

SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT

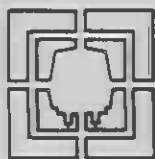
Metro Rail Project



IX COMMUNICATIONS Interface Data Sheets Contract A640

APRIL 1987

SCRTD
1987
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C64



GENERAL CONSULTANT:

METRO RAIL TRANSIT CONSULTANTS
DMJM/PBQD/KE/HWA

A640 INTERFACE DATA SHEET INDEX

<u>IDS NUMBER</u>	<u>INTERFACING CONTRACT</u>	<u>INTERFACE LOCATION</u>
640-112-00-01	A112 Facilities Electrical	Main Shop Panel VP-R1
640-112-00-03	" "	Yard Control Tower
640-112-00-03	" "	Main Shop Building
640-112-00-04	" "	" "
640-112-00-05	" "	" "
640-121-00-01	A121 Facilities Electrical	Maintenance of Way Building
640-121-00-02	" "	" "
640-121-00-03	A121 Facilities Electrical	" "
640-130-00-01	A130 Facilities Electrical	Union Station/Yard Leads CIC #5
640-136-00-01	A136 Facilities Electrical	Union Station CIC #3 East
640-136-00-02	" "	" " CIC #2 West
640-136-00-03	" "	" " Stationwide
640-136-00-04	" "	" " Stationwide
640-136-00-05	" "	" " CIC #4 West
641-141-00-1	A141 Facilities Electrical	5th/Hill/C.C. Line CICs
640-147-00-01	A147 Facilities Electrical	Civic Center Station CIC #2 North
640-147-00-02	" "	" " CIC #2 South
640-147-00-03	" "	" " Stationwide
640-147-00-04	" "	" " Stationwide
640-157-00-01	A157 Facilities Electrical	5th/Hill Station CIC #2 North
640-157-00-02	" "	" " CIC #2 South
640-157-00-03	" "	" " Stationwide
640-157-00-04	" "	" " Stationwide
640-167-00-01	A167 Facilities Electrical	7th/Flower Station CIC #3 East
640-167-00-02	" "	" " CIC #2 West
640-167-00-03	" "	" " Stationwide
640-167-00-04	" "	" " Stationwide
640-167-00-05	" "	7th/Flower LRT Station CIC #4L
640-167-00-06	" "	" " CIC #5L
640-167-00-07	" "	" " CIC #6L
640-167 00-08	" "	" " CIC #7L

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MTA LIBRARY
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IDS NUMBERINTERFACING CONTRACTINTERFACE LOCATION

640-171-00-1	A171 Facilities Electrical	Wilshire/Alvarado Line CICs	
640-187-00-01	A187 Facilities Electrical	Wilshire/Alvarado Station	CIC #2 East
640-187-00-02	" "	" "	CIC #3 West
640-187-00-03	" "	" "	Stationwide
640-187-00-04	" "	" "	Stationwide
640-187-00-05	" "	" "	CIC #4 West
640-187-00-06	" "	" "	CIC #5 East
640-620-00-01	A620 Automatic Train Control	Union Station	TC/C CIR
640-620-00-02	" "	Civic Center Station	"
640-620-00-03	A620 Automatic Train Control	5th/Hill Station	"
640-620-00-04	" "	7th/Flower Station	"
640-620-00-05	" "	Wilshire/Alvarado Station	"
640-620-00-06	" "	All Stations	TC&C MDF
640-620-00-07	" "	Union Station	TC&C Power
640-620-00-08	" "	Civic Center Station	TC&C "
640-620-00-09	" "	5th/Hill Station	TC&C "
640-620-00-10	" "	7th/Flower Station	TC&C "
640-620-00-11	" "	Wilshire/Alvarado Station	TC&C "
640-631-00-01	A631 Traction Power Installation	Union Station	CIC #1 TPSS
640-631-00-02	" "	Union Station	CIC #4
640-631-00-03	" "	Civic Center Station	CIC #1 TPSS
640-631-00-04	" "	5th/Hill Station	"
640-631-00-05	" "	5th/Hill Station	CIC #2 North
640-631-00-06	" "	5th/Hill Station	CIC #2 South
640-631-00-07	" "	7th/Flower Station	CIC #1 TPSS
640-631-00-08	" "	Wilshire/Alvarado Station	"
640-631-00-09	" "	Wilshire/Alvarado Station	CIC #5
640-631-00-10	" "	Yard	CIC #1 TPSS
640-631-00-11	" "	Yard	Control Junction Boxes
640-631-00-12	" "	Shop	CIC #1 TPSS
640-631-00-13	" "	Systemwide	CIC #1 TPSS
640-650-00-01	A650 Passenger Vehicle	Passenger Vehicle	Antenna
640-650-00-02	" "	" "	Radio
640-650-00-03	" "	" "	TICU
640-650-00-04	" "	" "	CCU

IDS NUMBERINTERFACING CONTRACTINTERFACE LOCATION

640-760-00-01	A760 Signs & Graphics	Union Station	Station Platform
640-760-00-02	" "	Civic Center Station	" "
640-760-00-03	" "	5th/Hill Station	" "
640-760-00-04	" "	7th/Flower Station	" "
640-760-00-05	" "	Wilshire/Alvarado Station	" "
640-795-00-01	A795 UPS	Union Station	CIC #3 East
640-795-00-02	" "	" "	CIC #2 West
640-795-00-03	" "	Civic Center Station	CIC #2 North
640-795-00-04	" "	" "	CIC #2 South
640-795-00-05	" "	5th/Hill Station	CIC #2 North
640-795-00-06	" "	" "	CIC #2 South
640-795-00-07	" "	7th/Flower Station	CIC #3 East
640-795-00-08	" "	" "	CIC #2 West
640-795-00-09	" "	Wilshire/Alvarado Station	CIC #2 East
640-795-00-10	" "	" "	CIC #3 West
640-840-00-01	H840 Fare Collection	Union Station	CIC #3 East
640-840-00-02	" "	" "	CIC #2 West
640-840-00-03	" "	Civic Center Station	CIC #2 North
640-840-00-04	" "	" "	CIC #2 South
640-840-00-05	" "	5th/Hill Station	CIC #2 North
640-840-00-06	" "	" "	CIC #2 South
640-840-00-07	" "	7th/Flower Station	CIC #3 East
640-840-00-08	" "	" "	CIC #2 West
640-840-00-09	" "	Wilshire/Alvarado Station	CIC #2 East
640-840-00-10	" "	" "	CIC #3 West

INTERFACE DATA SHEET

<p>CONTRACT No.: A640 Communications</p> <p>SUBSYSTEM: Power Subsystem</p> <p>SPEC. REFERENCE: TP 13 Power TP 14 Interfaces</p>	<p>LOCATION: Panel VP-R1</p>	<p>INTERFACE No.: 640-112-00-1</p>	<p>REV: 0</p>	
<p>REFER TO INTERFACE DATA TABLE: Main Shop</p>				
<p>CONTRACT No.: A112</p> <p>SUBSYSTEM: Main Shop Facilities Electrical</p> <p>SPEC. REFERENCE: 16471</p>	<p>ATTACHMENTS:</p> <p>Attachment 1 Technical Requirements</p> <p>Attachment 2 Interface Reference Drawing List</p>			
<p>FUNCTIONAL DESCRIPTION:</p> <p>Interconnection Interface Point between RCC Communications equipment electric power requirements and Facilities Electrical power supply system.</p>				
<p>TECHNICAL REQUIREMENTS:</p> <p>See Attachment 1</p>				
<p>PHYSICAL DESCRIPTION:</p> <p>Termination of 120/208 VAC, 3-phase, 4 wire, 60 Hz power at Vital Panel VP-R1 located in the Main Shop Electrical Room.</p>				
<p>ORGANIZATION CONTACT:</p> <p>SCRTD Project Engineer</p>				
<p>COMMENTS:</p>				
<p>REFERENCES:</p> <p>See Attachment 2</p>				
<p>REVISION:</p>		<p>PREPARED BY:</p>		<p>IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):</p>
No.	DATE	INITIALS	DATE	

ATTACHMENT 1

TECHNICAL REQUIREMENTS

1) Facilities Contractor A112

A112 Facilities Contractor shall furnish Vital Panel VP-R1 and terminal strips required for the power interface with A640 Communications RCC equipment.

2) Communications Contractor A640

A640 Contractor shall furnish 120/208 VAC power cable from the RCC Communications Equipment Room to the RCC Electrical Room and terminate the cable at Vital Panel VP-R1.

ATTACHMENT 2

Interface Reference Drawing List

A112 Contract Drawings

Drawing E-327 Basement Plan, Generator Pad and Elevations

Drawing E-036 Single Line Diagram

INTERFACE DATA SHEET

<p>CONTRACT No.: A640 Communications</p> <p>SUBSYSTEM: Power Subsystem</p> <p>SPEC. REFERENCE: TP 13 Power TP 14 Interfaces</p>	<p>LOCATION: Yard Control Tower</p> <p>INTERFACE No.: 640-112-00-02</p> <p>REV: 0</p> <p>REFER TO INTERFACE DATA TABLE: Yard Control Tower</p>			
<p>CONTRACT No.: A112</p> <p>SUBSYSTEM: Main Shop Facilities Electrical</p> <p>SPEC. REFERENCE: 16944</p>	<p>ATTACHMENTS:</p> <p>Attachment 1 Technical Requirements</p> <p>Attachment 2 Interface Reference Drawing List</p>			
<p>FUNCTIONAL DESCRIPTION:</p> <p>Interconnection Interface Point between Yard Control Tower control room and equipment room electric power requirements and Facilities Electric power supply system.</p>				
<p>TECHNICAL REQUIREMENTS:</p> <p>See Attachment 1</p>				
<p>PHYSICAL DESCRIPTION:</p> <p>Termination of 120/208 VAC, 3-phase, 4 wire, 60 Hz power at Panel EPLA located in the tower third floor mechanical room #304.</p>				
<p>ORGANIZATION CONTACT:</p> <p>SCRTD Project Engineer</p>				
<p>COMMENTS:</p>				
<p>REFERENCES:</p> <p>See Attachment 2</p>				
<p>REVISION:</p>		<p>IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):</p>		
No.	DATE		INITIALS	DATE

ATTACHMENT 1

TECHNICAL REQUIREMENTS

1) Facilities Contractor A112

A112 Facilities Contractor shall furnish and install Panel EPLA and terminal strips required for the power interface with A640 Communications equipment in the tower.

2) Communications Contractor A640

A640 Contractor shall furnish 120/208 VAC power cables from Communications equipment in the 2nd, 3rd and 4th floors of the Yard Control Tower and terminate the cables at Panel EPLA.

ATTACHMENT 2

Interface Reference Drawing List

A112 Contract Drawings

Drawing E-218 Control Tower Power

Drawing E-036 Main Shop Single Line Diagram

INTERFACE DATA SHEET

<p>CONTRACT No.: A640 Communications</p> <p>SUBSYSTEM: Fire and Intrusion</p> <p>SPEC. REFERENCE: TP 10 F&EM TP 14 Interfaces</p>	<p>LOCATION: Main Shop Building</p> <p>INTERFACE No.: 640-112-00-03</p> <p>REV: 0</p> <p>REFER TO INTERFACE DATA TABLE: Shop Bldg.</p>			
<p>CONTRACT No.: A112</p> <p>SUBSYSTEM: Main Shop Facilities Electrical</p> <p>SPEC. REFERENCE: 16944</p>	<p>ATTACHMENTS:</p> <p>Attachment 1 Technical Requirements</p> <p>Attachment 2 Interface Reference Drawing List</p>			
<p>FUNCTIONAL DESCRIPTION:</p> <p>Interconnection Interface Points for signals from Main Shop Building fire and intrusion sensors and fire valve position sensors.</p>				
<p>TECHNICAL REQUIREMENTS:</p> <p>See Attachment 1</p>				
<p>PHYSICAL DESCRIPTION:</p> <p>Termination of fire and intrusion signal wiring at A112 Contract furnished sensors and intermediate terminal cabinets.</p>				
<p>ORGANIZATION CONTACT:</p> <p>SCRTD Project Engineer</p>				
<p>COMMENTS:</p>				
<p>REFERENCES:</p> <p>See Attachment 2</p>				
<p>REVISION:</p>		<p>IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):</p>		
No.	DATE		INITIALS	DATE

ATTACHMENT 1

TECHNICAL REQUIREMENTS

1) Facilities Contractor A112

A112 Facilities Contractor shall furnish and install valve position indicators, smoke detector backboxes, fire and intrusion system conduits and TTC cabinets including terminal strips.

2) Communications Contractor A640

A640 Contractor shall furnish and install smoke detectors, intrusion detection hardware, the Fire Management Panel, system wiring and terminate all wiring at system termination points including the MDF in the RCC Communications Equipment room and the fire pump vault.

ATTACHMENT 2

Interface Reference Drawing List

A112 Contract Drawings

Drawing E-141 Communications Riser Diagram

Drawing E-201 thru E-208, E-211 thru E-213, E-361 thru E-363 Communications Plans

INTERFACE DATA SHEET

<p>CONTRACT No.: A640 Communications</p> <p>SUBSYSTEM: Public Address</p> <p>SPEC. REFERENCE: TP 6 & TP14</p>	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">LOCATION: Main Shop Bldg.</td> <td style="width: 33%;">INTERFACE No.: 640-112-00-04</td> <td style="width: 33%;">REV: 0</td> </tr> <tr> <td colspan="3" style="text-align: center;">REFER TO INTERFACE DATA TABLE: Shop Bldg.</td> </tr> </table>	LOCATION: Main Shop Bldg.	INTERFACE No.: 640-112-00-04	REV: 0	REFER TO INTERFACE DATA TABLE: Shop Bldg.		
LOCATION: Main Shop Bldg.	INTERFACE No.: 640-112-00-04	REV: 0					
REFER TO INTERFACE DATA TABLE: Shop Bldg.							
<p>CONTRACT No.: A112</p> <p>SUBSYSTEM: Main Shop Facilities Electrical</p> <p>SPEC. REFERENCE: 16050</p>	<p>ATTACHMENTS:</p> <p>Attachment 1 Technical Requirements</p> <p>Attachment 2 Interface Reference Drawing List</p>						
<p>FUNCTIONAL DESCRIPTION:</p> <p>Interconnection Interface Points for Public Address equipment throughout the the Main Shop building.</p>							
<p>TECHNICAL REQUIREMENTS:</p> <p>See Attachment 1</p>							
<p>PHYSICAL DESCRIPTION:</p> <p>Termination of P.A. system wiring at A112 Contractor furnished junction boxes and A640 Contract speakers.</p>							
<p>ORGANIZATION CONTACT:</p> <p>SCRTD Project Engineer</p>							
<p>COMMENTS:</p>							
<p>REFERENCES:</p> <p>See Attachment 2</p>							
REVISION:	PREPARED BY:	IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):					
No.	DATE		INITIALS	DATE			

ATTACHMENT 1

TECHNICAL REQUIREMENTS

1) Facilities Contractor A112

A112 Facilities Contractor shall furnish and install P.A. system junction boxes, speakers backboxes and system conduit.

2) Communications Contractor A640

A640 Contractor shall furnish and install P.A. speakers on speaker backboxes. System wiring shall be furnished and terminated at all points including the primary P.A. equipment in the Yard tower and the RCC Communications Equipment room.

ATTACHMENT 2

Interface Reference Drawing List

A112 Contract Drawings

Drawing E-140 Communications Riser Diagram
Drawing E-201 thru E-208, E-211 thru E-213, E-361 thru E-363
Communication Plans

A640 Contract Drawings

Drawing N-101 Communications Public Address Speaker

INTERFACE DATA SHEET

<p>CONTRACT No.: A640 Communications</p> <p>SUBSYSTEM: Telephone Subsystem</p> <p>SPEC. REFERENCE: TP 5 Telephone TP 14 Interfaces</p>	<p>LOCATION: Main Shop Bldg.</p> <p>INTERFACE No.: 640-112-00-5</p> <p>REV: 0</p> <p>REFER TO INTERFACE DATA TABLE: Shop Bldg.</p>			
<p>CONTRACT No.: A112</p> <p>SUBSYSTEM: Main Shop Facilities Electrical</p> <p>SPEC. REFERENCE: 16050</p>	<p>ATTACHMENTS:</p> <p>Attachment 1 Technical Requirements</p> <p>Attachment 2 Interface Reference Drawing List</p>			
<p>FUNCTIONAL DESCRIPTION:</p> <p>Interconnection Interface Point for administrative and emergency telephones throughout the Main Shop building.</p>				
<p>TECHNICAL REQUIREMENTS:</p> <p>See Attachment 1</p>				
<p>PHYSICAL DESCRIPTION:</p> <p>Termination of telephone wiring at telephones and A112 Contract or furnish intermediate terminal cabinets.</p>				
<p>ORGANIZATION CONTACT:</p> <p>SCRTD Project Engineer</p>				
<p>COMMENTS:</p>				
<p>REFERENCES:</p> <p>See Attachment 2</p>				
REVISION:	PREPARED BY:	IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):		
No.	DATE		INITIALS	DATE

ATTACHMENT 1

TECHNICAL REQUIREMENTS

1) Facilities Contractor A112

A112 Facilities Contractor shall and install Telephone Terminal Cabinets and telephone system conduits.

2) Communications Contractor A640

A640 Contractor shall furnish, install and terminate telephone system wiring at all termination points including DEF telephones and the MDF in the RCC Communications Equipment room. VP-R1.

ATTACHMENT 2

Interface Reference Drawing List

A112 Contract Drawings

Drawing E-141 Communications Riser Diagram
Drawing E-201 thru E-208, E-211 thru E-213, E-361 thru E-363
Communications Plans

INTERFACE DATA SHEET

<p>CONTRACT No.: A640 Communications</p> <p>SUBSYSTEM: Fire and Intrusion</p> <p>SPEC. REFERENCE: TP 10 F&EM TP 14 Interfaces</p>	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">LOCATION: MOW Building</td> <td style="width: 33%;">INTERFACE No.: 640-121-00-1</td> <td style="width: 33%;">REV: 0</td> </tr> <tr> <td colspan="3" style="text-align: center;">REFER TO INTERFACE DATA TABLE: Maintenance of Way Building</td> </tr> </table>	LOCATION: MOW Building	INTERFACE No.: 640-121-00-1	REV: 0	REFER TO INTERFACE DATA TABLE: Maintenance of Way Building		
LOCATION: MOW Building	INTERFACE No.: 640-121-00-1	REV: 0					
REFER TO INTERFACE DATA TABLE: Maintenance of Way Building							
<p>CONTRACT No.: A121</p> <p>SUBSYSTEM: Building Facilities Electrical</p> <p>SPEC. REFERENCE: 16944</p>	<p>ATTACHMENTS:</p> <p>Attachment 1 Technical Requirements</p> <p>Attachment 2 Interface Reference Drawing List</p>						
<p>FUNCTIONAL DESCRIPTION:</p> <p>Interconnection Interface Points for signals from MOW fire and intrusion sensors and fire valve positions sensors.</p>							
<p>TECHNICAL REQUIREMENTS:</p> <p>See Attachment 1</p>							
<p>PHYSICAL DESCRIPTION:</p> <p>Termination of fire and intrusion wiring at A121 Contractor furnished sensors and A640 Contractor furnished terminal cabinets.</p>							
<p>ORGANIZATION CONTACT:</p> <p>SCRID Project Engineer</p>							
<p>COMMENTS:</p>							
<p>REFERENCES:</p> <p>See Attachment 2</p>							
<p>REVISION:</p>		<p>IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):</p>					
No.	DATE		INITIALS	DATE			

ATTACHMENT 1

TECHNICAL REQUIREMENTS

1) Facilities Contractor A121

A121 Facilities Contractor shall furnish and install valve position indicators plus fire and intrusion conduits.

2) Communications Contractor A640

A121 Facilities Contractor shall furnish and install intrusion detection hardware, the Fire Management Panel and the building MDF. System wiring shall be furnished and terminated at all termination points including tie cables to the RCC Communications Equipment room.

ATTACHMENT 2

Interface Reference Drawing List

A121 Contract Drawings

Drawing E-023 thru E-027 Communications Plans

INTERFACE DATA SHEET

<p>CONTRACT No.: A640 Communications</p> <p>SUBSYSTEM: Power Subsystem</p> <p>SPEC. REFERENCE: TP 6 & TP 14</p>	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">LOCATION: MOW Building</td> <td style="width: 33%;">INTERFACE No.: 640-121-00-2</td> <td style="width: 33%;">REV: 0</td> </tr> <tr> <td colspan="3" style="text-align: center;">REFER TO INTERFACE DATA TABLE: Maintenance of Way Building</td> </tr> </table>	LOCATION: MOW Building	INTERFACE No.: 640-121-00-2	REV: 0	REFER TO INTERFACE DATA TABLE: Maintenance of Way Building							
LOCATION: MOW Building	INTERFACE No.: 640-121-00-2	REV: 0										
REFER TO INTERFACE DATA TABLE: Maintenance of Way Building												
<p>CONTRACT No.: A121</p> <p>SUBSYSTEM: Maintenance of Way Building Facilities Electrical</p> <p>SPEC. REFERENCE: 16944</p>	<p>ATTACHMENTS:</p> <p>Attachment 1 Technical Requirements</p> <p>Attachment 2 Interface Reference Drawing List</p>											
<p>FUNCTIONAL DESCRIPTION:</p> <p>Interconnection Interface Points for Public Address equipment throughout the Maintenance of Way building.</p>												
<p>TECHNICAL REQUIREMENTS:</p> <p>See Attachment 1</p>												
<p>PHYSICAL DESCRIPTION:</p> <p>Termination of P.A. system wiring and installations of P.A. speakers on A121 backboxes.</p>												
<p>ORGANIZATION CONTACT:</p> <p>SCRTD Project Engineer</p>												
<p>COMMENTS:</p>												
<p>REFERENCES:</p> <p>See Attachment 2</p>												
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REVISION:	PREPARED BY:	IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):										
No.	DATE											
INITIALS	DATE											

INTERFACE DATA SHEET

<p>CONTRACT No.: A640 Communications</p> <p>SUBSYSTEM: Telephone Subsystem</p> <p>SPEC. REFERENCE: TP 5 Telephones TP 14 Interfaces</p>	<p>LOCATION: MOW Building</p>	<p>INTERFACE No.: 640-121-00-03</p>	<p>REV: 0</p>	
		<p>REFER TO INTERFACE DATA TABLE: Maintenance of Way Building</p>		
<p>CONTRACT No.: A121</p> <p>SUBSYSTEM: Maintenance of Way Building Facilities Electrical</p> <p>SPEC. REFERENCE: 16944</p>	<p>ATTACHMENTS:</p> <p>Attachment 1 Technical Requirements</p> <p>Attachment 2 Interface Reference Drawing List</p>			
<p>FUNCTIONAL DESCRIPTION:</p> <p>Interconnection Interface Points for administrative and emergency telephones the Maintenance of Way building.</p>				
<p>TECHNICAL REQUIREMENTS:</p> <p>See Attachment 1</p>				
<p>PHYSICAL DESCRIPTION:</p> <p>Termination of telephone wiring at telephones and at MOW Telecom Room.</p>				
<p>ORGANIZATION CONTACT:</p> <p>SCRTD Project Engineer</p>				
<p>COMMENTS:</p>				
<p>REFERENCES:</p> <p>See Attachment 2</p>				
REVISION:		PREPARED BY:		<p>IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):</p>
No.	DATE	INITIALS	DATE	

ATTACHMENT 1

TECHNICAL REQUIREMENTS

1) Facilities Contractor A121

A121 Facilities Contractor shall furnish and install telephone system conduits.

2) Communications Contractor A640

A640 Contractor shall furnish, install and terminate telephone system wiring at all termination points including DEF telephones and tie cables to the YCT Communications Equipment room.

ATTACHMENT 2

Interface Reference Drawing List

A121 Contract Drawings

Drawing E-023 thru E-027 Communications Plans

ATTACHMENT 1

TECHNICAL REQUIREMENTS

1) Facilities Contractor A121

A121 Facilities Contractor shall furnish and install P.A. system conduits and P.A. speakers on speaker backboxes.

2) Communications Contractor A640

A640 Contractor shall furnish and install P.A. speakers on speaker backboxes. System wiring shall be furnished and terminated at all points including the Fire Management Panel and the tie cables to the YCT Communications Equipment room.

ATTACHMENT 2

Interface Reference Drawing List

A121 Contract Drawings

Drawing N-101 Communications Public Address Speakers

INTERFACE DATA SHEET

<p>CONTRACT No.: A640 Communications</p> <p>SUBSYSTEM: Cable Transmission</p> <p>SPEC. REFERENCE: TP 8.0 CTS TP 14 Interface</p>	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">LOCATION: CIC #1 TPSS</td> <td style="width: 33%;">INTERFACE No.: 640-631-00-10</td> <td style="width: 33%;">REV: 0</td> </tr> <tr> <td colspan="3" style="text-align: center;">REFER TO INTERFACE DATA TABLE: Yard</td> </tr> </table>	LOCATION: CIC #1 TPSS	INTERFACE No.: 640-631-00-10	REV: 0	REFER TO INTERFACE DATA TABLE: Yard		
LOCATION: CIC #1 TPSS	INTERFACE No.: 640-631-00-10	REV: 0					
REFER TO INTERFACE DATA TABLE: Yard							
<p>CONTRACT No.: A631 Traction Power Installation</p> <p>SUBSYSTEM: System Supervision</p> <p>SPEC. REFERENCE: *</p>	<p>ATTACHMENTS:</p> <p>Attachment 1 Technical Requirements</p> <p>Attachment 2 Interface Reference Drawing List</p>						
<p>FUNCTIONAL DESCRIPTION: Interconnection Interface Point for all signals to and from SCADA and Yard Traction Power, CIC #1 TPSS</p>							
<p>TECHNICAL REQUIREMENTS: See Attachment 1</p>							
<p>PHYSICAL DESCRIPTION: Barrier type terminal strips and assorted interposing relays.</p>							
<p>ORGANIZATION CONTACT: SCR TD Project Engineer</p>							
<p>COMMENTS:</p>							
<p>REFERENCES:</p>							
REVISION:	PREPARED BY:	IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):					
No.	DATE		INITIALS	DATE			

ATTACHMENT 1

TECHNICAL REQUIREMENTS

1) Traction Power Contractor A631

A631 Contractor shall furnish, install and terminate all SCADA input leads from the Yard traction power equipment at TPSS CIC #1 including EBPS generator supervision.

2) Communications Contractor A640

A640 Contractor shall furnish and install the Communication Interface Cabinet and system interposing relays. SCADA system tie cables shall be furnished, installed and terminated at CIC #1 and at the MDF in the RCC Communications Equipment room.

ATTACHMENT 2

Interface Reference Drawing List

A631 Contract Drawings

Drawing P-261 thru P-265 and P-384, P-385.

A640 Contract Drawing:

YARD SUBSTATION WIRE INTERCONNECTION SCHEDULE

A631 REFERENCE DRAWINGS

INCONNECTION SCHEDULE

TERMINAL STRIP DRAWING NUMBER

DRAWING N-096

Figures:

Yard Substation Metering and Control	A	P-261B
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DRAWING N-097

Yard Substation Metering and Control	A, B	P-262B
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DRAWING N-098

Yard Substation Metering and Control	A,B, D	P-264B
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INTERFACE DATA SHEET

<p>CONTRACT No.: A640 Communications SUBSYSTEM: Cable Transmission SPEC. REFERENCE: TP 8.0 CTS TP 14 Interfaces</p>	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 60%;">LOCATION: Yard Control Junction Boxes</td> <td style="width: 20%;">INTERFACE No.: 640-631-00-11</td> <td style="width: 20%;">REV: 0</td> </tr> <tr> <td colspan="3">REFER TO INTERFACE DATA TABLE: Yard</td> </tr> </table>	LOCATION: Yard Control Junction Boxes	INTERFACE No.: 640-631-00-11	REV: 0	REFER TO INTERFACE DATA TABLE: Yard		
LOCATION: Yard Control Junction Boxes	INTERFACE No.: 640-631-00-11	REV: 0					
REFER TO INTERFACE DATA TABLE: Yard							
<p>CONTRACT No.: A631 Traction Power Installation SUBSYSTEM: System Supervision SPEC. REFERENCE: *</p>	<p>ATTACHMENTS: Interface Drawing Utilization List</p>						
<p>FUNCTIONAL DESCRIPTION: Interconnection Interface Point for all signals to and from SCADA and Yard Control Junction Boxes CJB #1 thru #9</p>							
<p>TECHNICAL REQUIREMENTS:</p>							
<p>PHYSICAL DESCRIPTION: Barrier type terminal strips and assorted interposing relay</p>							
<p>ORGANIZATION CONTACT: SCRTD Project Engineer</p>							
<p>COMMENTS:</p>							
<p>REFERENCES: A640 Contract Drawings and A640 Reference Drawings. *A631 Drawing P-364A Control Junction Box Details</p>							
REVISION:	PREPARED BY:	IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):					
No.	DATE		INITIALS	DATE			

DRAWING UTILIZATION LIST

A640 Drawing Title:

COMMUNICATIONS SCADA/TRACTION POWER INTERFACES

A631 REFERENCE DRAWINGS

INTERCONNECTION SCHEDULE

TERMINAL STRIP DRAWING NUMBER

DRAWING N-282

Figures:

Yard Disconnect Switches
Metering and Control

CJB #1 - YDS 33, YDS 34 & YDS 42	A	P-230B
- YDS 36, YDS 39 & YDS 41	B	P-230B
CJB #2 - YDS 01 & YDS 02	A	P-230B
- YDS 03	A	P-231B
- YDS 06, YDS 07	B	P-231B
CJB #3 - YDS 23, YDS 25 & YDS 26	A	P-231B

DRAWING N-283

Yard Disconnect Switches
Metering and Control

CJB #6 - YDS 28, YDS 29 & YDS 30	A	P-231B
- YDS 31 & YDS 32	B	P-232B
CJB #7 - YDS 08 thru YDS 11	A	P-232B
CJB #8 - YDS 46	A	P-232B
CJB #9 - YDS 47	A	P-232B

INTERFACE DATA SHEET

<p>CONTRACT No.: A640 Communications</p> <p>SUBSYSTEM: Cable Transmission</p> <p>SPEC. REFERENCE: TP 8.0 CTS TP 14 Interfaces</p>	<p>LOCATION: CIC #1 TPSS</p>	<p>INTERFACE No.: 640-631-00-12</p>	<p>REV: 0</p>	
		<p>REFER TO INTERFACE DATA TABLE: Shop</p>		
<p>CONTRACT No.: A631 Traction Power Installation</p> <p>SUBSYSTEM: System Supervision</p> <p>SPEC. REFERENCE: *</p>	<p>ATTACHMENTS: Interface Drawing Utilization List</p>			
<p>FUNCTIONAL DESCRIPTION: Interconnection Interface Point for all signals to and from SCADA and Shop Traction Power, CIC #1 TPSS</p>				
<p>TECHNICAL REQUIREMENTS:</p>				
<p>PHYSICAL DESCRIPTION: Barrier type terminal strips and assorted interposing relay</p>				
<p>ORGANIZATION CONTACT: SCRTD Project Engineer</p>				
<p>COMMENTS:</p>				
<p>REFERENCES: A640 Contract Drawings and A640 Reference Drawings. *A631 Drawing P-362 Communications Interface Cabinet Details</p>				
<p>REVISION:</p>		<p>PREPARED BY:</p>		<p>IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):</p>
No.	DATE	INITIALS	DATE	

IDS-640-631-00-12

ATTACHMENT A

SHOP

CIC #1 TPSS

DRAWING UTILIZATION LIST

A640 Drawing Title:

COMMUNICATIONS SCADA/TRACTION POWER INTERFACES

A631 REFERENCE DRAWINGS

INTERCONNECTION SCHEDULE

TERMINAL STRIP

DRAWING NUMBER

DRAWING N-098

Figures:

Main Shop Substation Metering
and Control

A

P-247B

INTERFACE DATA SHEET

<p>CONTRACT No.: A640 Communications</p> <p>SUBSYSTEM: Cable Transmission</p> <p>SPEC. REFERENCE: TP 8.0 CTS TP 14 Interface</p>	<p>LOCATION: CIC #5</p>	<p>INTERFACE No.: 640-130-00-01</p>	<p>REV: 0</p>	
<p>REFER TO INTERFACE DATA TABLE: Union Sta./ Yard Leads</p>				
<p>CONTRACT No.: A130</p> <p>SUBSYSTEM: Union Station/Yard Leads Facilities Electrical</p> <p>SPEC. REFERENCE: 16944</p>	<p>ATTACHMENTS: Interface Drawing Utilization List</p>			
<p>FUNCTIONAL DESCRIPTION: Interconnection Interface Point for all signals to and from SCADA and Union Station/ Yard Leads Facilities Electrical, CIC #5</p>				
<p>TECHNICAL REQUIREMENTS:</p>				
<p>PHYSICAL DESCRIPTION: Barrier type terminal strips and assorted interposing relays.</p>				
<p>ORGANIZATION CONTACT: SCRTD Project Engineer</p>				
<p>COMMENTS:</p>				
<p>REFERENCES: A640 Contract Drawings - NS-007A Interposing Relay Interfaces A640 Reference Drawings - Union Station Stage II Construction Contract A130 Drawings</p>				
<p>REVISION:</p>		<p>PREPARED BY:</p>		<p>IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):</p>
No.	DATE	INITIALS	DATE	

DRAWING UTILIZATION LIST

A640 Drawing Title:

COMMUNICATIONS SCADA/FACILITIES ELECTRICAL INTERFACES

	<u>A130 REFERENCE DRAWINGS</u>		
	<u>CONNECTION DIAGRAM</u>		<u>ELEMENTARY DIAGRAM</u>
	<u>TERMINAL STRIP</u>	<u>DWG. NO.</u>	
<u>DRAWING N-042</u>			
<u>Figures:</u>			
Emergency Fan, Fan Dampers ED-011, ED-012, ED-013	TS-A, TS-B, TS-C	E-014	E-006
<u>DRAWING N-037</u>			
Emergency Fan #1 & #2 Auxiliary Circuits	TS-C	E-104	E-006
Emergency Fan #1, #2 & #3 EF-011, EF-012, EF-013	TS-A, TS-B, TS-C	E-104	E-006
<u>DRAWING N-038</u>			
Emergency Fan #3 Auxiliary Circuits	TS-C	E-104	E-007
Emergency Fan Bypass Dampers BD-011, BD-012	TS-A, TS-B	E-104	E-007
<u>DRAWING N-040</u>			
Duplex Sump Pumps SP-1, SP-2, SP-3, SP-4, SP-5, SP-6	TS-C, TS-D	E-104	E-103
<u>DRAWING N-041</u>			
Traction Power Room Supply Fans SSF-011, SSF-012,	TS-D	E-104	E-108
Traction Power Room Supply Fan Alarms	TS-D	E-104	E-108

DRAWING UTILIZATION LIST

	<u>A130 REFERENCE DRAWINGS</u>		
	<u>CONNECTION DIAGRAM</u>		<u>ELEMENTARY DIAGRAM</u>
	<u>TERMINAL STRIP</u>	<u>DWG. NO.</u>	
<u>DRAWING N-045</u>			
TC/C Battery Room Supply & Exhaust Fans, SF-10, EF-3	TS-B	E-104	E-113
<u>DRAWING N-086</u>			
Emergency Fan Room Exhaust Fans, EF-06, EF-07	TS-A	E-104	E-113
<u>DRAWING (TBD)</u>			
Incoming Electrical Service Room Supply Fan, SF-01	TS-D	E-104	E-112
Incoming Electrical Service Battery Room Exhaust Fans EF-09 A & B	TS-C	E-104	E-113
<u>DRAWING (TBD)</u>			
Electrical Room Supply & Exhaust Fans SF-12, EF-02	TS-A	E-104	E-112, E-113
Corridor Supply & Exhaust Fans SF-08, EF-04	TS-D	E-104	E-112

INTERFACE DATA SHEET

<p>CONTRACT No.: A640 Communications</p> <p>SUBSYSTEM: Cable Transmission</p> <p>SPEC. REFERENCE: TP 8.0 CTS TP 14 Interface</p>	<p>LOCATION: CIC #3 East</p>	<p>INTERFACE No.: 640-136-00-01</p>	<p>REV: 0</p>	
<p>CONTRACT No.: A136</p> <p>SUBSYSTEM: Union Station Facilities Electrical</p> <p>SPEC. REFERENCE: 16944</p>		<p>REFER TO INTERFACE DATA TABLE: Union Station</p> <p>ATTACHMENTS: Interface Drawing Utilization List</p>		
<p>FUNCTIONAL DESCRIPTION: Interconnection Interface Point for all signals to and from SCADA and Union Station Facilities Electrical, CIC #3 East</p>				
<p>TECHNICAL REQUIREMENTS:</p>				
<p>PHYSICAL DESCRIPTION: Barrier type terminal strips and assorted interposing relays.</p>				
<p>ORGANIZATION CONTACT: SCRTD Project Engineer</p>				
<p>COMMENTS:</p>				
<p>REFERENCES: A640 Contract Drawings - NS-007A Interposing Relay Interfaces A640 Reference Drawings - Union Station Stage II Construction Contract A136 Drawings</p>				
<p>REVISION:</p>		<p>PREPARED BY:</p>		<p>IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):</p>
No.	DATE	INITIALS	DATE	

DRAWING UTILIZATION LIST

A640 Drawing Title:

COMMUNICATIONS SCADA/FACILITIES ELECTRICAL INTERFACES

	<u>A136 REFERENCE DRAWINGS</u>		
	<u>CONNECTION DIAGRAM</u>		<u>ELEMENTARY</u>
	<u>TERMINAL STRIP</u>	<u>DWG. NO.</u>	<u>DIAGRAM</u>
<u>DRAWING N-039</u>			
<u>Figures:</u>			
Station Ventilation System AHU-1E, AHU-2E (AHU-011, AHU-012)*	TS-A, TS-D	E-137F	E-117F
Underplatform Exhaust Fan, UF-1E, (UF-011)	TS-A	E-137F	E-116F
<u>DRAWING N-040</u>			
Roll-up Doors at Station Entrance D-1E	TS-D	E-137F	E-122F
<u>DRAWING N-041</u>			
480V Main Breakers in Aux. Pwr. Rm. (two)	TS-F	E-137F	E-119F
<u>DRAWING N-042</u>			
Smoke & Heat Exhaust Fans SE-1E & SE-2E, (SM-1E, SM-2E)	TS-C	E-137F	E-116F
TC/C Room Air Conditioning ACU-1, MD-4, MD-3, MD-2, ACC-1	TS-B	E-137F	E-117F

*Ventilation equipment designations in parenthesis are Facilities mechanical dwg. designations that differ from Facilities electrical dwg. designations (typ.).

DRAWING UTILIZATION LIST

	<u>A136 REFERENCE DRAWINGS</u>		
	<u>CONNECTION DIAGRAM</u>		<u>ELEMENTARY DIAGRAM</u>
	<u>TERMINAL STRIP</u>	<u>DWG. NO.</u>	
<u>DRAWING N-043</u>			
Elevator Controls & Indications EL-1E EL-2E (ELV #1, #2)	TS-A, TS-B	E-137F	TBD
Escalator Controls & Indications ES-1E, ES-2E, ES-3E, ES-4E (ESC #1, #2, #3, #4)	TS-E	E-137F	TBD
<u>DRAWING N-044</u>			
Auxiliary Power Room Supply Exhaust Fans SF-1E, EF-2E (SF-1E, EF-1E)	TS-F	E-137F	E-111F
Auxiliary Power Battery Room Supply and Exhaust Fan SF-8E, EF-3E (SF-7E, EF-2E)	TS-B	E-137F	E-111F
<u>DRAWING N-045 & N-048</u>			
TC/C Room Exhaust Fans EF-7E, EF-10E	TS-C	E-137F	E-111F
<u>DRAWING N-084</u>			
Fire Pump P-6E	TS-D	E-137F	E-121F
<u>DRAWING N-085</u>			
Elevator Equipment Rm. Exhaust Fan, EF-7E (EF-5E)	TS-F	E-137F	E-111F
Elevator Shaft Exhaust Fan, EF-12E	TS-D	E-137F	E-111F

DRAWING UTILIZATION LIST

A136 REFERENCE DRAWINGS

	<u>CONNECTION DIAGRAM</u>		<u>ELEMENTARY DIAGRAM</u>
	<u>TERMINAL STRIP</u>	<u>DWG. NO.</u>	
<u>DRAWING N-085A (Cont'd.)</u>			
Ancillary Room Supply & Exhaust Fans, SF-2E, EF-9E (SF-3E, EF-4E) EF-7E, EF-8E (SF-4E, EF-6E)	TS-A, TS-E	E-137F	E-111F
Air Supply Room Supply & Exhaust Fans, SF-5E, EF-4E (SF-5E, EF-8E)	TS-F	E-137F	E-111F
UPE Fan Room Supply & Exhaust Fans, SF-6E, EF-5 (SF-6E, EF-9E)	TS-B, TS-C	E-137F	E-111F
<u>DRAWING N-086</u>			
Chiller Room Supply & Exhaust Fans SF-3E, EF-6E (SF-2E, EF-3E)	TS-A, TS-D	E-137F	E-114F

INTERFACE DATA SHEET

<p>CONTRACT No.: A640 Communications</p> <p>SUBSYSTEM: Cable Transmission</p> <p>SPEC. REFERENCE: TP 8.0 CTS TP 14 Interface</p>	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">LOCATION: CIC #2 West</td> <td style="width: 33%;">INTERFACE No.: 640-136-00-02</td> <td style="width: 33%;">REV: 0</td> </tr> <tr> <td colspan="3" style="text-align: right; padding-top: 10px;">REFER TO INTERFACE DATA TABLE: Union Station</td> </tr> </table>	LOCATION: CIC #2 West	INTERFACE No.: 640-136-00-02	REV: 0	REFER TO INTERFACE DATA TABLE: Union Station							
LOCATION: CIC #2 West	INTERFACE No.: 640-136-00-02	REV: 0										
REFER TO INTERFACE DATA TABLE: Union Station												
<p>CONTRACT No.: A136</p> <p>SUBSYSTEM: Union Station Facilities Electrical</p> <p>SPEC. REFERENCE: 16944</p>	<p>ATTACHMENTS: Interface Drawing Utilization List</p>											
<p>FUNCTIONAL DESCRIPTION: Interconnection Interface Point for all signals to and from SCADA and Union Station Facilities Electrical, CIC #2 West</p>												
<p>TECHNICAL REQUIREMENTS:</p>												
<p>PHYSICAL DESCRIPTION: Barrier type terminal strips and assorted interposing relays.</p>												
<p>ORGANIZATION CONTACT: SCRTD Project Engineer</p>												
<p>COMMENTS:</p>												
<p>REFERENCES: A640 Contract Drawings - NS-007A Interposing Relay Interfaces A640 Reference Drawings - Union Station Stage II Construction Contract A136 Drawings</p>												
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">REVISION:</td> <td style="width: 40%;">PREPARED BY:</td> <td rowspan="5" style="width: 30%; vertical-align: top;">IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):</td> </tr> <tr> <td style="text-align: center;">No.</td> <td style="text-align: center;">DATE</td> </tr> <tr> <td style="text-align: center;">INITIALS</td> <td style="text-align: center;">DATE</td> </tr> <tr> <td style="height: 20px;"></td> <td></td> </tr> <tr> <td style="height: 20px;"></td> <td></td> </tr> </table>		REVISION:	PREPARED BY:	IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):	No.	DATE	INITIALS	DATE				
REVISION:	PREPARED BY:	IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):										
No.	DATE											
INITIALS	DATE											

DRAWING UTILIZATION LIST

	<u>A136 REFERENCE DRAWINGS</u>		
	<u>CONNECTION DIAGRAM</u>		<u>ELEMENTARY DIAGRAM</u>
	<u>TERMINAL STRIP</u>	<u>DWG. NO.</u>	
<u>DRAWING N-039</u>			
Station Ventilation System AHU-1W, AHU-2W (AHU-013, AHU-014)	TS-A	E-138F	E-117F
Underplatform Exhaust Fan UF-1W (UF-012)	TS-A	E-139F	E-116F
<u>DRAWING N-040</u>			
Roll-up Doors at Station Entrance D-1W	TS-C	E-138F	E-122F
Duplex Sump Pumps P-1W, P-2W	TS-A	E-138F	E-114F
<u>DRAWING N-041</u>			
480V Main Breakers in Aux. Power Room (two)	TS-F	E-138F	E-119E
<u>DRAWING N-042</u>			
Smoke & Heat Exhaust Fans, SE-1W, SE-2W (SM-1W, SM-2W)*	TS-B, TS-C	E-138F	E-116E
<u>DRAWING N-043</u>			
Escalator Controls & Indica- cations ES-1W, ES-4W (ESC #5, #6)	TS-E	E-138F	TBD
<u>DRAWING N-044</u>			
Auxiliary Power Room Supply and Exhaust Fans SF-1W, EF-2W, (SF-3W, EF-3W)	TS-A, TS-D	E-138F	E-111F

*Ventilation equipment designations in parenthesis are Facilities mechanical dwg. designations that differ from Facilities electrical dwg. designations (typ.).

DRAWING UTILIZATION LIST

	<u>A136 REFERENCE DRAWINGS</u>		
	<u>CONNECTION DIAGRAM</u>		<u>ELEMENTARY DIAGRAM</u>
	<u>TERMINAL STRIP</u>	<u>DWG. NO.</u>	
<u>DRAWING N-044 (Cont'd.)</u>			
Auxiliary Power Battery Rm. Supply and Exhaust Fans SF-4W, EF-3W (SF-2W, EF-2W)	TS-C, TS-D	E-138F	E-111F
<u>DRAWING N-084</u>			
Fire Pump P-7W	TS-D	E-138F	E-121F
<u>DRAWING N-085</u>			
Elevator Equipment Room Exhaust Fan EF-5W	TS-B	E-138F	E-111F
Utility Shaft Exhaust Fan EF-6W	TS-F	E-138F	E-111F
Ancillary Room Supply & Exhaust Fans, SF-2W, EF-1W (SF-1W, EF-1W)	TS-F	E-138F	E-111F
Air Supply Room Supply & Exhaust Fans, SF-3W, EF-4W (SF-4W, EF-4W)	TS-D, TS-E	E-138F	E-111F

INTERFACE DATA SHEET

<p>CONTRACT No.: A640</p> <p>SUBSYSTEM: Public Address</p> <p>SPEC. REFERENCE: TP 6 & TP 14</p>	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">LOCATION: Union Station</td> <td style="width: 33%;">INTERFACE No.: 640-136-00-03</td> <td style="width: 33%;">REV: 0</td> </tr> <tr> <td colspan="3">REFER TO INTERFACE DATA TABLE: Union Station</td> </tr> </table>	LOCATION: Union Station	INTERFACE No.: 640-136-00-03	REV: 0	REFER TO INTERFACE DATA TABLE: Union Station		
LOCATION: Union Station	INTERFACE No.: 640-136-00-03	REV: 0					
REFER TO INTERFACE DATA TABLE: Union Station							
<p>CONTRACT No.: A136</p> <p>SUBSYSTEM: Electrical</p> <p>SPEC. REFERENCE: 16050 Part 3</p>	<p>ATTACHMENTS: Interface Drawing Utilization List</p>						
<p>FUNCTIONAL DESCRIPTION: Installation interface for speakers provided by A640 into back box provided by A136.</p>							
<p>TECHNICAL REQUIREMENTS: Speaker back boxes to be installed as shown on Contract Drawing A-023 of Contract A136.</p>							
<p>PHYSICAL DESCRIPTION: 1" conduits to and from four (4") square junction boxes and/or 9-5/8" x 9-5/8" x 6" back boxes. Wires, speakers, baffles, and mounting hardware for same.</p>							
<p>ORGANIZATION CONTACT: SCRITD Project Engineer</p>							
<p>COMMENTS: Additional speaker housings are installed in Contract A760.</p>							
<p>REFERENCES: A640 Contract Drawings (Section VII) A640 Reference Drawings (Section VIII)</p>							
REVISION:	PREPARED BY:	IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):					
No.	DATE		INITIALS	DATE			

IDS-640-136-00-03
ATTACHMENT A
UNION STATION
ALL PUBLIC ADDRESS
SPEAKERS EXCEPT
THOSE IN LINEAR
ELEMENT

DRAWING UTILIZATION LIST

A640 Drawing Title:

COMMUNICATIONS PUBLIC ADDRESS/STAGE II CONTRACT INTERFACE

DRAWING N-101

Figure 1:

Embedded Ceiling Mount

INTERFACE DATA SHEET

CONTRACT No.: A640 SUBSYSTEM: Closed Circuit T.V. SPEC. REFERENCE: TP 7 & TP 14	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">LOCATION: Union Station</td> <td style="width: 33%;">INTERFACE No.: 640-136-00-04</td> <td style="width: 33%;">REV: 0</td> </tr> <tr> <td colspan="3">REFER TO INTERFACE DATA TABLE: Union Station</td> </tr> </table>	LOCATION: Union Station	INTERFACE No.: 640-136-00-04	REV: 0	REFER TO INTERFACE DATA TABLE: Union Station		
LOCATION: Union Station	INTERFACE No.: 640-136-00-04	REV: 0					
REFER TO INTERFACE DATA TABLE: Union Station							
CONTRACT No.: A136 SUBSYSTEM: Electrical SPEC. REFERENCE: 16060 Part 3	ATTACHMENTS: Interface Drawing Utilization List						
FUNCTIONAL DESCRIPTION: Installation interface for CCTV cameras and cables provided by Contract A640 into conduits and boxes provided by A136.							
TECHNICAL REQUIREMENTS: Boxes shall be capable of supporting the weight of the camera.							
PHYSICAL DESCRIPTION: 1" conduits to and from a 4" square junction box.							
ORGANIZATION CONTACT: SCR TD Project Engineer							
COMMENTS:							
REFERENCES: A640 Contract Drawings (Section VII) A640 Reference Drawings (Section VIII)							
REVISION:	PREPARED BY:	IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):					
No.	DATE		INITIALS	DATE			

DRAWING UTILIZATION LIST

A640 Drawing Title:

COMMUNICATIONS CCTV/STAGE II STATION CONTRACT INTERFACE

DRAWING N-100

Figure 1

Ceiling Mount for CCTV Camera

Figure 2

Wall Mount for CCTV Camera

INTERFACE DATA SHEET

<p>CONTRACT No.: A640 Communications</p> <p>SUBSYSTEM: Cable Transmission</p> <p>SPEC. REFERENCE: TP 8.0 CTS TP 14 Interface</p>	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">LOCATION: CIC #4</td> <td style="width: 33%;">INTERFACE No.: 640-136-00-05</td> <td style="width: 33%;">REV: 0</td> </tr> <tr> <td colspan="3" style="text-align: right; padding-top: 10px;">REFER TO INTERFACE DATA TABLE: Union Station</td> </tr> </table>	LOCATION: CIC #4	INTERFACE No.: 640-136-00-05	REV: 0	REFER TO INTERFACE DATA TABLE: Union Station		
LOCATION: CIC #4	INTERFACE No.: 640-136-00-05	REV: 0					
REFER TO INTERFACE DATA TABLE: Union Station							
<p>CONTRACT No.: A136</p> <p>SUBSYSTEM: Union Station Facilities Electrical</p> <p>SPEC. REFERENCE: 16944</p>	<p>ATTACHMENTS: Interface Drawing Utilization List</p>						
<p>FUNCTIONAL DESCRIPTION: Interconnection Interface Point for all signals to and from SCADA and Union Station Facilities Electrical, CIC #4</p>							
<p>TECHNICAL REQUIREMENTS:</p>							
<p>PHYSICAL DESCRIPTION: Barrier type terminal strips and assorted interposing relays.</p>							
<p>ORGANIZATION CONTACT: SCRTD Project Engineer</p>							
<p>COMMENTS:</p>							
<p>REFERENCES: A640 Contract Drawings - NS-007A Interposing Relay Interfaces A640 Reference Drawings - Union Station Stage II Construction Contract A136 Drawings</p>							
REVISION:	PREPARED BY:	IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):					
No.	DATE		INITIALS	DATE			

DRAWING UTILIZATION LIST

A640 Drawing Title:

COMMUNICATIONS SCADA/FACILITIES ELECTRICAL INTERFACES

	<u>A136 REFERENCE DRAWINGS</u>		
	<u>CONNECTION DIAGRAM</u>		<u>ELEMENTARY DIAGRAM</u>
	<u>TERMINAL STRIP</u>	<u>DWG. NO.</u>	
<u>DRAWING N-036</u>			
<u>Figures:</u>			
Emergency Fan Track Dampers TD-1W, TD-2W (TD-021, TD-022)*	TS-A, TS-B	E-139F	E-120F
Emergency Fan Dampers FD-1W, FD-2W, FD-3W (ED-021, ED-022, ED-023)	TS-A, TS-B, TS-C	E-139F	E-118F
<u>DRAWING N-037</u>			
Emergency Fan #1 & #2 Auxiliary Circuits	TS-C	E-139F	E-118F
Emergency Fans #1, #2, & #3, EM-1W, EM-2W, EM-3W (EF-21, EF-22, EF-23)	TS-A, TS-B, TS-C	E-139F	E-118F
<u>DRAWING N-038</u>			
Emergency Fan #3 Auxiliary Circuits	TS-C	E-139F	E-120F
Emergency Fan Bypass Dampers BD-1W, BD-2W (BD-021, BD-022)	TS-A, TS-B	E-139F	E-119F
<u>DRAWING N-086</u>			
Emergency Fan Room Exhaust Fans, EF-11W, EF-12W (EF-9W, EF-10W)	TS-D	E-139F	E-114F

*Ventilation equipment designations in parenthesis are Facilities mechanical dwg. designations that differ from Facilities electrical dwg. designations (typ.).

INTERFACE DATA SHEET

<p>CONTRACT No.: A640 Communications</p> <p>SUBSYSTEM: Cable Transmission</p> <p>SPEC. REFERENCE: TP 8.0 CTS TP 14 Interfaces</p>	<p>LOCATION: TC&C CIR</p> <p>INTERFACE No.: 640-620-00-01</p> <p>REV: 0</p> <hr/> <p>REFER TO INTERFACE DATA TABLE: Union Station</p>			
<p>CONTRACT No.: A620</p> <p>SUBSYSTEM: Automatic Train Control Supervision</p> <p>SPEC. REFERENCE: TP 10.8</p>	<p>ATTACHMENTS: Interface Drawing Utilization List</p>			
<p>FUNCTIONAL DESCRIPTION: Interconnection Interface Point for all signals to and from SCADA and Union Station Automatic Train Control, TC/C Communications Interface Rack</p>				
<p>TECHNICAL REQUIREMENTS:</p>				
<p>PHYSICAL DESCRIPTION: Barrier type terminal strips and assorted interposing relays.</p>				
<p>ORGANIZATION CONTACT: SCRTD Project Engineer</p>				
<p>COMMENTS:</p>				
<p>REFERENCES: A640 Contract Drawings NS-007A Interposing Relay Interfaces A640 Reference Drawings - Union Station Stage II Construction Contract A136 Drawings A630 Drawings Q-053A, Q-054B, and Q-56B Typical Control Circuits</p>				
REVISION:	PREPARED BY:	IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):		
No.	DATE		INITIALS	DATE

A640 Drawing Title:

COMMUNICATIONS SCADA/AUTOMATIC TRAIN CONTROL INTERFACES

TERMINAL STRIPS
UTILIZED

DRAWING N-138

Figure:

Union Station

TBD

DRAWING N-139

Union Station

TBD

DRAWING N-140

Union Station

TBD

INTERFACE DATA SHEET

<p>CONTRACT No.: A640 Communications</p> <p>SUBSYSTEM: Power Subsystem</p> <p>SPEC. REFERENCE: TP 13 Power TP 14 Interfaces</p>	<p>LOCATION: INTERFACE No.: REV:</p> <p>TC&C Power 640-620-00-07 0</p> <p>Panels</p> <p>REFER TO INTERFACE DATA TABLE: Union Station</p>			
<p>CONTRACT No.: A620 Automatic Train Control</p> <p>SUBSYSTEM: ATC Room</p> <p>SPEC. REFERENCE: TP 4 ATC Room TP 10 Interface</p>	<p>ATTACHMENTS:</p> <p>Attachment 1 Technical Requirements</p> <p>Attachment 2 Interface Reference Drawing List</p>			
<p>FUNCTIONAL DESCRIPTION:</p> <p>Interconnection Interface Point between Communications equipment electric power requirements and Automatic Train Control power distribution equipment of the Train Control and Communications room.</p>				
<p>TECHNICAL REQUIREMENTS:</p> <p>See Attachment 1</p>				
<p>PHYSICAL DESCRIPTION:</p> <p>Termination of 120V/208V, 3-phase, 4-wire power and 120 VAC, single phase power, at A620 furnished power panelboards located in the TC&C room of Union Station.</p>				
<p>ORGANIZATION CONTACT:</p>				
<p>COMMENTS:</p> <p>SCRTD Project Engineer</p>				
<p>REFERENCES:</p> <p>See Attachment 2</p>				
<p>REVISION:</p>		<p>IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):</p>		
	PREPARED BY:			
No.	DATE		INITIALS	DATE

ATTACHMENT 1

TECHNICAL REQUIREMENTS

1) Train Control Contractor A620

A620 Contractor shall furnish and install two power distribution panelboards in the TC&C room of Union Station. Each panel shall have essential power bus terminations for one 120V/208V, 3-phase, 4-wire circuit for a 35A load and twelve 120VAC, single-phase circuits for 20A loads.

2) Communications Contractor A640

A640 Contractor shall furnish, install and terminate power cables between the power distribution panels and communications equipment of the station TC&C room.

ATTACHMENT 2

Interface Reference Drawing List

A620 Contract Drawings

Drawing Q-052 Power Distribution Schematic

INTERFACE DATA SHEET

<p>CONTRACT No.: A640 Communications</p> <p>SUBSYSTEM: Cable Transmission</p> <p>SPEC. REFERENCE: TP-8.0 CTS TP 14 Interface</p>	<p>LOCATION: CIC #1 TPSS</p> <p>INTERFACE No.: 640-631-00-01</p> <p>REV: 0</p> <hr/> <p>REFER TO INTERFACE DATA TABLE: Union Station</p>			
<p>CONTRACT No.: A631</p> <p>SUBSYSTEM: Traction Power Installation System Supervision</p> <p>SPEC. REFERENCE: *</p>	<p>ATTACHMENTS: Interface Drawing Utilization List</p>			
<p>FUNCTIONAL DESCRIPTION: Interconnection Interface Point for all signals to and from SCADA and Union Station Traction Power, CIC #1 TPSS</p>				
<p>TECHNICAL REQUIREMENTS:</p>				
<p>PHYSICAL DESCRIPTION: Barrier type terminal strips and assorted interposing relays.</p>				
<p>ORGANIZATION CONTACT: SCRTD Project Engineer</p>				
<p>COMMENTS:</p>				
<p>REFERENCES: A640 Contract Drawings and A640 Reference Drawings. *A631 Drawing P-362 Communications Interface Cabinet Details</p>				
REVISION:	PREPARED BY:	IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):		
No.	DATE		INITIALS	DATE

DRAWING UTILIZATION LIST

A640 Drawing Title:

COMMUNICATIONS SCADA/FACILITIES ELECTRICAL INTERFACES

A631 REFERENCE DRAWINGS

INTERCONNECTION SCHEDULE

TERMINAL STRIP DRAWING NUMBER

DRAWING N-076

Figures:

Traction Power Type II AC Switchgear	A, B, C	P-283B, P-285B P-286B
Traction Power DC Switchgear	B, C	P-283B, P-284B P-285B

INTERFACE DATA SHEET

<p>CONTRACT No.: A640 Communications</p> <p>SUBSYSTEM: Cable Transmission</p> <p>SPEC. REFERENCE: TP 8.0 CTS TP 14 Interface</p>	<p>LOCATION: CIC #4</p>	<p>INTERFACE No.: 640-631-00-02</p>	<p>REV: 0</p>	
		<p>REFER TO INTERFACE DATA TABLE: Union Station</p>		
<p>CONTRACT No.: A631</p> <p>SUBSYSTEM: Traction Power Installation System Supervision</p> <p>SPEC. REFERENCE: *</p>	<p>ATTACHMENTS: Interface Drawing Utilization List</p>			
<p>FUNCTIONAL DESCRIPTION: Interconnection Interface Point for all signals to and from SCADA and Union Station Traction Power, CIC #4</p>				
<p>TECHNICAL REQUIREMENTS:</p>				
<p>PHYSICAL DESCRIPTION: Barrier type terminal strips and assorted interposing relays.</p>				
<p>ORGANIZATION CONTACT: SCRTD Project Engineer</p>				
<p>COMMENTS:</p>				
<p>REFERENCES: A640 Contract Drawings and A640 Reference Drawings. *A631 Drawing P-362 Communications Interface Cabinet Details</p>				
<p>REVISION:</p>		<p>PREPARED BY:</p>		<p>IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):</p>
No.	DATE	INITIALS	DATE	

DRAWING UTILIZATION LIST

A640 Drawing Title:

COMMUNICATIONS SCADA/FACILITIES ELECTRICAL INTERFACES

A631 REFERENCE DRAWINGS

INTERCONNECTION SCHEDULE

TERMINAL STRIP

DRAWING NUMBER

DRAWING N-082

Figures:

Disconnect Switches Metering
and Control

C,E

P-287B

INTERFACE DATA SHEET

<p>CONTRACT No.: A640</p> <p>SUBSYSTEM: Public Address</p> <p>SPEC. REFERENCE: TP 6 & TP 14</p>	<p>LOCATION: Union Station</p> <p>INTERFACE No.: 640-760-00-01</p> <p>REV: 0</p> <hr/> <p>REFER TO INTERFACE DATA TABLE: Union Station</p>			
<p>CONTRACT No.: A760</p> <p>SUBSYSTEM: Signs & Graphics</p> <p>SPEC. REFERENCE:</p>	<p>ATTACHMENTS: Interface Drawing Utilization List</p>			
<p>FUNCTIONAL DESCRIPTION: Installation interface for speakers provided by Contract A640 into linear element provided by A760.</p>				
<p>TECHNICAL REQUIREMENTS: Speakers to be mounted on flange provided by A760 and shown on A760 Drawing P-604. Wires and speakers are provided by A640.</p>				
<p>PHYSICAL DESCRIPTION: Public address speakers are installed by A640 Contractor in platform linear element. This linear element is provided by Contract A760.</p>				
<p>ORGANIZATION CONTACT: SCRTD Project Engineer</p>				
<p>COMMENTS: Additional speaker boxes are installed in Contract A136.</p>				
<p>REFERENCES: A640 Contract Drawings (Section VII) A640 Reference Drawings (Section VIII)</p>				
REVISION:	PREPARED BY:	IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):		
No.	DATE		INITIALS	DATE

IDS-640-760-00-01
ATTACHMENT A
UNION STATION/
PUBLIC ADDRESS
SPEAKERS IN LINEAR
ELEMENT

DRAWING UTILIZATION LIST

A640 Drawing Title:

COMMUNICATIONS PUBLIC ADDRESS/SIGN & GRAPHICS

DRAWING N-076

Figure 1:

Speakers Mounted in Linear Element

INTERFACE DATA SHEET

<p>CONTRACT No.: A640 Communications</p> <p>SUBSYSTEM: Cable Transmission</p> <p>SPEC. REFERENCE: TP 8.0 CTS TP 14 Interfaces</p>	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">LOCATION: CIC #3 East</td> <td style="width: 33%;">INTERFACE No.: 640-795-00-01</td> <td style="width: 33%;">REV: 0</td> </tr> <tr> <td colspan="3" style="text-align: right; padding-top: 10px;">REFER TO INTERFACE DATA TABLE: Union Station</td> </tr> </table>	LOCATION: CIC #3 East	INTERFACE No.: 640-795-00-01	REV: 0	REFER TO INTERFACE DATA TABLE: Union Station		
LOCATION: CIC #3 East	INTERFACE No.: 640-795-00-01	REV: 0					
REFER TO INTERFACE DATA TABLE: Union Station							
<p>CONTRACT No.: A795</p> <p>SUBSYSTEM: UPS Supervision</p> <p>SPEC. REFERENCE: A795 16610 Par. 2.7</p>	<p>ATTACHMENTS: Interface Drawing Utilization List</p>						
<p>FUNCTIONAL DESCRIPTION: Interconnection Interface Point for all signals to and from SCADA and Union Station Uninterruptible Power Supply System, CIC #3 East</p>							
<p>TECHNICAL REQUIREMENTS:</p>							
<p>PHYSICAL DESCRIPTION: Barrier type terminal strips and assorted interposing relays.</p>							
<p>ORGANIZATION CONTACT: SCRTD Project Engineer</p>							
<p>COMMENTS:</p>							
<p>REFERENCES: A640 Contract Drawing NS-007A Interposing Relay Interfaces A640 Reference Drawings - Union Station Stage II Construction Contract A136 Drawings A795 Drawing ESK-003 UPS System Supervision</p>							
REVISION:	PREPARED BY:	IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):					
No.	DATE		INITIALS	DATE			

IDS-640-795-00-01
ATTACHMENT A
UNION STATION
CIC #3-Auxiliary
Power Room East

DRAWING UTILIZATION LIST

A640 Drawing Title:

COMMUNICATIONS SCADA/UPS INTERFACE

REFERENCE DRAWINGS

CONNECTION DIAGRAM

<u>TERMINAL STRIP</u>	<u>DRAWING NUMBER</u>
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DRAWING N-048

Figure:

UPS Supervision

TS-F

A136, E-137F

INTERFACE DATA SHEET

CONTRACT No.: A640 Communications SUBSYSTEM: Cable Transmission SPEC. REFERENCE: TP 8.0 CTS TP 14 Interfaces	LOCATION: CIC #2 West	INTERFACE No.: 640-795-00-02	REV: 0
		REFER TO INTERFACE DATA TABLE: Union Station	

CONTRACT No.: A795 SUBSYSTEM: UPS Supervision SPEC. REFERENCE: A795 16610 Par. 2.7	ATTACHMENTS: Interface Drawing Utilization List
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FUNCTIONAL DESCRIPTION:
 Interconnection Interface Point for all signals to and from SCADA and Union Station Uninterruptible Power Supply System, CIC #2 West

TECHNICAL REQUIREMENTS:

PHYSICAL DESCRIPTION:
 Barrier type terminal strips and assorted interposing relays.

ORGANIZATION CONTACT:
 SCRTD Project Engineer

COMMENTS:

REFERENCES: A640 Contract Drawings - NS-007A Interposing Relay Interfaces
 A640 Reference Drawings - Union Station Stage II Construction Contract A136 Drawings
 A795 Drawing ESK-003, UPS System Supervision

REVISION:		PREPARED BY:		IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):
No.	DATE	INITIALS	DATE	

IDS-640-795-00-02
ATTACHMENT A
UNION STATION
CIC #2-Auxiliary
Power Room West

DRAWING UTILIZATION LIST

A640 Drawing Title:

COMMUNICATIONS SCADA/UPS INTERFACE

REFERENCE DRAWINGS

CONNECTION DIAGRAM

TERMINAL STRIP DRAWING NUMBER

DRAWING N-048

Figure:

UPS Supervision

TS-F

A136, E-138F

INTERFACE DATA SHEET

<p>CONTRACT No.: A640 Communications</p> <p>SUBSYSTEM: Cable Transmission</p> <p>SPEC. REFERENCE: TP 8 CTS TP 14 Interface</p>	<p>LOCATION: CIC #3 East</p>	<p>INTERFACE No.: 640-840-00-01</p>	<p>REV: 0</p>	
		<p>REFER TO INTERFACE DATA TABLE: Union Station</p>		
<p>CONTRACT No.: H840</p> <p>SUBSYSTEM: Fare Collection Supervision</p> <p>SPEC. REFERENCE:</p>	<p>ATTACHMENTS: Interface Drawing Utilization List</p>			
<p>FUNCTIONAL DESCRIPTION: Interconnection Interface Point for all signals to and from SCADA and Union Station Fare Collection, CIC #3 East</p>				
<p>TECHNICAL REQUIREMENTS:</p>				
<p>PHYSICAL DESCRIPTION: Barrier type terminal strips and assorted interposing relays.</p>				
<p>ORGANIZATION CONTACT: SCRTD Project Engineer</p>				
<p>COMMENTS:</p>				
<p>REFERENCES: A640 Contract Drawings and A640 Reference Drawings.</p>				
<p>REVISION:</p>		<p>PREPARED BY:</p>		<p>IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):</p>
No.	DATE	INITIALS	DATE	

IDS-640-840-00-01
ATTACHMENT A
UNION STATION/
CIC #3-Auxiliary
Power Room East

DRAWING UTILIZATION LIST

A640 Drawing Title:

COMMUNICATIONS SCADA/FARE COLLECTION INTERFACES

REFERENCE DRAWINGS

CONNECTION DIAGRAM

TERMINAL STRIP DRAWING NUMBER

DRAWING N-047

Figure:

Fare Collection Supervision	TBD	A136, E-137F
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INTERFACE DATA SHEET

<p>CONTRACT No.: A640 Communications</p> <p>SUBSYSTEM: Cable Transmission</p> <p>SPEC. REFERENCE: TP 8 CTS TP 14 Interface</p>	<p>LOCATION: CIC #2 West</p>	<p>INTERFACE No.: 640-840-00-02</p>	<p>REV: 0</p>	
		<p>REFER TO INTERFACE DATA TABLE: Union Station</p>		
<p>CONTRACT No.: H840</p> <p>SUBSYSTEM: Fare Collection Supervision</p> <p>SPEC. REFERENCE:</p>	<p>ATTACHMENTS: Interface Drawing Utilization List</p>			
<p>FUNCTIONAL DESCRIPTION: Interconnection Interface Point for all signals to and from SCADA and Union Station Fare Collection, CIC #2 West</p>				
<p>TECHNICAL REQUIREMENTS:</p>				
<p>PHYSICAL DESCRIPTION: Barrier type terminal strips and assorted interposing relays.</p>				
<p>ORGANIZATION CONTACT: SCRTD Project Engineer</p>				
<p>COMMENTS:</p>				
<p>REFERENCES: A640 Contract Drawings and A640 Reference Drawings.</p>				
<p>REVISION:</p>		<p>PREPARED BY:</p>		<p>IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):</p>
No.	DATE	INITIALS	DATE	

IDS-640-840-00-02
ATTACHMENT A
UNION STATION/
CIC #2-Auxiliary
Power Room West

DRAWING UTILIZATION LIST

A640 Drawing Title:

COMMUNICATIONS SCADA/FARE COLLECTION INTERFACES

REFERENCE DRAWINGS

CONNECTION DIAGRAM

TERMINAL STRIP DRAWING NUMBER

DRAWING N-047

Figure:

Fare Collection Supervision	TBD	A136, E-138F
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INTERFACE DATA SHEET

<p>CONTRACT No.: A640 Communications</p> <p>SUBSYSTEM: Cable Transmission</p> <p>SPEC. REFERENCE: TP 8.0 CTS TP 14 Interfaces</p>	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">LOCATION: Cross Passage</td> <td style="width: 33%;">INTERFACE No.: 640-141-00-1</td> <td style="width: 33%;">REV: 0</td> </tr> <tr> <td colspan="3" style="text-align: center; padding-top: 10px;">REFER TO INTERFACE DATA TABLE: 5th & Hill/ Civic Center Line Section</td> </tr> </table>	LOCATION: Cross Passage	INTERFACE No.: 640-141-00-1	REV: 0	REFER TO INTERFACE DATA TABLE: 5th & Hill/ Civic Center Line Section		
LOCATION: Cross Passage	INTERFACE No.: 640-141-00-1	REV: 0					
REFER TO INTERFACE DATA TABLE: 5th & Hill/ Civic Center Line Section							

<p>CONTRACT No.: A141 Line Section</p> <p>SUBSYSTEM: Facilities Electrical</p> <p>SPEC. REFERENCE: 16944</p>	<p>ATTACHMENTS:</p> <p>Attachment 1 Technical Requirements</p> <p>Attachment 2 Interface Drawing Utilization List</p>
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FUNCTIONAL DESCRIPTION:
 Interconnection Interface Point for all signals to and from SCADA and 5th & Hill/
 Civic Center Line section Communications Interface Cabinets.

TECHNICAL REQUIREMENTS:
 See Attachment 1

PHYSICAL DESCRIPTION:
 Barrier type terminal strips and assorted interposing relays housed in two cross
 passage Communication Interface Cabinets

ORGANIZATION CONTACT:
 SCRTD Project Engineer

COMMENTS:

REFERENCES:
 See Attachment 2

REVISION:		PREPARED BY:		IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):
No.	DATE	INITIALS	DATE	

ATTACHMENT 1

1) Communications Contractor A640

- a) A640 Contractor shall furnish two communications interface cabinets, one assigned to SCADA inputs from each tunnel. Control and indication leads from cross passage ventilation and sump equipment shall be connected to CIC terminals.
- b) When a cross passage contains a fire main valve manifold, the A640 Contractor shall furnish and install cables and conduit from the valves to the CIC and terminate the valve supervision leads at the valve position switch terminals and at the CIC terminals.

2) Facilities Electrical Contractor A141

The A141 Contractor shall furnish cables and conduits from the ventilation and sump equipment to the CICs.

ATTACHMENT 2

A640 Contract Drawing
Interface Drawing Utilization List

Drawing N-084 Communications
SCADA/Facilities Electrical Interfaces

INTERFACE DATA SHEET

<p>CONTRACT No.: A640 Communications</p> <p>SUBSYSTEM: Cable Transmission</p> <p>SPEC. REFERENCE: TP 8.0 CTS TP 14 Interfaces</p>	<p>LOCATION: CIC #2 North</p> <p>INTERFACE No.: 640-147-00-01</p> <p>REV: 0</p> <p>REFER TO INTERFACE DATA TABLE: Civic Center Station</p>			
<p>CONTRACT No.: A147</p> <p>SUBSYSTEM: Civic Center Station Facilities Electrical</p> <p>SPEC. REFERENCE: 16944</p>	<p>ATTACHMENTS: Interface Drawing Utilization List</p>			
<p>FUNCTIONAL DESCRIPTION: Interconnection Interface Point for all signals to and from SCADA and Civic Center Station Facilities Electrical, CIC #2 North</p>				
<p>TECHNICAL REQUIREMENTS:</p>				
<p>PHYSICAL DESCRIPTION: Barrier type terminal strips and assorted interposing relays.</p>				
<p>ORGANIZATION CONTACT: SCRTD Project Engineer</p>				
<p>COMMENTS:</p>				
<p>REFERENCES: A640 Contract Drawings - NS-007A Interposing Relay Interfaces A640 Reference Drawings - Civic Center Station Stage II Construction Contract A147</p>				
REVISION:	PREPARED BY:	IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):		
No.	DATE		INITIALS	DATE

DRAWING UTILIZATION LIST

A640 Drawing Title:

COMMUNICATIONS SCADA/FACILITIES ELECTRICAL INTERFACES

	<u>A147 REFERENCE DRAWINGS</u>		
	<u>CONNECTION DIAGRAM</u>		<u>ELEMENTARY DIAGRAM</u>
	<u>TERMINAL STRIP</u>	<u>DWG. NO.</u>	
<u>DRAWING N-036</u>			
<u>Figures:</u>			
Emergency Fan Track Dampers TD-031, TD-032	TS-A, TS-D	E-314	E-090
Emergency Fan, Fan Dampers ED-031, ED-032	TS-B, TS-D	E-314	E-088
<u>DRAWING N-037</u>			
Emergency Fan #1 & #2 Auxiliary Circuits	TS-E	E-314	E-088
Emergency Fans #1 & #2, EF-031, EF-032	TS-C, TS-E	E-314	E-088
<u>DRAWING N-038</u>			
Emergency Fan Bypass Dampers BD-031, BD-032	TS-B, TS-D	E-314	E-089
<u>DRAWING N-039</u>			
Station Ventilation System AHU-021, AHU-022	TS-A, TS-C	E-314	E-087
Underplatform Exhaust Fan, UF-022	TS-A	E-314	E-086
<u>DRAWING N-040</u>			
Roll-up Doors at Station Entrance (one)	TS-C	E-314	E-092

A147 REFERENCE DRAWINGS

	<u>CONNECTION DIAGRAM</u>		<u>ELEMENTARY DIAGRAM</u>
	<u>TERMINAL STRIP</u>	<u>DWG. NO.</u>	
<u>DRAWING N-041</u>			
480V Main Breakers Aux. Power Room	TS-F	E-314	E-089
<u>DRAWING N-042</u>			
Smoke & Heat Exhaust Fan, EF-E	TS-C	E-314	E-086
TC/C Room Air Conditioning ACU-2, MD-9, 10, 11, & 12	TS-B	E-314	E-087
<u>DRAWING N-043</u>			
Elevator Controls & Indications EL, #1, #2	TS-B	E-314	TBD
Escalator Controls & Indications ESC #1, #2, #3, & #4	TS-E, TS-F	E-314	TBD
<u>DRAWING N-044</u>			
Auxiliary Power Room Supply Fan SF-2 & Exhaust Fan EF-5	TS-B, TS-F	E-314	TBD
Auxiliary Power Battery Room Exhaust Fan EF-6	TS-A	E-314	TBD
<u>DRAWING N-045</u>			
TC/C Room Exhaust Fan EF-7	TS-B	E-314	E-087
<u>DRAWING (TBD)</u>			
Elevator Equipment Room Exhaust Fan EF-1	TBD	E-314	TBD
Toilet Exhaust Fan EF-2	TBD	E-314	TBD
<u>DRAWING (TBD)</u>			
General Supply & Exhaust Fans SF-1, EF-5	TS-E, TS-F	E-314	TBD

IDS-640-147-00-01
ATTACHMENT A
CIVIC CENTER STATION
CIC #2 North
Auxiliary Power Room
North

A147 REFERENCE DRAWINGS

DRAWING (TBD)

		<u>CONNECTION DIAGRAM</u>	<u>ELEMENTARY</u>
		<u>TERMINAL STRIP</u>	<u>DIAGRAM</u>
		<u>DWG. NO.</u>	
Incoming Electrical Service Room Supply Fan, SF-3	TBD	E-314	TBD
Incoming Electrical Service Battery Room Exhaust Fans EF-8A & B	TBD	E-314	TBD

INTERFACE DATA SHEET

<p>CONTRACT No.: A640 Communications</p> <p>SUBSYSTEM: Cable Transmission</p> <p>SPEC. REFERENCE: TP 8.0 CTS TP 14 Interfaces</p>	<p>LOCATION: CIC #2 South</p> <p>INTERFACE No.: 640-147-00-02</p> <p>REV: 0</p> <p>REFER TO INTERFACE DATA TABLE: Civic Center Station</p>			
<p>CONTRACT No.: A147</p> <p>SUBSYSTEM: Civic Center Station Facilities Electrical</p> <p>SPEC. REFERENCE: 16944</p>	<p>ATTACHMENTS: Interface Drawing Utilization List</p>			
<p>FUNCTIONAL DESCRIPTION: Interconnection Interface Point for all signals to and from SCADA and Civic Center Station Facilities Electrical, CIC #2 South</p>				
<p>TECHNICAL REQUIREMENTS:</p>				
<p>PHYSICAL DESCRIPTION: Barrier type terminal strips and assorted interposing relays.</p>				
<p>ORGANIZATION CONTACT: SCRTD Project Engineer</p>				
<p>COMMENTS:</p>				
<p>REFERENCES: A640 Contract Drawings - NS-007A Interposing Relay Interfaces A640 Reference Drawings - Civic Center Station Stage II Construction Contract A147</p>				
<p>REVISION:</p>		<p>IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):</p>		
No.	DATE		INITIALS	DATE

DRAWING UTILIZATION LIST

A640 Drawing Title:

COMMUNICATIONS SCADA/FACILITIES ELECTRICAL INTERFACES

A147 REFERENCE DRAWINGS

	<u>CONNECTION DIAGRAM</u>		<u>ELEMENTARY DIAGRAM</u>
	<u>TERMINAL STRIP</u>	<u>DWG. NO.</u>	
<u>DRAWING N-036</u>			
<u>Figures:</u>			
Emergency Fan Track Dampers TD-041, TD-042	TS-B, TS-E	E-313	E-090
Emergency Fan, Fan Dampers ED-041, ED-042	TS-B, TS-D	E-313	E-088
<u>DRAWING N-037</u>			
Emergency Fan #1 & #2 Auxiliary Circuits	TS-E TS-E	E-313	E-088
Emergency Fans #1 & #2, EF-041, EF-042	TS-C, TS-E	E-313	E-088
<u>DRAWING N-038</u>			
Emergency Fan Bypass Dampers BD-041, BD-042	TS-B, TS-D	E-313	E-089
<u>DRAWING N-039</u>			
Station Ventilation System AHU-023, AHU-024	TS-A, TS-D	E-313	E-087
Underplatform Exhaust Fans, UF-021	TS-A	E-313	E-086
<u>DRAWING N-040</u>			
Roll-up Doors at Station Entrance (one)	TS-D	E-313	E-092
Duplex Sump Pumps SP-1, SP-2	TS-C	E-313	E-084

A147 REFERENCE DRAWINGS

	<u>CONNECTION DIAGRAM</u>		<u>ELEMENTARY</u>
	<u>TERMINAL STRIP</u>	<u>DWG. NO.</u>	<u>DIAGRAM</u>
<u>DRAWING N-041</u>			
Traction Power Room Supply Fans SSF-021, SSF-022	TS-B	E-313	E-085
Traction Power Room Supply Fan Alarms	TS-A	E-313	E-085
480V Main Breakers in Auxiliary Power Room (two)	TS-B	E-313	E-089
<u>DRAWING N-042</u>			
Smoke & Heat Exhaust Fan EF-9	TS-C	E-313	E-086
<u>DRAWING N-043</u>			
Escalator Controls & Indications ESC #5, #6, & #7	TS-E	E-313	TBD
<u>DRAWING N-044</u>			
Auxiliary Power Room Supply Fan SF-5 and Exhaust Fan EF-11	TS-A, TS-B	E-313	TBD
Auxiliary Power Battery Room Exhaust Fan EF-12	TS-A	E-313	TBD
<u>DRAWING N-086</u>			
Chiller Room Exhaust Fan EF-13	TS-F	E-313	TBD
<u>DRAWING (TBD)</u>			
General Supply & Exhaust Fans, SF-4, EF-10	TS-E	E-313	TBD

INTERFACE DATA SHEET

<p>CONTRACT No.: A640 Communications</p> <p>SUBSYSTEM: Public Address</p> <p>SPEC. REFERENCE: TP 6 & TP 14</p>	<p>LOCATION: Civic Center Sta.</p> <p>INTERFACE No.: 640-147-00-03</p> <p>REV: 0</p> <hr/> <p>REFER TO INTERFACE DATA TABLE: Civic Center Station</p>			
<p>CONTRACT No.: A147</p> <p>SUBSYSTEM: Electrical</p> <p>SPEC. REFERENCE: 16050 Part 3</p>	<p>ATTACHMENTS:</p> <p>Interface Drawing Utilization List</p>			
<p>FUNCTIONAL DESCRIPTION:</p> <p>Installation interface for speakers provided by A640 into back box provided by A147</p>				
<p>TECHNICAL REQUIREMENTS:</p> <p>Speaker back boxes to be installed as shown on Contract Drawing NS-005 of Contract A147, Sheet 428.</p>				
<p>PHYSICAL DESCRIPTION:</p> <p>1" conduits to and from four (4") square junction boxes and/or 9-5/8" x 9-5/8" or 6" back boxes. Wires, speakers, baffles, and mounting hardware for same.</p>				
<p>ORGANIZATION CONTACT:</p> <p>SCRTD Project Engineer</p>				
<p>COMMENTS:</p> <p>Additional speaker housings are installed in Contract A760</p>				
<p>REFERENCES:</p> <p>A640 Contract Drawing (Section VII)</p> <p>A640 Reference Drawings (Section VIII)</p>				
REVISION:	PREPARED BY:	IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):		
No.	DATE		INITIALS	DATE

IDS-640-147-00-03
ATTACHMENT A
CIVIC CENTER STATION
ALL PUBLIC ADDRESS
SPEAKERS EXCEPT THOSE
IN LINEAR ELEMENT

DRAWING UTILIZATION LIST

A640 Drawing Title:

COMMUNICATIONS PUBLIC ADDRESS/STAGE II CONTRACT INTERFACES

DRAWING N-101

Figure

Embedded Ceiling Mount

INTERFACE DATA SHEET

<p>CONTRACT No.: A640 Communications</p> <p>SUBSYSTEM: Closed Circuit T.V.</p> <p>SPEC. REFERENCE: TP 7 & TP 14</p>	<p>LOCATION: Civic Center Sta.</p>	<p>INTERFACE No.: 640-147-00-04</p>	<p>REV: 0</p>	
		<p>REFER TO INTERFACE DATA TABLE: Civic Center Station</p>		
<p>CONTRACT No.: A147</p> <p>SUBSYSTEM: Electrical</p> <p>SPEC. REFERENCE: 16060 Part 3</p>	<p>ATTACHMENTS: Interface Drawing Utilization List</p>			
<p>FUNCTIONAL DESCRIPTION: Installation interface for CCTV cameras and cables provided by Contract A640 into conduits and boxes provided by A147</p>				
<p>TECHNICAL REQUIREMENTS: Boxes shall be capable of supporting the weight of the camera.</p>				
<p>PHYSICAL DESCRIPTION: 1" conduits to and from four (4") square junction boxes.</p>				
<p>ORGANIZATION CONTACT: SCRTD Project Engineer</p>				
<p>COMMENTS:</p>				
<p>REFERENCES: A640 Contract Drawing (Section VII) A640 Reference Drawings (Section VIII)</p>				
<p>REVISION:</p>		<p>PREPARED BY:</p>		<p>IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):</p>
No.	DATE	INITIALS	DATE	

IDS-640-147-00-04
ATTACHMENT A
CIVIC CENTER STATION
CLOSED CIRCUIT
TELEVISION CAMERA

DRAWING UTILIZATION LIST

A640 Drawing Title:

COMMUNICATIONS PUBLIC ADDRESS/STAGE II CONTRACT INTERFACES

DRAWING N-100

Figure:

Embedded Ceiling Mount

INTERFACE DATA SHEET

<p>CONTRACT No.: A640 Communications</p> <p>SUBSYSTEM: Cable Transmission</p> <p>SPEC. REFERENCE: TP 8.0 CTS TP 14 Interfaces</p>	<p>LOCATION: TC/C CIR</p>	<p>INTERFACE No.: 640-620-00-02</p>	<p>REV: 0</p>	
<p>REFER TO INTERFACE DATA TABLE: Civic Center Station</p>				
<p>CONTRACT No.: A620</p> <p>SUBSYSTEM: Automatic Train Control Supervision</p> <p>SPEC. REFERENCE: TP 10.8</p>	<p>ATTACHMENTS: Interface Drawing Utilization List</p>			
<p>FUNCTIONAL DESCRIPTION: Interconnection Interface Point for all signals to and from SCADA and Civic Center Automatic Train Control, TC/C Communications Interface Rack</p>				
<p>TECHNICAL REQUIREMENTS:</p>				
<p>PHYSICAL DESCRIPTION: Barrier type terminal strips and assorted interposing relays.</p>				
<p>ORGANIZATION CONTACT: SCRTD Project Engineer</p>				
<p>COMMENTS:</p>				
<p>REFERENCES: A640 Contract Drawings NS-007A Interposing Relay Interfaces A640 Reference Drawings - Civic Center Station Stage II Construction Contract A147 Drawings A620 Drawings Q-053A, Q-054B, and Q-056B Typical Control Circuits</p>				
<p>REVISION:</p>		<p>PREPARED BY:</p>		<p>IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):</p>
No.	DATE	INITIALS	DATE	

A640 Drawing Title:

COMMUNICATIONS SCADA/AUTOMATIC TRAIN CONTROL INTERFACES

TERMINAL STRIPS
UTILIZED

DRAWING N-135

Figure:

Civic Center, 5th/Hill,
7th/Flower Stations

TBD

INTERFACE DATA SHEET

<p>CONTRACT No.: A640 Communications</p> <p>SUBSYSTEM: Power Subsystem</p> <p>SPEC. REFERENCE: TP 13 Power TP 14 Interfaces</p>	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">LOCATION: TC&C Power Panels</td> <td style="width: 33%;">INTERFACE No.: 640-620-00-08</td> <td style="width: 33%;">REV: 0</td> </tr> <tr> <td colspan="3" style="text-align: right; padding-top: 10px;">REFER TO INTERFACE DATA TABLE: Civic Center Station</td> </tr> </table>	LOCATION: TC&C Power Panels	INTERFACE No.: 640-620-00-08	REV: 0	REFER TO INTERFACE DATA TABLE: Civic Center Station		
LOCATION: TC&C Power Panels	INTERFACE No.: 640-620-00-08	REV: 0					
REFER TO INTERFACE DATA TABLE: Civic Center Station							
<p>CONTRACT No.: A620 Automatic Train Control</p> <p>SUBSYSTEM: ATC Room</p> <p>SPEC. REFERENCE: TP 4 ATC Room TP 10 Interface</p>	<p>ATTACHMENTS:</p> <p>Attachment 1 Technical Requirements</p> <p>Attachment 2 Interface Reference Drawing List</p>						
<p>FUNCTIONAL DESCRIPTION:</p> <p>Interconnection Interface Point between Communications equipment electric power requirements and Automatic Train Control power distribution equipment of the Train Control and Communications room.</p>							
<p>TECHNICAL REQUIREMENTS:</p> <p>See Attachment 1</p>							
<p>PHYSICAL DESCRIPTION:</p> <p>Termination of 120V/208V, 3-phase, 4-wire power and 120 VAC, single phase power, at A620 furnished power panelboards located in the TC&C room of Civic Center Station.</p>							
<p>ORGANIZATION CONTACT:</p>							
<p>COMMENTS:</p> <p>SCRTD Project Engineer</p>							
<p>REFERENCES:</p> <p>See Attachment 2</p>							
REVISION:	PREPARED BY:	IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):					
No.	DATE		INITIALS	DATE			

ATTACHMENT 1

TECHNICAL REQUIREMENTS

1) Train Control Contractor A620

A620 Contractor shall furnish and install two power distribution panelboards in the TC&C room of Civic Center Station. Each panel shall have essential power bus terminations for one 120V/208V, 3-phase, 4-wire circuit for a 35A load and twelve 120VAC, single-phase circuits fro 20A loads.

2) Communications Contractor A640

A640 Contractor shall furnish, install and terminate power cables between the power distribution panels and communications equipment of the station TC&C room.

ATTACHMENT 2

Interface Reference Drawing List

A620 Contract Drawings

Drawing Q-052 Power Distribution Schematic

INTERFACE DATA SHEET

<p>CONTRACT No.: A640 Communications</p> <p>SUBSYSTEM: Cable Transmission</p> <p>SPEC. REFERENCE: TP 8.0 CTS TP 14 Interfaces</p>	<p>LOCATION: CIC #1 TPSS</p>	<p>INTERFACE No.: 640-631-00-03</p>	<p>REV: 0</p>	
<p>REFER TO INTERFACE DATA TABLE: Civic Center Station</p>				
<p>CONTRACT No.: A631</p> <p>SUBSYSTEM: Traction Power Installation Installation System Supervision</p> <p>SPEC. REFERENCE: *</p>	<p>ATTACHMENTS: Interface Drawing Utilization List</p>			
<p>FUNCTIONAL DESCRIPTION: Interconnection Interface Point for all signals to and from SCADA and Civic Center Station Traction Power, CIC #1 TPSS</p>				
<p>TECHNICAL REQUIREMENTS:</p>				
<p>PHYSICAL DESCRIPTION: Barrier type terminal strips and assorted interposing relay</p>				
<p>ORGANIZATION CONTACT: SCRTD Project Engineer</p>				
<p>COMMENTS:</p>				
<p>REFERENCES: A640 Contract Drawing & A640 Reference Drawings *A631 Drawing P-362 Communications Interface Cabinet Details</p>				
<p>REVISION:</p>		<p>PREPARED BY:</p>		<p>IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):</p>
No.	DATE	INITIALS	DATE	

A640 Drawing Title:

COMMUNICATIONS SCADA/TRACTION POWER INTERFACES

A631 REFERENCE DRAWINGS

INTERCONNECTION SCHEDULE

TERMINAL STRIP DRAWING NUMBER

DRAWING N-076

Figure:

Traction Power Type II AC Switchgear	A, B	P-300A, P-302A, P-303A
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DRAWING N-077

Traction Power DC Switchgear	B, C	P-301A, P-302A
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INTERFACE DATA SHEET

<p>CONTRACT No.: A640 Communications</p> <p>SUBSYSTEM: Public Address</p> <p>SPEC. REFERENCE: TP 6 & TP 14</p>	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">LOCATION: Civic Center Sta.</td> <td style="width: 33%;">INTERFACE No.: 640-760-00-02</td> <td style="width: 33%;">REV: 0</td> </tr> <tr> <td colspan="3">REFER TO INTERFACE DATA TABLE: Civic Center Station</td> </tr> </table>	LOCATION: Civic Center Sta.	INTERFACE No.: 640-760-00-02	REV: 0	REFER TO INTERFACE DATA TABLE: Civic Center Station							
LOCATION: Civic Center Sta.	INTERFACE No.: 640-760-00-02	REV: 0										
REFER TO INTERFACE DATA TABLE: Civic Center Station												
<p>CONTRACT No.: A760</p> <p>SUBSYSTEM: Signs & Graphics</p> <p>SPEC. REFERENCE:</p>	<p>ATTACHMENTS: Interface Drawing Utilization List</p>											
<p>FUNCTIONAL DESCRIPTION: Installation interface for speakers provided by A640 into linear element provided by A760</p>												
<p>TECHNICAL REQUIREMENTS: Speakers to be mounted on flange provided by A760 and shown on A760 Drawing P-604. Wires and speakers are provided by A640.</p>												
<p>PHYSICAL DESCRIPTION: Public address speakers are installed by A640 Contractor in platform linear element. This linear element is provided by Contract A760.</p>												
<p>ORGANIZATION CONTACT: SCRTD Project Engineer</p>												
<p>COMMENTS: Additional speaker boxes are installed in Contract A147.</p>												
<p>REFERENCES: A640 Contract Drawing (Section VII) A640 Reference Drawings (Section VIII)</p>												
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">REVISION:</td> <td style="width: 40%;">PREPARED BY:</td> <td rowspan="5" style="width: 30%; vertical-align: top;">IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):</td> </tr> <tr> <td style="border: 1px solid black;">No.</td> <td style="border: 1px solid black;">DATE</td> </tr> <tr> <td style="border: 1px solid black;">INITIALS</td> <td style="border: 1px solid black;">DATE</td> </tr> <tr> <td style="border: 1px solid black;"> </td> <td style="border: 1px solid black;"> </td> </tr> <tr> <td style="border: 1px solid black;"> </td> <td style="border: 1px solid black;"> </td> </tr> </table>		REVISION:	PREPARED BY:	IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):	No.	DATE	INITIALS	DATE				
REVISION:	PREPARED BY:	IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):										
No.	DATE											
INITIALS	DATE											

IDS-640-760-00-02
ATTACHMENT A
CIVIC CENTER STATION
PUBLIC ADDRESS
SPEAKERS THOSE IN LINEAR

DRAWING UTILIZATION LIST

A640 Drawing Title:

COMMUNICATIONS PUBLIC ADDRESS/SIGNS AND GRAPHICS

DRAWING N-102

Figure:

Speakers Mounted in Linear Element

INTERFACE DATA SHEET

<p>CONTRACT No.: A640 Communications</p> <p>SUBSYSTEM: Cable Transmission</p> <p>SPEC. REFERENCE: TP 8.0 CTS TP 14 Interfaces</p>	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">LOCATION: CIC #2 North</td> <td style="width: 33%;">INTERFACE No.: 640-795-00-03</td> <td style="width: 33%;">REV: 0</td> </tr> <tr> <td colspan="3">REFER TO INTERFACE DATA TABLE: Civic Center Station</td> </tr> </table>	LOCATION: CIC #2 North	INTERFACE No.: 640-795-00-03	REV: 0	REFER TO INTERFACE DATA TABLE: Civic Center Station		
LOCATION: CIC #2 North	INTERFACE No.: 640-795-00-03	REV: 0					
REFER TO INTERFACE DATA TABLE: Civic Center Station							
<p>CONTRACT No.: A795</p> <p>SUBSYSTEM: UPS Supervision</p> <p>SPEC. REFERENCE: A795 16610 Par. 2.7</p>	<p>ATTACHMENTS: Utilization Drawing Utilization List</p>						
<p>FUNCTIONAL DESCRIPTION: Interconnection Interface Point for all signals to and from SCADA and Civic Center Station Uninterruptible Power Supply System, CIC #2 North</p>							
<p>TECHNICAL REQUIREMENTS:</p>							
<p>PHYSICAL DESCRIPTION: Barrier type terminal strips and assorted interposing relay</p>							
<p>ORGANIZATION CONTACT: SCRTD Project Engineer</p>							
<p>COMMENTS:</p>							
<p>REFERENCES: A640 Contract Drawings & A640 Reference Drawings A795 Drawing ESK-003 UPS System Supervision</p>							
REVISION:	PREPARED BY:	IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):					
No.	DATE		INITIALS	DATE			

IDS-640-795-00-03
ATTACHMENT A
CIVIC CENTER STATION
CIC #2 North
Auxiliary Power Room North

DRAWING UTILIZATION LIST

A640 Drawing Title:

COMMUNICATIONS SCADA/UPS INTERFACES

REFERENCE DRAWINGS

CONNECTION DIAGRAM

TERMINAL STRIP DRAWING NUMBER

DRAWING N-048

Figure:

UPS Supervision

TS-F

A147, E-314

INTERFACE DATA SHEET

<p>CONTRACT No.: A640 Communications</p> <p>SUBSYSTEM: Cable Transmission</p> <p>SPEC. REFERENCE: TP 8.0 CTS TP 14 Interfaces</p>	<p>LOCATION: CIC #2 South</p> <p>INTERFACE No.: 640-795-00-04</p> <p>REV: 0</p> <hr/> <p>REFER TO INTERFACE DATA TABLE: Civic Center Station</p>			
<p>CONTRACT No.: A795</p> <p>SUBSYSTEM: UPS Supervision</p> <p>SPEC. REFERENCE: A795 16610 Par. 2.7</p>	<p>ATTACHMENTS: Interface Drawing Utilization List</p>			
<p>FUNCTIONAL DESCRIPTION: Interconnection Interface Point for all signals to and from SCADA and Civic Center Station Uninterruptible Power Supply System, CIC #2 South</p>				
<p>TECHNICAL REQUIREMENTS:</p>				
<p>PHYSICAL DESCRIPTION: Barrier type terminal strips and assorted interposing relay</p>				
<p>ORGANIZATION CONTACT: SCRTD Project Engineer</p>				
<p>COMMENTS:</p>				
<p>REFERENCES: A640 Contract Drawings & A640 Reference Drawings A795 Drawing ESK-003 UPS System Supervision</p>				
REVISION:	PREPARED BY:	IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):		
No.	DATE		INITIALS	DATE

IDS-640-795-00-04
ATTACHMENT A
CIVIC CENTER STATION
CIC #2 South
Auxiliary Power Room South

DRAWING UTILIZATION LIST

A640 Drawing Title:

COMMUNICATIONS SCADA/UPS INTERFACES

REFERENCE DRAWINGS

CONNECTION DIAGRAM

TERMINAL STRIP DRAWING NUMBER

DRAWING N-048

Figure:

UPS Supervision

TS-F

A147, E-313

INTERFACE DATA SHEET

<p>CONTRACT No.: A640 Communications</p> <p>SUBSYSTEM: Cable Transmission</p> <p>SPEC. REFERENCE: TP 8 CTS TP 14 Interfaces</p>	<p>LOCATION: CIC #2 North</p> <p>INTERFACE No.: 640-840-00-03</p> <p>REV: 0</p> <p>REFER TO INTERFACE DATA TABLE: Civic Center Station</p>			
<p>CONTRACT No.: H840</p> <p>SUBSYSTEM: Fare Collection Supervision</p> <p>SPEC. REFERENCE:</p>	<p>ATTACHMENTS: Interface Drawing Utilization List</p>			
<p>FUNCTIONAL DESCRIPTION: Interconnection Interface Point for all signals to and from SCADA and Civic Center Station Fare Collection, CIC #2 North</p>				
<p>TECHNICAL REQUIREMENTS:</p>				
<p>PHYSICAL DESCRIPTION: Barrier type terminal strips and assorted interposing relay</p>				
<p>ORGANIZATION CONTACT: SCRTD Project Engineer</p>				
<p>COMMENTS:</p>				
<p>REFERENCES: A640 Contract Drawing & A640 Reference Drawings</p>				
<p>REVISION:</p>	<p>PREPARED BY:</p>	<p>IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):</p>		
<p>No.</p>	<p>DATE</p>		<p>INITIALS</p>	<p>DATE</p>

IDS-640-840-00-03
ATTACHMENT A
CIVIC CENTER STATION
CIC #2 North
Auxiliary Power Room North

DRAWING UTILIZATION LIST

A640 Drawing Title:

COMMUNICATIONS SCADA/FARE COLLECTION INTERFACES

REFERENCE DRAWINGS

CONNECTION DIAGRAM

TERMINAL STRIP DRAWING NUMBER

DRAWING N-047

Figure:

Fare Collection Supervision	TS-D	A147, E-314
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INTERFACE DATA SHEET

<p>CONTRACT No.: A640 Communications</p> <p>SUBSYSTEM: Cable Transmission</p> <p>SPEC. REFERENCE: TP 8 CTS TP 14 Interfaces</p>	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">LOCATION: CIC #2 South</td> <td style="width: 33%;">INTERFACE No.: 640-840-00-04</td> <td style="width: 33%;">REV: 0</td> </tr> <tr> <td colspan="3" style="text-align: right; padding-top: 10px;">REFER TO INTERFACE DATA TABLE: Civic Center Station</td> </tr> </table>	LOCATION: CIC #2 South	INTERFACE No.: 640-840-00-04	REV: 0	REFER TO INTERFACE DATA TABLE: Civic Center Station		
LOCATION: CIC #2 South	INTERFACE No.: 640-840-00-04	REV: 0					
REFER TO INTERFACE DATA TABLE: Civic Center Station							
<p>CONTRACT No.: H840</p> <p>SUBSYSTEM: Fare Collection Supervision</p> <p>SPEC. REFERENCE:</p>	<p>ATTACHMENTS: Interface Drawing Utilization List</p>						
<p>FUNCTIONAL DESCRIPTION: Interconnection Interface Point for all signals to and from SCADA and Civic Center Station Fare Collection, CIC #2 South</p>							
<p>TECHNICAL REQUIREMENTS:</p>							
<p>PHYSICAL DESCRIPTION: Barrier type terminal strips and assorted interposing relay</p>							
<p>ORGANIZATION CONTACT: SCRTD Project Engineer</p>							
<p>COMMENTS:</p>							
<p>REFERENCES: A640 Contract Drawing & A640 Reference Drawings</p>							
REVISION:	PREPARED BY:	IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):					
No.	DATE						
INITIALS	DATE						

IDS-640-840-00-04
ATTACHMENT A
CIVIC CENTER STATION
CIC #2 South
Auxiliary Power Room South

DRAWING UTILIZATION LIST

A640 Drawing Title:

COMMUNICATIONS SCADA/FARE COLLECTION INTERFACES

REFERENCE DRAWINGS

CONNECTION DIAGRAM

TERMINAL STRIP DRAWING NUMBER

DRAWING N-047

Figure:

Fare Collection Supervision	TBD	A147, E-313
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INTERFACE DATA SHEET

<p>CONTRACT No.: A640 Communications</p> <p>SUBSYSTEM: Cable Transmission</p> <p>SPEC. REFERENCE: TP 8.0 CTS TP 14 Interfaces</p>	<p>LOCATION: CIC #2 North</p> <p>INTERFACE No.: 640-157-00-01</p> <p>REV: 0</p> <p>REFER TO INTERFACE DATA TABLE: 5th/Hill Station</p>			
<p>CONTRACT No.: A157</p> <p>SUBSYSTEM: 5th/Hill Station Facilities Electrical</p> <p>SPEC. REFERENCE: 16944</p>	<p>ATTACHMENTS: Interface Drawing Utilization List</p>			
<p>FUNCTIONAL DESCRIPTION: Interconnection Interface Point for all signals to and from SCADA and 5th/Hill Station Facilities Electrical, CIC #2 North</p>				
<p>TECHNICAL REQUIREMENTS:</p>				
<p>PHYSICAL DESCRIPTION: Barrier type terminal strips and assorted interposing relays.</p>				
<p>ORGANIZATION CONTACT: SCRITD Project Engineer</p>				
<p>COMMENTS:</p>				
<p>REFERENCES: A640 Drawings - NS-007A Interposing Relay Interfaces A640 Reference Drawings - 5th/Hill Station Stage II Construction Contract A157 Drawings</p>				
REVISION:	PREPARED BY:	IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):		
No.	DATE		INITIALS	DATE

DRAWING UTILIZATION LIST

A640 Drawing Title:

COMMUNICATIONS SCADA/FACILITIES ELECTRICAL INTERFACES

	<u>A157 REFERENCE DRAWINGS</u>		
	<u>CONNECTION DIAGRAM</u>		<u>ELEMENTARY DIAGRAM</u>
	<u>TERMINAL STRIP</u>	<u>DWG. NO.</u>	
<u>DRAWING N-036</u>			
<u>Figures:</u>			
Emergency Fan Track Dampers TD-051, TD-052	TS-B, TS-E	E-418	E-195
Emergency Fan, Fan Dampers ED-051, ED-052	TS-B, TS-D	E-418	E-193
<u>DRAWING N-037</u>			
Emergency Fan #1 & #2 Auxiliary Circuits	TS-E	E-418	E-193
Emergency Fans #1 & #2, EF-051, EF-052	TS-C, TS-E	E-418	E-193
<u>DRAWING N-038</u>			
Emergency Bypass Dampers BD-051, BD-052	TS-B, TS-D	E-418	E-194
<u>DRAWING N-039</u>			
Station Ventilation System AHU-031, AHU-032	TS-A, TS-D	E-418	E-192
Underplatform Exhaust Fan, UF-031	TS-A	E-418	E-191
<u>DRAWING N-040</u>			
Roll-Up Doors at Station Entrance (two)	TS-D	E-418	E-197
Duplex Sump Pumps EP-1	TS-F	E-418	E-189

IDS-640-157-00-01
 ATTACHMENT A
 5th/HILL STATION
 CIC #2 North
 Auxiliary Power Room
 North

DRAWING UTILIZATION LIST

	<u>A157 REFERENCE DRAWINGS</u>		
	<u>CONNECTION DIAGRAM</u>		<u>ELEMENTARY</u>
	<u>TERMINAL STRIP</u>	<u>DWG. NO.</u>	<u>DIAGRAM</u>
<u>DRAWING N-041</u>			
Auxiliary Power Substation Supply Fans, SSF-031, SSF-032	TS-B, TS-C	E-418	E-190
Auxiliary Power Substation Supply Fan Alarms	TS-A	E-418	E-190
480V Main Breakers in Auxiliary Power Room (two)	TS-F	E-418	E-194
<u>DRAWING N-042</u>			
Smoke & Heat Exhaust Fan EF-1	TS-C	E-418	E-191
<u>DRAWING N-043</u>			
Escalator Controls & Indica- tions ESC #7, #8, #9, #10, #11	TS-E	E-418	TBD
<u>DRAWING N-044</u>			
Auxiliary Power Battery Room Exhaust Fan EF-14	TS-A	E-418	TBD
<u>DRAWING N-086</u>			
Chiller Room Supply & Exhaust Fans, SF-2, EF-3	TS-F	E-418	TBD
<u>DRAWING (TBD)</u>			
General Supply & Exhaust Fans, SF-1, EF-2	TS-A, TS-C	E-418	TBD
<u>DRAWING (TBD)</u>			
Incoming Electrical Service Room Supply Fans, SF-5 and EF-13	TS-B	E-418	TBD
Incoming Electrical Battery Room Exhaust Fan EF-19	TBD	E-418	TBD

INTERFACE DATA SHEET

<p>CONTRACT No.: A640 Communications</p> <p>SUBSYSTEM: Cable Transmission</p> <p>SPEC. REFERENCE: TP 8.0 CTS TP 14 Interfaces</p>	<p>LOCATION: CIC #2 South</p> <p>INTERFACE No.: 640-157-00-02</p> <p>REV: 0</p>			
<p>CONTRACT No.: A157</p> <p>SUBSYSTEM: 5th/Hill Station Facilities Electrical</p> <p>SPEC. REFERENCE: 16944</p>	<p>REFER TO INTERFACE DATA TABLE: 5th/Hill Station</p> <p>ATTACHMENTS: Interface Drawing Utilization List</p>			
<p>FUNCTIONAL DESCRIPTION: Interconnection Interface Point for all signals to and from SCADA and 5th/Hill Station Facilities Electrical, CIC #2 South</p>				
<p>TECHNICAL REQUIREMENTS:</p>				
<p>PHYSICAL DESCRIPTION: Barrier type terminal strips and assorted interposing relay</p>				
<p>ORGANIZATION CONTACT: SCRTD Project Engineer</p>				
<p>COMMENTS:</p>				
<p>REFERENCES: A640 Contract Drawings - NS-007A Interposing Relay Interfaces A640 Reference Drawings - 5th/Hill Station Stage II Construction Contract A157 Drawings</p>				
<p>REVISION:</p>		<p>IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):</p>		
No.	DATE		INITIALS	DATE

DRAWING UTILIZATION LIST

A640 Drawing Title:

COMMUNICATIONS SCADA/FACILITIES ELECTRICAL INTERFACES

A157 REFERENCE DRAWINGS

	<u>CONNECTION DIAGRAM</u>		<u>ELEMENTARY DIAGRAM</u>
	<u>TERMINAL STRIP</u>	<u>DWG. NO.</u>	
<u>DRAWING N-036</u>			
<u>Figures:</u>			
Emergency Fan Track Dampers TD-061, TD-062	TS-B, TS-D	E-419	E-195
Emergency Fan, Fan Dampers ED-061, ED-062	TS-B, TS-D	E-419	E-193
<u>DRAWING N-037</u>			
Emergency Fan #1 & #2 Auxiliary Circuits	TS-E	E-419	E-193
Emergency Fans #1 & #2, EF-061, EF-062	TS-C, TS-D	E-419	E-193
<u>DRAWING N-038</u>			
Emergency Bypass Dampers BD-061, BD-062	TS-B, TS-D	E-419	E-194
<u>DRAWING N-039</u>			
Station Ventilation System AHU-033, AHU-034	TS-A, TS-C	E-419	E-192
Underplatform Exhaust Fan, UF-032	TS-A	E-419	E-191
<u>DRAWING N-040</u>			
Roll-Up Doors at Station Entrance (two)	TS-C	E-419	E-197

IDS-640-157-00-02
 ATTACHMENT A
 5th/HILL STATION
 CIC #2 South
 Auxiliary Power Room
 South

DRAWING UTILIZATION LIST

	<u>A157 REFERENCE DRAWINGS</u>		
	<u>CONNECTION DIAGRAM</u>		<u>ELEMENTARY</u>
	<u>TERMINAL STRIP</u>	<u>DWG. NO.</u>	<u>DIAGRAM</u>
<u>DRAWING N-041</u>			
480V Main Breakers in Auxiliary Power Room (two)	TS-F	E-419	E-194
<u>DRAWING N-042</u>			
Smoke & Heat Exhaust Fan EF-5, EF-6	TS-D, TS-F	E-419	E-191
TC/C Room Air Conditioning, ACU-1, MD-1, 2, 3, &4, C-1	TS-D	E-419	E-192
<u>DRAWING N-043</u>			
Elevator Controls & Indica- tions Elevator #1, & #2	TS-B	E-419	TBD
Escalator Controls & Indica- tions ESC #1, #3, #4, & #5	TS-B, TS-D, TS-E	E-419	TBD
<u>DRAWING N-044</u>			
Auxiliary Power Room Supply Fan SF-4 and Exhaust Fan EF-8	TS-B, TS-E	E-419	TBD
Auxiliary Power Battery Room Exhaust Fan EF-9	TS-A	E-419	TBD
<u>DRAWING N-045</u>			
TC/C Room Exhaust Fan, EF-4	TBD	E-419	E-192
<u>DRAWING (TBD)</u>			
Elevator Equipment Room Exhaust Fan EF-10	TBD	E-419	TBD
Toilet Exhuast Fan EF-11	TBD	E-419	TBD
<u>DRAWING (TBD)</u>			
General Supply & Exhaust Fans, SF-3, EF-7	TK-F	E-419	TBD

INTERFACE DATA SHEET

<p>CONTRACT No.: A640 Communications</p> <p>SUBSYSTEM: Public Address</p> <p>SPEC. REFERENCE: TP 6 & TP 14</p>	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">LOCATION: 5th/Hill Station</td> <td style="width: 33%;">INTERFACE No.: 640-157-00-03</td> <td style="width: 33%;">REV: 0</td> </tr> <tr> <td colspan="3" style="text-align: right; padding-top: 10px;">REFER TO INTERFACE DATA TABLE: 5th/Hill Station</td> </tr> </table>	LOCATION: 5th/Hill Station	INTERFACE No.: 640-157-00-03	REV: 0	REFER TO INTERFACE DATA TABLE: 5th/Hill Station		
LOCATION: 5th/Hill Station	INTERFACE No.: 640-157-00-03	REV: 0					
REFER TO INTERFACE DATA TABLE: 5th/Hill Station							
<p>CONTRACT No.: A157</p> <p>SUBSYSTEM: Electrical</p> <p>SPEC. REFERENCE: 16050 Part 3</p>	<p>ATTACHMENTS: Interface Drawing Utilization List</p>						
<p>FUNCTIONAL DESCRIPTION: Installation interface for speakers provided by A640 into back box provided by A157</p>							
<p>TECHNICAL REQUIREMENTS: Speaker back boxes to be installed as shown on Contract Drawing NOS-005 of Contract A157, Sheet 439.</p>							
<p>PHYSICAL DESCRIPTION: 1" conduits to and from four (4") square junction boxes and/or 9-5/8" x 9-5/8" or 6" back boxes. Wires, speakers, baffles, and mounting hardware for same.</p>							
<p>ORGANIZATION CONTACT: SCRTD Project Engineer</p>							
<p>COMMENTS: Additional speaker housings are installed in Contract A760</p>							
<p>REFERENCES: A640 Contract Drawing (Section VII) A640 Reference Drawings (Section VIII)</p>							
REVISION:	PREPARED BY:	IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):					
No.	DATE						
INITIALS	DATE						

IDS-640-157-00-03
ATTACHMENT A
5th/HILL STATION
ALL PUBLIC ADDRESS
SPEAKERS EXCEPT THOSE
IN LINEAR ELEMENT

DRAWING UTILIZATION LIST

A640 Drawing Title:

COMMUNICATIONS SCADA/FACILITIES ELECTRICAL INTERFACES

DRAWING N-101

Figure:

Embedded Ceiling Mount

INTERFACE DATA SHEET

<p>CONTRACT No.: A640 Communications</p> <p>SUBSYSTEM: Public Address</p> <p>SPEC. REFERENCE: TP 7 & TP 14</p>	<p>LOCATION: 5th/Hill Station</p> <p>INTERFACE No.: 640-157-00-04</p> <p>REV: 0</p> <hr/> <p>REFER TO INTERFACE DATA TABLE: 5th/Hill Station</p>			
<p>CONTRACT No.: A157</p> <p>SUBSYSTEM: Electrical</p> <p>SPEC. REFERENCE: 16060 Part 3</p>	<p>ATTACHMENTS:</p> <p>Interface Drawing Utilization List</p>			
<p>FUNCTIONAL DESCRIPTION:</p> <p>Installation interface for CCTV cameras and cables provided by Contract A640 into conduits and boxes provided by A157</p>				
<p>TECHNICAL REQUIREMENTS:</p> <p>Boxes shall be capable of supporting the weight of the camera.</p>				
<p>PHYSICAL DESCRIPTION:</p> <p>1" conduits to and from a 4" square junction box.</p>				
<p>ORGANIZATION CONTACT:</p> <p>SCRTD Project Engineer</p>				
<p>COMMENTS:</p>				
<p>REFERENCES:</p> <p>A640 Contract Drawing (Section VII)</p> <p>A640 Reference Drawings (Section VIII)</p>				
<p>REVISION:</p>		<p>IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):</p>		
No.	DATE		INITIALS	DATE

DRAWING UTILIZATION LIST

A640 Drawing Title:

COMMUNICATIONS CCTV STAGE II STATION CONTRACT INTERFACE

DRAWING N-100

Figure:

Ceiling Mount for CCTV Camera

Wall Mount for CCTV Camera

INTERFACE DATA SHEET

<p>CONTRACT No.: A640 Communications</p> <p>SUBSYSTEM: Cable Transmission</p> <p>SPEC. REFERENCE: TP 8.0 CTS TP 14 Interfaces</p>	<p>LOCATION: TC/C CIR</p>	<p>INTERFACE No.: 640-620-00-03</p>	<p>REV: 0</p>
<p>REFER TO INTERFACE DATA TABLE: 5th/Hill Station</p>			
<p>CONTRACT No.: A631 Traction Power</p> <p>SUBSYSTEM: System Supervision</p> <p>SPEC. REFERENCE: TP 10.8</p>	<p>ATTACHMENTS: Interface Drawing Utilization List</p>		
<p>FUNCTIONAL DESCRIPTION: Interconnection Interface point for all signals to and from SCADA and 5th/Hill Station Automatic Train Control, TC/C Communications Interface Rack</p>			
<p>TECHNICAL REQUIREMENTS:</p>			
<p>PHYSICAL DESCRIPTION: Barrier type terminal strips and assorted interposing relays.</p>			
<p>ORGANIZATION CONTACT: SCRTD Project Engineer</p>			
<p>COMMENTS:</p>			
<p>REFERENCES: A640 Contract Drawings NS-007A Interposing Relay Interfaces A640 Reference Drawings - 5th/Hill Station Stage II Construction Contract A157 Drawings A620 Drawings Q-053A, Q-054B, and Q-056B Typical Control Circuits</p>			
<p>REVISION:</p>		<p>PREPARED BY:</p>	
		<p>IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):</p>	
No.	DATE	INITIALS	DATE

A640 Drawing Title:

COMMUNICATIONS SCADA/AUTOMATIC TRAIN CONTROL INTERFACES

TERMINAL STRIPS
UTILIZED

DRAWING N-135

Figure:

Civic Center, 5th/Hill,
7th/Flower Stations

TBD

INTERFACE DATA SHEET

<p>CONTRACT No.: A640 Communications</p> <p>SUBSYSTEM: Power Subsystem</p> <p>SPEC. REFERENCE: TP 13 Power TP 14 Interfaces</p>	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">LOCATION: TC&C Power Panels</td> <td style="width: 33%;">INTERFACE No.: 640-620-00-09</td> <td style="width: 33%;">REV: 0</td> </tr> <tr> <td colspan="3" style="text-align: right; padding-top: 10px;">REFER TO INTERFACE DATA TABLE: 5th/Hill Station</td> </tr> </table>	LOCATION: TC&C Power Panels	INTERFACE No.: 640-620-00-09	REV: 0	REFER TO INTERFACE DATA TABLE: 5th/Hill Station		
LOCATION: TC&C Power Panels	INTERFACE No.: 640-620-00-09	REV: 0					
REFER TO INTERFACE DATA TABLE: 5th/Hill Station							
<p>CONTRACT No.: A620 Automatic Train Control</p> <p>SUBSYSTEM: ATC Room</p> <p>SPEC. REFERENCE: TP 4 ATC Room TP 10 Interface</p>	<p>ATTACHMENTS: Attachment 1 Technical Requirements</p> <p>Attachment 2 Interface Reference Drawing List</p>						
<p>FUNCTIONAL DESCRIPTION: Interconnection Interface Point between Communications equipment electric power requirements and Automatic Train Control power distribution equipment of the Train Control and Communications room.</p>							
<p>TECHNICAL REQUIREMENTS: See Attachment 1</p>							
<p>PHYSICAL DESCRIPTION: Termination of 120V/208V, 3-phase, 4-wire power and 120 VAC, single phase power, at A620 furnished power panelboards located in the TC&C room of 5th/Hill Station.</p>							
<p>ORGANIZATION CONTACT:</p>							
<p>COMMENTS: SCRTD Project Engineer</p>							
<p>REFERENCES: See Attachment 2</p>							
REVISION:	PREPARED BY:	IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):					
No.	DATE		INITIALS	DATE			

ATTACHMENT 1

TECHNICAL REQUIREMENTS

1) Train Control Contractor A620

A620 Contractor shall furnish and install two power distribution panelboards in the TC&C room of 5th/Hill Station. Each panel shall have essential power bus terminations for one 120V/208V, 3-phase, 4-wire circuit for a 35A load and twelve 120VAC, single-phase circuits for 20A loads.

2) Communications Contractor A640

A640 Contractor shall furnish, install and terminate power cables between the power distribution panels and communications equipment of the station TC&C room.

ATTACHMENT 2

Interface Reference Drawing List

A620 Contract Drawings

Drawing Q-052 Power Distribution Schematic

INTERFACE DATA SHEET

<p>CONTRACT No.: A640 Communications</p> <p>SUBSYSTEM: Cable Transmission</p> <p>SPEC. REFERENCE: TP 8.0 CTS TP 14 Interfaces</p>	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">LOCATION: CIC #1 TPSS</td> <td style="width: 33%;">INTERFACE No.: 640-631-00-04</td> <td style="width: 33%;">REV: 0</td> </tr> <tr> <td colspan="3">REFER TO INTERFACE DATA TABLE: 5th/Hill Station</td> </tr> </table>	LOCATION: CIC #1 TPSS	INTERFACE No.: 640-631-00-04	REV: 0	REFER TO INTERFACE DATA TABLE: 5th/Hill Station		
LOCATION: CIC #1 TPSS	INTERFACE No.: 640-631-00-04	REV: 0					
REFER TO INTERFACE DATA TABLE: 5th/Hill Station							
<p>CONTRACT No.: A631</p> <p>SUBSYSTEM: Traction Power Installation System Supervision</p> <p>SPEC. REFERENCE: *</p>	<p>ATTACHMENTS: Interface Drawing Utilization List</p>						
<p>FUNCTIONAL DESCRIPTION: Interconnection Interface Point for all signals to and from SCADA and 5th/Hill Station Traction Power, CIC #1 Traction Power Substation</p>							
<p>TECHNICAL REQUIREMENTS:</p>							
<p>PHYSICAL DESCRIPTION: Barrier type terminal strips and assorted interposing relay</p>							
<p>ORGANIZATION CONTACT: SCRTD Project Engineer</p>							
<p>COMMENTS:</p>							
<p>REFERENCES: A640 Contract Drawing & A640 Reference Drawings *A631 Drawing P-362 Communications Interface Cabinet Details</p>							
REVISION:	PREPARED BY:	IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):					
No.	DATE		INITIALS	DATE			

A640 Drawing Title:

COMMUNICATIONS SCADA/TRACTION POWER ELECTRICAL INTERFACES

A631 REFERENCE DRAWINGS

INTERCONNECTION SCHEDULE

TERMINAL STRIP DRAWING NUMBER

DRAWING N-078

Figure:

Traction Power AC Type IV
Switchgear

G

P-316A, P-317B

INTERFACE DATA SHEET

CONTRACT No.: A640 Communications SUBSYSTEM: Cable Transmission SPEC. REFERENCE: TP 8.0 CTS TP 14 Interface	<table style="width: 100%;"> <tr> <td style="width: 33%;">LOCATION: CIC #2 North</td> <td style="width: 33%;">INTERFACE No.: 640-631-00-05</td> <td style="width: 33%;">REV: 0</td> </tr> <tr> <td colspan="3">REFER TO INTERFACE DATA TABLE: 5th/Hill Station</td> </tr> </table>	LOCATION: CIC #2 North	INTERFACE No.: 640-631-00-05	REV: 0	REFER TO INTERFACE DATA TABLE: 5th/Hill Station		
LOCATION: CIC #2 North	INTERFACE No.: 640-631-00-05	REV: 0					
REFER TO INTERFACE DATA TABLE: 5th/Hill Station							
CONTRACT No.: A631 Traction Power Installation SUBSYSTEM: System Supervision SPEC. REFERENCE: *	ATTACHMENTS: Interface Drawing Utilization List						
FUNCTIONAL DESCRIPTION: Interconnection Interface Point for all signals to and from SCADA and 5th/Hill Station Traction Power, CIC #2 North							
TECHNICAL REQUIREMENTS:							
PHYSICAL DESCRIPTION: Barrier type terminal strips and assorted interposing relays.							
ORGANIZATION CONTACT: SCR TD Project Engineer							
COMMENTS:							
REFERENCES: A640 Contract Drawings and A640 Reference Drawings. *A631 Drawing P-362 Communications Interface Cabinet Details							
REVISION:	PREPARED BY:	IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):					
No.	DATE		INITIALS	DATE			

IDS-640-631-00-05
ATTACHMENT A
5TH/HILL STATION
CIC #2 North
Auxiliary Power Room North

A640 Drawing Title:

COMMUNICATIONS SCADA/TRACTION POWER INTERFACES

A631 REFERENCE DRAWINGS

INTERCONNECTION SCHEDULE

TERMINAL STRIP DRAWING NUMBER

DRAWING N-284

Figure:

Disconnect Switches Metering and Control	E	P-317B
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INTERFACE DATA SHEET

CONTRACT No.: A640 Communications SUBSYSTEM: Cable Transmission SPEC. REFERENCE: TP 8.0 CTS TP 14 Interface	LOCATION: CIC #2 South INTERFACE No.: 640-631-00-06 REV: 0 REFER TO INTERFACE DATA TABLE: 5th/Hill Station				
CONTRACT No.: A631 Traction Power Installation SUBSYSTEM: System Supervision SPEC. REFERENCE: *	ATTACHMENTS: Interface Drawing Utilization List				
FUNCTIONAL DESCRIPTION: Interconnection Interface Point for all signals to and from SCADA and 5th/Hill Station Traction Power, CIC #2 South					
TECHNICAL REQUIREMENTS:					
PHYSICAL DESCRIPTION: Barrier type terminal strips and assorted interposing relays.					
ORGANIZATION CONTACT: SCRTD Project Engineer					
COMMENTS:					
REFERENCES: A640 Contract Drawings and A640 Reference Drawings. *A631 Drawing P-362 Communications Interface Cabinet Details					
REVISION:	PREPARED BY:	IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):			
No.	DATE			INITIALS	DATE

A640 Drawing Title:

COMMUNICATIONS SCADA/TRACTION POWER INTERFACES

A631 REFERENCE DRAWINGS

INTERCONNECTION SCHEDULE

TERMINAL STRIP DRAWING NUMBER

DRAWING N-284

Figure:

Disconnect Switches Metering E
and Control

P-317B

INTERFACE DATA SHEET

<p>CONTRACT No.: A640 Communications</p> <p>SUBSYSTEM: Public Address</p> <p>SPEC. REFERENCE: TP 6 & TP 14</p>	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">LOCATION: 5th/Hill Station</td> <td style="width: 33%;">INTERFACE No.: 640-760-00-03</td> <td style="width: 33%;">REV: 0</td> </tr> <tr> <td colspan="3">REFER TO INTERFACE DATA TABLE: 5th/Hill Station</td> </tr> </table>	LOCATION: 5th/Hill Station	INTERFACE No.: 640-760-00-03	REV: 0	REFER TO INTERFACE DATA TABLE: 5th/Hill Station		
LOCATION: 5th/Hill Station	INTERFACE No.: 640-760-00-03	REV: 0					
REFER TO INTERFACE DATA TABLE: 5th/Hill Station							
<p>CONTRACT No.: A760</p> <p>SUBSYSTEM: Signs & Graphics</p> <p>SPEC. REFERENCE:</p>	<p>ATTACHMENTS: Interface Drawing Utilization List</p>						
<p>FUNCTIONAL DESCRIPTION: Installation interface for speakers provided by A640 into linear element provided by A760</p>							
<p>TECHNICAL REQUIREMENTS: Speakers to be mounted on flange provided by A760 and shown on A760 Drawing P-604. Wires and speakers are provided by A640.</p>							
<p>PHYSICAL DESCRIPTION: Public address speakers are installed by A640 Contractor in platform linear element. This linear element is provided by Contract A760.</p>							
<p>ORGANIZATION CONTACT: SCRTD Project Engineer</p>							
<p>COMMENTS: Additional speaker boxes are installed in Contract A157.</p>							
<p>REFERENCES: A640 Contract Drawing (Section VII) A640 Reference Drawings (Section VIII)</p>							
REVISION:	PREPARED BY:	IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):					
No.	DATE		INITIALS	DATE			

IDS-640-760-00-03
ATTACHMENT A
5TH/HILL STATION
PUBLIC ADDRESS
SPEAKERS IN LINEAR
ELEMENT

DRAWING UTILIZATION LIST

A640 Drawing Title:

COMMUNICATIONS PUBLIC ADDRESS/SIGNS AND GRAPHICS

DRAWING N-102

Figure:

Speakers Mounted in Linear Element

INTERFACE DATA SHEET

<p>CONTRACT No.: A640 Communications SUBSYSTEM: Cable Transmission SPEC. REFERENCE: TP 8.0 CTS TP 14 Interfaces</p>	<p>LOCATION: CIC #2 North</p>	<p>INTERFACE No.: 640-795-00-05</p>	<p>REV: 0</p>	
<p>REFER TO INTERFACE DATA TABLE: 5th/Hill Station</p>				
<p>CONTRACT No.: A795 UPS SUBSYSTEM: UPS Supervision SPEC. REFERENCE: A795 16610 Par. 2.7</p>	<p>ATTACHMENTS: Interface Drawing Utilization List</p>			
<p>FUNCTIONAL DESCRIPTION: Interconnection Interface Point for all signals to and from SCADA and 5th/Hill Station Uninterruptible Power Supply System, CIC #2 North</p>				
<p>TECHNICAL REQUIREMENTS:</p>				
<p>PHYSICAL DESCRIPTION: Barrier type terminal strips and assorted interposing relay</p>				
<p>ORGANIZATION CONTACT: SCRTD Project Engineer</p>				
<p>COMMENTS:</p>				
<p>REFERENCES: A640 Contract Drawings & A640 Reference Drawings A795 Drawing ESK-003 UPS System Supervision</p>				
<p>REVISION:</p>		<p>PREPARED BY:</p>		<p>IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):</p>
No.	DATE	INITIALS	DATE	

IDS-640-795-00-05
ATTACHMENT A
5TH/HILL STATION
CIC #2 North
Auxiliary Power Room North

A640 Drawing Title:

COMMUNICATIONS SCADA/UPS INTERFACES

REFERENCE DRAWINGS

CONNECTION DIAGRAM

<u>TERMINAL STRIP</u>	<u>DRAWING NUMBER</u>
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DRAWING N-048

Figure:

UPS Supervision

TS-F

A157, E-418

INTERFACE DATA SHEET

<p>CONTRACT No.: A640 Communications</p> <p>SUBSYSTEM: Cable Transmission</p> <p>SPEC. REFERENCE: TP 8.0 CTS TP 14 Interfaces</p>	<p>LOCATION: CIC #2 South</p> <p>INTERFACE No.: 640-795-00-06</p> <p>REV: 0</p> <hr/> <p>REFER TO INTERFACE DATA TABLE: 5th/Hill Station</p>			
<p>CONTRACT No.: A795</p> <p>SUBSYSTEM: UPS Supervision</p> <p>SPEC. REFERENCE: A795 16610 Par. 2.7</p>	<p>ATTACHMENTS: Interface Drawing Utilization List</p>			
<p>FUNCTIONAL DESCRIPTION: Interconnection Interface Point for all signals to and from SCADA and 5th/Hill Station Uninterruptible Power Supply System, CIC #2 South</p>				
<p>TECHNICAL REQUIREMENTS:</p>				
<p>PHYSICAL DESCRIPTION: Barrier type terminal strips and assorted interposing relay</p>				
<p>ORGANIZATION CONTACT: SCRTD Project Engineer</p>				
<p>COMMENTS:</p>				
<p>REFERENCES: A640 Contract Drawings - NS-007A Interposing Relay Interfaces A640 Reference Drawings - 5th/Hill Station Stage II Construction Contract A157 Dwgs. A795 Drawing ESK-003 UPS System Supervision</p>				
REVISION:	PREPARED BY:	IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):		
No.	DATE		INITIALS	DATE

IDS-640-795-00-06
ATTACHMENT A
5TH/HILL STATION
CIC #2 South
Auxiliary Power Room South

DRAWING UTILIZATION LIST

A640 Drawing Title:

COMMUNICATIONS SCADA/UPS INTERFACES

REFERENCE DRAWINGS

CONNECTION DIAGRAM

TERMINAL STRIP DRAWING NUMBER

DRAWING N-048

Figure:

UPS Supervision

TS-F

A157, E-419

INTERFACE DATA SHEET

<p>CONTRACT No.: A640 Communications</p> <p>SUBSYSTEM: Cable Transmission</p> <p>SPEC. REFERENCE: TP 8 CTS TP 14 Interfaces</p>	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">LOCATION: CIC #2 North</td> <td style="width: 33%;">INTERFACE No.: 640-840-00-05</td> <td style="width: 33%;">REV: 0</td> </tr> <tr> <td colspan="3" style="text-align: right; padding-top: 10px;">REFER TO INTERFACE DATA TABLE: 5th/Hill Station</td> </tr> </table>	LOCATION: CIC #2 North	INTERFACE No.: 640-840-00-05	REV: 0	REFER TO INTERFACE DATA TABLE: 5th/Hill Station		
LOCATION: CIC #2 North	INTERFACE No.: 640-840-00-05	REV: 0					
REFER TO INTERFACE DATA TABLE: 5th/Hill Station							
<p>CONTRACT No.: H840</p> <p>SUBSYSTEM: Fare Collection Supervision</p> <p>SPEC. REFERENCE:</p>	<p>ATTACHMENTS: Interface Drawing Utilization List</p>						
<p>FUNCTIONAL DESCRIPTION: Interconnection Interface Point for all signals to and from SCADA and 5th/Hill Station Fare Collection CIC #2 North</p>							
<p>TECHNICAL REQUIREMENTS:</p>							
<p>PHYSICAL DESCRIPTION: Barrier type terminal strips and assorted interposing relay</p>							
<p>ORGANIZATION CONTACT: SCRTD Project Engineer</p>							
<p>COMMENTS:</p>							
<p>REFERENCES: A640 Contract Drawing & A640 Reference Drawings</p>							
REVISION:	PREPARED BY:	IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):					
No.	DATE		INITIALS	DATE			

IDS-640-840-00-05
ATTACHMENT A
5th/HILL STATION
CIC #2 North
Auxiliary Power Room North

DRAWING UTILIZATION LIST

A640 Drawing Title:

COMMUNICATIONS SCADA/FARE COLLECTION INTERFACES

REFERENCE DRAWINGS

CONNECTION DIAGRAM

TERMINAL STRIP DRAWING NUMBER

DRAWING N-047

Figure:

Fare Collection Supervision	TBD	A157, E-418
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INTERFACE DATA SHEET

<p>CONTRACT No.: A640 Communications</p> <p>SUBSYSTEM: Cable Transmission</p> <p>SPEC. REFERENCE: TP 8 CTS TP 14 Interfaces</p>	<p>LOCATION: CIC #2 South</p>	<p>INTERFACE No.: 640-840-00-06</p>	<p>REV: 0</p>	
<p>CONTRACT No.: H840</p> <p>SUBSYSTEM: Fare Collection Supervision</p> <p>SPEC. REFERENCE:</p>		<p>REFER TO INTERFACE DATA TABLE: 5th/Hill Station</p> <p>ATTACHMENTS: Interface Drawing Utilization List</p>		
<p>FUNCTIONAL DESCRIPTION: Interconnection Interface Point for all signals to and from SCADA and 5th/Hill Station Fare Collection CIC #2 South</p>				
<p>TECHNICAL REQUIREMENTS:</p>				
<p>PHYSICAL DESCRIPTION: Barrier type terminal strips and assorted interposing relay</p>				
<p>ORGANIZATION CONTACT: SCRTD Project Engineer</p>				
<p>COMMENTS:</p>				
<p>REFERENCES: A640 Contract Drawing & A640 Reference Drawings</p>				
<p>REVISION:</p>		<p>PREPARED BY:</p>		<p>IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):</p>
No.	DATE	INITIALS	DATE	

IDS-640-840-00-06
ATTACHMENT A
5th/HILL STATION
CIC #2 South
Auxiliary Power Room South

DRAWING UTILIZATION LIST

A640 Drawing Title:

COMMUNICATIONS SCADA/FARE COLLECTION INTERFACES

REFERENCE DRAWINGS

CONNECTION DIAGRAM

TERMINAL STRIP DRAWING NUMBER

DRAWING N-047

Figure:

Fare Collection Supervision	TBD	A157, E-419
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INTERFACE DATA SHEET

<p>CONTRACT No.: A640 Communications</p> <p>SUBSYSTEM: Cable Transmission</p> <p>SPEC. REFERENCE: TP 8.0 CTS TP 14 Interfaces</p>	<p>LOCATION: CIC #3 East</p>	<p>INTERFACE No.: 640-167-00-01</p>	<p>REV: 0</p>	
<p>CONTRACT No.: A167</p> <p>SUBSYSTEM: 7th/Flower Station Facilities Electrical</p> <p>SPEC. REFERENCE: 16944</p>		<p>REFER TO INTERFACE DATA TABLE: 7th/Flower Station</p> <p>ATTACHMENTS: Interface Drawing Utilization List</p>		
<p>FUNCTIONAL DESCRIPTION: Interconnection Interface Point for all signals to and from SCADA and 7th/Flower Station Facilities Electrical, CIC #3 East</p>				
<p>TECHNICAL REQUIREMENTS:</p>				
<p>PHYSICAL DESCRIPTION: Barrier type terminal strips and assorted interposing relays.</p>				
<p>ORGANIZATION CONTACT: SCRTD Project Engineer</p>				
<p>COMMENTS:</p>				
<p>REFERENCES: A640 Drawings - NS-007A Interposing Relay Interfaces A640 Reference Drawings - 7th/Flower Station Stage II Construction Contract A167 Drawings</p>				
<p>REVISION:</p>		<p>PREPARED BY:</p>		<p>IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):</p>
No.	DATE	INITIALS	DATE	

DRAWING UTILIZATION LIST

A640 Drawing Title:

COMMUNICATIONS SCADA/FACILITIES ELECTRICAL INTERFACES

	<u>A167 REFERENCE DRAWINGS</u>		
	<u>CONNECTION DIAGRAM</u>		<u>ELEMENTARY DIAGRAM</u>
	<u>TERMINAL STRIP</u>	<u>DWG. NO.</u>	
<u>DRAWING (TBD)</u>			
Emergency Fans #1 & #2 EM-1E, EM-2E (EF-71, EF-72)*	TS-C, TS-E	E-067	E-045
<u>DRAWING (TBD)</u>			
Emergency Fan, Fan Dampers FD-1E, FD-2E (FD-71, FD-72)	TS-B, TS-D	E-067	E-045
<u>DRAWING (TBD)</u>			
Emergency Fan Bypass Dampers BD-1E, BD-2E (BD-71, BD-72)	TS-B, TS-D	E-067	E-046
<u>DRAWING (TBD)</u>			
Station Ventilation System AHU-1E, AHU-2E, (AHU-41, AHU-42)	TS-A, TS-D	E-067	E-044
Underplatform Exhaust Fan UF-1E, (UF-41)	TS-A	E-067	E-043
<u>DRAWING (TBD)</u>			
Roll-Up Doors D-1	TS-D	E-067	E-061
<u>DRAWING (TBD)</u>			
480V Main Breakers in Auxiliary Power Room (two)	TS-F	E-067	E-046

*Ventilation equipment designations in parenthesis are Facilities mechanical dwg. designations that differ from Facilities electrical dwg. designations (typ.).

IDS-640-167-00-01
 ATTACHMENT A
 7th/FLOWER STATION
 CIC #3 East
 Auxiliary Power Room
 East

DRAWING UTILIZATION LIST

	<u>A167 REFERENCE DRAWINGS</u>		
	<u>CONNECTION DIAGRAM</u>		<u>ELEMENTARY DIAGRAM</u>
	<u>TERMINAL STRIP</u>	<u>DWG. NO.</u>	
<u>DRAWING (TBD)</u>			
Smoke & Heat Exhaust Fan, MF-1E (EF-6)	TS-C	E-067	E-043
TC/C Room Ventilation AC-1E (ACU-1), EF-16E (EF-16)	TS-B	E-067	E-044, E-060
<u>DRAWING (TBD)</u>			
Escalator Controls & Indica- tions ESC #1, 4, 5, 8 (ES-1E, 4E, 5E, 8E)	TS-E, TS-F	E-067	TBD
<u>DRAWING (TBD)</u>			
Emergency Fan #1 & #2 Auxiliary Circuits	TS-E	E-067	E-045
Emergency Fan Track Dampers TD-1E, TD-2E (TD-71, TD-72)	TS-B, TS-E	E-067	E-047
<u>DRAWING (TBD)</u>			
General Supply & Exhaust Fans SF-1E, CA-1 (SF-7, CA-1)	TS-F	E-067	E-059
<u>DRAWING (TBD)</u>			
TC/C Battery Room Exhaust Fan EF-3E2 (EF-2)	TS-A	E-067	E-233
Auxiliary Power Battery Room Exhaust Fan EF-3E1 (EF-1)	TS-A	E-067	E-233

INTERFACE DATA SHEET

<p>CONTRACT No.: A640 Communications</p> <p>SUBSYSTEM: Cable Transmission</p> <p>SPEC. REFERENCE: TP 8.0 CTS TP 14 Interfaces</p>	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">LOCATION: CIC #2 West</td> <td style="width: 33%;">INTERFACE No.: 640-167-00-02</td> <td style="width: 33%;">REV: 0</td> </tr> <tr> <td colspan="3">REFER TO INTERFACE DATA TABLE: 7th/Flower Station</td> </tr> </table>	LOCATION: CIC #2 West	INTERFACE No.: 640-167-00-02	REV: 0	REFER TO INTERFACE DATA TABLE: 7th/Flower Station		
LOCATION: CIC #2 West	INTERFACE No.: 640-167-00-02	REV: 0					
REFER TO INTERFACE DATA TABLE: 7th/Flower Station							
<p>CONTRACT No.: A167 7th/Flower</p> <p>SUBSYSTEM: Facilities Electrical</p> <p>SPEC. REFERENCE: 16944</p>	<p>ATTACHMENTS: Interface Drawing Utilization List</p>						
<p>FUNCTIONAL DESCRIPTION: Interconnection Interface Point for all signals to and from SCADA and 7th/Flower Station Facilities Electrical, CIC #2 West</p>							
<p>TECHNICAL REQUIREMENTS:</p>							
<p>PHYSICAL DESCRIPTION: Barrier type terminal strips and assorted interposing relay</p>							
<p>ORGANIZATION CONTACT: SCRTD Project Engineer</p>							
<p>COMMENTS:</p>							
<p>REFERENCES: A640 Contract Drawings - NS-007A Interposing Relay Interfaces A640 Reference Drawings - 7th/Flower Station Stage II Construction Contract A167 Drawings</p>							
REVISION:	PREPARED BY:	IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):					
No.	DATE						
INITIALS	DATE						

DRAWING UTILIZATION LIST

A640 Drawing Title:

COMMUNICATIONS SCADA/FACILITIES ELECTRICAL INTERFACES

A167 REFERENCE DRAWINGS

	<u>CONNECTION DIAGRAM</u>		<u>ELEMENTARY DIAGRAM</u>
	<u>TERMINAL STRIP</u>	<u>DWG. NO.</u>	
<u>DRAWING (TBD)</u>			
<u>Figures:</u>			
Emergency Fans #1 & #2 EM-1W, EM-2W (EF-081, EF-082)*	TS-C, TS-E	E-068	E-045
<u>DRAWING (TBD)</u>			
Emergency Fan, Fan Dampers ED-1W, ED-2W (ED-081, ED-082)	TS-B, TS-D	E-068	E-045
<u>DRAWING (TBD)</u>			
Emergency Fan Bypass Dampers BD-1W, BD-2W (BD-081, BD-082)	TS-B, TS-D	E-068	E-046
<u>DRAWING (TBD)</u>			
Station Ventilation System AHU-1W, AHU-2W (AHU-43, AHU-44)	TS-A, TS-C	E-068	E-044
Underplatform Exhaust Fan UF-1W (UF-42)	TS-A	E-068	E-043
<u>DRAWING (TBD)</u>			
Roll-Up Doors at Station Entrance D-2	TS-C	E-068	E-061
Duplex Sump Pump P-1W, P-2W (SP-1)	TS-A	E-068	E-041

*Ventilation equipment designations in parenthesis are Facilities mechanical dwg. designations that differ from Facilities electrical dwg. designations (typ.).

DRAWING UTILIZATION LIST

	<u>A167 REFERENCE DRAWINGS</u>		
	<u>CONNECTION DIAGRAM</u>		<u>ELEMENTARY</u>
	<u>TERMINAL STRIP</u>	<u>DWG. NO.</u>	<u>DIAGRAM</u>
<u>DRAWING (TBD)</u>			
480V Main Breakers in Auxiliary Power Room (two)	TS-F	E-068	E-046
Traction Power Room Supply Fans SF-1W, SF-2W (SSF-41, SSF-42)	TS-B	E-068	E-042
Traction Power Room Ventila- tion Alarms	TS-B	E-068	E-042
<u>DRAWING (TBD)</u>			
Smoke & Heat Exhaust Fan, MF-1W (EF-7)	TS-C	E-068	E-043
<u>DRAWING (TBD)</u>			
Elevator Controls & Indica- tions ELV #1 & #2	TBD	TBD	TBD
Escalator Controls & Indica- ECS #2, 3, 6, 7, 9, 10 (ES-1W, 2W, 3W, 4W, 5W, 6W)	TS-E, TS-F	E-068	TBD
<u>DRAWING (TBD)</u>			
Emergency Fan #1 & #2 Auxiliary Fans	TS-E	E-068	E-045
Emergency Fan Track Dampers TD-1W, TD-2W (TD-081, TD-082)	TS-B, TS-D	E-068	E-047
<u>DRAWING (TBD)</u>			
General Supply & Exhaust Fans SF-4W, EF-2W (SF-8, EF-15)	TS-D	E-068	E-059
Chiller Room Supply & Exhaust Fans SF-10W, EF-6W (SF-10, EF-5)	TS-F	E-068	E-059

DRAWING UTILIZATION LIST

	<u>A167 REFERENCE DRAWINGS</u>		
	<u>CONNECTION DIAGRAM</u>		<u>ELEMENTARY DIAGRAM</u>
	<u>TERMINAL STRIP</u>	<u>DWG. NO.</u>	
<u>DRAWING (TBD)</u>			
Incoming Electrical Service Room Supply Fan SF-3W (SF-9)	TS-E	E-068	E-059
Incoming Electrical Service Battery Room Exhaust Fans EF-1AW, EF-1BW (EF-18A & B)	TS-B, TS-E	E-068	E-233
West Electrical Room Supply & Exhaust Fans, SF-19, EF-20	TBD	E-068	TBD
<u>DRAWING (TBD)</u>			
Auxiliary Power Battery Room Exhaust Fan EF-3W (EF-3)	TS-A	E-068	E-233
<u>DRAWING (TBD)</u>			
West Auxiliary Power Room Exhaust Fan EF-2W (EF-15)	TS-D	E-068	E-059

INTERFACE DATA SHEET

<p>CONTRACT No.: A640 Communications</p> <p>SUBSYSTEM: Public Address</p> <p>SPEC. REFERENCE: TP 6 & TP 14</p>	<p>LOCATION: 7th/Flower Station</p> <p>INTERFACE No.: 640-167-00-03</p> <p>REV: 0</p> <hr/> <p>REFER TO INTERFACE DATA TABLE: 7th/Flower Station</p>			
<p>CONTRACT No.: A167</p> <p>SUBSYSTEM: Electrical</p> <p>SPEC. REFERENCE: 16050 Part 3</p>	<p>ATTACHMENTS:</p> <p>Interface Drawing Utilization List</p>			
<p>FUNCTIONAL DESCRIPTION:</p> <p>Installation interface for speakers provided by A640 into back box provided by A167</p>				
<p>TECHNICAL REQUIREMENTS:</p> <p>Speaker back boxes to be installed as shown on Contract Drawing NS-005 of Contract A167, Sheet 264.</p>				
<p>PHYSICAL DESCRIPTION:</p> <p>1" conduits to and from four (4") square junction boxes and/or 9-5/8" x 9-5/8" or 6" back boxes. Wires, speakers, baffles, and mounting hardware for same.</p>				
<p>ORGANIZATION CONTACT:</p> <p>SCRTD Project Engineer</p>				
<p>COMMENTS:</p> <p>Additional speaker housings are installed in Contract A760</p>				
<p>REFERENCES:</p> <p>A640 Contract Drawing (Section VII)</p> <p>A640 Reference Drawings (Section VIII)</p>				
REVISION:	PREPARED BY:	IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):		
No.	DATE		INITIALS	DATE

IDS-640-167-00-03
ATTACHEMENT A
7th/FLOWER STATION
ALL PUBLIC ADDRESS
SPEAKERS EXCEPT THOSE
IN LINEAR ELEMENT

DRAWING UTILIZATION LIST

A640 Drawing Title:

COMMUNICATIONS SCADA/FACILITIES ELECTRICAL INTERFACES

DRAWING N101

Figure:

Embedded Ceiling Mount

INTERFACE DATA SHEET

<p>CONTRACT No.: A640 Communication</p> <p>SUBSYSTEM: Closed Circuit T.V.</p> <p>SPEC. REFERENCE: TP 7 & TP 14</p>	<p>LOCATION: 7th/Flower Station INTERFACE No.: 640-167-00-04 REV: 0</p> <hr/> <p>REFER TO INTERFACE DATA TABLE: 7th/Flower Station</p>			
<p>CONTRACT No.: A167</p> <p>SUBSYSTEM: Electrical</p> <p>SPEC. REFERENCE: 16060 Part 3</p>	<p>ATTACHMENTS: Interface Drawing Utilization List</p>			
<p>FUNCTIONAL DESCRIPTION: Installation interface for CCTV cameras and cables provided by Contract A640 into conduits and boxes provided by A167</p>				
<p>TECHNICAL REQUIREMENTS: Boxes shall be capable of supporting the weight of the camera.</p>				
<p>PHYSICAL DESCRIPTION: 1" conduits to and from a 4" square junction box.</p>				
<p>ORGANIZATION CONTACT: SCRTD Project Engineer</p>				
<p>COMMENTS:</p>				
<p>REFERENCES: A640 Contract Drawings (Section VII) A640 Reference Drawings (Section VIII)</p>				
REVISION:	PREPARED BY:	IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):		
No.	DATE		INITIALS	DATE

DRAWING UTILIZATION LIST

A640 Drawing Title:

COMMUNICATIONS CCTV/STAGE II STATION CONTRACT INTERFACE

DRAWING N-100

Figures

Ceiling Mount for CCTV Camera

Wall Mount for CCTV Camera

INTERFACE DATA SHEET

<p>CONTRACT No.: A640 Communications</p> <p>SUBSYSTEM: Cable Transmission</p> <p>SPEC. REFERENCE: TP 8.0 CTS TP 14 Interface</p>	<p>LOCATION: CIC #4 L</p> <p>INTERFACE No.: 640-167-00-05</p> <p>REV: 0</p> <hr/> <p>REFER TO INTERFACE DATA TABLE: 7th/Flower Station</p>			
<p>CONTRACT No.: A167</p> <p>SUBSYSTEM: 7th/Flower Station Facilities Electrical</p> <p>SPEC. REFERENCE: 16944</p>	<p>ATTACHMENTS: Interface Drawing Utilization List</p>			
<p>FUNCTIONAL DESCRIPTION: Interconnection Interface Point for all signals to and from SCADA and 7th/Flower Light Rail Station Facilities Electrical CIC #4L</p>				
<p>TECHNICAL REQUIREMENTS:</p>				
<p>PHYSICAL DESCRIPTION: Barrier type terminal strips and assorted interposing relays.</p>				
<p>ORGANIZATION CONTACT: SCRTD Project Engineer</p>				
<p>COMMENTS:</p>				
<p>REFERENCES: A640 Contract Drawings - NS-007A Interposing Relay Interfaces A640 Reference Drawings - 7th/Flower Station Stage II Construction Contract A167 Drawings</p>				
REVISION:	PREPARED BY:	IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):		
No.	DATE		INITIALS	DATE

DRAWING UTILIZATION LIST

A640 Drawing Title:

COMMUNICATIONS SCADA/FACILITIES ELECTRICAL INTERFACES

	<u>A167 REFERENCE DRAWINGS</u>		
	<u>CONNECTION DIAGRAM</u>		<u>ELEMENTARY DIAGRAM</u>
	<u>TERMINAL STRIP</u>	<u>DWG. NO.</u>	
<u>DRAWING (TBD)</u>			
<u>Figure:</u>			
Roll-Up Doors (two)	TBD	TBD	E-061
<u>DRAWING (TBD)</u>			
LRT Battery Room Exhaust Fan EF-1L	TBD	TBD	E-232
Auxiliary Power Room Supply & Exhaust Fans AHU-1L, CA-1L	TBD	TBD	TBD
<u>DRAWING (TBD)</u>			
Signal and Communications Room Ventilation, ACI-1, EF-2L	TBD	TBD	TBD

INTERFACE DATA SHEET

<p>CONTRACT No.: A640 Communications</p> <p>SUBSYSTEM: Cable Transmission</p> <p>SPEC. REFERENCE: TP 8.0 CTS TP 14 Interface</p>	<p>LOCATION: CIC #5L</p>	<p>INTERFACE No.: 640-167-00-06</p>	<p>REV: 0</p>	
<p>CONTRACT No.: A167 7th/Flower Station</p> <p>SUBSYSTEM: Facilities Electrical</p> <p>SPEC. REFERENCE: 16944</p>		<p>REFER TO INTERFACE DATA TABLE: 7th/Flower Station</p> <p>ATTACHMENTS: Interface Drawing Utilization List</p>		
<p>FUNCTIONAL DESCRIPTION: Interconnection Interface Point for all signals to and from SCADA and 7th/Flower Light Rail Station Facilities Electrical CIC #5L</p>				
<p>TECHNICAL REQUIREMENTS:</p>				
<p>PHYSICAL DESCRIPTION: Barrier type terminal strips and assorted interposing relays.</p>				
<p>ORGANIZATION CONTACT: SCRTD Project Engineer</p>				
<p>COMMENTS:</p>				
<p>REFERENCES: A640 Contract Drawings - NS-007A Interposing Relay Interfaces A640 Reference Drawings - 7th/Flower Station Stage II Construction Contract A167 Drawings</p>				
<p>REVISION:</p>		<p>PREPARED BY:</p>		<p>IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):</p>
No.	DATE	INITIALS	DATE	

DRAWING UTILIZATION LIST

A640 Drawing Title:

COMMUNICATIONS SCADA/FACILITIES ELECTRICAL INTERFACES

	<u>A167 REFERENCE DRAWINGS</u>		
	<u>CONNECTION DIAGRAM</u>		<u>ELEMENTARY DIAGRAM</u>
	<u>TERMINAL STRIP</u>	<u>DWG. NO.</u>	
<u>DRAWING N-115A</u>			
<u>Figure:</u>			
Emergency Vent Fans, EM-4L (EVF-4)*	TS-C	E-234	E-045
Subway Vent Fan, SEM-2L (SVF-2)	TS-B	E-234	E-045
<u>DRAWING (TBD)</u>			
Emergency Vent Fan, Fan Dampers FD-6L	TS-C	E-234	E-045
Subway Vent Fan, Fan Damper FD-5L	TS-B	E-234	E-045
<u>DRAWING (TBD)</u>			
Emergency Fan Bypass Dampers BD-4L	TS-B	E-234	E-046
<u>DRAWING (TBD)</u>			
Emergency Vent Fan Auxiliary Circuits	TS-C	E-234	E-045
Subway Vent Fan Auxiliary Circuits	TBD	TBD	TBD
<u>DRAWING (TBD)</u>			
Overhead Track Exhaust Fan OTE-2L	TS-A	E-234	E-232

*Ventilation equipment designations in parenthesis are Facilities mechanical dwg. designations that differ from Facilities electrical dwg. designations (typ.).

DRAWING UTILIZATION LIST

	<u>A167 REFERENCE DRAWINGS</u>		
	<u>CONNECTION DIAGRAM</u>		<u>ELEMENTARY</u>
	<u>TERMINAL STRIP</u>	<u>DWG. NO.</u>	<u>DIAGRAM</u>
<u>DRAWING (TBD)</u>			
Elect. & Mech. Equip. Room Exhaust Fan EF-6L	TBD	TBD	E-323
Toilet & Valve Room Exhaust Fan EF-8L	TBD	TBD	TBD
<u>DRAWING (TBD)</u>			
Elevator Controls & Indica- tions ELV #6 (EL-4L)	TBD	TBD	TBD
Escalator Controls & Indica- tions ESC #13 (ES-11L)	TBD	TBD	TBD

INTERFACE DATA SHEET

<p>CONTRACT No.: A640 Communications</p> <p>SUBSYSTEM: Cable Transmission</p> <p>SPEC. REFERENCE: TP 8.0 CTS TP 14 Interface</p>	<p>LOCATION: CIC #6L</p>	<p>INTERFACE No.: 640-167-00-07</p>	<p>REV: 0</p>
		<p>REFER TO INTERFACE DATA TABLE: 7th/Flower Station</p>	
<p>CONTRACT No.: A167 7th/Flower</p> <p>SUBSYSTEM: Facilities Electrical</p> <p>SPEC. REFERENCE: 16944</p>	<p>ATTACHMENTS: Interface Drawing Utilization List</p>		
<p>FUNCTIONAL DESCRIPTION: Interconnection Interface Point for all signals to and from SCADA and 7th/Flower Light Rail Station Facilities Electrical CIC #6L</p>			
<p>TECHNICAL REQUIREMENTS:</p>			
<p>PHYSICAL DESCRIPTION: Barrier type terminal strips and assorted interposing relays.</p>			
<p>ORGANIZATION CONTACT: SCRTD Project Engineer</p>			
<p>COMMENTS:</p>			
<p>REFERENCES: A640 Contract Drawings - NS-007A Interposing Relay Interfaces A640 Reference Drawings - 7th/Flower Station Stage II Construction Contract A167 Drawings</p>			
<p>REVISION:</p>		<p>PREPARED BY:</p>	
<p>IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):</p>			
No.	DATE	INITIALS	DATE

DRAWING UTILIZATION LIST

A640 Drawing Title:

COMMUNICATIONS SCADA/FACILITIES ELECTRICAL INTERFACES

	<u>A167 REFERENCE DRAWINGS</u>		
	<u>CONNECTION DIAGRAM</u>		<u>ELEMENTARY</u>
	<u>TERMINAL STRIP</u>	<u>DWG. NO.</u>	<u>DIAGRAM</u>
<u>DRAWING (TBD)</u>			
Figure:			
Emergency Vent Fans, EM-1L, EM-2L (EVF-1L, EVF-2L)*	TS-A, TS-B	E-235	E-045
Subway Vent Fan, SEM-1L SVF-1L)	TS-C	E-235	E-045
<u>DRAWING (TBD)</u>			
Emergency Vent Fan, Fan Dampers FD-1L, FD-2L	TS-A, TS-B	E-235	E-045
Subway Vent Fan, Fan Damper FD-3L	TS-C	E-235	E-045
<u>DRAWING (TBD)</u>			
Emergency Fan Bypass Dampers BD-1L, BD-2L	TS-A, TS-B	E-235	E-046
<u>DRAWING (TBD)</u>			
Emergency Vent Fan Auxiliary Circuits	TS-C	E-235	E-045
Subway Vent Fan Auxiliary Auxiliary Circuits	TS-C	E-235	E-045

*Ventilation equipment designations in parenthesis are Facilities mechanical dwg. designations that differ from Facilities electrical dwg. designations (typ.).

DRAWING UTILIZATION LIST

A640 Drawing Title:

COMMUNICATIONS SCADA/FACILITIES ELECTRICAL INTERFACES

<u>DRAWING (TBD)</u>	<u>A167 REFERENCE DRAWINGS</u>		
	<u>CONNECTION DIAGRAM</u>		<u>ELEMENTARY DIAGRAM</u>
	<u>TERMINAL STRIP</u>	<u>DWG. NO.</u>	
Emergency Fan Room Exhaust, EF-4L	TBD	TBD	E-232
Tail Track Mechanical Room Exhaust, EF-5L	TBD	TBD	E-232

INTERFACE DATA SHEET

CONTRACT No.: A640 Communications SUBSYSTEM: Cable Transmission SPEC. REFERENCE: TP 8.0 CTS TP 14 Interface	LOCATION: CIC #7L	INTERFACE No.: 640-167-00-08	REV: 0
		REFER TO INTERFACE DATA TABLE: 7th/Flower Station	

CONTRACT No.: A167 7th/Flower SUBSYSTEM: Facilities Electrical SPEC. REFERENCE: 16944	ATTACHMENTS: Interface Drawing Utilization List
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FUNCTIONAL DESCRIPTION:
 Interconnection Interface Point for all signals to and from SCADA and 7th/Flower Light Rail Station Facilities Electrical CIC #7L

TECHNICAL REQUIREMENTS:

PHYSICAL DESCRIPTION:
 Barrier type terminal strips and assorted interposing relays.

ORGANIZATION CONTACT:
 SCRTD Project Engineer

COMMENTS:

REFERENCES: A640 Contract Drawings - NS-007A Interposing Relay Interfaces
 A640 Reference Drawings - 7th/Flower Station Stage II Construction Contract A167 Drawings

REVISION:		PREPARED BY:		IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):
No.	DATE	INITIALS	DATE	

DRAWING UTILIZATION LIST

A640 Drawing Title:

COMMUNICATIONS SCADA/FACILITIES ELECTRICAL INTERFACES

	<u>A167 REFERENCE DRAWINGS</u>		
	<u>CONNECTION DIAGRAM</u>		<u>ELEMENTARY DIAGRAM</u>
	<u>TERMINAL STRIP</u>	<u>DWG. NO.</u>	
<u>DRAWING (TBD)</u>			
<u>Figure:</u>			
Emergency Vent Fan EM-3L (EVF-3)	TS-A	E-236	E-045
<u>DRAWING (TBD)</u>			
Emergency Vent Fan, Fan Damper FD-4L	TS-A	E-236	E-045
Emergency Fan Bypass Damper BD-3L	TS-A	E-236	E-046
<u>DRAWING (TBD)</u>			
Mechanical Room Exhaust EF-7L	TBD	TBD	E-232
<u>DRAWING (TBD)</u>			
Elevator Controls & Indica- tions ELV #5, #4 (EL-5L, 6L)	TBD	TBD	TBD
Escalator Controls & Indica- tions ESC #12, #13 (ES-12L, 13L)	TBD	TBD	TBD

INTERFACE DATA SHEET

<p>CONTRACT No.: A640 Communications</p> <p>SUBSYSTEM: Cable Transmission</p> <p>SPEC. REFERENCE: TP 8.0 CTS TP 14 Interface</p>	<p>LOCATION: TC/C CIR</p>	<p>INTERFACE No.: 640-620-00-04</p>	<p>REV: 0</p>	
		<p>REFER TO INTERFACE DATA TABLE: 7th/Flower Station</p>		
<p>CONTRACT No.: A620 Automatic Train Control Supervision</p> <p>SUBSYSTEM: Supervision</p> <p>SPEC. REFERENCE: TP 10.8</p>	<p>ATTACHMENTS: Interface Drawing Utilization List</p>			
<p>FUNCTIONAL DESCRIPTION: Interconnection Interface Point for all signals to and from SCADA and 7th/Flower Station Automatic Train Control, TC/C Communications Interface Rack</p>				
<p>TECHNICAL REQUIREMENTS:</p>				
<p>PHYSICAL DESCRIPTION: Barrier type terminal strips and assorted interposing relays.</p>				
<p>ORGANIZATION CONTACT: SCRTD Project Engineer</p>				
<p>COMMENTS:</p>				
<p>REFERENCES: A640 Contract Drawings NS-007A Interposing Relay Interfaces A640 Reference Drawings - 7th/Flower Station Stage II Construction Contract A165 Drawings A620 Drawings Q-053A, Q-054B, and Q-056B Typical Control Circuits</p>				
<p>REVISION:</p>		<p>PREPARED BY:</p>		<p>IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):</p>
No.	DATE	INITIALS	DATE	

A640 Drawing Title:

COMMUNICATIONS SCADA/AUTOMATIC TRAIN CONTROL INTERFACES

TERMINAL STRIPS
UTILIZED

DRAWING N-135

Figures:

Civic Center, 5th/Hill,
7th/Flower Stations

TBD

INTERFACE DATA SHEET

<p>CONTRACT No.: A640 Communications</p> <p>SUBSYSTEM: Power Subsystem</p> <p>SPEC. REFERENCE: TP 13 Power TP 14 Interfaces</p>	<p>LOCATION: TC&C Power Panels</p> <p>INTERFACE No.: 640-620-00-10</p> <p>REV: 0</p> <hr/> <p>REFER TO INTERFACE DATA TABLE: 7th/Flower Station</p>																								
<p>CONTRACT No.: A620 Automatic Train Control</p> <p>SUBSYSTEM: ATC Room</p> <p>SPEC. REFERENCE: TP 4 ATC Room TP 10 Interface</p>	<p>ATTACHMENTS: Attachment 1 Technical Requirements</p> <p>Attachment 2 Interface Reference Drawing List</p>																								
<p>FUNCTIONAL DESCRIPTION: Interconnection Interface Point between Communications equipment electric power requirements and Automatic Train Control power distribution equipment of the Train Control and Communications room.</p>																									
<p>TECHNICAL REQUIREMENTS: See Attachment 1</p>																									
<p>PHYSICAL DESCRIPTION: Termination of 120V/208V, 3-phase, 4-wire power and 120 VAC, single phase power, at A620 furnished power panelboards located in the TC&C room of 7th/Flower Station.</p>																									
<p>ORGANIZATION CONTACT:</p>																									
<p>COMMENTS: SCRTD Project Engineer</p>																									
<p>REFERENCES: See Attachment 2</p>																									
<p>REVISION:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 15%;">No.</th> <th style="width: 15%;">DATE</th> <th style="width: 20%;">INITIALS</th> <th style="width: 15%;">DATE</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>		No.	DATE	INITIALS	DATE													<p>PREPARED BY:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;">INITIALS</th> <th style="width: 50%;">DATE</th> </tr> </thead> <tbody> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </tbody> </table>	INITIALS	DATE					<p>IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):</p>
No.	DATE	INITIALS	DATE																						
INITIALS	DATE																								

ATTACHMENT 1

TECHNICAL REQUIREMENTS

1) Train Control Contractor A620

A620 Contractor shall furnish and install two power distribution panelboards in the TC&C room of 7th/Flower. Each panel shall have essential power bus terminations for one 120V/208V, 3-phase, 4-wire circuit for a 35A load and twelve 120VAC, single-phase circuits for 20A loads.

2) Communications Contractor A640

A640 Contractor shall furnish, install and terminate power cable between the power distribution panels and communications equipment of the station TC&C room.

ATTACHMENT 2

Interface Reference Drawing List

A620 Contract Drawings

Drawing Q-052 Power Distribution Schematic

INTERFACE DATA SHEET

<p>CONTRACT No.: A640 Communications</p> <p>SUBSYSTEM: Cable Transmission</p> <p>SPEC. REFERENCE: TP 8.0 CTS TP 14 Interface</p>	<p>LOCATION: CIC #1 TPSS</p> <p>INTERFACE No.: 640-631-00-07</p> <p>REV: 0</p> <hr/> <p>REFER TO INTERFACE DATA TABLE: 7th/Flower Station</p>			
<p>CONTRACT No.: A631 Traction Power Installation</p> <p>SUBSYSTEM: System Supervision</p> <p>SPEC. REFERENCE: *</p>	<p>ATTACHMENTS: Interface Drawing Utilization List</p>			
<p>FUNCTIONAL DESCRIPTION: Interconnection Interface Point for all signals to and from SCADA and 7th/Flower Station Traction Power, CIC #1 TPSS</p>				
<p>TECHNICAL REQUIREMENTS:</p>				
<p>PHYSICAL DESCRIPTION: Barrier type terminal strips and assorted interposing relays.</p>				
<p>ORGANIZATION CONTACT: SCRTD Project Engineer</p>				
<p>COMMENTS:</p>				
<p>REFERENCES: A640 Contract Drawings and A640 Reference Drawings. *A631 Drawing P-362 Communications Interface Cabinet Details</p>				
REVISION:	PREPARED BY:	IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):		
No.	DATE		INITIALS	DATE

A640 Drawing Title:

COMMUNICATIONS SCADA/TRACTION POWER INTERFACES

A631 REFERENCE DRAWINGS

INTERCONNECTION SCHEDULE

TERMINAL STRIP DRAWING NUMBER

DRAWING N-077

Figures:

Traction Power DC Switchgear Supervision	B, C, D	P-330A, P-331A, P-338A P-332A, P-321A
---------------------------------------------	---------	------------------------------------------

DRAWING N-076

Traction Power Type II AC Switchgear	A, B, D	P-330A, P-332A P-333A, P-339A
-----------------------------------------	---------	----------------------------------

DRAWING N-284

Disconnect Switches Metering and Control	C	P-333A
---------------------------------------------	---	--------

INTERFACE DATA SHEET

<p>CONTRACT No.: A640</p> <p>SUBSYSTEM: Public Address</p> <p>SPEC. REFERENCE: TP 6 & TP 14</p>	<p>LOCATION: 7th/Flower Station</p> <p>INTERFACE No.: 640-760-00-04</p> <p>REV: 0</p> <hr/> <p>REFER TO INTERFACE DATA TABLE: 7th/Flower Station</p>			
<p>CONTRACT No.: A760</p> <p>SUBSYSTEM: Signs & Graphics</p> <p>SPEC. REFERENCE:</p>	<p>ATTACHMENTS: Interface Drawing Utilization List</p>			
<p>FUNCTIONAL DESCRIPTION: Installation interface for speakers provided by Contract A640 into linear element provided by A760.</p>				
<p>TECHNICAL REQUIREMENTS: Speakers to be mounted on flange provided by A760 and shown on A760 Drawing P-604. Wires and speakers are provided by A640.</p>				
<p>PHYSICAL DESCRIPTION: Public address speakers are installed by A640 Contractor in platform linear element. This linear element is provided by Contract A760.</p>				
<p>ORGANIZATION CONTACT: SCRTD Project Engineer</p>				
<p>COMMENTS: Additional speaker boxes are installed in Contract A167.</p>				
<p>REFERENCES: A640 Contract Drawings (Section VII) A640 Reference Drawings (Section VIII)</p>				
REVISION:	PREPARED BY:	IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):		
No.	DATE		INITIALS	DATE

IDS-640-760-00-04
ATTACHMENT A
7TH/FLOWER STATION
PUBLIC ADDRESS
SPEAKERS IN LINEAR
ELEMENT

DRAWING UTILIZATION LIST

A640 Drawing Title:

COMMUNICATIONS PUBLIC ADDRESS/SIGN & GRAPHICS

DRAWING N-102

Figure 1:

Speakers Mounted in Linear Element

INTERFACE DATA SHEET

<p>CONTRACT No.: A640 Communications</p> <p>SUBSYSTEM: Cable Transmission</p> <p>SPEC. REFERENCE: TP 8.0 CTS TP 14 Interfaces</p>	<p>LOCATION: CIC #3 East</p>	<p>INTERFACE No.: 640-795-00-07</p>	<p>REV: 0</p>	
<p>REFER TO INTERFACE DATA TABLE: 7th/Flower Station</p>				
<p>CONTRACT No.: A795</p> <p>SUBSYSTEM: UPS Supervision</p> <p>SPEC. REFERENCE: A795 16610 Par. 2.7</p>	<p>ATTACHMENTS: Interface Drawing Utilization List</p>			
<p>FUNCTIONAL DESCRIPTION: Interconnection Interface Point for all signals to and from SCADA and 7th/Flower Station Uninterruptible Power Supply System</p>				
<p>TECHNICAL REQUIREMENTS:</p>				
<p>PHYSICAL DESCRIPTION: Barrier type terminal strips and assorted interposing relays.</p>				
<p>ORGANIZATION CONTACT: SCRTD Project Engineer</p>				
<p>COMMENTS:</p>				
<p>REFERENCES: A640 Contract Drawings - NS-007A Interposing Relay Interfaces A640 Reference Drawings - 7th/Flower Station Stage II Construction Contract A167 Drawings A795 Drawing ESK-003 UPS System Supervision</p>				
<p>REVISION:</p>		<p>PREPARED BY:</p>		<p>IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):</p>
No.	DATE	INITIALS	DATE	

DRAWING UTILIZATION LIST

A640 Drawing Title:

COMMUNICATIONS SCADA/UPS INTERFACE

REFERENCE DRAWINGS

CONNECTION DIAGRAM

TERMINAL STRIP DRAWING NUMBER

DRAWING 048

Figure:

UPS Supervision

TS-F

A167, E-067

INTERFACE DATA SHEET

CONTRACT No.: A640 Communications SUBSYSTEM: Cable Transmission SPEC. REFERENCE: TP 8.0 CTS TP 14 Interfaces	LOCATION: CIC #2 West	INTERFACE No.: 640-795-00-08	REV: 0	
REFER TO INTERFACE DATA TABLE: 7th/Flower Station				
CONTRACT No.: A795 SUBSYSTEM: UPS Supervision SPEC. REFERENCE: A795 16610 Par. 2.7	ATTACHMENTS: Interface Drawing Utilization List			
FUNCTIONAL DESCRIPTION: Interconnection Interface Point for all signals to and from SCADA and 7th/Flower Station Uninterruptible Power Supply System				
TECHNICAL REQUIREMENTS:				
PHYSICAL DESCRIPTION: Barrier type terminal strips and assorted interposing relays.				
ORGANIZATION CONTACT: SCRTD Project Engineer				
COMMENTS:				
REFERENCES: A640 Contract Drawings - NS-007A Interposing Relay Interfaces A640 Reference Drawings - 7th/Flower Station Stage II Construction Contract A167 Drawings A795 Drawing ESK-003, UPS System Supervision				
REVISION:		PREPARED BY:		IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):
No.	DATE	INITIALS	DATE	

DRAWING UTILIZATION LIST

A640 Drawing Title:

COMMUNICATIONS SCADA/UPS INTERFACE

REFERENCE DRAWINGS

CONNECTION DIAGRAM

TERMINAL STRIP DRAWING NUMBER

DRAWING N-048

Figure:

UPS Supervision

TS-F

A167, E-068

INTERFACE DATA SHEET

CONTRACT No.: A640 Communications SUBSYSTEM: Cable Transmission SPEC. REFERENCE: TP 8 CTS TP 14 Interfaces	LOCATION: CIC #3 East	INTERFACE No.: 640-840-00-07	REV: 0
		REFER TO INTERFACE DATA TABLE: 7th/Flower Station	

CONTRACT No.: H840 SUBSYSTEM: Fare Collection Supervision SPEC. REFERENCE:	ATTACHMENTS: Interface Drawing Utilization List
-------------------------------------------------------------------------------------	----------------------------------------------------

FUNCTIONAL DESCRIPTION:
 Interconnection Interface Point for all signals to and from SCADA and 7th/Flower Station Fare Collection, CIC #3 East

TECHNICAL REQUIREMENTS:

PHYSICAL DESCRIPTION:
 Barrier type terminal strips and assorted interposing relay

ORGANIZATION CONTACT:
 SCRTD Project Engineer

COMMENTS:

REFERENCES:
 A640 Contract Drawing & A640 Reference Drawings

REVISION:		PREPARED BY:		IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):
No.	DATE	INITIALS	DATE	

IDS-640-840-00-07
ATTACHMENT A
7th/FLOWER STATION
CIC #3
Auxiliary Power Room East

DRAWING UTILIZATION LIST

A640 Drawing Title:

COMMUNICATIONS SCADA/FARE COLLECTION INTERFACES

REFERENCE DRAWINGS

CONNECTION DIAGRAM

TERMINAL STRIP DRAWING NUMBER

DRAWING N-047

Figure:

Fare Collection Supervision	TBD	A167, E-067
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INTERFACE DATA SHEET

<p>CONTRACT No.: A640 Communications</p> <p>SUBSYSTEM: Cable Transmission</p> <p>SPEC. REFERENCE: TP 8 CTS TP 14 Interfaces</p>	<p>LOCATION: CIC #2 West</p>	<p>INTERFACE No.: 640-840-00-08</p>	<p>REV: 0</p>	
<p>REFER TO INTERFACE DATA TABLE: 7th/Flower Station</p>				
<p>CONTRACT No.: H840</p> <p>SUBSYSTEM: Fare Collection Supervision</p> <p>SPEC. REFERENCE:</p>	<p>ATTACHMENTS: Interface Drawing Utilization List</p>			
<p>FUNCTIONAL DESCRIPTION: Interconnection Interface Point for all signals to and from SCADA and 7th/Flower Station Fare Collection, CIC #2 West</p>				
<p>TECHNICAL REQUIREMENTS:</p>				
<p>PHYSICAL DESCRIPTION: Barrier type terminal strips and assorted interposing relay</p>				
<p>ORGANIZATION CONTACT: SCRTD Project Engineer</p>				
<p>COMMENTS:</p>				
<p>REFERENCES: A640 Contract Drawing & A640 Reference Drawings</p>				
<p>REVISION:</p>		<p>PREPARED BY:</p>		<p>IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):</p>
No.	DATE	INITIALS	DATE	

IDS-640-840-00-08
ATTACHMENT A
7th/FLOWER STATION
CIC #2
Auxiliary Power Room West

DRAWING UTILIZATION LIST

A640 Drawing Title:

COMMUNICATIONS SCADA/FARE COLLECTION INTERFACES

REFERENCE DRAWINGS

CONNECTION DIAGRAM

TERMINAL STRIP

DRAWING NUMBER

DRAWING N-047

Figure:

Fare Collection Supervision

TBD

A167, E-068

INTERFACE DATA SHEET

<p>CONTRACT No.: A640 Communications</p> <p>SUBSYSTEM: Cable Transmission</p> <p>SPEC. REFERENCE: TP 8.0 CTS TP 14 Interfaces</p>	<p>LOCATION: Cross Passage</p> <p>INTERFACE No.: 640-171-00-1</p> <p>REV: 0</p> <hr/> <p>REFER TO INTERFACE DATA TABLE: Wilshire/ Alvarado Line Section</p>			
<p>CONTRACT No.: A171 Line Section</p> <p>SUBSYSTEM: Facilities Electrical</p> <p>SPEC. REFERENCE: 16944</p>	<p>ATTACHMENTS:</p> <p>Attachment 1 Technical Requirements</p> <p>Attachment 2 Interface Drawing Utilization List</p>			
<p>FUNCTIONAL DESCRIPTION:</p> <p>Interconnection Interface Point for all signals to and from SCADA and Wilshire/ Alvarado Line section Communications Interface Cabinets.</p>				
<p>TECHNICAL REQUIREMENTS:</p> <p>See Attachment 1</p>				
<p>PHYSICAL DESCRIPTION:</p> <p>Barrier type terminal strips and assorted interposing relays housed in two cross passage Communication Interface Cabinets</p>				
<p>ORGANIZATION CONTACT:</p> <p>SCRTD Project Engineer</p>				
<p>COMMENTS:</p>				
<p>REFERENCES:</p> <p>See Attachment 2</p>				
REVISION:	PREPARED BY:	IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):		
No.	DATE		INITIALS	DATE

ATTACHMENT 1

1) Communications Contractor A640

- a) A640 Contractor shall furnish two communications interface cabinets, one assigned to SCADA inputs from each tunnel. Control and indication leads from cross passage ventilation and sump equipment shall be connected to CIC terminals.
- b) When a cross passage contains a fire main valve manifold, the A640 Contractor shall furnish and install cables and conduit from the valves to the CIC and terminate the valve supervision leads at the valve position switch terminals and at the CIC terminals.

2) Electrical Contractor A171

The A171 Contractor shall furnish cables and conduits from the ventilation and sump equipment to the CICs.

ATTACHMENT 2

A640 Contract Drawing
Interface Drawing Utilization List

Drawing N-084 Communications
 SCADA/Facilities Electrical Interfaces

INTERFACE DATA SHEET

CONTRACT No.: A640 Communications SUBSYSTEM: Cable Transmission SPEC. REFERENCE: TP 8 CTS TP 14 Interface	LOCATION: CIC #2 East	INTERFACE No.: 640-187-00-01	REV: 0
REFER TO INTERFACE DATA TABLE:		Wilshire/ Alvarado Station	
CONTRACT No.: A187 Wilshire/Alvarado SUBSYSTEM: Facilities Electrical SPEC. REFERENCE: 16944	ATTACHMENTS: Interface Drawing Utilization List		
FUNCTIONAL DESCRIPTION: Interconnection Interface Point for all signals to and from SCADA and Wilshire/ Alvarado Station Facilities Electrical, CIC #2 East			
TECHNICAL REQUIREMENTS:			
PHYSICAL DESCRIPTION: Barrier type terminal strips and assorted interposing relays.			
ORGANIZATION CONTACT: SCRTD Project Engineer			
COMMENTS:			
REFERENCES: A640 Contract Drawings - NS-007A Interposing Relay Interfaces A640 Reference Drawings - Wilshire/Alvarado Station Stage II Construction Contract A187 Drawings			
REVISION:		PREPARED BY:	
No.	DATE	INITIALS	DATE
IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):			

DRAWING UTILIZATION LIST

A640 Drawing Title:

COMMUNICATIONS SCADA/FACILITIES ELECTRICAL INTERFACES

	<u>A187 REFERENCE DRAWINGS</u>		
	<u>CONNECTION DIAGRAM</u>		<u>ELEMENTARY</u>
	<u>TERMINAL STRIP</u>	<u>DWG. NO.</u>	<u>DIAGRAM</u>
<u>DRAWING N-039</u>			
Station Ventilation System AHU-051, AHU-052,	TS-A, TS-D	E-121	E-022
Underplatform Exhaust Fans, UF-051	TS-A	E-121	E-024
<u>DRAWING N-041</u>			
Traction Power Room Supply Fans SSF-051, SSF-052	TBD	TBD	E-021
Traction Power Room Supply Fan Alarms	TBD	TBD	E-021
480V Main Breakers in Aux. Room (two)	TS-F	E-121	E-111
<u>DRAWING N-042</u>			
Smoke & Heat Exhaust Fan, SE-1E	TS-C	E-121	E-023
TC/C Room Air Conditioning AHU-1	TS-B	E-121	E-026
<u>DRAWING N-044</u>			
Auxiliary Power Room Supply & Exhaust Fans SF-1E, EF-2E	TS-B	E-121	E-019, E-020
Auxiliary Power Battery Room Supply & Exhaust Fans SF-3E, EF-3E	TS-A	E-121	E-018



DRAWING UTILIZATION LIST

A640 Drawing Title:

COMMUNICATIONS SCADA/FACILITIES ELECTRICAL INTERFACES

	<u>A187 REFERENCE DRAWINGS</u>		
	<u>CONNECTION DIAGRAM</u>		<u>ELEMENTARY DIAGRAM</u>
	<u>TERMINAL STRIP</u>	<u>DWG. NO.</u>	
<u>DRAWING N-045</u>			
TC/C Room Exhaust Fans, EF-16E, EF-19E, MD-5, MD-17	TS-A, TS-B	E-121	E-026
TC/C Battery Room Supply & Exhaust Fans, SF-10E, EF-10E	TS-D, TS-F	E-121	E-018
<u>DRAWING N-085</u>			
Valve Room Exhaust Fan EF-12E	TS-D	E-121	E-018
<u>DRAWING N-086</u>			
Chiller Room Supply & Exhaust Fans, SF-6E, EF-6E	TS-C, TS-D	E-121	E-019, E-020
<u>DRAWING (TBD)</u>			
Ancillary Room Supply & Exhaust Fans SF-10E & SF-10E, SF-15E & EF-15E	TS-C, TS-D, TS-F	E-121	E-019, E-020
Gas Mitigation Supply & Exhaust Fans SF-5E, EF-5E	TS-B, TS-C	E-121	E-018
<u>DRAWING (TBD)</u>			
Air Supply Room Supply & Exhaust Fans SF-4E, EF-4E	TS-D, TS-E	E-121	E-019, E-020
<u>DRAWING (TBD)</u>			
Incoming Elec. Service Room Supply & Exhaust Fans, SF-11E, EF-11E	TS-F	E-121	E-019, E-020
Incoming Elec. Service Batt. Room Exhaust Fans, EF-18E 1 & 2	TS-D	E-121	E-018

INTERFACE DATA SHEET

CONTRACT No.: A640 Communications SUBSYSTEM: Cable Transmission SPEC. REFERENCE: TP 8 CTS TP 14 Interface	LOCATION: INTERFACE No.: REV: CIC #2 West 640-187-00-02 0		
CONTRACT No.: A187 Wilshire/Alvarado SUBSYSTEM: Facilities Electrical SPEC. REFERENCE: 16944	REFER TO INTERFACE DATA TABLE: Wilshire/ Alvarado Station ATTACHMENTS: Interface Drawing Utilization List		
FUNCTIONAL DESCRIPTION: Interconnection Interface Point for all signals to and from SCADA and Wilshire/ Alvarado Station Facilities Electrical, CIC #2 West			
TECHNICAL REQUIREMENTS:			
PHYSICAL DESCRIPTION: Barrier type terminal strips and assorted interposing relays.			
ORGANIZATION CONTACT: SCRTD Project Engineer			
COMMENTS:			
REFERENCES: A640 Contract Drawings - NS-007A Interposing Relay Interfaces A640 Reference Drawings - Wilshire/Alvarado Station Stage II Construction Contract A187 Drawings			
REVISION:	PREPARED BY:	IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):	
No.	DATE	INITIALS	DATE

DRAWING UTILIZATION LIST

A640 Drawing Title:

COMMUNICATIONS SCADA/FACILITIES ELECTRICAL INTERFACES

A187 REFERENCE DRAWINGS

	<u>CONNECTION DIAGRAM</u>		<u>ELEMENTARY DIAGRAM</u>
	<u>TERMINAL STRIP</u>	<u>DWG. NO.</u>	
<u>DRAWING N-036</u>			
<u>Figures:</u>			
Emergency Fan Track Dampers TD-101, TD-102	TS-B, TS-D	E-122	E-028
Emergency Fan, Fan Dampers ED-101, ED-102	TS-B, TS-D	E-122	E-027
<u>DRAWING N-037</u>			
Emergency Fan #1 & #2 Auxiliary Circuits	TS-E	E-122	E-027
Emergency Fans #1 & #2 EM-101, EM-102 (EF-101, EF-102)*	TS-C, TS-E	E-122	E-027
<u>DRAWING N-038</u>			
Emergency Fan Bypass Dampers BD-101, BD-102	TS-B, TS-D	E-122	E-028
<u>DRAWING N-039</u>			
Station Ventilation System AHU-053, AHU-054	TS-A, TS-C	E-122	E-022
Underplatform Exhaust Fan, UF-52	TS-A	E-122	E-025
<u>DRAWING N-040</u>			
Duplex Sump Pumps P-1W, P-2W (WP-1, WP-2)	TS-A	E-122	E-024

*Ventilation equipment designations in parenthesis are Facilities mechanical dwg. designations that differ from Facilities electrical dwg. designations (typ.).

DRAWING UTILIZATION LIST

	<u>A187 REFERENCE DRAWINGS</u>			
		<u>CONNECTION DIAGRAM</u> <u>TERMINAL STRIP</u>	<u>DWG. NO.</u>	<u>ELEMENTARY</u> <u>DIAGRAM</u>
<u>DRAWING N-041</u>				
480V Main Breakers in Auxiliary Power Room (two)	TS-F	E-122	E-111	
<u>DRAWING N-042</u>				
Smoke & Heat Exhaust Fan, SE-1W	TS-C	E-122	E-023	
<u>DRAWING N-043</u>				
Elevator Controls & Indica- tions EL-2W (ELV #2)	TS-B	E-122	TBD	
Escalator Controls & Indica- tions ES-1W, ES-4W (ESC #1 & 4)	TS-E	E-122	TBD	
<u>DRAWING N-044</u>				
Auxiliary Power Room Supply Fan & Exhaust Fans SF-1W, EF-2W	TS-B, TS-E	E-122	E-019, E-020	
Auxiliary Power Battery Room Supply & Exhaust Fans SF-3W, EF-3W	TS-A, TS-F	E-122	E-018	
<u>DRAWING N-085</u>				
Elevator Equipment Room Exhaust Fan EF-7W	TS-D	E-122	E-020	
Elevator Shaft Exhaust Fan, EF-14W	TS-E	E-122	E-018	
Trash Room Exhaust Fan, EF-13W	TS-C	E-122	E-018	
<u>DRAWING (TBD)</u>				
Gas Mitigation Supply & Exhaust Fans, SF-17W, EF-17W	TS-D	E-122	E-018	

IDS-640-187-00-02
ATTACHMENT A
WILSHIRE/ALVARADO
STATION
CIC #3
Auxiliary Power Room
West

DRAWING UTILIZATION LIST

A187 REFERENCE DRAWINGS

<u>DRAWING (TBD)</u>	<u>CONNECTION DIAGRAM</u>		<u>ELEMENTARY DIAGRAM</u>
	<u>TERMINAL STRIP</u>	<u>DWG. NO.</u>	
Air Supply Room Supply & Exhaust Fans, SF-4W, EF-4W	TS-F	E-122	E-019, E-020

INTERFACE DATA SHEET

<p>CONTRACT No.: A640</p> <p>SUBSYSTEM: Public Address</p> <p>SPEC. REFERENCE: TP 6 & TP 14</p>	<p>LOCATION: INTERFACE No.: REV: Wilshire/Alvarado Sta. 640-187-00-03 0</p> <hr/> <p>REFER TO INTERFACE DATA TABLE: Wilshire/ Alvarado Station</p>			
<p>CONTRACT No.: A187</p> <p>SUBSYSTEM: Wilshire Alvarado Facilities Electrical</p> <p>SPEC. REFERENCE: 16050 Part 3</p>	<p>ATTACHMENTS: Interface Drawing Utilization List</p>			
<p>FUNCTIONAL DESCRIPTION: Installation interface for speakers provided by A640 into back box provided by A187.</p>				
<p>TECHNICAL REQUIREMENTS: Speaker back boxes to be installed as shown on Contract Drawing NS-005 of Contract A187, Sheet 227.</p>				
<p>PHYSICAL DESCRIPTION: 1" conduits to and from four (4") square junction boxes and/or 9-5/8" x 9-5/8" x 6" back boxes. Wires, speakers, baffles, and mounting hardware for same.</p>				
<p>ORGANIZATION CONTACT: SCRTD Project Engineer</p>				
<p>COMMENTS: Additional speaker housings are installed in Contract A760.</p>				
<p>REFERENCES: A640 Contract Drawings (Section VII) A640 Reference Drawings (Section VIII)</p>				
REVISION:	PREPARED BY:	IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):		
No.	DATE		INITIALS	DATE

IDS-640-187-00-03
ATTACHMENT A
WILSHIRE/ALVARADO STATION
ALL PUBLIC ADDRESS
SPEAKERS EXCEPT
THOSE IN LINEAR
ELEMENT

DRAWING UTILIZATION LIST

A640 Drawing Title:

COMMUNICATIONS PUBLIC ADDRESS/STAGE II CONTRACT INTERFACE

DRAWING N-101

Figure 1:

Embedded Ceiling Mount

INTERFACE DATA SHEET

<p>CONTRACT No.: A640 Communication</p> <p>SUBSYSTEM: Closed Circuit T.V.</p> <p>SPEC. REFERENCE: TP 7 & TP 14</p>	<p>LOCATION: INTERFACE No.: REV:</p> <p style="padding-left: 40px;">Wilshire/Alvarado Sta. 640-187-00-04 0</p> <hr/> <p>REFER TO INTERFACE DATA TABLE: Wilshire/ Alvarado Station</p>			
<p>CONTRACT No.: A187</p> <p style="padding-left: 40px;">Wilshire Alvarado</p> <p>SUBSYSTEM: Facilities Electrical</p> <p>SPEC. REFERENCE: 16060 Part 3</p>	<p>ATTACHMENTS:</p> <p style="padding-left: 40px;">Interface Drawing Utilization List</p>			
<p>FUNCTIONAL DESCRIPTION:</p> <p>Installation interface for CCTV cameras and cables provided by Contract A640 into conduits and boxes provided by A187</p>				
<p>TECHNICAL REQUIREMENTS:</p> <p>Boxes shall be capable of supporting the weight of the camera.</p>				
<p>PHYSICAL DESCRIPTION:</p> <p>1" conduits to and from 4" square junction boxes.</p>				
<p>ORGANIZATION CONTACT:</p> <p>SCRTD Project Engineer</p>				
<p>COMMENTS:</p>				
<p>REFERENCES:</p> <p>A640 Contract Drawings (Section VII)</p> <p>A640 Reference Drawings (Section VIII)</p>				
REVISION:	PREPARED BY:	IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):		
No.	DATE		INITIALS	DATE

DRAWING UTILIZATION LIST

A640 Drawing Title:

COMMUNICATIONS CCTV/STAGE II STATION CONTRACT INTERFACE

DRAWING N-100

Figures:

Ceiling Mount for CCTV Camera

Wall Mount for CCTV Camera

INTERFACE DATA SHEET

CONTRACT No.: A640 Communications SUBSYSTEM: Cable Transmission SPEC. REFERENCE: TP 8 CTS TP 14 Interface	LOCATION: CIC #4 West	INTERFACE No.: 640-187-00-05	REV: 0	
REFER TO INTERFACE DATA TABLE:		Wilshire/ Alvarado Station		
CONTRACT No.: A187 SUBSYSTEM: Wilshire/Alvarado Facilities Electrical SPEC. REFERENCE: 16944	ATTACHMENTS: Interface Drawing Utilization List			
FUNCTIONAL DESCRIPTION: Interconnection Interface Point for all signals to and from SCADA and Wilshire/ Alvarado Station Facilities Electrical, CIC #4 West				
TECHNICAL REQUIREMENTS:				
PHYSICAL DESCRIPTION: Barrier type terminal strips and assorted interposing relays.				
ORGANIZATION CONTACT: SCRTD Project Engineer				
COMMENTS:				
REFERENCES: A640 Contract Drawings - NS-007A Interposing Relay Interfaces A640 Reference Drawings - Wilshire/Alvarado Station Stage II Construction Contract A187 Drawings				
REVISION:		PREPARED BY:		IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):
No.	DATE	INITIALS	DATE	

DRAWING UTILIZATION LIST

A640 Drawing Title:

COMMUNICATIONS SCADA/FACILITIES ELECTRICAL INTERFACES

	<u>A187 REFERENCE DRAWINGS</u>		
	<u>CONNECTION DIAGRAM</u> <u>TERMINAL STRIP</u>	<u>DWG. NO.</u>	<u>ELEMENTARY</u> <u>DIAGRAM</u>
<u>DRAWING N-040</u>			
Roll-up Doors at Station Entrance D-1W, D-2W	TS-B	E-123	E-113
<u>DRAWING N-043</u>			
Elevator Controls & Indica- tions EL-1W (ELV #1)*	TS-A	E-123	TBD
Escalator Controls & Indica- tions ES-1E, ES-2E, ES-2W, ES-3W (ESC #2, 3, 5, 6)	TS-A	E-123	TBD

*Ventilation equipment designations in parenthesis are Facilities mechanical dwg. designations that differ from Facilities electrical dwg. designations (typ.).

INTERFACE DATA SHEET

<p>CONTRACT No.: A640 Communications</p> <p>SUBSYSTEM: Cable Transmission</p> <p>SPEC. REFERENCE: TP 8 CTS TP 14 Interface</p>	<p>LOCATION: CIC #5 East</p>	<p>INTERFACE No.: 640-187-00-06</p>	<p>REV: 0</p>	
<p>REFER TO INTERFACE DATA TABLE: Wilshire/ Alvarado Station</p>				
<p>CONTRACT No.: A187 Wilshire/Alvarado</p> <p>SUBSYSTEM: Facilities Electrical</p> <p>SPEC. REFERENCE: 16944</p>	<p>ATTACHMENTS: Interface Drawing Utilization List</p>			
<p>FUNCTIONAL DESCRIPTION: Interconnection Interface Point for all signals to and from SCADA and Wilshire/ Alvarado Station Facilities Electrical, CIC #5 East</p>				
<p>TECHNICAL REQUIREMENTS:</p>				
<p>PHYSICAL DESCRIPTION: Barrier type terminal strips and assorted interposing relays.</p>				
<p>ORGANIZATION CONTACT: SCRTD Project Engineer</p>				
<p>COMMENTS:</p>				
<p>REFERENCES: A640 Contract Drawings - NS-007A Interposing Relay Interfaces A640 Reference Drawings - Wilshire/Alvarado Station Stage II Construction Contract A187 Drawings</p>				
<p>REVISION:</p>		<p>PREPARED BY:</p>		<p>IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):</p>
No.	DATE	INITIALS	DATE	

DRAWING UTILIZATION LIST

A640 Drawing Title:

COMMUNICATIONS SCADA/FACILITIES ELECTRICAL INTERFACES

	<u>A187 REFERENCE DRAWINGS</u>		<u>ELEMENTARY DIAGRAM</u>
	<u>CONNECTION DIAGRAM TERMINAL STRIP</u>	<u>DWG. NO.</u>	
<u>DRAWING N-040</u>			
Emergency Fan Track Dampers TD-091, TD-092	TS-A, TS-B	E-124	E-028
Emergency Fan, Fan Dampers ED-091, ED-092, ED-093	TS-A, TS-B, TS-C	E-124	E-027
<u>DRAWING N-037</u>			
Emergency Fan #1 & E2 Auxiliary Circuits	TS-C	E-124	E-027
Emergency Fans #1 & #2 & #3 EF-091, EF-092, EF-093	TS-A, TS-B, TS-C	E-124	E-027
<u>DRAWING N-038</u>			
Emergency Fan #3 Auxiliary Circuits	TS-C	E-124	E-028
Emergency Fan Bypass Dampers BD-091, BD-092	TS-A, TS-B	E-124	E-028

INTERFACE DATA SHEET

CONTRACT No.: A640 Communication SUBSYSTEM: Cable Transmission SPEC. REFERENCE: TP 8.0 CTS TP 14 Interfaces	LOCATION: TC&C CIR	INTERFACE No.: 640-620-00-05	REV: 0
REFER TO INTERFACE DATA TABLE:		Wilshire/ Alvarado Station	
CONTRACT No.: A620 SUBSYSTEM: Automatic Train Control Supervision SPEC. REFERENCE: TP 10.8	ATTACHMENTS: Interface Drawing Utilization List		
FUNCTIONAL DESCRIPTION: Installation Interface Point for all signals to and from SCADA and Wilshire/Alvarado Station Automatic Train Control, TC/C Communications Interface Rack			
TECHNICAL REQUIREMENTS:			
PHYSICAL DESCRIPTION: Barrier type terminal strips and assorted interposing relays.			
ORGANIZATION CONTACT: SCR TD Project Engineer			
COMMENTS:			
REFERENCES: A640 Reference Drawings NS-007A Interposing Relay Interfaces A640 Reference Drawings - Wilshire/Alvarado Station Stage II Construction Contract A187 Drawings A620 Drawings Q-053A, Q-054B, and Q-056B Typical Control Circuits			
REVISION:		PREPARED BY:	
		IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):	
No.	DATE	INITIALS	DATE

DRAWING UTILIZATION LIST

A640 Drawing Title:

COMMUNICATIONS SCADA/AUTOMATIC TRAIN CONTROL INTERFACES

	<u>TERMINAL STRIPS UTILIZED</u>
<u>DRAWING N-136</u>	
<u>Figure:</u>	
Wilshire/Alvarado Station	TBD
<u>DRAWING N-137</u>	
Wilshire/Alvarado Station	TBD

INTERFACE DATA SHEET

<p>CONTRACT No.: A640 Communications</p> <p>SUBSYSTEM: Power Subsystem</p> <p>SPEC. REFERENCE: TP 13 Power TP 14 Interfaces</p>	<p>LOCATION: TC&C Power</p>	<p>INTERFACE No.: 640-620-00-11</p>	<p>REV: 0</p>	
<p>REFER TO INTERFACE DATA TABLE: Wilshire/ Alvarado Station</p>				
<p>CONTRACT No.: A620 Automatic Train Control</p> <p>SUBSYSTEM: ATC Room</p> <p>SPEC. REFERENCE: TP 4 ATC Room TP 10 Interface</p>	<p>ATTACHMENTS: Attachment 1 Technical Requirements</p> <p>Attachment 2 Interface Reference Drawing List</p>			
<p>FUNCTIONAL DESCRIPTION: Interconnection Interface Point between Communications equipment electric power requirements and Automatic Train Control power distribution equipment of the Train Control and Communications room.</p>				
<p>TECHNICAL REQUIREMENTS: See Attachment 1</p>				
<p>PHYSICAL DESCRIPTION: Termination of 120V/208V, 3-phase, 4-wire power and 120 VAC, single phase power, at A620 furnished power panelboards located in the TC&C room of Wilshire/Alvarado Station</p>				
<p>ORGANIZATION CONTACT:</p>				
<p>COMMENTS: SCRTD Project Engineer</p>				
<p>REFERENCES: See Attachment 2</p>				
<p>REVISION:</p>		<p>PREPARED BY:</p>		<p>IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):</p>
No.	DATE	INITIALS	DATE	

ATTACHMENTS

WILSHIRE/ALVARADO STATION
TC&C Power Panels

ATTACHMENT 1

TECHNICAL REQUIREMENTS

1) Train Control Contractor A620

A620 Contractor shall furnish and install two power distribution panelboards in the TC&C room of Wilshire/Alvarado Station. Each panel shall have essential power bus terminations for one 120V/208V, 3-phase, 4-wire circuit for a 35A load and twelve 120VAC, single-phase circuits for 20A loads.

2) Communications Contractor A640

A640 Contractor shall furnish, install and terminate power cables between the power distribution panels and communications equipment of the station TC&C room.

ATTACHMENT 2

Interface Reference Drawing List

A620 Contract Drawings

Drawing Q-052 Power Distribution Schematic

INTERFACE DATA SHEET

<p>CONTRACT No.: A640 Communications</p> <p>SUBSYSTEM: Cable Transmission</p> <p>SPEC. REFERENCE: TP 8.0 CTS TP 14 Interface</p>	<p>LOCATION: CIC #1 TPSS</p>	<p>INTERFACE No.: 640-631-00-08</p>	<p>REV: 0</p>	
<p>CONTRACT No.: A631 Traction Power Installation</p> <p>SUBSYSTEM: System Supervision</p> <p>SPEC. REFERENCE: *</p>		<p>REFER TO INTERFACE DATA TABLE: Wilshire/ Alvarado Station</p> <p>ATTACHMENTS: Interface Drawing Utilization List</p>		
<p>FUNCTIONAL DESCRIPTION: Interconnection Interface Point for all signals to and from SCADA and Wilshire/ Alvarado Station Traction Power, CIC #1 TPSS</p>				
<p>TECHNICAL REQUIREMENTS:</p>				
<p>PHYSICAL DESCRIPTION: Barrier type terminal strips and assorted interposing relays.</p>				
<p>ORGANIZATION CONTACT: SCRTD Project Engineer</p>				
<p>COMMENTS:</p>				
<p>REFERENCES: A640 Contract Drawings and A640 Reference Drawings. *A631 Drawing P-362 Communications Interface Cabinet Details</p>				
<p>REVISION:</p>		<p>PREPARED BY:</p>		<p>IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):</p>
No.	DATE	INITIALS	DATE	

A640 Drawing Title:

COMMUNICATIONS SCADA/TRACTION POWER INTERFACES

A631 REFERENCE DRAWINGS

INTERCONNECTION SCHEDULE

TERMINAL STRIP DRAWING NUMBER

DRAWING N-076

Figures:

Traction Power Type II AC Switchgear	A, B	P-347A, P-349A P-350A
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DRAWING N-077

Traction Power DC Switchgear	B, C	P-347A, P-348A P-349A
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DRAWING N-284

Disconnect Switches Metering and Control	C	P-350A
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INTERFACE DATA SHEET

<p>CONTRACT No.: A640 Communications</p> <p>SUBSYSTEM: Cable Transmission</p> <p>SPEC. REFERENCE: TP 8.0 CTS TP 14 Interface</p>	<p>LOCATION: CIC #5</p>	<p>INTERFACE No.: 640-631-00-09</p>	<p>REV: 0</p>	
		<p>REFER TO INTERFACE DATA TABLE: Wilshire/ Alvarado Station</p>		
<p>CONTRACT No.: A631 Traction Power Installation</p> <p>SUBSYSTEM: System Supervision</p> <p>SPEC. REFERENCE: *</p>	<p>ATTACHMENTS: Interface Drawing utilization List</p>			
<p>FUNCTIONAL DESCRIPTION: Interconnection Interface Point for all signals to and from SCADA and Wilshire/ Alvarado Traction Power, CIC #5</p>				
<p>TECHNICAL REQUIREMENTS:</p>				
<p>PHYSICAL DESCRIPTION: Barrier type terminal strips and assorted interposing relays.</p>				
<p>ORGANIZATION CONTACT: SCRTD Project Engineer</p>				
<p>COMMENTS:</p>				
<p>REFERENCES: A640 Contract Drawings and A640 Reference Drawings. *A631 Drawing P-362 Communications Interface Cabinet Details</p>				
<p>REVISION:</p>		<p>PREPARED BY:</p>		<p>IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):</p>
No.	DATE	INITIALS	DATE	

A640 Drawing Title:

COMMUNICATIONS SCADA/TRACTION POWER INTERFACES

A631 REFERENCE DRAWINGS

INTERCONNECTION SCHEDULE

TERMINAL STRIP DRAWING NUMBER

DRAWING N-284

Figures:

Disconnect Switches Metering
and Control

C, D

P-350A, P-351B

INTERFACE DATA SHEET

<p>CONTRACT No.: A640 Communications</p> <p>SUBSYSTEM: Public Address</p> <p>SPEC. REFERENCE: TP 6 & TP 14</p>	<p>LOCATION: Wilshire/Alvarado Station</p> <p>INTERFACE No.: 640-760-00-05</p> <p>REV: 0</p> <hr/> <p>REFER TO INTERFACE DATA TABLE: Wilshire/Alvarado Station</p>			
<p>CONTRACT No.: A760</p> <p>SUBSYSTEM: Signs & Graphics</p> <p>SPEC. REFERENCE:</p>	<p>ATTACHMENTS: Interface Drawing Utilization List</p>			
<p>FUNCTIONAL DESCRIPTION:</p> <p>Installation interface for speakers provided by A640 into linear element provided by A760</p>				
<p>TECHNICAL REQUIREMENTS:</p> <p>Speakers to be mounted on flange provided by A760 and shown on A760 Drawing P-604. Wires and speakers are provided by A640.</p>				
<p>PHYSICAL DESCRIPTION:</p> <p>Public address speakers are installed by A640 Contractor in platform linear element. This linear element is provided by Contract A760.</p>				
<p>ORGANIZATION CONTACT:</p> <p>SCRTD Project Engineer</p>				
<p>COMMENTS:</p> <p>Additional speaker boxes are installed in Contract A187.</p>				
<p>REFERENCES:</p> <p>A640 Contract Drawing (Section VII) A640 Reference Drawings (Section VIII)</p>				
<p>REVISION:</p>		<p>IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):</p>		
No.	DATE		INITIALS	DATE

IDS-640-760-00-05
ATTACHMENT A
WILSHIRE/ALVARADO STATION
PUBLIC ADDRESS
SPEAKERS IN LINEAR ELEMENT

DRAWING UTILIZATION LIST

A640 Drawing Title:

COMMUNICATIONS PUBLIC ADDRESS/SIGNS & GRAPHICS

DRAWING N-102

Figure:

Speakers Mounted in Linear Element

INTERFACE DATA SHEET

CONTRACT No.: A640 Communications SUBSYSTEM: Cable Transmission SPEC. REFERENCE: TP 8 CTS TP 14 Interfaces	LOCATION: INTERFACE No.: REV: CIC #2 East 640-795-00-09 0			
SPEC. REFERENCE: TP 8 CTS TP 14 Interfaces	REFER TO INTERFACE DATA TABLE: Wilshire/ Alvarado Station			
CONTRACT No.: A795 UPS SUBSYSTEM: UPS Supervision SPEC. REFERENCE: A795 16610 Par. 2.7	ATTACHMENTS: Interface Drawing Utilization List			
FUNCTIONAL DESCRIPTION: Interconnection Interface Point for all signals to and from SCADA and Wilshire/ Alvarado Station Uninterruptible Power Supply System, CIC #2 East				
TECHNICAL REQUIREMENTS:				
PHYSICAL DESCRIPTION: Barrier type terminal strips and assorted interposing relays..				
ORGANIZATION CONTACT: SCRTD Project Engineer				
COMMENTS:				
REFERENCES: A640 Contract Drawing and A640 Reference Drawings A795 Drawing ESK-003 UPS System Supervision				
REVISION:	PREPARED BY:	IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):		
No.	DATE		INITIALS	DATE

IDS-640-795-00-09
ATTACHMENT A
WILSHIRE/ALVARADO STATION
CIC #2
Auxiliary Power Room East

DRAWING UTILIZATION LIST

A640 Drawing Title:

COMMUNICATIONS SCADA/UPS INTERFACES

REFERENCE DRAWINGS

CONNECTION DIAGRAM

<u>TERMINAL STRIP</u>	<u>DRAWING NUMBER</u>
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DRAWING N-048

Figure:

UPS Supervision

TS-F

A187, E-121

INTERFACE DATA SHEET

<p>CONTRACT No.: A640 Communications</p> <p>SUBSYSTEM: Cable Transmission</p> <p>SPEC. REFERENCE: TP 8.0 CTS TP 14 Interfaces</p>	<p>LOCATION: CIC #3 West</p>	<p>INTERFACE No.: 640-795-00-10</p>	<p>REV: 0</p>
<p>REFER TO INTERFACE DATA TABLE:</p>		<p>Wilshire/ Alvarado Station</p>	
<p>CONTRACT No.: A795 UPS</p> <p>SUBSYSTEM: UPS Supervision</p> <p>SPEC. REFERENCE: A795 16610 Par. 2.7</p>	<p>ATTACHMENTS: Interface Drawing Utilization List</p>		
<p>FUNCTIONAL DESCRIPTION: Interconnection Interface Point for all signals to and from SCADA and Wilshire/ Alvarado Station Uninterruptible Power Supply System, CIC #3 West</p>			
<p>TECHNICAL REQUIREMENTS:</p>			
<p>PHYSICAL DESCRIPTION: Barrier type terminal strips and assorted interposing relay</p>			
<p>ORGANIZATION CONTACT: SCRTD Project Engineer</p>			
<p>COMMENTS:</p>			
<p>REFERENCES: A640 Contract Drawings & A640 Reference Drawings A795 Drawing ESK-003 UPS System Supervision</p>			
<p>REVISION:</p>		<p>PREPARED BY:</p>	
No.	DATE	INITIALS	DATE
<p>IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):</p>			

IDS-640-795-00-10
ATTACHMENT A
WILSHIRE/ALVARADO STATION
CIC #3
Auxiliary Power Room West

DRAWING UTILIZATION LIST

A640 Drawing Title:

COMMUNICATIONS SCADA/UPS INTERFACES

REFERENCE DRAWINGS

CONNECTION DIAGRAM

TERMINAL STRIP DRAWING NUMBER

DRAWING N-048

Figure:

UPS Supervision

TS-F

A187, E-122

INTERFACE DATA SHEET

<p>CONTRACT No.: A640 Communications</p> <p>SUBSYSTEM: Cable Transmission</p> <p>SPEC. REFERENCE: TP 8 CTS TP 14 Interface</p>	<p>LOCATION: CIC #2 East</p>	<p>INTERFACE No.: 640-840-00-09</p>	<p>REV: 0</p>	
<p>REFER TO INTERFACE DATA TABLE: Wilshire/ Alvarado Station</p>				
<p>CONTRACT No.: H840</p> <p>SUBSYSTEM: Fare Collection Supervision</p> <p>SPEC. REFERENCE:</p>	<p>ATTACHMENTS: Interface Drawing Utilization List</p>			
<p>FUNCTIONAL DESCRIPTION: Interconnection Interface Point for all signals to and from SCADA and Wilshire/ Alvarado Station Fare Collection, CIC #2 East</p>				
<p>TECHNICAL REQUIREMENTS:</p>				
<p>PHYSICAL DESCRIPTION: Barrier type terminal strips and assorted interposing relays.</p>				
<p>ORGANIZATION CONTACT: SCRTD Project Engineer</p>				
<p>COMMENTS:</p>				
<p>REFERENCES: A640 Contract Drawings and A640 Reference Drawings.</p>				
<p>REVISION:</p>		<p>PREPARED BY:</p>		<p>IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):</p>
No.	DATE	INITIALS	DATE	

DRAWING UTILIZATION LIST

A640 Drawing Title:

COMMUNICATIONS SCADA/FARE COLLECTION INTERFACES

REFERENCE DRAWINGS

CONNECTION DIAGRAM

TERMINAL STRIP DRAWING NUMBER

DRAWING N-047

Figure:

Fare Collection Supervision	TBD	A187, E-121
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INTERFACE DATA SHEET

<p>CONTRACT No.: A640 Communications</p> <p>SUBSYSTEM: Cable Transmission</p> <p>SPEC. REFERENCE: TP-8 CTS TP 14 Interface</p>	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">LOCATION: CIC #3 West</td> <td style="width: 33%;">INTERFACE No.: 640-840-00-10</td> <td style="width: 33%;">REV: 0</td> </tr> <tr> <td colspan="3" style="text-align: right; padding-top: 10px;">REFER TO INTERFACE DATA TABLE: Wilshire/ Alvarado Station</td> </tr> </table>	LOCATION: CIC #3 West	INTERFACE No.: 640-840-00-10	REV: 0	REFER TO INTERFACE DATA TABLE: Wilshire/ Alvarado Station											
LOCATION: CIC #3 West	INTERFACE No.: 640-840-00-10	REV: 0														
REFER TO INTERFACE DATA TABLE: Wilshire/ Alvarado Station																
<p>CONTRACT No.: H840</p> <p>SUBSYSTEM: Fare Collection Supervision</p> <p>SPEC. REFERENCE:</p>	<p>ATTACHMENTS: Interface Drawing Utilization List</p>															
<p>FUNCTIONAL DESCRIPTION: Interconnection Interface Point for all signals to and from SCADA and Wilshire/ Alvarado Station Fare Collection, CIC #3 West</p>																
<p>TECHNICAL REQUIREMENTS:</p>																
<p>PHYSICAL DESCRIPTION: Barrier type terminal strips and assorted interposing relays.</p>																
<p>ORGANIZATION CONTACT: SCRTD Project Engineer</p>																
<p>COMMENTS:</p>																
<p>REFERENCES: A640 Contract Drawings and A640 Reference Drawings.</p>																
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">REVISION:</td> <td style="width: 30%;">PREPARED BY:</td> <td style="width: 40%;">IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):</td> </tr> <tr> <td style="text-align: center;">No.</td> <td style="text-align: center;">DATE</td> <td style="text-align: center;">INITIALS DATE</td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </table>		REVISION:	PREPARED BY:	IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):	No.	DATE	INITIALS DATE									
REVISION:	PREPARED BY:	IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):														
No.	DATE	INITIALS DATE														

IDS-640-840-00-10
ATTACHMENT A
WILSHIRE/ALVARADO STATION
CIC #3
Auxiliary Power Room West

DRAWING UTILIZATION LIST

A640 Drawing Title:

COMMUNICATIONS SCADA/FARE COLLECTION INTERFACES

REFERENCE DRAWINGS

CONNECTION DIAGRAM

TERMINAL STRIP DRAWING NUMBER

DRAWING N-047

Figure:

Fare Collection Supervision	TBD	A187, E-122
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INTERFACE DATA SHEET

<p>CONTRACT No.: A640 Communications</p> <p>SUBSYSTEM: Cable Transmission</p> <p>SPEC. REFERENCE: TP 8.0 CTS TP 14 Interfaces</p>	<p>LOCATION: Station TC&C MDF</p>	<p>INTERFACE No.: 640-620-00-06</p>	<p>REV: 0</p>	
<p>SPEC. REFERENCE: TP 8.0 CTS TP 14 Interfaces</p>		<p>REFER TO INTERFACE DATA TABLE: Train Stations</p>		
<p>CONTRACT No.: A620 Automatic Train Control</p> <p>SUBSYSTEM: Interface Requirements</p> <p>SPEC. REFERENCE: TP 10 Interfaces</p>	<p>ATTACHMENTS:</p> <p>Attachment 1 Technical Requirements</p> <p>Attachment 2 Interface Reference Drawing List</p>			
<p>FUNCTIONAL DESCRIPTION: Interconnection Interface Point between Corrosion Control test signals and SCADA.</p>				
<p>TECHNICAL REQUIREMENTS: See Attachment 1</p>				
<p>PHYSICAL DESCRIPTION: Corrosion Control test signal lead terminations at the Main Distribution Frame located in the TC&C room of each station.</p>				
<p>ORGANIZATION CONTACT: SCRTD Project Engineer</p>				
<p>COMMENTS:</p>				
<p>REFERENCES: See Attachment 2</p>				
<p>REVISION:</p>		<p>PREPARED BY:</p>		<p>IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):</p>
No.	DATE	INITIALS	DATE	

ATTACHMENT 1

TECHNICAL REQUIREMENTS

1) Train Control Contractor A620

A620 Contractor shall provide and install corrosion control test signal cable from the running rail weld connection to the main distribution frame of each TC&C room. Each station will have two pair of track-to-earth resistance leads. Stations with special trackwork will have an additional pair of leads.

2) Communications Contractor A640

A640 Contractor shall provide the main distribution frame for each TC&C room and designate terminal strips and specific terminals for connecting the corrosion control test leads.

ATTACHMENT 2

Interface Reference Drawing List

A620 Contract Drawings

Drawing N-049 Communications Corrosion Control Schematic

INTERFACE DATA SHEET

<p>CONTRACT No.: A640 Communications</p> <p>SUBSYSTEM: Cable Transmission</p> <p>SPEC. REFERENCE: TP 8.0 CTS TP 14 Interface</p>	<p>LOCATION: CIC #1 TPSS</p> <p>INTERFACE No.: 640-631-00-13</p> <p>REV: 0</p> <p>REFER TO INTERFACE DATA TABLE: Systemwide</p>			
<p>CONTRACT No.: A631 Traction Power Installation</p> <p>SUBSYSTEM: DC Switchgear</p> <p>SPEC. REFERENCE: *</p>	<p>ATTACHMENTS:</p> <p>Attachment 1 Technical Requirements</p> <p>Attachment 2 Interface Reference Drawing List</p>			
<p>FUNCTIONAL DESCRIPTION:</p> <p>Interconnection Interface Point of emergency trip signals entering Traction Power Substations to trip 750 V dc traction power circuit breakers.</p>				
<p>TECHNICAL REQUIREMENTS:</p> <p>See Attachment 1</p>				
<p>PHYSICAL DESCRIPTION:</p> <p>Termination of emergency trip (BLS) signal leads at Communications Interface Cabinets in the Traction Power Substations at passenger stations, at the Shop Building and in the Yard.</p>				
<p>ORGANIZATION CONTACT:</p>				
<p>COMMENTS:</p> <p>SCRTD Project Engineer</p>				
<p>REFERENCES:</p> <p>*See Attachment 2</p>				
<p>REVISION:</p>		<p>IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):</p>		
No.	DATE		INITIALS	DATE

ATTACHMENT 1

TECHNICAL REQUIREMENTS

1) Traction Power Contractor A631

A631 Contractor shall furnish, install and terminate emergency trip signal cable from the CIC to the 750 V dc switchgear cabinets.

2) Communications Contractor A640

- a. A640 Contractor shall furnish and install the CIC in the TPSS including system interposing relays housed in the CIC.
- b. A640 Contractor shall furnish, install and terminate signal cables from the TC&C room MDF to the TPSS CIC including circuit components housed in the MDF.
- c. A640 Contractor shall furnish, install and terminate Blue Light Stations (BLS) as required in stations, crosspassages, the Shop and in the Yard including signal cables from the BLS to the nearest CIC.

ATTACHMENT 2

Interface Reference Drawing List

A640 Contract Drawings

Drawing N-064 Emergency Trip Switch Schematic Diagram

INTERFACE DATA SHEET

<p>CONTRACT No.: A640</p> <p>SUBSYSTEM: Communications</p> <p>SPEC. REFERENCE: Radio Subsystem TP 4.2.9 Mobile Radio Antennas</p>	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">LOCATION:</td> <td style="width: 33%;">INTERFACE No.:</td> <td style="width: 34%;">REV.:</td> </tr> <tr> <td>Communications Antenna/Vehicle</td> <td>640-650-00-01</td> <td>0</td> </tr> <tr> <td colspan="3" style="text-align: center;">REFER TO INTERFACE DATA TABLE: Passenger Vehicle</td> </tr> </table>	LOCATION:	INTERFACE No.:	REV.:	Communications Antenna/Vehicle	640-650-00-01	0	REFER TO INTERFACE DATA TABLE: Passenger Vehicle		
LOCATION:	INTERFACE No.:	REV.:								
Communications Antenna/Vehicle	640-650-00-01	0								
REFER TO INTERFACE DATA TABLE: Passenger Vehicle										
<p>CONTRACT No.: A650</p> <p>SUBSYSTEM: Passenger Vehicle Section 4 Interfaces</p> <p>SPEC. REFERENCE: TP 4.2.3 District Furnished Carborne Equipment</p>	<p>ATTACHMENTS:</p> <p>Attachment 1 Technical Requirements</p> <p>Attachment 2 Interface Drawing Utilization List</p>									
<p>FUNCTIONAL DESCRIPTION:</p> <p>Interface between A640 Contractor-furnished antenna and A650 Contractor installation of antenna and equipment.</p>										
<p>TECHNICAL REQUIREMENTS:</p> <p>See Attachment 1.</p>										
<p>PHYSICAL DESCRIPTION:</p> <p>Radio antenna and antenna radome assembly for the communications radio shall be installed on the cab roof of one vehicle of each dependent pair.</p>										
<p>ORGANIZATION CONTACT:</p> <p>SCRTD Project Engineer.</p>										
<p>COMMENTS:</p>										
<p>REFERENCES:</p> <p>See Attachment 2.</p>										
REVISION:	PREPARED BY:	IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):								
No.	DATE									
INITIALS	DATE									

ATTACHMENT 1

1) PASSENGER VEHICLE CONTRACTOR A650

A650 Contractor shall provide the following:

- a) Provide space for two antennae on one car of each dependent pair.
- b) Install one antenna at an approved location, including mounting supports, hardware, and sealing of roof. Provide and install coaxial cable, including both halves of cable connectors, from antenna to radio.
- c) Provide space and approved installation provisions for second future antenna and coaxial transmission cable into the cab.

2) COMMUNICATION CONTRACTOR A640

A640 Contractor shall furnish radio antennae and radio antenna radomes as shown on A640 Contract Drawing N-095. A640 Contractor shall provide required mounting detail drawings and installation instructions (CDRL per 4.14).

ATTACHMENT 2

Interface Drawing Utilization List
A640 Contract Drawings

Drawing N-095	Communications Passenger Vehicle Mechanical Interfaces
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INTERFACE DATA SHEET

CONTRACT No.: A640 SUBSYSTEM: Communications Radio Subsystem SPEC. REFERENCE: Section 4 Radio Subsystem		LOCATION: INTERFACE No.: REV: Communications Communications 0 Radio/Vehicle 640-650-00-02		
REFER TO INTERFACE DATA TABLE: Passenger Vehicle				
CONTRACT No.: A650 SUBSYSTEM: Passenger Vehicle Section 17 Communications SPEC. REFERENCE: TP 4.2.3 District Furnished Carborne Equipment		ATTACHMENTS: Attachment 1 Technical Requirements Attachment 2 Interface Drawing Utilization List		
FUNCTIONAL DESCRIPTION: Interface between A640 Contractor-furnished communication radio and A650 Contractor installation.				
TECHNICAL REQUIREMENTS: See Attachment 1.				
PHYSICAL DESCRIPTION: Two-way communication radio shall be installed in an approved naturally ventilated cabinet in the operator cab of one vehicle of a dependent pair.				
ORGANIZATION CONTACT: SCRTD Project Engineer.				
COMMENTS:				
REFERENCES: See Attachment 2.				
REVISION:		PREPARED BY:		IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):
No.	DATE	INITIALS	DATE	

ATTACHMENT 1

1) PASSENGER VEHICLE CONTRACTOR A650

A650 Contractor shall provide the following:

- a) Provide space for two radios. Space for each shall be not less than 15-in. deep by 19-in. wide by 10-in. high.
- b) Install one radio and power supply. Provide power cable, both halves of connectors, installation hardware and interconnection wiring to LVPS. Install female connectors to car wiring. Provide male chassis-mounted connectors for installation on radio by A640 Contractor.
- c) Install approved provisions for second future radio including wireway for power from Low-Voltage Circuit Breaker Panel.

2) COMMUNICATION CONTRACTOR A640

A640 Contractor shall furnish one communications radio as shown on A640 Contract Drawing N-095. A640 Contractor shall provide connector requirement information, mounting detail drawings of equipment and installation instructions (CDRL per 4.1.4).

ATTACHMENT 2

Interface Drawing Utilization List
A640 Contract Drawings

Drawing	N-095	Communications Passenger Vehicle Mechanical Interfaces
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INTERFACE DATA SHEET

<p>CONTRACT No.: A640 SUBSYSTEM: Communications Radio Subsystem</p> <p>SPEC. REFERENCE: TP 4.2.10 Train Identification & Control Unit</p>	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">LOCATION:</td> <td style="width: 30%;">INTERFACE No.:</td> <td style="width: 40%;">REV:</td> </tr> <tr> <td>Communications TICU/Vehicle</td> <td>640-650-00-03</td> <td>0</td> </tr> </table> <p>REFER TO INTERFACE DATA TABLE: Passenger Vehicle</p>	LOCATION:	INTERFACE No.:	REV:	Communications TICU/Vehicle	640-650-00-03	0
LOCATION:	INTERFACE No.:	REV:					
Communications TICU/Vehicle	640-650-00-03	0					

<p>CONTRACT No.: A650 SUBSYSTEM: Passenger Vehicle Section 17 Communications</p> <p>SPEC. REFERENCE: TP 4.2.3 District Furnished Carborne Equipment</p>	<p>ATTACHMENTS:</p> <p>Attachment 1 Technical Requirements</p> <p>Attachment 2 Interface Drawing Utilization List</p>
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FUNCTIONAL DESCRIPTION:
 Interface between A640 Contractor-furnished train identification and control unit (TICU) and A650 Contractor installation.

TECHNICAL REQUIREMENTS:
 See Attachment 1.

PHYSICAL DESCRIPTION:
 TICU furnished by A640 Contractor shall be located in the vehicle operator cab within easy reach of seated operator.

ORGANIZATION CONTACT:
 SCR TD Project Engineer

COMMENTS:

REFERENCES:
 See Attachment 2.

REVISION:		PREPARED BY:		IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):
No.	DATE	INITIALS	DATE	

ATTACHMENT 1

TECHNICAL REQUIREMENTS

1) PASSENGER VEHICLE Contractor A650

A650 Contractor shall install TICU, and furnish and install interfacing hardware, interconnecting wiring on both halves of required connectors.

2) COMMUNICATIONS Contractor A640

A640 Contractor shall furnish TICU equipment and provide installation instructions to A650 Contractor (CDRL per TP Paragraph 4.1.4).

ATTACHMENT 2

Interface Drawing Utilization List
A640 Contract Drawings

Drawing N-095	Communications
	Passenger Vehicle
	Mechanical Interfaces

INTERFACE DATA SHEET

<p>CONTRACT No.: A640 SUBSYSTEM: Communications Radio Subsystem SPEC. REFERENCE: TP 4 Radio Subsystem</p>	<p>LOCATION: CCU to Radio Controls</p> <p>INTERFACE No.: 640-650-00-04</p> <p>REV: 0</p> <p>REFER TO INTERFACE DATA TABLE: Passenger Vehicle</p>			
<p>CONTRACT No.: A650 SUBSYSTEM: Passenger Vehicle Section 17 Communications SPEC. REFERENCE: TP 4.2.3 District-Furnished Carborne Equipment</p>	<p>ATTACHMENTS: Attachment 1 Technical Requirements</p>			
<p>FUNCTIONAL DESCRIPTION: Interfaces between Communication radio furnished by A640 Contractor and Communication Control Unit furnished by A650 Contractor. Interface connections are at the radio volume control, channel selector switch, RCC to PA switch and radio push-to-talk switch.</p>				
<p>TECHNICAL REQUIREMENTS: See Attachment 1.</p>				
<p>PHYSICAL DESCRIPTION: Volume control for the cab radio speaker, radio channel selector switch, RCC to PA switch and radio push-to-talk switch shall be furnished and installed by A650 Contractor on the vehicle CCU.</p>				
<p>ORGANIZATION CONTACT: SCR TD Project Engineer</p>				
<p>COMMENTS:</p>				
<p>REFERENCES:</p>				
REVISION:	PREPARED BY:	IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):		
No.	DATE		INITIALS	DATE

ATTACHMENT 1

TECHNICAL PROVISIONS

1) PASSENGER VEHICLE CONTRACTOR A650

A650 Contractor shall furnish the following:

- a) Provide and install RADIO VOLUME control and wiring per Technical Provisions Section 9. Base design upon potentiometer in parallel with Communications radio volume control furnished by A640 Contractor.
- b) Provide and install CHANNEL SELECTOR switch and wiring per Technical Provisions Section 9. Base design upon a nine wire interface with the radio furnished by A640.
- c) Provide and install RADIO PUSH-TO-TALK switch and wiring per Technical Provisions Section 9.
- d) Provide and install RCC to PA switch which connects the radio to the PA system. Base design on four wire interface.

2) COMMUNICATION CONTRACTOR A640

A640 Contractor shall furnish Communication radio and required interface detail drawings for installation of A650 Contractor-furnished Radio Volume control, Channel Selector switch, RCC to PA switch and RADIO PUSH-TO-TALK switch (CDRL per TP Paragraph 4.1.4).

INTERFACE DATA SHEET

<p>CONTRACT No.: A620 Automatic Train Control SUBSYSTEM: Installation</p> <p>SPEC. REFERENCE: 12.11.5 Installation of District- Furnished Cable and Tubing</p>	<p>LOCATION: Tunnels</p>	<p>INTERFACE No.: 620-640-00-01</p>	<p>REV: 0</p>	
<p>SPEC. REFERENCE: 12.11.5 Installation of District- Furnished Cable and Tubing</p>		<p>REFER TO INTERFACE DATA TABLE:</p>		
<p>CONTRACT No.: A640 - SUBSYSTEM: Communications Cable</p> <p>SPEC. REFERENCE: 15.1.2.A, 15.1.4, 15.4.1</p>	<p>ATTACHMENTS:</p> <p>Attachment 1 - Technical Requirements</p> <p>Attachment 2 - Interface Drawing Utilization List</p>			
<p>FUNCTIONAL DESCRIPTION:</p> <p>Installation of A640 Communications cables and tubes in tunnels by A620 Contractor.</p>				
<p>TECHNICAL REQUIREMENTS:</p> <p style="text-align: center;">See Attachment 1.</p>				
<p>PHYSICAL DESCRIPTION:</p> <p>A620 Contractor installs Communications cables and tubes in the cable trough in tunnel sections, including routing through conduit from TC&C room to trough and from trough.</p>				
<p>ORGANIZATION CONTACT:</p> <p>SCRTD Project Engineer</p>				
<p>COMMENTS:</p>				
<p>REFERENCES:</p> <p>See Attachment 2.</p>				
<p>REVISION:</p>		<p>PREPARED BY:</p>		<p>IMPLEMENTATION RESPONSIBILITY (THIRD PARTY):</p>
No.	DATE	INITIALS	DATE	

TECHNICAL REQUIREMENTS

1) ATC Contractor - A620

- a) Contractor shall install CATV coaxial cables, fiber optic cables, telephone cables, and gas sample lines (tubing) in tunnels per installation information provided by Communications Contractor and Technical Provisions, Article 12.11.5. Fiber optic cables shall be installed in continuous runs with no splices between TC&C equipment rooms. CATV coaxial cables shall have intermediate terminations at every other crosspassage. Telephone cables shall have intermediate terminations at every crosspassage. Gas sample lines shall be installed in continuous runs from TC&C rooms to tunnel crosspassages or intermediate conduit stub-ups, as indicated. Terminations will be made by the District.
- b) Contractor shall test cables and tubes after installation per test details provided by Communications Contractor and Technical Provisions, Article 13.7.2.G.2.

2) Communications Contractor - A640

- a) Contractor shall furnish CATV coaxial cables, fiber optic cables, and telephone cables per Technical Provisions, Article 20.3, Wire and Cable. Contractor shall furnish gas sample lines per Technical Provisions, Section 11, Gas Monitoring and Seismic Event Subsystem.
- b) Contractor shall furnish installation information and test details per Technical provisions, Article 15.1.4, Documentation. (CDRL)

INTERFACE DRAWING UTILIZATION LIST

A620 Contract Drawings

Drawing Q-124 - Communication Cable Installation

A640 Contract Drawings

Drawing N-150 - Gas Monitoring, MOS-1, Probe Locations
Drawing N-152 - Gas Monitoring, Union Station Probe Locations, Sheet 2
Drawing N-153 - Gas Monitoring, Union Station Probe Schedule
Drawing N-155 - Gas Monitoring, Civic Center Probe Locations, Sheet 2
Drawing N-156 - Gas Monitoring, Civic Center Probe
Drawing N-158 - Gas Monitoring, 5th/Hill Probe Locations, Sheet 2
Drawing N-159 - Gas Monitoring, 5th/Hill Probe Schedule
Drawing N-165 - Gas Monitoring, Gas Monitoring, Wilshire/Alvarado Probe
Locations, Sheet 2
Drawing N-166 - Gas Monitoring, Wilshire/Alvarado Probe Location Schedule
Drawing N-167 - Gas Monitoring, Gas Monitoring, Probe Location Details

SAMPLE LINES TO BE INSTALLED BY A620 CONTRACTOR

<u>Passenger Station</u>	<u>Probe Numbers</u>
Union Station	1-1, 1-2, 1-3, 1-4, 1-5, 1-6, 1-7, 1-8, 2-1, 3-6, and 3-7
Civic Center	1-1 and 1-2
5th/Hill	1-1, 1-3, 2-1, and 2-3
Wilshire/Alvarado	1-1 and 1-3