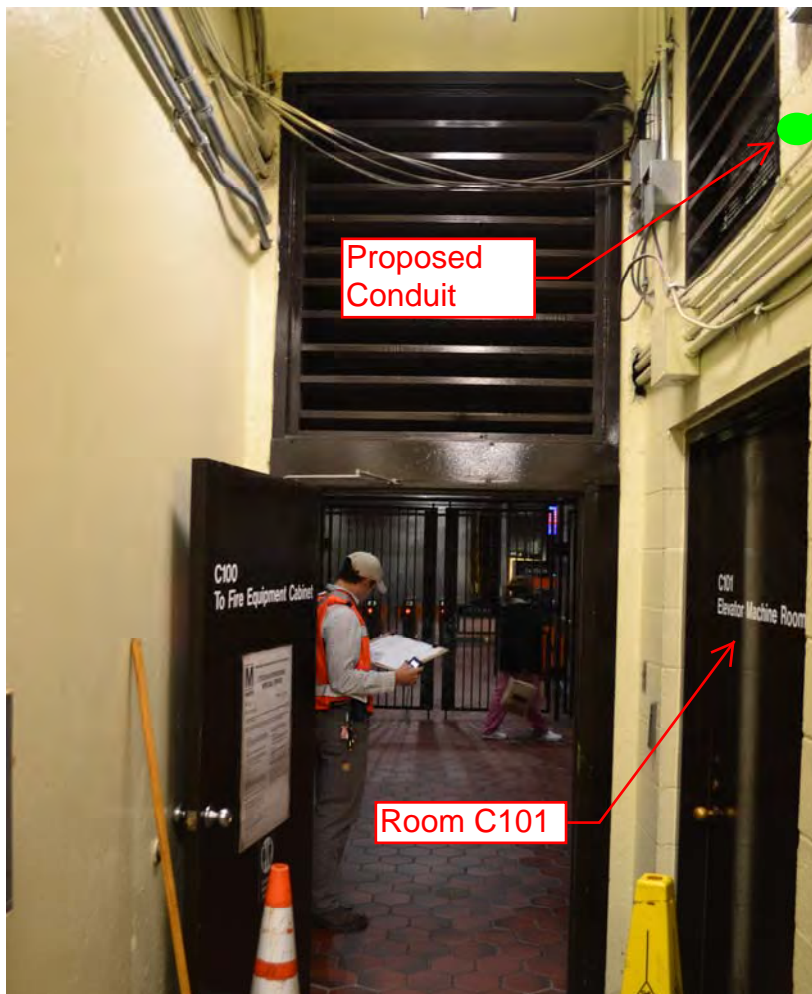
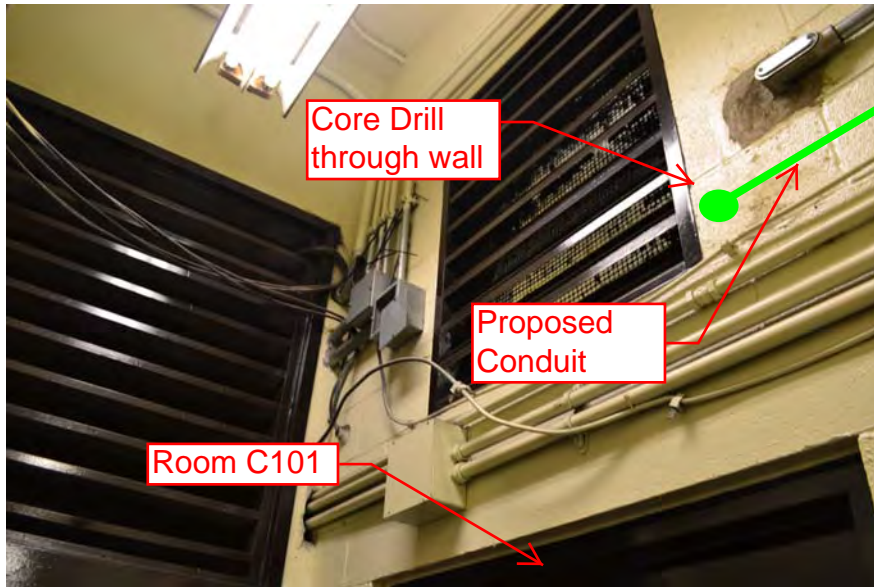
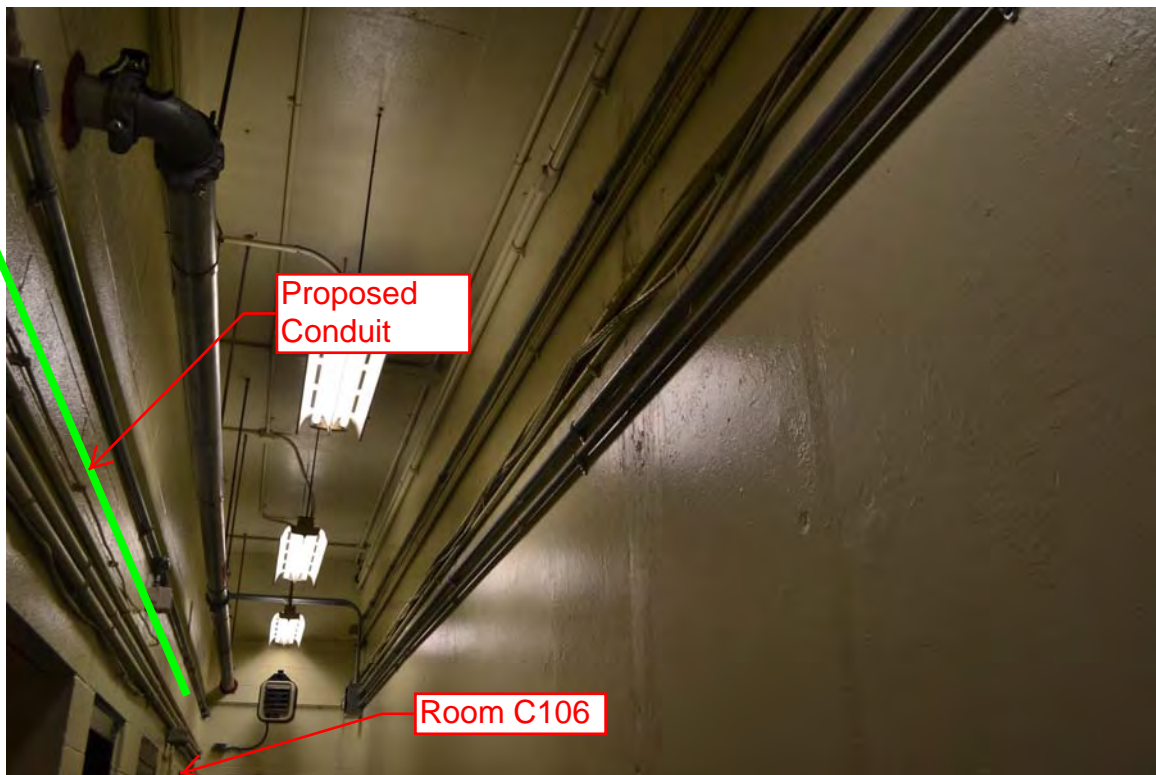
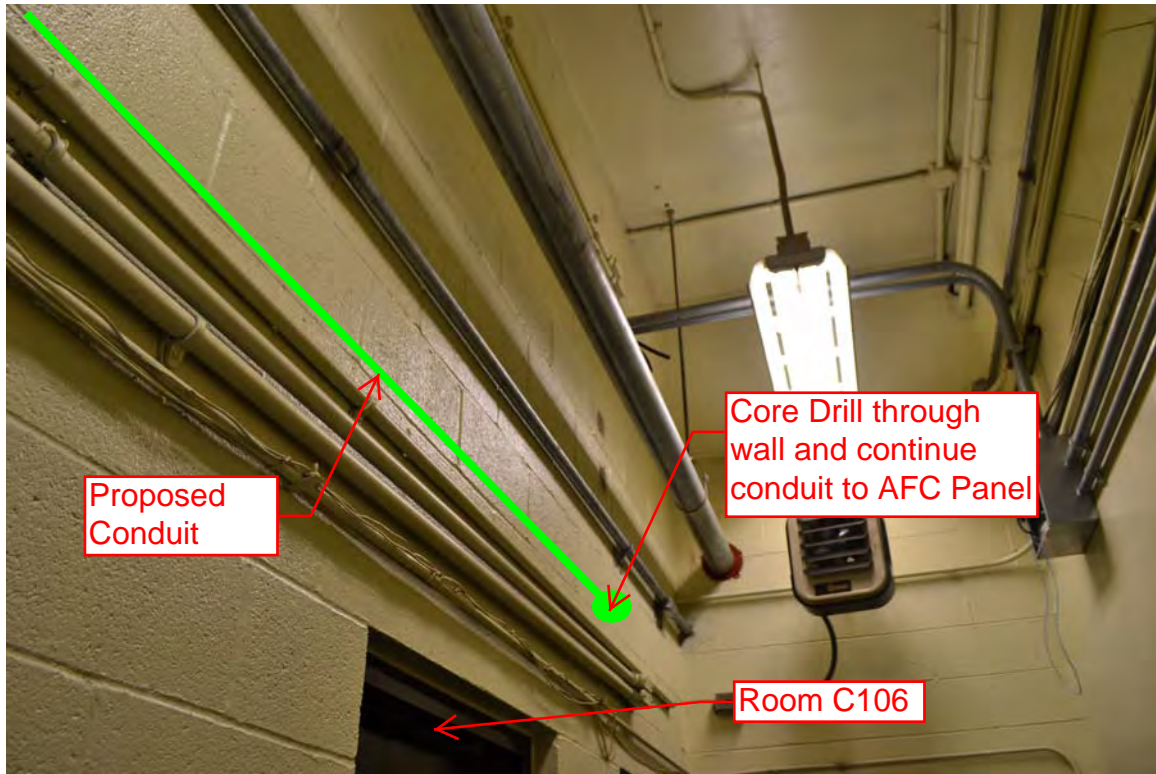


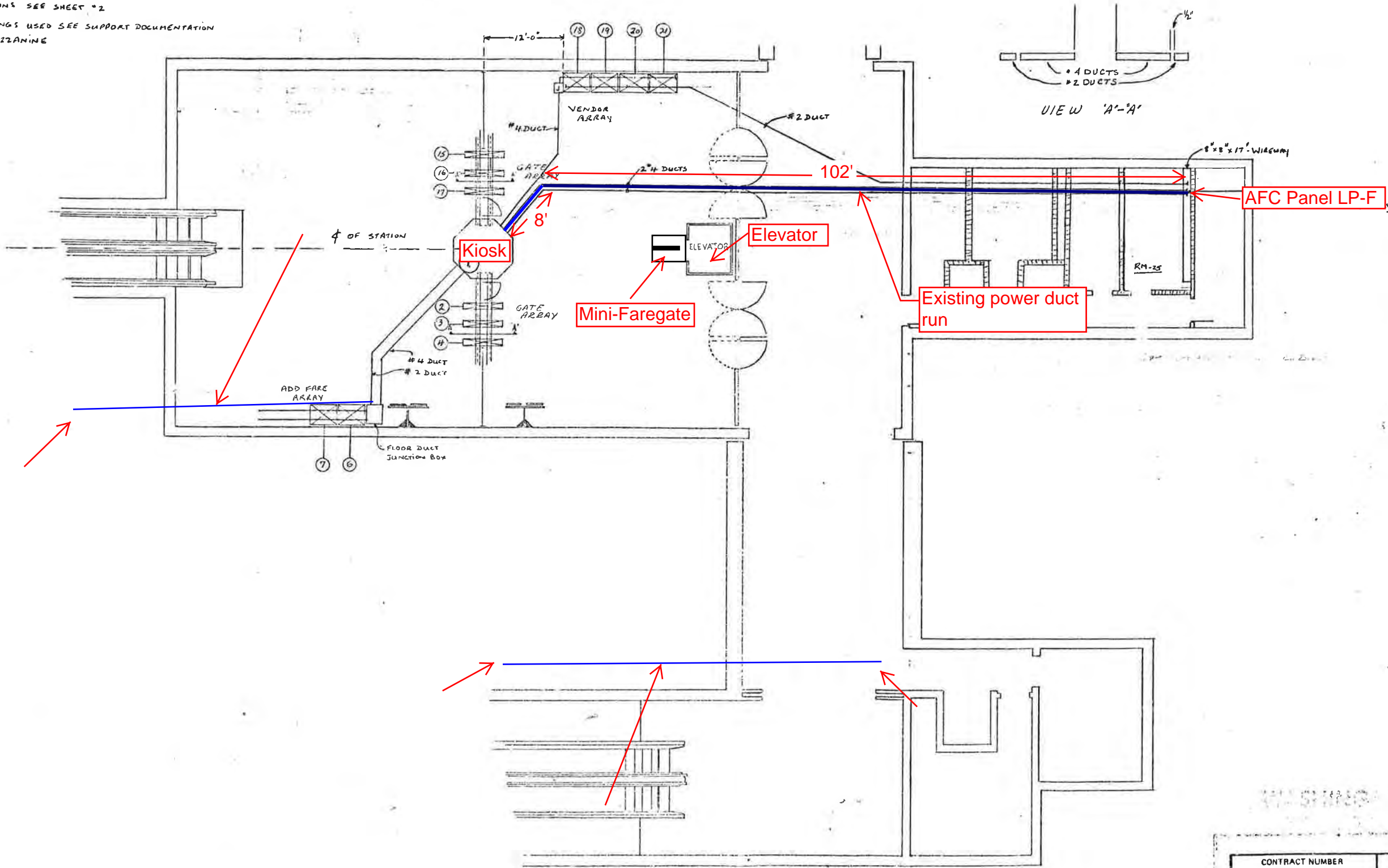
Photo #7 - Proposed conduit along hallway leading to Electrical Equipment Room C106



NOTES:

1. ALL INFORMATION CONCERNING DUCTS AND CONDUITS IS BASED ON INFORMATION SUPPLIED TO CUBIC WESTERN DATA BY WMATA.
2. TOTAL MACHINE INVENTORY IS DEPICTED ON THIS DRAWING. THE MINIMUM OPERATIONAL MACHINE INVENTORY IS REFERENCED ON THIS DRAWING BY THE X DRAWN THRU THE MACHINE.
3. FOR AS BUILT CONDITIONS SEE SHEET #2.
5. FOR REFERENCE DRAWINGS USED SEE SUPPORT DOCUMENTATION PACKAGE FOR THIS MEZZANINE.

REVISIONS		
DESCRIPTION	DATE	APVD



1- INSTALLATION PLAN

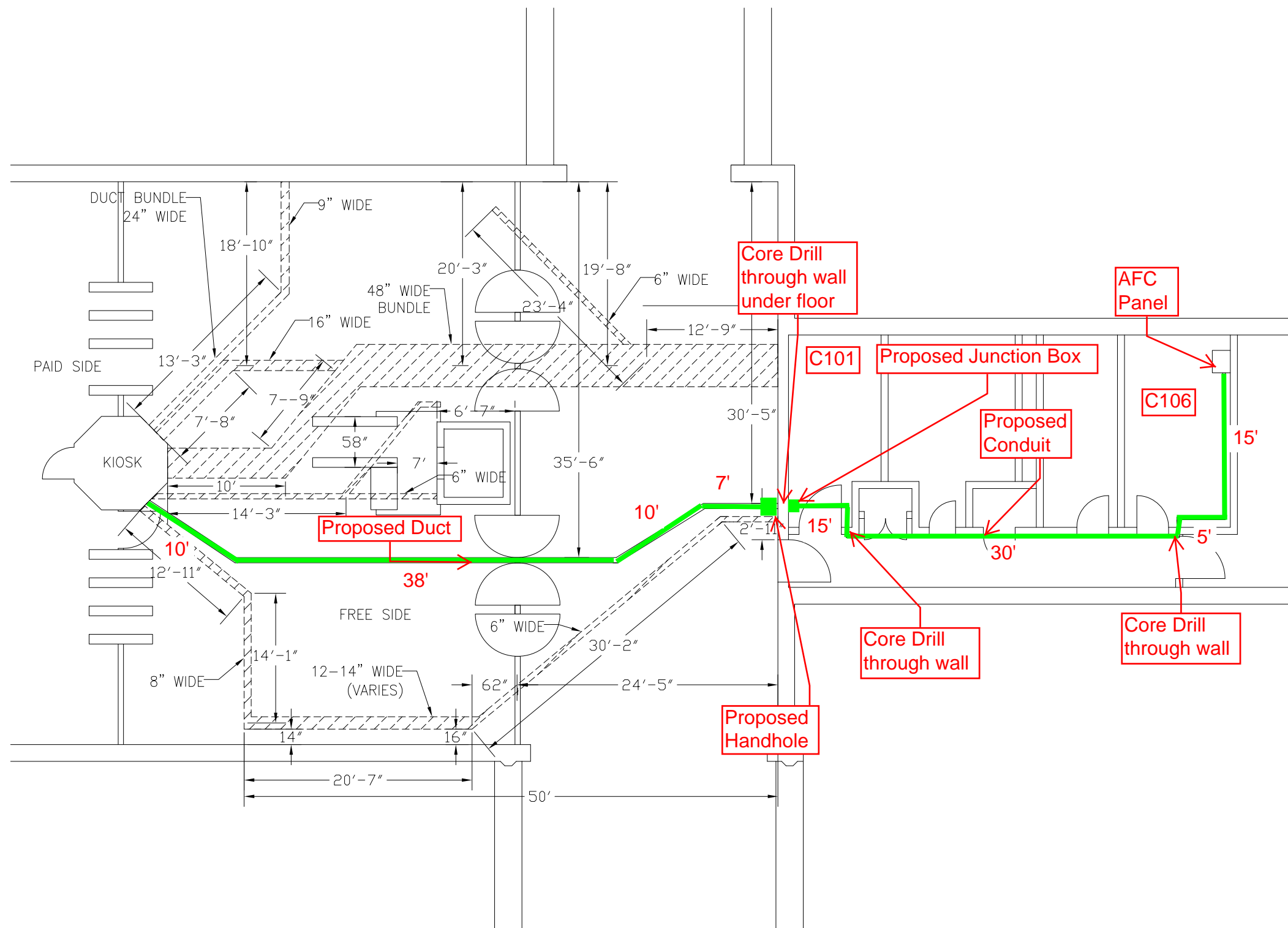
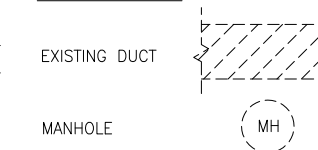
REFERENCE DRAWINGS USED
 BECHTEL REF. SK.#
 BECHTEL REF. DWG.#
 CWD REF. DWG.#

CONTRACT NUMBER 22007A		CUBIC WESTERN DATA <small>A subsidiary of Cubic Corporation 5650 KEARNY MESA ROAD • POST OFFICE BOX 80187 • SAN DIEGO, CA 92138</small>	
REL _____ ENGRG _____ DESIGN _____ CHECK _____ DRAWN _____		BROOKLAND STATION AFC MACHINES	
DESIGN ACTIVITY APPROVAL	SIZE 11	DRAWING NUMBER 926-0401	REV 27
APPROVED			

PLAN NOTES:

1. DIMENSIONS ARE IN FEET AND INCHES.
2. DIMENSIONS ARE FOR REFERENCE ONLY.
3. EXISTING IN-FLOOR DUCTS/CONDUITS WERE IDENTIFIED USING A PORTABLE GPR SCANNING DEVICE.
4. THE SCANNING COVERAGE IS LIMITED TO THE MEZZANINE FLOOR ONLY.
5. GPR SCANNING HAS THE FOLLOWING LIMITATIONS: (i) 12 INCHES VISIBLE SCANNING DEPTH; (ii) VISIBILITY BEYOND CONGESTED OR NEAR SURFACE REINFORCEMENT LAYERS; (iii) DETECTION OF PVC AND OTHER NON-METALLIC OBJECTS (iv) DETERMINATION OF SIZE AND EXTENTS OF SUBSURFACE ANOMALIES SUCH AS SLAB VOIDS OR REBAR SIZES; AND (v) VISIBILITY WHEN VARIABLE MOISTURE CONDITIONS EXIST IN THE SUBSTRATE.

LEGEND:



BROOKLAND CUA STATION
E-100 NOT TO SCALE

CONTRACT NO.
XXXXXX

DESIGNED	C. LOOSE	11-14	REFERENCE DRAWINGS		REVISIONS		
			NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION
DRAWN	C. LOOSE	11-14					
CHECKED	M. BUTLER	11-14					
APPROVED							

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY
DEPARTMENT OF TRANSIT INFRASTRUCTURE AND ENGINEERING SERVICES
OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM

GFP A Gannett Fleming/Parsons JOINT VENTURE

APPROVED _____ SUBMITTED _____ PROJECT MANAGER

15-NEPP-01
IN - FLOOR DUCT INSPECTIONS
B05 BROOKLAND CUA (M027)
PROPOSED ELECTRICAL DUCT PATH

SCALE: NOT TO SCALE DRAWING NO.: B05-E-100 XXX

Mezzanine Inspection Report

Date: 10/16/14	Station Name: B05 Brookland-CUA	Mezzanine #: 027	Completed By: Mike Butler
-----------------------	--	-------------------------	----------------------------------

Summary

Video scoping and pull string installation was only partially completed for this mezzanine. Video scoping and pull string installation was completed for communication ducts in Upper and Lower Faregate Arrays; respective power ducts were also video scoped. It should be noted that extensive rust and corrosion was found in upper/lower faregate ducts, however there appears to be sufficient capacity for new wires. Contractor was unable to install pull string in power duct between Kiosk and AFC Panel due to an obstruction found at 40' from kiosk entrance; the obstruction was recorded by video scoping.

Scanning of the mezzanine floor was completed to determine the existing layout of in-floor ducts and a proposed power duct / conduit run between the Kiosk and AFC Panel. A proposed power duct, that will run along a different path than the original duct run due to space constraints (see drawing), is proposed from the Kiosk to just outside Room C101 (Elevator Machine room). A proposed handhole is located in the mezzanine floor just outside Room C101. The duct will transition to conduit inside Room C101 via a junction box. The conduit will proceed up the west wall of Room C101 and across the ceiling before exiting the room through the wall next to door (wall to be core drilled). The conduit will continue along the hallway until it reaches the entrance to Room C106 (see photo #6 and7), where it will then pass through the wall (wall to be core drilled) and proceed to the AFC Panel.

Scoping of Faregate Array(s)

Task	Yes/No	Notes
Communications Duct – Upper Faregate Array (4 faregates)		
Was video scoping completed for the entire duct run?	Yes	Refer to WMATA Brookland Upper Comm Fairgate Video.avi"
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	Extensive duct corrosion evident.
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	4" walker duct with less than 10 wires
Communications Duct - Lower Faregate Array (4 faregates)		
Was video scoping completed for the entire duct run?	Yes	Refer to WMATA Brookland Lower Comm FairgateVVideo.avi "
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	Extensive duct corrosion evident.
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	4" walker duct with less than 10 wires
Power Duct - Upper Faregate Array (4 faregates)		
Was video scoping completed for the entire duct run?	Yes	Refer to WMATA Brookland Upper Power Fairgate Video.avi "
Were there any obstructions or blockages? Provide details of type and specific location.	No	Extensive duct corrosion evident.
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	6" walker duct with less than 12 wires
Power Duct - Lower Faregate Array (4 faregates)		
Was video scoping completed for the entire duct run?	Yes	Refer to WMATA Brookland Lower Power Fairgate Video.avi "
Were there any obstructions or blockages? Provide details of type and specific location.	No	Extensive duct corrosion evident.
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	6" walker duct with less than 12 wires


Scoping of Power Duct - Kiosk to AFC Panel		
Task	Yes/No	Notes
Kiosk to AFC Panel (Distance: 110')		
Was video scoping completed for the entire duct / conduit run?	Partially	Refer to "WMATA BrooklandLLeft Power duct Kiosk to AFC Video.avi" and "WMATA Brookland Right Power duct Kiosk to AFC Video.avi"
Was pull string installed?	No	
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	An obstruction, which appears to be a collapsed duct was found in the power duct at 40' from the Kiosk. The scoping showed that the duct also has extensive corrosion and is in bad condition.
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	N/A	6" walker duct with less than 15 wires
Observations / Issues / Next Steps		
<p>There were no hand holes found on the mezzanine floor related to the existing power duct run from the Kiosk to the AFC Panel.</p> <p>The proposed power duct run is approximately 65' from Kiosk to Room C101.</p> <p>The proposed conduit run is approximately 65' from Room C101 to AFC Panel (Fare Vend 2) in Room C106.</p>		
Sign Off		
	GFP Representative	WMATA PRGM
Name:	Mike Butler	
Signature:		
Date:	01/03/2015	

Photo # 1 – Existing and proposed duct run from Kiosk (Angle 1).

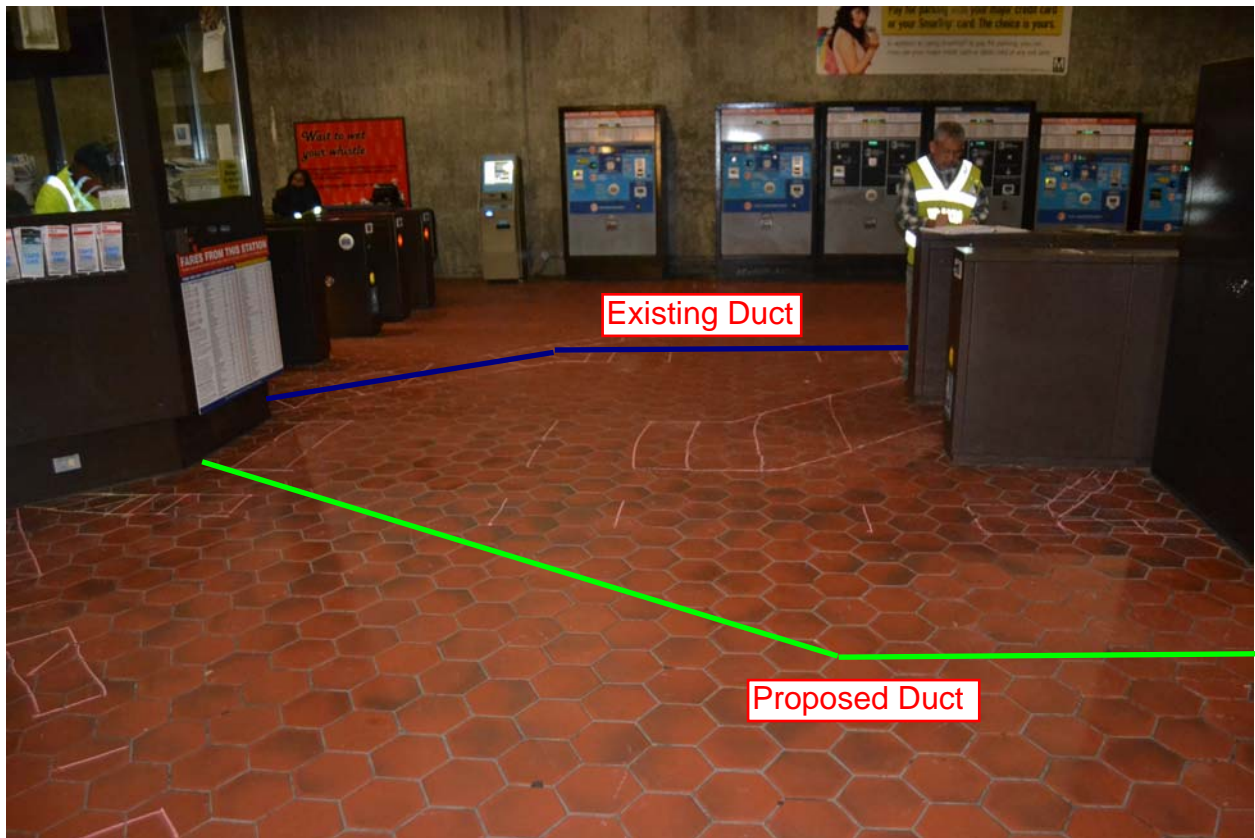


Photo # 2 – Existing and proposed duct run from Kiosk (Angle 2).

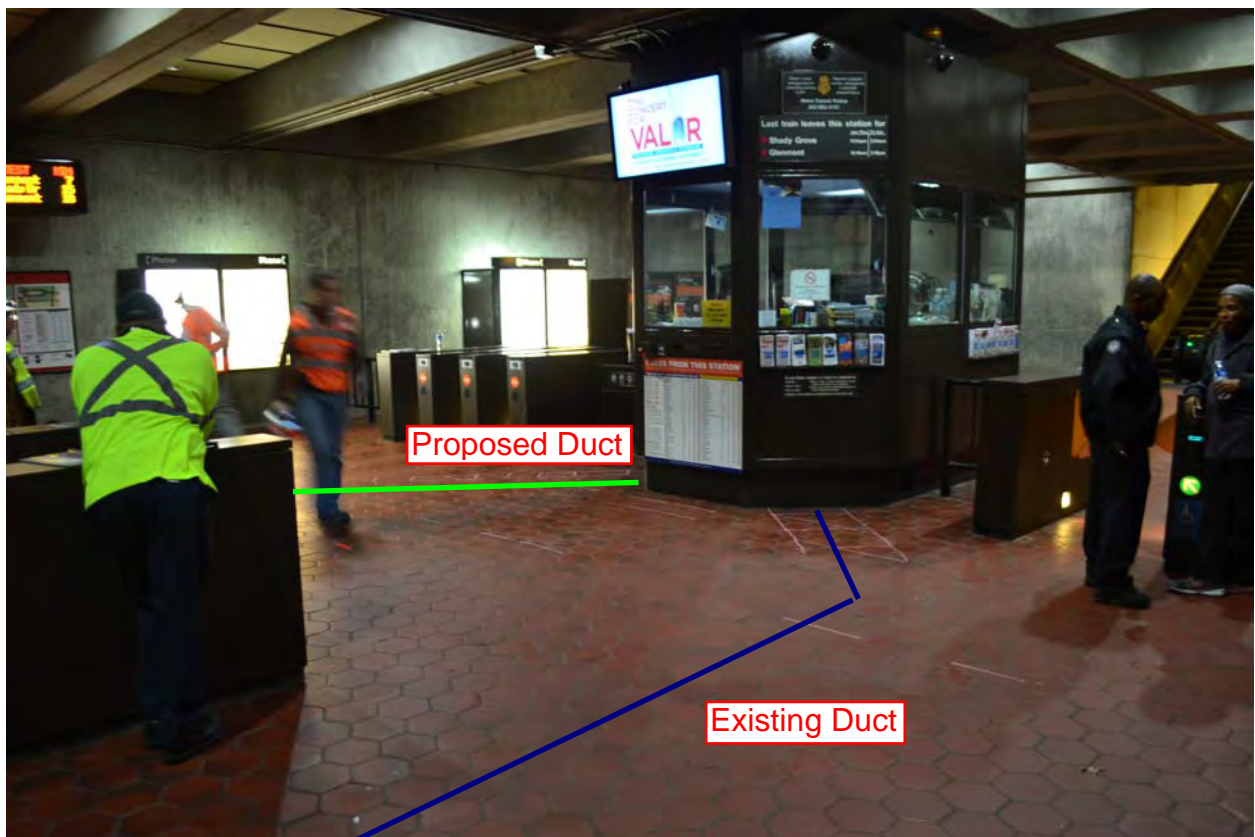


Photo # 3 – Continuation of existing and proposed duct run from Kiosk (Angle 1).

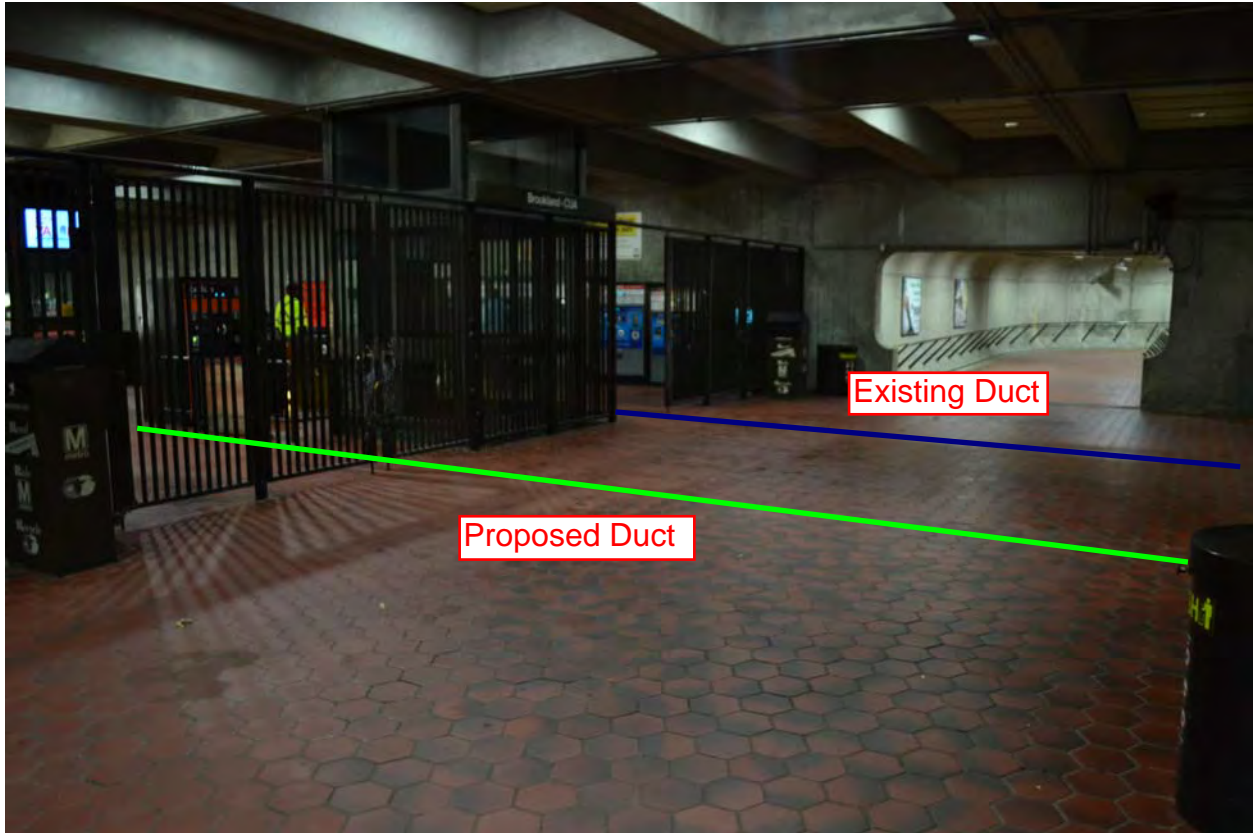


Photo # 4– Continuation of proposed duct run from Kiosk (Angle 2)



Photo # 5 – Proposed duct approach to back rooms



Photo #6 - Proposed conduit from Elevator Machine Room C101

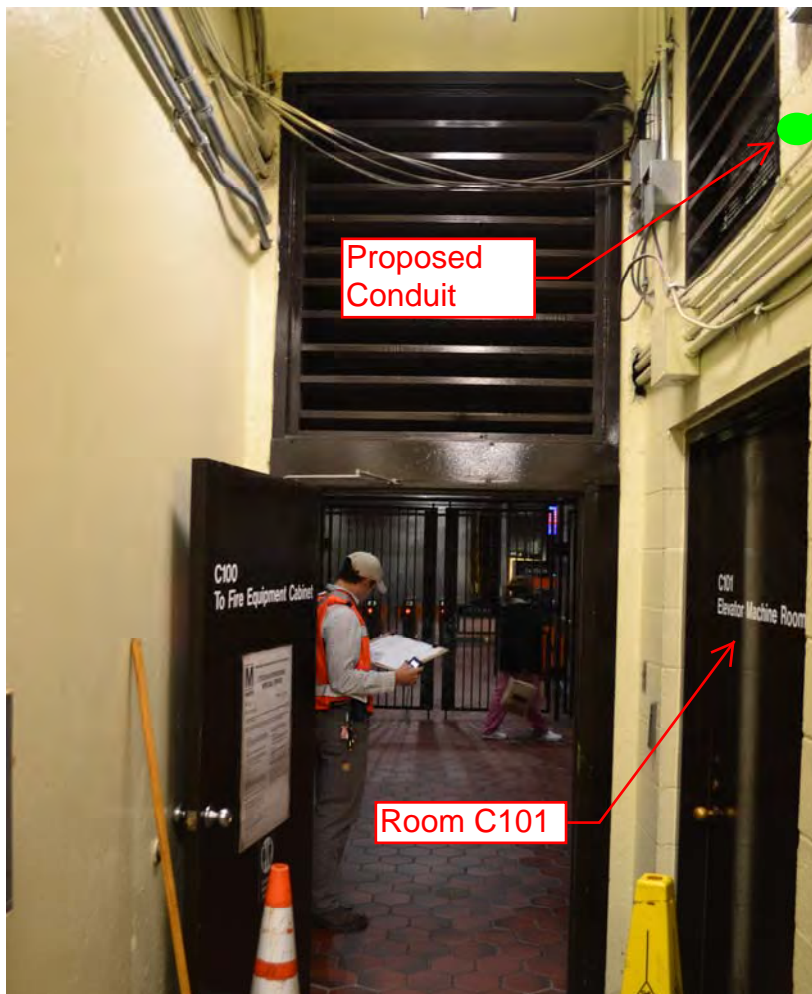
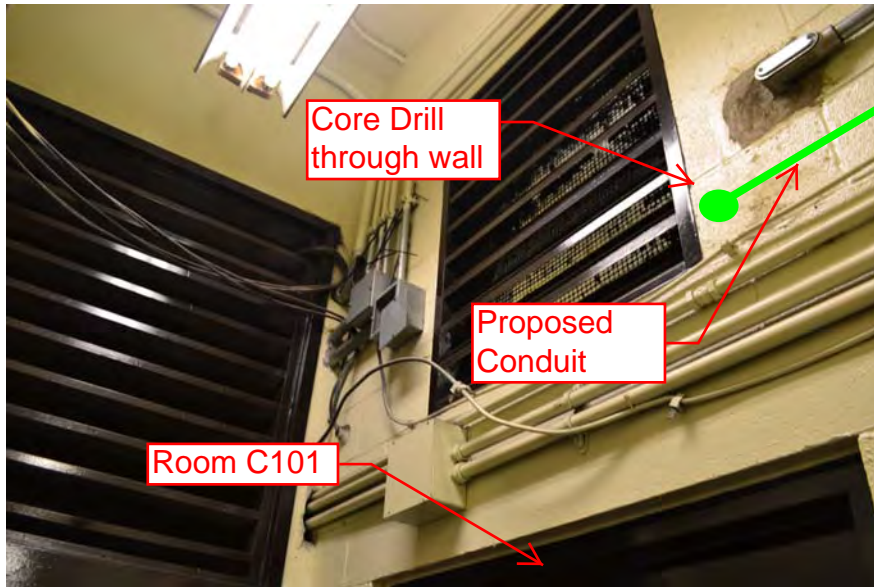
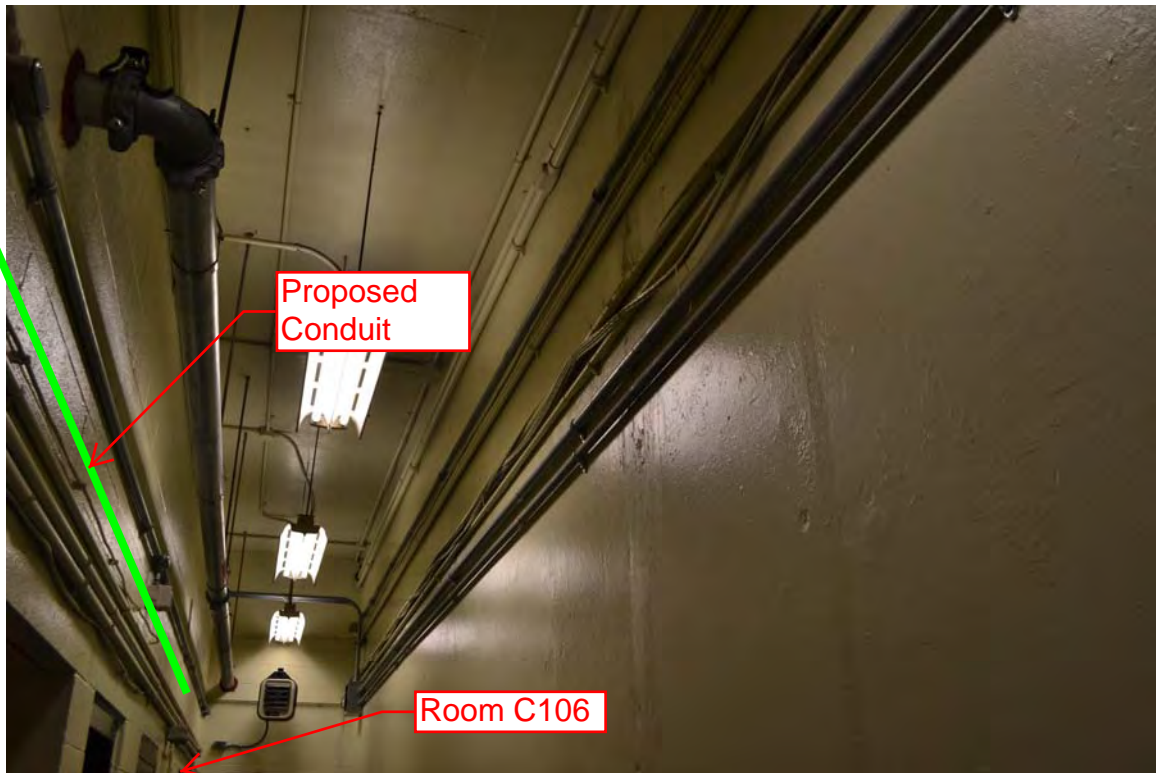
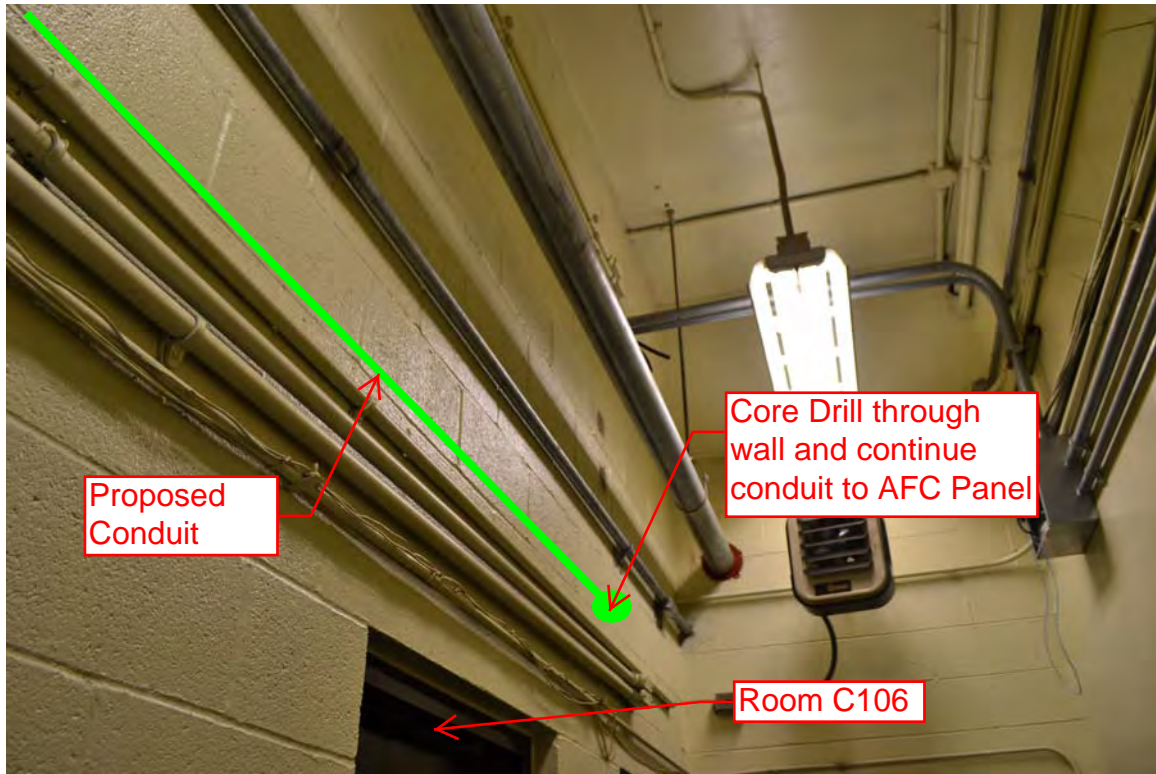


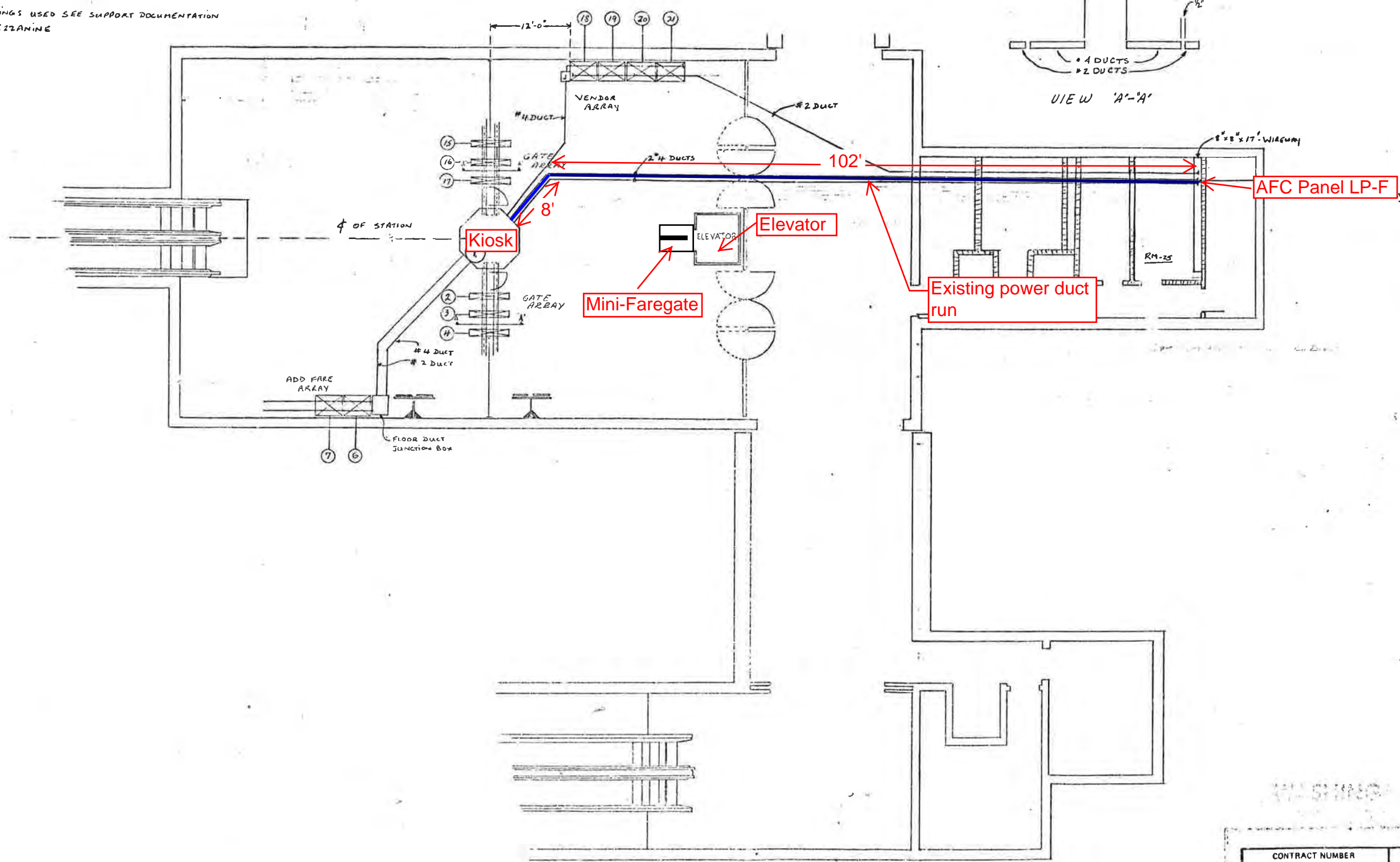
Photo #7 - Proposed conduit along hallway leading to Electrical Equipment Room C106



NOTES:

1. ALL INFORMATION CONCERNING DUCTS AND CONDUITS IS BASED ON INFORMATION SUPPLIED TO CUBIC WESTERN DATA BY WMATA.
2. TOTAL MACHINE INVENTORY IS DEPICTED ON THIS DRAWING. THE MINIMUM OPERATIONAL MACHINE INVENTORY IS REFERENCED ON THIS DRAWING BY THE X DRAWN THRU THE MACHINE.
3. FOR AS BUILT CONDITIONS SEE SHEET #2.
5. FOR REFERENCE DRAWINGS USED SEE SUPPORT DOCUMENTATION PACKAGE FOR THIS MEZZANINE.

REVISIONS		
DESCRIPTION	DATE	APVD



1- INSTALLATION PLAN

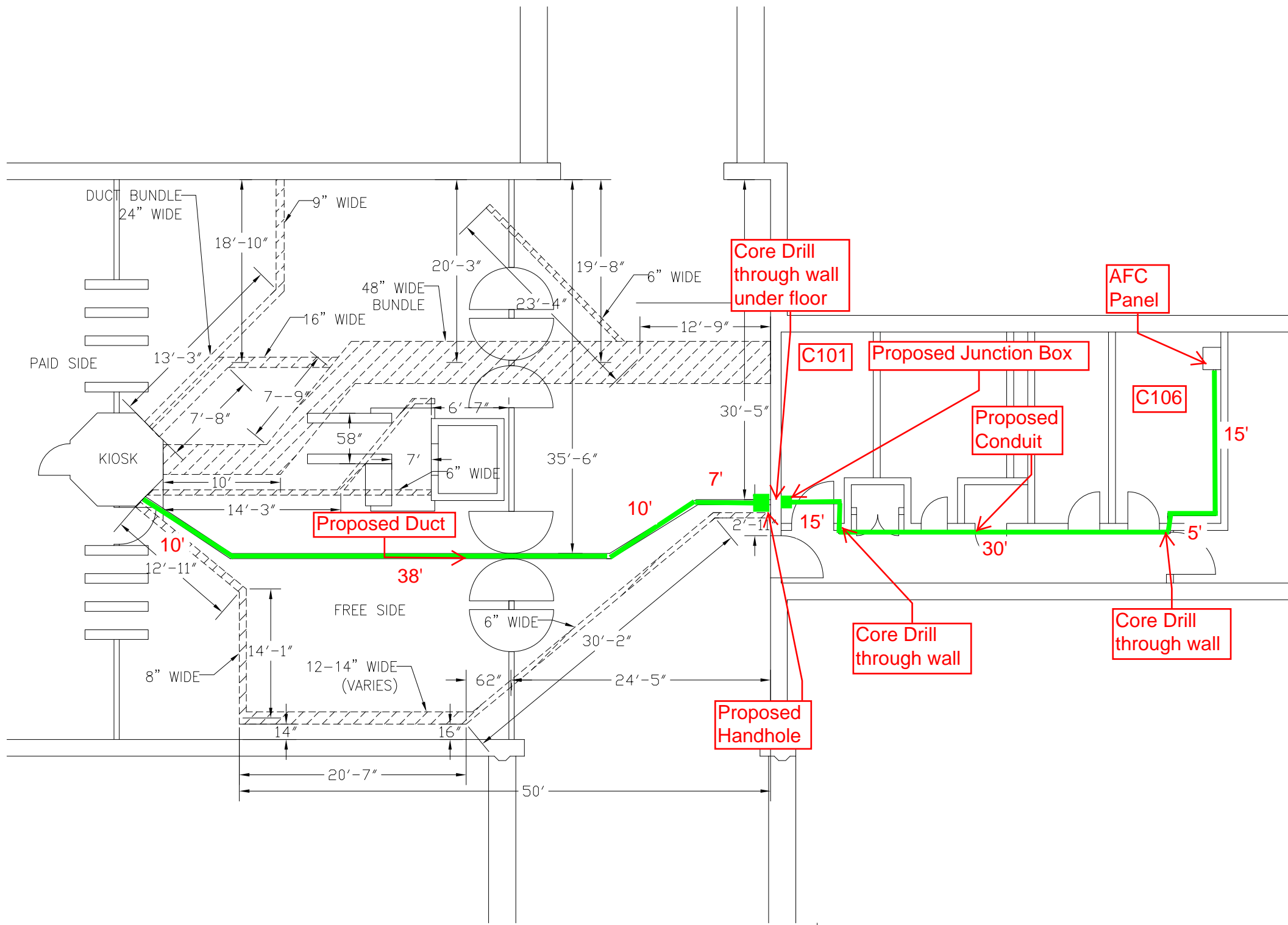
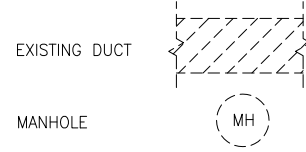
REFERENCE DRAWINGS USED
 BECHTEL REF. SK.#
 BECHTEL REF. DWG.#
 CWD REF. DWG.#

CONTRACT NUMBER 22007A		CUBIC WESTERN DATA <small>A Subsidiary of Cubic Corporation</small> <small>5650 KEARNY MESA ROAD • POST OFFICE BOX 90187 • SAN DIEGO, CA 92138</small>	
REL _____ ENGRG _____ DESIGN _____ CHECK _____ DRAWN _____		BROOKLAND STATION AFC MACHINES (27)	
DESIGN ACTIVITY APPROVAL	SIZE 11	DRAWING NUMBER 926-0401	REV
APPROVED			

PLAN NOTES:

1. DIMENSIONS ARE IN FEET AND INCHES.
2. DIMENSIONS ARE FOR REFERENCE ONLY.
3. EXISTING IN-FLOOR DUCTS/CONDUITS WERE IDENTIFIED USING A PORTABLE GPR SCANNING DEVICE.
4. THE SCANNING COVERAGE IS LIMITED TO THE MEZZANINE FLOOR ONLY.
5. GPR SCANNING HAS THE FOLLOWING LIMITATIONS: (i) 12 INCHES VISIBLE SCANNING DEPTH; (ii) VISIBILITY BEYOND CONGESTED OR NEAR SURFACE REINFORCEMENT LAYERS; (iii) DETECTION OF PVC AND OTHER NON-METALLIC OBJECTS (iv) DETERMINATION OF SIZE AND EXTENTS OF SUBSURFACE ANOMALIES SUCH AS SLAB VOIDS OR REBAR SIZES; AND (v) VISIBILITY WHEN VARIABLE MOISTURE CONDITIONS EXIST IN THE SUBSTRATE.

LEGEND:



BROOKLAND CUA STATION
E-100 NOT TO SCALE

CONTRACT NO.
XXXXXX

DESIGNED	C. LOOSE	11-14
DRAWN	C. LOOSE	11-14
CHECKED	M. BUTLER	11-14
APPROVED		

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY
DEPARTMENT OF TRANSIT INFRASTRUCTURE AND ENGINEERING SERVICES
OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM

GFP A Gannett Fleming/Parsons JOINT VENTURE

APPROVED _____ SUBMITTED _____
PROJECT MANAGER

15-NEPP-01
IN - FLOOR DUCT INSPECTIONS
B05 BROOKLAND CUA (M027)
PROPOSED ELECTRICAL DUCT PATH

SCALE: NOT TO SCALE
DRAWING NO.: B05-E-100
XXX

Mezzanine Inspection Report

Date: 09/17/14	Station Name: B06 Fort Totten	Mezzanine #: 026	Completed By: Mike Butler
----------------	-------------------------------	------------------	---------------------------


Summary

Overall, the walker ducts at this mezzanine are in poor condition due to extensive corrosion caused by water intrusion. Collapses were found both in both the faregate communication and power ducts and the power duct between the Kiosk and AFC Panel. Pull string could not be installed in faregate communication ducts due to collapses and inaccessibility issues. A pull string was installed in the power duct between the Kiosk and Handhole by utilizing an existing pull string, however it is not advisable to re-use this duct as there were multiple collapses found during video scoping.

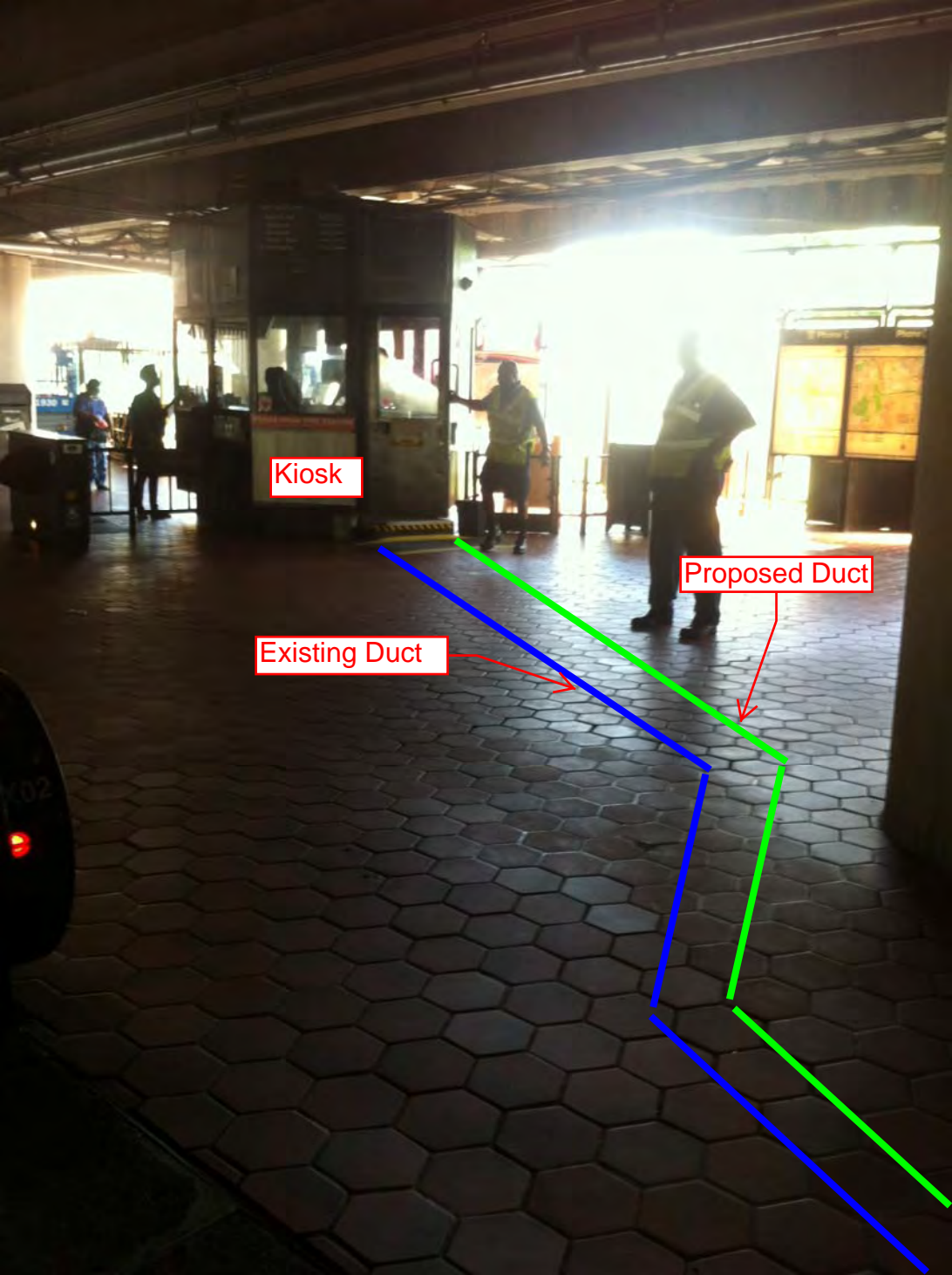
Scanning of the mezzanine floor was completed to determine layout of existing in-floor ducts and a proposed duct / conduit route. The attached drawing shows the proposed duct / conduit route, which comprises a 150' duct run from the Kiosk to backrooms (including two handholes) followed by a transition to an overhead conduit running for 10' through a partition wall and then into AFC Panel.

Scoping of Faregate Array(s)

Task	Yes/No	Notes
Communications Duct – Upper Faregate Array (5 faregates)		
Was video scoping completed for the entire duct run?	No	Array could not be reached; only accessible through lower faregate array ducts.
Were pull strings installed at all faregates in the array?	No	
Were there any obstructions or blockages? Provide details of type and specific location.	N/A	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	N/A	
Communications Duct - Lower Faregate Array (4 faregates)		
Was video scoping completed for the entire duct run?	Partially	
Were pull strings installed at all faregates in the array?	No	
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	Left duct is collapsed at 2 feet from kiosk; right duct has heavy debris after first faregate.
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	N/A	4" walker duct with less than 10 wires
Power Duct - Upper Faregate Array (5 faregates)		
Was video scoping completed for the entire duct run?	No	Array could not be reached; only accessible through lower faregate array ducts.
Were there any obstructions or blockages? Provide details of type and specific location.	N/A	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	N/A	
Power Duct - Lower Faregate Array (4 faregates)		
Was video scoping completed for the entire duct run?	Partially	
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	Left duct is collapsed at duct entrance; right duct is collapsed at 4 feet from kiosk.
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	N/A	6" walker duct with less than 12 wires

Scoping of Power Duct - Kiosk to AFC Panel		
Task	Yes/No	Notes
Kiosk to Handhole (Distance: 140')		
Was video scoping completed for the entire duct / conduit run?	Partially	Not possible due to collapsed duct
Was pull string installed?	Yes	Existing pull string used to install new pull string, however it is not advisable to install new wires due to compromised condition of existing duct and limited available capacity.
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	Right duct: Obstruction at 50 feet from handhole towards kiosk Left duct: Obstruction at 80 feet from handhole towards kiosk
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	Yes	6" walker duct with 21 wires in right duct; 20 wires in left duct
Handhole to AFC Panel (Distance: 5')		
Was video scoping completed for the entire duct / conduit run?	No	Not possible due to collapsed duct.
Was pull string installed?	No	
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	Collapsed duct close to handhole.
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	Yes	6" walker duct with 21 wires in right duct; 20 wires in left duct
Observations / Issues / Next Steps		
Sign Off		
	GFP Representative	WMATA PRGM
Name:	Mike Butler	
Signature:		
Date:	01/03/2015	

Photo# 1: B06 Fort Totten – Existing and proposed duct runs on mezzanine level (towards Kiosk)



Photo# 2: B06 Fort Totten – Existing and proposed duct runs near AFC Panel

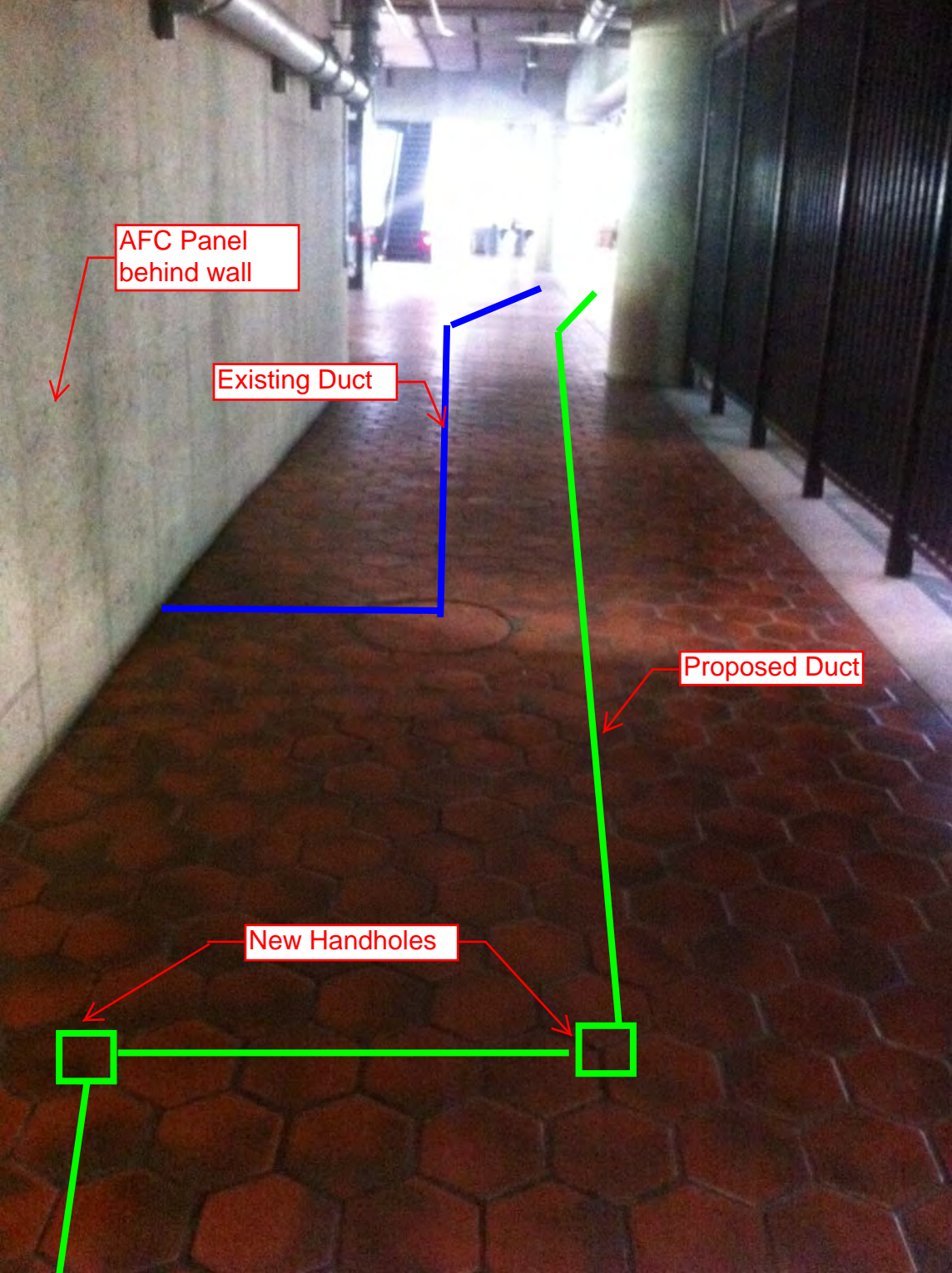


Photo #3: B06 Fort Totten – Poor condition of Handhole on mezzanine floor



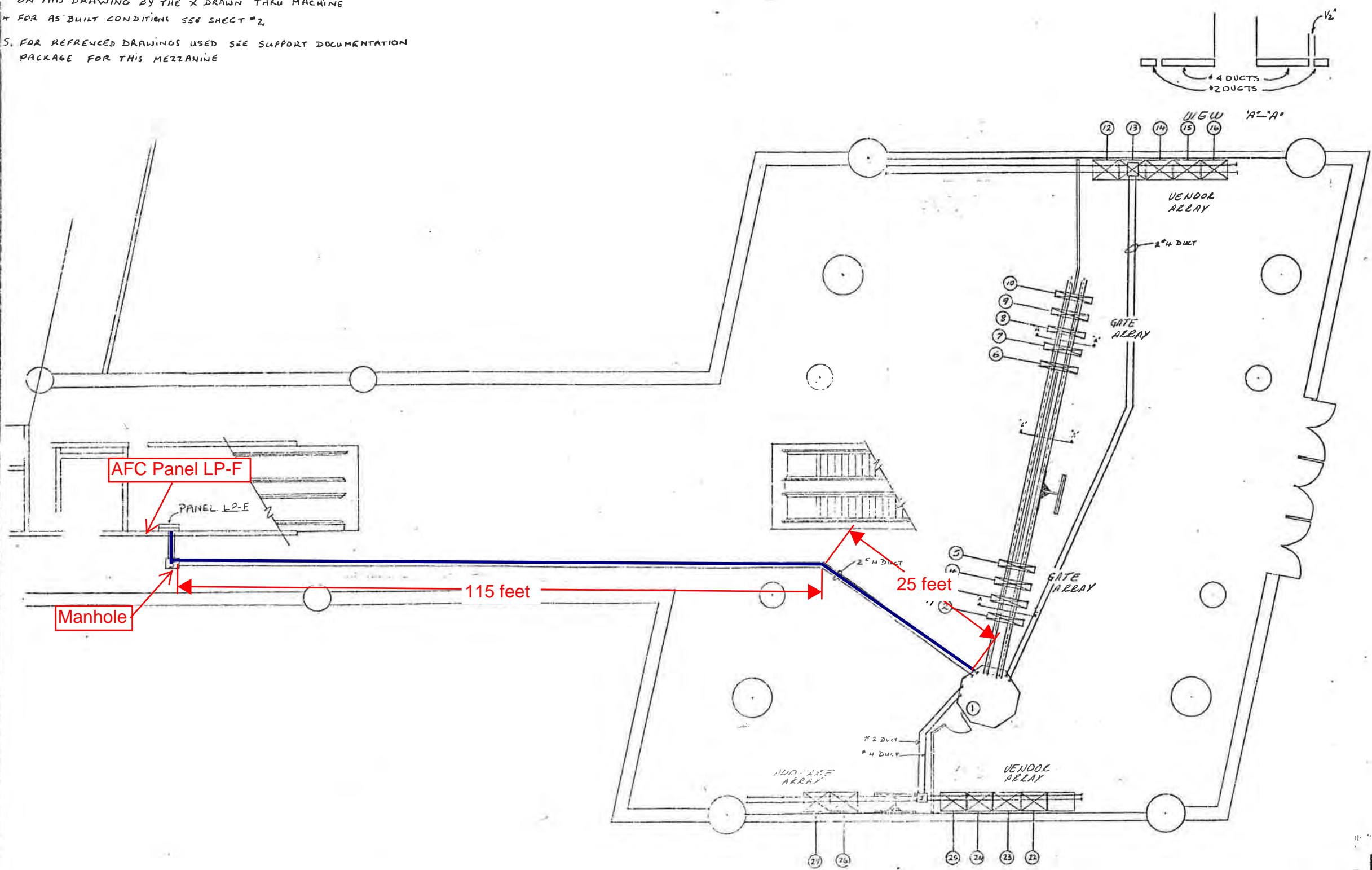
Photo #4: B06 Fort Totten – Pull string installed in power duct run from handhole to kiosk



NOTES:

1. ALL INFORMATION CONCERNING DUCTS AND CONDUITS IS BASED ON INFORMATION SUPPLIED TO CUBIC WESTERN DATA BY WMATA
2. TOTAL MACHINE INVENTORY IS DEPICTED ON THIS DRAWING THE MINIMUM OPERATIONAL MACHINE INVENTORY IS REFERENCED ON THIS DRAWING BY THE X DRAWN THRU MACHINE
3. FOR AS-BUILT CONDITIONS SEE SHEET #2
5. FOR REFERENCED DRAWINGS USED SEE SUPPORT DOCUMENTATION PACKAGE FOR THIS MEZZANINE

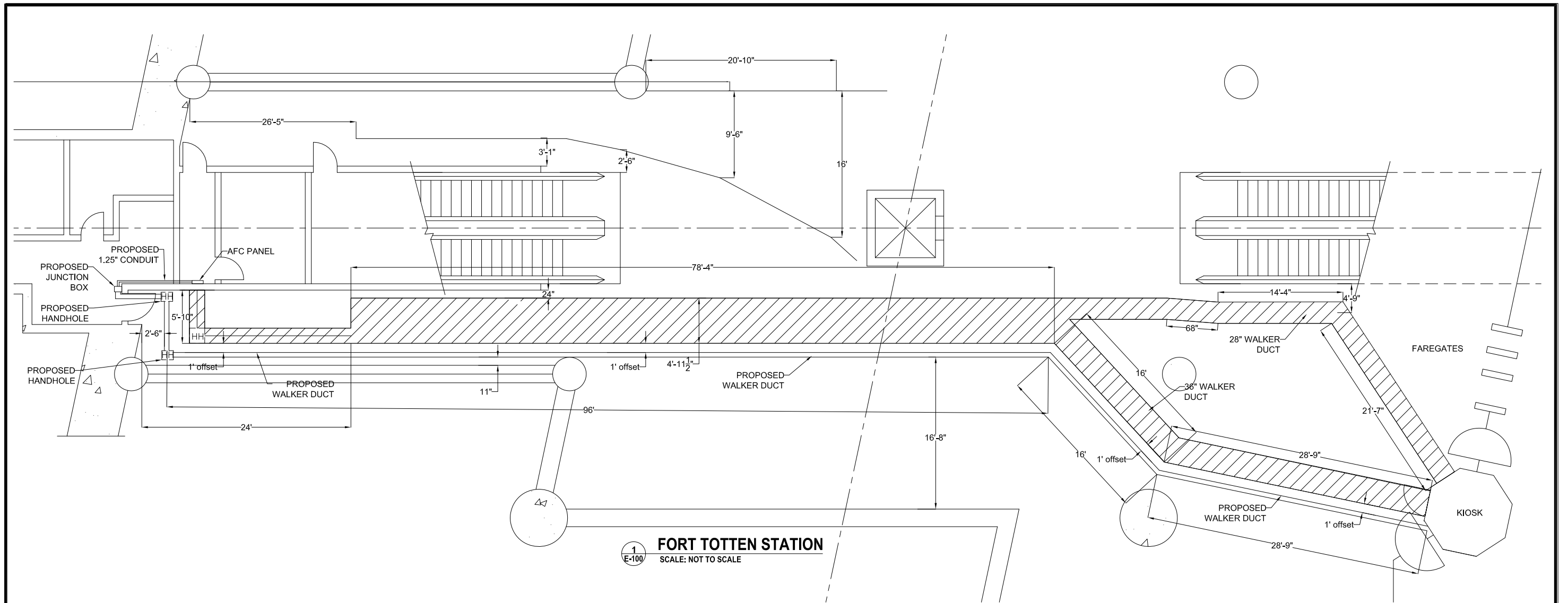
REVISIONS		
DESCRIPTION	DATE	APVD



1- INSTALLATION PLAN
28

REFERENCE DRAWINGS USED
BECHTEL REF SK.# 825
BECHTEL REF DWG.#
CWO REF DWG.#

CONTRACT NUMBER 22007A		 A subsidiary of Cubic Corporation 5650 KEARNY MESA ROAD • POST OFFICE BOX 90781 • SAN DIEGO, CA 92115	
REL _____ ENGR _____ DESIGN _____ CHECK _____ DRAWN _____		FORT TOTTEN STATION AFC MACHINES	
DESIGN ACTIVITY APPROVAL	SIZE C	DRAWING NUMBER 926-0402	REV 28
APPROVED			



1
E-100
FORT TOTTEN STATION
SCALE: NOT TO SCALE

PLAN NOTES:

1. DIMENSIONS ARE IN FEET AND INCHES.
2. DIMENSIONS ARE FOR REFERENCE ONLY.
3. EXISTING IN-FLOOR DUCTS/CONDUITS WERE IDENTIFIED USING A PORTABLE GPR SCANNING DEVICE.
4. THE SCANNING COVERAGE IS LIMITED TO THE MEZZANINE FLOOR ONLY.
5. GPR SCANNING HAS THE FOLLOWING LIMITATIONS: (i) 12 INCHES VISIBLE SCANNING DEPTH; (ii) VISIBILITY BEYOND CONGESTED OR NEAR SURFACE REINFORCEMENT LAYERS; (iii) DETECTION OF PVC AND OTHER NON-METALLIC OBJECTS (iv) DETERMINATION OF SIZE AND EXTENTS OF SUBSURFACE ANOMALIES SUCH AS SLAB VOIDS OR REBAR SIZES; AND (v) VISIBILITY WHEN VARIABLE MOISTURE CONDITIONS EXIST IN THE SUBSTRATE.

LEGEND:

- EXISTING DUCT
- HANDHOLE

CONTRACT NO.
XXXXXX

DESIGNED	C. LOOSE	11-14
		DATE
DRAWN	C. LOOSE	11-14
		DATE
CHECKED	M. BUTLER	11-14
		DATE
APPROVED		
		DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

APPROVED _____

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY
DEPARTMENT OF TRANSIT INFRASTRUCTURE AND ENGINEERING SERVICES
OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM

GFP A Gannett Fleming/Parsons JOINT VENTURE
SUBMITTED _____
PROJECT MANAGER

SCALE
NOT TO SCALE

15 NEPP METRO SCANNING
TAKOMA PARK STATION
B06 Fort Totten (M026)
PROPOSED POWER DUCT / CONDUIT RUN
DRAWING NO.
B06-E-100.dwg smaller XXX

Mezzanine Inspection Report (MIR)

Date: 09/15/2014	Station Name: B07 Takoma	Mezzanine #: 029	Completed By: Mike Butler
-------------------------	---------------------------------	-------------------------	----------------------------------

Summary

Scoping was completed as much as possible with multiple obstructions found in all walker ducts. Due to the obstructions and substantial corrosion from water intrusion, it was not possible to fully complete any scoping or pull string installation. Obstructions are shown in the attached photos.

Scanning of the mezzanine was completed on 10/20/2014 and existing in-floor ducts were identified. A new route for proposed duct replacement is shown in Drawing B07-E-100, which is attached to this report. The proposed in-floor walker duct runs parallel to the existing duct to a new hand hole in Room C100 before transitioning to a conduit that feeds directly into AFC Panel LP-F.

The total length of the new walker duct is approximately 34' from Kiosk to proposed Hand Hole; the new conduit is approximately 4' from Hand Hole to AFC Panel.

Scoping of Faregate Array(s)

Task	Yes/No	Notes
Communications Duct – Upper Faregate Array (6 turnstiles)		
Was video scoping completed for the entire duct run?	Partially	Video scoping and pull string installation could not be completed due to obstruction.
Were pull strings installed at all faregates in the array?	No	
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	An obstruction (possibly collapsed duct) observed by video scoping approximately 2 feet from the Kiosk (see photo #1)
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	N/A	4" wide duct.
Communications Duct - Lower Faregate Array		
Was video scoping completed for the entire duct run?	N/A	
Were pull strings installed at all faregates in the array?	N/A	
Were there any obstructions or blockages? Provide details of type and specific location.	N/A	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	N/A	
Power Duct - Upper Faregate Array (6 turnstiles)		
Was video scoping completed for the entire duct run?	Partially	Video scoping could not be completed due to obstruction.
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	An obstruction (possibly collapsed duct) observed by video scoping approximately 1 foot from the Kiosk (see photo #2)
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	N/A	4" wide duct.
Power Duct - Lower Faregate Array		
Was video scoping completed for the entire duct run?	N/A	
Were there any obstructions or blockages? Provide details of type and specific location.	N/A	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	N/A	


Scoping of Power Duct - Kiosk to AFC Panel		
Task	Yes/No	Notes
Kiosk to Hand hole 1 (35 feet)		
Was video scoping completed for the entire duct / conduit run?	Partially	Video scoping and pull string installation could not be completed due to obstruction.
Was pull string installed?	No	
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	Obstructions were found at 4 and 15 feet from the kiosk (photos #3 and 4, respectively), possibly collapsed duct. Attempts were made to scope from both ends of the run.
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	N/A	4" wide duct.
Hand hole 1 to Hand hole 2 (7 feet)		
Was video scoping completed for the entire duct / conduit run?	No	Video scoping and pull string installation could not be completed due to obstruction.
Was pull string installed?	No	
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	Obstruction at entry to hand hole (photo #5)
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	N/A	4" wide duct.
Hand hole 2 to AFC Panel (3 feet)		
Was video scoping completed for the entire duct / conduit run?	No	Video scoping and pull string installation could not be completed due to obstruction.
Was pull string installed?	No	
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	Obstruction at entry to hand hole (photo #6)
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	N/A	4" wide duct.
Observations / Issues		
Substantial corrosion and broken parts of existing ducts observed (see attached photos), due to extensive water intrusion throughout the mezzanine level. Unable to install pull strings due to condition of existing duct.		
Sign Off		
	GFP Representative	WMATA PRGM
Name:	Mike Butler	
Signature:		
Date:	11/12/2014	

Photo #1: B07 Takoma - Still image of obstruction in faregate array comm. duct



Photo #2: B07 Takoma - Still image of obstruction in faregate array power duct

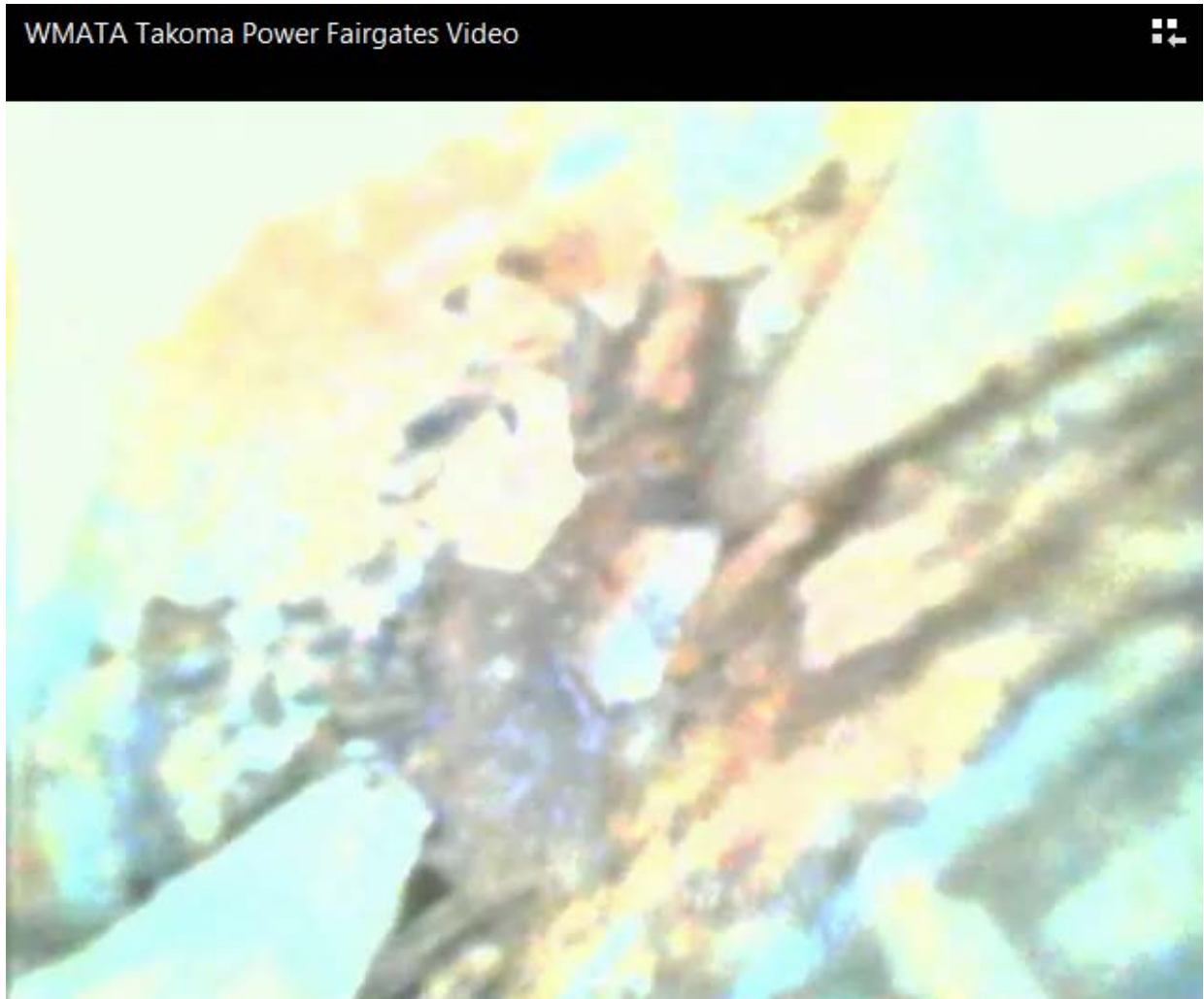


Photo #3: B07 Takoma - Still image of obstruction in power duct from kiosk to handhole



Photo #4: B07 Takoma - Still image of obstruction in power duct from handhole to kiosk

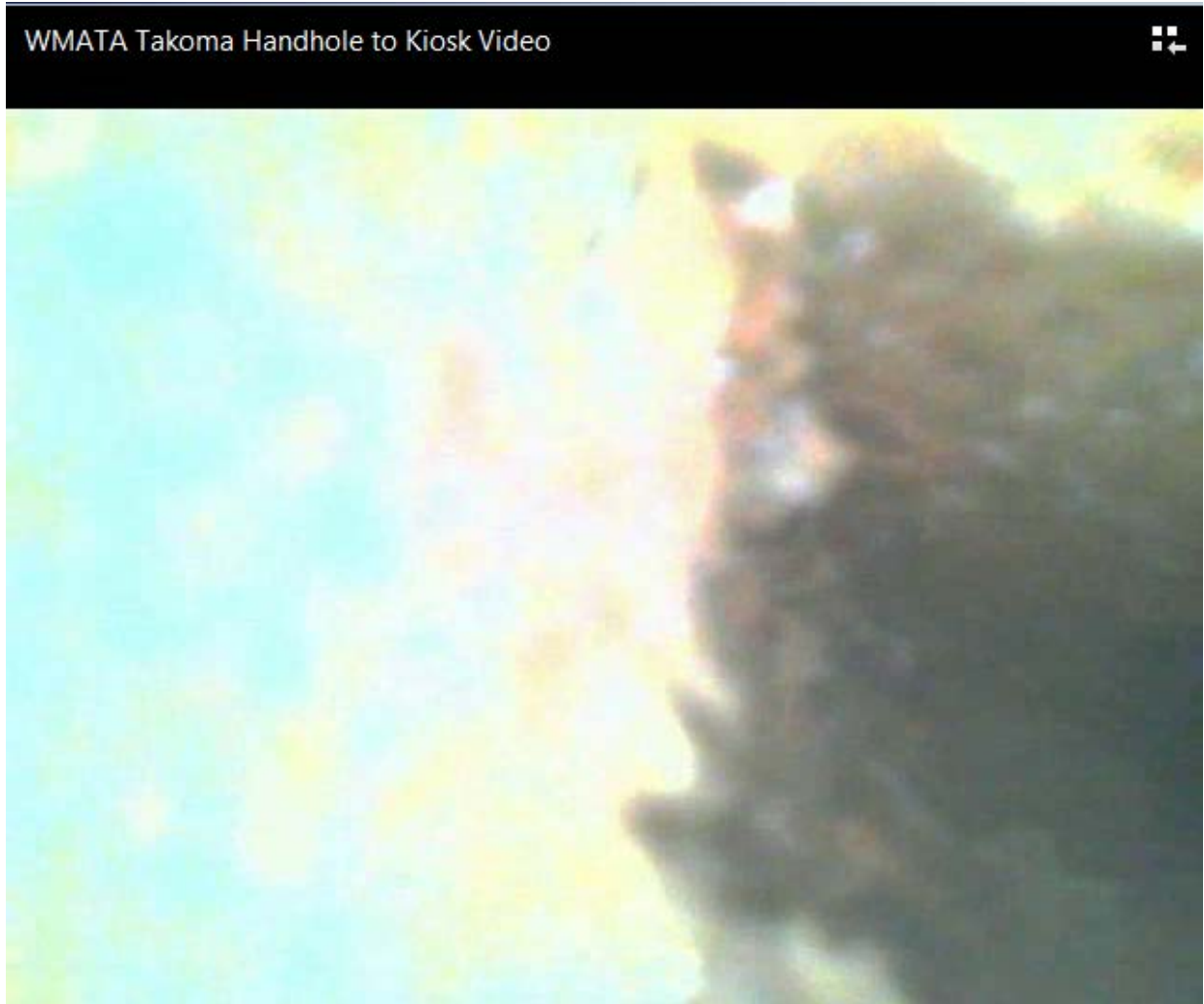


Photo 5: B07 Takoma – Standing water in first handhole



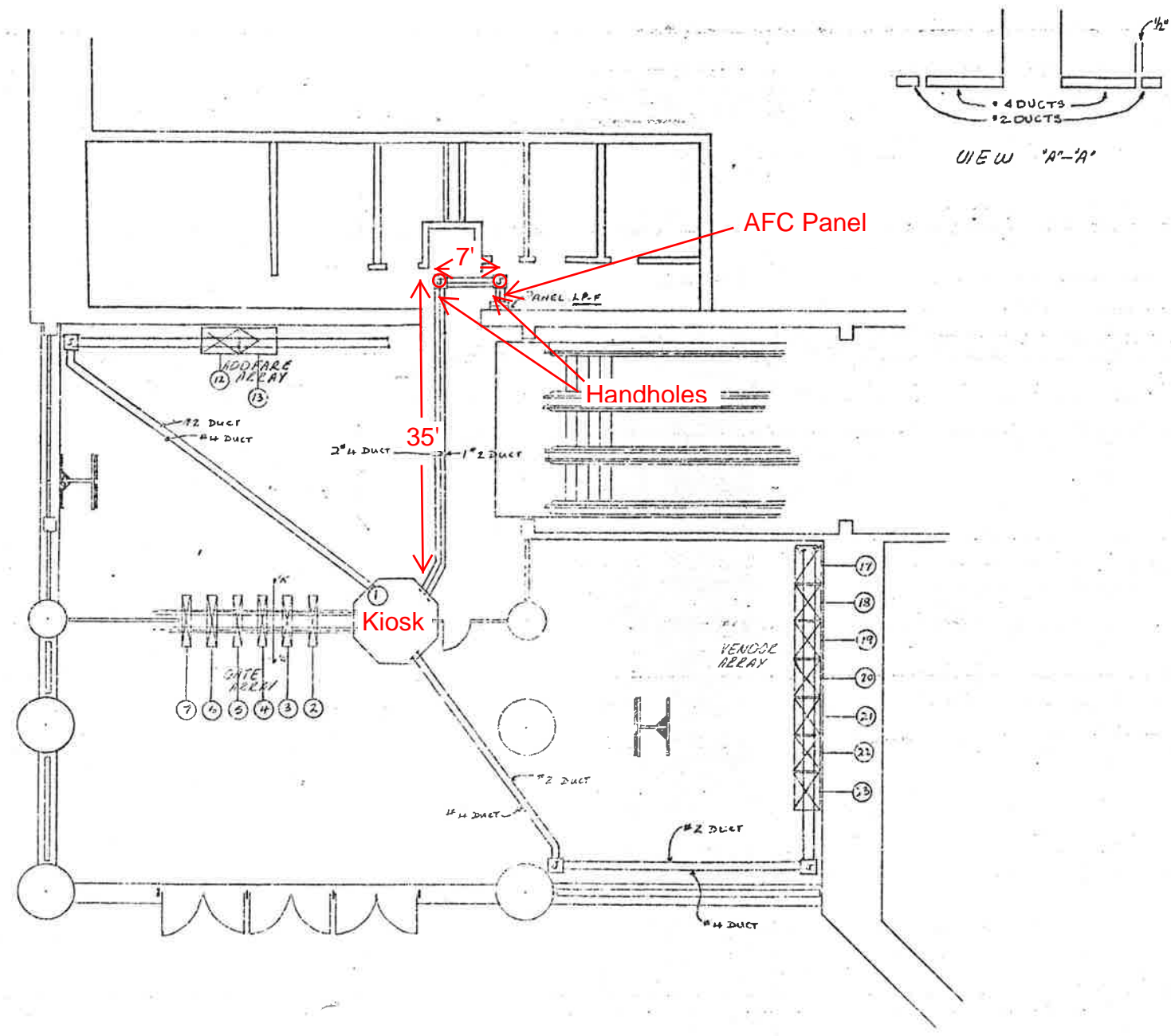
Photo #6: B07 Takoma – Poor conditions in second handhole



NOTES:

1. ALL INFORMATION CONCERNING DUCTS AND CONDUITS IS BASED ON INFORMATION SUPPLIED TO CUBIC WESTERN DATA BY WMATA
2. TOTAL MACHINE INVENTORY IS DEPICTED ON THIS DRAWING
3. THE MINIMUM OPERATIONAL MACHINE INVENTORY IS REFERENCED ON THIS DRAWING BY THE X DRAWN THRU THE MACHINE
4. FOR AS BUILT CONDITIONS SEE SHEET #2
5. FOR REFERENCED DRAWINGS USED SEE SUPPORT DOCUMENTATION PACKAGE FOR THIS MEZZANINE

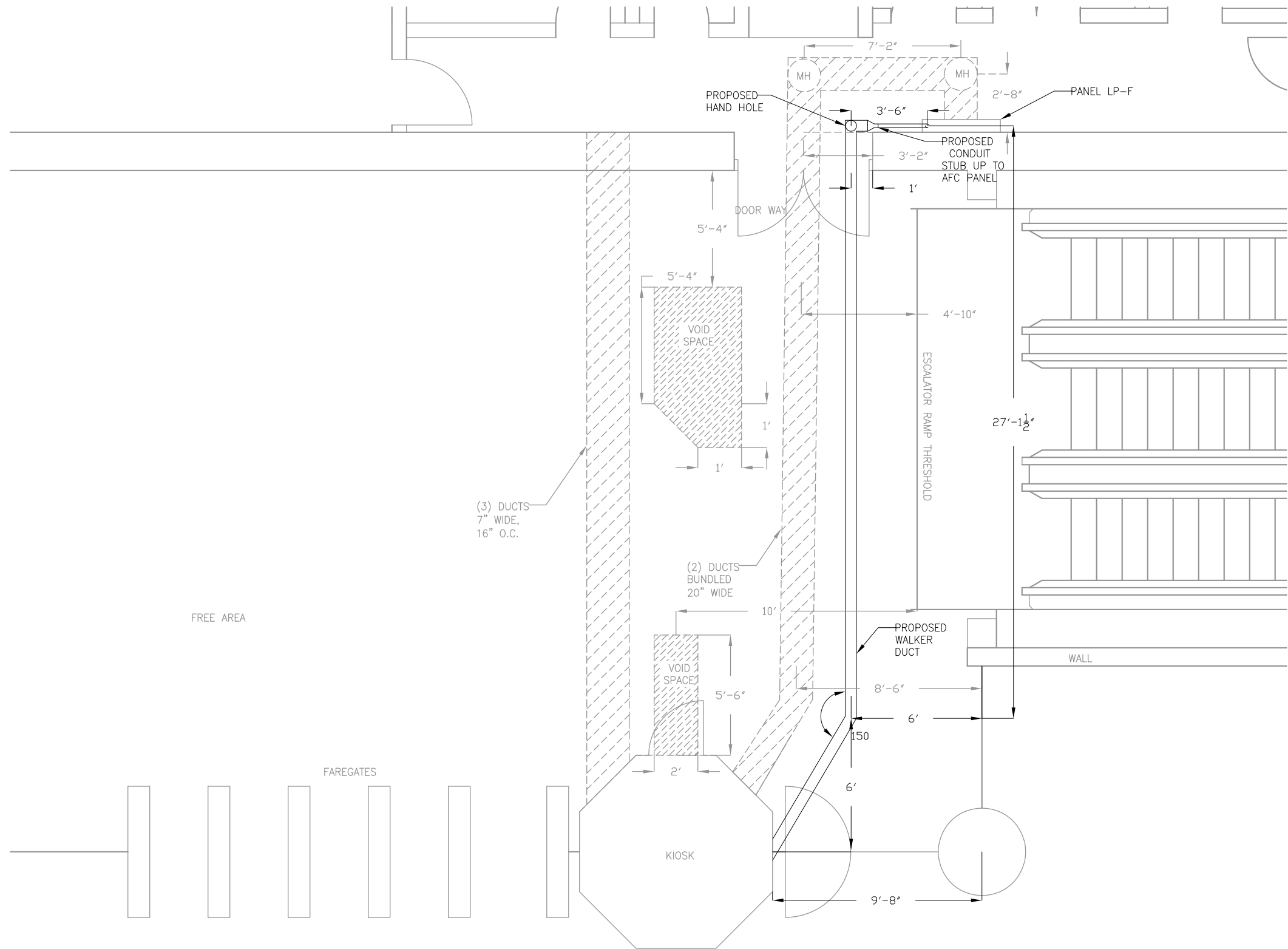
REVISIONS		
DESCRIPTION	DATE	APVD
APPROVED AS BUILT	6-15-77	



1- INSTALLATION PLAN
29

REFERENCE DRAWINGS USED
 BECHTEL REF. SK.#
 BECHTEL REF. DWG.#
 CWD REF. DWG.#

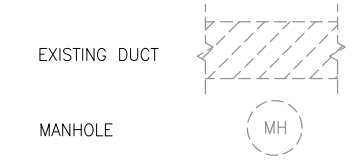
CONTRACT NUMBER 22007A		CUBIC WESTERN DATA A Subsidiary of Cubic Corporation 5650 KEARNY MESA ROAD • POST OFFICE BOX 3073 • SAN DIEGO, CA 92138	
DESIGN		TAKOMA STATION AFC MACHINES	
CHECK			
DRAWN			
DESIGN ACTIVITY APPROVAL			
SIZE		DRAWING NUMBER 926-0422	(29)



PLAN NOTES:

1. DIMENSIONS ARE IN FEET AND INCHES.
2. DIMENSIONS ARE FOR REFERENCE ONLY.
3. EXISTING IN-FLOOR DUCTS/CONDUITS WERE IDENTIFIED USING A PORTABLE GPR SCANNING DEVICE.
4. THE SCANNING COVERAGE IS LIMITED TO THE MEZZANINE FLOOR ONLY.
5. GPR SCANNING HAS THE FOLLOWING LIMITATIONS: (i) 12 INCHES VISIBLE SCANNING DEPTH; (ii) VISIBILITY BEYOND CONGESTED OR NEAR SURFACE REINFORCEMENT LAYERS; (iii) DETECTION OF PVC AND OTHER NON-METALLIC OBJECTS (iv) DETERMINATION OF SIZE AND EXTENTS OF SUBSURFACE ANOMALIES SUCH AS SLAB VOIDS OR REBAR SIZES; AND (v) VISIBILITY WHEN VARIABLE MOISTURE CONDITIONS EXIST IN THE SUBSTRATE.

LEGEND:



FREE AREA

FAREGATES

PAID AREA

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

CONTRACT NO.
XXXXXX

DESIGNED	C. LOOSE	11-14
		DATE
DRAWN	C. LOOSE	11-14
		DATE
CHECKED	M. BUTLER	11-14
		DATE
APPROVED		
		DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

DEPARTMENT OF TRANSIT INFRASTRUCTURE AND ENGINEERING SERVICES
OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM

GFP A Gannett Fleming/Parsons JOINT VENTURE

APPROVED _____ SUBMITTED _____
PROJECT MANAGER

15-NEPP-01
IN - FLOOR DUCT INSPECTIONS
B07 TAKOMA (M029)
PROPOSED ELECTRICAL DUCT PATH

SCALE: NOT TO SCALE

DRAWING NO. **B07-E-100**

XXX

Mezzanine Inspection Report (Scoping)

Date: 09/12/2014	Station Name: B08 – Silver Spring North	Mezzanine #: 031	Completed By: Tino Sahoo
-------------------------	--	-------------------------	---------------------------------

Summary

Video scoping was completed as much as possible, and pull string was installed for the upper and lower faregate array communications duct and power duct between the kiosk and AFC Panel. Video scoping was also completed as much as possible for the upper and lower faregate array power ducts.

There were some minor obstructions encountered while video scoping the lower faregate array communications duct and the upper faregate array power duct.

Scanning is not required.

Scoping of Faregate Array(s)

Task	Yes/No	Notes
Communications Duct – Upper Faregate Array (3 Gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to WMATA Silver Spring North Upper Comm Duct Video.avi file.
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	
Communications Duct - Lower Faregate Array (3 Gates)		
Was video scoping completed for the entire duct run?	No	26 of 29 feet of the lower comm. array run was successfully video scoped. Refer to WMATA Silver Spring North Lower Comm Duct Video.avi file.
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	Insert/riser to faregate creates a partial obstruction
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	
Power Duct - Upper Faregate Array (3 Gates)		
Was video scoping completed for the entire duct run?	No	12 of 25 feet of the upper array power duct was successfully video scoped. Refer to WMATA Silver Spring North Upper Power A Duct.avi and WMATA Silver Spring North Upper Power B Duct.avi files.
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	Duct is full of rust and debris and possibly collapsed; Should be able to get new wiring through existing ducts.
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	
Power Duct - Lower Faregate Array (3 Gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to WMATA Silver Spring Lower Power Video.avi file.
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	


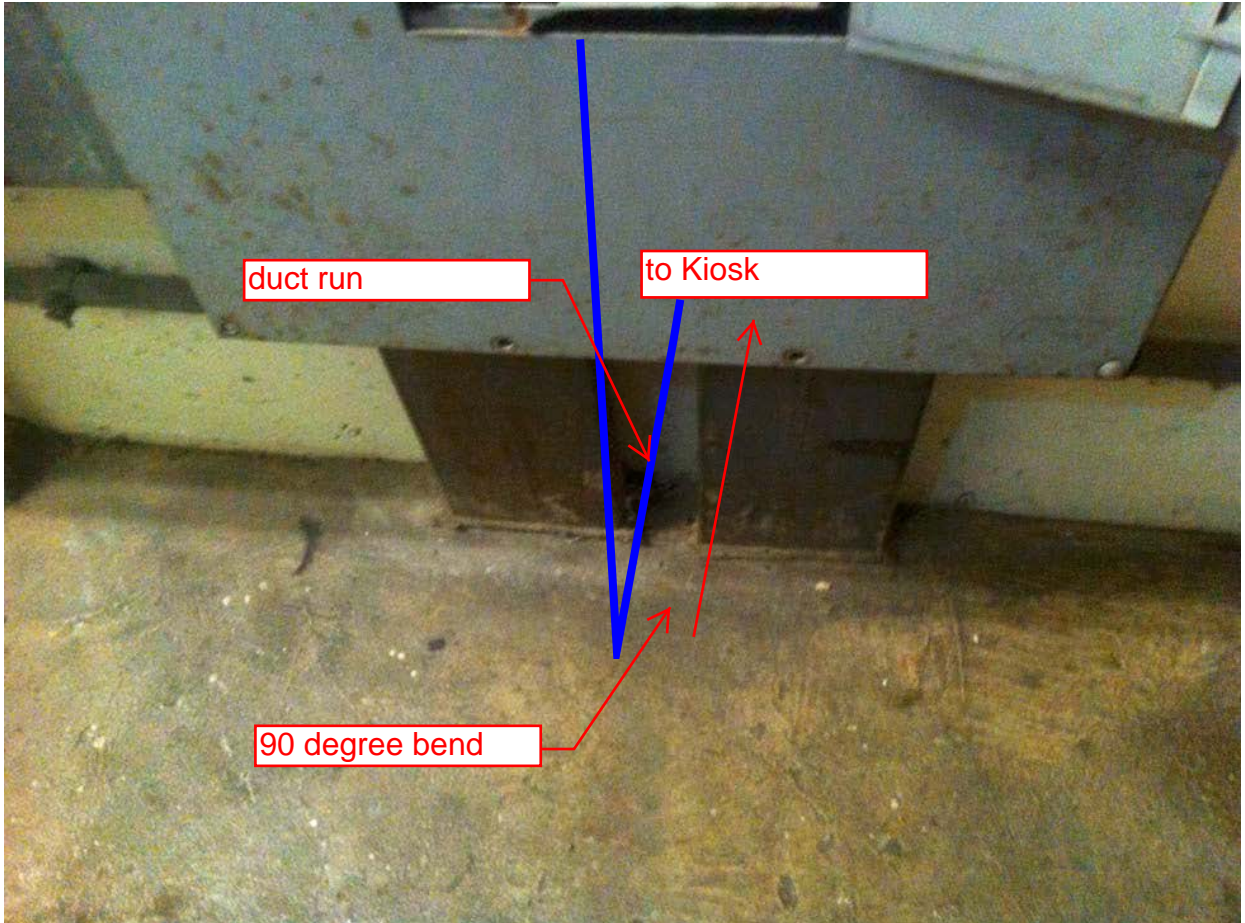
Scoping of Power Duct - Kiosk to AFC Panel		
Task	Yes/No	Notes
Kiosk to AFC Panel (50 foot run)		
Was video scoping completed for the entire duct / conduit run?	No	Scoping of power duct from kiosk to AFC Panel was completed to 90 degree walker duct bend at AFC Panel. Refer to WMATA Silver Spring North Kiosk to AFC Video.avi file.
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	
Observations / Issues / Next Steps		
Sign Off		
	GFP Representative	WMATA PRGM
Name:	Tino Sahoo	
Signature:		
Date:	9/12/2014	

Photo #1 – B08 Silver Spring North: Kiosk on Mezzanine level



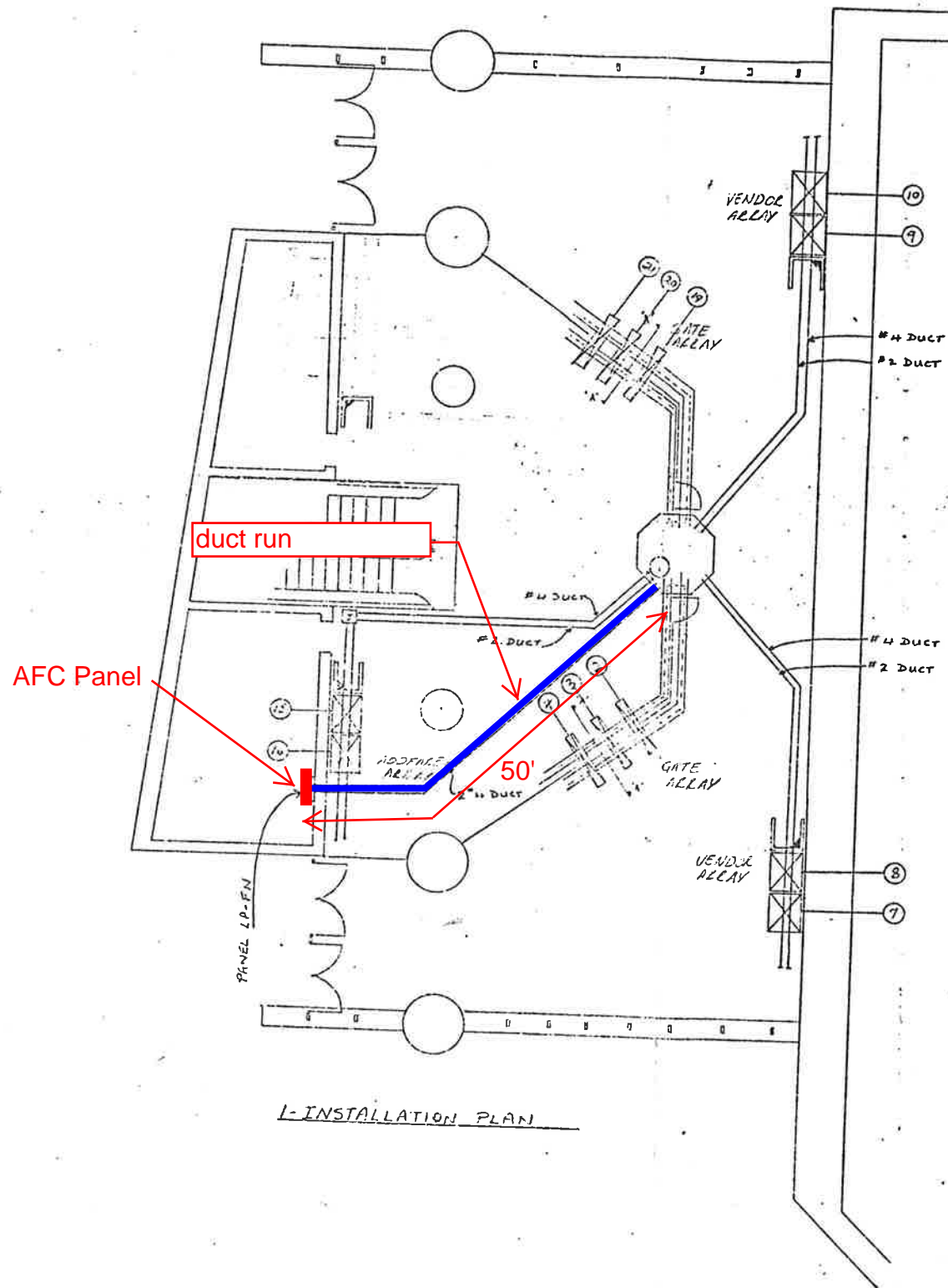
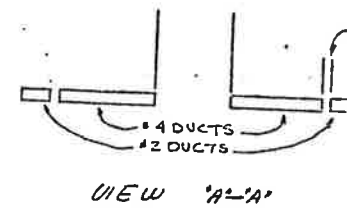
Photo #2 – B08 Silver Spring North: Duct run into AFC Panel



NOTES:

1. ALL INFORMATION CONCERNING DUCTS AND EQUIPTS IS BASED ON INFORMATION SUPPLIED TO CUBIC WESTERN DATA BY WPMATA
2. TOTAL MACHINE INVENTORY IS DEPICTED ON THIS DRAWING
3. THE MINIMUM OPERATIONAL MACHINE INVENTORY IS REFERENCED ON THIS DRAWING BY THE X DRAWN THRU THE MACHINE
4. FOR AS BUILT CONDITIONS SEE SHEET 'A'
5. FOR REFERENCED DRAWINGS USED SEE SUPPORT DOCUMENTATION PACKAGE FOR THIS MEZZANINE

REVISIONS		
DESCRIPTION	DATE	AP



I-INSTALLATION PLAN

WASHINGTON METRO
 AREA TREATMENT AUTHORITY

REFERENCE DRAWINGS USED

BECHTEL	REF. SK.#
BECHTEL	REF. DWG.#
CWD	REF. DWG.#

CONTRACT NUMBER 22 007A	<p>CUBIC WESTERN DATA <small>A subsidiary of C.W. Inc. Corporation 5600 KATY MESA ROAD • POST OFFICE BOX 62762 • SAN ANTONIO, TX 78262</small></p>									
<table border="1"> <tr><td>TEL</td><td></td></tr> <tr><td>ENGRG</td><td></td></tr> <tr><td>DESIGN</td><td></td></tr> <tr><td>CHECK</td><td></td></tr> <tr><td>DRAWN</td><td></td></tr> </table>		TEL		ENGRG		DESIGN		CHECK		DRAWN
TEL										
ENGRG										
DESIGN										
CHECK										
DRAWN										
DESIGN ACTIVITY APPROVAL	SILVER SPRING NORTH STATION AFC MACHINES (31)									

Mezzanine Inspection Report

REVISION 1

Date: 09/11/14	Station Name: B08 Silver Spring South	Mezzanine #: 030	Completed By: Mike Butler
----------------	---------------------------------------	------------------	---------------------------

Summary

Video scoping completed for power / communication ducts in faregate array; pull strings were installed in communication duct. Video scoping and pull string installation was completed between Kiosk and AFC Panel; however there was a partial collapse in the walker duct 15' from the Kiosk. Mini-faregates on mezzanine floor were successfully video scoped and pull string installed in communication duct. Refer to Photo #3 and as-built drawing for location.

Scanning was conducted to identify a new route from the Kiosk to AFC Panel. A new duct is proposed to run parallel to existing duct from Kiosk to AFC Panel. When the proposed duct reaches the wall, there will be a proposed handhole and then the duct will core drill through the base of the wall between the mezzanine and Room 119. Once inside Room 119, the duct will stub-up vertically and transition to an overhead conduit (via a junction box) that will feed into the top of the AFC Panel.

Scoping of Faregate Array(s)

Task	Yes/No	Notes
Communications Duct – Upper Faregate Array (6 gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to "WMATA Silver Spring South Upper Faregate Comm Video.avi".
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	3" walker duct, not at capacity (< 10 wires).
Communications Duct - Lower Faregate Array (6 gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to "WMATA Silver Spring South Lower Faregate Comm Video.avi".
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	3" walker duct, not at capacity (< 10 wires).
Power Duct - Upper Faregate Array (6 gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to "WMATA Silver Spring South Upper Faregate Power Video.avi"
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	6" walker duct, not at capacity (< 8 wires).
Power Duct - Lower Faregate Array (6 gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to "WMATA Silver Spring South Lower Faregate Power Video.avi"
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	6" walker duct, not at capacity (< 8 wires).


Scoping of Power Duct - Kiosk to AFC Panel		
Task	Yes/No	Notes
Kiosk to AFC Panel (Distance: 46')		
Was video scoping completed for the entire duct / conduit run?	Yes	Refer to "WMATA Silver Spring South Kiosk to AFC Panel Video.avi".
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	Duct collapsed 15' from Kiosk.
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	N/A	6" walker duct, not at capacity (< 8 wires).
Observations / Issues / Next Steps		
<p>The proposed duct / conduit run is 54' from Kiosk to AFC Panel (44' of duct and 10' of conduit) - refer to photos and drawings for more information.</p> <p>The mini-faregates (4 gates) had video scoping and pull string installation completed in 3" communication duct; video scoping was also completed in 6" power duct. Both ducts are not at capacity (less than 10 wires) and have no obstructions. Refer to video files: "WMATA Silver Spring South Mini Fairgate Comm Video.avi" and "WMATA Silver Spring South Mini Fairgate Power Video.avi".</p>		
Sign Off		
	GFP Representative	WMATA PRGM
Name:	Mike Butler	
Signature:		
Date:	02/06/15	

Photo #1 – Proposed and existing ducts on mezzanine floor

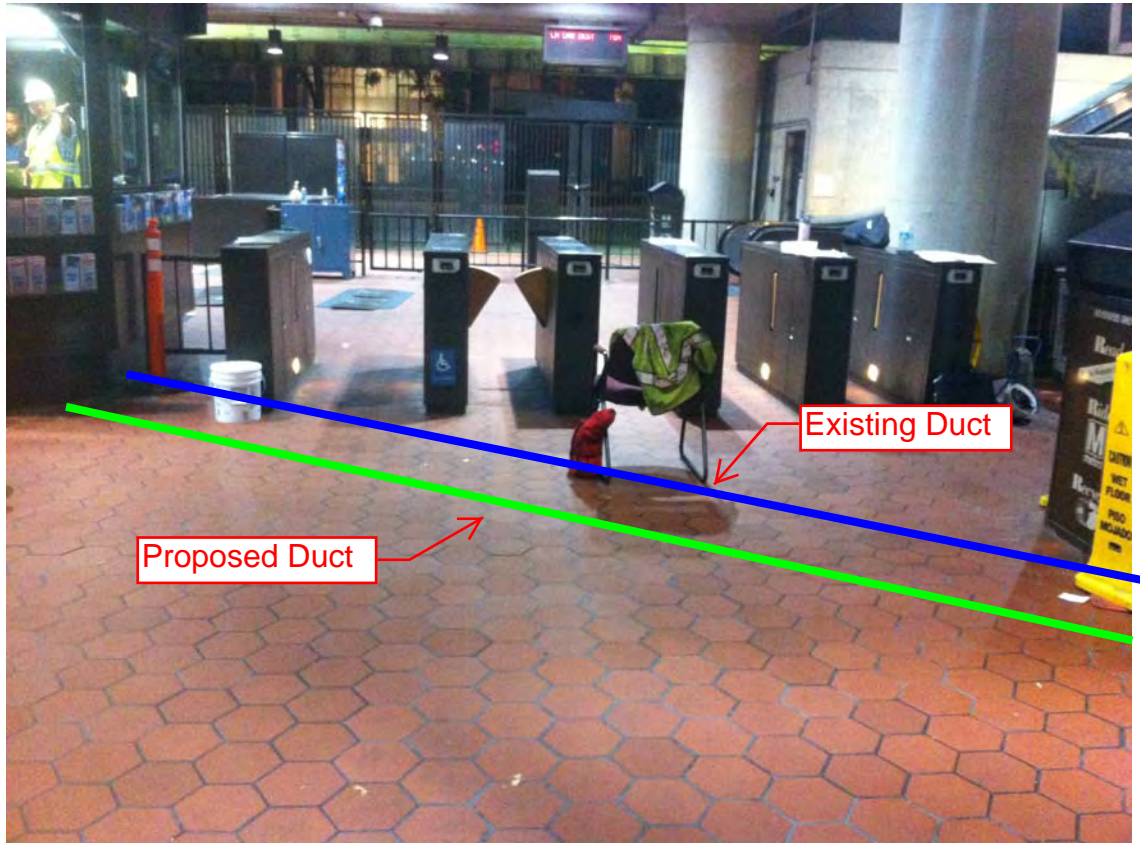


Photo #2 – Proposed and existing ducts on mezzanine floor

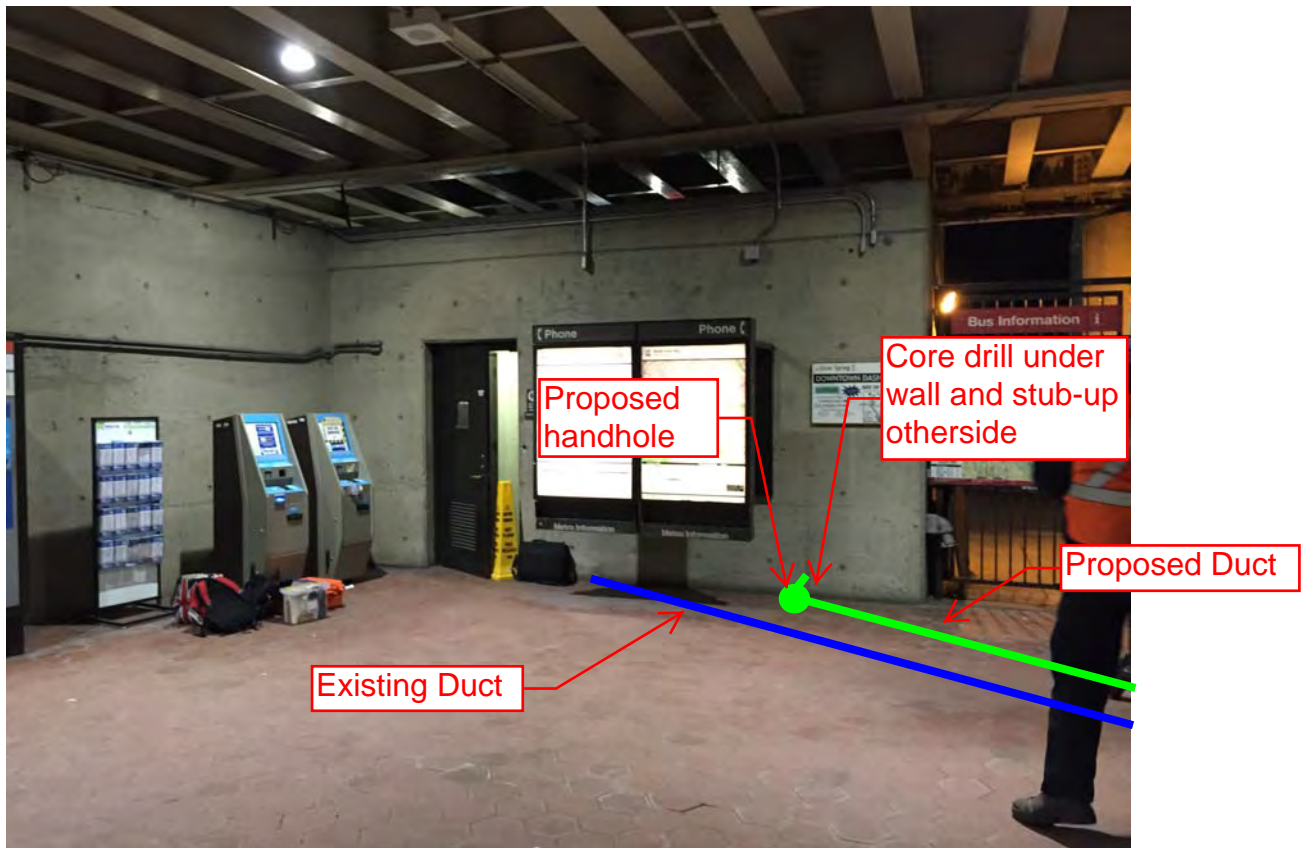


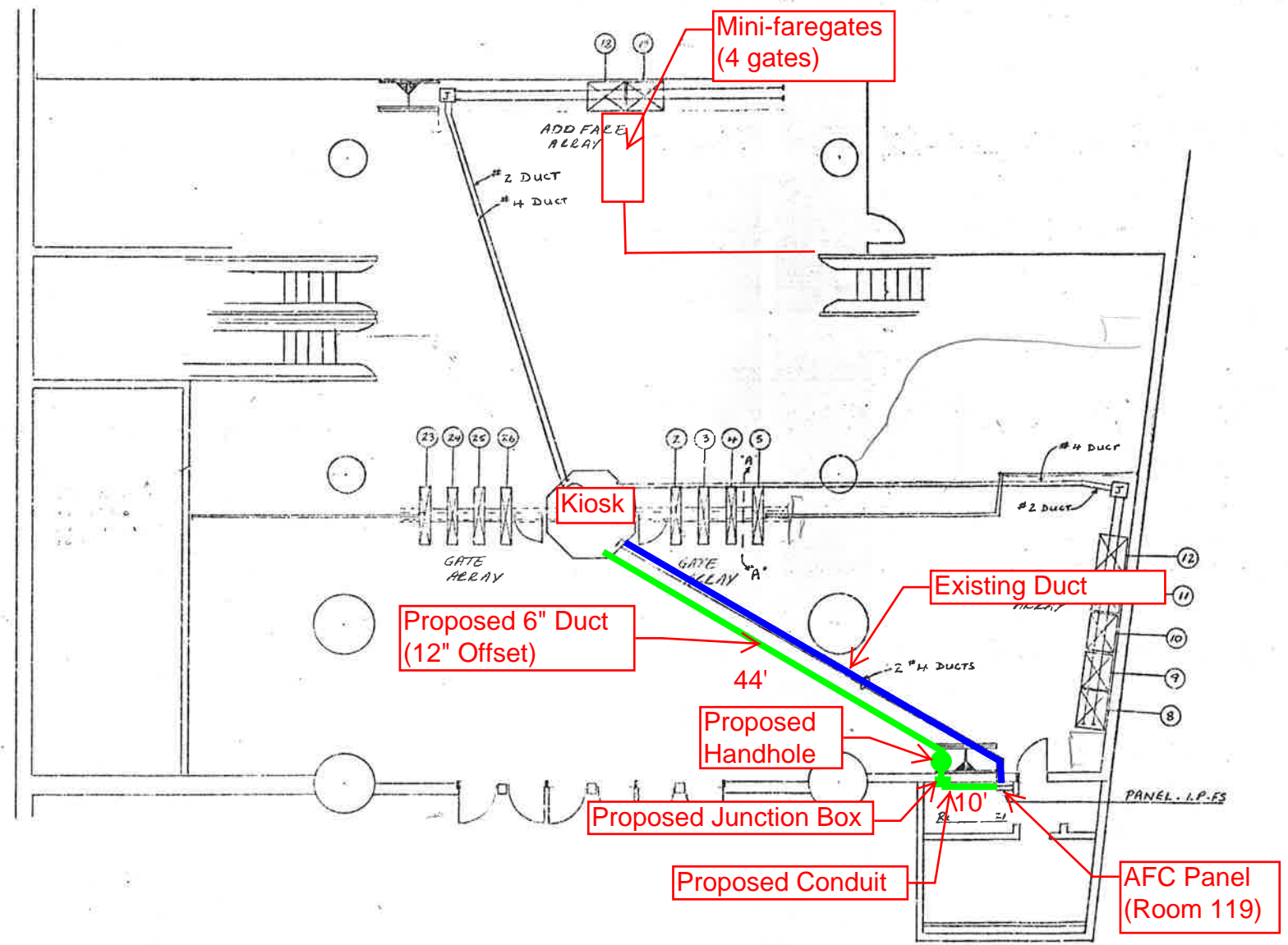
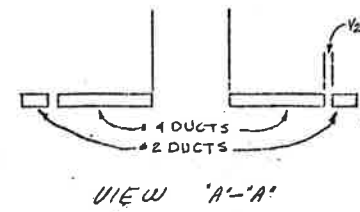
Photo #3 – Mini-faregates on mezzanine floor



NOTES:

1. ALL INFORMATION CONCERNING DUCTS AND CONDUITS IS BASED ON INFORMATION SUPPLIED TO CUBIC WESTERN DATA BY WMATA.
2. TOTAL MACHINE INVENTORY IS DEPICTED ON THIS DRAWING. IE MINIMUM OPERATIONAL MACHINE INVENTORY IS REFERENCED ON THIS DRAWING BY THE 'X' DRAWN THRU THE MACHINE.
3. FOR AS BUILT CONDITIONS SEE SHEET #2.
4. FOR REFERENCED DRAWINGS USED SEE SUPPORT DOCUMENTATION PACKAGE FOR THIS MEZZANINE.

REVISIONS		
DESCRIPTION	DATE	APVD



1- INSTALLATION PLAN

REFERENCE DRAWINGS USED

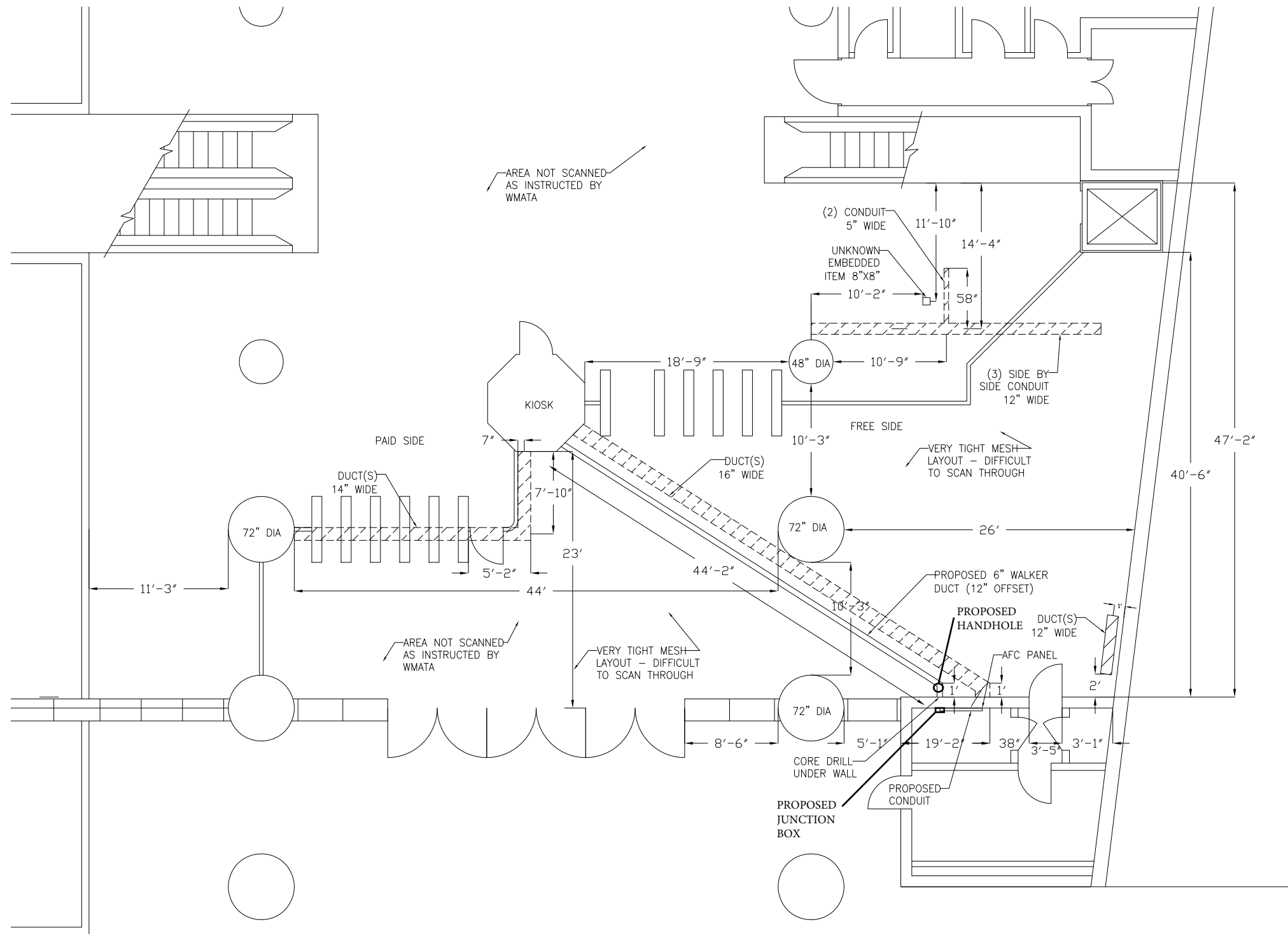
BECHTEL REF. SK.#

BECHTEL REF. DWG.#

CWD REF. DWG.#

WASHINGTON METRO/OUTSTATION
SILVER SPRING SOUTH STATION

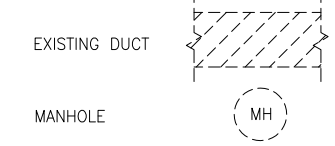
CONTRACT NUMBER 22007A		CUBIC WESTERN DATA A subsidiary of Cubic Corporation 5650 KEARNY MESA ROAD • POST OFFICE BOX 00787 • SAN DIEGO, CA 92108	
DESIGN ACTIVITY APPROVAL		SIZE	DRAWING NUMBER 926-0404-2
APPROVED			REV 30



PLAN NOTES:

1. DIMENSIONS ARE IN FEET AND INCHES.
2. DIMENSIONS ARE FOR REFERENCE ONLY.
3. EXISTING IN-FLOOR DUCTS/CONDUITS WERE IDENTIFIED USING A PORTABLE GPR SCANNING DEVICE.
4. THE SCANNING COVERAGE IS LIMITED TO THE MEZZANINE FLOOR ONLY.
5. GPR SCANNING HAS THE FOLLOWING LIMITATIONS: (i) 12 INCHES VISIBLE SCANNING DEPTH; (ii) VISIBILITY BEYOND CONGESTED OR NEAR SURFACE REINFORCEMENT LAYERS; (iii) DETECTION OF PVC AND OTHER NON-METALLIC OBJECTS (iv) DETERMINATION OF SIZE AND EXTENTS OF SUBSURFACE ANOMALIES SUCH AS SLAB VOIDS OR REBAR SIZES; AND (v) VISIBILITY WHEN VARIABLE MOISTURE CONDITIONS EXIST IN THE SUBSTRATE.

LEGEND:



SILVER SPRING STATION
 E-100 SCALE: 3/16" = 1'-0"

CONTRACT NO.
 XXXXXX

DESIGNED	C. LOOSE	11-14
		DATE
DRAWN	C. LOOSE	11-14
		DATE
CHECKED	M. BUTLER	11-14
		DATE
APPROVED		
		DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

APPROVED _____

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

DEPARTMENT OF TRANSIT INFRASTRUCTURE AND ENGINEERING SERVICES
 OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM

GFP A Gannett Fleming/Parsons JOINT VENTURE

SUBMITTED _____
 PROJECT MANAGER

15-NEPP-01
 IN - FLOOR DUCT INSPECTIONS
 B08 SILVER SPRING SOUTH
 PROPOSED ELECTRICAL DUCT PATH

SCALE
 NOT TO SCALE

DRAWING NO.
 B08-E-100

XXX

Mezzanine Inspection Report (Scoping)

Date: 11/17/2014	Station Name: B09 Forest Glen	Mezzanine #: 032	Completed By: Mike Butler
-------------------------	--------------------------------------	-------------------------	----------------------------------

Summary

Video scoping and pull string installation for the communication duct array was successfully completed. Video scoping for the power duct in the faregate array was also successfully completed. Scoping and pull string installation for the power run from the kiosk to the AFC panel was not completed due to issues identifying the existing run from the junction box to the AFC panel, as well as hot wires from other panels. It appears the existing conduit runs vertically down from the AFC panel across two levels to the kiosk through multiple shared raceways including junction boxes, troughs, etc. A proposed run has been established from the kiosk to the AFC panel. The run would utilize the existing duct from the kiosk through handholes 1 and 2 and continue into the junction box in room C100. From the junction box, a proposed conduit run would then continue down the hall, and wrap the walls of the two staircases up to room C101 where it would be cored through the wall above the door. It would then continue down the small hallway from where it would be cored again into room C106. Once inside C106, it would turn and run overhead along the wall to the AFC panel. See photos below for details.

Scanning is not required at this mezzanine.

Scoping of Faregate Array(s)

Task	Yes/No	Notes
Communications Duct – Faregate Array (8 Gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to WMATA Forest Glen Comm Video.avi file
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	
Power Duct - Faregate Array (8 Gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to WMATA Forest Glen Power Duct Video.avi file
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	


Scoping of Power Duct - Kiosk to AFC Panel		
Task	Yes/No	Notes
Kiosk to Handhole 1 (15' run)		
Was video scoping completed for the entire duct / conduit run?	No	Live wires prevented scoping
Was pull string installed?	No	
Were there any obstructions or blockages? Provide details of type and specific location.	N/A	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	
Handhole 1 to Handhole 2 (20' run)		
Was video scoping completed for the entire duct / conduit run?	No	Live wires prevented scoping
Was pull string installed?	No	
Were there any obstructions or blockages? Provide details of type and specific location.	N/A	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	
Handhole 2 to Junction box (20' run)		
Was video scoping completed for the entire duct / conduit run?	No	Live wires prevented scoping
Was pull string installed?	No	
Were there any obstructions or blockages? Provide details of type and specific location.	N/A	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	
Junction box to AFC Panel (Length of existing run undetermined)		
Was video scoping completed for the entire duct / conduit run?	No	
Was pull string installed?	No	
Were there any obstructions or blockages? Provide details of type and specific location.	N/A	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	N/A	Existing conduit run could not be traced between the Junction Box and AFC Panel. A proposed conduit option was identified.
Observations / Issues / Next Steps		
Total proposed run is approximately 210' from Kiosk to AFC panel. This includes 65' of existing duct from the duct from the kiosk to the junction box, and 145' of proposed conduit between the junction box and AFC panel.		
Sign Off		
	GFP Representative	WMATA PRGM
Name:	Mike Butler	
Signature:		
Date:	11/17/14	

Photo #1 - Existing run from kiosk to handhole 1

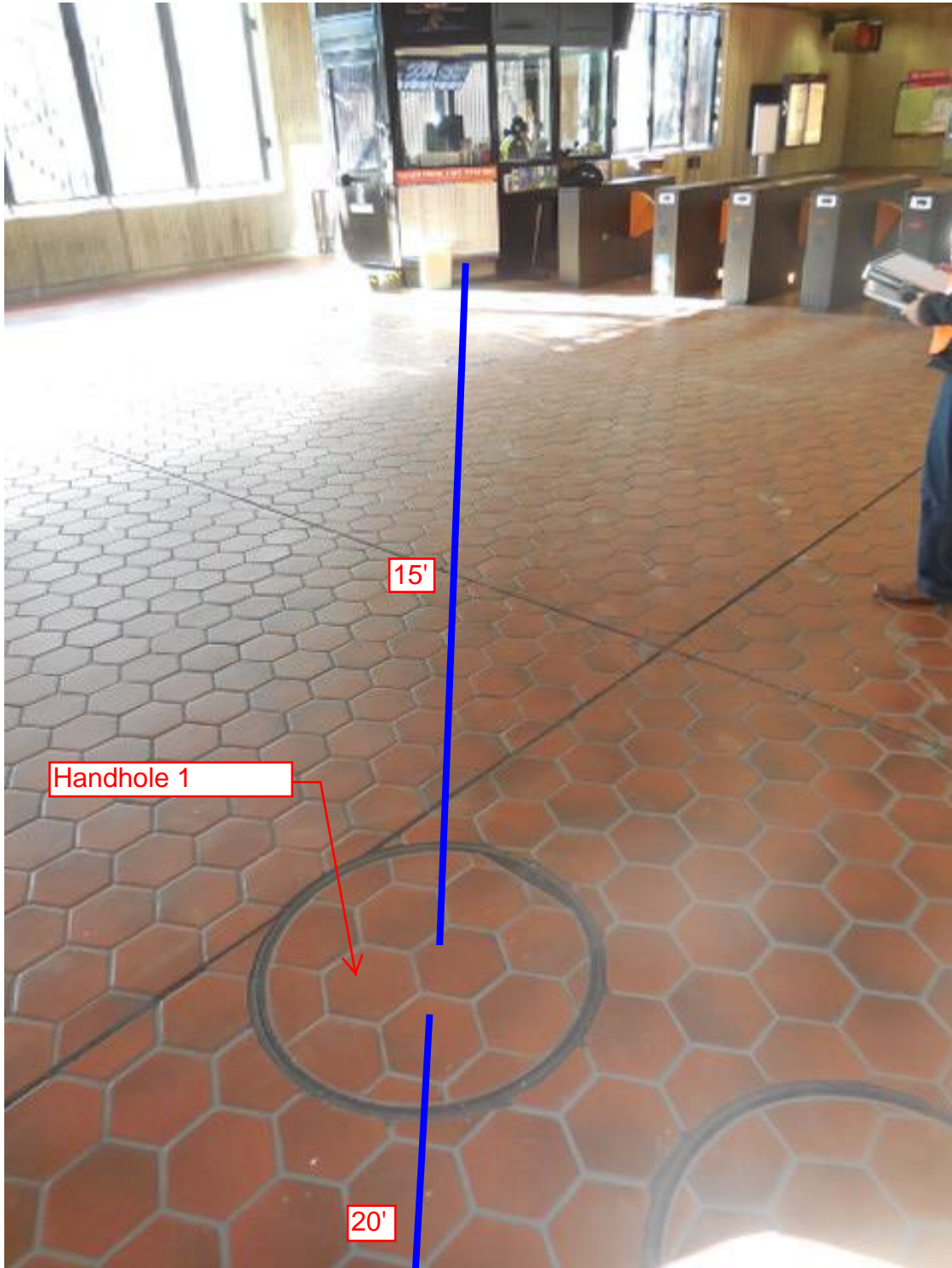


Photo #2 - Existing duct run from handhole 2 to junction box

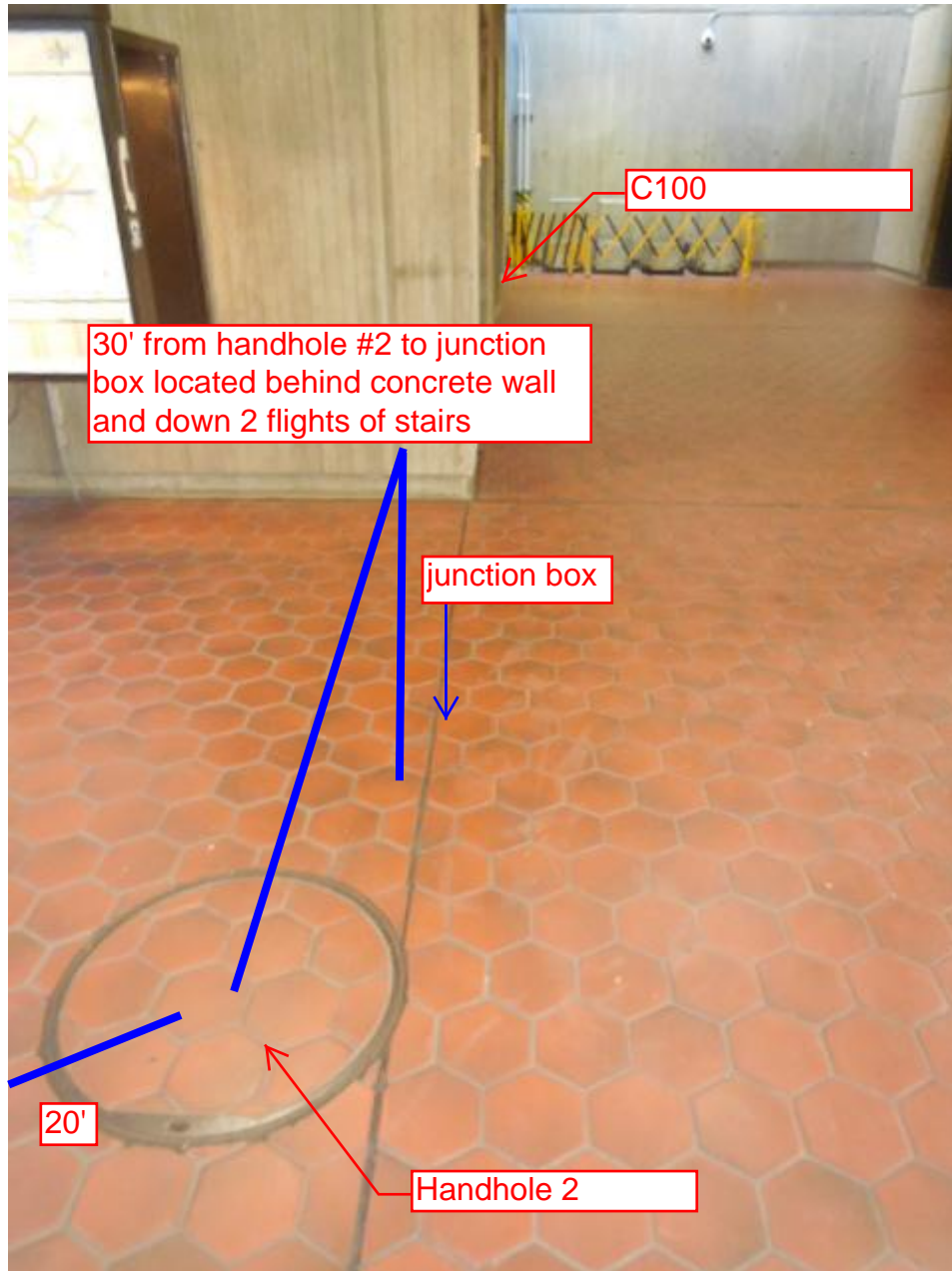


Photo #3 - Proposed conduit run from junction box towards AFC panel

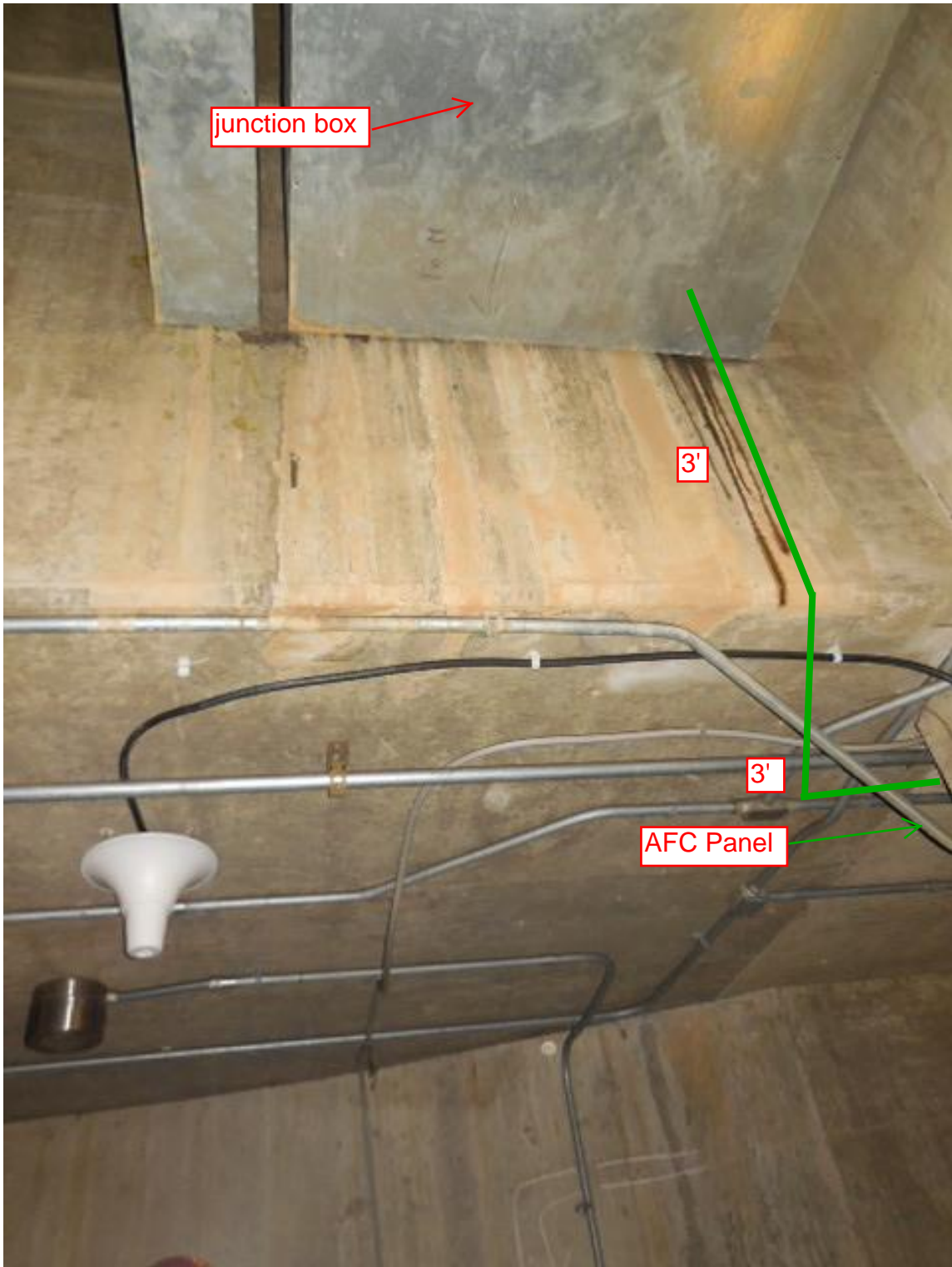


Photo #4 - Proposed conduit run in hallway between junction box and Room C101

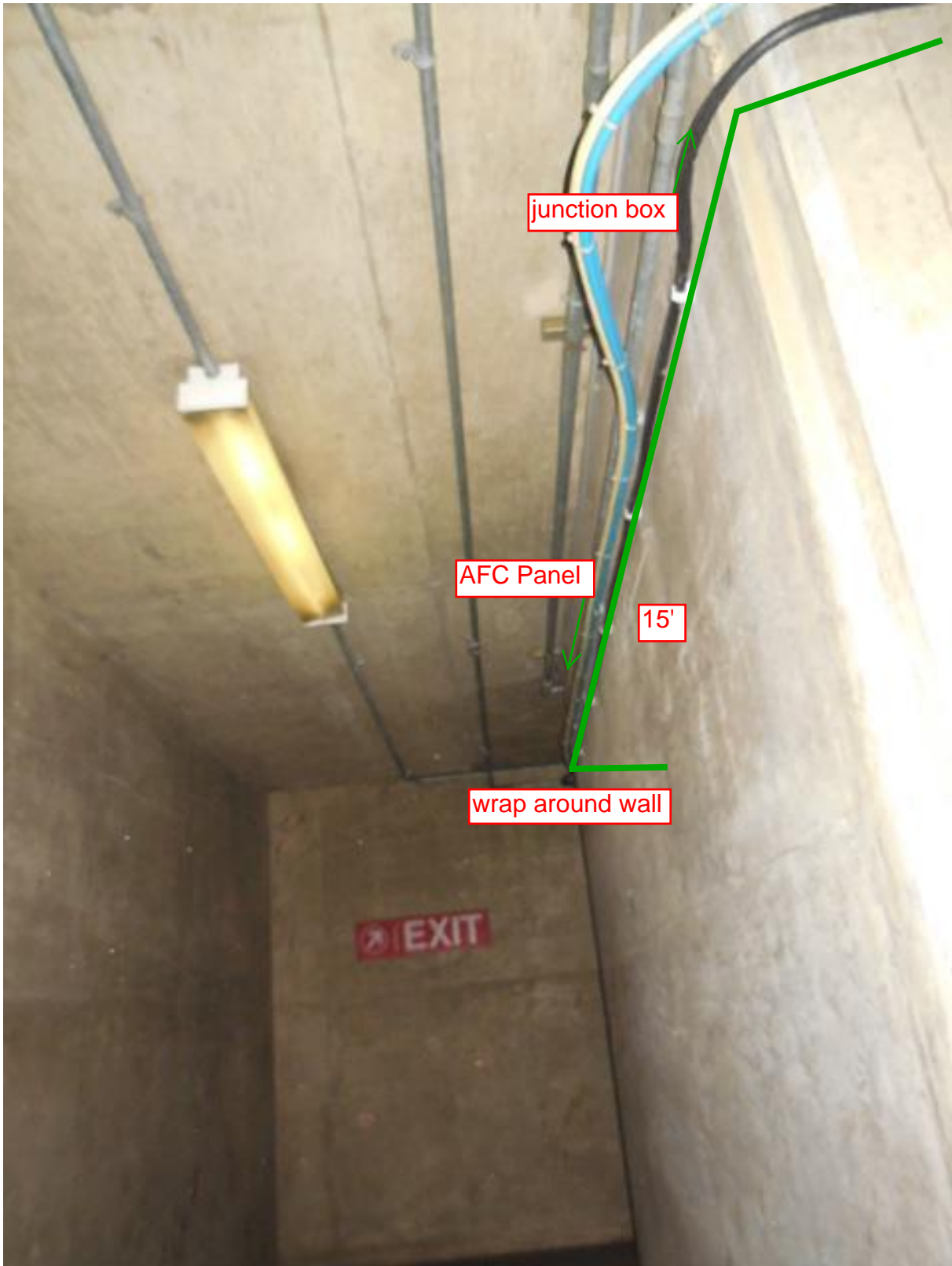


Photo #5 - Proposed conduit run in hallway between junction box and Room C101

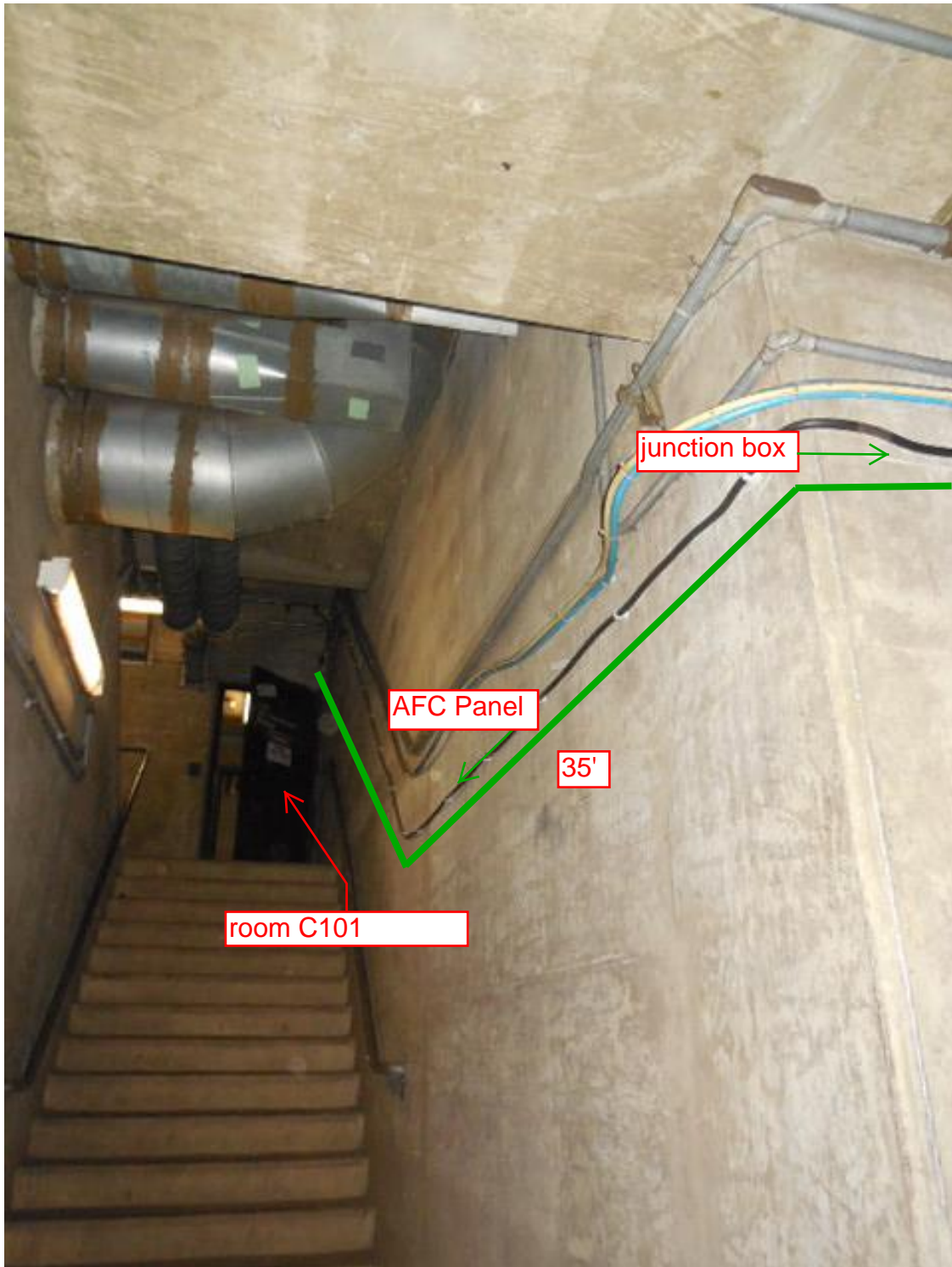


Photo #6 - Proposed conduit run showing core drill entering Room C101

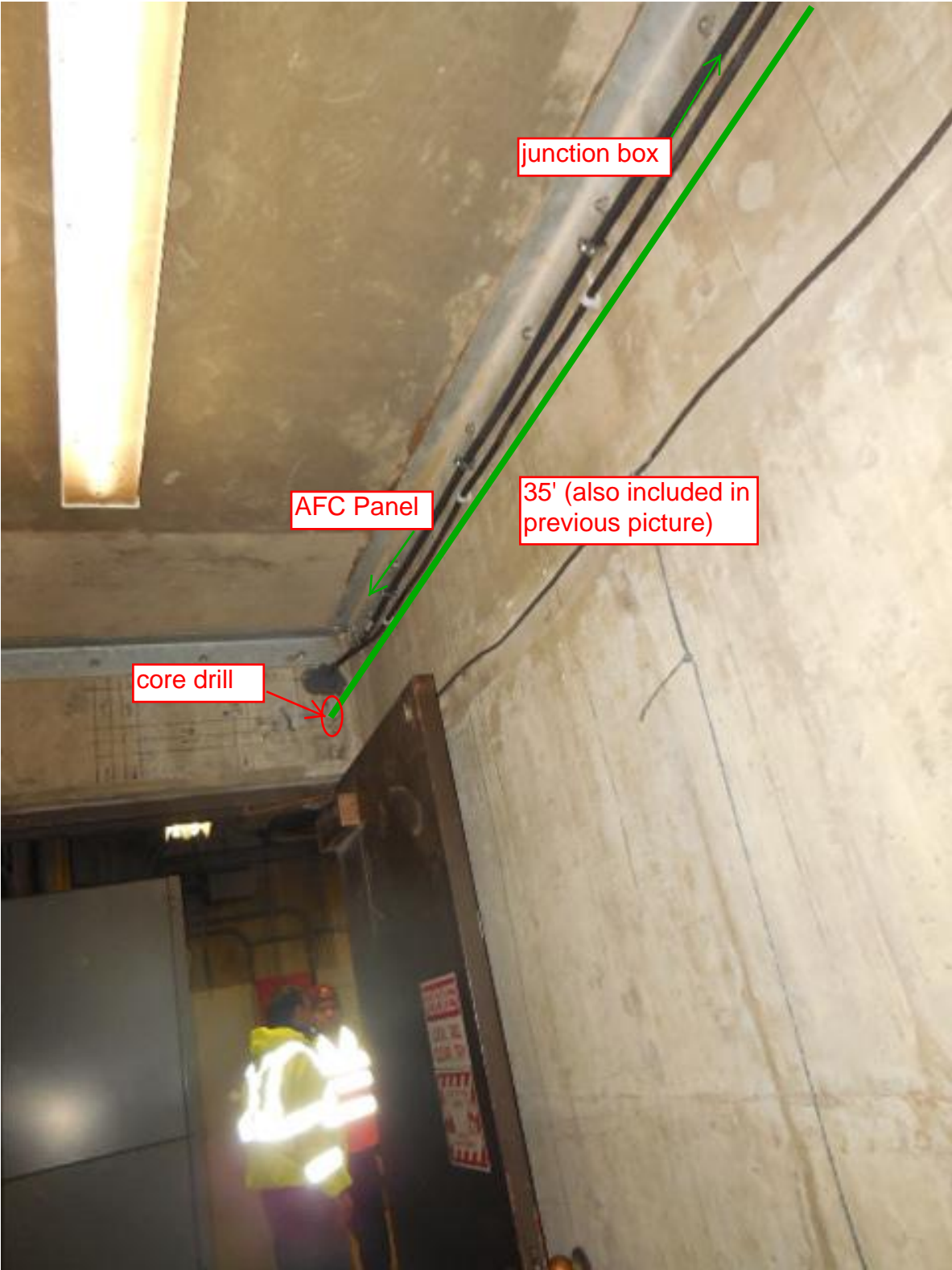


Photo #7 - Proposed conduit run from Room C101 entering Room C106

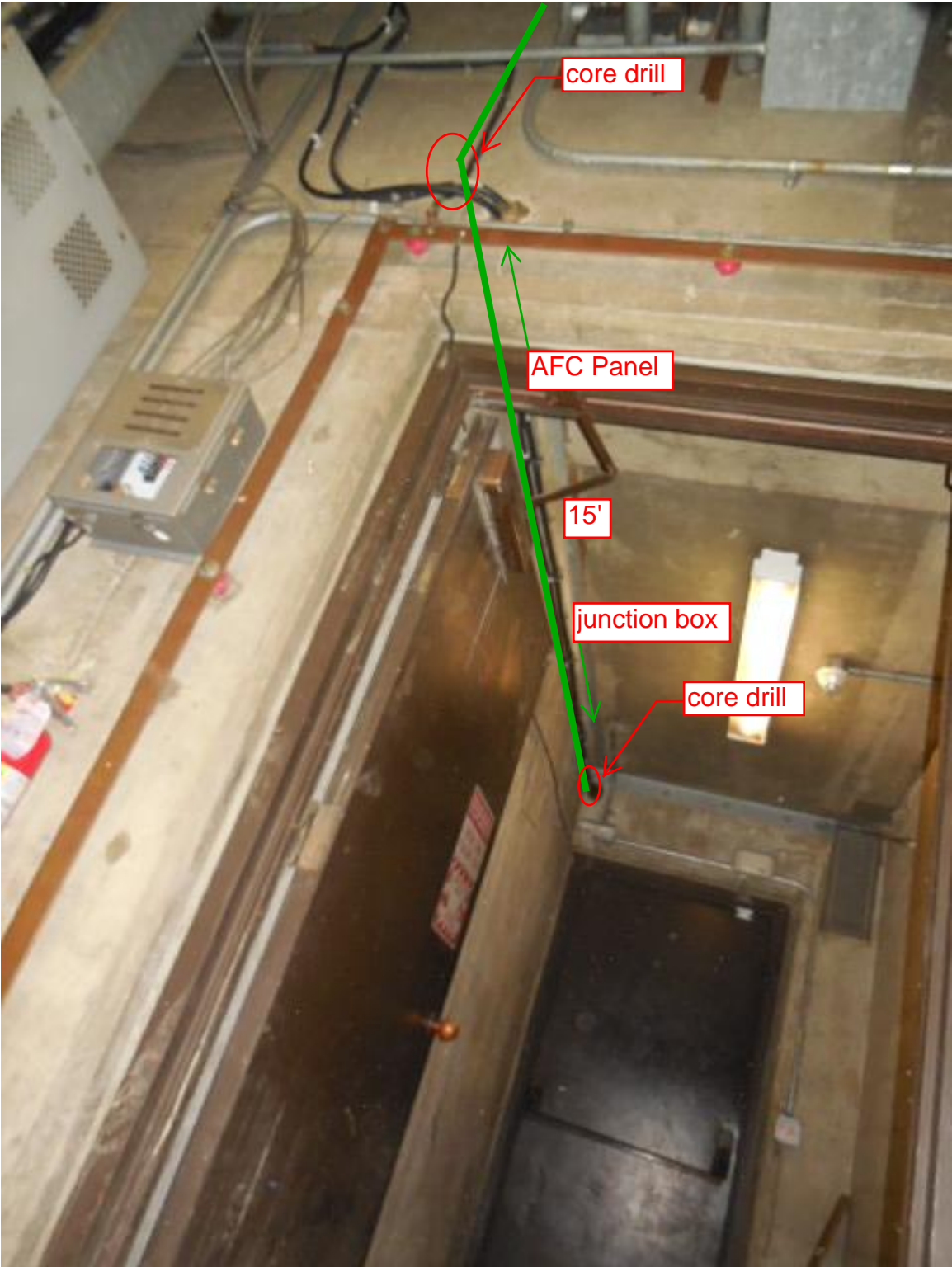


Photo #8 - Proposed conduit run inside Room C106

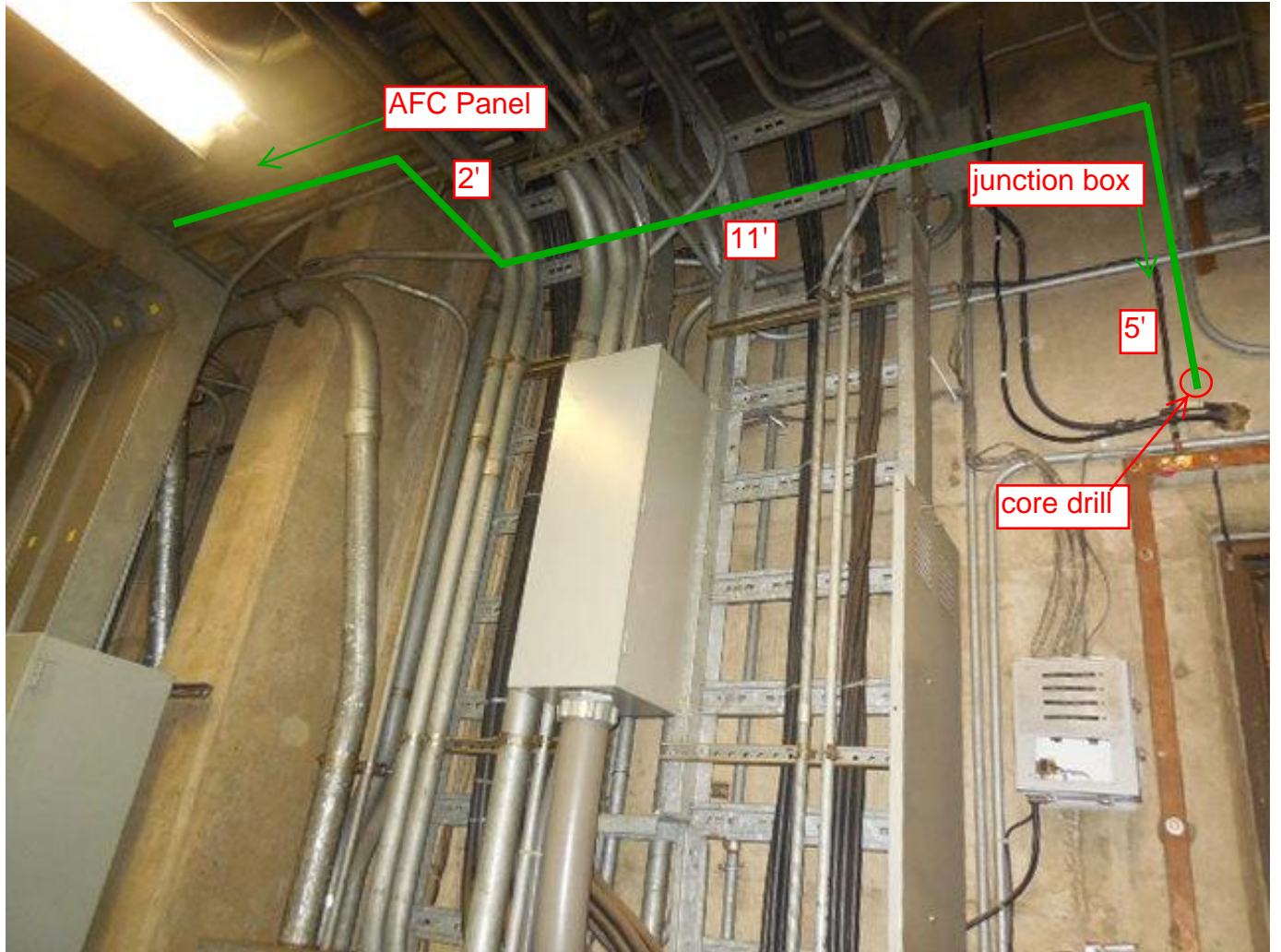


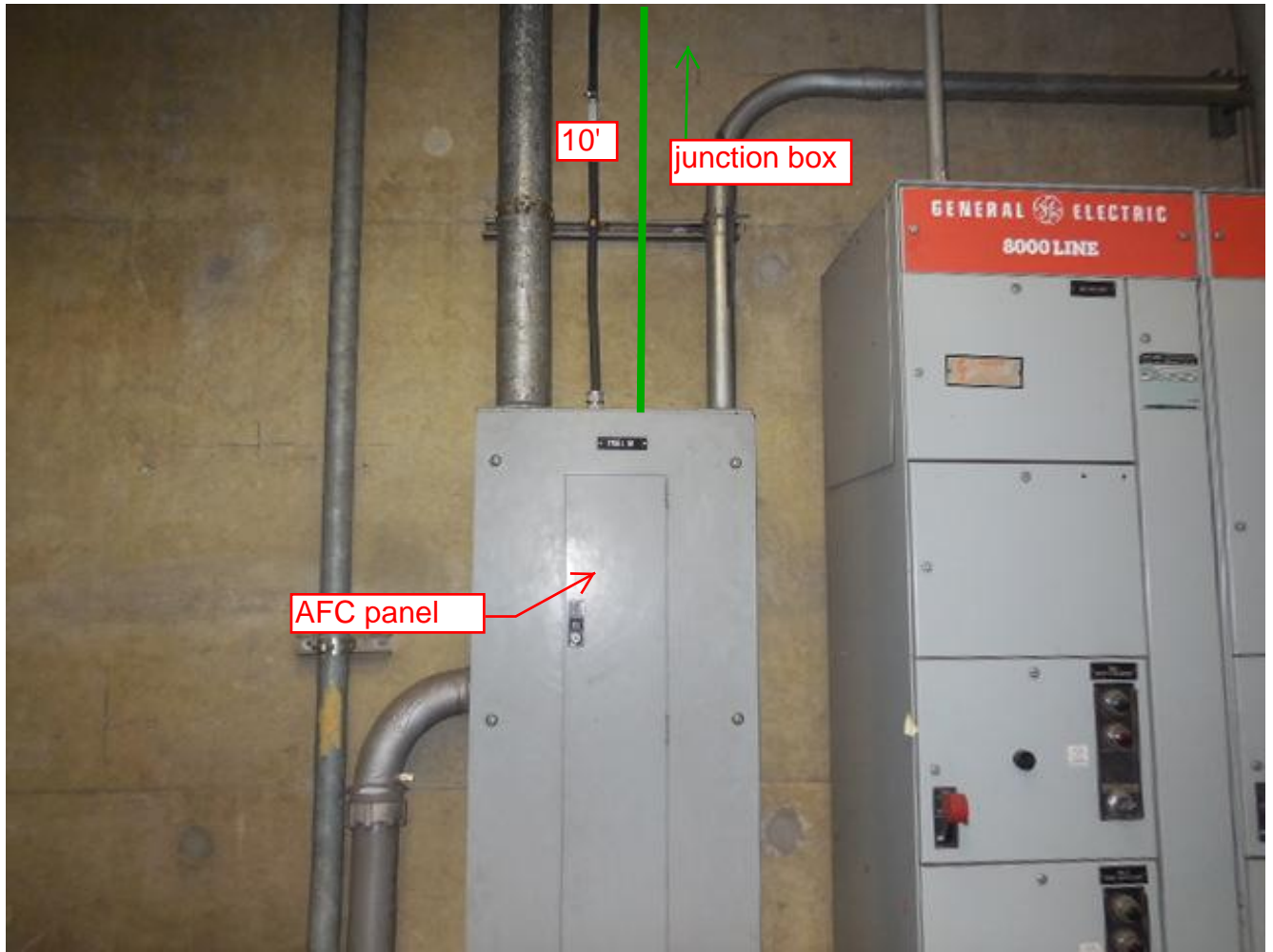
Photo #9 - Proposed conduit run inside Room C106



Photo #10 - Proposed conduit run inside Room C106



Photo #11 - Proposed conduit run connection to AFC Panel



Mezzanine Inspection Report

REVISION 1

Date: 09/03/2014	Station Name: B10 Wheaton	Mezzanine #: 033	Completed By: Tino Sahoo
------------------	---------------------------	------------------	--------------------------

Summary

Scoping was completed to the extent possible. Video scoping and pull string installation was not completed for the comm. and power faregate array ducts due to obstructions. The power ducts from the kiosk to (PANEL AFC) via two mezzanine level handholes were successfully video scoped and had pull strings installed.

Scanning is not required per scope of work, but it is recommended for the comm. and power faregate array ducts..

Scoping of Faregate Array(s)

Task	Yes/No	Notes
Communications Duct – Upper Faregate Array (10 Gates)		
Was video scoping completed for the entire duct run?	No	Refer to WMATA Wheaton Fairgate Comm Left Duct Video.avi and WMATA Wheaton Fairgate Comm Right duct ZVideo.avi files.
Were pull strings installed at all faregates in the array?	No	No faregates had pull strings installed.
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	Video scope reached 10 feet into the run before hitting an obstruction. Possible collapsed duct; duct is heavily corroded from sitting in water.
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	N/A	
Communications Duct - Lower Faregate Array (N/A)		
Was video scoping completed for the entire duct run?	N/A	
Were pull strings installed at all faregates in the array?	N/A	
Were there any obstructions or blockages? Provide details of type and specific location.	N/A	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	N/A	
Power Duct - Upper Faregate Array (10 gates)		
Was video scoping completed for the entire duct run?	No	Refer to WMATA Wheaton Fairgate Power Left Duct Video.avi and WMATA Wheaton Fairgate Power Right duct Video.avi files.
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	Video scope reached 10 feet into the run before hitting an obstruction. Possible collapsed duct; duct is heavily corroded from sitting in water.
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	N/A	
Power Duct - Lower Faregate Array (N/A)		
Was video scoping completed for the entire duct run?	N/A	
Were there any obstructions or blockages? Provide details of type and specific location.	N/A	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	N/A	


Scoping of Power Duct - Kiosk to AFC Panel		
Task	Yes/No	Notes
Kiosk to Handhole 1 (12 foot section)		
Was video scoping completed for the entire duct / conduit run?	Yes	Refer to WMATA Wheaton Power Kiosk to Mandhole Video.avi file.
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	
Handhole 1 to Handhole 2 (21 foot section)		
Was video scoping completed for the entire duct / conduit run?	Yes	Refer to WMATA Wheaton Power Handhole to Handhole.avi file.
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	
Handhole 2 to AFC Panel (33 foot section)		
Was video scoping completed for the entire duct / conduit run?	No	Bends prevented video scoping from being completed. Refer to WMATA Wheaton Power Handhole to 90 into JBox Video (1).avi file.
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	
Observations / Issues / Next Steps		
Sign Off		
	GFP Representative	WMATA PRGM
Name:	Tino Sahoo	
Signature:		
Date:	09/03/2014	

Photo #1: B10 Wheaton: Lock-out Tag-out of the feed breakers for the AFC Panel



Photo #2: B10 Wheaton: Lock-out Tag-out of the feed breakers for the AFC Panel

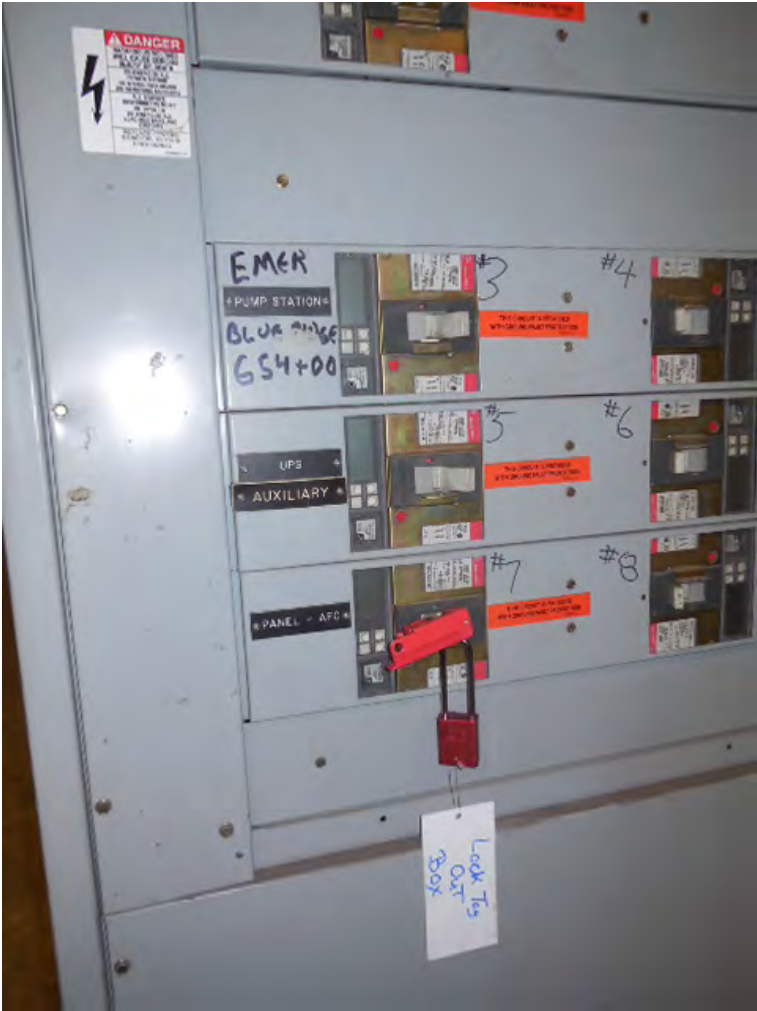


Photo #3: B10 Wheaton: Pushing in fish tape for the faregate array ducts



Photo #4: B10 Wheaton: Attempting to video-scope the faregate array ducts



Photo #5: B10 Wheaton: Attempting to rod the faregate array ducts



Photo #6: B10 Wheaton: Corroded communications duct opening in kiosk



Photo #7: B10 Wheaton: Corroded communications duct opening in kiosk



Photo #8: B10 Wheaton: Installing pull strings between the kiosk and AFC panel via the mezzanine handholes

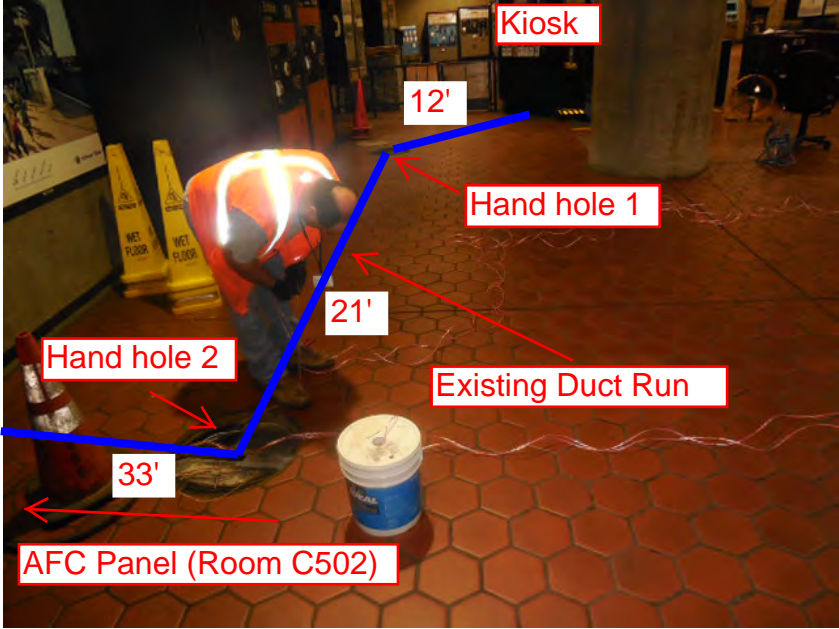


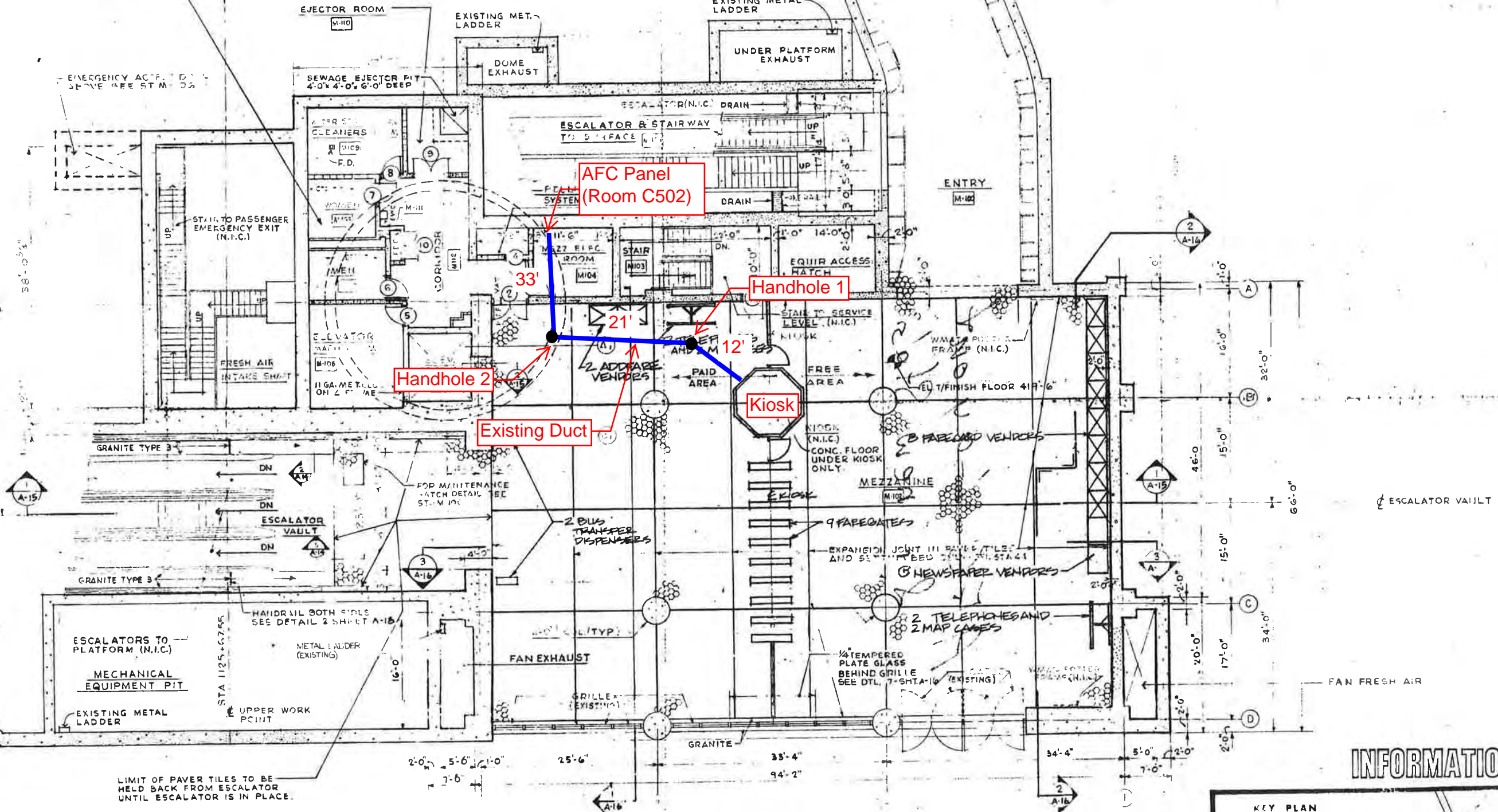
Photo #9: B10 Wheaton: Junction box near the AFC panel



Photo #10: B10 Wheaton: Installing the pull string in the junction box near the AFC panel

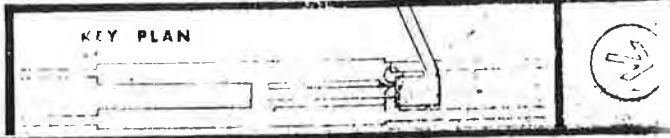


FOR 1/4" PLAN DETAIL OF ANCILLARY ROOMS SEE SHEET A-17



MEZZANINE PLAN EL. 7' FINISH FLOOR 419'-6"
SCALE 1/4" = 1'-0"

INFORMATION ONLY



DESIGNED	H.W.A.	6-20-88
DRAWN	A.J.D.	6-20-88
CHECKED		
APPROVED		

NUMBER	DESCRIPTION	REVISIONS	
		DATE	BY

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY WMATA APPROVED 111 DIRECTOR OF ARCHITECTURE APPROVED ASSISTANT GENERAL MANAGER FOR DESIGN & CONSTRUCTION		DE LEUW, CATHER & COMPANY GENERAL ENGINEERING CONSULTANT HARRY WEESE & ASSOCIATES GENERAL ARCHITECTURAL CONSULTANT
---	--	---

WHEATON STATION A.F.C. LAYOUT	SCALE AS SHOWN	DRAWING NO.
---	----------------	-------------

33

Mezzanine Inspection Report

Revision 1

Date: 06/03/15	Station Name: B11 Glenmont	Mezzanine #: 034	Completed By: Mike Butler
----------------	----------------------------	------------------	---------------------------

Summary

NEPP-01: Video scoping and pull string installation was completed in lower faregate communication duct and 15' power duct run from Handhole 1 to AFC Panel. Video scoping was also completed in lower faregate power duct. However, it was not possible to complete video scoping or pull string installation in upper faregate communication duct due to obstructions and water intrusion. Nor was it possible to video scope the upper faregate power duct due to obstructions and water intrusion. Video scoping and pull string installation for the 140' power duct run from Kiosk to Handhole 1 could not be completed due to multiple obstructions, which appear to have been caused by water damage.

Scanning of the mezzanine floor was completed to determine the existing layout of in-floor ducts and a proposed power duct run between the Kiosk and Handhole 1. The scanning results showed that there is space for a proposed duct run; however alternate parallel ducts between the Kiosk and AFC Panel were also identified during scanning.

NEPP-02: Video scoping and pull string installation was completed in an empty alternate duct between Kiosk, Handhole 2 and AFC Panel. The alternate duct runs parallel with the existing duct. Duct is in good condition and viable for future use.

NEPP-01: Scoping of Faregate Arrays (09/03/14)

Task	Yes/No	Notes
Communications Duct – Upper Faregate Array (6 faregates)		
Was video scoping completed for the entire duct run?	No	Video scoping and pull string installation was not possible due to water intrusion and obstructions.
Were pull strings installed at all faregates in the array?	No	
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	Rodder hit an obstruction at the apron of the kiosk in duct; further rodding attempts from the faregate end of duct were also unsuccessful. In addition, 75% of duct appears to be under water and corroded.
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	N/A	4" walker duct with less than 12 wires
Communications Duct - Lower Faregate Array (6 faregates)		
Was video scoping completed for the entire duct run?	Yes	Refer to "WMATA Glenmont Lower Fairgate Comm Video.avi"
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	There were no obstructions or blockages, however some water intrusion and corrosion was visible.
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	4" walker duct with less than 12 wires.
Power Duct - Upper Faregate Array (6 faregates)		
Was video scoping completed for the entire duct run?	No	Video scoping was not possible due to water intrusion and obstructions.
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	Rodder hit an obstruction at the apron of the kiosk in duct; further rodding attempts from the faregate end of duct were also unsuccessful. In addition, 75% of duct appears to be under water and corroded.
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	N/A	4" walker duct with less than 12 wires.
Power Duct - Lower Faregate Array (6 faregates)		
Was video scoping completed for the entire duct run?	Yes	Refer to "WMATA Glenmont Lower Fairgate Power Video.avi"
Were there any obstructions or blockages? Provide details of type and specific location.	No	There were no obstructions or blockages, however some water intrusion and corrosion was visible.
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	4" walker duct with less than 12 wires.

NEPP-01: Scoping of Existing Power Duct (09/03/14)		
Task	Yes/No	Notes
Kiosk to Handhole 1 (Distance: 140')		
Was video scoping completed for the entire duct / conduit run?	No	Video scoping and pull string installation was not possible due to water intrusion and obstructions.
Was pull string installed??	No	
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	Obstruction in duct was encountered almost immediately from the kiosk end, and at 20' from the handhole end. Duct has extensive corrosion with clear signs of water intrusion.
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	Yes	6" walker duct with less than 15 wires
Handhole 1 to AFC Panel (Distance: 15')		
Was video scoping completed for the entire duct / conduit run?	Yes	Refer to "WMATA Glenmont Power Kiosk to Handhole Video.avi"
Was pull string installed??	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	6" walker duct with less than 15 wires
NEPP-01: Scanning of Mezzanine Floor (10/22/14)		
<ul style="list-style-type: none"> - Scanning was conducted to identify a proposed duct route between the Kiosk and AFC Panel. - The scanning results showed that there are multiple ducts running side-by-side from the Kiosk to AFC Panel. - Refer to scanning drawing for the layout of existing ducts on the mezzanine floor. - An AFC as-built drawing does not exist for this mezzanine. 		


NEPP-02: Scoping of Alternate Power Duct (06/03/15)		
Task	Yes/No	Notes
Kiosk to Handhole 2 (Distance: 140')		
Was video scoping completed for the entire duct / conduit run?	Partially	Refer to "B11_MZ034_Glenmont_Kiosk to HH2.avi" and "B11_MZ034_Glenmont_HH2 to Kiosk.avi"
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	The video scope could not get past the two 45-degree bends.
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	Empty 6" walker duct
Handhole 2 to AFC Panel (Distance: 15')		
Was video scoping completed for the entire duct / conduit run?	Yes	Refer to "B11_MZ034_Glenmont_HH2 to AFC Panel.avi"
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	Empty 6" walker duct
Observations / Issues / Next Steps		
<ul style="list-style-type: none"> - The distance of alternate power duct from Kiosk to AFC Panel is 155'. 		
Sign Off		
	GFP Representative	WMATA PRGM
Name:	Mike Butler	
Signature:		
Date:	06/03/15	

Photo #1: B11 Glenmont - Existing and Alternate Duct Runs from Kiosk

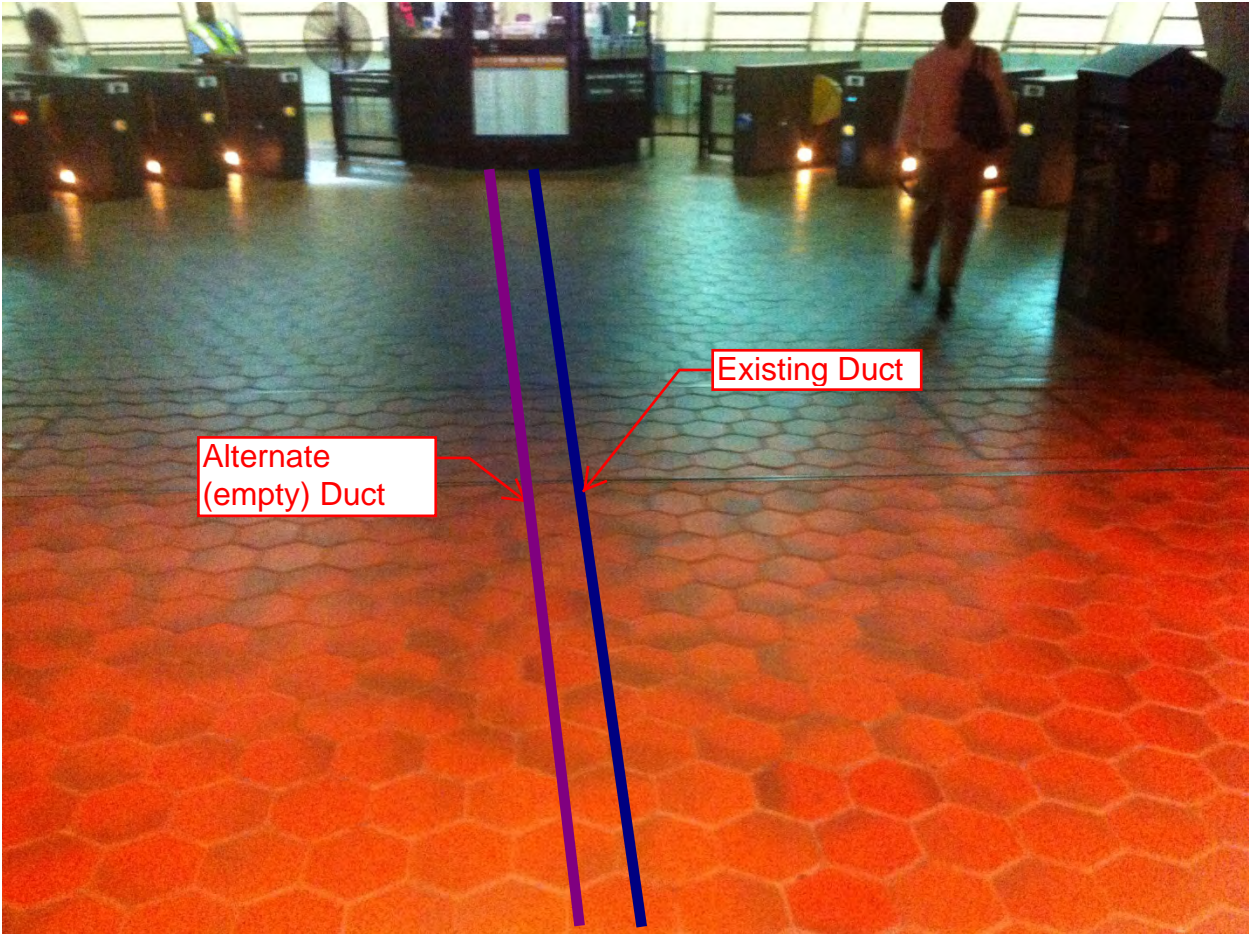


Photo #2: B11 Glenmont – Existing and Alternate Duct Runs from Kiosk to AFC Panel in Room #103, including hand hole locations.

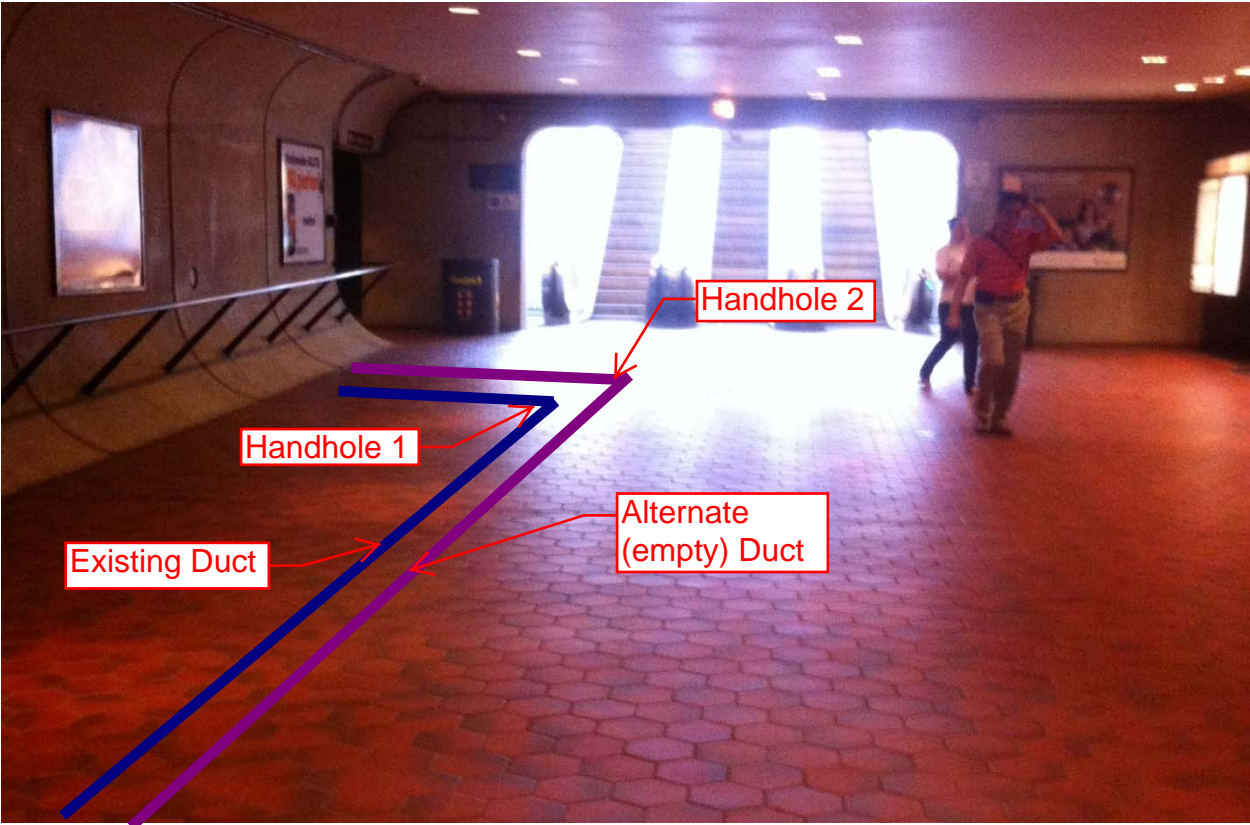
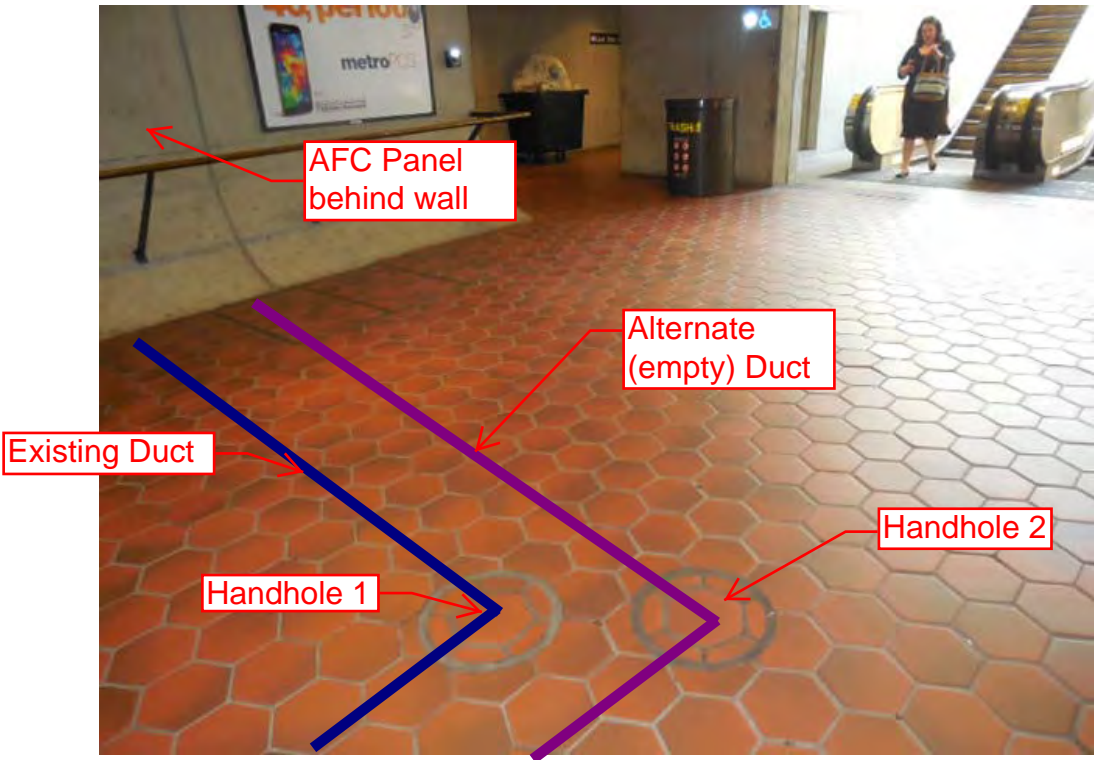


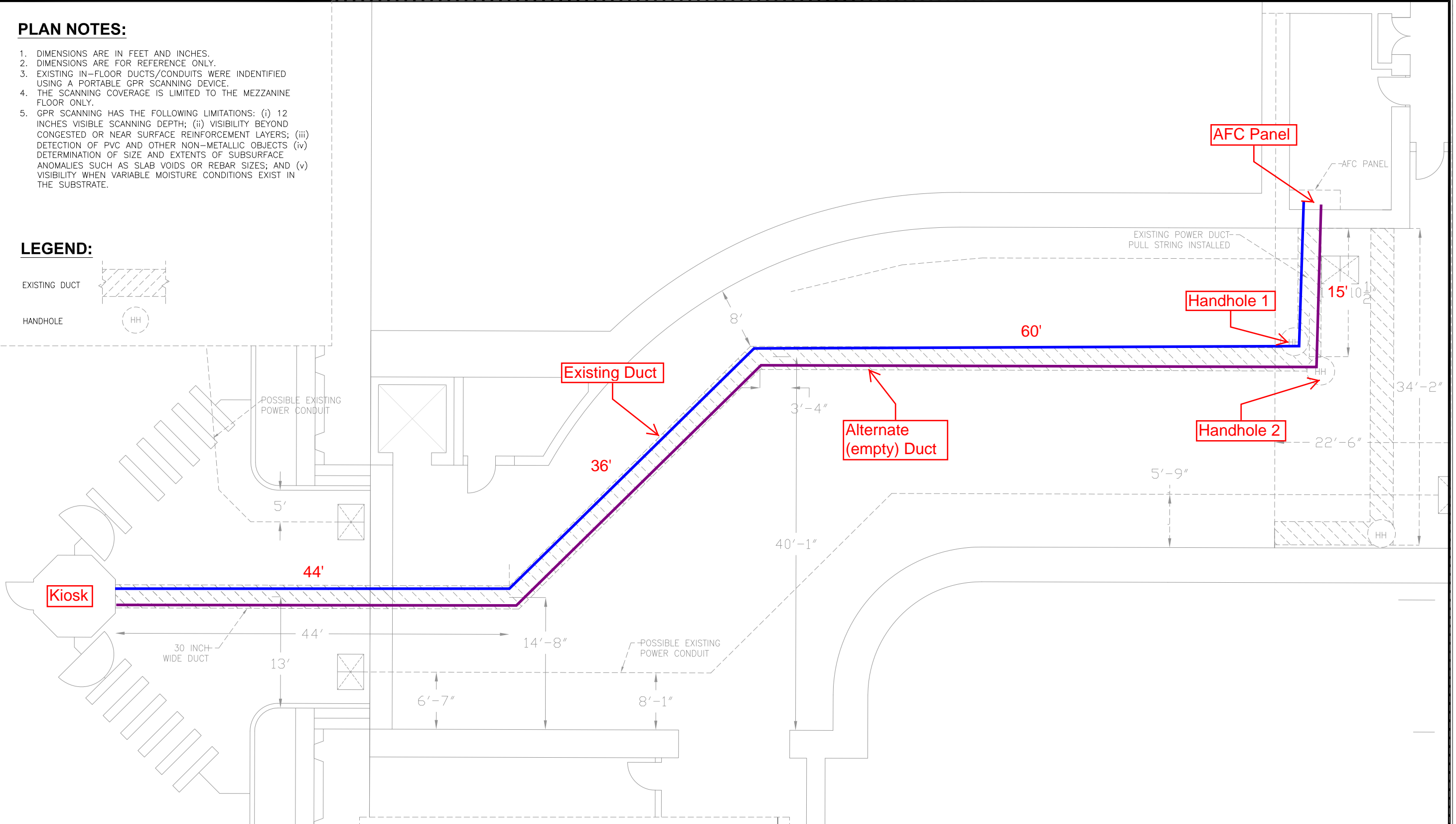
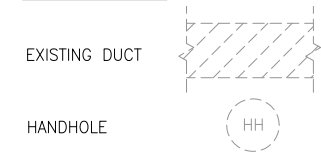
Photo #3: B11 Glenmont – Existing and Alternate Duct Runs from Kiosk to AFC Panel in Room #103, including hand hole locations.



PLAN NOTES:

1. DIMENSIONS ARE IN FEET AND INCHES.
2. DIMENSIONS ARE FOR REFERENCE ONLY.
3. EXISTING IN-FLOOR DUCTS/CONDUITS WERE IDENTIFIED USING A PORTABLE GPR SCANNING DEVICE.
4. THE SCANNING COVERAGE IS LIMITED TO THE MEZZANINE FLOOR ONLY.
5. GPR SCANNING HAS THE FOLLOWING LIMITATIONS: (i) 12 INCHES VISIBLE SCANNING DEPTH; (ii) VISIBILITY BEYOND CONGESTED OR NEAR SURFACE REINFORCEMENT LAYERS; (iii) DETECTION OF PVC AND OTHER NON-METALLIC OBJECTS (iv) DETERMINATION OF SIZE AND EXTENTS OF SUBSURFACE ANOMALIES SUCH AS SLAB VOIDS OR REBAR SIZES; AND (v) VISIBILITY WHEN VARIABLE MOISTURE CONDITIONS EXIST IN THE SUBSTRATE.

LEGEND:



1
E-100 **GLENMONT STATION**
SCALE: NOT TO SCALE

CONTRACT NO.
XXXXXX

DESIGNED	C. LOOSE	11-14
DRAWN	C. LOOSE	11-14
CHECKED	M. BUTLER	11-14
APPROVED		

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

APPROVED _____

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY
DEPARTMENT OF TRANSIT INFRASTRUCTURE AND ENGINEERING SERVICES
OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM

GFP A Gannett Fleming/Parsons JOINT VENTURE
SUBMITTED _____
PROJECT MANAGER

SCALE
NOT TO SCALE

15-NEPP-01
IN - FLOOR DUCT INSPECTIONS
B11 GLENMONT (M034)
PROPOSED ELECTRICAL DUCT PATH
DRAWING NO.
B11-E-100
XXX

Mezzanine Inspection Report (Scoping)

Date: 10/02/2014	Station Name: B35 New York Ave North	Mezzanine #: 109	Completed By: Mike Butler
------------------	--------------------------------------	------------------	---------------------------

Summary

Video scoping and pull string installed in power and comm. ducts. Pull string installed in power conduit from kiosk to electrical room. A transition from power conduit to smaller 'armored flexible cables' in the electrical room next to the AFC Panel prevented scoping and pull string installation (see photos). For consistency, it is recommended to install new NEPP wires inside new armored flex cable between conduit stub up and AFC Panel.

Scanning is not required at this station.

Scoping of Faregate Array(s)

Task	Yes/No	Notes
Communications Duct – Upper Faregate Array (6 Gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to WMATA New York North Mezz Comm Fairgate Video.avi file.
Were pull strings installed at all faregates in the array?	Yes	Pull strings installed and labeled "NEPP"
Were there any obstructions or blockages? Provide details of type and specific location.	No	Water and mud was observed inside walker ducts
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	4" duct with less than 8 wires
Communications Duct - Lower Faregate Array (N/A)		
Was video scoping completed for the entire duct run?	N/A	
Were pull strings installed at all faregates in the array?	N/A	
Were there any obstructions or blockages? Provide details of type and specific location.	N/A	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	N/A	
Power Duct - Upper Faregate Array (6 Gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to WMATA New York North Mezz Power Right Fairgate Video (1).avi file.
Were there any obstructions or blockages? Provide details of type and specific location.	No	Water and mud was observed inside walker ducts
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	4" duct with less than 12 wires
Power Duct - Lower Faregate Array (N/A)		
Was video scoping completed for the entire duct run?	N/A	
Were there any obstructions or blockages? Provide details of type and specific location.	N/A	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	N/A	


Scoping of Power Duct - Kiosk to AFC Panel		
Task	Yes/No	Notes
Kiosk to Conduit 'Stub-up' in Electrical Room #110 (80 foot run)		
Was video scoping completed for the entire duct / conduit run?	No	Conduit does not require scoping
Was pull string installed?	Yes	Pull strings installed and labeled "NEPP"
Were there any obstructions or blockages? Provide details of type and specific location.	No	Conduit has 90 degree bends
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	2" conduit with less than 10 wires
Conduit 'Stub-up' to AFC Panel(15 foot run)		
Was video scoping completed for the entire duct / conduit run?	No	Conduit could not be scoped or pulled due to small armored flex cables (see photos).
Was pull string installed?	No	
Were there any obstructions or blockages? Provide details of type and specific location.	N/A	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	N/A	
Observations / Issues / Next Steps		
No existing as-built available.		
Sign Off		
	GFP Representative	WMATA PRGM
Name:	Mike Butler	
Signature:		
Date:	10/02/2014	

Photo #1 – Kiosk and Faregates on Mezzanine Floor



Photo #2 – Power Conduit transition to Armored Flex Cables leading to AFC Panel (Electrical Room 110)



Photo #3 –Armored Flex Cables leading to AFC Panel (Electrical Room 110)



Mezzanine Inspection Report (Scoping)

Date: 11/05/2014	Station Name: B35 New York Ave South	Mezzanine #: 108	Completed By: Mike Butler
-------------------------	---	-------------------------	----------------------------------

Summary

Video scoping and pull string installation was completed for the communications duct for the faregate array. Video scoping was completed for the power duct for the faregate array.

A proposed route was identified for the power conduit run from the kiosk to the AFC panel. A 4 inch conduit runs from the kiosk to the cable chase room #109, behind elevator room #107, and pull string was installed to a stub up. There were four available 1 inch ground conduits not being used inside room #109 approximately 35 feet down the hall from the 4 inch stub up, and these 1 inch conduits run and stub up inside the power room #101 next to the AFC panel. The 4 inch and 1 inch stub ups could be connected by a proposed conduit run along the wall. The 1 inch ground conduit was used to bridge the run from the cable chase room to the AFC panel and pull string was installed. Both the 4 inch and 1 inch conduits were vacant.

No scanning is required at this mezzanine.

Scoping of Faregate Array(s)

Task	Yes/No	Notes
Communications Duct – Faregate Array (4 Gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to WMATA New York Ave South Comm Fair Gate Video.avi file.
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	
Power Duct - Upper Faregate Array (4 Gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to WMATA New York Ave South Right Power Fair Gate Video.avi file.
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	

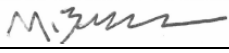
Scoping of Power Duct - Kiosk to AFC Panel		
Task	Yes/No	Notes
Kiosk to 4" stub up (~60 foot run)		
Was video scoping completed for the entire duct / conduit run?	No	Conduit – no scoping required
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	Conduit vacant
1" stub up to AFC Panel (~130 foot run)		
Was video scoping completed for the entire duct / conduit run?	No	Conduit – no scoping required
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	Conduit vacant
Observations / Issues / Next Steps		
<p>No existing As-builts available.</p> <p>A proposed conduit run, approximately 35 feet long, will be needed between the 4 inch and 1 inch stub ups.</p>		
Sign Off		
	GFP Representative	WMATA PRGM
Name:	Mike Butler	
Signature:		
Date:	11/05/2014	

Photo #1 – B35 New York Ave South: 4 inch stub up at first run from kiosk

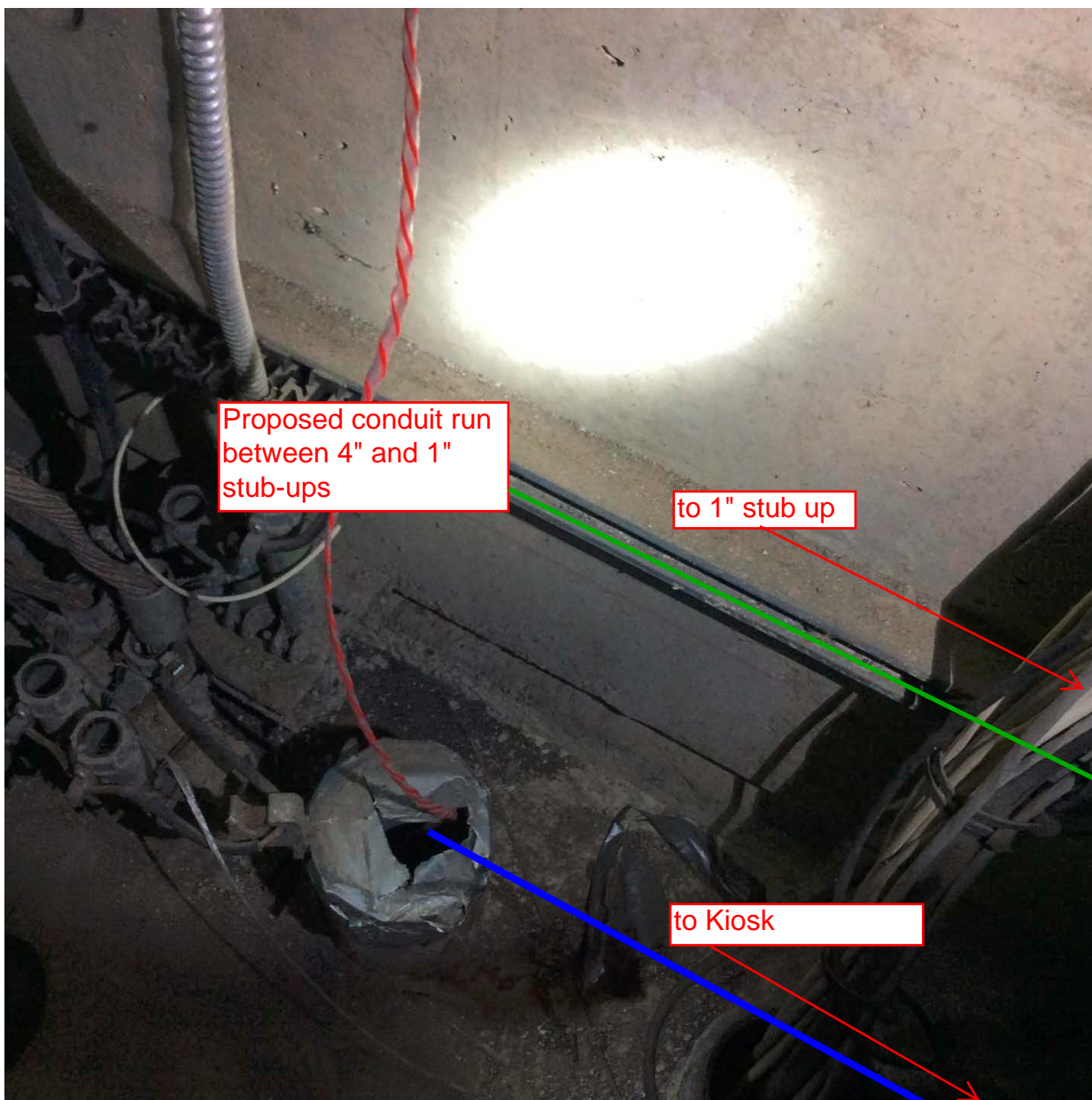


Photo #2 – B35 New York Ave South: 1 inch stub up starting run to AFC Panel

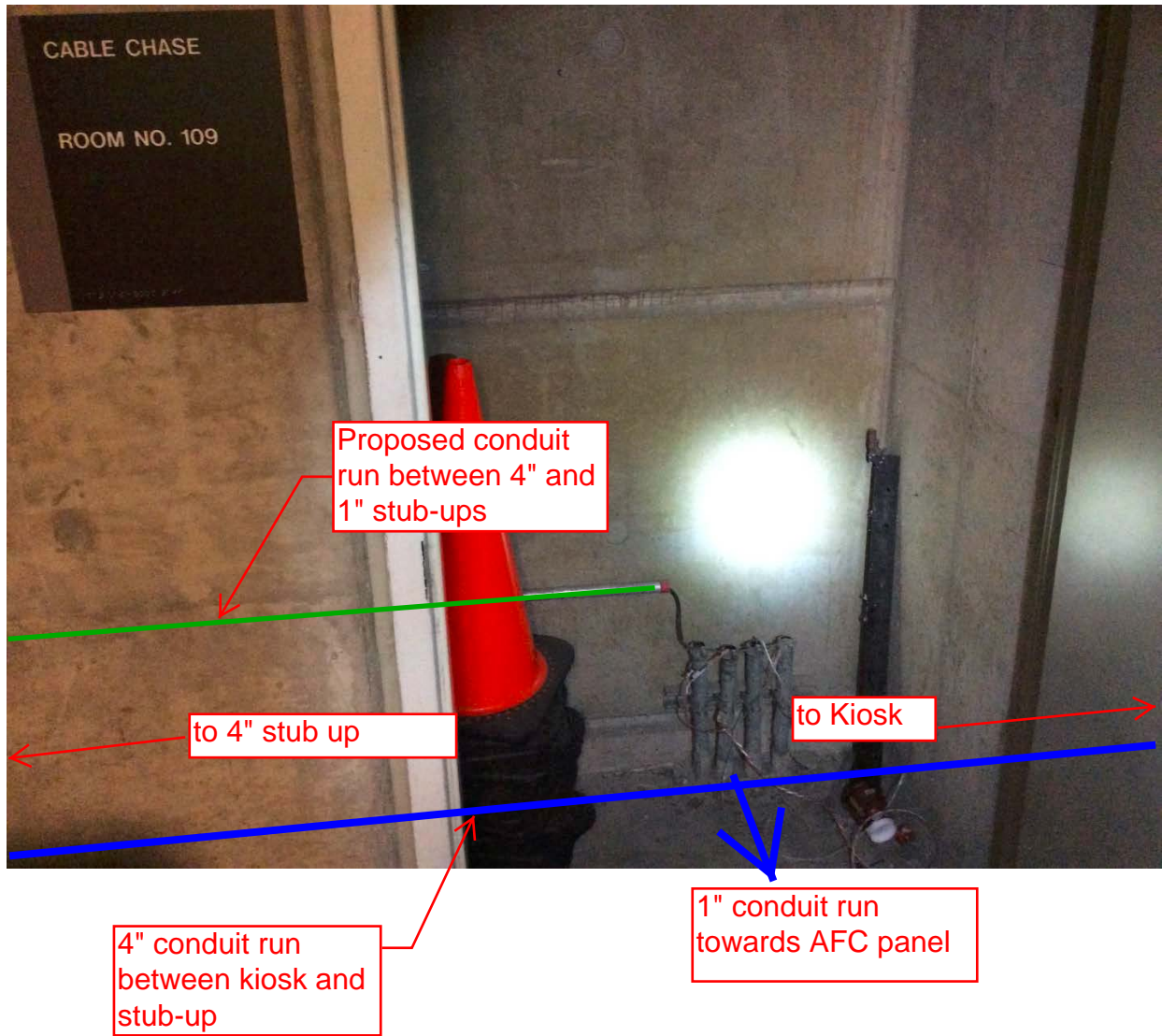


Photo #3 – B35 New York Ave South: AFC Panel near 1 inch stub up



1" stub up near
AFC Panel

1" conduit towards
proposed
connection to 4"
stub up

Mezzanine Inspection Report (Scoping)

REVISION 1

Date: 10/31/14	Station Name: F01 Gallery Place North	Mezzanine #: 069	Completed By: Mike Butler
----------------	---------------------------------------	------------------	---------------------------

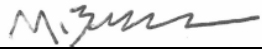
Summary

Video scoping is complete for this station. The ducts are not at capacity and they are free from obstructions. However, pull string installation is could not be completed between Kiosk and AFC Panel due to inaccessibility of junction box (see photo #2) on the ceiling of Room N101 on the platform level. The junction box is 20' above the ground and is not safely reachable by ladders (see photo #1) – there is no safe place to secure the ladder with the junction box in reach. Scaffolding is required to reach the Junction Box.

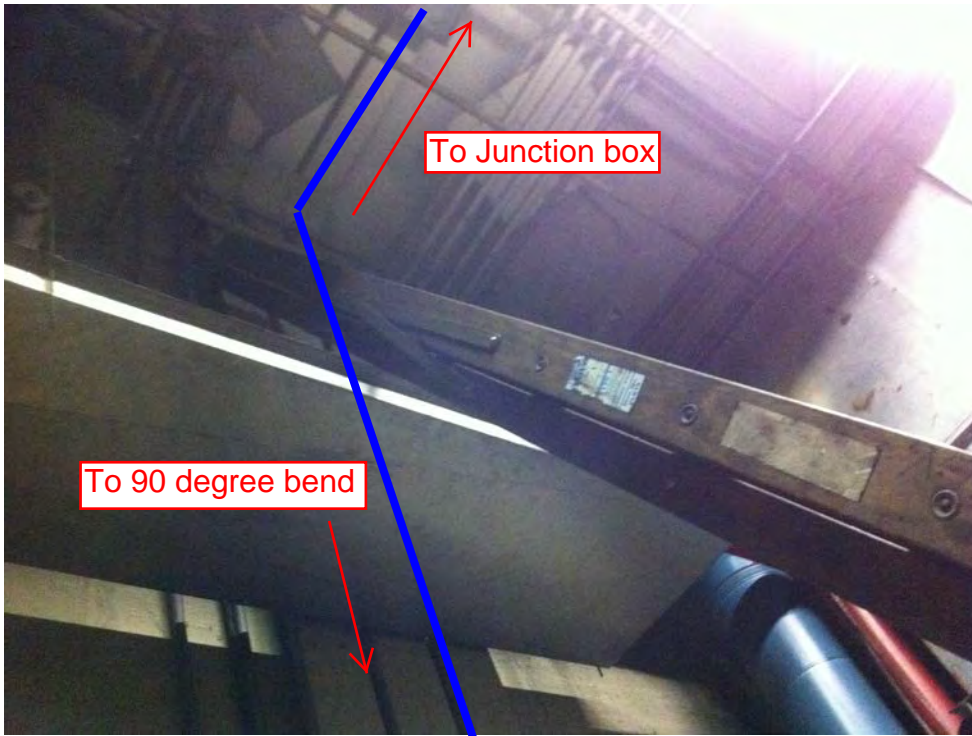
Scanning is not necessary.

Scoping of Faregate Array(s)

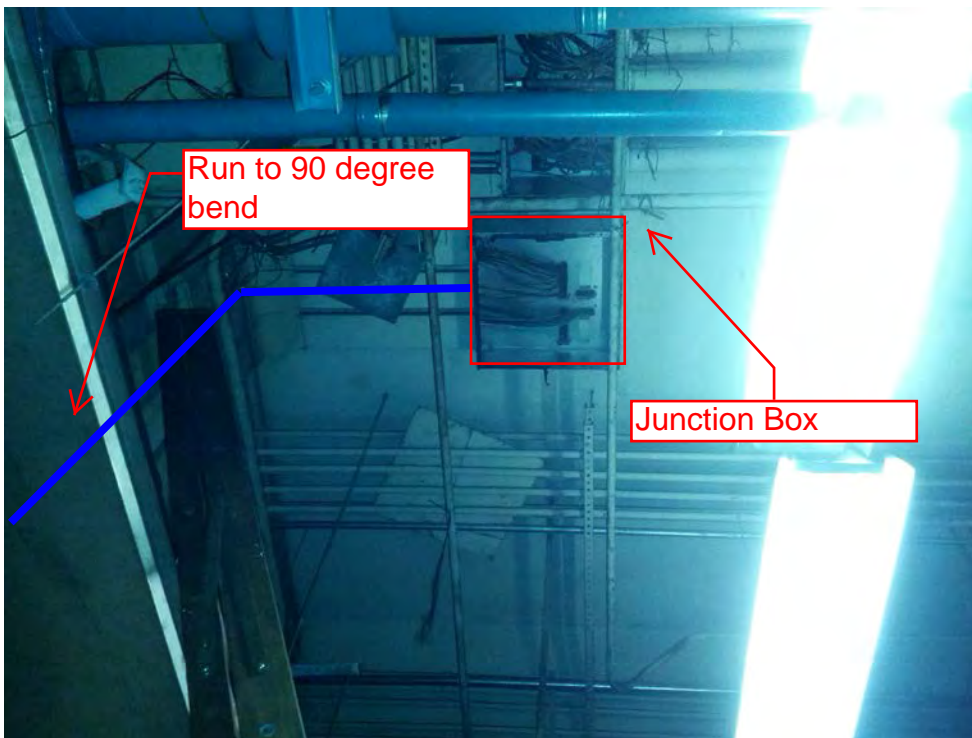
Task	Yes/No	Notes
Communications Duct – Upper Faregate Array (5 Gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to WMATA Gallery Place Upper Comm Fairgate Video.avi file.
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	
Communications Duct - Lower Faregate Array (5 Gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to WMATA Gallery Place Lower Comm Fairgate Video.avi file.
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	
Power Duct - Upper Faregate Array (5 Gates)		
Was video scoping completed for the entire duct run?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	
Power Duct - Lower Faregate Array (5 Gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to WMATA Gallery Place Lower Power Fairgate Video.avi file.
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	

Scoping of Power Duct - Kiosk to AFC Panel		
Task	Yes/No	Notes
Kiosk to Junction Box (Room N101) – 45'		
Was video scoping completed for the entire duct / conduit run?	Yes	Refer to WMATA Gallery Place Handhole to Kiosk Video.avi file.
Was pull string installed?	No	Camera light could be seen inside the junction box from the ground level 20' below. However, it was not possible to access box and install pull string.
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	
Junction Box (Room N101) to AFC Panel – 35'		
Was video scoping completed for the entire duct / conduit run?	No	90 degree bend was encountered where the duct transitions from wall to the ceiling (see photo).
Was pull string installed?	No	Need safe access to Junction Box 20' above ground level
Were there any obstructions or blockages? Provide details of type and specific location.	No	No obstructions in vertical duct run from AFC panel to ceiling. Assuming no obstructions in horizontal duct run on ceiling between 90 degree bend and junction box.
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	
Observations / Issues / Next Steps		
There is no secure location to place a ladder and access the junction box safely. The junction box is centrally positioned on the ceiling, away from the surrounding walls, making it difficult to reach. Scaffolding or some other temporary support is needed to safely access the junction box.		
Sign Off		
	GFP Representative	WMATA PRGM
Name:	Mike Butler	
Signature:		
Date:	10/31/14	

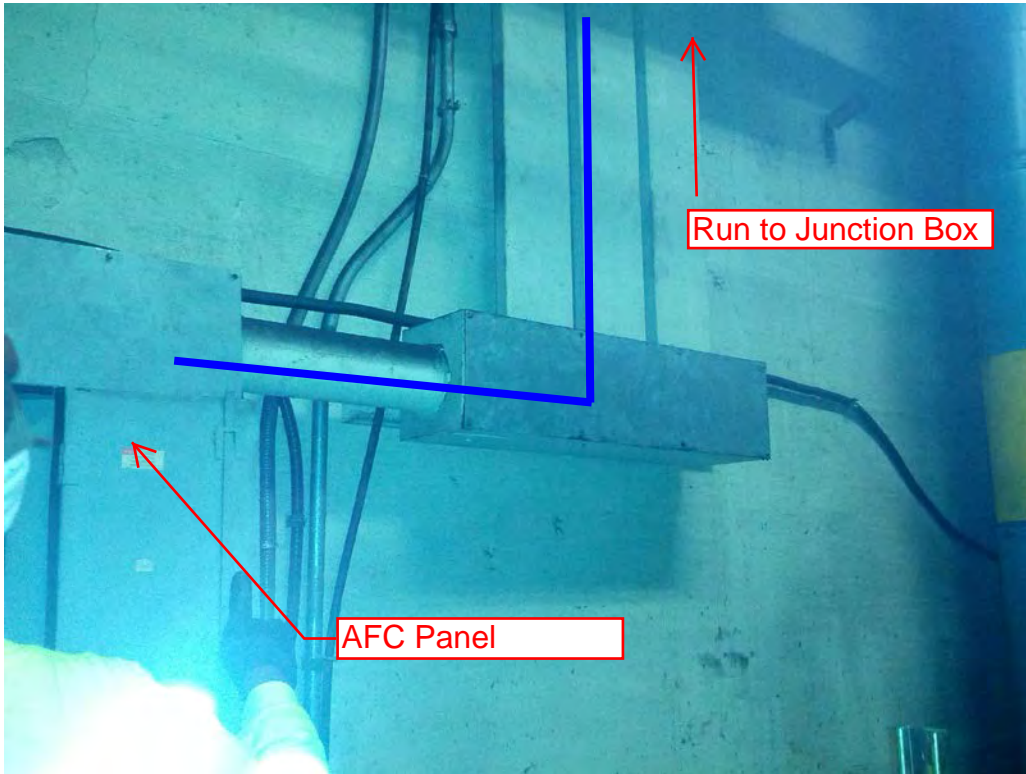
Gallery Place North Photo #1 – Due to obstructions on the wall and limited space in Room N101, there is no secure area to place the ladder and have access to the Junction Box in the ceiling.



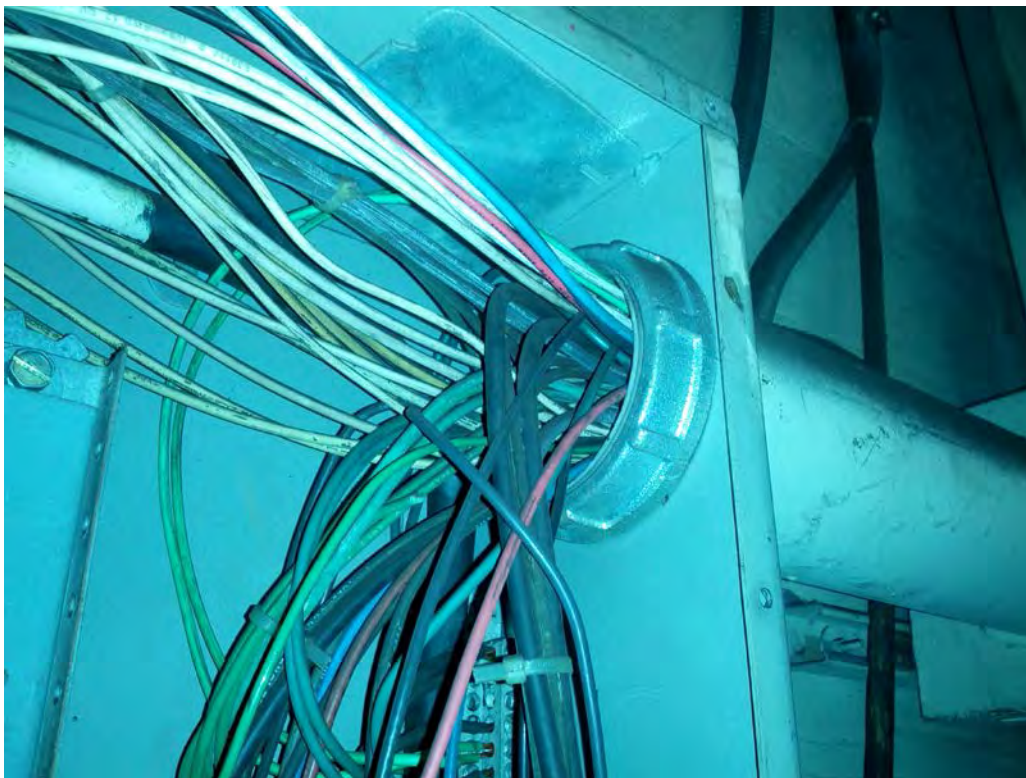
Gallery Place North Photo #2 – Junction box 20' above ground level under Mezzanine level.



Gallery Place North Photo #3 – Wires from Junction Box come down in ducts and converge into larger conduit leading to AFC Panel.

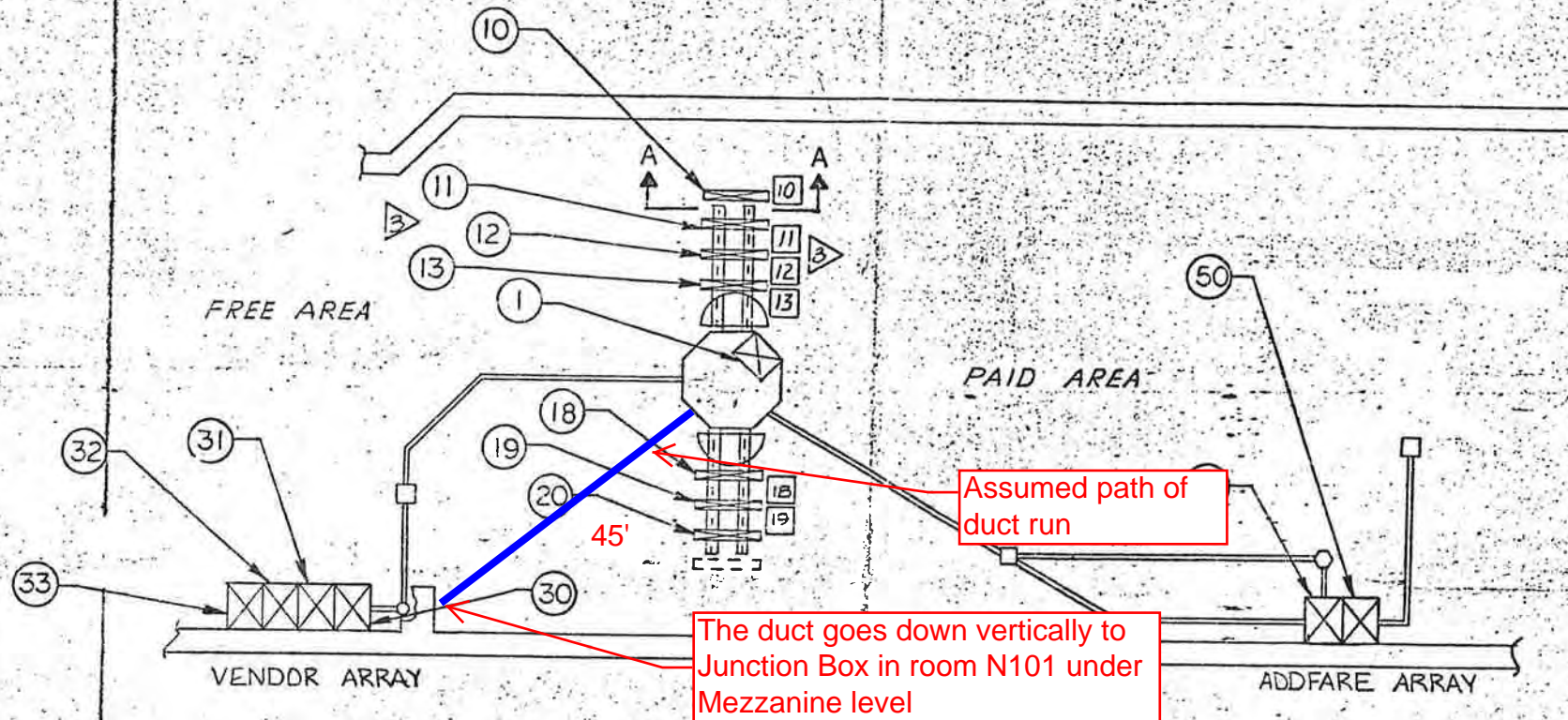


Gallery Place North Photo #4 – Wires coming from conduit inside of AFC Panel.

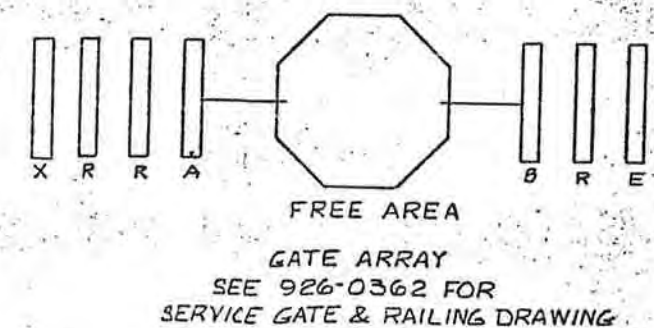
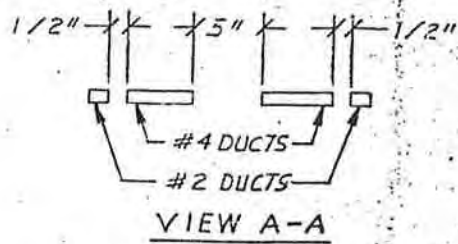


NOTES:

1. THE MINIMUM OPERATIONAL MACHINE INVENTORY IS REFERENCED ON THIS DRAWING BY THE "X" DRAWN THROUGH THE MACHINE.
 2. FOR REFERENCE DRAWINGS USED SEE SUPPORT DOCUMENTATION PACKAGE FOR THIS MEZZANINE.
- (X) INDICATES POSITION NO. (X) INDICATES AISLE NO.



- 1 INSTALLATION PLAN



PANEL F					
POSITION NO.	MACHINE TYPE	SERIAL NO.	CIRCUIT BREAKER NO.	BREAKER SIZE (AMPS)	WIRE SIZE (AWG)
1	DADS	DS-8066		20	
10	EXITGATE	EX 4069		20	See 926-0362
11	REV GATE	ER-7264	1	20	
12	REV GATE	ER-7265	5	20	
13	A GATE	EA-5053	7	20	
18	B GATE	EB-6047	2	20	
19	REV GATE	ER-7305	4	20	
20	ENTRY GATE	EN-3062	6	20	
30	VENDOR	FV-1322	9	20	
31	VENDOR	FV-1313	11	20	
32	VENDOR	FV-1316	13	20	
33	VENDOR	FV-1314	8	20	
50	ADDFARE	AA-2126	10	20	
51	ADDFARE	AA-2128	12	20	

DO NOT SCALE DRAWING
UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON:
DECIMALS: .XX ± .03 .XXX ± .010
HOLES: ANGLES: ± 0.5 DEG.
.125 THRU .125 ± .004 - .001
.126 THRU .250 ± .005 - .001
.251 THRU .500 ± .006 - .001
.501 THRU .750 ± .008 - .001
.751 THRU 1.000 ± .010 - .001

CONTRACT NUMBER
DRAWING NUMBER
SHEET 1 OF 1

CUBIC WESTERN DATA
A subsidiary of Cubic Corporation
3801 VENTURA VISTA ROAD, SUITE 100, OFFICE BLDG 800, SAN DIEGO, CA 92118

INSTALLATION PLAN -
GALLERY PLACE STATION

CODE IDENT NO. 94987

DRAWN: T. DIN
CHECKED: [Signature]
DESIGN: [Signature]
APPROVAL: [Signature]

D1926-0454

MEZZ 69

(N 2)

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

VOLUME 4 – MEZZANINE INSPECTION REPORTS TABLE OF CONTENTS

	PAGE NO.
VOLUME 4, PART 1 – MEZZANINE INSPECTION REPORTS, A LINE	
1 MIR_A01_Metro_Center_West_MZ001	3
2 MIR_A01_Metro Center East_MZ019	8
3 MIR_A02_Farragut North NE_MZ004	14
4 MIR_A02_Farragut North NW_MZ003	23
5 MIR_A02_Farragut North SE_MZ002	31
6 MIR_A03_Dupont Circle_MZ005	37
7 MIR_A04_Woodley Park_MZ007	48
8 MIR_A05_Cleveland Park_MZ008	55
9 MIR_A06_Van Ness_MZ009	66
10 MIR_A07_Tenleytown_MZ010	79
11 MIR_A08_Friendship Heights North_MZ011	88
12 MIR_A08_Friendship Heights South_MZ104	96
13 MIR_A11_Grosvenor_MZ014	101
14 MIR_A12_White Flint_MZ015	108
15 MIR_A13_Twinbrook_MZ016	116
16 MIR_A14_Rockville_MZ017	126
17 MIR_C01_Metro Center North_MZ035	131
18 MIR_C01_Metro Center South_MZ052	137
VOLUME 4, PART 2 – MEZZANINE INSPECTION REPORTS, B LINE	
19 MIR_B01_Gallery Place West_MZ020	3
20 MIR_B02_Judiciary Sq East_MZ023	15
21 MIR_B02_Judiciary Square West_MZ022	22
22 MIR_B03_Union Station North_MZ025	31
23 MIR_B04_Rhode Island Ave_MZ026	41
24 MIR_B05_Brookland CUA_M027	50
25 MIR_B06_Fort Totten_MZ026	59
26 MIR_B07_Takoma_MZ029	66
27 MIR_B08_Silver Spring North_MZ031	76
28 MIR_B08_Silver Spring South_MZ030	81
29 MIR_B09_Forest Glen_MZ032	87
30 MIR_B10_Wheaton_MZ033	101
31 MIR_B11_Glenmont_MZ034	112
32 MIR_B35_New York Ave North_MZ109	118
33 MIR_B35_New York Ave South_MZ108	123
34 MIR_F01_Gallery Place North_MZ069	128



ELECTRICAL AND DATA CABLE INSTALLATION

For

Washington Metropolitan Area Transit Authority

Contract Number FQ 15233

VOLUME 4

Mezzanine Inspection Report

July 15, 2015

Final Submission