

**City and County of San Francisco  
Airport Commission  
P.O. Box 8097  
San Francisco, California 94128**

**Modification No. 3**

THIS MODIFICATION (this "Modification") is made as of November 3, 2016, in San Francisco, California, by and between **Bombardier Transportation (Holdings) USA Inc.** ("Contractor"), and the City and County of San Francisco, a municipal corporation ("City"), acting by and through its Airport Commission or the Commission's designated agent, hereinafter referred to as "**Commission.**"

RECITALS

WHEREAS, City and Contractor have entered into the Agreement (as defined below); and

WHEREAS, City and Contractor desire to amend the Agreement on the terms and conditions set forth herein to address the replacement of obsolete equipment; and

WHEREAS, the Commission awarded this contract to Contractor on September 16, 2008, pursuant to an agreement to settle a dispute among the City and County of San Francisco, Bombardier Transportation (Holdings) USA, Inc., and Factory Mutual Insurance Company which was filed in the United States District Court for the Northern District of California, case number C 04-5307 PJH, and further pursuant to Resolution No. 08-0173; and

WHEREAS, on November 18, 2008, by Resolution No. 266-08, the Board of Supervisors approved the Agreement under San Francisco Charter Section 9.118; and

WHEREAS, Commission approved Modification No. 1 pursuant to Resolution No. 13-0156 on July 23, 2013; and

WHEREAS, on December 10, 2013, by Resolution No. 429-13, the Board of Supervisors approved the modification to the Agreement under San Francisco Charter Section 9.118; and

WHEREAS, Commission approved this Modification No. 2 pursuant to Resolution No. 14-0104 on May 19, 2014; and

WHEREAS, on September 9, 2014, by Resolution No. 328-14, the Board of Supervisors approved the modification to the Agreement under San Francisco Charter Section 9.118 but reduced the not to exceed amount by \$4,340 for a new not-to-exceed amount of \$100,543,834; and; and

WHEREAS, Commission approved this Modification No. 3 pursuant to Resolution No. 16-0277 on November 1, 2016; and

WHEREAS, on *February 14, 2017*, by Resolution No. *44-17*, the Board of Supervisors approved the modification to the Agreement under San Francisco Charter Section 9.118 for a new not-to-exceed amount of \$ *115,444,968*; and

NOW, THEREFORE, Contractor and the City agree as follows:

1. **Definitions.** The following definitions shall apply to this Amendment:

a. **Agreement.** The term "Agreement" shall mean the Agreement dated September 16, 2008 between Contractor and City, as amended by the:

Modification No. 1,           dated August 1, 2013; and  
Modification No. 2,           dated May 20, 2014.

b. **Contract Monitoring Division.** Effective July 28, 2012, with the exception of Sections 14B.9(D) and 14B.17(F), all of the duties and functions of the Human Rights Commission under Chapter 14B of the Administrative Code (LBE Ordinance) were transferred to the City Administrator, Contract Monitoring Division ("CMD"). Wherever "Human Rights Commission" or "HRC" appears in the Agreement in reference to Chapter 14B of the Administrative Code or its implementing Rules and Regulations, it shall be construed to mean "Contract Monitoring Division" or "CMD" respectively.

c. **Other Terms.** Terms used and not defined in this Modification shall have the meanings assigned to such terms in the Agreement.

2. **Section 2. Term of the Agreement** is hereby amended to extend the term of the contract for one year for a new ending date of February 28, 2018.

3. **Section 4. Services Contractor Agrees to Perform** of the Agreement is amended to address the replacement of obsolete equipment as detailed in Appendix G, Tasks 5 and 6.

4. **Section 5. Compensation** is hereby amended to increase the total compensation payable by an amount not to exceed Fourteen Million Nine Hundred One Thousand One Hundred Thirty Four Dollars (\$14,901,134) for a new total not to exceed amount of One Hundred Fifteen Million Four Hundred Forty Four Thousand Nine Hundred Sixty Eight Dollars (\$115,444,968).

5. **New Section 32. Earned Income Credit (EIC) Forms** is hereby replaced in its entirety with a **New Section 32. Consideration of Criminal History in Hiring and Employment Decisions** to read as follows:

**32. Consideration of Criminal History in Hiring and Employment Decisions.**

a. Contractor agrees to comply fully with and be bound by all of the provisions of Chapter 12T "City Contractor/Subcontractor Consideration of Criminal History in Hiring and Employment Decisions," of the San Francisco Administrative Code (Chapter 12T), including the remedies provided, and implementing regulations, as may be amended from time to time. The provisions of Chapter 12T are incorporated by reference and made a part of this Agreement as though fully set forth herein. The text of the Chapter 12T is available on the web at [www.sfgov.org/olse/fco](http://www.sfgov.org/olse/fco). A partial listing of some of Contractor's obligations under Chapter 12T is set forth in this Section. Contractor is required to comply with all of the applicable provisions of 12T, irrespective of the listing of obligations in this Section. Capitalized terms used in this Section and not defined in this Agreement shall have the meanings assigned to such terms in Chapter 12T.

b. The requirements of Chapter 12T shall only apply to the Contractor's or Subcontractor's operations to the extent those operations are in furtherance of the performance of this Agreement, and shall apply only to applicants and employees who would be or are performing work in

furtherance of this Agreement, whose employment is or would be in whole or in substantial part physically located in the City and County of San Francisco, which excludes Airport property.

1) Applicants or employees who would be or are performing work in furtherance of this Agreement may be required to be screened by the U.S. Department of Homeland Security for security badging. A rejection by the U.S. Department of Homeland Security of an applicant's or employee's security badging application, and the resulting inability of the Contractor to hire the applicant or assign the employee to perform services under this Agreement, shall not be considered an Adverse Action under Chapter 12T.

c. Contractor shall incorporate by reference in all subcontracts the provisions of Chapter 12T, and shall require all subcontractors to comply with such provisions. Contractor's failure to comply with the obligations in this subsection shall constitute a material breach of this Agreement.

d. Contractor or Subcontractor shall not inquire about, require disclosure of, or if such information is received, base an Adverse Action on an applicant's or potential applicant for employment or employee's: (1) Arrest not leading to a Conviction, unless the Arrest is undergoing an active pending criminal investigation or trial that has not yet been resolved; (2) participation in or completion of a diversion or a deferral of judgment program; (3) a Conviction that has been judicially dismissed, expunged, voided, invalidated, or otherwise rendered inoperative; (4) a Conviction or any other adjudication in the juvenile justice system; (5) a Conviction that is more than seven years old, from the date of sentencing; or (6) information pertaining to an offense other than a felony or misdemeanor, such as an infraction.

e. Contractor or Subcontractor shall not inquire about or require applicants, potential applicants for employment, or employees to disclose on any employment application the facts or details of any conviction history, unresolved arrest, or any matter identified in subsection 32.4, above. Contractor or Subcontractor shall not require such disclosure or make such inquiry until either after the first live interview with the person, or after a conditional offer of employment.

f. Contractor or Subcontractor shall state in all solicitations or advertisements for employees that are reasonably likely to reach persons who are reasonably likely to seek employment to be performed under this Agreement, that the Contractor or Subcontractor will consider for employment qualified applicants with criminal histories in a manner consistent with the requirements of Chapter 12T.

g. Contractor and Subcontractors shall post the notice prepared by the Office of Labor Standards Enforcement (OLSE), available on OLSE's website, in a conspicuous place at every workplace, job site, or other location under the Contractor or Subcontractor's control at which work is being done or will be done in furtherance of the performance of this Agreement. The notice shall be posted in English, Spanish, Chinese, and any language spoken by at least 5% of the employees at the workplace, job site, or other location at which it is posted.

h. Contractor understands and agrees that if it fails to comply with the requirements of Chapter 12T, the City shall have the right to pursue any rights or remedies available under Chapter 12T, including but not limited to, a penalty of \$50 for a second violation and \$100 for a subsequent violation for each employee, applicant or other person as to whom a violation occurred or continued, termination or suspension in whole or in part of this Agreement.

**6. New Section 58. Graffiti Removal** is hereby replaced in its entirety with a **New Section 58. Sugar-Sweetened Beverage Prohibition** to read as follows:

**58. Sugar-Sweetened Beverage Prohibition.** Contractor agrees that it will not sell, provide, or otherwise distribute Sugar-Sweetened Beverages, as defined by San Francisco Administrative Code Chapter 101, as part of its performance of this Agreement.


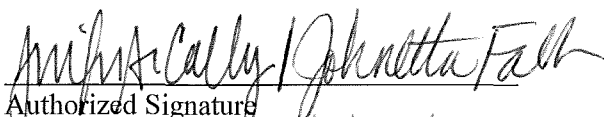

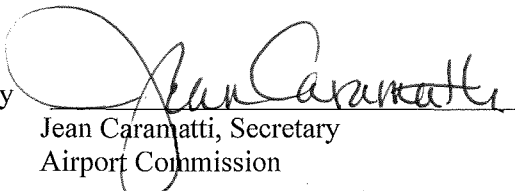
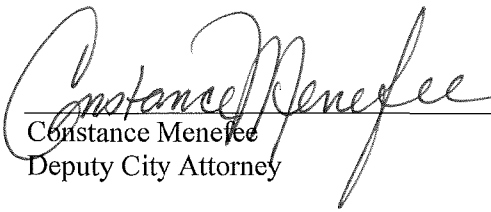
**7. Appendix E. Spare Parts, Tools, and Equipment List** is hereby replaced in its entirety with the new Appendix E-2. Additional spare parts needed for the work contemplated under this modification will be added to the Spare Parts, Tools, and Equipment List at the next modification.

**8. Appendix G.** Appendix G is hereby amended to add Tasks 5 and 6 to address replacement of obsolete equipment covered under the contract. Performance of the Tasks in Appendix G is subject to mutually agreeable terms and conditions, which shall be established prior to the start of each task. Appendix G is also amended to correct an administrative error in the heading of Modification No. 2 Appendix G pages 1 of 8 and 2 of 8. The correct heading should have been "Task 1: AirTrain LED to LCD Sign Upgrade" not "Task 2: AirTrain UPS Replacement."

**9. Effective Date.** Each of the changes set forth in this Modification shall be effective on and after the date of this Modification.

**10. Legal Effect.** Except as expressly modified by this Modification, all of the terms and conditions of the Agreement shall remain unchanged and in full force and effect.

IN WITNESS WHEREOF, Contractor and City have executed this Amendment as of the date first referenced above.

CITY	CONTRACTOR
AIRPORT COMMISSION CITY AND COUNTY OF SAN FRANCISCO	
By:  Ivar C. Satero, Airport Director	 Authorized Signature  Printed Name
Attest:	Vice President / Secretary Title
By:  Jean Caramatti, Secretary Airport Commission	Bombardier Transportation (Holdings) USA Inc. Company Name
Resolution No: <u>16-0277</u>	40554 City Vendor Number
Adopted on: <u>NOV. 1, 2014</u>	1501 Lebanon Church Road Address
Approved as to Form:	Pittsburgh, PA 15236 City, State, ZIP
Dennis J. Herrera City Attorney	(412) 655-5700 Telephone Number
By:  Constance Menefee Deputy City Attorney	25-1579550 Federal Employer ID Number

## Appendix E-2: Spare Parts

Part No	Description	Qty
0899363G01	CONTACT ASSEMBLY	8
1018J06G03	REVERSER TYPE XR-148 ELECTRO-PNEUMATIC	2
1074F75G07	BRAKE AIR COMPRESSOR 60HZ	2
1074F75H44	MOTOR	2
1252A46H04	RESISTOR 392 OHMS .250W 1% NA60	1
1252A46H15	RESISTOR 511 OHMS .250W 1% NA60	2
1252A55H29	RESISTOR 301K OHMS .250W 1% NA60	2
1252A80H21	RESISTOR 1.62K OHMS .750W 1% NA70	4
1253A04H01	RESISTOR 1 OHM 50W 1%	4
1253A44H05	TRANSISTOR 2N3715	4
1253A44H15	TRANSISTOR 2N6306	2
1502F63G05	GUIDE WHEEL ASSEMBLY	8
1502F97G10	WHEEL ASSEMBLY	2
18D9633H01	STD.CONTACT .62 LG COPPER EXTRUSION	8
1913F14G02	MODIFIED MOUNTING BRACKET	6
1913F14G03	MODIFIED MOUNTING BRACKET	12
1913F14G05	MODIFIED MOUNTING BRACKET	12
1913F14H01	MTG BRACKET 1) SIGNAL RAIL	4
1913F14H05	Shim	12
1913F14H06	MTG BRACKET 1) LOCK PIN	4
1999E63G02	DRAFTGEAR	1
1999E63H01	ELECTRICAL COUPLER HEAD ASSEMBLY	1
1999E63H02	MECHANICAL COUPLER HEAD ASSEMBLY	1
1999E63H03	CLAMP ASSEMBLY	2
1A96918G01	STD. UMC CONTRACTOR SHUNT AT ASSEMBLY	6
1A96920G01	STD. UMC CONTACTOR INTERLOCK FINGER	10
1A97462792	FUSE 5A 125V FAST-BLOWN PIG-TAIL	6
1A97462792	FUSE 5A 125V FAST BL	6
1A97462793	THERMAL PAD SCR 2.44X 4.25	1
1A97462794	THERMAL PAD SCR .81X	2
1A97462794	THERMAL PAD SCR .81X 3.64	1
1A97462799	FUSE 500 VOLT 100 AMP	2
1A97462801	FUSE 600VAC 3A DUAL ELEM UL	4
1A97462801	FUSE 600VAC 3A DUAL ELEM UL	2
1A97462802	CAP MET FOIL 70UF 280VAC	1
1A97462804	SCR MODULE 90A 800V	2
1A97462804	SCR MODULE 90A 800V	1
1A97599H04	STATIC RAM CARD 24MB	1
1A97601H01	SECOND SERIAL PORT CABLE & KIT	1
1B37424H09	DIODE ASSEMBLY 25A 200 PRV DA-180	2
1B38681G03	DIODE ASSEMBLY	4
1B38681G04	DIODE ASSEMBLY	4
1B38995G01	SHOE ASSEMBLY	3000
1B38996G01	SHOE HOLDER POWER SUB ASSEMBLY	16
1B38997G01	SHOE HOLDER ATO SUB-ASSEMBLY	64
1B39166G01	2 SLOT VME J2 BACKPLANE ASSEMBLY	1
1B39166G01	2 SLOT VME J2 BACKPLANE ASSEMBLY	1

## Appendix E-2: Spare Parts

Part No	Description	Qty
1B39673H01	SETRONIC VALVE	4
1B39824G02	RESISTOR ASSEMBLY	3
1B39825G02	CAPACITOR ASSEMBLY	2
1B39836G01	ATO SHOE HOLDER SUPPORT ASSEMBLY	16
1B39837G01	POWER SHOE HOLDER SUPPORT ASSEMBLY	12
1B40194G03	RESISTOR ASSEMBLY	2
1B40194G04	RESISTOR ASSEMBLY	2
1B40194G05	RESISTOR ASSEMBLY	3
1B40194G06	DIODE ASSEMBLY	2
1B40194G07	VOLTAGE REGULATOR ASSEMBLY	2
1B40194G10	RESISTOR ASSEMBLY	2
1B40194G11	RESISTOR ASSEMBLY	2
1B40194G13	DIODE ASSEMBLY	2
1B40488G01	COLLECTOR CABLE ASSEMBLY	8
1B40488G02	COLLECTOR CABLE ASSEMBLY	8
1B40488G03	COLLECTOR CABLE ASSEMBLY	8
1B40488G04	COLLECTOR CABLE ASSEMBLY	8
1B40811G06	COLLECTOR CABLE	32
1B40820G01	SFAA VEHICLE DYNAMIC GRAPHICS ASSEMBLY	0
1B40820G02	SFAA VEHICLE DYNAMIC GRAPHICS ASSEMBLY	0
1B40820G03	SFAA VEHICLE DYNAMIC GRAPHICS ASSEMBLY	0
1B40820G04	SFAA VEHICLE DYNAMIC GRAPHICS ASSEMBLY	0
1B41300H01	Trip shaft kit	2
1B41300H02	Upper stud assembly	3
1B41300H03	Lower stud assembly	3
1B41300H04	Elect. Operated Mechanism	3
1B41300H05	Shunt Trip Assembly	3
1B41300H06	Shunt Release Assembly	3
1B41300H07	Anti-Pump Relay	3
1B41300H08	Spring Charge Motor Kit	3
1B41300H09	Bussman Type FNQ-R Fuse, 2A, 600V	6
1B41300H10	Rating Plug, Digitrip T 10 Series, 800AS/600RP	4
1B41300H11	Rating Plug, Digitrip T 10 Series, 800AS/800RP	1
1B41300H12	Rating Plug, Digitrip T 10 Series, 1600AS/1200RP	1
1B41300H13	Rating Plug, Digitrip T 10 Series, 1600AS/1600RP	1
1B41300H14	Fuse, class J, fast Acting, 3A, 600V	6
1B41300H15	Bussman Type FRS Fuse, 20A, 600V	6
1B41300H16	Digitrip, 510 LSI	1
1B41300H17	Digitrip, 510 LS	1
1B41300H18	Bussman Type FNQ Fuse, 10A, 500V	2
1B41300H19	Bussman Type FNQ Fuse, 6A, 500V	6
1B41300H20	Fuse, 1A Class J	10
1B41301H01	Temperature Monitor	1
1B41301H02	Thermostat	2
1B41301H03	Heater	6
1B41302H01	Cutler Hammer Control Relay, 120VAC Coil, 2NO-2NC	6
1B41302H02	Time Mark Voltage Sensing Relay	6

## Appendix E-2: Spare Parts

Part No	Description	Qty
1B41302H03	Cutler Hammer Molded Case Circuit breaker, 3 Pole, 600V, 600A	2
1B41302H04	Cutler Hammer Motor Operator, 120 VAC	2
1B41302H05	Cutler Hammer Molded Case Circuit breaker, 1 Pole, 15A	2
1B41302H06	Gould Time Delay Fuse, 600V, 1A	15
1B41303H01	C-H 240 VAC Relay	1
1B41303H02	C-H 240 VAC Reversing Contactor	1
1B41303H03	ITI Voltage Transformer 600V/120V	2
1B41303H04	Bussman Type FNQ-R Fuse, 2A, 600V	6
1B41303H05	ITI VT, 50 VA, 600/120	3
1B41303H06	Ohmite Resistor, 1000 Ohm, 175W	2
1B41303H07	Honeywell Thermostat, 40-80 Degree F	1
1B41303H08	Space Heater, 250-375W / 125V-95W	1
1B41303H09	CSM Customer Supplied Material (Vital Relays)	1
1B41303H10	15A/1P Circuit Breaker	3
1B41303H11	10A/2P Circuit Breaker	1
1B41303H12	25A/1P Circuit Breaker	1
1B41303H13	15A/2P Circuit Breaker	1
1B41303H14	Timemark 3 PH Monitor, 50 VAC PH-N	1
1B41303H15	C-H E22 2 POS Switch, Rotate 90 Degree	2
1B41303H16	Breaker Control SW	2
1B41303H17	C-H D15 Relay, 120 VAC	4
1B41303H18	Agastst On-Delay Timer 120V	1
1B41303H19	GE Voltage Relay	1
1B41303H20	Timemark 3 Phase Power Monitor	2
1B41303H21	Timemark Current Unbalance Relay	2
1B41303H22	Basler Reverse Power Relay	2
1B41303H23	Ind Lt, 22MM Resistor Type, 120 VAC/DC	3
1B41303H24	Bussman Type FNQ Fuse, 6A, 500V	6
1B41303H25	Class J Fuse, 3A, 600V	6
1B41303H26	Lightning Secondary Arresters, 3P, 650 V	4
1B41303H27	Bussmann Type LPJ Fuse, 1A, 600V	12
1B41303H28	Square D Circuit Monitor	1
1B41303H29	DSII Breaker Cell SW 3-NO, 3-NC	3
1B41303H30	Bussmann Type FRS-R Fuse, 20AA, 600V	4
1B41303H31	CPT, 56KV, 600/120-240V with Fuse Puller	1
1B41303H32	Bussman Type FNQ Fuse, 10A, 500V	4
1B41303H33	C-H breaker 150A/3P 100KAIC	1
1B41303H34	C-H breaker 100A/3P 100KAIC	1
1B41303H35	C-H breaker 30A/3P 100KAIC	1
1B41303H36	C-H breaker 200A/3P 100KAIC	1
1B41303H37	Crompton Voltage Relay, 120 VAC	3
1B41303H38	3PH Current Transformer, 1000/5A	2
1B41303H39	Contact Block for D15 Relay, 4-NO	2
1B41303H40	C-H D15 Relay, 4 N-O, 120 VAC	3
1B41303H41	GFR Relay, 1-12 A, Electric Reset	1
1B41303H42	GFR Sensor 1-12 A, 5.5 Dia	1
1B41303H43	AgastatTimer (64GFS)	1



## Appendix E-2: Spare Parts

Part No	Description	Qty
1B41303H44	Contact Block for D15 Relay	1
1B41303H45	D15 Relay On/Off Delay Timer Module, 0.1-30 S	1
1B41303H46	DSII-516	1
1B41303H47	DSII-508	1
1B41304H01	Agastat Time Delay Relay	3
1B41304H02	Breaker GHC 1 Pole 15 A	4
1B41304H03	Breaker GHC 1 Pole 30 A	2
1B41304H04	Cap Trip Device 120 VAC	4
1B41304H05	Diode 400V PRV 40A	4
1B41304H06	Relay MG-6 125V DC, Open EL Rst	2
1B41304H07	Thermostat, Fixed 110 F/43.3	1
1B41304H08	S-D Relay 2120V/60Hz, DPDT, 12 Pin	3
1B41304H09	CT 600:5 C100	3
1B41304H10	Fuse 15.5 KV 0.5 E	6
1B41304H11	Pull Fuse 3 Pole 30 A	1
1B41304H12	Fuse 6 A Control	8
1B41304H13	MOC, 9-P, 5A-4B Conn Only	3
1B41304H14	Arrester, 9KV Station Class	6
1B41304H15	Voltage Xfrm, VIZ-11, 7200-120V	3
1B41304H16	36W Breaker Ramp Assy	1
1B41304H17	Rail Clamp, VCP-W	2
1B41304H18	Test Jumper, Ten Conductor VCP	1
1B41304H19	E22 Bulb Removal Tool	5
1B41304H20	Breaker 150 VCP-W 500 1200 A	3
1B41304H21	Snubber - 5 or 15 KV 1200A Main	2
1B41305H01	125 VDC/120VAC Spring Charging Motor	1
1B41305H02	125 VDC/120VAC Spring Release Coil	1
1B41305H03	120VAC Anti-Pump Y Relay	1
1B41305H04	Motor Cut-off Switch	1
1B41305H05	Position Switch	1
1B41305H06	Auxiliary Switch	1
1B41305H07	Fastener Kit	1
1B41305H08	Rectifier Assy	1
1B41305H09	1200A Push Rod Assy	1
1B41305H10	1200A Primary Contact Assy	6
1B41306H01	BKR CONT SW 24 1C, 1T Non-Pull	2
1B41306H02	E22 Contact Block 1NC	2
1B41306H03	IND LT E22 Green 48V	3
1B41306H04	IND LT E22 Red 48V	3
1B41306H05	REL LOR-24, 125VDC, 4A/4B, 2-ST	2
1B41306H06	Resistor 4020Ohm 5W	3
1B41306H07	Switch W2, 2Pos, 8 Poles	2
1B41306H08	Switch W2, 2Pos, 8 Poles	1
1B41306H09	BE1-27/59, 1PH, 55-160VAC, 125 V	1
1B41320H02	FUSE 500 VOLT 50 AMP	2
1B41320H04	SCR 3 PHASE BRIDGE 1200V 110A	1
1B41320H05	THERMAL PAD SCR 3.70X 1.34	1

## Appendix E-2: Spare Parts

Part No	Description	Qty
1B41320H06	FUSE SUBMIN .1A	6
1B41320H12	CAP 3700UF 450VDC	1
1B41320H12	CAP 3700UF 450VDC	1
1B41320H13	IGBT DUAL 600V 150A	2
1B41320H15	FUSE 2-12A 125V PICO AX.LEAD	6
1B41320H15	FUSE 2-12A 125V PICO AX.LEAD	4
1B41320H18	PWB ASSY TRANSIENT SUPPRESSOR	1
1B41320H18	PWB ASSY TRANSIENT SUPPRESSOR	1
1B41320H19	PWB ASSY RECTIFIER DRIVE	1
1B41320H20	PWB ASSY POWER SUPPLY	1
1B41320H20	PWB ASSY POWER SUPPLY	1
1B41320H21	PWB ASSY UPS INTFC	1
1B41320H21	PWB ASSY UPS INTFC	1
1B41320H22	PWB ASSY SBS DRIVE	1
1B41320H22	PWB ASSY SBS DRIVE	1
1B41320H23	PWB ASSY POWER BOARD	1
1B41320H24	PWB ASSY PWR BOOSTER	1
1B41320H25	PWB ASSY DISPLAY BOARD	1
1B41320H25	PWB ASSY DISPLAY BOARD	1
1B41320H26	FUSE 500 VOLT 150AMP	2
1B41320H31	IGBT DUAL 600V 400A	1
1B41320H32	PWB ASSY INV. DRIVE	1
1B41320H33	PWB ASSY	1
1B41320H34	FUSE 70A 600V	3
1B41320H35	PWB ASSY RECTIFIER DRIVE	1
1C40468H04	CAM .63) 7.00 DIA	1
1C40483G15	RESISTOR TUBE RIBFLEX 7.5 OHMS	4
1C40540G01	AIR COMPRESSOR - GENL ASSEMBLY	0
1C40570G04	SWITCH & REPLACEMENT PARTS	1
1C40570H02	REPLACEMENT BLOCK	2
1C40570H04	REPLACEMENT HEAD	2
1C40811177	RELAY	8
1C40811H02	MOTOR & GEAR HOUSING ASS'Y	2
1C40811H07	SWITCHLEVER	16
1C40811H19	SWITCH SNAP ACTION	8
1C40811H20	BUMPER	24
1C40811H23	RES ADJ 100W 10% 5 OHMS	10
1C40811H27	RING RET EXT	30
1C40811H28	RES ADJ 100W 10% 10 OHMS	10
1C40811H29	RES ADJ 100W 10% 20 OHMS	10
1C40811H50	PIN ROLL .125X1.25	50
1C40811H63	VARISTOR ASS'Y	8
1C40811H64	RECTIFIER ASS'Y	8
1C40811H98	MOTOR & GEAR HOUSING ASS'Y	2
1C41229H01	CONTACT SWITCH 1)	2
1C41229H02	CONTACT SWITCH 1)	2
1C41229H03	CONTACT BLOCK 1)	4

**Appendix E-2: Spare Parts**

Part No	Description	Qty
1C41448H01	SWITCH - PRESSURE WAVE	8
1C41537H01	TRANSFORMER (CURRENT)	2
1C41706G01	LOGIC CRADLE FAN ASS'Y	0
1C41710H01	EL BREAKER 2 POLE	2
1C41773G07	ANTENNA INSTALLATION	2
1C41821H01	PRESSURE REGULATOR	3
1C41830H01	AD-9 AIR DRYER	2
1C41830H03	DESICCANT CARTIDGE	19
1C41830H05	PURGE VALVE MAINTENANCE KIT	38
1C41830H06	24 VOLT HEATER & THERMOSTAT ASS'Y	2
1C42642G01	DIODE ASSEMBLY	2
1C42642G02	DIODE ASSEMBLY	4
1C42875H02	MOUNTING RAIL 1)	1
1C43432H01	VIDEO DRIVER BOARD 1)	1
1C44327H01	TRANSFORMER ENCAPSULATED	2
1C44610G01	PC BOARD FLEXIBLOK VEHICLE DIG IN ASSY	2
1C44610G02	PC BOARD FLEXIBLOK VEHICLE DIG IN ASSY	2
1C44610G03	PC BOARD FLEXIBLOK VEHICLE DIG IN ASSY	2
1C44612G01	PC BOARD FLEXIBLOK REGION ATP CPU ASSY	2
1C44612G02	PC BOARD FLEXIBLOK REGION ATP CPU ASSY	2
1C44613G01	PC BOARD FLEXIBLOK REG SER COMM ASSY	2
1C44615G01	PC BOARD FLEXIBLOK REGION DIG INPUT ASSY	2
1C44615G01	PC BOARD FLEXIBLOK REGION DIG INPUT ASSY	1
1C44615G02	PC BOARD FLEXIBLOK REGION DIG INPUT ASSY	2
1C44615G03	PC BOARD FLEXIBLOK REGION DIG INPUT ASSY	2
1C44615G08	PC BOARD FLEXIBLOK REGION DIG INPUT ASSY	2
1C44615G08	PC BOARD FLEXIBLOK REGION DIG INPUT ASSY	1
1C44615G09	PC BOARD FLEXIBLOK REGION DIG INPUT ASSY	2
1C44615G10	PC BOARD FLEXIBLOK REGION DIG INPUT ASSY	2
1C44633G01	FLEXIBLOK WAYSIDE COMM PROCESSOR ASSY	2
1C44676G01	MANUAL ENABLE SWITCH PLATE ASSEMBLY	1
1C44701G01	PC BOARD FLEXIBLOK VEHICLE ATP CPU ASSY	2
1C44701G02	PC BOARD FLEXIBLOK VEHICLE ATP CPU ASSY	2
1C44702G01	PC BOARD FLEXIBLK VEH SER COM PRCSR ASSY	2
1C44810G01	WIPER MOTOR ASSEMBLY	2
1C44955G01	LIGHT PANEL ASSEMBLY	2
1C45405H06	TEMPERATURE SENSOR	4
1C45770G01	FLEXIBLOK REGION SOURCE DIG OUT PC BOARD	2
1C45770G01	PC BOARD FLEXIBLOK REGION SOURCE DIG OUT	1
1C45770G02	FLEXIBLOK REGION SOURCE DIG OUT PC BOARD	2
1C45770G03	FLEXIBLOK REGION SOURCE DIG OUT PC BOARD	2
1C45770G04	FLEXIBLOK REGION SOURCE DIG OUT PC BOARD	2
1C45771G01	FLEXIBLOK REGION SINK DIG OUT PC BOARD	2
1C45771G01	PC BOARD FLEXIBLOK REGION SINK DIG OUT	1
1C45771G02	FLEXIBLOK REGION SINK DIG OUT PC BOARD	2
1C45771G03	FLEXIBLOK REGION SINK DIG OUT PC BOARD	2
1C45771G04	FLEXIBLOK REGION SINK DIG OUT PC BOARD	2

**Appendix E-2: Spare Parts**

Part No	Description	Qty
1C45928G01	ROUTER MODULE ASSEMBLY	1
1C45928G02	ROUTER MODULE ASSEMBLY	1
1C46071G01	ALARM SWITCH ASSEMBLY	3
1C46122G01	NORMING POINT READER ASSEMBLY	1
1C46718G01	TRAIN REGISTRY 68040 CPU	1
1C46718G02	TRAIN REGISTRY 68040 CPU	1
1C46719G01	TRAIN REGISTRY SER COMM PRCSR	1
1C46720G01	TRAIN REGISTRY WAYSIDE COMM PRCSR	1
1C46831G01	FIBER OPTIC RACK ASSEMBLY	1
1D62645H01	MTG BRACKET FIBERGLASS MOLD	80
1D62645H02	MTG BRACKET FIBERGLASS MOLD - HIGH STR	16
1D62751H04	Knuckle	1
1D63190G09	VARISTOR SUPPRESSION DEVICE	2
2007E21G01	TRAIN REGISTRY CABINET	1
2007E43G01	REGION ATP VME CRADLE ASSY	1
203P516G01	PC BOARD BATTERY CHARGER & PULSE	2
203P521G02	P C BOARD BATTERY CHARGER AND PHASE	2
2125F98G02	RESISTOR ASSEMBLY	8
2127F15G03	GENL ASSEMBLY DUAL OUTPUT P-SIGNAL GEN	2
2127F15G04	GENL ASSEMBLY DUAL OUTPUT P-SIGNAL GEN	0
21D7111G01	CONTACT ASSEMBLY	8
2256F54G03	HIGH SPEED RAMP ASS'Y LEFT HANF (LEXAN)	2
2256F54G04	HIGH SPEED RAMP ASS'Y RIGHT HAND (LEXAN)	2
2257F71G03	Center Assembly, pivot beam	1
225P735G01	P C BOARD PROP. MONITOR PANEL LED ASSY	2
2263D94G01	BRUSH HOLDER ASSEMBLY	8
2263D99G01	CAPACITOR MOUNTING ANGLE AND ASSEMBLY	2
2263D99G02	CAPACITOR ASSEMBLY	4
2267D80G01	LEAF SPRING ASSEMBLY	2
226P152G02	P C BOARD DYNAMIC BRAKE GATE ASSEMBLY	2
226P174G02	PC BOARD 1 PHASE 60 HZ BATTERY CHGR ASSY	2
226P256G01	P C BOARD P SIG & BRK SIG GEN PWR ASSY	2
226P336G01	P C BOARD BATTERY CHARGER MONITOR ASSY	2
226P344G01	P C BOARD MANUAL CONTROLLER 15V	2
226P400G01	PC BOARD DOOR RECEIVER/DRIVER ASSEMBLY	3
2271D28G01	PINION SHROUD ASSEMBLY	1
2271D28H02	SHROUD 16.87 X 5.30) .062 THK STL	1
227D847H01	TRANSFORMER	2
22A8997G04	STATIONARY PART	0
24D3488H01	STD ARC HORN 1.375) .063 X 1.75 CU	6
2525F21G02	VEHICLE AIR PIPING	0
2528F96G03	GEN ASS'Y TRANS MOTOR D.C. 1460-P3	3
2531B84G02	LIGHTNING ARRESTOR ASSEMBLY	2
2531F06G01	POWER & SIGNAL RAIL MOUNTING THRU SWITCH	0
2532B34G01	RIGHT HAND BALL SOCKET ASSEMBLY	2
2532B34G02	LEFT HAND BALL SOCKET ASSEMBLY	2
2534B39H01	ADJUSTABLE PRESSURE SWITCH #604G1	2

**Appendix E-2: Spare Parts**

Part No	Description	Qty
2534B39H02	ADJUSTABLE PRESSURE SWITCH #604G11	6
2534B78H02	MANUAL VALVE FULL PORT	2
2534B78H03	MANUAL VALVE FULL PORT	2
2535F20G01	BATTERY BOX ASSEMBLY	0
2536B52H03	HUBODOMETER SIZE 10 X 22.5 MICHELIN	2
2537B93G01	RESISTOR ASSEMBLY	2
2538B14H01	WINDOW GLAZING RBR EXTRN 160.00+/-2.00)	32
2538B23G01	RESISTOR ASSEMBLY	3
2538B23G02	RESISTOR ASSEMBLY	2
2539B87H01	DUST SHIELD FR .06 THK HALF HARD AL SHT	2
2559A61H06	GROMMET .50 ID .06 PNL	20
2559B24G01	TEMPERATURE SENSOR	2
2560B11G01	DRIVE SHAFT ASSEMBLY	2
2560B16H02	EXTINGUISHER (FIRE)	4
267P636G01	PC BOARD DUAL P. SIGNAL GENERATOR ASSY	2
267P680G01	PC BOARD TRANSMITTER ASSEMBLY	3
267P858G02	PC BOARDPOWER SUPPLY ASSEMBLY	2
267P926G01	PC BOARD OVERVOLTAGE CIRCUIT ASSEMBLY	2
2682F59G01	TOP DOOR TRACK R/H	0
2682F59G02	TOP DOOR TRACK L/H	0
2682F59H03	CAP RETAINER .125 THK STL	50
2687F29G01	CURRENT COLLECTOR ASSY (R/HAND)	8
2687F29G02	CURRENT COLLECTOR ASSY (L/HAND)	8
2688F16G03	I.D. RECEIVE ANTENNA ASSEMBLY	2
2688F16G04	I.D. TRANSMIT ANTENNA ASSEMBLY	2
2688F17G01	TYPE XMA-559 MANUAL CONTROLLER	3
268P052G01	PC BOARD BRUSH DETECTOR	2
268P060G01	PC BOARD ATC CRADLE MOTHERBOARD ASSEMBLY	1
2698A54H05	MAGNETIC HALL EFFECT SENSOR	5
2973A52G03	DIODE ASSEMBLY	3
2973A52G04	DIODE ASSY	2
3437C83G02	RADIUS ROD ASSEMBLY	2
3437C85H03	TIRE 10R-22.5 TRANSTEEL RADIAL	304
3437C97G01	SWITCH BOARD ASSEMBLY	0
3911C41H03	PRESSURE RELIEF	4
3925A65H01	RELIEF VALVE	4
3925A66H04	AIR CHECK VALVE	4
3925A67H03	VALVE QUICK RELEASE	12
3925A67H04	REBUILD KIT QUICK RELEASE VALVE	12
3925A67H05	SEALING RING QUICK RELEASE VALVE	12
3925A67H06	DIAPHRAGM QUICK RELEASE VALVE	12
3925A67H07	INSERT QUICK RELEASE VALVE	12
3925A86H02	RELAY VALVE	4
3925A87H01	VALVE PRESSURE HOLDING	2
3926A37H01	TRANSFORMER SIGNAL OR PULSE	3
3926A72H01	RESISTOR 10 OHMS 11W 5% TYPE 99	2
3926A89H01	TRANSFORMER SIGNAL OR PULSE	3

## Appendix E-2: Spare Parts

Part No	Description	Qty
3927A03H21	CAPACITOR 1.0 UF 100 V +-5%	2
3927A06H41	RESISTOR 120 1/4W 5% RC07	4
3927A06H67	RESISTOR 1.5K 1/4W 5% RC07	2
3927A08H56	RESISTOR 510 OHMS 1W 5% TYPE RC 32	2
3927A22H01	TRANSFORMER	2
3930A47H04	TRANSFORMER POWER	4
3968C17H04	PUSHBUTTON (S.P.D.T.) CAT#OT1C1A	2
3968C50G02	ARMATURE ASSEMBLY	0
3972C53G01	GATE LEAD PANEL	4
3972C86H01	RIM (PAINTED)	8
3973C13H01	CHOKER	2
3973C14H01	TRANSFORMER 575/36/36	2
3973C86H12	KEYSWITCH	2
3973C86H13	PUSHBUTTON	2
3A62819H01	DISK DRIVE	1
3A63290H29	PIN COTTER .125 X 1.00 LG ZINC YEL CRMT	200
3A63290H31	PIN COTTER .125 X 1.50 LG ZINC YEL CRMT	100
3A63407G01	CAPACITOR W/MTG BRACKETS (660 VOLT)	4
3A63565H03	CAPACITOR 50UF 370VA	1
3A63565H03	CAPACITOR 50UF 370VA	1
3A63565H04	FUSE 1/2A 500VAC TIM	2
3A63565H04	FUSE 1/2A 500VAC TIME DELAY	2
3A63565H05	FUSE 2A 500VAC TIME DELAY	2
3A63565H05	FUSE 2A 500VAC TIME DELAY	2
3A63565H06	FAN MAJOR 115VAC 50/	1
3A63565H06	FAN MAJOR 115VAC 50/60HZ	1
3A63565H11	THERMAL PAD MOD 3.70X 1.89	2
3A63565H11	THERMAL PAD MOD 3.70X 1.89	2
3A63565H13	IGBT DUAL 600V 300A	1
3A63921H67	RESISTOR 1.5K OHM 2W +/-5% TOL	4
3A63921H67	RESISTOR 1.5K OHM 2W +/-5% TOL	1
3A64787G01	WIRELIST-TRAIN REGISTRY CABINET	1
3A64788G01	WIRELIST-TRAIN REGISTRY CABINET-A4 CRADLE	1
3D15179G01	LEVELING VALVE ASSEMBLY	4
3D15257G01	GATE CONTROL TRANSFORMER	2
3D15323H01	LEVELING VALVE	8
3D15403G01	Hard Ground Assy	6
3D15632G01	SPEED SENSOR ASSEMBLY	4
3D15632G02	SPEED SENSOR ASSEMBLY	2
3D15698G02	SWAY BAR ASSEMBLY	2
3D15968H01	Controller Model 7K	1
3D51640G03	PANEL ASSEMBLY	1
3D52075H02	MOTOR OPERATOR 120 VAC	2
3D99578G01	SWITCH HYDRAULIC UNIT	0
3D99727G01	HYDRAULIC POWER UNIT	1
3D99727H02	GEAR PUMP	2
3D99727H12	LEVEL GAGE (LHA)	1

**Appendix E-2: Spare Parts**

Part No	Description	Qty
3D99727H20	MOTOR 2HP 230/460 3PH. W/MTO	1
3D99914G01	LOW SPEED RAMP ASSEMBLY	1
404P102H74	TRANSFORMER	2
404P104H31	RESISTOR .20 OHM 10 WATT	2
404P111H54	CAPACITOR 52000 MFD-30 WVDC	3
404P112H92	POWER SUPPLY 85-264VAC QUAD OUT 350W	2
404P112H92	POWER SUPPLY 85-264VAC QUAD OUT 350W	1
404P112H93	POWER SUPPLY 24VDC IA 120VAC IN	2
404P115H06	L.E.D. (RED)	100
404P115H19	DIODE SPECIAL 100A 300V RECTIFIER	2
404P115H38	LED RED	10
404P117H95	RELAY 1300 OHM 16-24VDC 6FB STD.	2
404P117H96	RELAY GEN PURP 24DC 2A 6PDT 430 ohm	2
404P127H96	MODEM L/HAUL 1300 NM WFT-12 STAND ALONE	1
404P135H26	RESISTOR ADJUSTABLE 12 WATT WIRE WOUND	2
404P135H27	RESISTOR ADJUSTABLE 12 WATT WIRE WOUND	2
404P155H10	CAPACITOR	4
404P157H63	RESISTOR 50 WATT 33.2 OHM 1%	8
404P157H72	RESISTOR 1K OHMS 10.0W 1% RH10	2
404P157H90	RESISTOR 2W 1.5K OHM CARBON FILM	10
404P175H44	CLAMP KIT W/RETAINER 50 PIN	8
404P175H44	CLAMP KIT W/RETAINER 50 PIN	8
404P175H45	CLAMP KIT W/RETAINER 9 PIN	4
404P175H45	CLAMP KIT W/RETAINER 9 PIN	4
404P228H06	RESISTOR 2.2K OHMS 1W 5% RG1/2	14
404P290H13	1/2" Auto Aris, Vari-Focal CCTV Camera Lens	4
404P290H15	Video Switcher Controller Keyboard	1
404P290H18	20" Color Monitor	1
404P290H39	9832VI/O Quad Video I/O	1
404P290H40	9832VDA Quad Video Decoder	1
404P290H41	9832VEA Quad Video Encoder	1
404P290H42	9832RF Fiber Repeater	1
404P290H43	9832FT Fiber Transceiver	1
404P290H44	9832PS3 Power Supply	2
404P290H45	9832PS7 Power Supply	2
404P291H09	CONVERTER RS232 TO RS485	2
404P291H09	RS-422 / RS-485 Converter with Enclosure and 9VDC Supply	1
404P305H05	STRAIGHT SWIVEL	100
404P313H01	HOSE -04	200
404P313H02	HOSE .31 ID X .61 OD	1000
404P313H03	HOSE -08	500
404P313H05	HOSE -12	100
404P313H12	TEFLON HOSE	100
404P313H13	HOSE	200
404P313H14	TEFLON HOSE	100
404P313H15	TEFLON HOSE	100
404P332H03	SWITCH MOMENTARY ACTION	1

## Appendix E-2: Spare Parts

Part No	Description	Qty
404P335H48	SWITCH	1
404P335H49	SWITCH	1
404P336H05	ROTARY SWITCH	2
404P341H04	TERMINAL BLOCK UKK 5-DIO	3
404P341H04	TERMINAL BLOCK UKK 5-DIO	2
404P348H09	BLOCK CONTACT-N.O.	2
404P348H10	STD CONTACT BLOCK	2
404P356H17	RELAY RP 1-1/2 PCB	2
404P356H17	RELAY RP 1-1/2 PCB	1
404P356H19	RELAY EJECTOR	1
404P356H19	RELAY EJECTOR	1
404P357H02	LIGHT INDICATOR	11
404P357H04	LAMP	20
404P357H55	LED 12VDC RED	2
404P357H56	LED 12VDC GREEN	2
404P357H57	LED 12VDC AMBER	2
404P360H21	LED GREEN 24/28V	4
404P360H22	LED YELLOW 24/28V	4
404P360H38	LAMP INDICATOR LED MF YELLOW 24V	8
404P360H40	LAMP INDICATOR LED MF GREEN 24V	4
404P394H01	MOUSE INTELLIPOINT VERSION 2.0 COMBO	1
404P394H29	COMPUTER COMPONENT - KEYBOARD	1
404P394H45	LAPTOP TERMINAL 133 MHZ PENTIUM	1
404P394H71	MONITOR 22" DIAMOND PRO 2060 DESKTOP	1
404P394H72	17 PAGE PER MINUTE LASERJET PRINTER	1
404P402H03	SPRING	8
404P405H07	SPEAKER	4
404P405H09	SPEAKER	2
404P405H14	SPEAKER	2
404P405H22	SPEAKER 2.5	2
404P419H03	LAMP FLUORESCENT	90
404P419H11	LAMP FLUORESCENT 32 WATT 48 LG	100
404P419H14	LAMP FLUORESCENT 25 WATT 36.00 IN LG	20
404P427H05	FUSE 25 AMP	10
404P437H34	SPRING CONTACT (14-16 AWG)	100
404P437H34	SPRING CONTACT (14-16 AWG)	84
404P437H51	RELAY 9-30 VDC ADJ. TIMER 125 OHM	2
404P437H56	RELAY O.A. BIASED 400 OHM 6FB	4
404P437H56	RELAY O.A. BIASED 400 OHM 6FB	1
404P437H64	RELAY O.A. BIASED 1000/250 OHM	1
404P437H96	VITAL RELAY 12-14 VDC 800 OHM	6
404P437H97	RELAY TIME DELAY 24 VDC 11 PIN INTERVALON	4
404P437H98	COUPLER PARTS CENTER PLATE	2
404P438H09	DIODE	4
404P439H74	RESISTOR 2 WATTS 50 OHM N-MALE	2
404P443H02	RELAY SOCKET 8 PIN	2
404P443H07	RELAY SOCKET	2



## Appendix E-2: Spare Parts

Part No	Description	Qty
404P443H12	RELAY	3
404P443H16	RELAY	2
404P443H57	SPRING HOLD DOWN	40
404P443H67	RELAY SOCKET	3
404P443H92	RELAY 48 VDC 10 AMP 2 POLE	2
404P449H06	Spring, Contract SST	8
404P478H03	PRESS CONTROL 0/100 PSI W/0-10V OUTPUT	4
404P480H03	CONTACTOR	3
404P480H33	CONTACTOR	2
404P480H35	CONTACTOR INTERLOCK	2
404P485H28	4" Waterproof PA Speaker with 70 Volt / 4 Watt Transformer	10
404P488H22	BREAKER 2 POLE 4 AMP 240 VAC	4
404P488H22	BREAKER 2 POLE 4 AMP 240 VAC	20
404P488H32	CIRCUIT BREAKER GFI DIN MOUNTED	2
404P488H37	CIRCUIT BREAKER	2
404P491H27	AUDIO MATCHING TRANSFORMER	1
404P498H10	SWITCH PRESSURE	2
404P500H07	AMPLIFIER 6 WATT AUDIO POWER	1
404P500H09	MICROPHONE PREAMPLIFIER MODULE	1
404P500H10	1/8 DIN LCD GREEN BACKLIT DISPLAY	4
404P501H07	LINE AMPLIFIER ASSY W/LONWORKS CONNECTOR	1
404P501H08	LINE AMPLIFIER ASSY W/LONWORKS CONNECTOR	1
404P501H12	PA Amplifier 2 Channel x 100 Watt	1
404P502H34	FUSE 2.0 AMP 250 VOLTS 5X20 MM	10
404P502H35	FUSE 4 AMP 250V 5X20 MM	12
404P502H35	FUSE 4 AMP 250V 5X20 MM	3
404P502H36	FUSE 6.3 AMP 250 V 5X20 MM	6
404P502H36	FUSE 6.3 AMP 250 V 5X20 MM	2
404P506H02	SWITCH TOGGLE	4
404P506H05	SWITCH	2
404P506H11	TOGGLE SWITCH SPST 6A/250V	1
404P506H38	SWITCH TURN POSITION KEY	2
404P513H03	POTENTIOMETER	2
404P513H11	POTENTIOMETER	2
404P513H16	POTENTIOMETER 8 OHM	2
404P513H16	POTENTIOMETER 8 OHM	1
404P513H34	POTENTIOMETER 5K 2W PLASTIC W/LKG BSHG	1
404P532H02	SWITCH 2 PORT KVM	1
404P532H58	SWITCH KEY OPERATED 6 POLES	2
404P532H76	SWITCH ROTARY 45 DEG DETENT W/KNOB	1
404P532H82	SWITCH ROTATIONAL 3 POS LEAD-TRAIL	2
404P533H11	GROOVE PIN .125 DIA .875 LG STL	100
404P538H47	SPRING	12
404P538H57	SPRING .480 OD 1.50 FREE .045 WIRE	50
404P538H74	CONTACT SPRING AWG 18-20	8
404P538H74	CONTACT SPRING AWG 18-20	4
404P546H01	BEARING CUP	40

## Appendix E-2: Spare Parts

Part No	Description	Qty
404P546H02	BEARING CONE	40
404P546H03	BEARING CUP	40
404P546H04	BEARING CONE	40
404P547H04	SEAL	50
404P547H07	SEAL	50
404P547H46	TORQUE SEAL ORANGE	50
404P548H01	KEYED WASHER	8
404P549H01	GREASE CAP	8
404P551H01	CASTLE NUT	8
404P551H06	WHEEL STUD .500-20 1.31 LG	40
404P551H07	WHEEL NUT .500-20 NYLON RINGLOCK	40
404P554H22	FUSE	8
404P564H05	Bearing	4
404P567H14	SENSOR TIRE MONITOR KIT	8
404P585H14	FUSE 1.0 AMP 600 V 4 C 500 V DC	15
404P594H01	VARISTOR	8
404P594H24	VARISTOR 127 VDC	4
404P595H08	AB BREAKER 15 AMP	11
404P595H09	AB BREAKER 20 AMP	4
404P595H80	BREAKER MAGNETIC HYDRAULIC 5.0 AMPS	2
404P595H84	BREAKER 1 POLE 277 VAC 15A	4
404P595H87	BREAKER 1 POLE 277 VAC 30A	2
404P595H90	BREAKER 1 POLE 277 VAC 70A	2
404P598H04	POTENTIOMETER 10K OHM 3 WATTS	1
404P598H05	POTENTIOMETER 1K OHM 3 WATTS	1
404P600H35	WASHER .382 ID .750 OD .032 T SST	100
404P611H50	CAPACITOR 20 UF 370VAC	2
404P617H48	BREAKER 40A 227 VAC 1 POLE	2
404P630H15	RELAY 24VDC	2
404P630H22	RELAY 24VDC 2 DPDT 10 AMP	4
404P630H25	RELAY MODULE UMK22-REL12/21-21	1
404P649H02	FILTER	4
404P649H28	FAN 24 VDC BALLBEARING 35CFM	2
404P649H40	FAN TRAY ASSEMBLY 115VAC 192CMH X3 FANS	1
404P649H40	FAN TRAY ASSEMBLY 115VAC 192CMH X3 FANS	1
404P650H16	BUMPER 1.00 DIA .69 LONG RUBBER	16
404P659H01	RELAY LIGHTING	10
404P660H01	BALLAST SINGLE LAMP	8
404P660H02	BALLAST DOUBLE LAMP	8
404P661H01	LAMP SOCKET FLOURESCENT SIDE INSERT	8
404P663H06	RF SWITCH 4-POS N-M CABLE HARNESS	2
404P681H30	FLANGE BEARING .502 I.D. .691 O.D. .75 LG	1
404P682H01	CONTROL RELAY	2
404P682H02	CONTROL RELAY	2
404P682H21	RELAY GERMAN SIGNAL (6NO/2NC)	20
404P682H22	RELAY GERMAN SIGNAL (4NO/4NC)	4
404P682H23	HEAVY DUTY DC CONTROL RELAY	2

**Appendix E-2: Spare Parts**

Part No	Description	Qty
404P683H08	THYRISTOR 200V 70A	3
404P690H01	End, Right Hand Rod	1
404P690H02	End, Left Hand Rod	1
404P690H03	End, Right Hand Rod	1
404P690H04	End, Left Hand Rod	1
404P694H06	INDICATING LIGHT	4
404P694H12	PUSHBUTTON FLUSH 2-NO 2-NC WHITE	2
404P694H13	PUSHBUTTON FLUSH 2-NO 2-NC BLUE	2
404P697H36	BATTERY GEL CELL 97 AMP HR 12V	2
404P699H01	SOLENOID VALVE	2
404P700H01	DOUBLE CHECK VALVE	2
404P701H09	LOW POWER LINE FILTER 3A	2
404P703H07	TOGGLE SWITCH.	2
404P703H55	SWITCH TOGGLE	2
404P703H67	SWITCH TOGGLE	1
404P703H72	SWITCH SUB MINIATURE PUSHBUTTON	2
404P708H54	115 VAC Power Supply	1
404P708H65	POWER SUPPLY	1
404P709H11	TRANSMITTER CARTRIDGE	2
404P709H60	DIGITAL VOICE ANNOUNCEMENT UNIT	1
404P709H74	RADIO EQUIPMENT MDR 18-32 VDC	1
404P709H75	RADIO EQUIPMENT BDR RACK MOUNT	1
404P709H78	N-CONNECTOR, EPOXY SEAL	1
404P709H79	2-4 GHZ, EPOXY SEAL	4
404P709H80	2-4 GHZ, EPOXY SEAL	2
404P709H81	2-4 GHZ, EPOXY SEAL	1
404P709H83	POWER DIVIDER, 1-4 GHZ	2
404P709H85	DIRECTIONAL COUPLER	1
404P709H90	DOUBLE RF HYBRID	1
404P732H10	ANTENNA 902-928 MALE TAG READER	2
404P747H18	SWITCH ASSY W/CONNECTOR MS3112E-12-8P	1
404P747H23	FDDI BYPASS SWITCH SC-SC-DB9 RACK-2M	2
404P747H25	SWITCH FDDI BYPASS SC-SC-MDIN RACK-2M	1
404P765H10	RESISTOR MTG HDW 210-1000	2
404P765H11	RESISTOR MTG HDW 210-12 WATT	2
404P810H03	VALVE PRESSURE RELIEF	2
404P810H04	SOLENOID VALVE	2
404P810H05	SOLENOID VALVE	2
404P810H06	SOLENOID VALVE	2
404P810H22	VALVE 1/4 3 WAY DIRECT ACTING	2
404P810H24	VALVE REPAIR KIT FOR 404P810H22	4
404P813H18	FILTER	4
404P813H19	CHECK VALVE .38-14 NPTF DRY SEAL	2
404P820H22	FILTER ELEMENT (10B)	4
404P829109	MONITOR 37 INCH SVGA	1
404P829118	OTR-150 Optical Transceiver	1
404P829126	HARD DISK DRIVE 2.5 GBYTES	1

## Appendix E-2: Spare Parts

Part No	Description	Qty
404P829128	250 WATT COMPUTER POWER SUPPLY	2
404P837H01	SONALERT 10-48 VDC 4500 HZ	1
404P837H02	SONALERT 10-48 VDC 1900 HZ	1
404P837H03	SONALERT	1
404P840H01	PRESSURE GAUGE	1
404P840H11	PRESSURE GAGE 0-160PSI BK MOUNT	4
404P840H12	PRESSURE GAGE 0-300PSI BK MOUNT	4
404P840H13	PRESSURE GAGE 0-60PSI BACK CONN.	2
404P903H44	CONTACT BLOCK SPST N.O.	2
404P930H02	BELT	4
404P931H07	FLTR MEDIA 12.88 X 13.88 X .75 THK FOAM	8
404P949H07	BOOT	8
404P949H08	SHOCK ABSORBER 1.38 BORE .63 ROD	8
404P963H30	POWER SUPPLY 12 VDC	1
404P963H32	POWER SUPPLY 115 VAC PLUG-IN	1
404P963H36	POWER SUPPLY 115VAC - 9VDC PLUG-IN	1
404P968H10	HAND PUMP SINGLE PISTON	1
404P988H85	SWITCH TYPE UK5-MTK-P/P	2
404P988H89	TERMINAL BLOCK FUSED W/LED 15-30V	4
404P988H89	TERMINAL BLOCK FUSED W/LED 15-30V	5
404P988H97	FUSE PLUG 5-15V AC/DC W/LIGHT	10
404P988H98	FUSE PLUG 15-30V AC/DC W/LIGHT	8
404P996H02	VALVE IN-LINE CHECK	2
404P996H03	CHECK VALVE	2
404P996H06	TOGGLE VALVE .25 M/.25 M .125 ORIFICE	4
404P996H08	Valve, Bleeder	1
4077B45H02	D C AMMETER 1)	2
4077B76G02	SWITCH ASS'Y	2
4078B16H01	VOLTMETER	1
4078B51H01	THYRISTOR	4
4078B74G01	STD. INTERLOCK MOVING PART ASSEMBLY	8
4078B89H01	SWITCH TEMPERATURE LEVEL	1
409P033H98	TRANSPONDER INTERROGATOR - VEH 10 CHAR	2
409P034H04	REDUNDANT MODBUS PLUS OPTION ADAPTER	3
409P034H07	MODULE I/O BASE	2
409P034H37	MODICON PLC COMPACT CONTROLLER 984-120	2
409P034H43	DEP 218 INPUT MODULE 115 VAC	4
409P034H45	SERIAL ADAPTER LONTALK SLTA-10	1
409P071H02	Digital Sound Processor	1
409P084H04	CBX SLA16 Subscriber Line Analog Module	1
409P084H04	CBX PSUI Power Supply Unit.	1
409P084H05	CCF Operator Display Telephone	1
409P084H05	MSF Office Telephone	1
409P084H06	Wall Mount Telephone	1
409P084H07	Passenger Station Emergency Telephone	1
409P084H08	Blue Light Telephone with AE700 Surface Mount Enclosure	1
409P119H52	POWER SUPPLY RACK MOUNTABLE	2

**Appendix E-2: Spare Parts**

<b>Part No</b>	<b>Description</b>	<b>Qty</b>
409P119H91	POWER SUPPLY ASSEMBLY (#S10833)	1
409P129H23	AIR CONDITIONER MOISTURE INDICATOR	6
409P176H05	SMOKE ALARM RELAY BASE	4
409P177H28	AUDIO AMPLIFIER UNIT	1
409P177H34	BEAM POWERED TRANSPORTATION TAG	2
409P177H34	BEAM POWERED TRANSPORTATION TAG	4
409P177H35	TRANSPONDER INTERROGATOR - WAYSIDE	2
409P180100	RS232 TO RS485 OPTICAL ISOLATED MODEM	1
409P180102	3 PCI 2 CPU 8 ISA SLOT BACKPLANE	1
409P180H98	DISPLAY TERMINAL TOUCH SCREEN	2
409P188103	8.4 GBYTE HARD DISK DRIVE	1
409P188110	120MBYTE REMOVABLE DISK DRIVE	1
409P188H26	RESISTOR TERMINATOR CAPS BNC 50 OHM	2
409P188H26	RESISTOR TERMINATOR CAPS BNC 50 OHM	2
409P188H27	TRANSCEIVE CONNEX MINI BNC	2
409P188H27	TRANSCEIVE CONNEX MINI BNC	2
409P189H01	CONTROLLER 1.5 K	1
409P189H02	POWER SUPPLY 120 VAC 24 VDC	3
409P189H03	EEPROM CARD 8 K BYTE	2
409P189H04	SUBRACK PRIMARY	1
409P189H05	SUBRACK SECONDARY	1
409P189H06	CABLE BUS EXTENSION	1
409P189H08	OUTPUT MODULE 8 PT RELAY	4
409P189H11	INPUT MODULE 16 POINT 24 VDC	2
409P189H20	CONTROLLER MOMENTUM PROCESSOR	3
409P191105	RECEIVER 62.5 MULTIMODE 10 DB BUDGET	1
409P191106	TRANSMITTER 62.5 MULTIMODE 10 DB BUDGET	1
409P191111	FIBER OPTIC/RF CONVERTER BASE UNIT	1
409P191125	FIBER OPTIC SYSTEM	2
409P196H43	MODEL 857 10 SLOT CARDFILE W BACK PLANE	1
409P196H70	1/3" CCD Color CCTV Camera (120VAC)	4
409P197H24	PCI GRAPHICS CARD	1
409P197H25	DIGI 8 PORT SERIAL BOARD	1
409P197H75	144 MBYTE STATIC RAM DISK DRIVE	1
409P197H80	40X CD ROM DRIVE	1
409P198H24	COMPUTER COMPONENTS	1
409P199143	Digital to Analog Audio Converter	1
409P199H39	ETHERNET LAN 12 PORT HUB	1
409P199H52	SEC SERIAL PORT/PS2 MOUSE CABLE & KIT	1
409P199H62	CONTROL MODULE - CPM 6400	1
409P199H63	POWER SUPPLY FOR MATRIX SWITCH RACK	1
409P199H65	8-PORT I/O MODULE (RS-232) - CPM 6400	1
409P199H93	SUPERSTACK II SWITCH 2200	1
409P199H99	56 KBPS INTERNAL FAXMODEM	1
409P210H17	HIGH RESOLUTION VIDEO CONVERTER	1
409P210H18	VIDEO MONITOR - 20	1
409P210H19	KEYBOARD VIDEO CONTROLLER	1

## Appendix E-2: Spare Parts

Part No	Description	Qty
409P210H20	TIME LAPSE VIDEO RECORDER	1
409P219H12	RING SEAL	4
409P236H10	RELAY	2
409P236H13	TERMINAL BLOCK TYPE UKK5	10
409P237H05	LOWER PLATE	2
409P237H06	UPPER PLATE	2
409P237H11	COUPLER PARTS RUBBER BUFFER	4
409P237H16	DUST CAP	2
409P237H17	ROLL PIN 8 X 45	4
409P237H19	RUBBER BUMPERS	2
409P241H01	GASKET COUPLER	4
409P241H02	GASKET COUPLER	4
409P241H05	PIN CENTER	2
409P241H06	NUT CENTER PIN	2
409P241H07	RING RUBBER	4
409P241H09	BUSHING UPPER CENTER	2
409P241H10	BUSHING LOWER CENTER	2
409P248H75	PC BOARD 10 SLOT VME J1 BACKPLANE	1
409P248H75	PC BOARD 10 SLOT VME J1 BACKPLANE	2
409P248H76	PC BOARD 7 SLOT VME J1 BACKPLANE	1
409P248H77	PC BOARD 5 SLOT VME J1 BACKPLANE	1
409P248H79	PC BOARD 2200 DAS PCI FIBER FDDI ADAPTER	1
409P248H88	48 Power Supply and Ringing Generator (48V/25Hz)	1
409P249101	12-Port Analog Voice Interface Card (12LVOI-P)	1
409P249102	High Quality Audio / Public Address Interface Card (HQAUD-M)	1
409P249102	High Quality Audio / Public Address Interface Card (HQAUD-S)	1
409P249103	4-Wire E&M Interface Card	1
409P249104	BORA Common Logic Module	1
409P249105	RS 422 Interface Card	1
409P249106	RS-485 interface Card	1
409P249107	RS 232 Interface Card	1
409P249110	12-Port Analog Voice Interface Card (12LVOI-T)	1
409P250H94	FILTER ASSEMBLY	35
409P262H24	PA Ambient Noise Sensing Controller	1
409P276H13	WIPER BLADE ASSEMBLY (31.5)	4
409P301H01	Hi-Tech Spare Parts Kit Includes: 1 Complete Dynamic Message Si	1
409P302H61	MOTOR, 2HP, 480V, 1800RPM, 56C	1
409P302H62	BEARING CARBON GRAPHITE, 1.5"	1
409P302H63	BEARING - 4 BOLT FLANGE, 1"	6
409P302H64	1" BORE, #1610 TAPER LOCK BUSHING	2
409P302H65	FUSE AJT30	2
409P302H66	FUSE GGM-4	2
409P302H67	FUSE FRN-R-5	1
409P302H68	RECEIVER EYE IR-M12-15M	1
409P302H69	MANUAL AMO/TIMER ISG-N34-115V	1
409P302H70	TRANSMITTER EYE IT M12 35M	1
4166A87H01	RELAY TYPE B	3

**Appendix E-2: Spare Parts**

Part No	Description	Qty
4227B27G01	CONTACT STUD ASSEMBLY	32
4227B59G01	CAM SHUNT	8
4567B03H07	CAPACITOR 1 UF 660 VAC	6
4675C15G04	BRAKE TRANSFORMER	0
4677C95G09	VARISTOR ASSEMBLY	4
4677C95G28	VARISTOR SUPPRESSION DEVICE	3
4678C64G01	TRANSFORMER & POTENTIOMETER PANEL ASSY	2
4680C29G04	AAR RACK ASSEMBLY	0
4680C65H01	AIRSIDE SPRING	8
4682C17G02	BRUSH HOLDER PIN	32
4722A43H02	BOLT .500-13 X 1.25 HEX HD STL	100
4766A18G02	VARISTOR ASSEMBLY	6
4766A18G05	VARISTOR ASSEMBLY	4
4766A18G08	VARISTOR ASSEMBLY	6
4766A40G06	DIODE ASSEMBLY	4
4766A40G11	DIODE ASSEMBLY	2
4766A40G12	DIODE ASSEMBLY	2
4766A40G13	DIODE ASSEMBLY	8
4766A40G16	DIODE ASSEMBLY	3
4766A40G18	DIODE ASSEMBLY	4
4767A67G01	LIGHTNING ARRESTER	14
4767A86H12	BALL VALVE	2
4767A86H15	Valve, Check	1
4767A90G01	STD. CONTACT INTERLOCK FINGER	8
4768A05H11	CRITICAL RELAY 4 FORM C 24V	4
4768A30H01	TRANSFORMER	4
4776A87H01	FUSE BLOCK #3519 0-60 AMPS 600V	4
4778A79G01	STD. FINGER INTERLOCK	10
4893B70H02	GAUGE	3
4894B90H01	SPRING .0747 THK SST	16
4896B59H01	SWIVEL STEM 3.50) .375 DIA STL	16
4896B60H01	SPACER .505) .375 DIA 1/2 HARD BRS	8
4898B19G06	LIGHTNING ARRESTER ASSEMBLY	8
4898B19G07	LIGHTNING ARRESTER ASSEMBLY	8
4898B51G02	PINNED POWER RAIL INSTALLATION	0
4898B51G04	PINNED SIGNAL RAIL INSTALLATION	0
4899B59H01	PIN 3.50) .375 DIA	100
4899B64H01	EXTENSION SPRING	12
4899B65H03	ALIGNMENT PLATE 1.75 X .75) .125 THK	40
4D02279G02	TRANZORB ASSEMBLY	2
5574C12H06	Cylinder Hydraulic	1
5574C31G03	GUIDE TIRE ASSEMBLY	0
5574C31H03	TIRE	16
5574C40G01	DOOR SLIDE ASSEMBLY L.H.	2
5574C41G01	DOOR SLIDE ASSEMBLY R.H.	2
5574C95H04	Ramp	7
5574C95H05	Ramp	6

**Appendix E-2: Spare Parts**

Part No	Description	Qty
5575C64H02	SWITCH SNAP ACTION ROLLER	2
5578B62G01	BRUSH HOLDER ASSEMBLY	16
5579B40H01	FAN DC BRUSHLESS	6
5580B05G01	RESISTOR ASSY 11 K 1 W	2
5580B05G02	DIODE ASSY IN5399	2
5582B88H01	BEARING	64
5585B41H05	ADJUSTING PLUNGER ASSY 16 DEGREE ANGLE	8
5585B41H05	ADJUSTING PLUNGER ASSY 16 DEGREE ANGLE	16
5585B78H01	CHANNEL 5.00 X 1.92) .062 THK SST	20
5585B79H01	ARM 11.00) .375 DIA STL	64
5585B85H01	KEEPER 9.50) .188 X 1.00 CF STL	20
5585B93H01	BRUSH HOLDER PLUG 2.00) .625 X 1.50 BR	16
5586B24H02	SWIVEL STEM 4.25) .375 DIA STL	50
5586B62H02	CYLINDER HIGH PRESSURE	2
5586B62H03	GASKET	2
5586B62H04	CYLINDER LOW PRESSURE	2
5586B62H05	GASKET	2
5586B62H06	CAP SUCTION VALVE	2
5586B62H08	SEAL O-RING CAP	4
5586B62H09	SEAL FELT PLUNGER TO SLEEVE	4
5586B62H10	SEAL O-RING PLUNGER TO SLEEVE	4
5586B62H16	HEAD LOW PRESSURE CYLINDER	2
5586B62H17	GASKET LOW PRESSURE CYLINDER	2
5586B62H18	VALVE ASSEMBLY DISCHARGE	4
5586B62H20	VALVE ASSEMBLY SUCTION	4
5586B62H26	SEAL O-RING CAP	4
5586B62H27	SEAL FELT PLUNGER TO SLEEVE	8
5586B62H28	SEAL O-RING PLUNGER TO SLEEVE	4
5586B62H33	HEAD HIGH PRESSURE CYLINDER	2
5586B62H34	GASKET HIGH PRESSURE CYLINDER	2
5586B62H35	VALVE ASSEMBLY DISCHARGE	4
5586B62H37	VALVE ASSEMBLY SUCTION	4
5586B62H42	ELEMENT AIR CLEANER	38
5586B62H53	SPRING	2
5586B62H54	VALVE CHECK	2
5586B62H55	PIN	2
5586B62H56	SEAL PIN	2
5586B62H57	RETAINER OIL RELIEF SPRING	4
5586B62H58	SPRING OIL RELIEF	4
5586B62H60	PISTON	2
5586B62H61	DIAPHRAGM	4
5586B62H66	PISTON ASSEMBLY HIGH PRESSURE	4
5586B62H70	BALL NYLON OIL RELIEF VALVE	4
5586B62H73	SLEEVE RUBBER	4
5586B62H75	SEAL OIL FRONT	2
5586B62H81	CUP BEARING	4
5586B62H83	GASKET INTERCOOLER TUBE	8



**Appendix E-2: Spare Parts**

Part No	Description	Qty
5586B62H85	VALVE ASSEMBLY SAFETY	4
5586B62H86	O-RING OIL PUMP COVER	4
5586B62H87	ROTOR OIL PUMP	2
5586B62H88	VANE OIL PUMP ROTOR	8
5586B62H89	SPRING VANE	8
5586B62H91	PIN ROLL	4
5586B62H94	PIN ROLL	4
5586B66H01	CARBON BRUSH GRADE W187	32
5587B02G01	CYLINDER AIR COMPRESSOR - HIGH PRESSURE	2
5587B02G02	CYLINDER AIR COMPRESSOR - LOW PRESSURE	2
5587B07G01	CRANKSHAFT ASSY AIR COMPRESSOR	2
5587B09G01	PISTON & CONNECTING RODS - HIGH PRESSURE	2
5587B09G02	PISTON & CONNECTING RODS - LOW PRESSURE	4
5587B11G01	INTERCOOLER AIR COMPRESSOR	2
5587B12G01	REAR RETAINER AND OIL PUMP	4
5621B15G01	HUB AND SHAFT ASSEMBLY	0
5621B16G01	BRAKE PARTS	0
5621B19G01	GENERAL ASSEMBLY DRIVE AXLE	2
5624B12H01	LEVER 1)	1
5624B19H01	MODIFIED SOCKET	8
5625B54H02	CAP EXTRUSION (90.50)	16
5625B82H01	BUMPER E.A.R. ISODAMP #C.1002.25	4
5630B48G01	MICROPHONE ASS'Y	1
570A055H31	O RING STD SIZE 210	16
577B060H33	DIODE	2
5819C58G03	FINGER ASSEMBLY	16
5824C49G01	SOLENOID VALVE	4
5827C89H04	Cylinder Hydraulic	1
5D56060H21	CAM	6
5D72149G01	PROPULSION MONITOR ASSEMBLY	0
5D72500G04	SMOKE DETECTOR ASSEMBLY (GRAPHICS)	2
5D72501G02	SMOKE DETECTOR MOUNTING BRACKET	2
5D73028G01	PC BOARD R110 CONVERTER MOTHERBD ASS'Y	2
5D73062G01	PC BOARD GEALOC POWER SUPPLY ASSEMBLY	2
5D73065G01	PC BOARD MANUAL CONTROL II ASSEMBLY	2
5D73067G02	PC BOARD MANUAL CONTROL I ASSEMBLY	2
5D73091G01	PC BOARD FRANKFURT 16 SLOT P2 BACKPLANE	1
5D73122G01	PC BOARD FRANKFURT RELAY STAT IND ASS'Y	2
5D73200G01	PC BOARD GEALOC POWER SUPPLY ASSEMBLY	1
5D73201G01	PC BOARD DIGITAL INPUT PCB ASSEMBLY	1
5D73205G02	PC BOARD GROUND LOSS DETECTION ASSY	2
5D73206G01	PC BOARD AUDIO MATRIX ASSEMBLY	1
5D73220G01	PC BOARD ATCS SYNC/VITAL DRVR INTFC ASSY	2
5D73220G02	PC BOARD ATCS SYNCHRONIZER/VITAL DRIVER	2
5D73220G03	PC BOARD ATCS SYNC VITAL DRIVER	1
5D73221G01	PC BOARD MULTI PURPOSE I/O ASSEMBLY	2
5D73221G02	PC BOARD MULTI PURPOSE I/O ASSEMBLY	2

**Appendix E-2: Spare Parts**

Part No	Description	Qty
5D73222G02	PWR SUPPLY ASSY (24V IN 5V +/-12V OUT)	2
5D73299G01	PC BOARD LAS VEGAS RADIO RELAY I/O ASSY	2
5D73299G01	PC BOARD LAS VEGAS RADIO RELAY I/O ASSY	1
5D73338G01	PC BOARD DIGITAL OUTPUT ASSEMBLY	1
5D73338G02	PC BOARD DIGITAL OUTPUT ASSEMBLY	1
5D73412G01	PC BOARD RF INTERFACE ASSEMBLY	1
5D73412G02	PC BOARD RF INTERFACE ASSEMBLY	2
5D73413G01	PC BOARD 386 CPU ASSEMBLY	1
5D73449G01	PC BOARD NUMBER ONE END TERMINATION CARD	3
5D73449G02	PC BOARD NUMBER ONE END TERMINATION CARD	2
5D73452G01	PC BOARD BRAKE PROP CONTROLLER ASSY	2
5D73458G01	PC BOARD SAN FRANCISCO DOOR TX TERM ASSY	3
5D73463G01	PV BOARD SAN FRANCISCO NON-CPU M/B ASSY	1
5D73473G01	PC BOARD, DOOR TX/RX ASSEMBLY	2
5D73479G01	PC BOARD MANUAL SPEED LIMITER ASSEMBLY	2
5D74294H01	MOTOR 115 VAC 60 HZ	1
5D74330G03	FLAG ASSEMBLY TRIP STOP	1
5D74457G16	VEHICLE RADIO ASSEMBLY	0
5D74649G01	PHASE VOLTAGE RELAY GEN ASSY	2
5D74671G01	GUIDE WHEEL HUB ASSEMBLY	2
5D74715H01	COMPRESSOR	1
5D74715H07	VALVE-CHECK	4
5D74716H02	COIL - CONDENSER	2
5D74716H05	VALVE - RELIEF	4
5D74716H06	ISOLATOR - SHOCK MOUNT	8
5D74716H08	VALVE - SERVICE	2
5D74716H09	RECEIVER - LIQUID	4
5D74716H10	MOTOR - CONDENSER	2
5D74716H14	VALVE - PURGE	4
5D74716H20	VALVE - RECEIVER (INLET AND OUTLET)	3
5D74717H04	BLOWER (RH)	1
5D74717H08	MOUNT-SHOCK	16
5D74717H11	COIL-EVAPORATOR	2
5D74717H17	VALVE-LIQUID & MODULATING	2
5D74717H19	VALVE-EXPANSION	2
5D74717H23	THERMOSTAT-OVERHEAT	2
5D74717H24	BLOWER (LH)	1
5D76262H03	EQUALIZER VALVE 110 PSI	4
5D76263H22	VEHICLE RADIO 1)	1
5D77763G01	DIGITAL I/O INTERFACE MODULE PDISO-8	1
5D77773H05	ETHERNET EXPRESS PRO 10+	1
5D77773H06	ETHERNET EXPRESS PRO 10+	1
5D77998H27	FILTER DRIER CARTRIDGE	6
5D79410H01	DTE/TERM'D LINE DRIVER CARD	2
5D79410H02	DTE/UNTERM'D LINE DRIVER CARD	2
5D80189H01	CPU BOARD PENTIUM P5000HX SERIES	1
5D81178H01	ETHERNET PC LINK2 BD	1

## Appendix E-2: Spare Parts

Part No	Description	Qty
5D81799G01	CENTRAL RADIO SYSTEM COMPUTER ASSEMBLY	1
60A2872G37	CAM SWITCH TYPE XCA-398	2
6157A58H04	THERMAL RELAY	2
6246D69H09	SHACKLE 7.25 X 2.75) .38 HR STL	16
6523B68H01	Magnet	4
652A103H02	DRAIN VALVE	4
652A589H03	WASHER .202) 2.375 DIA STL	50
6961C69G01	ASSEMBLY DUAL QUICK RELEASE VALVE KIT	4
6965C16H02	TRANSFORMER ENCAPSULATED	2
6967C72G02	KNUCKLE CASTING	24
6967C72G03	KNUCKLE CASTING	8
6969C55G01	PANEL ASSEMBLY	0
6971C67H02	BREAKER 3 POLE 600 VAC 15 AMP	2
6971C67H07	BREAKER 3 POLE 600 VAC 15 AMP	3
6971C68H01	BREAKER 3 POLE 600 VAC 70 AMP	3
6971C68H04	BREAKER 3 POLE 600 VAC 125 AMP	2
6972C93G01	POWER RAIL JOINT ASSEMBLY	50
6972C93G02	SIGNAL RAIL JOINT ASSEMBLY	40
6972C93G04	HALF ALIGN PLATE ASSEMBLY	20
6972C93H01	Plate, Joint	6
6972C93H02	Plate, Alignment	6
6972C93H06	Plate, Joint	6
6972C94H05	POWER COVER 5 FEET BEIGE	100
6972C94H21	POWER COVER 2.50 FEET BEIGE	6
6972C95G03	ISOLATION GAP	10
6972C97G02	POWER TERMINAL	16
6972C98G02	Expansion Joint Power	6
6973C66G02	VARISTOR ASSEMBLY	4
6973C66G07	VARISTOR ASSEMBLY	4
6973C66G10	VARISTOR ASSEMBLY	4
6973C66G14	VARISTOR ASSEMBLY	2
6974C38H01	CARBON BRUSH GRADE 933	40
6976C08G05	ROLLER BEARING ASSEMBLY	6
6D56059G01	DOOR OPERATOR R.H.	4
6D56059H21	CAM	6
6D56060G01	DOOR OPERATOR L.H.	4
6D56130G01	POWER FEED ASSEMBLY	5
6D56434G01	HEADLIGHT/TAILLIGHT ASSY (CLEAR)	0
6D56434G02	HEADLIGHT/TAILLIGHT ASSY (RED)	0
6D56434H07	LAMP - HALOGEN HI/LO	16
6D56434H08	LAMP - INCANDESCENT RED	16
6D56529G01	PROGRAM SWITCH PANEL ASSEMBLY	0
6D56575G01	A/C COMPRESSOR ASSEMBLY UNIT	1
6D56575H04	SWITCH-HIGH PRESSURE	2
6D56575H05	SWITCH-LOW PRESSURE	2
6D56575H06	SWITCH-MODULATION PRESSURE	2
6D56575H15	ISOLATOR SHOCK MOUNT	12

## Appendix E-2: Spare Parts

Part No	Description	Qty
6D56575H18	TRANSFORMER	2
6D56575H19	CIRCUIT BREAKER - COMPRESSOR	2
6D56575H20	CIRCUIT BREAKER - CONDENSER FAN	2
6D56575H21	CIRCUIT BREAKER - OVERHEAD HEATER	2
6D56575H22	CIRCUIT BREAKER - BLOWER FAN	2
6D56575H23	CONTACTOR	4
6D56575H24	RELAY BASE OVERLOAD	2
6D56575H25	OVERLOAD	6
6D56575H26	OVERLOAD	6
6D56575H27	PC BOARD CONTROL	2
6D56576G01	HVAC EVAPORATOR ASSEMBLY	1
6D56576H02	MOTOR-BLOWER 2-SPEED	2
6D56576H07	WHEEL-BLOWER (CW)	1
6D56576H08	WHEEL-BLOWER (CCW)	1
6D56576H28	HEATER ASSEMBLY	2
6D56576H34	SWITCH-AIRFLOW	4
6D56576H36	SENSOR-RETURN AIR (NOT SHOWN)	4
6D56576H37	VARISTOR-SURGE SUPPRESSOR	4
6D56576H40	SWITCH FREEZE PROTECTION	2
6D56631G01	MANUAL CONTROLLER COMPARTMENT ASSEMBLY	0
6D56864G01	CENTRAL CONTROL COMPUTER ASSEMBLY	1
6D56865G01	FRONT END COMPUTER ASSEMBLY	1
6D56867G01	OPERATOR STATION COMPUTER ASSEMBLY	1
6D56868G01	GENERAL SYSTEM DISPLAY COMPUTER ASSEMBLY	1
6D56869G01	OFFICE NETWORK BRIDGE COMPUTER ASSEMBLY	1
6D57047G01	TERMINAL BLOCK ASSY - P24 DISTRIBUTION	1
6D57052G01	TERMINAL BLOCK PANEL - P24 DISTRIBUTION	1
6D57064G01	ATC2 CRADLE - ASSEMBLY	1
6D57226G01	ATO COMPUTER ASSEMBLY	1
6D57226G02	ATO COMPUTER ASSEMBLY	1
6D57228G01	INDUSTRY PACK BOARD ASSEMBLY	1
6D57252G01	POWER SUPPLY ASSEMBLY	1
6D57255G01	GRAPHICS FRONT END COMPUTER	1
6D57299G01	FIBER OPTIC TERMINAL BOX ASSEMBLY	1
6D57607H01	GEALOC FIELD POWER SUPPLY	2
6D57607H01	GEALOC FIELD POWER SUPPLY	1
6D57612G01	TERMINATION PANEL ASSEMBLY - JUMPER PNL	0
6D57695G01	TERM CARD CRADLE ASSEMBLY	0
6D57696G01	ATC2 CRADLE ASSEMBLY	0
6D57740G02	TERMINAL BLOCK ASSEMBLY	0
6D57761G01	SPEAKER/MICROPHONE PANEL ASSEMBLY	0
6D57762G01	SPEAKER/MICROPHONE INSTALLATION	0
6D57793G01	CONDENSER UNIT ASSEMBLY	1
6D57793H02	FAN-CONDENSER	2
6D57800G01	FIRE EXTINGUISHER INSTALLATION	0
6D57803H01	CPU BOARD	2
6D57803H02	CPU BOARD	2

## Appendix E-2: Spare Parts

Part No	Description	Qty
6D57820G01	SAN FRANCISCO VEH COMMUNICATIONS CABLE 18	0
6D57825G01	VEHICLE COMMUNICATION CONTROLLER HARNESS	0
6D57827H01	DTE/TERM'D OPTO-ISOL'D LINE DRIVER BD	2
6D57827H02	DTE/UNTERM'D OPTO-ISOL'D LINE DRIVER BD	2
6D57842G01	RACKMOUNT DISPLAY COMPUTER ASSEMBLY	1
6D58053H01	CENTRAL CONTROL - PWR SUPPLY ASSY	1
6D58550G01	IONIZATION SMOKE DETECTOR (CTR LOCATION)	3
6D59447G01	LOWER DOOR GUIDE - C-100 & CX-100 VEHICLE	4
6D59447G02	LOWER DOOR GUIDE - C-100 & CX-100 VEHICLE	4
6D59563G01	DYNAMIC GRAPHICS ASSEMBLY	4
6D59669H01	SERIAL INTERFACE BOARD	1
6D59669H02	SERIAL INTERFACE BOARD	1
70310CB07C	SPRING PIN .125 DIA X .750 LG SST	100
70310CB07F	SPRING PIN .125 DIA X 1.00 LG SST	40
70310CB0BA	SPRING PIN .188 DIA X 1.00 LG SST	100
70310CB0DT	SPRING PIN .250 DIA X 1.625 LG SST	300
70500CT00Y	WASHER .375 STD STL	100
70510CV10G	LOCKWASHER .138 REG STL	100
70510CV10Q	LOCKWASHER .375 REG STL	100
70510DL10S	LOCK WASHER .500 X-DUTY STL	100
73482AP00S	FUSE 60A 250V SB	10
760C217G07	SHUNT	8
795C168G01	CONTACTOR ARC CHUTE - MOLDED	4
8368D84H26	VEHICLE GLASS	8
8368D84H27	VEHICLE GLASS	2
8368D84H28	VEHICLE GLASS	4
8368D93G06	TYPE TE-359 BTRY CHGR & DOOR SPLY G/ASSY	2
8584C27G01	HYDRAULIC HOSE ASSEMBLY	1
8584C27G02	HYDRAULIC HOSE ASSEMBLY	1
8584C27G03	HYDRAULIC HOSE ASSEMBLY	1
8584C27G05	HYDRAULIC HOSE ASSEMBLY	1
8588C18H01	SWITCH 2 POS - 12 CONTACT	2
8589C64100	SPRING BRAKE CHAMBER ASS'Y	8
8589C64100	SPRING BRAKE CHAMBER ASS'Y	8
8589C64185	SEAL ADJUSTING BOLT	16
8589C64185	SEAL ADJUSTING BOLT	32
8589C64H13	SPINDLE WHEEL BEARING	1
8589C64H14	O RING	60
8589C64H62	CONE HUB BRG. OUTER	4
8589C64H63	CUP HUB BRG. OUTER	4
8589C64H64	NUT WHEEL STUD	40
8589C64H67	CUP HUB BRG. INNER	4
8589C64H68	CONE HUB BRG. INNER	4
8589C64H69	OIL SEAL HUB BRG.	8
8589C64H71	BRAKE DRUM	4
8589C64H72	CAP SCREW	40
8589C64H74	BRAKE LINING KIT	8

**Appendix E-2: Spare Parts**

Part No	Description	Qty
8589C64H77	COLLET NUT - BRAKE CHAMBER	8
8589C64H77	COLLET NUT - BRAKE CHAMBER	16
8589C64H78	RIVETS	140
8589C64H79	LININGS	16
8589C64H80	BOLT ADJUSTING	16
8589C64H80	BOLT ADJUSTING	32
8589C64H86	CAP SCREW HOLD DOWN CLIP	8
8589C64H86	CAP SCREW HOLD DOWN CLIP	16
8589C64H87	SPRING - BRAKE SHOE RETURN	8
8589C64H87	SPRING - BRAKE SHOE RETURN	16
8589C64H88	BRAKE SHOE & LINING ASS'Y	8
8589C64H88	BRAKE SHOE & LINING ASS'Y	16
8589C64H90	NUT HOLD DOWN CLIP	8
8589C64H90	NUT HOLD DOWN CLIP	16
8589C64H91	CLIP HOLD DOWN	8
8589C64H91	CLIP HOLD DOWN	16
8589C64H93	WEDGE ASSEMBLY	8
8589C64H93	WEDGE ASSEMBLY	8
8589C64H94	SPIDER BRAKE	8
8589C64H94	SPIDER BRAKE	2
8591C07H01	SIGNAL COVER 5 FEET BEIGE	80
8591C07H13	SIGNAL COVER 2.50 FEET BEIGE	4
8591C09G01	SIGNAL EXPANSION JOINT ASS'Y	10
8591C12G01	SIGNAL ISOLATION JOINT	6
8592C16G03	STD. CONTACTOR 200 AMPS TYPE UMC-109A	2
8592C18G06	STD CONTACTOR AND INTERLOCKTYPE UMC-109G	2
8593C08H03	TRANSFORMER 600V/60HZ & 600V/50HZ 10VA	3
8593C21G01	CYLINDER HEAD ASSY - LOW PRESSURE	2
8593C22G01	CYLINDER HEAD ASSY - HIGH PRESSURE	2
8593C23G01	OIL PUMP COVER (WITH UNLOADERS)	2
8594C63H02	STD. FAN 24 VDC 94 CFM	3
8594C63H04	STD. FAN 12 VDC 106 CFM	3
8617A79G01	CONTACT WITH INSERT	8
8618A09G07	RESISTOR ASSEMBLY	1
8838D98H01	WHEEL HUB	2
8840D42G06	GENERAL ASSEMBLY TYPE UT-323 OVERLOAD	2
8840D61G01	RESISTOR PANEL R.H.	2
8840D61G02	RESISTOR PANEL L.H.	2
8840D61G03	RESISTOR PANEL R.H.	1
8840D61G04	RESISTOR PANEL L.H.	1
8840D97G02	INDICATOR ASSEMBLY	2
8840D97G03	PUSHBUTTON ASSEMBLY	2
8840D97G04	PUSHBUTTON ASSEMBLY	2
8840D97G05	PUSHBUTTON SWITCH ASSEMBLY	2
8840D97G07	PUSHBUTTON ASSEMBLY	2
8840D97G08	PUSHBUTTON ASSEMBLY	2
8840D97G09	PUSHBUTTON ASSEMBLY	2

**Appendix E-2: Spare Parts**

<b>Part No</b>	<b>Description</b>	<b>Qty</b>
8840D97G11	PUSHBUTTON ASSEMBLY	2
8840D97G12	PUSHBUTTON ASSEMBLY	2
8840D97G13	PUSHBUTTON ASSEMBLY	2
8840D97G14	PUSHBUTTON ASSEMBLY	2
8840D97G32	PUSHBUTTON ASSEMBLY	2
8840D97G38	PUSHBUTTON SWITCHES & INDICATORS	2
8840D97G44	INDICATOR ASSEMBLY	2
8840D97G83	ALARM TEST PUSBUTTON ASSEMBLY	2
8840D97G84	FLUID LEVEL INDICATOR ASSEMBLY	2
8840D97G85	PUSHBUTTON ASSEMBLY	2
8844D32G01	AIR CONTROL PKG SOLENOID VALVE	2
8844D32H02	COIL, 24 VDC	4
8844D32H03	REPAIR KIT	4
ZL145WA	Siemens Hicom CBX w/ 31E5533, 31E4405, & SLA16N	2
VideoPoster VPIII	Apollo Display Technology (Video PC Boards)	4
46" LCD Display	Apollo Display Technology (46" Monitor)	8

## Appendix E-2: Tools, and Equipment List

Item	Qty	Part No.	Location
Laser printer	2		2ND FLOOR
Laser color printer	1		2ND FLOOR
IBM compatible PCs (servers)	2		2ND FLOOR
Spectrum analyzer w/noise marker	1		ALFREDO
Tic tracer	12		ALL TECHS
Frequency/Time domain reflectometer	1		AVMET V102
Traction Motor Support Cradle	1	5D79169G01	BAY 5 WALL
Dot matrix printers	2		CENTRAL
System simulator	1		CENTRAL
Soldering/desoldering stations	2		ELEC ROOM
Soldering iron	2		ELEC ROOM
Bench VAST	1		ELEC ROOM
Portable VAST	1		Supply room
Prom programmer	1		ENG OFF
Tool, Actuation, Flat Tire System	1	401P401H14	LEAD DESK
Battery soldering iron	2		LIB
End Play Measuring Tool	2	6D55567G01	Mech Room
Guidewheel Assembly Fixture	1	6D55460G01	Mech Room
Bearing Cup Driver (Upper)	1	1C44422G01	Mech Room
Bearing Cup Driver ( Lower)	1	1C44423H01	Mech Room
Grease Seal Driver	1	1C44424H01	Mech Room
Grease Seal Driver (Lower)	1	1C44425H01	Mech Room
Dust Shield Driver	1	1C44418G01	Mech Room
Coupling Hub Hydraulic Removal Assy	1	3D51371G01	Toolcrib
Plate 11.00 X 23.63 X .25 Thk Alum (H01)	3	1C43246H01	Mech Room
Planetary Hub Bearing Cup Puller	1	5D56121G01	I108
Plannetary Hub/brake Drum Cradle	1	1C43244G01	BAY 5 WALL
Planetary Ring Gear Lifting Tool	1	1C43137G01	V104
Dust Seal Driver	1	1B39122H01	Mech Room
Brake Adjustment Tool	1	1C43136H01	Mech Room
Cable W/Custom Deutsch Connector	1	404P723H32	LEAD DESK
6 channel chart recorder	1		mechrm cab
8 channel chart recorder	1		mechrm cab
Power supply, 40 V - (BK Model 6020, 0-60v)	1		mechrm cab
Digital thermometer	1		MRA3.
Track mapper	0		NA
IBM compatible PCs (work stations)	21		OFFICES
Portable IBM compatible PC	2		SUPS
Analog multimeter, portable, Simpson 260-p	1		ENG OFF
Ty wrap tool	3		TOOL WALL
Frequency counter	1		U127
Function generator	1		U127
Signal generator, Lizard portable Transmitter	1		LIB
Power meter w/power head	1		U127
Sound level meter	1		U127
Bench model DMM	1		U132
Hi-pot	1		U132
Power supply, 0-30 V, ELECTO IND. MODEL 3012A	1		U132
Fluke, 123 Scopemeter	1		V131
FLuke, 43B Power Analyser	1		V133
Megger, 1000 V, AVO Model 210600	1		V102
Commutator Resurfacing Tool Assy	1	2255F39G01	V103
Hub Seal Driver	1	1B39123H01	V103
Grease Cap Driver	1	1C44419H01	V104
Bearing Nut Removal Tool	1	3D51373G01	V104
Bearing Cup Driver	1	1B39120H01	V104
Bearing Cup Driver	1	1B39121G01	V104
Pinion Yoke Removal/Installation Tool Set	1	5D74845G01	V104



**Appendix E-2: Tools, and Equipment List**

Item	Qty	Part No.	Location
Socket 1.75 Hex Special	1	4077B16G02	V104
Special Socket 1)	1	4724A87H02	V104
Phase sequence indicator	1		V107
Clamp-on current meter (AC/DC) FLUKE 31	1		V107
Heat gun	2		V111
Hand-held DVM	8		V112, MRA3
Force gauge	1		V117, MRA1
Clamp-on current probe	1		V131
Power supply, 20 V, Tenma 72-6628	1		V132
Resistor decade box	1		V133
10' X 20' Flat Bed Trailer	0		NR
FLUKE 863, Graphic multimeter	1		V102
O-scope probe (provided w/ scope)	2		V102
O-scope probe (provided w/ scope)	1		V117
Capacitance decade box	1		LIB
Extender boards, propulsion	3	225P748G01	A129
Extender boards, ATO	2	409P248H90	
Extender boards, wayside	3	226P338G01	ELEC ROOM
Power Supply, B&K Precision model 1715 0-60v	1		mechrm cab
Notch Filter	1		NA
Fluke Thermal Imager, Model TI-30, s/n 89720099	1		LIB
Fluke Power Quality Analyser, Model 434,	1		LIB
Special Coupler Tool Set	1		mechroomcab
Adhesive Back Sandpaper for Orbital Sander	1	2D709	BACK WALL
7" Grinder disc	10	3VP30	back wall
4 1/2" Grinder disc	20	3VX05	back wall
14" Cut-off blades	6	4A896	back wall
6' X 8' Welding Screen	1	3T970	Bay 1 bot
Drum dollies	3	3KR53	bay 5
25' Extension Cord	4	2W566	bay floor
High Pressure Steam Cleaner	1	5GH72	BOT FLOOR
Micrometer Set 0-6"	1	5C675	Library
Wheel Chauks	2	4W941	Load dock
5" Bench vise	2	1ATH0	mech room
14" Cut-off saw, Milwaukee	1	2AC06	MECH ROOM
Rechargeable Latern	3	2V837	MECH ROOM
Rechargeable Flashlight	3	2V888	mech room
8" Bench Grinder	1	4Z909	Mech room
8" Bench vise	2	5C804	Mech room
9-Speed 20" Floor drill press	1	6W281	Mech room
15" Floor Standing Band Saw	1	6Y002	Mech room
Wheel bearing packer	1	6Y907	Mech room
Heavy duty industrial workbench	6	7W087	MECH ROOM
12 ton Hydraulic press and H frame	1	7Z820	MECH ROOM
Shop Stools	6	2W175	mech room flr
12" Dial Caliper	1	5C665	MRA1
5/16" - 6" Internal Micrometer	1	5C717	MRA1
6" Dial Caliper	1	5C667	MRA1,U122
6" Digital Caliper	2	5C672	MRA1,U122
Degreaser transfer pump	1	2P683	sh floor
9" long Hex 3/8" drive ratchet	1	1AF34	shift toolbox
Metal Tool Bax	2	2W019	Shop floor
Oil Waste Can	1	2W560	Shop floor
Hydraulic Lift Table	2	3KR47	Shop floor
3 Ton Gantry	1	3KR62	Shop floor
Crane Trolley	1	3TP86	shop floor
Platform Truck	2	3W077	shop floor
8' Stepladder	2	3W142	shop floor

**Appendix E-2: Tools, and Equipment List**

<b>Item</b>	<b>Qty</b>	<b>Part No.</b>	<b>Location</b>
3" Fiberglass Step Stool	6	3W332	shop floor
12'Stepladder	1	3W422	shop floor
Grease pail doily	1	4F987	shop floor
Drum Containment Platform Ramp	1	4RF65	shop floor
Drum Containment Platform	2	4YF76	shop floor
Heavy Dity Rool Around Tool Box	2	6A575	shop floor
Oil dispenser, air operated	1	6Y820	shop floor
Grease Gun Handle Style	2	6Y826	shop floor
Grease Gun Pistol Style	2	6Y829	shop floor
12" Felxible Hose	6	6Y835	shop floor
Oil dispenser, Hand operated	1	6Y881	shop floor
Air operated grease gun	2	6Y885	shop floor
Oil drain pan	1	6Y902	shop floor
Oil drain pan	1	6Y903	shop floor
Drain pan funnel	1	6Y910	shop floor
50' Water Hose	3	1P649	SHOP FLR
9" long Hex 1/2" drive ratchet	1	3R747	shop tool box
Bins for storage cabinets	32	2W779	storeroom
Bins for storage cabinets	96	2W780	storeroom
2 3/4 Ton Pallet Jack	1	3KR84	storeroom
Plate Dolley	2	3W218	storeroom
10001b Floor Scale	1	3W494	storeroom
Fire safety cabinet, safety yellow	2	4T196	storeroom
Sliding drawer units	2	5W885	storeroom
1 3/4" Cup Brush	5	3A203	supply shelf
1/2" Spiral Wire Brush	2	4F727	Supply shelf
1" Spiral Wire Brush	2	4F731	supply shelf
Maintenance Free Respirators	2	4JG05	Supply shelf
Band saw blades	6	4L226	Supply shelf
Band Saw Blades	6	4L236	Supply shelf
Disposible Ear Plugs	1	4T147	Supply shelf
Dust / Mist Respirator	2	4T823	Supply shelf
8" Bench grinding wheels	4	6A091	Supply shelf
Funnel	4	6Y806	Supply shelf
Utility Knife	6	5R685	tool bxs
Tot Bag for Tools	6	4A670	Toolcrib
12" Hacksaw	2	4K799	Toolcrib wall
Carpenter Square	1	5W189	Toolcrib wall
50foot Extension Cord	2	5W576	Toolcrib wall
100' Extension Cord	2	5W577	Toolcrib wall
48" Straight Edge	2	6C233	Toolcrib wall
Combination Square 12"	2	6X996	Toolcrib wall
24" Straight Edge	2	2H406	Toolcrib wall 1
Freon Recovery System	1	1Z861	TOP SHELF
A/C Pressure Vacum Gauge Set	1	3T078	U115
Freon Leak Detector	1	3T449	U115
Hole Saw Kit	1	4L638	U118
Pneumatic Rivet Gun	1	4Z913	U118
Manual Rivet Gun Kit	2	6A644	U118
Chain Hoist 3 Ton	1	3KR22	U119
4 ton Hydraulic ram system	1	3ZC68	U119
Chain Hoist	1	4Z312	U119
3/8" 18V battery powered drill with keyless chuck,	2	4PD94	U121
Circular saw, 7 1/2" blade, Milwaukee	1	4Z372	U121
Circular saw blades	2	5G890	U121
Depth Gauge 0"-6"	1	5C723	U122
1/2" Electric impact wrench, Dewalt DW291	1	4JB74	U123
1/2" Hammer drill, Milwaukee	1	6Z040	U123

**Appendix E-2: Tools, and Equipment List**

<b>Item</b>	<b>Qty</b>	<b>Part No.</b>	<b>Location</b>
8' Nylon Sling	4	1A598	U124
Shackle	6	2G796	U124
Chain Hooks	12	3X692	U124
3/8" Chain (Bucket)	1	3Z940	U124
Chain Slings	2	4X461	U124
Portable band saw stand	1	1Y335	U126
Portable variable speed band saw, Deep cut,	1	6Z345	U126
1/4" Die Grinder Milwaukee	1	1Y068	U128
1/2" Electric drill with keyless chuck, Milwaukee	2	4A937	U128
6 ft. Nylon sling	2	1A597	U129
10'Nylon Sling	2	6A259	U129
Electric angle grinder 4 1/2", Milwaukee	1	4A942	U133
Electric 2" die grinder, Milwaukee	1	4Z818	U133
Welding Helmet	1	1N782	V105
Welding Vest	2	2AG83	V105
Welding Gloves	2	4JF98	V105
Deluxe Drum Wrench	1	6A240	V108
Cable Cutter 24" Long	1	2G996	V113
8" Bench grinder stand	1	4Z154	V114
9" Suction Cups	4	6A987	V115
Air operated blow gun, regulated to 30psi	4	5X786	V116
6" Cross vise	1	6Z848	V119
Oil transfer pumps	2	1P893	V120.sh floor
Hand Stamps, Letter & Numbers	1	1F113	V121
Stencil set	1	6A231	V121
HVLP Spray Gun	1	4TH37	V125
Motor for Band Saw	1	6K639	V125
Drill Bit Set 8 Piece (9/16" -1")	1	1A050	V126
Drill Bit Set 118 Piece (1/16" -1/2")	2	1A522	V126
3/4" Dewalt Impact Gun	1	3MJ17	V128
Orbital Sander Milwaukee	1	3W786	V128
Electric angle grinder 7", sander Milwaukee	1	4Z819	V128
3/8" Electric right angle drill, Milwaukee	1	6Z037	V128
Battery charger	1	2Z556	V131
Portable Lite Stands	3	83998	back wall
18 Piece Hex Key T Handle Set	1	46288	box 4 floor
13 Piece Ball Hex Key Set	2	46754	bx 4 floor
110V Mig Welder	1	20418	I103
16 Gallon Shop Vacuum	1	17703	mech room
Ignition Wrench Sets	2	43109	mech room an
3 Piece Channel Lock Set	2	45439	mra2.mrd1, 2nd
3lb Sledge Hammer	2	38311	mra4
16oz Rubber Mallet	2	45787	mra4.mrd3
16oz Claw Hammer	2	38127	mra4.tocribwa
5 Piece Pry Bar Set	2	43067	mra4.tocribwa
10" Pipe Wrench	1	30841	MRB2
Ratchet Wrench Sets (1/4"-7/8")	2	42160	mrb2
5 Piece Adjustable Wrench Set	1	44036	mrb2.mrd1,2nd
7 Piece PlierSet	2	45225	mrc2
13 Piece Vise Grip Set	1	45634	U109
3 Piece Extra Large Adjustable Wrench Set	1	44916	mrd3, tc wall
3/8" X25' Air Hose	3	16203	shop floor
3/8" X 50'Air Hose	6	16204	shop floor
3/8" X 50' Hose Reels	6	18644	shop floor
Halogen Drop Lights	6	83895	shop floor
Flourescent Drop Lights on Reels	12	83912	shop floor
15" Hand Saw	1	36071	tool crib
18" Pipe Wrench	1	30843	tool crib wall

**Appendix E-2: Tools, and Equipment List**

Item	Qty	Part No.	Location
14 Piece Clamp Set	1	31470	tool crib wall
Oxy / Accet Cutting Torch	1	20170	tool crib,
Hand Held Vacuum 3 Gallon	2	17768	tool crib, shop
Portable Air Compressor	1	16735	tool shed
25 Piece File Set	2	31233	U103, various
20 Piece Screwdriver Sets	2	47452	u105, bx 4
Stubby Wrench Set	2	44138	u106, mrb1
Extra Large Wrench Set (1 1/16"-11/2")	2	45965	u106,mrb1
Ratcheting (5/6"-1/2") Tap Holder	1	4064	U108
Ratcheting (0"-1/4") Tap Holder	1	4065	U108
58 Piece Tap and Die Set	1	52311	u108
8 Piece File Set w/Handles	2	31326	bx 4 floor
259 Piece Standard Mechanic Tool Set	4	33758	shop floor
5 Piece Hammer Set	2	38074	toolcrib wall
Offset Ratchet Wrench Sets	2	43375	mrb2
9 Piece PlierSet	2	45311	2nd shift 2a
10 Piece Vise Grip Set	1	45635	MRD2
3 Piece Folding Hex Key Set	2	46287	bx 4 floor
Offset Ratcheting Driver Set	1	YA487	BX 4 FLR
Mag Base Dial Indicator	1	GA3645	GUIDE CAB
Tire Infaltor w/Gauge	4	YA258	Mech floor
3/8" 6 pt. Impact Standard Socket Set	1	212IMFY	mechroom wa
3/8" 6 pt. Impact Deep Socket Set	1	212SIMFY	mechroom wa
1/2" 6pt Impact Standard Socket Set	1	320IMY	mechroom wa
1/2" 6 pt Impact Deep Socket Set	1	320SIMY	mechroom wa
3/4" 6 pt Drive deep well impact socket set	2	420SIMY	mechroom wa
3/4" 6 pt Shallow Thin Wall Socket Set	2	422IMFSY	mechroom wa
3/4" 6 pt. Drive impact socket set	2	427IMY	mechroom wa
3/8" Drive Torque Wrench 40-200inch Ib	1	QC2R200	MRA3
1/2" Drive Crows Foot Set	1	314SCO	MRB2
1/2" Spline Socket Torque Adapter	1	SRES306	MRB2
Spline Wrench Set (7/32"-1")	1	XDES608A	MRB2
Valve Stem Core Removcal Tool	2	TR1170	MRC2
3" Cut Off Saw	1	AT15	MRC3
1/4" Drive Impact ratchet	2	AT200D	MRC3
1/2" Drive impact gun	2	AT500E	MRC3
3/8" Drive impact ratchet	2	AT700E	MRC3
3/8" Right Angle Air Drill	1	AT81	MRC3
3/8" Drive impact gun	2	IM31	MRC3
3/8" Air Drill	1	PDR3A	MRC3
Screw Starter Flat Tip	2	SSM5A	MY CAB
Torque Multiplier	1	GA184A	PIN TOOL BX
General Purpose Puller Set	1	CJ2000SB	STORE WALL
3/4" 12 pt Standard Socket Set	2	414AHD	U100
Ratcheting Bit Set	1	CRA180PV	U101
6" Divider	1	PMF129	U102
1/4" Drive Torque Wrench 40-200inch Ib	1	QC1R200	U102
Punch and Chiesel Holder	2	PPC5A	U102, MRA3
1/4" Drive Torque Wrench 10-50inch Ib	2	QC1R50	U102,U107
6 Piece Long Roll Pin Set	2	PPCL60AK	U103
12 Piece Roof Pin Set	2	PPR712K	U103
Retaining Ring Plier Set	1	PRO625	U108
Hole Punch Set	1	PGH8A	U108
3/8" Drive Torque Wrench 20-1 OOfT Ib	2	QC2R100	U108,MRA3
1/2" Drive Torque Wrench 50-250ft Ib	2	QC3R250	U117
3/4" Drive Torque Wrench 120-600ft Ib	2	QC4R600A	U117,MRA3
Rivet insert kit, Threadsetter Set	1	HP650	U118
Cotter Pin Pullers	4	CP3B	V103

**Appendix E-2: Tools, and Equipment List**

Item	Qty	Part No.	Location
Safety Wire Pliers	2	WTRW6	V106
Safety Wire Pliers	2	WTRW9	V106
Thermometer	4	ACT83	V116
Bent Feeler Gauge Set	2	FB300A	V116,BX4FLR
Pneumatic Orbital Sander	1	PSF100	V118
Air Nibbler	1	AT18	V118
3/4" Drive impact gun	2	AT77	V123,MRC3
Carbon Scrapper Set	2	CSA300	
Feeler Gauge Set	2	FBL325A	BX 4 FLR
Stick Style Tire Pressure Gauges	2	GA246	V113
Screw Starter Phillips Tip	2	GA260A	BX 4 FLR
Tread Depth Gauge	2	GA599	
3/4" Drive Breaker Bar	1	L872RM	
Scrapper Set	2	PK500	
1/8"-1/2" Reamer	2	R120	PEG DRAW
1/2"-1" Reamer	2	R121	PEG DRAW
Refrigeration Wrench	2	R404	
1/2" Drive Long Handle Ratchet	2	SL832	MRA3
Xantrex Power Supply, model # XDL56-4P	1		JEFF
RAD Torque Machine, model RAD 550SL	1		shop floor
Micro-Ohmmeter, model# LOM-510A	1		JEFF
Vericom Brake rate Tester	1		Eric
Tyco Electronics Die Crimp# 2 for large Crimper	1		shop floor
QC2FR75 TORQUE WRENCHES	3	QC2FR75	2 on U112, 1 MRA3
Sandyjet Abrasive Sand Blaster	1		3RD FLOOR
Genie Lift Truck,	2		3RD FLOOR Bay 2
Alcatel Vacuum Pump	2		back wall
12 FT extension Ladders	2		Bay 2 bot level
Louisville Ladder /ramp	1		Bay 2 bot level
6' Fiberglass Ladder, 6JJ82	1	6JJ82	Bay 2 bot level
28' Ladder 3W140	2	3W140	Bay 2 bot level
MRV Fuel Tank	1		Bay 5
12' Cotterman Ladder	1		bay 5
4' Cotterman Ladder	1		bay 5
Microair Vacuum System	1		bay 5
Tractmax hepa Vacuum	1		bay 5
Wesco Lift Dolly, DPL-54-2222	1	DPL-54-2222	Bay 5
Rolling Bin Carts	1		Bay 5
Lincoln electronic meter assy, quarts, 6WB36	1	6WB36	Bay 5
Ridgid KJ-99 Jack Stands	2	KJ-99	bay 5
3/4 ton Wheel Dolly ATD-7227	1	ATD-7227	Bottom Floor
Wire Spool Spindle Rack	1		Bottom Floor
Pipe Rack	1		Bottom Floor
Yellow containment Drums 55 gallon	4		Bottom Floor
Black 4 way special pallets	1		Bottom Floor
Yellow Battery Containment pallet	1		Bottom Floor
Orange Pallet Grabber	1		Bottom Floor
8 FT Loading Ramp walkway	1		Bottom Floor
Speed Scrub 2601 Power Floor Cleaner	1	2601	Bottom Floor
Saber WINDSOR Floor Cleaner	1		Bottom Floor
Large Capacity Plastic Liquid storage Tank	1		Bottom Floor
Yellow Lift cage for Forklift	1		Bottom Floor
Ridgid Tristand 1/8 to 6 n460	1	n460	Bottom Floor 2nd Isle
Yamaha 4D4600 Gas Generator	1	4D4600	Bottom floor 2nd Isle Back
36" floor Fans Qty 3 used fair	4		Bottom floor 2nd isle back
Uline Hand Stretch wrapper Model h-88	3	h-88	Bottom Floor 1st Isle Back
Programmable Logic Controller, plc guide switch	1		Electronic Room
Ridgid Battery operated Sawsall	1		Electronic Room

**Appendix E-2: Tools, and Equipment List**

Item	Qty	Part No.	Location
Portable Scunsi Steam machine	1		Electronic Room
SPECTOLINE EPROM Eraser	1		LB
Streppel Glasfaser 110 vac	1		LIB
Dewalt Cordless rt angle drill kit, DW960	1	DW960	LIB
Ridgid cordless rt angle drill, R82233	1	R82233	LIB
Amp Crimper, 59824-1	1	59824-1	LIB
AF8 VEAM CRIMPER	1		LIB
Pyle National crimping tool kit	1		LIB
Litton Veam Connector assy kit dmc2	2	dmc2	LIB
RYCOM 3111A Selective Voltmeter, QTY 2	2	3111A	LIB,T129
Tektronix P5200 HIGH VOLTAGE Probe	1	P5200	LIB
Mitoyo Caliper 505-705	1	505-705	LIB
MITOYO CALIPER 2904F	1	2904F	LIB
Dial Indicator, chicago dial	1		LIB
AMP Crimper f0026	1	f0026	LIB
AWS PSI- 8031 Indicator	1	PSI- 8031	LIB
Burndy HYTOOL M8ND Crimper	1	M8ND	LIB
Fluke Current Transformer 801600a	1	801600a	LIB
Textronics probe, P6113B	1	P6113B	LIB
FLUKE 850/1300 FIBER OPTIC SOURCE	1	FLUKE 850/1300	LIB
Fluke 52 Thermometer	1	Fluke 52	LIB
FLUKE 87 MULTIMETER	1	FLUKE 87	LIB
FLUKE 77 MULTIMETERS	3	FLUKE 77	LIB
Sencore Capacitor inductor Analyzer lc76	1	lc76	LIB
Simpson Sound Meter System 886-2, type 2	1	886-2, type 2	LIB
NOYES MLP MULTIMODE LIGHT PACK	1		LIB
Anritzu Spectrum Analyzer mp 1550a	1	mp 1550a	LIB
General Radio capacitor decade Box	1		LIB
Yokogawa 2786 Decade Resistance Box	1	Yokogawa 2786	LIB
Proto Torque Wrench, 6006a 10-80 ft	1	6006a	LIB
proto Torque Wrench, 6003 PB 10-100 ft	1	6003 PB	LIB
Snap-on flex head torque Wrench TQFR250	1	TQFR250	LIB
MONARCH RPM GUN	1		LIB
SNAP-ON TORQUE QC1R50	1	QC1R50	LIB
SNAP-ON TORQUE QT1R50	2	QT1R50	LIB
SNAP-ON TORQUE WRENCH, QD1R50	1	QD1R50	LIB
SNAP-ON TORQUE WRENCH, QC1200	1	QC1200	LIB
PROTO TORQUE WRENCH 6062A	1	6062A	LIB
GRAPHTEC Thermal array Chart Recorder, WR	1	WR 8000	LIB
Snap-on QC5R1000 Torque Wrench	1	QC5R1000	LIB
Electro Physik Thickness Gauge, Minitest 600	1	Minitest 600	LIB
Tire Cage	1		Loading Dock
Skidmore Wilham Calibration Tool	1		Mechroom
Kar Products Hardware storage Cabinets	1		mechroom
Bird, Digital Power Meter, model 5000ex	1	5000ex	MECHROOM CAB
Battery tester 6/12/ volt	1		MECHROOM CAB
Guidewheel Assy Fixture, 6D55460G01	1	6D55460G01	MECHROOM FLOOR
QC3R250 TORQUE WRENCH	1	QC3R250	MRA3
Long QCR250 TORQUE WRENCH	1	QCR600A	MRA3
QCR600A Torque Wrench	1		MRA3
pneumatic Calking Gun	1		MRC4
Dayton Wet/dry Vacuum model # 1D456D	1	1D456D	PDS Room
Black Rolling Cart, 3 shelf Bretford	1		PDS Room
10 ft Ladder fiberglass Model # FS1510	1	FS1510	PDS Room
8 FT fiberglass ladder	1		Pds Room
Green flat Hand Cart 2 x 4	2		PDS Room, by spools
System Drawings, 1 Pallet,	1		SF1307
Extra Metal shelving units, 1 Pallet	1		SF1415

**Appendix E-2: Tools, and Equipment List**

Item	Qty	Part No.	Location
AQUAWORKS Parts Cleaning Machines	1		shop floor
2 shop fans 24"	1		shop floor
10' Ladder M7110-1 type 1A	1	M7110-1 type 1A	STOREROOM
Uline Banding Cart and tools	1		Storeroom
Forklift Extensions, 8 FT,	1	6XX16	Storeroom back wall
Fire Safety Cabinets	4		storeroom, Janitorial, BAY 5
Air Operated Calking gun 3M BP 480-85 MIX PAC	1	BP 480-85	Storreroom back shelf
Spectroline DC-3300A Eprom/waiver Eraser	1	DC-3300A	T126
Tektronix 314 storage Oscilloscope	1	Tektronix 314	T126
Astromed MT9500 Chart Recorder	1	MT9500	T128
HP 6274B DC Power Supply	1	HP 6274B	T128
Lambda LRA-17 Rack Power Supply	1		T128
Milwaukee Mag Drill,	1		Tool crib cage floor
Craftsman 150 psi 3 hp 4 gal air compressor	1		Tool crib cage floor
Portatorch, Lincoln	1		toolcrib floor
Dayton Battery Charge 40/2 amp	1		toolcrib floor
Battery powered grease gun, Lincoln	1		toolcrib floor
48 " Straight Edge	2		toolcrib wall
MEASURING DISTANCE WHEEL, Lufkin	1		top shelf toolcrib
BEX bluepoint BEX13 Bolt Extractor Set	1	BEX13	U113
LCD Vacuum Gauges	2	69070	U115
Freon Leak Detector	1		U115
Hydraulic Rivet Gun	1		U118
Hole saw Kit, Westward	1	4wx60	U118
Electric Winch3VJ64	1		U119
4 TON HYDRAULIC RAM SET	1		U119
Chain Hoist 3 ton	1		U119
Vari speed Jigsaw	1		U120
6" DIAL Calipers, nsk	1		U122
Starett Micrometer model	2	230p	U122,,MRA1
Hilti Hammer Drills	2	TE-6A	U125
HILti Hammer Drills	1	TE15	U125
Portable Variable band saw Milwaukee	1		U126
1/4" Die Grinder Milwaukee	1		U128
Greenlee Hydraulic Knockout Set 7506, 1/2 - 2"	1	7506	U130
Hilti Hammer Drill	1	TE-55	U130
David White auto level	1		U131
Tripod, David White mod 9045	1	9045	U131
Measuring stick, David White	1		U131
PLS-5 Lazar Level	1	PLS-5	U131
Audio Visual VOLTAGE Detector, Salisbury	1		U132
Mag Drill, Hougen rotor broach	1		U133
ULTRA -LOK self Ratcheting Lifeline & Harness	3		U134
Tie Downs	6	3kn70	U134
Cross Needle SWR and power meter	1	cn-1031	V101
Diode removal tool,	1	577B060H33	V103
Radius Rod Removal Tools	2		V103
Submersible Pump	4	5RV54	V119
Extech Lazer photo/contact Tachometer	1		V122
Transfer Pump	1	6Y881	V125
Dewalt Grinder 4 1/2 "	1		V128
Special Seismic tool Measuring Kits	2		V129
Complete Mechanics tool Sets with tool box	46		shop floor
(SFO Owned) Toyota Sitdown Forklift, Propane op.	1		1st Floor
Fluke 179 multimeter	1		JROW
OUTDOOR STORAGE SHED	1		BY CARWASH
OIL HEATER	1		CONFERENCE ROOM
Honda Generator	1		Bay 2

**Appendix E-2: Tools, and Equipment List**

<b>Item</b>	<b>Qty</b>	<b>Part No.</b>	<b>Location</b>
Carpet Loader Attachment for Forklift	1		bottom floor
UTICA, ts-100 Torque limit Screwdriver, mc	1	8554a25	victor
MCARR Digital torque wrench,	1	CD2250A	VICTOR
McCarr Digital torque wrench,	1	CD280fr	victor
McCarr proto Hex Bit Ball Set 7 pc	1		Victor
AMP PRO CRIMPER,	2	90869-1	VICTOR
AMP EXTRACTION TOOLS,	2	318831-1	VICTOR
Daniels SAAFE T Cable tool,	1	SCT323	ERIC
UNION SWITCH RELAY TEST STAND,	1	PN150	ALFREDO
UNION SWITCH RELAY TEST STAND, GRS B1	1		ALFREDO
Xantrex Power Supply, model # XDL56-4P	1		JEFF
RAD Torque Machine, model RAD 550SL	1		shop floor
Micro-Ohmmeter, model# LOM-510A	1		JEFF
Vericom Brake rate Tester	1		Eric
Tyco Electronics Die Crimp# 2 for large Crimper	1		shop floor



## Appendix G

### Task 5: AirTrain Vehicle Tri-Handle Stanchion Replacement

#### General Project Scope:

Contractor will provide all material, labor, tools, engineering, vehicle drawing updates/configuration management associated with the supply and installation of 190 new tri-handle stanchion assemblies into the AirTrain vehicles at the San Francisco International Airport.

#### Installation:

Currently each vehicle is outfitted with five (5), single pole stanchions along the center line of the vehicle and two (2) stanchions that are offset near the door opening. To increase the number of locations within the center portion of the vehicle that passengers can hold themselves steady during vehicle movement, Contractor will replace the five (5), single pole, center-line stanchions with tri-handle stanchions. Replacement of the single stanchion design with a tri-handle stanchion design will improve passenger experience on the AirTrain system and increase the safety level inside the vehicle while traversing the system.

Retrofits will be performed during normal station door maintenance inspections and will not impact normal AirTrain operations.

#### Final Acceptance:

The following will be performed to verify final acceptance:

- Once units arrive on site, a quality assurance inspection will be performed prior to installation.
- After QA inspection, the installation of each unit will begin. Installation process will be inspected to confirm proper mounting.
- Contractor to ensure any debris from project has been removed from all areas upon completion of job.

#### Warranty

Each unit will carry a standard warranty of 1 year on all parts from date of purchase.

#### Cost of Project:

The firm fixed price for the combined scope as described is broken down as follows:

• Contractor Labor Charges – Includes:	\$56,280.00
o Project Management	
o Engineering	
o Configuration Management	
o Drafting	
o Installation (38 Vehicles)	
• Qty (190) – Tri-Handle Stanchion Post @ \$875.85/ea.:	\$166,411.50
• Qty (190) – Bottom Plate @ \$138.25/ea:	\$26,267.50
• Qty (185) – Trim Ring @ \$69.68/ea:	\$12,890.80
• Miscellaneous installation hardware and adhesives:	\$5,967.38
• CA Sales Tax on Materials (8.75%):	\$18,509.50
• <u>Material Shipping:</u>	<u>\$5,332.70</u>
<b>TOTAL:</b>	<b>\$291,659.38</b>

## Appendix G

### Task 5: AirTrain Vehicle Tri-Handle Stanchion Replacement

**Payment Terms:** The following payment schedule is proposed for this project:

- 15% of order value to be invoiced upon receipt of authorized notice to proceed
- 10% of order value to be invoiced upon completion of material order
- 25% of order value to be invoiced upon 1st car installation and acceptance by the customer
- 25% of order value to be invoiced upon delivery of remaining material to SFO
- 25% of order value to be invoiced upon completion and testing of all units

## Appendix G

### Task 6: AirTrain Station Door Auto-Lock Replacement

#### General Project Scope:

This project will replace 122 automatic station door auto-lock assemblies located at the various AirTrain stations. The project scope includes the following:

- Contractor will provide all necessary project management, engineering, drafting and material supply for retrofitting one hundred and twenty-two (122) station doors plus four (4) spare Auto-Lock systems and a complete Spare Parts kit.
- Contractor SDC Staff will be responsible for installation and testing of the new auto-lock equipment, on a schedule to be mutually agreed to by SFO and Contractor.

#### Installation:

Retrofits will be performed during normal overnight shutdown periods recognizing that installation and testing activities, whenever possible, must not impact normal AirTrain operations.

#### Final Acceptance:

The following will be performed to verify final acceptance:

- Once units arrive on site a quality assurance inspection will be performed prior to installation.
- After QA inspection the installation of each unit will begin. Installation process will be inspected to confirm proper mounting.
- A final test of each unit will be performed after installation to ensure secure close and lock is achieved.
- Contractor to ensure any debris from project has been removed from all areas upon completion of job.

#### Warranty:

Each unit will carry a standard warranty of 1 year on all parts from date of purchase.

#### Cost of Project:

The firm fixed price for the Auto-Lock retrofit is as follows:

• Bombardier Labor Charges – Includes:	\$27,560.00
o Project Management & Scheduling	
o Engineering	
o Planning	
o CADD/Drafting	
o Installation (126 assemblies)	
• Qty (126) – Auto-Lock Assemblies @ \$1,264.65/ea:	\$159,345.90
• Qty (1) – Set of Alignment Tools:	\$1,030.54
• Qty (1) – Spare Parts Kit:	\$3,727.59
• CA Sales Tax on Materials (8.75%):	\$14,259.10
• Freight:	\$4,137.05
• <u>Optional Services (on-site training, calibration of tooling, etc.):</u>	<u>\$3,795.00</u>
<b>TOTAL:</b>	<b>\$213,953.93</b>

## Appendix G

### Task 6: AirTrain Station Door Auto-Lock Replacement

#### Payment Terms:

- 15% of order value to be invoiced upon receipt of authorized notice to proceed
- 10% of order value to be invoiced upon completion of material order
- 25% of order value to be invoiced upon 1st station door installation and acceptance
- 25% of order value to be invoiced upon delivery of remaining material to SFO
- 25% of order value to be invoiced upon completion and testing of all units