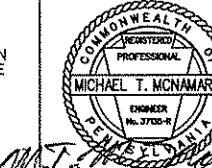
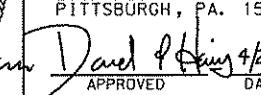
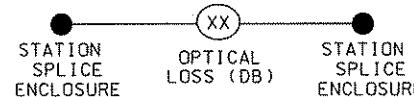


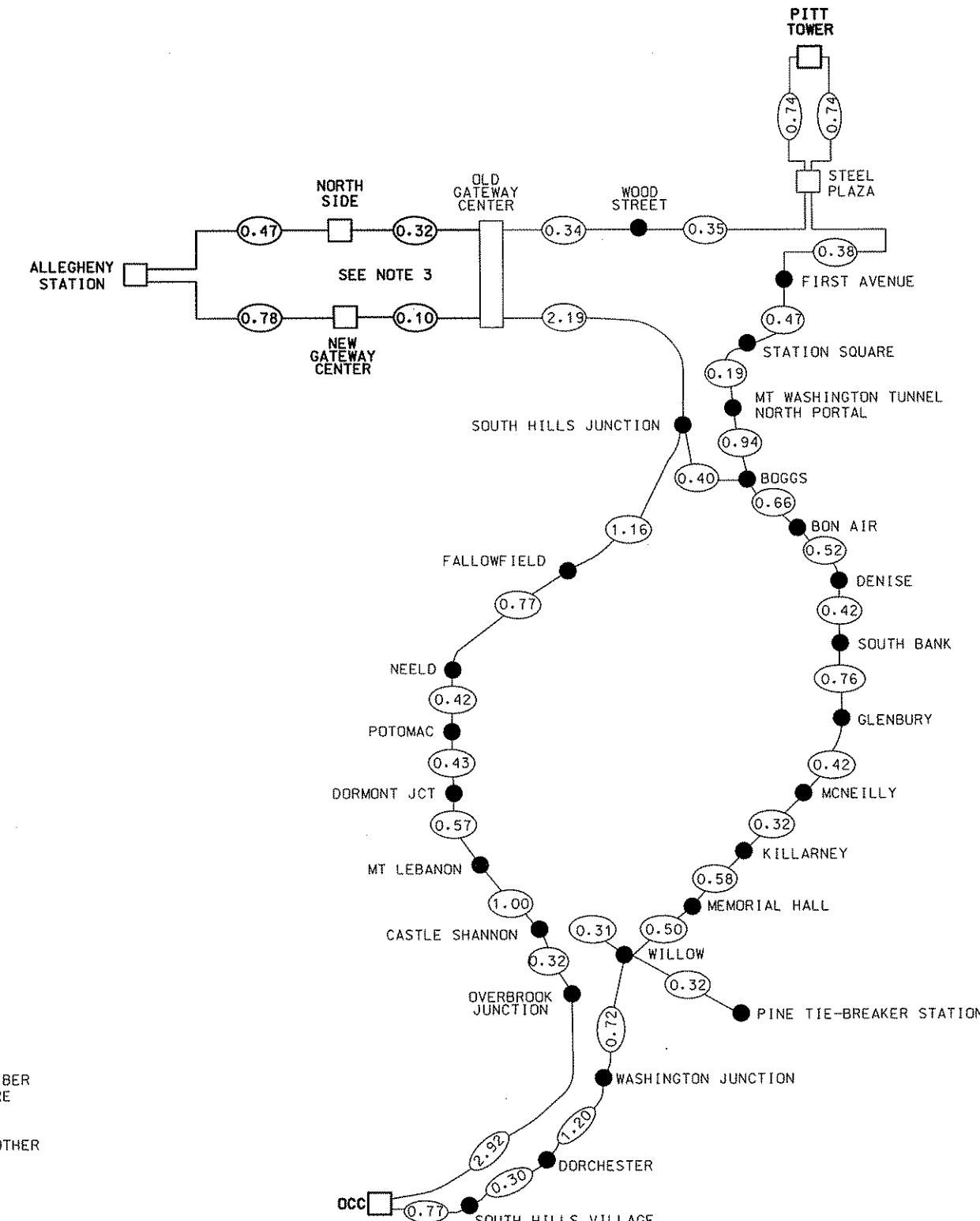
NOTE: THIS PLAN INDICATES LOCATIONS ONLY AND IS NOT INTENDED TO INDICATE WORK TO BE PERFORMED BY CONTRACTOR. NEW FACILITIES ARE SHOWN IN BOLD.

 Gannett Fleming Transit & Rail Systems			THE PREPARATION OF THIS DOCUMENT HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE FEDERAL TRANSIT ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, FOR THE PORT AUTHORITY OF ALLEGHENY COUNTY, PENNSYLVANIA.	DMJM HARRIS	AECOM	DESIGNED R WEIDNER	PORT AUTHORITY OF ALLEGHENY COUNTY	
						DRAWN HT TRAN	PITTSTON	PENNSYLVANIA
						CHECKED D ZUCK	NORTH SHORE CONNECTOR	
						IN CHARGE CD JONES	NSC TRAIN SYSTEM (SYSTEM WIDE)	
						DATE APR. 28, 2008	SYSTEMWIDE SIGNALS & COMMUNICATION SYSTEMS	
						SCALE NTS	COMMUNICATION SYSTEM LAYOUT	
						APPROVED DATE	Port Authority	CONTRACT NO. NSC-009
								DWG. NO. CM003 SHT. 522
NO. DATE	DESCRIPTION	REVISIONS						

OPTICAL LOSS LEGEND:



LOCATIONS WITH NEW FIBER OPTIC MUX AND NEW GIGABIT ETHERNET SWITCH

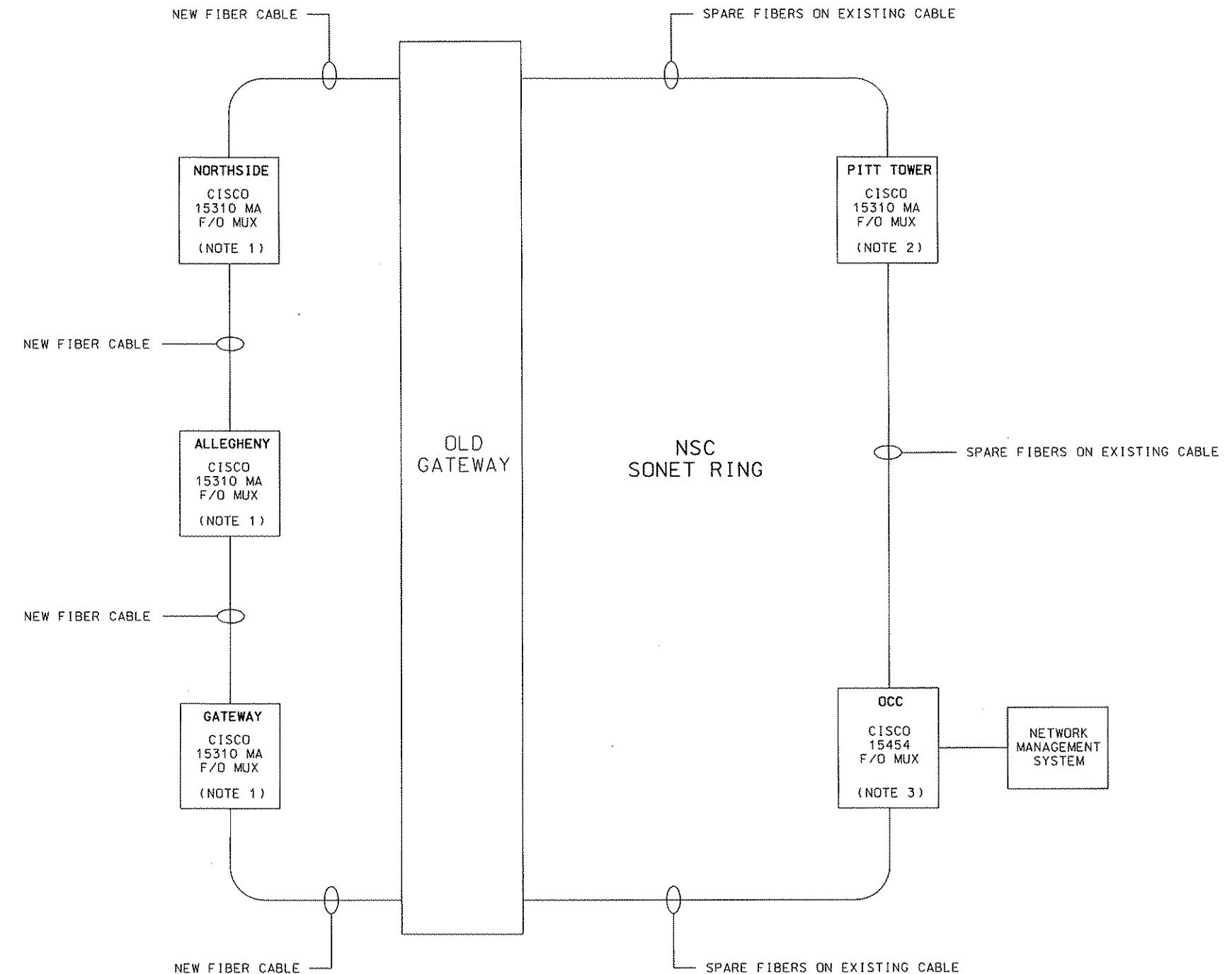


NOTES:

1. THE FIBER OPTIC RING CONFIGURATION SHOWN PROVIDES THE APPROXIMATE FIBER CABLE OPTICAL LOSS FOR THE TWO NEW RINGS TO BE IMPLEMENTED FROM SPARE FIBERS IN EXISTING CABLES AND THE NEW FIBER CABLES TO BE INSTALLED.
2. ONE RING WILL SUPPORT COMMUNICATIONS ON THE NSC SONET RING AND THE OTHER WILL SUPPORT CCTV COMMUNICATIONS ON THE GIGABIT ETHERNET RING.
3. NEW FACILITIES INSTALLED AS PART OF THIS CONTRACT ARE SHOWN IN BOLD.
4. THE CONTRACTOR SHALL MEASURE AND RECORD F.O. ATTENUATION AFTER NEW F.O. CABLE IS INSTALLED FOR THE NEW NSC STATIONS.
5. CONTRACTOR SHALL PROVIDE A FUSION SPLICING THROUGH AT ALL STATIONS WITH THE EXCEPTION OF THE NSC STATIONS, PITT TOWER, AND THE OCC WHICH WILL REQUIRE A FIBER PATCH PANEL.
6. FOR DETAILS OF EXISTING CABLE ROUTING SEE "ALSO" PLANS.

APPROXIMATE FIBER CABLE OPTICAL LOSSES
FOR NSC SONET RING AND GIGABIT ETHERNET RING

Gannett Fleming Transit & Rail Systems			 THE PREPARATION OF THIS DOCUMENT HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE FEDERAL TRANSIT ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, FOR THE PORT AUTHORITY OF ALLEGHENY COUNTY, PENNSYLVANIA.	DMJM HARRIS <small>FOUR GATEWAY CENTER PITTSBURGH, PA. 15222</small>	AECOM <small>IN CHARGE CD JONES</small>	DESIGNED R WEIDNER	PORT AUTHORITY OF ALLEGHENY COUNTY <small>PITTSBURGH</small>
	NO. DATE	DESCRIPTION				DRAWN HT TRAN	
		REVISIONS		 MICHAEL T. McNAMARA <small>OWNER PORT AUTHORITY OF ALLEGHENY COUNTY</small>	APPROVED <i>David P. Henry 4/28/08</i>	IN CHARGE CD JONES	NORTH SHORE CONNECTOR NSC TRAIN SYSTEM (SYSTEM WIDE) SYSTEMWIDE SIGNALS & COMMUNICATION SYSTEMS FIBER RING OPTICAL CABLE LOSSES
					DATE APR. 28, 2008	SCALE NTS	Port Authority <small>Contract No. NSC-009 DWG. NO. CM004 SHT. 523</small>

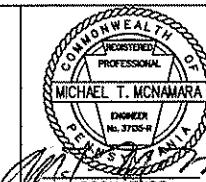


NOTES:

1. CISCO 15310 MA F/O MUX TO PROVIDE RING CONNECTIVITY AT THE NSC STATIONS. REFER TO CTS BLOCK DIAGRAMS FOR DETAILS AT EACH STATION.
 2. CISCO 15310 MA F/O MUX TO PROVIDE INTERFACE TO VMS/PA AND RADIO CONSOLES AT PITT TOWER.
 3. CISCO 15454 F/O MUX AT OCC TO SUPPORT COMMUNICATIONS TO THE NSC STATIONS AND PITT TOWER.
 4. 2 FIBERS REQUIRED TO SUPPORT THE NSC SONET RING.
 5. CONTRACTOR SHALL PROVIDE A FUSION SPLICE THROUGH AT ALL STATIONS WITH THE EXCEPTION OF THE NSC STATIONS, PITT TOWER, AND THE OCC WHICH WILL REQUIRE A FIBER PATCH PANEL.

NSC SONET RIN

THE PREPARATION OF THIS DOCUMENT HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE FEDERAL TRANSIT ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, FOR THE PORT AUTHORITY OF ALLEGHENY COUNTY, PENNSYLVANIA.



DMJM HARRIS AECOM
FOUR GATEWAY CENTER
20TH FLOOR
PITTSBURGH, PA. 15222

DESIGNED	R WEIDNER
DRAWN	JC TRAUM
CHECKED	F KHO
IN CHARGE	CD JONES
DATE	APR. 28, 2008
SCALE	NTS

PITTSBURGH

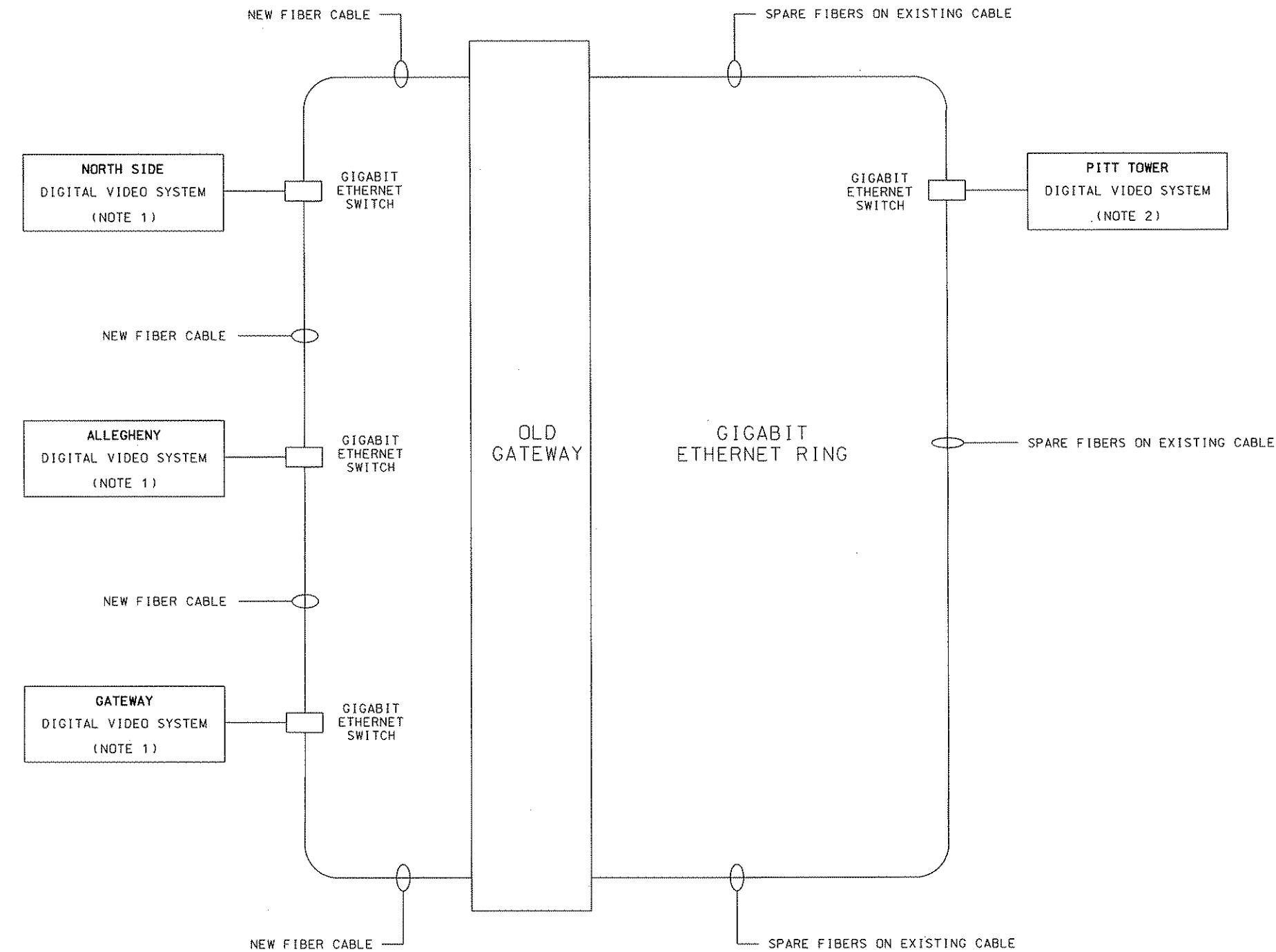
PENNSYLVANIA

NORTH SHORE CONNECTOR

NSC TRAIN SYSTEM (SYSTEM WIDE)

SYSTEMWIDE SIGNALS & COMMUNICATION SYSTEMS

NSC SONET RING



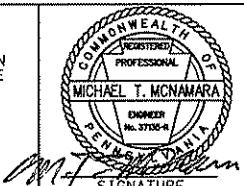
FIBER OPTIC RING FOR THE DIGITAL VIDEO SYSTEM

NOTES:

1. REFER TO TYPICAL STATION DIGITAL VIDEO BLOCK DIAGRAM ON DWG. CM028 FOR DETAILS.
 2. REFER TO PITT TOWER DIGITAL VIDEO BLOCK DIAGRAM ON DWG. CM026 FOR DETAILS.
 3. 2 FIBERS REQUIRED TO SUPPORT THE GIGABIT ETHERNET RING.



THE PREPARATION OF THIS DOCUMENT HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE FEDERAL TRANSIT ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, FOR THE PORT AUTHORITY OF ALLEGHENY COUNTY, PENNSYLVANIA.



DMJM HARRIS | AECOM
FOUR GATEWAY CENTER
20TH FLOOR
PITTSBURGH, PA. 15222
Daniel P. Harrington 4/28/08
APPROVED DATE

PITTSBURGH

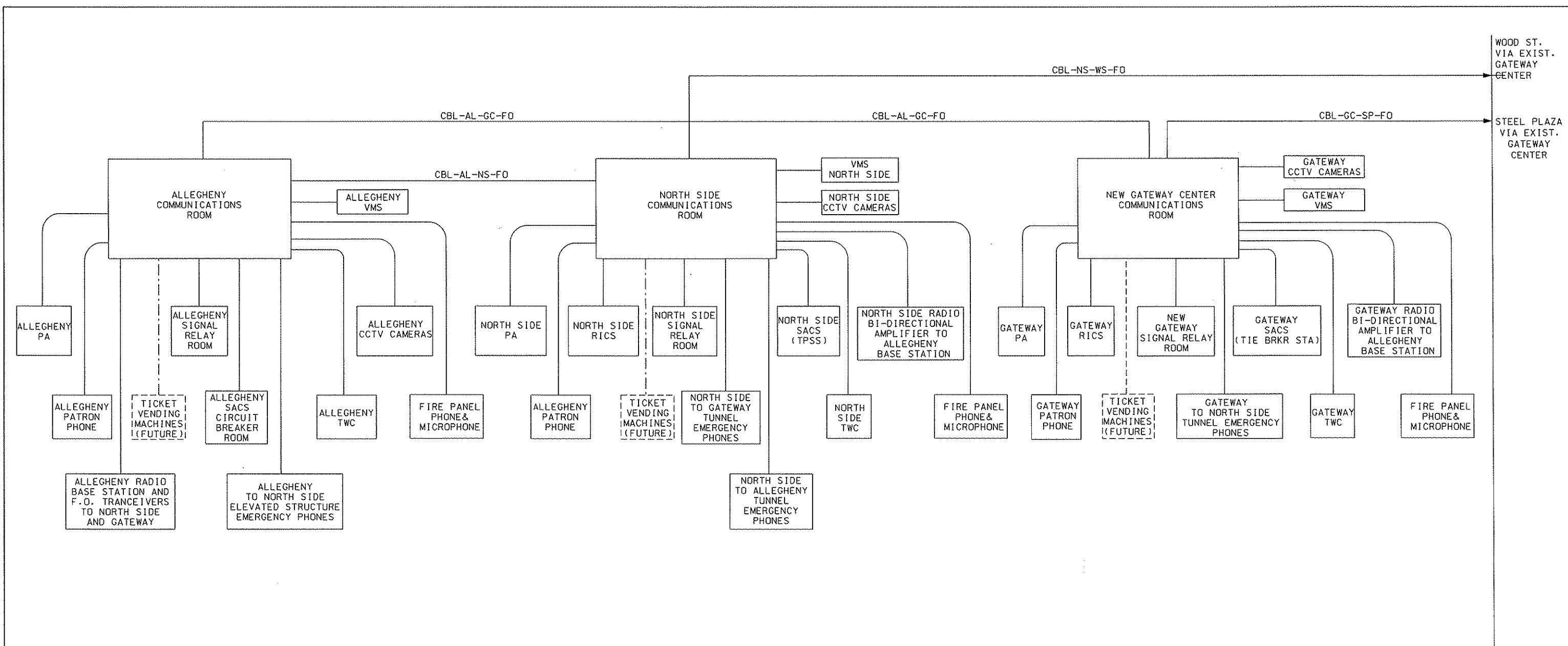
PENNSYLVANIA

NORTH SHORE CONNECTOR

NSC TRAIN SYSTEM (SYSTEM WIDE)

SYSTEMWIDE SIGNALS & COMMUNICATION SYSTEMS

FIBER OPTIC RING FOR THE DIGITAL VIDEO SYSTEM

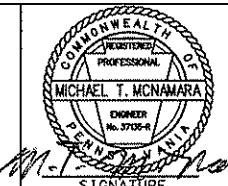


NOTES:

1. FIRE PANEL INSTALLED AS PART OF STATION FINISH CONTRACT
 2. CONNECTION TO MONITORING SERVICE TO BE PROVIDED VIA LOCAL TELEPHONE COMPANY. TELEPHONE CONNECTION IS PROVIDED AS PART OF STATION FINISH CONTRACT.



THE PREPARATION OF THIS DOCUMENT HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE FEDERAL TRANSIT ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1984, AS AMENDED, FOR THE PORT AUTHORITY OF ALLEGHENY COUNTY, PENNSYLVANIA.



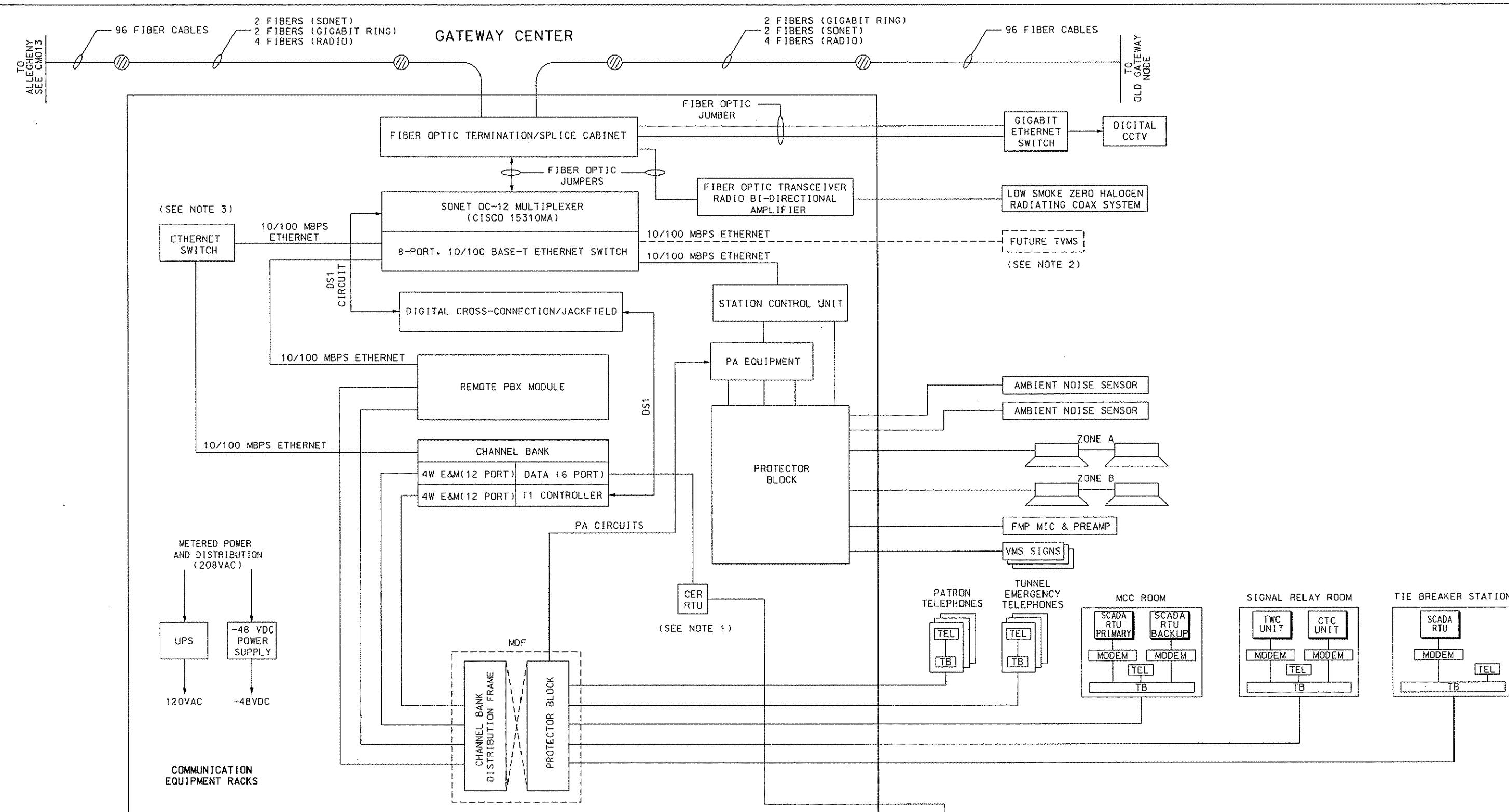
DMJM HARRIS | AECOM

David F. Haig 4/28/08
APPROVED DATE

PITTSBURGH PORT AUTHORITY OF ALLEGHENY COUNTY

**NORTH SHORE CONNECTOR
NSC TRAIN SYSTEM (SYSTEM WIDE)
SYSTEMWIDE SIGNALS & COMMUNICATION SYSTEMS
NSC GENERAL CABLE PLAN**

Port Authority	CONTRACT NO.	NSC-009
	PWIC NO.	CM007

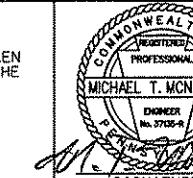


NOTES:

1. CER RTU TO MONITOR THE COMMUNICATION ROOM ALARMS.
 2. NOT IN THE CONTRACT, FUTURE REQUIREMENT.
 3. ETHERNET SWITCH REQUIRED IF MULTIPLE CHANNEL BANKS ARE REQUIRED.
 4. FIRE ALARM PANEL BY OTHER. FIRE TROUBLE AND FIRE ALARM INDICATION SHALL BE PROVIDED TO CER RTU BY NSC-009.



THE PREPARATION OF THIS DOCUMENT HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE FEDERAL TRANSIT ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, FOR THE PORT AUTHORITY OF ALLEGHENY COUNTY, PENNSYLVANIA.



DMJM HARRIS AEC
FOUR GATEWAY CENTER
20TH FLOOR
PITTSBURGH, PA. 152
New David & Henry 4/28
APPROVED DATE

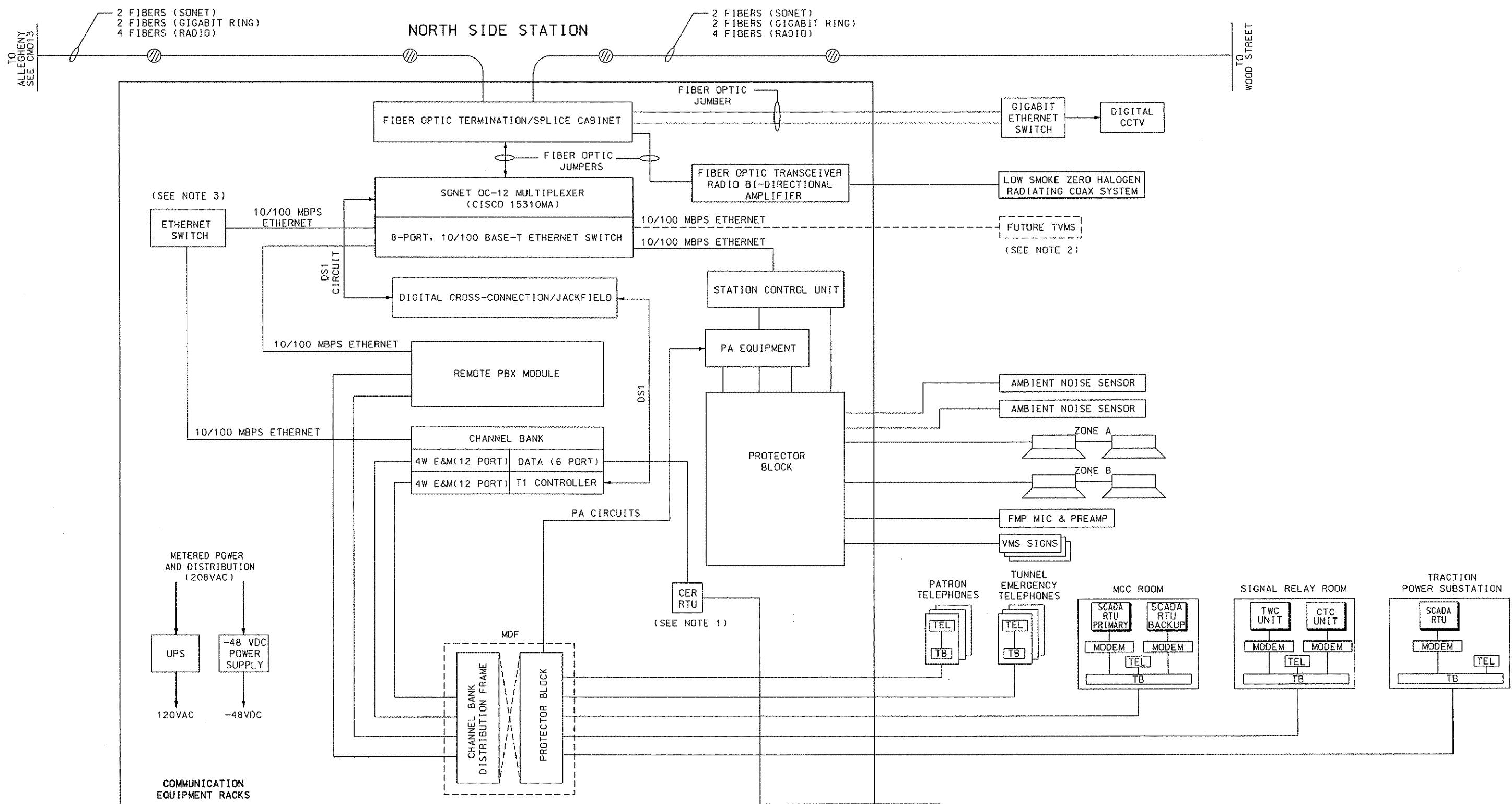
DESIGNED	R WEIDNER
DRAWN	HT TRAN
CHECKED	D ZUCK
IN CHARGE	CD JONES
DATE	APR. 28, 2008
SCALE	NTS

PITTSBURGH

PENNSYLVANIA

**NORTH SHORE CONNECTOR
NSC TRAIN SYSTEM (SYSTEM WIDE)
SYSTEMWIDE SIGNALS & COMMUNICATION SYSTEMS
GATEWAY CENTER CTS BLOCK DIAGRAM**

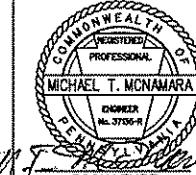
Port Authority Contractor's stamp or signature	CONTRACT NO.	NSC-009
	DWG. NO.	CM011



NOTES:

1. CER RTU TO MONITOR THE COMMUNICATION ROOM ALARMS.
2. NOT IN THE CONTRACT, FUTURE REQUIREMENT.
3. ETHERNET SWITCH REQUIRED IF MULTIPLE CHANNEL BANKS ARE REQUIRED.
4. FIRE ALARM PANEL BY OTHER, FIRE TROUBLE AND FIRE ALARM INDICATION SHALL BE PROVIDED TO CER RTU BY NSC-009.

THE PREPARATION OF THIS DOCUMENT HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE FEDERAL TRANSIT ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, FOR THE PORT AUTHORITY OF ALLEGHENY COUNTY, PENNSYLVANIA.



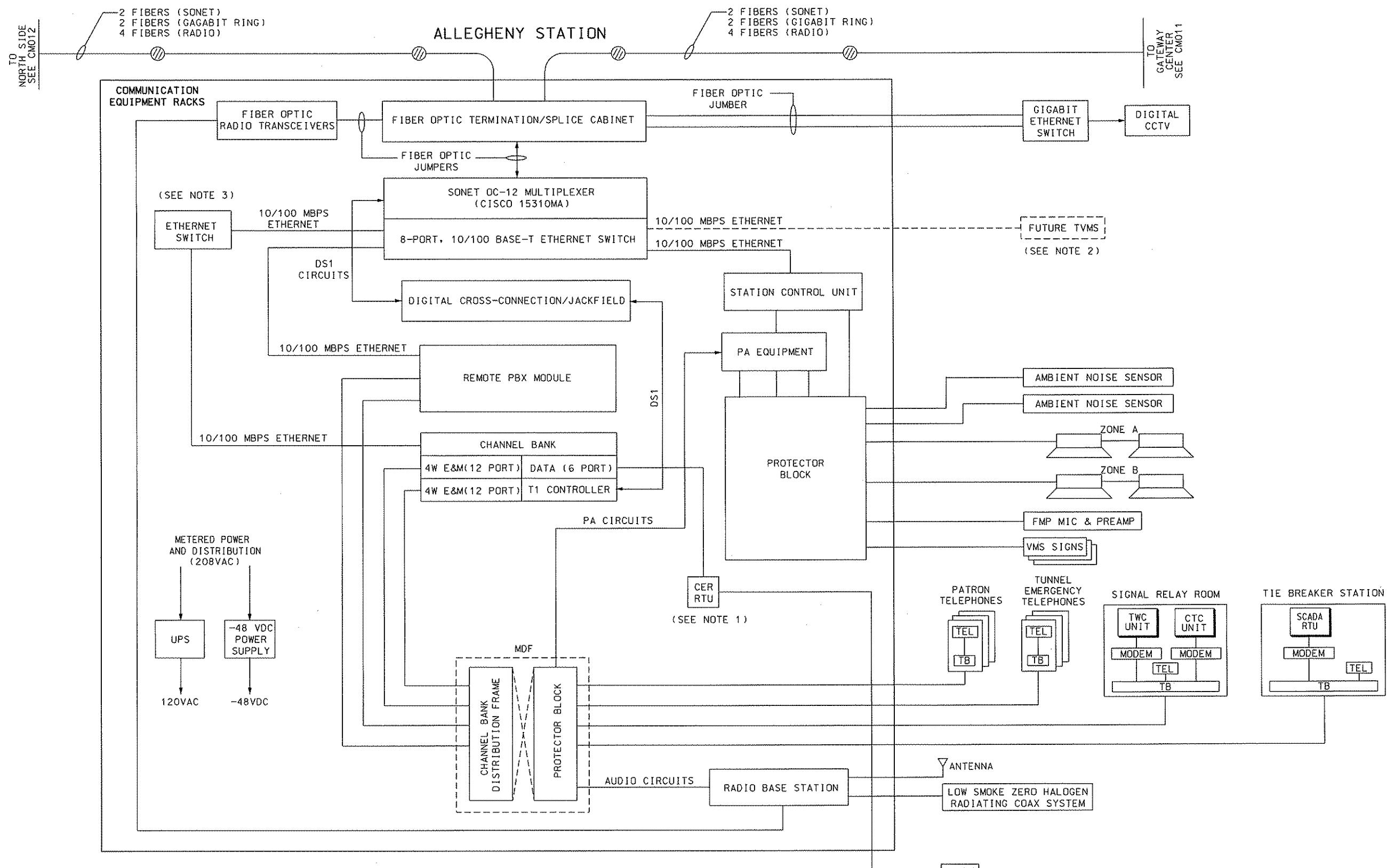
DMJM HARRIS | AECOM
FOUR GATEWAY CENTER
20TH FLOOR
PITTSBURGH, PA. 15222
[Signature]
APPROVED DATE
APR. 28, 2008

FIRE ALARM PANEL
(SEE NOTE 4)

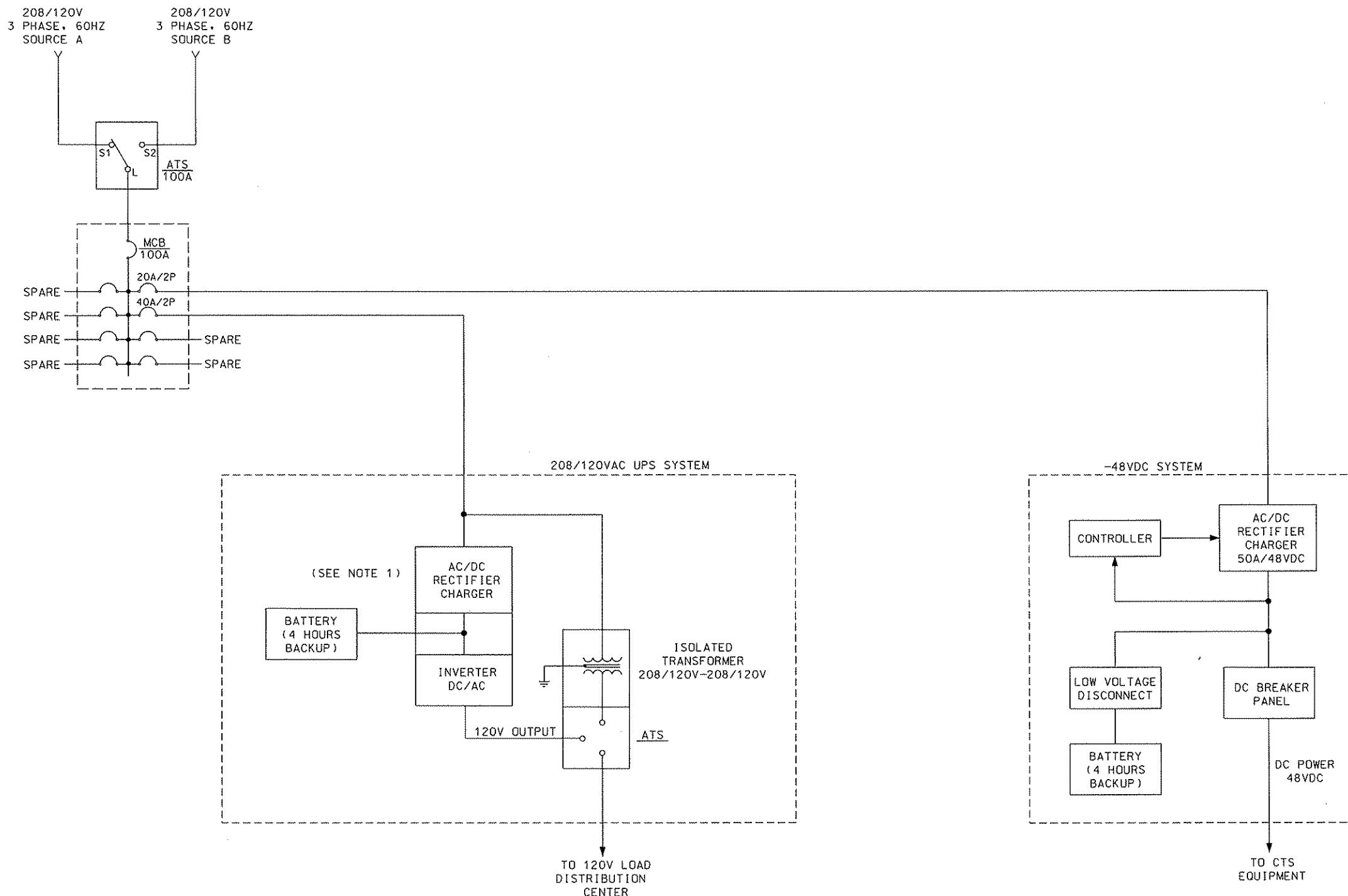
PORT AUTHORITY OF ALLEGHENY COUNTY
PITTSBURGH, PENNSYLVANIA
NORTH SHORE CONNECTOR
NSC TRAIN SYSTEM (SYSTEM WIDE)
SYSTEMWIDE SIGNALS & COMMUNICATION SYSTEMS
NORTH SIDE STATION CTS BLOCK DIAGRAM
Port Authority
CONTRACT NO. NSC-009
DWG. NO. CM012
SHT. 528

Gannett Fleming
Transit & Rail Systems

NO.	DATE	DESCRIPTION
REVISIONS		



Gannett Fleming Transit & Rail Systems			THE PREPARATION OF THIS DOCUMENT HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE FEDERAL TRANSIT ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, FOR THE PORT AUTHORITY OF ALLEGHENY COUNTY, PENNSYLVANIA.	DMJM HARRIS AECOM	DESIGNED 4 R WEIDNER DRAWN HT TRAN	PORT AUTHORITY OF ALLEGHENY COUNTY	
						PITTSTON	PENNSYLVANIA
						NORTH SHORE CONNECTOR NSC TRAIN SYSTEM (SYSTEM WIDE) SYSTEMWIDE SIGNALS & COMMUNICATION SYSTEMS ALLEGHENY STATION CTS BLOCK DIAGRAM	
NO. DATE		DESCRIPTION		MICHAEL T. McNAMARA ENGINER REG. NO. 3733-A Pittsburgh, PA 15222	APPROVED	DATE	
		REVISIONS			David J. Henry	4/28/08	
							Port Authority
							CONTRACT NO. NSC-009 DWG. NO. CM013 SHT. 529

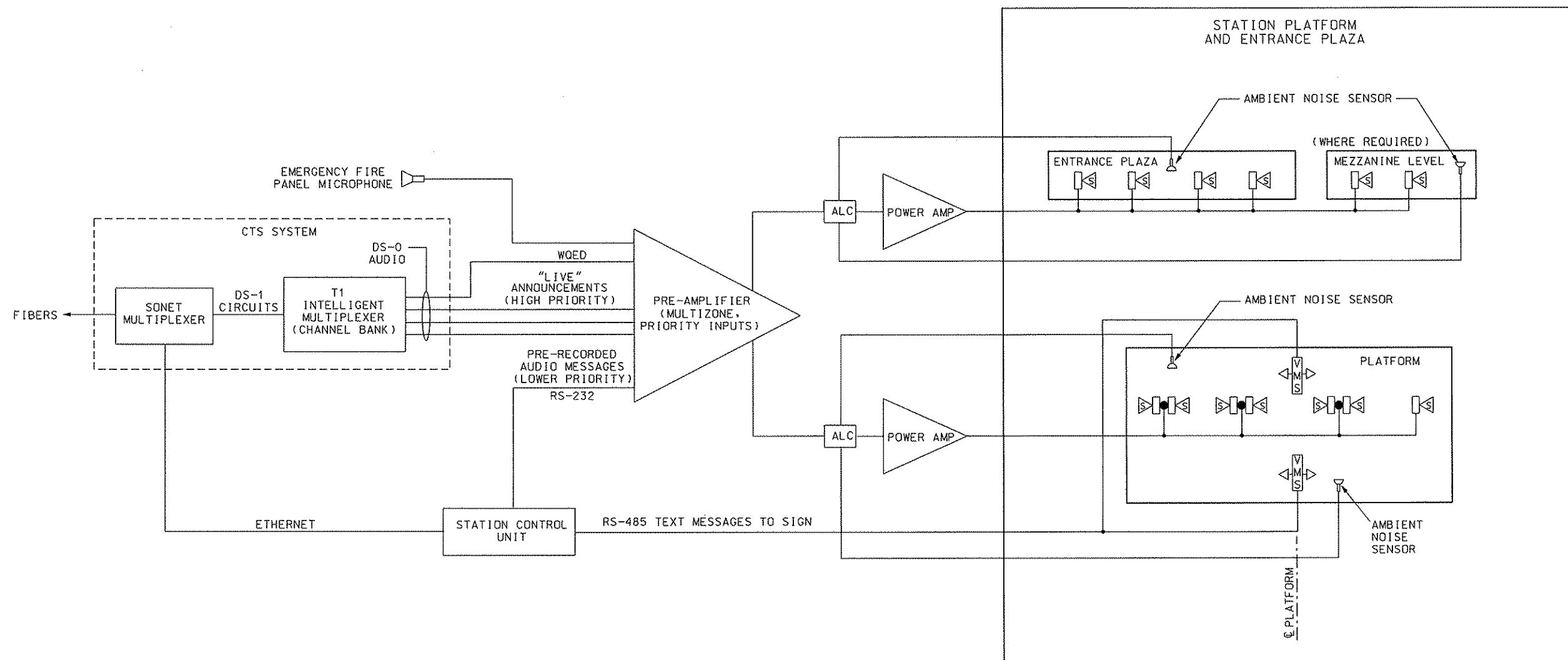


NOTES:

1. CONTRACTOR IS TO SIZE POWER SUPPLY TO PROVIDE SUFFICIENT CAPACITY TO OPERATE ALL COMMUNICATIONS EQUIPMENT PLUS 20% RESERVE CAPACITY.
 2. UPS & 48VDC SYSTEMS TO BE PROVIDED AT GATEWAY, NORTH SIDE, AND ALLEGHENY STATIONS.
 3. 2-208/120V SOURCES PROVIDED BY NSC-010,011,012 FINISH CONTRACTS.
 4. UPS SYSTEMS ARE REQUIRED AT PITT TOWER & OCC WITHOUT 48VDC POWER SUPPLY

TYPICAL POWER SUPPLIES

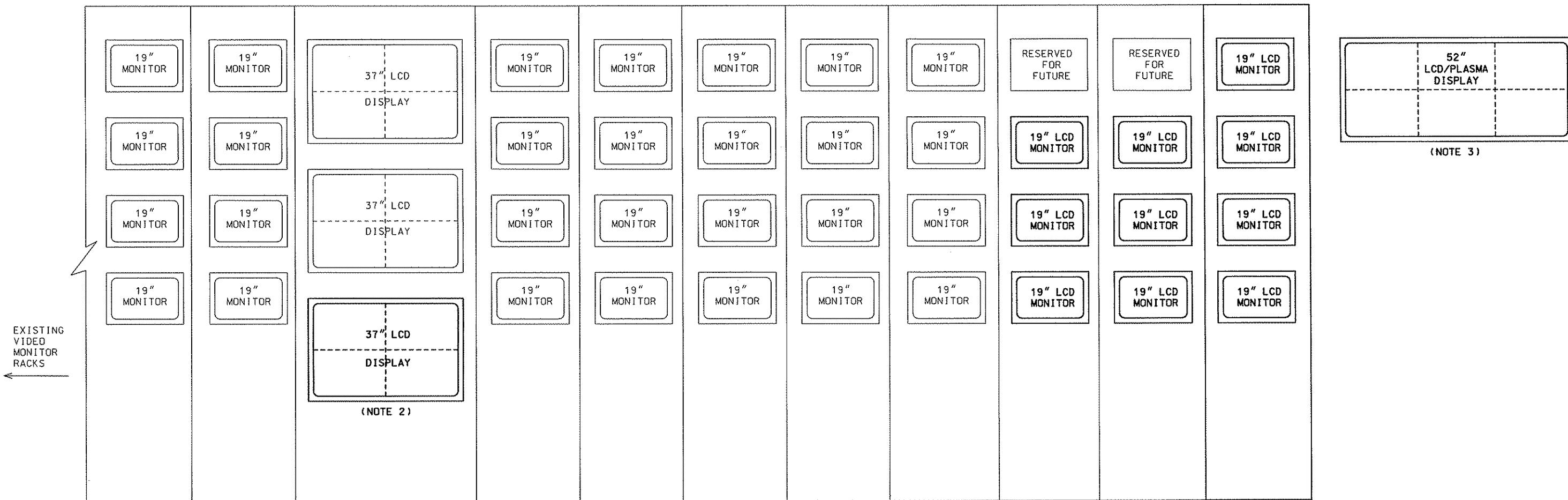
(PROVIDED BY CONTRACTOR)



NOTES:

1. PRE-AMPLIFIER SHALL HAVE PRIORITY INPUTS AS SHOWN IN SPECIFICATION 16741.
2. EMERGENCY FIRE MICROPHONE HAS HIGHEST PRIORITY.
3. PA/VMS SYSTEM REQUIRED FOR ALL NSC STATIONS.

 Gannett Fleming Transit & Rail Systems			<p>THE PREPARATION OF THIS DOCUMENT HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE FEDERAL TRANSIT ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, FOR THE PORT AUTHORITY OF ALLEGHENY COUNTY, PENNSYLVANIA.</p>	 COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL MICHAEL T. McNAMARA OWNER AL-3708-R MAY 2008 SIGNATURE	DMJM HARRIS AECOM FOUR GATEWAY CENTER 20TH FLOOR PITTSBURGH, PA. 15222	DESIGNED R WEIDNER DRAWN HT TRAN CHECKED D ZUCK IN CHARGE CD JONES DATE APR. 26, 2008 SCALE NTS	PORT AUTHORITY OF ALLEGHENY COUNTY PITTSBURGH NORTH SHORE CONNECTOR NSC TRAIN SYSTEM (SYSTEM WIDE) SYSTEMWIDE SIGNALS & COMMUNICATION SYSTEMS TYPICAL VMS / PA SYSTEM STATION BLOCK DIAGRAM	
	NO. DATE	DESCRIPTION					 <i>Michael T. McNamara</i> APPROVED	<i>David J. Henry 4/26/08</i> DATE
REVISIONS							Port Authority <i>connectivitysystems.com</i>	CONTRACT NO. NSC-009 DWG. NO. CM023 SHT. 531



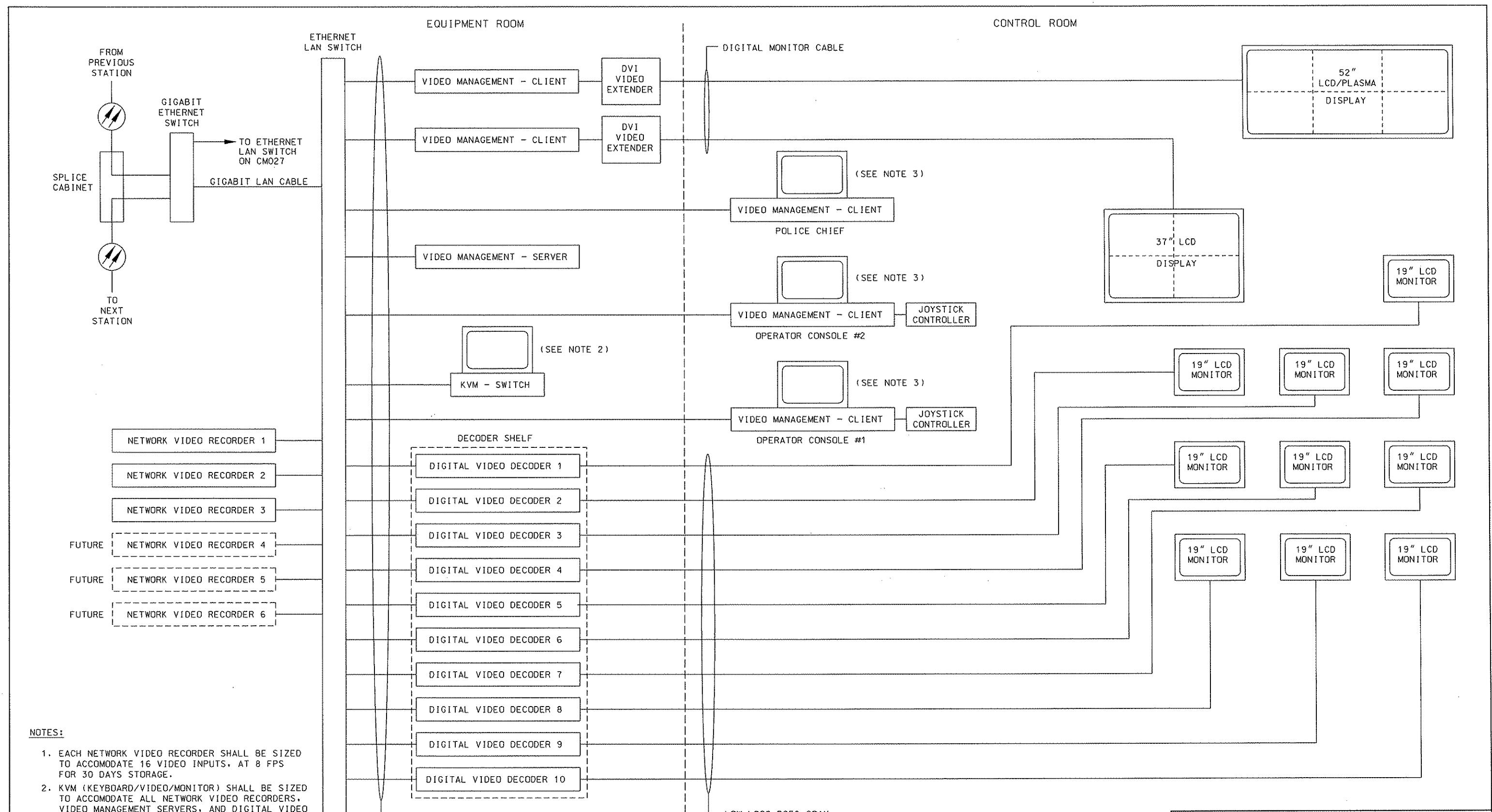
PITT TOWER CONTROL ROOM VIDEO DISPLAY ARRANGEMENT

N.T.S.

NOTES:

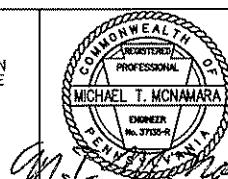
1. NEW EQUIPMENT SHOWN IN BOLD.
2. PROVIDE ONE NEW 37" LCD DISPLAY TO MATCH TWO EXISTING UNITS.
3. PROVIDE ONE NEW 52" LCD/PLASMA DISPLAY TO BE MOUNTED ON SIDE WALL OF CONTROL ROOM.

 Gannett Fleming Transit & Rail Systems				<small>THE PREPARATION OF THIS DOCUMENT HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE FEDERAL TRANSIT ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, FOR THE PORT AUTHORITY OF ALLEGHENY COUNTY, PENNSYLVANIA.</small>	 MICHAEL T. McNAMARA REGISTERED PROFESSIONAL ENGINEER PE No. 3709-R	DMJM HARRIS	AECOM	DESIGNED R WEIDNER DRAWN JC TRAUM	PORT AUTHORITY OF ALLEGHENY COUNTY PITTSBURGH	
						CHECKED F KHO IN CHARGE CD JONES DATE APR. 28, 2008 SIGNATURE <i>Michael T. McNamara 4/28/08</i>	APPROVED DATE <i>David P. Henry 4/28/08</i>	SCALE NTS	NORTH SHORE CONNECTOR NSC TRAIN SYSTEM (SYSTEM WIDE) SYSTEMWIDE SIGNALS & COMMUNICATION SYSTEMS PITT TOWER CONTROL ROOM VIDEO DISPLAY ARRANGEMENT	
NO. DATE	DESCRIPTION	REVISIONS							Port Authority	CONTRACT NO. NSC-009 DWG. NO. CM025 SHT. 532



PITT TOWER DIGITAL VIDEO SYSTEM
N.T.S.

	Transit & Rail Systems			THE PREPARATION OF THIS DOCUMENT HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE FEDERAL TRANSIT ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, FOR THE PORT AUTHORITY OF ALLEGHENY COUNTY, PENNSYLVANIA.	R. WEIDNER DRAWN JC TRAUM CHECKED F. KHO IN CHARGE CD JONES DATE APR. 28, 2008 SCALE NTS <i>[Signature]</i> APPROVED DATE <i>[Signature]</i>	PORT AUTHORITY OF ALLEGHENY COUNTY Pittsburgh NORTH SHORE CONNECTOR NSC TRAIN SYSTEM (SYSTEM WIDE) SYSTEMWIDE SIGNALS & COMMUNICATION SYSTEMS PITT TOWER DIGITAL VIDEO SYSTEM
		NO. DATE	DESCRIPTION			
		REVISIONS				

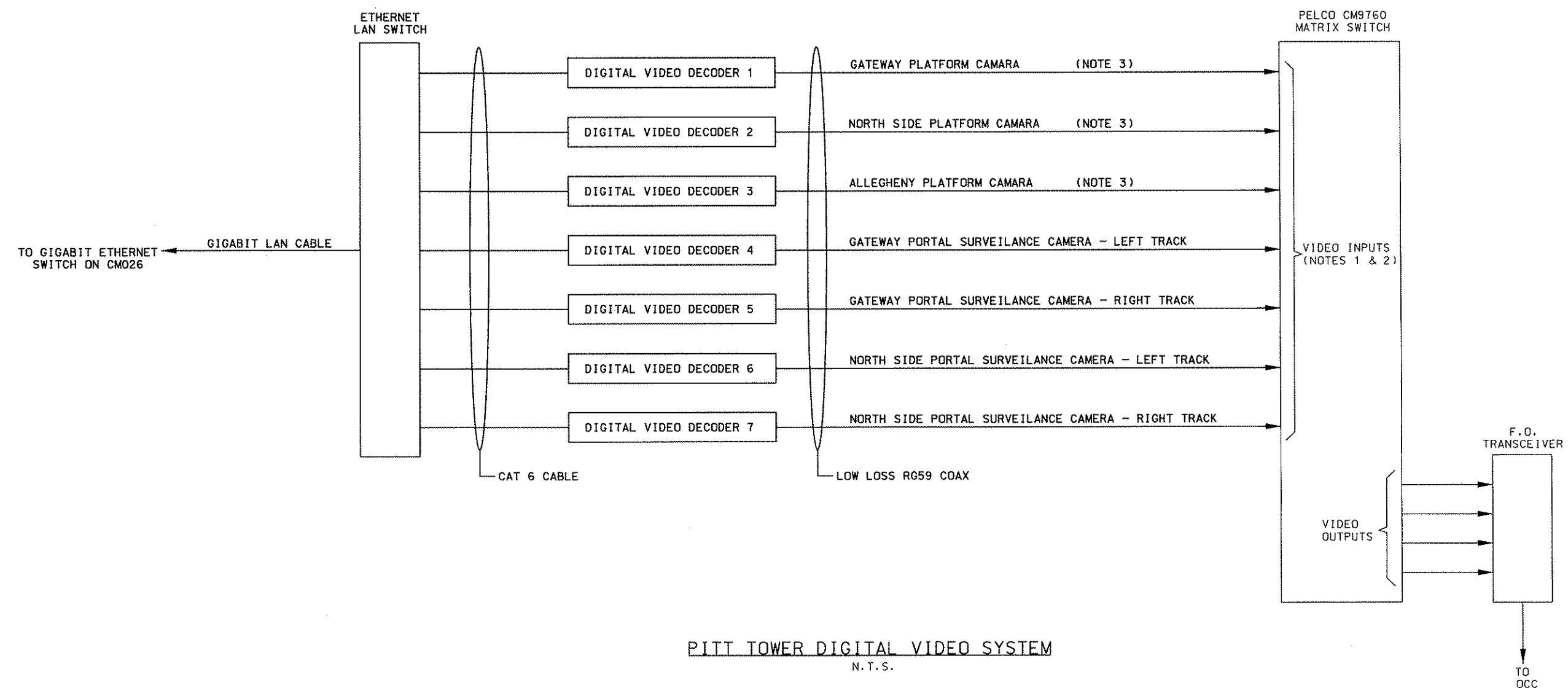


DMJM HARRIS | AECOM
FOUR GATEWAY CENTER
20TH FLOOR
PITTSBURGH, PA. 15222
MICHAEL T. MCNAULAR
OWNER
REG. NO. 3735-R
APPROVED
DATE
APR. 28, 2008
SIGNATURE
APPROVED
DATE
[Signature]

Port Authority

CONTRACT NO. NSC-009
DWG. NO. CM026 SHT. 533

EQUIPMENT ROOM

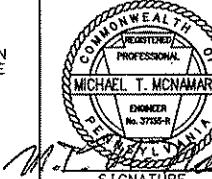


NOTES:

1. UPGRADE PELCO CM9760 MATRIX SWITCH BY INSTALLING ONE VIDEO INPUT CARD (CM9760-VCC) WHICH CAN ACCOMODATE 16 ANALOG CAMARA INPUTS.
2. FOR THE SEVEN VIDEO INPUTS SHOWN ON THIS DRAWING, THE IP ADDRESSES WILL BE MAINTAINED 100% OF THE TIME, THEREBY MAKING THEM AVAILABLE AT THE OCC UPON OPERATOR SELECTION.
3. SELECTION OF THE PLATFORM CAMERAS AT THE NSC STATION WILL REQUIRED COORDINATION WITH THE PIT TOWER POLICE CHIEF.
4. NEW EQUIPMENT SHOWN IN BOLDED.

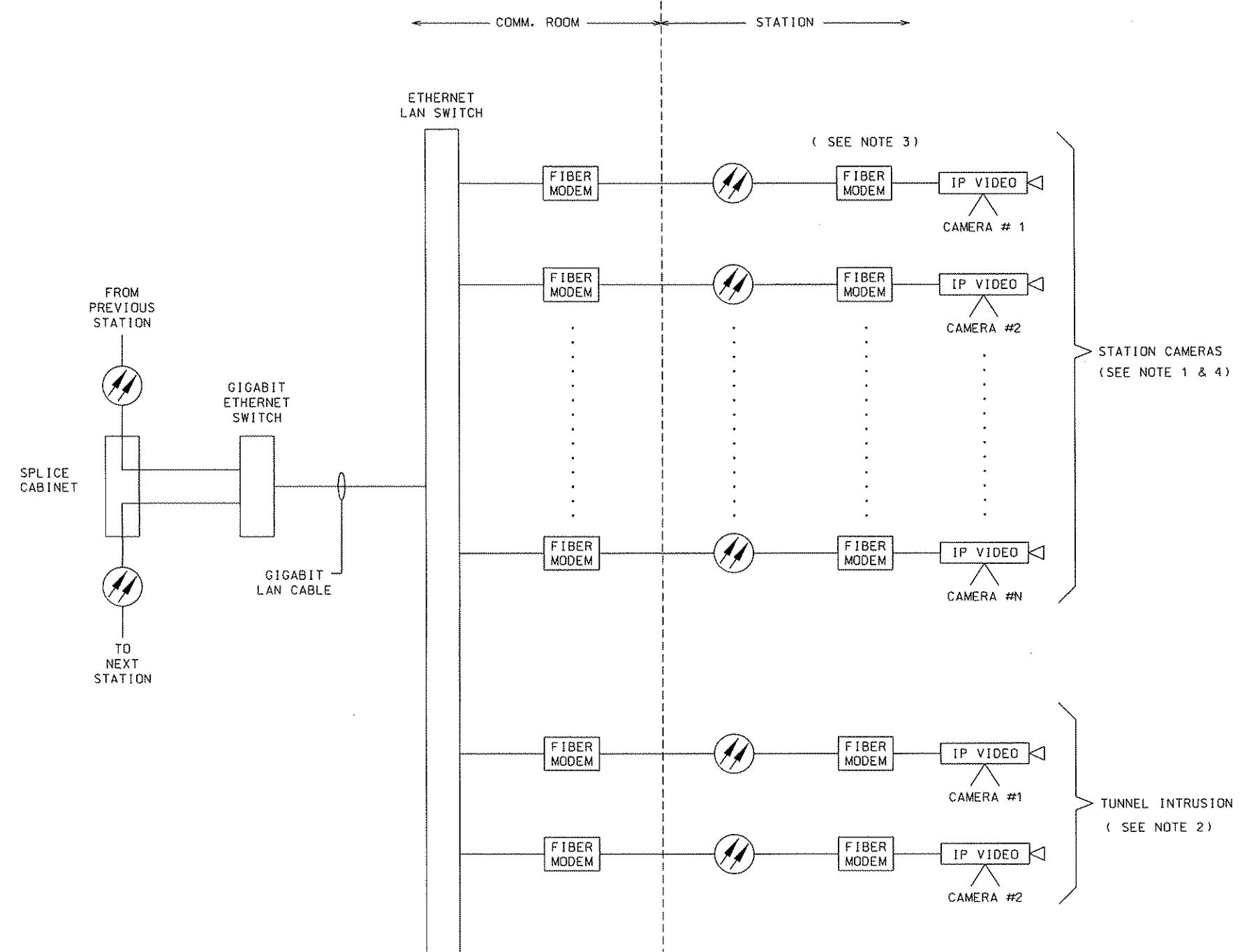
	NO. DATE	DESCRIPTION	REVISIONS

THE PREPARATION OF THIS DOCUMENT HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE FEDERAL TRANSIT ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, FOR THE PORT AUTHORITY OF ALLEGHENY COUNTY, PENNSYLVANIA.



DMJM HARRIS | AECOM
FOUR GATEWAY CENTER
20TH FLOOR
PITTSBURGH, PA. 15222
IN CHARGE CD JONES
DATE APR. 28, 2008
APPROVED *David T. Harris 4/28/08*
SIGNATURE DATE
SCALE NTS

PORT AUTHORITY OF ALLEGHENY COUNTY
PITTSBURGH, PENNSYLVANIA
NORTH SHORE CONNECTOR
NSC TRAIN SYSTEM (SYSTEM WIDE)
SYSTEMWIDE SIGNALS & COMMUNICATION SYSTEMS
PITT TOWER DIGITAL VIDEO SYSTEM
Port Authority
CONTRACT NO. NSC-009
DWG. NO. CM027 SHT. 534

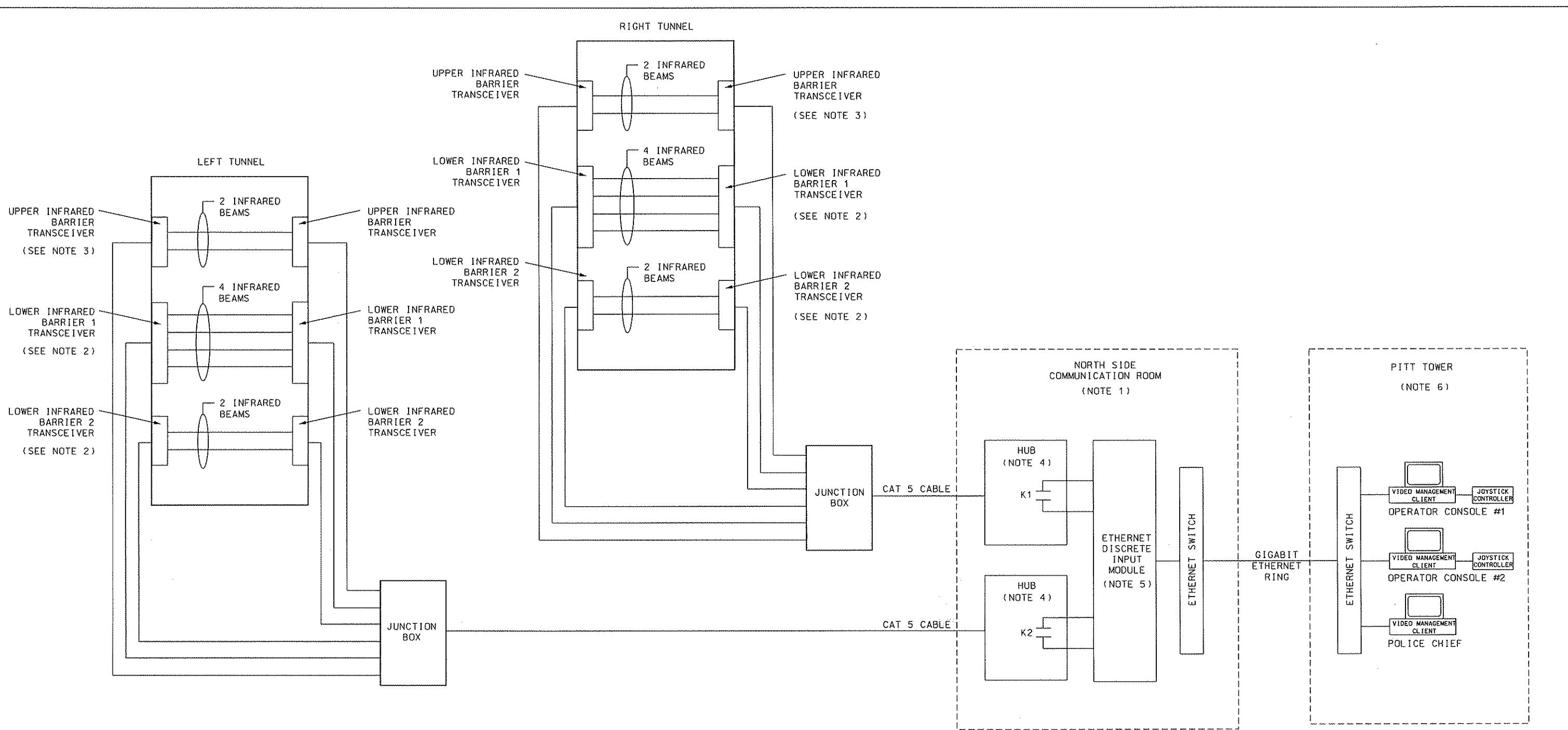


TYPICAL STATION DIGITAL VIDEO SYSTEM (GATEWAY, NORTHSIDE, AND ALLEGHENY)

NOTES:

1. REFER TO THE NSC-010,011,012 IN "ALSO" DRAWINGS FOR PLACEMENT OF IP VIDEO CAMERAS.
2. SEE TUNNEL INTRUSION DETECTION DRAWINGS CR500 & CR503 FOR DETAILS.
3. FIBER MODEM ON CAMERA END TO BE MOUNTED IN JUNCTION BOX.
4. QUANTITY OF CAMERA DEVICES ARE SHOWN ON DWG# CM075, CM076, CM077.

 Gannett Fleming Transit & Rail Systems				 MICHAEL T. McNAMARA OWNER NO. 3705-R	DMJM HARRIS AECOM FOUR GATEWAY CENTER 20TH FLOOR PITTSBURGH, PA. 15222	DESIGNED R WEIDNER DRAWN JC TRAUM CHECKED F KHO IN CHARGE CD JONES DATE APR. 28, 2008 SCALE NTS	PORT AUTHORITY OF ALLEGHENY COUNTY PITTSBURGH NORTH SHORE CONNECTOR NSC TRAIN SYSTEM (SYSTEM WIDE) SYSTEMWIDE SIGNALS & COMMUNICATION SYSTEMS TYPICAL STATION DIGITAL VIDEO SYSTEM	
	NO. DATE	DESCRIPTION	REVISIONS				Port Authority CONTRACT NO. NSC-009 DWG. NO. CM028 SHT. 535	



NOTES:

- INTRUSION DETECTION SYSTEM TO BE INSTALLED AT BOTH THE GATEWAY AND NORTH SIDE END OF THE BORED TUNNEL. SYSTEM SHOWN IS FOR THE NORTH SIDE END. GATEWAY END TO BE THE SAME.
- LOWER INFRARED BARRIER 1 & 2 DETECTS AN INTRUDER.
- UPPER INFRARED BARRIER DETECTS THE LRT TRAIN.
- HUB PROCESSOR LOGIC DETERMINES IF TRAIN OR INTRUDER HAS ENTERED TUNNEL.
K1 CONTACT CLOSES IF INTRUDER ENTERS RIGHT TUNNEL.
K2 CONTACT CLOSES IF INTRUDER ENTERS LEFT TUNNEL.
- K1 & K2 CONTACTS TRANSMITTED TO PITT TOWER VIA ETHERNET RING.
- PORTAL SURVEILLANCE DETECTION STATUS TO BE PROCESSED AND ANNUNCIATED AT THE OPERATOR CONSOLES BY THE VIDEO MANAGEMENT SYSTEM SOFTWARE.

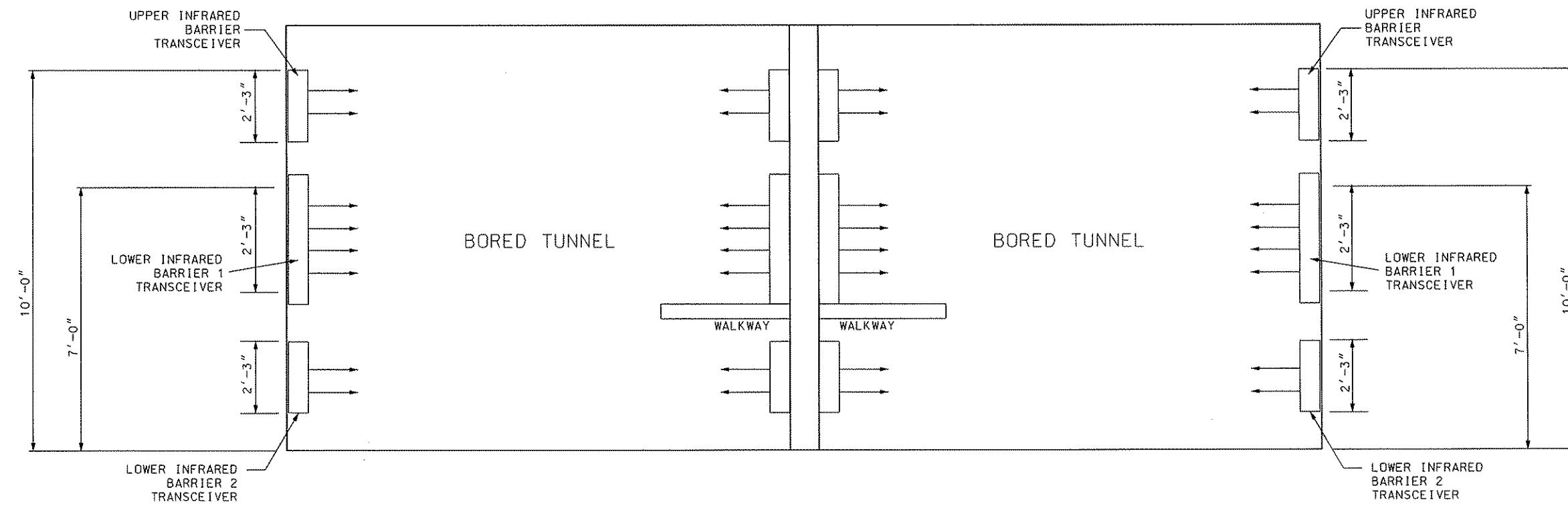
BORED TUNNEL PORTAL SURVEILLANCE DETECTION SYSTEM

(NOTE 1)

 Gannett Fleming Transit & Rail Systems			<p>THE PREPARATION OF THIS DOCUMENT HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE FEDERAL TRANSIT ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, FOR THE PORT AUTHORITY OF ALLEGHENY COUNTY, PENNSYLVANIA.</p> <p>NO. DATE DESCRIPTION REVISIONS</p>	 COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL MICHAEL T. McNAMARA LICENSE NO. 37054 MAY 2008 SIGNATURE	DMJM HARRIS AECOM FOUR GATEWAY CENTER 20TH FLOOR PITTSBURGH, PA. 15222 <i>[Signature]</i> APPROVED DATE	DESIGNED R WEIDNER DRAWN HT TRAN CHECKED F KHO IN CHARGE CD JONES DATE APR. 28, 2008 SCALE NTS	PORT AUTHORITY OF ALLEGHENY COUNTY PITTSBURGH NORTH SHORE CONNECTOR NSC TRAIN SYSTEM (SYSTEM WIDE) SYSTEMWIDE SIGNALS & COMMUNICATION SYSTEMS BORED TUNNEL PORTAL SURVEILLANCE DETECTION SYSTEM

Port Authority

CONTRACT NO. NSC-009
DWG. NO. CM029
SH. 536

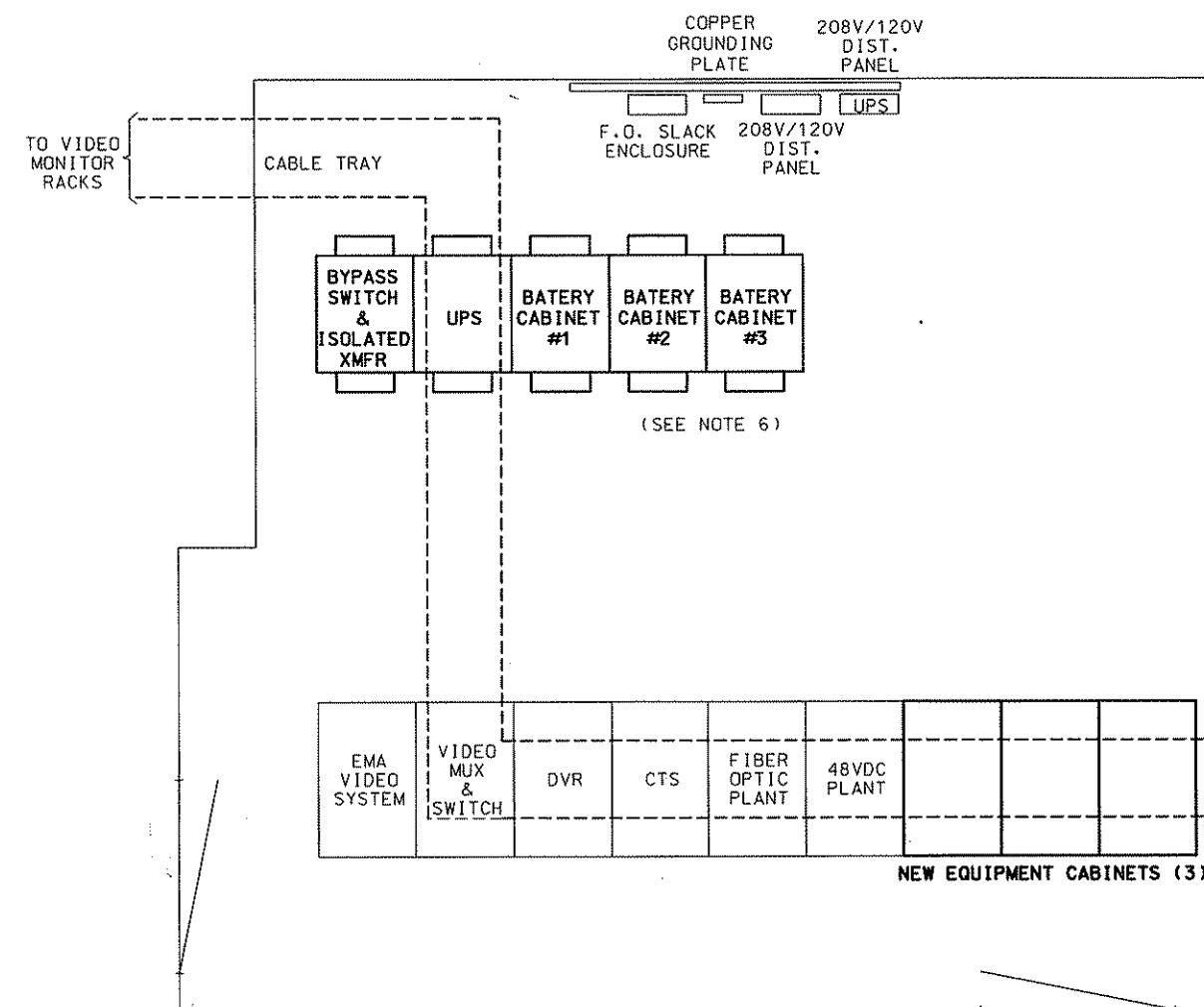
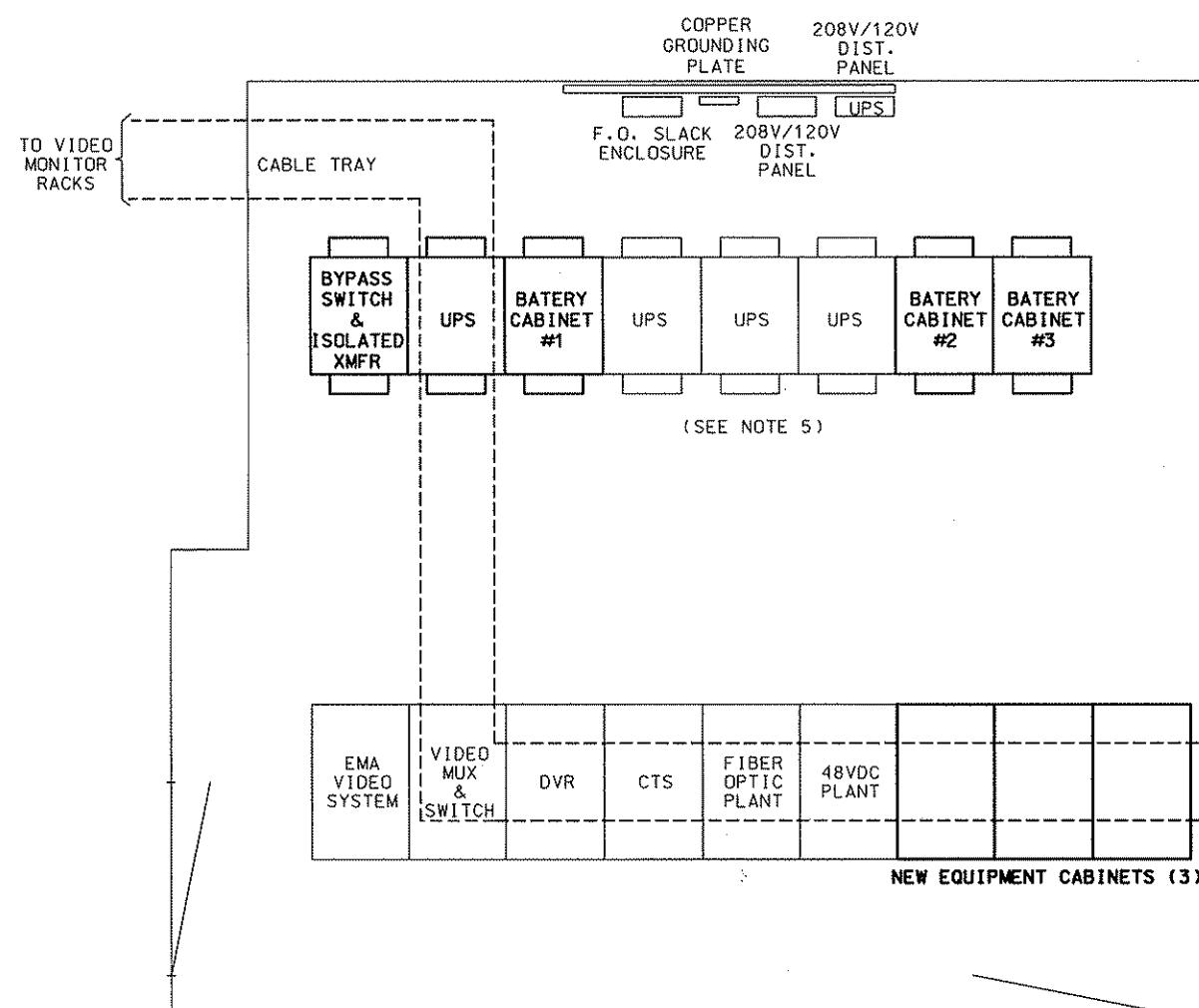


PORTAL SURVEILLANCE DETECTION SYSTEM MOUNTING DETAILS

Gannett Fleming Transit & Rail Systems				<div style="text-align: center;"> COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL MICHAEL T. McNAMARA OWNER NO. 3705-R </div> <div style="text-align: center;"> DMJM HARRIS AECOM FOUR GATEWAY CENTER 20TH FLOOR PITTSBURGH, PA. 15222 </div>	DESIGNED	R WEIDNER	PORT AUTHORITY OF ALLEGHENY COUNTY PITTSBURGH NORTH SHORE CONNECTOR NSC TRAIN SYSTEM (SYSTEM WIDE) SYSTEMWIDE SIGNALS & COMMUNICATION SYSTEMS PORTAL SURVEILLANCE DETECTION SYSTEM MOUNTING DETAILS						
					DRAWN	H T TRAN							
					CHECKED	F KHO							
					IN CHARGE	CD JONES							
					DATE	APR. 28, 2008							
					SCALE	NTS							
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;">NO.</th> <th style="width: 30%;">DATE</th> <th style="width: 40%;">DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td>REVISIONS</td> </tr> </tbody> </table>		NO.	DATE	DESCRIPTION			REVISIONS						
NO.	DATE	DESCRIPTION											
		REVISIONS											

FINAL INSTALLATION

INTERIM INSTALLATION



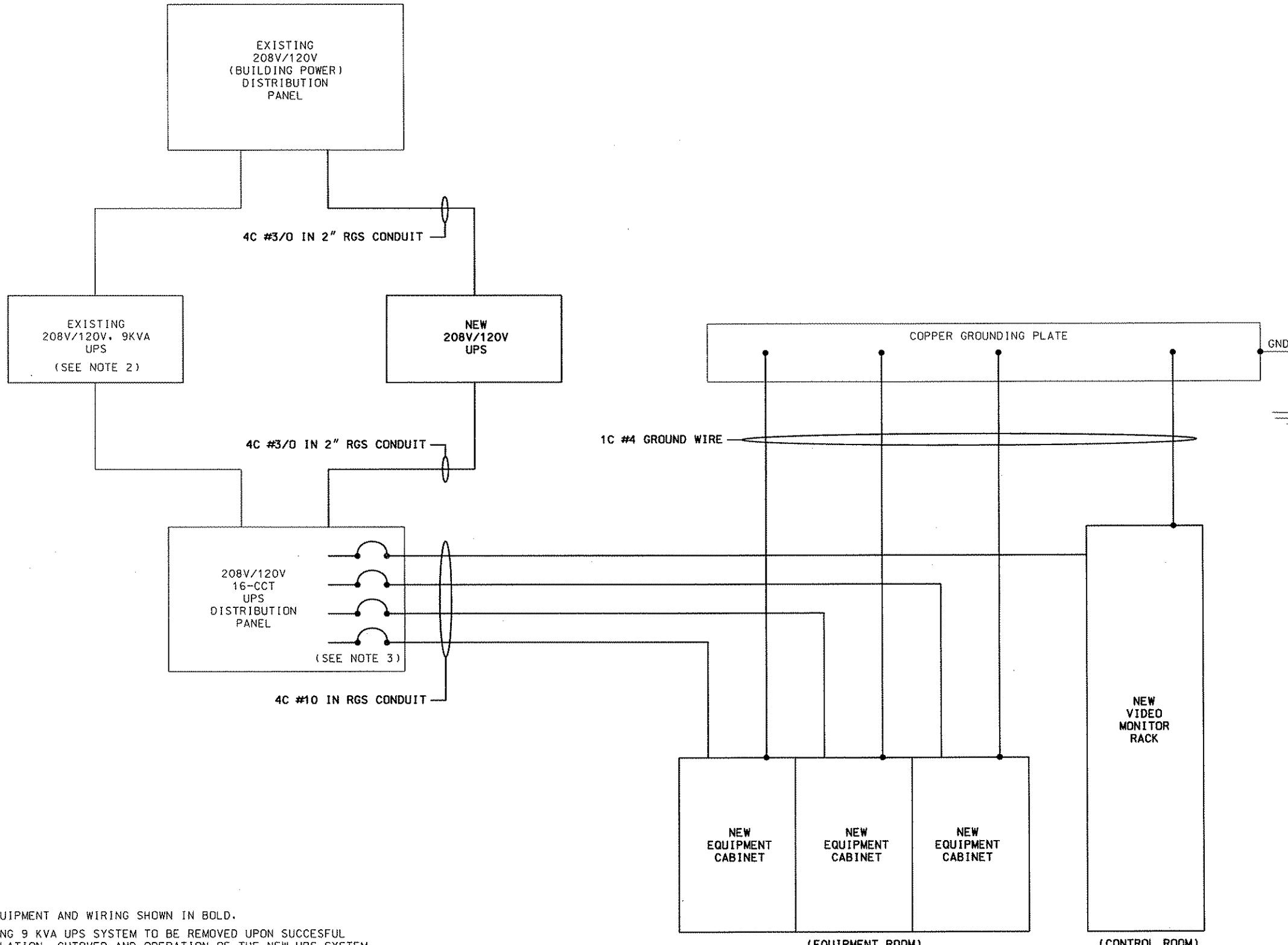
NOTES:

1. NEW EQUIPMENT SHOWN IN BOLD.
2. CONTRACTOR TO VERIFY DIMENSIONS OF ROOM AND EXISTING EQUIPMENT PRIOR TO INSTALLATION.
3. NEW EQUIPMENT CABINETS SHALL BE SIMILAR TYPE AND STYLE AS THE EXISTING CABINETS.
4. CONTRACTOR TO SIZE UPS SYSTEM TO ACCOMODATE EXISTING 9KVA SYSTEM PLUS THE NEW DIGITAL VIDEO SYSTEM LOADS WITH 20% ADDITIONAL CAPACITY FOR FUTURE GROWTH.
5. EXISTING 9 KVA UPS SYSTEM TO BE REMOVED UPON SUCCESSFUL INSTALLATION, CUTOVER AND OPERATION OF THE NEW UPS SYSTEM.
6. RELOCATE BATTERY CABINETS #2 & #3 AS INDICATED IN THE FINAL INSTALLATION CONFIGURATION.

PITT TOWER VIDEO SYSTEM EQUIPMENT ROOM LAYOUT

N.T.S.

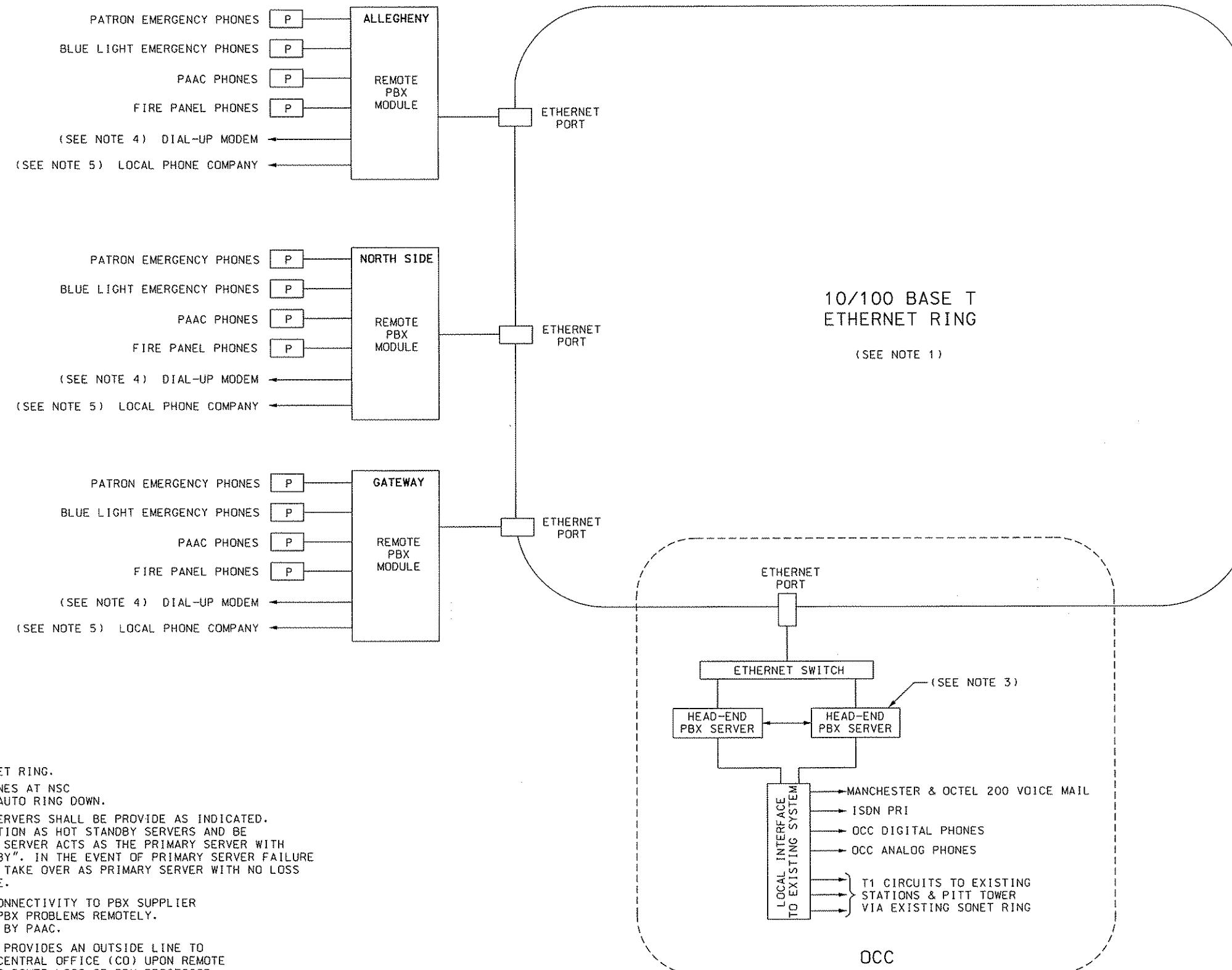
				 MICHAEL T. MCNAMARA P.E. No. 3000-R	DMJM HARRIS AECOM FOUR GATEWAY CENTER 20TH FLOOR PITTSBURGH, PA. 15222 <i>[Signature]</i> APPROVED DATE	DESIGNED R WEIDNER DRAWN JC TRAUM CHECKED F KHO IN CHARGE CD JONES DATE APR. 28, 2008 SCALE NTS	PORT AUTHORITY OF ALLEGHENY COUNTY PITTSBURGH PENNSYLVANIA NORTH SHORE CONNECTOR NSC TRAIN SYSTEM (SYSTEM WIDE) SYSTEMWIDE SIGNALS & COMMUNICATION SYSTEMS PITT TOWER VIDEO SYSTEM EQUIPMENT ROOM	
	NO. DATE	DESCRIPTION	REVISIONS					

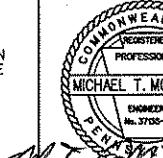


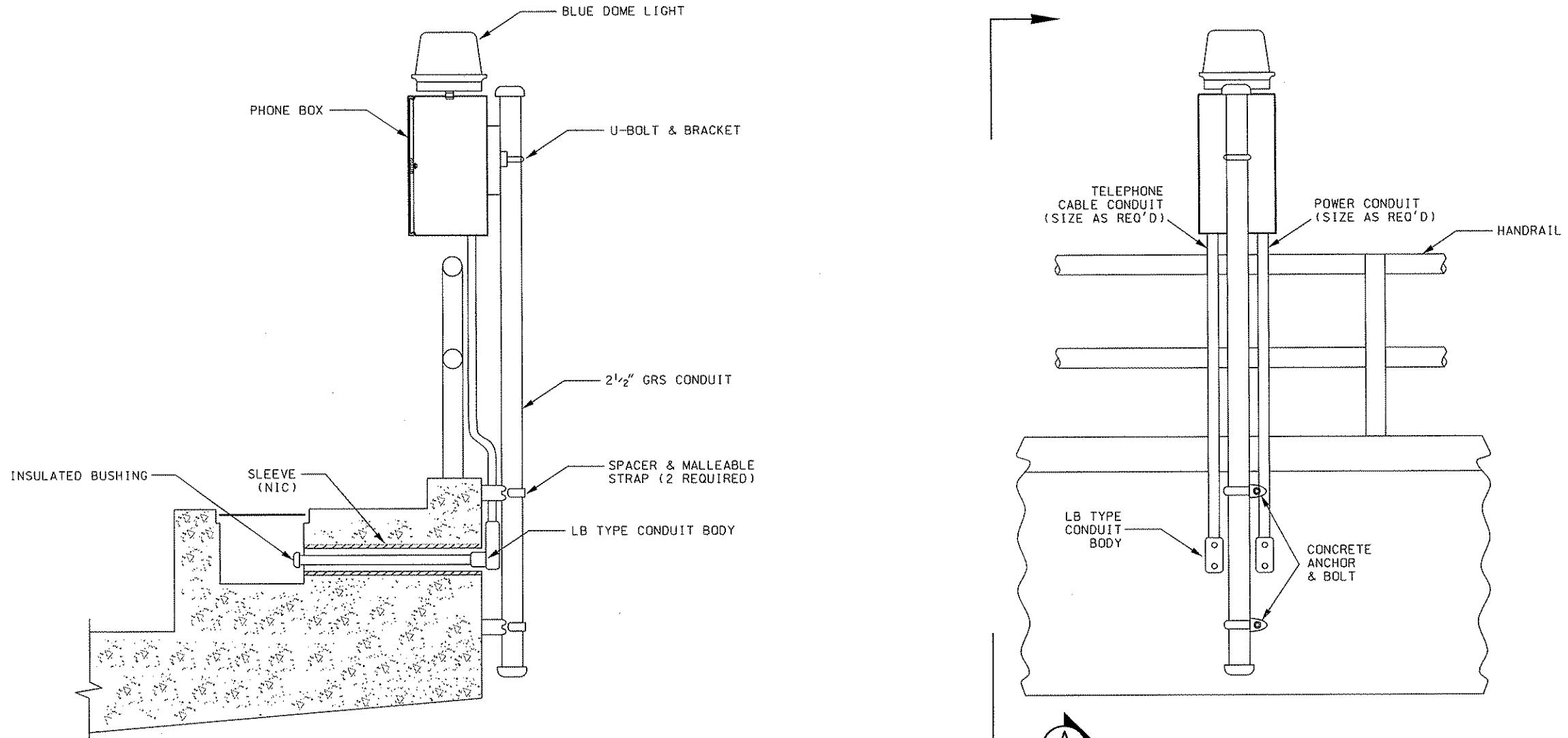
NOTES:

1. NEW EQUIPMENT AND WIRING SHOWN IN BOLD.
2. EXISTING 9 KVA UPS SYSTEM TO BE REMOVED UPON SUCCESSFUL INSTALLATION, CUTOVER AND OPERATION OF THE NEW UPS SYSTEM.
3. CONTRACTOR TO SIZE AND PROVIDE DEDICATED BREAKERS FOR EACH NEW CIRCUIT.

 Gannett Fleming Transit & Rail Systems			<small>THE PREPARATION OF THIS DOCUMENT HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE FEDERAL TRANSIT ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, FOR THE PORT AUTHORITY OF ALLEGHENY COUNTY, PENNSYLVANIA.</small>	 MICHAEL T. MCNAMARA OWNER PA. 37353-R MICHAELE T. MCNAMARA PENNSYLVANIA PROFESSIONAL REGISTERED ENGINEER	DMJM HARRIS AECOM <small>FOUR GATEWAY CENTER 20TH FLOOR PITTSBURGH, PA. 15222</small>	DESIGNED R WEIDNER DRAWN JC TRAUM CHECKED F KHO IN CHARGE CD JONES DATE APR. 26, 2008 SCALE NTS	PORT AUTHORITY OF ALLEGHENY COUNTY <small>PITTSBURGH, PENNSYLVANIA</small>	
	NO. DATE	DESCRIPTION					NORTH SHORE CONNECTOR NSC TRAIN SYSTEM (SYSTEM WIDE) PITT TOWER POWER DISTRIBUTION AND GROUNDING ARRANGEMENTS	
		REVISIONS		 Michael T. McNamara APR 26 2008	APPROVED	DATE	Port Authority <small>CONTRACT NO. NSC-009 DWG. NO. CM032 SHT. 539</small>	



 Gannett Fleming Transit & Rail Systems			THE PREPARATION OF THIS DOCUMENT HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE FEDERAL TRANSIT ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, FOR THE PORT AUTHORITY OF ALLEGHENY COUNTY, PENNSYLVANIA.	 DMJM HARRIS AECOM FOUR GATEWAY CENTER 20TH FLOOR PITTSBURGH, PA. 15222 APPROVED DATE <i>[Signature]</i> <i>David J. Harris 4/28/08</i>	DESIGNED R WEIDNER	PORT AUTHORITY OF ALLEGHENY COUNTY	
					DRAWN HT TRAN	PITTSBURGH	PENNSYLVANIA
NO. DATE	DESCRIPTION	REVISIONS		CHECKED D ZUCK	NORTH SHORE CONNECTOR		
				IN CHARGE CD JONES	NSC TRAIN SYSTEM (SYSTEM WIDE)		
				DATE APR. 28, 2008	SYSTEMWIDE SIGNALS & COMMUNICATION SYSTEMS		
				SCALE NTS	TELEPHONE SYSTEM BLOCK DIAGRAM		
					Port Authority	CONTRACT NO. NSC-009	
					DWG. NO. CM037	SHT. 5/10	



SECTION A

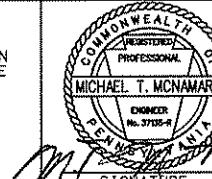
BLUE LIGHT EMERGENCY PHONE
ELEVATED STRUCTURE INSTALLATION

NOTES:

1. TELEPHONE GAS PROTECTION BLOCK CONNECTED TO GROUNDING PLATE IN CABLE TROUGH WITH #6 AWG GROUND WIRE.
2. GROUND PLATE PROVIDED BY NSC-007, SEE "ALSO" PLANS.
3. CABLE CONNECTIONS TO PHONE BOX TO BE WATERTIGHT.

NO.	DATE	DESCRIPTION
		REVISIONS

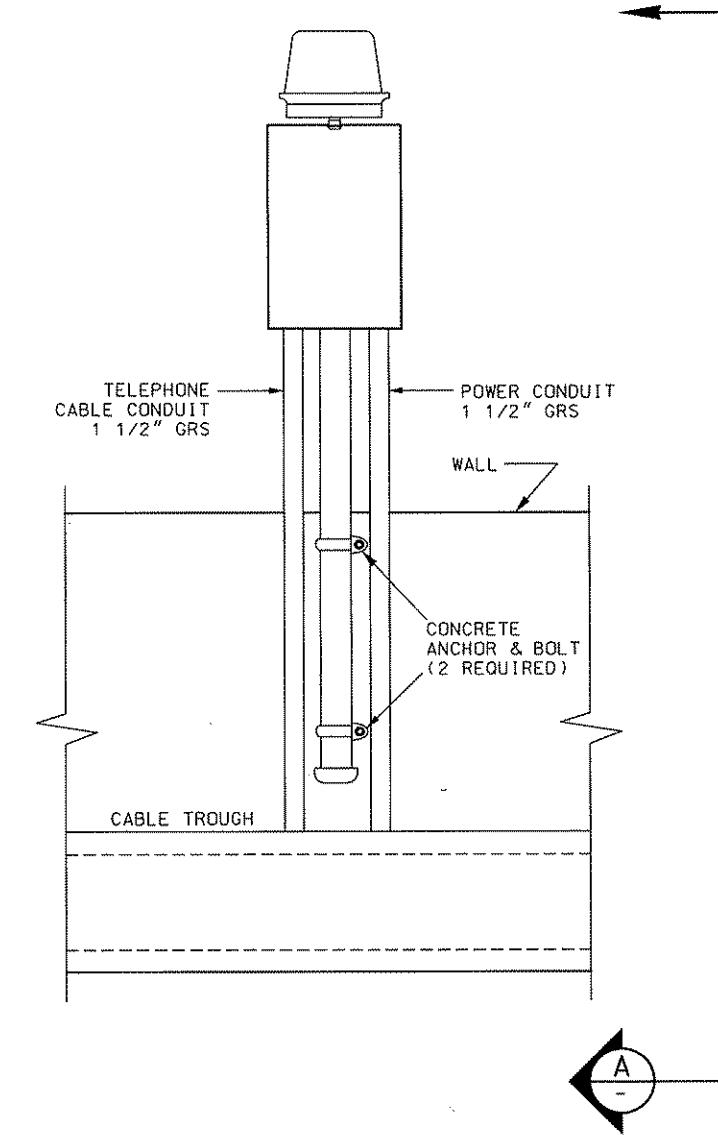
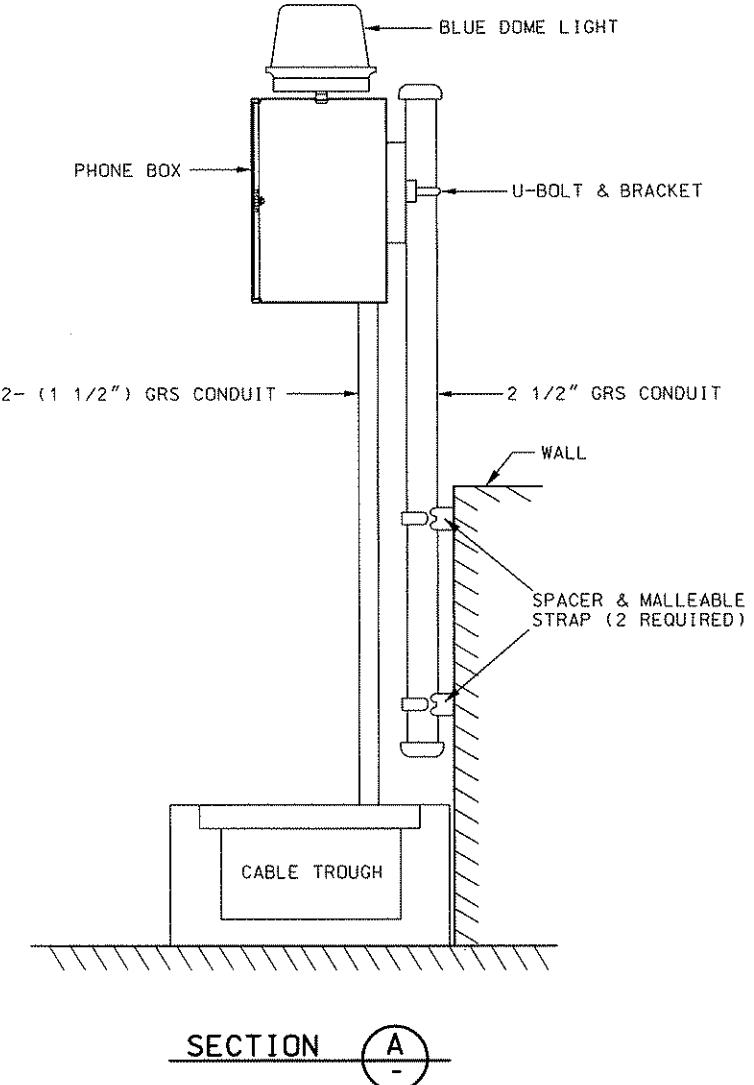
THE PREPARATION OF THIS DOCUMENT HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE FEDERAL TRANSIT ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, FOR THE PORT AUTHORITY OF ALLEGHENY COUNTY, PENNSYLVANIA.



DMJM HARRIS | AECOM
FOUR GATEWAY CENTER
20TH FLOOR
PITTSBURGH, PA. 15222
SIGNATURE: *Michael T. McNamara 4/28/08*
APPROVED DATE: *4/28/08*

DESIGNED R WEIDNER
DRAWN HT TRAN
CHECKED D ZUCK
IN CHARGE CD JONES
DATE APR. 28, 2008
SCALE NTS

PORT AUTHORITY OF ALLEGHENY COUNTY
PITTSBURGH
PENNSYLVANIA
NORTH SHORE CONNECTOR
NSC TRAIN SYSTEM (SYSTEM WIDE)
SYSTEM WIDE SIGNALS & COMMUNICATION SYSTEMS
TYPICAL EMERGENCY PHONE - ELEVATED STRUCTURE
Port Authority
CONTRACT NO. NSC-009
DWG. NO. CM038 SHT. 541



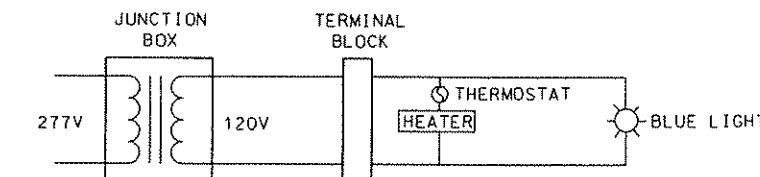
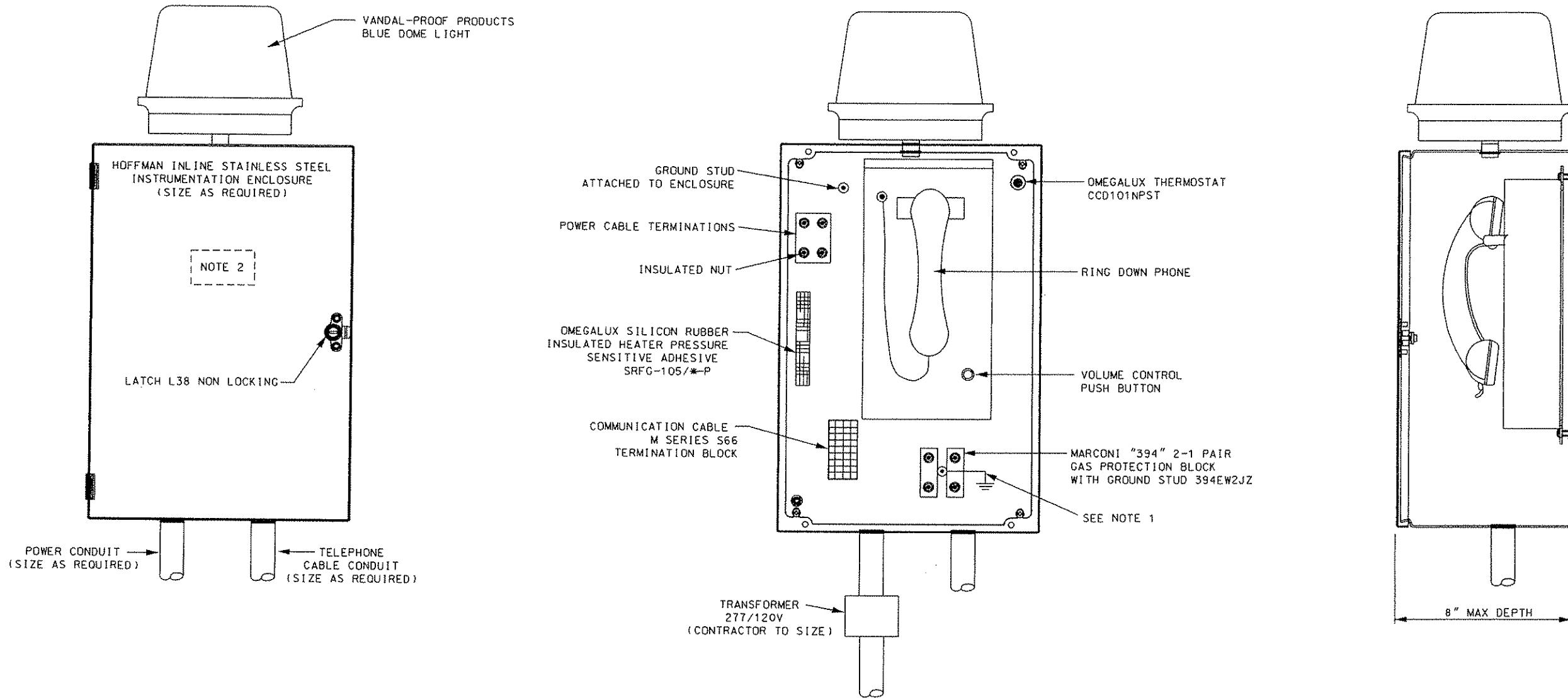
BLUE LIGHT EMERGENCY PHONE BOX TUNNEL INSTALLATION (6051+80)

(REQUIRED ON LEFT & RIGHT TRACK)

NOTES:

1. TELEPHONE GAS PROTECTION BLOCK CONNECTED TO AERIAL GROUND WIRE WITH #6 AWG GROUND WIRE.
2. CABLE CONNECTIONS TO PHONE BOX TO BE WATERTIGHT.

NO. DATE	DESCRIPTION	REVISIONS	THE PREPARATION OF THIS DOCUMENT HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE FEDERAL TRANSIT ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, FOR THE PORT AUTHORITY OF ALLEGHENY COUNTY, PENNSYLVANIA.	COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ENGINEER MICHAEL T. McNAMARA LICENSE NO. 3730-R PITTSTON, PA. 15222 FOUR GATEWAY CENTER 20TH FLOOR PITTSBURGH, PA. 15222 IN CHARGE CD JONES DATE APR. 28, 2008 SIGNATURE <i>M.T. McNamara</i> APPROVED <i>David P. Haney 4/28/08</i> DATE SFT	DMJM HARRIS AECOM DESIGNED R WEIDNER DRAWN HT TRAN CHECKED D ZUCK IN CHARGE CD JONES DATE APR. 28, 2008 SCALE NTS	PORT AUTHORITY OF ALLEGHENY COUNTY PITTSBURGH NORTH SHORE CONNECTOR NSC TRAIN SYSTEM (SYSTEM WIDE) SYSTEM WIDE SIGNALS & COMMUNICATION SYSTEMS TYPICAL EMERGENCY PHONE - 6051+80	Port Authority CONTRACT NO. NSC-009 DWG. NO. CM039 SHT. 542		



POWER WIRING

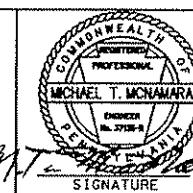
NOTES:

1. PROVIDE GROUND WIRE TO EARTH GROUND AS SHOW ON APPLICABLE MOUNTING DETAIL DRAWING.
2. ID TAG TO IDENTIFY PHONE LOCATION BY TRACK STATIONING.
ID TAG TO BE MOUNTED ON THE INSIDE OF DOOR.

Gannett Fleming
Transit & Rail Systems

NO.	DATE	DESCRIPTION
REVISIONS		

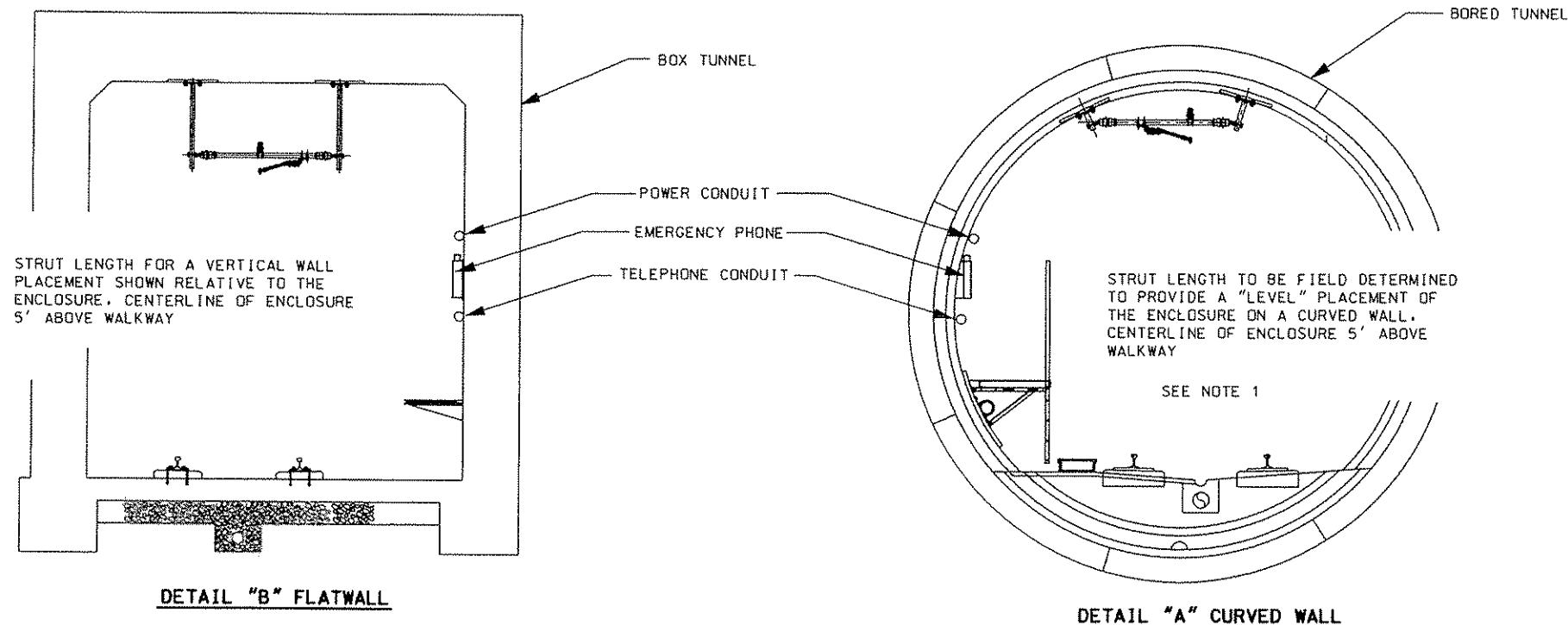
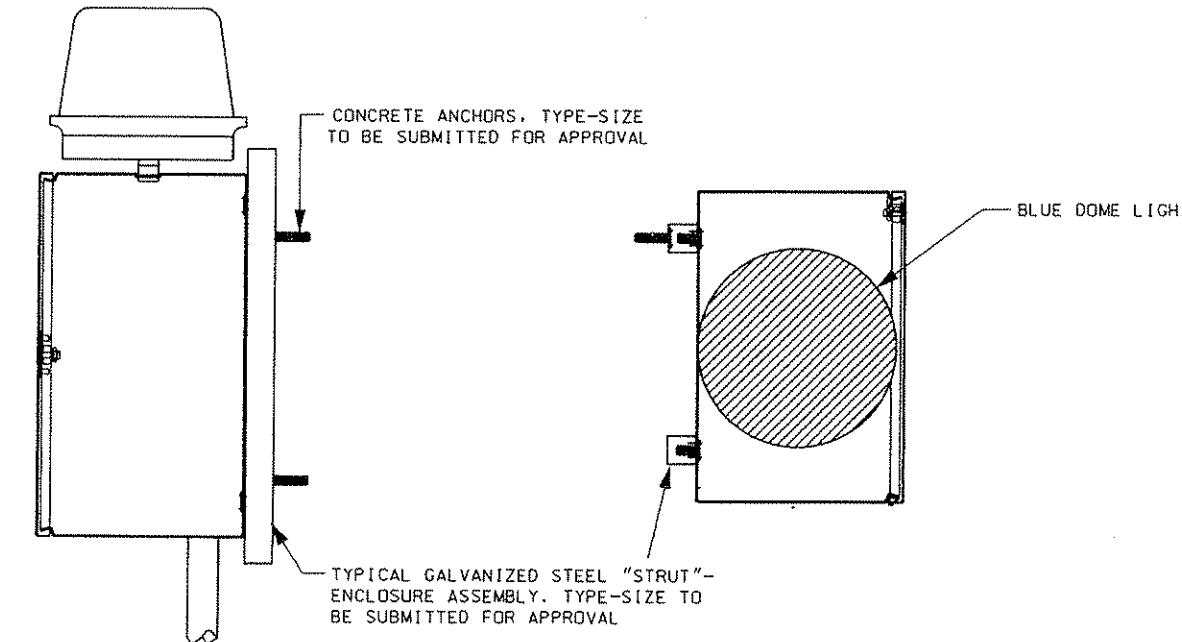
THE PREPARATION OF THIS DOCUMENT HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE FEDERAL TRANSIT ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, FOR THE PORT AUTHORITY OF ALLEGHENY COUNTY, PENNSYLVANIA.



DMJM HARRIS | AECOM
FOUR GATEWAY CENTER
20TH FLOOR
PITTSBURGH, PA. 15222
MICHAEL T. MCNAMARA
PROFESSIONAL ENGINEER
REGISTRATION NO. 2788-A
EXAMINED
APRIL 28, 2008
SIGNATURE
APPROVED
DATE
547

DESIGNED R WEIDNER
DRAWN HT TRAN
CHECKED D ZUCK
IN CHARGE CD JONES
DATE APR. 28, 2008
SCALE NTS

PORT AUTHORITY OF ALLEGHENY COUNTY
PITTSBURGH
NORTH SHORE CONNECTOR
NSC TRAIN SYSTEM (SYSTEM WIDE)
SYSTEM WIDE SIGNALS & COMMUNICATION SYSTEMS
TYPICAL EMERGENCY PHONE LAYOUT
Port Authority
CONTRACT NO. NSC-009
DWG. NO. CM040
SHT. 547



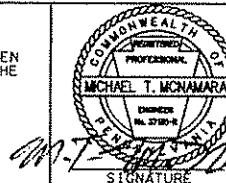
NOTES:

1. PENETRATION DEPTH OF DRILLED ANCHOR
SHALL NOT EXCEED 3" IN BORED TUNNELS.
2. TELEPHONE GAS PROTECTION BLOCK CONNECTED TO
AERIAL GROUND WIRE WITH #6 AWG GROUND WIRE.

BLUE LIGHT EMERGENCY PHONE
BORED TUNNEL INSTALLATION

NO.	DATE	DESCRIPTION	REVISIONS

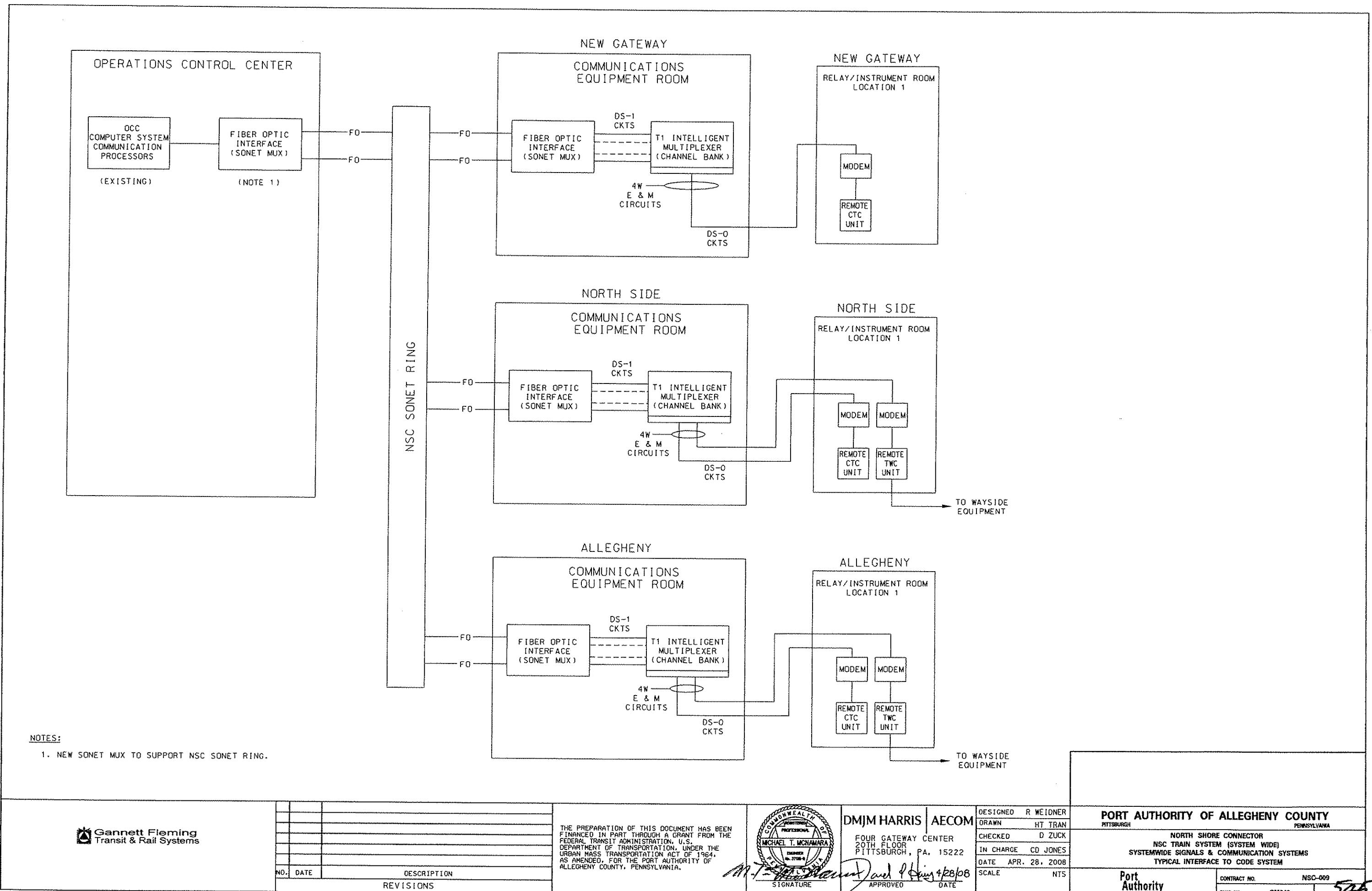
THE PREPARATION OF THIS DOCUMENT HAS BEEN
FINANCED IN PART THROUGH A GRANT FROM THE
FEDERAL TRANSIT ADMINISTRATION, U.S.
DEPARTMENT OF TRANSPORTATION, UNDER THE
URBAN MASS TRANSPORTATION ACT OF 1964,
AS AMENDED, FOR THE PORT AUTHORITY OF
ALLEHENY COUNTY, PENNSYLVANIA.



DMJM HARRIS | AECOM
FOUR GATEWAY CENTER
20TH FLOOR
PITTSBURGH, PA. 15222
SIGNATURE
APPROVED DATE
M.T. McNamara 4/28/08

DESIGNED R WEIDNER
DRAWN HT TRAN
CHECKED D ZUCK
IN CHARGE CD JONES
DATE APR. 28, 2008
SCALE

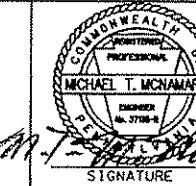
PORT AUTHORITY OF ALLEGHENY COUNTY
PITTSBURGH
NORTH SHORE CONNECTOR
NSC TRAIN SYSTEM (SYSTEM WIDE)
SYSTEM WIDE SIGNALS & COMMUNICATION SYSTEMS
TYPICAL EMERGENCY PHONE - TUNNEL
Port Authority
CONTRACT NO. NSC-009
DWG. NO. CM041 SHT. 5/28/08



Gannett Fleming
Transit & Rail Systems

NO.	DATE	DESCRIPTION
		REVISIONS

THE PREPARATION OF THIS DOCUMENT HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE FEDERAL TRANSIT ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, FOR THE PORT AUTHORITY OF ALLEGHENY COUNTY, PENNSYLVANIA.



MICHAEL T. McNAMARA
CHIEF ENGINEER
PENNSYLVANIA PORT AUTHORITY

SIGNATURE

APPROVED DATE

R. WEIDNER
HT TRAN

D. ZUCK

C. JONES

APR. 28, 2008

NTS

Port Authority

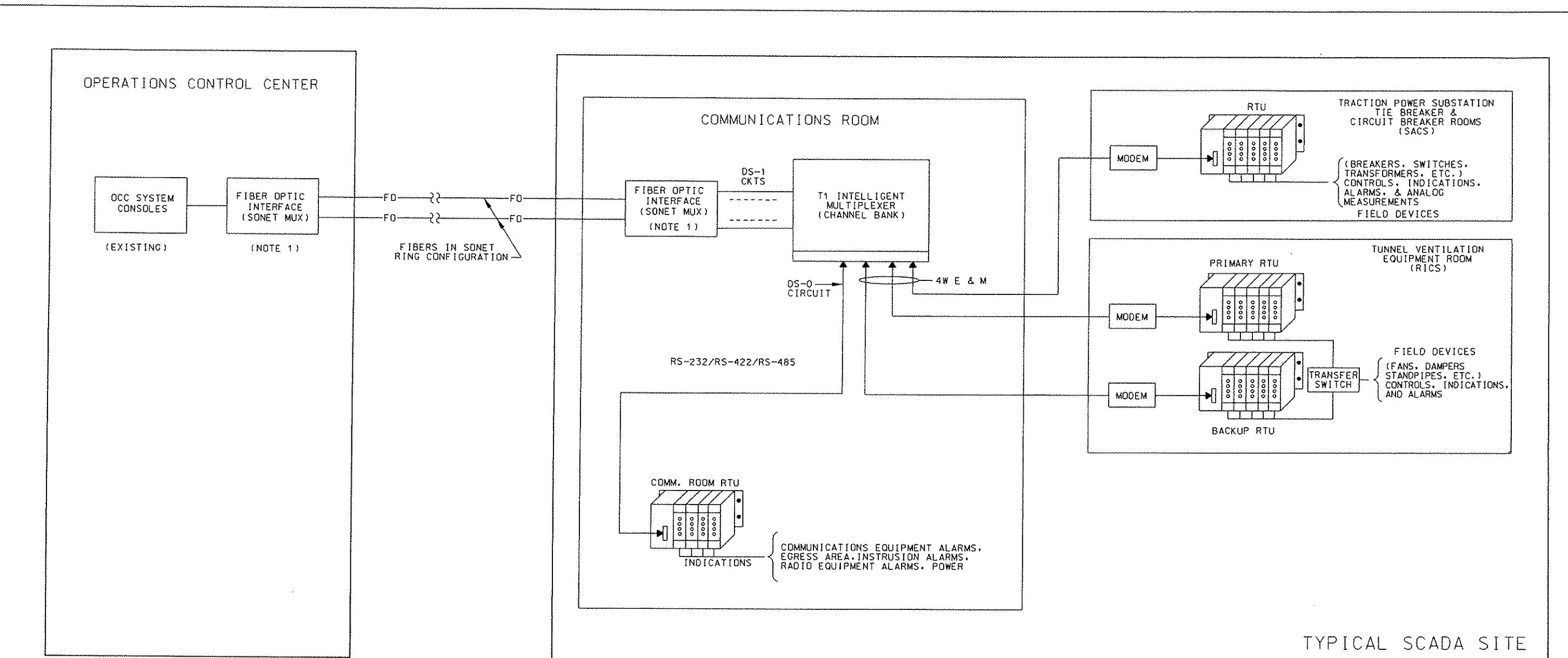
CONTRACT NO. NSC-009

DWG. NO. CM042

SH. 505

PORT AUTHORITY OF ALLEGHENY COUNTY
PITTSBURGH, PENNSYLVANIA

NORTH SHORE CONNECTOR
NSC TRAIN SYSTEM (SYSTEM WIDE)
SYSTEMWIDE SIGNALS & COMMUNICATION SYSTEMS
TYPICAL INTERFACE TO CODE SYSTEM



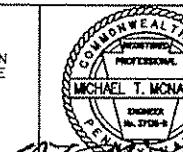
NOTES:

1. NEW SONET MUX TO SUPPORT NSC SONET RING.

NO.	DATE	DESCRIPTION
REVISIONS		

Gannett Fleming
Transit & Rail Systems

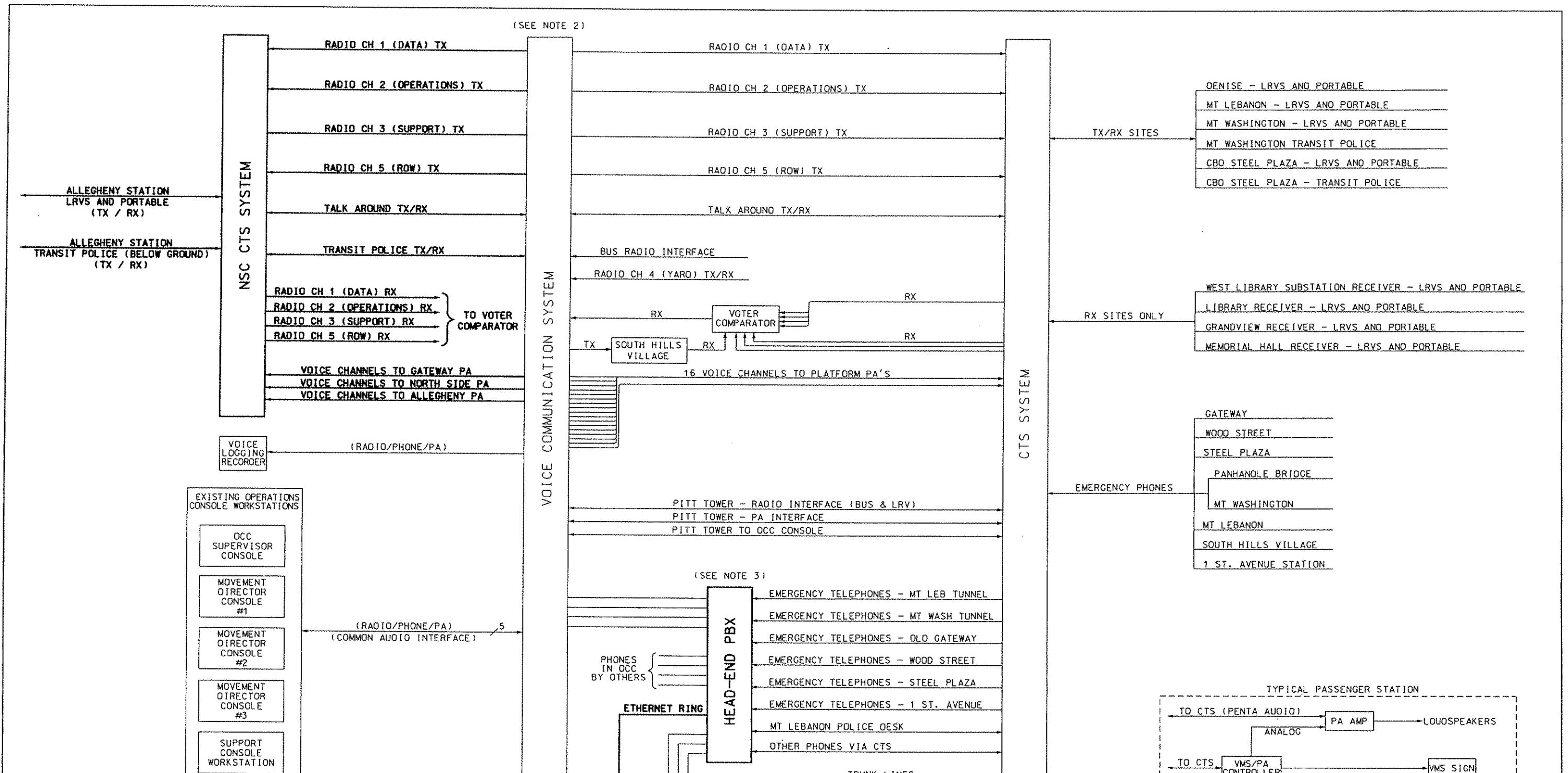
THE PREPARATION OF THIS DOCUMENT HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE FEDERAL TRANSIT ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964. AS AMENDED, FOR THE PORT AUTHORITY OF ALLEGHENY COUNTY, PENNSYLVANIA.



DMJM HARRIS | AECOM
FOUR GATEWAY CENTER
20TH FLOOR
PITTSBURGH, PA. 15222
IN CHARGE CD JONES
DATE APR. 28, 2008
SIGNATURE *[Signature]*
APPROVED *[Signature]* DATE *4/28/08*

DESIGNED R WEIDNER
DRAWN HT TRAN
CHECKED D ZUCK
IN CHARGE CD JONES
DATE APR. 28, 2008
SCALE NTS

PORT AUTHORITY OF ALLEGHENY COUNTY
PITTSBURGH, PENNSYLVANIA
NORTH SHORE CONNECTOR
NSC TRAIN SYSTEM (SYSTEM WIDE)
SYSTEMWIDE SIGNALS & COMMUNICATION SYSTEMS
TYPICAL SCADA SYSTEM BLOCK DIAGRAM
Port Authority
CONTRACT NO. NSC-009
DWG. NO. CM043 SHT. 596

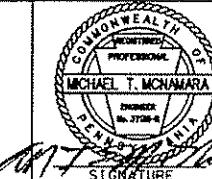


NOTES:

1. VOICE COMMUNICATION CIRCUITS INSTALLED AS PART OF THIS CONTRACT ARE SHOWN IN BOLD.
2. VOICE COMMUNICATION SYSTEM TO BE UPGRADED TO ACCOMMODATE NEW CIRCUIT TO SUPPORT THE NSC STATIONS.
3. EXISTING PBX TO BE REPLACED. CIRCUITS TO BE CUTOVER TO NEW PBX DURING OFF HOURS TO MINIMIZE DISRUPTION TO OCC OPERATION.

NSC STATION
PHONES VIA
REMOTE PBX
AT EACH STATION

THE PREPARATION OF THIS DOCUMENT HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE FEDERAL TRANSIT ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, FOR THE PORT AUTHORITY OF ALLEGHENY COUNTY, PENNSYLVANIA.



MICHAEL T. McNAMARA

PROFESSIONAL

ENGINEER

No. 2726-A

RECEIVED
APRIL 28 2008

SIGNATURE

D. ZUCK

APPROVED

DATE

IN CHARGE

CD JONES

DATE

APR. 28. 2008

DESIGNED

R WEIDNER

DRAWN

H T TRAN

CHECKED

D ZUCK

IN CHARGE

CD JONES

DATE

APR. 28. 2008

SCALE

NTS

CONTRACT NO.

NSC

DWG. NO.

CM044

SHT.

547

Gannett Fleming
Transit & Rail Systems

NO.	DATE	DESCRIPTION
		REVISONS

PORT AUTHORITY OF ALLEGHENY COUNTY
PITTSBURGH, PENNSYLVANIA

NORTH SHORE CONNECTOR
NSC TRAIN SYSTEM (SYSTEM WIDE)
SYSTEMWIDE SIGNALS & COMMUNICATION SYSTEMS
VOICE SYSTEM BLOCK DIAGRAM

Port Authority	CONTRACT NO.	NSC
DWG. NO.	CM044	SHT. 547

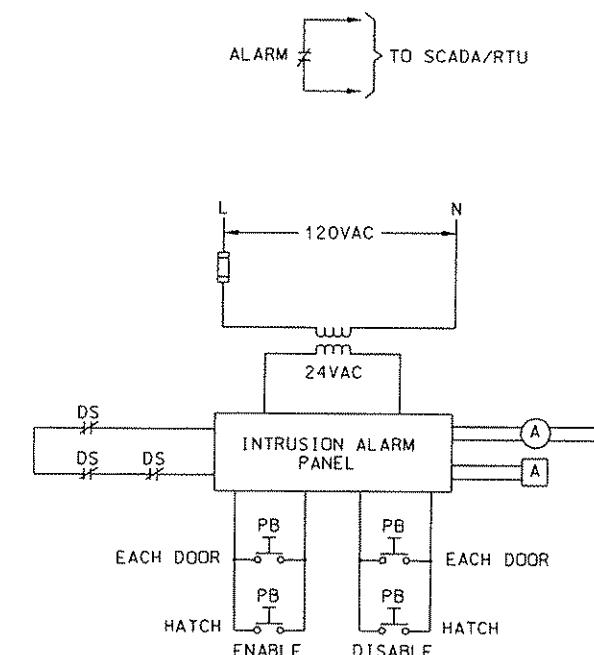
EMERGENCY EGRESS AREAS

LOCATION	DOOR REQUIRED	HATCHWAYS	PUSH BUTTON REQUIRED	LOW LEVEL ALARM	ALARM HORN
GATEWAY			HATCH DOOR		
STATION-SOUTH END	1 (#109 **)	1	2 2	1	2
STATION-NORTH END	1 (#117 **)	1	2 2	1	2
NORTH SIDE					
BORED TUNNEL LAUNCH PIT	2 ***	1	2 4	1	2
STATION-EAST END CONCOURSE	1 (M13A **)	1	2 2	1	2
STATION-EAST END PLATFORM	1 (P98A **)	-	2 2	1	1
STATION-WEST END PLATFORM	1 (P99A **)	1	2 2	1	2

* FOR DOOR LOCATIONS SEE NSC-010 DWGS.

** FOR DOOR LOCATIONS SEE NSC-011 DWGS.

*** FOR DOOR LOCATIONS SEE NSC-003 & NSC-006 DWGS.



TYPICAL INTRUSION ALARM SYSTEM

SYMBOLS

- DS DOOR SWITCH - ON EACH DOOR
- PB PUSH BUTTON
- A ALARM HORN
- A LOW LEVEL ALARM

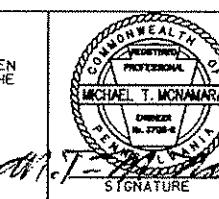
ROOM INTRUSION ALARMS

LOCATION	DOOR REQUIRED	PUSH BUTTON REQUIRED	LOW LEVEL ALARM	ALARM HORN
GATEWAY				
NEW SIGNAL ROOM	1	2	1	1
NEW COMMUNICATION ROOM	1	2	1	1
MOTOR CONTROL CENTER	1	2	1	1
TIE BREAKER	1	2	1	1
NORTH SIDE				
SIGNAL ROOM	1	2	1	1
COMMUNICATION ROOM	1	2	1	1
MOTOR CONTROL CENTER - EAST	2	4	1	1
MOTOR CONTROL CENTER - WEST	2	4	1	1
TRACTION POWER SUBSTATION	3	6	3	1
ALLEGHENY				
SIGNAL ROOM	1	2	1	1
COMMUNICATION ROOM	1	2	1	1
CIRCUIT BREAKER ROOM	1	4	1	1

Gannett Fleming
Transit & Rail Systems

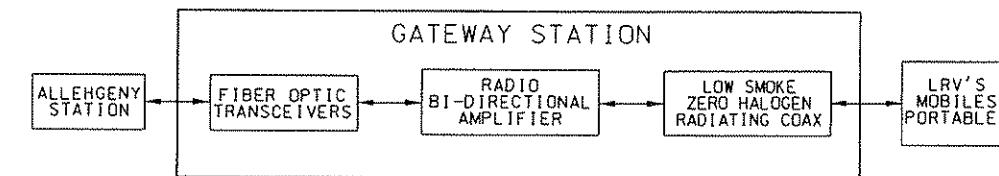
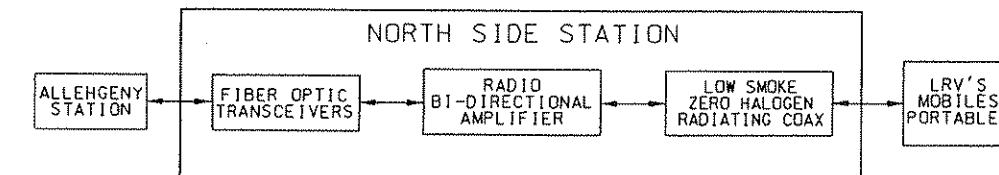
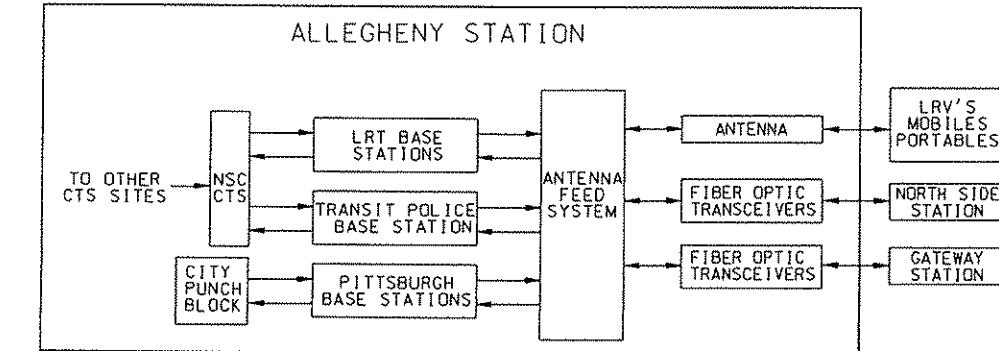
NO.	DATE	DESCRIPTION
REVISIONS		

THE PREPARATION OF THIS DOCUMENT HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE FEDERAL TRANSIT ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, FOR THE PORT AUTHORITY OF ALLEGHENY COUNTY, PENNSYLVANIA.



DMJM HARRIS | AECOM
FOUR GATEWAY CENTER
20TH FLOOR
PITTSBURGH, PA 15222
IN CHARGE: CD JONES
DATE: APR. 28, 2008
APPROVED: David P. King 4/28/08
SIGNATURE: David P. King
DATE: APPROVED DATE

PORT AUTHORITY OF ALLEGHENY COUNTY
PITTSBURGH
NORTH SHORE CONNECTOR
SYSTEMWIDE TRACTION POWER AND OCS
TYPICAL
INTRUSION ALARM SYSTEM
Port Authority
CONTRACT NO. NSC-009
DWG. NO. CM045 SHT. 548



 Gannett Fleming
Transit & Rail Systems

NO.	DATE	DESCRIPTION
REVISIONS		

THE PREPARATION OF THIS DOCUMENT HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE FEDERAL TRANSIT ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964. AS AMENDED, FOR THE PORT AUTHORITY OF ALLEGHENY COUNTY, PENNSYLVANIA.



MICHAEL T. MCNAMARA

REG. NO. 27285

SIGNATURE

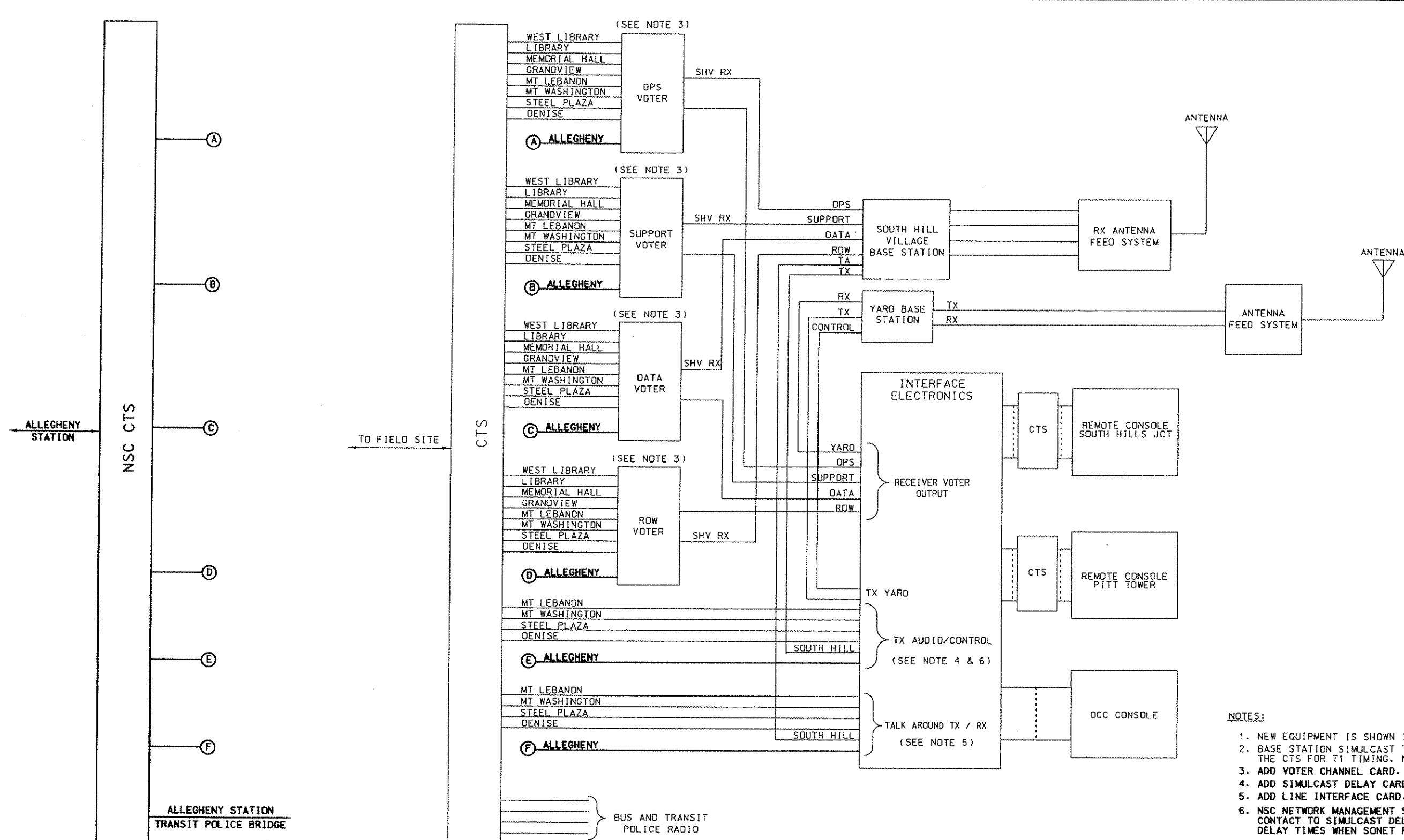
D. T. McNamara, P.E., S.E.C.E.
APPROVED DATE

DMJM HARRIS | AECOM
FOUR GATEWAY CENTER
20TH FLOOR
PITTSBURGH, PA. 15222
IN CHARGE CD JONES
DATE APR. 28, 2008
SCALE NTS

DESIGNED R WEIDNER
DRAWN HT TRAN
CHECKED D ZUCK
IN CHARGE CD JONES
DATE APR. 28, 2008
SCALE NTS

PORT AUTHORITY OF ALLEGHENY COUNTY
PITTSBURGH
NORTH SHORE CONNECTOR
NSC TRAIN SYSTEM (SYSTEM WIDE)
SYSTEMWIDE SIGNALS & COMMUNICATION SYSTEMS
RADIO SYSTEM BLOCK DIAGRAM

Port Authority
CONTRACT NO. NSC-009
DWG. NO. CM050
SHT. 59



NOTES:

1. NEW EQUIPMENT IS SHOWN IN BOLD.
2. BASE STATION SIMULCAST TRANSMITTER USES THE CTS FOR T1 TIMING. NOT SHOWN ON DRAWING.
3. ADD VOTER CHANNEL CARD.
4. ADD SIMULCAST DELAY CARD.
5. ADD LINE INTERFACE CARD.
6. NSC NETWORK MANAGEMENT SYSTEM TO PROVIDE CONTACT TO SIMULCAST DELAY CARD TO CHANGE DELAY TIMES WHEN SONET RING REVERSES DIRECTION.

NO.	DATE	DESCRIPTION
REVISONS		

THE PREPARATION OF THIS DOCUMENT HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE FEDERAL TRANSIT ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964. AS AMENDED, FOR THE PORT AUTHORITY OF ALLEGHENY COUNTY, PENNSYLVANIA.



MICHAEL T. MCNAMARA
SIGNATURE

DJM J. HARRIS
APPROVED

AECOM
DATE

R WEIDNER
DRAWN

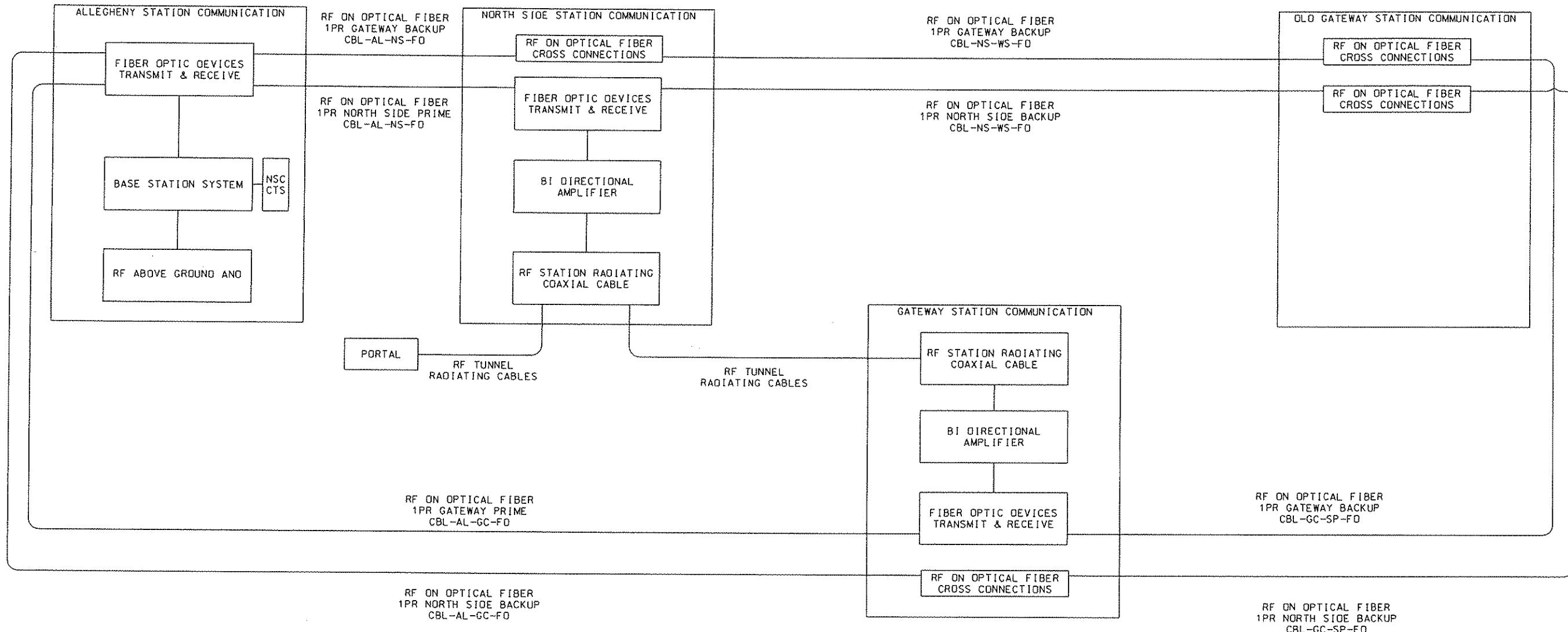
H T TRAN
CHECKED

D ZUCK
IN CHARGE

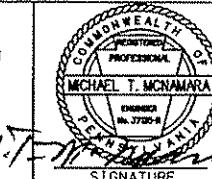
C D JONES
DATE APR. 28. 2008

NTS
SCALE

PORT AUTHORITY OF ALLEGHENY COUNTY PITTSBURGH	
NORTH SHORE CONNECTOR NSC TRAIN SYSTEM (SYSTEM WIDE) SYSTEMWIDE SIGNALS & COMMUNICATION SYSTEMS OPERATIONS CONTROL CENTER / TWO-WAY RADIO SYSTEM FUNCTIONAL LAYOUT	
Port Authority	CONTRACT NO. NSC-008 DWG. NO. CM051 SHT. 550



THE PREPARATION OF THIS DOCUMENT HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE FEDERAL TRANSIT ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION, UNDER THE URGAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, FOR THE PORT AUTHORITY OF ALLEGHENY COUNTY, PENNSYLVANIA.

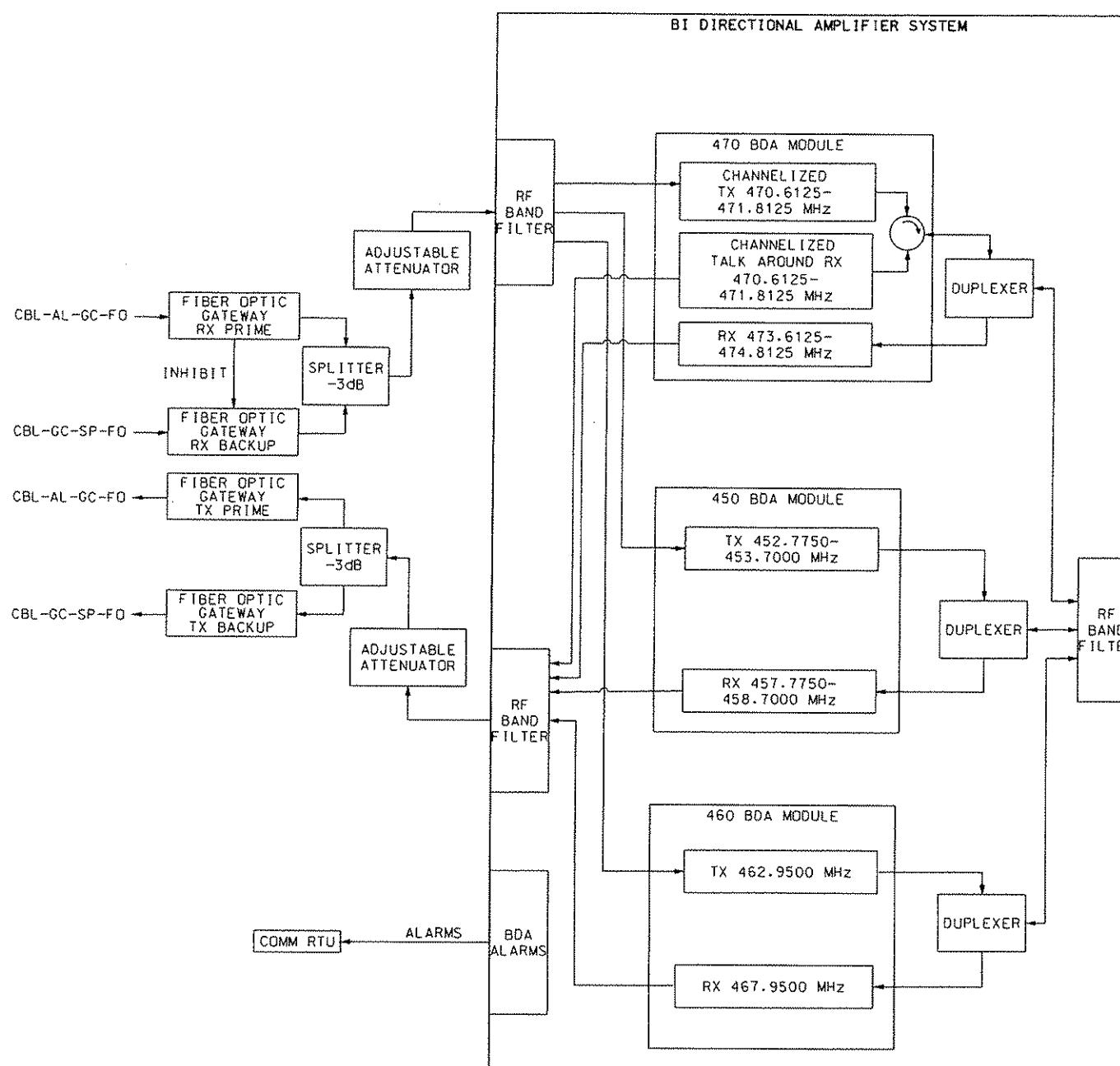


DMJM HARRIS | AECOM
FOUR GATEWAY CENTER
20TH FLOOR
PITTSBURGH, PA. 15222
Daniel P. Harrington 4/28/08
APPROVED DATE

DESIGNED	R SCHIMIOT	P
DRAWN	HT TRAN	P
CHECKED	K HOFFMAN	
IN CHARGE	CD JONES	
DATE	APR. 28, 2008	
SCALE	NTC	

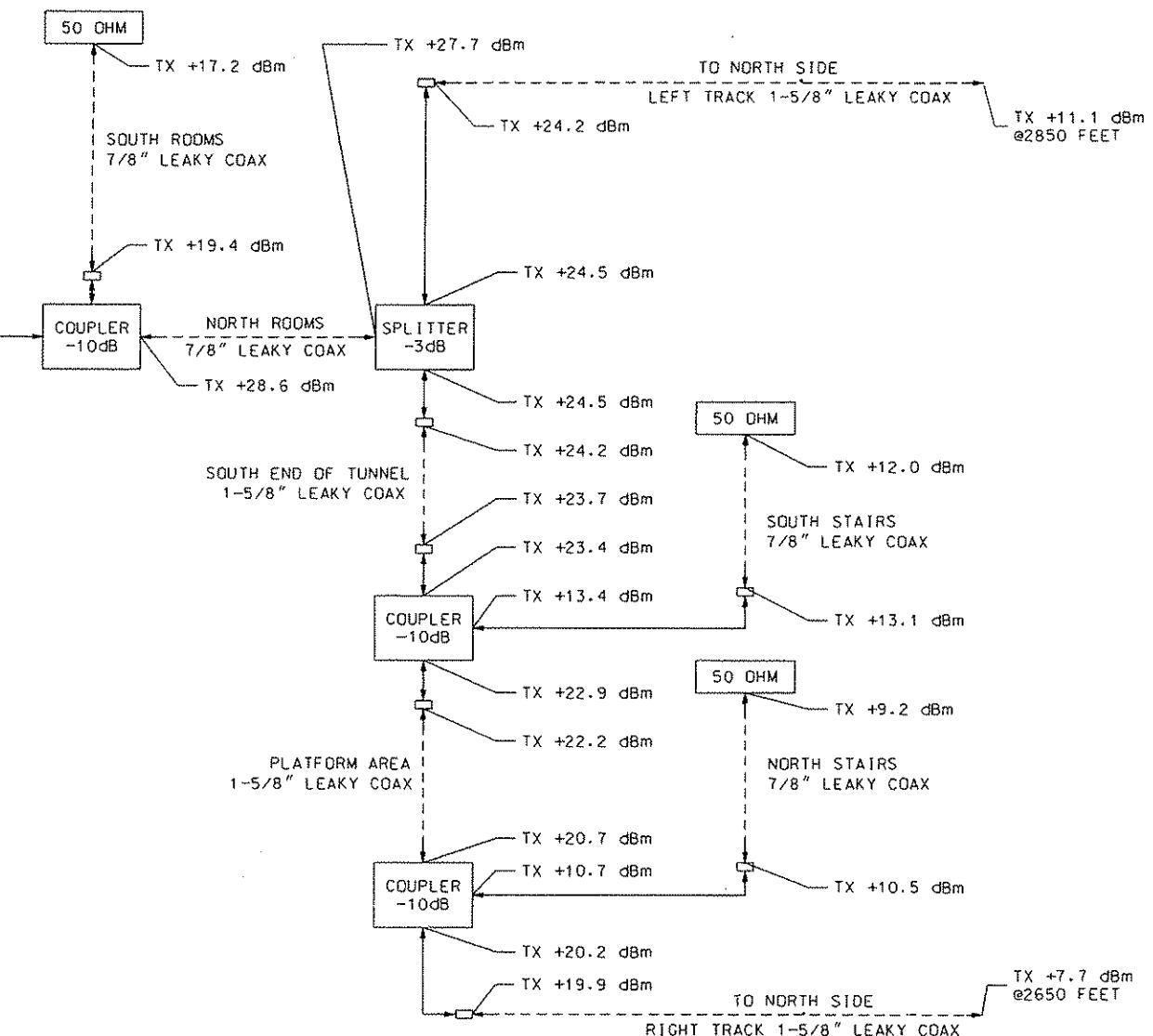
DRT AUTHORITY OF ALLEGHENY COUNTY
SBURGH PENNSYLVANIA

NORTH SHORE CONNECTOR
NSC TRAIN SYSTEM (SYSTEM WIDE)
SYSTEMWIDE SIGNALS & COMMUNICATION SYSTEMS
TWO-WAY RADIO SYSTEM FUNCTIONAL LAYOUT



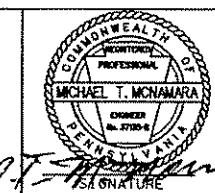
NOTES:

1. TX LEVELS ARE INDICATED IN dBm PER CARRIER FREQUENCY.
2. THE INTERNAL ARRANGEMENT OF THE BI DIRECTIONAL AMPLIFIER SYSTEM ILLUSTRATES ONE WAY TO ACHIEVE THE PERFORMANCE REQUIREMENTS.
3. THE 470 MHZ TRANSMITTER AND TALK AROUND RECEIVER SHALL BE CHANNELIZED.
4. THE AMPLIFIER SHALL HAVE SUFFICIENT ISOLATION TO PREVENT OSCILLATION.
5. FIBER OPTIC TRANSMITTERS AND RECEIVERS ARE ASSUMED A NOMINAL 0 dBm MAXIMUM CONTINUOUS COMPOSITE RF LEVEL ADJUST LEVELS AS REQUIRED FOR THE ACTUAL F.O. DEVICE.
6. FIBER OPTIC RECEIVERS ARE REDUNDANT. THE PRIME RECEIVER SHALL INHIBIT THE BACKUP RECEIVER. FAILURE OR LOSS OF LIGHT IN THE PRIME RECEIVER SHALL ENABLE THE BACKUP RECEIVER.



NO.	DATE	DESCRIPTION
REVISIONS		

THE PREPARATION OF THIS DOCUMENT HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE FEDERAL TRANSIT ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, FOR THE PORT AUTHORITY OF ALLEGHENY COUNTY, PENNSYLVANIA.



DMJM HARRIS | AECOM
FOUR GATEWAY CENTER
20TH FLOOR
PITTSBURGH, PA. 15222
IN CHARGE CD JONES
DATE APR. 28, 2008
SCALE NTS

Michael T. McNamara *David P. Harris 4/28/08*
SIGNATURE APPROVED DATE

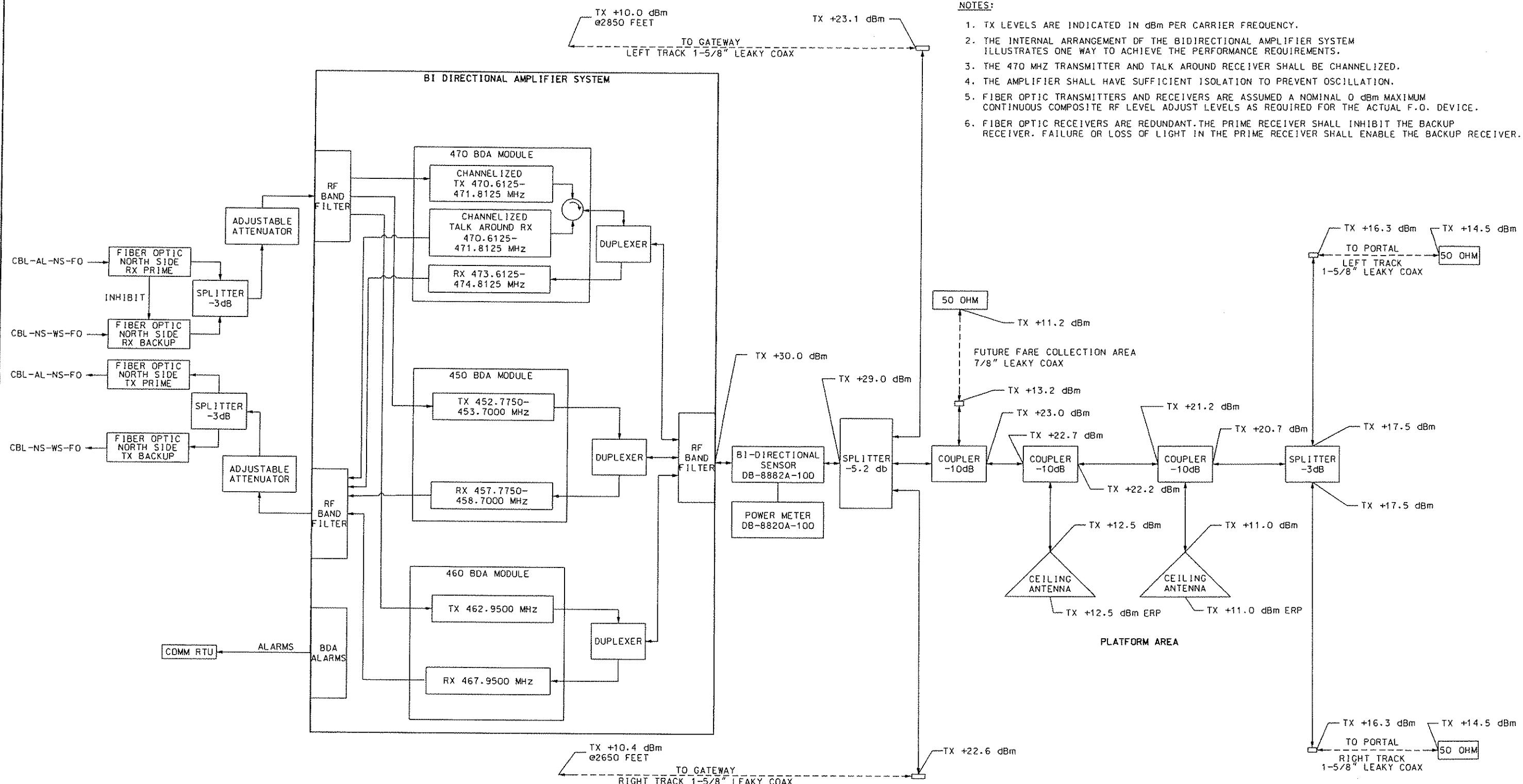
PORT AUTHORITY OF ALLEGHENY COUNTY
PITTSBURGH

NORTH SHORE CONNECTOR
NSC TRAIN SYSTEM (SYSTEM WIDE)
SYSTEMWIDE SIGNALS & COMMUNICATION SYSTEMS
GATEWAY STATION - RADIO BLOCK DIAGRAM

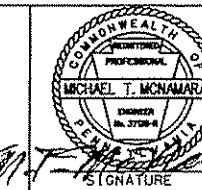
Port Authority
CONTRACT NO. NSC-009
DWG. NO. CM060
SHT. 5-2

NOTES:

1. TX LEVELS ARE INDICATED IN dBm PER CARRIER FREQUENCY.
2. THE INTERNAL ARRANGEMENT OF THE BI DIRECTIONAL AMPLIFIER SYSTEM ILLUSTRATES ONE WAY TO ACHIEVE THE PERFORMANCE REQUIREMENTS.
3. THE 470 MHZ TRANSMITTER AND TALK AROUND RECEIVER SHALL BE CHANNELIZED.
4. THE AMPLIFIER SHALL HAVE SUFFICIENT ISOLATION TO PREVENT OSCILLATION.
5. FIBER OPTIC TRANSMITTERS AND RECEIVERS ARE ASSUMED A NOMINAL 0 dBm MAXIMUM CONTINUOUS COMPOSITE RF LEVEL ADJUST LEVELS AS REQUIRED FOR THE ACTUAL F.O. DEVICE.
6. FIBER OPTIC RECEIVERS ARE REDUNDANT. THE PRIME RECEIVER SHALL INHIBIT THE BACKUP RECEIVER. FAILURE OR LOSS OF LIGHT IN THE PRIME RECEIVER SHALL ENABLE THE BACKUP RECEIVER.



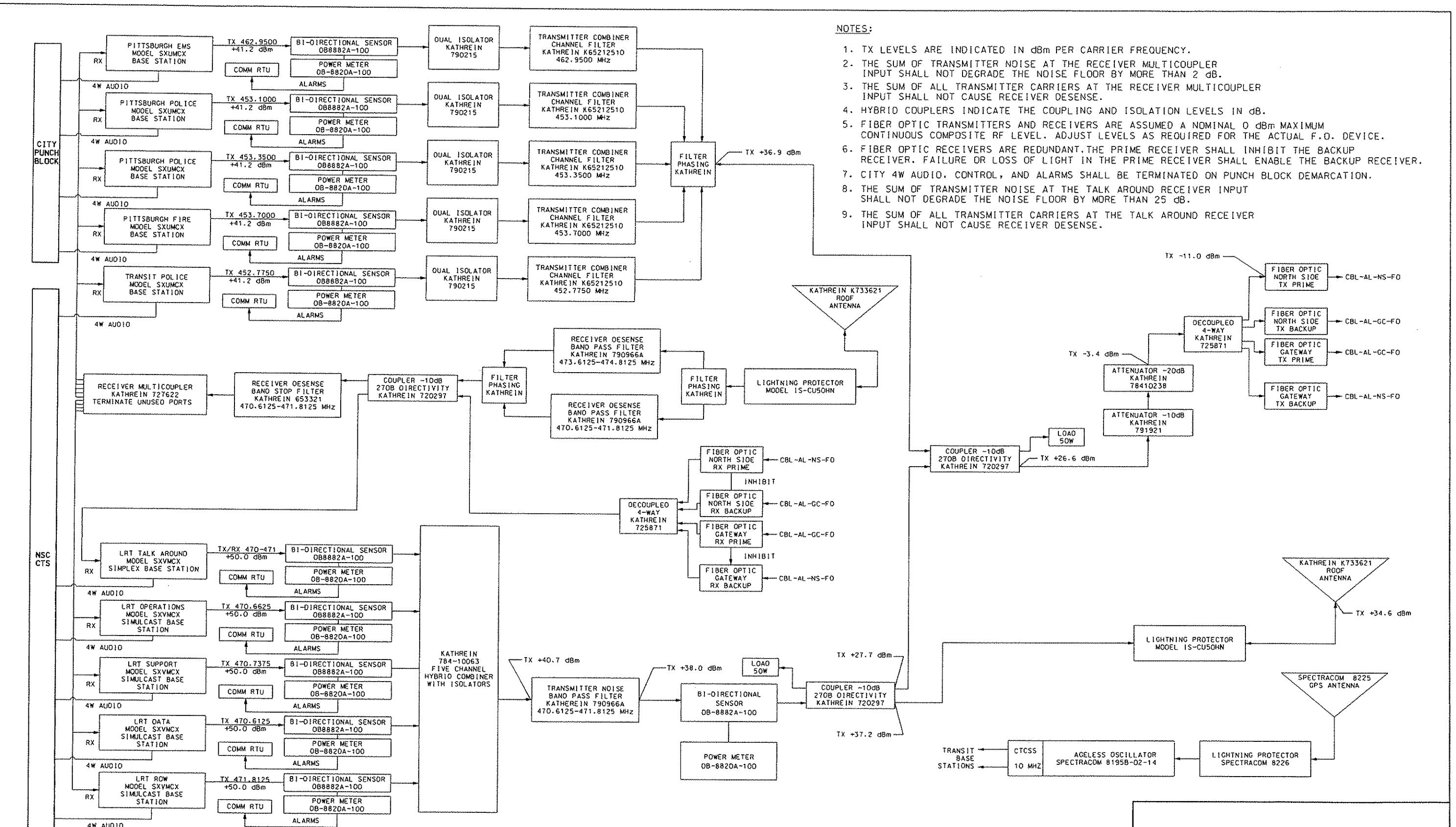
THE PREPARATION OF THIS DOCUMENT HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U.S. DEPARTMENT OF TRANSPORTATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, FOR THE PORT AUTHORITY OF ALLEGHENY COUNTY, PENNSYLVANIA.



DMJM HARRIS | AECOM
FOUR GATEWAY CENTER
20TH FLOOR
PITTSBURGH, PA. 15222
CHECKED K HOFFMAN
IN CHARGE CD JONES
DATE APR. 28, 2008
APPROVED *Dave P. Henry 4/28/08*
SIGNATURE APPROVED DATE

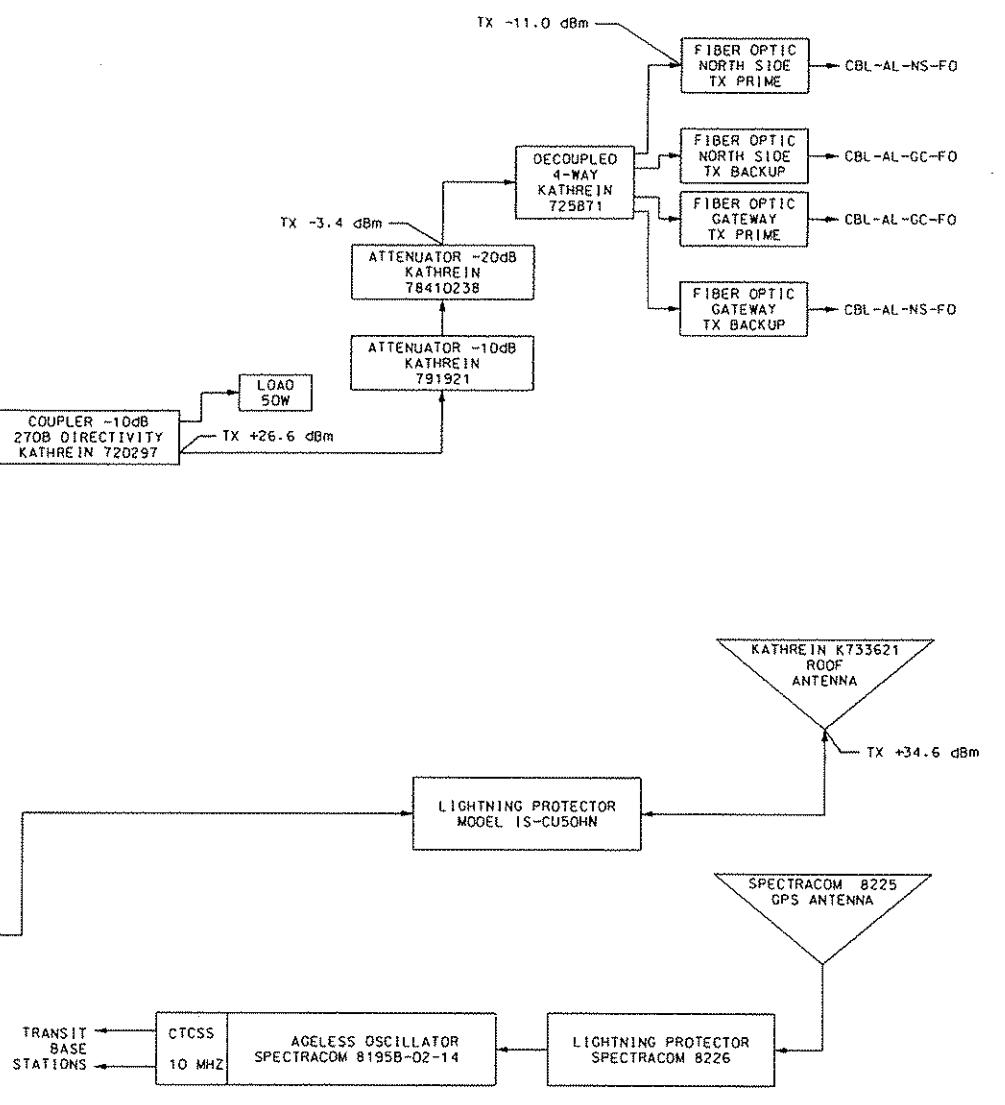
DESIGNED R SCHMIDT
DRAWN HT TRAN
NORTH SHORE CONNECTOR
NSC TRAIN SYSTEM (SYSTEM WIDE)
SYSTEMWIDE SIGNALS & COMMUNICATION SYSTEMS
NORTH SIDE STATION - RADIO BLOCK DIAGRAM
SCALE NTS
Port Authority
CONTRACT NO. NSC-009
DWO NO. CM001
SHT. 533

PORT AUTHORITY OF ALLEGHENY COUNTY
PITTSBURGH
PENNSYLVANIA
NORTH SHORE CONNECTOR
NSC TRAIN SYSTEM (SYSTEM WIDE)
SYSTEMWIDE SIGNALS & COMMUNICATION SYSTEMS
NORTH SIDE STATION - RADIO BLOCK DIAGRAM
Port Authority
CONTRACT NO. NSC-009
DWO NO. CM001
SHT. 533

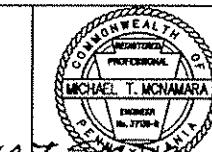


NOTES:

1. TX LEVELS ARE INDICATED IN dBm PER CARRIER FREQUENCY.
2. THE SUM OF TRANSMITTER NOISE AT THE RECEIVER MULTICOUPLER INPUT SHALL NOT DEGRADE THE NOISE FLOOR BY MORE THAN 2 dB.
3. THE SUM OF ALL TRANSMITTER CARRIERS AT THE RECEIVER MULTICOUPLER INPUT SHALL NOT CAUSE RECEIVER DESENSE.
4. HYBRID COUPLERS INDICATE THE COUPLING AND ISOLATION LEVELS IN dB.
5. FIBER OPTIC TRANSMITTERS AND RECEIVERS ARE ASSUMED A NOMINAL 0 dBm MAXIMUM CONTINUOUS COMPOSITE RF LEVEL. ADJUST LEVELS AS REQUIRED FOR THE ACTUAL F.O. DEVICE.
6. FIBER OPTIC RECEIVERS ARE REDUNDANT. THE PRIME RECEIVER SHALL INHIBIT THE BACKUP RECEIVER. FAILURE OR LOSS OF LIGHT IN THE PRIME RECEIVER SHALL ENABLE THE BACKUP RECEIVER.
7. CITY 4W AUDIO, CONTROL, AND ALARMS SHALL BE TERMINATED ON PUNCH BLOCK DEMARCTION.
8. THE SUM OF TRANSMITTER NOISE AT THE TALK AROUND RECEIVER INPUT SHALL NOT DEGRADE THE NOISE FLOOR BY MORE THAN 25 dB.
9. THE SUM OF ALL TRANSMITTER CARRIERS AT THE TALK AROUND RECEIVER INPUT SHALL NOT CAUSE RECEIVER DESENSE.



THE PREPARATION OF THIS DOCUMENT HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE FEDERAL TRANSIT ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, FOR THE PORT AUTHORITY OF ALLEGHENY COUNTY, PENNSYLVANIA.

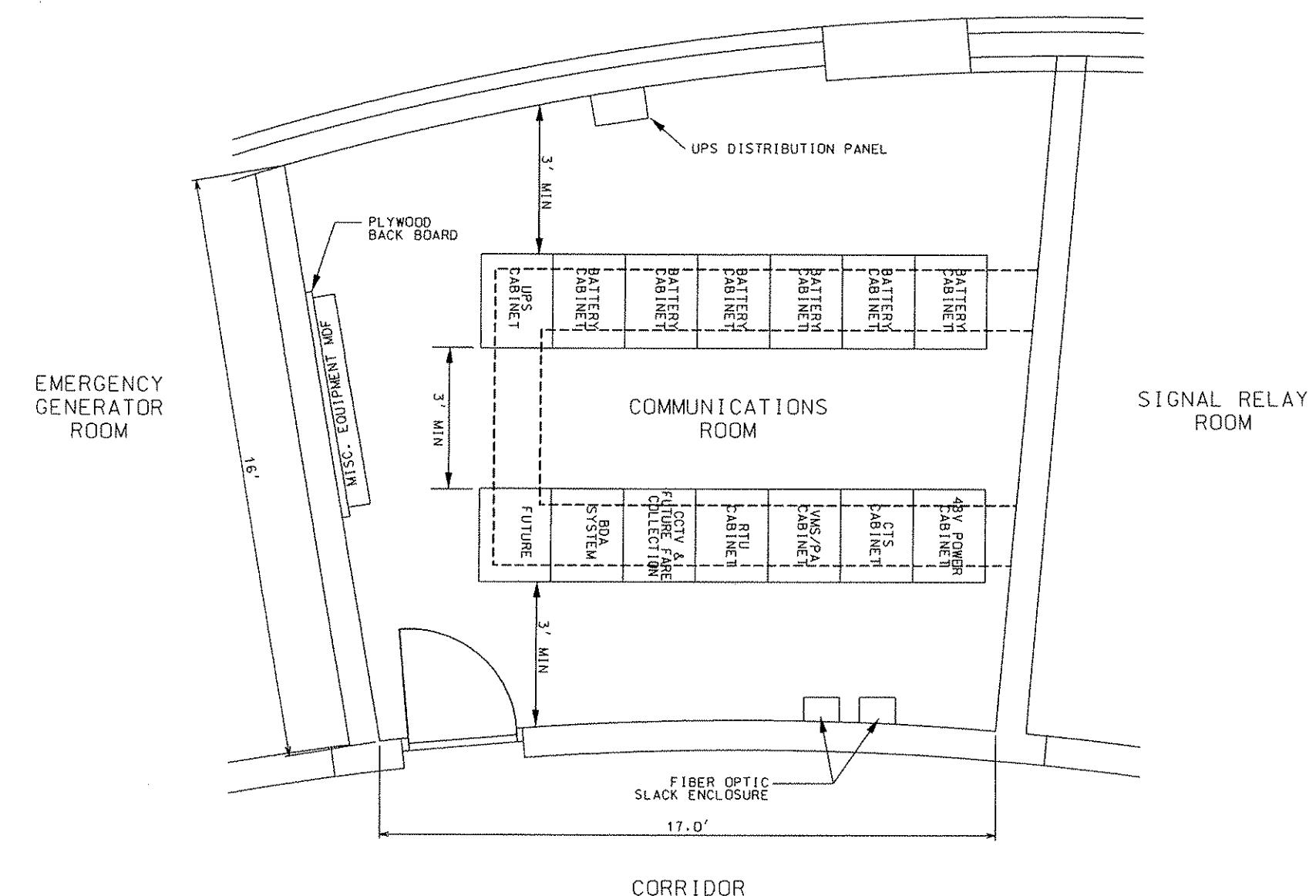


DMJM HARRIS | AECOM
FOUR GATEWAY CENTER
20TH FLOOR
PITTSBURGH, PA. 15222
APPROVED DATE
SIGNATURE
M.T. - D. P. H. 4/28/08

DESIGNED R SCHIMDT
DRAWN HT TRAN
CHECKED K HOFFMAN
IN CHARGE CD JONES
DATE APR. 28, 2008
SCALE NTS
Port Authority
CONTRACT NO. NSC-009
Dwg. No. CM062 SHT. 550

PORT AUTHORITY OF ALLEGHENY COUNTY
PITTSBURGH
NORTH SHORE CONNECTOR
NSC TRAIN SYSTEM (SYSTEM WIDE)
SYSTEMWIDE SIGNALS & COMMUNICATION SYSTEMS
ALLEGHENY STATION - RADIO BLOCK DIAGRAM

NO.	DATE	DESCRIPTION
REVISIONS		



LEGENDS:

CABLE TRAY

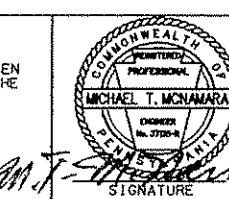
NOTES:

- PLAN IS NOT TO SCALE. FOR APPROXIMATE LAYOUT OF EQUIPMENT ONLY.
CONTRACTOR TO VERIFY ROOM DIMENSIONS AND EQUIPMENT DIMENSIONS
PRIOR TO INSTALLATION.
- CONTRACTOR TO PROVIDE CABLE TRAY AS REQUIRED FOR ALL RACK-TO-RACK CABLING.

Gannett Fleming
Transit & Rail Systems

NO.	DATE	DESCRIPTION	REVISIONS

THE PREPARATION OF THIS DOCUMENT HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE FEDERAL TRANSIT ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, FOR THE PORT AUTHORITY OF ALLEGHENY COUNTY, PENNSYLVANIA.



SIGNATURE

D. M. T. McNamara 4/28/08
APPROVED DATE

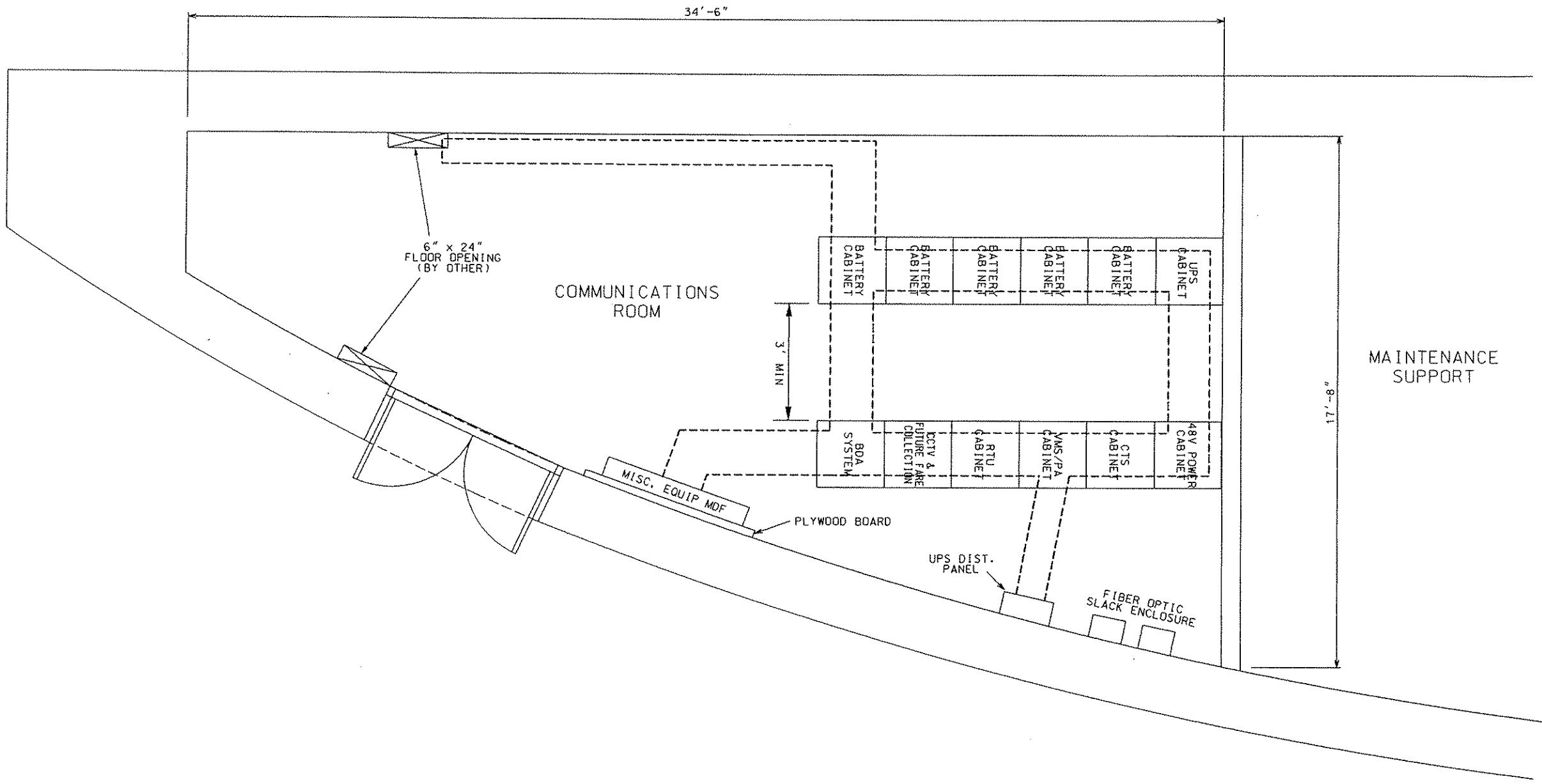
DESIGNED P. WILLS
DRAWN J. TRAUM
CHECKED R. WEIDNER
IN CHARGE C. D. JONES
DATE APR. 28, 2008
SCALE NONE

PORT AUTHORITY OF ALLEGHENY COUNTY
PITTSBURGH, PENNSYLVANIA

NORTH SHORE CONNECTOR
NSC TRAIN SYSTEM (SYSTEM WIDE)
GATEWAY STATION
COMMUNICATIONS EQUIPMENT ROOM LAYOUT

Port Authority

CONTRACT NO. NSC-009
DWG. NO. CM070 SHT. 55



LEGENDS:

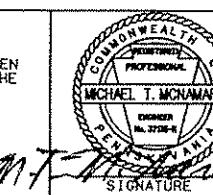
----- CABLE TRAY

NOTES:

1. PLAN IS NOT TO SCALE. FOR APPROXIMATE LAYOUT OF EQUIPMENT ONLY.
CONTRACTOR TO VERIFY ROOM DIMENSIONS AND EQUIPMENT DIMENSIONS
PRIOR TO INSTALLATION.
2. CONTRACTOR TO PROVIDE CABLE TRAY AS REQUIRED FOR ALL RACK-TO-RACK CABLING.

NO.	DATE	DESCRIPTION
REVISIONS		

THE PREPARATION OF THIS DOCUMENT HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE FEDERAL TRANSIT ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, FOR THE PORT AUTHORITY OF ALLEGHENY COUNTY, PENNSYLVANIA.



SIGNATURE

Daniel J. Harris 4/28/08
APPROVED DATE

DESIGNED P. WILLS
DRAWN J. TRAUM

CHECKED J. SAMEAN

IN CHARGE CD JONES

DATE APR. 28, 2008

SCALE NONE

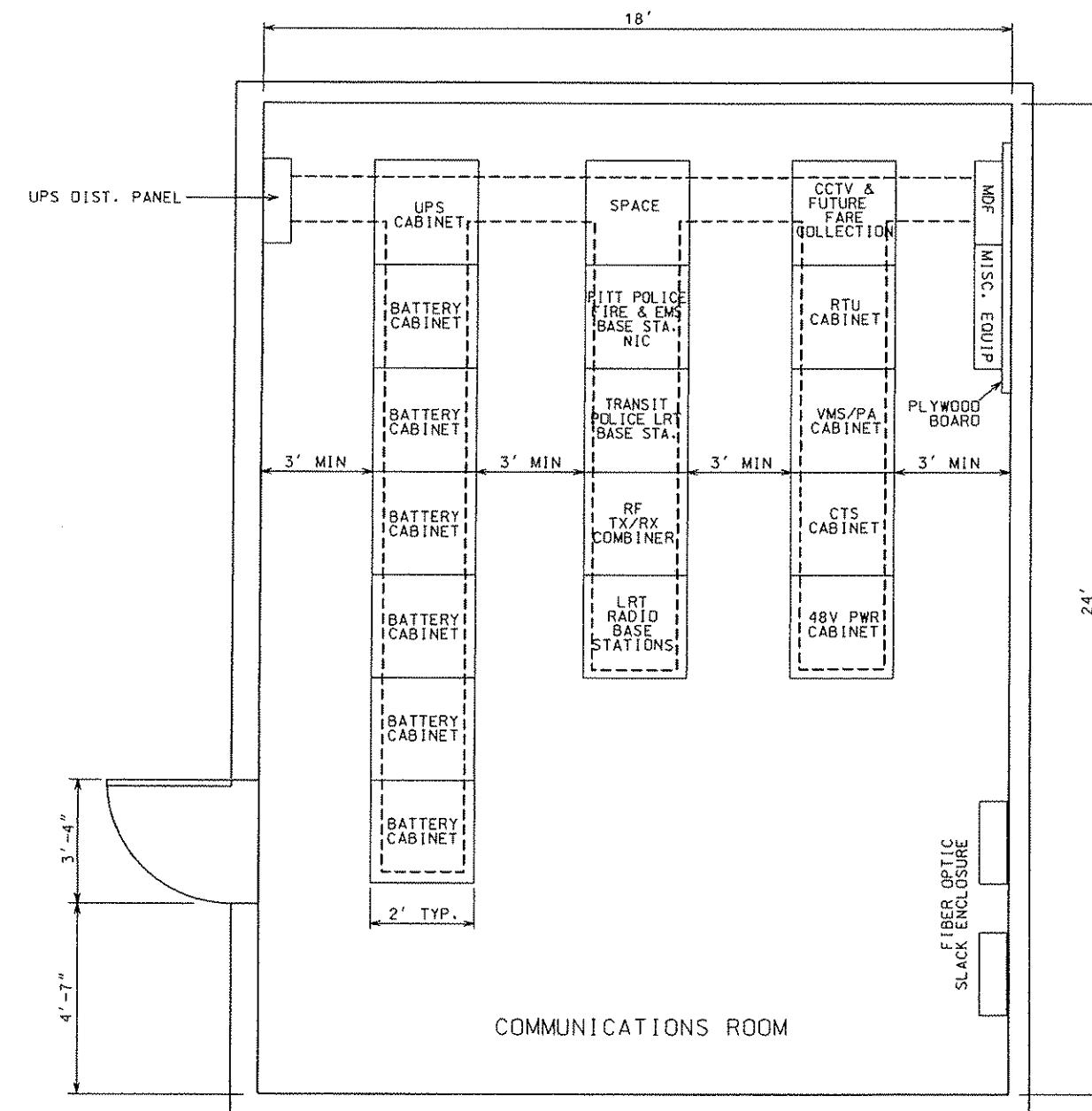
Port Authority

CONTRACT NO. NSC-009

DWG. NO. CM071

SHT. 59B

PORT AUTHORITY OF ALLEGHENY COUNTY
PITTSBURGH
PENNSYLVANIA
NORTH SHORE CONNECTOR
NSC TRAIN SYSTEM (SYSTEM WIDE)
NORTHSIDE STATION
COMMUNICATIONS ROOM LAYOUT



LEGENDS:

----- CABLE TRAY

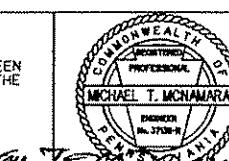
NOTES:

1. PLAN IS NOT TO SCALE, FOR APPROXIMATE LAYOUT OF EQUIPMENT ONLY.
CONTRACTOR TO VERIFY ROOM DIMENSIONS AND EQUIPMENT DIMENSIONS
PRIOR TO INSTALLATION.
2. CONTRACTOR TO PROVIDE CABLE TRAY AS REQUIRED FOR ALL RACK-TO-RACK CABLING.

Gannett Fleming
Transit & Rail Systems

NO.	DATE	DESCRIPTION	REVISIONS

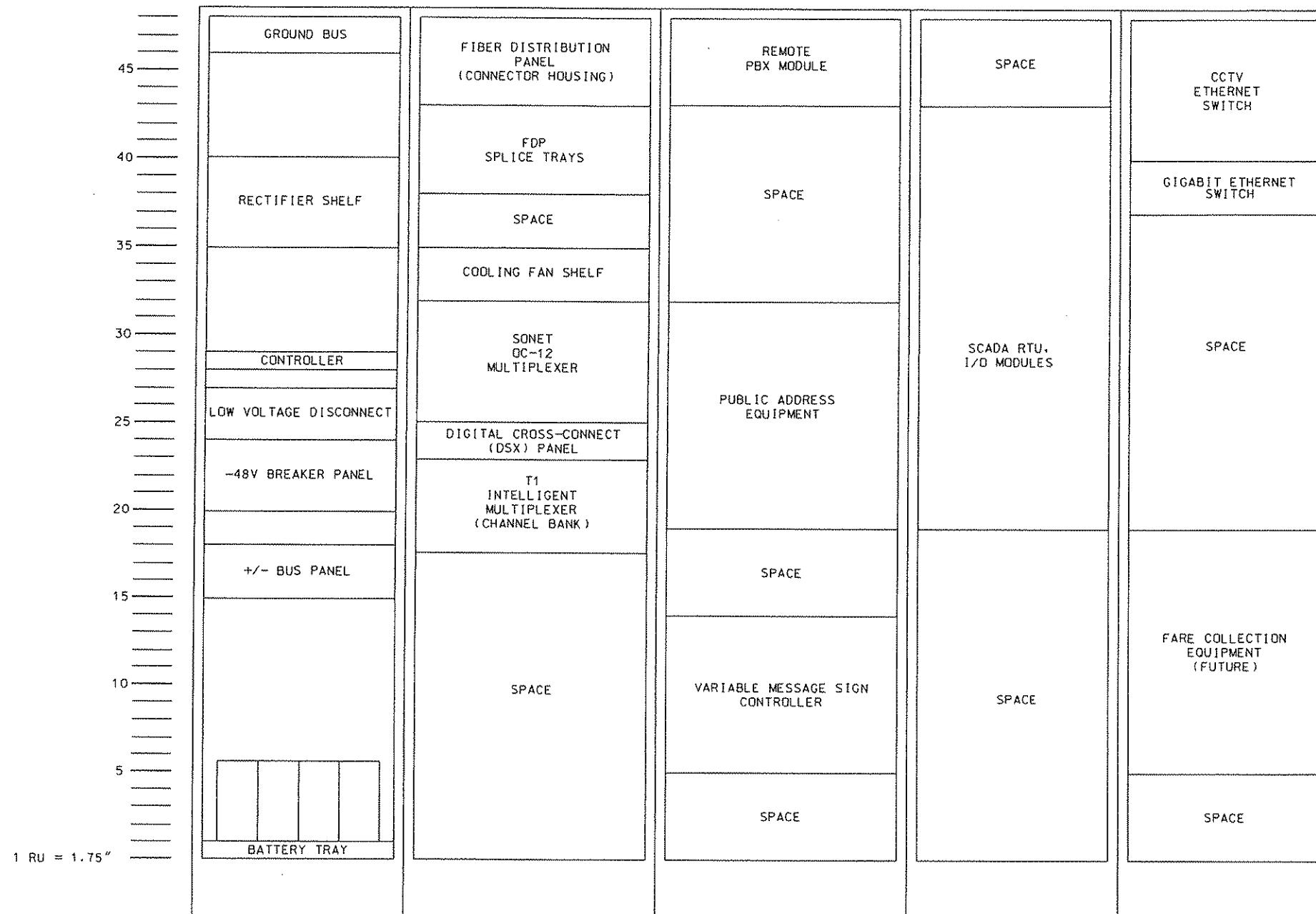
THE PREPARATION OF THIS DOCUMENT HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE FEDERAL TRANSIT ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, FOR THE PORT AUTHORITY OF ALLEGHENY COUNTY, PENNSYLVANIA.



DMJM HARRIS | AECOM
FOUR GATEWAY CENTER
20TH FLOOR
PITTSBURGH, PA. 15222
[Signature]
APPROVED DATE
SIGNATURE

DESIGNED R WEIDNER
DRAWN HT TRAN
CHECKED D ZUCK
IN CHARGE CD JONES
DATE APR. 28, 2008
SCALE 1" = 2'-0"
SKETCH NO. CM072

PORT AUTHORITY OF ALLEGHENY COUNTY
PITTSBURGH
NORTH SHORE CONNECTOR
NSC TRAIN SYSTEM (SYSTEM WIDE)
SYSTEMWIDE SIGNALS & COMMUNICATION SYSTEMS
ALLEGHENY STATION /COMMUNICATIONS EQUIPMENT ROOM LAYOUT
Port Authority
CONTRACT NO. NSC-009
DWG. NO. CM072
SKETCH NO. 337

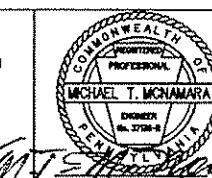


COMMUNICATION ROOM EQUIPMENT RACKS

 Gannett Fleming
Transit & Rail Systems

NO.	DATE	DESCRIPTION
REVISIONS		

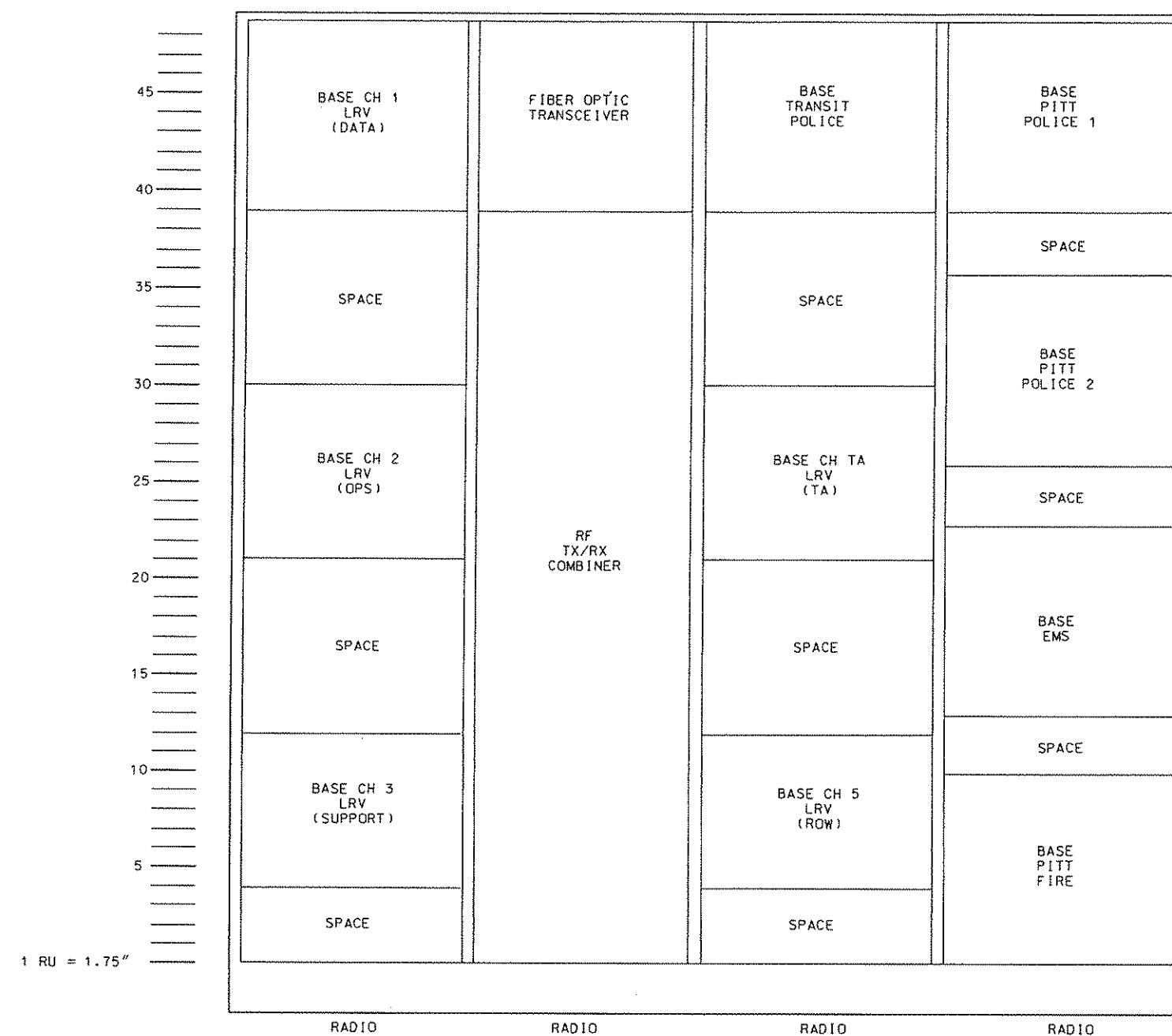
THE PREPARATION OF THIS DOCUMENT HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE FEDERAL TRANSIT ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, FOR THE PORT AUTHORITY OF ALLEGHENY COUNTY, PENNSYLVANIA.



DMJM HARRIS | AECOM
FOUR GATEWAY CENTER
20TH FLOOR
PITTSBURGH, PA. 15222
APPROVED DATE
SIGNATURE *David P. Harrington 4/28/08*

DESIGNED R WEJNER
DRAWN HT TRAN
CHECKED D ZUCK
IN CHARGE CD JONES
DATE APR. 28, 2008
SCALE NTS

PORT AUTHORITY OF ALLEGHENY COUNTY
PITTSBURGH, PENNSYLVANIA
NORTH SHORE CONNECTOR
NSC TRAIN SYSTEM (SYSTEM WIDE)
SYSTEMWIDE SIGNALS & COMMUNICATION SYSTEMS
TYPICAL COMMUNICATION ROOM EQUIPMENT RACK LAYOUT
Port Authority
CONTRACT NO. NSC-009
DWG. NO. CM073 SHT. 558



ALLEGHENY STATION COMMUNICATION ROOM RADIO RACK LAYOUT

NOTES:

- EQUIPMENT SHOWN IN THIS DRAWING ILLUSTRATES A TYPICAL ARRANGEMENT.
FINAL ARRANGEMENT IS SUBJECT TO SYSTEM DESIGN BY CONTRACTOR.

THE PREPARATION OF THIS DOCUMENT HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE FEDERAL TRANSIT ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, FOR THE PORT AUTHORITY OF ALLEGHENY COUNTY, PENNSYLVANIA.



MICHAEL T. McNAMARA
CHIEF ENGINEER
PE-1728-R

SIGNATURE

Dave J. Hargis 4/28/08
APPROVED DATE

DMJM HARRIS | AECOM
FOUR GATEWAY CENTER
20TH FLOOR
PITTSBURGH, PA. 15222

DESIGNED R SCHIMDT
DRAWN HT TRAN
CHECKED K HOFFMAN
IN CHARGE CD JONES
DATE APR. 28, 2008
SCALE NTS

PORT AUTHORITY OF ALLEGHENY COUNTY
PITTSBURGH, PENNSYLVANIA
NORTH SHORE CONNECTOR
NSC TRAIN SYSTEM (SYSTEM WIDE)
SYSTEMWIDE SIGNALS & COMMUNICATION SYSTEMS
ALLEGHENY STATION COMMUNICATION ROOM RADIO RACK LAYOUT

Port Authority
GENERAL PLANNING & DESIGN

CONTRACT NO. NSC-008
DWG. NO. CM074
SHT. 557

NO.	DATE	DESCRIPTION	REVISIONS

COMM DEVICE TD/FROM CABLE LIST - GATEWAY STATION						
COMM DEVICE	DEVICE CHARACTERISTICS	TD DEVICE LOCATION	FROM	CABLE TYPE	COMMENTS	NSC-010 DRAWING #
CCTV #1	FIXED	CONCOURSE ELEVATOR	COMM ROOM	F.O. - POWER	LINEAR CONDUITS - CEILING	AR208, EL017
CCTV #2	FIXED	CONCOURSE	COMM ROOM	F.O. - POWER	LINEAR CONDUITS - CEILING	AR208, EL017
CCTV #3	FIXED	CONCOURSE	COMM ROOM	F.O. - POWER	LINEAR CONDUITS - CEILING	AR208, EL017
CCTV #4	PTZ	PLATFORM RIGHT TRACK	COMM ROOM	F.O. - POWER	WALL MOUNT	AR202, EL011
CCTV #5	FIXED	PLATFORM ELEVATOR	COMM ROOM	F.O. - POWER	WALL MOUNT	AR202, EL011
CCTV #6	FIXED	PLATFORM ESCALATOR	COMM ROOM	F.O. - POWER	LIGHT POST #3	AR203, EL012
CCTV #7	FIXED	PLATFORM STAIRS	COMM ROOM	F.O. - POWER	LIGHT POST #5	AR203, EL012
CCTV #9	PTZ	PLATFORM LEFT TRACK	COMM ROOM	F.O. - POWER	CEILING MOUNT	AR204, EL013
CCTV #12	FIXED	TRACK AREA RIGHT TRACK	COMM ROOM	F.O. - POWER	DOWNSTAND MOUNTING	AR202, EL011
CCTV #13	FIXED	TRACK AREA LEFT TRACK	COMM ROOM	F.O. - POWER	DOWNSTAND MOUNTING	AR204, EL013
VMS #1	DOUBLE SIDED	PLATFORM RIGHT TRACK	COMM ROOM	RS-422 (DATA)	DOWNSTAND MOUNTING	AR203
VMS #2	DOUBLE SIDED	PLATFORM LEFT TRACK	COMM ROOM	RS-422 (DATA)	DOWNSTAND MOUNTING	AR203
FIRE ALARM PANEL	ALARM CIRCUIT	SEC. ROOM 111	COMM ROOM	2 PAIR, #22 AWG SHIELDED	WALL MOUNT	AR202, EL011
AMBIENT NOISE SENSOR	1	PLATFORM AREA	COMM ROOM	2C - #22 AWG SHIELDED	LIGHT POST #4	AR203, EL012
AMBIENT NOISE SENSOR	2	CONCOURSE LEVEL	COMM ROOM	2C - #22 AWG SHIELDED	LINEAR CONDUITS	AR208, EL017
SPEAKERS 1 - 6	BI-DIRECTIONAL	PLATFORM AREA	COMM ROOM	2 PAIR #14 AWG	COLUMN & CEILING MOUNTED DAISY CHAINED INTO ONE ZONE	
SPEAKERS 7 - 10	BI-DIRECTIONAL	CONCOURSE AREA	COMM ROOM	2 PAIR #14 AWG	LINEAR CONDUIT DAISY CHAINED INTO ONE ZONE	
PASSENGER (PATRON) PHONE #1	AUTOMATIC RING DOWN	PLATFORM AREA	COMM ROOM	2 PAIR, #22 AWG SHIELDED	COLUMN MOUNT - POLE #1	AR203
PASSENGER (PATRON) PHONE #2	AUTOMATIC RING DOWN	PLATFORM AREA	COMM ROOM	2 PAIR, #22 AWG SHIELDED	COLUMN MOUNT - POLE #5	AR203
PASSENGER (PATRON) PHONE #3	AUTOMATIC RING DOWN	CONCOURSE ENTRANCE AREA	COMM ROOM	2 PAIR, #22 AWG SHIELDED	MOUNT AT ENTRANCE LEVEL	AR208
PASSENGER (PATRON) PHONE #4	AUTOMATIC RING DOWN	EGRESS ROOM 109	COMM ROOM	2 PAIR, #22 AWG SHIELDED	COLUMN MOUNT	AR201
PASSENGER (PATRON) PHONE #5	AUTOMATIC RING DOWN	EGRESS ROOM 117	COMM ROOM	2 PAIR, #22 AWG SHIELDED	COLUMN MOUNT	AR204
MICROPHONE	-	FIRE CONTROL PANEL	COMM ROOM	XLR-F AUDIO CABLE SHIELDED	TERMINATE AT FIRE ALARM ANNUNCIATOR PANEL, OUTSIDE OF SECURITY GATE	AR208
TELEPHONE	TOUCH-TONE DIAL-UP	FIRE CONTROL PANEL	COMM ROOM	2 PAIR, #22 AWG SHIELDED	TERMINATE AT FIRE ALARM ANNUNCIATOR PANEL, OUTSIDE OF SECURITY GATE	AR208
ELEVATOR PHONE #1 (SUPPORT) PHONE BY OTHERS	AUTOMATIC RING DOWN	ELEVATOR N1	COMM ROOM	2 PAIR, #22 AWG SHIELDED	RUN CONDUIT TO ELEVATOR SHAFT	AR202
ELEVATOR PHONE #2 (SUPPORT) PHONE BY OTHERS	AUTOMATIC RING DOWN	ELEVATOR N2	COMM ROOM	2 PAIR, #22 AWG SHIELDED	RUN CONDUIT TO ELEVATOR SHAFT	AR202
PAAC PHONE #1	TOUCH-TONE DIAL-UP	MECHANICAL ROOM M10	COMM ROOM	2 PAIR, #22 AWG SHIELDED	RUN CONDUIT TO WALL (NOTE 2)	AR202, EL011
PAAC PHONE #2	TOUCH-TONE DIAL-UP	ELEVATOR MECHANICAL ROOM	COMM ROOM	2 PAIR, #22 AWG SHIELDED	RUN CONDUIT TO WALL (NOTE 2)	AR202, EL011
PAAC PHONE #3	TOUCH-TONE DIAL-UP	ELECTRICAL ROOM	COMM ROOM	2 PAIR, #22 AWG SHIELDED	RUN CONDUIT TO WALL (NOTE 2)	AR202, EL011
PAAC PHONE #4	TOUCH-TONE DIAL-UP	MCC ROOM	COMM ROOM	2 PAIR, #22 AWG SHIELDED	RUN CONDUIT TO WALL (NOTE 2)	AR206, EL015
PAAC PHONE #5	TOUCH-TONE DIAL-UP	NEW ELECTRICAL ROOM	COMM ROOM	2 PAIR, #22 AWG SHIELDED	RUN CONDUIT TO WALL (NOTE 2)	AR206, EL015
PAAC PHONE #6	TOUCH-TONE DIAL-UP	EMERGENCY GENERATOR ROOM	COMM ROOM	2 PAIR, #22 AWG SHIELDED	RUN CONDUIT TO WALL (NOTE 2)	AR207, EL016
PAAC PHONE #7	TOUCH-TONE DIAL-UP	NEW TIE BREAKER ROOM	COMM ROOM	2 PAIR, #22 AWG SHIELDED	RUN CONDUIT TO WALL (NOTE 2)	AR205, EL014
PAAC PHONE #8	TOUCH-TONE DIAL-UP	NEW STORAGE ROOM	COMM ROOM	2 PAIR, #22 AWG SHIELDED	RUN CONDUIT TO WALL (NOTE 2)	AR202, EL011
PAAC PHONE #9	TOUCH-TONE DIAL-UP	NEW COMMUNICATION ROOM	COMM ROOM	2 PAIR, #22 AWG SHIELDED	RUN CONDUIT TO WALL (NOTE 2)	AR207, EL016
PAAC PHONE #10	TOUCH-TONE DIAL-UP	STORAGE CUSTODIAL ROOM	COMM ROOM	2 PAIR, #22 AWG SHIELDED	RUN CONDUIT TO WALL (NOTE 2)	AR202, EL011
PAAC PHONE #11	TOUCH-TONE DIAL-UP	NEW SIGNAL ROOM	COMM ROOM	2 PAIR, #22 AWG SHIELDED	RUN CONDUIT TO WALL (NOTE 2)	AR207, EL016
RTU #1	-	MCC ROOM	COMM ROOM	2 PAIR, #22 AWG SHIELDED	RUN CONDUIT TO WALL (NOTE 2)	AR207, EL015
RTU #2	-	NEW TIE BREAKER ROOM	COMM ROOM	2 PAIR, #22 AWG SHIELDED	RUN CONDUIT TO WALL (NOTE 2)	AR205, EL014

NOTES:

1. WHERE POWER WIRING SIZE IS NOT INDICATED:
WIRE #12 AWG MINIMUM SHALL BE USED FOR CIRCUITS LESS THAN 100 FEET IN LENGTH.
WIRE #10 AWG SHALL BE USED FOR CIRCUITS FROM 100 FEET TO 150 FEET IN LENGTH.
WIRE #8 AWG SHALL BE USED FOR CIRCUITS FROM 150 FEET TO 250 FEET IN LENGTH.
 2. CONDUIT SHALL TERMINATE IN A FLUSH MOUNTED BOX AT THE LOCATION SHOWN ON THE DRAWINGS.
THE VERTICAL CENTER OF THE BOX SHALL BE LOCATED 54" ABOVE THE FINISHED FLOOR.
 3. ALL CONDUITS FURNISHED AND INSTALL BY NSC-010.
 4. SEE NSC-010. "ALSO" DRAWINGS FOR CONDUIT NUMBERS, LOCATIONS & MOUNTING
OF COMMUNICATION DEVICES.

NO.	DATE	DESCRIPTION
		REVISIONS
		</td

THE PREPARATION OF THIS DOCUMENT HAS BEEN
FINANCED IN PART THROUGH A GRANT FROM THE
FEDERAL TRANSIT ADMINISTRATION, U.S.
DEPARTMENT OF TRANSPORTATION, UNDER THE
URBAN MASS TRANSPORTATION ACT OF 1964,
AS AMENDED, FOR THE PORT AUTHORITY OF
ALLENTOWN, PENNSYLVANIA.



DMJM HARRIS | AECOM

DESIGNED	H LAY
DRAWN	HT TRAN
CHECKED	R WEIDNER
IN CHARGE	CD JONES
DATE	APR. 28, 2008
SCALE	NOTES

**PITTSBURGH PORT AUTHORITY OF ALLEGHENY COUNTY
PENNSYLVANIA**

GATEWAY STATION -

**Port
Authority**

UNCTION DEVICE TO /FROM CABLE LIST		
	CONTRACT NO.	NSC-009
	DNC NO.	CN0275

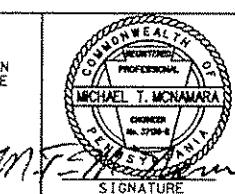
COMM DEVICE TO/FROM CABLE LIST - NORTH SIDE STATION						
COMM DEVICE	DEVICE CHARACTERISTICS	TO DEVICE LOCATION	FROM	CABLE TYPE	COMMENTS	NSC-011 DRAWING #
CCTV #1	FIXED	ELEVATOR CONCOURSE LEVEL	COMM ROOM	F.O. - POWER	DOME - CEILING MOUNT	NAR909, NAR109
CCTV #2	PTZ	CONCOURSE LEVEL CENTER ON STAIRS	COMM ROOM	F.O. - POWER	DOME - CEILING MOUNT	NAR909, NAR109
CCTV #3	PTZ	CONCOURSE LEVEL CENTER ON ESCALATOR	COMM ROOM	F.O. - POWER	DOME - CEILING MOUNT	NAR909, NAR109
CCTV #4	FIXED	ELEVATOR CONCOURSE LEVEL	COMM ROOM	F.O. - POWER	DOME - CEILING MOUNT	NAR911
CCTV #5	PTZ	CONCOURSE LEVEL	COMM ROOM	F.O. - POWER	DOME - CEILING MOUNT	NAR911
CCTV #6	FIXED	PLATFORM ELEVATOR VESTIBULE	COMM ROOM	F.O. - POWER	DOME - CEILING MOUNT	NAR913, NAR113
CCTV #7	PTZ	PLATFORM	COMM ROOM	F.O. - POWER	DOME - CEILING MOUNT	NAR913, NAR113
CCTV #8	PTZ	PLATFORM	COMM ROOM	F.O. - POWER	DOME - CEILING MOUNT	NAR913, NAR113
CCTV #9	PTZ	PLATFORM	COMM ROOM	F.O. - POWER	DOME - WALL MOUNT	NAR910, NAR407
CCTV #10	PTZ	PLATFORM	COMM ROOM	F.O. - POWER	DOME - WALL MOUNT	NAR910, NAR407
VMS #1	DOUBLE SIDED	PLATFORM INBOUND	COMM ROOM	RS-422 (DATA)	COLUMN MOUNT	NAR113, 710
VMS #2	DOUBLE SIDED	PLATFORM OUTBOUND	COMM ROOM	RS-422 (DATA)	COLUMN MOUNT	NAR113, 114, 710
FIRE ALARM PANEL	ALARM CIRCUIT	PAAC POLICE ROOM	COMM ROOM	2 PAIR, #22 AWG SHIELDED	FIRE ALARM AND FIRE TROUBLE	NAR109
AMBIENT NOISE SENSOR	1 & 2	PLATFORM AREA	COMM ROOM	2C - #22 AWG SHIELDED	FLUSH MOUNT IN WALL 8 FEET ABOVE FLOOR	NAR113, 114
AMBIENT NOISE SENSOR	3 & 4	CONCOURSE LEVEL	COMM ROOM	2C - #22 AWG SHIELDED	COLUMN MOUNTED SPEAKERS DAISY CHAINED INTO ONE ZONE	NAR109
SPEAKERS 1 - 4	BI-DIRECTIONAL	PLATFORM AREA	COMM ROOM	2 PAIR #14 AWG	CEILING MOUNTED SPEAKERS DAISY CHAINED INTO ONE ZONE	NAR113, 114, 710
SPEAKERS 5 - 8	BI-DIRECTIONAL	CONCOURSE AREA	COMM ROOM	2 PAIR #14 AWG	COLUMN MOUNT	NAR909, NAR911
PASSENGER (PATRON) PHONE #1	AUTOMATIC RING DOWN	PLATFORM AREA	COMM ROOM	2 PAIR, #22 AWG SHIELDED	COLUMN MOUNT	NAR113
PASSENGER (PATRON) PHONE #2	AUTOMATIC RING DOWN	PLATFORM AREA	COMM ROOM	2 PAIR, #22 AWG SHIELDED	FLUSH MOUNT IN WALL REFUGE AREA	NAR114
PASSENGER (PATRON) PHONE #3	AUTOMATIC RING DOWN	PLATFORM STAIR "A"	COMM ROOM	2 PAIR, #22 AWG SHIELDED	FLUSH MOUNT IN WALL IN ELEVATOR VESTIBULE	NAR114
PASSENGER (PATRON) PHONE #4	AUTOMATIC RING DOWN	PLATFORM LEVEL ELEVATOR VESTIBULE	COMM ROOM	2 PAIR, #22 AWG SHIELDED	FLUSH MOUNT IN WALL IN CONCOURSE AREA	NAR113
PASSENGER (PATRON) PHONE #5	AUTOMATIC RING DOWN	CONCOURSE LEVEL	COMM ROOM	2 PAIR, #22 AWG SHIELDED	RUN CONDUIT TO ELEVATOR SHAFT	NAR109
PASSENGER (PATRON) PHONE #6	AUTOMATIC RING DOWN	PLATFORM LEVEL STAIR C	COMM ROOM	2 PAIR, #22 AWG SHIELDED	FLUSH MOUNT IN WALL IN	NAR113
PASSENGER (PATRON) PHONE #7	AUTOMATIC RING DOWN	CONCOURSE LEVEL CORRIDOR M13	COMM ROOM	2 PAIR, #22 AWG SHIELDED	FLUSH MOUNT IN WALL IN	NAR109
PASSENGER (PATRON) PHONE #14	AUTOMATIC RING DOWN	FIRE CONTROL PANEL	COMM ROOM	2 PAIR, #22 AWG SHIELDED	MOUNTED IN PANEL	NAR107
MICROPHONE	-	FIRE CONTROL PANEL	COMM ROOM	XLR-F AUDIO CABLE SHIELDED	MOUNTED IN PANEL	NAR107
ELEVATOR PHONE #1 (SUPPORT) PHONE BY OTHERS	AUTOMATIC RING DOWN	ELEVATOR N1	COMM ROOM	2 PAIR, #22 AWG SHIELDED	RUN CONDUIT TO ELEVATOR SHAFT	NAR109
ELEVATOR PHONE #2 (SUPPORT) PHONE BY OTHERS	AUTOMATIC RING DOWN	ELEVATOR N2	COMM ROOM	2 PAIR, #22 AWG SHIELDED	RUN CONDUIT TO ELEVATOR SHAFT	NAR109
ELEVATOR PHONE #3 (SUPPORT) PHONE BY OTHERS	AUTOMATIC RING DOWN	ELEVATOR N3 (MACHINE ROOM)	COMM ROOM	2 PAIR, #22 AWG SHIELDED	RUN CONDUIT TO ELEVATOR SHAFT	NAR111, NEL119
ELEVATOR PHONE #4 (SUPPORT) PHONE BY OTHERS	AUTOMATIC RING DOWN	ELEVATOR N4 (MACHINE ROOM)	COMM ROOM	2 PAIR, #22 AWG SHIELDED	RUN CONDUIT TO WALL (NOTE 2)	NAR111, NEL119
PAAC PHONE #1	TOUCH-TONE DIAL-UP	MCC ROOM M05	COMM ROOM	2 PAIR, #22 AWG SHIELDED	RUN CONDUIT TO WALL (NOTE 2)	NAR108
PAAC PHONE #2	TOUCH-TONE DIAL-UP	MECHANICAL ROOM M10	COMM ROOM	2 PAIR, #22 AWG SHIELDED	RUN CONDUIT TO WALL (NOTE 2)	NAR109
PAAC PHONE #3	TOUCH-TONE DIAL-UP	CUSTODIAL ROOM M07	COMM ROOM	2 PAIR, #22 AWG SHIELDED	RUN CONDUIT TO WALL (NOTE 2)	NAR109
PAAC PHONE #4	TOUCH-TONE DIAL-UP	SIGNAL ROOM P02	COMM ROOM	2 PAIR, #22 AWG SHIELDED	RUN CONDUIT TO WALL (NOTE 2)	NAR113
PAAC PHONE #5	TOUCH-TONE DIAL-UP	MATNENANCE ROOM M09	COMM ROOM	2 PAIR, #22 AWG SHIELDED	RUN CONDUIT TO WALL (NOTE 2)	NAR109
PAAC PHONE #6	TOUCH-TONE DIAL-UP	POLICE ROOM M14	COMM ROOM	2 PAIR, #22 AWG SHIELDED	RUN CONDUIT TO WALL (NOTE 2)	NAR109
PAAC PHONE #7	TOUCH-TONE DIAL-UP	ELECTRICAL ROOM P07	COMM ROOM	2 PAIR, #22 AWG SHIELDED	RUN CONDUIT TO WALL (NOTE 2)	NAR114
PAAC PHONE #8	TOUCH-TONE DIAL-UP	ELECTRICAL ROOM P09	COMM ROOM	2 PAIR, #22 AWG SHIELDED	RUN CONDUIT TO WALL (NOTE 2)	NAR114
PAAC PHONE #9	TOUCH-TONE DIAL-UP	MCC ROOM P08	COMM ROOM	2 PAIR, #22 AWG SHIELDED	RUN CONDUIT TO WALL (NOTE 2)	NAR114
PAAC PHONE #10	TOUCH-TONE DIAL-UP	GENERATOR ROOM P11	COMM ROOM	2 PAIR, #22 AWG SHIELDED	RUN CONDUIT TO WALL (NOTE 2)	NAR114
PAAC PHONE #11	TOUCH-TONE DIAL-UP	TRANSFORMER ROOM M17	COMM ROOM	2 PAIR, #22 AWG SHIELDED	RUN CONDUIT TO WALL (NOTE 2)	NAR110
PAAC PHONE #12	TOUCH-TONE DIAL-UP	TUNNEL VENT ROOM M16B	COMM ROOM	3 PAIR, #22 AWG SHIELDED	RUN CONDUIT TO WALL (NOTE 2)	NAR110
PAAC PHONE #13	TOUCH-TONE DIAL-UP	COMM ROOM	COMM ROOM	4 PAIR, #22 AWG SHIELDED	RUN CONDUIT TO WALL (NOTE 3)	NAR109
RTU #1	-	MCC ROOM (EE)	COMM ROOM	2 PAIR, #22 AWG SHIELDED	RUN CONDUIT TO WALL IN MCC ROOM	NAR108
RTU #2	-	MCC ROOM (WE)	COMM ROOM	2 PAIR, #22 AWG SHIELDED	RUN CONDUIT TO WALL IN MCC ROOM	NAR114

NOTES:

- WHERE POWER WIRING SIZE IS NOT INDICATED:
WIRE #12 AWG MINIMUM SHALL BE USED FOR CIRCUITS LESS THAN 100 FEET IN LENGTH.
WIRE #10 AWG SHALL BE USED FOR CIRCUITS FROM 100 FEET TO 150 FEET IN LENGTH.
WIRE #8 AWG SHALL BE USED FOR CIRCUITS FROM 150 FEET TO 250 FEET IN LENGTH.
- CONDUIT SHALL TERMINATE IN A FLUSH MOUNTED BOX AT THE LOCATION SHOWN ON THE DRAWINGS.
THE VERTICAL CENTER OF THE BOX SHALL BE LOCATED 54" ABOVE THE FINISHED FLOOR.
- ALL CONDUITS FURNISHED AND INSTALL BY NSC-011.
- SEE NSC-011. "ALSO" DRAWINGS FOR CONDUIT NUMBERS, LOCATIONS & MOUNTING
OF COMMUNICATION DEVICES.

NO.	DATE	DESCRIPTION	REVISIONS

THE PREPARATION OF THIS DOCUMENT HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE FEDERAL TRANSIT ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION, UNDER THE URGENT MASS TRANSPORTATION ACT OF 1964, AS AMENDED, FOR THE PORT AUTHORITY OF ALLEGHENY COUNTY, PENNSYLVANIA.



DMJM HARRIS | AECOM
FOUR GATEWAY CENTER
20TH FLOOR
PITTSBURGH, PA. 15222
CHIEF ENGINEER
MICHAEL T. MCNAUL
CHIEF PLANNING & DESIGN
MICHAEL T. MCNAUL
APPROVED
SIGNATURE
DATE
APR. 28, 2008
D. M. HARRIS
APPROVED
DATE
APR. 28, 2008

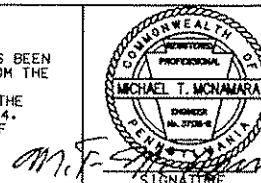
PORT AUTHORITY OF ALLEGHENY COUNTY
PITTSBURGH
PENNSYLVANIA
NORTH SHORE CONNECTOR
NSC TRAIN SYSTEM (SYSTEM WIDE)
SYSTEMWIDE SIGNALS & COMMUNICATION SYSTEMS
NORTH SIDE STATION - COMMUNICATION DEVICE TO /FROM CABLE LIST
Port Authority
CONTRACT NO. NSC-009
DWG. NO. CM076
SHT. 55/8

COMM DEVICE TO/FROM CABLE LIST - ALLEGHENY STATION

COMM DEVICE TD/FROM CABLE LIST - ALLEGHENY STATION						
COMM DEVICE	DEVICE CHARACTERISTICS	TD DEVICE LOCATION	FROM	CABLE TYPE	COMMENTS	NSC-012 DRAWING #
CCTV #1	FIXED	STREET LEVEL ELEVATOR	COMM ROOM	F.O. - POWER	DOME - CEILING MOUNT	EL012
CCTV #2	FIXED	STREET LEVEL ELEVATOR	COMM ROOM	F.O. - POWER	DOME - CEILING MOUNT	EL012
CCTV #3	FIXED	STREET LEVEL ENTRANCE	COMM ROOM	F.O. - POWER	DOME - CEILING MOUNT	EL012
CCTV #4	FIXED	MEZZANINE STAIRS	COMM ROOM	F.O. - POWER	DOME - CEILING MOUNT	EL013
CCTV #5	FIXED	MEZZANINE ESCALATOR	COMM ROOM	F.O. - POWER	DOME - CEILING MOUNT	EL013
CCTV #6	FIXED	MEZZANINE ELEVATOR	COMM ROOM	F.O. - POWER	DOME - CEILING MOUNT	EL013
CCTV #7	FIXED	MEZZANINE ESCALATOR	COMM ROOM	F.O. - POWER	DOME - CEILING MOUNT	EL013
CCTV #8	FIXED	MEZZANINE STAIRS	COMM ROOM	F.O. - POWER	DOME - CEILING MOUNT	EL013
CCTV #9	FIXED	PLATFORM ELEVATOR	COMM ROOM	F.O. - POWER	DOME - CEILING MOUNT	EL015
CCTV #10	FIXED	PLATFORM ELEVATOR	COMM ROOM	F.O. - POWER	DOME - CEILING MOUNT	EL015
CCTV #11	FIXED	PLATFORM ESCALATOR	COMM ROOM	F.O. - POWER	DOME - CEILING MOUNT	EL015
CCTV #12	FIXED	PLATFORM STAIRS	COMM ROOM	F.O. - POWER	DOME - CEILING MOUNT	EL015
CCTV #13	PTZ	PLATFORM OUTBOUND	COMM ROOM	F.O. - POWER	DOME - CEILING MOUNT	EL015
CCTV #14	PTZ	PLATFORM INBOUND	COMM ROOM	F.O. - POWER	DOME - CEILING MOUNT	EL014
CCTV #15	FIXED	PLATFORM EMERGENCY EXIT	COMM ROOM	F.O. - POWER	DOME - CEILING MOUNT	EL014
VMS #1	DOUBLE SIDED	PLATFORM INBOUND	COMM ROOM	RS-422 (DATA)	COLUMN MOUNT	EL014
VMS #2	DOUBLE SIDED	PLATFORM OUTBOUND	COMM ROOM	RS-422 (DATA)	COLUMN MOUNT	EL014
FIRE ALARM PANEL	ALARM CIRCUIT	PAAC POLICE ROOM	COMM ROOM	2 PAIR, #22 AWG SHIELDED	FIRE ALARM AND FIRE TROUBLE	EL012
AMBIENT NOISE SENSOR	1 & 2	PLATFORM AREA	COMM ROOM	2C - #22 AWG SHIELDED	FLUSH MOUNT IN COLUMN 8 FEET ABOVE PLATFORM	EL014
AMBIENT NOISE SENSOR	3 & 4	LOBBY AREA	COMM ROOM	2C - #22 AWG SHIELDED	FLUSH MOUNT IN WALL 8 FEET ABOVE FLOOR	EL012
SPEAKERS 1 - 4	BI-DIRECTIONAL	PLATFORM AREA	COMM ROOM	2 PAIR #14 AWG	COLUMN & WALL MOUNTED SPEAKERS DAISY CHAINED INTO ONE ZONE	EL014, EL015
SPEAKERS LOBBY/MEZZANINE	BI-DIRECTIONAL	LOBBY AND MEZZANINE	COMM ROOM	2 PAIR #14 AWG	CEILING MOUNTED SPEAKERS DAISY CHAINED INTO ONE ZONE	EL012
PASSENGER (PATRON) PHONE #1	AUTOMATIC RING DOWN	PLATFORM AREA	COMM ROOM	2 PAIR, #22 AWG SHIELDED	COLUMN MOUNT	EL014
PASSENGER (PATRON) PHONE #2	AUTOMATIC RING DOWN	PLATFORM AREA	COMM ROOM	2 PAIR, #22 AWG SHIELDED	FLUSH MOUNT IN WALL	EL015
PASSENGER (PATRON) PHONE #3	AUTOMATIC RING DOWN	LOBBY AREA	COMM ROOM	2 PAIR, #22 AWG SHIELDED	FLUSH MOUNT IN WALL	EL012
PASSENGER (PATRON) PHONE #4	AUTOMATIC RING DOWN	MEZZANINE LEVEL	COMM ROOM	2 PAIR, #22 AWG SHIELDED	FLUSH MOUNT IN WALL	EL013
PASSENGER (PATRON) PHONE #5	AUTOMATIC RING DOWN	FIRE CONTROL PANEL	COMM ROOM	2 PAIR, #22 AWG SHIELDED	FLUSH MOUNT IN WALL	EL012
MICROPHONE	-	FIRE CONTROL PANEL	COMM ROOM	XLR-F AUDIO CABLE SHIELDED	MOUNTED IN FIRE CONTROL PANEL	EL012
ELEVATOR PHONE #1 (SUPPORT) PHONE BY OTHERS	AUTOMATIC RING DOWN	ELEVATOR N1	COMM ROOM	2 PAIR, #22 AWG SHIELDED	MOUNTED IN FIRE CONTROL PANEL	EL012
ELEVATOR PHONE #2 (SUPPORT) PHONE BY OTHERS	AUTOMATIC RING DOWN	ELEVATOR N2	COMM ROOM	2 PAIR, #22 AWG SHIELDED	RUN CONDUIT TD ELEVATOR SHAFT	EL012
PAAC PHONE #1	TOUCH-TONE DIAL-UP	SIGNAL ROOM P02	COMM ROOM	2 PAIR, #22 AWG SHIELDED	RUN CONDUIT TD ELEVATOR SHAFT	EL012
PAAC PHONE #2	TOUCH-TONE DIAL-UP	FIBER OPTICS ROOM	COMM ROOM	2 PAIR, #22 AWG SHIELDED	RUN CONDUIT TO WALL (NOTE 2)	EL012
PAAC PHONE #3	TOUCH-TONE DIAL-UP	MECHANICAL ROOM M10	COMM ROOM	2 PAIR, #22 AWG SHIELDED	RUN CONDUIT TO WALL (NOTE 2)	EL012
PAAC PHONE #4	TOUCH-TONE DIAL-UP	BREAKER ROOM	COMM ROOM	2 PAIR, #22 AWG SHIELDED	RUN CONDUIT TO WALL (NOTE 2)	EL012
PAAC PHONE #5	TOUCH-TONE DIAL-UP	ELECTRICAL ROOM	COMM ROOM	2 PAIR, #22 AWG SHIELDED	RUN CONDUIT TO WALL (NOTE 2)	EL012
PAAC PHONE #6	TOUCH-TONE DIAL-UP	OPERATORS LOUNGE AREA	COMM ROOM	2 PAIR, #22 AWG SHIELDED	RUN CONDUIT TO WALL (NOTE 2)	EL012
PAAC PHONE #7	TOUCH-TONE DIAL-UP	POLICE ROOM M14	COMM ROOM	2 PAIR, #22 AWG SHIELDED	RUN CONDUIT TO WALL (NOTE 2)	EL012
PAAC PHONE #8	TOUCH-TONE DIAL-UP	CUSTODIAL ROOM M07	COMM ROOM	2 PAIR, #22 AWG SHIELDED	RUN CONDUIT TO WALL (NOTE 2)	EL012
RTU #1	-	BREAKER ROOM	COMM ROOM	2 PAIR, #22 AWG SHIELDED	RUN CONDUIT TO WALL (NOTE 2)	EL012

NOTES:

1. WHERE POWER WIRING SIZE IS NOT INDICATED:
WIRE #12 AWG MINIMUM SHALL BE USED FOR CIRCUITS LESS THAN 100 FEET IN LENGTH.
WIRE #10 AWG SHALL BE USED FOR CIRCUITS FROM 100 FEET TO 150 FEET IN LENGTH.
WIRE #8 AWG SHALL BE USED FOR CIRCUITS FROM 150 FEET TO 250 FEET IN LENGTH.
 2. CONDUIT SHALL TERMINATE IN A FLUSH MOUNTED BOX AT THE LOCATION SHOWN ON THE DRAWINGS.
THE VERTICAL CENTER OF THE BOX SHALL BE LOCATED 54" ABOVE THE FINISHED FLOOR.
 3. ALL CONDUITS FURNISHED AND INSTALL BY NSC-012.
 4. SEE NSC-012, "ALSO" DRAWINGS FOR CONDUIT NUMBERS, LOCATIONS & MOUNTING
OF COMMUNICATION DEVICES.

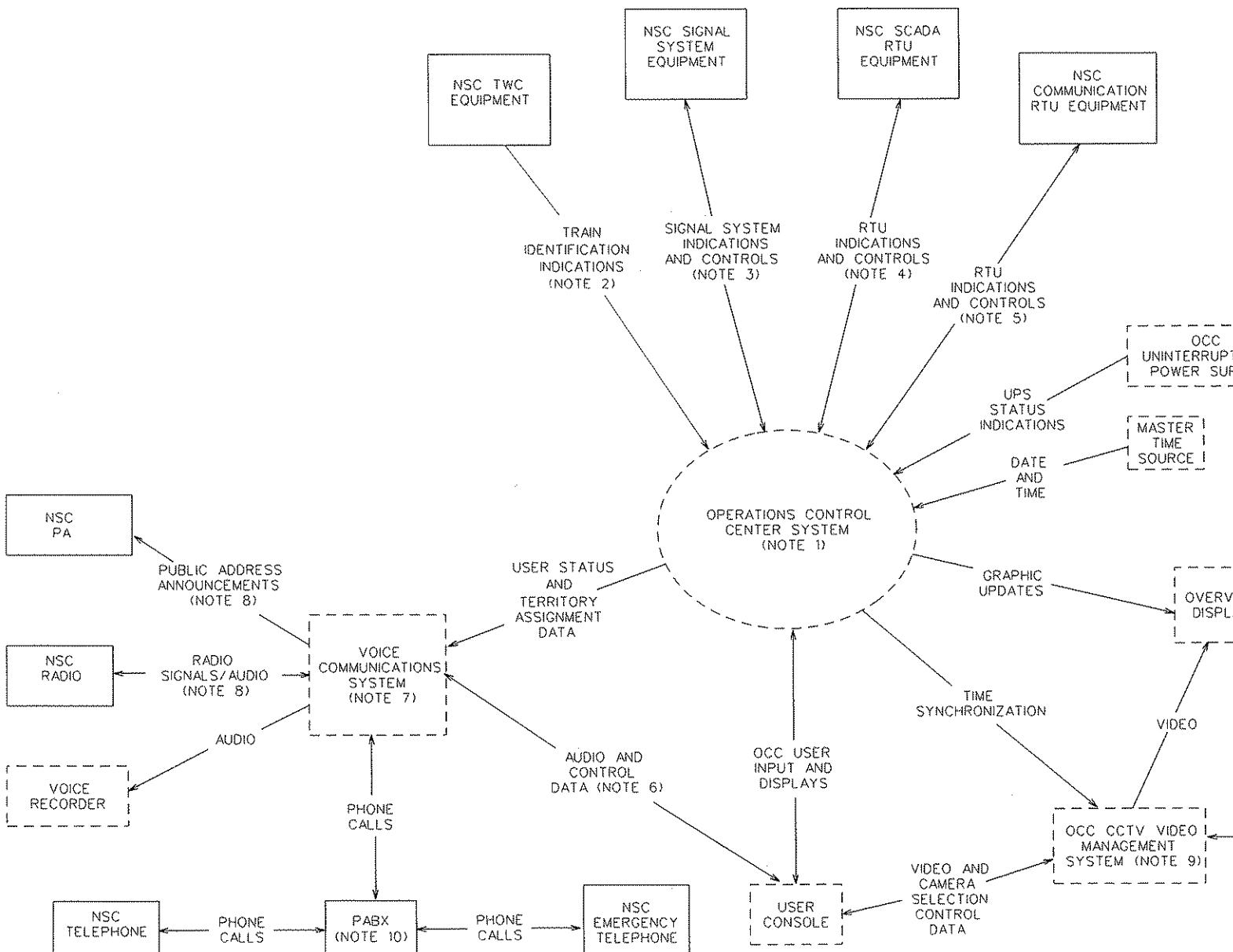


THE PREPARATION OF THIS DOCUMENT HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE FEDERAL TRANSIT ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED. FOR THE PORT AUTHORITY OF ALLEGHENY COUNTY, PENNSYLVANIA.

DMJM HARRIS | **AECOM**
FOUR GATEWAY CENTER
20TH FLOOR
PITTSBURGH, PA. 15222
Daryl P. Henry 4/28/08
APPROVED DATE

PITTSBURGH PORT AUTHORITY OF ALLEGHENY COUNTY PENNSYLVANIA

Port Authority <small>Connecting Jersey City</small>	CONTRACT NO.	NSC-009	
	DWG. NO.	CM077	SHT. 5



NOTES:

1. OCCS OVERVIEW AND CONSOLE DISPLAYS MUST BE UPDATED TO SHOW THE NSC TRACK LAYOUT AND NEW DEVICES ALONG THE NSC. OCCS CONFIGURATION DATA MUST BE UPDATED TO SUPPORT THE NEW CODE SYSTEM INTERFACES TO THE NSC TWC, NSC SIGNALING, AND NSC SCADA/COMMS FIELD DEVICES, AND TO UPDATE DISPLAYS. CONTRACTOR SHALL USE THE US&S SCT TOOL TO UPDATE CONFIGURATION DATA. SEE SPECIFICATION SECTION 16950 FOR FURTHER DETAILS.
2. NEW CODE SYSTEM INTERFACES TO BE PROVIDED BY CONTRACTOR TO INTERFACE WITH NEW NSC TWC HANNING & KAHL COMMUNICATION SYSTEM ROUTE EQUIPMENT (HANNING & KAHL COMMUNICATION SYSTEM TYPE-R (HCS-R)). SEE SPECIFICATION SECTION 16950 FOR FURTHER DETAILS.
3. NEW CODE SYSTEM INTERFACES TO BE PROVIDED BY CONTRACTOR TO INTERFACE WITH NEW NSC SIGNALING SYSTEM UNION SWITCH & SIGNAL MICROLOK II UNITS. SEE SPECIFICATION SECTION 16950 FOR FURTHER DETAILS.
4. NEW CODE SYSTEM INTERFACES TO BE PROVIDED BY CONTRACTOR TO INTERFACE WITH NEW NSC SCADA RTU UNITS. RTU UNITS TO BE GE FANUS VERSAMAX MICRO PROGRAMMABLE LOGIC CONTROLLERS (PLCs).
5. NEW CODE SYSTEM INTERFACES TO BE PROVIDED BY CONTRACTOR TO INTERFACE WITH NEW NSC COMMUNICATIONS RTU UNITS. RTU UNITS TO BE GE FANUC PROGRAMMABLE LOGIC CONTROLLERS (PLCs). PROVIDES MONITORING NSC TICKET VENDING MACHINE AND STATION COMMUNICATIONS ALARMS. SEE SPECIFICATION SECTION 16950 FOR FURTHER DETAILS.
6. EXISTING INTERFACE BETWEEN USER CONSOLE AND VOICE COMMUNICATIONS SYSTEM. PHYSICALLY SUPPORTED BY THREE (3) AUDIO CONNECTIONS FOR RECEIVE, TRANSMIT, AND MONITOR AND ONE (1) SERIAL CONNECTION FOR CONTROL DATA. NO CHANGES TO EXISTING INTERFACE ARE REQUIRED TO SUPPORT ACCESS AND CONTROL OF NSC AUDIO CIRCUITS.
7. VOICE COMMUNICATIONS SYSTEM CONFIGURATION DATA MUST BE UPDATED TO ALLOW USER TO ACCESS AND CONTROL AUDIO CIRCUITS VIA THE EXISTING VCS WINDOWS BASED GUI INTEGRATED ON THE USER CONSOLE. SEE SPECIFICATION SECTION 16950 FOR FURTHER DETAILS.
8. NEW AUDIO CIRCUITS TERMINATED ON THE VOICE COMMUNICATIONS SYSTEM TO CONNECT TO NSC PUBLIC ADDRESS AND RADIO SYSTEM.
9. OCC CCTV VIDEO MANAGEMENT SYSTEM CONFIGURATION DATA MUST BE UPDATED TO ALLOW USER TO SELECT NEW NSC CAMERAS AND RECEIVE VIDEO FROM NEW NSC CAMERAS VIA THE EXISTING CCTV GUI ON THE USER CONSOLE. SEE SPECIFICATION SECTION 16950 FOR FURTHER DETAILS.
10. EXISTING PABX WILL BE REPLACED AS PART OF THIS CONTRACT. SEE SECTION 16721.

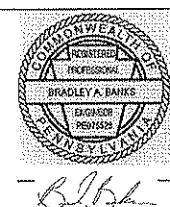
NEW SYSTEM COMPONENTS
 EXISTING SYSTEM COMPONENTS

PB AMERICAS, INC.

 Gannett Fleming
 Transit & Rail Systems

NO.	DATE	DESCRIPTION
REVISIONS		

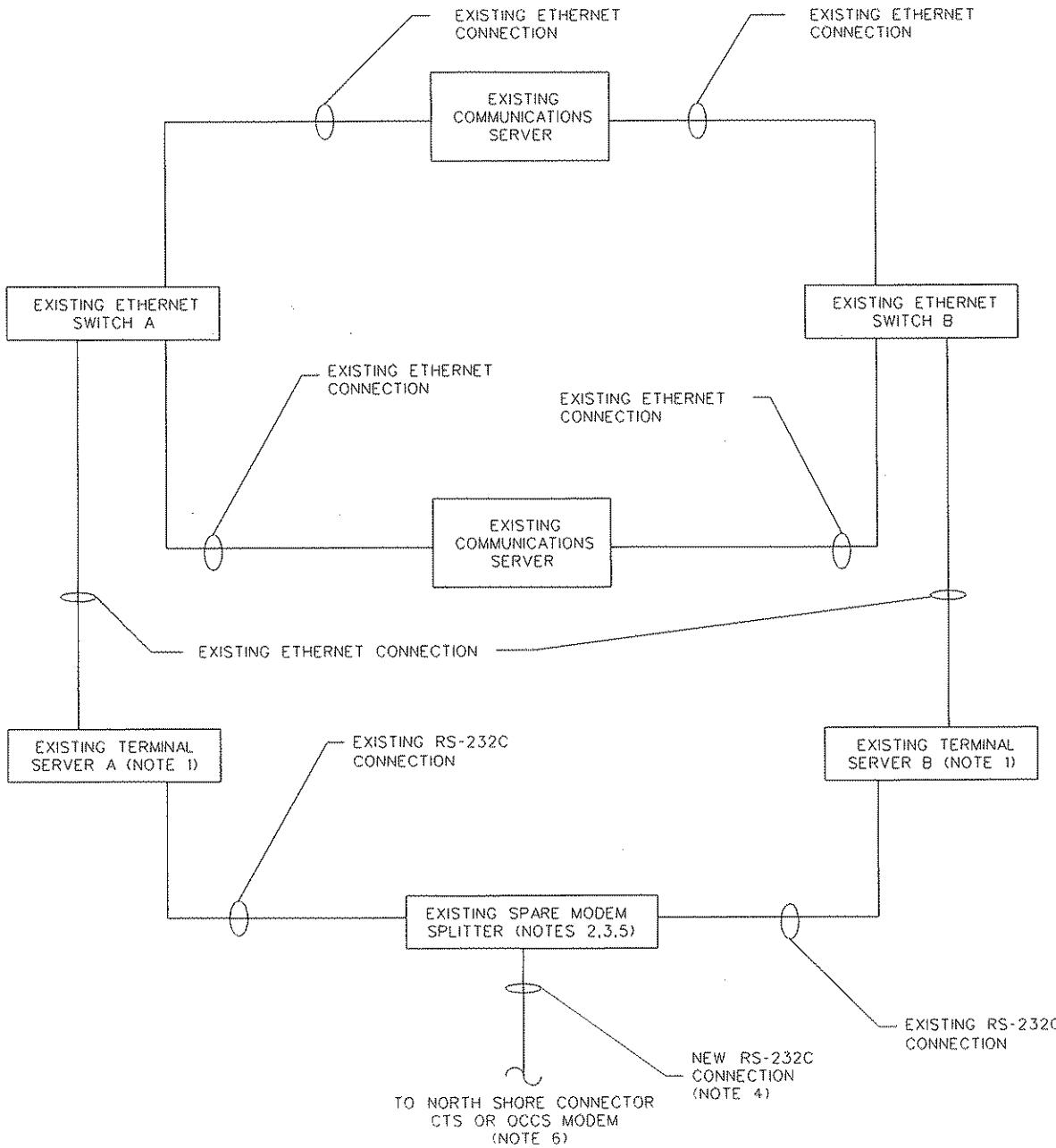
THE PREPARATION OF THIS DOCUMENT HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE FEDERAL TRANSIT ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, FOR THE PORT AUTHORITY OF ALLEGHENY COUNTY, PENNSYLVANIA.



DMJM HARRIS | AECOM
 FOUR GATEWAY CENTER
 20TH FLOOR
 PITTSBURGH, PA. 15222
David P. Hays
B. Banks
 APPROVED DATE
B. Banks

DESIGNED C. DALOIA
 DRAWN C. DALOIA
 CHECKED B. BANKS
 IN CHARGE
 DATE JUNE 24, 2008
 SCALE NTS

PORT AUTHORITY OF ALLEGHENY COUNTY
 PITTSBURGH
 PENNSYLVANIA
 NORTH SHORE CONNECTOR
 NSC TRAIN SYSTEM (SYSTEM WIDE)
 OPERATIONS CONTROL CENTER SYSTEM
 UPGRADE CONTEXT DIAGRAM
Port Authority
 CONTRACT NO. NSC-009
 DWG. NO. CM-101 SHT. 560



NOTES

1. THE TERMINAL SERVERS ARE USED IN CONJUNCTION WITH THE MODEM SPLITTERS TO PROVIDE REDUNDANT PATHS OVER THE TWO NETWORKS, TO EACH OF THE EXTERNAL (SERIAL RS-232C) INTERFACES. ONE SET OF TERMINAL SERVERS IS ATTACHED TO ONE OF THE OCCS ETHERNET NETWORKS. THE OTHER SET OF TERMINAL SERVERS IS ATTACHED TO THE OTHER OCCS ETHERNET NETWORK.
 2. THE PHYSICAL SERIAL RS-232C CONNECTION FOR A GIVEN INTERFACE IS BROUGHT INTO A MODEM SPLITTER. THE SPLITTER PROVIDES TWO OUTPUTS FOR THE SAME INPUT CHANNEL. ONE OF THE OUTPUTS IS CONNECTED TO A PORT ON A TERMINAL SERVER ATTACHED TO ONE OF THE ETHERNET NETWORKS. THE OTHER OUTPUT IS CONNECTED TO A PORT ON A TERMINAL SERVER ATTACHED TO THE OTHER ETHERNET NETWORK.
 3. THE MODEM SPLITTERS ARE PASSIVE DEVICES. THEY SIMPLY PASS I/O, IN THE FORM OF RS-232 SIGNALS, BETWEEN THE COMPUTERS AND THE CONNECTED DEVICES. THEY DO NOT PERFORM ANY ARBITRATION BETWEEN THE TWO DIVERSE PATHS. IT IS UP TO THE APPLICATION SOFTWARE TO ENSURE THAT ONLY ONE COMPUTER IS TRANSMITTING AT ANY GIVEN TIME.
 4. NEW RS-232C CONNECTION BETWEEN EXISTING MODEM SPLITTER & NORTH SHORE CONNECTOR CTS. CONTRACTOR SHALL INSTALL ALL CABLE AND DISTRIBUTION FRAMES TO PROVIDE THIS CONNECTION. ONLY ONE RS-232C IS SHOWN IN THIS DRAWING. MULTIPLE RS-232C CONNECTIONS WILL BE REQUIRED TO SUPPORT THE NSC. CONTRACTOR SHALL INSTALL ALL RS-232 CONNECTIONS NECESSARY TO PROVIDE OCCS UPGRADE.
 5. EXISTING SPARE MODEM SPLITTER. THERE IS ONE MODEM SPLITTER PER SERIAL CONNECTION TO NORTH SHORE CONNECTOR CTS. ONLY ONE RS-232C CONNECTION TO THE CTS IS SHOWN IN THIS DRAWING. MULTIPLE RS-232C CONNECTIONS WILL BE REQUIRED TO SUPPORT THE NSC. CONTRACTOR SHALL INSTALL ALL RS-232C CONNECTIONS NECESSARY TO PROVIDE OCCS UPGRADE.
 6. RS-232C CONNECTION TO NORTH SHORE CONNECTOR CTS OR OCCS MODEM.

PB AMERICAS, INC.
 Gannett Fleming
Transit & Rail Systems

THE PREPARATION OF THIS DOCUMENT HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE FEDERAL TRANSIT ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, FOR THE PORT AUTHORITY OF ALLEGHENY COUNTY, PENNSYLVANIA.



DMJM HARRIS | **AECOM**
FOUR GATEWAY CENTER
20TH FLOOR
PITTSBURGH, PA. 15222
Daniel J. Harris
APPROVED DATE

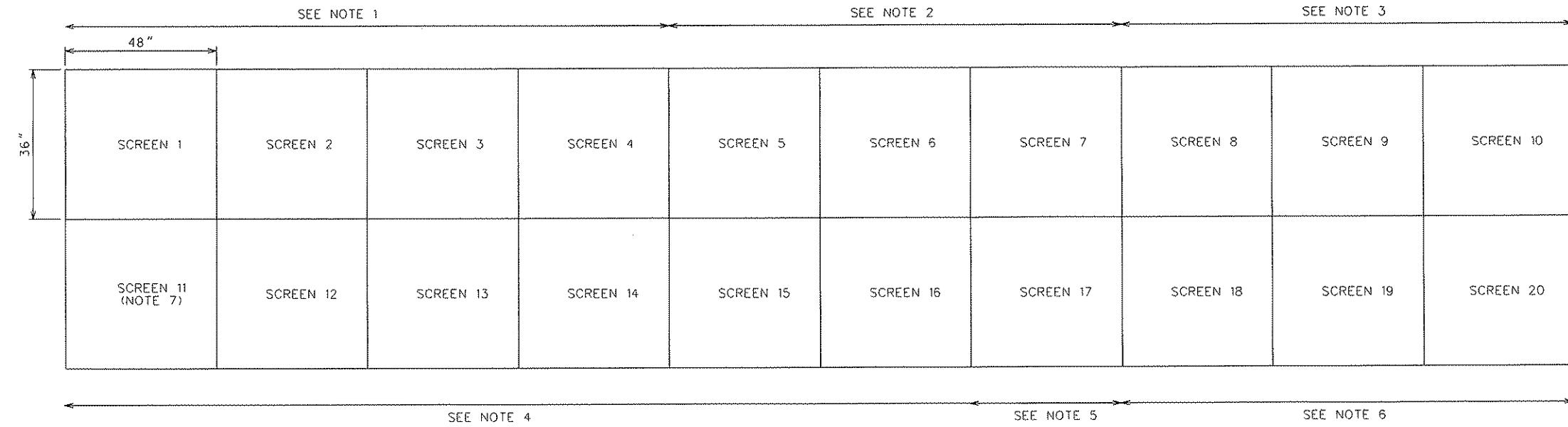
PORT AUTHORITY OF ALLEGHENY COUNTY
PITTSBURGH **PENNSYLVANIA**

**NORTH SHORE CONNECTOR
NSC TRAIN SYSTEM (SYSTEM WIDE)
OPERATIONS CONTROL CENTER SYSTEM
TO CTS CONNECTIVITY DIAGRAM**

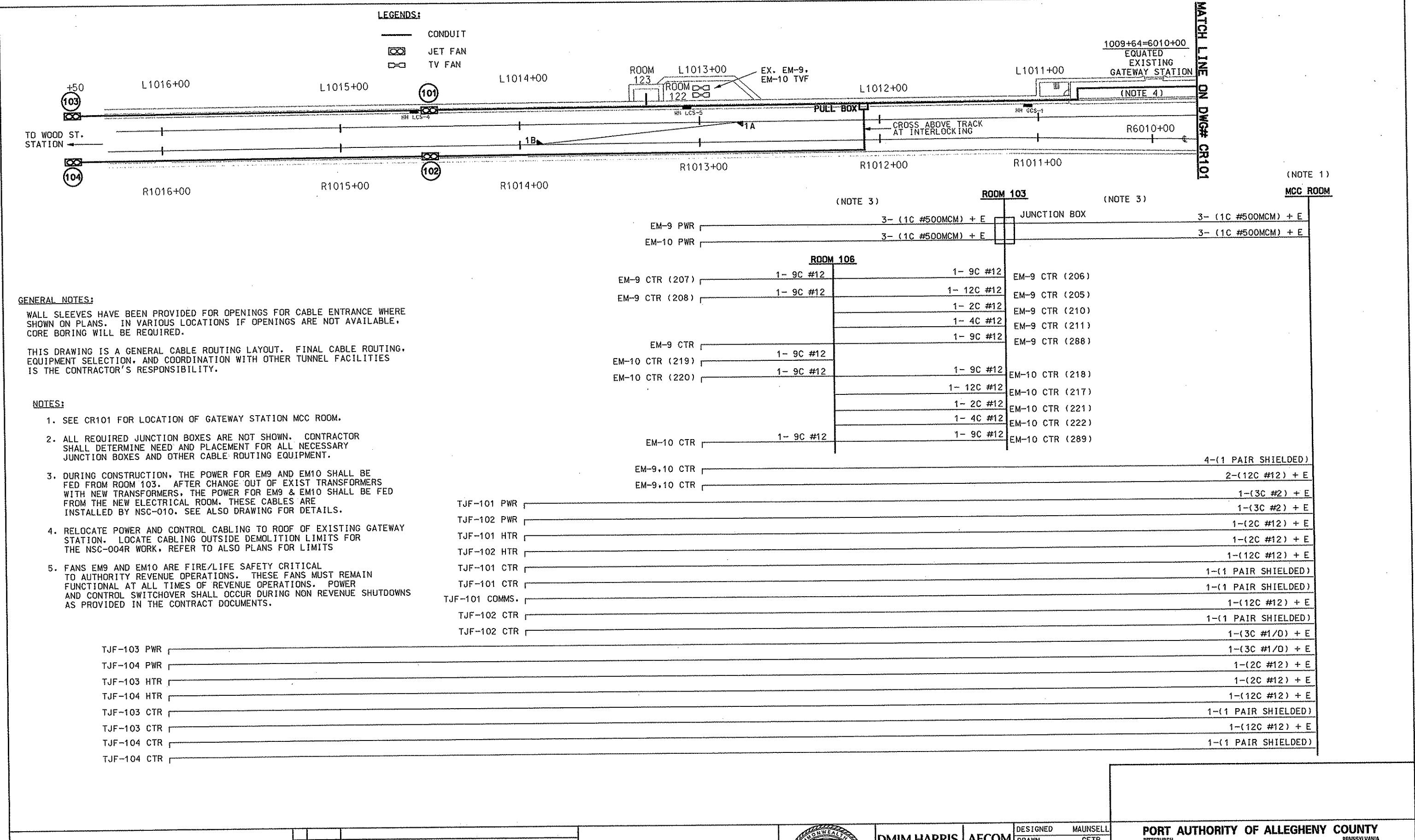
uthority Engineering & Construction	CONTRACT NO.	NSC-009	
	DWG. NO.	CM-102	SHT.

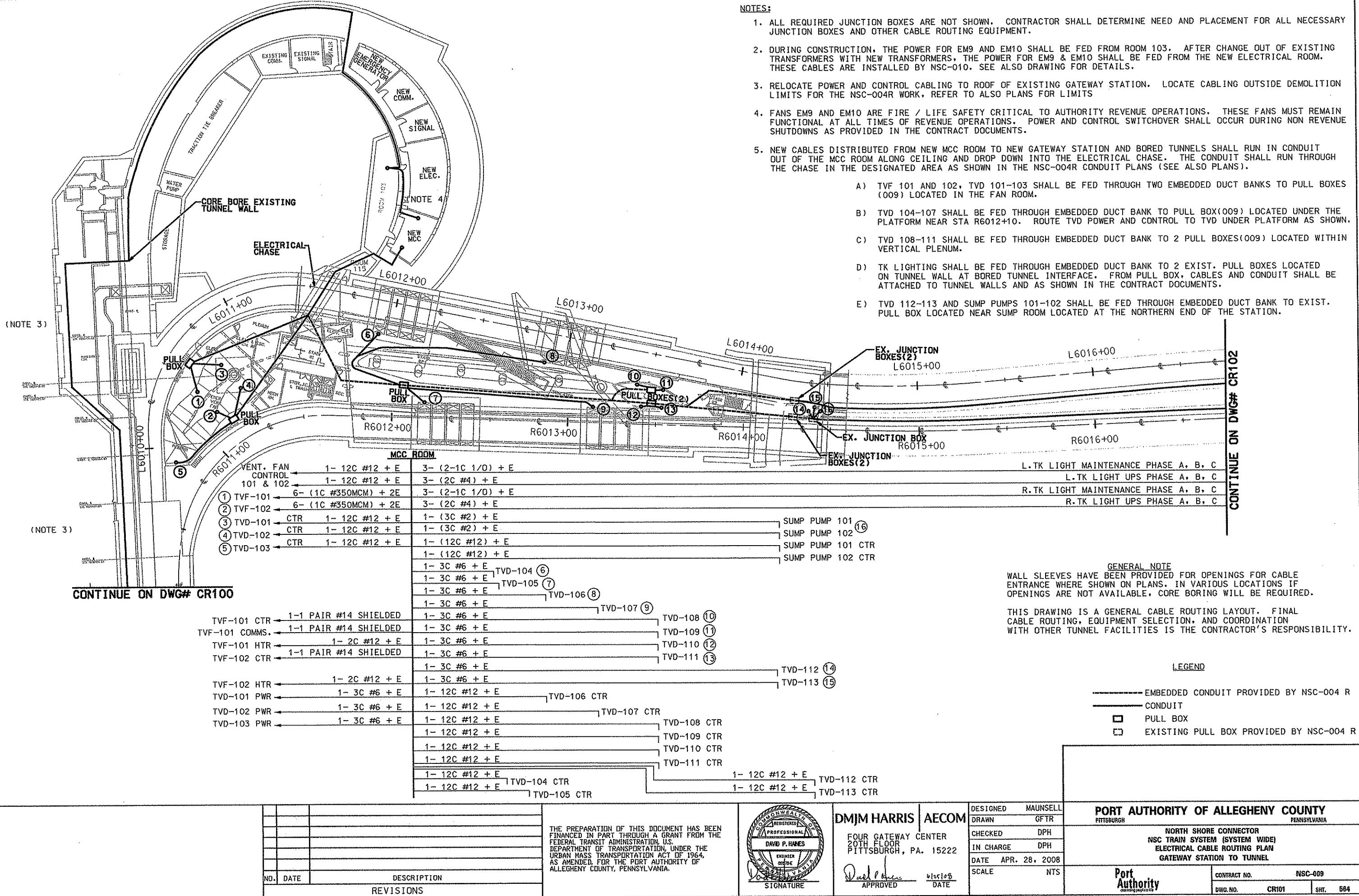
NOTES:

1. SCREEN 1 THRU SCREEN 4 USED TO DISPLAY CCTV IMAGES
2. SCREEN 5 THRU SCREEN 7 USED TO DISPLAY TRACK DIAGRAM
3. SCREEN 8 THRU SCREEN 10 USED TO DISPLAY YARD GRAPHICS
4. SCREEN 11 THRU SCREEN 16 USED TO DISPLAY TRACK DIAGRAM
5. SCREEN 17 USED TO DISPLAY CCTV IMAGE FROM YARD CAMERA
6. SCREEN 18 THRU SCREEN 20 USED TO DISPLAY YARD GRAPHICS
7. SCREEN 11 CURRENTLY DISPLAYS THE CENTRAL BUSINESS DISTRICT SECTION OF THE TRACK LAYOUT.

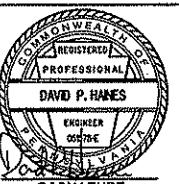


PB AMERICAS, INC. Gannett Fleming Transit & Rail Systems				THE PREPARATION OF THIS DOCUMENT HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE FEDERAL TRANSIT ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, FOR THE PORT AUTHORITY OF ALLEGHENY COUNTY, PENNSYLVANIA.	 BRADLEY A. BANKS CHIEF INFORMATION OFFICER DATE: JUNE 24, 2008 <i>[Signature]</i> APPROVED DATE <i>[Signature]</i>	DMJM HARRIS AECOM FOUR GATEWAY CENTER 20TH FLOOR PITTSBURGH, PA. 15222 <i>[Signature]</i> APPROVED DATE	DESIGNED C. DALOIA DRAWN C. DALOIA CHECKED B. BANKS IN CHARGE DATE JUNE 24, 2008 SCALE NTS	PORT AUTHORITY OF ALLEGHENY COUNTY PITTSBURGH NORTH SHORE CONNECTOR NSC TRAIN SYSTEM (SYSTEM WIDE) OPERATIONS CONTROL CENTER EXISTING OVERVIEW DISPLAY LAYOUT	
	NO.	DATE	DESCRIPTION					REVISIONS	Port Authority
							DWG. NO. CM-104	SHT. 562	





THE PREPARATION OF THIS DOCUMENT HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE FEDERAL TRANSIT ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, FOR THE PORT AUTHORITY OF ALLEGHENY COUNTY, PENNSYLVANIA.



DMJM HARRIS AECOM

PITTSBURGH **PENNSYLVANIA**

**NORTH SHORE CONNECTOR
NSC TRAIN SYSTEM (SYSTEM WIDE)
ELECTRICAL CABLE ROUTING PLAN
GATEWAY STATION TO TUNNEL**

Port Authority <small>controlling player in its</small>	CONTRACT NO.	NSC-009	
	DWG. NO.	CR101	SHT. 664

GENERAL NOTES:

WALL SLEEVES HAVE BEEN PROVIDED FOR OPENINGS FOR CABLE ENTRANCE WHERE SHOWN ON PLANS. IN VARIOUS LOCATIONS IF OPENINGS ARE NOT AVAILABLE, CORE BORING WILL BE REQUIRED.

LEGENDS:

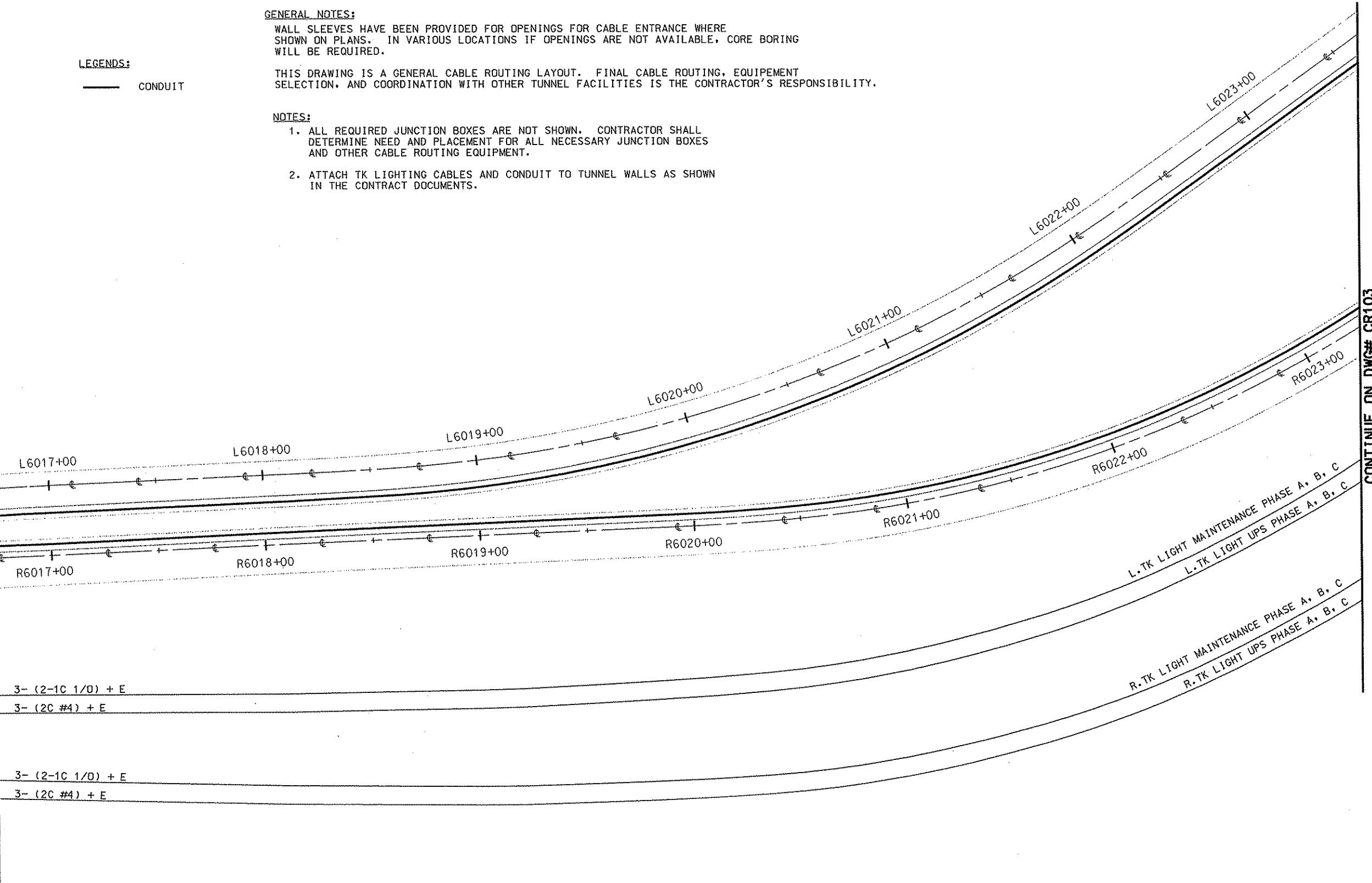
CONDUIT

THIS DRAWING IS A GENERAL CABLE ROUTING LAYOUT. FINAL CABLE ROUTING, EQUIPMENT SELECTION, AND COORDINATION WITH OTHER TUNNEL FACILITIES IS THE CONTRACTOR'S RESPONSIBILITY.

NOTES:

1. ALL REQUIRED JUNCTION BOXES ARE NOT SHOWN. CONTRACTOR SHALL DETERMINE NEED AND PLACEMENT FOR ALL NECESSARY JUNCTION BOXES AND OTHER CABLE ROUTING EQUIPMENT.
2. ATTACH TK LIGHTING CABLES AND CONDUIT TO TUNNEL WALLS AS SHOWN IN THE CONTRACT DOCUMENTS.

CONTINUE ON DWG# CR101



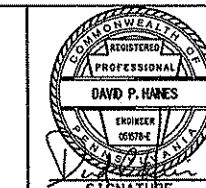
3- (2-1C 1/0) + E

3- (2C #4) + E

3- (2-1C 1/0) + E

3- (2C #4) + E

THE PREPARATION OF THIS DOCUMENT HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE FEDERAL TRANSIT ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, FOR THE PORT AUTHORITY OF ALLEGHENY COUNTY, PENNSYLVANIA.



DMJM HARRIS | AECOM

FOUR GATEWAY CENTER
20TH FLOOR
PITTSBURGH, PA. 15222

David P. Harris
APPROVED
DATE 6/25/08

DESIGNED MAUNSELL

DRAWN GFTR

CHECKED DPH

IN CHARGE DPH

DATE APR. 28, 2008

SCALE NTS

DATE

PORT AUTHORITY OF ALLEGHENY COUNTY
PITTSBURGH, PENNSYLVANIA

NORTH SHORE CONNECTOR
NSC TRAIN SYSTEM (SYSTEM WIDE)
ELECTRICAL CABLE ROUTING PLAN
TUNNEL SECTION

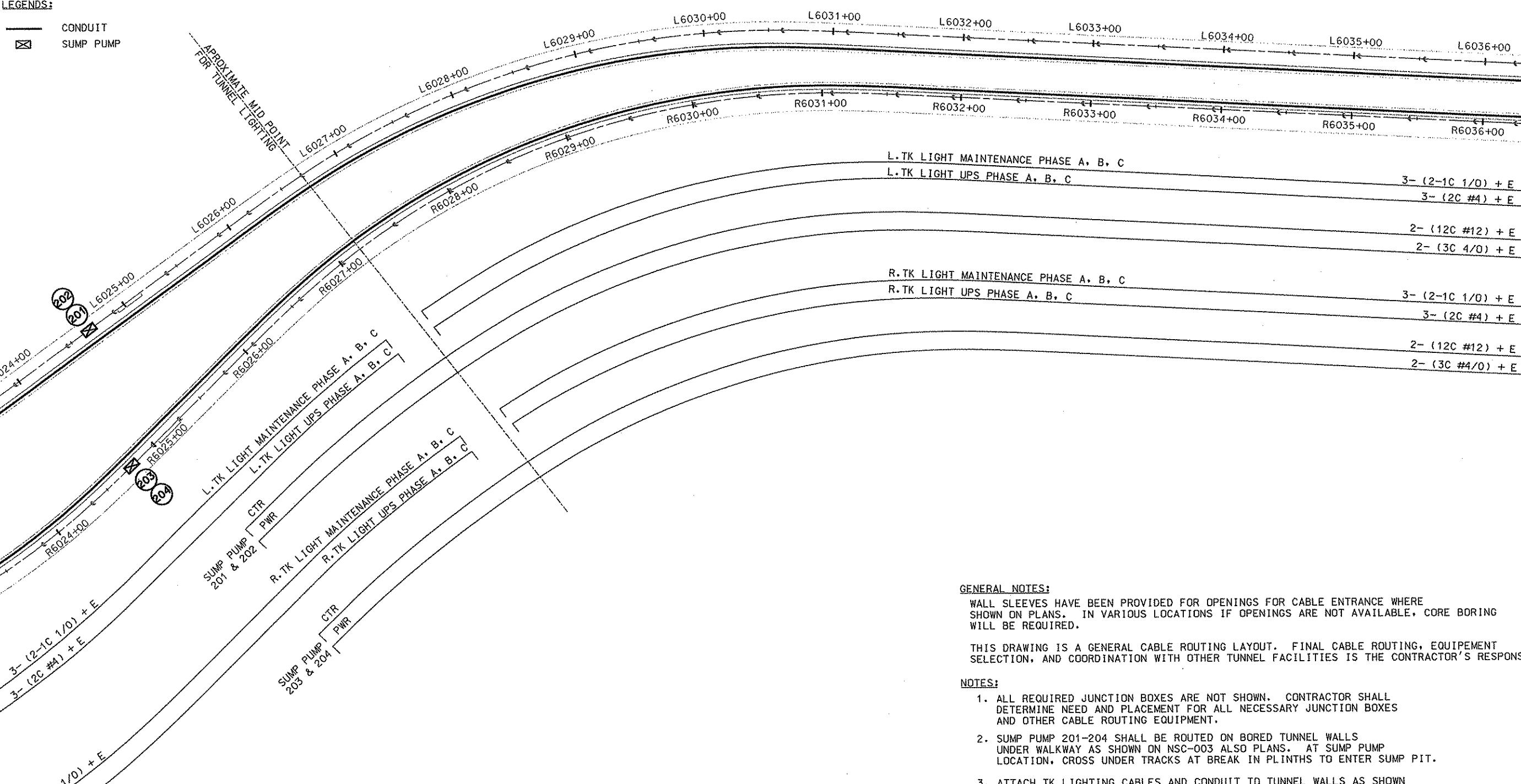
Port Authority
CONTRACTOR

CONTRACT NO. NSC-009

DWG. NO. CR102

SHT. 565

CONTINUE ON DWG# CR102



CONTINUE ON DWG# CR104

GENERAL NOTES:

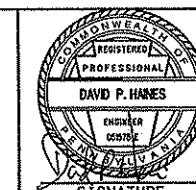
WALL SLEEVES HAVE BEEN PROVIDED FOR OPENINGS FOR CABLE ENTRANCE WHERE SHOWN ON PLANS. IN VARIOUS LOCATIONS IF OPENINGS ARE NOT AVAILABLE, CORE BORING WILL BE REQUIRED.

THIS DRAWING IS A GENERAL CABLE ROUTING LAYOUT. FINAL CABLE ROUTING, EQUIPMENT SELECTION, AND COORDINATION WITH OTHER TUNNEL FACILITIES IS THE CONTRACTOR'S RESPONSIBILITY.

NOTES:

- ALL REQUIRED JUNCTION BOXES ARE NOT SHOWN. CONTRACTOR SHALL DETERMINE NEED AND PLACEMENT FOR ALL NECESSARY JUNCTION BOXES AND OTHER CABLE ROUTING EQUIPMENT.
- SUMP PUMP 201-204 SHALL BE ROUTED ON BORED TUNNEL WALLS UNDER WALKWAY AS SHOWN ON NSC-003 ALSO PLANS. AT SUMP PUMP LOCATION, CROSS UNDER TRACKS AT BREAK IN PLINTHS TO ENTER SUMP PIT.
- ATTACH TK LIGHTING CABLES AND CONDUIT TO TUNNEL WALLS AS SHOWN IN THE CONTRACT DOCUMENTS.

THE PREPARATION OF THIS DOCUMENT HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE FEDERAL TRANSIT ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, FOR THE PORT AUTHORITY OF ALLEGHENY COUNTY, PENNSYLVANIA.



DMJM HARRIS | AECOM

FOUR GATEWAY CENTER
20TH FLOOR
PITTSBURGH, PA. 15222

APPROVED *David P. Hanes* DATE *4/28/08*

DESIGNED MAUNSELL
DRAWN GFTR

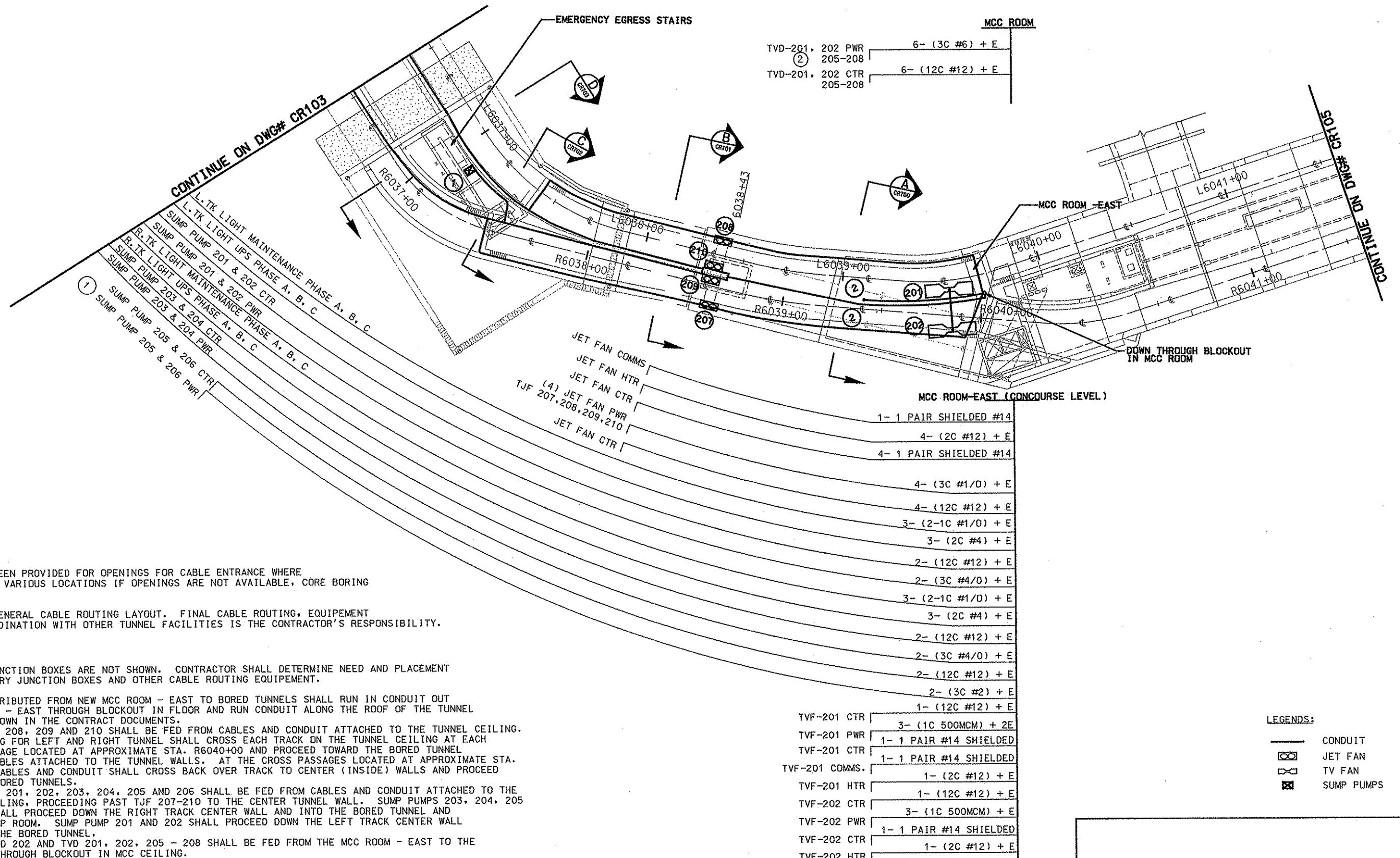
CHECKED DPH
IN CHARGE DPH

DATE APR. 28, 2008
SCALE NTS

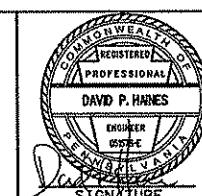
PORT AUTHORITY OF ALLEGHENY COUNTY
PITTSBURGH

NORTH SHORE CONNECTOR
NSC TRAIN SYSTEM (SYSTEM WIDE)
ELECTRICAL CABLE ROUTING PLAN
TUNNEL SECTION

Port Authority	CONTRACT NO. NSC-009
DWG. NO. CR103	SH. 566



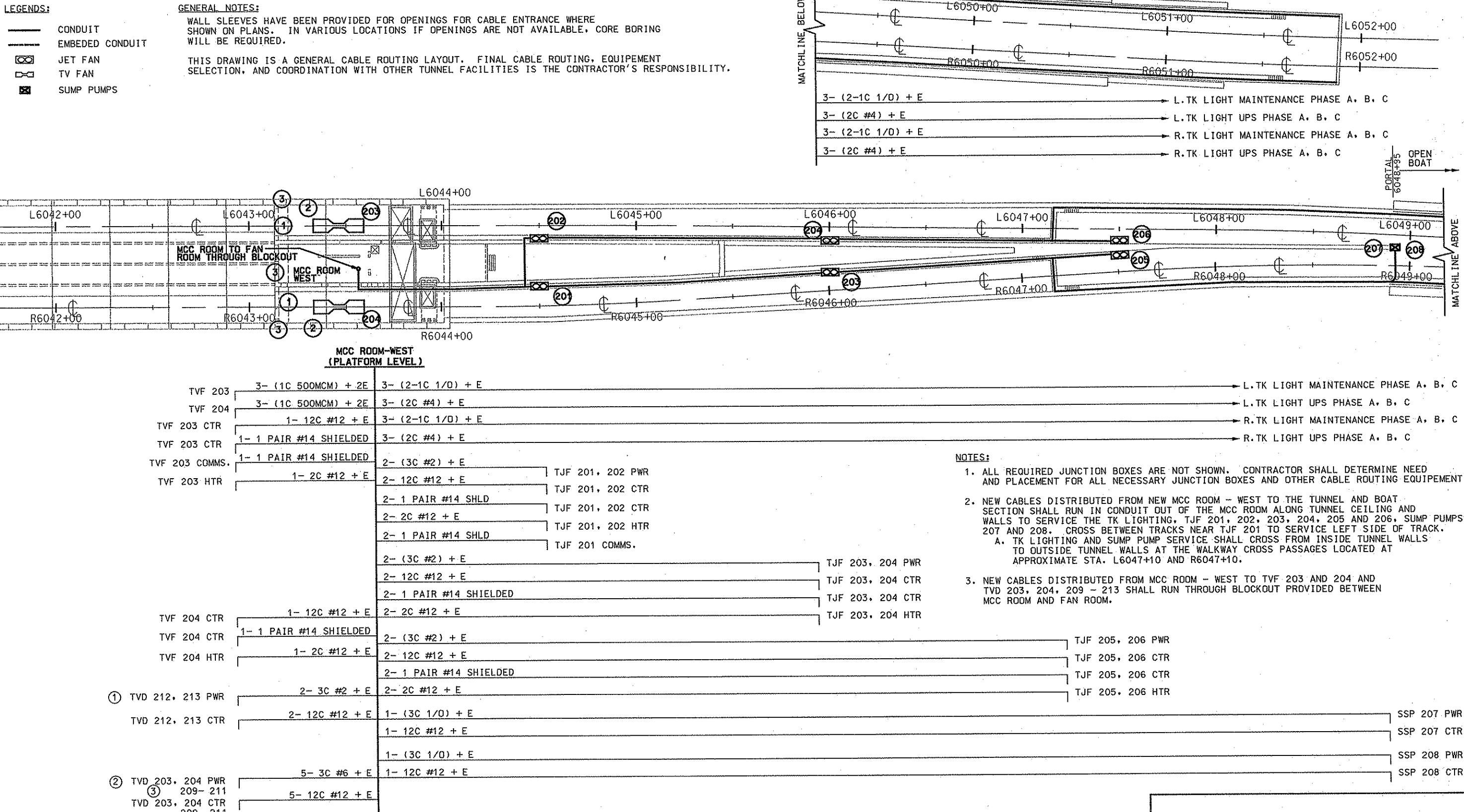
THE PREPARATION OF THIS DOCUMENT HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE FEDERAL TRANSIT ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, FOR THE PORT AUTHORITY OF ALLEGHENY COUNTY, PENNSYLVANIA.



DMJM HARRIS | AECOM
FOUR GATEWAY CENTER
20TH FLOOR
PITTSBURGH, PA. 15222
Dale Polcini
APPROVED
6/25/08
DATE

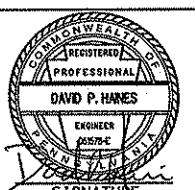
PORT AUTHORITY OF ALLEGHENY COUNTY
PITTSBURGH
NORTH SHORE CONNECTOR
NSC TRAIN SYSTEM (SYSTEM WIDE)
ELECTRICAL CABLE ROUTING PLAN
NORTH SIDE STATION
Port Authority
CONTRACT NO. NSC-008
DWG. NO. CR104 SHT. 667

CONTINUE ON DWG# CR104



THE PREPARATION OF THIS DOCUMENT HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE FEDERAL TRANSIT ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, FOR THE PORT AUTHORITY OF ALLEGHENY COUNTY, PENNSYLVANIA.

NO. DATE DESCRIPTION
REVISIONS



DMJM HARRIS | AECOM
FOUR GATEWAY CENTER
20TH FLOOR
PITTSBURGH, PA. 15222
Dad P. Harris
APPROVED 6/25/08
SIGNATURE DATE

PORT AUTHORITY OF ALLEGHENY COUNTY
PITTSBURGH
NORTH SHORE CONNECTOR
NSC TRAIN SYSTEM (SYSTEM WIDE)
ELECTRICAL CABLE ROUTING PLAN
NORTH SIDE TO ALLEGHENY STATION
Port Authority
CONTRACT NO. NSC-008
DWG. NO. CR105 SHT. 568

LEGENDS:

CONDUIT		SIGNAL
EMBEDDED CONDUIT		TRAIN TO WAYSIDE (TWC)
CABLE TRAY		TRAIN STOP (TS)
CABLE TROUGH		JUNCTION BOX (JB)
RACEWAY		PULL BOX (PB)
(S--)		(E) EXISTING

NOTES:

- SEE DRAW CR201 FOR LOCATION OF NEW & EXISTING SIGNAL ROOM.
- CONDUITS RUNNING ALONG TUNNEL WALL TO SIGNAL DEVICES AND TRACK CIRCUIT CONNECTIONS MUST DROP AT EXISTING HANDHOLES AND EXIT HANDHOLES AT TRACK LEVEL. CONDUITS SHALL NOT RUN ACROSS THE WALKWAY.
- 37C #14 CABLE TO BE TERMINATED ON SAME TERMINALS AS EXISTING CABLE.
- CABLES SHOWN ON THIS SHEET FROM EXISTING SIGNAL ROOM WILL BE INSTALLED IN CONDUIT AND WILL REPLACE EXISTING CABLES IN DUCT BANK. THIS WORK TO BE DONE IMMEDIATELY FOLLOWING THE SHUT DOWN OF GATEWAY STATION.

GENERAL NOTE

WALL SLEEVES HAVE BEEN PROVIDED FOR OPENINGS FOR CABLE ENTRANCE WHERE SHOWN ON PLANS. IN VARIOUS LOCATIONS IF OPENINGS ARE NOT AVAILABLE, CORE BORING WILL BE REQUIRED.

1009+64=6010+00
EQUATED1010+45
EQUATED

MATCH LINE ON DWG# CR201

NOTE 1
EXISTING SIGNAL ROOM

NOTE 2

EXISTING TERMINAL CASE → (S1) 37C #14

HH GCS-1

TWC 57-58 → (S2) 2-(4PR #14 TW) (COMM)

SIG 14S → (S3) 2C #6, 10C #14

SIG 12S → (S4) 2C #6, 5C #14

(S5) 2-(2C #6), 5C #14

(S6) 2-(2C #6), 10C #14

(S7) 3C #8, 7C #14

(S8) 3C #8, 7C #14

(S8) 2C #16 TW

HH LCS-4
SIG 10N
SIG 8N5C #14
2C #16 TW

SW 1B SW 1A

TWC 56

SIG 6S

SIG 4N

SIG 2S

SIG 2N

(S7) 4PR #14 TW (COMM)

(S9) 2-(2C #6), 10C #14

(S10) 2-(2C #6), 10C #14

(S11) 2C #6

(S12) 2C #6, 10C #14

NOTE 1

NEW SIGNAL ROOM

SIG 1010S → (S13) 2-(2C #6), 10C #14

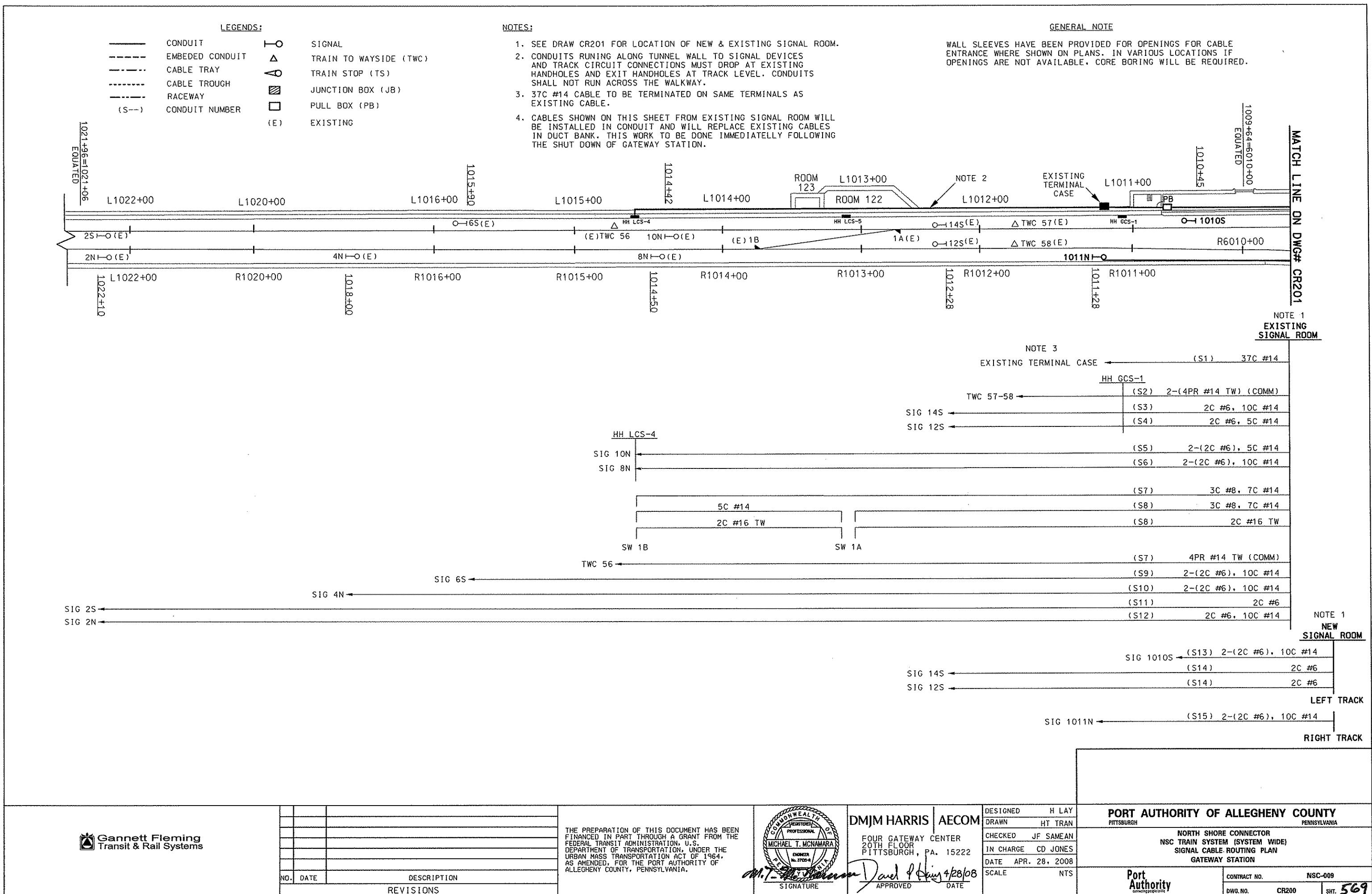
(S14) 2C #6

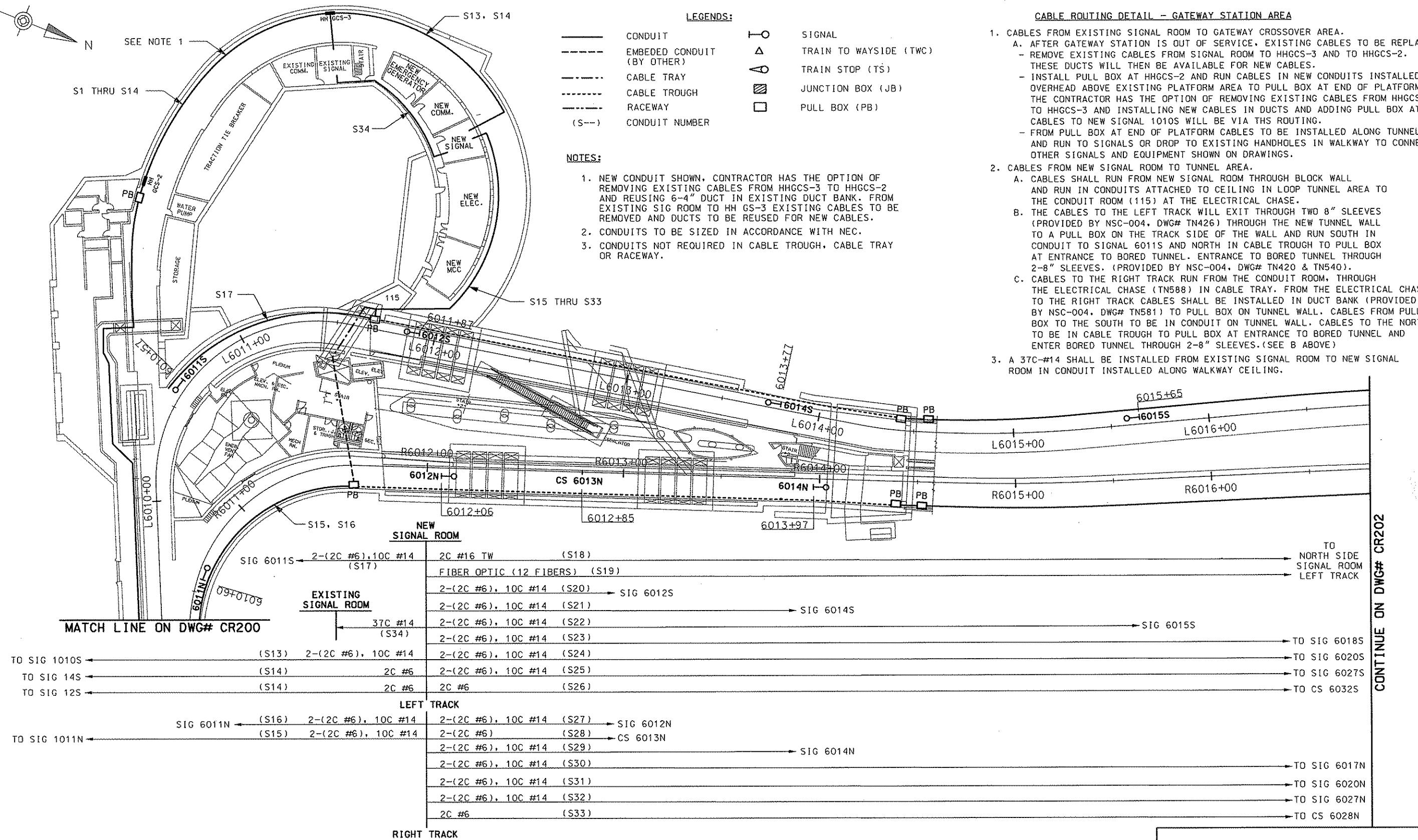
(S14) 2C #6

LEFT TRACK

SIG 1011N → (S15) 2-(2C #6), 10C #14

RIGHT TRACK

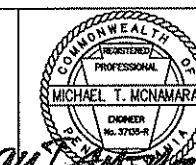




CONTINUE ON DWG# CR202



THE PREPARATION OF THIS DOCUMENT HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE FEDERAL TRANSIT ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, FOR THE PORT AUTHORITY OF ALLEGHENY COUNTY, PENNSYLVANIA.



DMJM HARRIS | AECOM
FOUR GATEWAY CENTER
20TH FLOOR
PITTSBURGH, PA. 15222

DESIGNED	H LAY
DRAWN	HT TRAN
CHECKED	JF SAMEAN
IN CHARGE	CD JONES
DATE	APR. 28, 2008
SCALE	NTS

PORT AUTHORITY OF ALLEGHENY COUNTY
PITTSBURGH PENNSYLVANIA

**NORTH SHORE CONNECTOR
NSC TRAIN SYSTEM (SYSTEM WIDE)
SIGNAL EXPRESS CABLE ROUTING PLAN
GATEWAY STATION TO TUNNEL**

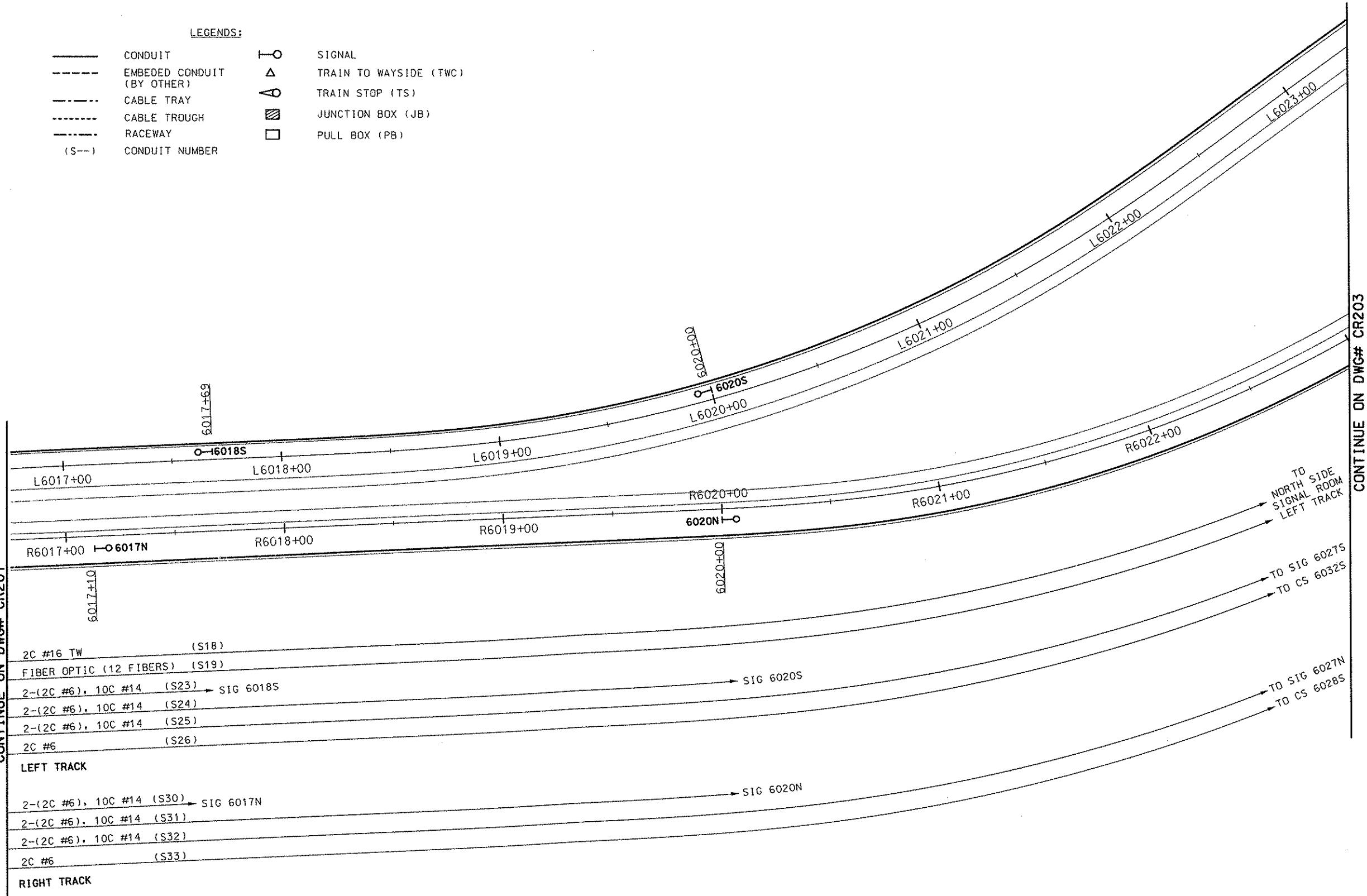
**NORTH SHORE CONNECTOR
NSC TRAIN SYSTEM (SYSTEM WIDE)
SIGNAL EXPRESS CABLE ROUTING PLAN
GATEWAY STATION TO TUNNEL**

CONTRACT NO.	NSC-009	
DWG. NO.	CR201	SHT. 1

CONTINUE ON DWG# CR201

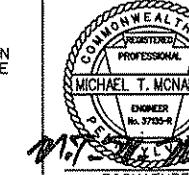
LEGENDS:

	CONDUIT		SIGNAL
	EMBEDDED CONDUIT (BY OTHER)		TRAIN TO WAYSIDE (TWC)
	CABLE TRAY		TRAIN STOP (TS)
	CABLE TROUGH		JUNCTION BOX (JB)
	RACEWAY		PULL BOX (PB)
	CONDUIT NUMBER		



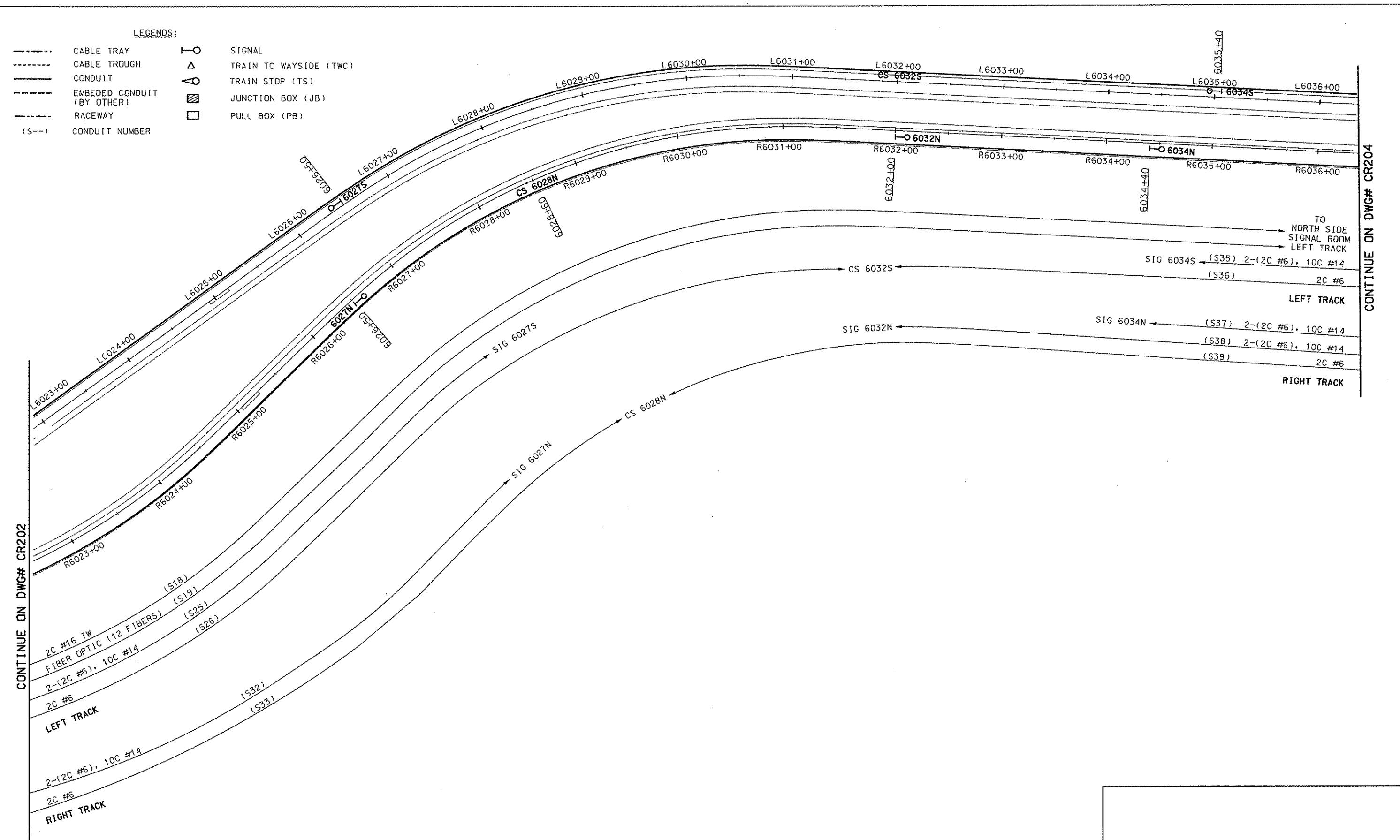
NO.	DATE	DESCRIPTION	
		REVISIONS	

THE PREPARATION OF THIS DOCUMENT HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE FEDERAL TRANSIT ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, FOR THE PORT AUTHORITY OF ALLEGHENY COUNTY, PENNSYLVANIA.

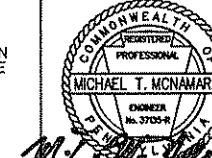


DMJM HARRIS | AECOM
FOUR GATEWAY CENTER
20TH FLOOR
PITTSBURGH, PA. 15222
CHECKED JF SAMEAN
IN CHARGE CD JONES
DATE APR. 28, 2008
SIGNATURE
APPROVED
DATE 4/28/08

PORT AUTHORITY OF ALLEGHENY COUNTY
PITTSBURGH, PENNSYLVANIA
NORTH SHORE CONNECTOR
NSC TRAIN SYSTEM (SYSTEM WIDE)
SIGNAL CABLE ROUTING PLAN
TUNNEL SECTION
Port Authority
CONTRACT NO. NSC-009
DWG. NO. CR202 SHT. 571



Gannett Fleming Transit & Rail Systems			THE PREPARATION OF THIS DOCUMENT HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE FEDERAL TRANSIT ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, FOR THE PORT AUTHORITY OF ALLEGHENY COUNTY, PENNSYLVANIA.	DMJM HARRIS AECOM	DESIGNED H. LAY	PORT AUTHORITY OF ALLEGHENY COUNTY	
					DRAWN H. T. TRAN	PITTSBURGH	
					CHECKED J. F. SAMEAN	NORTH SHORE CONNECTOR	
					IN CHARGE C. D. JONES	NSC TRAIN SYSTEM (SYSTEM WIDE)	
					DATE APR. 28, 2008	SIGNAL CABLE ROUTING PLAN	
					SCALE NTS	TUNNEL SECTION	
						Port Authority	
						CONTRACT NO. NSC-009	
						DWG. NO. CR203	SHT. 572



MICHAEL T. McNAMARA
OWNER
REG. NO. 3703-R

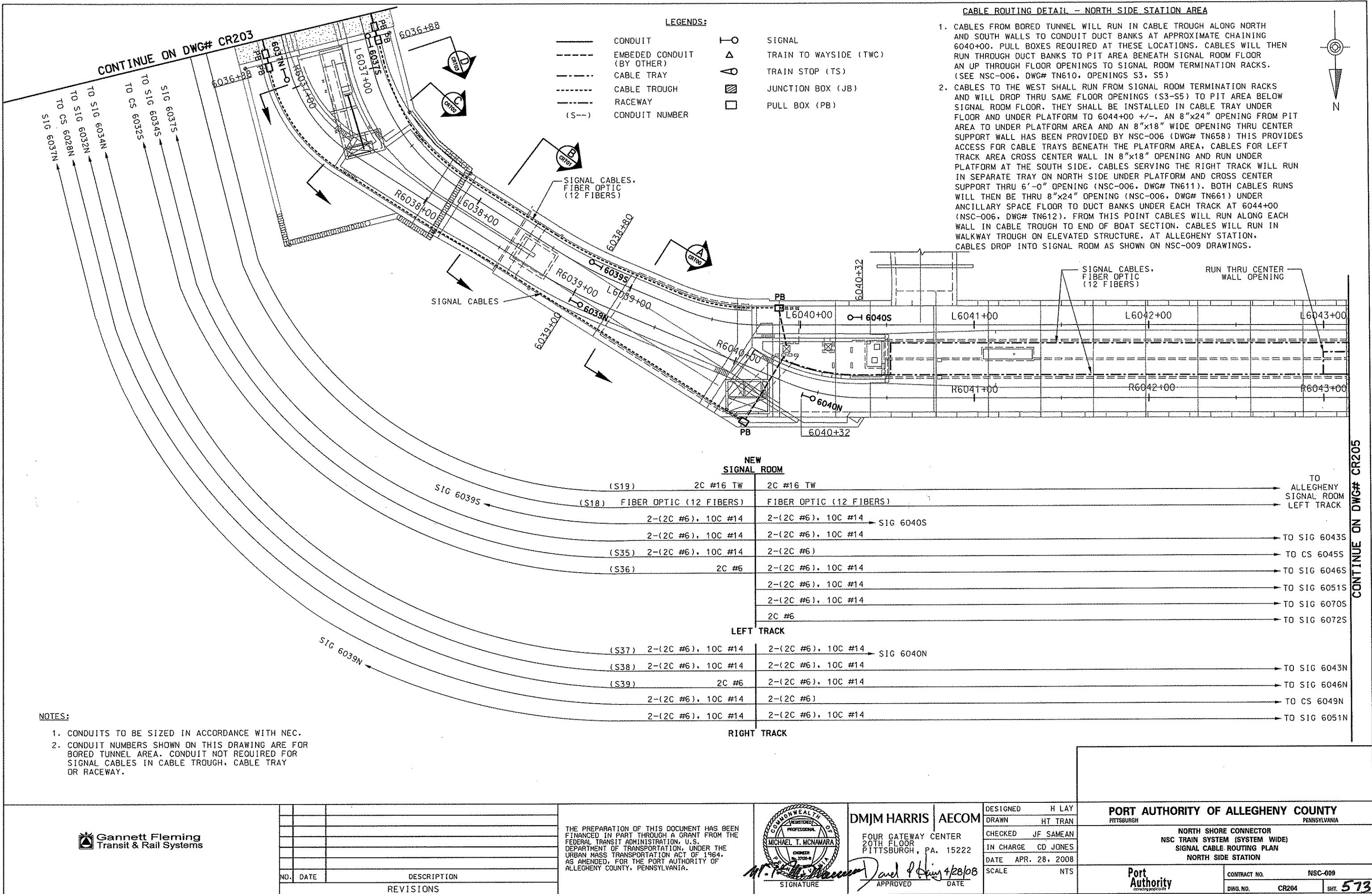
SIGNATURE

APPROVED

DATE

10/1/2008

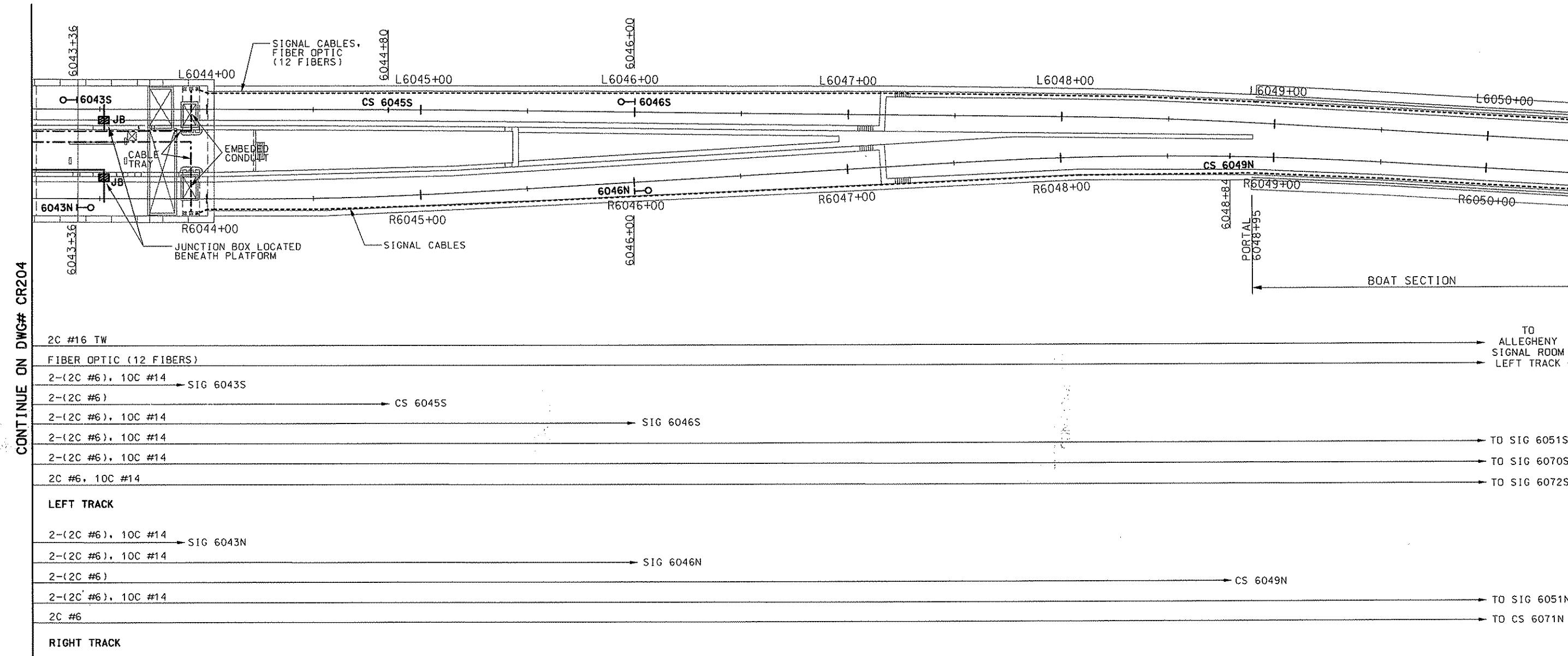
David J. Henry 4/28/08



LEGENDS:

CONDUIT	SIGNAL
EMBEDDED CONDUIT (BY OTHER)	△ TRAIN TO WAYSIDE (TWC)
CABLE TRAY	▲ TRAIN STOP (TS)
CABLE TROUGH	■ JUNCTION BOX (JB)
RACEWAY	□ PULL BOX (PB)

CONTINUE ON DWG# CR204

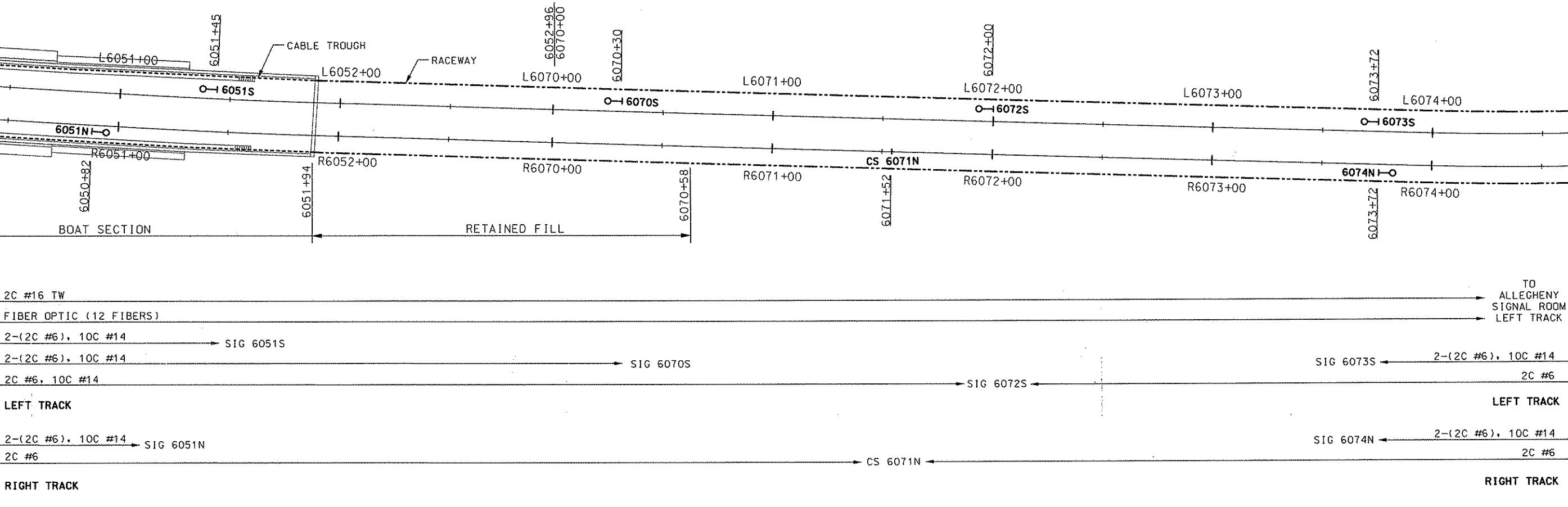


NO.	DATE	DESCRIPTION	REVISIONS	THE PREPARATION OF THIS DOCUMENT HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE FEDERAL TRANSIT ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, FOR THE PORT AUTHORITY OF ALLEGHENY COUNTY, PENNSYLVANIA.	SIGNATURE	APPROVED	DATE	PORT AUTHORITY OF ALLEGHENY COUNTY	
								PITTSTURGH	PENNSYLVANIA
Gannett Fleming Transit & Rail Systems				DMJM HARRIS AECOM	PROFESSIONAL REGISTERED MICHAEL T. MCNAMARA ENGINEER No. 3705-R	CHECKED	JF SAMEAN	NORTH SHORE CONNECTOR NSC TRAIN SYSTEM (SYSTEM WIDE) SIGNAL CABLE ROUTING PLAN NORTH SIDE TO ALLEGHENY STATION	
						IN CHARGE	CD JONES	DATE	APR. 28, 2008
						SCALE	NTS		
								Port Authority	CONTRACT NO. NSC-009
								DWG. NO. CR205	SHT. 574

LEGENDS:

CONDUIT	SIGNAL
EMBEDDED CONDUIT (BY OTHER)	△ TRAIN TO WAYSIDE (TWC)
CABLE TRAY	▲ TRAIN STOP (TS)
CABLE TROUGH	■ JUNCTION BOX (JB)
RACEWAY	□ PULL BOX (PB)

CONTINUE ON DWG# CR205



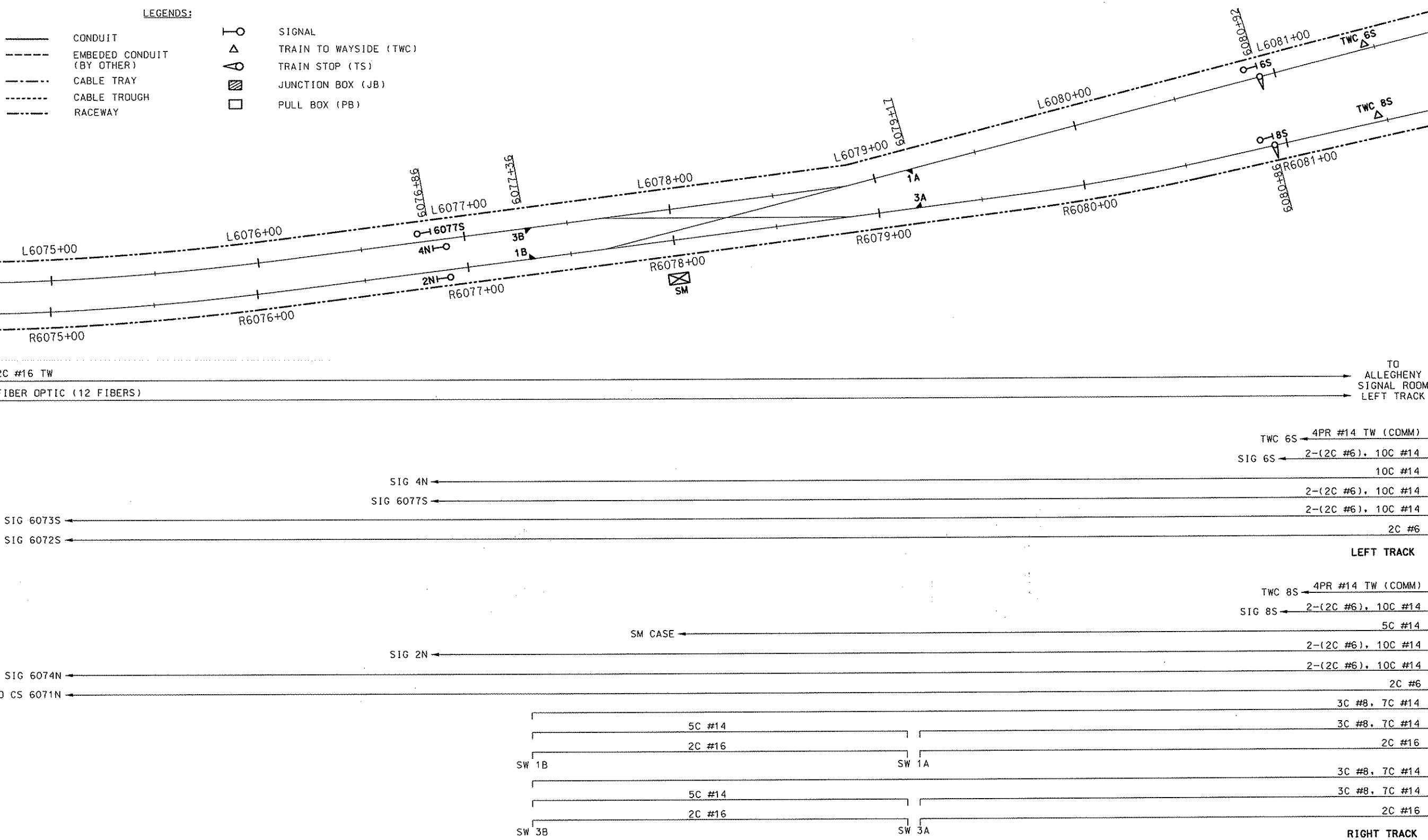
CONTINUE ON DWG# CR207

Gannett Fleming Transit & Rail Systems				<p>THE PREPARATION OF THIS DOCUMENT HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE FEDERAL TRANSIT ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, FOR THE PORT AUTHORITY OF ALLEGHENY COUNTY, PENNSYLVANIA.</p>	COMMONWEALTH OF PENNSYLVANIA PROFESSIONAL MICHAEL T. MCNAMARA ENGINEER AL-3705-R	DMJM HARRIS AECOM FOUR GATEWAY CENTER 20TH FLOOR PITTSBURGH, PA. 15222	DESIGNED H LAY DRAWN HT TRAN	PORT AUTHORITY OF ALLEGHENY COUNTY	
	NO.	DATE	DESCRIPTION					APPROVED 4/28/08	DATE APR. 28, 2008
			SIGNATURE	SCALE NTS	Port Authority	CONTRACT NO. NSC-009			
			REVISIONS	APPROVED 4/28/08	DWG. NO. CR206	SHT. 575			

CONTINUE ON DWG# CR206

LEGENDS:

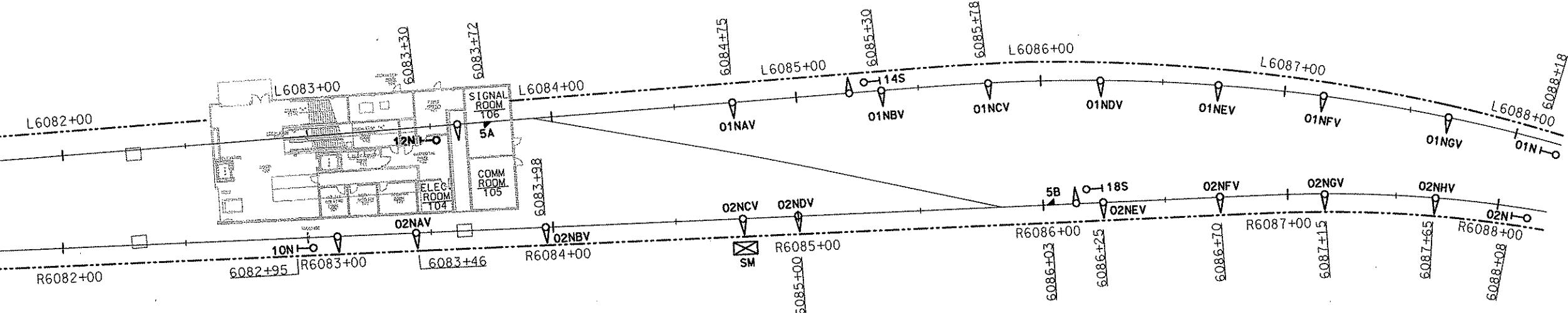
- | | |
|--|--------------------------------|
| | CONDUIT |
| | EMBEDDED CONDUIT
(BY OTHER) |
| | CABLE TRAY |
| | CABLE TROUGH |
| | RACEWAY |
| | SIGNAL |
| | TRAIN TO WAYSIDE (TWC) |
| | TRAIN STOP (TS) |
| | JUNCTION BOX (JB) |
| | PULL BOX (PB) |



CONTINUE ON DWG# CR208

 Gannett Fleming Transit & Rail Systems			 THE PREPARATION OF THIS DOCUMENT HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE FEDERAL TRANSIT ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, FOR THE PORT AUTHORITY OF ALLEGHENY COUNTY, PENNSYLVANIA.	DMJM HARRIS MICHAEL T. McNAMARA <small>PROFESSIONAL REGISTERED ENGINEER No. 3758-R</small> APPROVED <small>4/28/08</small>	AECOM FOUR GATEWAY CENTER 20TH FLOOR PITTSBURGH, PA. 15222 <small>IN CHARGE CD JONES</small> <small>DATE APR. 28, 2008</small>	DESIGNED DRAWN H LAY <small>HT TRAN</small>	PORT AUTHORITY OF ALLEGHENY COUNTY <small>PITTSBURGH</small>	
	NO.	DATE					NORTH SHORE CONNECTOR NSC TRAIN SYSTEM (SYSTEM WIDE) SIGNAL CABLE ROUTING PLAN NORTH SIDE TO ALLEGHENY STATION	
							Port Authority <small>connecting people</small>	CONTRACT NO. NSC-009 DWG. NO. CR207 SHT. 576
			DESCRIPTION					
			REVISIONS					

CONTINUE ON DWG# CR207

**NEW SIGNAL ROOM**

2C #16 TW	2C #6, 5C #14	01AT SIG 01N
FIBER OPTIC (12 FIBERS)	2C #16, 10C #14	SIG 14S
SIG 12N ← 2-(2C #6), 10C #14	3C #8, 7C #14	
TO TWC 6S ← 4PR #14 TW (COMM)	3C #8, 7C #14	5C #14
TO SIG 6S ← 2-(2C #6), 10C #14	2C #16 TW	2C #16 TW
TO SIG 4N ← 10C #14	2C #6, 2C #14	SW 5A SW 5B
TO SIG 6077S ← 2-(2C #6), 10C #14	2C #14	01NAV
TO SIG 6073S ← 2-(2C #6), 10C #14	2C #6, 2C #14	01NBV
TO SIG 6072S ← 2C #6	2C #6, 2C #14	01NCV
	2C #6, 2C #14	01NDV
	2C #6, 2C #14	01NEV
	2C #6, 2C #14	01NFV
	2C #6, 2C #14	01NGV

LEFT TRACK

SIG 10N ← 2-(2C #6), 10C #14	2C #6, 5C #14	02AT SIG 02N
TO TWC 8S ← 4PR #14 TW (COMM)	5C #14	SM CASE
TO SIG 8S ← 2-(2C #6), 10C #14	2-(2C #6), 10C #14	SIG 18S
TO SM CASE ← 5C #14		
TO SIG 2N ← 2-(2C #6), 10C #14	2C #6, 2C #14	02NBV
TO SIG 6074N ← 2-(2C #6), 10C #14	2C #6, 2C #14	02NCV
TO CS 6071N ← 2C #6	2C #6, 2C #14	02NDV
TO SW 1A & SW 1B ← 3C #8, 7C #14	2C #6, 2C #14	02NEV
TO SW 1A & SW 1B ← 2C #16	2C #6, 2C #14	02NFV
TO SW 3A & SW 3B ← 3C #8, 7C #14	2C #6, 2C #14	02NGV
TO SW 3A & SW 3B ← 2C #16	2C #6, 2C #14	02NGV
02NAV ← 2C #6, 2C #14		

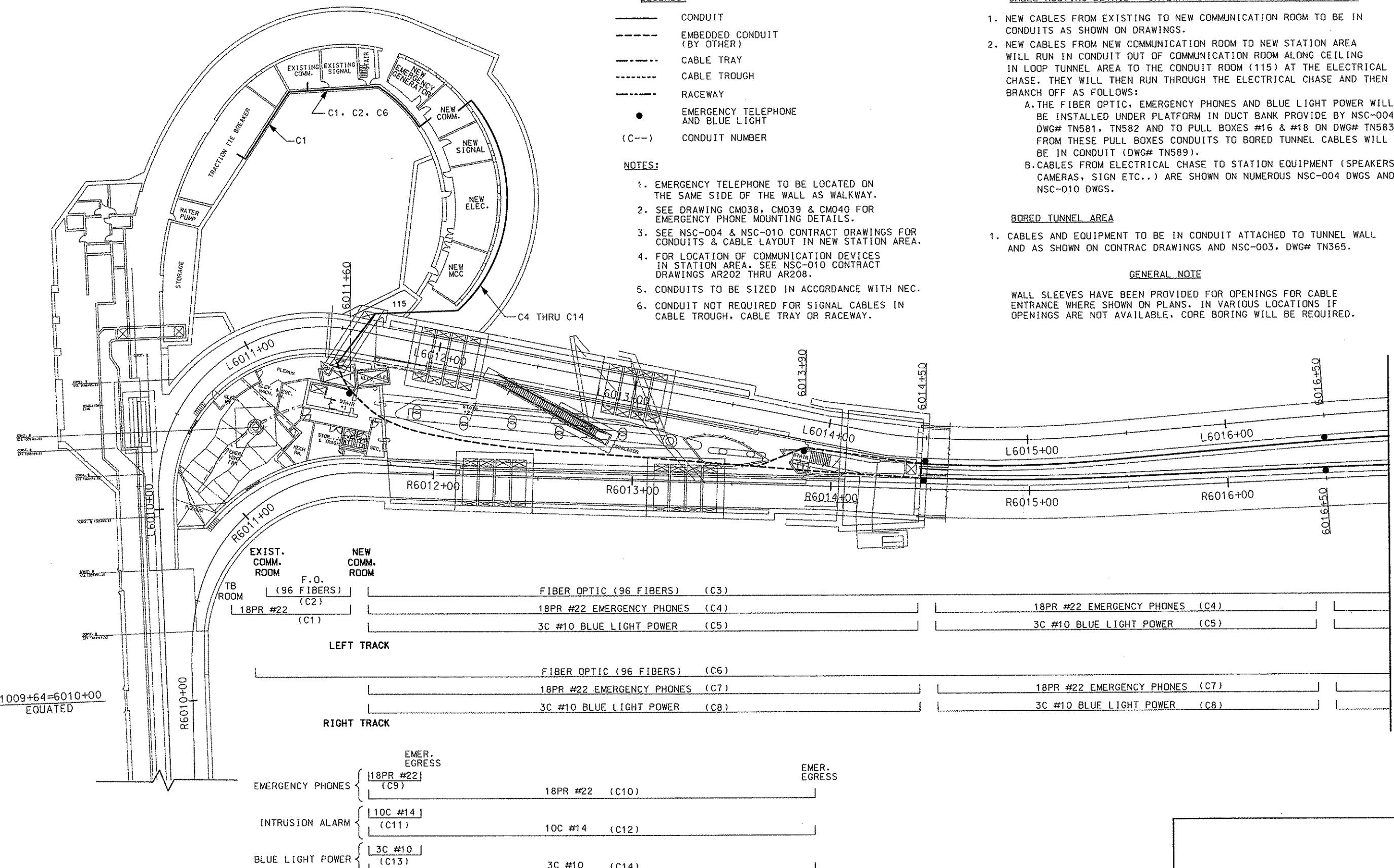
LEGENDS:

- CONDUIT
- - - EMBEDDED CONDUIT (BY OTHER)
- - - CABLE TRAY
- - - CABLE TROUGH
- - - RACEWAY
- SIGNAL
- △ TRAIN TO WAYSIDE (TWC)
- TRAIN STOP (TS)
- JUNCTION BOX (JB)
- PULL BOX (PB)

NOTES:

- SEE DRAWINGS SG203 & SG204 FOR CONDUIT LAYOUT FROM SIGNAL AND COMMUNICATION ROOMS TO ELEVATED STRUCTURE.

				THE PREPARATION OF THIS DOCUMENT HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE FEDERAL TRANSIT ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, FOR THE PORT AUTHORITY OF ALLEGHENY COUNTY, PENNSYLVANIA.		DMJM HARRIS AECOM FOUR GATEWAY CENTER 20TH FLOOR PITTSBURGH, PA. 15222 MICHAEL T. MCNAMARA ENGINEER-IN-CHARGE APPROVED: <i>[Signature]</i> DATE: APR. 28, 2008	DESIGNED	H LAY	PORT AUTHORITY OF ALLEGHENY COUNTY PITTSBURGH NORTH SHORE CONNECTOR NSC TRAIN SYSTEM (SYSTEM WIDE) SIGNAL CABLE ROUTING PLAN ALLEGHENY STATION	
							DRAWN	HT TRAN		
NO. DATE	DESCRIPTION	REVISIONS			CHECKED	JF SAMEAN	IN CHARGE	CD JONES		
					APPROVED	DATE	DATE	APR. 28, 2008		
CONTRACT NO.	NSC-009	DWG. NO.	CR208	SHT.	577					



CONTINUE ON DWG# CR301

 Gannett Fleming Transit & Rail Systems				 MICHAEL T. MCNAMARA PENNSYLVANIA LICENSE NO. 37353-R EXPIRED APR. 2009 Signature: Michael T. McNamara Date: 4/28/08	PORT AUTHORITY OF ALLEGHENY COUNTY Pittsburgh NORTH SHORE CONNECTOR NSC TRAIN SYSTEM (SYSTEM WIDE) COMMUNICATION CABLE ROUTING PLAN GATEWAY STATION TO TUNNEL
	NO.	DATE	DESCRIPTION		
REVISIONS			DATE	NTS	Port Authority
			CONTRACT NO.	NSC-009	
			DWG. NO.	CR300	SHT. 578

CONTINUE ON DWG# CR300

LEGENDS:	
CONDUIT	
EMBEDDED CONDUIT (BY OTHER)	1. EMERGENCY TELEPHONE TO BE LOCATED ON THE SAME SIDE OF THE WALL AS WALKWAY. 2. SEE DRAWING CM040 FOR MOUNTING DETAILS.
CABLE TRAY	
CABLE TROUGH	
RACEWAY	
● EMERGENCY TELEPHONE AND BLUE LIGHT	
(C--) CONDUIT NUMBER	

NOTES:

1. EMERGENCY TELEPHONE TO BE LOCATED ON THE SAME SIDE OF THE WALL AS WALKWAY.
2. SEE DRAWING CM040 FOR MOUNTING DETAILS.

6018+50

L6018+00

L6019+00

L6020+00

6020+50

L6021+00

L6022+00

16023+00

R6022+00

6022+50

FIBER OPTIC (96 FIBERS) (C3)
18PR #22 EMERGENCY PHONES (C4)
3C #10 BLUE LIGHT POWER (C5)

18PR #22 EMERGENCY PHONES (C4)
3C #10 BLUE LIGHT POWER (C5)

18PR #22 EMERGENCY PHONES (C4)
3C #10 BLUE LIGHT POWER (C5)

LEFT TRACK

FIBER OPTIC (96 FIBERS) (C6)
18PR #22 EMERGENCY PHONES (C7)
3C #10 BLUE LIGHT POWER (C8)

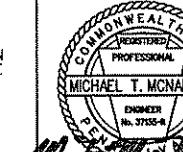
18PR #22 EMERGENCY PHONES (C7)
3C #10 BLUE LIGHT POWER (C8)

18PR #22 EMERGENCY PHONES (C7)
3C #10 BLUE LIGHT POWER (C8)

RIGHT TRACK

CONTINUE ON DWG# CR302

THE PREPARATION OF THIS DOCUMENT HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE FEDERAL TRANSIT ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, FOR THE PORT AUTHORITY OF ALLEGHENY COUNTY, PENNSYLVANIA.



DMJM HARRIS | AECOM
FOUR GATEWAY CENTER
20TH FLOOR
PITTSBURGH, PA. 15222
MICHAEL T. McNAMARA
REGISTERED PROFESSIONAL
ENGINEER
No. 37554
Signature: Michael T. McNamara
Date: April 28, 2008

DESIGNED H LAY

DRAWN HT TRAN

CHECKED P WILLIS

IN CHARGE CD JONES

DATE APR. 28, 2008

SCALE NTS

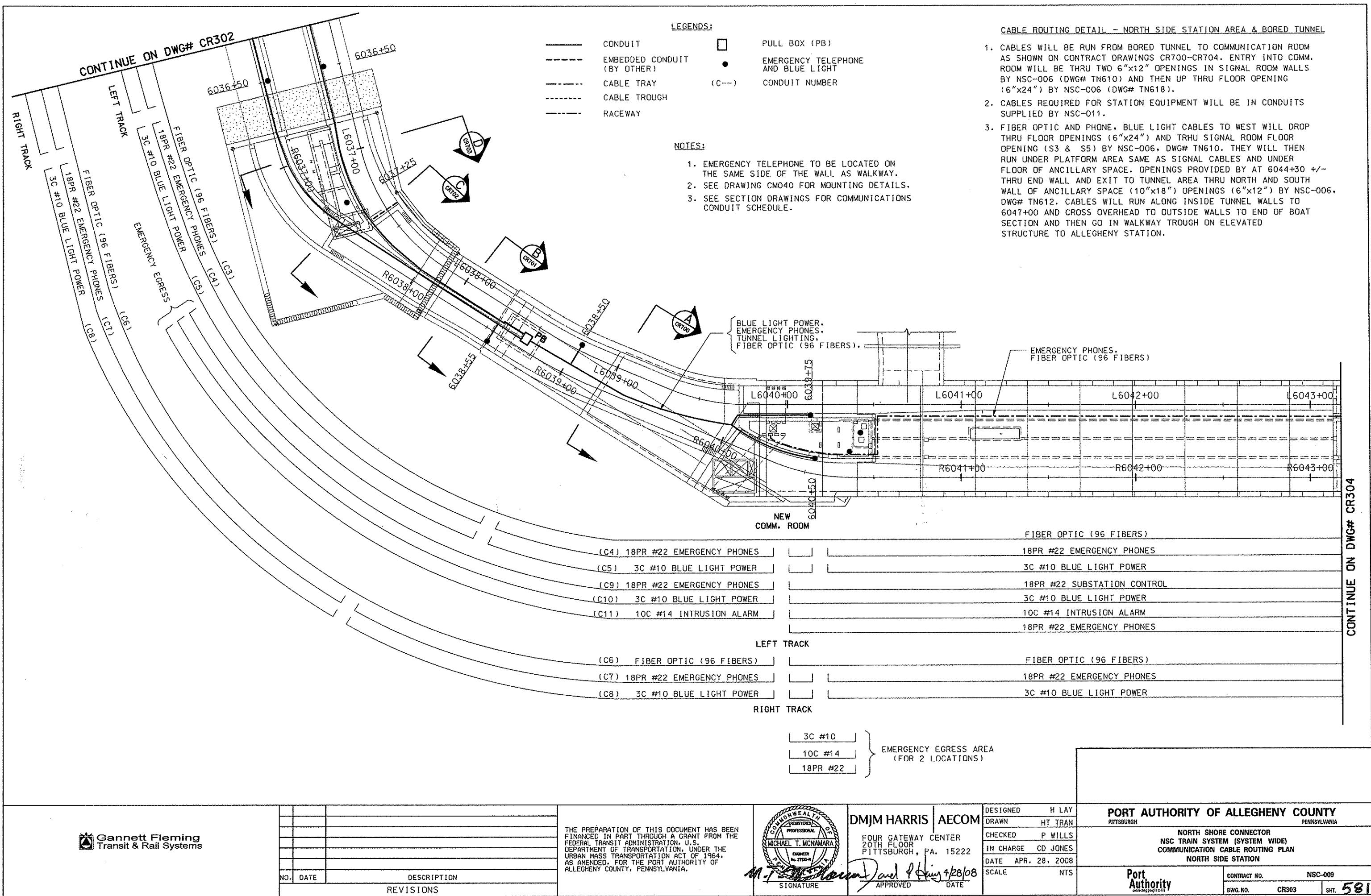
APPROVED DATE

PORT AUTHORITY OF ALLEGHENY COUNTY
Pittsburgh, Pennsylvania
NORTH SHORE CONNECTOR
NSC TRAIN SYSTEM (SYSTEM WIDE)
COMMUNICATION CABLE ROUTING PLAN
TUNNEL SECTION

Gannett Fleming
Transit & Rail Systems

NO.	DATE	DESCRIPTION
REVISIONS		

Port Authority
Contract No. NSC-009
DWG. NO. CR301 Sht. 579



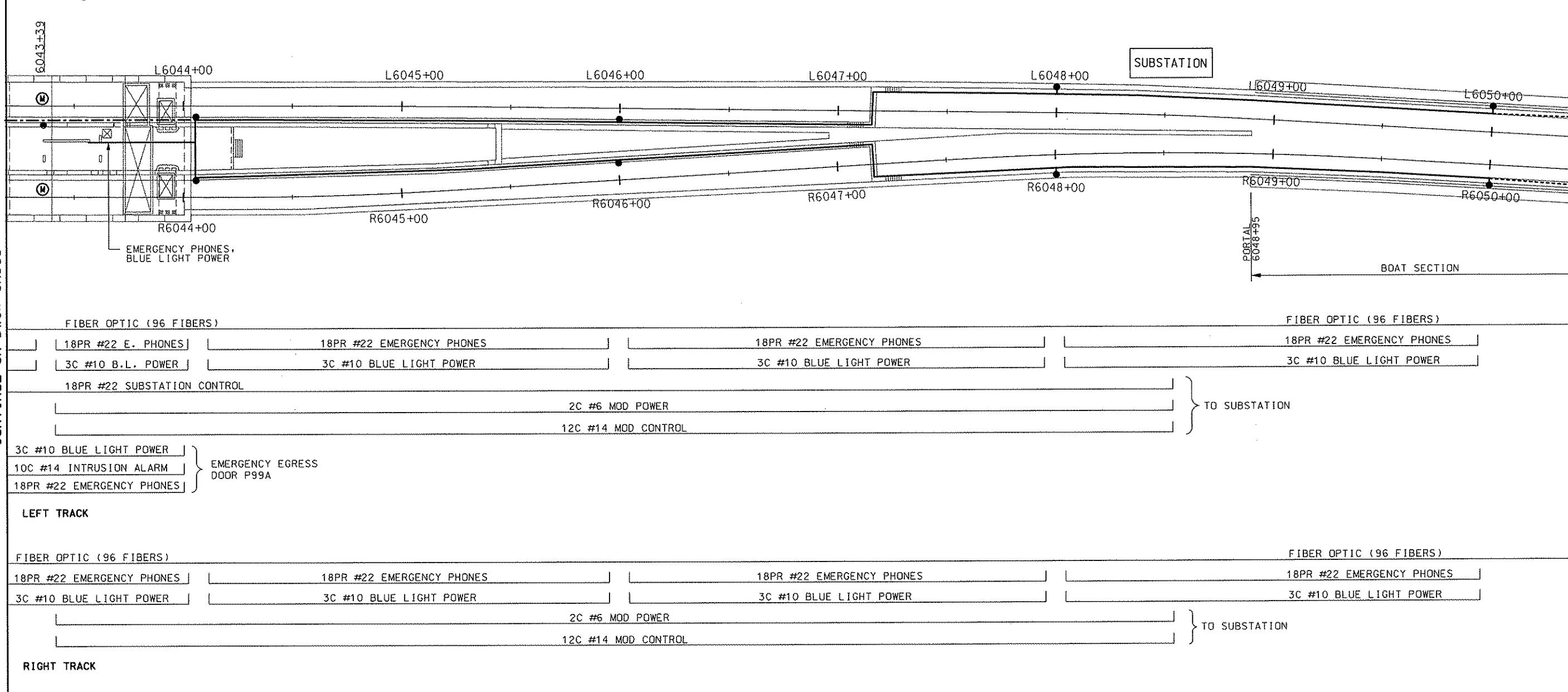
LEGENDS:

- CONDUIT
- - - EMBEDDED CONDUIT
(BY OTHER)
- - - CABLE TRAY
- - - CABLE TROUGH
- - - RACEWAY
- EMERGENCY TELEPHONE
AND BLUE LIGHT
- Ⓜ MOTOR OPERATED DISCONNECT

NOTES:

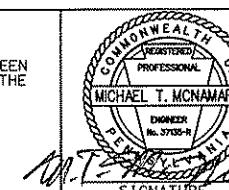
1. EMERGENCY TELEPHONE TO BE LOCATED ON THE SAME SIDE OF THE WALL AS WALKWAY.
2. SEE DRAWING CM040 FOR MOUNTING DETAILS.

CONTINUE ON DWG# CR303



CONTINUE ON DWG# CR305

 Gannett Fleming Transit & Rail Systems	<table border="1"> <tr> <td>NO.</td> <td>DATE</td> <td>DESCRIPTION</td> </tr> <tr> <td colspan="3">REVISIONS</td> </tr> </table>	NO.	DATE	DESCRIPTION	REVISIONS			 THE PREPARATION OF THIS DOCUMENT HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE FEDERAL TRANSIT ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, FOR THE PORT AUTHORITY OF ALLEGHENY COUNTY, PENNSYLVANIA.	DMJM HARRIS AECOM FOUR GATEWAY CENTER 20TH FLOOR PITTSBURGH, PA. 15222	DESIGNED	H. LAY	PORT AUTHORITY OF ALLEGHENY COUNTY PITTSBURGH
		NO.	DATE	DESCRIPTION								
REVISIONS												
DRAWN	H. T. TRAN											



Michael T. McNamara
OWNER
P.T. McNamara & Associates, Inc.
SIGNATURE

[Handwritten signature]

David P. Hay 4/28/08
APPROVED DATE

North Shore Connector NSC Train System (System Wide) Communication Cable Routing Plan North Side Station to Allegheny Station	Port Authority CONTRACT NO. NSC-009 DWG. NO. CR304 SHT. 582

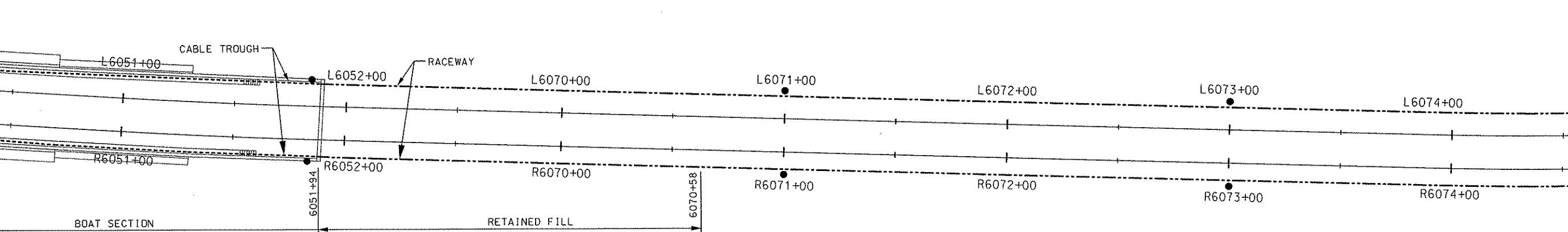
LEGENDS:

- CONDUIT
- - - EMBEDDED CONDUIT
(BY OTHER)
- - - CABLE TRAY
- - - CABLE TROUGH
- - - RACEWAY
- EMERGENCY TELEPHONE
AND BLUE LIGHT

NOTES:

1. EMERGENCY TELEPHONE TO BE LOCATED ON THE SAME SIDE OF THE WALL AS WALKWAY.
2. SEE DRAWING CM040 FOR MOUNTING DETAILS.
3. BLUE LIGHT POWER TO BE INSTALLED IN TYPE MC CABLE INSIDE OF TROUGH.

CONTINUE ON DWG# CR304



CONTINUE ON DWG# CR306

FIBER OPTIC (96 FIBERS)

18PR #22 EMERGENCY PHONES
3C #10 BLUE LIGHT POWER

18PR #22 EMERGENCY PHONES
3C #10 BLUE LIGHT POWER

FIBER OPTIC (96 FIBERS)

18PR #22 EMERGENCY PHONES
3C #10 BLUE LIGHT POWER

LEFT TRACK

FIBER OPTIC (96 FIBERS)

18PR #22 EMERGENCY PHONES
3C #10 BLUE LIGHT POWER

18PR #22 EMERGENCY PHONES
3C #10 BLUE LIGHT POWER

FIBER OPTIC (96 FIBERS)

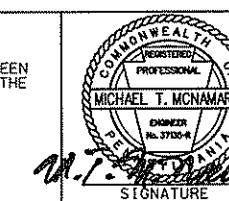
18PR #22 EMERGENCY PHONES
3C #10 BLUE LIGHT POWER

RIGHT TRACK



NO.	DATE	DESCRIPTION
REVISIONS		

THE PREPARATION OF THIS DOCUMENT HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE FEDERAL TRANSIT ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, FOR THE PORT AUTHORITY OF ALLEGHENY COUNTY, PENNSYLVANIA.



DMJM HARRIS | AECOM
FOUR GATEWAY CENTER
20TH FLOOR
PITTSBURGH, PA. 15222
Daniel P. Harrington 4/28/08
SIGNATURE APPROVED DATE

DESIGNED H. LAY
DRAWN HT. TRAN
CHECKED P. WILLS
IN CHARGE CD. JONES
DATE APR. 28, 2008
SCALE NTS

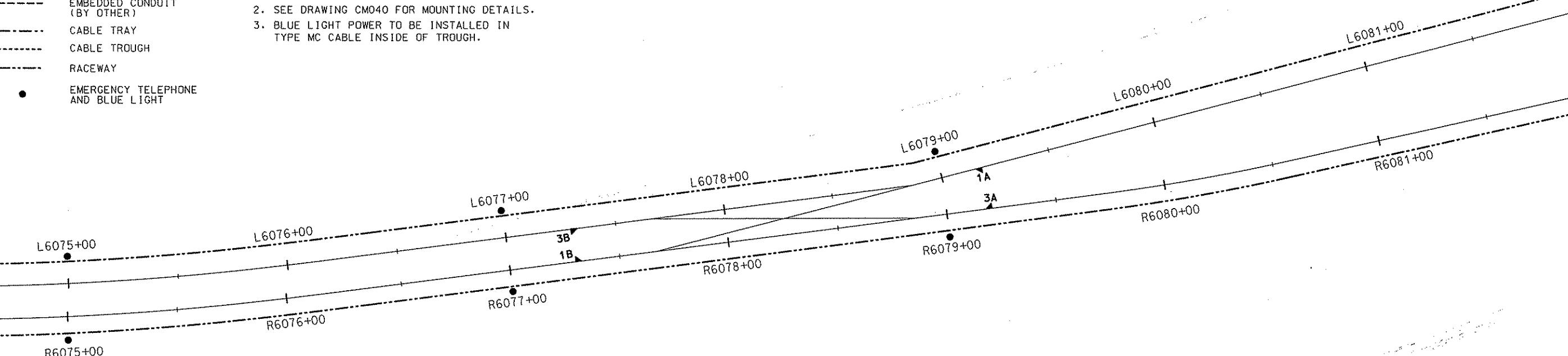
PORT AUTHORITY OF ALLEGHENY COUNTY
PITTSBURGH
NORTH SHORE CONNECTOR
NSC TRAIN SYSTEM (SYSTEM WIDE)
COMMUNICATION CABLE ROUTING PLAN
NORTH SIDE STATION TO ALLEGHENY STATION
Port Authority
CONTRACT NO. NSC-009
DWG. NO. CR305 SHT. 583

CONTINUE ON DWG# CR305

LEGENDS:	
CONDUIT	
EMBEDDED CONDUIT (BY OTHER)	
CABLE TRAY	
CABLE TROUGH	
RACEWAY	
● EMERGENCY TELEPHONE AND BLUE LIGHT	

NOTES:

1. EMERGENCY TELEPHONE TO BE LOCATED ON THE SAME SIDE OF THE WALL AS WALKWAY.
2. SEE DRAWING CM040 FOR MOUNTING DETAILS.
3. BLUE LIGHT POWER TO BE INSTALLED IN TYPE MC CABLE INSIDE OF TROUGH.



CONTINUE ON DWG# CR307

FIBER OPTIC (96 FIBERS)

18PR #22 EMERGENCY PHONES
3C #10 BLUE LIGHT POWER18PR #22 EMERGENCY PHONES
3C #10 BLUE LIGHT POWER

FIBER OPTIC (96 FIBERS)

18PR #22 EMERGENCY PHONES
3C #10 BLUE LIGHT POWER

LEFT TRACK

FIBER OPTIC (96 FIBERS)

18PR #22 EMERGENCY PHONES
3C #10 BLUE LIGHT POWER

FIBER OPTIC (96 FIBERS)

18PR #22 EMERGENCY PHONES
3C #10 BLUE LIGHT POWER

FIBER OPTIC (96 FIBERS)

18PR #22 EMERGENCY PHONES
3C #10 BLUE LIGHT POWER

RIGHT TRACK

 Gannett Fleming Transit & Rail Systems			THE PREPARATION OF THIS DOCUMENT HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE FEDERAL TRANSIT ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, FOR THE PORT AUTHORITY OF ALLEGHENY COUNTY, PENNSYLVANIA.	 MICHAEL T. McNAMARA CHIEF P.E. NO. 3733-R APPROVED DATE <i>M.T. McNamara</i> <i>David P. Hay</i> 4/28/08	DMJM HARRIS AECOM FOUR GATEWAY CENTER 20TH FLOOR PITTSBURGH, PA. 15222 SIGNATURE <i>M.T. McNamara</i> APPROVED DATE <i>David P. Hay</i> 4/28/08	DESIGNED H LAY	NORTH SHORE CONNECTOR NSC TRAIN SYSTEM (SYSTEM WIDE) COMMUNICATION CABLE ROUTING PLAN NORTH SIDE STATION TO ALLEGHENY STATION
		DRAWN HT TRAN				CHECKED P WILLS	
NO. DATE	DESCRIPTION	REVISIONS		SCALE NTS	Port Authority	CONTRACT NO. NSC-009	
				DWG. NO. CR306	SHT. 584		

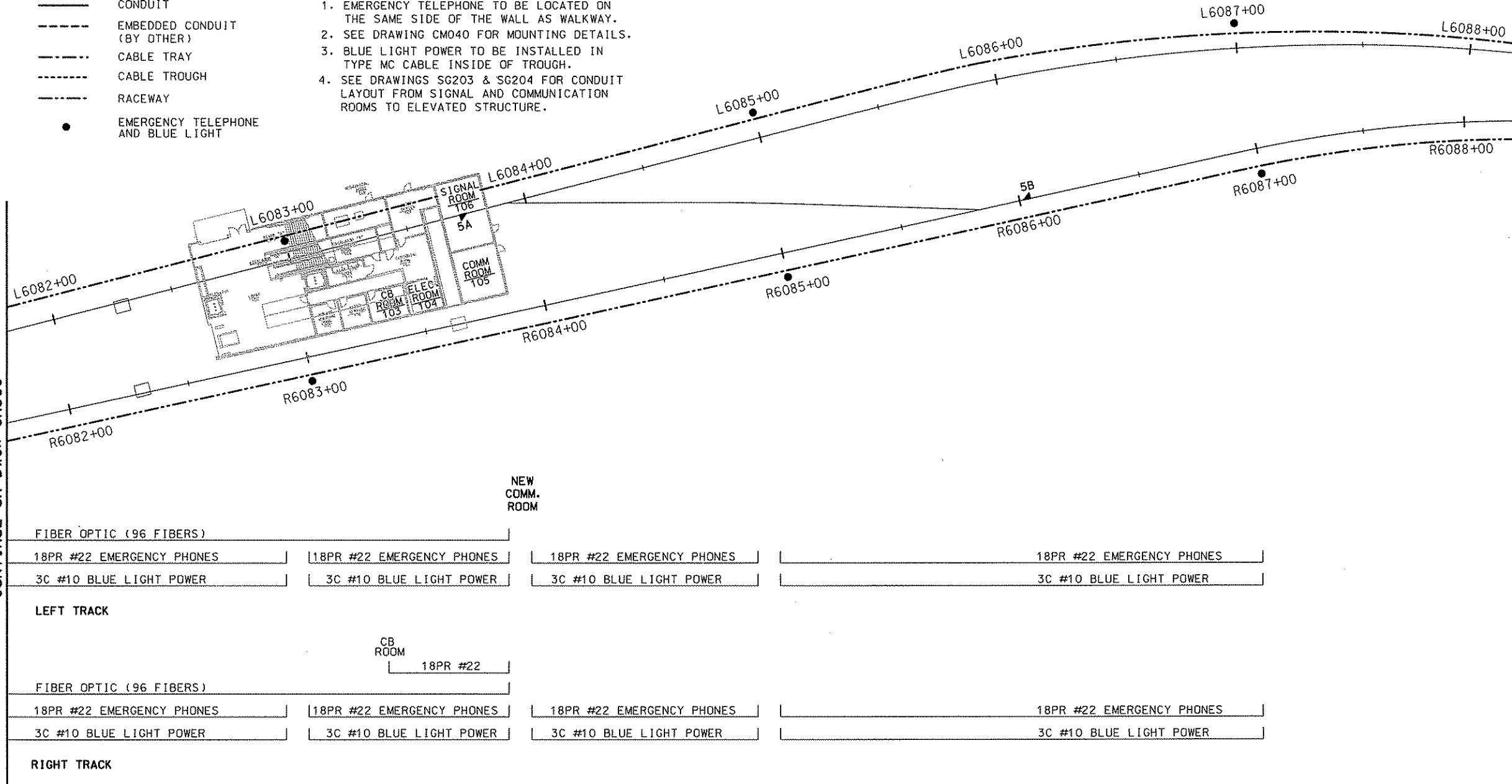
LEGENDS:

- CONDUIT
- - - EMBEDDED CONDUIT
(BY OTHER)
- - - CABLE TRAY
- - - CABLE TROUGH
- - - RACEWAY
- EMERGENCY TELEPHONE
AND BLUE LIGHT

NOTES:

1. EMERGENCY TELEPHONE TO BE LOCATED ON THE SAME SIDE OF THE WALL AS WALKWAY.
2. SEE DRAWING CM040 FOR MOUNTING DETAILS.
3. BLUE LIGHT POWER TO BE INSTALLED IN TYPE MC CABLE INSIDE OF TROUGH.
4. SEE DRAWINGS SG203 & SG204 FOR CONDUIT LAYOUT FROM SIGNAL AND COMMUNICATION ROOMS TO ELEVATED STRUCTURE.

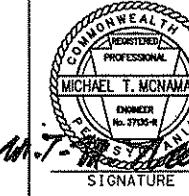
CONTINUE ON DWG# CR306



Gannett Fleming
Transit & Rail Systems

NO.	DATE	DESCRIPTION
REVISIONS		

THE PREPARATION OF THIS DOCUMENT HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE FEDERAL TRANSIT ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, FOR THE PORT AUTHORITY OF ALLEGHENY COUNTY, PENNSYLVANIA.



MICHAEL T. MCNAMARA
OWNER
P-3703-R

SIGNATURE

APPROVED

DATE

4/28/08

H. LAY
DRAWN
HT TRAN

P. WILLS
CHECKED

C. JONES
IN CHARGE

APR. 28, 2008
DATE

NTS
SCALE

PORT AUTHORITY OF ALLEGHENY COUNTY
PITTSBURGH, PENNSYLVANIA

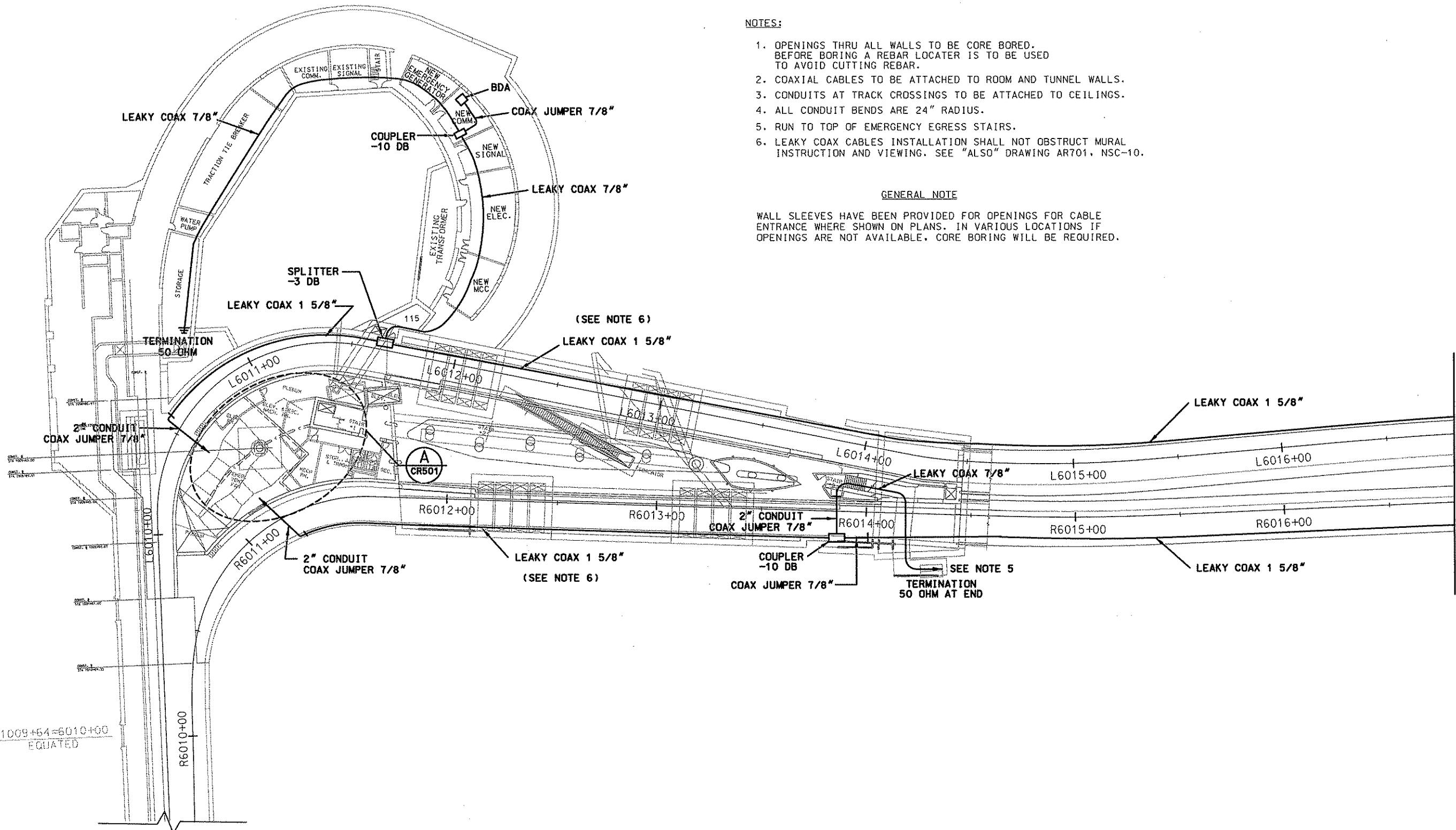
NORTH SHORE CONNECTOR
NSC TRAIN SYSTEM (SYSTEM WIDE)
COMMUNICATION CABLE ROUTING PLAN
ALLEGHENY STATION

Port Authority

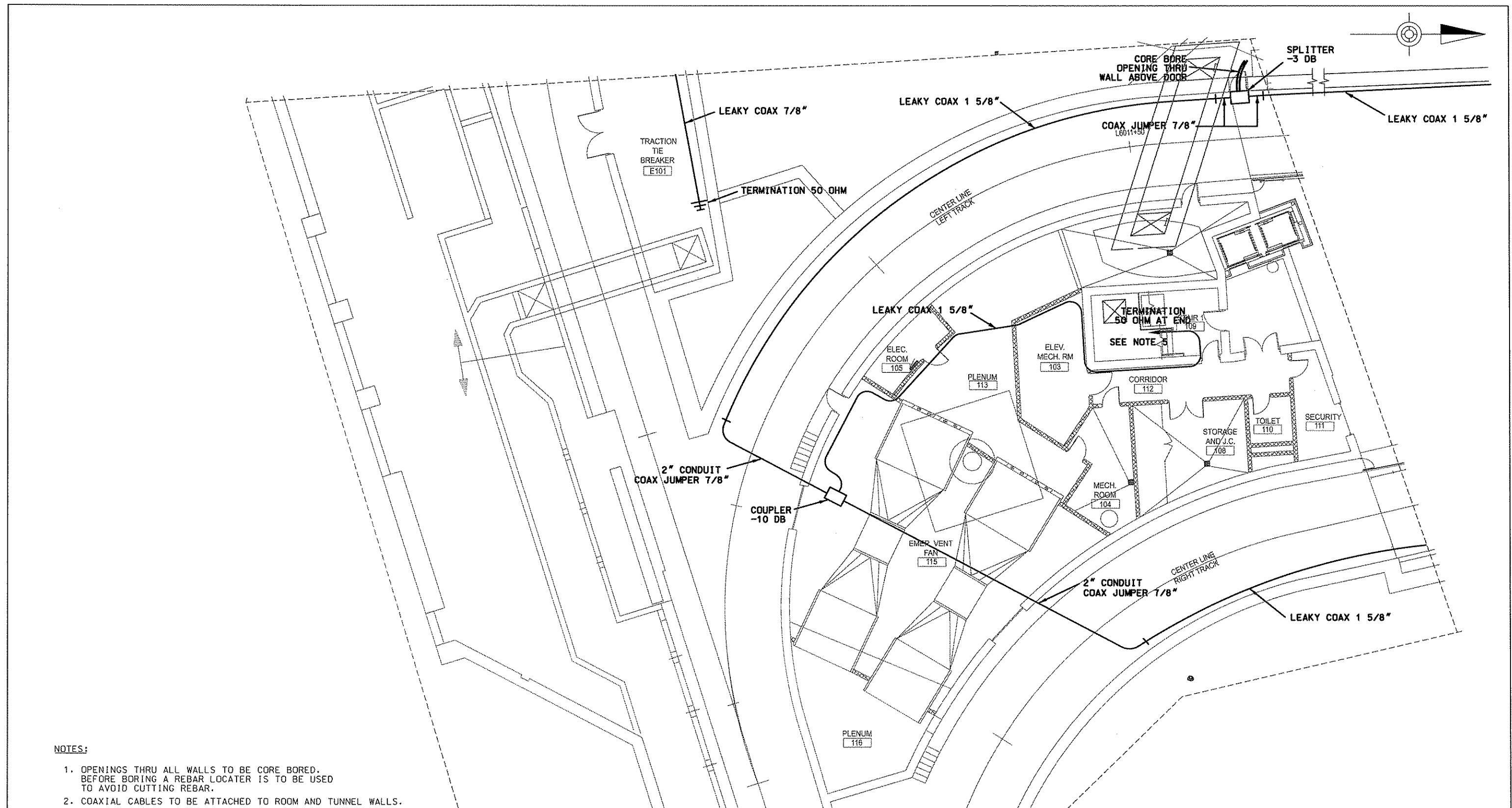
CONTRACT NO.
NSC-009

DWG. NO.
CR307

SHT. 585



							PORT AUTHORITY OF ALLEGHENY COUNTY PITTSBURGH PENNSYLVANIA	
							NORTH SHORE CONNECTOR NSC TRAIN SYSTEM (SYSTEM WIDE) LEAKY CO-AXIAL CABLE ROUTING PLAN GATEWAY STATION TO TUNNEL	
NO. DATE	DESCRIPTION	REVISIONS	 MICHAEL T. McNAMARA <small>OWNER AGENT</small> <small>PROFESSIONAL</small> <small>REGISTERED</small> <small>COMMONWEALTH OF PENNSYLVANIA</small>		DMJM HARRIS	AECOM	DESIGNED R SCHMIDT DRAWN HT TRAN	
					CHECKED K HOFFMAN IN CHARGE CD JONES DATE APR. 28, 2008			
			 <i>Michael T. McNamara</i> <i>David F. Hagan 4/28/08</i>		APPROVED	DATE	Port Authority CONTRACT NO. NSC-008 DWG. NO. CR400 SHT. 586	
					SCALE NTS			



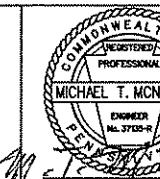
NOTES:

- OPENINGS THRU ALL WALLS TO BE CORE BORED. BEFORE BORING A REBAR LOCATER IS TO BE USED TO AVOID CUTTING REBAR.
- COAXIAL CABLES TO BE ATTACHED TO ROOM AND TUNNEL WALLS.
- CONDUITS AT TRACK CROSSINGS TO BE ATTACHED TO CEILINGS.
- ALL CONDUIT BENDS ARE 24" RADIUS.
- RUN TO TOP OF EMERGENCY EGRESS STAIRS.

DETAIL A
CR400

NO.	DATE	DESCRIPTION	
		REVISIONS	REVISIONS

THE PREPARATION OF THIS DOCUMENT HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE FEDERAL TRANSIT ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, FOR THE PORT AUTHORITY OF ALLEGHENY COUNTY, PENNSYLVANIA.



DMJM HARRIS | AECOM
FOUR GATEWAY CENTER
20TH FLOOR
PITTSBURGH, PA. 15222
MICHAEL T. MCNAMARA
PROFESSIONAL ENGINEER
REGISTRATION NO. 3703-R
EXPIRED APR. 2008
SIGNATURE
APPROVED
DATE
7/26/08

PORT AUTHORITY OF ALLEGHENY COUNTY
PITTSBURGH
NORTH SHORE CONNECTOR
NSC TRAIN SYSTEM (SYSTEM WIDE)
LEAKY CO-AXIAL CABLE ROUTING PLAN
GATEWAY STATION ROOM LAYOUT
Port Authority
CONTRACT NO. NSC-009
DWG. NO. CR401
SHT. 57

CONTINUE ON DWG# CR400

LEAKY COAX 1 5/8"

L6018+00

L6019+00

L6020+00

L6021+00

L6022+00

L6023+00

R6018+00

R6019+00

R6020+00

R6021+00

R6022+00

R60

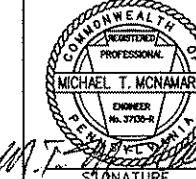
LEAKY COAX 1 5/8"

CONTINUE ON DWG# CR403

NOTES:

1. OPENINGS THRU ALL WALLS TO BE CORE BORED.
BEFORE BORING A REBAR LOCATER IS TO BE USED
TO AVOID CUTTING REBAR.
2. COAXIAL CABLES TO BE ATTACHED TO ROOM AND TUNNEL WALLS.
3. CONDUITS AT TRACK CROSSINGS TO BE ATTACHED TO CEILINGS.
4. ALL CONDUIT BENDS ARE 24" RADIUS.

THE PREPARATION OF THIS DOCUMENT HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE FEDERAL TRANSIT ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, FOR THE PORT AUTHORITY OF ALLEGHENY COUNTY, PENNSYLVANIA.



MICHAEL T. McNAMARA

OWNER

PEL

SIGNATURE

APPROVED

DATE

DAVID F. HARRIS

CD JONES

APR. 28, 2008

DATE

NTS

SCALE

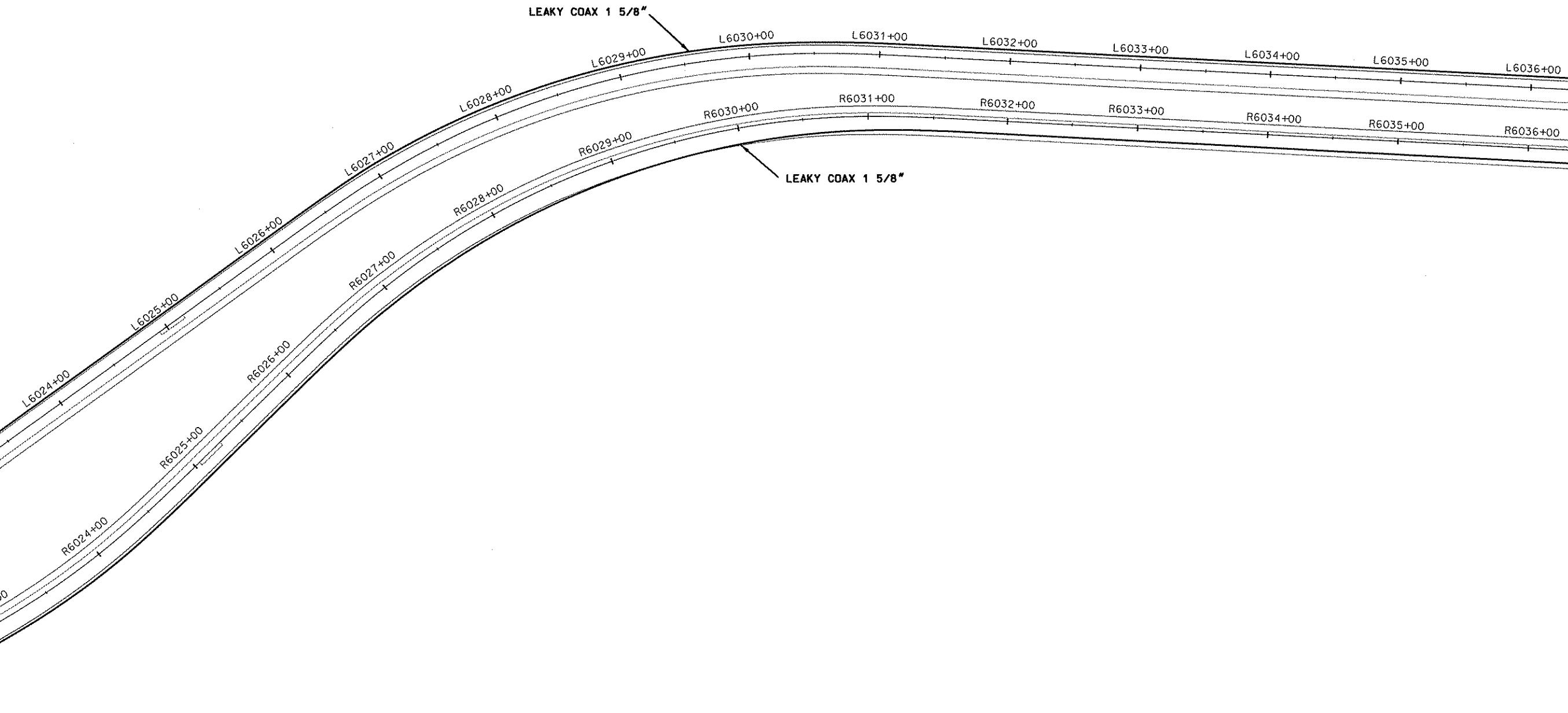
DATE

APPROVED

DATE

</div

CONTINUE ON DWG# CR402



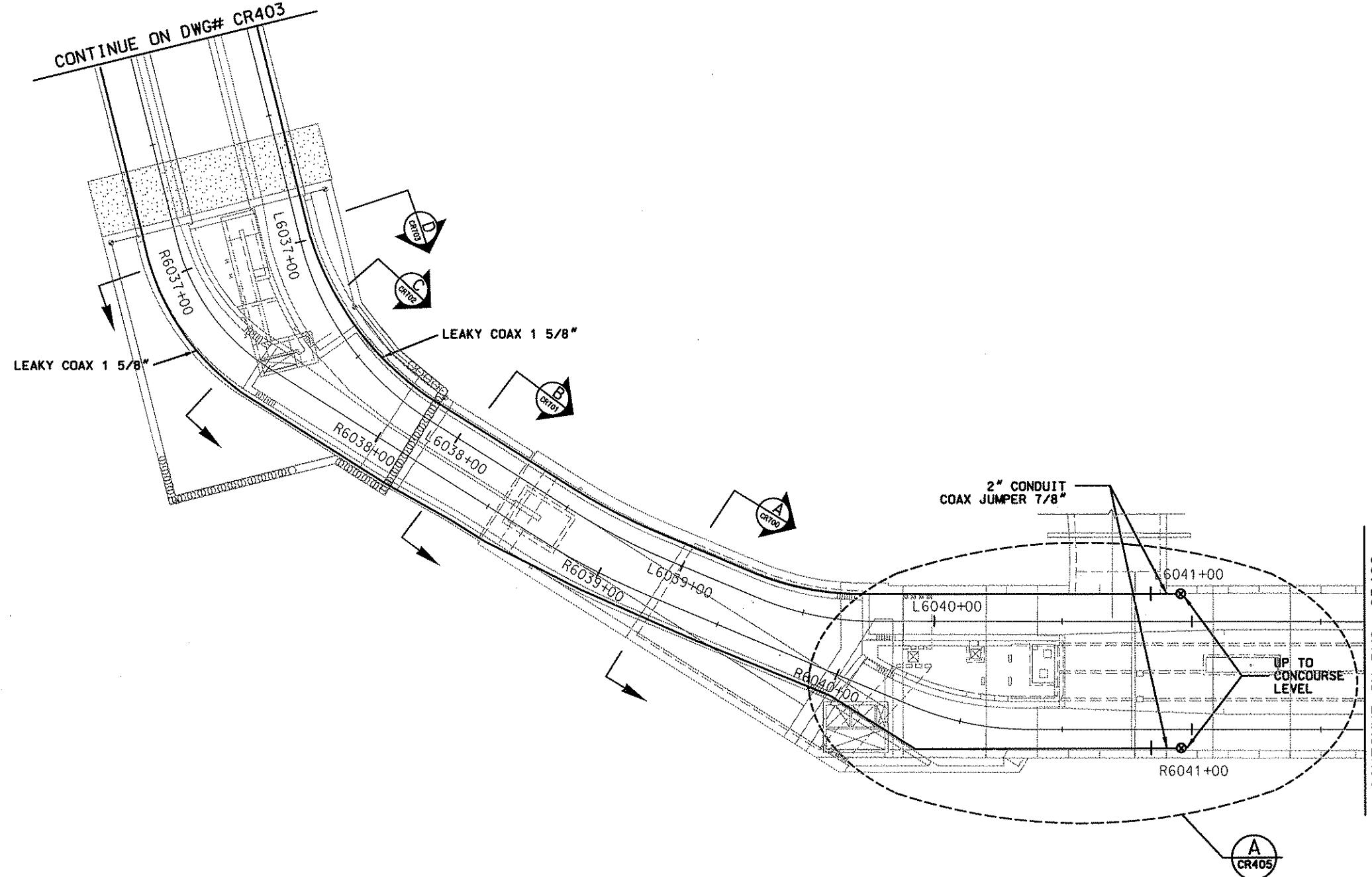
CONTINUE ON DWG# CR404

NOTES:

1. OPENINGS THRU ALL WALLS TO BE CORE BORED.
BEFORE BORING A REBAR LOCATER IS TO BE USED
TO AVOID CUTTING REBAR.
2. COAXIAL CABLES TO BE ATTACHED TO ROOM AND TUNNEL WALLS.
3. CONDUITS AT TRACK CROSSINGS TO BE ATTACHED TO CEILINGS.
4. ALL CONDUIT BENDS ARE 24" RADIUS.

				<p>THE PREPARATION OF THIS DOCUMENT HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE FEDERAL TRANSIT ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, FOR THE PORT AUTHORITY OF ALLEGHENY COUNTY, PENNSYLVANIA.</p>	<p>MICHAEL T. McNAMARA OWNER PA. STATE REG. NO. 123456 SIGNATURE</p>	<p>DMJM HARRIS AECOM</p> <p><i>[Handwritten Signature]</i></p>	DESIGNED R SCHMIDT	PORT AUTHORITY OF ALLEGHENY COUNTY	
							DRAWN HT TRAN	PITTSBURGH	PENNSYLVANIA
				CHECKED K HOFFMAN	NORTH SHORE CONNECTOR				
				IN CHARGE CD JONES	NSC TRAIN SYSTEM (SYSTEM WIDE)				
				DATE APR. 28, 2008	LEAKY CO-AXIAL CABLE ROUTING PLAN				
				SCALE NTS	TUNNEL SECTION				
					Port Authority	CONTRACT NO. NSC-009			
					DWG. NO. CR403	SHT. 580			

CONTINUE ON DWG# CR403

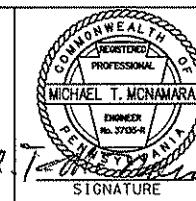


NOTES:

1. OPENINGS THRU ALL WALLS TO BE CORE BORED.
BEFORE BORING A REBAR LOCATER IS TO BE USED
TO AVOID CUTTING REBAR.
2. COAXIAL CABLES TO BE ATTACHED TO ROOM AND TUNNEL WALLS.
3. CONDUITS AT TRACK CROSSINGS TO BE ATTACHED TO CEILINGS.
4. ALL CONDUIT BENDS ARE 24" RADIUS.

NO.	DATE	DESCRIPTION
REVISIONS		

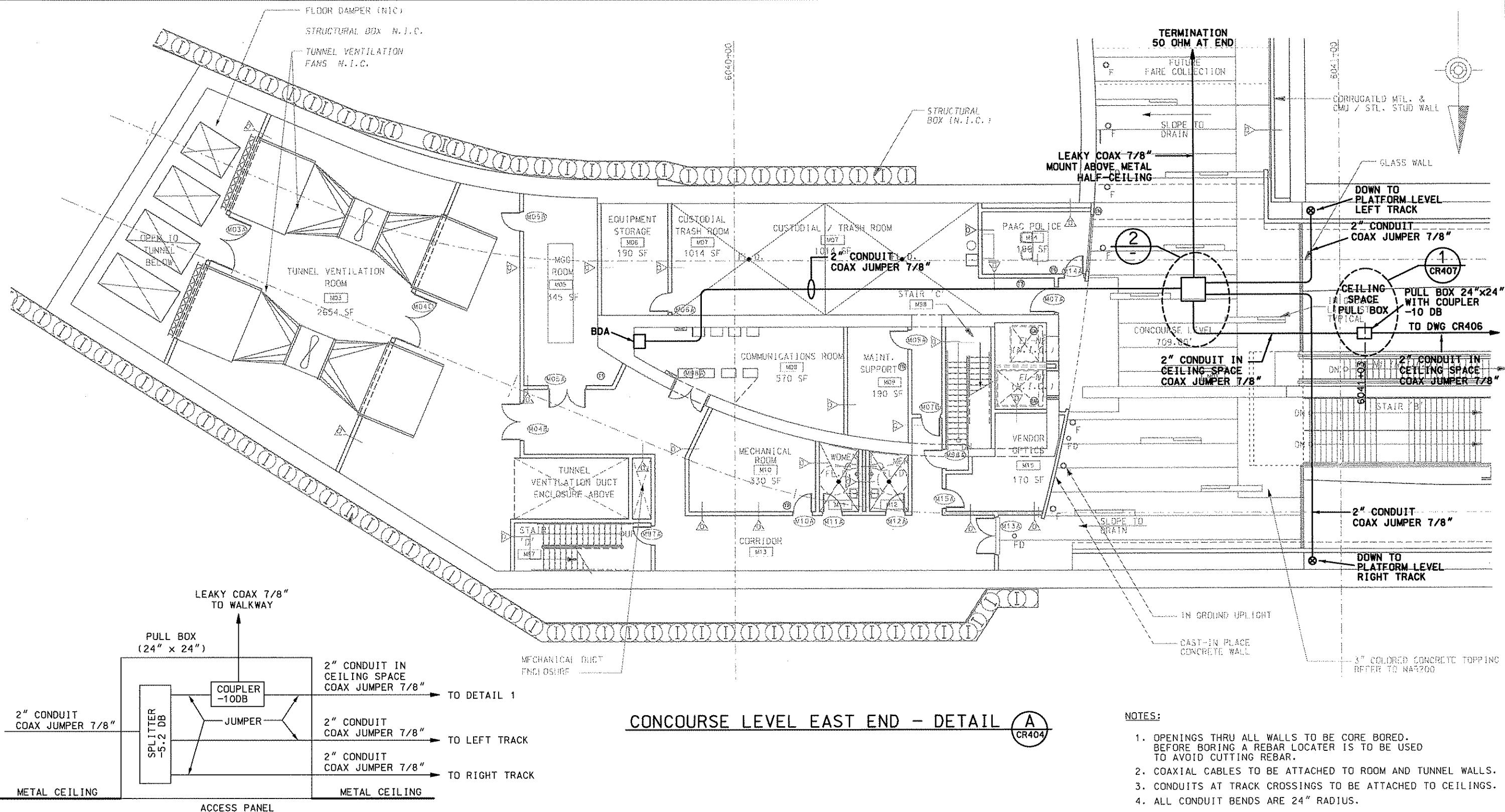
THE PREPARATION OF THIS DOCUMENT HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE FEDERAL TRANSIT ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, FOR THE PORT AUTHORITY OF ALLEGHENY COUNTY, PENNSYLVANIA.



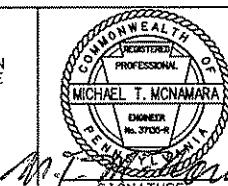
DMJM HARRIS | AECOM
FOUR GATEWAY CENTER
20TH FLOOR
PITTSBURGH, PA. 15222
CHECKED K HOFFMAN
IN CHARGE CD JONES
DATE APR. 26, 2008
APPROVED DATE
Signature: David F. Henry 4/28/08
Signature: T. McNamara

DESIGNED R SCHMIDT
DRAWN HT TRAN
SCALE NTS
Port Authority
CONTRACT NO. NSC-009
DWG. NO. CR404
SHT. 589

PORT AUTHORITY OF ALLEGHENY COUNTY
PITTSBURGH
NORTH SHORE CONNECTOR
NSC TRAIN SYSTEM (SYSTEM WIDE)
LEAKY CO-AXIAL CABLE ROUTING PLAN
NORTH SIDE STATION
CONTRACT NO. NSC-009
DWG. NO. CR404
SHT. 589



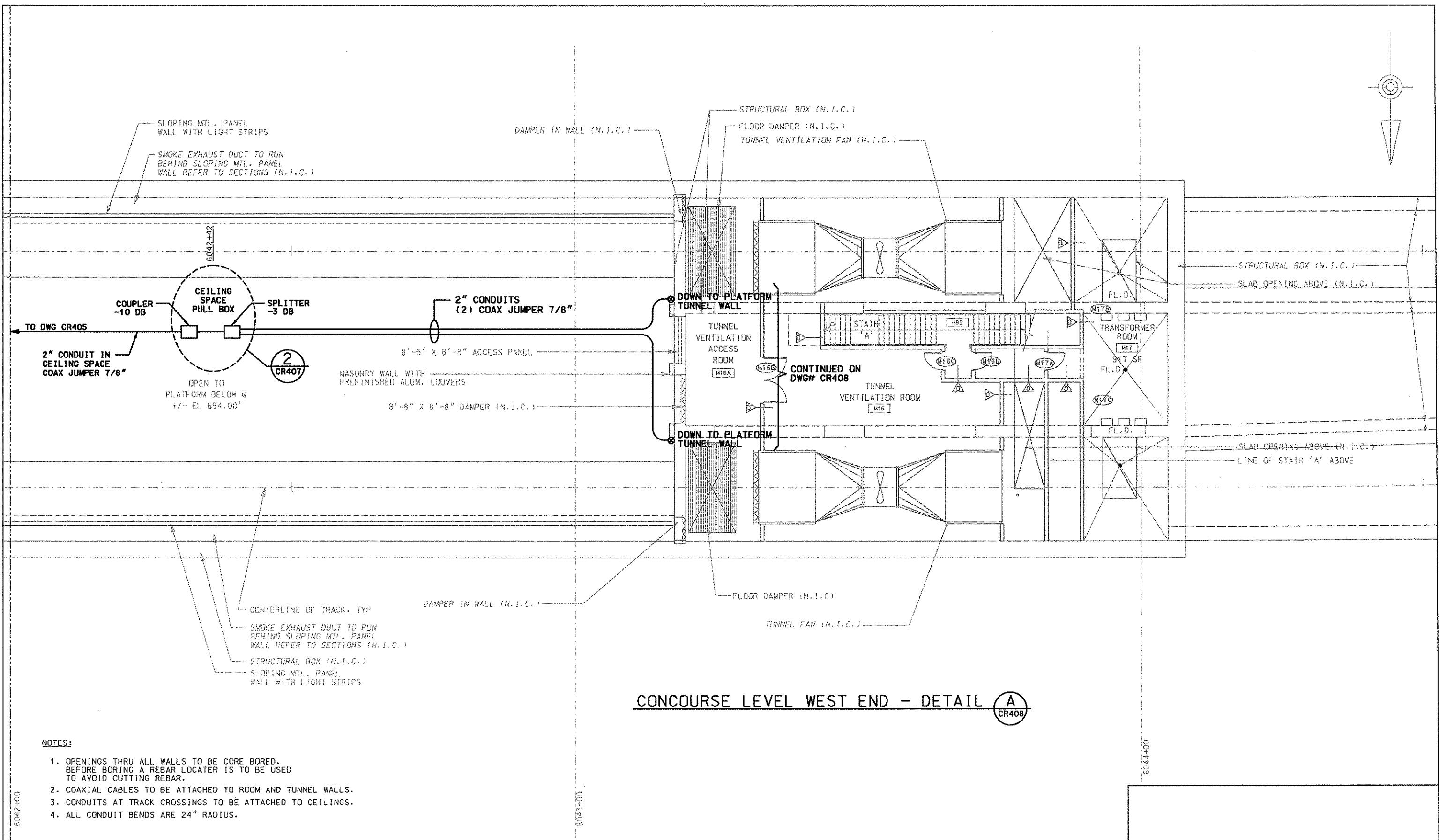
THE PREPARATION OF THIS DOCUMENT HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE FEDERAL TRANSIT ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, FOR THE PORT AUTHORITY OF ALLEGHENY COUNTY, PENNSYLVANIA.



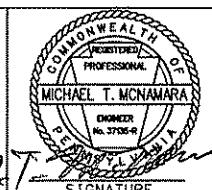
DMJM HARRIS | AECOM
FOUR GATEWAY CENTER
20TH FLOOR
PITTSBURGH, PA. 15222
IN CHARGE CD JONES
DATE APR. 28, 2008
SCALE NTS
APPROVED *Daniel J. Hayes 4/28/08* DATE

PORT AUTHORITY OF ALLEGHENY COUNTY
PITTSBURGH
NORTH SHORE CONNECTOR
NSC TRAIN SYSTEM (SYSTEM WIDE)
LEAKY CO-AXIAL CABLE ROUTING PLAN
NORTH SIDE STATION - CONCOURSE LEVEL - EAST END

Port Authority
CONTRACT NO. NSC-009
DWG. NO. CR405
SHT. -59-



THE PREPARATION OF THIS DOCUMENT HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE FEDERAL TRANSIT ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, FOR THE PORT AUTHORITY OF ALLEGHENY COUNTY, PENNSYLVANIA.



MICHAEL T. McNAMARA

OWNER

PEPS

SIGNATURE

DATE

APR 28, 2008

APPROVED

DATE

2008

DAVID F. HARRIS

AECOM

FOUR GATEWAY CENTER
20TH FLOOR
PITTSBURGH, PA. 15222

DESIGNED R SCHMIDT

DRAWN HT TRAN

CHECKED K HOFFMAN

IN CHARGE CD JONES

DATE APR. 28, 2008

SCALE NTS

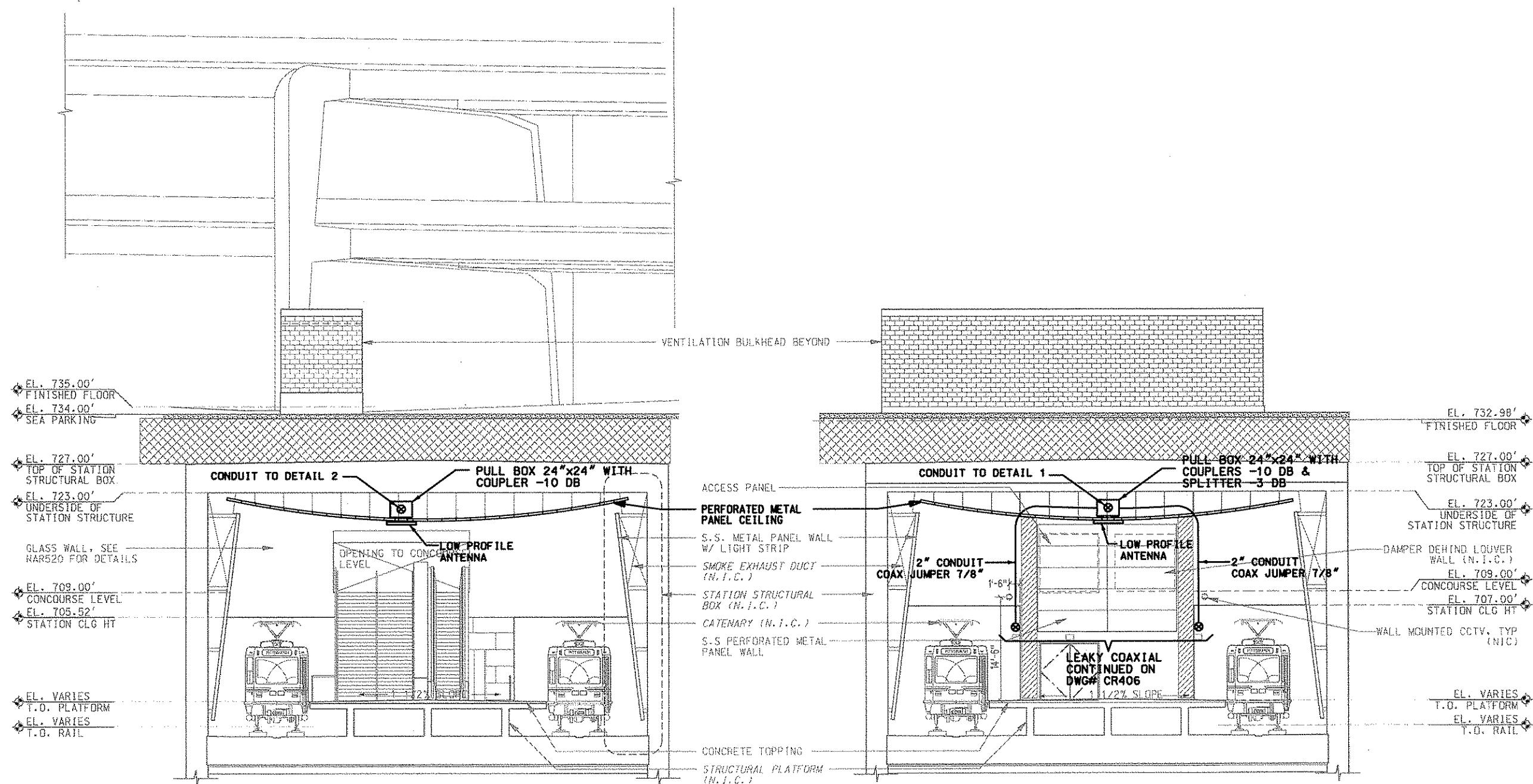
APPROVED DATE

PORT AUTHORITY OF ALLEGHENY COUNTY
PITTSBURGH
PENNSYLVANIA

NORTH SHORE CONNECTOR
NSC TRAIN SYSTEM (SYSTEM WIDE)
LEAKY CO-AXIAL CABLE ROUTING PLAN
NORTH SIDE STATION - CONCOURSE LEVEL - WEST END

Port Authority
CONTRACT NO. NSC-009
DWG. NO. CR406
SHT. 592

NO.	DATE	DESCRIPTION
REVISIONS		



NOTES:

- OPENINGS THRU ALL WALLS TO BE CORE BORED. BEFORE BORING A REBAR LOCATER IS TO BE USED TO AVOID CUTTING REBAR.
- COAXIAL CABLES TO BE ATTACHED TO ROOM AND TUNNEL WALLS.
- CONDUITS AT TRACK CROSSINGS TO BE ATTACHED TO CEILINGS.
- ALL CONDUIT BENDS ARE 24" RADIUS.

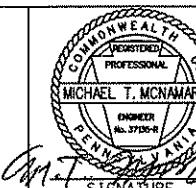
DETAIL 1
CR405

BUILDING SECTION
AT TUNNEL STA. 6042+00
LOOKING EAST

DETAIL 2
CR406

BUILDING SECTION
AT TUNNEL STA. 6042+00
LOOKING WEST

THE PREPARATION OF THIS DOCUMENT HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE FEDERAL TRANSIT ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, FOR THE PORT AUTHORITY OF ALLEGHENY COUNTY, PENNSYLVANIA.

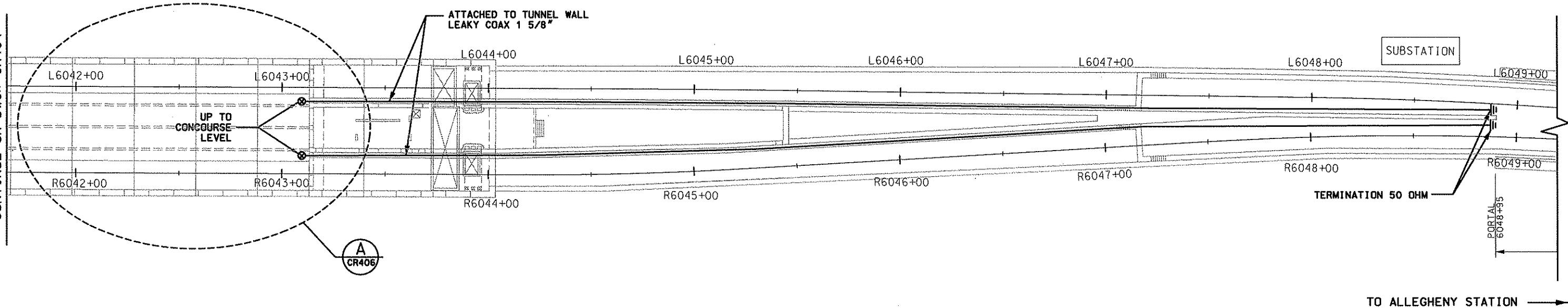


DMJM HARRIS | AECOM
FOUR GATEWAY CENTER
20TH FLOOR
PITTSBURGH, PA. 15222
CHECKED K. HOFFMAN
IN CHARGE CD JONES
DATE APR. 28, 2008
SCALE NTS
APPROVED *David J. Henry 4/28/08*
SIGNATURE DATE

PORT AUTHORITY OF ALLEGHENY COUNTY
PITTSBURGH
NORTH SHORE CONNECTOR
NSC TRAIN SYSTEM (SYSTEM WIDE)
LEAKY CO-AXIAL CABLE ROUTING PLAN
CEILING MOUNT ANTENNA
Port Authority
CONTRACT NO. NSC-009
DWG. NO. CR407
SHT. 593

NO.	DATE	DESCRIPTION
		REVISIONS

CONTINUE ON DWG# CR404

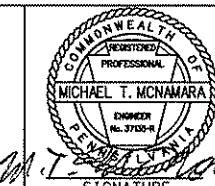


NOTES:

- OPENINGS THRU ALL WALLS TO BE CORE BORED.
BEFORE BORING A REBAR LOCATER IS TO BE USED
TO AVOID CUTTING REBAR.
- COAXIAL CABLES TO BE ATTACHED TO ROOM AND TUNNEL WALLS.
- CONDUITS AT TRACK CROSSINGS TO BE ATTACHED TO CEILINGS.
- ALL CONDUIT BENDS ARE 24" RADIUS.

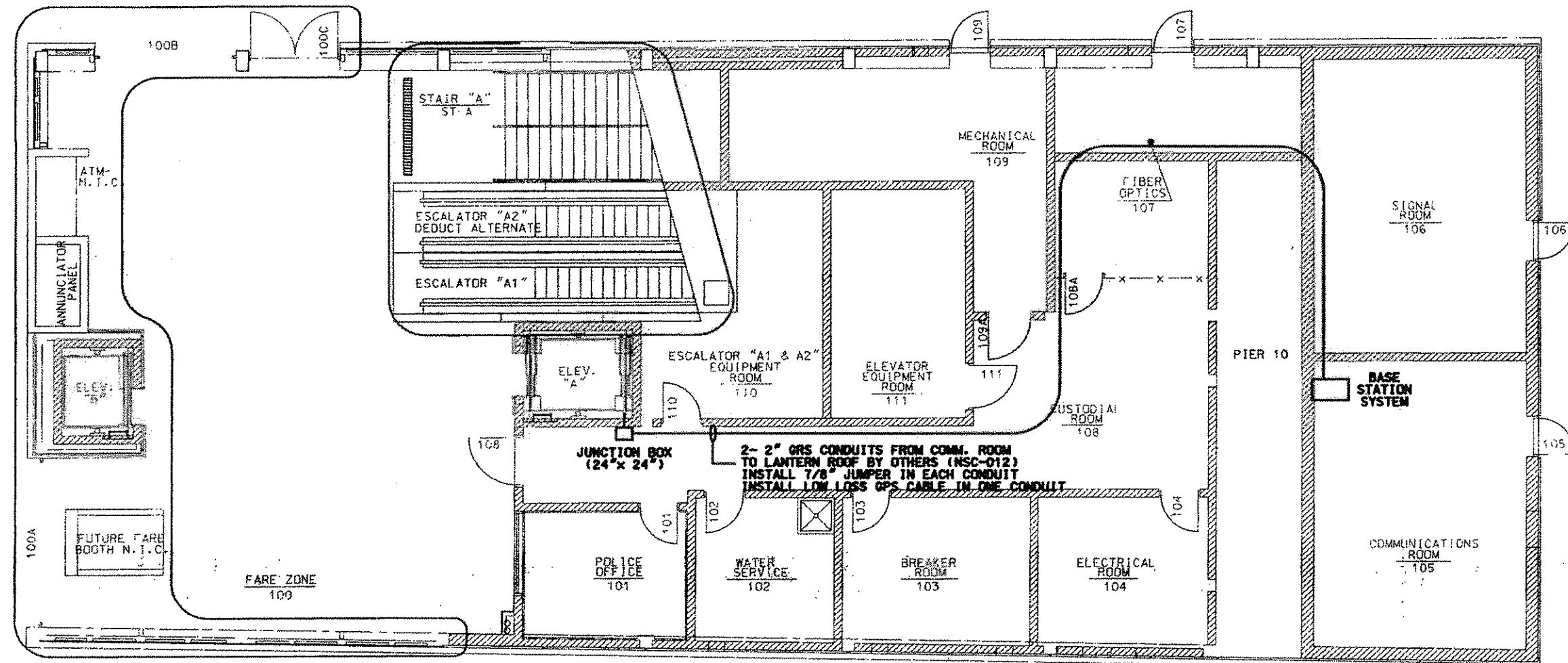
NO.	DATE	DESCRIPTION	
		REVISIONS	

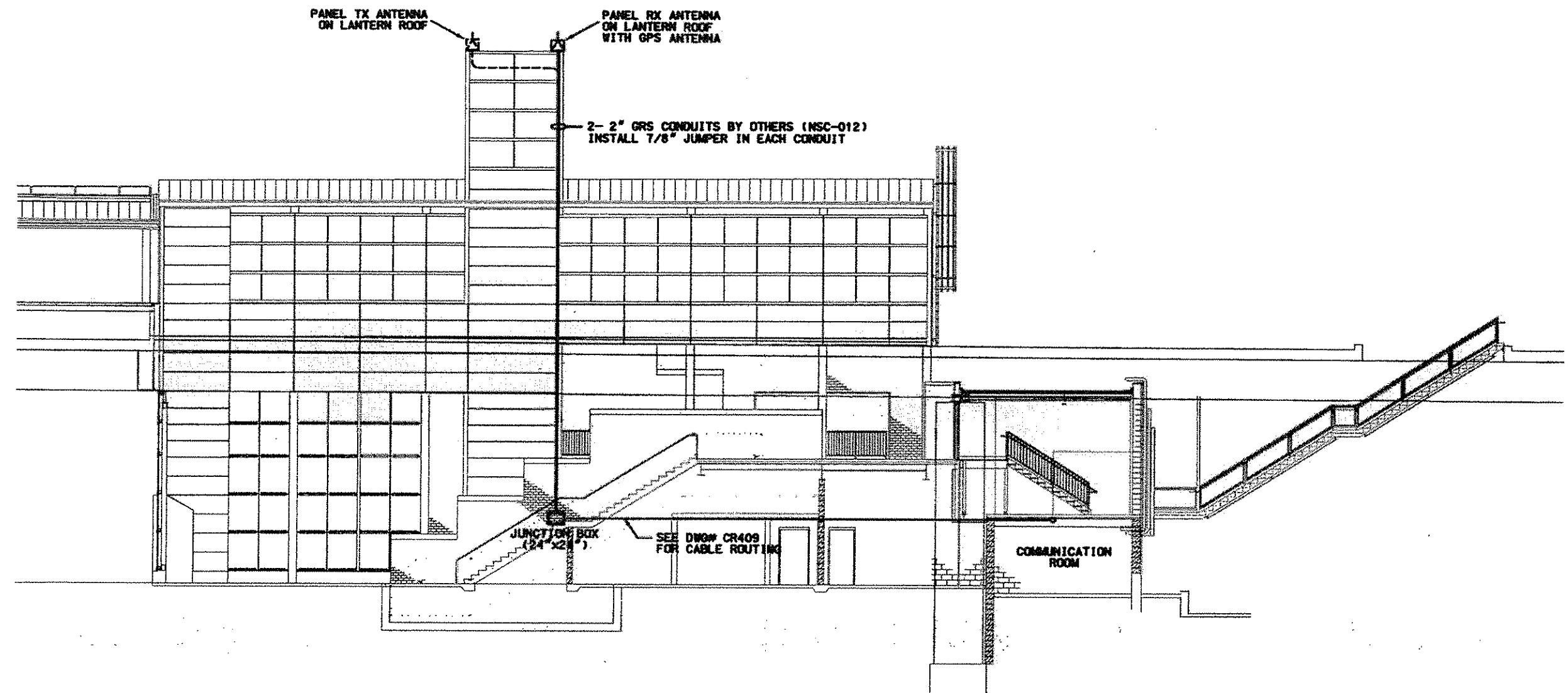
THE PREPARATION OF THIS DOCUMENT HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE FEDERAL TRANSIT ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, FOR THE PORT AUTHORITY OF ALLEGHENY COUNTY, PENNSYLVANIA.



DMJM HARRIS | AECOM
FOUR GATEWAY CENTER
20TH FLOOR
PITTSBURGH, PA. 15222
APRIL 28, 2008
Signature: David J. Harris
APPROVED DATE
Signature: [Signature]

PORT AUTHORITY OF ALLEGHENY COUNTY
PITTSBURGH, PENNSYLVANIA
NORTH SHORE CONNECTOR
NSC TRAIN SYSTEM (SYSTEM WIDE)
LEAKY CO-AXIAL CABLE ROUTING PLAN
NORTH SIDE STATION TO ALLEGHENY STATION
Port Authority
CONTRACT NO. NSC-009
DWG. NO. CR408 SHT. 5/9

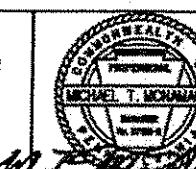


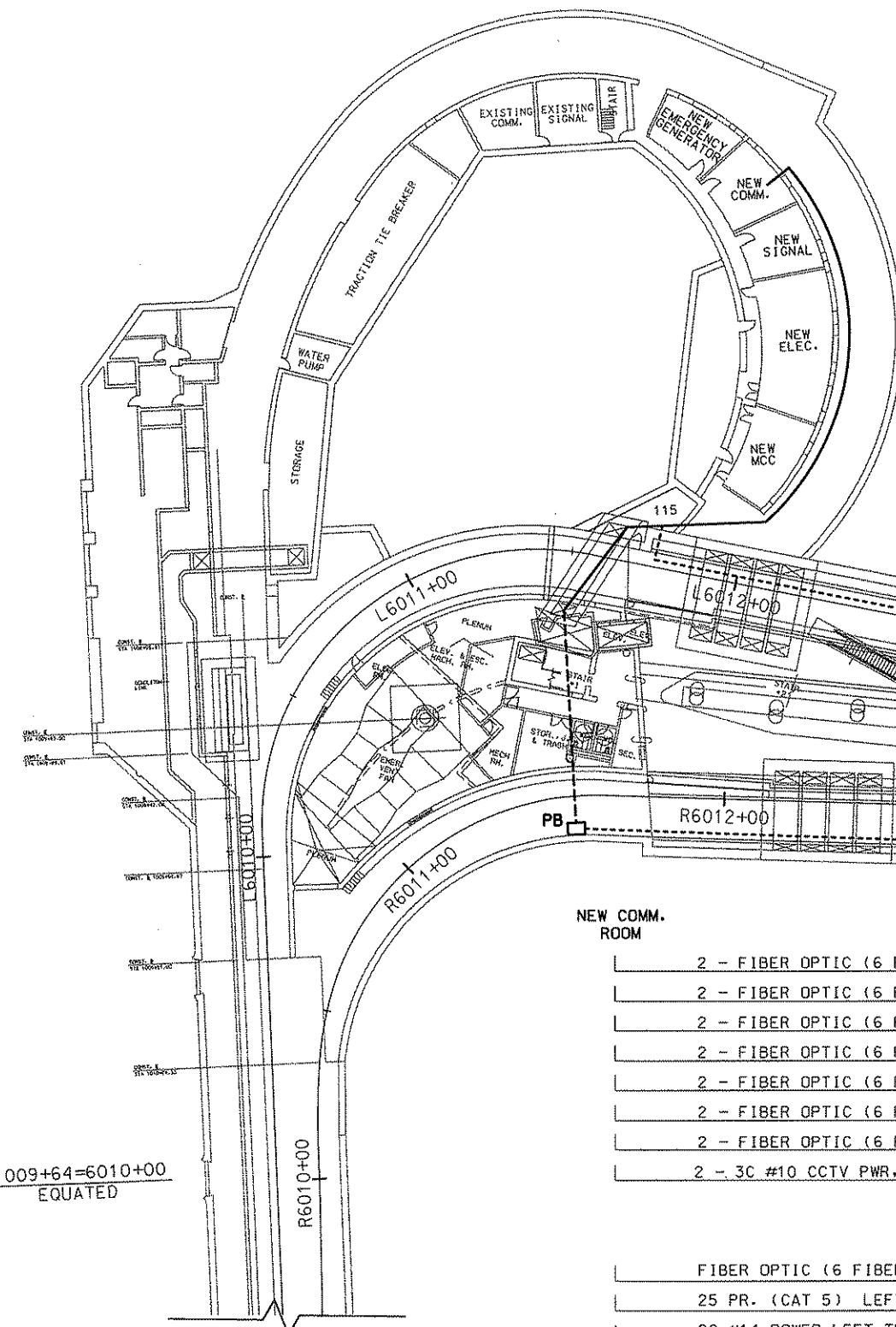


ALLEGHENY STATION

NOTES:

1. COAXIAL CABLES TO BE ATTACHED TO THE ROOM WALLS.
2. ALL CONDUIT BENDS ARE 24" RADIUS.
3. CONTRACTOR SHALL VERIFY SUITABILITY OF GPS LOW LOSS JUMPER.
4. MOUNT PANEL RX ANTENNA 10' HIGHER THAN PANEL TX ANTENNA.
5. MOUNT GPS ANTENNA WITH PANEL RX ANTENNA.

				<small>THE PREPARATION OF THIS DOCUMENT HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE FEDERAL TRANSIT ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, FOR THE PORT AUTHORITY OF ALLEGHENY COUNTY, PENNSYLVANIA.</small>	DMJM HARRIS AECOM  MICHAEL T. MORNARO <small>PRINCIPAL IN CHARGE</small> APPROVED DATE <i>[Signature]</i> <i>[Signature]</i> <i>APR 28 2008</i>	<small>DESIGNED R SCHMIDT DRAWN HT TRAN</small> <small>CHECKED K HOFFMAN IN CHARGE CD JONES</small> <small>DATE APR. 28. 2008</small> <small>SCALE NTS</small>	PORT AUTHORITY OF ALLEGHENY COUNTY <small>PITTSBURGH, PENNSYLVANIA</small>	
							NO. DATE	DESCRIPTION
						<small>Port Authority</small>	<small>CONTRACT NO. NSC-000</small>	
						<small>DWG. NO. CR410</small>	<small>REV. 596</small>	



LEGENDS:

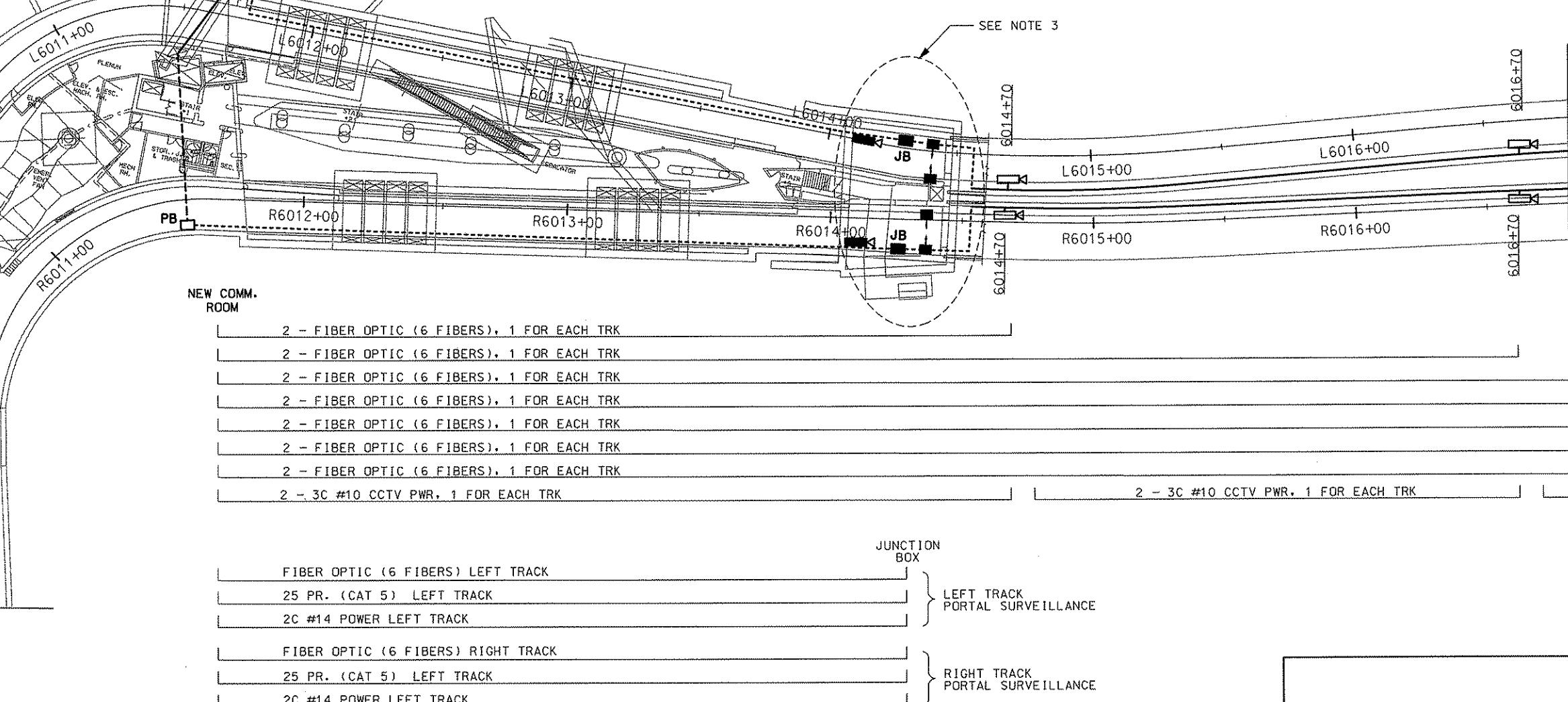
- CONDUIT
- - - EMBEDDED CONDUIT
- - - CABLE TROUGH
- CCTV CAMERA
- PORTAL SURVEILLANCE CAMERA
- INTRUSION DETECTOR
- JUNCTION BOX (JB)
- PULL BOX (PB)

NOTES:

1. CCTV CAMERA TO BE INSTALLED AND SPACED APPROXIMATE 200 FEET APART.
2. CONDUITS AND CAMERA JUNCTION BOX TO BE FURNISHED AND INSTALLED. FIBER OPTIC POWER CABLE AND CAMERA ARE TO BE INSTALLED IN THE FUTURE BY OTHER.
3. CONTRACTOR TO FURNISH AND INSTALL ALL EQUIPMENT FOR PORTAL SURVEILLANCE INCLUDING CAMERAS, INTRUSION DETECTORS, JUNCTION BOXES, CONDUIT & CABLES FROM NEW COMMUNICATIONS ROOM TO PORTAL AREA AT EACH TRACK.

GENERAL NOTE

WALL SLEEVES HAVE BEEN PROVIDED FOR OPENINGS FOR CABLE ENTRANCE WHERE SHOWN ON PLANS. IN VARIOUS LOCATIONS IF OPENINGS ARE NOT AVAILABLE, CORE BORING WILL BE REQUIRED.



CONTINUE ON DWG# CR501

 Gannett Fleming Transit & Rail Systems			 MICHAEL T. MCNAMARA ENGINER PE No. 37044-A <i>[Signature]</i>	DMJM HARRIS AECOM FOUR GATEWAY CENTER 20TH FLOOR PITTSBURGH, PA. 15222 <i>[Signature]</i> APPROVED	DESIGNED BY H. LAY DRAWN BY H.T. TRAN CHECKED BY R. WELDNER IN CHARGE CD JONES DATE APR. 28, 2008 SCALE NTS	PORT AUTHORITY OF ALLEGHENY COUNTY <small>PITTSBURGH, PENNSYLVANIA</small>	
	NO. DATE	DESCRIPTION				NSC-009	
REVISIONS		597			NORTH SHORE CONNECTOR NSC TRAIN SYSTEM (SYSTEM WIDE) TUNNEL SURVEILLANCE SYSTEM GATEWAY STATION TO TUNNEL		
					Port Authority <small>controlling party</small>	DWG. NO. CR500	

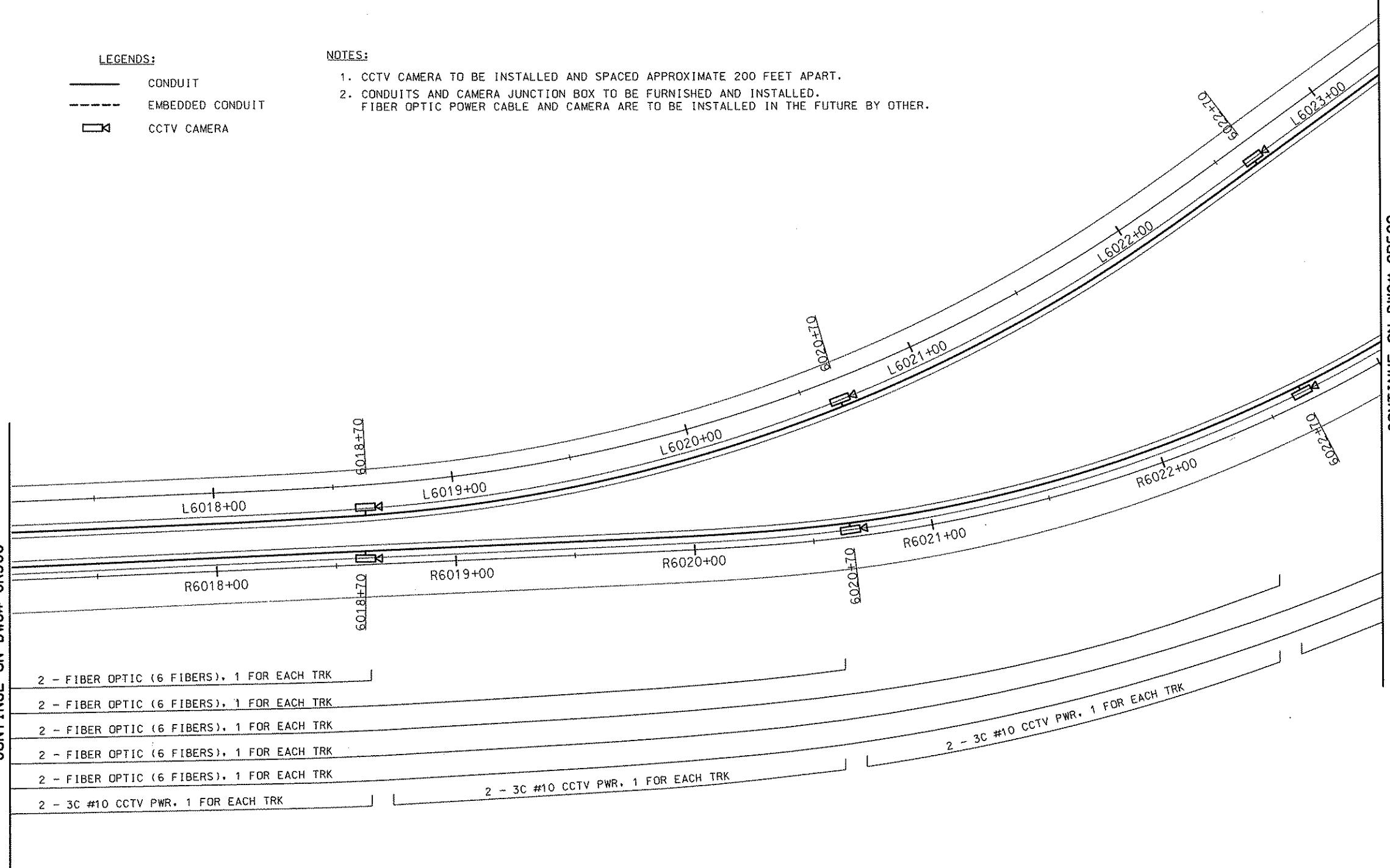
CONTINUE ON DWG# CR500

LEGENDS:

- CONDUIT
- - - EMBEDDED CONDUIT
- CCTV CAMERA

NOTES:

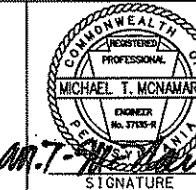
1. CCTV CAMERA TO BE INSTALLED AND SPACED APPROXIMATE 200 FEET APART.
2. CONDUITS AND CAMERA JUNCTION BOX TO BE FURNISHED AND INSTALLED.
FIBER OPTIC POWER CABLE AND CAMERA ARE TO BE INSTALLED IN THE FUTURE BY OTHER.



CONTINUE ON DWG# CR502

NO.	DATE	DESCRIPTION	REVISIONS

THE PREPARATION OF THIS DOCUMENT HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE FEDERAL TRANSIT ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, FOR THE PORT AUTHORITY OF ALLEGHENY COUNTY, PENNSYLVANIA.



MICHAEL T. McNAMARA
CHIEF PLANNING & DESIGNER

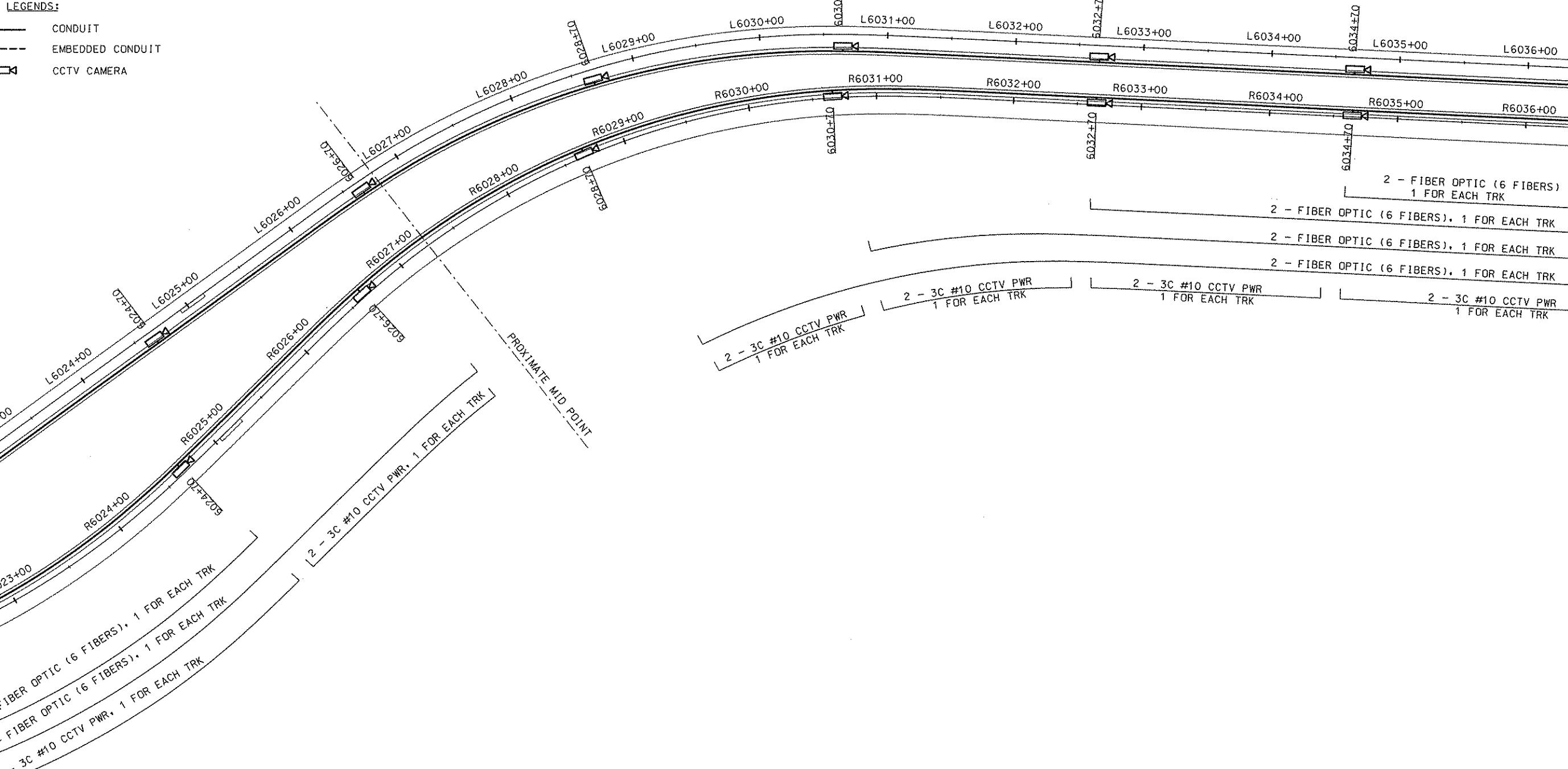
SIGNATURE

DMJM HARRIS | AECOM
FOUR GATEWAY CENTER
20TH FLOOR
PITTSBURGH, PA. 15222
M.T. McNamara *D. P. Henry 4/28/08*

DESIGNED H. LAY
DRAWN H. TRAN
CHECKED R. WEIDNER
IN CHARGE C.D. JONES
DATE APR. 28, 2008
SCALE NTS

PORT AUTHORITY OF ALLEGHENY COUNTY
PITTSBURGH, PENNSYLVANIA
NORTH SHORE CONNECTOR
NSC TRAIN SYSTEM (SYSTEM WIDE)
TUNNEL SURVEILLANCE SYSTEM
TUNNEL SECTION
Port Authority
CONTRACT NO. NSC-009
DWG. NO. CR501 SHT. 598

CONTINUE ON DWG# CR501



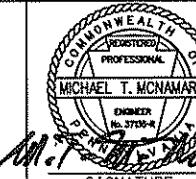
CONTINUE ON DWG# CR503

NOTES:

1. CCTV CAMERA TO BE INSTALLED AND SPACED APPROXIMATE 200 FEET APART.
2. CONDUITS AND CAMERA JUNCTION BOX TO BE FURNISHED AND INSTALLED.
FIBER OPTIC POWER CABLE AND CAMERA ARE TO BE INSTALLED IN THE FUTURE BY OTHER.

NO.	DATE	DESCRIPTION
REVISIONS		

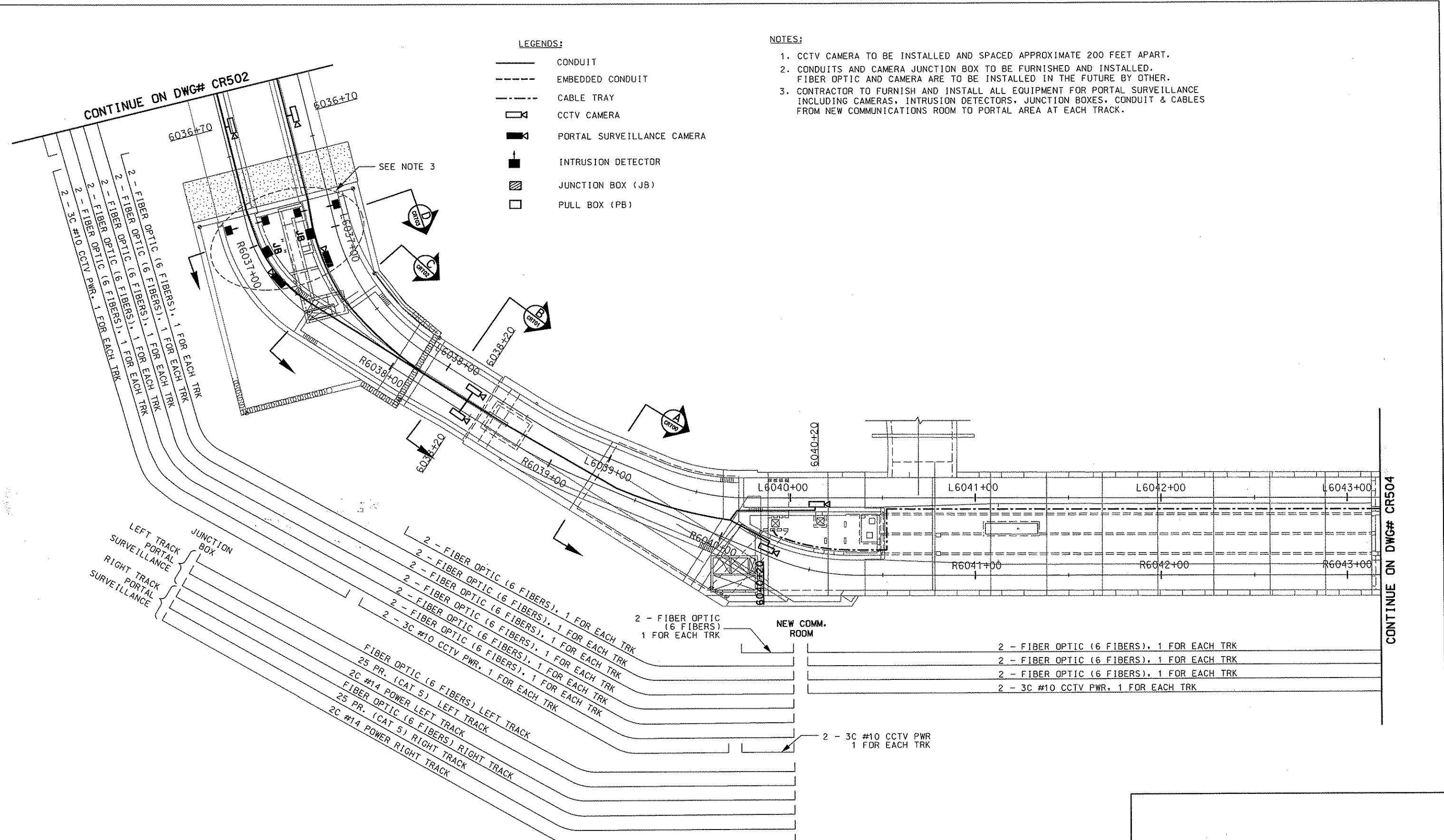
THE PREPARATION OF THIS DOCUMENT HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE FEDERAL TRANSIT ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, FOR THE PORT AUTHORITY OF ALLEGHENY COUNTY, PENNSYLVANIA.



DMJM HARRIS | AECOM
FOUR GATEWAY CENTER
20TH FLOOR
PITTSBURGH, PA. 15222
[Handwritten signatures over the company names]
APPROVED DATE
SIGNATURE

DESIGNED H LAY
DRAWN HT TRAN
CHECKED R WEIDNER
IN CHARGE CD JONES
DATE APR. 28, 2008
SCALE NTS

PORT AUTHORITY OF ALLEGHENY COUNTY
PITTSBURGH, PENNSYLVANIA
NORTH SHORE CONNECTOR
NSC TRAIN SYSTEM (SYSTEM WIDE)
TUNNEL SURVEILLANCE SYSTEM
TUNNEL SECTION
Port Authority
CONTRACT NO. NSC-009
DWG. NO. CR502 SHT. 599



			THE PREPARATION OF THIS DOCUMENT HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE FEDERAL TRANSIT ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964 AS AMENDED, FOR THE PORT AUTHORITY OF ALLEGHENY COUNTY, PENNSYLVANIA.		DMJM HARRIS	AECOM	DESIGNED DRAWN	H LAY HT TRAN	PORT AUTHORITY OF ALLEGHENY COUNTY PITTSBURGH		
			 MICHAEL T. McNAMARA ENGINER NO. 3702-R APPROVED DATE <i>4/28/08</i>		FOUR GATEWAY CENTER 20TH FLOOR PITTSBURGH, PA. 15222	CHECKED IN CHARGE	R WEIDNER CD JONES	NORTH SHORE CONNECTOR NSC TRAIN SYSTEM (SYSTEM WIDE) TUNNEL SURVEILLANCE SYSTEM NORTH SIDE STATION			
			NO. DATE	DESCRIPTION	SIGNATURE	APPROVED	DATE	Port Authority			
			REVISIONS					CONTRACT NO.	NSC-009	DWG. NO. CR503 SHT. 600	
Gannett Fleming Transit & Rail Systems											

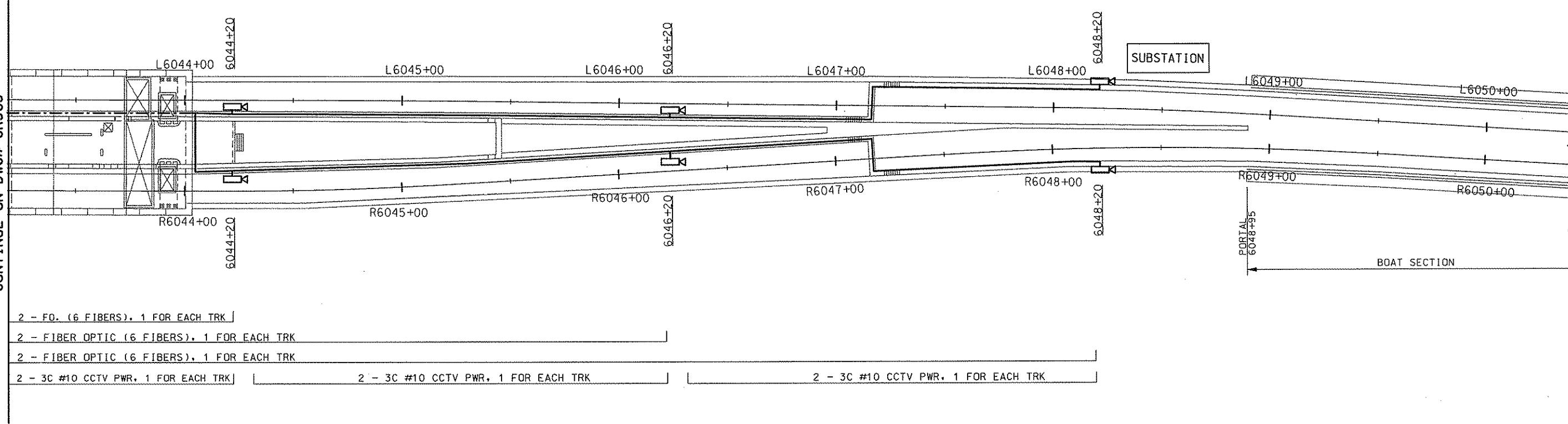
LEGENDS

- CONDUIT
- - - EMBEDDED CONDUIT
- - - CABLE TRAY
█ CCTV CAMERA

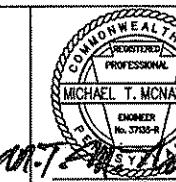
NOTES

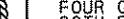
1. CCTV CAMERA TO BE INSTALLED AND SPACED APPROXIMATE 200 FEET APART.
 2. CONDUITS AND CAMERA JUNCTION BOX TO BE FURNISHED AND INSTALLED.
FIBER OPTIC POWER CABLE AND CAMERA ARE TO BE INSTALLED IN THE FUTURE BY OTHER

CONTINUE ON DWG# CBE03



THE PREPARATION OF THIS DOCUMENT HAS BEEN FINANCED IN PART THROUGH A GRANT FROM FEDERAL TRANSIT ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, FOR THE PORT AUTHORITY OF ALLEGHENY COUNTY, PENNSYLVANIA.



	DMJM HARRIS AECC FOUR GATEWAY CENTER 20TH FLOOR PITTSBURGH, PA. 15222
 <u>APPROVED</u> <u>DATE</u> <i>4/28/01</i>	

PITTSBURGH

PENNSYLVANIA

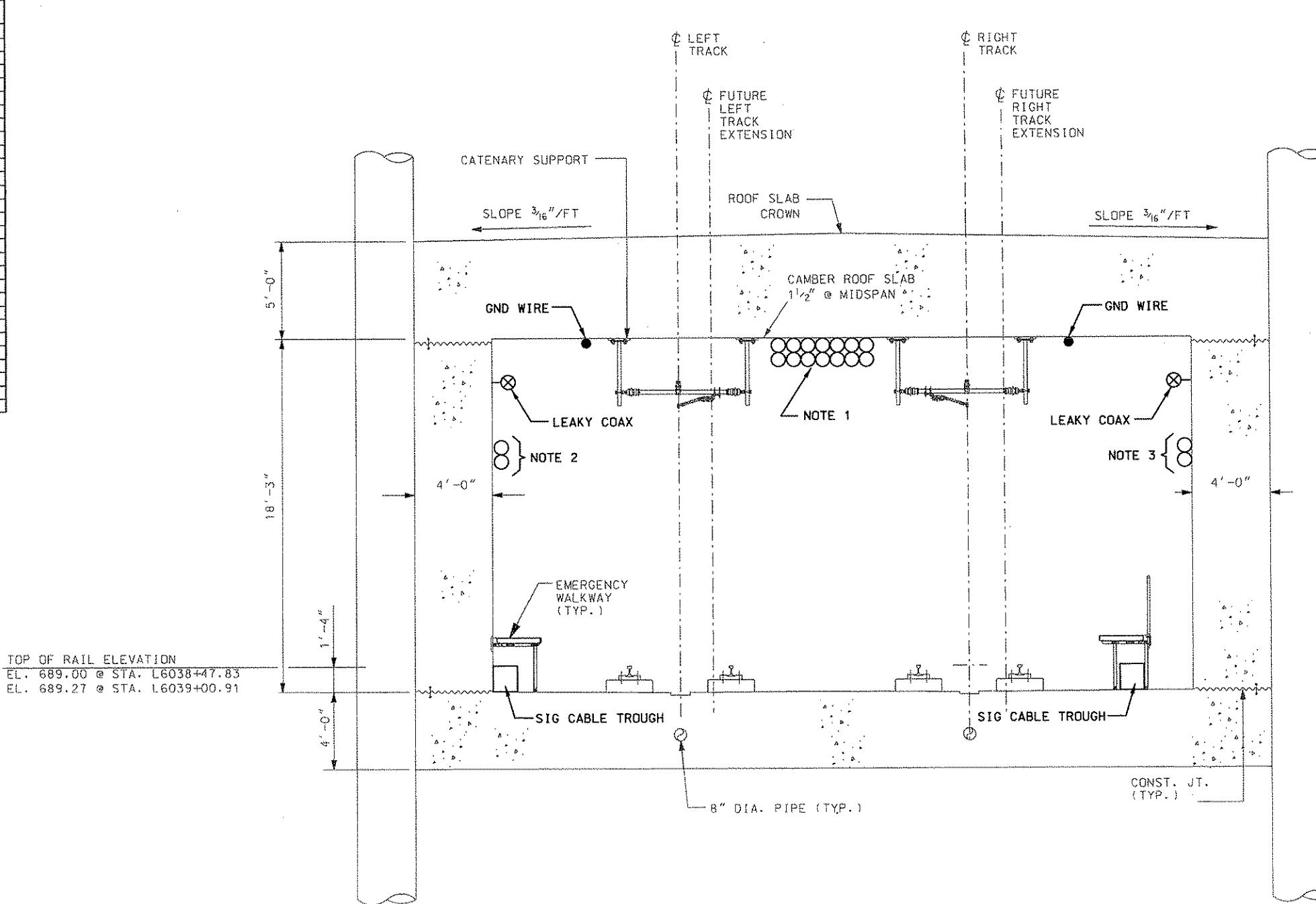
**NORTH SHORE CONNECTOR
TRAIN SYSTEM (SYSTEM WIDE)
TUNNEL SURVEILLANCE SYSTEM
ONE STATION TO ALLEGHENY STATION**

Port Authority

CONTRACT NO.	NSC-009
CHG. NO.	CRE04

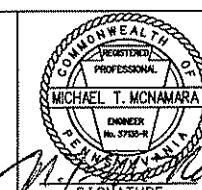
CONDUITS REQUIRED FOR FOLLOWING CABLES

MARKED	CABLES	CONDUIT NO.	SIZE (INCH)
	BLUE LIGHT POWER LEFT TRK	5	1.5
	BLUE LIGHT POWER RIGHT TRK	8	1.5
	EMERGENCY PHONES LEFT TRK	4	1.5
	EMERGENCY PHONES RIGHT TRK	7	1.5
	96 FIBER (FIBER OPTIC) LEFT TRK	3	1.5
	96 FIBER (FIBER OPTIC) RIGHT TRK	6	1.5
	TUNNEL SURVEILLANCE LEFT TRK	1	2.5
	TUNNEL SURVEILLANCE RIGHT TRK	2	2.5
	EMERGENCY PHONE EGRESS	9	1.5
	BLUE LIGHT POWER EGRESS	10	1.5
	INTRUSION ALARM EGRESS	11	2.5
	PORTAL SURVEILLANCE LEFT TRK	12	1.5
	PORTAL SURVEILLANCE RIGHT TRK	13	1.5
	LAUNCH PIT SUMP POWER 205-206	M205	3
	LAUNCH PIT SUMP CONTROL 205-206	M206	2
	TUNNEL SUMP POWER 201	M207	3
	TUNNEL SUMP POWER 202	M208	3
	TUNNEL SUMP CONTROL 201-202, LEFT TRK	M209	2
	TUNNEL SUMP POWER 203	M210	3
	TUNNEL SUMP POWER 204	M211	3
	TUNNEL SUMP CONTROL 203-204, RIGHT TRK	M212	2
	JET FANS POWER 207-208	M201	4
	JET FANS CONTROL & HEATER 207-208-209-210	M202	3
	JET FANS POWER 209-210	M200	4
	JET FAN COMMUNICATION	M203	2
NOTE 1	LEFT TRK LIGHT MAINT.	M213	3
	LEFT TRK EGRESS LIGHT	M214	3
NOTE 2	RIGHT TRK LIGHT MAINT.	M215	3
NOTE 3	RIGHT TRK EGRESS LIGHT	M216	3



NO.	DATE	DESCRIPTION	
		REVISIONS	

THE PREPARATION OF THIS DOCUMENT HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE FEDERAL TRANSIT ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964*, AS AMENDED, FOR THE PORT AUTHORITY OF ALLEGHENY COUNTY, PENNSYLVANIA.

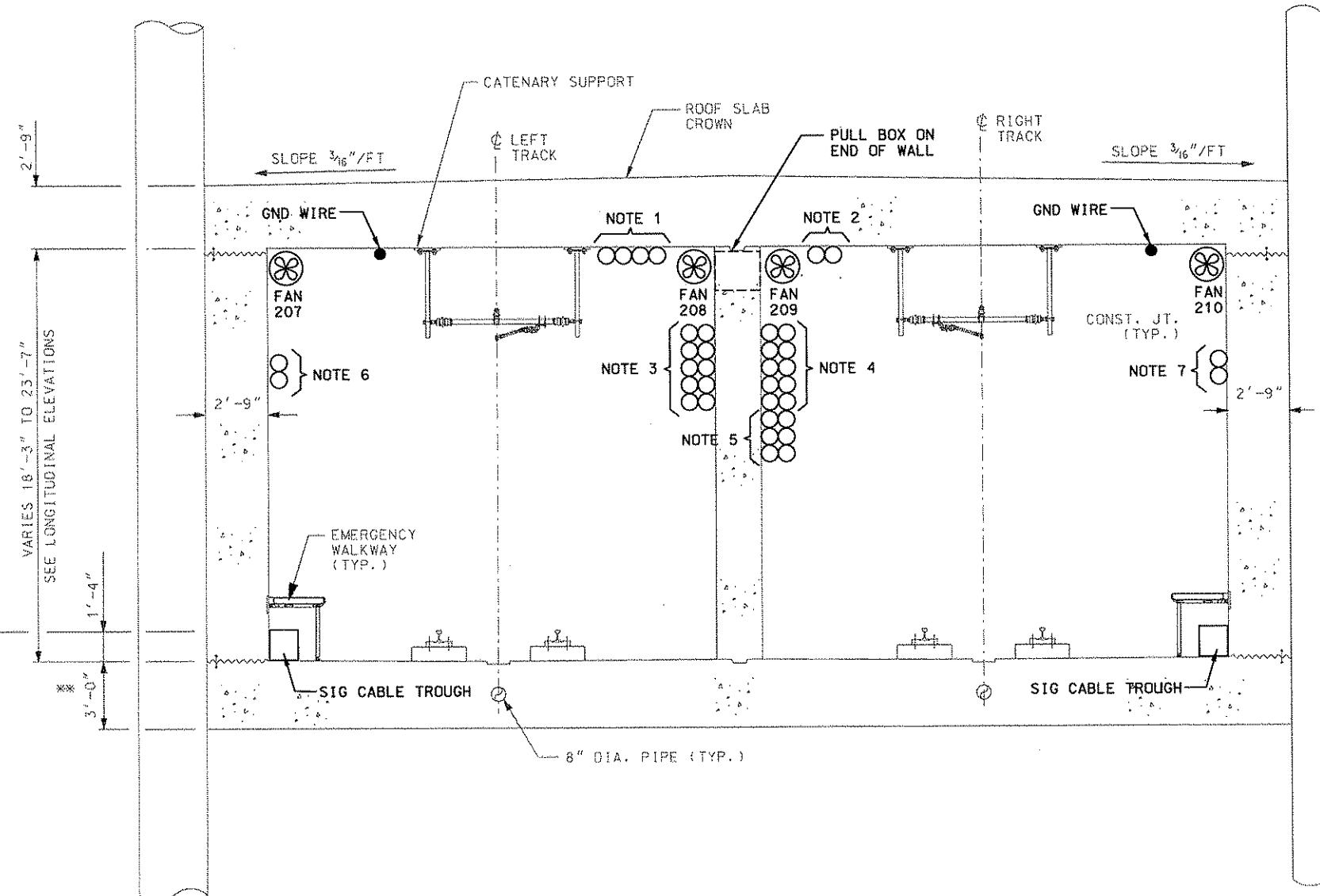


DMJM HARRIS | AECOM
FOUR GATEWAY CENTER
20TH FLOOR
PITTSBURGH, PA. 15222
CHECKED R. WEIDNER
IN CHARGE C.D. JONES
DATE APR. 28, 2008
SIGNATURE: *Daniel P. Harrington 4/28/08*
APPROVED DATE
SCALE NTS

PORT AUTHORITY OF ALLEGHENY COUNTY
Pittsburgh, Pennsylvania
NORTH SHORE CONNECTOR
NSC TRAIN SYSTEM (SYSTEM WIDE)
NORTH SIDE STATION - CABLE ROUTING
SECTION A
Port Authority
Contract No. NSC-009
Dwg. No. CR700 Sht. 602

CONDUITS REQUIRED FOR FOLLOWING CABLES

MARKED	CABLES	CONDUIT NO.	SIZE (INCH)
NOTE 1	JET FANS POWER 207	M217	3
	JET FANS CONTROL & HEATER 207	M218	2
	JET FAN COMMUNICATION 207	M219	2
	JET FANS POWER 209	M220	3
	JET FANS CONTROL & HEATER 209	M221	2
	JET FAN COMMUNICATION 209	M222	2
NOTE 2	JET FANS POWER 208	M223	3
	JET FANS CONTROL & HEATER 208	M224	2
	JET FAN COMMUNICATION 208	M225	2
	JET FANS POWER 210	M226	3
	JET FANS CONTROL & HEATER 210	M227	2
	JET FAN COMMUNICATION 210	M228	2
NOTE 3	TUNNEL SUMP POWER 201	M207	3
	TUNNEL SUMP POWER 202	M208	3
	TUNNEL SUMP CONTROL 201-202	M209	2
	BLUE LIGHT POWER LEFT TRK	5	1.5
	EMERGENCY PHONES LEFT TRK	4	1.5
	96 FIBER (FIBER OPTIC) LEFT TRK	3	1.5
NOTE 4	TUNNEL SURVEILLANCE LEFT TRK	1	2.5
	PORTAL SURVEILLANCE LEFT TRK	12	1.5
	TUNNEL SUMP POWER 203	M210	3
	TUNNEL SUMP POWER 204	M211	3
	TUNNEL SUMP CONTROL 203-204	M212	2
	BLUE LIGHT POWER RIGHT TRK	8	1.5
NOTE 5	EMERGENCY PHONES RIGHT TRK	7	1.5
	96 FIBER (FIBER OPTIC) RIGHT TRK	6	1.5
	TUNNEL SURVEILLANCE RIGHT TRK	2	2.5
	PORTAL SURVEILLANCE RIGHT TRK	13	1.5
	EMERGENCY PHONE EGRESS	9	1.5
	BLUE LIGHT POWER EGRESS	10	1.5
NOTE 6	INTRUSION ALARM EGRESS	11	1.5
	LAUNCH PIT SUMP POWER 205-206	M205	3
	LAUNCH PIT SUMP CONTROL 205-206	M206	2
	LEFT TRK LIGHT MAINT.	M213	3
	LEFT TRK EGRESS LIGHT	M214	3
	RIGHT TRK LIGHT MAINT.	M215	3
NOTE 7	RIGHT TRK EGRESS LIGHT	M216	3



SECTION

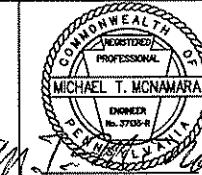
STA. L6037+43 TO STA. L6038+47

B

NOTES:

- A. DRAWINGS SHOW PROPOSED ROUTING OF CONDUITS. CONDUIT SIZES MAY VARY DEPENDING ON PHYSICAL SIZE OF CABLES SUPPLIED. CONDUITS TO BE SIZED IN ACCORDANCE WITH NEC.

THE PREPARATION OF THIS DOCUMENT HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE FEDERAL TRANSIT ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, FOR THE PORT AUTHORITY OF ALLEGHENY COUNTY, PENNSYLVANIA.



DMJM HARRIS | AECOM
FOUR GATEWAY CENTER
20TH FLOOR
PITTSBURGH, PA. 15222
MICHAEL T. MCNAMARA
OWNER NO. 370048
SIGNATURE
APPROVED DATE
David P. Hay 4/28/08

PORT AUTHORITY OF ALLEGHENY COUNTY
Pittsburgh, Pennsylvania

NORTH SHORE CONNECTOR
NSC TRAIN SYSTEM (SYSTEM WIDE)
NORTH SIDE STATION - CABLE ROUTING
SECTION B

Port Authority

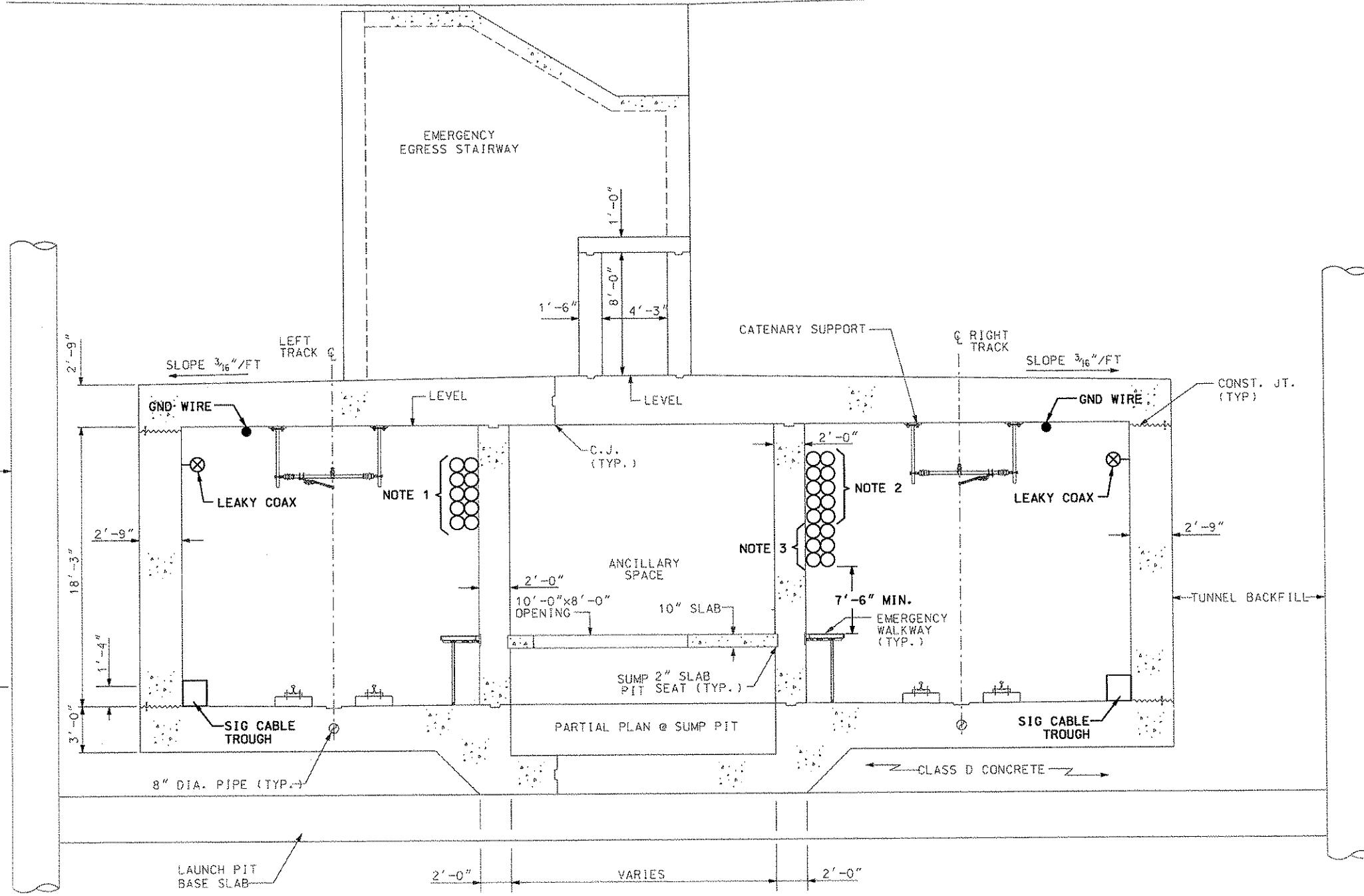
CONTRACT NO. NSC-009
DWG. NO. CR701 SHT. 603

NO.	DATE	DESCRIPTION	REVISIONS
Gannett Fleming Transit & Rail Systems			

CONDUITS REQUIRED FOR FOLLOWING CABLES

MARKED	CABLES	CONDUIT NO.	SIZE (INCH)
	TUNNEL SUMP POWER 201	M207	3
	TUNNEL SUMP POWER 202	M208	3
	TUNNEL SUMP CONTROL 201-202	M209	2
	LEFT TRK LIGHT MAINT.	M213	3
	LEFT TRK EGRESS LIGHT	M214	3
	BLUE LIGHT POWER LEFT TRK	5	1.5
	EMERGENCY PHONES LEFT TRK	4	1.5
	96 FIBER (FIBER OPTIC) LEFT TRK	3	1.5
	TUNNEL SURVEILLANCE LEFT TRK	1	2.5
	PORTAL SURVEILLANCE LEFT TRK	12	1.5
NOTE 1	TUNNEL SUMP POWER 203	M210	3
	TUNNEL SUMP POWER 204	M211	3
	TUNNEL SUMP CONTROL 203-204	M212	2
	RIGHT TRK LIGHT MAINT.	M215	3
	RIGHT TRK EGRESS LIGHT	M216	3
	BLUE LIGHT POWER RIGHT TRK	8	1.5
	EMERGENCY PHONES RIGHT TRK	7	1.5
	96 FIBER (FIBER OPTIC) RIGHT TRK	6	1.5
	TUNNEL SURVEILLANCE RIGHT TRK	2	2.5
	PORTAL SURVEILLANCE RIGHT TRK	13	1.5
NOTE 2	EMERGENCY PHONE EGRESS	9	1.5
	BLUE LIGHT POWER EGRESS	10	1.5
	INTRUSION ALARM EGRESS	11	1.5
	LAUNCH PIT SUMP POWER 205-206	M205	3
	LAUNCH PIT SUMP CONTROL 205-206	M206	2

WEST GENERAL ROBINSON STREET / NORTH SIDEWALK

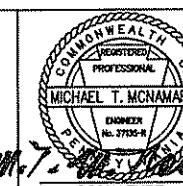


NOTES:

- A. DRAWINGS SHOW PROPOSED ROUTING OF CONDUITS.
CONDUIT SIZES MAY VARY DEPENDING ON PHYSICAL
SIZE OF CABLES SUPPLIED. CONDUITS TO BE SIZED
IN ACCORDANCE WITH NEC.

NO.	DATE	DESCRIPTION	REVISIONS

THE PREPARATION OF THIS DOCUMENT HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE FEDERAL TRANSIT ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, FOR THE PORT AUTHORITY OF ALLEGHENY COUNTY, PENNSYLVANIA.



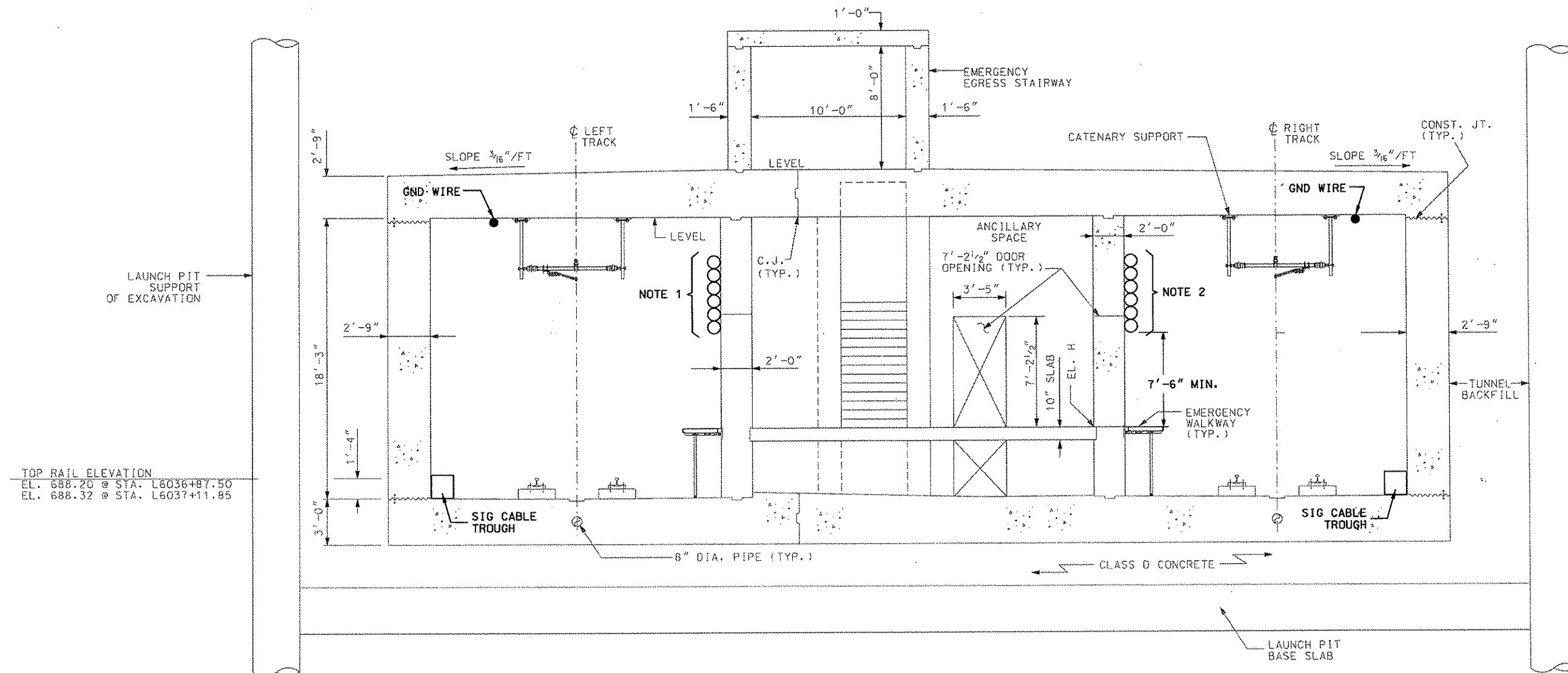
DMJM HARRIS | AECOM
FOUR GATEWAY CENTER
20TH FLOOR
PITTSBURGH, PA. 15222
[Handwritten signatures]
APPROVED DATE
SIGNATURE

DESIGNED H LAY
DRAWN HT TRAN
CHECKED R WEIDNER
IN CHARGE CD JONES
DATE APR. 28, 2008
SCALE NTS

PORT AUTHORITY OF ALLEGHENY COUNTY
PITTSBURGH
NORTH SHORE CONNECTOR
NSC TRAIN SYSTEM (SYSTEM WIDE)
NORTH SIDE STATION - CABLE ROUTING
SECTION C
Port Authority
CONTRACT NO. NSC-009
DWG. NO. CR702
SHT. 604

CONDUITS REQUIRED FOR FOLLOWING CABLES

MARKED	CABLES	CONDUIT NO.	SIZE (INCH)
NOTE 1	TUNNEL SUMP POWER 201	M207	3
	TUNNEL SUMP POWER 202	M208	3
	TUNNEL SUMP CONTROL 201-202	M209	2
	LEFT TRK LIGHT MAINT.	M213	3
	LEFT TRK EGRESS LIGHT	M216	3
	BLUE LIGHT POWER LEFT TRK	5	1.5
	EMERGENCY PHONES LEFT TRK	4	1.5
	96 FIBER (FIBER OPTIC) LEFT TRK	3	1.5
	TUNNEL SURVEILLANCE LEFT TRK	1	2.5
	PORTAL SURVEILLANCE LEFT TRK	12	1.5
NOTE 2	TUNNEL SUMP POWER 203	M210	3
	TUNNEL SUMP POWER 204	M211	3
	TUNNEL SUMP CONTROL 203-204	M212	2
	RIGHT TRK LIGHT MAINT.	M215	3
	RIGHT TRK EGRESS LIGHT	M216	3
	BLUE LIGHT POWER RIGHT TRK	8	1.5
	EMERGENCY PHONES RIGHT TRK	7	1.5
	96 FIBER (FIBER OPTIC) RIGHT TRK	6	1.5
	TUNNEL SURVEILLANCE RIGHT TRK	2	2.5
	PORTAL SURVEILLANCE RIGHT TRK	13	1.5



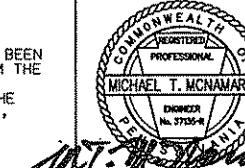
NOTES:

- A. DRAWINGS SHOW PROPOSED ROUTING OF CONDUITS. CONDUIT SIZES MAY VARY DEPENDING ON PHYSICAL SIZE OF CABLES SUPPLIED. CONDUITS TO BE SIZED IN ACCORDANCE WITH NEC.
- B. SUMP POWER, SUMP CONTROL & FIBER OPTIC CONDUITS TO DROP BELOW WALKWAY WHEN ENTERING BORE TUNNEL.

SECTION

STA. L6036+87 TO STA. L6037+11

D



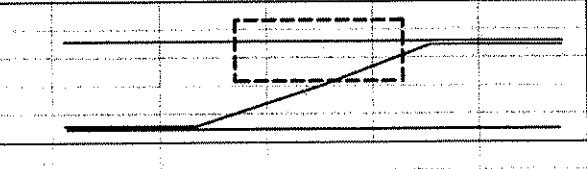
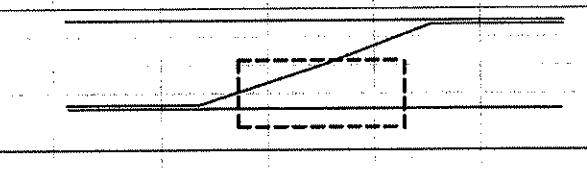
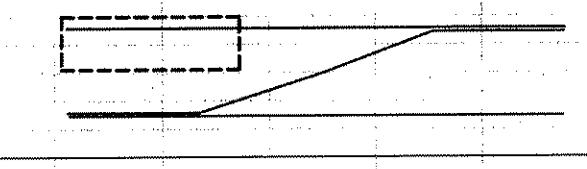
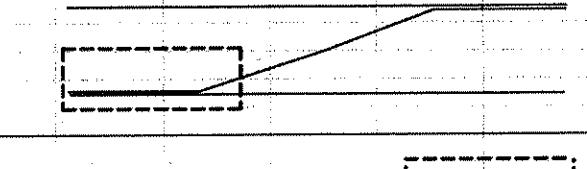
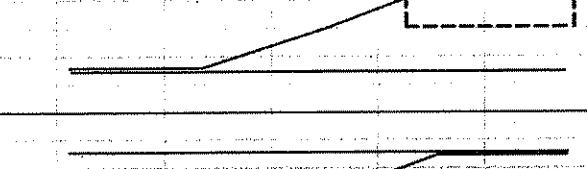
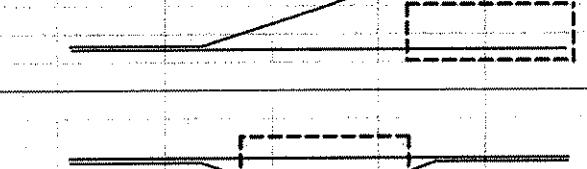
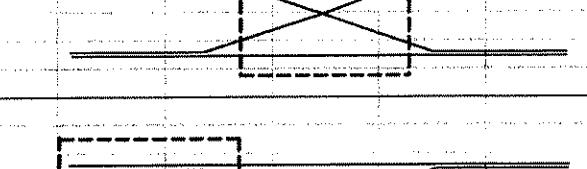
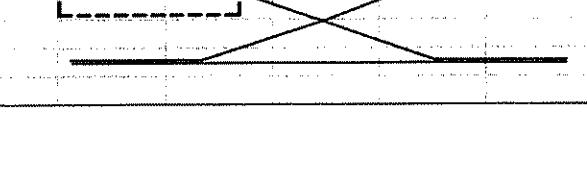
DMJM HARRIS | AECOM
FOUR GATEWAY CENTER
20TH FLOOR
PITTSBURGH, PA. 15222
CHECKED R WEIDNER
IN CHARGE CD JONES
DATE APR. 28, 2008
SIGNATURE: *[Signature]*
APPROVED DATE: *David P. Fleming 4/28/08*

DESIGNED H LAY
DRAWN HT TRAN
SCALE NTS

PORT AUTHORITY OF ALLEGHENY COUNTY
Pittsburgh, Pennsylvania
NORTH SHORE CONNECTOR
NSC TRAIN SYSTEM (SYSTEM WIDE)
NORTH SIDE STATION - CABLE ROUTING
SECTION D
Port Authority
CONTRACT NO. NSC-009
DWG. NO. CR703 SHT. 605

NO.	DATE	DESCRIPTION		REVISIONS
		REVISIONS		

THE PREPARATION OF THIS DOCUMENT HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE FEDERAL TRANSIT ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, FOR THE PORT AUTHORITY OF ALLEGHENY COUNTY, PENNSYLVANIA.

PHASE #	TASK	DURATION	OUTAGE	PRE-REQUISITE WORK	
1	Demo Section 1, install (1) triplex frog in final location, supported on temporary wood timbers under every other DF plate; anchor temp location of track (Method TBD)	53 hrs.	Double Track 12:01am Sat. - 5:00am Mon.	Track level survey, possible relocation or demo of duct bank, submission by Contractor of detailed anchor layout for stirrups	
2	Demo Section 2, install (1) triplex frog and (2) end frogs in final location, supported on temporary wood timbers under every other DF plate; anchor temp location of track (Method TBD) Drill / Install rebar stirrups in floor of previous phase	53 hrs.	Double Track 12:01am Sat. - 5:00am Mon.	install steel jacking supports under both triplex frogs (between wood timbers) before installing triplex frog in section 2	
3	Demo Section 3, install (1) switch set in final location, supported on temporary wood timbers under every other DF plate; anchor temp location of track (Method TBD) Drill / Install rebar stirrups in floor of previous phase	53 hrs.	Double Track 12:01am Sat. - 5:00am Mon.	Install steel jacking supports under switch set (between wood timbers) before installing rails	
4	Demo Section 4, install (1) switch set in final location, supported on temporary wood timbers under every other DF plate; anchor temp location of track (Method TBD) Drill / Install rebar stirrups in floor of previous phase	53 hrs.	Double Track 12:01am Sat. - 5:00am Mon.	Install steel jacking supports under switch set (between wood timbers) before installing rails	
5	Demo Section 5, install (1) switch set in final location, supported on temporary wood timbers under every other DF plate; anchor temp location of track (Method TBD) Drill / Install rebar stirrups in floor of previous phase	53 hrs.	Double Track 12:01am Sat. - 5:00am Mon.	Install steel jacking supports under switch set (between wood timbers) before installing rails	
6	Demo Section 6, install (1) switch set in final location, supported on temporary wood timbers under every other DF plate; anchor temp location of track (Method TBD) Drill / Install rebar stirrups in floor of previous phase	53 hrs.	Double Track 12:01am Sat. - 5:00am Mon.	Install steel jacking supports under switch set (between wood timbers) before installing rails	
7	Raise center frog section using steel jacking, cut out wood timbers, install rebar cages, form around edges and jacking apparatus, pour center frog section	53 hrs.	Double Track 12:01am Sat. - 5:00am Mon.		
8	Raise switch set in Section 3 using steel jacking, cut out wood timbers, install rebar cages, form around edges and jacking apparatus, pour switch section	53 hrs.	Double Track 12:01am Sat. - 5:00am Mon.		

Gannett Fleming
Transit & Rail Systems

NO.	DATE	DESCRIPTION
		REVISIONS

THE PREPARATION OF THIS DOCUMENT HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE FEDERAL TRANSIT ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, FOR THE PORT AUTHORITY OF ALLEGHENY COUNTY, PENNSYLVANIA.



SIGNATURE

DAVID HARRIS
APPROVED

DATE

APR. 28, 2008

N.T.S.

606

PORT AUTHORITY OF ALLEGHENY COUNTY
PITTSBURGH, PENNSYLVANIA

NORTH SHORE CONNECTOR
NSC TRAIN SYSTEM (SYSTEM WIDE)
WOOD STREET

RECOMMENDED STAGING PLAN (1 OF 2)

Port Authority

CONTRACT NO. NSC-009
DWG. NO. WS001 SHT. 606

9	Raise switch set in Section 4 using steel jacking, cut out wood timbers, install rebar cages, form around edges and jacking apparatus, pour switch section	53 hrs.	Double Track				
10	Raise switch set in Section 5 using steel jacking, cut out wood timbers, install rebar cages, form around edges and jacking apparatus, pour switch section	53 hrs.	Double Track				
11	Raise switch set in Section 6 using steel jacking, cut out wood timbers, install rebar cages, form around edges and jacking apparatus, pour switch section	53 hrs.	Double Track				
12	Install new and modify existing OCS support assemblies, messenger and contact wires and hangers, section insulators, and disconnect switches.	53 hrs.	Double Track				
13	Install new and modify existing OCS support assemblies, messenger and contact wires and hangers, section insulators, and disconnect switches.	53 hrs.	Double Track				
14	Install complete final wiring within Wood Street Signal room. Install all permanent signal cables and perform preliminary testing of the signalling and OCS system prior to the next weekends' cutover.	53 hrs.	Double Track				
15	Perform Signal System Cut-over	53 hrs.	Double Track				
16	Install temporary insulators near temporary closure wall. Construct OCS construction overlaps near Gateway Station. Temporarily dead-end existing OCS wires to be removed by NSC-004.	53 hrs.	Double Track				

NOTES:

1. PRIOR TO "BREAKING IN" TO TUNNEL, TEMPORARY CLOSURE WALL AND CATENARY OVERLAPS MUST BE CONSTRUCTED.
2. SWITCH POINT PROTECTION MUST BE MAINTAINED FOR ALL EXISTING AND NEW SWITCH POINTS AT ALL TIMES.
3. DURING THE CONVERSION OF THE SINGLE CROSSOVER TO A DOUBLE CROSSOVER, ALL WIRING CHANGES WITHIN WOOD STREET SIGNAL ROOM SHALL BE WIRED AND TESTED BEFORE STAGE 15.

			THE PREPARATION OF THIS DOCUMENT HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE FEDERAL TRANSIT ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, FOR THE PORT AUTHORITY OF ALLEGHENY COUNTY, PENNSYLVANIA.		DESIGNED JF BARBIERE DRAWN JF BARBIERE		PORT AUTHORITY OF ALLEGHENY COUNTY PITTSBURGH	
			RICHARD CROSS IV PROFESSIONAL ENGINEER NO. 4470 Pittsburgh, PA 15222		CHECKED R CROSS IN CHARGER CROSS DATE APR. 28, 2008		NORTH SHORE CONNECTOR NSC TRAIN SYSTEM (SYSTEM WIDE) WOOD STREET RECOMMENDED STAGING PLAN (2 OF 2)	
			APPROVED DATE		SCALE N.T.S.		Port Authority CONTRACT NO. NSC-008 Dwg. No. WS002 Sht. 607	
			NO.	DATE	DESCRIPTION	REVISIONS	SIGNATURE	APPROVED DATE
Gannett Fleming Transit & Rail Systems								