

DEPARTMENT OF FINANCE

MARTA



REQUEST FOR PROPOSALS P30186

MARTA PAID PARKING SERVICES

2014

Metropolitan Atlanta Rapid Transit Authority



2424 Piedmont Road, NE
Atlanta, GA 30324

404-848-5000

December 19, 2014

TO: ALL PROSPECTIVE PROPONENTS

**SUBJECT: REQUEST FOR PROPOSALS (RFP) NUMBER P30186
MARTA PAID PARKING SERVICES**

You are invited to submit to the Metropolitan Atlanta Rapid Transit Authority (MARTA), also referred to as the Authority, a proposal for MARTA Paid Parking Services.

A Pre-Proposal Conference to discuss the proposal documents and the services to be provided will be held at the MARTA Headquarters Building, located at 2424 Piedmont Road, N.E., Atlanta, Georgia 30324-3330, Bid Room, Lobby Floor, on January 28, 2015, 11:00 a.m., local time.

To be eligible for consideration, an original and twenty (20) copies of your proposal in response to this request should be received by MARTA no later than March 9, 2015, 2:00 p.m., local time at 2424 Piedmont Road, Atlanta, Georgia 30324-3330, Attention: Contract Control. Proposal documents may be reviewed and downloaded or purchased from MARTA's website: www.itsmarta.com. On the home page, point to "About MARTA"/click Vendor Opportunities/Current Opportunities/click on RFP P30186/Download Invitation for Bids/Request for Proposals/Log-in (first time users must register). Copies of the drawings may be purchased from MARTA, contact Contract Control at 404-848-5580.

Please address all questions in writing to the undersigned, at least eighteen (18) business days before the proposal submittal date. If you need additional information, please contact Jacqueline Holland, Senior Contract Specialist at 404-848-4668.

Sincerely,

Lisa DeGrace, Director
Contracts & Procurement and Materials

Attachment

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PART I

INFORMATION AND INSTRUCTIONS TO PROPONENTS

- 1. General and Background Information:** The Metropolitan Atlanta Rapid Transit Authority (“**MARTA**” or “**Authority**”) operates the ninth largest transit system in North America, providing bus, rail and para-transit services in the greater metropolitan Atlanta area. MARTA transports over 500,000 people in the City of Atlanta and counties of Fulton and DeKalb daily. MARTA has approximately 4,540 employees.

MARTA Transformation Initiative.

In 2013, MARTA officially adopted a five year Strategic Transformation Program focused on reducing costs and enhancing revenues to improve MARTA’s fiscal sustainability and position it for future growth. MARTA also officially began the MARTA Transformation Initiative (MTI), which includes a governance structure and Program Management Office to implement the opportunities identified in the Strategic Transformation Roadmap. The MTI consists of 12 projects and will require investment of MARTA resources and close collaboration across multiple stakeholders to achieve desired goals and objectives.

One of MTI’s 12 projects consists of Parking Services at specified MARTA rail stations. The parking services program has two objectives: (a) To enhance rider services by providing customer friendly parking services at specified overnight MARTA rail stations and (b) to generate revenue for MARTA. In order to achieve these objectives, MARTA has defined the Statement of Work related to this Request for Proposals, which the Proponents will address in their response hereto.

- 2. Services Being Procured:** This Request for Proposals No. P30186 (“**RFP**”) seeks proposals from experienced, financially sound and qualified “**Proponent(s)**” to enhance rider services by providing customer friendly parking services at certain MARTA parking facilities and to generate revenue for MARTA. The successful Proponent, if any, will be required to work closely with the Authority’s Finance Department.
- 3. Definitions:** All capitalized terms contained in the Paid Parking Services Contract are incorporated into this RFP. the following terms shall have the following meanings when used throughout this RFP:

Proponent: Each Firm or aggregation of Firms (which may include a joint venture partnership, limited liability company or limited liability partnership) submitting a proposal in response to this RFP with the intent of performing the statement of work as the prime contractor.

Firm(s): The person, firm, joint venture, or corporation that has or will obtain, prior to the execution of any contract awarded hereunder, all necessary

licenses required by the State of Georgia to perform the Services and is authorized to do business in the State of Georgia.

- 4. Minimum Qualifications:** To participate in this procurement, Proponent, at a minimum, must meet the minimum qualifications set forth in this RFP. Where the Proponent is a partnership, joint venture arrangement, limited liability company, limited liability partnership or other multiple entity organization, the entity that holds a majority ownership interest in the Proponent (i.e., over 50% ownership) must meet the minimum requirements set forth in this RFP. Additionally, prior to final award of either Contract, the successful Proponent will be required to demonstrate that it is duly authorized to conduct business in the State of Georgia.

No Proponent or entity comprising Proponent may submit more than one proposal under the same or different names or as part of multiple organizations. MARTA reserves the right to disqualify any Proponent or entity comprising Proponent that submits more than one proposal in response to this solicitation.

- 5. No Offer by MARTA; Firm Offer by Proponent:** This procurement does not constitute an offer by MARTA to enter into a Contract and cannot be accepted by any Proponent to form a Contract. This procurement is only an invitation for offers from interested Proponents and no offer or proposal shall bind MARTA. However, Proponent's response to this RFP is a firm offer from Proponent to MARTA for a period of four (4) months and may not be withdrawn during such time period.
- 6. Pre-Proposal Conference:** A pre-proposal conference is scheduled for **January 28, 2015 at 11:00 a.m. (local Atlanta, GA time)**, at the MARTA's headquarters building located at 2424 Piedmont Road N.E., Atlanta, Georgia 30324-3330. Proponents are advised that notwithstanding the address, MARTA's headquarters building is located west of Piedmont Road on Morosgo Drive across from the Lindbergh Rail Station. Attendance at the pre-proposal conference is not required but is strongly encouraged. Each Proponent is responsible for being fully informed regarding all existing and expected conditions and matters that may affect the cost or the performance under either Contract. Any failure to fully investigate the requirements of this RFP shall not relieve any Proponent from the responsibility to properly estimate the difficulty or cost of successfully performing under either Contract. **MARTA anticipates having two (2) site visits to review all eleven (11) MARTA parking facilities and attendance is not required but is strongly encouraged.**
- 7. Procurement Questions; Prohibited Contacts:** Any questions regarding this RFP should be submitted in writing to MARTA's contact person, **Jacqueline Holland, Senior Contracts Specialist** via electronic mail at **jholland1@itsmarta.com**, on or before **February 11, 2015 at 2:00 p.m. (local Atlanta, GA time)**. Questions submitted after the designated period will not be considered by MARTA. Any response made by MARTA will be provided in writing to all Proponents by posting the same to MARTA's website at www.itsmarta.com. It is the responsibility of each Proponent to obtain a copy of all responses and/or any addenda

issued for this procurement by monitoring MARTA's website. No Proponent may rely on any verbal response to any question concerning this procurement. All Proponents (and any representative thereof) are strictly prohibited from contacting any MARTA employees (or third-party representatives or consultants of MARTA) on any matter having to do with this procurement. All communications by any Proponent **must** be made with MARTA's contact person or any other MARTA employees or representatives designated by the head of MARTA's Contracts, Procurement and Materials Department.

8. Proposal Deadline: To be considered responsive, a Proponent must complete and submit its proposal and all required submittals and attachments in accordance with the instructions contained or referenced in this RFP. All responses to this RFP must be received by MARTA's Department of Contracts, Procurement & Materials, 2424 Piedmont Road N.E., Atlanta, Georgia 30324-3330, on or before **March 9, 2015, at 2:00 p.m. (local Atlanta, GA time)**. MARTA will not review any Proposal that is not received by the Proposal Deadline set forth herein.

9. Availability of Electronic Documents: This RFP is being made available to all Proponents by electronic means. By responding to this RFP, Proponent acknowledges and accepts full responsibility to ensure that it is responding to the correct form of RFP, including any addenda issued by MARTA's Department of Contracts, Procurement and Materials. Proponent acknowledges and agrees that in the event of a conflict between the RFP in the Proponent's possession and the version maintained by MARTA's Department of Contracts, Procurement and Materials, the version maintained by MARTA's Department of Contracts, Procurement and Materials shall govern. The RFP document is available at www.itsmarta.com.

10. Required Submittals:

(a) **Form 1 - Illegal Immigration Reform and Enforcement Act.** Each Proponent **must** complete and submit a Contractor's Affidavit with its proposal. This RFP is subject to the Illegal Immigration Reform and Enforcement Act of 2011 ("**Act**"), as amended. Pursuant to the Act, the Proponent must provide with its proposal proof of its registration with and continuing and future participation in the E-Verify program established by the United States Department of Homeland Security. Under state law, MARTA cannot consider any proposal which does not include a completed Contractor's Affidavit. It is not the intent of this notice to provide detailed information or legal advice concerning the Act. All Proponents intending to do business with MARTA are responsible for independently apprising themselves of and complying with the requirements of the Act and assessing its effect on MARTA procurements and their participation in those procurements. For additional information on the E-Verify program or to enroll in the program, go to <https://e-verify.uscis.gov/enroll>.

- (b) **Form 2 - Price Proposal.** Each Proponent must complete, sign and submit a Price Proposal with its proposal, which must be packaged in a separately sealed envelope from the Technical Proposal (hereinafter defined).
- (c) **Form 2-A – APARC System Equipment Pricing Forms.** Each Proponent must complete, sign and submit this form with its proposal, which must be packaged in a separately sealed envelope from the Technical Proposal. This form may be included in the same envelope as the Price Proposal form (noted above).
- (d) **Form 3 – No Conflict of Interest.** Each Proponent must furnish with their proposal the information called for by the form.
- (e) **Form 4 – List of Proposed Subcontractors.** Each Proponent is requested to furnish with their proposal the information called for by the form. If the form is omitted or if the information furnished is incomplete or inadequate, the Authority may require that additional information be submitted after the Proposal Deadline and before an award is made.
- (f) **Form 6 – Proponent’s Qualification and Business References.** Each Proponent must furnish with their proposal the information called for by the form. If the form is omitted or if the information furnished is incomplete or inadequate, MARTA may require that additional information be submitted after the proposal deadline and before an award is made.
- (g) **Appendix A - Department of Diversity and Equal Opportunity Requirements.** MARTA’s Department of Diversity and Equal Opportunity (“DEO”) administers the program(s) applicable to this procurement and any Contract that may be awarded pursuant to this procurement are set forth in **Appendix A** attached hereto. Each Proponent must furnish with their proposal the information called for in Appendix A.

11. Additional Documentation; Ownership of Proposals: Each Proponent, if successful, acknowledges and agrees to submit such additional documentation (e.g., insurance/bonds, etc.) promptly after final award of this RFP pursuant to any notice provided by MARTA and as required by the terms of this RFP and/or the Contract. Each proposal submitted to MARTA will become the property of MARTA, without compensation to a Proponent, for MARTA’s use, in its discretion.

12. Submission of Proposals:

- (a) Proposals must be submitted according to the requirements of this RFP. All blank spaces must be typed or hand written in blue or black ink. All dollar amounts must be typed or hand written BOTH in word and numeric forms (e.g., One Dollar and No Cents (\$1.00)). Proponents are advised that the written figures will prevail over the numerical figures in the event of a discrepancy between the two in any proposal

document. For example only, if a price proposal of “One Dollar and No Cents (\$2.00)” is received, then the written figure of One Dollar and No Cents is the amount of the price proposal. All corrections to any entry must be lined out and initialed by the Proponent prior to proposal submission. Do not use correction tape or fluid.

- (b) Proposals shall be signed by hand by a principal of the Proponent with the authority to bind the Proponent and enter into a Contract with MARTA. Joint ventures or partnerships must designate one joint venture member/partner to represent the joint venture or partnership, respectively, with the authority to submit and execute a proposal, bind the entity as well as enter into a Contract with MARTA. Each Proponent is responsible for the preparation of its proposal and for the costs associated therewith.
- (c) Each Proponent must submit a complete proposal in accordance with the requirements of this RFP. The format for the submission of a proposal mandated by this RFP is not negotiable. The name and number of the project is: **RFP P30186: MARTA Paid Parking Services**. Proposals must be submitted in sealed envelope(s) or package(s) and the outside of the envelope(s) or package(s) must clearly identify the name of the Project, Project Number, Proponent’s Name and address, and Proponent’s Federal Work Authorization User Identification Number.
- (d) All proposals must be submitted to:

Metropolitan Atlanta Rapid Transit Authority
Department of Contracts, Procurement and Materials
2424 Piedmont Road, N.E.
Atlanta, Georgia 30324-3330
Attn: Contract Control (RFP P30186)

- (e) A Proponent must submit one (1) original, marked “Original” and twenty (20) copies of its proposal. Each proposal must be submitted on 8-½” x 11” single-sided, typed pages, using 12–point font size and such pages must be inserted in a standard three-hole ring binder. To the extent Proponent requires a larger page size to demonstrate its experience, MARTA will accept 11”x 17” sheet size but it must be folded to 8-1/2” x 11” size. Each proposal must contain an index and separate sections for the information requirements set forth in this RFP, as well as for the forms required to be submitted.
- (f) Each Proponent agrees to promptly notify MARTA in writing, prior to the proposal due date, should the Proponent find discrepancies, errors, ambiguities or omissions in any of Proponent’s proposal documents or should the intent or meaning set forth in Proponent’s proposal documents appear unclear or ambiguous.

13. Selection Process; Proposal Evaluation: Upon receipt and review of the Proposals, MARTA, at its sole discretion, shall determine which Proponents are responsive and responsible. MARTA will notify each Respondent in writing of MARTA's determination. After the Proposal Deadline, MARTA's Source Evaluation Committee ("**SEC**") will evaluate each responsive proposal in accordance with the evaluation criteria described in this RFP. If MARTA elects to award this RFP, MARTA may award the same to the most responsive and responsible Proponent that submits a proposal that is in the best interest of MARTA to accept. Proponents may be required to make an oral presentation to the SEC during the evaluation process.

- a) MARTA will evaluate and score proposals that are deemed responsive, according to the following criteria in descending order of importance:
 1. Revenue Sharing Percentage offered by Proponent
 2. Capabilities of APARC System to Meet Requirements
 3. Comprehensive Requirement of APARC System
 4. Experience, Qualifications and Capabilities
 5. Financial Stability of Company
 6. DBE Involvement

14. Rejection of Proposals; Cancellation of Solicitation; Waiver of Technicalities: MARTA reserves the right to reject any proposal or all proposals, to waive any technical defect in any proposal, or to cancel this procurement at any time for any reason or no reason. Additionally, MARTA may in accordance with applicable law, by addendum, modify any provision or part of the RFP at any time prior to the bid due date and time. The Proponent shall not rely on oral clarifications to the RFP unless they are confirmed, in writing, by MARTA in an issued addendum.

15. Georgia Open Records Act: Information provided to MARTA is subject to disclosure under the Georgia Open Records Act ("GORA"). Pursuant to O.C.G.A. § 50-18-72(a)(34), "*[a]n entity submitting records containing trade secrets that wishes to keep such records confidential under this paragraph shall submit and attach to the records an affidavit affirmatively declaring that specific information in the records constitute trade secrets pursuant to Article 27 of Chapter 1 of Title 10 [O.C.G.A. § 10-1-760 et seq.].*"

16. Representation: By submitting a proposal in response to this RFP, Proponent acknowledges and represents that: (a) the accompanying proposal is made by a person or business entity that is neither a high cost lender nor a predatory lender, nor is the Proponent an affiliate of a high cost lender or a predatory lender, as defined by the Official Code of Georgia Annotated ("Code") Section 58-102; (b) it has read all of the RFP documents (including, without limitation, the Contract) and acknowledges that Proponent shall be bound by the requirements stated therein; (c) the signatory to the RFP is (or Proponent's duly authorized agent or employee of the Proponent with the authority to bind Proponent hereto; (d) any information or disclosures provided in response to this RFP are truthful and accurate representations up to and including the date Proponent submits its proposal to MARTA; (e)

MARTA may not agree to make any substantive revisions to the Contract; and (f) it agrees that it will voluntarily notify MARTA immediately if any information or disclosure provided to MARTA during any part of this procurement process changes, is no longer accurate or would be misleading in any way.

By submitting a proposal in response to this RFP, Proponent is representing and warranting to MARTA that none of the following, during the term of either Contract or for one (1) year thereafter, have or will have any interest, direct or indirect, in the Contract or in any part of the proceeds, therefor: (a) members of the MARTA Board of Directors; (b) officers or employees or former employees of MARTA, or of any representative of MARTA in the administration of the Contract, pursuant to MARTA's Code of Ethics. This Section also applies to members of or delegates to the United States Congress or the Georgia legislature; and members of the governing body, and all other officers and employees, of the City of Atlanta or the counties of Clayton, DeKalb or Fulton.

17. Protests: Any protest or objection to this RFP or the solicitation process related to this RFP must be submitted, in a timely manner, in accordance with the Protest Procedures set forth on MARTA's website at www.itsmarta.com.

18. Equal Employment Opportunity and Disadvantaged Business Utilization: All Proponents are (a) strongly encouraged to consider the use of Disadvantaged Business Enterprises ("DBE(s)") in all aspects of both Contracts and (b) will be required to document their good faith efforts in this regard as an integral part of their submittal. Refer to the Equal Employment Opportunity and Disadvantaged Business Enterprise Requirements in Appendix A.

MARTA has assigned a **15%** goal for Disadvantaged Business Enterprise (DBE) participation in this project. More specifically, the DBE goal is 15% of the administrative costs (e.g., overhead) incurred by Proponent to provide this service. The Proponent agrees, represents, and warrants that:

- (a) He/she/it will not discriminate against any employee or applicant for employment because of race, color, religion, sex, age, or national origin;
- (b) He/she/it will comply with all the provisions of Executive Order No. 11246 of September 24, 1965, and of the rules, regulations and other relevant orders of the US Secretary of Labor; and he/she/it will furnish all information and reports required by Executive Order No. 11246 of September 24, 1965, and by Title VI of the Civil Rights Act of 1964, as well as, the Age Discrimination in Employment Act effective June 12, 1968, and will permit access to books, records and accounts by MARTA, the Secretary of Labor and/or the Secretary of Transportation, for purposes of investigation to ascertain his/her compliance with such rules, regulations, and orders; and
- (c) He/she will take affirmative action to assure that Disadvantaged Business Enterprises are strongly pursued for participation on the Contract and will document their best

good faith efforts to ascertain DBE participation in different aspects of the project as an integral part of their Proposal submitted.

19. Environmental Purchasing: The Authority desires to use Environmentally Preferable Purchasing (EPP) criteria when making purchases for commodities and services. Environmentally Preferable Purchasing refers to securing products that have a lesser or reduced effect on human health and the environment when compared with competing products that serve the same purpose. These products minimize the consumption of resources, energy and water; prevent the creation of solid waste, air pollution or water pollution; minimize the use of materials or processes which compromise the environment; and/or promote the use of non-toxic substances and avoid toxic materials or processes.

(a) Twelve basic categories are used to provide guidance as to what constitutes an environmentally preferable product. These categories include:

- (1) Alternative Energy Source
- (2) Bio-Based
- (3) Biodegradable
- (4) Compostable
- (5) High Recycled Content
- (6) Low Toxicity
- (7) Low Volatile Organic Compound (VOC)
- (8) Pollution (air, water, solid waste) Reduction
- (9) Recyclable
- (10) Repairable
- (11) Resource Efficient (water conserving and/or energy efficient)
- (12) Reusable

(b) In an effort to promote greater use of recycled and environmentally preferable products and minimize waste, all Proposals submitted should comply with the following guidelines:

- (i) All copies should be printed double-sided.
- (ii) All submittals and copies should be printed on recycled paper with a minimum post-consumer content of 30% or on tree-free paper (i.e., paper made from raw materials other than trees, such as kenaf). All Proposals should note the level of recycled content contained in the paper being used.
- (iii) Unless absolutely necessary, all Proposals and copies should minimize or eliminate the use of non-recyclable or non-reusable materials, such as plastic report covers, plastic dividers, vinyl sleeves and GBC binding. Three-ringed binders, glued materials, paper clips, and staples are acceptable.

- (iv) Proponents should submit materials in a format that allows for easy removal and recycling of paper materials.
- (v) Proponents are encouraged to use other products that contain recycled content in their Proposal documents. Such products may include, but are not limited to, folders, binders, paper clips, discs, envelopes, boxes, etc. Where appropriate, Proponents may wish to note which products in their Proposals are made with recycled materials.
- (vi) Unnecessary samples, attachments, or documents not specifically asked for should not be submitted with the Proposals.

20. Award of Contract; Execution: If MARTA awards a Contract pursuant to this procurement, MARTA will prepare and forward to the successful Proponent a Contract for execution substantially in the form included in this RFP.

PART II

CONTENTS OF PROPOSALS

- (i) **General Contents of Proposals:** A Proponent **must** submit a complete proposal in response to this RFP in the format specified in this RFP. A proposal will consist of two (2) parts:
- (a) **Technical Proposal:** This part will contain all of the information and submittals that are required by the RFP or being provided by Proponent as part of its proposal; and
 - (b) **Price Proposal:** This part will contain the price proposal form, which must be packaged in a separately sealed envelope from the Technical Proposal.
 - (c) **APARC System Equipment Pricing Forms:** This part will contain the APARC System Equipment Pricing Forms, which must be packaged in a separately sealed envelope from the Technical Proposal; however, Proponent may include it in the same envelope as the Price Proposal Forms.
- (ii) **Technical Proposal:**
- (a) **Title Page:** The title page should show the RFP number and title, the Proponent's name, address and telephone and fax numbers of the contact person(s) for Proponent and the date of Proponent's proposal.
 - (b) **Table of Contents:** The table of contents should outline and index the contents of the proposal and correspond to the requirements of this RFP.
 - (c) **Transmittal Letter:** A letter that briefly states the Proponent understands of the work to be performed, its commitment to perform the work and a statement why Proponent believes it is the best qualified individual or entity to perform the work. The transmittal letter must be signed.
 - (d) **Executive Summary:** Each Proponent is **required** to provide an overview of the Proponent's qualifications to provide the services being procured through this RFP and a high level description of the proposed solution. At a minimum, the Executive Summary **must** contain the following information:
 - (1) Complete legal name of the Proponent and the name of the legal entities that comprise the Proponent. The Proponent must provide the domicile where each entity comprising it is organized, including entity name, brief history of the entity, contact name, address, phone number, and facsimile number, as well as the legal structure of the entity and a listing of major satellite offices (if any).

- (2) If Proponent is a corporation or limited liability company formed in the State of Georgia, Proponent **must** include a copy of its Certificate of Incorporation or its Certificate of Organization from the Georgia Secretary of State's office.
- (3) If Proponent is a corporation or limited liability company formed outside the State of Georgia, Proponent **must** include a copy of its Certificate of Organization from the state in which the Proponent was formed and each Proponent will be required to obtain a Certificate of Authority from the Secretary of the State of Georgia authorizing the Proponent to transact business within the State of Georgia before executing the Contract.

(e) Proponent's Manufacturer Requirements: Proponents are advised that MARTA will require the successful Proponent to provide equipment from a manufacturer that has a minimum of three (3) years' experience manufacturing barcode technology and barcode parking tickets. Please provide evidence that the manufacture that Proponent intends to utilize has at least three (3) years' experience.

(f) Response to all Requirements: Clearly describe Proponent's approach/plan to meeting or exceeding each requirement set forth below. Proponent's response should be in the same format as set forth below.

- (1) Proponents shall identify what security protocol(s) shall be employed to ensure any duplicated or altered patterns are not validated in the APARC system.
- (2) Proponent should submit, as part of the response to this RFP, a comprehensive understanding of how Proponent will transfer parking operations from MARTA to the Proponent. The comprehensive understanding should include the following:
 - (i) Operational Transition Plan (See Scope of Work CDRL 4.2.1)
 - (ii) Implementation Plan (See Scope of Work CDRL 4.2.2)
 - (iii) Operations Manual/Plan (See Scope of Work CDRL 4.2.3)
 - (iv) Staffing Plan (See Scope of Work CDRL 4.2.4)
 - (v) Marketing and Communication Plan (See Scope of Work CDRL 4.2.5)
 - (vi) Contingency Plan (See Scope of Work CDRL 4.2.6)
 - (vii) Contractor Management Plan (See Scope of Work CDRL 4.2.7)
 - (viii) Contractor Policies and Procedures (See Scope of Work CDRL 4.2.8)
 - (ix) Traffic Management Plan (See Scope of Work CDRL 4.2.9)
- (3) Proponents **shall** present all aspects and details of Proponent's proposed fulfillment of MARTA's specific functional, technical performance, certification(s) and support requirements as required by this RFP. Proposals should reference each identified requirement (including paragraph number), indicating that the specified requirement is currently supported, is planned to be supported, or will not be supported, with an explanation for each item as appropriate.

- (4) Proponents should submit comprehensive Technical proposals in the format and order described below. Review and address each requirement described in:
- (i) Automated Parking Access and Revenue Control System Functions and Capabilities
 - (A) Automated Parking Access and Revenue Control - Operational and Site Requirements (See Scope of Work Section 4.1)
 - (B) Automated Parking Access and Revenue Control – Capabilities (See Scope of Work Section 3.2.1)
 - (C) Automated Parking Access and Revenue Control- System Reports and Revenue Reports Requirements (See Scope of Work Section 3.14)
 - (D) Automated Parking Access and Revenue Control Back Office (See Scope of Work Section 3.13)
 - (E) Automated Parking Payment Machine (APPM) - (Pay on Foot Device) (See Scope of Work Section 3.4)
 - 1. Automated Parking Payment Machine (APPM) Design Requirements (See Scope of Work Section 3.4.1)
 - 2. Automated Parking Payment Machine (APPM) Physical Requirements (See Scope of Work Section 3.4.2)
 - (F) Parking Cashier Terminal (See Scope of Work Section 3.5)
 - (G) Parking Entry Gate Unit (See Scope of Work Section 3.5)
 - (H) Parking Exit Gate Unit (See Scope of Work Section 3.7)
 - (I) Reversible Gate Unit (See Scope of Work Section 3.8)
 - (J) Bailout Gate Unit (See Scope of Work Section 3.9)
 - (K) Secure Lock and Key (See Scope of Work Section 3.10)
 - (L) Barcode Parking Ticket (See Scope of Work Section 3.11)
 - (M) Customer DATA Privacy (See Scope of Work Section 3.17)
 - (N) Network Architecture (See Scope of Work Section 3.2)
 - (O) Technical Support (See Scope of Work Section 3.17)
 - (P) Technologies Service Level Contract (See Scope of Work Section 3. 18)
 - (Q) MARTA Technology Infrastructure Requirements (See Scope of Work Section 3.2.2)
 - (R) Environmental Conditions (See Scope of Work Section 3.12)
 - (S) MARTA Employee Access (See Scope of Work Section 3.6)
 - (T) MARTA Parking Customer Validation and Verification (See Scope of Work Section 3.7)
 - (U) Disposition of Old Parking Equipment and Parking Booths (See Scope of Work Section 3.8)
 - (V) 5.1. License Plate Recognition System Optional (See Scope of Work Section 3.2.1)

- (ii) Section 4.4 – Automatic Parking Access and Revenue Control (APARC) Equipment Maintenance Requirements
 - (A) Preventive
 - (B) Field Repair
 - (C) Shop Level
 - (D) Overhaul of APARC equipment

- (iii) Operational Requirements and Site Conditions (See Scope of Work Section 4.2)
 - (A) Transition Plan
 - (B) Implementation Plan
 - (C) Operations Plan
 - (D) Staffing Plan
 - (E) Marketing Plan
 - (F) Contractor Management Plan
 - (G) Contractor Policies and Procedures
 - (H) Traffic Management Plan

- (iv) Section 4.5 - Parking Facilities Maintenance Requirements
 - (A) Maintenance Safety
 - (B) Cleaning and Maintenance Schedule
 - (C) Repair Recommendations
 - (D) Janitorial Maintenance Plan
 - (E) Safety/ Inspection Log
 - (F) Spills and Hazardous Waste Disposal
 - (G) Accident Prevention Plan
 - (H) APARC Equipment

(g) Organizational Structure and Key Personnel: The Proponent **must** provide (a) an Organizational Chart of the Proponent’s management structure and (b) corresponding resumes for each of the individuals listed on the organizational chart provided. The organizational structure and resumes shall clearly identify the Proponent’s management team. Identify key upper management and project personnel who will be assigned to the contract.

- (a) Legal form of the Proponent and the state in which it is domiciled. In the case where the Proponent is a partnership, joint venture or affiliation of two or more firms, please provide information for all participants and the nature of the relationship. This should include organization documents and a brief description of the rights and obligations of the parties.

(b) Resumes **shall** include at least the following information:

- (1) Name and Title;
- (2) Professional Background;
- (3) Education; and
- (4) Current and Past Employment
- (5) Experience with Automated Parking Control Application and Equipment
- (6) Satisfaction of Clients – Contractor (Previous and Current)
- (7) Satisfaction of Clients - Parking Equipment Vendor (Previous and Current)
- (8) Qualifications and Experience of Technical Staff
- (9) Qualifications and Related Experience of the Contractor
- (10) Experience managing multi-level and multi-function (similar size) locations

(c) The Proponent **must** also include a statement that clearly identifies the level of authority vested to each individual within Proponent's management structure to make decisions on behalf of the Proponent.

(d) Name, address, telephone and fax number for the contact person authorized to communicate and negotiate on behalf of the Proponent.

(e) List any outstanding disputes or business relationships between the Proponent and the following entities, if any:

- (1) MARTA;
- (2) The United States Department of Transportation;
- (3) Federal Transit Administration; and
- (4) Any other relevant agencies and organizations.

Describe any other outstanding disputes involving the Proponent that may affect either Contract, which MARTA should be made aware. If there are none, please state as such in the Proponent's proposal response.

(h) References and Client List: Proponents **must** provide client references for ALL of Proponent's clients in the past five (5) years. Provide each of the following: client names, organization /company names, mailing address and telephone numbers. Also, provide a description of the Proponent's role in the project.

NOTE: By submitting a response to this RFP, Proponent acknowledges and agrees that MARTA may directly contact any of Proponent's references or clients.

MARTA seeks a Contractor that has successfully completed numerous transitions, many of which involve handling free daily parkers as well as long-term parkers. MARTA seeks a company that continually demonstrates an ability to develop and implement a comprehensive plan to minimize operational issues during all phases

of the transition process. MARTA seeks confident and extensive experience, coupled with the expertise of an on-site transition team to meet or exceed MARTA's expectations and provide for a seamless transition.

(i) Reports: The Proponent should provide samples of the reports, invoices and statements as detailed in Sections 5.3.6(D) and 3.14.2 of the Scope of Work attached to the Contract for review.

(iii) Submittals: Please submit each of the following forms:

(a) Form 1 - Illegal Immigration Reform and Enforcement Act Form.

(b) Form 2 – Price Proposal Form.

(c) Form 2-A – APARC System Equipment Pricing Forms

(d) Form 3 – No Conflict of Interest.

(e) Form 4 – List of Proposed Subcontractors.

(f) Form 5 – Reserved.

(g) Form 6 - Proponent's Qualification and Business References.

(h) Appendix A-Department of Diversity and Equal Opportunity Requirements.

PART III

REQUIRED SUBMITTAL FORMS

See attached.

FORM 1
ILLEGAL IMMIGRATION REFORM AND ENFORCEMENT ACT
METROPOLITAN ATLANTA RAPID TRANSIT AUTHORITY
REQUEST FOR PROPOSALS (RFP) P30186
CONTRACTOR AFFIDAVIT UNDER OCGA §13-10-91(b)(1)

By executing this affidavit, the undersigned Contractor verifies its compliance with OCGA §13-10-91, stating affirmatively that the individual, firm or corporation which is engaged in the physical performance of services on behalf of METROPOLITAN ATLANTA RAPID TRANSIT AUTHORITY has registered with, is authorized to use and uses the federal work authorization program commonly known as E-Verify, or any subsequent replacement program, in accordance with the applicable provisions and deadlines established in OCGA §13-10-91. Furthermore, the undersigned Contractor will continue to use the federal work authorization program throughout the contract period and the undersigned Contractor will contract for the physical performance of services in satisfaction of such contract only with subcontractors who present an affidavit to the contractor with the information required by OCGA §13-10-91(b). Contractor hereby attests that its federal work authorization user identification number and date of authorization are as follows:

Federal Work Authorization User Identification Number

Date of Authorization

Name of Contractor

MARTA Paid Parking Services

Name of Project

Metropolitan Atlanta Rapid Transit Authority

Name of Public Employer

I hereby declare under penalty of perjury that the foregoing is true and correct.

Executed on _____, 2015 in _____ (City), _____ (State)

Signature of Authorized Officer or Agent

Printed Name and Title of Authorized Officer or Agent

SUBSCRIBED AND SWORN BEFORE ME

ON THIS THE ____ DAY OF _____, 2015.

NOTARY PUBLIC

My Commission Expires:

**METROPOLITAN ATLANTA RAPID TRANSIT AUTHORITY
REQUEST FOR PROPOSALS (RFP) P30186
SUBCONTRACTOR AFFIDAVIT UNDER OCGA §13-10-91(b)(3)**

By executing this affidavit, the undersigned subcontractor verifies its compliance with OCGA §13-10-91, stating affirmatively that the individual, firm or corporation which is engaged in the physical performance of services under a contract with _____ (Name of Contractor) on behalf of METROPOLITAN ATLANTA RAPID TRANSIT AUTHORITY has registered with, is authorized to use and uses the federal work authorization program commonly known as E-Verify, or any subsequent replacement program, in accordance with the applicable provisions and deadlines established in OCGA §13-10-91. Furthermore, the undersigned subcontractor will continue to use the federal work authorization program throughout the contract period and the undersigned subcontractor will contract for the physical performance of services in satisfaction of such contract only with sub-subcontractors who present an affidavit to the subcontractor with the information required by OCGA §13-10-91(b). Additionally, the undersigned subcontractor will forward notice of the receipt of an affidavit from a sub-subcontractor to the Contractor within five business days of receipt. If the undersigned subcontractor receives notice of receipt of an affidavit from any sub-subcontractor that has contracted with a sub-subcontractor the subcontractor will forward, within five business days of receipt, a copy of such notice to the Contractor. Subcontractor hereby attests that its federal work authorization user identification number and date of authorization are as follows:

Federal Work Authorization User Identification Number

Date of Authorization

Name of Subcontractor

MARTA Paid Parking Services
Name of Project

Metropolitan Atlanta Rapid Transit Authority
Name of Public Employer

I hereby declare under penalty of perjury that the foregoing is true and correct.

Executed on _____, 2015 in _____ (City), _____ (State)

Signature of Authorized Officer or Agent

Printed Name and Title of Authorized Officer or Agent

SUBSCRIBED AND SWORN BEFORE ME ON THIS THE ____ DAY OF _____, 2015.

NOTARY PUBLIC

My Commission Expires:

**METROPOLITAN ATLANTA RAPID TRANSIT AUTHORITY
REQUEST FOR PROPOSALS (RFP) P30186
SUB-SUBCONTRACTOR AFFIDAVIT UNDER OCGA §13-10-91(b)(4)**

By executing this affidavit, the undersigned sub-subcontractor verifies its compliance with OCGA §13-10-91, stating affirmatively that the individual, firm or corporation which is engaged in the physical performance of services under a contract with _____ (Name of subcontractor or sub-subcontractor with whom such sub-subcontractor has privity of contract) and _____ (Name of Contractor) on behalf of METROPOLITAN ATLANTA RAPID TRANSIT AUTHORITY has registered with, is authorized to use and uses the federal work authorization program commonly known as E-Verify, or any subsequent replacement program, in accordance with the applicable provisions and deadlines established in OCGA §13-10-91. Furthermore, the undersigned sub-subcontractor will continue to use the federal work authorization program throughout the contract period and the undersigned sub-subcontractor will contract for the physical performance of services in satisfaction of such contract only with sub-subcontractors who present an affidavit to the sub-subcontractor with the information required by OCGA §13-10-91(b). The undersigned sub-subcontractor shall submit, at the time of such contract, this affidavit to _____ (Name of subcontractor or sub-subcontractor with whom such sub-subcontractor has privity of contract). Additionally, the undersigned sub-subcontractor will forward notice of the receipt of any affidavit from a sub-subcontractor to _____ (Name of subcontractor or sub-subcontractor with whom such sub-subcontractor has privity of contract). Sub-subcontractor hereby attests that its federal work authorization user identification number and date of authorization are as follows:

Federal Work Authorization User Identification Number

Date of Authorization

Name of Sub-subcontractor

MARTA Paid Parking Services
Name of Project

Metropolitan Atlanta Rapid Transit Authority
Name of Public Employer

I hereby declare under penalty of perjury that the foregoing is true and correct.

Executed on _____, 2015 in _____ (City), _____ (State)

Signature of Authorized Officer or Agent Printed Name and Title of Authorized Officer or Agent

SUBSCRIBED AND SWORN BEFORE ME ON THIS THE ____ DAY OF _____, 2015.

NOTARY PUBLIC
My Commission Expires:

FORM 2 and Form 2-A

See attached Exhibits C & C-1.

FORM 3
CERTIFICATION OF NO CONFLICT OF INTEREST FORM

Except as may be identified and explained below, the undersigned hereby certifies that,

no member of the Board of Directors, officer, employee, or former employee of the Metropolitan Atlanta Rapid Transit Authority, pursuant to the Authority's Code of Ethics,

AND

no elected, appointed, or employed official or employee of the State of Georgia or of a governing body, instrumentality, or political subdivision within the territory comprising the Counties of Fulton, DeKalb.

AND

no relative of persons described above,

AND

no member of or delegate to the Congress of the United States

has an interest whatsoever (regardless of how indirect and how remote that interest may be) in Contractor's organization and in the proceeds of a Contract and Contract which might be made between Contractor and the Metropolitan Atlanta Rapid Transit Authority as a result of the Contract accompanied by this certification; no person who is or who during the past twelve months has been a member of the Board of Directors, an officer, or an employee of the Metropolitan Atlanta Rapid Transit Authority is employed by or on behalf of Proponent's organization.

The undersigned certifies that he/she is legally authorized by the Proponent to make the above representation, and that the representation is true to the best of his/her knowledge and belief and without deliberate omission of any inquiry which would to the best of his/her belief tend to change the above representation. The undersigned understands that any representation made knowing it to be false may disqualify the Proponent from being awarded this work and future work by the Authority.

NOTE: THIS CERTIFICATION MUST BE SIGNED AND SUBMITTED PRIOR TO AWARD.

Signature _____

Title _____ Date of Signing _____

Firm or Corporate Name _____

Address _____

Telephone Number _____

FORM 4
LIST OF PROPOSED SUBCONTRACTORS

PROVIDE THE FOLLOWING INFORMATION FOR EACH PROPOSED SUBCONTRACTOR AND USE ADDITIONAL SHEETS IF NECESSARY

1. NAME: _____

ADDRESS: _____

TELEPHONE NUMBER: _____

SUBCONTRACT EFFORT: _____

AGE OF FIRM: _____ YEAR(S) _____ MONTH(S) DBE NON-DBE

ANNUAL GROSS RECEIPTS OF FIRM:

\$0 - \$999,999 \$100,000 - \$499,999 \$500,000 - \$999,999 \$1,000,000 - \$4,999,999

\$5,000,000 - \$9,999,999 \$10,000,000 - \$14,999,999 \$15,000,000 - 24,999,999

2. NAME: _____

ADDRESS: _____

TELEPHONE NUMBER: _____

SUBCONTRACT EFFORT: _____

AGE OF FIRM: _____ YEAR(S) _____ MONTH(S) DBE NON-DBE

ANNUAL GROSS RECEIPTS OF FIRM:

\$0 - \$999,999 \$100,000 - \$499,999 \$500,000 - \$999,999 \$1,000,000 - \$4,999,999

\$5,000,000 - \$9,999,999 \$10,000,000 - \$14,999,999 \$15,000,000 - 24,999,999

3. NAME: _____

ADDRESS: _____

TELEPHONE NUMBER: _____

SUBCONTRACT EFFORT: _____

AGE OF FIRM: _____ YEAR(S) _____ MONTH(S) DBE NON-DBE

ANNUAL GROSS RECEIPTS OF FIRM:

\$0 - \$999,999 \$100,000 - \$499,999 \$500,000 - \$999,999 \$1,000,000 - \$4,999,999

\$5,000,000 - \$9,999,999 \$10,000,000 - \$14,999,999 \$15,000,000 - 24,999,999

FORM 5
RESERVED

FORM 6
PROPONENT'S QUALIFICATIONS AND BUSINESS REFERENCES FORM

Name of Proponent _____

Principal Office _____
(Street Address or P.O. Box Number)

_____ (State) _____ (Zip Code)

() _____ () _____
(Telephone Number) (Fax Number)

Federal ID.Number: _____
(Social Security Number in case of an individual)

1. Are you registered to do business in Georgia? _____ Classification

2. Are you an individual _____, a partnership _____, a corporation _____, or a joint venture _____?
(Check as applicable)

If a partnership, list names and addresses of partners; if a corporation, list names of officers and directors and State of incorporation; if a joint venture, list names and addresses of ventures and, if any venturer is a corporation, partnership, or joint venture, list the same information for each such corporation, partnership, and joint venture.

3. How many years has your organization been in business under your present business name?
____ yrs.
4. How many years of experience has your organization had in work similar to the work of this Contract?
 - (a) As a prime contractor? _____
 - As a subcontractor? _____

5. List all the contracts which your organization has completed during the last 5 years, and which demonstrate qualifications to perform the work of this Contract. (For joint venture works show the sponsoring individual or company.)

Year	Contract Price	Kind of Contract	Location of Work	Name and Address of Customer
------	----------------	------------------	------------------	------------------------------

6. Have you or your organization, or any officer or partner thereof, failed to complete a contract?
If so, give details _____

7. In what other lines of business are you financially interested? _____

8. Describe the composition of your company’s labor force by job classification, including management:

9. Give information about the experience of the principal individuals of your present organization.

Individual's Name	Present Position or Office in your organization	Years of Similar Experience	Magnitude and Type of Work	In what Capacity
-------------------	---	-----------------------------	----------------------------	------------------

10. List similar contract work which you have currently underway, or for which you are committed:

Contract Price	Kind of Contract	Location of Work	Completion Date	Expected Completion	Name and address of Customer

11. **References: List customers, including public bodies, for whom you have done work during past three (3) years:**

Name	Address	Business
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

12. **Reference is hereby made to the following financial institutions as to the financial responsibility of the Proponent:**

Name of the Bank: _____

Street Address: _____

City and State: _____ **Telephone:** _____

Officer familiar with Proponent's Account: _____

Name of the Bank: _____

Street Address: _____

City and State: _____ **Telephone:** _____

Officer familiar with Proponent's Account: _____

Name of the Bank: _____

Street Address: _____

City and State: _____ **Telephone:** _____

Officer familiar with Proponent's Account: _____

13. Reference is hereby made to the following surety/insurance company or companies as to the financial responsibility and general reliability of the Proponent:

Name of Surety/Insurance Company: _____

Name of Local Agent (if different): _____

Local Street Address: _____

City and State: _____ Telephone: _____

Person familiar with Proponent's Account: _____

Name of Surety/Insurance Company: _____

Name of Local Agent (if different): _____

Local Street Address: _____

City and State: _____ Telephone: _____

Person familiar with Proponent's Account: _____

14. Financial information for last two (2) years:

Year ending _____ Year ending _____

Total gross sales \$ _____ \$ _____

Net Profit (Loss) \$ _____ \$ _____

Current Assets \$ _____ \$ _____

Current Liabilities \$ _____ \$ _____

Audited financial statements available? Yes ___ No ___ Yes ___ No ___

15. Is any litigation pending against your organization? _____

If so, give details _____

The undersigned certifies that he is legally authorized by the Proponent to make the statements and representations contained in this Document, and represents and warrants that the foregoing information is true and accurate to the best of his knowledge, and intends that the Metropolitan Atlanta Rapid Transit Authority rely thereon in awarding the Contract.

PROPONENT'S NAME _____

DATE OF SIGNING _____

SIGNATURE _____

TITLE _____

PART IV

FORM OF PAID PARKING SERVICES CONTRACT

RFP NUMBER P30186

This Paid Parking Services Contract (“Contract”) is entered into and made effective on and as of _____, 20____ (“Effective Date”) by and between the Metropolitan Atlanta Rapid Transit Authority (“MARTA”) and _____, a _____ (“Contractor”). MARTA and Contractor are collectively referred to herein as the “Parties” and each, individually, as a “Party.”

Contract Name: _____	Contract No: P30186
Contractor: _____	MARTA Department: _____
Address: _____ _____ _____	Address: MARTA 2424 Piedmont Road, NE Atlanta, Georgia 30324-3330
Phone: _____	Phone: _____
Fax: _____	Fax: _____
Contractor’s Authorized Representative: _____	MARTA’s Authorized Representative: _____ (or his or her designee(s))

1. SERVICES; TERM.

- (a) Service. Subject to the terms and conditions set forth herein, Contractor shall perform the services described in the statement of work attached hereto as **Exhibit A** (“Statement of Work,” “Scope of Work,” “Scope of Services” or “Services”). The Contractor shall perform the Services when ordered from time to time by MARTA or as stipulated in this Contract. Contractor will be responsible for the cost of, obtaining, maintaining, and complying with, and paying all fees and taxes associated with, all applicable licenses, authorizations, consents, approvals, and permits required of Contractor in performing Services and complying with this Contract.

- (b) Term. The term of this Contract shall commence on the Effective Date and expire ten (10) years after the final Completion of Contractor’s Work (as defined in the Section 12(i) of the Scope of Work), unless this Contract is terminated earlier. Notwithstanding anything to the contrary contained herein, the parties acknowledge and agree that MARTA has five (5), one (1) year options to extend the term of this Contract. Each option may be exercised by MARTA, in its sole discretion, by giving the Contractor written notice at least thirty (30) days prior to the expiration of the then current term.

- (c) Contractor Costs. Unless otherwise expressly provided in this Contract, all materials, equipment, software, facilities and labor required for the proper performance of the Services shall be furnished by and be under the sole direction and control of Contractor and at Contractor's sole expense. Contractor shall be responsible, at its sole cost, for procuring all required resources and using the same in a professional and workmanlike manner at no additional cost to MARTA.
- (d) Removal of Employees Assigned to MARTA Contract. Within a reasonable period, but not later than seven (7) days after Contractor's receipt of notice from MARTA that the continued assignment to this Contract of any Contractor Employees is not in the best interests of MARTA or may create a conflict of interest (in MARTA's sole determination), Contractor shall remove such Contractor Employee(s) from providing services under this Contract. Contractor will not be required to terminate the employment of such individual. Contractor will assume all costs associated with the replacement of any Contractor Employees. In addition, Contractor agrees to remove from this Contract any Contractor Employees who have engaged in willful misconduct or have committed a material breach of this Contract immediately after Contractor becomes aware of such misconduct or breach and notify MARTA of the same. For purposes of this Contract, the term "Contractor Employee(s)" shall mean all of Contractor's employees, contractors, subcontractors, agents, including, without limitation, the employees, contractors, subcontractors, agents of Contractor's partners or joint venture partners and any other individuals or entities providing any of the Services set forth in the Contract under the color of Contractor's authority.
- (e) Contractor Authorized Representative. Contractor designates the person(s) named herein above as its Contractor Authorized Representative ("Contractor Authorized Representative") who shall: (a) be an employee within Contractor's organization, with the information, authority and resources available to properly coordinate Contractor's responsibilities under this Contract; (b) serve as primary interface and the single-point of communication for the provision of Services by Contractor; (c) have day-to-day responsibility and authority to address issues relating to the Services; and (d) devote adequate time and efforts to managing and coordinating the Services.
- (f) MARTA Authorized Representative. MARTA designates the person(s) named herein above as its MARTA Authorized Representative(s) ("MARTA Authorized Representative") who shall: (a) serve as primary interface and the primary point(s) of communication for the provision of Services; (b) have day-to-day responsibility to address issues relating to this Contract; and (c) to the extent provided under applicable law (and the policies and procedures of MARTA) as the same may change from time to time, have the authority to execute any additional documents or changes on behalf of MARTA.

2. **SPECIAL TERMS AND CONDITIONS.** Notwithstanding anything to the contrary contained herein, the Parties acknowledge and agree that in the event of a conflict between the terms and conditions contained in **Exhibit B** and the balance of the Contract, the terms and conditions set forth in **Exhibit B** shall control.

3. **COMPENSATION.**
 - (a) **Parking Revenue Collection.** Contractor shall be responsible for collecting all parking revenue and remitting MARTA's Gross Parking Revenue on a monthly basis without deduction, set off or abatement of any kind or nature. Contractor shall remit such Gross Parking Revenue, on a monthly basis, to MARTA's Accounting Department at 2424 Piedmont Rd., Atlanta, Georgia 30324-3330, Attention: Parking Contract Administrator (Contract No. P30186).

 - (b) **Payment Terms.** Contractor shall pay MARTA the agreed upon percentage set forth on the Price Proposal Form (attached hereto as **Exhibit C** and incorporated herein by his reference) of the gross monthly revenue collected in exchange for Contractor performing all of the Services set forth in this Contract by Contractor. Contractor shall pay MARTA all amounts within ten (10) business days after the end of the prior month without deduction, set off or abatement of any kind. In the event that the Gross Receipts collected by Contractor in any given month are less than one-twelfth (12th) of the amount of the Minimum Annual Guarantee, Contractor agrees to pay MARTA one-twelfth (12th) of the amount of the Minimum Annual Guarantee as its monthly payment under the terms of this Contract.

4. **EQUAL EMPLOYMENT OPPORTUNITY AND DISADVANTAGED BUSINESS ENTERPRISES.**
 - (a) Contractor agrees that it will not discriminate against any business owner because of the owner's race, color, religion, national origin, sex or physical handicap in connection with the award or performance of this Contract. Contractor agrees to include the above statements in any subcontracts or subsequent Contracts that it enters into and cause those businesses to similarly include the statements in subsequent Contracts related to this Contract. Contractor agrees to use its best good faith efforts to comply with the terms, conditions and goals set forth in **Appendix A** attached hereto and incorporated herein by this reference.

 - (b) Contractors are required to submit with their Equal Employment Opportunity ("EEQ") statistical data, as well as, Disadvantaged Business Enterprise ("DBE") utilization commitments. This requirement pursuant to Title VII of the Civil Rights Act of 1964, Executive Order 11246 as implemented by the Department of Labor's Office of Contract Compliance, Executive Order 11625, Federal Transit Administration Circular 4716.1A,

Federal Department of Transportation 49 CFR Part 23 and MARTA Board Policies on equal employment opportunity and DBE contracting goals.

- (c) If Contractor has fifty (50) employees or more, Contractor is required to submit a copy of its affirmative action plan along with all other materials requested by MARTA. The affirmative action plan shall contain, at a minimum, a utilization analysis, an analysis of any underutilization, a program of goals and timetables to correct any such underutilization, an auditing and record keeping process, internal and external EEO policy dissemination procedures and the identification and delineation of the affirmative action officer's responsibilities.
- (d) If Contractor has less than fifty (50) employees, Contractor shall provide an equal opportunity policy statement signed by the firm's Chief Executive Officer (or his/her equivalent). The policy statement will indicate that the Contractor does not discriminate against any employee or applicant for employment because of race, color, religion, sex or national origin. Further, the Contractor will state that it will take affirmative action to ensure that applicants are employed, and that employees are treated during their employment, without regards to race, color, religion, sex, or national origin.

5. **DEFAULT; REMEDIES.**

- (a) Contractor shall be in default under the terms of this Contract if Contractor:
 - (i) fails to make any payment within five (5) days of the date such payment is due;
 - (ii) ceases to provide any of the Services without the written consent of MARTA's Authorized Representative or becomes permanently deprived of the rights, powers, or privileges necessary for the proper conduct thereof;
 - (iii) becomes insolvent or seeks the benefit of any present or future insolvency statute, makes an assignment for the benefit of any creditor, files a voluntary petition in bankruptcy, or consents to the appointment of a receiver, trustee or liquidator of any of its assets;
 - (iv) files a petition under any part of the federal bankruptcy laws, or an action under any present or future insolvency law or statute, or is involved in an involuntary bankruptcy filing that is not dismissed within sixty (60) days after filing
 - (v) fails to keep, perform or observe any term, covenant or condition set forth in this Contract;

(vi) intentionally or willfully misrepresents any material fact to MARTA;

(vii) makes any material misrepresentation (or failed to make a full and accurate disclosure) to MARTA in the documents, questionnaires, forms or materials submitted by Contractor in response to the Request for Qualifications, Request for Proposals, Request for Quotes, Invitation to Bid, any other solicitation document or any document pursuant to which this Contract was awarded, or failed to comply with all requirements, including, without limitation, MARTA's ethical standards and conflicts of interest policies; or

(viii) fails to pay any and all taxes and assessments required to be paid under this Contract or in the operation of MARTA's business.

(b) If Contractor is in default, MARTA will notify Contractor in writing of the nature of the default and the time period within which to cure, if any. If Contractor, (a) where a specific time period for the cure is provided in the applicable subsection of this Contract, does not cure the default within that period, or (b) where a time period for the cure is not specifically provided in the applicable section, does not cure the default within twenty (20) days from receipt of notice from MARTA, then MARTA may, without further notice to Contractor and Contractor's sureties, if any, elect to exercise any of the following remedies:

(i) terminate all or any portion of this Contract or any of Contractor's rights under this Contract at any time thereafter and recover from Contractor all costs, expenses, losses and damages recoverable under this Contract (including, without limitation, all reasonable costs associated with the re-procurement of the Services) or applicable law as a result thereof.

(ii) cure any default at Contractor's cost. If MARTA at any time, by reason of Contractor's default, pays any sum to cure any default, the sum paid by MARTA shall be immediately due from Contractor to MARTA, and shall bear interest at the rate of one and one-half percent (1.5%) per month from (or such maximum rate permissible by applicable law, if lower) the date paid by MARTA until the date MARTA is fully reimbursed by Contractor.

(iii) exercise any and all other rights or remedies available under this Contract or at law or in equity.

6. **TERMINATION FOR CONVENIENCE**. MARTA shall have the right to terminate this Contract with or without cause at any time during the term of this Contract by giving written notice to Contractor at least thirty (30) days prior to the date such termination is to be effective.

7. **EFFECT OF TERMINATION.** Unless otherwise provided herein, termination of this Contract, in whole or in part and for any reason, shall not affect: (a) any liabilities or obligations of either Party arising before such termination or out of the events causing such termination; or (b) any remedies to which a Party may be entitled under this Contract, at law or in equity. Upon termination of this Contract, Contractor shall immediately: (i) discontinue Services on the date and to the extent specified in the notice; (ii) inventory, maintain and turn over to MARTA all Work Product (hereinafter defined), licenses, equipment, materials, plant, tools, and property furnished by Contractor or provided by MARTA for performance of the terminated Services; (iii) comply with all other reasonable requests from MARTA regarding the terminated Services; and (iv) continue to perform in accordance with all of the terms and conditions of this Contract any portion of the Services that are not terminated.

8. **SUSPENSION OF SERVICES.** MARTA may suspend at any time, by written notice to Contractor, the performance of all or any portion of the Services for any amount of time. Upon receipt of a suspension notice, Contractor must, unless the notice requires otherwise, immediately (a) discontinue suspended Services on the date and to the extent specified in the notice, (b) place no further orders or subcontracts for materials, services or facilities with respect to suspended Services, (c) cease advertising to the public as a provider of the suspended Service(s) and (d) take any other reasonable steps to minimize costs associated with the suspension.

9. **MARTA'S RIGHT TO REVIEW AND REJECT.** Any Service, Work Product or other document or item to be submitted or prepared by Contractor hereunder shall be subject to the review of MARTA Authorized Representative. The MARTA Authorized Representative may disapprove, if in MARTA Authorized Representative's sole opinion, the Work Product, Service, document, or item is not in accordance with the requirements of this Contract or sound professional service principles, or is impractical, uneconomical, or unsuited in any way for the purposes for which the Work Product, Service, document, or item is intended or is deemed unsuitable for MARTA purposes by MARTA Authorized Representative. If any of the said items or any portion thereof are so disapproved, Contractor shall revise the items until they meet the approval of MARTA Authorized Representative. However, Contractor shall not be compensated under any provision of this Contract for repeated performance of such disapproved items.

10. **AUDIT AND INSPECTION.**
 - (a) Contractor will provide to MARTA, and any entity designated by MARTA, access to Contractor Employees and to Contractor's offices and property for the purpose of performing audits and inspections of Contractor, Contractor Employees and/or any of the relevant information relating to the Services and this Contract. Such audits, inspections and access may be conducted to: (a) verify the accuracy of charges and

invoices; (b) examine Contractor's performance of the Services; (c) monitor compliance with the terms of this Contract, including, without limitation, compliance DEO policies; and (d) any other matters reasonably requested by MARTA. Contractor shall provide, at no additional cost, full cooperation to MARTA and its designated entities in connection with audit functions and examinations by regulatory authorities. All audits and inspections will be conducted during normal business hours (except with respect to Services that are performed during off-hours). Contractor shall promptly respond to and rectify the deficiencies identified in and implement changes suggested by any audit or inspection report.

- (b) If any audit or inspection of charges, invoices or Services reveals that MARTA has overpaid any amounts to Contractor, Contractor shall immediately refund such overpayment and Contractor shall also pay to MARTA interest on the overpayment amount at the rate of one and one-half percent (1.5%) per month (or such maximum rate permissible by applicable law, if lower) from the date the overpayment was made until the date the overpayment is refunded to MARTA by Contractor. Additionally, Contractor acknowledges and agrees that MARTA deduct such amounts due from future invoices until all overpaid amounts (including, interest thereon) are repaid in full.
- (c) Until the later of: (a) five (5) years after expiration or termination of this Contract; (b) the date that all pending matters relating to this Contract (*e.g.*, disputes) are closed or resolved by the Parties; or (c) the date such retention is no longer required to meet MARTA's records retention policy or any record retention policy imposed by applicable law, if more stringent than MARTA's policy, Contractor will maintain and provide access upon request to the records, data, documents and other information required to fully and completely enable MARTA to enforce its audit rights under this Contract.

11. CONFLICTS OF INTEREST; PROHIBITED INTERESTS.

- (a) Conflicts of Interest. The Contractor agrees to execute and return the Certification of No Conflict of Interest attached hereto as **Exhibit E** and to comply with MARTA's Code of Conduct (available on-line at www.itsmarta.com) as the same may change from time to time. Contractor shall immediately notify MARTA in writing, specifically disclosing any and all potential or actual conflicts of interests, which arise or may arise during the execution of its work in the fulfillment of the requirements of the Contract whether or not MARTA has identified such conflict of interest. MARTA shall make a written determination as to whether a conflict of interest actually exists and the actions to be taken to resolve the conflict of interest, which may include termination of this Contract or the suspension of Services.
- (b) Prohibited Interests. The Contractor undertakes, represents, and warrants that none of the following persons, during his tenure or for one year thereafter, has or will have any

interest, direct or indirect, in the Contract or in any part of the proceeds hereof: members of MARTA's Board of Directors; officers or employees of MARTA (or former employees of MARTA within the preceding twelve month period), or any representative of MARTA in the administration of the Contract; members of or delegates to the United States Congress or to the Georgia legislature; and members of the governing body, and all other officers or employees of MARTA, City of Atlanta or the Counties of Clayton, Cobb, DeKalb, Fulton or Gwinnett, Georgia.

12. **INSURANCE REQUIREMENTS.** Contractor shall comply with the insurance and bonding requirements set forth on **Exhibit D**. Contractor further agrees that its obligation to indemnify and hold harmless MARTA Indemnitees will not be limited to the limits or terms of Contractor's liability insurance, if any, required under this Contractor.
13. **INDEMNIFICATION.** Contractor shall indemnify and hold MARTA, its agencies and its and their respective officers, directors, employees, advisors, and agents, successors and permitted assigns (collectively, the "MARTA Indemnitees") harmless from any losses, liabilities, damages, demands and claims, and all related costs (including, without limitation, reasonable legal fees and costs of investigation, litigation, settlement, judgment, interest and penalties) arising from claims or actions based upon:
- (a) Contractor or Contractor's subcontractors, agents or employees' performance, non-performance or breach of this Contract;
 - (b) any actual, alleged, threatened or potential violation of any applicable laws by Contractor or Contractor's subcontractors, agents or employees, to the extent such claim is based on the act or omission of Contractor or any person acting for, in the name of, at the direction or supervision of or on behalf of Contractor;
 - (c) death of or injury to any individual caused, in whole or in part, by the tortious conduct of Contractor or any person acting for, in the name of, at the direction or supervision of or on behalf of Contractor; and
 - (d) damage to, or loss or destruction of, any real or tangible personal property caused, in whole or in part, by the act or omission of Contractor or any person acting for, in the name of, at the direction or supervision of or on behalf of Contractor.
14. **LIMITATION OF LIABILITY.** The maximum aggregate liability of MARTA hereunder is limited to the total of all fees actually paid by Contractor to MARTA during then current year under the contract. MARTA will not be liable or responsible to contractor for any loss(es), damage(s) or expense(s) that contractor may sustain or incur if either the quantity or character of any services to be provided by MARTA is changed or is no longer available or is no longer suitable for contractor's requirements. Marta will not be liable or responsible to

contractor for any loss(es), damage(s) or expense(s) arising out of, resulting from, relating to or concerning, directly or indirectly, acts of terrorism, including, but not limited to, loss(es), damage(s) or expense(s) sustained or incurred by contractor as a result of:

- (a) a change in MARTA's or Contractor's business resulting from such terrorist acts;
- (b) the enactment of laws responding to or concerning terrorist acts; or
- (c) any other detrimental effect upon Contractor or its business resulting from such terrorist acts.

15. WORK PRODUCT.

- (a) Except as otherwise expressly provided in this Contract, all reports, information, data, specifications, computer programs, technical reports, operating manuals and similar work or other documents, deliverables, and other work product prepared or authored by Contractor or any of its subcontractors for MARTA under this Contract, and all intellectual property rights associated with the foregoing items (collectively, the "Work Product") shall be and remain the sole and exclusive property of MARTA. Any of Contractor's or its subcontractors' works of authorship comprised within the Work Product (whether created alone or in concert with MARTA or a third party) shall be deemed to be 'works made for hire' and made in the course of rendering Services and, whether pursuant to the provisions of Section 101 of the U.S. Copyright Act or other applicable law, such Work Product shall belong exclusively to MARTA. Contractor and its contractors grant MARTA a non-exclusive, perpetual, worldwide, paid-in-full, royalty-free license to all Work Product not exclusively developed for MARTA under this Contract.
- (b) If any of the Work Product is determined not to be a work made for hire, Contractor assigns to MARTA, worldwide and in perpetuity, all rights, including proprietary rights, copyrights, and related rights, and all extensions and renewals of those rights, in and to the Work Product. If Contractor has any rights to the Work Product that cannot be assigned to MARTA, Contractor unconditionally and irrevocably waives the enforcement of such rights and irrevocably grants MARTA (during the term of such rights) an exclusive, irrevocable, perpetual, transferable, worldwide, fully paid and royalty-free license, with rights to sublicense through multiple levels of sub-licensees, to reproduce, make, have made, create derivative works of, distribute, publicly perform and publicly display by all means, now known or later developed, such rights.
- (c) MARTA shall have the sole and exclusive right to apply for, obtain, register, hold and renew, in its own name or for its own benefit, all patents, copyrights, applications and registrations, renewals and continuations and all other appropriate protection.

(d) To the extent exclusive title or complete and exclusive ownership rights in any Work Product created by Contractor Employees may not originally vest in MARTA by operation of applicable law, Contractor shall, immediately upon request, unconditionally and irrevocably assign, transfer and convey to MARTA all rights, title and interest in the Work Product.

16. **CONTRACTOR REPRESENTATIONS AND WARRANTIES.** As of the Effective Date and continuing throughout the Term, Contractor represents and warrants to MARTA that:

(a) **Authority.** Contractor is duly incorporated or formed, validly existing and is in good standing under the laws of the state in which it is incorporated or formed, and is in good standing in each other jurisdiction (including, without limitation, the State of Georgia) where the failure to be in good standing would have a material adverse effect on its business or its ability to perform its obligations under this Contract. Contractor has all necessary power and authority to enter into and perform its obligations under this Contract and within the State of Georgia, and the execution and delivery of this Contract and the consummation of the transactions contemplated by this Contract have been duly authorized by all necessary actions on its part. This Contract constitutes a legal, valid and binding obligation of Contractor, enforceable against it in accordance with its terms. No action, suit or proceeding in which Contractor is a party that may restrain or question this Contract or the provision of Services by Contractor is pending or threatened.

(b) **Professional Standards.** The Services will be performed in a professional and workmanlike manner in accordance with the best industry standards and the professional standards used in well managed operations similar to the Services.

(c) **Materials and Equipment.** Any equipment or materials provided or used by Contractor shall be new and of merchantable quality and fit for the purposes for which they are intended. Further, Contractor shall maintain any equipment or materials provided or used by Contractor in good working order, in compliance with the best industry practices, all applicable laws and the Scope of Work.

(d) **Intellectual Property Rights.** None of the processes or procedures utilized by Contractor to fulfill its obligations hereunder, nor any of the materials and methodologies used by Contractor in fulfilling its obligations hereunder, nor any of the Services shall infringe any third party's intellectual property rights or privacy, publicity or other rights.

17. **GEORGIA OPEN RECORDS ACT.** Information provided to MARTA is subject to disclosure under the Georgia Open Records Act, as amended from time to time ("GORA"). PURSUANT TO O.C.G.A. § 50-18-72(A)(34), *an entity submitting records containing trade secrets that wishes to keep such records confidential under this paragraph shall submit and attach to the*

records an affidavit affirmatively declaring that specific information in the records constitute trade secrets pursuant to Article 27 of Chapter 1 of Title 10 [O.C.G.A § 10-1-760 et seq.]. Please note that information related to MARTA's BreezeCard system is specifically exempt from disclosure under GORA, as such Consultant agrees not to disclose any such information to any third party without MARTA's prior written approval. See O.C.G.A. § 50-18-72(A) (30).

18. **ILLEGAL IMMIGRATION REFORM AND ENFORCEMENT ACT.** This Contract is subject to the Illegal Immigration Reform and Enforcement Act of 2011 ("Act"). Pursuant to Act, Contractor must actively participate in the E-Verify Program established by the United States Department of Homeland Security to verify the work authorization status of Contractor's employees for the duration of this Contract. For the entire Term of this Contract, Contractor must comply with the Act (O.C.G.A. 13-10-90 et seq.), as it may be amended from time to time, including but not limited to, obtaining affidavits from Contractor's subcontractors and sub-subcontractors demonstrating their participation in the E-Verify Program for the duration of their contract with Contractor. Contractor shall further include the obligation to obtain affidavits demonstrating E-Verify participation in its subcontracts with all of Contractor's subcontractors and sub-subcontractors that perform all or part of the Services in this Contract.

It is not the intent of this section to provide detailed information or legal advice concerning the Act. Contractor is responsible to independently appraise itself of and comply with the requirements of the Act and to assess its effect on MARTA contracts and its participation in those contracts. For additional information on the E-Verify program or to enroll in the program, go to <https://e-verify.uscis.gov/enroll>.

19. **GENERAL.**

- (a) Notices. Any notices required or permitted by this Contract shall be in writing and sent to the respective Party at the address on page one (1) of this Contract, and if to MARTA, a copy to the head of the Department of Contracts, Procurement & Materials at 2424 Piedmont Road NE, Atlanta, Georgia, 30324, and shall be deemed delivered: (a) when delivered by hand or courier or by overnight delivery with signature receipt required; (b) when sent by facsimile with a copy sent by another means specified in this Section; or (c) three (3) days after the date of mailing by United States certified mail, return receipt requested with all postage prepaid. Any Party may change its address for communications by notice in accordance with this Section.
- (b) Waiver. Any waiver by either Party or failure to enforce their rights under this Contract shall be deemed applicable only to the specific matter and shall not be deemed a continuing waiver or failure to enforce any other rights under this Contract, and this Contract shall continue in full force and effect as though such previous waiver or failure

to enforce any rights had not occurred. No supplement, modification, amendment, or waiver of this Contract will be binding on MARTA unless executed in writing by MARTA's Authorized Representative.

- (c) Assignment. Neither this Contract, nor any rights or obligations under it, may be sublet, assigned, encumbered, licensed or subcontracted in any manner by Contractor without the prior written consent of MARTA's General Manager (or his/her designee), and any attempt to do so without such written consent shall be void *ab initio*. MARTA's General Manager (or his/her designee) may grant or deny consent to assign, subcontract, license or encumber this Contract or the Services in his/her sole discretion.
- (d) Severability. In the event that any provision of this Contract is declared invalid, unenforceable or unlawful, such provision shall be deemed omitted and the remainder of this Contract shall not be affected and shall continue to be enforceable to the greatest extent under applicable law. Any provision of this Contract which contemplates performance or observance subsequent to any termination or expiration of this Contract or which must survive in order to give effect to its meaning, shall survive the expiration or termination of this Contract.
- (e) Independent Contractor. Contractor is an independent contractor of MARTA and nothing in this Contract shall be deemed to constitute Contractor and MARTA as partners, joint ventures, or principal and agent, or be construed as requiring or permitting the sharing of profits or losses. Neither party has the authority to represent or bind or create any legal obligations for or on behalf of the other party.
- (f) Entire Contract. This Contract and any exhibits or addenda attached hereto or referenced herein shall comprise the entire Contract of the parties relating to the subject matter hereof and supersedes all previous communications, representations, or Contracts (oral or written) between the parties with respect to such subject matter. This Contract may only be amended or modified by a writing executed by each party's authorized representative and each such writing shall be deemed to incorporate all of the Contract Documents, except to the extent that MARTA is authorized under this Contract or applicable law to issue unilateral change documents. CONTRACTOR MAY NOT UNILATERALLY AMEND OR MODIFY THIS CONTRACT BY INCLUDING PROVISIONS IN ANY BUSINESS FORMS, WHICH SHALL BE DEEMED OBJECTED TO BY MARTA AND OF NO FORCE OR EFFECT. No presumption of any applicable law relating to the interpretation of contracts against the drafter shall apply to this Contract.
- (g) Gender, Exhibits and Attachments and Time. Words of any gender used in this Contract shall be held and construed to include any other gender and words in the singular number shall be held to include the plural, unless the context otherwise requires. All exhibits, appendices, attachments, riders and addenda referred to in this Contract are

incorporated into this Contract and made a part hereof for all intents and purposes. Time is of the essence with regard to each provision of this Contract. If Contractor is other than a natural person, Contractor shall deliver to MARTA such legal documentation as MARTA may request to evidence the authority of those signing this Contract to bind Contractor.

- (h) Drug-Free Workplace Policy. Contractor acknowledges that pursuant to the Federal Drug-Free Workplace Act of 1989, the unlawful manufacture, distribution, dispensation, possession, or use of a controlled substance is prohibited on MARTA property or in the performance of any of the Services.
- (i) Usufruct. To the extent MARTA granted Contractor the right to use any real property owned by MARTA, all of Contractor's rights hereunder constitute a usufruct, which is not subject to levy or sale. No estate shall pass out of MARTA.
- (j) Attorneys' Fees. If MARTA should bring any action under this Contract, then Contractor agrees in each and any such case to pay to MARTA all costs, including, but not limited to, court costs and reasonable attorneys' fees, incurred by MARTA in connection therewith.
- (k) Governing Law. This Contract shall be governed by and construed in accordance with the laws of the State of Georgia without regard to its choice of law principles. The Parties hereby submit and consent to the exclusive jurisdiction of the Superior Court of Fulton County, Georgia or in the United States District Court for the Northern District of Georgia and irrevocably agree that all actions or proceedings relating to this Contract will be litigated in such courts, and each of the Parties waives any objection which it may have based on improper venue or forum *non conveniens* to the conduct of any such action or proceeding in such court.
- (l) Force Majeure. Neither Party shall be deemed to be in breach of this Contract by reason of a failure to perform any of its obligations hereunder to the extent that such failure is caused by strike or labor troubles, unavailability of materials or utilities, riots, rebellion, terrorist attack, insurrection, invasion, war, action or interference of governmental authorities (other than MARTA), acts of God, or any other cause whether similar or dissimilar to the foregoing which is reasonably beyond the control of the Parties (collectively "Force Majeure Event"). If either Party claims the occurrence of a Force Majeure Event, such Party must promptly give notice to the other of the existence of such Force Majeure Event, the nature and extent thereof, the obligation hereunder affected thereby and the actions to be taken to abate or terminate such event. In no event shall the failure to pay any amount (or have the ability to pay any amount) be deemed a Force Majeure Event under this Contract.

(m) Use of MARTA's Name. The Contractor shall not refer to MARTA or use MARTA's name for purposes of advertising or public relations without MARTA's prior written permission. Any such reference or use shall be strictly factual, and shall not in any way imply that MARTA endorses Contractor or the services Contractor provides.

20. Execution of Contract. This Contract will not become binding on MARTA and MARTA will incur no liability under it until it has been duly executed by Contractor, returned to MARTA with all required submittals, including insurance and bonding, executed by MARTA's authorized signatory and delivered to Contractor.

[Signature Page Follows]
[Remainder of Page Intentionally Left Blank]

IN WITNESS WHEREOF, the Parties, by and through their authorized representatives, have executed this Contract as of the Effective Date.

**MARTA:
METROPOLITAN ATLANTA RAPID TRANSIT AUTHORITY**

Print Name: _____
Title: _____

Approved as to legal form:

Print Name: _____
Title: _____

CONTRACTOR:

_____,
a _____

ATTEST: _____
Print Name: _____
Title: _____

EXHIBIT A

SCOPE OF WORK

1.1 OBJECTIVE

[R01] Contractor shall design, deliver, install, test, operate, maintain, repair and replace (as needed) a fully Automated Parking Access and Revenue Control System (“APARC”) at each of MARTA’s eleven (11) long-term paid parking facilities.

MARTA’s paid parking facilities are located at the following rail stations:

Table 0-1: Long-Term Parking Facilities

Long-term Parking Facilities
College Park (S6)
Lindbergh Center (N6)
Dunwoody I (N9)
Dunwoody II (N9)
Sandy Springs (N10)
North Springs (N11)
Lenox (NE7)
Brookhaven/Oglethorpe University (NE8)
Doraville (NE10)
Kensington (E8)
Medical Center (N8)

[R02] In addition, the Authority is seeking a Contractor that is fully capable of operating and maintaining the APARC system, which includes but is not limited to the following activities:

[R02.1] Management and supervision of the new parking operation.

[R02.2] Operate and maintain a comprehensive APARC System.

[R02.3] Provide and train all necessary staff to operate and manage the installed parking system.

[R02.4] Collect and deposit all parking fees from the paid parking facilities in the most efficient and customer friendly manner that is approved in advance by MARTA..

[R02.5] Market in conjunction with MARTA all paid parking facilities to maximize revenue.

[R02.6] Provide superior customer service by providing a seamless, customer focused parking environment. Respond to customer concerns in a timely manner.

[R02.7] Provide all supplies, other resources, and equipment necessary to perform the required services for all paid parking lots.

1.2 PARKING INFORMATION – CURRENT STATE

1.2.1 MARTA PARKING OPERATIONS

[R01] There are three categories of parking facilities within MARTA’s parking system:

[R01.1] **Central Cashiering Facilities** - MARTA has two Central Cashiering facilities located at the North Springs and Sandy Springs rail stations. Both facilities are combined and consist of long-term paid parking (over 24 hours including first day and part days) and unpaid daily parking (less than 24 hours). MARTA Employees park free. The Cashiering Facilities at these locations are referred to as Command Centers in this Contract.

[R01.2] **Dedicated Long Term Parking Facilities** - MARTA has five dedicated long-term parking facilities located at the Kensington, College Park, Brookhaven, Medical Center and Lenox rail stations. Every customer that enters into these facilities pays the daily rate, even if they park for less than 24 hours. There is a 15-minute grace period at these locations. MARTA Employees park free.

[R01.3] **Combined Parking Facilities** – MARTA provides parking at four-combined facilities that are located at the Dunwoody (two decks), Doraville, and Lindbergh (Sydney Marcus Deck) rail stations. Combined parking allows customers to park free for the first 24 hours or less. Customers parking over 24 hours are charged the published daily parking rate if parked for 24-hours or longer including the 1st day and any part day. Customers parking at the Lindbergh (Sydney Marcus) rail station must validate their parking ticket before exiting the station, in order to receive free parking (less than 24 hours). MARTA Employees park free.

[R02] MARTA’s parking system presently consists of eleven (11) separate parking facilities. Parking fees are collected from MARTA patrons for long-term parking.

[R03] There are nine (9) parking decks and two (2) surface lots which are more fully described in the below tables:

Table 0-2: MARTA Parking Spaces by Category

Rail Station	Central Cashiering Facility	Long-Term or Designated	Combined Spaces	Total Spaces		
Brookhaven		170		170		
College Park		221		221		
Doraville				1,231	1,231	
Dunwoody Deck I				457	457	
Dunwoody Deck II (leased)				617	617	
Kensington					197	
Lenox					384	384
Lindbergh (Sydney Marcus)					475	475
Medical Center					160	
North Springs					2,327	2,327
Sandy Springs					1,077	1,077
Totals		3,404	1,132	2,780	7,316	

Table 0-3: MARTA Parking Fee Structure (in dollars)

Rail Station	Daily Rate
Brookhaven	\$ 5.00
College Park	\$ 8.00
Doraville	\$ 8.00
Dunwoody Deck I & II	\$ 5.00
Kensington	\$ 5.00
Lenox	\$ 5.00
Lindbergh (Sydney Marcus)	\$ 8.00
Medical Center	\$ 5.00
North Springs	\$ 8.00
Sandy Springs	\$ 5.00

Table 0-4: MARTA Parking Entry/Exit/Bail-Out Gate(s) Configuration by Location

Rail Station		Entry Gates	Exit Gates	Reversible Gates	Bail-out Gates	Total Gates
Brookhaven		1	1	0	0	2
College Park		1	1	0	0	2
Doraville		3	2	0	0	5
Dunwoody						
	Deck 1	1	1	0	0	2
	Deck 2	1	1	0	0	2
Kensington		1	1	0	0	2
Lenox		1	1	0	0	2
Lindbergh (Sydney Marcus)		1	1	1	0	3
Medical Center		1	1	0	1	3
North Springs						
	Level 1	6	6	0	2	14
	Level 2	3	2	0	2	7
	Level 3	0	0	0	0	0
Sandy Springs						
	Level 1	1	1	1	2	5
	Level 2	1	1	0	0	2
Total Gates		22	20	2	7	51

1.2.2 MARTA PARKING FINANCIALS

Table 0-5: MARTA Parking Revenue - Fiscal Years 2010 through 2014

Rail Station		Yearly Revenue (In Dollars)				
		FY14	FY13	FY12	FY11	FY10
Brookhaven		171,360	155,875	151,780	168,613	165,094
College Park		101,512	83,208	90,898	104,052	107,023
Doraville		264,135	250,748	262,982	290,486	243,663
Dunwoody	Deck 1	191,595	135,255	142,380	167,550	197,002
	Deck 2	57,935	66,980	80,135	88,311	95,295
Kensington		41,603	34,091	36,189	38,235	45,232
Lenox		53,420	39,850	47,490	49,938	53,739
Lindbergh (Sydney Marcus)		127,903	112,510	121,120	151,240	138,588
Medical Center*		N/A	N/A	N/A	N/A	N/A
North Springs		1,011,824	912,760	938,172	1,025,471	1,007,688
Sandy Springs		309,475	295,550	321,924	372,185	382,145
TOTAL		2,330,762	2,086,826	2,193,070	2,456,081	2,435,469

* Medical Center was approved by the MARTA Board of Directors as a paid parking facility. Medical Center is a pending facility that is currently being evaluated.

Table 0-6: MARTA Parking Revenue for Fiscal Year 2014 Cash vs. Credit

Rail Station		Cash	Credit	Total
Brookhaven		62,263	109,097	171,360
College Park		30,383	71,130	101,513
Dunwoody	Deck 1	54,922	136,673	191,595
	Deck 2	17,909	40,027	57,936
Doraville		43,907	220,228	264,135
Kensington		21,381	20,222	41,603
Lindbergh (Sydney Marcus)		32,162	95,741	127,903
Lenox		18,283	35,138	53,421
Sandy Springs		63,293	246,180	309,473
North Springs		136,759	875,065	1,011,824
TOTAL		481,262	1,849,501	2,330,763

1.3 MARTA INFRASTRUCTURE

[R01] The Contractor shall remove existing parking gate equipment. Prior to removal of equipment, the Contractor shall coordinate the removal with the Authority. Some power panels and fiber/telephone panels that are to be removed have cables that must be removed (pulled-back) to the cable's initial feed point. Cables may not be abandoned in place.

[R02] The Contractor shall furnish equipment required by this Contract and installed by the same at each location shown on the Contract Drawings. Existing electrical distribution breaker panels and fiber cable splice enclosures are located on or near the existing parking gates and parking booths for the purpose of powering the new equipment and interfacing to the parking gate data network system.

[R03] Parking gate/booth clusters have an AC power panel LLPxx and a fiber cable splice box FCPP3xx located either on the gate island or nearby wall/column. Contractor shall furnish, install, and test the necessary power cables/wiring and fiber cables from the Contractor furnished and installed equipment to the Authority provided power panel and fiber splice box. Contractor may use existing power or fiber cables that are compatible and have sufficient capacity for the Contractor's furnished equipment. If the Contractor's furnished equipment is not compatible with the existing power and fiber, the Contractor shall be responsible for installing additional power or fiber at no cost to MARTA.

[R04] Contractor shall furnish and install fiber jumper cables (or as site conditions dictate the use of a fiber cable) from the Contractor's equipment to the FCPP3xx enclosure. Each FCPP3xx contains a multi-mode fiber patch panel.

[R05] Pay on Foot (POF) units furnished and installed in rail station areas shall have feeds from 277 Vac breaker panels unless otherwise noted in the Contractor's documents. Contractor is to furnish voltage step down transformer and associated equipment needed to provide the voltage for their POF equipment.

[R06] Fiber splice boxes are usually located within 50 feet of each POF unless otherwise noted and shall contain dark 62.5 multi-mode fiber strands in a loose buffer tube for the Contractor to terminate the POF equipment.

[R07] The Contractor shall furnish and install metallic GRS conduit from each POF to the interfacing power and fiber cable junction boxes.

[R08] Command Center headend network locations are to be established at both the North Springs and Sandy Springs Cashier Facilities. Each facility shall be configured as redundant operating network centers. Network equipment may be housed in an existing shared Authority equipment cabinet at each Cashier Facility. Workstations and wall mounted monitor displays shall be installed in locations within each facility as coordinated with the Authority.

[R09] The Project work at MARTA rail stations includes the following locations:

[R09.1] NORTH SPRINGS STATION:

[R09.1.1] There are six (6) parking gate cluster locations in the south garage and one (1) parking gate cluster between the two (2) garages. Parking gate clusters are identified by location A to G and configured as follows:

[R09.1.1.1] Cluster A is on the first level and has two (2) exit lanes with two (2) bail-out lanes;

[R09.1.1.2] Cluster B is on the first level and has two (2) entrance lanes;

[R09.1.1.3] Cluster C is on the first level and has two (2) entrance lanes;

[R09.1.1.4] Cluster D is on the second level and has two (2) exit lanes and two (2) bail-out lanes;

[R09.1.1.5] Cluster E is on the first level and has two (2) exit lanes and two (2) bail-out lanes;

[R09.1.1.6] Cluster F is at the surface street level and has two (2) entrance lanes and two (2) exit lanes; and

[R09.1.1.7] Cluster G is on the second level and has three (3) entrance lanes.

[R09.1.2] Two groups of two (2) POF units each shall be furnished and installed by Contractor near the Cashier facility.

[R09.1.3] North Springs Fiber Cable: There are fiber cables routed to each parking gate cluster for use by the Contractor. Cables are stubbed-out at junction boxes within 75 feet of any cluster.

[R09.1.4] North Springs Power: Each parking gate cluster has existing 120 Vac power wiring sized for 20-ampere service for Contractor furnished equipment. If Contractor requires additional power service, Contractor may, at its sole cost, remove existing wiring and install new wiring accordingly for required power service. Existing power panels have space for additional Contractor furnished breakers.

[R09.1.5] North Springs Pay-on-Foot Power: A conduit and junction box is located within 25 feet of the POF units. A conduit is routed from junction box to Room CF103 power panel LLP. Contractor to furnish wiring from LLP to POF equipment.

[R09.1.6] North Springs Pay-on-Foot Fiber: A conduit and junction box is located within 25 feet of the POF units and is routed to room CF103 fiber patch panel ("FCPP3") enclosure. Contractor shall furnish and install fiber cable from POF units to FCPP3. Authority shall assigned fiber strands.

[R09.1.7] North Springs Command Center: Four (4) workstations (i.e., one (1) supervisor and three (3) staff Contractors) shall be furnished and installed in the North Springs Cashier Facility to provide monitoring and controlling of the parking gates deployed throughout the Authority's parking decks and parking lots. These positions shall also provide management and control of POF machines at all applicable stations. Each workstation shall be equipped with a monitor, keyboard, and mouse. Each staff Contractor position shall be equipped with a wall mounted large high definition flat screen monitor (minimum 47 inches) for viewing multiple video and images.

[R09.2] SANDY SPRINGS STATION:

[R09.2.1] The Sandy Springs surface street (ground level) deck parking gate cluster has two (2) parking gate clusters. Entrance A has two (2) parking gate cluster islands

with two (2) exit lanes and one (1) entrance lane (with two (2) entry controls that can also serve as an exit lane with a bail-out gate. Entrance B consists of one (1) island with one (1) entrance and one (1) exit lane. Two (2) POF units are located to the right of the faregate array and two (2) POF units are located on the far wall across from the cashier facility.

[R09.2.2] Sandy Springs Surface Street Fiber: A fiber panel FCPP3A is located on a south wall of the clusters. Conduit is stubbed-up into the first island and then daisy chained to the second and third islands with the entry pedestals. The Contractor must procure, install and extend fiber cable from the equipment to the FCPP3A.

[R09.2.3] Sandy Springs Surface Street Power: Power panel LLGCA 120 Vac is mounted on a column. Conduits presently routed to existing island equipment are to be used by the Contractor. Contractor is to remove existing wiring from LLCGA to the island and procure and install new wire to service the new equipment.

[R09.2.4] Sandy Springs Second Level Fiber: A fiber panel FCPP3B is located on a west wall of the cluster. Conduit is stubbed up into the island. The Contractor must procure, install and extend fiber cable from the new equipment to the FCPP3A.

[R09.2.5] Sandy Springs Second Level Street Power: Power panel LLGCB 120 Vac services each island. Contractor must remove existing wiring from LLCGB to the island and procure and install new wire to service the new equipment.

[R09.2.6] Sandy Springs Pay-on-Foot Power and Fiber: POF units 1 and 2 are located to the right of the faregate array and units 3 and 4 are located on the wall across from the cashier facility. Unit 3 is to the left of the staff room window and unit 4 is to the right of the window. A junction box with 120 Vac 20 Amp service feeds from the electrical room C06 is located near the POF units 1 for the Contractor to extend power the POF units. Another junction box adjacent to the POF unit 1 is extended into the Staff room for the Contractor to furnish and install fiber cable from the POF units to a network connection to the parking gate system.

[R09.2.7] Sandy Springs Command Center: Four (4) workstations (i.e., one (1) supervisor and three (3) staff Contractors) shall be furnished and installed in the Sandy Springs Cashier Facility to establish the monitoring and controlling of the parking gates deployed throughout the Authority's parking decks and parking lots. These positions shall also provide management and control of POF machines at all

applicable stations. Each workstation shall be equipped with a monitor, keyboard, and mouse. Each staff Contractor position shall be equipped with a wall mounted large flat screen monitor (minimum 47 inches) for viewing multiple video and images.

[R09.3] DUNWOODY STATION:

[R09.3.1] There are two parking decks at Dunwoody identified as Dunwoody Deck I (West) and Dunwoody Deck II (East). Dunwoody East is the east parking deck between the rail station and the Perimeter Mall Shopping Center. Dunwoody West is located immediately west of the rail station. A total of four (4) POF units are to be furnished and installed. Four (4) POF units are to be located at the rail station's faregate array located by parking Deck I.

[R09.3.2] Dunwoody Deck I (West): There is one (1) parking gate cluster in the garage with an entrance and exit gate.

[R09.3.3] Dunwoody Deck I (West) Fiber: Interface enclosure designated FCPP3A contains a 12-strand multi-mode fiber cable and is mounted on an adjacent wall located west of the parking gate cluster.

[R09.3.4] Dunwoody Deck I (West) Power: A 120 Vac power distribution panel LLPA is located on the island.

[R09.3.5] Dunwoody Deck II (East). There is one (1) parking gate cluster into the garage with an entrance and exit gate.

[R09.3.6] Dunwoody Deck II (East) Fiber: A fiber termination enclosure identified as FCPP3B is located on the wall just east of the parking gate cluster. Contractor must procure, install and extend fiber cable from the parking gate equipment to FCPP3B panel fiber and make the fiber cable connection in the existing multi-port fiber box.

[R09.3.7] Dunwoody Deck II (East) Power: A 120 Vac power distribution panel LLPB is located on the parking gate

[R09.3.8] Dunwoody Pay-on-Foot: The West parking deck (Deck I) has four (4) POF units that are located on the column adjacent to the Breeze machine line-up. Available 277 Vac power circuits are available in a junction box located near the POF units. A fiber cable shall be available in a junction box located near the POF units for the Contractor to make fiber terminations to the Contractor's POF units.

[R09.4] MEDICAL CENTER STATION:

[R09.4.1] The Medical Center parking deck has a single gate cluster with one lane entrance, one lane exit, and one bailout lane. Two (2) POF units shall be furnished and installed at the rail station north faregate array adjacent to existing Breeze machines.

[R09.4.2] Medical Center Parking Fiber: The fiber cable interface is located inside a large stainless steel enclosure adjacent to the entrance lane. Contractor to use existing conduits from the enclosure to the island for the Contractor's equipment.

[R09.4.3] Medical Center Parking Power: The 120 Vac power distribution panel is located inside a large stainless steel enclosure adjacent to the entrance lane. Contractor to use existing conduits from the enclosure to the island for the Contractor's equipment.

[R09.4.4] Medical Center Pay-on-Foot: A junction box with 277 Vac is located adjacent to the POF units. A fiber interface junction box is also located adjacent to each POF.

[R09.5] DORAVILLE STATION:

[R09.5.1] Doraville: Doraville rail station has both a parking deck and a surface parking lot each with parking gate requirements. The parking deck has single entrance/exit lane parking gate array using a center island for equipment placement. The surface parking lot consists of two islands with two (2) entry lanes, one (1) exit lane, and one (1) bailout lane. Three (3) POF units are to be furnished and installed at the south end of the station in the concourse area. One (1) unit to be located along the faregate array line-up and adjacent to the Breeze machines. Two (2) POF to be located along the opposite wall from the faregate array.

[R09.5.2] Doraville Parking Deck Power: A 120 Vac power panel (LLPA) is located on the island to service the parking gate equipment.

[R09.5.3] Doraville Parking Deck Fiber: A fiber enclosure FCPP3 is located on the wall that is parallel and adjacent to the entry lane.

[R09.5.4] Doraville Parking Lot Power: A 120 Vac power panel (LLPB) is located in the grass area just south of the parking gate array.

[R09.5.5] Doraville Parking Lot Fiber: A fiber enclosure (FCPP3B) is located in the grass area just north of the parking gate array.

[R09.5.6] Doraville Pay-on-Foot: For each POF location, a junction box with 277 Vac is located near to the POF units. In addition, a fiber junction box is wall mounted near each POF units.

[R09.6] BROOKHAVEN STATION:

[R09.6.1] Brookhaven Rail Station's parking lot is located on the Peachtree Street (west) side of the station and south of the kiss-ride and taxi area. There are two traffic lanes (i.e., entrance and exit).

[R09.6.2] Brookhaven Fiber Cable: Fiber splice box FCPP3 is located on a pedestal in the grass area. Conduit is extended from the FCPP3 to the island. Contractor to furnish and install fiber cable between the FCPP3 and the Contractor's equipment.

[R09.6.3] Brookhaven Power: An AC power distribution panel (LLPP) is located adjacent to the fiber panel FCPP3 in the grass area. Contractor shall furnish conduit and cabling from the power panel to the gate equipment.

[R09.6.4] Brookhaven Pay-on-Foot: Two (2) Pay-on-Foot machines shall be located adjacent to the existing Breeze machines, located between the pay parking lot and the fare gates. A power junction box with 277 Vac is located adjacent to the POF units. A fiber junction box is also located adjacent to the POF units.

[R09.7] LENOX STATION:

[R09.7.1] Lenox Parking Deck: The Lenox parking gate cluster is located on the north side of the parking deck. The parking deck is located at the north end of the rail station and across the street (East Paces Ferry Road) from the rail station. Two (2) POF units are to be furnished at the north concourse entrance to the rail station. The POF units are to be placed along the southwest wall at the entrance to the walkway to the parking deck.

[R09.7.2] Lenox Parking Fiber: The fiber cable interface enclosure FCPP3 is located on a column near the parking gate cluster island.

[R09.7.3] Lenox Parking Power: The power distribution panel LLPA (120 Vac) is located on a column near parking gate cluster island.

[R09.7.4] Lenox Pay-on-Foot Power and Fiber: A power junction box with 277 Vac is located adjacent to the POF units. A Fiber interface junction box is also located adjacent to the POF units.

[R09.8] LINDBERGH STATION:

[R09.8.1] Lindbergh has two booths in the NW end of the north-most parking garage. The parking gate cluster consists of three lanes one entrance, one exit, and one reversible. Two (2) POF units are located at the north end of the rail station. (Ref. Morosgo Drive).

[R09.8.2] Lindbergh Fiber: Fiber interface panel FCPP3 is located on the wall across from the entrance lane for the Contractor's connection. Contractor to extend fiber cable from the parking island equipment to the interface panel.

[R09.8.3] Lindbergh Power: A 120 Vac power panel (LLPA) is located on the parking gate island for the Contractor's equipment.

[R09.8.4] Lindbergh Pay-on-Foot: Install two (2) POF units at the north concourse entrance. A junction box with 120 Vac wiring is located near to the POF units. A fiber enclosure is wall mounted near the POF units.

[R09.9] COLLEGE PARK STATION:

[R09.9.1] MARTA paid parking occupies a portion of a parking deck controlled by AT&T. The parking deck has a single gate cluster consisting of an entrance and exit lane, with a kiosk on an island between the lanes.

[R09.9.2] College Park Fiber: A fiber cable enclosure designated FCPP3 is mounted on a column east of the island. Contractor to extend conduit overhead from FCPP3 to the cluster island equipment.

[R09.9.3] College Park Power: A 120 Vac power distribution panel LLPA is located on the wall adjacent to the cluster island. Conduit is extend to the island for the Contractor's equipment.

[R09.9.4] College Park Pay-on-Foot: Two (2) POF units are to be furnished and installed adjacent to the Breeze machines located by the rail station east faregate line-up. A junction box with 277 Vac wiring is located near the POF units. In a fiber enclosure is wall mounted near the POF units.

[R09.10] KENSINGTON STATION:

[R09.10.1] Kensington Paid Parking Lot: The parking lot gate cluster is located south of the bus loop. The gate closure consists of a single island with one (1) entrance and one (1) exit lane. Two (2) POF units shall be furnished and installed in the west concourse area across from the faregate array and Breeze machines.

[R09.10.2] Kensington Parking Fiber: Parking gate cluster fiber cable termination enclosure FCPP3 is located on a retaining wall in close proximity to the parking equipment island. A conduit is routed to the island for the Contractor to extend a fiber cable from the island to FCPP3.

[R09.10.3] Kensington Parking Power: Contractor shall connect to the existing power distribution panel (120 Vac) LLPA located on the parking gate equipment island.

[R09.10.4] Kensington Pay-on-Foot Power/Fiber: A junction box with 277 Vac is located adjacent to the POF units. A Fiber interface enclosure is also located adjacent to the POF units.

END OF SECTION 1

2.0 DEFINITIONS AND ABBREVIATIONS

2.1 DEFINITIONS

Contractor's terms not otherwise defined in this Contract and referred in the Scope of Work shall be as defined by the Institute of Electrical and Electronic Engineers (IEEE), and the Electronics Industries Association (EIA).

2.1.1 SPECIAL DEFINITIONS

- A. **Automated Parking and Revenue Control System (APARC).** A system of components that comprises a fully integrated, on-line, real-time automated parking and revenue control system.
- B. **Central Cashiering Facility.** A staffed location that provides all required cash and credit card functions on an as-needed basis 24 hours per day, 7 days a week and 365 days a year. The central cashiering facility houses the Command Center.
- C. **Command Center.** The location where the (APARC) System is located. The Command Center is housed within the Central Cashiering Facility located at the North Springs and Sandy Springs rail stations.
- D. **Configuration.** The physical and functional characteristic of a product or system as defined by its controlling drawings, schematics, plans, specifications or other documentation.
- E. **Configuration Management.** A discipline applying technical and administrative direction and surveillance to (1) identify and document the physical and functional characteristics of a configuration item, (2) control changes to these characteristics, and (3) record and report change processing and implementation.
- F. **Configuration Data List (CDL).** An as-built listing of equipment furnished by the Contractor. The listing contains an indentured structure of assembled equipment and components by manufacturer, model number, part number, serial number, and quantity.
- G. **Contract Data Requirements List (CDRL).** A listing of data/submittals that is to be submitted by the Contractor.

- H. **Information, Product.** Catalog pages, manufacturer’s literature, drawings, and test data or samples that provide sufficient information to determine a product’s compliance with these Specifications.
- I. **Interface.** The point where two or more systems, subsystems, or work of multiple contracts must meet to ensure continuity.
- J. **Pay on Foot Unit (POF):** A device placed at the transit stations to allow patrons to pay for parking outside the parking area. These POF devices are typically near existing Authority Fare Collection Machines (Breeze).
- K. **Revenue Service.** All transit service or mainline routes established for service to the public.
- L. **Train Control Room (TCR).** A room generally located in or near a passenger rail station where equipment for communications and train control is located.

2.2 ABBREVIATIONS AND ACRONYMS

This Article lists various abbreviations and acronyms for terms and organizations and prescribes the meaning of the industry standard abbreviations and acronyms, some of which are used in these Specifications.

Table 2-1: Table of Abbreviations and Acronyms

Abbreviation / Acronym	Phrase
A	Ampere
AC	Alternating Current
ADA	Americans with Disabilities Act
ADAAG	Americans with Disabilities Act Accessibility Guidelines
ADPS	Automatic Data Processing Systems
ANSI	American National Standards Institute, Inc.
ANTP	Administrative Notice to Proceed
APARC	Automated Parking and Revenue Control System
APPM	Automated Parking Payment Machines
AR	Acceptance Review
ASQ	American Society of Quality

Abbreviation / Acronym	Phrase
ASSE	American Society of Safety Engineers Foundation
ASTM	American Society for Testing and Materials
AT	Acceptance Testing
ATP	Acceptance Test Procedures
AWG	American Wire Gauge
BPS	Bits per second
C	Celsius
CAD	Computer-aided design
CCTV	Closed Circuit Television
CD / DVD	Compact Disk / Digital Video Disk
CDL	Configuration Data List
CDRL	Contract Data Requirements List
CPU	Central Processing Unit
DB	Decibel
DC	Direct Current
DES	Digital Encryption Standard
DHS	Department of Homeland Security
DRC	Disaster Recovery Center
DSS	Data Security Standard
DTE	Data Terminal Equipment
DVR	Digital Video Recorder or Design Verification Review
ECP	Engineering Change Proposal
EIA	Electronic Industries Alliance
EMC	Electromagnetic Compatibility
EMI	Electromagnetic Interference
EMT	Electrical metallic tubing
EMV	Europay MasterCard Visa
EPA	Environmental Protection Agency
F	Fahrenheit
F/S	Facilities/System wide
FACI	First Article Configuration Inspection

Abbreviation / Acronym	Phrase
FCC	Federal Communications Commission
FDR	Final Design Review
FIG	Figure
FMC	Flexible metal conduit
FO	Fiber optic
FRE	Fiberglass reinforced epoxy conduit
FT	Feet
FTA	Federal Transit Administration
FTP	File Transfer Protocol
GB	Gigabyte
GBPS	Gigabit Per Second
GHZ	Gigahertz
GIS	Geographic Information System
GPS	Global Positioning System
GRS	Galvanized rigid steel conduit
GUI	Graphic User Interface
HSAS	Homeland Security Advisory System
HZ	Hertz
I/O	Input/ Output
IACP	International Association of Chiefs of Police
ICEA	Insulated Cable Engineers Association
IDR	In Progress Design Review
IEC	International Electrotechnical Commission
IEEE	Institute of Electrical and Electronic Engineers, Inc.
IMC	Intermediate metal conduit
IP	Internet Protocol
IPC	Institute of Printed Circuits
IR	Implementation Review
ISEA	International Safety Equipment Association
ISO	International Organization for Standardization
ITU	International Telecommunications Union

Abbreviation / Acronym	Phrase
IV	Installation Verification
KB	Kilobyte (1024 bytes)
KBPS	Kilobit per Second
KCMIL	Thousand Circular Mils
KHZ	Kilohertz (1,000 Hertz)
LAN	Local Area Network
LCD	Liquid Crystal Display
LED	Light Emitting Diode
LFMC	Liquid-tight flexible metal conduit
LPR	License Plate Recognition
LRU	Line Replaceable Unit
MA	Milli-ampere
MARTA	Metropolitan Atlanta Rapid Transit Authority
MAX	Maximum
MB	Megabyte
MBPS	Megabit Per Second
MHz	Megahertz
MIN	Minimum or Minute
MM	millimeter
MS	millisecond
MTBF	Mean Time Between Failures
MTPP	MARTA Testing Program Plan
MTTR	Mean Time To Restore
MUTCD	Manual of Uniform Traffic Control Devices
NEC	National Electrical Code
NEMA	National Electrical Manufacturers Association
NFPA	National Fire Protection Association
NIC	Not In Contract
NM	Nanometer
NTAS	National Terrorism Advisory Service
ODBC	Open Database Connectivity

Abbreviation / Acronym	Phrase
OSHA	Occupational Safety and Health Administration
OVF	Open Virtualization Format
OWT	One Way Transmission
PC	Personal Computer
PCC	Police Communications Center
PCI	Payment Card Industry
PCI DSS	Payment Card Industry Data Security Standards
PCSC	Parking Customer Service Center
PCT	Parking Cashier Terminal
PCU	Power Conditioning Unit
PDF	Portable Document Format
PIN	Personal Identification Number
POF	Pay on Foot Machine
POS	Point of Sale
PRCS	Parking and Revenue Control System
PSI	Pounds per Square Inch
PVC	Polyvinyl Chloride
QA	Quality Assurance
QC	Quality Control
QOS	Quality of Service
RAM	Random access memory
RFID	Radio Frequency Identification
RFP	Request For Proposal
RFS	Release for Shipment
RPO	Recovery Point Object
RTO	Recovery Time Objective
SA	Systems Administrator or System Acceptance
SAE	Society of Automotive Engineers
SAN	Storage Area Network
SCADA	Supervisory Control and Data Acquisition
SCAP	Security Content Automation Protocol

Abbreviation / Acronym	Phrase
SCR	Semiconductor-Controlled Rectifier
SIA	Security Industry Association
SLA	Service Level Contracts
SMS	Short Message Service
SNMP	Simple Network Management Protocol
SNTP	Site Notice To Proceed
SQL	Structured Query Language
SS	Stainless steel conduit
SPR	System Problem Review
TB	Terminal Block
TCR	Train Control Room
TDES	Triple Data Encryption Standard
TIA	Telecommunications Industry Association
TOC	Table of Contents
TP	Training Plan
TRD	Test Results Documentation
UL	Underwriters Laboratories Inc.
UPC	Utility Protection Center
UPS	Uninterruptible Power Supply
V	Volt
VOIP	Voice over Internet Protocol
VPN	Virtual Private Network

END OF SECTION 2

3.0 FUNCTIONAL AND TECHNICAL DESCRIPTION

3.1 GENERAL REQUIREMENTS

[R01] The Automated Parking Control and Revenue (the “System”) shall be capable of integrating with multiple built-in functions including, but not limited to, access control, alarm management, intrusion detection, video imaging, venue ticketing, web-based solutions, badging, and other various multiple databases.

[R02] The System shall be listed for Parking and Revenue Control System (PRCS) Equipment with Underwriters’ Laboratories, Inc. (UL). All control panels furnished on the job shall carry the UL label. Copies of UL listing cards or other proof of compliance shall be provided and available upon request.

[R03] The System shall be modular in nature permitting expansion of both capacity and functionality through the addition of, among other things, each of the following: control panels, card readers, sensors, barriers, dispensers, columns, workstations, process computers, gates, displays, signage, server(s), loops, intercoms, and Radio Frequency Identification (RFID) equipment, as needed.

[R04] The System shall incorporate the necessary hardware, software, and firmware to collect, transmit and process cash, credit/debit cards either in real-time or by batch loading data transfer when real-time processing is not possible in compliance with the then current PCI DSS.

[R05] The System shall incorporate the necessary hardware, software, and firmware to process ticket transactions and access grants requested by vehicles for entry to the parking facility, deck, lot, or special venue with supplemental control of exits from the parking facility. Revenue transaction capability shall include pay in advance and pay on exit.

[R06] The System shall provide various messages to workstations, servers and/or other system devices by audible or visual messages. Messages shall include, but not be limited to, system status, alarms, text messages, and remote text messaging. Other remote work message mediums shall include, without limitation, hand held communication devices, web-based hand held devices, telephone system device, and message boards. Parking vacancy counts shall be one of the messages originating from within the PRCS system.

[R07] The System shall control the flow of authorized personnel and vehicle traffic through the define control limits of the gated areas within the facility.

[R08] Workstations or other various computers that are mouse-driven with graphical user interface (GUI) shall allow the user command and control to open and work simultaneously on multiple windows.

3.2 NETWORK ARCHITECTURE

[R01] MARTA’s Enterprise TCP/IP Network (MEN) resides on a Cisco platform. MARTA’s Enterprise Network (MEN) presently interconnects all Transit Station TCRs as shown in the EXHIBIT drawings. The MEN includes two (2) data centers located at MARTA’s Headquarters and at the MARTA Disaster Recovery Center (DRC) across the street from the Candler Park rail station. These two (2) data centers are connected via fiber. Network equipment within the two (2) data centers, including routers, switches, and firewalls are fully redundant. The MARTA Enterprise Network interconnects MARTA’s 38 rail stations.

[R02] MARTA will configure and support switches located in the station TCRs and provide network connectivity between parking sites and the MEN.

[R03] The Contractor shall configure and support parking devices located within the parking site network including all fiber connections. The Contractor shall also provide network configuration details for Enterprise network access control.

3.2.1 NETWORK – PARKING FACILITIES

[R01] MARTA will provide the Contractor with data network and AC power interfaces consisting of the following:

[R01.1] Data Network Interface: Two (2) 62.5 μm multimode fiber at each gate (or cluster of gates) and each cluster of POF machines. The Contractor interface will be LC connectors and the interface will be provided within 50 feet of the Contractor proposed equipment.

[R01.2] AC Power Interface: AC power at each gate (or cluster of gates) and each cluster of POF machines. The Contractor interface will be Industry Standard IEC connectors and will be provided within 50 feet of the Contractor proposed equipment. Power interfaces shall be as follow:

Table 3-1: Power Interfaces

Equipment	Power	Service
Gates	120 VAC	20 A

POF Machines	277 VAC	15 A
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[R02] MARTA data network interfaces for the Contractor Equipment including gates and POF machines will be provided at the following stations as shown in the EXHIBIT Drawings:

[R02.1] North Springs

[R02.2] Sandy Springs

[R02.3] Dunwoody

[R02.4] Medical Center

[R02.5] Brookhaven

[R02.6] Lenox

[R02.7] Lindbergh

[R02.8] Doraville

[R02.9] Kensington

[R02.10] College Park.

3.2.2 NETWORK – COMMAND CENTERS

[R01] MARTA will also provide the Contractor with data network interfaces consisting of two (2) 62.5 μ m multimode fiber and 120 VAC power for each of the Command Centers. The Contractor interface will be at the Command Center at a location defined within the EXHIBIT Drawings.

[R02] Command Center locations are:

[R02.1] North Springs

[R02.2] Sandy Springs

[R03] The Contractor shall procure the following Network Components to be used at the Command Centers at North Springs and Sandy Springs:

[R03.1] Cisco Catalyst 3750X-24S-E or latest model with advanced IP services IOS licenses to connect to MARTA's existing network via the station TCR.

[R03.2] Cisco SFP (mini-GBIC) transceiver modules (GLC-SX-MMD) or latest model. Contractor shall provide modules as needed. SFP devices shall be provided by the Contractor for both ends of the interconnect with the TCR.

[R03.3] VPN Licenses

3.2.3 SERVERS

[R01] The Contractor shall furnish servers as required. MARTA has standardized on a HP server platform. The standard server hardware platform used by MARTA is Hewlett Packard. Contractor shall procure a rack-mountable HP server that is approved by MARTA prior to Contractor procuring the same. Hardware and software shall be designed and built to satisfy, at a minimum, a Windows Server 2008 R2 64 bit licensed operating system and security standards. The Contractor's Servers must be on latest operating system version with up-to-date security patches and anti-virus software. Package shall include licensed management software (ILO). Included in the hardware purchase, the Contractor will be responsible for providing a licensed version of the (HP-ILO) administrative management software.

[R02] All servers must reside in MARTA's datacenters. Contractor access to these servers shall be provided via two-factor VPN access.

3.2.3.1 Data Integrity and Availability

[R01] Server Security

[R01.1] Using the latest security patches, all server patching shall occur on a quarterly basis.

[R01.2] Server administrative functions systems may be performed only by personnel with documented authorization using unique user ID (use of common user IDs are prohibited).

[R01.3] Systems must be able to disable services that are not required to achieve the business purpose or function of the system (e.g., FTP, Telnet, SMTP, Web services, etc).

[R01.4] All Point of Sale (POS) servers and payment system controls access must include active monitoring and alerting to potential problems and threats.

[R01.5] The payment application and database servers must be placed behind firewalls and access must be strictly enforced.

[R02] Data Security

[R02.1] If the Contractor is processing credit/debit transactions as a merchant, the vendor is required to be compliant with the then most current Payment Card Industry Data Security Standards.

[R02.2] All reasonable efforts should be made to avoid storing confidential data on laptops.

[R02.3] All reasonable efforts should be made to avoid storing confidential data on mobile devices, including PDA's, blackberries, flash drives, etc. Mobile devices that must store confidential data must employ encryption of confidential data.

[R02.4] Backup should be performed on a regular basis and monitored. The Contractor shall provide a detailed plan on how the overall system backups will be handled on a daily, weekly and monthly basis.

[R02.5] Data in transit must be encrypted from the POS device to the payment application and payment processor.

[R03] Desktops

[R03.1] All desktops devices connected to the MARTA network shall be approved by MARTA in advance. MARTA has standardized on a Dell desktop platform.

[R03.2] Desktops shall have anti-virus software approved in advance by MARTA installed and configured so that the virus definition files are current, routinely and automatically updated. The anti-virus software must be actively running on these devices.

[R03.3] Using the latest security patches, all desktop patching should occur on a quarterly basis.

[R04] Redundancy/Failover

[R04.1] The servers/application must be synchronized between MARTA's two (2) data centers. Either site shall be capable of operating the entire APARC system using Data and Transaction high speed communications lines

3.3 SYSTEM FUNCTIONS

[R01] The proposed Automated Parking Access and Revenue Control System should be a fully online system of mechanisms and sub-systems that provides all necessary items including software, hardware, documentation, installation, integration, training, spare parts and other support items as required. These components will comprise an operational, fully integrated

on-line, real-time automated Parking and Revenue Control System (PRCS) that shall provide functionality at a minimum as described in this Section.

[R02] APARC System shall be provided as a gated PRCS with the minimum following mechanism:

[R03] Revenue Control System for parkers who pay for parking with:

[R03.1] cash payment;

[R03.2] credit cards/debit cards (Magnetic and Smart Chip);

[R03.3] promotional programs offered by MARTA (i.e., frequent parker);

[R03.4] third party validations and machine readable barcodes; and

[R03.5] payment in advance.

[R04] APARC System shall accept payment on exit by vehicle, using a minimum speed of 100 Mbps speed and throughput. Payment on exit shall be limited to credit and debit cards only.

[R05] APARC System shall accept payment at all Pay on Foot (POF) units.

[R06] APARC System shall include an audio and video intercom communication system.

[R07] APARC System shall provide central management of all facilities from a single control center with remote vending capabilities.

3.3.1 CAPABILITIES

[R01] The System functions for all software and firmware shall be completely tested and documented before installing at operational sites.

[R02] Input Point Monitoring Real-Time

[R02.1] The PRCS system shall collect and process status information from all monitored points. Connectivity shall be by Ethernet over IP to all lane devices. The System shall create and maintain an Open Database Connectivity (ODBC) and Structured Query Language (SQL) compliant with, but not limited to, all cardholders, events, financial transactions, alarms, Contractor permissions, administrator permissions, various rate schedules, and other system activities for connected points (devices). Database shall be ODBC and shall be fully compliant to operate with typical ODBC SQL report generators.

[R03] Audit Trail

[R03.1] The System shall maintain an audit trail file of Contractor, Cashier and Administrator activities.

[R03.2] The System shall provide the ability to generate a report by Contractor, time, date and type of activity (audit code).

[R03.3] The System shall allow the Contractor or Administrator with accepted password protection to direct the audit report to screen, printer or file.

[R03.4] The audit trail feature shall, at a minimum, record the following system events:

[R03.4.1] Database backup started, ended, or failed

[R03.4.2] Site parameters modified

[R03.4.3] System log-in, log-out, rejected, terminated, or forced log-out

[R03.4.4] Cardholder or parker information added, deleted, or changed

[R03.4.5] System time and date changed

[R03.4.6] System shut down

[R03.4.7] Event added, deleted, changed, or executed

[R03.4.8] Alarm event message added, deleted, or changed

[R03.4.9] Communications initiated or terminated

[R03.4.10] Download started

[R03.4.11] Field device type and hardware added, deleted, or changed

[R03.4.12] Access privileges added, deleted, or changed

[R03.4.13] Passwords added, deleted, or changed

[R04] Alarm Annunciation

[R04.1] The APARC system shall provide applicable device status advisories from within the System. These advisories shall be provided via audible and visual means incorporating structured graphics and shall annunciate all alarm events, trouble conditions, and various device status advisories from within the system. Audible messaging shall be via one-way transmission (OWT) to the server display, and shall be forwarded by electronic messaging to other systems or devices including email and SMS messages. Forwarding of all events shall

also be configurable by schedule and recipient allowing delivery of those messages based on a defined time of day.

[R04.1.1] Input point supervision: The System shall electronically supervise gates, columns, OWT, and readers (i.e., credit card, badges and parking tickets) real-time with monitored and supervised status of the data lines.

[R04.1.2] Contractor Menu Access: The Contractor password shall control which menu items the individual Contractor may access. It shall also restrict Contractors from certain specified menu commands that do not appear on the screen or are grayed-out (disabled) for a given Contractor.

[R04.2] Alarm Handling: The alarm or event handling portion of the system shall provide dynamic color alarm graphic maps with the following functions:

[R04.2.1] User definable graphic maps shall depict input point conditions. The System shall support the importing of most bitmap file format graphics produced with any graphic drawing program such as .TIFF, .BMP or .JPG file formats. Vector file formats are not acceptable.

[R04.2.2] The APARC system shall be capable of storing a number of graphics for operations that are custom definable.

[R04.2.3] Within the control monitor screen, the input point icon on the APARC system shall flash, change color and send a text message or output a message.

[R04.2.4] The computer's internal sounder shall beep when an alarm condition exists.

[R04.2.5] Clicking the mouse on the icon in response to the alarm condition shall move or directly control the screen window and start a response to the alarm.

[R04.2.6] Output alarms of a field system device located anywhere in the APARC system(s) shall be responded to by a click on a screen icon making a set or reset the status of the output point alarm.

[R04.2.7] User definable alarm messages shall be structured and sent to the APARC system server, workstation, cashier station and/or output device such as internet mailbox address.

[R05] The PRCS shall support remote monitoring via Ethernet over the MARTA Enterprise Network. The PRCS shall also provide for local monitoring via Ethernet or USB connectivity.

[R06] The PRCS shall include all web based ticket issuing, cashiering, counting, and data entry device continuous communication with the facility and host servers to control and record efficiently all parking activity in real time.

[R07] The PRCS shall provide on-line integrated payment processing system producing all required accounting, audit and revenue tracking reports.

[R08] The PRCS shall also permit defined consumers, company and public to log in, online MARTA secured password on the internet to pre-purchase parking and/or validations.

[R09] The PRCS shall utilize secure “machine readable” technology, create, audit and maintain a virtual ticket inventory, and produce paperless invoices and receipts.

[R010] The PRCS shall read and record proximity card, AVI, and machine-readable ticket media. The media shall be read and recorded for controlling and providing reports on all access and egress to the facility.

[R011] In addition to the standard monthly parking and payment functions, the System shall permit registration and promotion of frequent parker functions. Selected media shall be used by pre-registered customers to park in the facility or any MARTA facility utilizing the PRCS system. Hourly and daily charges based on the posted rates or discounted at the discretion of MARTA, shall be automatically charged to an account or credit/debit card on file.

[R012] All data shall be retained and archived for a designated ten (10) year period and any option years awarded.

[R013] Web-based, Client/Server network software applications shall be provided by the Contractor to provide Microsoft Windows based communications for real time data upload/download of daily ticket, monthly, payment, count and all other activity data between required facility hardware and the Host on-line system servers.

[R014] The System shall provide reporting of activity of any given period and end-of-the-month accounting, operational and statistical data.

[R015] All tickets and receipts shall have ability to display a facility logo, facility name, address, and phone number in addition to the required machine-readable media.

3.3.2 MOBILE PAYMENT SYSTEM

[R01] MARTA is currently in the process of procuring and deploying a Mobile Ticketing System that will allow customers to pay for fares and get access to trains and buses by using a new

App installed on smart devices. The Contractor must have a mobile fare collection solution in use. The Contractor shall provide case studies and show examples of existing customer usage of its mobile fare collection application along with its functionality, integration points, identified limitations and projected roadmap.

[R02] It is MARTA's intention to use this new application as a mean of payment for all MARTA services including long-term paid parking.

[R03] The Contractor shall make necessary provisions to ensure the new equipment and systems provided as part of this RFP will be capable of accepting this new method of payment.

3.4 PAY ON FOOT (POF)

[R01] The Pay on Foot (POF) unit shall accept both cash and credit/debit cards for payment and issue change. The POF shall be designed to issue and read barcode parking tickets. The design of the POFs shall be based on simple, clear, and reliable construction, and modular components to make them easy to use and maintain.

[R02] The enclosure for the POFs shall be of stainless steel and or steel with powder coating.

[R03] The POF shall, at a minimum, provide the following customer service capabilities:

[R03.1] Accept cash (Bill and Coins) and Credit/Debit Card (Magnetic and Smart Chip)

[R03.2] Dispense Change (Bills and Coins)

[R03.3] Respond to customer's choice of action

[R03.4] Read barcode parking ticket

[R03.5] Issue barcode parking ticket

[R03.6] Must be ADA compliant

[R03.7] Provide audio output of messages and instructions

[R03.8] Include a security and alarm system

[R03.9] Indicate malfunctions of the unit

[R03.10] Be online

[R03.11] All transactions occur in real time

3.4.1 POF DESIGN REQUIREMENTS

[R01] Each POF unit shall contain a master circuit breaker to remove power from the entire unit.

[R02] The POF unit shall be provided with a lighting fixture to illuminate the entire front side of the POF. The lighting fixture shall be constructed out of the same material as the cabinet in a manner to keep out dirt, moisture, debris and insects.

[R03] The POFs shall have key buttons and or shall be touch screen to allow the customers to make their selections. The buttons shall not be removable from the outside of the POF, and shall be vandal resistant. All buttons shall be sealed to prevent the intrusion of water.

[R04] The display screen shall be liquid crystal display (LCD) and easily distinguishable in sunlight. The display screen shall adjust automatically to ambient light conditions so screen information can be read under all lighting conditions including direct sunlight or low light conditions. The display screen shall be protected by shatter resistant Plexiglas or polycarbonate covers and a glare reduction screen. Direct sunlight and/or high internal cabinet temperature shall not cause deterioration of the display. The LCD shall be industrial grade and required to tolerate extreme internal cabinet temperatures. The display screen shall remain functional when wet with precipitation, and must not suffer from "fogging" due to condensation.

[R05] The design and manufacture of the POF, including all removable sealed containers shall ensure the highest degree of security. The POF design shall provide protection against vandalism, scratching, burglary, and/or removal of the POF from the pad installation site.

3.4.2 POF PHYSICAL REQUIREMENTS

[R01] The POF unit shall, at a minimum, include the following modules:

[R01.1] Barcode Reader and Printer

[R01.2] Customer interface and display

[R01.3] Credit/Debit Card Reader (Magnetic and Smart Chip)

[R01.4] PIN pad

[R01.5] Bill Handling and sub components

[R01.6] Coin Handling and sub components

[R01.7] Parking Ticket Dispenser (Roll Stock)

[R01.8] Receipt Dispenser (Roll stock)

[R01.9] Video Intercom (Video and Sound)

[R01.10] Data and Transaction high speed communications lines

[R02] The POF unit shall include a cancel button for canceling the parking fee selection prior to insertion of the total amount due. Pressing the cancel button prior to the insertion of the total parking fee due shall cancel the last selection and the POF shall return the amount of money deposited.

[R03] The POF unit shall maintain internal counts of essential POF data to allow for full recovery from loss of transactional and fault data.

[R04] The POF unit shall be capable of accepting, validating and counting U.S. currency one-dollar (\$1), five-dollar (\$5), ten-dollar (\$10) and twenty-dollar (\$20). Currency rejected by the validator shall be returned to the customer in a convenient accessible location. Accept any new bills issued by the U.S. Treasury for the term of the contract. Include a control system that shall monitor, control and count all accepted bills by denomination.

[R05] The POF unit shall be capable of accepting, validating, and counting the value of nickels (5 cents), dimes (10 cents), quarters (25 cents), and dollar coins (\$1.00). No pennies (1 cent) shall be accepted by the POF.

[R06] The POF unit shall be capable of dispensing one-dollar (\$1), five-dollar (\$5), ten-dollar (\$10), nickels (5 cents), dimes (10 cents), quarters (25 cents), and dollar coins (\$1.00). No pennies (1 cent) shall be dispensed by the POF.

[R07] The POF unit shall contain a Credit/Debit card reader and smart card reader, which shall include, but not be limited to:

[R08] The personal identification number (PIN) keypad. The Credit/Debit and smart card readers and PIN Keypads shall be PCI DSS compliant. The Contractor shall be responsible for designing, testing, and certifying PCI compliance of any interfaces that connect between the POF, APARC system, payment hub, and the clearinghouse of the financial institution. The Contractor shall provide all hardware and software for encrypting and transmitting credit/debit card data. The POF shall provide the functionality of ZIP Code Verification of credit/debit cardholder.

[R09] The POF card reader shall read and verify information on credit and debit cards encoded in accordance with current applicable International Organization of Standardization (ISO) and Europay, MasterCard, Visa (EMV) standards. Card reader shall be of the “insert and remove” type.

[R010] The POF units shall have network capability with remote POF status monitoring, automatic polling for sales information, a complete audit and accounting system, ability to remotely commands to reset and self-diagnose, ability to remotely modify operating parameters, and process all credit/debit card authorizations.

3.5 PARKING CASHIER TERMINAL

[R01] The Parking Cashier Terminal (PCT) shall provide the functionality to read and print barcode parking tickets. The PCT shall be sized to minimize the area of counter space required for its installation.

[R02] The PCT shall at minimum, include the following modules:

[R02.1] Barcode reader and printer

[R02.2] PIN pad

[R02.3] PCT Contractor display

[R02.4] Customer display

[R02.5] Keypad/board

[R02.6] Cash drawer

[R02.7] Credit/debit card reader (Magnetic and Smart Chip)

[R02.8] Printer-receipt

[R02.9] Data high speed communications lines

[R03] The PCT shall contain Credit/Debit card reader and smart card reader, which shall include the personal identification number (PIN) keypad. The Credit/Debit card reader, smart card reader, and PIN Keypads shall be PCI DSS compliant. The Contractor shall be responsible for designing, testing, and certifying PCI compliance of any interfaces that connect between the PCT, APARC system, payment hub, and the clearinghouse of the financial institution. The Contractor shall provide all hardware and software for encrypting and transmitting credit/debit card data.

3.6 PARKING ENTRY GATE UNIT

[R01] The Parking Entry Gate Unit shall at minimum, include the following modules:

[R01.1] One (1) Parking Gate

[R01.2] One (1) Gate Arm

[R01.3] Two (2) Parking Entry Units consisting of: (Redundant Units)

[R01.3.1] Barcode Reader and Printer

[R01.3.2] Customer interface and display

[R01.3.3] Parking Ticket Dispenser (Roll Stock)

[R01.3.4] Video and Audio Intercom (Video and Sound)

[R01.3.5] Data and Transaction high speed communications lines

[R02] Each Parking Entry Unit must be redundant.

[R03] The enclosure for the Parking Entry Gate Unit shall be of stainless steel and/or steel with powder coating.

[R04] The Parking Entry Gate unit shall have at minimum the following functionalities:

[R04.1] Contain an extra sensory feature to ensure that the gate arm reverses direction and returns to the UP position if it strikes an object during descent.

[R04.2] Contain an auto stop feature to ensure the parking gate immediately stops its downward travel cycle if the gate closing loop detector senses the presence of a vehicle.

[R04.3] Have a maximum cycle time for the parking gate that does not exceed 3.0 seconds.

[R04.4] Be equipped with a locking mechanism.

[R05] Have a remote alarm monitoring system that automatically alerts the server APARC system.

[R06] Operate in all exterior weather conditions within Atlanta.

[R07] All gate arms must be 6 to 10 feet in length and be articulating where required to facilitate the full length in the down position, but a shorter clearance sensitive length when in the up position.

3.7 PARKING EXIT GATE UNIT

[R01] The Parking Exit Gate Unit shall at minimum, include the following modules:

[R01.1] One (1) Parking Gate

[R01.2] One (1) Gate Arm

[R01.3] Barcode Reader and Printer

[R01.4] Customer interface and display

[R01.5] Credit/Debit Card Reader (Magnetic and Smart Chip)

[R01.6] Receipt Dispenser (Roll stock)

[R01.7] Video and Audio Intercom (Video and Sound)

[R01.8] Data and Transaction high speed communications lines

[R02] The Parking Exit Gate Unit shall contain credit/debit card reader and smart card reader. The Credit/Debit card reader and smart card reader shall be PCI DSS compliant. The Contractor shall be responsible for designing, testing, and certifying PCI compliance of any interfaces that connect between the Parking Exit Gate Unit, APARC system, payment hub, and the clearinghouse of the financial institution. The Contractor shall provide all hardware and software for encrypting and transmitting credit/debit card data.

[R03] The enclosure for the Parking Entry Gate Unit shall be of stainless steel and or steel with powder coating.

[R04] The Parking Entry Gate unit shall have at minimum the following functions:

[R04.1] Contain an extra sensory feature to ensure that the gate arm reverses direction and returns to the UP position if it strikes an object during descent.

[R04.2] Contain an auto stop feature to ensure the parking gate immediately stops its downward travel cycle if the gate closing loop detector senses the presence of a vehicle.

[R04.3] Have a maximum cycle time for the parking gate that does not exceed 3.0 seconds.

[R04.4] Be equipped with a locking mechanism.

[R04.5] Have a remote alarm monitoring system that automatically alerts the server APARC system.

[R04.6] Operate in all exterior weather conditions within the Atlanta, Georgia area.

[R04.7] All gate arms must be 6 to 10 feet in length and be articulating where required to facilitate the full length in the down position, but a shorter clearance sensitive length when in the up position.

3.8 REVERSIBLE GATE UNIT

[R01] Please see requirements for 3.6 Parking Entry Gate Unit and 3.7 Parking Exit Gate Unit

3.9 BAILOUT GATE UNIT

[R01] The Bailout Gate Unit shall at minimum, include the following modules:

[R01.1] One (1) Parking Gate

[R01.2] One (1) Gate Arm

[R01.3] Data and high speed Transaction communications lines

[R02] If required, the enclosure for the Bailout Gate Unit shall be of stainless steel and or steel with powder coating.

3.10 SECURE LOCK AND KEY

[R01] All locks and keys used at the POF, Parking Entry, Parking Exit, Reversible and Bailout Gate Units exterior and the POF cashbox shall be of the high security type defined as follows:

[R01.1] Shall be pick resistant and of the multi-tumbler type

[R01.2] Shall be such that impressions or duplications shall not be possible to create an unauthorized reproduction of the key that would work in the lock

[R01.3] Shall be registered and new or additional keys shall be available only from the manufacturer (or authorized agent) by authorized personnel

3.11 BARCODE PARKING TICKET

[R01] Thermal roll stock paper shall be used for printing barcode patterns (two-dimensional or three-dimensional). The roll stock shall be universal and suitable in size to be utilized in all parking gate entry units, pay on foot units, and the parking cashier terminal. The patterns shall not transfer to hands or clothing. The barcode patterns shall be printed at a minimum one (1) time on the ticket stock.

[R02] Proposals shall identify what security protocol(s) shall be employed to ensure any duplicated or altered patterns are not validated in the system.

[R03] The Contractor should provide equipment from a manufacturer that has a minimum of three (3) years' experience manufacturing barcode technology and barcode parking tickets.

3.12 ENVIRONMENTAL CONDITIONS

[R01] The Parking Entry, Parking Exit, Reversible, and Bailout Gate Units and Pay on Foot Unit shall be able to operate and not suffer any degradation in performance under the following environmental conditions:

Table 3-2: Environmental Conditions

Condition	Parameters
Storage Temperature	0° to +165°F ambient
Storage Humidity	2 to 99% RH (non-condensing)
Operating Temperature	+25° to +110°F ambient
Thermal Shock	1° per minute drop in temperature over 15°F range between 110° and 60°
Relative Humidity Range	13% to 99% RH including condensation
Shock	5g peak (instantaneous)
Dust	Airborne particles and dust
Water/solvents	Shall be adequately protected against ingress of water or damage due spray on equipment from cleaning floors and walls, industrial cleaning solvents, wet fare media, rain, mud or snow
Electromagnetic interference	Applicable FCC requirements
Grounding/Lightning	Good ground available/Lightning protection available to protect from high voltage (1000V) spikes from lightning

3.13 CONTROL BACK OFFICE

[R01] The APARC Back Office shall be located at MARTA's North Springs Central Cashiering Facility, with a redundant site at the Sandy Springs Central Cashiering Facility. The APARC Back

Office shall provide the central monitoring, controlling and configuration management of the entire APARC System.

[R02] The APARC Back Office design, including all hardware, software, and interfaces, shall be submitted for MARTA review and approval at the Design Review.

[R03] The APARC Back Office shall consist of the application programs, system functionality, and operating capability to generate responses and files, generate and print reports, compile and transfer data.

[R04] The APARC Back Office shall be delivered with a fully functioning graphical user interface (GUI) for online query, reporting, and system configuration.

[R05] The APARC Back Office shall at minimum, include the following modules:

[R05.1] Required Servers

[R05.2] Complete Workstations (CPU, Keyboards, mouse, etc.)

[R05.3] Workstation Monitors

[R05.4] Monitors to view the APARC system (47 inches or larger, rated for 24-hour use)

[R05.5] Monitors to view customers from the Pay on Foot Unit (POF), Parking Entry, and Exit gate, etc.

[R05.6] Intercom System to communicate with customers

[R05.7] Required Hardware

[R05.8] Required Software

3.14 SYSTEM AND REVENUE REPORTS REQUIREMENTS

3.14.1 SYSTEM REPORTS

[R01] The APARC report system shall provide complete, easy to use, standard or customer configurable reports. The standard reporting features shall allow the users to manipulate a report in the following ways:

[R01.1] To retrieve a desired report from a database. By using criteria such as certain date, time, and devices, the user can retrieve a specific report from the database.

[R01.2] To view, save, export, and print a report. The user shall be able to view the report retrieved from the database, save the report to a new location in PDF, EXCEL, WORD or other compliant specified, and print out the report.

[R01.3] To navigate with the database report. The user shall be able to use navigational buttons to navigate to different pages of the report.

[R01.4] To rename a report. The user shall be able to rename any report exported from the PRCS Database.

[R01.5] To export sortable data fields from the APARC to Microsoft Excel. By exporting data from the APARC to Microsoft Excel, the user can work with data in Excel spreadsheets and import the data to other compatible financial systems.

3.14.2 REVENUE REPORTS

[R01] Integrated within the APARC system shall be standard reports that provide a wide array of information. Specific to revenue reports, the APARC system shall provide reporting capabilities that allow MARTA to generate and audit parking operations and revenue from the data sources:

[R01.1] Transaction Report (Any time period)

[R01.2] Parking Fee Report

[R01.3] Totals Report (Any time period)

[R01.4] Daily Revenue Report

[R01.5] Cashier Shift Report

[R01.6] Validation Report

[R01.7] Manual Transaction Report

[R01.8] Ticket Revenue Report

[R01.9] Discount/Validated Ticket Report

[R01.10] Outstanding Ticket Report

[R01.11] Revenue Summary Reports

[R01.12] Gate Status Report

- [R01.13] Gate Override Report
- [R01.14] Cash Drawer Open Report
- [R01.15] Parking Ticket Exception Report
- [R01.16] Payment Device Reports
- [R01.17] MARTA Employee Parking Reports

3.15 TECHNICAL SUPPORT

[R01] The Contractor shall provide various service level guaranties as indicated herein and maintain appropriate certification as indicated herein:

[R01.1] Platform Support

[R01.1.1] The Contractor shall provide a platform consisting of the entire application stack required to support the Pay on Foot Machine (POF). This APARC platform will be consistently used to support the following:

[R01.1.1.1] A development and test environment that is logically isolated from the QA/staging, production, and training environments.

[R01.1.1.2] A QA/staging (pre-production) environment that is logically isolated from the end user and other environments, but representative of the production environment.

[R01.1.1.3] A production environment that is logically isolated from the development/test, QA/staging environments, and training environments.

[R01.1.1.4] A training environment that is logically isolated from the development/test, QA/staging, and production environments.

[R01.1.1.5] A path for application development (Change Mechanism) that supports enhancements and/or customization requests to the System. This change mechanism capability shall support the transition between the aforementioned environments.

[R01.2] Management Support

[R01.2.1] The Contractor shall provide management support for all software servers (database, web servers, application enablers), operating systems, hypervisors, hardware, and network infrastructure that are included in the Contractor's boundary.

[R01.3] Operations Management

[R01.3.1] The Contractor shall provide Operations Management and operations of the environment to be inclusive of all the above components and their respective integration.

[R01.4] Customer Support

[R01.4.1] The Contractor shall provide customer support for internal client databases.

3.16 TECHNOLOGY SERVICE LEVEL CONTRACTS

[R01] Provide a solution based on current and evolving industry standards and best practices over the course of the contract duration. The solution will provide the best value to the Authority while at the same time allowing the Authority the flexibility to meet current and future requirements. The solution shall meet all requirements set forth in this section.

[R02] The Contractors proposal shall describe their methods of compliance with these requirements and will propose Service Level Contracts (SLA), associated terms and conditions, and enforcement methodology. At a minimum the SLA shall cover the following points:

[R02.1] Uptime for the solution as measured as the total external availability for the solution during the billing period of one month, and including definition for measurement of uptime.

[R02.2] Recovery Time Objective (RTO) and Recovery Point Object (RPO) in the event of loss of operation for the hardware.

[R02.3] Points and methods of contact for communicating service outages, technical issues, and security issues with tiered response times.

[R02.4] Methodology for ensuring that the Service Level Contract is met.

3.16.1 SOLUTION-SPECIFIC TASKS

[R01] The following define the specific requirements:

[R01.1] The Contractor shall:

[R01.2] Provide an effective solution that utilizes industry standards and best practices that meets or exceeds the performance criteria detailed in the Service Level Contracts (SLA).

[R01.3] Provide an implementation plan for sites utilizing the solution.

[R01.4] Manage and operate the solution in accordance with the SLAs.

[R01.5] The Contractor shall jointly develop a Technology Implementation Plan with the Authority for the first implementations and for future implementations.

3.16.2 SOLUTION ROBUSTNESS

[R01] The Contractor shall provide end-to-end SLA monitoring capability and reporting for application rendering, content query, rich media content delivery and file download services that enable root-cause analysis and the resolution of performance issues.

3.16.3 ADMINISTRATIVE CAPABILITIES

[R01] The Contractor shall:

[R01.1] Provide a Desktop Environment within the Dev/Test environment with the necessary development tools to provide MARTA Technology development staff with a consolidated and cohesive infrastructure for the development lifecycle of public facing applications.

[R01.2] Provide lifecycle management tools to support Configuration Management.

[R01.3] Provide tools for analyzing usage specific trends as it relates to the public users of the system.

[R01.4] Provide a Change Control Process to secure the functionality of the environment without hindering the ability of MARTA Technology staff to efficiently add new functionality, integration, and or content delivery mechanisms.

[R01.5] Provide a test environment for MARTA Technology Applications and Development staff to test code for all environments that may receive iterative patches and/or refreshes.

3.16.4 DATA ARCHIVAL

[R01] The Contractor shall:

[R01.1] Provide tiered storage solution to move data through multiple tiers as the data ages.

[R01.2] Provide archive data retention mechanism as well as data disposal.

[R01.3] Manage the logs and data consistent with best practice approaches.

[R01.4] Provide a mechanism for the bulk retrieval of all data, scripts, software, virtual machine images, and so forth such as mirroring or copying to MARTA's supplied industry standard media. The Contractor's proposal shall describe the formats data will be provided; preference will be given to open standards such as OVF.

3.16.5 TECHNICAL SUPPORT

[R01] The Contractor shall:

[R01.1] Provide Service and Support the solution 24 x 7 x 365 days in base period to include Tier 1, 2, 3 help desk support / service center functions defined as:

[R01.1.1] Tier 1 (Incident response catch/dispatch)

[R01.1.2] Tier 2 (SME engagement)

[R01.1.3] Tier 3 (SME and/or Vendor engagement as required)

[R02] Provide trouble ticketing via customizable online portal/interface with integrated email capabilities.

3.16.6 ADMINISTRATION CAPABILITIES

[R01] The Contractor shall:

[R01.1] Provide a trusted secure communication channel to support authentication (dual factor method) of remote access in accordance with MARTA's policies.

[R01.2] Provide network storage, server and virtualization layer management to include performance of internal technology and refresh cycles applicable to the environment.

[R01.3] Provide and document patch management appropriate to all components within the provider's boundary and to adhere to MARTA's standards.

[R01.4] Provide automated monitoring of performance, resource utilization and other events such as failure of service, degraded service, availability of the network, storage, database systems, operating Systems, applications, including API access within the provider's boundary and Security Content Automation Protocol (SCAP) automation capabilities via a service dashboard or by other electronic methods.

[R01.5] Provide maintenance of user profiles presented to the user at time of login.

3.16.7 COMPREHENSIVE BACKUP

[R01] The Contractor shall:

[R01.1] Provide restoration of an individual file or folder on request as outlined in the SLA.

[R01.2] Describe and implement a backup procedure and process that supports the following objectives:

[R01.3] Recovery Point Objective (RPO) – Contractor shall be able to recover files for any specific day within a rolling six-month period.

[R01.4] Recovery Time Objective (RTO) – Contractor shall recovery files within 24 hours of request.

[R01.5] Data Backup Location – Data backups shall be maintained or replicated at a site geographically disparate from the production site such that the loss of one data center does not prohibit recovery of data within the prescribed RTO.

[R01.6] Specific Snapshot Objective – At the Component Agency request, the Contractor shall create a full snapshots for the platform, content and related data, to be retrieved at the Component Agency’s request within 24 hours up to a period to be determined by the Component Agency.

3.16.8 TECHNOLOGY REFRESH

[R01] The Contractor shall:

[R01.1] Comply with technology refresh requirements as required by MARTA to ensure security requirements and service level Contracts (SLA) are met.

[R01.2] Comply with MARTA’s requirements that software within the Provider’s Boundary will never be more than two (2) versions behind.

3.16.9 OPERATIONAL COMPLIANCE

[R01] The Contractor shall:

[R01.1] Sustain operations with no more than three (3) non-compliant findings per fiscal year.

[R01.2] Provide a solution that delivers periodic migration support.

[R01.3] Support Physical-to-Virtual (P2V), Virtual-to-Virtual (V2V), and Virtual-to-Physical migration methods for systems including private Local Area Network (LAN) integration with

provider network via secure channel(s), such as site-to-site virtual private network (VPN) tunnel(s).

[R01.4] Support database array-based data replication.

[R01.5] Provide a time-frame target period of no more than five (5) days for validated migration of each physical application server and associated database server, including test and development servers to the environment.

[R01.6] Provide migration planning and support, such as configuring external connections to the hosted infrastructure and the ability to upload database backups and virtual machine (VM) images to the hosting environment.

[R01.7] Coordinate all impacts to system availability impacts during the migration and subsequent cutover to the service provider infrastructure and secure approval from the MARTA Department of Technology before execution.

[R01.8] Provide a solution in which data calls (requests for information) do not exceed two (2) incidents of non-compliance per fiscal year.

[R01.9] Comply with directed mandates to protect and defend information systems from recurring security threats or in response to real-time vulnerabilities and have no more than one (1) non-compliant incident per fiscal year.

[R01.10] Provide and apply tactical patching in defense of real-time vulnerabilities within 24 hours or less and have no more than one (1) non-compliant incident per fiscal year.

3.16.10 MIGRATION SUPPORT SERVICES

[R01] The Contractor shall:

[R01.1] Demonstrate architecture based upon the Day 1 Operating Requirements.

[R01.2] Configure, manage, deploy, scale, the system on selected infrastructures.

[R01.3] Provide an expert technical operations and management team which can advise the Authority on optimal operational practices, recommend deployment architectures for existing/future infrastructures, design and implement automated scaling processes, day-to-day and emergency procedures, deploy and monitor applications, performance reporting and metrics, and ensure the overall reliability and responsive operation of the applications through both proactive planning and rapid situational response.

[R01.4] Provide tools and processes for monitoring the availability of assigned applications, responding to system and application outages with troubleshooting activities designed to identify and mitigate operational issues.

[R01.5] The Contractor shall provide any necessary network equipment for the APARC System. The connectivity must be redundant in MARTA's two data centers and provide a complete failover from one site to another. The infrastructure and Contractors are required to be compliant with the Payment Card Industry Data Security Standards (PCI DSS v3.0) and the payment application must comply to PA-DSS v3.0 payment application standards All Point of Sales (POS) PIN Encryption Devices and (PEDs) host systems must comply to Visa PIN Security requirements and Triple Data Encryption Standard (TDES) to protect online PIN-based transactions processed within the POS and host systems.

3.17 CUSTOMER DATA PRIVACY

The Contractor shall not share, sell, or use customer data.

END OF SECTION 3

4.0 IMPLEMENTATION AND MAINTENANCE

4.1 OPERATIONAL AND SITE REQUIREMENTS

[R01] The APARC system provided herein and under this part shall be provided with the following minimum mechanisms, provisions, understandings, certifications and capabilities:

[R01.1] Mechanisms provided shall be all new equipment, not used, and with manufacturers original warranty provisions. Intercom system specified herein shall include components designed and installed as standard equipment in entry and exit devices and be devices used within a defined communication system. All mechanisms shall communicate with the Command Center with single button activation at entry, exit, and payment station locations. All component devices shall be from the same manufacturer. All devices must communicate with IP over Ethernet. Ability to forward intercom calls to external phone systems shall be included.

[R02] Compliance shall be provided with all applicable codes and standards at the time of installation and shall include, but not be limited to:

[R03] State / Federal / Local Codes including:

[R03.1] National Fire Protection Association (NFPA): 70, National Electrical Code (NEC)

[R03.2] Georgia State Amendments to NFPA 70, National Electrical Code (NEC)

[R03.3] U.S. Federal Communications Commission (FCC): Part 68 of the FCC rules

[R04] American National Standards Institute/Telecommunications Industry Association (ANSI/TIA):

[R04.1] Americans with Disabilities Act (ADA)

[R04.2] Underwriters' Laboratories, Inc. (UL)

[R04.3] ISO 9001

[R04.4] Electronic standards for read/write transactions.

[R05] All necessary device control wiring and communications wiring to equipment shall be as specified, documented and individually uniquely tagged with a unique identifier. Submittals for this network shall include a description of all electronics, communications equipment, devices, mechanisms, cables, and various other equipment terminations and shall be provided to the Authority in drawing or document formats.

[R06] Vehicle detection devices (i.e., puck, saw cut loop) shall be provided as needed and according to manufacturer specifications.

[R07] All electrical conduits, as needed, which include power wiring, shall be in compliance with Federal / State / Local permits and codes. Low voltage, high voltage, and data lines, as needed, shall be installed and tested.

[R08] Devices with conductive properties having external exposure shall be equipped with lightning surge protection for CAT-6 and serial connections.

[R09] All APARC devices and systems shall be PCI-compliant and meet full PCI Security Standards Certification (PCI SSC). **CDRL 4.1.09**

[R010] Concrete work for lanes or islands shall be per design specifications of APARC system devices.

[R011] Workstations, cashier stations, all Automated Parking Payment Machines (APPM), controllers, and servers shall be provided with UPS backup with a capacity for a minimum of 15 operations.

[R012] Devices shall be provided with heaters and cooling fans as required.

4.2 OPERATIONAL REQUIREMENTS AND SITE CONDITIONS

[R01] The Contractor shall submit as part of the response to this RFP a comprehensive understanding of how the operations shall responsibly transfer from MARTA to the Contractor. The comprehensive understanding should include the following:

[R02] Operational Transition Plan (**CDRL 4.2.1.01**)

[R03] Implementation Plan (**CDRL 4.2.2.01**)

[R04] Operations Manual / Plan (**CDRL 4.2.3.01**)

[R05] Staffing Plan (**CDRL 4.2.4.01**)

[R06] Marketing and Communication Plan (**CDRL 4.2.5.01**)

[R07] Contingency Plan (**CDRL 4.2.6.01**)

[R08] Contractor Management Plan (**CDRL 4.2.7.01**)

[R09] Contractor Policies and Procedures (**CDRL 4.2.8.01**)

[R010] Traffic Management Plan (**CDRL 4.2.9.01**)

4.2.1 OPERATIONAL TRANSITION PLAN

[R01] The Contractor shall submit an Operational Transition Plan. The Transition Period shall be defined as the period during which operations and responsibilities transfer from MARTA to the Contractor. The Contractor must have a fully implemented APARC system at the parking facility before MARTA transitions that facility to the Contractor. The Operational Transition Plan shall be fully integrated with the overall Program Management Plan **CDRL 7.1.1.01**.

Table 4-1: Parking Facility Transition Order

Transition Order	Long-Term Parking Facilities
1.	Kensington and North Springs Command Center
2.	Lenox
3.	Medical Center
4.	College Park
5.	Lindbergh (Sydney Marcus Deck)
6.	Brookhaven
7.	Dunwoody Deck I
8.	Dunwoody Deck II
9.	Doraville
10.	Sandy Springs and Command Center
11.	North Springs and Command Center

[R02] The Operational Transition Plan shall describe all activities required by the Contractor and MARTA during the Transition Period. The Transition Plan shall clearly identify the nature and timing of any interaction with MARTA. The Transition Plan shall also outline responsibilities of the Contractor and MARTA throughout the transition period. The changeover shall be seamless to customers.

[R03] The Transition Plan shall include:

[R03.1] Detailed milestones and schedule for the Transition Period

[R03.2] Review of existing operations

[R03.3] Staff recruitment and training

[R03.4] Customer Communications

[R03.5] Detailed Cutover Plan

[R04] Assigned Vehicles:

[R04.1] The Authority will furnish two (2) vehicles to the Contractor to transport personnel and parts between the parking facilities and the Parking Command Center facility. After the transition of the first five (5) Parking facilities, the Contractor shall assume responsibility of one (1) MARTA vehicle. After full conversion of all eleven (11) facilities, the second (2nd) vehicle shall be transitioned to the Contractor's responsibility.

[R05] The Contractor shall be responsible for all vehicle insurance, expenses, and repairs for the duration of the contract. The vehicle shall be fully insured for injury, liability, and the contents being transported. All Contractor personnel who operate the vehicle shall be licensed drivers and abide by MARTA's policies on safe driving and driver distraction. The vehicle shall not be a take home automobile and should be parked at the MARTA command center after each use.

4.2.2 IMPLEMENTATION PLAN

[R01] A detailed Implementation Plan shall provide procedures to transition from MARTA operated parking to an external parking Contractor. This process shall be executed professionally to strengthen Customer relationships and as a result, MARTA is seeking a Contractor that has transitioned other parking operations of MARTA's size and complexity. The Contractor shall handle the transition at MARTA so that every aspect of the changeover is completed seamlessly, systematically, and on time, with detailed documentation to enhance revenue. MARTA is seeking a Contractor to automate manual cashiering with devices such as Pay-On-Foot (POF) systems. The new Contractor's system shall reduce operational costs; reduce risk of revenue leakage, promote the use of credit/debit card in-credit/debit card out and provide increased control of validations. **CDRL 4.2.2.01**

[R02] MARTA seeks a Contractor that has successfully completed numerous transitions, many of which involve handling free daily parkers as well as long-term parkers. MARTA seeks a company that continually demonstrates an ability to develop and implement a comprehensive plan to minimize operational issues during all phases of the transition process. MARTA seeks

confident and extensive experience, coupled with the expertise of an on-site transition team to meet or exceed MARTA's expectations and provide for a seamless transition.

[R03] Contractor shall provide an experienced on-site Transition Team to facilitate the changeover. A roster shall be required of all members of the Transition Team along with their roles and responsibilities.

[R04] The Implementation Plan should be detailed and concise and effectively coordinate efforts with MARTA during all stages of the transition. The Implementation Plan should provide the following:

[R04.1] Personnel Assignment to coordinate the overall transition process including:

[R04.2] Assemble the core transition personnel

[R04.3] Delegate each individual's assignments and responsibilities

[R04.4] Provide coordination of the transition agenda with MARTA.

[R04.5] Site Specific Cutover of each added Network Element (NE).

[R05] The Contractor shall assemble and train staff and the management team, at its sole expense, as detailed in the Staffing Plan and the following paragraphs:

[R05.1] Substance Abuse Screening

[R05.2] Background Investigation

[R05.3] Credit Check

[R05.4] MARTA Approved Uniforms/Identification Badges

[R05.5] Orientation/Safety and Customer Service Seminars and Training

[R05.6] On-Site Training of MARTA and APARC Systems

4.2.3 OPERATIONS MANUAL / PLAN

[R01] The Contractor shall provide an Operations Manual/Plan, which shall be approved by MARTA, describing in detail its plans and procedures for operating and maintaining the premises, and for operating MARTA's long term parking facilities. The Operations Manual shall include operating and customer service procedures, rules, and customer parking regulations that may be distributed to customers. The Contractor shall notify MARTA of any unusual conditions that may develop in the operation of the station parking facilities including, but not

limited to, major or minor fire, flood, breakage or casualty damage to the station parking facilities, or to any person or the property of any person. **CDRL 4.2.3.01**

[R02] The Contractor shall maintain detailed records, including accident reports, and provide immediate notification of such events or accidents to MARTA by email and telephone. In the event of an emergency, Contractor shall notify the MARTA Police Department and/or other most readily available emergency response agency for immediate response. **Any violation of the law including parking violations should be brought to the immediate attention of the MARTA Police Department for enforcement. MARTA Police can be contacted at 404-848-4911.**

[R03] The Contractor shall operate and maintain the premises to provide a safe environment for customers and automobiles. The Contractor shall formulate and maintain procedures, acceptable to MARTA, addressing, at a minimum, the following security issues: security of all Contractor on-site personnel, and including revenue protection, and emergency notification/action procedures. All plans and procedures which may have a bearing on security including but not limited to those concerning alarm system, lighting, perimeter fencing, stairwells, vehicle access control and pedestrian access control shall be subject to the review and approval by MARTA (and, in particular, the MARTA Police Department) at any time.

[R04] All collected monies shall be securely transported, housed, and processed in a safe, secure location. This should be addressed in the Operations plan. MARTA reserves the right to visit and audit these premises as needed upon request.

[R05] The Contractor shall be subject to periodic security audits of the premises performed by MARTA and shall implement reasonable recommendations based thereon by MARTA.

4.2.4 STAFFING PLAN

[R01] The Contractor shall submit a Staffing Plan within thirty (30) days of Administrative Notice to Proceed (ANTP) and annually thereafter. The plan shall include organization charts by position for all operations down to the lowest level. The Staffing Plan shall be in compliance of Americans with Disabilities Act requirements. **CDRL 4.2.4.01**

[R02] MARTA currently employs a large Parking Services Staff. MARTA would like the new Contractor to interview current qualified parking personnel for positions that are determined necessary to operate and manage the parking program. The Contractor shall consistently staff the operations with well-trained, efficient, competent, and courteous uniformed

personnel sufficient to operate, clean, and secure the facilities in a first class manner. At a minimum, the Contractor shall provide a staffing plan and an organization chart to advise MARTA of all levels of employees at MARTA locations. The Contractor's organization chart may be amended from time to time as necessary.

[R03] At a minimum, the Contractor shall provide a Management and Supervisory staff solely dedicated to the APARC operation of MARTA's parking facilities when implemented and throughout the term of the contract.

[R04] The Contractor shall provide a formal training program for its employees that shall include at a minimum: New employee customer service training, frequent on-going and/or updated customer service training for existing employees including those who may need remedial training, customer service training for supervisors/managers, and conflict resolution training. This program shall focus on providing a high hospitality level of service for MARTA Parking Operations. All Contractor's personnel assigned under this Contract must perform in a manner satisfactory to MARTA, and shall be removed at MARTA's reasonable request. The Contractor shall perform thorough background checks of all employees, including criminal records, driving records and credit checks (as applicable). The Contractor shall provide MARTA with the opportunity to meet with any proposed replacement personnel.

[R05] The Contractor shall maintain a drug/alcohol testing program and ensure that all assigned employees are properly monitored to help ensure public safety. The Contractor's drug/alcohol program shall be in compliance with MARTA's drug/alcohol program. To the extent permitted by law, Contractor shall reasonably cooperate with MARTA Police with respect to any investigation of Contractor employees.

[R06] All Contractor employees on the premises or otherwise on MARTA property shall always be in an approved uniform and display appropriate employee ID badge while on duty in any capacity. The Contractor shall provide a reasonable number of uniforms for each employee and maintain uniforms in good condition at its own expense. The Contractor shall submit proposed uniforms for advance approval by MARTA. The wearing of headgear (Hats, skullcaps, etc.) must be an approved uniform item. Shoes should be black, closed toes, and no heels higher than 1 inch.

[R07] The Contractor shall prohibit the possession and consumption of alcoholic beverages and intoxicants on the premises or otherwise on MARTA's property by its employees or the employees of its Subcontractors.

[R08] The Contractor shall abide by all of Federal, State, and Local Sexual Harassment Policies and Procedures.

[R09] All Contractor's on-site personnel must attend MARTA's Safety Class prior to active service. In addition, all Contractor personnel shall abide by applicable MARTA safety rules and regulations. This requirement shall not in any way limit the Contractor's responsibility to implement and maintain its own safety procedures.

[R010] The Non-Exempt Hourly Line personnel create the first and last impression for customers using MARTA facilities. Therefore, it is essential that a capable team be assembled and trained as a priority.

4.2.5 MARKETING AND COMMUNICATION PLAN

[R01] The Contractor, at its sole expense and in collaboration with MARTA's Marketing and Sales Department, shall develop a Marketing and Communication Plan that shall attract drivers to MARTA's 11 paid parking facilities. The marketing plan should create synergy between the Contractor, MARTA and MARTA's customers. The Marketing and Communications Plan should detail information on the company and the tools they shall use to support patrons parking at MARTA parking spaces. The Marketing and Communications Plan should reflect a total approach to marketing the 11 parking facilities (e.g., parking benefits, fees, hours of operation, description of each parking facility, Q&A section, etc.). **CDRL 4.2.5.01**

[R02] The marketing plan should include, but not be limited to each of the following:

[R02.1] Objectives;

[R02.2] Objectives should be clearly defined;

[R02.3] Strategy;

[R02.4] Strategies should define how they shall support the objectives; and

[R02.5] Communication Tactics.

[R03] The Contractor should clearly communicate information the patrons will need to understand when they park their vehicle. The communication tactics should include but not limited to, each of the following:

[R03.1] Marketing Information;

[R03.2] Website (shall have a link to MARTA's website);

[R03.3] A-Frames;

[R03.4] Customer Service Help Desk;

[R03.5] Outreach.

[R04] The marketing and communication plan should include an outreach component that educates and informs various sectors of the community to the benefits of parking and riding MARTA. It is important the plan understands the daily rider who parks versus a rider parking for special events.

[R05] Through the term of the Contract, MARTA reserves the exclusive right to advertise on MARTA property to include MARTA parking lots, parking decks, parking equipment and parking gates. Revenue generated through these mediums shall be MARTA's and MARTA's associated advertising contractor.

[R06] MARTA shall review and approve the Marketing Plan prior to implementation.

4.2.6 CONTINGENCY PLAN

[R01] The Contractor shall provide a Contingency Plan to continue existing operations if the Contractor is not ready to begin its own operation by the agreed upon start date. These actions are also addressed within the Operational Transition Plan. **CDRL 4.2.01.6**

4.2.7 CONTRACTOR MANAGEMENT PLAN

[R01] The Contractor should develop a Contractor Management Plan to reduce costs and generate revenues that can fund transportation improvements and other important MARTA projects. The management plan is an important component of efforts to encourage more efficient transportation patterns, which helps reduce problems such as traffic congestion, roadway costs, pollution emissions, energy consumption, and traffic accidents. **CDRL 4.2.01.7**

[R02] The Contractor Management Plan should outline steps to minimize traffic impacts and delays associated with this project. The plan should summarize the procedures that may be used to minimize traffic impacts and the process for distribution of accurate and timely information to the public. People should have viable parking and travel options. MARTA customers should have information on their parking and travel options. MARTA's parking facilities serve multiple users and destinations. The Contractor's Parking Plan should accommodate uncertainty and change. Special efforts should be made in the plan to manage

peak-demand. MARTA's parking facilities assets should be considered as important as, aesthetics, security, accessibility, and user information.

4.2.8 CONTRACTOR POLICIES AND PROCEDURES

[R01] The Contractor should develop Contractor Policies and Procedures for all employee, visitor, and disabled parking in MARTA parking facilities. This policy should describe acceptable employee and visitor parking areas, as well as loading zones and fire lanes. MARTA is required to provide adequate disabled parking and the Contractor of this contract should enforce its proper use. **CDRL 4.2.8.01**

[R02] Patrons parking and riding the system must follow all MARTA parking rules, policies, and procedures. It is important that the Contractor of this contract have displayed and enforce all parking rules, policies, and procedures as well. Failure for the parker to comply should result in fines, and/or towing vehicles. Parking in unassigned lots, reserved spaces, fire lanes, and emergency access lanes should result in a parking citation and/or towing.

4.2.9 TRAFFIC MANAGEMENT PLAN

[R01] The Traffic Management Plan should indicate traffic, parking, and pedestrian management techniques to mitigate any and all anticipated problems on the days of operation after the award of this contract. The challenge to the Contractor involves not only developing site-specific operation strategies and resource applications to mitigate a potential congestion or safety "hot spot," but also ensuring each operational tactic does not defeat the objectives of another. A successful traffic management plan ensures the safety of all MARTA patrons, staff, and general public and contractor personnel. Manual on Uniform Traffic Control Device (MUTCD) codes, standards, and signage should be incorporated in the traffic control plans when applicable. Traffic flow shall be affected throughout the duration of this project due to construction/transition to the new parking system. Traffic impacts shall vary depending on each stage. The Contractor's plan should take into consideration peak periods and minimize customer inconvenience. Emergency vehicles must have immediate access to MARTA's parking facilities at all times. **CDRL 4.2.9.01**

4.2.10 DISASTER RECOVERY PLAN

[R01] The Contractor shall develop and implement a Disaster Recovery Plan for continuing operations, with a minimum of downtime, in the event of failures of the hardware components, network components, software applications and systems, environmental factors,

or other operating emergencies. The Contractor shall be able to re-constitute normal operation within three (3) hours of any failure or emergencies as described above. The Contractor shall document all procedures necessary to maintain orderly operations in the event of emergencies. **CDRL 4.2.10.01**

[R02] The Contractor shall list all system failures and situations or events that shall trigger disaster recovery procedures. The Contractor shall prepare a disaster recovery plan for approval by MARTA.

[R03] At a minimum, the disaster recovery plan shall include the following:

[R03.1] List of resources required to conduct on-site and off-site recovery

[R03.2] Description of the escalation process, including contact lists and alternates to provide for emergency coverage of operations, staffing, technical support, and management

[R03.3] Description of how the Contractor shall provide formal arrangements for emergency replacement of parts, repair services, and technical services.

[R03.4] Descriptions of how the Contractor shall restore and recover lost or corrupt data from back-ups and archives

[R03.5] A ranking of primary, secondary, and non-critical applications with assigned minimum recovery times required to prevent a financial loss.

[R03.6] Description of a test program that shall verify the effectiveness of all disaster recovery methods and procedures

[R03.7] Description of the notification procedure to MARTA personnel.

4.2.11 SUCCESSION PLAN

[R01] The Contractor shall provide a Succession Plan. The purpose of this document is to define requirements for continued operations in the event that the Contract is not renewed, terminated for convenience, or that the Contractor is declared in breach of contract. MARTA requires that operations continue without interruption under any and all circumstances. **CDRL 4.2.11.01**

[R02] The Contractor's Succession Plan shall assume MARTA's ownership of all assets used for APARC operations (e.g., equipment, system hardware and software) and for MARTA's

immediate/automatic right to assume or use any other elements required for uninterrupted APARC functions (Contractor-developed operating software and programs, etc.).

[R03] The Contractor's succession plan shall include a projected cost for each year of the base contract for transferring from the Contractor to MARTA the entire APARC System. The projected cost and succession plan should be submitted along with the submitted bid. This projected cost will be negotiated between MARTA and the Contractor. The negotiated cost will then become a part of the contract.

[R04] The Succession Plan shall describe how the Contractor's operations would continue under MARTA's control, how all aspects of customer service would be assumed by MARTA, or its designated successor. At a minimum, the plan shall cover the following areas:

[R04.1] Transfer of assets, including equipment and other materials and supplies

[R04.2] Transfer of customer account data

[R04.3] Transfer of system hardware and software

[R04.4] Identification of any contractual Contracts which are assumable by MARTA, including but not limited to maintenance Contracts

[R04.5] Staffing and training required to actually accomplish the succession

[R04.6] Customer communication regarding changes in policy, procedures, and forms

4.2.12 DELIVERY SCHEDULE

[R01] The APARC System, APARC equipment, and services described in this Contract shall be delivered, installed, and made ready for full and complete operations within 360 calendar days after MARTA issuance of the Administrative Notice to Proceed.

4.2.13 SUPPORT PROVISION

[R01] The Contractor shall have or establish a local office in the Metropolitan Atlanta Area. The local office support shall include the Contractor and the provider of the APARC System and equipment.

4.2.14 CONTRACT DELIVERABLE REQUIREMENTS LIST

[R01] All contract deliverables shall be provided both in paper copy and electronically, in a software format appropriate to the document (word processing, scheduling, etc.) as approved by MARTA. MARTA owns all deliverables.

[R02] Final versions of all CDRLs shall be provided to MARTA within the timeline as prescribed in Table 4-2: Contract Deliverable Requirements List (CDRL)

[R03] The Contractor shall submit updates to all CDRL's that have had a significant change at no additional cost to MARTA. Table 4-2 provides a list of all required CDRLs as follow:

Table 4-2: Contract Deliverable Requirements List (CDRL)

CDRL No.	Submittal	# of Calendar Days After ANTP
4.1.09	PCI Certification	30 days prior to first Install
4.11.5.01	APARC System Training Program	90
4.2.1.01	Operational Transition Plan	15
4.2.10.01	Disaster Recovery Plan	90
4.2.11.01	Succession Plan	At Bid Time
4.2.2.01	Implementation Plan	40
4.2.3.01	Operations Manual / Plan	60
4.2.4.01	Staffing Plan	30
4.2.5.01	Marketing and Communications Plan	60
4.2.6.01	Contingency Plan	60
4.2.7.01	Contractor Management Plan	40
4.2.8.01	Contractor Policies and Procedures	40
4.2.9.01	Traffic Management Plan	40
4.3.01	Customer Service Plan	90
4.4.03	Preventive Maintenance Plan	90
4.5.12.01	Inspection Reports	Weekly
4.9.01	Installation Plan	40
4.11.1.01	Training Program Plan	As required
4.11.5.01	System Training Program	As required
6.1.10	Project Cost Estimates	30
6.1.2.01	Design Plan	60

CDRL No.	Submittal	# of Calendar Days After ANTP
7.1.1.01	Program Management Plan	15
7.2.1.01	Baseline Schedule	40
7.2.3.01	Revised Baseline Schedule	As required
7.2.4.01	Recovery Schedule	As required
7.2.6.01	Final As-Built Schedule	30 days after Final Acceptance
7.4.2.01	Data Schedule and Status Report	10
7.5.3.01	Standard Product Information and Product Data Sheets	As required
7.5.4.01	External Interface Table	As required
7.5.4.1.01	Software and Software Documentation Inventory	As required
7.5.4.1.02	Software Programs Inventory	As required
7.5.4.2.01	Documentation and User Manuals for Standard Software	As required
8.3.01	Quality Control Officer's Resume	15
8.5.01	Quality Control Program Plan	40
8.5.1.06	Software Quality Assurance Plan	40
8.6.1.04	System Problem Reports	Start of first Install
9.4.1.01	Test Program Plan	40
9.4.2.01	Test Procedure	30 days prior to Test
9.4.3.01	Test Reports	40
9.4.4.01	Test Program Schedule	30 days prior to Test
9.9.1.03	System Acceptance Test Plan	40
10.0.01	Construction Safety Plan	15
11.2.01	Configuration Management Plan	60
11.3.2.01	Asset Management	As required

4.3 CUSTOMER SERVICE REQUIREMENTS

[R01] The Contractor shall submit and include in a Customer Service Plan all items provided in this section. **CDRL 4.3.01**

[R01] The Customer Service Plan should include, but not limited to each of the following:

- [R01.1] Special Events Plan
- [R01.2] Inclement Weather Plan
- [R01.3] Lost Ticket Plan
- [R01.4] APARC Equipment Malfunction Plan
- [R01.5] Chargebacks and Disputed Transaction Plan
- [R01.6] Parking Customer Service Center Plan
- [R01.7] Customer Escalation Plan
- [R01.8] Customer Satisfaction Survey

4.3.1 SPECIAL EVENTS PLAN

[R01] Prior to each special event, the Contractor shall provide a Special Events Plan for all long-term parking facilities, which shall promote the smooth and efficient ingress/egress of customers before and after each special event (**CDRL 4.3.01**). Special events are defined as those events that bring a significant number of additional riders onto the MARTA system and usually occur during non-peak service hours.

[R02] Major special events include but are not limited to the following:

- [R02.1] The Peach Drop – January 1
- [R02.2] Peachtree Road Race – July 4
- [R02.3] Atlanta Falcons Football Games (10) – August through December (including play-off games)
- [R02.4] Atlanta Hawks Basketball Games (40) – October through March (including play-off games)
- [R02.5] Atlanta Braves Games (84) – April through September (including play-off games)
- [R02.6] Southeastern Conference Football Championship Game – December

[R02.7] Chick-Fil-A Bowl – December

[R02.8] Chick-Fil-A Kick-off Classic – August

[R03] Various other events and conventions throughout the year including NCAA Tournaments, The Apparel Mart Show and various venues throughout the year.

[R04] The Contractor shall provide a representative to attend regular Special Events meetings as scheduled by MARTA. These meetings provide insight into the type of special event scheduled, projected attendance, ridership and other pertinent information related to the preparation for such events.

4.3.2 INCLEMENT WEATHER PLAN

[R01] The Contractor shall provide an Operational Plan that is enacted during inclement weather (**CDRL 4.3.01**). Inclement weather is defined as those operational times that occur during periods of freezing temperatures, ice, snow, freezing rain and generally unsafe conditions that affect long-term parking facilities. The plan must indicate how the Contractor shall prepare each parking facility for inclement weather and what specific steps shall be taken. Responsibilities shall include:

[R01.1] Ensuring that all APARC equipment shall be accessible and in good working condition for parkers entering and exiting the facilities.

[R01.2] Ensuring that parking facilities shall be free of standing water, ice accumulation, snow, and storm debris.

[R01.3] Ensuring that all parking facility entrances and exits shall be kept safely accessible, including areas in and around the APARC equipment.

[R01.4] Ensuring that all parking facility stairwells shall be kept free of standing water or ice.

[R01.5] Reporting all water leaks to MARTA maintenance while efforts are made to keep the area safe.

[R01.6] Reporting any other customer-related problems or dangerous situations to MARTA maintenance as soon as possible.

[R02] The Contractor shall coordinate with MARTA on the deicing of entrances, exits, ramps, and general safety of the parking facilities. The plan must be consistent with MARTA's internal inclement weather plan. In the event of severe weather conditions, MARTA shall establish a

central “Command Center” that shall coordinate all communications related to severe weather conditions.

4.3.3 LOST TICKET PLAN

[R01] The Contractor shall provide a plan that accounts for lost parking tickets (**CDRL 4.3.01**). A lost parking ticket is defined as a ticket that has been lost or misplaced by a customer who is attempting to exit a parking facility. Lost parking tickets may potentially have a negative impact on revenue generation and should be treated as such. There shall be a monetary charge for lost tickets, which generally should be set at a level to discourage repeated occurrences. MARTA shall determine the lost ticket policy and fee at each location.

4.3.4 APARC EQUIPMENT MALFUNCTION PLAN

[R01] The Contractor shall provide a plan detailing how long-term parking facilities shall function in the event of APARC equipment malfunctions (**CDRL 4.3.01**). For example, in the event of a power outage, how will tickets be issued or how will parking fees be collected. The Contractor shall also provide a plan that details the ongoing and proactive maintenance of APARC equipment. The APARC equipment maintenance plan shall include specific intervals on when equipment shall be routinely serviced and the specific response time required in the event of a service call request. APARC equipment should be maintained on a regular and consistent basis and should be operational throughout all Revenue hours.

4.3.5 CHARGEBACKS AND DISPUTED TRANSACTION PLAN

[R01] The Contractor shall provide a plan that outlines a process for resolving disputed credit/debit card transactions, which may result in charge backs to customer credit or debit cards (**CDRL 4.3.01**). Disputed transactions are often times the result of inappropriate credit/debit card charges or inadvertent charges and must be reversed back to the customer’s credit/debit card. The process of receiving, investigating and responding to charge back inquiries should be well documented and occur within an expedited manner. In addition, to enhance the security of credit/debit cards, zip code verification shall be required on all credit and debit card transactions by customers as they use these cards at payment devices.

4.3.6 PARKING CUSTOMER SERVICE CENTER PLAN

[R01] The Contractor shall have a Parking Customer Service Center (PCSC) located in the command center where customers shall be able to lodge complaints expeditiously by way of

telephone, web site, e-mail, letter, text, and walk-in (**CDRL 4.3.01**). The goal of the PCSC is to provide the highest level of customer service by listening, documenting and tracking customer complaints and comments and demonstrating to parkers that MARTA is responsive and empathetic. Issues and concerns addressed to the PCSC are handled in a professional and timely manner consistent with MARTA's complaint resolution process. MARTA's main objective is to have a satisfied system parker. Any calls or complaints that MARTA receives will be documented and forwarded to the Contractor for investigation, follow-up, and resolution.

[R02] Once lodged, MARTA's goal is to have customer complaints investigated and resolved in a timely manner, usually not longer than 3 business days, if not sooner. The Contractor shall develop a customer complaint resolution process that details how customer complaints shall be received, investigated, tracked and resolved.

[R03] The Contractor shall develop a tracking system that logs and documents customer complaints from the time received through final resolution. Customer concerns shall be resolved within a period of time consistent with MARTA's internal complaint resolution process.

[R04] An example of a complaint resolutions process is as follows:

[R04.1] Step 1 – PCSC Receives and Documents Customer Concerns

[R04.2] Step 2 – Parking Supervisor Conducts Fact Finding and Detailed Investigation

[R04.3] Step 3 – Parking Supervisor Takes Corrective Action and Resolution

[R04.4] Step 4 – PCSC Representative Contacts Customer and Advises of Action Taken

[R05] The PCSC shall work closely with MARTA's Customer Service Center and provide a weekly report on the status all customer complaints and follow-up actions on how each complaint was, or is being, resolved.

4.3.7 CUSTOMER ESCALATION PLAN

[R01] The Contractor shall provide a Customer Escalation Plan that outlines an escalation process for handling unsatisfied customers (**CDRL 4.3.01**). The escalation plan should identify the need for supervisory or managerial level input to resolve more complex customer service issues. Issues that remain unresolved shall be escalated to a manager, who shall advise MARTA's Contract Administrator. A summary report of escalated complaints and the status of their resolution shall be provided to MARTA on a weekly basis.

4.3.8 CUSTOMER SATISFACTION SURVEY

[R01] The Contractor shall assist MARTA with conducting a Customer Satisfaction Survey (**CDRL 4.3.01**). The purpose of this survey shall be to determine the level of customer satisfaction on the performance of parking operations. The survey shall occur on intervals as determined by MARTA but generally shall be conducted on an annual basis

4.4 EQUIPMENT MAINTENANCE REQUIREMENTS

[R01] The Contractor shall submit as part of the response to this RFP a comprehensive understanding of how the Contractor shall perform all levels of maintenance:

[R01.1] Preventive

[R01.2] Field Repair

[R01.3] Shop Level

[R01.4] Overhaul of APARC equipment

[R02] MARTA anticipates the Contractor shall perform all levels of maintenance: preventative, field repair, shop level, overhauls or replacement of APARC equipment as needed. The maintenance requirements shall also include all APARC software updates as they become available from the manufacturer. Each element of the APARC system shall exhibit not more than four (4) hours of downtime or degraded performance per year excluding scheduled maintenance (between 2:00 am to 4:00 am, seven days a week). Downtime or degraded performance refers to that time in which the device is not fully functional.

[R03] Proposals should include a detailed preventive maintenance program and guide for the APARC System and any sub-systems of the APARC equipment and software. The Contractor shall provide a detailed Preventive Maintenance Plan. **CDRL 4.4.03**

[R04] The Contractor shall require that the equipment manufacturer provide system software upgrades at no additional charge to MARTA for the duration of the contract.

[R05] The Contractor shall require that the equipment manufacturer provide maintenance warranty on APARC equipment for the duration of the contract at no additional charge to MARTA.

4.5 FACILITIES MAINTENANCE REQUIREMENTS

[R01] The Contractor shall submit as part of the response to this RFP a comprehensive understanding of how the parking facilities maintenance requirements shall be fulfilled. This response should be included in the Operations Manual / Plan and should include, but not limited to, all items described in this section and subsections. **CDRL 4.2.3.01**

[R02] The comprehensive understanding should include, but not limited to the following:

[R02.1] Maintenance Safety

[R02.2] Cleaning and Maintenance Schedule

[R02.3] Repair Recommendations

[R02.4] Janitorial Maintenance Plan

[R02.5] Safety / Inspection Log

[R02.6] Spills and Hazardous Waste Disposal

[R02.7] Accident Prevention Plan

[R02.8] APARC Equipment

[R03] The importance of a clean and well-maintained parking facility cannot be overstated. Cleaning relates to the appearance of the parking lot/facilities and the image it portrays to the public. A clean parking facility creates an inviting appearance to customers, helps prevent slips and falls, promotes the durability of the facility and reduces the cost of repair and future restoration. Items requiring constant attention may include facility interior, public common areas within the facility, elevator lobbies and painting and maintenance of APARC equipment. The following data should be included in the Contractor's plan to maintain MARTA's Parking Facilities:

4.5.1 MAINTENANCE SAFETY

[R01] All employees should be responsible for providing minor maintenance and cleaning of their facility, particularly during slow periods as described within the Operations Manual / Plan. (**CDRL 4.2.3.01**) Duties vary from facility to facility due to staffing and examples can include such things as changing light bulbs, sweeping, degreasing, and emptying trash receptacles at Central Cashiering Facilities and Booths/islands in the Contractor's plan.

[R02] Before performing any maintenance duties, the appropriate personal protective safety equipment must be worn. For example:

[R02.1] If changing light bulbs, the employee should wear rubber gloves and goggles and use a wooden or fiberglass ladder only that is approved for electrical work.

[R02.2] If sweeping the garage, goggles and a dust masks must be worn.

[R02.3] When emptying trash cans or picking up trash, employees must wear heavy-duty gloves to protect hands from cuts.

[R03] Oil, water, and grease should be removed as soon as possible from floor surfaces. The majority of slip, trip, and fall accidents can be attributed to wet surfaces. The Contractor staff shall be required to use appropriate wet floor signs, cleaning solvents, mops, and buckets.

[R04] The staff shall be required to follow hazardous waste disposal guidelines when disposing of oil solvents or other known hazardous wastes.

[R05] Whenever painting, mopping or performing area repairs, employees must section off the work area with the appropriate signage, caution tape, or cones.

[R06] Extra caution shall be used when cleaning areas adjacent to elevators, escalators, stairwells, and doorways and any area where pedestrians have little option in deciding where to walk in these areas.

[R07] Employees should be provided with these safety maintenance instructions to ensure a high level of safety while on the job:

[R07.1] Slipping accidents are avoidable, therefore supervisory personnel should be contacted when oil, water, debris or substances that would present a possible slip or trip hazard is observed. Place appropriate signage and cone off the area to prevent pedestrian traffic from entering the area. Clean the affected area immediately before removing the caution barriers.

[R07.2] While mixing solvents, gloves, and goggles must be worn at all times. The Contractor must ensure that all employees must read and understand the employee's use of all material safety data that applies to all solvents that are used.

[R07.3] Appropriate back support belts must be worn at all times during maintenance work.

[R07.4] Closed toe, rubber sole shoes must be worn at all times during maintenance work.

[R07.5] Safety vests must be worn at all times by the Contractor’s maintenance crew while on duty and performing maintenance work within the parking facility.

4.5.2 CLEANING AND MAINTENANCE SCHEDULE

[R01] As part of the Contractor’s maintenance program, the Contractor shall implement a daily, weekly, monthly maintenance schedule and include it within the Operations Manual / Plan (CDRL 4.2.3.01). The schedule should be put in place to address all aspects of housekeeping and maintenance of all facilities with the goal of putting the MARTA customer first. The schedule should be flexible enough to ensure that all facilities and lots are provided with an optimal cleaning program to keep the facilities and lots clean, safe, and well maintained.

4.5.2.1 Pressure Washing

[R01] MARTA will, at MARTA’s cost, provide pressure washing services for the entire facility at least once per year, and an additional pressure washing of heavy traffic areas once per year (CDRL 4.2.3.01).

4.5.2.2 Sweeping

[R01] MARTA will have a third party contractor that will be responsible for providing parking lot and parking deck sweeping services for the Authority’s paid parking lots and parking decks located throughout the MARTA system. MARTA’s parking lot sweeping services will be scheduled as follows:

Table 4-3: MARTA Sweeping Schedule

Long-term Parking Facilities	Monthly Frequency
Brookhaven	2
College Park	4
Doraville	4
Dunwoody Deck I and II	4
Kensington	4
Lenox	2
Lindbergh (Sydney Marcus)	2

Long-term Parking Facilities	Monthly Frequency
Medical Center	2
North Springs	4
Sandy Springs	4

[R02] The Contractor shall be responsible for picking up trash throughout the week, particularly after special events, between third party contractor sweeping services. The Contractor should pay particular attention to high profile, high traffic pedestrian areas. MARTA’s third party sweeping services shall be conducted and based on a pre-designated schedule.

4.5.2.3 Equipment Cleaning

[R01] The Contractor must clean the nearby APARC equipment at least once weekly as prescribed within the Operations Manual / Plan (CDRL 4.2.3.01). In addition, more troublesome cleaning should be done by the Contractor’s on-site maintenance personnel assigned to other duties, such as cleaning any signage, or for sweeping immediate areas in the parking facilities.

4.5.2.4 Painting

[R01] MARTA will ensure proper upkeep and the professional look of islands, curbs, posts, and booths if they are needed as prescribed within the Operations Manual / Plan (CDRL 4.2.3.01). The Contractor’s on-site maintenance personnel should be equipped with the necessary tools to do spot painting of curbs and columns that are impacted by vehicles throughout the day.

4.5.2.5 Signage

[R01] At least monthly, the overhead and posted signage should be cleaned on all levels by the Contractor’s maintenance staff, particularly during non-peak hours as defined within the Operations Manual / Plan (CDRL 4.2.3.01). If any signs are missing or require repairs, the Contractor’s maintenance staff shall report the necessary repairs to the parking Contractor’s management. The Contractor’s management shall report to MARTA. MARTA will have signage replaced and or repaired.

4.5.2.6 Lighting

[R01] On a bi-monthly basis, the Contractor's maintenance staff shall take the responsibility for reporting all burnt out lights to the Parking Services Contract Administrator, who in turn shall advise the appropriate MARTA department as prescribed within the Operations Manual / Plan (CDRL 4.2.3.01). The Contractor's maintenance personnel shall replace easily accessible lights when appropriate. It is the responsibility of the Contractor to ensure that the duties assigned to the parking staff and or maintenance staff are adhered to and completed according to the established schedule. In addition to the weekly inspection, MARTA shall require an in-depth facility inspection performed by the Contractor on a quarterly basis. All inspections should be documented for review by MARTA within five (5) business days after the end of the quarter.

4.5.3 REPAIR RECOMMENDATIONS

[R01] It is the responsibility of the Contractor to inspect each location and report any concerns and areas that may need repair, along with recommendations for possible solutions as prescribed in the Operations Manual/Plan (CDRL 4.2.3.01). The Contractor should use a Safety Maintenance Schedule inspection form for this purpose. The inspection is to be completed bi-monthly and after every facility accident. The Contractor shall submit copies of each inspection report with suggestions to MARTA's Parking oversight personnel. For repairs and recommendations that are the responsibility of the Contractor to perform, a proposal for the necessary work shall accompany the recommendation.

4.5.3.1 Recommended Housekeeping and Cleaning Regiment

[R01] The Contractor of the facility or parking lot shall have a facility housekeeping plan to maintain a clean, safe parking facility (CDRL 4.2.3.01).

4.5.4 JANITORIAL MAINTENANCE PLAN

[R01] The Contractor shall maintain the facilities based on the standards outlined in the Contractor's Maintenance plan within the Operations Manual / Plan (CDRL 4.2.3.01). The garages and lots should be patrolled daily for debris. All debris should be picked up and disposed of immediately. Stairwells and elevators should be monitored for waste. If necessary, the area should be properly sanitized.

4.5.5 MAINTENANCE DUTIES/LOG

[R01] A maintenance duties/log shall be a daily list of janitorial and maintenance tasks to be performed, outlined, and reported by event in the Operations Manual / Plan (CDRL 4.2.3.01). It should also cover winter duties such as de-icing applications and shoveling when required. This maintenance log should be reviewed by the Contractor's management staff on a daily basis for completeness, accuracy, and quality. At MARTA's request, copies should be sent to MARTA's Parking Services Contract Administrator for review. Detailed explanations and instructions for these duties should be covered in the Contractors daily cleaning procedures.

4.5.6 SAFETY / INSPECTION LOG

[R01] A safety/inspection log shall be used daily as a troubleshooting list of all parking areas, equipment and event related to vehicle inventory as defined in the Operations Manual / Plan (CDRL 4.5.3.01). This log shall allow Management to correct problems and react to traffic during the transition periods between daily business and event requirements.

[R02] The Contractor shall complete the safety maintenance schedule form on a weekly basis. Regular compliance with the items covered on the schedule ensures janitorial and housekeeping efficiency and provides MARTA with a forecast of potential maintenance problems with equipment and fixtures.

4.5.7 SPILLS AND HAZARDOUS WASTE DISPOSAL

[R01] The Contractor shall clean up all spills and hazardous materials in accordance to EPA procedure. A spill should result in an immediate call to the proper authorities for removal.

4.5.8 SNOW AND ICE PLAN

[R01] The Contractor shall have experience in operating in cold weather and freezing conditions. In the rare event of freezing rain or snow, the Contractor should use a de-icing substance in the facilities approved by MARTA's Safety Department.

4.5.9 CONTRACTOR STANDARD MAINTENANCE PROCEDURES

[R01] The Contractor shall submit as part of the response to this RFP a comprehensive understanding of how the Contractor shall perform all levels of maintenance:

[R01.1] Trash Collection

[R01.2] Gate Equipment and Signs

[R01.3] Booth, Walkways, and Elevators

[R01.4] Garage Floor, Stairwells, and Guardrails

[R01.5] Snow and Ice Removal (when necessary)

[R01.6] Equipment-powered sweeping equipment

4.5.10 ACCIDENT PREVENTION RESPONSE PLAN

[R01] The Contractor shall have in place an Accident Prevention Plan, which covers all types of emergencies from fire and explosions to tornado and hazardous waste spills. All management personnel should be trained and instructed on emergency procedures should an emergency arise as well as having individual responsibility outlined in the Contractor's operating procedures manual.

4.5.11 SAFETY MEETINGS

[R01] Each month management shall meet with employees to discuss various topics on facility and individual safety. These meetings should be documented and on file should MARTA request use of them. The Contractor should review weekly incident and accident reports and recommend corrective action to MARTA.

4.5.12 MONTHLY SAFETY INSPECTIONS

[R01] MARTA shall require a monthly Safety Inspection Report to be filed out by the Contractor for each facility. This report enables MARTA and the Contractor to identify areas of potential danger before an incident occurs. **CDRL 4.5.12.01**

4.5.13 APARC EQUIPMENT

[R01] All Automated Parking Control and Revenue Control equipment shall be checked at least once daily to ensure proper function and to minimize down time during peak activity periods (6:30 am to 9:00 am and 4:00 pm to 6:30 pm). This process should be clearly defined within the Operations Manual / Plan (**CDRL 4.2.3.01**). All the Contractor's management and maintenance staff should be trained in basic repair and maintenance and cleaning of APARC equipment. It shall be essential that all facilities run efficiently so minor issues shall not cause parking gates and other equipment to be out of service for prolonged periods of time. Maintenance Staff and Supervisor qualifications shall be submitted to MARTA for approval.

4.6 MARTA EMPLOYEE ACCESS

[R01] MARTA Employees park free at all MARTA parking facilities to include paid parking facilities. MARTA employees include current MARTA Board of Directors, Full-time and Part-time permanent employees, MARTA retired employees and MARTA contractors. The Contractor shall be responsible for interfacing into MARTA's Employee Badging System and providing equipment to read the employee badges at the paid parking facilities.

4.7 MARTA PARKING CUSTOMER VALIDATION AND VERIFICATION

[R01] MARTA provides free parking to patrons who ride the MARTA system. The Contractor shall be responsible for implementing a validation system that ensures that all patrons that park and ride the system within 24 hours are not charged a fee to park at long term parking facilities as described in this RFP. Conversely, those parkers who have not ridden MARTA and not validated their parking ticket should be charged the long-term rate at that location which would include charging those parkers that park less than 24 hours. MARTA has discovered that violations are occurring (people parking but not riding MARTA) at locations such as Lindbergh, Medical Center, Dunwoody and the Sandy Springs parking facilities

4.8 DISPOSITION OF OLD PARKING EQUIPMENT AND PARKING BOOTHS

[R01] The Contractor shall be responsible for promptly removing all existing equipment from MARTA property and shall be responsible for its proper disposal. The Contractor shall ensure no part or component of the system that may compromise MARTA installed equipment, system, or operational security is made or becomes available to unauthorized personnel or organizations.

[R02] The Contractor shall prepare a disposal plan for all removed equipment. The disposal plan shall be submitted to MARTA for review and record purposes.

[R03] MARTA and the Contractor shall agree, in writing, on the total quantities removed.

4.9 INSTALLATION PLAN

[R01] The Contractor shall submit a final Installation Plan for the APARC system. The Installation period shall be defined as the period during which Contractor replaces the current parking fee collection system with an Automated Parking Access and Revenue Control (APARC) system. **CDRL 4.9.01**

[R02] The Installation Plan shall be fully integrated with the overall Program Management Plan (CDRL 01). The Installation Plan shall be as transparent to MARTA's customers as possible.

[R03] The Installation Plan shall describe all activities required of the Contractor, MARTA, and other involved parties during the installation period. The installation plan shall clearly identify the nature and timing of any interaction with MARTA.

[R04] The Installation Plan shall include:

[R04.1] Detailed milestones and schedule for the Installation Period

[R04.2] Acquisition and installation of equipment

[R04.3] Transfer and disposal of equipment (MARTA approval required prior to disposal of any equipment)

[R04.4] Detailed cutover plan by each Parking facility

4.10 DESIGN AND IMPLEMENTATION

[R01] Design and Implementation reviews shall be conducted to evaluate the progress of technical design in accordance with the required functions and capabilities of the Contract. In addition to formal design reviews, informal meetings to address key issues shall be held as needed. Prior to each review, a design review package shall be submitted that includes Contract Data Requirements Lists (CDRLs) and other items required for the review. CDRLs shall be updated as required throughout the contract life to reflect design and process changes. Design review packages shall be provided at least ten (10) calendar days before a design review meeting. **CDRL 4.10.01**

[R02] MARTA and the Contractor shall conduct the following reviews:

[R02.1] In-Progress Design Review – Submittal

[R02.2] Final Review – Submittal

[R02.3] Record / As-Built Set – Submittal

[R02.4] Refer to Section 6.0 MARTA Guide Specification.

[R03] Design reviews shall consist of the following key activities:

[R03.1] All design document submittals shall adhere to the MARTA Criteria for Drawings and in accordance with the MARTA Design Criteria when applicable.

[R03.2] Design review package shall be reviewed by MARTA.

[R03.3] An Issues List shall be created as a result of the review and shall be provided to the Contractor at least one (1) calendar week prior to the scheduled design review meeting.

[R03.4] The design review meeting, or series of meetings, shall be held between Contractor and MARTA when necessary.

[R04] MARTA shall determine the appropriate action to close the issues and revisions, which may require resubmission of design review items.

[R05] Once there are no open issues with Contractor's design review submittal, the submittal shall be reviewed for approval.

4.10.1 IN-PROGRESS DESIGN REVIEW (IDR): (60 PERCENT DESIGN COMPLETION)

[R01] The objectives of the IDR shall be to familiarize MARTA with Contractor's approach to meet the Contract APARC requirements, resolve external interfaces, and provide the basis for proceeding to Final Design Review (FDR). The IDR shall cover the following:

[R01.1] Schedule compliance review and discussion of variances or delays

[R01.2] Confirm Contractor's management team and the Scope of Work

[R01.3] Provide all IDR Items in the CDRL table

[R01.4] Confirm that Contractor is familiar with the intended operations environment

[R01.5] Identify information needs and decisions required by MARTA

[R01.6] Provide description of problem tracking, resolution and reporting process

[R01.7] 60 percent design package, consisting AutoCAD 2014 drawings as per the MARTA Criteria for Drawings, should be submitted at this stage.

[R01.8] Three (3) electronic copies and ten (10) paper copies of the submittals shall be provided thirty (30) days prior to the IDR meeting.

4.10.2 FINAL DESIGN REVIEW (FDR): (100 PERCENT DESIGN COMPLETION)

[R01] The objectives of the FDR shall be to familiarize MARTA with Contractor's detailed design for each Installation. The FDR shall also policies, procedures, and staffing to meet the Contract APARC requirements. The FDR shall cover the following:

[R01.1] Schedule compliance review and discussion of variances or delays

[R01.2] Confirm Contractor's management team and the Scope of Work

[R01.3] Provide all FDR Items in the CDRL table

[R01.4] Confirm that Contractor is familiar with the intended operations environment

[R01.5] Identify information needs and decisions required by MARTA

[R01.6] Provide description of problem tracking, resolution, and reporting process.

[R01.7] 100 percent design package, consisting of AutoCAD 2014 drawings as per the MARTA Criteria for Drawings, should be submitted at this stage, refer to Section 6.0, MARTA Design Specifications.

[R01.8] 100 percent Specifications should be submitted at this stage for review.

[R01.9] Three (3) electronic copies and ten (10) paper copies of the submittals shall be provided thirty (30) days prior to the FDR meeting.

4.10.3 ACCEPTANCE REVIEW (AR)

[R01] The AR shall represent Conformed Set of drawings and specifications for each site for the entire project, which shall include total implementation of the APARC System. Refer to Section 6.0 MARTA Design Specification.

4.11 TRAINING REQUIREMENTS

[R01] The Contractor shall provide a program to train MARTA personnel in all details of the APARC system including but not limited to the reports, equipment, hardware, support, and diagnostic equipment. The Contractor shall be responsible for training up to 12 MARTA employees in accordance with the requirements specified in this Article.

[R02] Training shall include course development, the provision of instructors, the supply of handouts and manuals, the preparation of classroom aids, and all other items as required to prepare MARTA personnel satisfactorily to operate the APARC System. Instructor qualifications shall be submitted for review and approval by MARTA.

[R03] Training materials shall reference the content of the Operations and Maintenance Manuals where appropriate. MARTA reserves the right to videotape training sessions conducted by the Contractor for review and future use.

4.11.1 TRAINING PLAN

[R01] Detailed training outlines, lesson plans, and tests shall be submitted for MARTA's approval at the Initial Design Review of the APARC system. Instruction shall be designed to include courses described below and shall cover equipment familiarization, systems operations, and field and shop maintenance. At a minimum, the Contractor must provide a training program that is comprehensive enough to bring twelve (12) employees designated by MARTA to the level of proficiency required for operations, service, and maintenance of the APARC equipment. The Training Program Plan shall be submitted to MARTA for review and approval at the Initial Design Review. **CDRL 4.11.1.01**

[R01.1] The plan shall, at a minimum, provide the following for each course:

[R01.1.1] Brief course description

[R01.1.2] Expected performance objectives and how the expected objectives shall be measured

[R01.1.3] Outline of the course content (one for each course)

[R01.1.4] Type or method(s) of presentation that shall be used

[R01.1.5] Resources required (equipment, classroom/shop space, supplies)

[R01.1.6] An estimated time schedule to train (based on the required number of hours and/or sessions of instruction) employees

4.11.2 TRAINING APARC EQUIPMENT

[R01] The Contractor shall provide functional equipment to facilitate and conduct training at the designated training locations of the MARTA facility.

[R02] APARC training equipment shall be fully functional and reflect the parking fee structure and operating characteristics of MARTA. Contractor shall be responsible for ensuring that any hardware or software changes developed during the course of testing and acceptance are installed on training equipment on a timely basis, through final acceptance of the project.

4.11.3 TRAINING MATERIAL

[R01] The Contractor shall submit to MARTA, instruction guides for each training course. The guides shall at minimum include the following:

[R01.1] Course agenda and objectives

[R01.2] Resources and facilities required for the course

[R01.3] Detailed lesson plans or outlined presentations and discussion guides

[R01.4] Instructions for using any audiovisual support and equipment

[R01.5] Handouts

[R01.6] Computer-based presentations

[R01.7] Electronic copies of training materials shall be submitted at the Initial Design Review. Final training material shall be submitted ten (10) calendar days before classes are scheduled to begin.

4.11.3.1 Training Material – Electronic Format

[R01] All training materials provided as final hard copy shall also be submitted in an electronic form as specified by MARTA. A directory of all files on the disk shall be listed in hard copy showing filenames, date, file size, and appropriate annotation to cross-reference the chapter and section.

4.11.3.2 Updated Training Material – Electronic Format

[R01] The Contractor shall provide updated or new training aids (e.g., video tapes, manuals, etc.) for equipment and software provided to MARTA within thirty (30) calendar days after new software or equipment is installed. MARTA shall receive copies of the updated material for its sole use in MARTA training programs, at no cost to MARTA.

4.11.4 TRAINING SCHEDULE

[R01] The detailed schedule of training tasks shall be based upon the equipment installation schedule, which shall be established as a dependency in the Contractor project plan.

4.11.5 APARC SYSTEM TRAINING PROGRAM

[R01] The APARC System Training Program shall be intended to provide MARTA management and supervisory personnel with an overview of the APARC System, including a functional understanding of various components of the equipment and software. The training shall describe APARC System capabilities and functionalities. **CDRL 4.11.5.01**

[R02] The training shall cover the following at a minimum:

[R02.1] APARC System Functionality

[R02.2] APARC Fee Collection

[R02.3] APARC Equipment Maintenance

[R02.4] Troubleshooting procedures,

[R02.5] Field-level repair of system and related equipment,

[R02.6] Preventive maintenance on all subassemblies.

4.11.6 FIELD TRAINING

[R01] The Contractor shall conduct field training at MARTA parking facilities for up to (7) seven consecutive days following fully implementation of the APARC System. Field training shall consist of observation and question and answer dialogue during operations, parking revenue collection/handling, maintenance activities, etc. as directed by MARTA and in coordination with MARTA Operations and Buildings and Support.

END OF SECTION 4

5.0 OPTIONS AND SYSTEM ENHANCEMENTS

5.1 LICENSE PLATE RECOGNITION SYSTEM - OPTIONAL

[R01] The Contractor shall integrate a license plate recognition (LPR) system. The LPR system is expected to enhance the accuracy of the APARC system and overall safety and security capabilities. The Contractor shall provide an LPR that shall photograph all vehicle license plates upon ingress/egress of the parking facility. The system shall include all required hardware and software to provide the following features:

[R01.1] The automated collection of vehicle license plate images and data upon entry and exit.

[R01.2] License plate tracking for use in resolving disputes precipitated by lost tickets or fraudulent activities.

[R01.3] Generation and storage of high-resolution vehicle images.

[R01.4] If possible, images of the driver, license plate, and vehicle indexed with a specific vehicular entry or exit.

[R01.5] The time, date, location and license plate associated with each of the other forms of collected information, creating a basis for fee calculation and support of interlocking evidence of events.

[R02] The Contractor shall provide a technical description, support requirements and pricing for LPR system. MARTA will determine if this option will be executed. In addition, it may be the intent of the MARTA Police Department to use the LPR system to interface into a national law enforcement database.

5.2 FUTURE POTENTIAL REVENUE STREAM ENHANCEMENTS

5.2.1 FUTURE REVENUE STREAM – ADDITIONAL RAIL STATION PARKING

[R01] This Article of the RFP highlights future potential revenue enhancements that may benefit MARTA and the Contractor. This Article is a future consideration and does not impact the award of this Contract.

[R02] MARTA desires to maximize use of current parking spaces at rail stations where long-term parking either does not exist or can be enhanced. MARTA recognizes the potential revenue stream at a number of rail stations and request Contractor input. Please provide a

description of how additional revenue may be generated from these additional parking facilities. Particular emphasis should be placed on the rail stations that are highlighted below.

[R03] MARTA operates thirty-eight (38) rail stations. Of these, twenty-eight (28) stations have parking for daily riders (i.e., up to 24 hours). Of these 28 stations, ten (10) have long-term/dedicated parking which have been included within the scope of this RFP. (Please refer to Section 1 Scope of Work, Table 1-3: MARTA Parking Fee Structure).

[R03.1] The key factors that the Contractor must consider are:

- [R03.1.1] Project Financing
- [R03.1.2] Architecture and APARC system design
- [R03.1.3] Revenue Generation
- [R03.1.4] Contractual Terms and Conditions

Table 5-1: Future Revenue Stream

Station Name	Parking Type	Location	Customer Automobile Parking
College Park (S6)	Daily	Lot	1,771
East Point (S5)	Daily	Lot	886
Lakewood (S4)	Daily	Lot	1,004
Oakland City (S3)	Daily	Lot	328
West End (S2)	Daily	Lot	449
Arts Center (N5)	Daily	Lot	24
Lenox (NE7)	Daily	Lot	185
Brookhaven Oglethorpe University (NE8)	Daily	Lot	1,223
Chamblee (NE9)	Daily	Lot	1,121
Doraville (NE10)	Daily	Lot	148
Hamilton E. Holmes (W5)	Daily	Lot	1,380
West Lake (W4)	Daily	Lot	376
Bankhead	Daily	Lot	8
Ashby (W3)	Daily	Lot	154
Vine City (W2)	Daily	Lot	25

Station Name	Parking Type	Location	Customer Automobile Parking
King Memorial (E2)	Daily	Lot	19
Inman Park/Reynoldstown (E3)	Daily	Lot	389
Edgewood/Candler Park (E4)	Daily	Lot	508
East Lake (E5)	Daily	Lot	606
Avondale (E7)	Daily	Lot	704
Kensington (E8)	Daily	Lot	1,684
Indian Creek (E9)	Daily	Lot	2,258

5.2.2 FUTURE REVENUE STREAM – DAILY PARKING FEES

[R01] Only MARTA’s Board of Directors has the right to change the parking fare policy and fee structure at MARTA rail stations and parking facilities. As a result, the Contractor must be able to accommodate these changes, which may possibly result in a revenue enhancement for both MARTA and the Contractor. These changes shall require the Contractor to install software and hardware in order to implement the new fare policy and fee structure.

5.3 MARTA’S TRANSIT ORIENTED DEVELOPMENT (TOD) AND OTHER SITE INFORMATION

[R01] A key component of MARTA’s transformation initiative focuses on identifying new revenue-generating opportunities through the agency’s Transit-Oriented Development program. A Transit Oriented Development, (“TOD”) is a development that is vibrant, pedestrian-friendly, and genuinely integrated with transit. MARTA’s interest in TOD reflects three over-arching strategic goals:

[R01.1] To generate a return on MARTA’s transit investment through enhanced passenger revenues, greater federal support, and, where applicable, development on MARTA property.

[R01.2] To generate greater transit ridership, a natural consequence of clustering mixed-use development around stations and along corridors.

[R01.3] To promote a sustainable, affordable, and growing future for the people of Metro Atlanta.

5.3.1 JOINT DEVELOPMENT

[R01] Within the Transit-Oriented Development program, MARTA actively seeks partnerships with the private sector to redevelop existing real estate assets in a process that is commonly

referred to as Joint Development. The joint development of MARTA's property rights include subsurface, surface and/or air rights (individually or any combination thereof) owned by MARTA when the development of such property rights will not interfere with the efficient operation and maintenance of the transit system. A significant number of these Joint development opportunities will revolve around the redevelopment of underutilized surface parking lots surrounding existing transit stations.

5.3.2 ANALYSIS OF REAL PROPERTY ASSETS AND MARKET

[R01] MARTA's TOD and Real Estate staff analyzes the Authority's real property assets and maintains a list of properties with potential for joint development taking into account MARTA's current and future transit needs. Once MARTA's transit needs are identified, staff will select and prioritize certain properties and station areas to be offered for development. This is accomplished with a review and analysis of developer interest and overall market demand, a review of any available master plans, Livable Centers Initiative (LCI) studies, and weighed against the needs and desires of the local community.

5.3.3 REQUEST FOR PROPOSALS (RFP)

[R01] Prospective property offerings are discussed by MARTA TOD and real estate staff. After selecting a specific parcel or station area to offer for development, MARTA staff prepares a project plan and seeks Board approval for the proposed offering. During this process, MARTA will obtain an appraisal of the property and seek Federal Transit Administration (sub) concurrence on the proposed use.

5.3.4 TOD INITIATIVES

[R01] Recently, considerable interest has been shown by private sector developers regarding joint development opportunities at several of MARTA's station area properties. In response to this interest, and as a critical component of MARTA's on-going transformation initiative, the agency recently announced a new initiative to launch five (5) new transit-oriented developments within a two-year period. As of December 2014, four of these new projects have been announced which include the redevelopment of underutilized parking lots at the Avondale, Brookhaven/Oglethorpe, Edgewood/Candler Park, and King Memorial transit stations. The groundbreaking is expected to commence in 2015 for the Avondale, Edgewood/Candler Park, and King Memorial transit stations, with Brookhaven/Oglethorpe to follow in 2016.

[R02] Additional near term redevelopment opportunities include property located at the Arts Center, Chamblee, Lindbergh Center, Kensington, and Oakland City transit stations.

[R03] MARTA's Lindbergh Center Station is home to the Authority's largest TOD which sits on 47 acres. There are three (3) existing structured parking facilities located within the development that permit MARTA transit patron parking (City Center, Garson & Sydney Marcus). A fourth parking facility (Deck X) is exclusively used by MARTA and AT&T employees. MARTA currently operates and manages a portion of the Sydney Marcus parking facility which is shared with AT&T. The City Center and Garson facilities are currently managed by LAZ Parking through the Lindbergh Owners Association (LOA).

[R04] Due to previously negotiated agreements, MARTA transit patrons are currently permitted to park in all three (3) parking facilities at Lindbergh on a daily basis. The Sydney Marcus facility is typically used by transit patrons for both daily and long-term parking.

5.3.5 PARKING REPLACEMENT

[R01] To free up land available for redevelopment at various rail stations, MARTA will convert existing surface parking lots into structured parking facilities that will be wrapped by residential, commercial and/or a mix of other potential uses. MARTA's future daily and long-term transit parking needs will be accommodated within these structured facilities, most likely in a shared-parking environment. Parking spaces within the surface parking lots will not be replaced on a one-for-one basis. The replacement of these spaces will be based upon average parking utilization statistics collected by MARTA staff, and will be on a case-by-case, station-by-station basis.

[R02] To facilitate the construction of new TODs at various stations, MARTA may require the relocation and/or repositioning of existing daily and long-term surface parking spaces prior to the construction of a structured replacement parking facility within the new development.

5.3.6 ACCOUNTING ITEMS

A. Remittances/Late Charges:

1. **Remittances.** Remittances due the Authority for monthly reconciliation shall be deposited directly in the Authority's account. Otherwise, all remittances due the Authority shall reference Contract Number P30186 and be forwarded to:

MARTA Department of Finance
2424 Piedmont Road
Atlanta, GA 30324

2. **Late Charges.** Without waiving any other right of action available to the Authority in the event of default in payment of charges and fees hereunder, if Contractor fails to make a payment to the Authority when due and said failure continues for a consecutive period of 30 days, late charges will be automatically assessed. Late charges may consist of interest and penalties. Thereafter, late charges will be assessed for each additional 30-day period or portion thereof that the payment is late.

The interest rate for the late payments shall be at the rate per annum which is 3% higher than the prime rate as published in The Wall Street Journal on the date such payment was due.

To the extent Contractor regularly fails to make timely payment of charges as agreed upon revenue in sharing percentage and fees required under the Contract, the Authority may, in addition to interest, assess reasonable and proportionate penalties in MARTA's sole discretion

B. Collection and Deposit of Gross Receipts:

1. **Gross Receipts.** Contractor shall completely and accurately account for all Gross Receipts generated from the Services. Contractor shall collect, count, record, and hold all Gross Receipts (e.g., parking revenue).
2. **Collection and Deposit of Gross Receipts.** Contractor shall establish a commercial account at a banking institution subject to the approval of MARTA's CFO. Said commercial account shall be solely used for the parking revenues generated under this Contract.
3. **Credit Card Sales.** Contractor shall be responsible for accurately recording all parking patrons credit card transactions; researching credit card payment disputes; reviewing credit card summary statement reports provided by the credit card processors; and reconciling Contractor's credit card sales records with the credit card processors' deposits of credit card receipts and the chargebacks, discount fees, and transaction fees paid to the credit card processors.
4. **New or Revised Collection and Deposit Procedures.** Contractor shall immediately implement any new collection and deposit procedures or revise existing procedures as the Authority may, at its sole discretion, require from time to time.

5. **Lost, stolen, or unaccounted for Gross Receipts.** Should any Gross Receipts in the possession of Contractor be lost, stolen or unaccounted for, including but not limited to cashier shortages, shall not be deducted or excluded from Gross Receipts. Contractor shall verbally notify MARTA and the MARTA's Police Department immediately of any lost, stolen, or unaccounted for Gross Receipts, followed by a written notice within 24 hours.
6. **Inclusion in the Manual.** All Gross Receipts collection procedures shall be included in Contractor's Management Plan.
7. **Checks and Credit Cards.** Contractor shall accommodate patrons wishing to pay parking fees by nationally recognized debit and/or credit cards as directed by MARTA.

C. Accounting and Operating Reports:

1. **Annual Certification of Statements of Operating Results.** Within ninety (90) days following the end of each Contract Year, and within ninety (90) days following termination or expiration of the Contract, Contractor shall prepare an Annual Statement of Operating Results. Contractor shall allow MARTA's designated, independent, Certified Public Accountant (CPA) to perform an annual financial audit of all operations related to the Contract. The financial audit will be performed in accordance with Generally Accepted Auditing Standards (GAAS), and will state the opinion of those statements to fairly reflect the financial position and operation in accordance with Generally Accepted Accounting Principles (GAAP). The result of the annual financial audit is the CPA's Certification Audit Report. As part of the Certification Audit Report, the CPA shall give its opinion as to the adequacy of all of the revenue control and cash-handling equipment and procedures. The CPA's Certification Audit Report shall include sufficiently detailed schedules and explanations of discrepancies and shall also certify the following:
 - a. The amount of parking fees and any other Gross Receipts collected by Contractor. These shall be shown as follows:
 1. Gross Receipts collected in total and per parking garage.
 2. Gross Receipts from credit cards, including a breakdown of sales by each type of credit card.
 3. Contractor's reconciliation of Gross Receipts and deposit tickets and explanations of variances.
 4. Losses from chargebacks, and credit card accounts not paid.
 5. Total fees paid to MARTA.
2. **Selection of Auditor.** The Authority's Audit Department will select the independent CPA, and develop the engagement letter detailing the CPA's understanding of the assignment to be undertaken.

3. **Under Collection of Gross Receipts.** If the Certification Audit Report indicates that any of the Gross Receipts required to be collected by Contractor have not been collected, Contractor shall immediately pay to MARTA a sum equal to the difference as the then applicable and highest fee rate between the amount of such Gross Receipts that should have been collected and/or deposited with interest thereon at the rate of 3% higher than the “prime rate” as published in The Wall Street Journal on the date such payment was due.
4. **Operational and Procedural Audits.** MARTA’s Office of Audit will determine the appropriate areas to audit based upon an annual risk assessment. MARTA has the right to request independent audits at its discretion.

At MARTA’s discretion (but only once a year), Contractor shall employ, at its sole cost, an external auditor to conduct a broad scope of auditing activities. The audit scope shall include tests of the PRCS reliability, cashier reconciliations, exception tickets, lost tickets, compliance and operational controls. The audit results shall be reported to Contractor’s management staff and shall be made available to MARTA within five business days after receipt by Contractor. Upon the completion of each such audit, the auditor shall file with MARTA a written statement in a format approved by MARTA stating when the audit was performed, the time period covered by the audit, the accuracy of Contractor’s accounting of receipts and deposits, the accuracy of exception transactions verification by the audit performed pursuant to the annual certification of revenues and expenses, the accuracy of ticket accountability, the accuracy of its reports, including without limitation, reports with respect to staffing and adherence by Contractor to all the terms of the Contract. Contractor shall submit the annual work plan for the external auditor to MARTA. The external auditor shall, as part of the scope of its audit efforts, review and comment on samples and summary information of Contractor’s cashier auditing activity. Contractor shall respond in writing to both the Authority and to the external auditor on any “findings” the auditor may have reported. This response shall be submitted within five days of receiving the auditor’s report.

Contractor may be directed, at any time, to perform an operational internal audit of procedures for handling its operations pursuant to this Contract. Such audits shall be completed within two months after receipt of MARTA’s written request. Upon completion of each such audit, the auditor shall file with MARTA a written statement, in a format approved by MARTA, summarizing the audit and the results thereof.

Contractor shall utilize its own supervisory and auditing staff to audit the credit card transactions to verify that they are being processed, deposited, documented, and reconciled in accordance with company policies and procedures and to verify, on a sample basis, cashier credit card detail.

In the event Contractor has understated the Gross Receipts or overstated expenses from all operations by one-half of one percent (0.5%) or more, the entire audit expense shall be borne by Contractor.

D. Operating Reports:

Contractor shall submit the reports listed below, in a format approved by the Authority:

1. **Operating Monthly Activity Reports.** Contractor shall submit a series of electronic or hard paper copy of monthly reports to MARTA by the 10th day of following month. The monthly reports include but are not limited to:
 - Gross Receipts collected in total and per parking garage;
 - Gross Receipts from credit cards including a breakdown of sales by each type of credit card;
 - Contractor's reconciliation of Gross Receipts and deposit tickets and explanations of variances;
 - Spreadsheet showing each day's revenue and transactions;
 - Customer Comments;
 - **Monthly Maintenance Inspection Report.** Contractor shall furnish to MARTA a bi-weekly Maintenance Inspection Report, identifying areas where maintenance needs to be performed and separated into maintenance responsibilities of Contractor and MARTA.
 - **Exception Transactions.** The number of exception transactions, adjustments, and refunds, including non-revenue transactions, and exits within the complimentary period recorded in the parking operations for the previous contract month. Additionally, Contractor shall keep and, upon request from MARTA, make available to its records of exception transactions by parking garage, cashier, and time of day. The report shall show by credit card type the amount of canceled credit card sales ("chargebacks").
 - **Missing Tickets.** Contractor shall be fully accountable for all parking tickets issued, including both used and unused tickets. To ensure this accountability, Contractor shall keep up-to-date usage and stock records. Semi-annually, Contractor shall provide a summary inventory report, accounting for the tickets in storage, in the system and in stock, and listing tickets determined to be missing during that period. "Missing tickets" include: (1) tickets that are discovered not to be physically available for inspection and audit even though the tickets were received from exiting

patrons; and (2) exception transactions that are discovered not to be physically available for inspections and audit after they were processed for exiting patrons claiming to have lost their tickets.

2. **Certified Monthly Statement.** Contractor shall furnish to MARTA, no later than the tenth (10th) day of following month or by the referenced noted date, a Certified Monthly Statement covering the previous month's revenue and expenditures for parking operations. Said statement shall be in the format specified by MARTA, shall include all information required by MARTA, and shall be certified as complete and correct by Contractor's principal financial officer. The Certified Monthly Statement shall, at a minimum, include the information listed below:

(a) Revenue Collections and Deposits.

(1) A complete, detailed reconciliation of daily revenue collections for each lot, structure or area, all deposits and the Gross Receipts reported by Contractor, in total, by parking area and payment method.

(2) A complete, detailed reconciliation of monthly Gross Receipts captured by the PRCS, Gross Receipts reported by Contractor, and deposits, in total, by lot and by payment method. The monthly PRCS Gross Receipts and preliminary Gross Receipts reported shall provide to MARTA by the next business day.

(3) A complete, detailed reconciliation of sales including, without limitation, all credit card sales.

(4) A complete, detailed credit card reconciliation spreadsheet showing each day's activity. This will include a reconciliation of daily credit card activity to month-end reports from the credit card processors.

(b) Parking Activity. A report by parking facility of vehicle entrances and exits, number of revenue and non-revenue transactions, average revenue per space and ticket values for each parking garage.

(c) Monthly Employee Hire and Separation Report. Summary of employment activity.

3. **Report Change.** As may be required from time to time during the Term, MARTA may direct, in writing, Contractor to add, change or delete certain reports. MARTA shall comply with the written requests within the time period as specified by MARTA.

4. If the PRCS in a particular parking area prevents or inhibits the accurate accumulation of the requested date for the Operating Reports listed above, Contractor shall take immediate action to remedy the PRCS deficiency and shall institute comprehensive,

manual revenue control procedures to accurately document public parking activity until the PRCS is restored or improved to meet MARTA's standards.

E. Liquidated Damages. The following provisions relate to the quality of the service the MARTA expects to be provided under the Contract. Contractor agrees that it is obligated to perform the following and that non-performance denigrates the quality of the services, and therefore, is in violation of the Contract. The occurrence of any of the following situations may result in the imposition of liquidated damages. Contractor agrees that the following liquidated damages are fair and reasonable and that they do not constitute a penalty. MARTA will notify Contractor within 30 days following the incident whether it intends to assess liquidated damages. Failure to impose liquidated damages for a particular violation shall not bar MARTA from imposing liquidated damages for subsequent violations of the same nature. Liquidated damages will be paid by Contractor in the month following the date of assessment. MARTA reserves the right to waive the assessment of liquidated damages if Contractor is able to provide supporting documentation to substantiate each occurrence, which must be reviewed and approved by MARTA. The liquidated damages remedy is in addition to all other rights and remedies of MARTA.

(1) Delay in Exiting. Contractor shall ensure exiting delays of no more than a sustained period of five minutes except for system failures that fall outside of Contractor's sphere of control. Should Contractor fail to meet this requirement and fail to provide supporting documentation to substantiate delay in exiting, Contractor may be assessed, at the option of MARTA, a liquidated damage fee equal to \$100 not more than three (3) occurrences a month.

(2) Transaction Processing Time. Contractor shall ensure that the average processing time at the cashier booth is does not exceed 45 seconds per vehicle for regular transactions and one (1) minute for exception transactions. A complete transaction is defined from the time the customer presents the parking ticket up until the time the gate opens. Should Contractor fail to meet this requirement, Contractor may be assessed, at the option of MARTA \$10 per occurrence, if there are more than three (3) unexplained occurrences during the month.

(3) Failure to Submit Reports in a Timely Manner. Contractor shall submit the required reports to MARTA. Should Contractor fail to provide to MARTA by the specified submittal date one or all of these subject reports and fail to provide supporting documentation to substantiate the delay or obtain MARTA's permission to delay or omit a particular report, liquidated damages may be assessed and Contractor's

Management Fee may, at the option of MARTA, be reduced by \$100 per day, per report, for each day the reports are not submitted.

F. Vehicles Complimentary Parking: Contractor shall permit MARTA service vehicles, owned and operated buses/vehicles, employee vehicles at certain long term facilities and certain other vehicles as approved by MARTA to park at no charge. Contractor shall charge all other patrons the parking rates as set from time to time by MARTA. MARTA shall provide Contractor written notice of any changes in such rates at least seven days before their proposed effective date. Contractor shall be responsible for changing all rate signs and notices of rates, and, if directed by MARTA, for making adjustments to the PRCS hardware or software necessary to properly implement the rate changes.

- (1) The rate structure for all parking fees to be charged in the designated parking facilities shall be established by MARTA and shall be subject to change by MARTA at its sole discretion.
- (2) Contractor shall charge parking patrons only those rates established by Contractor and shall permit only such complimentary use of parking space as MARTA may direct or approve.
- (3) If Contractor charges any patron a price more than the established schedule of rates, the amount by which the charge exceeds the established rate shall constitute an overcharge which shall be promptly refunded to the patron. If Contractor charges any patron a price which is less than the established schedule of rates or fails to collect any parking fee which it is required to collect for any reason at all, the amount by which the charge is less than the established rate schedule, or the amount of the fee which Contractor failed to collect, shall constitute an undercharge and the amount equivalent thereto shall be paid, with demand by Contractor to MARTA.

G. Books and Records of Contractor:

1. **Contractor to Maintain Certain Books and Records.** Contractor shall maintain such books and records as would normally be examined by an independent Certified Public Accountant (CPA) pursuant to Generally Accepted Accounting Principles (GAAP), in order that MARTA may perform an audit of, among other things, the amount of Gross Receipts collected by Contractor. Such books or records shall contain records of all Contractor's Gross Receipts in connection with its operations under this Contract, in a form consistent with good accounting practice, and shall contain itemized records of all

Gross Receipts and of all other receipts derived by Contractor from its records, work papers, procedures and methods of collection. These books and records, including, without limitation, ledgers, journals, revenue control reports, and books of accounts shall reflect the operations of Contractor under the Contract.

2. **Location of Books and Records.** Contractor shall keep the books and records it is required to maintain at its local home office. Such books and records shall be kept segregated from Contractor's books and records relating to operations other than pursuant to the Contract, and shall be retained by Contractor for a period of not less than three years following the end of the Contract Year to which such books and records relate (notwithstanding the expiration or earlier termination of the Contract).

3. **Books, Records, and Information.** Books, records, and information that are to be made available to MARTA as requested or during an audit shall include but not be limited to:
 - a) All accounting source documents necessary to MARTA's performance of an audit in accordance with generally accepted accounting principles;
 - b) The complete (cumulative) corporate general ledger that identifies Contractor's operation under this Contract for the period under the audit;
 - c) A detailed description of Contractor's accounting system, including:
 - A description of the accounting system used for tracking control numbers assigned to each location.
 - d) A complete copy of the chart of accounts and a detailed description of the accounts shown thereon;
 - e) Bank statements and canceled checks applicable to the operation of this management contract at MARTA.
 - f) Contractor shall also provide, upon the written request of MARTA, the name and telephone number of Contractor's accounting manager who has a thorough knowledge of the accounting system as it pertains to the Contract and who will assist MARTA with its audit.

END OF SECTION 5

6.0 DESIGN SPECIFICATION

6.1 ENGINEERING REQUIREMENTS

6.1.1 CRITERIA AND DRAWINGS

[R01] Develop and prepare all drawings using AutoCAD Computer-Aided Design and Drafting software (CADD), in the most current version of AutoCAD that is being used by MARTA (contact MARTA CADD Management for details). Drawing files in AutoCAD DWG format shall be coordinated within AutoCAD's Sheetset Manager. Detail the drawings so that they are well-arranged, placed for ready reference, and so that they present complete information such that MARTA may perform a cursory review to determine conformance with the RFP and construction shop drawings. Do not use shop drawings as design drawings. MARTA will not provide existing CAD drawings for use.

[R02] MARTA Design Drawing Criteria. Prepare drawings in accordance with the instructions contained in the MARTA Criteria for Drawings that will be made available to the Contractor. All drawings shall be accurate, correctly layered and in conformance with the following:

[R02.1] The Contractor shall use the Georgia State Grid coordinate system as modified by MARTA to locate all facilities in CADD. Reference the North American Vertical Datum of 1988 (NAVD88) for all elevations.

[R02.2] The Contractor shall use the MARTA standard title blocks and borders on all drawings, and provide an index of drawings with each submittal phase. Full-size drawing sheets shall be neat and clear to permit 50 percent reduction and legible reproduction.

[R03] Contractor's Design Drawings. Because the project is located at existing MARTA facilities utilize existing as-built drawings to reconcile current existing conditions; Contractor's design drawings shall be created to reflect current conditions. All drawings generated shall conform to the MARTA Criteria for Drawings and shall be checked, signed, and sealed by a professional engineer registered in the State of Georgia for the appropriate discipline.

[R04] Contractor's As-Built Record Drawings. All drawings generated shall conform to the MARTA Criteria for Drawings and shall be checked and signed by the Contractor.

[R05] Shop Drawings. The Contractor shall prepare project-specific information, drawn accurately to scale, and in conformance with the MARTA Criteria for Drawings. Information shall include, but not be limited to, dimensions (including notation of dimensions established

by field measurements), identification of products, notation of coordination requirements and relationships to adjoining structures, etc. Those shop drawings requiring Engineering Design shall be signed and sealed as required by a professional engineer registered in the State of Georgia, and shall be stamped and signed by the Contractor certifying initial review and coordination of information submitted. Those shop drawings not requiring Engineering Design are not required to be sealed but shall be signed by the Contractor.

[R06] Submittal Copy Requirements. The Contractor shall provide deliverable drawings and electronic files for MARTA review and record keeping in numbers as called for in this SECTION.

[R07] Review of Design Information. Review and utilize all information provided by MARTA as required in the performance of the Work. Make use of documents and information as may be provided by MARTA, applicable for the basis for design.

[R08] Design Criteria. All Work shall be performed in accordance with Section 6.2 MARTA Guide Specifications, or the latest applicable code requirements, whichever is more stringent.

[R09] Coordination Assistance. In its performance of services authorized and required under the Contract, Contractor shall assist MARTA in coordination activities as required and as requested by MARTA. Such coordination assistance shall include arranging and attending conferences in connection with the Work pursuant to the Contract, with governmental, public, or private agencies or others interested in the project, as may be authorized and required by MARTA.

[R010] Meeting and Communications Requirements. The Contractor shall keep MARTA informed of the progress of the design throughout the life of the Project. Contractor shall promptly bring to the attention of MARTA, by written notice, any betterment requested or other situations that could affect the scope, schedule, or cost of the work.

[R010.1] Project Meetings. In accordance with this Article.

[R010.1.1] Documentation of Communications. Contractor shall take meeting minutes and prepare a written record of all Project discussions and meetings, unless otherwise specified, whether telephonic or in-person. Meetings shall include presentations to stakeholders, design progress meetings, site visits, vendor coordination meetings, discussions with third-party entities, etc. Contractor shall submit an electronic copy and hard copy of meeting minutes and records of project discussions to MARTA within five (5) working days following each meeting or

discussion. The minutes and records shall include subject matter, names of participants, outline of discussions, and recommendations or conclusions. Each set of minutes and each record shall be clearly identified and dated.

[R010.1.2] Project Presentations. Contractor shall prepare briefing materials as required for presentation to the Project stakeholders.

6.1.2 DESIGN PLAN

[R01] The Contractor shall submit a Design Plan as listed in Section 4, Contract Deliverable Requirements List (CDRL). **CDRL 6.1.2.01**

[R02] The plan shall include and not be limited to:

[R02.1] Systemwide Network Design (excluding MARTA components)

[R02.2] Parking Facility Design including all connections each gate and POF machine

[R02.3] APARC Equipment Specification

[R02.4] APARC Command Center Design

[R02.5] Integration to MARTA Network

[R02.6] Modifications to Command Center (North Springs and Sandy Springs facilities)

[R02.7] Integration to Third Party Software

[R03] Design plan shall be updated as needed to reflect actual products installed and methods used.

6.1.3 PROJECT CUT SHEET MANUAL

[R01] Incorporate manufacturer's literature and AE Specifications for all items used in the Project. Provide the names and telephone numbers of manufacturer's contacts for products used in the Project.

6.1.4 ENGINEERING AND DESIGN

[R01] The Contractor shall utilize an integrated design process to design all elements of the Project in a synchronized manner so that the Project is designed as an integrated whole and functions effectively and efficiently for the intended purpose.

[R02] The Contractor shall perform detailed design, including preparation of design drawings and specifications, required for each site as required by the scope of work. Said design shall be

in accordance with all applicable criteria and standards and shall provide for incorporation of components, equipment, and systems designed by others.

6.1.5 DESIGN AFTER AWARD

[R01] General. The Contractor awarded the Project shall propose a schedule for the design submittal phases. Submittals are required at the following levels:

[R01.1] In-Progress Design Submittal (60 percent complete)

[R01.2] Final Design Submittal (100 percent complete)

[R01.3] Record/As-Built Submittal following construction

[R02] The requirements for each design submittal are listed in Section 6.1.12. The Contractor shall reflect schedules for the design submittals in the progress charts. All design submittals shall be made in one consolidated package.

[R03] Designer of Record. The Contractor shall identify, for approval, the Designer of Record for each area of the Work. One Designer of Record may be responsible for more than one area. All areas of design disciplines shall be accounted for by a listed Designer of Record that shall be a professional engineer registered in the State of Georgia. The Designer(s) of Record shall seal, sign, and date all design drawings under their responsible discipline at the Final Design Phase submittal.

6.1.6 DESIGN QUALITY

[R01] Revisions to the Design: The Contractor shall be responsible for responding to and resolving all design review comments regarding their work product. Contractor shall make all required revisions to the design resulting from the design reviews.

6.1.7 DESIGN FREEDOM

[R01] Requirements stated in this RFP are minimums. Innovative, creative, and/or cost-saving proposals, which meet or exceed these requirements, are encouraged.

6.1.8 ADA REQUIREMENTS

[R01] Accessibility Requirements. All areas required to be accessible to physically challenged persons shall conform to the Americans with Disabilities Act Accessibility Guidelines (ADAAG) and the Georgia Accessibility Code.

6.1.9 CONSTRUCTION SEQUENCE REVIEW

[R01] Perform a construction sequence review with MARTA, obtain approval as soon as practical, and provide a report detailing the areas in the design that require non-standard construction practices and areas of risk. Summarize items to include impact to the Project with respect to cost, schedule, and quality.

[R02] Contractor shall provide Construction Sequence, Staging and Demolition plans in the Contract Documents for the proposed sequence of construction and demolition for all stages of construction and shall submit the plans to the Authority for approval.

6.1.10 COST ESTIMATING

[R01] Contractor shall prepare cost estimates and maintain a cost audit trail as described below. Estimates shall be included with all formal submittals. Total project cost estimates and total project construction cost estimates shall also be submitted electronically **CDRL 6.1.10.01**.

[R02] Quantity Take-Off.

[R02.1] Prepare quantity take-offs for each estimate on 8-½ inches by 11 inches sheets as used for design calculations, and with the same provisions at the top for the required identification. State on quantity take-off sheets the procedures and all supplementary assumptions used. Include summary sheet(s) as well as all pertinent backup computation sheets. All sheets shall be neatly and clearly prepared to permit legible reproduction. If the estimate is generated electronically, a copy of the estimate on CD / DVD shall be made available to MARTA. Detailed estimates shall be made in accordance with the CSI Uniform Construction Index and ASPE Standard Estimating Practice.

[R03] Pricing.

[R03.1] Insert price for each item on the Proposal Price Form. All item prices shall be in current US dollars. Assumptions and calculations made to establish Proposal Item prices and escalation shall be provided by the Contractor. Pricing data and information shall be reviewed by MARTA, but MARTA shall not be responsible for the validity of this data and the information and use thereof shall be at Contractor's risk.

[R04] Cost Audit Trail.

[R04.1] Initiate a cost monitoring system at the beginning of the design effort. The cost monitoring system shall include at a minimum dates, costs, and detailed explanations of cost

variances. The Contractor shall include cost monitoring documentation as a component of the Cost Estimate submittal at the end of each design phase. Each entry shall have a substantiated cost estimate with quantity take-offs and pricing. The monitoring system shall contain two categories – Total Project Cost and Construction Cost.

[R05] Coordination

[R05.1] Written Records. Maintain and issue written records of all meeting and communications with the Authority.

[R06] Request for Information (RFI) List. Throughout the life of this contract, the Contractor shall furnish MARTA a monthly RFI list for design related items. This list shall itemize in an orderly fashion design data required by the Contractor to advance the design in a timely manner. Each list shall include a sequence number, description of action item, name of the individual or agency responsible for satisfying the action item and remarks. The list shall be maintained on a continuous basis with satisfied action items checked off and new action items added as required. Once a request for information is initiated, that item shall remain on the list until the requested information has been furnished or otherwise resolved. An electronic copy of the updated list shall be sent to MARTA's Project Manager on a weekly basis or at least two (2) days prior to any scheduled project review meetings.

6.1.11 MARTA REVIEW

[R01] After receipt, MARTA shall be allowed twenty-one (21) days to review and comment on each design submittal. For each design review submittal MARTA shall furnish to the Contractor a single consolidated listing of all comments from the various design sections. The review shall be for conformance with the technical requirements of the solicitation and the Contractor's RFP proposal. If the Contractor disagrees technically with any comment and does not intend to comply with the comment, he/she must clearly outline, with ample justification, the reasons for non-compliance within seven (7) days after receipt from MARTA in order for the comment to be resolved. The Contractor shall furnish disposition of all comments, in writing, with the next scheduled submittal. The Contractor is cautioned that if they believe the action required by any comment exceeds the requirements of the contract, then no action shall be taken and MARTA shall immediately be notified in writing. Review conferences shall be held for each design submittal. The Contractor shall bring the personnel that developed the design submittal to the review conference. These conferences shall take place not later than ten (10) calendar days after the receipt of the comments by the Contractor. If a design

submittal is over one (1) day late in accordance with the latest design schedule, MARTA review period shall be extended seven (7) days. Submittal date revisions must be made in writing at least seven (7) days prior to the effected submittal.

[R02] Post-review conference action shall include making copies of comments, annotated with agreed comment action, available to all parties 48 hours after the conference adjourns. Unresolved problems shall be resolved by immediate follow-up action at the end of conferences. Valid comments shall be incorporated. After receipt of final corrected design documents upon incorporation of back-check comments MARTA shall recommend issuance of a Site Notice to Proceed (SNTP) for the designed site. MARTA, however, reserves the right to disapprove design document submittals if comments are significant. If final or back-check submittal(s) are incomplete or deficient, and require correction by the Contractor and resubmittal for review, the cost of re-handling and reviewing by MARTA shall be deducted from payment due the Contractor per submittal.

6.1.12 SUBMITTALS

[R01] Contractor shall prepare drawings and other material for submission as follows:

[R01.1] In-Progress Design Submittal

[R01.1.1] Level of Design. The design, including all disciplines, shall be complete and checked for accuracy and form. Plans shall show most details necessary for equipment fabrication and installation and shall be coordinated among the various disciplines prior to submittal. Work performed in the In-Progress Design Submittal initiates the final design phase.

[R01.1.2] Purpose. The purpose of this submittal is to provide a clear indication of coordination between discipline and progress toward design solutions for problems outlined in meetings or formal written communications and to offer an opportunity for MARTA to review the proposed construction. The submittal shall serve as a basis for briefing, and for ultimately obtaining concurrence from other parties.

[R01.1.3] Installation Design. The installation design for each type gate configuration and POF units shall be well advanced and shall show the component sizes for review wherever they appear. Plans, sections, and details shall have been started to enable review for acceptance by the Authority's staff, as well as all applicable codes and standards of practice.

[R01.1.4] Design Calculations. Design Calculations shall be submitted commensurate with the level of design as shown on the Design and Installation Drawings.

[R01.1.5] System Design and Initial Site Installation Package. Submit Design packages to include Title Page, Table of Contents (TOC) and applicable technical descriptions of design and installation parameters. The system design package shall provide key details, interfaces, and configurations. Initial installation package shall contain drawings showing equipment placement, mounting details and interfaces to existing equipment. Each required installation site shall be submitted as separate packages for review.

[R01.1.6] Product Literature and Cut Sheet Package. Proposed equipment manufacturers' product literature, AE Specifications and material cut sheets shall be submitted. All coordination of various disciplines has been completed.

[R01.1.7] Issues. All issues must be identified and resolved. All resolutions must be reviewed and accepted by MARTA.

[R01.2] Final Design Submittal

[R01.2.1] This submittal shall reflect a complete and completely checked design. Documents are to be in sets, indexed and clearly marked to indicate date of issue and stage of development.

[R01.2.2] Design Calculations. All calculations shall have been checked and submitted.

[R01.2.3] System Design and Site Installation Drawing. Submit completed System Design specifications and drawings. Site installation drawings shall be submitted for review by the Authority.

[R01.3] Record / As-Built Set

[R01.3.1] This deliverable package shall reflect as-built conditions at the completion of construction. Documents are to be in sets, indexed and clearly marked to indicate date of issue. Contractor shall submit an initial as-built drawing and specification set for MARTA review and approval before preparing the final record set. All record/as-built documentation shall reflect the final as-built field conditions, and shall be submitted to MARTA within thirty (30) working days after date of substantial site completion and acceptance by MARTA.

[R02] Submittal Deliverable Requirements

[R02.1.1] Contractor shall provide documents for review in numbers as specified. Documents are to be in sets and indexed; a distribution sheet shall be attached for all submittals denoting submittal level, issue date, and comments due date.

Table 6-1: Submittal Requirements

Submittals	Paper/Quantity of Copies	CD/DVD
Document	Double Sided – 2 copies	06
Drawings	Double Sided – 2 copies	06

[R03] Transferring of Data and Submittal Requirements

[R03.1] Definitions:

[R03.1.1] Hard Copy. A printout of an electronic document file, especially the output of a computer word processor or other software.

[R03.1.2] Soft Copy. The electronic document file. This term is often contrasted with hard copy. It can usually be viewed through an appropriate editing program, such as word processing programs, database programs, or presentation software (depending on file type).

[R03.1.3] Contract Technical Data. Complete and sign hard copies of Transmittal and Receipt forms.

[R03.1.4] CADD Drawings. Drawing files to be soft copies in AutoCAD DWG vector format meeting all requirements of the MARTA Criteria for Drawings.

[R03.1.5] Record / As-Built Drawings. Hard copy sets provided as required (half-sized sets to be three-holed punched and bound), and soft copies in DWG, TIFF and indexed PDF portfolio formats. The TIFF and PDF files shall be scanned from the final signed and sealed drawings (minimum of 300 dpi).

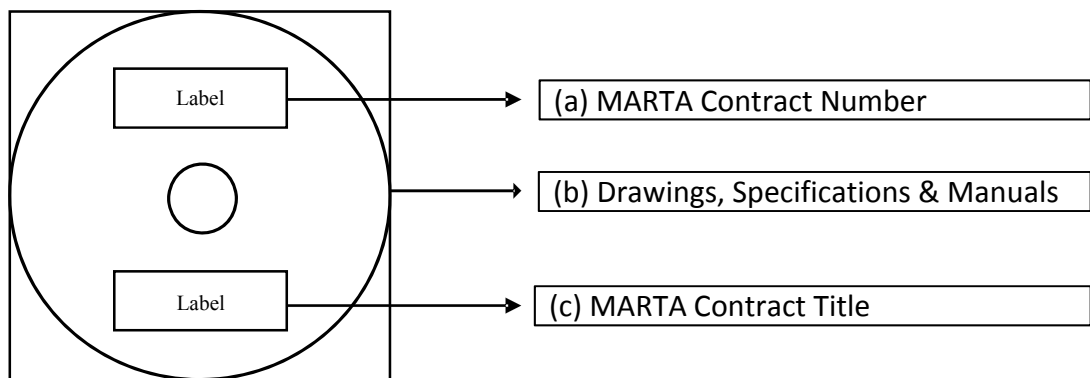
[R03.1.6] Design Plans. Indexed hard copies provided as required (three-hole punched with screw-post binding); Soft copies of each document included in the Design Plan in MS Word DOC format; and a soft copy of Design Plan in a combined PDF file. PDF file shall be created directly from the DOC files using the Combine - Merge files into single PDF" feature of Adobe Acrobat Pro software.

[R03.1.7] Operation/Maintenance Manuals and Other Technical Documentation. One (1) hard copy set provided and soft copies in PDF format (minimum of 300 dpi). Boxes and labels can be ordered by contacting MARTA's Record Storage Center at telephone number 404-848-3482.

[R03.1.8] Training Materials. One (1) hard copy provided and soft copies in PDF format.

[R03.1.9] CD / DVD Information Layout. Label information shall be placed on the disc media (not the CD / DVD jewel case) as follows:

Figure 1: CD/DVD Information Layout



[R03.1.9.1] (a) MARTA Contract Number - "RFP P30186" (label)

[R03.1.9.2] (b) Electronic files copied to "read-only" media - Drawings in DWG, TIFF, and PDF formats; Specifications & Manuals in DOC and PDF formats.

[R03.1.9.3] (c) MARTA Contract Title - "MARTA Paid Parking Services" (label)

[R04] Submittal Register

[R04.1] The Contractor shall document construction submittal requirements and schedules during the design phase of the contract by producing a Submittal Register. The Contractor shall be responsible for listing all required submittals necessary to insure that the Project requirements are met. The Register shall identify submittal items such as shop drawings, manufacturer's literature, certificates of compliance, material samples, warranties, test results, etc. that the Contractor shall submit for review and/or approval action during the life of the Contract. The Register shall be maintained as a MS Excel document. The Register shall be updated and copies provided for all regular Project Status Meetings.

[R05] Review of Submittals

[R05.1] MARTA's review of and comments on design is for the convenience of MARTA, and shall not limit or restrict the Contractor's duty to exercise the appropriate standard of care as set out in the general requirements of this Contract.

[R05.2] MARTA shall review and provide comments on all submittals. Design review comments shall be provided to the Contractor no later than three (3) weeks after receipt of the design submittal by MARTA. Comments shall be resolved in a joint meeting between the Contractor and MARTA held within one week after the Contractor has received comments. The Contractor may proceed with design pending receipt of design review comments but at his own risk. Regardless of whether a comment has or has not been provided, the Contractor is not authorized to deviate from the MARTA Design Criteria unless MARTA provides authorization to make such deviation has been specifically requested in writing by the Contractor and approved in writing by MARTA.

6.1.13 DOCUMENTS PROVIDED BY MARTA

[R01] MARTA will furnish to the Contractor the following as applicable, which shall govern the manner in which the work is performed, unless and until MARTA's Technical Representative provides, written direction to the contrary:

[R01.1] MARTA Design Criteria

[R01.2] MARTA Criteria for Drawings

[R01.3] MARTA As-Built Drawings

6.1.14 CLOSE-OUT DOCUMENTATION

[R01] All final design documentation shall reflect the final as-built field conditions, and shall be submitted to MARTA within 30 calendar days after date of Substantial Completion and acceptance by MARTA. Contractor shall submit bound copies and electronic files of documents as indicated below. PDF files of the documents shall be sequenced for reproduction. Submit in accordance with MARTA requirements.

[R02] Contractor's As-Built Design Drawings: All drawings generated shall conform to the MARTA Criteria for Drawings. Drawings shall be checked and signed, if required, and if they contain Engineering Design, they shall be signed and sealed by a professional engineer registered in the State of Georgia.

[R03] All horizontal and vertical distances shall be measured in feet.

[R04] Electronic files - provide in DWG, TIFF and indexed PDF portfolio formats. DWG files shall be vector images. The TIFF and PDF files shall be scanned from the final drawings (minimum of 300 dpi).

[R05] Design Plan:

[R05.1] Provide two (2) bound (three-hole punched with screw-post binding) copies. Provide Drawings on 11 X 17 in. media.

[R05.2] Electronic copy of each document included in the Design Plan in MS Word DOCX format.

[R05.3] Electronic copy of Design Plan in a combined PDF file. PDF file shall be created directly from the DOCX files using the "Combine - Merge files into single PDF" feature of Adobe Acrobat Pro software.

[R05.4] Executed Extended Warranty: Provide executed 10-year extended warranty against defects in materials and workmanship of the Work performed under this Contract. The 10 year warranty period on all APARC equipment and systems begin with the acceptance of the Systemwide Performance Test for all 10 locations and the Control Centers.

[R05.5] Submittal Register: Provide hardcopy of final Submittal Register indicating that all required submittals were made, and were accepted by MARTA.

6.2 MARTA GUIDE SPECIFICATIONS

6.2.1 GENERAL INFORMATION

[R01] The Contractor shall perform a site survey to verify conditions as depicted in the Contract Drawings.

[R02] The Contractor shall perform all required inspections and tests and provide a recommendation as to whether existing equipment and materials (including concrete pads) shall remain or will be replaced.

[R03] Upon receiving recommendation approval from the Authority, the Contractor shall replace materials and equipment connected to the existing parking gate equipment.

[R04] The Contractor shall follow the Authority's procedures for obtaining access for each location.

[R05] The Contractor shall utilize cabling, conduit and other materials that meet the requirements specified herein during the installation of the parking gate equipment.

[R06] The Contractor shall remove and dispose of all materials and equipment that will be replaced by this contract unless otherwise directed by the Authority.

6.2.2 GENERAL REFERENCES

[R01] Contractor-furnished and installed equipment and installation activities shall meet the following codes and standards:

[R01.1] International Code Council (ICC): International Building Code (IBC)

[R01.2] National Fire Protection Association (NFPA):

[R01.2.1] NFPA 70, National Electrical Code (NEC), including electrical components, devices, fittings, and accessories that shall be listed and labeled as defined in Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

[R01.2.2] NFPA 130, Standard for Fixed Guideway Transit and Passenger Rail Systems, including requirements for smoke and fire resistant material.

[R01.2.3] NFPA 262, Standard Method of Test for Flame Travel and Smoke of Wires and Cables for Use in Air-Handling Spaces

[R01.3] Underwriters Laboratories Inc. (UL)

[R01.4] U. S. Department of Labor, Occupational Safety and Health Administration (OSHA): Code of Federal Regulations (CFR), Title 29, Chapter XVII

[R01.4.1] Part 1910, Subpart S, Electrical

[R01.4.2] Part 1926, Subpart K, Electrical

[R01.5] Codes referred to are minimum standards. Where the requirements of these Specifications or Drawings exceed those of the codes and regulations, the Drawings or Specifications shall govern.

[R01.6] For Products for which standards have not been established by UL and label service or certification service is not available, material and equipment shall be listed by one of the following laboratories:

[R01.6.1] Canadian Standard Association (CSA).

[R01.6.2] Edison Testing Laboratories, Inc. (ETL).

[R01.6.3] MET Laboratories Electrical Testing Company, Inc.

[R01.6.4] SGS United States Testing Company, Inc.

[R01.6.5] Applied Research Laboratories, Inc.

6.2.3 GENERAL SUBMITTALS

[R01] The Contractor shall submit equipment and materials documentation as described in the Design Plan. Documentation shall also contain the following information as a minimum:

[R01.1] Product Data and Samples for equipment and materials listed in this Article;

[R01.2] Detailed description of proposed procedures for making cutover from existing service(s) to connect to new service(s);

[R01.3] Concrete pad requirements and design;

[R01.4] Parking Gate test procedure; and

[R01.5] Parking Gate Site Connection procedure.

[R02] Prepare and submit for review site-specific, detailed procedures and check list tables for the test and practice of all functions necessary to simulate gate functions.

[R03] Submit the training schedule for the Authority employees for energizing the site equipment. Schedule shall include coordinating with the Authority, onsite test, and training on each project location upon completion of installation.

6.2.3.1 Delivery, Storage, and Handling

[R01] Delivery: Inspect products for completeness and condition. If products are to be stored, reseal them for protection.

[R02] Storage: Store products in dry spaces, free from corrosives. Storage areas shall be heated to prevent condensation when necessary and shall be dust-free. Keep equipment clean by covering or by other measures as necessary. Store shipping sections on level surfaces.

[R02.1] Store equipment and material under waterproof cover and off the ground or off floors.

[R02.2] For outdoor storage, protective opaque plastic covers shall be secured over equipment and material. Covers shall be reinforced and weighted down to withstand wind and precipitation. Covers shall be maintained during use to avoid holes or tears.

[R02.3] Set equipment and material on skids or platforms not less than six-inches high to avoid damage or deterioration from rain spattering and ground water.

[R03] Handling: Handle equipment in accordance with manufacturer's recommendations.

6.2.4 GENERAL SEQUENCING

[R01] Coordinate locations of fixtures, apparatus, equipment, and raceways with site-specific conditions prior to installation.

[R02] Locations of equipment and apparatus as indicated on Contract Drawings are approximate. Make connections to equipment as actually installed and coordinate with piping, ductwork, and other mechanical systems to allow access to equipment.

[R03] Provide access to equipment and apparatus requiring operation, service, or maintenance as required by applicable codes and utilities.

[R04] Structures on which equipment will be installed or supported shall be capable of supporting the equipment. Finish surfaces to be concealed by equipment before equipment is installed. Connect sources of permanent power only after the products have been installed, inspected, and tested.

6.2.5 GENERAL SCHEDULING

[R01] Schedule work and provide temporary service and connections to minimize interruption of existing systems. Obtain approval from the Authority at least seven days prior to any interruption of service.

[R02] Perform work to minimize inconvenience to the Authority and as approved by the Authority.

6.2.6 GALVANIZED REPAIR COATING

[R01] Galvanized Repair Coating: Cold-liquid type, ZRC Worldwide, or accepted equivalent that is approved by MARTA in advance.

[R02] Surface Preparation: Clean surfaces on which equipment will be installed. Remove stickers, rust, stains, labels, foreign matter, and temporary covers from all equipment and material before final inspection.

[R02.1] Repair/Restoration

[R02.1.1] If any repair or touchup product is not compliant with this section, remove product and install new.

[R02.1.2] Touch up finishes of factory-painted apparatus where finish is marred during delivery or installation, to match the painted apparatus surface and with manufacturer's recommended touch-up paint.

[R02.1.3] Where galvanizing is damaged during fabrication or installation, repair damage. Remove oil, grease, corrosion, and loose zinc from damaged surface and from surfaces immediately adjacent. Clean and dry surface. Repair damaged galvanized surfaces using a cold-liquid type repair coating in accordance with the coating manufacturer's recommendations.

6.2.7 LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS, DATA AND OPTICAL FIBER CABLES

[R01] The Contractor shall perform the following tasks:

[R01.1] Test existing feeders and branch circuit condition and insulation according to ANSI/NETA MTS-2011 or later.

[R01.2] Furnish, install, and test low voltage (600 volt) electric power wire and cable and provide test reports.

[R01.3] Furnish, install, and test data cable and provide test reports.

[R01.4] Furnish, install, and test control and fiber optic cable.

6.2.7.1 Low-Voltage Electrical Power Conductors, Data, and Optical Fiber Cable References

[R01] American Society for Testing and Materials (ASTM)

[R01.1] B8 Concentric-Lay-Stranded Copper Conductors, Hard, medium-Hard, or Soft.

[R01.2] B33 Tinned Soft or Annealed Copper Wire for Electrical Purposes

[R02] Institute of Electrical and Electronic Engineers, Inc. (IEEE): 383, Vertical Tray Flame Test.

[R03] Insulated Cable Engineers Association/National Electrical Manufacturer's Association (ICEA/NEMA)

[R03.1] S-95-658/WC-70, Non-shielded Power Cables Rated 2000 Volts or less for the Distribution of Electrical Energy

[R03.2] S-73-532/WC-57, Control Cables

[R04] Insulated Cable Engineers Association (ICEA): T-33-655, Low-Smoke, Halogen-Free (LSHF) Polymeric Cable Jackets

[R05] Underwriters' Laboratories, Inc. (UL)

[R05.1] 44 Thermoset-Insulated Wires and Cables

[R05.2] 83 Thermoplastic-Insulated Wires and Cables

6.2.7.2 Low-Voltage Electrical Power Conductors, Data, and Optical Fiber Cable Requirements

[R01] Subject to compliance with the Contract requirements, provide products by one of the following manufacturers or an equivalent manufacturer, which must be pre-approved by MARTA in writing:

[R01.1] AFC Cable Systems, Inc.

[R01.2] Alfalex[®] Inc.

[R01.3] American Insulated Wire Corp.

[R01.4] Belden Cable.

[R01.5] Dow Corning.

[R01.6] Essex Group, Inc.

[R01.7] General Cable

[R01.8] Hellerman-Tyton Products.

[R01.9] Manhattan/CDT/Cole-Flex.

[R01.10] Okonite Cable Corp.

[R01.11] Panduit

[R01.12] Plymouth Bishop.

[R01.13] Siecor Corp.

[R01.14] Superior Essex.

[R02] Power Wire and Cable

[R02.1] Shall be copper conforming to UL 44 Type XHHW-2, UL 44 Type RHH, or UL 83 Type RHW-2.

[R02.2] Number 10 AWG and larger shall be stranded; other sizes shall be solid.

[R03] Power feeders and branch circuit conductors shall have green insulated grounding conductors. Neutral conductors shall be the same size as branch circuit conductors. Power Connectors shall be insulated and rated for voltage.

[R04] Electrical tapes shall be insulating, self-adhesive plastic: Plymouth Bishop Premium 85 CW Electrical Plastic Tape, or accepted equivalent.

[R05] Optical Fiber Cable Materials: Fiber Optic Cable: Indoor/Outdoor, riser-rated, gel-free, water blocking loose-tube multimode or single mode fiber strands encased in a common flame-retardant jacket. Contractor shall field verify the existing fiber optic cable's Mode and Field Diameter at each project site and provide approved Corning or accepted equivalent cable matching the existing fiber optic cable with code required insulation type listed for the installation location. If not connecting to existing cable, Contractor shall provide 50 um or 62.5 um OM2 multimode fiber cable as applicable. Maximum optical attenuation for 50 um multimode cables shall be 3.0 dB/km at 850 nm and 1.0 dB/km at 1300 nm and for 62.5 um multimode cables it shall be 3.0 dB/km at 850 nm and 1.0 dB/km at 1300 nm.

[R06] Cable shall meet NEC OFNR and CSA OFN FT-4 standards.

[R07] Color Code: Each fiber in each cable shall be color coded in accordance with TIA-598-E for easy identification. Color may be in the coating or by an insulating grade propylene/ethylene copolymer fiber jacket.

[R08] Strength Member: The cable strength member shall be Aramid yarn.

[R09] Outer Jacket: The jacket material shall be low density, high molecular weight polyethylene. The jacket shall be free from holes, splits, blisters, or other imperfections and shall be as smooth and concentric as is consistent with the best commercial practice. The jacket shall provide the cable with a tough flexible protective covering able to withstand exposure to sunlight, atmospheric conditions, and stresses expected in installation and service.

[R010] Ethernet Cable: Category 6 (Cat-6) to operate at frequencies up to 250 MHz as defined in TIA/EIA-568-B2 (568-B.2.1). Cable shall contain four (22-24 AWG) twisted pair conductors and 8P8C modular connector for jumpers up to six (6) feet and with four (4), twisted pair shielded and a ground wire for runs longer than six (6) feet. Cable jacket shall be low density, high molecular weight polyethylene. The jacket material shall be UL listed for application and location. Patch panel shall match the cable type.

[R011] Cable Identification: Completed cables shall be permanently identified by printing on the outer surface of the jacket. Information shall include the number of pairs, conductor size, and manufacturer's designation of the cable type, manufacturer's name, and year of manufacture. This information shall appear at intervals of not more than 30-inches. Cable shall include the manufacturer's color-coded identification threads. The identification threads may be part of the core covering tape and shall be readily discernible to the unaided eye.

[R012] Optical Fiber Connectors: The connector shall be LC-type.

[R013] Optical Fiber Patch Panel: The patch panel housing shall be equipped with LC connector panels for terminating all fibers and shall be Corning type or accepted equivalent.

[R014] Factory Testing: Equipment interface cables shall be factory tested in accordance with applicable UL, NEC, or IEEE standards, unless otherwise specified or field assembled, to show that finished cable meets the requirements as specified in these Specifications.

6.2.7.3 Low-Voltage Electrical Power Conductor, Data and Optical Fiber Cable Installation Requirements

[R01] The Contractor shall perform the following tasks:

[R02] General:

[R02.1] Mandrel, rod, and swab conduits before installing wire and cable.

[R02.2] Install wiring in raceways, unless otherwise specified herein.

[R02.3] Install in such a manner as to prevent damage to insulation or breaking of wire and cable.

[R02.4] Install patch panel or junction boxes to avoid excessive runs or bends.

[R02.5] Connect installed products to the permanent power source and ground after installation has been accepted.

[R03] Terminations:

[R03.1] If the connector is a pressure type, twist wire together and insert into the connector, then complete the splice.

[R03.2] If the connector is an insulated compression-type, splice it in accordance with the connector manufacturer's printed installation instructions.

[R03.3] If the connector is a non-insulated compression type, splice it in accordance with the connector manufacturer's printed installation instructions and wrap the splice with cross-linked tape, and insulating, self-adhesive, plastic tape.

[R03.4] Compression connections shall be completed with ratcheted tools using proper dies for each specific connector in accordance with the connector manufacturer's printed instructions.

[R04] If a product is not compliant with section or fails test, remove product and install new.

6.2.8 HANGERS AND SUPPORTS FOR ELECTRICAL SYSTEMS

6.2.8.1 Hangers and Supports for Electrical Systems Requirements

[R01] The Contractor shall provide hangers and supports for electrical systems that meet the following requirements:

[R02] Subject to compliance with requirements, provide products by one of the following or an equivalent manufacturer, which must be pre-approved by MARTA in writing:

[R02.1] Appleton Electric Co.

[R02.2] B-Line Systems (Cooper B-Line).

[R02.3] Efcor, Inc. (part of Hubble).

[R02.4] Hellerman Tyton Products.

[R02.5] Hubbell-Raco, Inc.

[R02.6] Ideal Industries.

[R02.7] Kindorf Corp.

[R02.8] Midland Ross Corp.

[R02.9] Minnesota Mining and Manufacturing (3M) Co.

[R02.10] Panduit Corp.

[R02.11] Thomas and Betts Corporation.

[R03] Metal Framing Systems:

[R03.1] The system shall consist of a horizontal member and two or more rods each capable of supporting itself, a 200-pound load, and the installed conduits and conductors.

[R03.2] Channels shall be not less than 12-gauge, carbon steel hot-dip galvanized after fabrication. Attachment holes shall be factory-punched.

[R03.3] Channels shall be cold-formed lipped type, designed to accept spring-held hardened steel nuts. Nuts shall be of a size sufficient to ensure the design capacity of the channel connection will not be less than 1000 pounds.

[R03.4] Two or more channels may be welded together.

[R03.5] Rods shall be carbon steel. Rods shall be sized to ensure that the design capacity at the thread root is not less than 1,000 pounds. Rods shall not be smaller than 3/8-inch in diameter and shall be threaded on each end.

[R03.6] All nuts, bolts, straps, and accessories shall be protected with the same finish as channels.

[R04] Fasteners

[R04.1] Bolts, nuts, washers, and screws shall be galvanized.

[R04.2] For existing masonry, provide anchors and fasteners.

[R04.3] For new masonry, provide anchors and fasteners.

[R04.4] For concrete bridge superstructures, provide epoxy bolts or studs.

[R04.5] For existing cast-in-place concrete (excluding bridge superstructures), provide either expansion bolts or epoxy bolts.

[R04.6] For existing pre-stressed and post-tensioned concrete (excluding bridge superstructure), provide expansion bolts.

[R04.7] For new cast-in-place concrete (excluding bridge superstructures), provide either expansion bolts, epoxy bolts or embedded inserts.

[R04.8] For new pre-stressed and post-tensioned concrete (excluding bridge superstructure), provide either expansion bolts or embedded inserts.

[R04.9] For steel work, provide machine screws, welded threaded studs, or spring-tensioned clamps.

[R05] Beam Clamps: Load rating shall be not less than 400 pounds capacity and shall be galvanized steel, with tapped holes in the base and face for bolts or hanger rods.

[R06] Cable Ties if permitted to be installed at a location: Thomas & Betts black, Heat Stabilized/Ultraviolet Resistant, Type TY2(x) MX-A, or accepted equivalent.

[R07] Conduit Supports: Shall be galvanized steel straps or hangers, or spring steel type hangers or clamps.

[R08] Lighting Fixture Support Hardware

[R08.1] Studs and hickies: 3/8-inch.

[R08.2] Outlet box cast covers: Malleable iron, with gasket and four mounting screws, for the conduit size indicated. Provide Appleton Electric Company CPU Hub Conduit Outlet Box Covers, or an equivalent manufacturer, which must be pre-approved by MARTA in writing.

6.2.8.2 Hangers and Supports for Electrical Systems Installation Requirements

[R01] The Contractor shall perform the following tasks:

[R01.1] Anchor or support in place all raceways, cables, and electrical equipment.

[R01.2] Install in such a manner as to prevent damage to substrates or attaching surfaces.

[R02] Metal Framing Systems: Use channel strut systems for support of all multiple runs of conduit. Channel may also be used for support of enclosures, panelboards, or equipment. Support channel strut with a minimum of two 3/8-inch steel rods when not directly fastened to the structure.

[R03] Inserts and Anchors: Inserts and anchors placed in pre-stressed and post-tensioned concrete shall be installed so as not to weaken tendons or tensioning wires.

[R04] Beam Clamps: Beam clamps shall be used for support of raceways, enclosures, panelboards, or equipment where attached to fixed steel supports or structures. Beam clamps fastened to steel supports that are not horizontal or vertical shall be provided with a swing

connector. Beam clamps fastened to structures in a horizontal position (where the bolt is horizontal) shall not be used for support of equipment exceeding ten (10) pounds.

[R05] Cable Ties: Shall be provided when specified herein for grouping and organizing conductors or cables in panelboards, switchboards, wireways, or enclosures. Cable ties shall be used for securing cables from movement. Ethernet (Cat6) type cables shall be organized using Velcro ties.

[R06] Conduit Supports

[R06.1] Use straps, clamps, or hangers for support of individual runs of conduit.

[R06.2] Use spring steel type hangers or clamps for support of conduit to steel, except where exposed to rain or moisture.

[R06.3] Secure conduit support devices to wood structure with wood screws.

[R06.4] Secure conduit support devices to existing concrete and masonry structure with anchors and fasteners.

[R06.5] Secure conduit support devices to new concrete and masonry structure with anchors and fasteners.

[R06.6] Secure conduit support devices to steel structure with machine screws, welded threaded studs, or spring-tensioned clamps.

[R06.7] For conduit secured to surfaces exposed to rain or moisture support by hangers with spacers which will hold the conduit off the surface.

[R06.8] Conduit shall not be supported from ceiling suspension systems.

[R06.9] Conduit supports shall not be welded to steel structures.

[R06.10] Install conduit spacers in accordance with manufacturer's printed installation instructions.

[R06.11] For conduit, to be installed on below-grade walls and on ceilings retaining earth, maintain minimum 1/4-inch clearance between conduit and surface.

[R06.12] For fire-rated, raceway systems maintain system required material and supports' spacing.

[R07] If a product is not compliant with section, remove product, and install new.

[R08] Where galvanizing is damaged during fabrication or installation, repair damage.

[R09] If conduits, hangers, and supports are exposed to public view, paint installed conduits, spacers, fittings, straps, clamps, and junction boxes to match the painted surface next to conduits.

6.2.9 RACEWAYS AND BOXES FOR ELECTRICAL SYSTEMS

[R01] The Contractor shall furnish and install raceways, fittings, boxes, and enclosures for electrical systems.

6.2.9.1 Raceways and Boxes for Electrical Systems References

[R01] American Society for Testing and Materials (ASTM)

[R01.1] A47 Ferrous malleable iron castings

[R01.2] E814 Fire Tests of Through-Penetration Fire Stops

[R01.3] National Electrical Manufacturers' Association (NEMA)

[R01.4] ICS-6 Enclosures for Industrial Controls and Systems

[R01.5] TC-8 Extra Strength PVC Plastic Utilities Duct for Underground Installation

[R01.6] TC-14 Reinforced Thermosetting Resin Conduit and Fittings

[R02] Underwriters Laboratories, Inc. (UL)

[R02.1] 1 Flexible Metal Conduit

[R02.2] 6 Rigid Metal Conduit

[R02.3] 514A Metallic Outlet Boxes

[R02.4] 514B Fittings for Cable and Conduit

[R02.5] 651A Type EB and A Rigid PVC Conduit and HDPE Conduit

[R02.6] 797 Electrical Metallic Tubing (EMT)

[R02.7] 884 Underfloor Raceways and Fittings

[R02.8] 1242 Immediate Metal Conduit

[R02.9] 2024 Optical Fiber Cable Raceway

[R03] American National Standards Institute/ Underwriters Laboratories, Inc. (ANSI/UL)-2196
Tests for Fire Resistive Cables

6.2.9.2 Raceways and Boxes for Electrical Systems Definitions

[R01]	EMT	Electrical metallic tubing
[R02]	FMC	Flexible metal conduit
[R03]	FRE	Fiberglass reinforced epoxy conduit
[R04]	GRS	Galvanized rigid steel conduit
[R05]	IMC	Intermediate metal conduit
[R06]	LFMC	Liquid-tight flexible metal conduit
[R07]	PVC	Poly vinyl chloride nonmetallic conduit.
[R08]	SS	Stainless steel conduit

6.2.9.3 Raceways and Boxes for Electrical Systems Submittals

[R01] Product Data

[R01.1] For conduits and raceways, wireways and fittings, floor boxes, hinged cover enclosures and cabinets.

[R01.2] For site-specific installation details for seals.

[R01.3] For site-specific details for fire stopping.

[R01.4] For inner-duct, conduit sealant and conduit spacers.

[R02] Installation Drawings

[R02.1] Conduit and ductbank layouts showing location of penetrations and stub-ups. Show dimensional interface with boxes, fittings, enclosures, cabinets and other equipment, existing and proposed.

[R02.2] Include proposed method of anchoring raceways.

[R02.3] Frame and cover design.

[R02.4] Grounding details.

[R02.5] Samples: Site specific requirements as indicated

6.2.9.4 Raceways and Boxes for Electrical Systems Requirements

[R01] The Contractor shall provide raceways and boxes for electrical systems that meet the following requirements:

[R02] Subject to compliance with requirements, provide products by one of the following or an equivalent manufacturer, which must be pre-approved by MARTA in writing:

[R02.1] AFC Cable Systems, Inc.

[R02.2] Alflex Inc.

[R02.3] Allen Tel Products.

[R02.4] Allied Tube & Conduit; a TYCO International Ltd. Co.

[R02.5] Anamet Electrical, Inc.; Anaconda Metal Hose.

[R02.6] Appleton Electric Company.

[R02.7] Carlon Electrical Services, Inc.

[R02.8] Cooper Crouse Hinds.

[R02.9] Dow Corning

[R02.10] Electrical Services Inc.

[R02.11] Electri-Flex Co.

[R02.12] Endot Industries, Inc.

[R02.13] FRE Northeast Industries.

[R02.14] General Electric RTV.

[R02.15] Grace Construction

[R02.16] Hilti Corp.

[R02.17] Hubbell Corp.

[R02.18] Leviton Products Corp.

[R02.19] Minnesota Mining & M. (3M) Fire Barrier.

[R02.20] Manhattan/CDT/Cole-Flex.

[R02.21] Maverick Tube Corporation.

[R02.22] Nelson Firestop Products

[R02.23] O-Z Gedney; a unit of General Signal.

[R02.24] Panduit Corp.

[R02.25] Thomas and Betts / Steel City Corporation

[R02.26] Unisorb Corp.

[R02.27] Walkerdut Wiremold

[R02.28] Wheatland Tube Company.

[R02.29] ZRC Worldwide

[R03] Electrical Metallic Tubing (EMT)

[R03.1] EMT shall be electro or hot-dipped galvanized steel conforming to UL 797.

[R03.2] Connectors and couplings shall be malleable iron or steel, and be galvanized or cadmium plated.

[R03.3] Use compression type couplings with insulated throat for conduit size ¾-inch through 1-1/4-inches.

[R03.4] Use either compression or setscrew type with insulated throats for conduit sizes 1-1/2 through 2-inches.

[R03.5] EMT sizes shall not exceed two inches.

[R04] Galvanized Rigid Steel (GRS) Conduit

[R04.1] GRS shall be hot-dipped galvanized steel conforming to UL 6.

[R04.2] Connectors and coupling shall be threaded galvanized malleable iron or steel.

[R04.3] Locknuts shall be of the type with sharp edges that bite into enclosure where connected.

[R04.4] Bushings shall be brown or black, high temperature type, unless indicated otherwise.

[R04.5] Rigid metal conduit and fitting to be buried in earth or gravel shall have a factory-

[R05] Liquid-tight Flexible Metal Conduit (LFMC)

[R05.1] LFMC shall be neoprene-jacketed steel core, with copper bonding conductor between convolutions conforming to UL 1.

[R05.2] Connection shall be watertight, or twist-in, insertion type with insulated throats.

[R06] Fire Retardant Sealant:

[R06.1] Shall be asbestos free, UL classified, and meet ASTM E814.

[R06.2] Forming and blocking material installed with the sealant shall be bulk ceramic fiber or rigid fiberboard rated for 2,300° F.

[R06.3] Manufacturers: 3M 303 Fire Barrier, Dow Corning or General Electric RTV Silicone Foam, Flammadur E473, Hilti Firestop, Nelson Flameseal, Thomas & Betts Flame Safe, or an equivalent manufacturer, which must be pre-approved by MARTA in writing.

[R07] Boxes:

[R07.1] Wall pull boxes and wall outlet boxes shall be sheet steel, galvanized after fabrication in accordance with NFPA 70 (NEC), unless noted otherwise.

[R07.2] Boxes for unit masonry walls shall be square-cornered tile type. If exterior-mounted, box shall be square-cornered tile-type cover with gasket.

[R07.3] Boxes for raceway systems shall be 1-1/2-inches or deeper.

[R07.4] Boxes for Category 6 cable shall be 6-inches octagonal, depth to be determined by connecting conduit.

[R07.5] If exterior-mounted, provide a screw-fastened, gasketed, brass cover.

[R08] Miscellaneous Fittings:

[R08.1] Expansion and deflection fittings shall be concrete tight and weatherproof with ground continuity. They shall allow four-inch movement and ¾-inch or 30 degrees of deflection from normal and shall have factory-installed packing ring and pressure ring designed to exclude moisture. Expansion couplings shall conform to ASTM D2000, Grade 2, Type FRE and shall have a grounding ring or grounding conductor.

[R08.2] Metallic coupling shall also have grounding ring or grounding conductor.

[R08.3] Hub fittings: Shall have nylon-insulated throat.

[R08.4] Through-Wall and floor seals: Insulating and watertight type.

[R08.5] Elbows: Radius not less than nine (9) conduit diameters.

[R08.6] Fittings for conduits and outlet boxes, conforming to UL 514B.

[R09] Accessories:

[R09.1] Conduit Pull Tape: Polyaramid, ¼-inch, and tensile strength not less than 1,250 pounds.

[R09.2] Conduit thread compound: Lead-free, corrosion-resistant, anti-seize, conductive.

[R09.3] Joint compound for GRS or IMC: Listed for use in cable connector assemblies, and compounded for use to lubricate and protect threaded raceway joints from corrosion and enhance their conductivity.

[R09.4] Conduit sealant: Silicon foam; Dow Corning Silicone RTV Foam No. 3-6548, or accepted equivalent.

[R09.5] Conduit Spacers: Spacers for ductbank installations shall be Carlon Inc., “Snap-Loc Spacers” or accepted equivalent.

[R09.6] Box Covers in public areas: Shall be removable stainless steel, unless otherwise indicated. All other areas shall be removable galvanized.

6.2.9.5 Raceways and Boxes for Electrical Systems Installation Requirements

[R01] Install wiring in raceways, unless otherwise specified herein.

[R02] Raceways shall be exposed, concealed in ceilings, walls, floors, or underground.

[R03] Minimum raceway size shall be ¾-inch.

[R04] Where raceways must pass through structural members, obtain approval from the Authority regarding location and size of openings prior to drilling.

[R05] Raceways that pass expansion joints shall be provided with expansion fittings.

[R06] Exposed raceways shall be run parallel with or at right angles to the building walls.

[R07] Lateral runs of raceways in masonry shall not exceed ¾-inch trade size.

[R08] Raceways shall be secured in place and protected to prevent damage to the work during construction.

[R09] Installation of raceways shall be complete and shall be blown-out and swabbed clear of water and trash prior to pulling wire.

[R010] Install junction or pull boxes to avoid excessive runs or bends. Several such boxes are indicated on the drawings. The locations shown may be varied and additional boxes installed

to minimize length of runs. Splices are not allowed. All connections must be made on terminals in junction boxes.

[R011] Provide pull tape in all empty raceways. At each end, leave 12-inches of slack coiled in the box or at the end of the conduit where boxes are not installed.

[R012] Provide connectors with phenolic-insulated throat and collar with grounding lugs at enclosures with concentric knockouts.

[R013] Cut conduit square, in a manner which will result in conduit openings not being restricted; clean cut ends, and remove burrs.

[R014] Conduit spacers: Install in accordance with manufacturer's printed installation instructions.

[R015] Field bend conduit with tools designed for the purpose.

[R016] Fasten conduit to hubless boxes with two locknuts and a grounding bushing.

[R017] For each unused conduit, pull out all conductors and provide 1,250 lb. tensile strength Polyaramid pull tape with linear foot marking and destination labels.

[R018] If encased conduit is PVC, complete a transition to GRS at least 6-inches before emerging from encasement. The transitional non-PVC conduit shall be at least 12-inches in length and shall be attached to PVC conduit with materials and methods approved for the purpose.

[R019] Concrete encasements and stub-ups shall be unreinforced concrete except where differential settlement has been indicated. Where settlement has been projected, encase a No. 6 or No. 4 rebar at each corner of encasement.

[R020] Inject sealant into conduits at exterior boxes and wireways and at the first box on conduit entering dry areas from wet areas.

[R021] Electrical Metallic Tubing (EMT)

[R021.1] EMT may be installed for the following applications, unless specified otherwise:

[R021.2] In slabs above grade, columns, walls, and suspended ceiling spaces.

[R021.3] Telephone conduits, except underground or below slab on grade.

[R021.4] Where EMT is stubbed up from floor slabs or down from ceiling plenums and not connected to an enclosure, terminate with an insulated throat connector.

[R022] Galvanized Rigid Steel Conduit (GRS)

[R022.1] GRS may be installed for all applications, except as otherwise specified herein.

[R022.2] GRS shall be secured to metal enclosures with two locknuts.

[R022.3] Insulated bushings shall be installed at all connections to cabinets and boxes. For stub-ups not attached to enclosures, terminate with an insulated throat grounding bushing.

[R022.4] Commercial pipe joint compound shall be applied to the male threads on all threaded joints and fittings.

[R022.5] Connections shall be wrench-tight and where subject to ground water, rain or spray shall be watertight.

[R022.6] Treat metallic conduit and fittings buried in earth or gravel with one of the following:

[R022.6.1] Two (2) coats of asphaltum, field applied.

[R022.6.2] Spiral wrapped, half-lapped, 20-mil plastic tape, field applied.

[R022.7] Thread conduit and ream in a manner, which will result in conduits having neither burrs nor sharp edges. Clean conduit and seal ends.

[R023] Liquid-tight Flexible Metal Conduit (LFMC)

[R023.1] LFMC shall be installed for applications as follows:

[R023.1.1] Connections to dry-type transformers.

[R023.1.2] Connections to motors exposed to rain or spray.

[R023.1.3] Connections to all electrical equipment subject to movement or vibration where exposed to rain, spray, or a corrosive atmosphere.

[R023.1.4] Connections to equipment subject to oil or grease.

[R024] Rigid Non-metallic Conduit (PVC)

[R024.1] Permitted for installation underground

[R024.2] Used or ground cable riser conduit

[R025] Raceway Sleeves and Sealing:

[R025.1] Provide sleeves consisting of EMT. Extend sleeves through floor 2-inches above the finished floor.

[R025.2] Conduits entering refrigerated spaces and hazardous areas shall be installed with sealing fittings to prevent entrance of moisture and explosive substances.

[R025.3] For conduits penetrating walls below grade, install a waterproof, modular, mechanical expansion seal consisting of interlocking synthetic rubber links shaped to fill continuously the annular space between the conduit and wall opening. Manufacturer shall determine sizing of links and wall sleeve.

[R025.4] For slabs above grade, plastic core foam block outs may be used to form sleeve openings where exposed in electrical closets and other areas not subject to flooding.

[R025.5] Raceways installed between lighting fixtures and outlets exposed to weather and interior conditioned space shall be sealed with ductseal at the last outlet in the conditioned space.

[R025.6] Where raceways penetrate fire-rated walls, seal annular opening around pipe with fire-retardant sealant.

[R026] Boxes: Install all boxes in accordance with NFPA 70 (NEC) and Contract Documents.

[R027] Repair/Restoration: If a product is not compliant with section, remove product and install new. Where galvanizing is damaged during fabrication or installation, repair damage.

[R028] Painting: If conduits are exposed to public view, paint installed conduits, spacers, fittings, straps, clamps, and junction boxes, to match the painted surface next to conduits.

6.2.10 WIRING DEVICES REFERENCES

[R01] National Electrical Manufacturer's Association (NEMA): ICS-6 Industrial Control and Systems Enclosures

[R01.1] Underwriters Laboratories, Inc. (UL)

[R01.2] 231 Power Outlets

[R01.3] 498 Attachment Plugs and Receptacles

[R01.4] 943 Ground-Fault Interrupters.

[R02] Federal Specifications (FS)

[R02.1] W-C-596/40D Connector, Receptacle, Electrical, General Purpose, Duplex, General Grade and Hospital Grade, Grounding, 2 Pole, 3 Wire, 20 Amperes, 125 Volts, 50/60 Hertz

[R02.2] W-C-596/41D Connector, Receptacle, Electrical, General Purpose, Single, Hospital Grade, Grounding, 2 Pole, 3 Wire, 20 Amperes, 125 Volts, 50/60 Hertz

[R02.3] W-C-596/107A Connector, Receptacle, Electrical, Special Purpose, Single, Grounding, 2 Pole, 3 Wire, 20 Amperes, 277 Volts, 50/60 Hertz

[R02.4] W-S-896F (1)Switches, Toggle (Toggle and Lock), Flush Mounted (General Specification)

6.2.10.1 Wiring Devices Submittals

[R01] Product Data, equipment drawings and installation instructions.

6.2.10.2 Wiring Devices Requirements

[R01] Subject to compliance with the Contract requirements, provide products by one of the following or an equivalent manufacturer, which must be pre-approved by MARTA in writing:

[R01.1] Legrand/Pass and Seymour

[R01.2] Leviton Products, Inc.

[R01.3] Lutron

[R01.4] O-Z Gedney; a unit of General Signal.

[R01.5] Square D Co.

[R01.6] Eaton

[R02] Receptacles:

[R02.1] Except as otherwise noted on the Contract Drawings or specified herein, receptacles shall be flush type 20A, UL 231 and UL 498, configuration 5-20R; grounded type; conforming to FS W-C-596/41D for single receptacles and FS W-C-596/40D for duplex receptacles.

[R02.2] Receptacles shall be side- or back-wired, Provide pigtail for each receptacle in the outlet box for neutral, ground, and hot so that a defect in a receptacle will not disconnect remainder of the branch circuit.

[R02.3] Receptacles shall also be weather resistant and tamper resistant where installed in non-conditioned space or is required by code.

[R02.4] Body shall be thermoplastic compound supported by mounting yoke having plastic ears.

[R02.5] Duplex and single receptacles shall be colored ivory, unless noted otherwise.

[R02.6] Ground-fault circuit interrupter shall be configuration 5-20R; rated for 125-volt AC and 20 amperes; UL 943, Group 1, Class A, with solid-state ground-fault sensing and signaling. Ground-fault trip level shall be five milliamperes and shall be noise-suppressed to the extent that nuisance tripping will be minimized. Locate outlet so that it is not blocked by equipment placement and will be accessible. The depth of the receptacle shall permit mounting in outlet boxes as shallow as 1-1/2-inches without spacers. Ground fault circuit interrupter shall be weather resistant where installed in non-conditioned space or required by code.

[R02.7] Ensure that connection to load terminals will ensure ground fault protection for other receptacles and loads connected to those terminals.

[R02.8] Provide equipment ground protection as required by NEC.

[R02.9] Receptacles for 277-volt AC service shall be rated 20 amperes, configuration L7-20R; conform to UL 231 and FS W-C-596/107A, -1 if flush-mounted and -2 if surface-mounted; and have a mating cord-grip plug.

[R02.10] Other receptacles shall be NEMA configuration as indicated on the Contract Drawings or to match connected equipment, as applicable.

[R03] Wall Switches:

[R03.1] Except as otherwise noted on the Contract Drawings or specified herein, switches shall be flush type, totally enclosed, specification grade, rated 20-ampere, 277/120-volt AC; conforming to FS W-S-896F(1), with phenolic body and base. Toggle color shall be approved by Authority.

[R04] Device Cover Plates

[R04.1] In public areas, cover plates for flush wall outlets (switch, receptacle, telephone, and signal) shall be gasketed type 302 stainless steel with a satin finish and gasketed spring-loaded caps. All other plates in wet or exterior locations shall be galvanized steel, gasketed with gasketed spring-loaded useable while plug is connected caps. All other plates for interior areas shall be galvanized steel. Fasteners shall match plate finish.

[R04.2] Weatherproof covers for devices exposed to weather, rain or spray or where indicated on drawings shall be cast and gasketed lockable, useable while plug is connected metal cover boxes with wire notch at the lower part, lift type. Type, conforming to NEMA ICS 6 - 110.15, Type 4.

6.2.10.3 Wiring Devices Installation Requirements

[R01] The Contractor shall perform the following tasks:

[R01.1] Install all devices in accordance with the manufacturer's printed installation instructions.

[R01.2] Where two or more switches or receptacles are shown on the Contract Drawings at the same location, they shall be ganged and covered with one cover plate.

[R01.3] If a product is not compliant with section, remove product and install new.

[R01.4] Where galvanizing is damaged during fabrication or installation, repair damage.

[R01.5] If devices are scratched and damaged during installation, remove product or device cover plate and install new.

6.2.11 IDENTIFICATION FOR ELECTRICAL SYSTEMS

[R01] The Contractor shall furnish and install nameplate assemblies, conduit and wire markers, warning labels, and other forms of identification for electrical equipment. Labels shall indicate source of power circuit.

[R02] The Contractor shall individually label equipment in accordance with the listing of the electrical schedules and/or drawings.

[R03] The Contractor shall adhere to Identification References associated with:

[R03.1] American National Standards Institute (ANSI): C2 National Electrical Safety Code

[R03.2] American Society for Testing and Materials (ASTM): B209, Aluminum and Aluminum-alloy Sheet and Plate

[R03.3] National Fire Protection Association (NFPA); 70, National Electrical Code (NEC), and 70E, Standard for Electrical Safety in the Workplace

[R03.4] SAE International (SAE); AMS-DTL-23053/5, Insulation Sleeving, Electrical, Heat Shrinkable, Polyolefin, Flexible, Crosslinked; and AS-81531, Marking of Electrical Insulating Materials

[R03.5] Occupational Safety and Health Administration (OSHA): Code Federal Regulations, Title 29, Chapter XVII, Part 1910.145, Accident Prevention Signs and Tags

[R04] Identification Submittals

[R04.1] Product Data, equipment drawings and installation instructions.

[R04.2] Samples: Site specific requirements as indicated

[R05] Identification Requirements

[R05.1] Subject to compliance with the Contract requirements, provide products by one of the following manufacturers or an equivalent manufacturer, which must be pre-approved by MARTA in writing:

[R05.1.1] Appleton Electric Co.

[R05.1.2] Efcor, Inc. (part of Hubble)

[R05.1.3] Hellerman Tyton Products

[R05.1.4] Ideal Industries

[R05.1.5] Minnesota Mining and Manufacturing (3M) Co.

[R05.1.6] Panduit Corp.

[R05.1.7] Thomas and Betts Corporation

[R05.2] Nameplate: Three-layer laminated plastic having white surface layers and black inner layer. Letters shall be Helvetica style and numerals shall be Arabic. Engraved letters and numerals shall be black and of the following heights, unless indicated otherwise in the design documents or as required by NEC or NFPA 70E.

[R05.3] Designations of all new or reworked interface terminal cabinets, panel boards, distribution panel boards, pull boxes, junction boxes, transfer switches, and reworked boxes: 1/2-inch.

[R05.4] Rating and voltage source of panelboards: 1/4-inch.

[R05.5] Location and circuit of, and load severed by, individual circuit breakers, switches, and motor starters in panelboards: 1/4-inch.

[R05.6] Load served by individual circuit breakers, disconnect switches, and motor starters other than those in panelboards: 1/4-inch. Nameplates for generator, distribution panelboards, panelboards, ATS, pullboxes, junction boxes, and devices serving loads supplied from the emergency power source shall be red and shall have "(EMERGENCY)" indication underneath the name.

[R05.7] Fastenings: Stainless steel screws or rivets.

[R05.8] Conduit Identification Tags: Provide and install stainless steel labels to each end of conduits at related devices, pullboxes, junction boxes, manholes, intermediate pullboxes, and terminating enclosures. Letters and numerals shall be 1/2-inch high, engraved on the stainless steel labels with black paint fill. Information shall include source and destination.

[R05.9] Plasticized Tags: Use appropriately worded pre-printed or partially pre-printed accident prevention and operational tags. Tags shall be on plasticized card stock, approximately 3-1/4 inches by 5-5/8 inches in size, and have a matte finish. Cards shall have a brass grommet and wire fastener.

[R05.10] Wire and Cable Markers: Markers shall be flame retardant, tolerate temperatures as high as 135 degrees C without becoming faded, restriction of hazardous substances (RoHS) compliant, and meet SAE AMS-DTL-23053/5 class 1 and 3 specifications for material and functional requirements. Markings shall be permanent after printing, meeting permanence requirements of SAE AS-81531.

[R05.11] Warning labels: Provide arc flash warning label on each equipment compartment door, located to be clearly visible to qualified persons before examination, adjustment, servicing, or maintenance of the equipment, in accordance with the requirements of NFPA 70 and OSHA. The warning label shall be designed to warn of potential hazards, including the equipment flash protection boundary, its incident energy level, and the required personal protective equipment (PPE), Project number and date of calculation.

[R06] Identification Installation Requirements

[R06.1] Where identification is applied to surfaces that require a finish, install identification after the surface has been finished.

[R06.2] Clean surfaces on which assemblies and markers will be applied.

[R06.3] Install in such a manner as to prevent damage to attaching surfaces.

[R06.4] Install engraved signs at or on each enclosed circuit breaker, enclosed switch, panelboard, special apparatus, and communications and signal systems, unless equipment is specified herein with its own self-explanatory identification.

[R06.5] Install nameplates parallel to equipment lines on front of the product being identified.

[R06.6] Nameplates shall bear lettering and notations corresponding to notations on the electrical schedules, drawings, and/or wiring diagrams. Name plates shall also include the source of power

[R06.7] Signs shall not cause interference with operation and maintenance of equipment.

[R06.8] Attach signs with stainless-steel screws.

[R06.9] Install conduit markers on each conduit.

[R06.10] During backfilling, install marker tape continuously at six-inches to eight-inches below finished grade, above buried power and communication cables and conduits.

[R06.11] Install multiple markers 12-inches on center where cables or conduits are installed in groups exceeding 16-inches wide.

[R06.12] Install wire markers on each new or reworked conductor in ATS, panelboard gutters, pull boxes, outlet and junction boxes, on terminals, and at load connections. Install markers on each power and lighting circuit. Show branch circuit and feeder numbers. Install markers on control and communications wiring. Show wire numbers.

[R06.13] Conductors No. 10 AWG or smaller shall have the outer covering color-coded to indicate phase, neutral, and ground conductors. Color-coded self-adhesive one-inch wide tape bands shall be installed on conductors larger than No. 10 AWG. Colors shall be as follows:

Table 6-2: Color-Coded Conductors

Phase/Neutral/Ground	208Y/120V Systems	480Y/277V Systems
Phase A	Black	Brown
Phase B	Red	Orange
Phase C	Blue	Yellow

Neutral	White	Gray
Ground	Green	Green

[R06.14] Color-code of switch legs shall be identical to phase conductors.

[R06.15] Install cable identification on each communication or signal cable at both ends of cable, and where cable enters and exits any wall, floor, or other partition.

[R06.16] Install manufacturer and fielded applied signs for instruction or warnings on switches, outlet controls, devices and covers of electrical enclosures. Signs shall comply with NFPA 70, OSHA, and ANSI C2.

[R06.17] Install danger signs as indicated in the design document in areas constituting a danger for persons in or about the Project. Signs shall comply with NFPA 70 and OSHA Title 29 CFR 1910.145.

[R06.18] Install typewritten directories in branch circuit panel boards that are being reworked or installed in this project, identifying the load served by each circuit.

[R06.19] If a product is not compliant with section, remove product and install new.

6.2.12 GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS

6.2.12.1 Grounding and Bonding Definitions

[R01] Counterpoise: Conductor placed in the earth around the perimeter of the facility and interconnected with the ground grid.

[R02] Ground Grid: Grid of conductors and rods placed in the earth to form a low resistance connection to the earth.

[R03] Earth Electrode System: System in which ground grids, ground rods, counterpoise, rock anchors, and piling are bonded together.

[R04] Chassis Ground Network: Network of conductors, plates, and ground bases throughout the auxiliary electrical system that qualifies as the grounding conductor.

[R05] Reference Ground Point: Ground plates and separate risers from the ground grid for electrical rooms, communication rooms, auxiliary electrical rooms, and train control room.

6.2.12.2 Grounding and Bonding Submittals

[R01] Product Data, equipment drawings and installation instructions.

[R02] Installation Drawings:

[R02.1] For grounding and bonding equipment and fittings.

[R02.2] Include details of specially fabricated fastening and supporting devices and details of assemblies and subassemblies.

[R02.3] Grounding and bonding details.

[R02.4] Submit the grounding and bonding system schedule not less than 30 days before starting work. Indicate the estimated time of each concealed installation stage and sub-stage.

6.2.12.3 Grounding and Bonding Requirements

[R01] The Contractor shall provide wiring devices that meet the following requirements:

[R01.1] Scheduling

[R01.2] Coordinate installation of the earth electrode system so as to occur when excavation, hole, and trench digging can be performed while other excavating and earth moving operations are in progress. If the system is installed prior to completion of other earth moving operations, take precautions to ensure that system components are not damaged. If system components are protected with temporary coverings, remove the coverings before the system is buried.

[R01.3] Install grounding and bonding parts exposed-to-view after the area has been cleaned and painted.

[R01.4] Before covering the electrode system, Authority will check joints and connections for integrity, for completeness of physical bonding and to ensure interconnections.

[R01.5] Subject to compliance with requirements, provide products by one of the following or an equivalent manufacturer, which must be pre-approved by MARTA in writing:

[R01.5.1] AMP by Tyco Electronics Corp.

[R01.5.2] Brady Identification Co.

[R01.5.3] Buchanan Electrical Products/Tyco Corp.

[R01.5.4] Carboline Bitumastic Co.

[R01.5.5] Continental Industries Inc.

[R01.5.6] Erico Co.

[R01.5.7] General Electric Co.

[R01.5.8] Hargers Ground Rods Co.

[R01.5.9] Royston Labs.

[R01.5.10] Square D Co.

[R01.5.11] Thomas and Betts Corp.

[R01.6] Ground Rods: Shall be copper-clad steel cores, 3/4-inch diameter by 10-feet long. Cladding shall be not thinner than 0.010-inch. Couplers for joining ground rods to form assemblies longer than 10-feet shall be designed for the purpose and shall be electrically and mechanically compatible.

[R01.7] Concrete encased electrode per NFPA 70 article 250.52(A)(3), 20 feet of copper wire encasement is preferred.

[R01.8] Grounding Connectors:

[R01.8.1] For attaching ground conductors to conduit: High copper alloy U-bolts.

[R01.8.2] Connectors for connecting cable to flat surfaces: Shall be either high copper alloy through-bolt type or high copper alloy two-piece clamp type.

[R01.9] Chassis Ground Plates: Cast copper alloy with a permanently attached green label bearing the caption "CHASSIS GROUND" in letters not less than ½-inch high.

[R01.10] Chassis Grounding, Electrode Grounding Conductors, isolated equipment grounding conductors in metal conduits, and bare copper conductors when not in metal conduit for: Copper cable having Type XHHW or XHHW-2 green insulation.

[R01.11] Ground Plates: Ground plates associated with reference ground points shall be hard drawn copper as indicated.

[R01.12] Clear Plastic Covers: Shall have dimensions as indicated and be installed over the signal ground plate. The cover shall extend at least one-half inch beyond each edge of the

plate. The cover shall have a permanently attached yellow label bearing the caption "CAUTION - SIGNAL GROUND" in letters not less than ½-inch high.

[R01.13] Conduit and Conduit Fittings:

[R01.13.1] Shall be as specified in Section, 6.2.9 RACEWAYS AND BOXES FOR ELECTRICAL SYSTEMS.

[R01.14] Bond and Weld Sealant: Shall be polyethylene-backed compound. Provide Tapecoat T-Tape GPE, or accepted equivalent.

[R01.15] Welded Ground Connections: Provide either Continental Industries ThermOWeld, ERICO Products, Inc.'s Cadweld Process, or other exothermic welding process acceptable to the Authority.

[R01.16] Ground Connectors: Mechanical type, two-piece, consisting of copper wedge and "C" spring. They shall be suitable for the required connections. Provide AMP Special Industries AMPACT C-LOK, or accepted equivalent.

[R01.17] Bitumen: Cold-applied fast drying type coal tar. Provide Carboline Bitumastic 300M Coal Tar Epoxy, or accepted equivalent.

[R01.18] Wire Markers: Section IDENTIFICATION FOR ELECTRICAL SYSTEMS.

[R01.19] Cable Ties: Thomas and Betts black, Heat Stabilized/Ultraviolet Resistant, Type TY2(x) MX-A, or accepted equivalent.

[R01.20] Nameplates: Shall be identified as specified in Section IDENTIFICATION FOR ELECTRICAL SYSTEMS.

6.2.12.4 Grounding and Bonding Installation Requirements

[R01] Examine surfaces and structures to, and on, which equipment will be installed to ensure that they will support the equipment. Surfaces to be concealed by equipment shall be finished before the equipment is installed.

[R02] Verify that anchor bolts, channels, conduits, and mounting surfaces are compatible with equipment.

[R03] Do not connect grounding products to utility lines.

[R04] Surface Preparation: Clean surfaces on which equipment will be installed.

[R05] Auxiliary AC Distribution System:

[R05.1] Connect transformer neutrals to earth electrode system.

[R05.2] Distribution neutrals shall be isolated from equipment cabinets and structural elements.

[R05.3] Install equipment grounding conductors in each conduit, raceway, and cable tray. Connect conductors to cabinets or equipment at one end and to the ground bus at the other end.

[R05.4] Make joints electrically continuous between sections of conduit, fittings, and boxes. Apply conductive lubricant to pipe and locknut threads before tightening locknut. Avoid damaging paint and other finishes. Protect bonds against corrosion by finishing with either the same type of paint as used on the products or silicone grease.

[R06] Properly bond the following equipment and systems:

[R06.1] Bond the metal equipment housings of motors, generators, and other types of electrical rotating machinery using a copper bonding conductor to the nearest chassis ground plate or grounding pigtail.

[R06.2] Telephone cabinets, trip switches, signal housings, and all enclosures housing electrical equipment.

[R06.3] All exposed metal objects within pullboxes and manholes.

[R07] Exothermically weld or mechanically bond the grounding system. Weld all buried and otherwise inaccessible connections.

[R08] If a product is not compliant with section, remove product and install new.

[R09] Touch up finishes of factory-painted apparatus where finish is marred during delivery or installation, to match the painted apparatus surface and with manufacturer's recommended touch-up paint

[R010] Where galvanizing is damaged during fabrication or installation, repair damage.

6.2.13 CONCRETE

[R01] General Information Curb-Gutter-Sidewalk

[R01.1] Contractor furnished and installed concrete curb, gutter, and bollards shall meet the following codes and standards:

[R01.2] Georgia Department of Transportation (GDOT): Standard Specifications, Construction of Transportation Systems (SSCTS)

[R01.2.1] Section 833 Joints Fillers and Sealers

[R01.2.2] Section 853 Reinforcement and Tensioning Steel

[R01.3] American Society for Testing and Materials (ASTM)

[R01.3.1] C67 Sampling and Testing Brick and Structural Clay Tile

[R01.3.2] C309 Liquid Membrane-Forming Compounds for Curing Concrete

[R01.3.3] C936 Solid Concrete Interlocking Paving Units

[R01.4] Quality Control: Construction equipment, tools, and supplies

[R01.4.1] Forms: Fixed or slip type.

[R01.4.2] Fixed forms: True, wood or steel, and with smooth, straight upper edge. Form curves with radius of less than 150 feet with bendable forms.

[R01.4.3] Surface wood forms on the concreting side and with true- surfaced upper edge nominally two inches thick; wood forms for curves, grade changes, and curb returns may be bendable and thin plank forms. Back forms for curb returns may be ½-inch thick cleated together along full depth of curb.

[R01.4.4] Depth of forms at back shall be equal to full depth of curb. Depth of face forms shall be equal to the full face height of curb.

[R01.4.5] Concrete-cutting saw: Abrasive type blade.

[R01.4.6] Form clamps, spreaders, and braces: Rigid.

[R01.5] Submittals

[R01.6] Submit Product Data for equipment and material as listed in this Section.

[R01.7] Mix design.

[R01.8] Manufacturer's product data for saw cutting equipment, joint sealer, and expansion joint filler.

[R01.9] Notify the Authority of intent to place concrete not less than five workdays before scheduled placing.

[R01.10] Job Conditions:

[R01.10.1] Protection: Protect placed curb and gutter from traffic for not less than seven days.

[R01.10.2] Existing conditions: Substrate shall be capable of supporting concrete and imposed loads.

[R01.10.3] Environmental conditions: Place concrete only in dry weather with ground temperatures above 40 degrees F. Protect concrete from effects of rain before concrete has hardened. Have materials for protecting the surface of the concrete available at all times during concrete placement. Such protective materials shall consist of covering material such as burlap or cotton mats, curing paper or plastic sheeting. When rain appears imminent, stop paving operations and place protection covering over unhardened concrete.

[R01.11] Scheduling and Sequencing

[R01.11.1] Scheduling of concrete work.

[R01.11.1.1] Finish concrete on same workday when placed.

[R01.11.1.2] Saw cut during daylight, and at optimum time after placing concrete.

[R01.11.2] Sequencing curb and gutter

[R01.11.2.1] Thoroughly clean and coat forms with form oil before placing concrete.

[R01.11.2.2] Moisten and compact subgrade before placing concrete reinforcement.

[R01.11.2.3] Wet subgrade and forms immediately before placing concrete.

[R01.11.2.4] Remove front curb forms no sooner than one hour or later than six hours after placing concrete. Remove forms only after concrete has taken its initial set.

[R01.11.2.5] Trowel curb face immediately after front curb form has been removed.

[R01.11.2.6] Apply fine brush finish on top and face of curb immediately after troweling.

[R01.11.3] Sequencing sidewalk

[R01.11.3.1] Thoroughly clean and coat forms with form oil before placing concrete.

[R01.11.3.2] Wet subgrade and forms immediately before placing concrete.

[R01.11.3.3] Remove forms only after concrete has taken its initial set.

[R01.11.3.4] Apply broom finish.

[R01.11.3.5] Saw cut contraction joints.

6.2.13.1 Concrete Products

[R01] Concrete: Class 4000E.

[R01.1] Concrete Reinforcing: Supporting devices shall be capable of supporting a vertical load of 200 pounds. Deformed reinforcing bars conforming to GDOT SSCTS Article 853.2.01A.

[R02] Concrete Accessories

[R02.1] Expansion joint filler: Resilient bituminous type.

[R02.2] Filler holders shall be sheet steel not lighter than 16 gauge, channel-shaped, slotted, and of a size which will cover strip to a depth of not less than 4-1/2 inches; holder ends shall be spread to admit end supports.

[R02.3] Joint Sealer: Silicone Type; GDOT SSCTS Article 833.2.06, Type A for tooled joints; Type B for self-leveling joints. Hot poured Type sealer between concrete thickened edge and existing asphaltic concrete pavement; GDOT SSCTS Article 833.2.02, with rubber.

[R02.4] Backer rod: Closed cell expanded polyethylene foam rod. Size backing to allow for 25 percent compression of the rod when inserted into joint.

[R02.5] Bond breaking tape (masking tape) for thickened edge expansion joint 3/4-inch wide, GDOT SSCTS Article 833.2.06, Type N.

[R03] Bollards: Six-inch, schedule 80 galvanized steel pipe.

[R04] Mixing: Slump limits shall not be more than four inches without the use of high-range water reducers and shall not be more than six inches with the use of high-range water reducers.

[R05] Curing Compound: Liquid, membrane-forming; ASTM C309, Type 2 white pigmented.

[R06] Preformed Joint Filler: Resilient bituminous type; GDOT SSCTS Article 833.2.01C.

[R07] Expansion Joint Sealer: Silicone Type; GDOT SSCTS Article 833.2.06, Type A for tooled joints; Type B for self-leveling joints.

6.2.13.2 Concrete Execution

[R01] Examination: Ensure that curb trench subgrade is smooth and compacted.

[R02] Preparatory Work

[R02.1] Excavate curb and gutter trench and sidewalk subgrade true-to-grade and cross-section within tolerances, and to template. If soft subgrade occurs, remove unsuitable material as directed by the Authority and replace with graded aggregate base.

[R02.2] Cut and remove existing sidewalk where new sidewalk will be constructed. Excavate the subgrade and place and compact the graded aggregate base.

[R02.3] Moisten and compact subgrade where curb and gutter will be constructed.

[R02.4] Clean, coat, align, grade, and wet forms. Secure forms in-place with stakes spaced on not more than four-foot centers. Indicate grade of curb tops by an offset guide line.

[R02.5] Cut curb and gutter to be reconstructed to a depth of not shallower than 1-1/2-inches at or at first scoring line beyond planned point. Remove section to be reconstructed.

[R02.6] Clean, and drill holes in pavement slab; set dowels in holes, and grout annulus.

[R02.7] Tolerances: When tested with a template set on side forms, curb subgrade cross-section shall vary not more than ¼-inch.

[R03] Formwork:

[R03.1] Place side forms resulting in full bearing on sub-base; an expansion gap of approximately 0.01-foot, and in alignment with design line, elevation, and grade. Support side forms to ensure that deviation of form from indicated grade is not more than 0.01 foot.

[R03.2] Stake side forms at end of each section and on not more than five-foot centers.

[R04] Placing Concrete: Tolerances: When tested with a 10-foot straightedge, top and face of curb and gutter surface shall vary not more than 1/8-inch in 10-feet except at curves and at grade changes.

[R05] Expansion Joints

[R05.1] For curb and gutter, install expansion joint filler at right angles to curb line on not more than 100-foot intervals, at ends of curb returns, and at junctures with structures.

[R05.2] For sidewalks, install expansion joint filler at right angles to the sidewalk at junctures with structures, retaining walls, curb and gutter, and existing sidewalk. When the sidewalk is adjacent to curb, the location of expansion joints shall match the location of the curb and gutter expansion joints.

[R05.3] Shape expansion joint filler to conform to curb and gutter and sidewalk cross-section.

[R06] Curb and Gutter Contraction Joints: Form a groove, at 10-foot intervals, and tool groove edges to 1/4-inch radius.

[R07] Sidewalk Contraction Joints: The interval of contraction joints for sidewalks shall be equal to the width of the sidewalk. Saw contraction joints before uncontrolled cracking occurs. Start sawing as soon as the concrete has sufficiently hardened to permit sawing without raveling the surface.

[R08] Finishing Concrete

[R08.1] Trowel curb face smooth either to a depth of not less than two inches below the flow line or to the flow line of the integral curb and gutter. Finish with steel trowel. Hand trowel curb top and face, and tool front and back edges.

[R08.2] Give curb top and face a fine brush finish. Make brush strokes parallel with curb line. No coarse aggregate shall show on finished curb surface.

[R08.3] Broom finish sidewalk.

[R09] Raised Median Construction: Install the bollards and all stub-ups prior to placing the Portland cement concrete. The location of the bollards and all stub-ups shall be accepted by the Authority prior to placing the concrete.

[R010] Expansion Joint Sealer: Place in accordance with sealer manufacturer's printed installation instructions.

[R011] Cleaning and Waste Management: Clean discolored concrete with detergent and water and rinse concrete thoroughly.

[R012] Repairing: Remove damaged portions of curb and gutter and sidewalk between joints and replace.

6.2.14 CONCRETE AND MASONRY ANCHORING

[R01] The Contractor shall furnish and install concrete anchors for materials and equipment as described in this section.

6.2.14.1 Concrete and Masonry Anchoring References

[R01] American Concrete Institute (ACI)

[R01.1] 318 Building Code Requirements for Structural Concrete

[R01.2] 355.2 Standard for Evaluating the Performance of Post-Installed Mechanical Anchors in Concrete

[R02] ASTM International (ASTM)

[R02.1] A36 Carbon Structural Steel

[R02.2] A153 Zinc Coating (Hot-Dip) on Iron and Steel Hardware

[R02.3] A193 Alloy-Steel and Stainless Steel Bolting for High-Temperature Service

[R02.4] A307 Carbon Steel Bolts and Studs, 60,000 psi Tensile Strength

[R02.5] A510 General Requirements for Wire Rods and Coarse Round Wire, Carbon Steel

[R02.6] A615 Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement

[R02.7] A706 Low-Alloy Steel Deformed and Plain Bars for Concrete Reinforcement

[R02.8] B633 Electrodeposited Coatings of Zinc on Iron and Steel

[R02.9] B695 Coatings of Zinc Mechanically Deposited on Iron and Steel

[R02.10] C881 Epoxy-Resin-Based Bonding Systems for Concrete

[R02.11] F1554 Anchor Bolts, Steel, 36, 55, and 105-ksi Yield Strength

[R03] Federal Specifications (FS): A-A-1923A, Concrete Expansion Anchors

[R04] International Code Council - Evaluation Service (ICC-ES)

[R04.1] AC01 Acceptance Criteria for Expansion Anchors in Masonry Elements

[R04.2] AC58 Acceptance Criteria for Adhesive Anchors in Masonry Elements

[R04.3] AC70 Acceptance Criteria for Fasteners Power-Driven into Concrete, Steel, and Masonry Elements

[R04.4] AC106 Acceptance Criteria for Predrilled Fasteners (Screw Anchors) in Concrete or Masonry Elements

[R04.5] AC193 Acceptance Criteria for Mechanical Anchors in Concrete Elements

[R04.6] AC308 Acceptance Criteria for Post-Installed Adhesive Anchors in Concrete Elements

[R05] Underwriters Laboratories, Inc. (UL)

[R06] Factory Mutual Global (FMG)

6.2.14.2 Concrete and Masonry Anchoring Submittals

[R01] Product Data: Submit data for proprietary materials, manufacturer's specifications (including finishes and/or materials), Material Safety Data Sheets (MSDS), and installation procedures.

[R02] Test Reports: ICC-ES listings and performance data that includes recommended loading for each application.

6.2.14.3 Concrete and Masonry Anchoring Requirements

[R01] Post-Installed anchors and related materials shall be listed by one or more of the following agencies, as applicable:

[R01.1] ICC-ES

[R01.2] UL

[R01.3] FMG

[R02] Materials and workmanship shall comply with the applicable requirements of the codes and standards listed in Subsection 6.2.2.

[R03] Substitutions

[R03.1] Only manufacturers with an ICC-ES listing will be considered for substitution requests.

[R03.2] Contractor shall submit for Authority review, calculations that are prepared and sealed by a registered Professional Engineer licensed in the State of Georgia demonstrating that the substituted product is capable of achieving the pertinent equivalent performance values of the specified product using the appropriate design procedure and/or standard(s) as required by the Building Code.

[R03.3] The calculations shall specify the diameter and embedment depth of the substituted product. Any increase in material costs for such submittal shall be the responsibility of the Contractor.

[R04] Expansion Anchors

[R04.1] Concrete Wedge Anchors: Anchors used to transmit load between structural elements and/or from life safety-related attachments shall be designed in accordance with Appendix D of ACI 318, which requires post-installed mechanical anchors to be qualified according to ACI 355.2. Such anchors shall be an imperial sized, threaded stud with an integral cone expander and three-segment expansion clip. The stud shall be manufactured from carbon steel and the expansion clip shall have two undercutting embossments per segment and be manufactured from type 316 stainless steel. Carbon steel anchors shall have an electroplated zinc finish in accordance with ASTM B633, Class SC1, Type I.

[R04.2] Anchors shall have an evaluation report issued by ICC-ES and have been tested and qualified for performance in cracked and uncracked concrete in accordance with ACI 355.2 and ICC-ES AC193 for all mandatory tests including the following:

[R04.2.1] Seismic tension and shear in cracked concrete.

[R04.3] Unless otherwise noted, concrete wedge anchors shall be:

[R04.3.1] "Strong-Bolt" Wedge Anchors by Simpson Strong-Tie (ICC-ES ESR-1771)

[R04.3.2] "Strong-Bolt 2" Wedge Anchors by Simpson Strong-Tie (ICC-ES ESR-3037)

[R04.3.3] Accepted equivalent, see Article 15.35.3 of this Section.

[R05] Masonry Wedge Anchors

[R05.1] Anchors shall meet the physical requirements of FS A-A-1923A, Type 4. Anchors shall be non-bottom bearing type with a single piece steel expansion clip providing 360-degree contact with the base material and shall not require oversized holes for installation. Carbon steel anchors shall have an electroplated zinc finish or shall be mechanically galvanized in

accordance with ASTM B695, Class 55, Type 1, as appropriate. Stainless steel anchors shall be type 303, 304, or 316.

[R05.2] Anchors shall have an evaluation report issued by ICC-ES and have been tested in accordance with ICC-ES AC01 for all mandatory tests and including the Seismic tension & shear, Combination of tension and shear loads, and Critical and minimum edge distance.

[R05.3] Unless otherwise noted, wedge anchors shall be “Wedge-All” Wedge Anchors by Simpson Strong-Tie (ICC-ES ESR-1396) or accepted equivalent.

[R06] Adhesive Anchors

[R06.1] Adhesive anchors shall consist of an insert and an adhesive formula. Inserts shall meet the requirements of ASTM A307, A36, A193 Grade B7, or F1554 for threaded rods or ASTM A615 or A706 for rebar. For exterior exposure, the threaded insert shall be stainless steel or zinc coated carbon steel. The zinc coating shall be either hot-dipped in accordance with ASTM A153 Class C or D; mechanically deposited in accordance with ASTM B695, Class 65, Type I; or demonstrated through tests to be equivalent to the coatings previously described.

[R06.2] Concrete Anchoring Adhesives are anchors used to transmit load between structural elements and/or from life safety-related attachments shall be designed in accordance with Appendix D of ACI 318 as amended by the specific design provisions of ICC-ES AC308. Adhesives shall be a cartridge type, two-component, high solids epoxy based system dispensed and mixed through a static mixing nozzle supplied by the manufacturer. The adhesive shall meet the minimum requirements of ASTM C881 Type I and IV, Grade 3, Class C. Acceptable installation and performance temperature ranges shall be verified with manufacturer’s literature prior to installation.

[R06.3] Epoxy adhesives shall have an evaluation report issued by ICC-ES and have been tested and qualified for use in cracked and uncracked concrete in accordance with ICC-ES AC308 for all mandatory tests and including:

[R06.3.1] Seismic tension and shear in cracked concrete

[R06.3.2] Static and cyclic cracks

[R06.3.3] Horizontal and overhead installations

[R06.3.4] Long term creep at elevated temperatures

[R06.3.5] Damp holes

[R06.3.6] Freeze-thaw conditions

[R06.3.7] Critical and minimum edge distance and spacing

[R06.3.8] Unless otherwise noted, cracked concrete epoxy adhesives shall be “SET-XP” (ICC-ES ESR-2508) by Simpson Strong-Tie and accepted equivalent.

[R06.4] Masonry Anchoring Adhesives: Adhesive shall be a cartridge type, two-component system dispensed and mixed through a static mixing nozzle supplied by the manufacturer. The adhesive shall meet the minimum physical requirements of ASTM C881 Type I and IV, Grade 3, Class A, B and C. Acceptable installation and performance temperature ranges shall be verified with manufacturer’s literature prior to installation.

[R06.5] Acrylic adhesives shall have an evaluation report issued by ICC-ES and have been tested in accordance with ICC-ES AC58 for all mandatory tests and including the following:

[R06.5.1] Seismic tension and shear

[R06.5.2] Long term creep at elevated temperatures

[R06.5.3] Static loading at elevated temperatures

[R06.5.4] Damp and water-filled holes

[R06.5.5] Freeze-thaw conditions

[R06.5.6] Critical and minimum edge distance and spacing

[R06.6] Unless otherwise noted, masonry anchoring adhesives shall be “Acrylic-Tie Adhesive” (AT) (ICC-ES ER-5791) by Simpson Strong-Tie, “SET Epoxy-Tie High-Strength Adhesive” (SET) (ICC-ES ESR-1772) by Simpson Strong-Tie or accepted equivalent.

[R06.7] Installation Temperature: When the base material temperature drops below 40° F (5° C), only Acrylic or Encapsulated Adhesives shall be used for adhesive installations. See manufacturer’s instructions for additional minimum temperature requirements.

[R06.8] Hollow Substrates: The adhesive manufacturer’s screen tubes shall be used for adhesive installations into hollow substrate material. Encapsulated Adhesives shall not be used in hollow substrate applications.

[R06.9] Moisture: Encapsulated Adhesives shall not be used when moisture is present in or around hole.

[R06.10] Oversized Holes: Refer to manufacturer's information if drilled hole size is larger than what is recommended.

[R06.11] Core-drilled holes: Refer to manufacturer's information if holes are drilled with a core-drill bit.

[R07] Concrete and Masonry Screw Anchors

[R07.1] Concrete Screw Anchors: Anchors used to transmit load between structural elements and/or from life safety-related attachments shall be designed in accordance with Appendix D of ACI 318 as amended by the specific design provisions of ICC-ES AC193. Anchors shall be manufactured from carbon steel that is subsequently heat-treated. Anchors shall be zinc-plated in accordance with ASTM B633 or mechanically galvanized in accordance with ASTM B695.

[R07.2] Anchors shall have an evaluation report issued by ICC-ES and have been tested in accordance with ICC-ES AC193 for all mandatory and including Seismic tension and shear, and Reliability of screw anchors against brittle failure.

[R07.3] Unless otherwise noted, cracked concrete screw anchors shall be "Titen HD" and "Titen HD Rod Hanger" Anchors (ICC-ES ESR-2713) by Simpson Strong-Tie or accepted equivalent.

[R07.4] Masonry Screw Anchors: Anchors shall be manufactured from carbon steel that is subsequently heat-treated. Anchors shall be zinc-plated in accordance with ASTM B633 or mechanically galvanized in accordance with ASTM B695.

[R07.5] Anchors shall have an evaluation report issued by ICC-ES and have been tested in accordance with ICC-ES AC106 for Seismic tension and shear and Reliability of screw anchors against brittle failure.

[R07.6] Unless otherwise noted, concrete and masonry screw anchors shall be "Titen HD" Anchors (ICC-ES ESR-2713) by Simpson Strong-Tie or accepted equivalent.

[R07.7] Limitations:

[R07.7.1] High strength, heat-treated anchors are recommended for permanent dry, interior non-corrosive applications or temporary outdoor applications.

[R08] Powder Actuated Fasteners: Fasteners shall be drive pin and threaded stud types, as applicable for each condition. Fasteners shall be manufactured from AISI 1060 to 1065 steel

tempered to a Rockwell “C” Hardness of 51-56, and have a mechanically galvanized finish. Fasteners shall have a minimum bending yield strength of 90,000 psi.

[R08.1] Fasteners shall have an evaluation report issued by ICC-ES and have been tested in accordance with ICC-ES AC70.

[R08.2] Unless otherwise noted, powder actuated fasteners shall be Manufactured by Simpson Strong-Tie (ICC-ES ESR-2138) or accepted equivalent.

[R09] Gas Actuated Fasteners: Fasteners shall be drive pin and threaded stud types, as applicable for each condition. Fasteners shall be manufactured from steel complying with ASTM A510, Grade 10B60 and tempered to a Rockwell “C” core hardness of 53-56 and have a zinc-plated finish.

[R09.1] Fasteners shall have an evaluation report issued by ICC-ES and have been tested in accordance with ICC-ES AC70.

[R09.2] Unless otherwise noted, gas actuated fasteners shall be Manufactured by Simpson Strong-Tie (ICC-ES ESR-2811) or accepted equivalent.

[R010] Anchor Sizes: The anchor size (nominal diameter and embedment depth) shall be as indicated on the Contract Drawings. If not indicated on the Contract Drawings, sizes shall be provided as required to maintain not less than the appropriate Code safety factors over manufacturer’s performance load tables. If the actual concrete compressive strength is not known, the compressive strength shall be determined through testing.

6.2.14.4 Concrete and Masonry Anchoring Installation Requirements

[R01] The Contractor shall perform the following tasks:

[R01.1] Installation of anchors shall be in strict accordance with the manufacturer’s written instructions. Where manufacturer recommends use of special tools for installation of anchors, such tools shall be used, unless otherwise permitted specifically by the Authority.

[R01.2] Where holes are drilled in concrete or masonry, holes shall be accurately and squarely drilled, holes location shall leave adequate concrete to the end edge of concrete to let concrete be able to withstand the load without cracking, and the holes shall be cleaned in accordance with the manufacturer’s recommendations.

[R02] Field Quality Control

[R02.1] Seismic Certification.

[R02.2] Special Inspection, periodic or continuous, of post-installed anchors shall be provided as required by ICC-ES evaluation reports and/or as specified by the Authority. This service shall be performed by personnel independent of the Manufacturer or Contractor so as to prevent a conflict of interest.

[R02.3] The Authority may require pullout or shear tests, in addition to Special Inspection, to determine the adequacy of anchors. A field testing program shall be established by the independent test laboratory and/or Authority and performed in accordance with appropriate ASTM test standards. Field tests shall be non-destructive whenever possible.

6.2.15 MISCELLANEOUS INSTALLATION / FIELD REQUIREMENTS

[R01] The Contractor shall be responsible for scheduling and sequencing that portion of the Work that may affect the Authority's operating rail system. The Contractor shall notify the Authority of intentions to start work on that portion of the system, and shall be responsible for observing the procedures restricting movement of personnel and equipment to the extent that the Authority's operation will not be unduly interrupted.

[R02] The Contractor shall ensure the operation of parking decks and lots, control and electrical systems, and appurtenant items are protected from damage, and ensure that adequate materials, equipment, and personnel that are required to perform the scheduled work are at the site or are immediately available.

[R03] Contractor shall be responsible for pumping any water encountered in vaults or manholes.

[R04] Contractor shall be responsible for removal of any debris or demolition material encountered or generated, on jobsite or in vaults, manholes, fan and equipment rooms, plenums, and shafts.

[R05] Existing Authority conduit may be used. The Contractor shall install innerduct in any existing conduit used that is 2-inches diameter or greater.

6.2.16 MATERIAL STORAGE

[R01] Materials, construction tools, supplies, and equipment shall be stored at MARTA facilities only in areas as authorized by the Authority's Resident Engineer/Contract Officer. Do not locate storage areas in dedicated streets, or within drip line of shrubs and trees or pedestrian

ways. Equipment and materials stored at each work site shall be protected from the weather. Stored materials shall be palletized and shall not contact the ground. Do not store gasoline, liquid petroleum gases, and other flammables undercover of any MARTA facility. Flammable substances may be stored in cabinets or sheds and must be labeled FLAMMABLE – KEEP FIRE AWAY. Other precautions shall be as stipulated in OSHA 1926.251.

6.2.17 CLEANING AND WASTE MANAGEMENT

[R01] Cleaning and Waste Management Requirements are defined as those activities of the Contractor which will ensure the following compliance:

[R01.1] Site Maintenance

[R01.1.1] Maintain worksite in accordance with MARTA and local governmental requirements applicable to worksite cleanliness and in a neat, orderly, and hazard-free condition until final acceptance of the Work. Regularly inspect facilities for hazardous conditions.

[R01.2] Hazards Control

[R01.2.1] Do not store volatile wastes on Authority premises and remove wastes from worksite daily.

[R01.2.2] Do not accumulate wastes creating hazardous conditions.

[R01.2.3] Artificially ventilate spaces where volatile and noxious substances are being used.

[R01.3] Interim Cleaning and Waste Management

[R01.3.1] Clean worksite every workday during the Project. Maintain structures, grounds, and other areas of worksite and public and private properties adjacent to worksite free from accumulations of waste materials and rubbish caused by construction operations. Place waste materials and rubbish in dump containers.

[R01.3.2] Remove or secure loose material on exposed surfaces at end of each workday or more often. Maintain worksite in hazard-free condition. Securing shall prevent dislodgement by wind and other forces.

[R01.3.3] If it is impractical to immediately remove dry waste and rubbish, wet-down material to allay dust and to prevent blowing of dust.

[R01.3.4] Empty full dump containers promptly when filled and legally dispose of contents off Authority's property.

END OF SECTION 6

7.0 PROJECT MANAGEMENT

[R01] This section describes requirements for the Contractor's project management, scheduling, and documentation for execution of the Authority's APARC System project. The Contractor's project management, scheduling and documentation systems shall be sufficiently comprehensive to enable the Authority to ascertain with confidence that the Contractor shall meet the requirements as described in this Project Manual, and to monitor the Work to determine to what degree the Contract requirements are being achieved.

7.1 PROJECT MANAGEMENT

[R01] The Contractor's Project Manager assigned to the project shall have the authority to make commitments and decisions that are binding on the Contractor.

[R02] All communications between the Authority and the Contractor shall be coordinated through the Contractor's Project Manager and the Authority's designated representative, typically the Authority's Resident Engineer (RE) or Contract Specialist. The Authority's designated representative will coordinate all Authority project activities.

[R03] The Contractor shall establish and maintain a Project Management Team to manage and perform all Contractor functions and activities as identified in the Project Manual.

[R04] The project shall be staffed from the list of project management, engineering, installation, and software personnel initially presented for the Authority's review.

7.1.1 PROJECT MANAGEMENT PLAN

[R01] The Contractor shall prepare a Project Management Plan (PMP) to the Authority for review and approval within fifteen (15) days of Administrative Notice to Proceed. **CDRL**

7.1.1.01

[R02] The Project Management Plan shall include, but not be limited to, the following:

[R02.1] Outline of overall Project Management Plan.

[R02.2] Project Description, Goals, and Objectives.

[R02.3] Scope of the Project.

[R02.4] Start-up Activities.

[R02.5] Description of Program Organization.

- [R02.6] Resource Plan
- [R02.7] Quality Control and Quality Assurance Management.
- [R02.8] Scope Management.
- [R02.9] Issue Management Plan, including process for escalating issues.
- [R02.10] Risk Management Plan.
- [R02.11] Schedule Management.
- [R02.12] Document Control.
- [R02.13] Deliverable Submission and Approval Process.
- [R02.14] Subcontractor interface and controls.
- [R02.15] Installation organization, concepts, and control.
- [R02.16] System/Software development, operations, and upgrades
- [R02.17] Ongoing program and policy review, including quality assurance
- [R02.18] Contract administration interface with MARTA
- [R02.19] Performance reporting
- [R02.20] Special projects as needed

7.2 NETWORK ANALYSIS PROGRESS SCHEDULE

[R01] The Network Analysis Progress Schedule shall show the planning, scheduling, monitoring, and reporting of the time, resources, and cost of this Project using the Critical Path Method (CPM) in a precedence format.

7.2.1 BASELINE SCHEDULE

[R01] Submit a complete Project Schedule in a precedence format, including bar chart, and accompanying reports within 40 days after the effective date of the Administrative Notice to Proceed. This schedule will become the Baseline Schedule once it is approved by the Authority. **CDRL 7.2.1.01**

[R02] The Project Schedule shall include, but not be limited to, the following:

[R02.1] Diagrams and Bar Chart: Submit two (2) copies of the computer drawn bar chart showing interdependence of activities and the sequence in which the work is to be accomplished, as planned by the Contractor. The bar chart shall contain as a minimum:

[R02.1.1] Schedule activities grouped and sorted by Start Date and Finish Date.

[R02.1.2] Columns representing Activity Identification Number, Activity Description, Original Duration, Start Date, Finish Date, and Total Float.

[R02.2] Narrative Report: Submit three (3) copies of the Narrative Report describing the following items:

[R02.2.1] Assumptions used for planning and scheduling.

[R02.2.2] The overall strategy of the Project including the planned flow of work, and a list of constraints that may affect the progress of work which are beyond the Contractor's control (i.e., availability of permits, utility coordination, etc.).

[R02.2.3] Description of access to and from the job-site(s), including the location, start and completion of the access, and any constraints associated with the access area(s).

[R02.2.4] Planning measures and contingencies aimed at avoiding the impact of seasonal weather restrictions.

[R02.2.5] A summary of work to be subcontracted including the number of crews, the planned number of shifts per day, and the number of hours per shift.

[R02.2.6] A description of the Contractor's work force, the number of crews, the planned number of days per week, the planned number of shifts per day, and the number of hours per shift.

[R02.2.7] The type, quantity duration and number of shifts per day of critical equipment to be used on the project and whether the equipment is owned by the Contractor, leased, or rented.

7.2.2 PROGRESS SCHEDULE

[R01] Update the approved Baseline Schedule and submit at monthly intervals. Reports submitted shall be current, complete, and represent the Contractor's current progress and future plans.

[R02] Submit one (1) copy of the updated computer drawn bar chart monthly. The bar chart shall include columns representing Activity Identification Number, Activity Description, Original Duration, Start Date, Finish Date, and Total Float, and present the actual status of the Project to date.

[R03] Submit three (3) copies of the following schedule reports monthly:

[R03.1] Schedule Log printout identifying open-end listings, constraints, out-of-sequence progress, and scheduling statistics.

[R04] Submit three (3) copies of the Narrative Report monthly describing the following for the reporting period:

[R04.1] Weather-related problems and proposed solutions.

[R04.2] Identify and describe any current and anticipated problems that may affect the performance of work, the factors causing the problem(s), and their impacts on the Project.

[R04.3] A description of the plans and methods to recover lost time, if the schedule status is behind.

[R05] Submit one (1) electronic .copy of the Progress Schedule using the “export” command on a CD monthly. Each schedule submittal shall have a unique file name. Include on the CD electronic versions of the Schedule Log and the Narrative Report of this section.

[R06] Review and evaluation: Following approval of the Baseline Schedule and five (5) days prior to submitting monthly progress schedule, participate in a meeting conducted by the Authority to discuss project progress and status of schedule activities. If necessary, make revisions resulting from this review and resubmit the Progress Schedule within five (5) days after the conference.

7.2.3 REVISED BASELINE SCHEDULE

[R01] If, in the opinion of the Authority, variance exists between actual progress and the baseline schedule which renders the two schedules incomparable, the Contractor may be required to submit a revised Baseline Schedule. The revised Baseline Schedule shall reflect the actual sequence of work to date and the Contractor’s future plans. Submit the revised Baseline Schedule within fourteen (14) days of the Authority’s request and in accordance with requirement in this section. **CDRL 7.2.3.01**

7.2.4 RECOVERY SCHEDULE

[R01] If in the opinion of the Authority, the Contractor falls behind the approved Baseline Schedule because of the Contractor's actions and/or lack of action, the Contractor may be required to clearly present corrective action, including resources and associated costs to recover the lost time, and submit revised logic diagrams, bar charts, accompanying reports, and electronic files for review and approval by the Authority at no additional cost to the Authority. **CDRL 7.2.4.01**

7.2.5 CHANGES TO THE CONTRACT

[R01] When a change to the work which affects the resources, cost, duration, and sequencing of schedule activities is required, submit proposed revisions to the schedule network reflecting the impact of the change. Following issuance of a Change Notice or Letter Change Order, incorporate changes to the schedule as separately identifiable activities on the first progress schedule. Such proposed revisions are made to follow the progress of work and are not to be construed as an approval of extended Contract time and related cost.

[R01.1] Add activity(s) to the current progress schedule for applicable Change Notices. Activities shall be added in a manner consistent with the requirements of this section. Incorporate the financial data and, if necessary, add or modify activity data after the Authority has issued a Change Order to conform to the approved change. The budget cost shall equal the value identified in the Change Order and shall be assigned a new Proposal Price Item.

[R01.2] Add activity(s) to the current progress schedule network representing the work in Letter Change Orders. The budget cost shall equal the estimated cost identified in the Letter Change Order and shall be assigned a new Proposal Price Item. If necessary, add or modify the initial activity, including the financial data after the issuance of an executed change order signed by the Authority to conform to the approved change.

7.2.6 FINAL AS-BUILT SCHEDULE

[R01] Submit an As-Built Schedule within 30 days after Final Acceptance of the last release. The As-Built Schedule shall provide activity relationships and logic modifications made during the course of the Project, actual activity durations, and Change Orders. Submit four (4) copies of the bar chart schedule, and one electronic file on a CD. **CDRL 7.2.6.01**

7.2.7 FAILURE TO SUBMIT

[R01] Failure to submit and obtain approval of schedule submittals within the time limits specified shall be sufficient cause to conclude that progress is not satisfactory or the Contractor's personnel responsible for planning and scheduling the Project are not performing their work in a proper and skillful manner.

[R02] The Authority may require the Contractor to take such steps as increasing Contractor's forces, equipment, shifts, or hours, as may be necessary, until such submittal has been made. Remedies for failure to submit schedules and revisions thereto specified in this section are in addition to, and not in limitation of other remedies the Authority is entitled

7.2.8 PROGRAMS, REPORTS, AND BAR CHARTS

[R01] Bar Charts shall be submitted on 11-inch by 17-inch paper.

[R02] Schedule Log Reports shall be submitted on 8.5-inch by 11-inch paper.

[R03] Narrative Reports shall be submitted on 8.5-inch by 11-inch paper.

[R04] Network Diagrams shall be submitted on 34-inch by 44-inch size paper if requested by the Authority.

7.2.9 PREPARATIONS

[R01] The Contractor shall thoroughly study the Project plans and specifications, references, significant events, work to be performed by others, and work on projects that interface with this Project before developing the plan and schedule required for this section. The Contractor's Project Manager shall meet with the Authority prior to developing the Baseline Schedule to obtain calendars and codes as necessary and to review the Authority's quality control methodology and expectations.

7.2.10 TIME EXTENSIONS

[R01] Float or slack is not time for the exclusive use or benefit of either the Authority or the Contractor. Extensions of time for performance will be granted only to the extent that equitable time adjustments for the activity or activities affected exceed the total float or slack along the network paths involved. Submit time extension requests bar chart, total float report, and narrative report supporting the Contractor's request, and in accordance with the GENERAL CONDITIONS.

7.3 MEETINGS

[R01] The Contractor shall participate in the meetings specified in the following subsections.

[R02] All meetings shall be held at the Authority's offices.

[R03] Contractor shall take meeting minutes and prepare a written record of all Project discussions and meetings, unless otherwise specified, whether telephonic or in-person. Meetings shall include presentations to stakeholders, design progress meetings, site visits, vendor coordination meetings, discussions with third-party entities, etc. Contractor shall submit an electronic copy and hard copy of meeting minutes and records of project discussions to MARTA within five (5) working days following each meeting or discussion. The minutes and records shall include subject matter, names of participants, outline of discussions, and recommendations or conclusions. Each set of minutes and each record shall be clearly identified and dated.

7.3.1 PROGRESS MEETINGS

[R01] Progress meetings shall be scheduled and attended by the Contractor's authorized representative(s) every reporting period to review progress of the project.

[R02] Progress meetings shall be used to review the progress report, written correspondence exchanged since the last meeting, and open action items. Contractor shall promptly bring to the attention of MARTA, by written notice, any betterment requested or other situations that could affect the scope, schedule, or cost of the Work.

[R03] The Contractor's authorized technical representative(s) shall also attend progress review meetings as required to discuss technical aspects of the project and to review comments on documents.

7.3.2 TECHNICAL MEETINGS

[R01] The Contractor's technical representatives shall attend meetings as necessary to clarify and refine requirements, obtain technical data, discuss design issues, and review technical documents.

[R02] The Contractor's technical representatives shall be familiar with detailed design issues to facilitate quick resolution through discussion with the Authority's technical representatives.

[R03] When appropriate, technical meetings shall be conducted as extensions to the progress meetings.

7.3.3 PROJECT PRESENTATIONS

[R01] Contractor shall prepare briefing materials as required for presentation to the MARTA's Project stakeholders.

7.3.4 POST-AWARD AND KICKOFF CONFERENCE

[R01] The Contractor shall attend the Post-Award and Kickoff Conference at the Authority's facilities within 15 days after receipt of acceptable bonds and insurance certificates. The purpose of the conference is to introduce attendees, to establish lines of communications, and to discuss administrative requirements.

[R02] The Contractor shall prepare and provide at the conference a list of attendees, and be prepared to review the list of major subcontractors, sequence of critical work, and tentative schedule of manufacture and installation.

[R03] As a minimum, the following Contractor personnel shall attend the conference:

[R03.1] Project Manager

[R03.2] Design Engineer

[R03.3] Safety Engineer

[R03.4] Quality Representative

[R03.5] EEO Officer

[R03.6] Representatives of major subcontractors.

[R04] The Contractor shall be prepared to discuss the following topics at the conference:

[R04.1] Meeting attendee introductions and responsibilities

[R04.2] Contractor's corporate and project team organization and the responsibilities and authorities of key individuals in those organizations

[R04.3] Questions concerning errors, ambiguities, omissions, and interpretations of the Contract Documents

[R04.4] Procedures for processing Engineering Change Proposals, Change Orders, Modifications, and CDRL submittals

[R04.5] Use of storage and work areas

[R04.6] Deliveries and priorities of major equipment

[R04.7] Arrangement for safety, first-aid, and emergency actions; security; and housekeeping procedures

[R04.8] Insurance, laws, codes, regulations, and permit requirements

[R04.9] Contractor's installation methods and coordination of work with the Authority and other Authority Contractor activities

[R04.10] The Contractor provided list of major subcontractors, sequence of critical work, and tentative schedule of manufacture and installation.

7.3.5 SYSTEM DEVELOPMENT REVIEWS

[R01] During system development, a formal technical design review process shall be conducted periodically by the Contractor to allow the Authority to assess the Contractor's development for compliance with the Project Manual requirements and the overall system design objectives.

[R02] The Contractor's personnel responsible for the implementation of the APARC shall participate in the development review meetings.

[R03] The development review process shall include an In-Progress Design Review and a Final Design Review.

[R03.1] In-Progress and Final Design reviews shall consist of:

[R03.2] A formal PowerPoint or similar presentation of the design

[R03.3] A discussion of unresolved comments arising from the Authority's review of the associated design documents.

[R04] The review meetings shall be conducted by the Contractor.

[R05] Review Documentation shall be provided sufficiently prior to the review meeting such that a complete review cycle (i.e., document reviewed by the Authority, comments submitted to Contractor, Contractor responds to comments) shall have been completed prior to the review.

[R05.1] For review documentation, the Contractor's written responses to the Authority's review comments from the first review of the document shall be submitted to the Authority at least ten (10) working days prior to the review meeting; however, it is not necessary to issue the revised document prior to the review meeting.

[R05.2] The Authority shall have the right to submit additional comments on any of the reference or review documentation as a result of the review meeting.

[R06] Review agendas and material shall be provided to the Authority for review at least 20 days prior to the associated review.

[R07] Issues that cannot be resolved at the formal development review meetings shall be documented as action items. The Authority will identify which action items must be completed as criteria for completion of the current review.

[R07.1] A development review and its associated milestone shall not be considered complete until the action items generated during the review and designated by the Authority to be completed for the current review have been resolved to the Authority's satisfaction.

7.3.5.1 In-Progress Design Review

[R01] The In-Progress Design Review (IDR) shall be conducted before software or hardware implementation when the system design is approximately 60 percent complete.

[R02] IDR Review Submittals shall include those items listed in Section 4.0 Implementation and Maintenance.

7.3.5.2 Final Design Review

[R01] The Final Design Review (FDR) shall include an update of all of the design activity to date.

[R02] Approval of the FDR and associated documentation will allow the software coding effort and other final designs to be formalized. The FDR documents will be accepted before any equipment is installed and tested.

[R03] In addition to the submission of PDR documentation updated to reflect continued development of the document, the results of the Authority's comments, and any design changes since the PDR review.

[R04] FDR Review Submittals shall include those items listed in Section 4.0 Implementation and Maintenance.

7.3.6 SYSTEM PROBLEM REPORT REVIEW

[R01] An updated System Problem Report listing showing the status of all SPRs (refer to Section 8.0 Quality Control) shall be provided with each Progress Report.

[R02] Beginning at the start of the Prototype, and continuing through final acceptance, the Contractor shall provide an updated System Problem Report listing in electronic form every week.

[R03] The SPR Listing shall be reviewed with the Authority:

[R03.1] Monthly, at each Progress Review Meeting

[R04] The SPR Review shall include the following activities:

[R04.1] Review new SPRs added since the last review

[R04.2] Assign priorities to new SPRs

[R04.3] Review the status and schedule of critical and high priority SPRs

[R04.4] Review the resolution of SPRs with a new status of "Pending"

[R04.5] Schedule the demonstration/testing of resolved SPRs (i.e., status of "Pending")

[R04.6] Discuss other SPRs as necessary.

7.3.7 INSTALLATION START-UP MEETING

[R01] The Installation Start-up Meeting shall be scheduled to occur at least fifteen (15) days prior to first installation activity.

[R02] Meeting notices shall be prepared and distributed four days before scheduled meeting by the Authority. Notices shall be accompanied by a copy of the meeting agenda, list of major subcontractors, sequence of critical work, and tentative schedule of construction.

[R03] As a minimum, the following Contractor personnel shall attend the installation start-up meeting:

[R03.1] Project Manager

[R03.2] Quality Assurance Representative

[R03.3] Design Engineer

[R03.4] Installation Project Superintendent

[R03.5] Safety Engineer

[R04] The Contractor shall be prepared to discuss the following topics at the meeting:

[R04.1] Meeting attendees will be introduced, and their responsibilities will be briefly described.

[R04.2] Contractor's and Authority Representative's organizational responsibilities and authorities, and Contractor personnel organization, including subcontractors

[R04.3] Adequacy of distribution of Contract Documents and the Authority's accepted installation drawings

[R04.4] Changed conditions, time extensions, and original and final field surveys.

[R04.5] Procedures for processing Interface SPRs, Deviation/Waiver Forms, Authority-generated System Problem Lists, and Notice of Rejections

[R04.6] Use of storage areas and installation areas will be discussed.

[R04.7] Deliveries and priorities of major equipment, arrangements for safety, first-aid, and emergency actions, security, and housekeeping procedures

[R04.8] Insurance, laws, codes, and regulations and permit requirements of public agencies

[R04.9] Contractor's installation and inspection methods, and coordination of the Work with the Authority's System as a whole

[R04.10] Sequence of critical work, and tentative schedule of installation, testing, and work completion shall be distributed and discussed.

[R04.11] Wayside Access Procedures

7.3.8 INSTALLATION COORDINATION MEETINGS

[R01] The Installation Coordination Meeting will be scheduled to occur weekly, or at the Authority's discretion, throughout the progress of the installation and field-testing.

[R02] The first meeting shall be scheduled at least seven (7) days prior to the scheduled start of installation work by the Contractor.

[R03] The Installation Coordination Meetings shall be held at the Authority's offices.

[R04] Unless expressly excused by the Authority, the following Contractor personnel, at a minimum, shall attend the installation coordination meetings:

[R04.1] Contractor's field representative

[R04.2] Quality Assurance Representative

[R04.3] Installation Project Superintendent

[R04.4] Design Engineer

[R04.5] Senior Test Representative

[R05] The Contractor shall be prepared to present and discuss the following topics at each Installation Coordination Meeting:

[R05.1] Minutes of previous meetings shall be reviewed, amended if necessary, and accepted.

[R05.2] Questions and issues unresolved at the previous meeting shall be reviewed and considered further.

[R05.3] Any unsatisfied request for information by the Authority will be explained.

[R05.4] Work accomplished since previous meetings, i.e., off-site fabrication problems, product delivery problems, submitted schedule slippages, problems arising from Authority-proposed changes, and other circumstances which might delay progress of Work shall be analyzed for their effect on Schedule and completion date.

[R05.5] Should the Project be behind schedule, corrective measures and procedures shall be developed to regain planned and scheduled progress.

[R05.6] Field observations, problems, the Authority's decisions, work quality, and employee work standards shall be discussed.

[R05.7] A look-ahead schedule shall be presented.

[R05.7.1] The look-ahead schedule shall include Installation, Installation Inspections, and Testing activities that are proposed during the next week.

[R05.8] Other current business shall be discussed and, if possible, concluded.

[R05.8.1] Unresolved issues and the Authority's request for new information shall be noted.

7.4 CORRESPONDENCE

[R01] Every document, letter, progress report, change order, and any other written or computer-readable material exchanged between the Contractor and the Authority shall be assigned a unique correspondence number.

[R02] Discussions and phone calls where important information is exchanged shall be documented in a letter.

[R03] The Contractor shall maintain a correspondence index and assign numbers consecutively for all Contractor documents.

The Authority will maintain a similar correspondence numbering scheme identifying documents and data submittals.

[R04] The Contractor shall establish the necessary procedures and controls to ascertain that data is submitted within the times indicated in the Contract Data Requirements List (CDRL) or as otherwise specified in these Technical Specifications.

7.4.1 CONTRACTOR TRANSMITTAL FORM

[R01] The Contractor shall accompany delivery of project record documents with a transmittal form indicating date, Project title and number, Contractor's name and address, and title of submittal, in compliance with the requirements of this section.

[R01.1] Each transmittal shall bear the signature of an authorized representative of the Contractor.

7.4.2 DATA SCHEDULE AND STATUS REPORT

[R01] Within ten (10) days after the Administrative Notice to Proceed, the Contractor shall submit a Data Schedule and Status Report in a computer printout format. **CDRL 7.4.2.01**

[R02] The Schedule and Status Report shall be a list in CDRL number sequence and shall contain the following information:

[R02.1] CDRL number and suffixes.

[R02.2] Brief title.

[R02.3] Scheduled submittal.

[R02.4] Actual submittal date and letter number.

[R02.5] Action taken by the Authority and letter number.

[R02.6] Status of submittals.

[R03] The report shall be updated and resubmitted every 30 days, until all CDRL items have been accepted.

7.5 DOCUMENTATION

[R01] Complete documentation of the APARC shall be provided.

[R02] Documentation shall be prepared in accordance with the Authority's documentation standard.

[R02.1] The Authority shall have the right to reject documents not conforming to the standard.

[R02.2] Contractor recommendations on improvements to Authority's documentation standards that in their professional opinion would further Authority's performance objectives must be submitted and resolved during planning phase of the work.

[R03] All documentation, including software source code, database, user manuals, design documents, etc., shall be in the English language.

[R04] Requirements for submittal of documentation to the Authority for review and acceptance shall be in accordance with the specific submittal requirements or as otherwise required by the Contract.

[R05] The Contractor shall establish the necessary procedures and controls to ascertain that documentation is submitted within the times specified in the Contract.

[R06] The Contractor shall identify the document on the title or cover page with the following:

[R06.1] Firm name

[R06.2] Data title and identification

[R06.3] CDRL identification number

[R06.4] Date of issue

[R06.5] Revision letter

[R06.6] Each page of the document shall bear the document identification number and revision letter.

[R06.7] Each page of the document shall have a page number including the total number of pages (e.g., Page 6 of 30).

[R07] All document section and subsection headings shall have a section number.

[R08] All contract documentation submittals shall be accompanied by a transmittal form indicating date, project title and number, Contractor's name and address, and title of the submittal.

[R08.1] Each transmittal form shall bear the signature of an authorized representative of the Contractor.

[R09] Where a document is revised for any reason, a number, date, and description in a revision block along with an indication of official approval by the Contractor's Project Manager shall document each such revision.

[R09.1] Each revision of a document shall highlight all changes made since the previous revision.

7.5.1 DRAWING PREPARATION

[R01] In executing the work of this Contract, the Contractor shall utilize standard drafting practices, symbols, and abbreviations as specified in the following paragraphs.

[R02] The Contractor shall be responsible for converting existing Authority drawings that need to be modified for the APARC project to AutoCAD format.

7.5.1.1 Drafting Standards

[R01] Drawings shall adhere to the following standards:

[R01.1] MARTA CAD and design standards.

[R01.2] American National Standard Drafting Manual, Y14 (Engineering Drawings and Related Documentation Practices).

[R01.3] American National Standards for Graphic Symbols, Y32.

[R01.4] Abbreviations for Use on Drawings and in Text, ANSI Y1.1-1972.

[R02] The Authority's intention is that it shall not be necessary to redraw standard product drawings. If the Contractor utilizes drawings prepared by others, such drawings may be prepared using the standards and symbols of those others if the drawings utilized by such others are a mix of existing product drawings and drawings prepared specifically for this Contract. However, if others provide only drawings prepared specifically for this Contract, such drawings shall conform in symbols and standards to the Contractor's drawings.

7.5.1.2 Symbols

[R01] Symbols used in documents and drawings shall conform to the standard symbols as specified in Subsection 7.5.1.1.

[R02] If Symbols other than those specified in Subsection 7.5.1.1 are necessary, then they shall conform to the standards of one of the following organizations:

[R02.1] Institute of Electrical and Electronics Engineers.

[R02.2] National Electrical Manufacturers Association.

7.5.1.3 Standardization

[R01] Each drawing or document shall use symbols from only one standard reference source.

[R02] Symbols that are standard to one organization shall not be mixed with symbols that are standard to another organization.

[R03] Where an interface of equipment is shown on a single drawing, the symbols standard to the controlling circuitry shall be used.

7.5.1.4 Nonstandard Symbols

[R01] If the use of nonstandard symbols is unavoidable, the Contractor shall submit to the Authority, for review and approval, a list of all nonstandard symbols he or his subcontractor(s) intend to use.

7.5.1.5 Revisions

[R01] Prior to the issuance of as-built drawings, revisions shall be identified by letters or, if it is an already established practice of the Contractor or subcontractor, by number.

[R02] Revisions to drawings shall be indicated in the following manner:

[R02.1] Change the revision letter or number in the title block area.

[R02.2] Place circles on the reproducible drawings; enclosing areas of the drawing in which changes have been made.

[R02.3] Enter the new revision letter or number and specify the revision in the revision column.

[R02.4] For each subsequent revision remove all previous circles and proceed as in steps [R02.1] [R02.2] and [R02.3] above.

[R03] Revision circles and letters shall be removed from As-Built drawings.

[R03.1] The initial issue of As-Built drawings shall be identified by a blank space if letters are used or a zero if numbers are used.

[R03.2] The words "AS-BUILT," the date, and approval shall be entered in the revision column of each drawing.

7.5.1.6 Drawing Submissions

[R01] The Authority reserves the right to refuse acceptance of drawing submissions not meeting the above requirements.

One (1) copy of the submitted drawings will be returned to the Contractor and will be marked as described in Subsection 7.6 REVIEW STAMP

[R02] No Work on any items for which these drawings are required shall commence until the drawings are returned to the Contractor marked "NO EXCEPTIONS TAKEN" or "EXCEPTION AS NOTED," unless the Authority waives this requirement for any reason.

[R03] The Contractor shall arrange for the preparation of clearly definable drawings as called for in the Contract Documents.

[R04] The Contractor and each Subcontractor shall operate as experts in their respective fields and all drawings and samples shall conform to the requirements of the Contract Documents.

[R05] Before submission to the Authority, the Contractor shall review all drawings to verify that the products illustrated therein conform to the Contract Documents. By this review, the Contractor agrees that it has determined and verified all field dimensions, field construction criteria, materials, catalogue numbers and similar data and that it has checked and coordinated each drawing with the requirements of the Work and of the Contract Documents.

[R05.1] The Contractor's review of each drawing shall be indicated by date and signature of a qualified and responsible person possessing the appropriate authorization.

[R06] The Contractor shall submit drawings for the Authority's review with reasonable promptness and in orderly sequence so as to cause no delay in the Work or in the work of other Contractors.

[R07] At the time of submission, the Contractor shall notify the Authority in writing of any deviations in the drawings from the requirements of the Contract Documents.

[R08] The Authority will review and return the drawings in accordance with twenty-one (21) days of the submittal.

[R08.1] The Authority's review will be for conformity to the design concept and for general arrangement only. Such review shall not relieve the Contractor of responsibility for errors or omissions in the drawings or of responsibility for meeting all requirements of the Contract Documents, unless the Authority has approved a deviation on the drawings in writing.

[R09] The Contractor shall make any changes in drawings that the Authority may require consistent with the Contract Documents and re-submit unless otherwise directed by the Authority.

[R09.1] When re-submitting the drawings, the Contractor shall notify the Authority in writing of any revisions other than those requested by the Authority.

[R010] Drawings submitted by the Contractor as required herein shall be the property of the Authority, who may use and duplicate such drawings where required.

[R011] Dimensions and designations of elements shall be shown in the same system of measurement used on the applicable Contract Drawings.

[R011.1] The Contractor shall not submit duplicate reproductions of Contract Drawings as submitted drawings.

[R012] The Contractor shall be responsible for:

[R012.1] Dimensions, to be confirmed and correlated at the site

[R012.2] For information that pertains solely to fabrication processes or to techniques of construction and installation

[R012.3] For coordination of the Work of all sub-trades.

7.5.2 PRODUCT AND PERFORMANCE DOCUMENTATION

[R01] The Contractor shall submit to the Authority six (6) copies of standard product information and product data sheets for each unique component contained in the equipment and software and firmware documentation as specified below. **CDRL 7.5.2.01**

[R02] The information shall cover all provided equipment including electrical components such as wire and cable, terminal strips, and connectors.

[R03] This information shall show the standard and optional product features as well as all the generally accepted standard operational performance data and/or Technical Specifications for each module.

[R04] If the information and data sheets cover more than one part or product, clearly indicate which part, product, and optional features are used in the equipment.

[R05] Products containing a new design or any modification shall be covered by an appropriate product information and data sheet.

7.5.3 INTERFACE INFORMATION

[R01] The Contractor shall submit an Interface Table that describes external interfaces to the Contractor's equipment. **CDRL 7.5.3.01**

[R02] The information on the Interface Table shall identify the types of terminations involved for the interface connections identified in Section 4.0, Technical and Functional Requirements.

[R03] The Interface Table shall identify terminal strip numbers and terminal numbers for each termination.

[R04] The Table shall also identify the types, sizes, and ratings for wire, cable, terminal lugs, connectors, and any other interface material on the equipment, as well as the required mating connectors.

7.5.4 SOFTWARE DOCUMENTATION

[R01] Documentation for all supplied software shall be provided to the Authority.

[R02] Software documentation to be provided shall include, along with Contractor's standard and purchased documentation, documentation that is specifically tailored and configured for the various skill levels of the users intended to operate and maintain the APARC.

[R03] Software documentation to be provided shall include all documents used by the Contractor to define requirements, design, build, integrate, and test the APARC software and all additional Authority documentation specified herein.

[R04] The software documentation specified in the following sections shall be provided for all software and utilities, regardless of whether the software source code and utilities are supplied to the Authority or maintained in escrow.

7.5.4.1 Software and Software Documentation Inventory

[R01] The Contractor shall provide an inventory of all software documentation. **CDRL 7.5.4.1.01**

[R01.1] The Contractor shall maintain the inventory list through final acceptance of the APARC.

[R02] The Contractor shall provide a detailed inventory of all software programs provided with the APARC. **CDRL 7.5.4.1.02**

[R02.1] The inventory shall include the name of each program, a cross-reference to pertinent Contractor documents, and an indication of whether the software is to be standard, modified, or custom.

7.5.4.2 Standard Software Documentation

[R01] Existing documentation and user manuals for standard software shall be provided for Authority review. **CDRL 7.5.4.2.01**

[R01.1] Standard software shall be defined as field-proven software purchased from third parties or Contractor software developed internally as a base for all projects that fully satisfies the requirements of the Project Manual without modification for the Authority. Examples include operating systems, compilers, software development utilities, software diagnostic programs, network managers, and window managers.

7.5.5 TEST DOCUMENTATION

[R01] Documentation for all prototype, field, and availability tests shall be provided in accordance with the requirements defined in Section 9.0 Quality Control Testing.

7.5.6 TRAINING DOCUMENTATION

[R01] Training documentation shall be provided in accordance with the requirements defined in Section 4.0 Implementation and Maintenance.

7.6 REVIEW STAMP

[R01] The Authority will mark each of the Contractor's Drawings and technical data items submitted for review with a Review Stamp. The review block will be signed and dated by the Authority and will be marked with one of the following status markings.

[R01.1] The mark, NO EXCEPTIONS TAKEN, is an acceptance, and means that every illustration and description appears to conform to the requirements of the Contract Documents; that fabrication, assembly, manufacture, installation, application, and erection of illustrated and described product may proceed, and that re-submittal is not required.

[R01.2] The mark, EXCEPTION AS NOTED, is an acceptance, and means that every illustration and description will appear to conform to the respective requirements of the Contract Documents upon incorporation of the reviewer's corrections and that fabrication, assembly, manufacture, application, and erection of illustrated and described product may proceed. Submittals so marked need not be re-submitted before prosecution of the work unless the Contractor challenges reviewer's exception.

[R01.3] The mark, REVISE AND RESUBMIT, means that submittal is deficient to the degree that the reviewer cannot correct the submittal with a reasonable degree of effort, that the submittal shall be revised, and that a re-submittal shall be made.

7.7 DOCUMENT FORMAT AND QUANTITIES

[R01] Unless specified otherwise, two (2) hardcopies and six (6) electronic copies on CD- or DVD-ROM of all review documents, preliminary documents, and final documents shall be delivered to the Authority.

END OF SECTION 7

8.0 QUALITY CONTROL

8.1 GENERAL

[R01] The Contractor shall implement a Quality Control Program that will ensure that the requirements of the Contract will be satisfied. The Program shall include, but is not limited to, furnishing the services of a full-time Quality Control Officer (QCO) for the duration of the Project who will be responsible for implementing the Quality Control Program.

[R01.1] The QCO shall be present and in charge of quality control at all times during design and when work is being performed. The services of an Alternate QCO shall be furnished to ensure the continuous presence of a QCO on the job-site at all times when work is being performed.

[R01.2] The QCO shall perform activities according to the requirements of this Section, document the various aspects of quality control for the project, and participate in and/or coordinate as appropriate any necessary inspections and required testing.

[R01.3] Appointment of the QCO and Alternate QCO shall be by a letter signed by an officer of the Contractor.

[R02] The Contractor shall possess a Quality Program in accordance with the American National Standards Institute (ANSI), American Society for Quality (ASQ) or International Standards Organization (ISO) 9000 Series.

[R03] An existing, in-place Quality Control Program, which in the Authority's estimation is fully compliant with one of the preceding standards, supplemented as required, will be acceptable, should the Program fully satisfy the Contract's specifications.

[R03.1] All work performed under this Contract shall be in accordance with the selected system.

[R03.2] The Contractor shall inspect all subcontracted work.

[R03.3] The Contractor shall not change nor alter approved submittals, i.e., procedures, drawings, etc., without the Authority's approval.

[R03.3.1] The Quality Control Program shall ensure the following:

[R03.3.1.1] All requirements of the contract documents are complied with.

[R03.3.1.2] Provisions are made for hold points and inspection by the Authority.

[R03.3.1.3] Provisions are made for originating and responding to documents employed by the Authority's Quality Control Program.

8.2 DEFINITIONS

[R01] Quality Control is defined as those activities of the Contractor, as well as the Authority and its agents, which will ensure compliance with the Contract Documents.

[R02] Quality Control encompasses all the instructions, procedures, programs, requirements, skills, training and equipment employed by the designer or Contractor to consistently deliver documents, equipment and facilities to the standard of quality defined and required by the Contract Documents.

[R03] The Quality Control Program is a system of activities employed by the Contractor to satisfactorily meet the requirements of the Contract Documents.

8.3 SUBMITTALS

[R01] Submit for approval the name and qualifications of the proposed QCO no later than 15 days after the effective date of the Administrative Notice to Proceed. **CDRL 8.3.01**

[R02] Submit in accordance with Section 7.0 Project Management.

[R03] Submit for approval the name and qualifications of the proposed Alternate QCO no later than 15 days after the effective date of the Administrative Notice to Proceed.

[R04] Submit required reports of tests and certifications.

[R05] Submit four (4) copies of the weekly Quality Control Summary Report in accordance with this Section on a weekly basis. The first report shall be submitted no later than 10 days after the effective date of the Site Notice to Proceed.

8.4 CONTRACTOR'S QUALITY CONTROL OFFICER (QCO)

[R01] Qualifications – Quality Control Officer (QCO) and Alternate (QCO) shall be either::

[R01.1] A graduate engineer having five (5) years' experience in Automated Parking Access and Revenue Control (APARC) System, with at least three (3) years inspection or Quality Control experience on the installation of systems similar to those utilized on the APARC.

[R01.2] A candidate having nine (9) years' experience in APARC systems, with at least five (5) years inspection or Quality Control experience on the installation of systems similar to those utilized on the APARC.

[R02] QCO Duties:

[R02.1] Develop, implement, and supervise a Quality Control Program for the Contractor's and subcontractors' forces.

[R02.2] Have sufficient, well-defined responsibility, authority, and the organizational freedom to identify and evaluate quality conditions and to initiate, recommend or provide solutions.

[R02.3] Ensure good workmanship, the use of proper construction materials and equipment, and correct installation procedures are followed.

[R02.4] Implement quality controls that will ensure meeting the Contract requirements.

[R03] Conditions of Employment:

[R03.1] The Authority will review the QCOs and Alternate QCOs experience and qualifications and approve the appointment of an acceptable officer and alternate officer.

[R03.2] If the QCO is not effective in executing the duties assigned, the Authority may instruct, in writing, that the Contractor furnish the services of another approved QCO.

[R03.3] If the Contractor desires, or is instructed to replace the QCO with another, the Contractor shall notify the Authority, in writing, and submit for approval the name, experience, and qualification of the proposed QCO within 30 calendar days.

[R03.4] The QCO and Alternate QCO shall not report to, or through the Contractor's representative in the field. The QCO and Alternate QCO shall report directly to a responsible officer in the Contractor's main office, whose level of authority is equal to or higher than that of the officer to whom the highest field representative and superintendent will report.

8.5 CONTRACTOR'S QUALITY CONTROL PROGRAM

[R01] The Contractor shall submit to the Authority two hardcopies and two electronic copies on CD- or DVD-ROM of the Quality Control Program Plan (QCPP). **CDRL 8.5.01**

[R02] Quality Control Program shall as a minimum, meet the following requirements:

[R02.1] Ensure that the latest issue of documents and information, as required by the Contract, shall be used to govern the Work. This includes the removal from use all obsolete or superseded information in a timely fashion.

[R02.2] Ensure that nonconforming material is identified, segregated, and disposed of promptly.

[R02.3] Ensure that inspection, measuring, and test equipment are appropriate for their use and their calibration is current. Calibration records shall be maintained by the Contractor as Quality Control records and be available to the Authority for review upon request.

[R02.4] Ensure that foremen, subcontractors and others are inspecting the Work in progress adequately, in a timely manner, and inspections are documented, such as pour cards, materials inspection reports, etc.

[R02.5] Ensure compliance with the materials testing requirements of the contract and that test results are monitored, documented, and adverse test results are appropriately responded to.

[R02.6] Ensure that the quality and testing of all subcontractor Work, meets the requirements of Section 9.0 Quality Control Testing.

[R02.7] Ensure Authority approval of any required remedial action procedures prior to the start of such remedial actions.

[R02.8] Ensure the following inspections are completed and documented:

[R02.8.1] Receiving Inspection: Inspect products and materials as soon as they are delivered to the job site ensuring that they meet the Contract requirements, are properly stored, and are accompanied by any required material certifications and test reports. Rejected materials shall be promptly removed from the job site.

[R02.8.2] Preparatory Inspection:

[R02.8.2.1] Ensure that preliminary or prerequisite Work has been satisfactorily completed prior to the next phase of Work. Ensure that materials, products, and equipment have been satisfactorily tested, reports have been submitted and approved, and/or that arrangements have been made for testing. If the manufacturer's installation instructions conflict with the Contract, immediately notify the Authority and permit installation to proceed only after the conflict has been resolved.

[R02.8.3] In-process Inspection: Inspect the Work periodically as it progresses to ensure continued compliance with the Contract Documents and that any required testing is performed at the appropriate times.

[R02.8.4] Installation Verification Inspection: Participate with the Authority's Quality representatives in performing Installation Verification (IV) Inspections according to, and prior to, all required testing performed under the Quality Assurance Testing Program Plan (refer to Section 9.0 QUALITY CONTROL TESTING). The Contractor shall verify by inspection and document evidence that the installation is complete and in compliance with the Contract document, good workmanship standards, approved manufacturer's literature, and drawings before scheduling an Installation Verification.

[R02.8.4.1] The Contractor shall provide a minimum of three (3) business days prior notice for each inspection to be made.

[R02.8.4.2] An IV package shall be submitted with the notice, and it will contain the following:

[R02.8.4.3] The requesting letter/memo, complete with projected inspection date;

[R02.8.4.4] Completed copy of the Authority's Installation Verification form;

[R02.8.4.5] Readable-scaled copies of all relevant prints for the equipment to be inspected;

[R02.8.4.6] Any necessary clearances or permissions required for access to an inspection area including written verification that said requirements have been met and are/will be successfully implemented.

[R02.8.5] Final Inspection: Participate in a final inspection to ensure that the completed Work is in accordance with the Contract and that all previously identified discrepancies have been satisfactorily resolved.

[R02.8.6] Prototype Inspection: The Contractor shall conduct an inspection and Test on the prototype to be used by formal examination against approved drawings and contract requirements with the indentured listing and design previously approved. After performing and proving the Prototype Test, the Contractor shall invite the Authority to witness the Prototype Test. The Contractor shall document the inspection and test, and submit the results to the Authority within ten (10) days. The shipment of this or similar units shall not occur until the Authority has reviewed and approved the inspection and test results.

[R02.8.7] The Authority shall have the right to participate in the inspection and shall be given at least thirty (30) business days notification.

[R02.8.8] Release for Shipment: The Contractor shall perform the inspection and tests necessary to ensure that all the equipment provided under the Contract complies with the Contract documents. The Authority will have the right to witness all testing as specified in Section 9, Quality Assurance Testing, and perform the required hold point inspection prior to shipment of any equipment. The Contractor shall submit the test results and completed Authority furnished Release for Shipment forms along with an approved indented equipment list to the Authority for approval within ten (10) days after test conclusion.

[R02.9] Ensure that critical inspection points for specific stages of the Work are identified, and that required inspections are conducted and documented. Typical critical inspection points include receipt and installation of unique materials, products, or equipment; locations or structures having stringent tolerances; installations requiring special sequences or methods; or where Work will be un-inspectable due to follow-on installations.

[R02.10] The Contractor shall establish and/or follow procedures for identifying, documenting, controlling, and processing nonconforming material. Any repair or rework of nonconforming material will require the review and approval of the Authority.

[R02.11] The Contractor shall establish and maintain procedures to ensure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, and defects in material and equipment shall be promptly identified and corrected. The Contractor shall ensure that the cause of conditions adverse to quality is determined, and that the corrective action taken will preclude repetition of such conditions. Identification of conditions adverse to quality, the cause of the condition, and the corrective action taken shall be documented and submitted to the Authority for review and approval.

8.5.1 QUALITY CONTROL PROCEDURES

[R01] The Contractor shall establish and maintain written procedures defining the Contractor's Quality Control System.

[R02] The procedures shall encompass all phases of the system including, but not limited to, surveillance of Contractor's production techniques, production and process control, design control, functional testing, System Problem control, measuring and test equipment calibration,

all documentation (including drawings) control, quality records, shipping, inspection and other quality provisions to meet contract requirements.

[R03] The procedures shall encompass all phases of software development including, but not limited to design, coding, code control, reviews and audits, integration, testing, and documentation.

[R04] All such publications shall be made available to the Authority upon request.

[R05] A matrix listing and cross-referencing of the Contractor's procedures with the requirements of this Section shall be submitted with the Quality Control Program Plan.

[R06] The Contractor shall submit a Software Quality Control Plan that defines the software standards to which it adheres. **CDRL 8.5.1.06**

8.6 PERSONNEL RESPONSIBILITIES

[R01] Contractor's QCO shall:

[R01.1] Implement and supervise the Contractor's Quality Control Program.

[R01.2] Inspect the Work daily. Immediately act to eliminate unacceptable materials, equipment, and workmanship. Record the corrective action taken in the appropriate Quality Control status report to the Authority.

[R01.3] Participate in Quality Control meetings, in accordance with Section 7.0 Project Management, and those convened by the Authority.

[R01.4] Coordinate activities with the Authority's field staff, and cooperate with the Authority's Quality Assurance and Technical Services representatives.

[R01.5] Compile, maintain current and submit to the Authority a list of Contractor and subcontractor personnel and firms requiring certification in accordance with Section 7.0 Project Management. The list, when submitted, shall be accompanied by copies of the associated Certifications.

[R01.6] Record activities in a Daily QC Report and submit a weekly QC Summary Report of all quality control activities.

[R02] Contractor's Project Manager shall:

[R02.1] Support the QCO in a manner which will enable that officer to effectively execute their duties, and cooperate with the Authority's Quality Assurance representatives.

[R02.2] Authorize immediate action to correct workmanship and materials which do not conform

[R02.3] Review any required quality control procedures of the Contract with supervisors, foremen, subcontractors and suppliers and assure compliance.

[R02.4] Actively participate in Quality Control meetings as specified in Section 7.0 Project Management.

[R03] Contractor's Field Superintendent shall:

[R03.1] Closely coordinate upcoming and ongoing field activities with the QCO and the Authority's representatives to ensure timely inspection of the Work.

[R03.2] Immediately take corrective action on all conditions and practices that are adverse to quality and report these incidents promptly to the QCO.

[R03.3] Convene Special Quality Control meetings in accordance with Section 7.0 Project Management.

[R03.4] Continuously assure that workers accomplish quality Work in accordance with the Contract and determine the reason for, and implement measures to preclude recurrence of rejected Work.

[R04] Contractors' Job Foremen shall:

[R04.1] Instruct personnel regarding good Work practices and methods when Work is assigned, and furnish and enforce the use of tools appropriate for the job.

[R04.2] Inspect products and materials prior to being used and document tests where applicable.

[R04.3] Convene Weekly Quality Control meetings with his personnel to:

[R04.4] Discuss recent Work well done, as well as unsatisfactory Work, and how to prevent recurrence of the latter.

[R04.5] Provide instructions and precautionary measures to be taken regarding new Work about to be undertaken and encourage his personnel to suggest methods to improve quality.

[R04.6] Promptly supply information for the QCO's quality control reports.

[R04.7] Attend, as applicable to his responsibilities, Special Quality Control meetings in accordance with Section 7.0 Project Management.

[R05] Subcontractors' Job Superintendents shall:

[R05.1] Plan and execute their Work in accordance with the Contract as well as report conditions adverse to quality and violations of the Contract to the Contractor's QCO and Project Manager.

[R05.2] Attend as applicable to their responsibilities, Quality Control meetings in accordance with Section 7.0 Project Management.

[R05.3] Cooperate with the QCO and the Authority's Quality Assurance representatives.

8.6.1 SYSTEM PROBLEM REPORTS

[R01] A System Problem Report (SPR) tracking system shall be placed in service no later than one month before the start of Prototype (Section 9.0 QUALITY CONTROL TESTING) and shall remain in use through the completion of the project.

[R02] This SPR tracking system shall record and track all hardware, software and other system problems including:

[R02.1] Documentation deficiencies

[R02.2] Functional deficiencies

[R02.3] Technical deficiencies

[R02.4] Performance deficiencies

[R02.5] Procedural deficiencies (such as when deviations from contractually required QA procedures are observed)

[R02.6] Test deficiencies (such as when the system cannot satisfactorily complete a test procedure due to a problem with the test).

[R03] The SPR recording and tracking system shall produce reports of all system problem information and shall produce subsets of the system problem reports based on searches of the system problem report parameters singly and in combination.

[R04] The Contractor shall submit an SPR summary that lists for each SPR number, a brief overview of the discrepancy, its category, and its priority. **CDRL 8.6.1.04**

[R05] The Authority shall have access to the SPR summary report(s) for review upon request.

8.6.1.1 SPR Records

[R01] The record of each SPR shall include the following information:

[R01.1] An SPR number – a sequential number assigned when the SPR is entered into the tracking system

[R01.2] An overview of the SPR suitable for use in keyword searches

[R01.3] A detailed description of the SPR

[R01.4] An SPR priority –the Authority will assign to each SPR a priority defining the action to be taken to resolve the SPR. The SPR priority shall be one of the following:

[R01.4.1] Critical –This priority identifies a problem, for which there is no work-around, that prevents the use of a system feature that is essential to the Authority’s operation of its services

[R01.4.2] High – Denotes the failure of the system to perform a required feature in a manner that significantly reduces the utility of the system or feature, for which there is no work-around, or a failure that delays further testing of the system or feature

[R01.4.3] Moderate – Denotes the failure of the system to perform a required feature in a manner that reduces the utility of the system or feature but there is a work-around. The impact of a moderate SPR on testing will be determined by the Authority on a case-by-case basis.

[R01.4.4] Low – Denotes the failure of the system to perform a required feature in a manner that reduces the utility of the system only slightly. By definition, low priority SPRs shall not delay any testing. SPRs that record transient failures (i.e., failures that cannot be readily reproduced) shall be initially assigned to this priority. Subsequent occurrences of the transient failure shall result in raising the priority of the SPR.

[R01.5] The date of the initial discovery of the SPR

[R01.6] An SPR category:

[R01.6.1] Open (recorded but not scheduled for further action)

[R01.6.2] Assigned (scheduled for further action)

[R01.6.3] Pending (the SPR has been resolved but not tested)

[R01.6.4] Closed (the Authority has accepted the resolution).

[R01.7] The location of the SPR

[R01.8] An identification of the system component, such as a hardware item or software function, against which the SPR is being written

[R01.9] An identification of the test procedure, if applicable. The segment or step of the procedure shall be identified

[R01.10] An identification of the person submitting the SPR and the names of any other witnesses or knowledgeable the Authority or Contractor staff

[R01.11] The date of assignment into each category

[R01.12] A description of the resolution, including identification of all hardware, software, and documents modified or otherwise changed and the names of the Contractor or the Authority's staff involved with the resolution

[R01.13] A record of all testing performed

[R01.14] An identification of the Authority's staff accepting the resolution and the date of acceptance.

8.6.1.2 Schedule for SPR Correction

[R01] The Contractor and the Authority shall meet periodically to review the SPR list.

[R02] Each new SPR opened since the previous meeting shall be scheduled for correction at the meeting.

[R03] The Contractor and the Authority shall follow these guidelines for scheduling corrections:

[R03.1] A schedule for the correction of critical and high priority system problems shall be set within one calendar day of their discovery.

[R03.1.1] The schedule for correction of all other system problems shall be set within seven calendar days of their addition.

[R03.2] The Contractor and the Authority shall establish a mutually agreeable date for the correction of moderate and low priority system problems, with attention given to the following objectives:

[R03.2.1] If the system is in productive use, correcting moderate system problems within 30 calendar days of their discovery.

[R03.2.2] Low priority system problems may be scheduled for correction at any time, but shall not exceed 45 calendar days after identification.

[R03.2.3] All system problems corrected prior to the commencement of productive use, maintaining the overall project schedule.

[R03.3] The Contractor shall identify and assign sufficient human and equipment resources with the intent of correcting system problems within the time limitations specified above.

8.6.1.3 Resolution of SPRs

[R01] An SPR shall be deemed resolved only upon written acceptance of the correction by the Authority.

[R02] Prior to submitting the corrected SPR for acceptance by the Authority, the Contractor shall take all reasonable steps to verify that the correction has resolved the SPR, and the Contractor shall update the SPR record to reflect the corrective action taken.

[R03] The Authority shall then schedule any testing to be performed in conjunction with the Contractor.

[R04] An SPR shall be deemed corrected and the SPR record shall be completed only after the Authority has witnessed the successful testing of the corrected SPR, successfully completed all required regression testing, and approves the results.

[R05] The Contractor shall support any and all testing deemed necessary by the Authority to verify the corrections.

END OF SECTION 8

9.0 QUALITY CONTROL TESTING

9.1 GENERAL

[R06] This Section specifies the requirements for Prototype, Wire and Cable, Installation Tests, Equipment Installation Test, and the Systemwide Proof of Performance Test.

[R07] The Contractor shall be responsible for all testing required by this Contract. The Contractor shall prepare and submit testing documentation to the Authority for approval. All testing required by this contract shall be conducted using the Authority approved procedures. The Contractor shall adhere to the MARTA Testing Program Plan (MTPP) located in Exhibit 9A.

[R08] The Contractor shall provide a Test Manager who shall be competent and experienced with the work involved in the field testing. Test Manager Qualifications shall be submitted for review and approval by MARTA.

[R09] The assignment of Contractor and Subcontractor personnel to the Test Manager and other factory and field testing positions shall be subject to the Authority's approval.

9.1.1 SCOPE

[R01] Prepare and submit for Authority approval a Test Plan, Test Schedule, Test Procedures, and Test Reports. Testing required by the Contract shall be conducted using Authority-approved procedures.

9.1.2 METHODOLOGY

[R01] Test scheduling, test procedures, test performance, test data recording, and test data submittals shall be in accordance with these Specifications and as detailed in the Test Program Plan.

9.2 TEST REQUIREMENTS

[R01] Organize the Test Program to provide for the following:

[R01.1] Prototype.

[R01.2] Wire and Cable Installation Tests.

[R01.3] Equipment Installation Tests.

[R01.4] Systemwide Proof of Performance Test.

9.3 TEST SUPPORT AND TEST PERFORMANCE

9.3.1 TEST PERSONNEL

[R01] Provide qualified technical personnel to conduct testing as listed below. Test personnel shall be fully qualified to perform their duties and shall be familiar with the equipment before being assigned to the Test Program.

[R01.1] Prototype. Provide personnel to monitor and to be present for all Prototype activities to ensure that the requirements of these Specifications are adhered to. Ensure that the test data is properly recorded before the Prototype are considered complete.

[R01.2] Wire and Cable Installation Tests. Provide personnel to conduct the Wire and Cable Installation Tests on wire and cable installed. Conduct the tests, record test data, and attest that data is correct.

[R01.3] Equipment Installation Tests. Provide personnel to perform Equipment Installation Tests on equipment furnished and installed by the Contractor. Either record test data, or ensure that the test data is properly recorded by the subcontractor or the factory personnel performing these tests.

[R01.4] Systemwide Proof of Performance Test. Provide personnel and any necessary test equipment to perform the Systemwide Proof of Performance Tests. Perform tests on the system furnished and installed by the Contractor. Either record test data, or ensure that the test data is properly recorded by the subcontractor or factory personnel performing these tests.

9.3.2 TEST MANAGEMENT

[R01] Assign a Test Manager to coordinate with the Authority Test Engineer for required test activity performed. The Authority will coordinate access to test locations and arrange for the availability of Authority facilities and personnel.

9.3.3 TEST WITNESSES

[R01] The Authority has the right to witness all test activities including any and all preparations such as, pre-tests, burn-in, troubleshooting, retests, and warm-up. Provide advance notice to the Authority to provide for such witnessing.

9.3.4 TEST OBSERVERS

[R01] The Authority may assign personnel to observe tests on a non-participating basis.

9.3.5 TEST EQUIPMENT AND INSTRUMENTS

[R01] Provide test equipment and instruments necessary to conduct required tests. Test equipment and instruments shall be calibrated in accordance with Section 8.0, Quality Control, of these Specifications.

9.3.6 PROSECUTION OF TESTING

[R01] Conduct the testing according to the approved plan, procedures, and schedule. The Authority reserves the right to direct the Contractor to change the test sequence or the test hours as deemed necessary by the Authority.

9.3.7 TEST SCHEDULING

[R01] Schedule tests in accordance with the Test Program. As a minimum, the test schedule for each test classification shall include the information listed below. Schedule the sequence of tests in consideration of the following requirements.

[R01.1] Prototype. Schedule and conduct these tests prior to equipment delivery. The Prototype shall be conducted only after the approval of the Prototype Procedure. Schedule the tests with the Authority to allow sufficient time for the Authority to arrange for test witnessing.

[R01.2] Wire and Cable Installation Tests shall be conducted only after an Installation Verification (IV) has been conducted in accordance with Section 8.0, Quality Control, on the wire and cable to be tested and on the equipment to which it is connected, and after the IV is approved by the Authority, or otherwise at the Authority's discretion. Each of these tests shall be conducted before the Equipment Installation Tests are performed and before cross-connection or interface to the Authority's network equipment.

[R01.3] Equipment Installation Tests. Conduct these tests after an IV in accordance with Section 8.0, Quality Control, and Wire and Cable Installation Tests for each corresponding system has been conducted and approved, or otherwise at the Authority's discretion.

[R01.4] Systemwide Proof of Performance Tests. Conduct these tests after Equipment Installation Tests have been conducted and approved, or otherwise at the Authority's discretion.

9.4 TESTING PROGRAM DOCUMENTS

[R01] Prepare and submit a Test Program Plan, a Testing Schedule, Test Procedures and Test Reports. Test Plans, Procedures / Datasheets, Test Schedules, Test Reports, etc. created for this contract should adhere to the requirements of the MTPP.

[R02] Provide a written schedule by the close of business on the Wednesday preceding the week of the actual start of each Installation and Wire and Cable Installation Test. The schedule shall include the test procedure number, test location, date and time that the test will be conducted, and the responsible test engineer. If the test requires more than one day for completion, it shall be shown daily until completion.

9.4.1 TEST PROGRAM PLAN

[R01] Submit a Test Program Plan to the Authority indicating the following: **CDRL 9.4.1.01**

[R01.1] Describe each test and its objectives.

[R01.2] List each test by a unique test procedure number or name that will be conducted for:

[R01.2.1] Prototype.

[R01.2.2] Wire and Cable Installation Tests.

[R01.2.3] Equipment Installation Tests.

[R01.2.4] Systemwide Performance Tests.

[R01.3] Describe the test program personnel organization and the responsibilities and qualifications of each organization level and each person. Submit to MARTA for review and approval. Describe applicable prerequisites for testing.

[R01.4] Include samples of test data sheets and test logs, and instructions for using them.

[R01.5] Describe procedures for identifying, evaluating, and correcting the causes of problems or failures which occur during tests, and describe procedures for reworking and retesting.

[R01.6] Describe procedures for preparing and submitting test data sheets.

[R01.7] Describe procedures for notifying the Authority of the actual date of each test.

9.4.2 TEST PROCEDURES

[R01] Prepare a test procedure for each required test. Submit Test Procedures at least 60 days before the scheduled start of the testing. Test Procedures will not be approved before the Test

Program Plan has been approved. Do not schedule tests prior to approval of test procedures.

CDRL 9.4.2.01.

[R02] Each procedure shall contain the following:

[R02.1] A statement of test objective and scope.

[R02.2] A list of equipment required to set up and conduct the test.

[R02.3] A list of equipment and facilities, which are only available from the Authority, and which are required to conduct the test.

[R02.4] A list of prerequisite tests that shall be completed before the test can be conducted.

[R02.5] A description of the required test setup including diagrams illustrating test equipment connections and identifying test points, where applicable.

[R02.6] Step-by-step instructions for conducting the test, identifying the points where data is to be recorded, and the limits for acceptable data.

[R02.7] Instructions for recording data on data sheets or verifying that procedure steps have been completed.

[R02.8] Test data sheets on which all results of testing shall be recorded when the test is performed. Test data sheets shall be used to record items being tested, test location, test date, signature of person performing the test, and signature of the Authority test witness on each test data sheet. Test data sheets shall be used to record applicable drawing numbers, test data, test equipment, tool serial numbers and calibration dates where applicable, discrepancies, and corrective actions required. Data entries shall refer to the applicable procedures, and allowable limits for each entry shall be indicated on the data sheet. Test data sheets shall be arranged in tabular form.

9.4.3 TEST REPORTS

[R01] Prepare and submit to the Authority a Test Report for each test conducted. **CDRL**

9.4.3.01

[R02] Submit Test Reports within 15 days after conducting a test containing the following:

[R02.1] Test data sheets as completed at time of test.

[R02.2] The Contractor's analyses and conclusions of the test results.

[R02.3] A complete list of discrepancies and/or deviations from expected results including how and when each item is to be resolved.

[R02.4] A list of items to be re-tested.

[R02.5] A revised Test Procedure, if corrections or revisions were made during the test.

[R02.6] A general summary of the item, subsystem, or system being tested indicating any open items that are yet to be resolved and any test that is yet to be conducted.

9.4.4 TEST PROGRAM SCHEDULE

[R01] Prepare and submit to the Authority for approval within 90 days after Administrative Notice to Proceed, a Test Program Schedule of the Prototype, Site and Systemwide Testing. The schedule shall show each test scheduled for each location or area and the start and finish dates. **CDRL 9.4.4.01**

9.5 PROTOTYPE REQUIREMENTS

[R01] The objective of the Prototype is to verify that material and/or equipment meets or exceeds the requirements in accordance with these Specifications and to show that the equipment functions as a system before it is shipped for installation.

9.6 WIRE AND CABLE INSTALLATION TEST REQUIREMENTS

[R01] Conduct Wire and Cable Installation Tests to verify that cables are properly installed and connected, point-to-point cabling integrity (continuity and isolation as required), and that electrical power is provided as required. Wire and Cable Installation Tests shall include inspection as specified herein.

9.7 INSTALLATION TEST REQUIREMENTS

[R01] The objective of Installation Testing is to verify that the equipment continues to meet or exceed the requirements as specified in these Specifications after it has been shipped, assembled, and installed. The new equipment cannot be cross-connected to existing systems until successful completion of installation testing and approval of test reports.

9.8 SYSTEMWIDE PROOF OF PERFORMANCE TEST REQUIREMENTS

[R01] The objective of the Proof of Performance Test is to verify that the system meets or exceeds the requirements and functionality as specified in these Specifications after it has been installed, tested, and integrated with other Authority systems. Design the Systemwide

Performance Test Procedure to show that all portions of the new system are functioning as required.

9.8.1 SYSTEMWIDE PERFORMANCE

[R01] This Section describes the testing requirements associated with system acceptance.

[R02] Acceptance testing shall be conducted by the Contractor and shall be subject to review and approval by MARTA.

[R03] Acceptance testing shall be performed at a system level, with all components and subsystems completely functional, operational, on-line, and in service. The Contractor shall provide MARTA with a Systems Acceptance Test Plan. **CDRL 9.8.1.03**

[R04] The Contractor shall coordinate the development of test plans and procedures with MARTA in order to ensure that the Systems Acceptance Testing is complete and sufficient to demonstrate to MARTA that the system meets the testing requirements

[R05] Acceptance Testing shall include the following System Level Tests:

Table 9-1: System Level Tests

No.	Action	Confirmation
1.	End-to-End Test from each Station Gate and POF to Command Center and Financial Contact.	Duplex Communications w/ Command Center. Full Control of Gate or POF from Command Center. Transactions processed through Financial Contact.
2.	Disable one (1) Station Network Element (Gate or POF Unit)	Confirm all other Station Network Elements are Operational (Gate or POF)
3.	Disable Server at HQ After Test – Enable Server at HQ	Confirm Station is fully operational with Command Center
4.	Disable Server at PCC After Test – Enable Server at PCC	Confirm Station is fully operational with Command Center

No.	Action	Confirmation
5.	Disable North Springs Command Center After Test – Enable North Springs Command Center	Confirm Station is fully operational with Sandy Springs Command Center.
6.	Disable Sandy Springs Command Center After Test – Enable Sandy Springs Command Center	Confirm Station is fully operational with North Springs Command Center.

[R06] The Systems Acceptance Test Plan shall be submitted for review and approval by MARTA fifteen (15) calendar days prior to the scheduled start of the systemwide test period. Acceptance testing shall include but not be limited to final configuration of hardware and software, interface, integration, test, and installation schematics.

[R07] The Contractor shall state Contract with each of the following points or proposed alternatives:

[R07.1] The Contractor’s proposed Systemwide Testing must show the events, sequences, and schedules required for acceptance of the system.

[R07.2] The Contractor must ensure each module/component of the system operates according to specifications before operating.

[R07.3] The Contractor must agree that during the acceptance period, each system component shall undergo a live test.

[R07.4] The Contractor equipment that is found to not meet the specifications or other requirements of the contract shall be rejected and replaced at no cost to MARTA.

[R07.5] The Contractor must agree to pass an acceptance test. The system must successfully operate for seven (7) consecutive days at each parking facility.

[R07.6] Provide data generated to MARTA daily.

[R07.7] The Contractor must demonstrate the ability to provide adequate service and maintenance as outlined in this Request for Proposal.

[R07.8] The Contractor must demonstrate system security.

[R07.9] The Contractor must provide all documentation for the site being tested, before acceptance testing shall begin.

9.9 SYSTEM INTEGRATION

[R01] The Contractor shall perform System Integration Testing for the complete end-to-end system following Installation of each station.

[R02] The System is comprised of three (3) components as follow:

[R02.1] MARTA Enterprise Network (MEN).

[R02.2] Gate / POF / Command Center Components with Access to MEN.

[R02.3] Server Components with Access to MEN and Financial Institutions.

9.9.1.1 MARTA Enterprise Network

[R01] MARTA is responsible for the MEN and will provide point-to-point connectivity for Contractor devices as shown in the Contract Drawings.

[R02] The MEN will provide all Network connectivity with acceptable industry standard performance of the following parameters:

[R02.1] Latency from End-to-End as measured in ms

[R02.2] Packet Loss End-to-End as measured in percentage of total packets transmitted.

[R02.3] Bit Jitter End-to-End as measured in μs .

[R03] The Contractor shall be responsible for interconnecting their equipment to the MEN and testing full ARARC System functionality through the network.

9.9.2 GATE / POF / COMMAND CENTER COMPONENTS

[R01] This category of Contractor provided components includes but is not limited to the following Contractor provided equipment:

[R01.1] Entrance Gates

[R01.2] Exit Gates

[R01.3] Reversible Gates

[R01.4] Bail Out Gates

[R01.5] Pay on Foot Units

[R01.6] All Command Center Network Elements including:

[R01.6.1] IP Communication Elements

[R01.6.2] Workstations and Supporting Elements

[R01.6.3] Displays and Supporting Elements

9.9.3 SERVER COMPONENTS

[R01] This category of Contractor Provided components includes but is not limited to:

[R01.1] Server Equipment for MARTA Headquarters (Lindbergh)

[R01.2] Server Equipment for MARTA Disaster Recovery Center (Candler Park)

9.9.4 SYSTEM AVAILABILITY

[R01] The APARC System shall present no loss of revenue from any station.

[R02] All Station APARC systems for parking decks and parking lots should operate autonomously in the event of equipment failure. All Contractor equipment shall be Configured and Implemented to provide redundancy such that no Single Point of Failure exists in the system.

END OF SECTION 9

9A.01 MARTA TESTING PROGRAM PLAN

[R01] The Contractor must comply with all of MARTA's quality assurance standards including, without limitation, those standards set forth in the MARTA Testing Program Plan attached hereto as **Exhibit G** and incorporated herein.

10.0 AUTHORITY SAFETY REQUIREMENTS

[R02] The Contractor shall submit a site specific Construction Safety Plan within fifteen (15) days after the Administrative Notice to Proceed (ANTP). **CDRL 10.0.01**

[R03] The Plan shall include, but not limited to, the following:

[R03.1] Managing project safety

[R03.2] Furnishing and utilizing personal safety equipment

[R03.3] Furnishing and operating construction equipment

[R03.4] Emergency Action Plan

[R04] Contractor shall:

[R04.1] Continuously monitor personnel and conditions at Worksite to avoid unsafe practices and conditions.

[R04.2] Instruct workers regarding safe work practices and work methods at the time workers are given work assignments.

[R04.3] Furnish and enforce the use of protective equipment and suitable tools for the assigned job task

[R05] In addition, MARTA Parking Services will assign a full-time management employee to observe and make note of any potential safety concerns. Safety concerns will be reported as appropriate.

END OF SECTION 10

11.0 CONFIGURATION MANAGEMENT

11.1 SCOPE

[R01] The Contractor shall establish and maintain a Configuration Management Program, including software configuration management. This program shall employ the systems and techniques necessary to identify the product configuration; control changes to the product during operational and test use; and report implementation status of approved changes on a periodic basis.

[R02] Engineering and technical documentation shall be of a quality level at least equal to that of the industry, capable of legible reproduction, and adequate in use for its intended purposes. The Contractor shall maintain accurate and current configuration records, available to the Authority throughout the performance of this Contract.

11.2 CONFIGURATION MANAGEMENT PLAN

[R01] The Contractor shall prepare and submit six (6) copies of the Configuration Management Plan to the Authority within 60 days after Administrative Notice to Proceed, two (2) hard copies, and four (4) electronic on CD/DVD. The Configuration Management Plan shall identify the methods and procedures that will be utilized to accomplish the requirements of the Configuration Management Program. **CDRL 11.2.01**

11.3 CONFIGURATION IDENTIFICATION

[R01] Technical documentation shall define the approved configuration of system equipment under development, test, production, or operational use. The technical documentation shall identify the configuration to the lowest level required to meet production and maintenance requirements as determined by the Authority.

11.3.1 CONFIGURATION DATA LIST

[R01] The basic configuration control document utilized to define and identify the baseline configuration shall be a Configuration Data List (CDL). A CDL is an indented listing of the engineering drawings, schematics, parts lists and other engineering documents necessary to identify the production baseline. The highest-level drawing shall be at the top and leftmost on the list. Indented one position to the right and below the top-level drawing shall be the highest-level assembly drawing(s) with its piece parts and/or subassembly drawing(s) below them and indented one position to the right. Subassembly drawings shall be arranged on downward in the same manner. Drawings, schematics, etc. shall be identified by drawing or document number, title and revision or issue. The list of drawings and associated

documentation shall be provided down to the lowest level of repair or replacement, which shall be determined by the Authority. In the case of printed wiring assemblies, the engineering documentation shall include the assembly drawing, electrical schematic and the parts list of all of the components by manufacturer's or standard part number or other unique identifier.

[R02] Six (6) copies, two (2) hard copies, and four (4) electronic disks on CD-/DVD R/W of the CDL shall be submitted to the Authority 60 days After Administrative Notice to Proceed. Submittals shall be provided as PDF Documents. All Submittals shall adhere to Microsoft Office 2010 or AutoCAD R11 standards. At the time of Release for Shipment, a copy of the approved CDL shall be updated with serial numbers and quantities added and shall be furnished to the Authority. The CDL shall be the basic configuration control document and shall be maintained current throughout the life of the Contract.

11.3.2 SYSTEM DATA ENTRY INTO ASSET MANAGEMENT SYSTEM

[R01] The Contractor shall prepare data files for the Authority's Fixed Asset Suite (FASuite) Enterprise Asset Management System. **CDRL 11.3.2.01**

[R02] The Contractor will be provided with an Excel spreadsheet that corresponds to the information in the table shown below.

[R03] The Contractor shall complete the Excel spreadsheet with all of the information presented in the table.

Table 11-1: Asset Management Sample

Field	Field Format/Length	Example
Model Year	4 Digits	2013
Manufacturer ID	15 Characters	FORD
Model ID	15 Characters	55-555555555555
Equipment Description	40 Characters	FAN-MIDTUNNEL
Serial Number	50 Characters	B-123-45678-QRS-123456789123456-4
Physical Location	Should be one of predefined locations already in the system	2 digit location codes to be provided upon contract award
Estimated Useful Life	6 Characters	30 year
In-Service Date	mm/dd/yyyy	06/06/2016

Field	Field Format/Length	Example
Original Cost	10 digits before decimal, 2 digits after decimal	60,000
Estimated Replacement Date	mm/dd/yyyy	12/31/2017 (may not be same as in-service date + estimated useful life)
Equipment Type	30 Characters	Fan, midtunnel
From Marker	20 Characters	1400
From Segment	10 Characters	NE
From Offset	18 Characters	47.000
To Marker	20 Characters /10 Characters	2800
To Segment	10 Characters	SYD
To Offset	18 Characters	-111.0000
Latitude	25 Characters	304.xxx
Longitude	25 Characters	-84.xxx

11.4 HARDWARE IDENTIFICATION

[R01] Like functional units in this Contract shall be interchangeable. The part number used shall identify a specific item in a specific configuration. Items beginning with the lowest level of repair or replacement and identified by the same part number shall have the same physical and functional characteristics, be equivalent in performance and durability, and be interchangeable without alteration to themselves or associated items other than field adjustments. An item shall not be considered interchangeable if it must be selected for fit or performance. Do not use colors, colored dots, or serial or modification numbers to identify items for part number segregation. Instead, old and new configuration items that require segregation shall be accomplished by part number change and controlled by new drawings or a dash number added to the original drawing.

11.4.1 NAMEPLATES

[R01] Hardware identified with a nameplate and designed specifically for the Authority shall have the Authority's part number permanently marked thereon in addition to the manufacturer's name or logo, part number, and, as applicable, model and/or serial number.

11.4.2 SERIALIZATION

[R01] When serialization is required, each unit of equipment shall be assigned an individual serial number in a numerical sequence established for the type or model series of the equipment being supplied. Duplicate serial numbers shall not be used within a type or model series regardless of whether supplied to the Authority or another agency. Serial numbers shall not exceed ten (10) digits in length. Serialization and configuration records shall be maintained for all equipment provided under this Contract. Provide the Authority a copy of these records at the time of Release for Shipment.

11.5 CONFIGURATION CONTROL

[R01] Once the Production Configuration Baseline is established by the Authority's approval of or concurrence with selected engineering drawings and documentation at the First Article Configuration Inspection (FACI), proposed engineering changes to the baseline must be controlled by change documentation. Changes to the production configuration baseline shall be controlled by an Engineering Change Proposal.

11.5.1 CHANGE PROCESSING

[R01] The Contractor shall submit Changes to the Authority on an Authority provided Engineering Change Proposal (ECP) Form for approval prior to initiating any implementation action. The Contractor shall submit four (4) copies of the ECP to the Authority accompanied by the technical documentation and the cost information necessary to evaluate the change.

11.5.2 DESIGN REVIEWS

[R01] The Authority will conduct a formal, documented, systematic Design Verification Review, (DVR) which will provide for a timely recordable independent review of drawings, Technical Specifications, and technical documents related to product development, safety, and use.

11.6 ENGINEERING DRAWINGS

11.6.1 SYSTEM DESIGN DRAWINGS

[R01] The Contractor shall furnish system design drawings for the APARC being furnished as well as Installation Drawings for each location. Upon completion of the Authority's review, those drawings marked with comments to be incorporated or corrections to be made will be returned to the Contractor.

[R02] Changes made on the drawings shall be resubmitted for review within 30 days after receipt in the manner specified herein. Comments by the Authority shall not constitute relief for the Contractor from contractual obligations.

[R03] The Contractor's System Design Drawings shall include the following:

[R03.1] Overall System Block Diagrams.

[R03.2] Site-specific Block and Level Diagrams.

[R03.3] Interface details, including locations of terminal strips, connectors, etc.

[R03.4] Shelf-loading and plug-in unit arrangements, by port number.

[R03.5] Equipment enclosure elevations and details as required.

[R03.6] Mounting details, mounting configuration, box, distribution enclosure, conduit, display, and other elements as required to define the installation work and any disturbance to existing station elements.

[R03.7] Schematics, wiring diagrams, or assembly drawings necessary to install, maintain, and repair each LRU indicated on the CDL.

[R03.8] Powering requirements.

[R03.9] Any other drawings that apply or that may present the above differently.

11.6.2 INSTALLATION DRAWINGS

[R01] The Contractor shall provide Installation Drawings for each different location.

[R02] Installation Drawings shall be submitted prior to each installation. The APARC design for each location shall include individually unique features inherent for that particular location.

[R03] Installation Drawings shall clearly depict and identify the following:

[R03.1] Technical Specifications for each proposed conduit and fastener type.

[R03.2] Floor Plans and Building Sections showing proposed conduit routes, fastener locations, as well as, descriptions of each existing surface assembly that conduit is proposed to cross.

[R03.3] Conduit and fastener types, sizes and locations shall be shown with sufficient references to Contractor designed details, describing the impacts of routings, transitions and fastener installations to existing surface finishes.

[R03.4] All Plans and building sections shall have a typical scale of 1/8-inch = 1-foot 0-inch. Documentation shall be sufficient to identify the installation, location, configuration, equipment, and the cable routing plan.

[R03.5] The Contractor shall utilize the existing conduit infrastructure, where practicable.

[R03.6] New infrastructure shall be kept to a minimum.

[R03.7] When existing conduits cannot be used, alternative design solution drawings shall be submitted by the Contractor showing all conduit routing and equipment placement.

11.7 DESIGN VERIFICATION

[R01] Design verification is the process by which the Contractor's compliance with the technical requirements of the Contract will be ascertained. Design verification will also assess the compatibility of the interfaces between the Contractor's equipment relative to the equipment interfaces furnished by MARTA.

11.7.1 PRELIMINARY DESIGN REVIEW (PDR)

[R01] The PDR documents must be reviewed and approved by the Authority before any equipment is assembled and wired in equipment enclosures; however, the Contractor may procure and manufacture parts prior to the PDR if the parts were accepted by the Authority.

[R02] The Contractor shall attend the PDR to be held at the Authority's facility. The Authority will mark each of the Contractor's Drawings and technical data items submitted for review with a Review Stamp. The review block will be signed and dated by the Authority.

11.7.2 FINAL DESIGN REVIEW (FDR)

[R01] The FDR documents must be reviewed and approved by the Authority before any equipment is installed and tested.

[R02] The Contractor shall attend the FDR to be held at the Authority's facility. The Authority will mark each of the Contractor's Drawings and technical data items submitted for review with a Review Stamp. The review block will be signed and dated by the Authority.

[R03] The Contractor shall submit all documents still needing to be updated from the PDR submissions. All FDR documents shall be 100% complete level.

11.8 DATA SUBMITTALS

[R01] The requirements for the submittal of design, performance, and test data to the Authority shall be as specified, and in accordance with the Contract Data Requirements List.

[R02] The data submitted shall be compatible with the equipment furnished and the Contractor shall be responsible for the timely and adequate revision of delivered data that is affected by subsequent equipment changes.

[R03] Should additional data requirements arise after execution of the Contract, the Contractor shall provide such data to the Authority at no cost if the data has been prepared in support of the Contractor's own use in performing this Contract.

END OF SECTION 11

EXHIBIT B
SPECIAL TERMS AND CONDITIONS

The following special terms and conditions modify and amend the Contract terms and conditions specifically referenced herein. In the event of a conflict between the terms and conditions contained in this Exhibit B and the balance of the Contract, the terms and conditions set forth in this Exhibit B shall control.

(a) Contractor must design, deliver, install, test, operate, maintain, repair and replace (as needed) the APARC. In addition, Contractor must collect and provide for the safe keeping of all parking fees.

(b) The Contractor shall provide all services associated with the design, construction, management, operation and maintenance and the collection and safe keeping of parking fees in a first-class manner consistent with the best standards and practices within the parking industry and the requirements as specified in this Contract. Responsibilities may include selling and distributing permits, maintaining proper cash handling and audit procedures, maintaining the Automated Parking and Revenue Control (APARC) equipment, collecting and enforcing parking fees, keeping records of all revenue and expenses, trouble-shooting problems that may arise and providing superior service to everyone who parks at the Facilities.

(c) The Contractor's duties also include without limitation, keeping the parking garages and facilities in a neat and clean appearance, maintaining and repairing the same, and coordinating with MARTA for snow and ice removal that achieves MARTA'S zero-tolerance for snow and ice at parking facilities during peak commuting hours.

(d) The Contractor's duties also shall include purchase and installation of equipment and parking signage related to the APARC services.

1. **HOURS OF OPERATION**

The APARC system shall be operational and available to the traveling public 24 hours per day 7 days per week and 365 days a year. The Contractor shall not restrict the availability of the APARC system during peak periods and should notify and coordinate any APARC system down time with MARTA.

2. **PERMITTED AND EXCLUDED PRODUCTS**

Revenue from the APARC system is limited to MARTA approved parking rates at specific overnight locations. Only the MARTA Board of Directors has the right to change the parking policy and fee structure. The Contractor must be able to accommodate these fee changes. If these changes shall require the Contractor to install software and hardware in order to implement the new fee structure, then Contractor shall do so at Contractor's sole cost and expense.

3. **PARKING REVENUE**

(a) The Contractor shall collect all parking revenue at MARTA's long term parking facilities. Contractor shall be responsible to MARTA for any loss of parking revenue. The Contractor shall have full responsibility for all parking revenue that it receives from the operation of the facilities. In no event shall the Contractor withhold any parking revenue due to MARTA.

(b) The terms "Parking Revenue", "Gross Receipts" or "Gross Revenue" (including, without limitation, fee waiver parking Contracts), as used in this Contract shall mean all funds and proceeds derived from the operation of the Facilities in accordance with the Contract, including without limitation amounts that customers of the Facilities pay for all categories of parking, amounts that customers of the Facilities pay to Contractor in the form of fines or penalties for parking violations and any sales or other taxes that Contractor separately collects from customers of the Facilities, included without limitation sales, use and/or privilege taxes, which taxes Contractor shall collect from customers of the Facilities as part of charges for parking. **Contractor acknowledges and agrees that there shall be no deduction, set off, abatement or other reduction in the calculation of Gross Receipts for any reason including, without limitation, inability to collect from the parking user/customer.**

(c) Contractor shall impose and collect all parking fees from customers of the Facilities in accordance with the schedule of rates that MARTA Board of Directors from time to time determines.

(d) In the event of casualty or loss of any Parking Revenue prior to remittance when such theft or casualty loss is not the fault of the Contractor, failure to deposit such lost Parking Revenue shall not be an event of default under this Contract provided, however, that nothing herein shall alter, modify or lessen Contractor's responsibility to replace such lost Parking Revenue.

(e) **Minimum Annual Revenue Payable to MARTA: Contractor acknowledges and agrees that the minimum annual revenue that MARTA will accept throughout the term of the Contract is equal to \$562,500 regardless of the amount of gross receipts received by Contractor throughout the term of the Contract.**

(f) Increases in Parking Fees: If at any time during the term of the Contract, MARTA increases parking fees (as approved by the MARTA Board of Directors) MARTA shall receive fifty percent (50%) of any such increase in parking fees. For example only if the \$5.00 parking fee increases to \$6.00 and the \$8.00 parking fee increase to \$9.00, then MARTA shall receive fifty percent (50%) of the total increased parking fees (i.e., \$1.00).

4. USE OF THE FACILITIES

(a) The Facilities shall be used as commuter and long-term parking lots. The Facilities shall not be used for any other purpose without the prior written consent of MARTA. Contractor will not use the Facilities for any purpose which violates or interferes in any way with the restrictive covenants, conditions and easements to which the Facilities is or may, in MARTA's sole discretion, become subject. The Contractor shall, at its sole cost, apply for, obtain and maintain in good standing throughout the term of the Contract, all permits and licenses required by any

authority from whom any permit or license must be obtained in order for the Contractor to lawfully operate the Facilities. The Contractor shall comply with all governmental laws, regulations, and rules with respect to the use, maintenance, operation, and occupancy of the Facilities.

(b) A discriminatory parking policies will not be allowed at the Facilities. Hence, all commuters, long term parkers, resident or non-resident, shall be allowed equal access to the Facilities.

(c) MARTA reserves (for its sole benefit) the right to engage in all revenue producing functions and operations at the Facilities. Contractor shall not engage in, or permit any of its employees, agents, subcontractors, invitees or servants to be engaged in, the business of selling emergency services, supplies or products of any kind or the business of washing, cleaning or repairing vehicles at the Facilities. Contractor shall not install, maintain, operate or permit the installation, maintenance or operation of any vending machine or device assigned to dispense or sell merchandise or services of any kind. Contractor shall not install, maintain, operate or permit the installation, maintenance or operation of any free or pay telephones. Contractor shall not install, maintain, operate or permit the installation, maintenance or operation of any for-profit wireless communication equipment.

(d) Contractor shall permit MARTA and MARTA's, its agents and employees to enter and view the Facilities occupied by Contractor in conjunction with its performance under the Contract at any time for the purpose of inspecting or maintaining the Facilities or for the purpose of doing any other act therein that may be necessary or desirable for the proper operation of the Facilities.

(e) **Notwithstanding anything to the contrary contained in the Contract, Contractor acknowledges and agrees that any subletting, licensing or use of any of the Facilities shall be subject to MARTA's prior written consent and the FTA's prior written concurrence.**

5. CONTRACTOR IDENTITY

Contractor shall not affix or display its company logo, name or otherwise place its identity on operating equipment or on the Facilities without MARTA's prior written approval, which may be granted or denied in MARTA's sole discretion.

6. CUSTOMER INFORMATION

Because MARTA desires to present the Facilities to its customers and the general public in a professional, high-quality manner, Contractor shall work with MARTA to develop and disseminate customer-service information, as MARTA requires.

(a) All signs, messages, and devices used in the operation of the Facilities shall be subject to MARTA'S written approval.

(b) Contractor shall maintain a pre-recorded outgoing telephone-message device that contains accurate information about the Facilities, its location and the rates charged.

(c) At MARTA's discretion, Contractor shall train its employees in customer service according to a program approved by MARTA that seeks to provide high-quality public service that responds to public inquiries and minimizes customer complaints.

7. TITLE TO EQUIPMENT

Title to all improvements and operating equipment that Contractor purchases or installs on behalf of and at the expense of MARTA shall vest in MARTA upon installation, unless MARTA agrees otherwise in writing.

8. DIVERSION OF TRADE

Contractor shall not divert nor permit any of its employees, subcontractors or agents to divert any parking trade from the Facilities or to interfere with normal operation of the Facilities. MARTA at its sole discretion shall make any determination of diversion or interference.

9. MODIFICATION OF CONTRACT

(a) The Scope of Services set forth in this Contract may be reduced, modified or expanded within or beyond the scope of this Contract by written contract modifications executed by MARTA and Contractor. This includes the right to add, within this Contract, responsibility for management of additional parking facilities to those listed herein. These services at additional facilities may include implementation of paid parking services at parking facilities currently with free parking. Except as provided in paragraph (b) below, in the event that MARTA requires a reduction, expansion, or modification of the Scope of Services, MARTA shall issue to Contractor a written notification that specifies such reduction, expansion, or modification. Within fifteen (15) days after receipt of the written notification, Contractor shall provide MARTA with a detailed cost and schedule proposal for the service to be performed or to be reduced. This proposal may be accepted by MARTA or modified by negotiations between Contractor and MARTA and, thereafter, both parties shall execute a contract modification in writing.

(b) Notwithstanding subsection (a) above, MARTA at any time, by written order, may make changes to the scope of this Contract. If any such change causes an increase or decrease in the estimated cost of, or the time required for, the performance of any part of the work under this Contract, whether or not changed by the order, MARTA shall make such adjustments as are appropriate and equitable and shall modify the Contract in writing accordingly. Any claim by MARTA for adjustment under this clause must be asserted within thirty (30) days from the date of receipt by Contractor of the notification of change; provided, however, that MARTA, if it decides that the facts justify such action, may receive and act upon such claim asserted at any time prior to final payment under this Contract. Failure to agree to any adjustment shall be a dispute. However, nothing in this clause shall excuse Contractor from proceeding with the

Contract as changed.

(c) No services for which an additional cost or fee will be implemented without the prior express written consent of MARTA.

10. REVIEWS

Contractor shall allow representatives of MARTA to visit the offices and other places of work of Contractor periodically without prior notice to monitor Contractor's work pursuant to this Contract. MARTA shall, within a reasonable time, review and act upon all documents submitted by Contractor.

11. TAXES

Contractor shall be solely responsible for the collection and payment of all taxes associated with the operation of the APARC system, and any other taxes assessed against the Contractor's business. The payment of any such taxes shall not be a credit against any rent or other amounts due to the Authority for the grant of this Contract hereunder. Failure to pay all taxes when due, shall constitute an event of default.

12. CONTRACTOR'S INSTALLATION OF THE APARC SYSTEM

The Authority shall turn over each parking facility to the Contractor according to the Contractor's installation plan as approved by MARTA. The installation period shall be defined as the period during which the Contractor replaces the current parking fee collection system at each location with an Automated Parking Access and Revenue Control (APARC) system. An Administrative Notice to Proceed will be given along with the installation plan. The Contractor thereafter shall immediately proceed with the installation of the APARC system according to the agreed upon schedule for the installation period. All installation activities shall be undertaken at Contractor's sole cost and expense in accordance with a schedule to be agreed upon by the parties.

(a) Contractor's Obligations for Installation (Electrical Service In Place): Contractor agrees to perform Contractor's installation as set forth in the Statement of Work attached in Section III, together with other improvements that may be required by the Authority, required by code, law or regulation, or required by any local jurisdiction having authority over the Premises. For purposes of this Contract, Contractor's installations, or improvements which may be proposed by Contractor or required by law throughout the Term ("Subsequent Alterations") shall be hereinafter sometimes referred to as "Contractor's Work".

(b) Contractor's Obligation for Installation (No Electrical Service In Place): For installations where no electrical service is placed as of the date of this Contract, the Contractor shall be responsible, at Contractor's sole cost and expense, for providing electrical service suitable for the installation of APARC System. Plans for the installation of electrical service must be submitted to the Authority prior to the performance of any installation work.

(c) Contractor's Initial Installation Plans: Contractor, at Contractor's sole cost and expense and not later than forty (40) days after the date of execution of this Contract, shall submit in both paper copy and electronically complete plans and specifications (hereinafter, "Contractor's Initial Installation Plans") for review by the Authority. MARTA will determine the number of Initial Installation Plans required.

(d) Submission Review Procedures: After receipt and review by the Authority of Contractor's Initial Installation Plans, the Authority (a) shall give its written approval thereto, or (b) shall request revisions, modifications or substitutions. Contractor shall submit such revisions, modifications or substitutions within ten (10) calendar days after receipt of such request from the Authority. Upon completion of the Authority's review, the Authority shall give its written approval thereto or shall request additional revisions and modifications therein. The preceding two (2) sentences shall be implemented repeatedly until the Authority gives its written approval for Contractor's Initial Installation Plans. If the Authority shall deliver written notification to Contractor of such approval, such approval shall not constitute authorization to commence work.

(e) Submissions After Plan Approval: Upon the Authority's approval of Contractor's Initial Installation Plans, Contractor shall provide to the Authority: (1) certificate or certificates of insurance evidencing general liability, workers compensation, automobile liability and other insurance covering Contractor's contractors and builder's risk insurance in amounts, coverage and forms acceptable to the Authority; (2) copies of executed Contracts with all contractors; and (3) a work schedule (hereinafter, the "Schedule"). Upon review of all documents described above, the Authority shall inform Contractor to commence the Contractor's Work.

(f) Commencement of Work: Contractor shall commence Contractor's Initial Installation no later than seven (7) days from receipt of the Administrative Notice to Proceed and shall complete all of Contractor's Initial Installations (i.e., installations in the all of the parking facilities governed by this Contract) within (360) calendar days of the Administrative Notice to Proceed. Contractor's Initial Installation shall not be considered completed for the purpose of this Contract until the Authority has inspected the Premises and determined that Contractor's Initial Installations have been completed in accordance with Contractor's Initial Installations Plans.

(g) Conduct of Contractor's Work: Contractor shall not commence any of Contractor's Work on the Premises until the receipt of the Notice to Proceed and all required permits and approvals of any local jurisdiction having authority over the Premises. No work shall be done in the Premises except by Contractor or a contractor or contractors who have been approved by the Authority. All of Contractor's Work shall be done in accordance with Contractor's Initial Installation Plans as approved by the Authority and in accordance with all applicable federal, state and local laws, ordinances, requirements and regulations, and shall be performed in a safe manner so as not to interfere with rail station operations, the work of other contractors, or pedestrian traffic on the premises, nor shall Contractor's Work cause injury to MARTA property, patrons, employees or the public.

(h) Subsequent Alterations: Subject to the provisions of this Article, Contractor, at Contractor's sole cost and expense, shall make all repairs and alterations to all or any part of the Premises required to be made under the provisions of this Contract. For any Subsequent Alterations, Contractor must give the Authority prior written notice, and shall submit to the Authority for its approval six (6) complete sets of plans and specifications for the Authority's approval, prior to commencing the Subsequent Alterations. The approval and work implementation process for Subsequent Alterations shall be the same as the approval process of Contractor's Initial Improvements.

(i) Completion of Contractor's Work: None of Contractor's Work shall be considered completed for the purpose of this Contract until the Authority has inspected the Premises and determined that Contractor's Work has been completed in accordance with Contractor's plan and specifications, as approved by the Authority, and Contractor shall have delivered to the Authority the as-built documents for the Contractor's Work.

(j) Authority's Right to Inspect: The Authority shall have the right, but not the obligation, at any time during any construction or alteration performed by Contractor or Contractor's agents within or about the Premises to inspect Contractor's Work for compliance with plans submitted by Contractor and approved by the Authority. If the Authority is not satisfied with Contractor's Work, materials or manner in which it is performed, the Authority shall have the right, but not the obligation, to stop all work until the Authority's objections are satisfied to the Authority's specifications. Contractor hereby waives any claim against the Authority and shall indemnify the Authority from any claims which may be asserted against the Authority on account of any delay and all costs, expenses or damages incurred by Contractor due to the Authority's actions as specified herein. Any inspections, review or approval by the Authority of Contractor's Plans or Contractor's Work shall not relieve Contractor from any liability therefore, or relieve Contractor from any of its obligations under the Contract. Contractor acknowledges that any review or approval of plans or specifications by the Authority or consent by the Authority allowing Contractor to perform Contractor's Work in the Premises is for the Authority's purposes only and without any representation or warranty whatsoever to Contractor with respect to the adequacy, correctness or efficiency thereof or the compliance of the same with any legal requirements, insurance requirements or any other code or regulation.

(k) Installation Costs: Contractor agrees to pay any and all costs and expenses of performing Contractor's Work and to indemnify and hold harmless the Authority from any claims against the Authority arising from Contractor's Work. Contractor shall require all contractors performing Contractor's Work to post performance and payment bonds to secure the satisfactory and timely completion of the Work and the full payment therefor.

(l) As-Built Drawings: Six (6) CD's and two (2) copies of all original designs, Contracts, detail and shop drawings, together with two copies of the reproducible Contractor's Plans used by Contractor for Contractor's Work marked to show any changes and re-certified (having been initially stamped) shall be delivered by Contractor to the Authority immediately upon

completion of installation, and shall thereupon become the property of the Authority. The Authority will cooperate with Contractor in making its application to obtain licenses and permits necessary for Contractor's Work, at Contractor's sole cost and expense.

(m) Mechanic's Liens: Contractor shall not do or suffer anything to be done whereby any of MARTA's property or equipment may be encumbered by any lien, including without limitation, any mechanic's lien or materialmen's lien. Contractor agrees to hold the Authority harmless from any obligation to pay for any of the work, labor, and services performed on behalf of Contractor, or for any of the materials or chattels, fixtures and equipment furnished by or to Contractor in connection with Contractor's Work. Contractor agrees that the Authority shall not be liable to pay for any work, labor or services rendered or materials furnished or claimed to be furnished, to or for the improvement of MARTA's property. Nothing in this Contract shall be deemed or construed in any way as constituting the consent or request of the Authority, express or implied, to any contractor, subcontractor, laborer or materialmen for the performance of any labor or the furnishing of any materials for any specific improvement or alteration to, or repair of, MARTA's property, all which will be performed by Contractor for its sole benefit, nor as giving Contractor any right, power or authority to Contract for or permit the rendering of any services or the furnishing of any materials that would give rise to the filing of any liens against any of the Authority's property. In the event that a lien for such labor or materials shall be filed, Contractor shall, within thirty (30) days after receipt of notice thereof pay or bond such mechanic's lien or materialmen's lien or otherwise cause the same to be discharged. This provision shall survive the termination of this Contract. If Contractor shall not timely cause the same to be so withdrawn, discharged or removed, then, in addition to whatever other remedies may be available to the Authority there under or by law, the Authority may do so by payment, deposit, bonding proceeding or otherwise and all costs incurred by the Authority in that connection, including attorneys' fees, shall be reimbursed by Contractor to the Authority upon demand.

13. MAINTENANCE AND REPAIRS

(a) Contractor, at Contractor's sole cost and expense, shall maintain the premises in a clean, safe and secure condition. Contractor shall keep the premises in a clean and sanitary condition. During the term of this Contract, Contractor shall replace, as required by the Authority, any APARC System that is not in like new condition and cannot be repaired to like new condition.

(b) The Contractor shall be responsible for the daily maintenance, cleaning and repair (due to wear, use, vandalism, etc.) of all APARC equipment. MARTA anticipates the Contractor shall perform all levels of maintenance: preventative, field repair, shop level and overhauls to the APARC equipment. The maintenance requirements shall also include all APARC software updates as they become available from the manufacturer. **The APARC system shall provide at least ninety-nine point nine percent (99.9%) availability, excluding scheduled maintenance (between 2 AM – 4 AM seven days per week). Availability means the fully functional APARC system without degraded performance.**

14. ALTERATIONS TO THE PREMISES AND THE APARC SYSTEM

Contractor shall not make any major repairs, replacements, alterations or improvements (hereinafter, "Alterations") on or to the APARC System installed upon the Premises without the prior written consent of the Authority. Any alterations shall be constructed as provided above.

15. RECORDS AND REPORTS

Contractor shall keep true and accurate records of all transactions pertaining to this Contract. Such records shall be open to regular audit on an annual basis, with reasonable prior notice, by the Authority or its authorized representatives during normal business hours at the offices of Contractor, at any time while this Contract is in effect and for four years after its termination. Special audits may be conducted by the Authority more frequently than annually, with reasonable prior notice to Contractor of the purpose, scope and nature of the audit. In lieu of appearance at the offices of the Contractor, the Authority may request that relevant documents be transmitted electronically to the Authority for review. The types of records to be retained and open to audit shall include:

- (a) Servicing reports detailing maintenance and service calls for the equipment.
- (b) Parking unit periodic (daily, weekly, monthly) sales reports.
- (c) Such other reports as are maintained in the ordinary course of Contractor's business.

16. ACCESS TO ELECTRONIC RECORDS AND REPORTS

Contractor shall provide the Authority ongoing access to all electronic remote monitoring devices, electronic records and reports regarding the performance of the parking machines installed in accordance with the Statement of Work or otherwise.

17. IDENTIFICATION OF PERSONNEL: SECURITY

The Authority shall provide the Contractor with procedures for conducting suitable background checks, at the Contractor's expense, for all employees engaged in the Work who, in the sole discretion of the Authority, should be subject to background checks based upon the duties performed under the Contract. Suitable background checks may consist of one or more of the following, the Authority's sole discretion: (1) Criminal history, (2) credit report, (3) fingerprint analysis, (4) Livescan reporting (as administered by the Georgia Bureau of Investigation), or (5) determine whether the results of the background checks described above render an individual suitable for work assignments related to the Contract.

The Contractor shall include this requirement for background checks in all subcontracts entered into between the Contractor and any Subcontractor for performance of the Work or related support activities.

The Contractor shall provide personnel who enter upon the Authority's property and/or perform services under this Contract with distinctive identification badges showing the employer's name, the employee's job title and any employee identification number assigned to such employee. All personnel shall display these badges prominently upon their persons while on the Authority's property or while performing services under this Contract. The Authority will

allow only properly certified personnel of the Contractor on its property. The Authority shall have the right to require the Contractor to conduct background checks on its employees and to remove from the Authority's property, or from performing any duties under this Contract, any employee the Authority considers incompetent, careless, or who constitutes a security risk or safety hazard.

The Contractor's personnel must have all appropriate documentation, as determined by the Contract Administrator, to gain access to the Authority's property. The Authority's Contract Specialist will advise the Contractor in writing of the necessary documentation and identification required to gain access to the Authority's property, based upon the Federal Department of Homeland Security threat level in effect from time to time, and subject to any additional security requirements mandated by the Federal Department of Homeland Security, the Federal Transit Administration, or any other federal or state agency.

18. NOTICE TO PROCEED AND PROGRESS SCHEDULE

Provided that Contractor shall have delivered all required bonds and certificates of insurance to the Authority, the Authority will issue an Administrative Notice to Proceed to the Contractor within the time stipulated in the Contract Deliverable Requirements in section 4.2.14 Contract Deliverable Requirements List Table 0-4. The Administrative Notice to Proceed will authorize and direct the Contractor to prepare to perform the Contract but will not authorize any work on site of the project. The Authority will issue a Site Notice to Proceed authorizing and directing the Contractor to begin work on the site. Upon receiving the Site Notice to Proceed, the contractor shall diligently prosecute the Work in accordance with the Progress Schedule as hereinafter stipulated and shall complete the Work within the time required by the Contract.

19. OWNERSHIP OF EQUIPMENT

Notwithstanding anything to the contrary contained in this Contract, the Parties hereto acknowledge and agree that Contractor shall retain fee ownership in the equipment installed as a part of the APARC system upon installation and throughout the term of this Contract. Ownership of the APARC system equipment shall automatically be conveyed and transferred to MARTA upon the earlier of (a) the tenth (10th) anniversary of the Effective Date of the Contract or (b) the effective date of an earlier termination or cancellation of this Contract. The Parties hereto acknowledge and agree that in the event MARTA terminates or cancels this Contract and Contractor's right to provide services under this Contract at a specific parking facility (i.e., less than the entire Contract), then the specific APARC system equipment related to the termination/cancellation shall automatically be conveyed and transferred to MARTA upon the effective date of such termination/cancellation. If this Contract (in whole or in part) is terminated prior to the tenth (10th) anniversary of the Effective Date of the Contract, then MARTA agrees to pay Contractor the undepreciated amount of the APARC equipment in accordance with the APARC System Depreciation Schedule included in the APARC System Equipment Pricing Forms attached hereto as **Exhibit C-1**.

20. DEPRECIATION OF EQUIPMENT

Notwithstanding anything to the contrary contained in this Contract, the Contractor shall retain fee ownership in the equipment installed as a part of the APARC system throughout the term of this Contract and may depreciate the same in accordance with that certain APARC System Depreciation Schedule included in the APARC System Equipment Pricing Forms attached hereto as **Exhibit C-1**. Contractor may only depreciate the APARC equipment in accordance with GAAP and on a straight-line basis over a 10-year period without mark-ups of any kind.

EXHIBIT C
PRICE PROPOSAL FORM

The undersigned, on behalf of _____, Proponent/Contractor, has carefully examined RFP No. P30186 and having become familiar with all of the terms and conditions specified in the RFP and Contract, hereby submits the following annual Gross Parking Revenue offer as and for compensation for the privilege of and permission to provide design, construction, management services for certain parking operations at MARTA.

A. Minimum Acceptable Revenue Sharing Percentage: Proponent's/Contractor's minimum bid may not be less than 25% of \$2,250,000 (i.e., the Gross Parking Revenue Range Baseline), which equals \$562,500 ("Minimum Annual Guarantee"). Between the Effective Date and the Completion of Contractor's Work set forth in Section 12(i) of Exhibit B of the Contract (i.e., 360 days), Contractor shall pay MARTA twenty five percent (25%) of Gross Receipts received by Proponent/Contractor.

B. Minimum Annual Revenue Payable to MARTA: Proponent/Contractor acknowledges and agrees that the minimum annual revenue that MARTA will accept throughout the term of the Contract is equal to \$562,500 regardless of the amount of Gross Receipts received by Proponent/Contractor throughout the term of the Contract.

C. Increases in Parking Fees: If at any time during the term of the Contract, MARTA increases parking fees (as approved by the MARTA Board of Directors) MARTA shall receive fifty percent (50%) of any such increase in parking fees. For example only if the \$5.00 parking fee increases to \$6.00 and the \$8.00 parking fee increase to \$9.00, then MARTA shall receive fifty percent (50%) of the total increased parking fees (i.e., \$1.00).

D. Proponent's Parking Fee Proposal: The Proponent/Contractor shall pay MARTA the following percentage of the total Gross Receipts received by Proponent/Contractor:

(Please fill in the Gross Parking Revenue offer in both words and numbers)

1. 360 Day Construction Period: Twenty Five percent (25%)
2. Contract Year 1: _____ percent (_____%)
3. Contract Year 2: _____ percent (_____%)
4. Contract Year 3: _____ percent (_____%)
5. Contract Year 4: _____ percent (_____%)
6. Contract Year 5: _____ percent (_____%)
7. Contract Year 6: _____ percent (_____%)
8. Contract Year 7: _____ percent (_____%)
9. Contract Year 8: _____ percent (_____%)
10. Contract Year 9: _____ percent (_____%)
11. Contract Year 10: _____ percent (_____%)

Proponent's Average Percentage Proposed for Contract Years 1-10: _____ percent (_____%)

12. Contract Renewal Year 1: _____ percent (_____%)
13. Contract Renewal Year 2: _____ percent (_____%)
14. Contract Renewal Year 3: _____ percent (_____%)
15. Contract Renewal Year 4: _____ percent (_____%)
16. Contract Renewal Year 5: _____ percent (_____%)

E. MARTA’S REVENUE SHARING MODEL: The gross parking revenue range is fixed as set forth in the chart below. The gross parking revenue range begins at a baseline amount and incrementally increases six (6) times as set forth below. Proponent’s/Contractor’s proposed percentage set forth in Section D above will be the amount paid for the first step in the Fixed Revenue Sharing Percentage charge below. Proponent/Contractor acknowledges and agrees that the parking fees paid to MARTA will be based upon the percentage of Gross Parking Revenue and shall be fixed in accordance with the schedule set forth below for each contract year of the Term and paid in accordance with the terms of the Contract:

Fixed Revenue Sharing Percentage to MARTA			
Tiers	Gross Parking Revenue Range		Percentage of Gross Receipts to MARTA
	Min	Max	
Baseline	\$2,250,000	\$2,600,000	[Insert Proponent’s/Contractor’s Proposed Percentage here for each Contract Year]
Increase Step 1	\$2,600,001	\$3,100,000	20.00%
Increase Step 2	\$3,100,001	\$3,600,000	20.00%
Increase Step 3	\$3,600,001	\$4,100,000	15.00%
Increase Step 4	\$4,100,001	\$4,600,000	10.00%
Increase Step 5	\$4,600,001	\$5,100,000	5.00%
Increase Step 6	\$5,100,001	All amounts above \$5,500,001	5.00%

For example only, in the event Gross Parking Revenue generated under the Contract was \$2,000,000 during the 360 Day Construction Period and \$3,700,000 in the first Contract Year of the Term and Proponent proposed a Parking Fee percentage equal to 33% for the first Contract Year of the Term, then the Parking Fees that would have been remitted to MARTA by the end of the first Contract Year of the Term are as follows:

Tiers	Gross Parking Revenue Range		Percentage of Gross Receipts Payable to MARTA	Gross Parking Revenue Generated	Annual Parking Fee Payable to MARTA
	Min	Max			
360 Day Construction Period	None for this period		25%	\$2,000,000	\$500,000
Baseline	\$2,250,000	\$2,600,000	33%	\$2,600,000	\$858,000
Increase Step 1	\$2,600,001	\$3,100,000	20.00%	\$500,000	\$100,000

Increase Step 2	\$3,100,001	\$3,600,000	20.00%	\$500,000	\$100,000
Increase Step 3	\$3,600,001	\$4,100,000	15.00%	\$100,000	\$15,000
Increase Step 4	\$4,100,001	\$4,600,000	10.00%	\$0	\$0
Increase Step 5	\$4,600,001	\$5,100,000	5.00%	\$0	\$0
Increase Step 6	\$5,100,001	All amounts above \$5,500,001	5.00%	\$0	\$0
Total					\$1,573,000

EXHIBIT C-1

APARC SYSTEM EQUIPMENT PRICING FORMS

The following information shall be completed by Proponent/Contractor.

Quantity Estimated	Unit	Product	Comments	Unit Cost (\$)	Total Cost (\$)
Section 1: Automated Parking Equipment					
22	Each	Parking Entry Gate Unit	Complete Unit: One (1) Gate Arm and assemble, Two (2) Units with barcode dispenser and customer display, Software, Video Intercom and all other required items for a complete unit		
20	Each	Parking Exit Gate Unit	Complete Unit: One (1) Gate arm, barcode reader, software, Customer display, VoIP intercom, Video CCTV (Customer), Credit Card reader and processor and all other required items for a complete unit		
2	Each	Reversible Gate Unit	Both the Parking Entry and Exit Gate Unit		
7	Each	Bail Out Gate Unit	Bail Out Gate Unit		

Quantity Estimated	Unit	Product	Comments	Unit Cost (\$)	Total Cost (\$)
29	Each	Automated Parking Payment Machine (Pay-on-Foot Device)	Automated Parking Payment Machine includes: Credit/Debit Reader with PIN pad, parking barcode reader, customer display, bill and coin Acceptor, printer-receipt, data communications, Software with licenses, and all necessary hardware.		
7	Each	Parking Cashier Terminal	Parking Cashier Terminal includes: Credit/Debit Reader with PIN pad, customer display, parking ticket reader, cashier display, printer-receipt, data communications, Software with licenses.		
		Additional APARC Equipment	Please provide description and cost breakdown 1) 2) 3)		
Section 1 Total					
Section 2: APARC Back Office System					

Quantity Estimated	Unit	Product	Comments	Unit Cost (\$)	Total Cost (\$)
1	Each	Site : North Springs APARC Back Office System	Site North Springs : Back-office System to manage and control Hardware, servers, software, monitors, video monitors and all other required items for a complete unit		
1	Each	Site : Sandy Springs APARC Back Office System	Site Sandy Springs : Back-office System to manage and control Hardware, servers, software, monitors, video monitors and all other required items for a complete unit. (Redundant Site)		
1	Each	APARC MARTA System	APARC System for MARTA personnel to review and audit reports. Hardware, software and all other required items for a complete unit		
	Each	Expense and Cost	Please provide description and cost break-down 1) 2) 3)		
Section 2 Total					

Quantity Estimated	Unit	Product	Comments	Unit Cost (\$)	Total Cost (\$)
Section 3: Installation and Testing					
1	All	Installation of APARC System			
1	All	Testing of APARC System			
		Expenses and Other Costs	Please provide description and cost break-down 1) 2) 3)		
Section 3 Total					
Section 4: Project Management					
1	All	Project Management			
1	All	Expenses and Other Costs	Please provide description and cost break-down 1) 2) 3)		

Quantity Estimated	Unit	Product	Comments	Unit Cost (\$)	Total Cost (\$)
Section 4 Total					
Section 5: Civil Work					
1	All	Civil Work	Civil work for Installation of APARC system		
1	All	Site Drawings	Detailed drawings for each site		
		Expenses and Other Costs	Please provide description and cost break-down 1) 2) 3)		
Section 5 Total					

Quantity Estimated	Unit	Product	Comments	Unit Cost (\$)	Total Cost (\$)
Automated Parking Access and Revenue Control System Grand Total (Totals of All Sections 1 thru 5)					
Optional License Plate Recognition System					
Quantity Estimated	Unit	Product	Comments	Unit Cost (\$)	Total Cost (\$)
44	Each	License Plate Recognition System	Complete Unit: One (1) Camera and assembly per lane (Entry and Exit), Mounts and housing , Software, Night vision lights and all other required items for a complete unit		
		Installation and Testing of License plate Recondition System			
		Additional LPR System equipment 1) 2) 3)	Please provide description and cost break-down		
Total Optional License Plate Recognition System					
Combined Total (Automated Parking Access and Revenue Control System plus Optional License Plate Recognitions System)					

**Facility-By-Facility
APARC System Equipment Pricing**

The following equipment pricing should equal the pricing provided above but stated on a facility-by-facility basis.

Product	North Springs	Sandy Springs	Dunwoody I	Dunwoody II	Medical Center	Doraville	Brookhaven	Lenox	Lindbergh (Sydney Marcus)	College Park	Kensington	Grand Total
	Total Cost	Total Cost	Total Cost	Total Cost	Total Cost	Total Cost	Total Cost	Total Cost	Total Cost	Total Cost	Total Cost	
Section 1: Automated Parking Equipment												
Parking Entry Gate Unit												
Parking Exit Gate Unit												
Reversible Gate Unit												
Ball Out Gate Unit												
Automated Parking Payment Machine												
Parking Cashier Terminal												
Additional APARC Equipment												
Total Section 1												
Section 2: APARC Back Office												
APARC Back Office System (North Springs)												
APARC Back Office System (Sandy Springs)												
APARC MARTA System												

Optional License Plate Recognition System

Product	North Springs	Sandy Springs	Dunwoody I	Dunwoody II	Medical Center	Doraville	Brookhaven	Lenox	Lindbergh (Sydney Marcus)	College Park	Kensington	Grand Total
License Plate Recognition System												

Combined Total of APARC System and License Plate Recognition System

Combined Total of APARC System and License Plate Recognition System

Product	North Springs	Sandy Springs	Dunwoody I	Dunwoody II	Medical Center	Doraville	Brookhaven	Lenox	Lindbergh (Sydney Marcus)	College Park	Kensington	Grand Total
Automated Parking Access and Revenue Control System Grand Total												
License Plate Recognition System												
Grand Total												

Facility-By-Facility
APARC Equipment Depreciation Schedule

Automated Parking Access and Revenue Control System Depreciation Schedule

Parking Facility	Initial Cost	Number of Years Useful	APARC System Worth																	
			Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10								
North Springs																				
Landy Springs																				
Dunwoody I																				
Dunwoody II																				
Medical Center																				
Doraville																				
Brookhaven																				
Lenox																				
Windbergh (Sydney Marcus)																				
College Park																				
Wilmington																				
TOTAL																				

EXHIBIT D
INSURANCE AND BONDING REQUIREMENTS

A. Preamble

The following requirements apply to all work under the Contract. Compliance is required by the Contractor. **To the extent permitted by applicable law, MARTA reserves the right to adjust or waive any insurance or bonding requirements contained in this Exhibit D.**

1. Evidence of Insurance Required Before Work Begins:

No work under the Contract may be commenced until all insurance and bonding requirements contained in this Exhibit D, or required by applicable law, have been complied with and evidence of such compliance satisfactory to MARTA as to form and content has been filed with MARTA. Contractor must provide MARTA with a Certificate of Insurance that clearly and unconditionally indicates that Contractor has complied with all insurance and bonding requirements set forth in this Exhibit D. If the Contractor is a joint venture, the insurance certificate should name the joint venture, rather than the joint venture partners individually, as the primary insured. Either prior to or at the time Contractor submits its executed Contract to MARTA, Contractor must satisfy all insurance and bonding requirements required by this Exhibit D and applicable by law, and provide the required written documentation to MARTA evidencing such compliance. In the event that Contractor does not comply with the insurance and bonding requirements set forth herein after the Effective Date of the Contract, MARTA may, in accordance with the terms of the Contract, deem the Contractor to be in default under the terms of the Contract and exercise its right to any remedy or cure available to MARTA pursuant to the terms of the Contract or pursuant to applicable law.

2. Minimum Financial Security Requirements

All companies providing insurance required by this Exhibit D must meet certain minimum financial security requirements. These requirements must conform to the ratings published by A.M. Best & Co. in the current Best's Key Rating Guide - Property-Casualty. The ratings for each company must be indicated on the documentation provided by Contractor to MARTA certifying that all insurance and bonding requirements set forth in this Exhibit D and applicable to the Contract have been unconditionally satisfied. For all Contracts, regardless of size, companies providing insurance or bonds under the Contract must meet the following requirements:

- (a) Best's Rating not less than A-;
- (b) Best's Financial Size Category not less than Class IX;
- (c) Companies must be authorized to conduct and transact insurance contracts by the Insurance Commissioner of the State of Georgia; and
- (d) All bid, performance and payment bonds must be underwritten by a U.S. Treasury Circular 570 listed company.

If the issuing company does not meet these minimum requirements, or for any other reason is or becomes unsatisfactory to MARTA, MARTA will notify Contractor in writing. Contractor must promptly obtain a new policy or bonds issued by an insurer acceptable to MARTA and submit to MARTA evidence of its compliance with these conditions.

Contractor's failure to comply with all insurance and bonding requirements set forth in this Exhibit D and applicable to the Contract will not relieve Contractor from any liability under the Contract. Contractor's obligations to comply with all insurance and bonding requirements set forth in Exhibit D and applicable to the Contract will not be construed to conflict with or limit Contractor's indemnification obligations under the Contract.

3. Insurance Required for Duration of Contract

All insurance and bonds required by this Exhibit D must be maintained during the entire term of the Contract, including any renewal or extension terms, and until all work has been completed to the satisfaction of MARTA.

4. Notices of Cancellation & Renewal

Contractor must, notify MARTA in writing at the address listed below by mail, hand-delivery or facsimile transmission, within 2 days of any notices received from any insurance carriers providing insurance coverage under this Contract and Exhibit D that concern the proposed cancellation, or termination of coverage.

Risk Management Department
2424 Piedmont Road, N.E.
Atlanta, GA 30324-3330
Facsimile No. (404) 848-4549

Confirmation of any mailed notices must be evidenced by return receipts of registered or certified mail. Contractor shall provide MARTA with evidence of required insurance prior to the commencement of the Contract, and, thereafter, with a certificate evidencing renewals or changes to required policies of insurance at least thirty (30) days prior to the expiration of previously provided certificates.

5. Agent Acting as Authorized Representative

Each and every agent acting as authorized representative on behalf of a company affording coverage under this contract shall warrant when signing the Acord Certificate of Insurance that specific authorization has been granted by the Companies for the Agent to bind coverage as required and to execute the Acord Certificates of Insurance as evidence of such coverage. MARTA coverage requirements may be broader than the original policies; these requirements have been conveyed to the Companies for these terms and conditions. In addition, each and every agent shall warrant when signing the Acord Certificate of Insurance that the Agent is licensed to do business in the State of Georgia and that the company or companies are currently in good standing in the State of Georgia.

6. Certificate Holder

MARTA must be named as certificate holder. All notices must be mailed to the attention of **Risk Management Department** at **2424 Piedmont Road, N.E., Atlanta, Georgia 30324-3330**.

7. Project Number & Name

The project number and name must be referenced in the description section of the insurance certificate.

8. Additional Insured Endorsements – Form CG 20 26 07 04 or their carrier equivalent

MARTA shall be covered as an Additional Insured, as its interest may appear, under any and all insurance required pursuant to this Contract, and such insurance shall be primary and non-contributory with respect to the Additional Insured. However, this requirement does not apply to Workers' Compensation or Professional Liability Insurance. Additional insured status extending to ongoing and completed operations per CG 20 26 07 04 or their carrier equivalent shall be provided. Additional insured status shall be maintained following project completion equivalent to the statute of repose in the State of Georgia. A copy of the Additional Insured Endorsement or its equivalent must be forwarded to the Risk Management Department as soon as practicable but in no event more than ten (10) days after the execution date of the Contract.

9. Mandatory Sub-Contractor Compliance

Contractor must require and ensure that all subcontractors at all tiers to be sufficiently insured/bonded.

10. Self-Insured Retentions, Deductibles or Similar Obligations

Any self-insured retention, deductible or similar obligation will be the sole responsibility of the contractor.

11. Task Order

Evidence of compliance with insurance requirements must be provided on a Task Order basis prior to the issuance of any Notice to Proceed.

B. Workers' Compensation and Employer's Liability Insurance

Contractor must procure and maintain Workers' Compensation and Employer's Liability Insurance in the following limits to cover each employee who is or may be engaged in work under the Contract:

Workers' Compensation	Statutory
Employer's Liability:	
Bodily Injury by Accident/Disease	\$100,000 each accident
Bodily Injury by Accident/Disease	\$100,000 each employee

Bodily Injury by Accident/Disease **\$100,000 policy limit**

C. Commercial General Liability Insurance

Contractor must procure and maintain Commercial General Liability Insurance on form (CG 00 00 01 or equivalent) in an amount not less than **\$1,000,000 per occurrence subject to a \$3,000,000 aggregate.** The following indicated extensions of coverage must be provided:

- Contractual Liability
- Broad Form Property Damage
- Premises Operations
- Medical Expense
- Independent Contractor/Subcontractor
- Additional Insured Endorsement* (primary & non-contributing in favor of MARTA)
- Waiver of Subrogation in favor of MARTA

D. Commercial Automobile Liability Insurance

Contractor must procure and maintain Automobile Liability Insurance in an amount not less than **\$1,000,000** Bodily Injury and Property Damage combined single limit. The following indicated extensions of coverage must be provided:

- Owned, Non-owned & Hired Vehicles
- Waiver of Subrogation in favor of MARTA

If Contractor does not own any automobiles in the corporate name, non-owned vehicle coverage will apply and must be endorsed on either Contractor's personal automobile policy or the Commercial General Liability coverage required under this Exhibit D.

E. Professional Liability

Contractor must procure and maintain Professional Liability with not less than **\$1,000,000** including but not limited to coverage for all acts, errors, omissions, negligence and network security and privacy risks, including coverage for unauthorized access, failure of security, breach of privacy perils, wrongful disclosure of information in the performance of services for and on behalf of MARTA. If any of the coverage requirements are sub-limited within your errors and omissions or cyber coverage, those sub-limits should not be less than **\$1,000,000.**

F. Excess or Umbrella Liability Insurance

- Coverage must follow form with primary policy
- May be used to achieve minimum general and auto liability limits
- Coverage must be as broad as primary policy

G. Property Coverage

Contractor shall procure and maintain all risk property coverage in an amount equal to replacement value for all equipment, furniture, fixtures, machinery and/ or personal property.

H. Payment and Performance Bonds

Contractor must, prior to or simultaneously with the Effective Date of the Contract, at Contractor's own expense, deliver to MARTA a Performance and a Payment Bond each in an amount equal to the construction costs for the entire APARC system, naming MARTA as co-obligee and issued by a surety company or companies in such form either attached hereto (or as otherwise approved by MARTA's Chief Counsel), which surety bond or bonds must be renewed annually. The bonds must be kept in full force and effect until the final Completion of Contractor's Work set forth in Section 12(i) of Exhibit B of the Contract. In lieu of a Performance Bond, Contractor may submit to MARTA an Irrevocable Letter of Credit in a form acceptable to MARTA, in MARTA's sole discretion.

- (a) In addition, prior to the commencement of any construction work by or at the instance of Contractor, it must provide to MARTA a fixed price contract or contracts for all work to be performed, which contract(s) shall be insured by, and Contractor shall provide to MARTA, a Payment Bond in an amount equal to 100% of the work specified in such contract(s) and acceptable to MARTA's Chief Financial Officer and in such form as approved by MARTA's Chief Counsel. The Payment Bond shall name MARTA as the obligee, shall meet the other requirements of the Contract, and shall remain in full force and effect until: (i) all improvements are completely and fully paid for, (ii) certificates of occupancy (if required) have been issued, (iii) final lien waivers have been obtained from all contractors and subcontractors; (iv) MARTA has approved the final construction of the improvements; and (v) the applicable limitations period under Georgia law for the commencement of a suit against the Payment Bond has lapsed.
- (b) The bonds must be issued as security for the full and faithful performance of this Contract, including, its covenants, stipulations and agreements of the Contractor, the payment of all bills and obligations arising out of the performance its obligations under the Contract, which bills and obligations might or would in any manner become a claim against MARTA, and guaranteeing all services and work set forth in the Contract against faulty materials or poor workmanship, or both, in accordance with any warranty provisions of the Contract, if any.
- (c) The surety company issuing the bonds must give the MARTA notice in writing by registered mail at least sixty (60) days prior to an anniversary date of the bonds of its intention not to renew or to terminate the bonds.
- (d) A Corporate Surety that is satisfactory to MARTA, authorized to do business in the State of Georgia, and listed in the latest issue of U.S. Treasury Circular 570 must execute the bonds.
- (e) An agent of the Surety residing in the State of Georgia must execute the bonds. The date of the Bonds must be the same as the date of execution of the Contract by MARTA. The Surety must appoint an agent for service in Atlanta, Georgia upon whom all notices must be shown on each Bond. The person executing the Bonds on behalf of the Surety must file with the Bonds a general power of attorney unlimited as to amount and type of Bonds covered by such power of attorney, and certified to by an official of said Surety. The Bonds must be on forms provided by MARTA. The Contract will not be executed by MARTA until after the approval of the Bonds by MARTA's Chief Counsel.

END OF EXHIBIT D

APPENDIX A
DEPARTMENT OF DIVERSITY AND EQUAL OPPORTUNITY REQUIREMENTS

See attached.

**METROPOLITAN ATLANTA RAPID TRANSIT AUTHORITY
EQUAL EMPLOYMENT OPPORTUNITY
AND
DISADVANTAGED BUSINESS ENTERPRISE REQUIREMENTS
FOR
SERVICE CONTRACTS AND AGREEMENTS**

This document is issued pursuant to Title VII of the *Civil Rights Act* of 1964, *Executive Order* 11246, *Executive Order* 11625, 49 CFR Part and 26, and the MARTA Board Policies on equal employment opportunity (Exhibit A), and the utilization of disadvantaged business enterprises (Exhibit B). The Contractor is required to take certain actions designed to assure equitable participation of minority persons and women in its work force, as well as the maximization of opportunities for disadvantaged business enterprises.

Part I details the equal employment opportunity requirements; Part II outlines the disadvantaged business utilization requirements; and Part III requires the Contractor's employment data, details on disadvantaged business utilization, and certification.

PART I - EQUAL EMPLOYMENT OPPORTUNITY (EEO)

A. Utilization Analysis

1. This submittal requirement is applicable to each entity, including each separate partnership, corporation, company, joint venture, or other entity, regardless of its level of participation, comprising the business organizations or entities submitting the bid(s). Each Contractor, desirous of doing business with the Authority, shall be required to submit a current affirmative action program if their workforce is 50 or more employees. The affirmative action program should include a utilization analysis by job category, an underutilization analysis, a program of goals and timetables to correct any such underutilization, and other data called for by the Authority's Office of Diversity and Equal Opportunity. A current Equal Employment Opportunity Policy statement is required if the Contractor's workforce is less than 50 employees.

B. Underutilization Analysis

1. "Underutilization" is defined as employing fewer minorities in a particular job category than would reasonably be expected between their availability in the general population, or fewer women in a particular job category than would reasonably be expected based on their availability in the labor market. In determining whether minorities or women are being underutilized in any job category, the Contractor will consider all of the following factors:
 - a. The minority population of the area encompassed by the MARTA system;
 - b. The size of the minority and female unemployment force in the labor area encompassed by the MARTA system;
 - c. The percentage of minority and female work forces as compared with the total work force in the labor area encompassed by the MARTA system;

- d. The general availability of minorities and women having requisite skills in the labor area encompassed by the MARTA system;
- e. The availability of minorities and women having requisite skills in an area from which the Contractor can reasonably recruit;
- f. The availability of promotable minority and female employees within the Contractor's organization;
- g. The anticipated expansion, contraction and turnover in the work force;
- h. The existence of training institutions capable of training minorities and women in the requisite skills; and
- i. The degree of training which the Contractor is reasonably able to undertake as a means of making all job classes available to minorities and women.

C. Goals and Timetables

1. In the event there is an underutilization of minority or female employees, the Contractor shall also be required to include in its affirmative action plan, a program, including goals and timetables, for correcting these deficiencies.
2. An effective affirmative action program shall contain, but not necessarily be limited to, the following elements: (a) development or reaffirmation of the Contractors' equal employment opportunity policy in all personnel actions; (b) formal internal and external dissemination of the Contractors' policy; (c) establishment of responsibilities for implementation of the Contractor's affirmative action program; (d) identification of underutilization by organizational units and job categories; (e) where underutilization occurs, development and execution of a program establishing corrective and affirmative goals and objectives by organizational units and job category, including timetables for completion; (f) design and implementation of internal audit and reporting systems to measure effectiveness of the total program; (g) internal active support of local and national community action programs. Support data for the above analysis and program shall be compiled and maintained as part of the affirmative action program. This data should include progression line charts, seniority rosters, applicant flow data, and applicant rejection ratios indicating minority and female status.
3. Goals shall be targets reasonably attainable by means of applying every good faith effort to make all aspects of the entire affirmative action program work. The use of goals is not intended and should not be used to discriminate against any applicant or employee because of race, color, religion, sex or national origin.

D. Reports

1. All Contractors doing business with the Authority shall submit at least quarterly reports as may be requested by the Executive Director, Office of Diversity and Equal Opportunity or a designee. Such employment reports shall include such information as to the practices, policies, programs, and statistics of the Contractor, and shall be in such form, as the Authority may prescribe.

E. Subcontractors

1. Subcontractors are bound by the same requirements as Contractors, who shall be responsible for the compliance of their Lower tier contractors.

F. Responsibility for Implementation

1. Each Contractor shall designate, and notify the Authority of the person who will be responsible for implementing its equal opportunity policy and plan.

G. Compliance

1. The Contractor agrees to comply, and assures the compliance of each sub recipient, lessee, third party contractor, or other participants at any tier of the Project, with all equal employment opportunity (EEO) provisions of 49 U.S.C. § 5332, with Title VII of the Civil Rights Act of 1964, as amended, 49 U.S.C. § 2000e, and implementing Federal regulations and any later amendments thereto. Except to the extent FTA determines otherwise in writing, the Contractor also agrees to follow all applicable Federal EEO directives that may be issued.
2. Failure to comply with the Authority's Equal Employment Opportunity policy may constitute cause for cancellation or termination of the contract and may render a Contractor ineligible for future contracts with the Authority. Immediately upon finding that a Contractor is in noncompliance, the Authority shall issue a notice to the Contractor giving it thirty (30) days to show cause why the contract should not be terminated. If the Contractor fails to develop and implement an acceptable affirmative action program within thirty (30) days, the Authority shall issue a notice of proposed cancellation or termination of existing contracts and subcontracts and debarment from future contracts and subcontracts. The Contractor shall have ten (10) days to request a hearing. If a request has not been received in ten (10) days, the Contractor will be declared ineligible for future contracts and contracts will be terminated for default.
3. During the "show cause" period of thirty (30) days, every effort shall be made by the Authority through conciliation, mediation and persuasion to resolve the deficiencies that led to the determination of noncompliance.
4. Any prime Contractor or Subcontractor declared ineligible for further contracts or subcontracts may request reinstatement in a letter directed to the Authority. In connection with the reinstatement proceeding, the prime Contractor or Subcontractor shall be required to show that it has established and will carry out employment policies and practices in compliance with the Equal Employment Opportunity requirements.

H. Records

1. The Contractor and Subcontractor shall permit access to their books, records, and accounts by OFCCP, the Federal DOT, or the Federal Transit Administration and the Authority's Executive Director, Office of Diversity and Equal Opportunity or a designated representative for purpose of investigation to ascertain compliance with the foregoing requirements.

I. Federal Nondiscrimination Provisions Pursuant to 41 CFR Part 60-1.4(b)

During the performance of this contract, the Contractor agrees as follows:

1. The Contractor will not discriminate against any employee or applicant for employment because of race, creed, color, sex or national origin. The Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated equitably during employment without regard to their race, religion, color, sex, or national origin. Such action shall include, but not be limited to, the following: employment, promotion, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees, and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.
2. The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, religion, color, sex or national origin.
3. The Contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representative of the Contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
4. The Contractor will comply with all provisions of *Executive Order* 11246 of September 24, 1965, and of the rules, regulations and relevant orders of the Secretary of Labor.
5. The Contractor will furnish all information and reports required by *Executive Order* 11246 of September 24, 1965, and by rules, regulations and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records and accounts by the Administering Agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations and orders.
6. In the event of the Contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations or orders, this contract may be canceled, terminated, or suspended in whole or in part and the Contractor may be declared ineligible for further Government contracts or Federally assisted contracts in accordance with procedures authorized in *Executive Order* 11246 of September 24, 1965, and such sanctions may be imposed and remedies invoked as provided in *Executive Order* 11246 of September 24, 1965, or by rule, regulation, or order, of the Secretary of Labor, or as otherwise provided by law.
7. The Contractor will include the portion of the sentence immediately preceding paragraph (I.1) and the provisions of paragraphs (I.1) through (I.7), in every subcontract or purchase order unless exempted by rules, regulations or orders of the Secretary of Labor issued pursuant to Section 204 of *Executive Order* 11246 of September 24, 1965, so that such provisions will be binding upon each

Subcontractor or vendor. The Contractor will take such action with respect to any Subcontractor or purchase order as the Administering Agency may direct as a means of enforcing such provisions, including sanctions for noncompliance. Provided, however, that in the event a Contractor becomes involved in, or is threatened with, litigation with a Subcontractor or vendor as a result of such direction by the Administering Agency, the Contractor may request the United States to enter into such litigation to protect the interests of the United States.

J. Federal Nondiscrimination Provisions Pursuant to 49 CFR Part 21.

During the performance of the Contract, the Contractor agrees as follows:

1. The Contractor shall comply with the Regulations relative to nondiscrimination in Federally assisted programs of the Department of Transportation (DOT) Title 49, Code of Federal Regulations, Part 21, as they may be amended from time to time (hereafter referred to as the Regulations), which are herein incorporated by reference and made a part of the contract.
2. The Contractor, with regard to the work performed by it during the Contract, shall not discriminate on the grounds of race, color, sex, creed or national origin in the selection and retention of Subcontractors, including procurements of materials and leases of equipment. The Contractor shall not participate, either directly or indirectly, in the discrimination prohibited by Section 21.5 of the Regulations, including employment practices when the Contract covers a program set forth in Appendix B of the Regulations.
3. In all solicitations, either by competitive bidding or negotiation, made by the Contractor for work to be performed under a subcontract, including procurements of materials and leases of equipment, each potential Subcontractor or supplier shall be notified by the Contractor of the Contractor's obligations under the Contract and the Regulations relative to nondiscrimination on the grounds of race, color, sex, creed or national origin.
4. The Contractor shall provide all information and reports required by the Regulations and directives issued pursuant thereto, and shall permit access to its books, records, accounts, other sources of information and its facilities as may be determined by the Authority or the Federal Transit Administration (FTA) to be pertinent to ascertain compliance with such Regulations, orders, and instructions. Where any information required of a Contractor is in the exclusive possession of another who fails or refuses to furnish this information, the Contractor shall so certify to the Authority, or the Federal Transit Administration, as appropriate, and shall set forth what efforts it has made to obtain the information.
5. In the event of the Contractor's noncompliance with the nondiscrimination provisions of this Contract, the Authority shall impose such contract sanctions as it or the Federal Transit Administration may determine to be appropriate, including, but not limited to:
 - a. Withholding of payments to the Contractor under the contract until the Contractor complies, and/or
 - b. Cancellation, termination or suspension of the contract, in whole or in part.

6. The Contractor shall include the sentence immediately preceding paragraph (J.1) and the provisions of paragraph (J.1) through (J.6) in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Regulations, or directives issued pursuant thereto. The Contractor shall take such action with respect to any subcontract or procurement as the Authority or the Federal Transit Administration may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, however, that, in the event a Contractor becomes involved in, or is threatened with, litigation with a Subcontractor or Supplier as a result of such direction, the Contractor may request the Authority to enter into such litigation to protect the interests of the Authority, and, in addition, the Contractor may request the United States to enter into such litigation to protect the interests of the United States.

PART II - UTILIZATION OF DISADVANTAGED BUSINESS ENTERPRISES

A. Disadvantaged Business Enterprise (DBE) Participation Contract Specifications Pursuant to *Executive Order 11625, 49 CFR Part and 26, and MARTA Policy.*

1. It is the policy of the Federal Government and the Authority to ensure a "level playing field" and foster equal opportunity for small businesses pursuant to the Department of Transportation's 49 CFR Part 26. In this regard, the Contractor to whom any award of this solicitation is made shall take all necessary and reasonable steps in accordance with this solicitation to ensure that disadvantaged business enterprises have a "level playing field" and foster equal opportunity for small businesses. The contractor, sub recipient or subcontractor shall not discriminate on the bases of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirement of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate. The Contractor shall use its best efforts to carry out the DBE policy consistent with efficient performance on the project.
2. Contractors are hereby informed that the Authority will consider the establishment of goals for the participation of disadvantaged business enterprises in all contracts it awards. Subsequently, any Subcontracts awarded by the Contractor successful in this solicitation to firms owned by disadvantaged persons, and to joint ventures of which such firms are a part, are essential to the achievement of the Authority's DBE goal. Therefore to be considered for award, Contractors must comply with the requirements of this Part II. By submitting his/her bid, each Contractor gives assurance that he/she will meet the Authority's percentage goal target set forth in Parts II.A.3 for participation by disadvantaged business enterprises in the performance of any contract resulting from this solicitation or, as an alternative, that he has made or will make good faith efforts toward meeting the DBE goals, and will demonstrate to the Authority's satisfaction that he/she has made such efforts. Contractors are encouraged to submit with their bids, on the form set in Part III.B, the names, respective scope of work, and the dollar values of each DBE Subcontractor that the Contractor proposes for participation in the contract. In any case, this information shall be submitted within such time as the Authority requires. If the information so submitted indicates that the Authority's goals will

not be met, the Contractor shall also submit **Exhibit G**, to show sufficient evidence to the Authority's satisfaction that the Contractor has in good faith made every reasonable effort, in the Authority's judgment, to meet such goals. Examples of efforts that may be appropriate are found in Part II.A.5. If any Contractor fails to submit, within the time stipulated or any extension the Authority may allow, the required information concerning DBE participation, or if, having failed to meet the Authority's goals or fails to demonstrate to the Authority's satisfaction his/her good faith efforts to do so, the Authority may, in its discretion, reject his/her contract.

3. **Disadvantaged Business Enterprise (DBE) Goals.**

The Authority has established a DBE contract goal of 15 % of the total dollar value of the Summary Fee Schedule, including amendments, modifications, options and change orders. Credit towards the DBE goal for a contract shall be limited to the participation of firms performing within the designated NAICS code(s) for which the firms have been certified as a DBE.

4. The Contractor must promptly notify MARTA's Office of Diversity and Equal Opportunity, whenever a DBE subcontractor, performing work related to this contract, is terminated or fails to complete it work, and must make good faith efforts to engage another DBE subcontractor to perform at least the same amount of work. The Contractor may not terminate any DBE subcontractor and perform that work through its own forces or those of an affiliate without prior written consent of MARTA's Executive Director of Diversity and Equal Opportunity.

5. Contractors are informed that price alone does not constitute an acceptable basis for rejecting DBE quotes unless the Contractor can demonstrate that no reasonable price can be obtained from a DBE. A Contractor's failure to meet the DBE goal or to show reasonable efforts to that end will, in the Authority's discretion, constitute sufficient grounds for rejecting his/her proposal. Such reasonable efforts may include, but are not limited to, some or all of the following:

- a. Attendance at the pre-proposal conference if any;
- b. Follow-up of initial solicitations of interest in a timely fashion by contacting DBEs to determine with certainty whether the DBEs are interested;
- c. Efforts made to select portions of the work (including, where appropriate, breaking down contracts into economically feasible units) proposed to be performed by DBEs in order to increase the likelihood of achieving the DBE goals;
- d. Efforts to negotiate with DBEs for specific subcontracts, including at a minimum:
 - (i) The names, addresses, and telephone numbers of DBEs that were contacted;

- (ii) A description of the information provided to DBEs regarding the plans and specifications for portions of the work to be performed; and
 - (iii) A detailed statement of the reasons why additional prospective agreements with DBEs, needed to meet the stated goals, were not reached;
- e. Advertisement in general circulation media, trade association publications and disadvantaged-focus media for a reasonable period before bids are due;
 - f. Notification, in writing, to a reasonable number of specific DBEs that their interests in specifically delineated contract work is solicited, in sufficient time to allow the DBEs to participate effectively;
 - g. Concerning each DBE the Contractor contacted but rejected as unqualified, the reasons for the Contractor's conclusion;
 - h. Efforts made to assist the DBEs contacted that needed assistance in obtaining bonding, lines of credit, or insurance required by the Contractor or the Authority;
 - i. Designation, in writing, of a liaison officer who administers the Contractor's disadvantaged business enterprise utilization program;
 - j. Expansion of search for DBEs to a wider geographic area than the area in which the Contractor generally seeks Subcontractors, if use of the customary solicitation area does not result in meeting the goals by the Contractor; and
 - k. Utilization of services of available disadvantaged community organizations; disadvantaged Contractors' groups; local, state, and federal minority business technical assistance offices; and other organizations that provide assistance in the recruitment and placement of DBEs.
6. **Disadvantaged Business Enterprise** means a small business concern owned and controlled by a socially and economically disadvantaged individual or individuals. For purposes of this definition:
- a. Small business size standards vary by type of industry. Contractors should refer to 13 CFR, Part 121, for current standards. Disadvantaged business enterprise firms will be considered ineligible and will be graduated from the disadvantaged enterprise program if their average annual gross receipts over the preceding three fiscal years exceed \$22,410,000.
 - b. An individual is socially disadvantaged if (i) he or she is a citizen of the United States or a lawfully admitted permanent resident, and (ii) because of his or her race, color, national origin, gender, physical handicap or mental disability, long term residence in an environment isolated from the mainstream of American society, or other similar cause beyond the individual's control, he or she has been negatively affected with respect to his or her entry into or advancement in the business world.

- c. A socially disadvantaged individual is economically disadvantaged if he or she and his or her business are in a more difficult economic situation than most businesses and owners that are not socially disadvantaged.
 - d. Any group or individual may, upon a proper showing, be found to be socially and economically disadvantaged. There is a presumption, which, however, may be rebutted by evidence of any appropriate kind, that members of the following groups are socially and economically disadvantaged; (i) "Black Americans," which includes persons having origins in any of the Black racial groups of Africa; (ii) "Hispanic Americans," which includes persons of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish or Portuguese culture or origin, regardless of race; (iii) "Native Americans," which includes persons whose origins are American Indians, Eskimos, or Native Hawaiians; (iv) "Asian-Pacific Americans," which includes persons whose origin are from Japan, China, Taiwan, Korea, Vietnam, Laos, Cambodia, the Philippines, Samoa, Guam, the U.S. Trust Territories of the Pacific, or the Northern Marianas; (v) "Asian-Subcontinental Americans," which includes persons whose origins are from India, Pakistan, or Bangladesh; and (vi) "Women," regardless of race, ethnicity, or origin.
 - e. Owned and Controlled means a business (i) which is at least 51 per cent owned by one or more disadvantaged persons or women or, in the case of a publicly owned business, at least 51 per cent of the stock of which is owned by one or more disadvantaged persons or women, and (ii) whose management and daily business operations are controlled by one or more such individuals.
 - f. The definition of a disadvantaged business enterprise is in Part II.A.5 based upon DOT regulation 49 CFR Part and 26 as amended. The Contractor agrees to abide by this DOT regulation and any subsequent amendments thereto affecting the foregoing definition.
7. The Contractor may rely on written representation by Subcontractors regarding their status as disadvantaged business enterprises in lieu of an independent investigation, however:
- a. Prior to award of this contract, as requested by the Authority, Contractors shall cause disadvantaged business enterprises and joint ventures involving disadvantaged businesses to submit, through the Contractor, appropriate certification to the Authority as shown in the Disadvantaged Business Disclosure Requirements (Exhibits D and E). On the basis of these disclosures and any other relevant information, should the Authority determine any firm to not be a legitimate DBE, Contractors shall be permitted to substitute bona fide DBEs for the Authority's consideration.
 - b. After proposal deadline and during contract performance, Contractors are required to make every reasonable effort to replace a DBE Subcontractor that is unable to perform successfully, with another DBE. Prior to substituting a DBE which is not performing satisfactorily, the Contractor shall seek written approval from the Office of Diversity and Equal Opportunity. The Authority's Office of Diversity and Equal Opportunity shall approve all prior substitutions, in writing, in order to ensure that the substitutions of firms are bona fide DBEs.

- c. In the event of the Contractor's non-compliance with the disadvantaged business requirements of the contract, the Authority shall impose such contract sanctions as it or the Federal Transit Administration may determine to be appropriate, including, but not limited to:
 - (i) Withholding of payments to the Contractor until the Contractor complies, and/or
 - (ii) Cancellation, termination or suspension of the contract, in whole or in part.
8. For the information of Contractors, Exhibit F outlines the Authority's rules, guidelines and criteria for (a) making determinations as to the legitimacy of DBEs (b) ensuring that contracts are awarded to Contractors that meet DBE goals, and (c) counting DBE participation toward DBE goals.
9. The Contractor shall cooperate with the Authority's Executive Director, Office of Diversity and Equal Opportunity or a designee in any reviews of the Contractor's procedures and practices with respect to disadvantaged business enterprises which the Executive Director, Office of Diversity and Equal Opportunity may from time to time conduct.

B. DBE Reporting and Recordkeeping Requirements.

1. The Contractor shall submit periodic reports (i.e. dependent upon the duration of the contract) of contracting with disadvantaged business enterprises in such form and manner and at such time as prescribed by the Authority (Exhibit C-1 is currently required to be submitted within 10 calendar days following the end of each calendar quarter) for contracts with 12 months duration. If the contract duration is for less than 12 months period, reports must be submitted within 10 calendar days following the end of each month. Any failure to submit this report within 10 days of the end of a month or quarter, as specified by MARTA, could potentially cause a delay in future progress payments.
3. The Contractor and Subcontractors shall permit access to their books, records, and accounts by the Federal DOT or the Federal Transit Administration and the Authority's Executive Director, Office of Diversity and Equal Opportunity, or a designated representative, for purpose of investigation to ascertain compliance with these specified requirements. Such records shall be maintained by the Contractor in a fashion, which is readily accessible to the Authority for a minimum of three years following completion of the contract.
4. To ensure that all obligations under any contract awarded as a result of this proposal solicitation are met, the Authority will conduct periodic reviews of the Contractor's DBE involvement efforts during contract performance. The Contractor shall bring to the attention of the Authority's Office of Diversity and Equal Opportunity any situation in which regularly scheduled progress payments are not promptly made to DBE Subcontractors. Prompt payments to disadvantaged businesses are a requirement of 49 CFR Part 26 and are subject to interest charges, when not made within five (5) days of the Authority paying the Prime Contractor.

C. Miscellaneous Requirements.

1. There should be no restrictions through, for example, law provisions, partnership agreements, or charter requirements for cumulative voting rights or otherwise that prevent the minority or women owners, without the cooperation or vote of any owner who is not a minority or woman, from making a business decision of the firm in accordance with 49 CFR 26.27(c).
2. The Contractor shall take affirmative steps in establishing local banking requirements for funds received from this project. Failure to investigate the opportunities to use banking institutions owned and controlled by minorities and women in good faith may cause a Contractor to be in non-compliance with 49 CFR 26.27. The Federal requirement states that deposits in banking institutions are not to be considered toward fulfillment of the DBE goals.
3. **Subcontractor Agreements.** After Contract Award, the Contractor will be required to submit copies of signed subcontract agreements with all subcontractors and sub recipients they will use to the Executive Director of Diversity and Equal Opportunity for review and approval. All subcontract agreements shall denote the Contract Assurance clause 49 CFR Part 26.13; the name of the person authorized to sign for the Subcontractor; the date on which the subcontract agreement was signed; the names of witnesses required; the Scope of Work and compensation for services rendered; and the beginning and ending date for the tasks assigned to the subcontractors. The Authority will not allow any subcontractor or sub recipient to perform any work under the Contract unless its subcontract agreement(s) has been received at least ten days prior to commencement of the subcontractor's and sub recipient's work. The subcontractor and sub recipient agreement shall contain language governing how the subcontractor will be paid that mirrors how MARTA will pay the prime in those instances where work is delayed because of terroristic, color coded alerts issued by Federal Homeland Security.
4. **Prompt Payment and Retention. Prompt Payment and Retention for Subcontractors.** It is the policy of the Authority that prompt payment is made to all subcontractors. **Each subcontract the prime contractor signs with a subcontractor must include the following assurance:** The Contractor is required to pay subcontractors for satisfactory performance of their contracts within 5 days after the Authority has paid the Contractor for such work. The Contractor will not be paid for work performed by a subcontractor until the prime ensures that the subcontractor is paid. The Contractor shall not require retainage of subcontractors that is greater than the retainage required of the Contractor by the Authority. In addition, the Contractor must return any retainage payments to those subcontractors within 14 days after the subcontractor's work related to this contract is satisfactorily completed; or any retainage payments after incremental acceptance of the subcontractor's work by MARTA and Contractor's receipt of the partial retainage payment related to the subcontractor's work.

The Contractor's failure to pay subcontractors, as provided herein, shall be a material breach for which the Authority may cancel the Contract. In addition, 49 CFR 26.29 cites that all progress payments not promptly processed by the prime within specified time limits (i.e. 5 days from receipt of payment by MARTA) will bear interest of 1% per month on the unpaid balance. The

Contractor shall not delay or postpone payment to a subcontractor without prior written approval from the Executive Director of Diversity and Equal Opportunity.

5. **Prompt Payment and Retention for Lower Tier Contractors.** It is the policy of the Authority that prompt payment is made to all lower tier contractors. **Each lower tier contract the subcontractor signs with a lower tier contractor must include the following assurance:** The Subcontractor is required to pay the lower tier contractors for satisfactory performance of their contracts within 5 days after the Prime has paid the Subcontractor for such work. The Contractor will not be paid for work performed by the lower tier contractor until the subcontractor ensures that the lower tier contractor is paid. The subcontractor shall not require retainage of the lower tier contractors that is greater than the retainage required of the Contractor by the Authority. In addition, the Contractor must return any retainage payments to the lower tier contractors within 14 days after the lower tier contractor's work related to this contract is satisfactorily completed; or any retainage payments after incremental acceptance of the lower tier contractor's work by the Prime and subcontractor's receipt of the partial retainage payment related to the lower tier contractor's work.

The subcontractor's failure to pay the lower tier contractor, as provided herein, shall be a material breach for which the Prime may cancel the Subcontract. In addition, 49 CFR 26.29 cites that all progress payments not promptly processed by the prime within specified time limits (i.e. 5 days from receipt of payment by MARTA) will bear interest of 1% per month on the unpaid balance. The Subcontractor shall not delay or postpone payment to the lower tier contractor without prior written approval from the Executive Director of Diversity and Equal Opportunity.

6. **Arbitration.** The Contractor is required to include, in each subcontract, a clause requiring the use of appropriate arbitration mechanisms to resolve all payment disputes. The Contractor must promptly notify The Authority when a DBE subcontractor performing work related to this contract is terminated or fails to complete its work, and must make good faith efforts to engage another DBE subcontractor to perform at least the same amount of work. Before transmitting to MARTA its request to terminate, the prime contractor must give notice in writing to the DBE of its intent to do so. A copy of this notice must be provided to MARTA prior to consideration of the request to terminate. The DBE will then have five (5) days to respond and advise MARTA of why it objects to the proposed termination (**the five day period may be reduced if the matter is one of public necessity, e.g., safety**). The Contractor may not terminate any DBE subcontractor and perform that work through its own forces or those of an affiliate without prior written consent of the Executive Director of Diversity and Equal Opportunity.
7. Upon receipt of the Administrative Notice to Proceed and prior to Site Notice to Proceed, the contractor must submit a schedule of work indicating scope of work for each subcontractor and the time frame in which it is anticipated that this work will be performed.
8. The Contractor must provide MARTA's Office of Diversity and Equal Opportunity with the name and contact information for the EEO officer who will be responsible for all matters pertaining to Affirmative Action and DBE participation for the duration of the contract. During the term of the contract, the contractor's EEO officer will be responsible for the completion and

submission of all quarterly reports to MARTA's Office of Diversity and Equal Opportunity. In addition, the EEO officer will also be responsible for serving as the Contractor's liaison for all matters pertaining to DBE firms participating on the contract, including but not limited to, payment and performance issues, substitutions, etc.

9. **Contract Compliance.** The Contractor shall comply with all Davis Bacon, Affirmative Action, Americans with Disabilities Act (ADA), Equal Employment Opportunity (EEO), and Disadvantaged Business Enterprise (DBE) laws, Executive Orders, and regulations. The Office of Diversity and Equal Opportunity shall provide technical assistance to contractors on their compliance obligations; identify instances of non-compliance, and the implementation of timely and effective remedies to address non-compliance.
10. The contractor shall establish and maintain policies that provide opportunities for the full utilization and skill-improvement opportunities to assure the increased participation of minority groups and disadvantaged persons and women on their projects.
11. The contractor shall fully comply with Federal laws, directives, executive orders and implemented regulations for the duration of this contract. The Contractor shall display, on a bulletin board in the job site trailer in an accessible and visible location, posters that provide Federal information pertaining to safety (OSHA), wage and hour (Davis Bacon), Equal Employment Opportunity (EEO), and Americans with Disability Act (ADA).
12. The contractor shall provide the Office of Diversity and Equal Opportunity their full cooperation and support during the Equal Opportunity Compliance Reviews of their company.

D. Civil Rights Requirements

The Contractor agrees to comply with all applicable civil rights statutes and implementing regulations including, but not limited to, the following:

1. Nondiscrimination in Federal Transit Programs. The Contractor agrees to comply, and assure the compliance of each subcontractor at any tier of the Project, with the provisions of 49 USC § 5332, which prohibits discrimination on the basis of race, color, creed, national origin, sex, or age, and prohibits discrimination in employment or business opportunity.
2. Nondiscrimination – Title VI of the Civil Rights Act. The Contractor agrees to comply, and assure the compliance of each subcontractor at any tier of the Project, with all requirements prohibiting discrimination on the basis of race, color, or national origin of Title VI of the Civil Rights Act of 1964, as amended, 42 U.S.C. § 2000d *et seq.*, and US DOT regulations, "Nondiscrimination in Federally-Assisted Programs of the Department of Transportation – Effectuation of title VI of the Civil rights Act," 49 CFR Part 21, and any implementing requirements FTA may issue.
3. Equal Employment Opportunity. The Contractor agrees to comply, and assure the compliance of each subcontractor at any tier of the Project, with all requirements of Title VII of the Civil Rights Act of 1964, as amended, 42 USC 42 U.S.C. § 2000e, and 49 USC 42 U.S.C. § 5332 and any implementing requirements FTA may issue. The contractor agrees that it

will not discriminate against any employee or applicant for employment because of race, color, creed, sex, disability, age, or national origin. Affirmation action will be taken to ensure that applicants are employed and that employees are treated during employment without regard to their race, color, creed, sex, disability, age, or national origin. The Contractor also agrees to comply with any implementing requirements FTA may issue. Failure by the Contractor to carry out the terms of the EEO program will be treated as a violation of the Contract or Agreement.

4. Disadvantaged Business Enterprise. The Contractor agrees to comply with section 1101 (b) of TEA-21, 23 USC 42 USC § 101 note, and US DOT regulations, "Participation by Disadvantaged Business Enterprises in Department of Transportation Financial Assistance Programs," 49 CFR Part 23. The Contractor agrees that it shall not discriminate on the basis of race, color, national origin, or sex in the award and performance of any subcontract supported with Federal assistance derived from the US DOT or in the administration of its DBE program or the requirements of 49 CFR Part 26. The Contractor agrees to take all necessary and reasonable steps set forth in 49 CFR Part 26 to ensure nondiscrimination in the award and administration of all subcontracts supported with Federal assistance derived from the USDOT. The Authority's DBE program, as required 49 CFR Part 26 and approved by the USDOT, is incorporated by reference and made part of the Contractual Agreement.
5. Discrimination on the Basis of Sex. The Contractor agrees to comply with all applicable requirements of Title IX of the Education Amendments of 1972, as amended, 20 USC 42 USC §§ 1681 *et seq.*, with implementing USDOT regulations, "Nondiscrimination on the Basis of Sex in Education Programs or activities receiving Federal Financial Assistance," 49 CFR Part 25, and with any implementing directives that US DOT or FTA may promulgate, which prohibit discrimination on the basis of sex.
6. Nondiscrimination on the Basis of Age. The Contractor agrees to comply with all applicable requirements of the Age Discrimination Act of 1975, as amended, 42 USC §§ 6101 *et seq.*, and implementing regulations, which prohibit employment and other discrimination against individuals on the basis of age.
7. Access Requirements for Persons with Disabilities. The Contractor agrees to comply with all applicable requirements of 49 CFR § 5301 (d), which states the Federal policy that elderly persons and person with disabilities have the same right as other persons to use mass transportation service and facilities, and that special efforts shall be made in planning and designing those services and facilities to implement that policy. The Contractor also agree to comply with all applicable requirement of Section 504 of the Rehabilitation Act of 1973 as amended, 29 USC § 794, which prohibits discrimination on the basis of handicaps, with the Americans with Disability Act of 1990 (ADA), as amended, 42 USC §§ 12101 *et seq.*, which requires that accessible facilities and services be made available to persons with disabilities, including any subsequent amendments to the Act, and with the Architectural Barriers Act of 1968, as amended, 42 USC §§ 4151 *et seq.*, which requires that buildings and public accommodations be accessible to persons with disabilities, including any subsequent amendments to that Act. In addition, the Contractor agrees to comply with all applicable requirements of the following regulations and any subsequent amendments thereto:

- a. US DOT regulations, "Transportation Services for Individuals with Disabilities (ADA)," 49 CFR part 37;
- b. US DOT regulations, "Nondiscrimination on the Basis of handicap in Programs and Activities Receiving or Benefiting from Federal Financial Assistance," 49 CFR Part 27;
- c. Joint US Architectural and Transportation Barriers Compliance Board (US ATBCB)/US DOT regulations, "Americans with Disabilities (ADA) Accessibility Specifications for Transportation Vehicles," 36 CFR Part 1192 and 49 CFR Part 38;
- d. US DOJ Regulations, "Nondiscrimination on the Basis of Disability in State and Local Government Services," 28 CFR Part 35;
- e. US DOJ Regulations, "Nondiscrimination on the Basis of Disability by Public Accommodations and in commercial Facilities," 28 CFR part 36;
- f. US General Services Administration (US GSA) regulations, "Accommodations for the Physically Handicapped," 41 CFR Subpart 101-19;
- g. US Equal Employment Opportunity commission, "regulations to Implement the Equal Employment Provisions of the Americans with Disability Act,' 29 CFR Part 1630;
- h. US Federal Communication Commission regulations, "Telecommunications Relay Services and Related Customer Premises Equipment for the Hearing and speech Disabled,' 47 CFR Part 64;
- i. US ATBCB, "electronic and Information Technology Accessibility Standards," 36 CFR Part 1194;
- j. FTA regulations, "Transportation for Elderly and Handicapped persons,' 49 CFR Part 609; and
- k. Any implementing requirements FTA may issue.

Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as MARTA deems appropriate.

- 8. Access to Services for Persons with Limited English Proficiency. The Contractor agrees to comply with Executive Order No. 13166, "Improving Access to Services for Person with Limited English Proficiency,' 42 USC § 2000d-1 note, and US DOT Notice, "DOT Policy Guidance concerning Recipients' Responsibilities to Limited English Proficiency (LEP), 70 *Federal Regulation* 74087, December 14, 2005.
- 9. Environmental Justice. The Contractor agrees to comply with the policies of Executive Order No. 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," 42 USC § 4321 note.

10. Drug or Alcohol Abuse-Confidentiality and Other Civil Rights Protections. To the extent applicable, the Contractor agrees to comply with the confidentiality and other civil rights protections of the Drug Abuse Office and Treatment Act of 1972, as amended, 21 USC §§ 1101 *et seq.*, with the Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970, as amended, 42 USC §§ 4541 *et seq.*, and with the Public Health Service Act of 1912, as amended, 42 USC §§ 201 *et seq.*, and any amendments to these laws.
11. Other Nondiscrimination Statutes. The Contractor agrees to comply with all applicable requirements of any other nondiscrimination statute(s) that may apply to this Contract
12. The contractor also agrees to include these requirements in each subcontract financed in whole or in part with Federal assistance provided by FTA, modified only if necessary to identify the affected parties.
13. Contract Assurance. (a) Each financial assistance agreement you sign with a DOT operating administration (or a primary recipient) must include the following assurance: The recipient shall not discriminate on the basis of race, color, national origin, or sex in the award and performance of any DOT-assisted contract or in the administration of its DBE program or the requirements of 49 CFR Part 26. The recipient shall take all necessary and reasonable steps under 49 CFR Part 26 to ensure nondiscrimination in the award and administration of DOT-assisted contracts. The recipient's DBE program, as required by 49 CFR part 26 and as approved by DOT, is incorporated by reference in this agreement. Implementation of this program is a legal obligation and failure to carry out its terms shall be treated as a violation of this agreement. Upon notification to the recipient of its failure to carry out its approved program, the Department may impose sanctions as provided for under part 26 and may, in appropriate cases, refer the matter for enforcement under 18 U.S.C. 1001 and/or the Program Fraud Civil Remedies Act of 1986 (31 U.S.C. 3801 *et seq.*).

(b) Each contract you sign with a contractor (and each subcontract the prime contractor signs with a subcontractor) must include the following assurance:

The contractor, sub recipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate.

PART III – EEO STATISTICAL DATA FOR PRIME CONTRACTORS

A. Employment Data

The Bidder shall provide the following information pertaining to its workforce. If the Bidder has an Atlanta-area workforce, it should be shown; if the Contractor does not have an Atlanta-area workforce, total permanent workforce should be shown.

JOB CATEGORIES	ALL EMPLOYEES				TOTAL MINORITY EMPLOYEES								
	TOTAL MALES AND FEMALES		FEMALES		MALES			FEMALES					
	MALES	FEMALES	MALES	FEMALES	BLACK	ASIAN AMERICAN	AMERICAN INDIAN	HISPANIC	BLACK	ASIAN AMERICAN	AMERICAN INDIAN	HISPANIC	
Officers													
Managers													
Supervisors													
Professionals													
Technicians													
Sales Workers													
Office & Clerical													
Craftsman (skilled)													
Operatives (semi-skilled)													
Laborers (unskilled)													
Service Workers													
Apprentices													
TOTALS													

The above reflects (check Atlanta-area workforce Total permanent workforce (outside Atlanta area))

* Bidders with 50 or more employees are required to submit a copy of their written Affirmative Action Plan

** Bidders with less than 50 employees are required to submit a copy of their Equal Opportunity Policy statement signed by an authorized company official.

B. SCHEDULE OF DISADVANTAGED BUSINESS ENTERPRISE (DBE) PARTICIPATION

As specified in Part II of these EEO/DBE specifications, Contractors are to present the details of disadvantaged business participation below.

Name of Disadvantaged Business Enterprise	Address	Type of work and contract item or parts thereof to be performed	Projected commencement & completion date of work	* Agreed Upon Price w/ DBEs owned and controlled by minorities	* Agreed Upon Price w/ DBEs owned and controlled by women
Totals					

*Dollar value of each DBE agreement should be listed in one, not both of the "Agreed Upon Price" column; totals of the columns are to at least equal the DBE goals.

C. CERTIFICATION

The undersigned certifies that he/she has read, understands, and agrees to be bound by Parts I, II, and III of this section, including the accompanying Exhibits, regarding EEO and DBE, and the other terms and conditions of the Invitation for Bids. The undersigned further certifies that he/she is legally authorized by the Contractor to make the statements and representations in this Part III and that said statements and representations are true and correct to the best of his/her knowledge and belief. The undersigned will enter into formal agreement(s) with Disadvantaged Business Enterprise(s) (which are otherwise deemed by the Authority to be technically responsible to perform the work) listed in Part III B for the work listed in Part III B at the price(s) set forth in Part III B conditioned upon execution of a contract with the Authority. The contractor must promptly notify The Authority when a DBE subcontractor performing work related to this contract is terminated or fails to complete its work, and must make good faith efforts to engage another DBE subcontractor to perform at least the same amount of work. Before transmitting to MARTA its request to terminate, the prime contractor must give notice in writing to the DBE of its intent to do so. A copy of this notice must be provided to MARTA prior to consideration of the request to terminate. The DBE will then have five (5) days to respond and advise MARTA of why it objects to the proposed termination (the five day period may be reduced if the matter is one of public necessity, e.g., safety). The contractor may not terminate any DBE subcontractor and perform that work through its own forces or those of an affiliate without prior written consent of the Executive Director of Diversity and Equal Opportunity. The undersigned understands and agrees that if any of the statements and representations are made by the Contractor knowing them to be false, or if there is a failure of the successful Contractor to implement any of the stated agreements, intentions, objectives, goals, commitments, and substitutions set forth herein without prior approval by the Executive Director, of Diversity and Equal Opportunity or a designee, then in any of such events the Contractor's act or failure to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such remedy as MARTA deems appropriate.

Print Name: _____ Signature: _____ Title: _____ Date of Signing: _____

Title: _____ Firm or Corporate name: _____ Telephone: _____ Fax: _____

Address: _____

**METROPOLITAN ATLANTA RAPID TRANSIT AUTHORITY
OFFICE OF DIVERSITY AND EQUAL OPPORTUNITY
EXHIBITS**

Title	Exhibit
Equal Employment Opportunities	A
Minority Business Enterprise	B
Disadvantaged Business Enterprise	B-1
Monthly Construction Workers Utilization Report	C *
Quarterly Report of Disadvantaged Business Enterprise	C-1
Exhibit D Intentionally Not Included	D
Joint Venture Disclosure	E
Disadvantaged Business Enterprise Goal Requirement	F
Good Faith Efforts	G **
Minority-Owned Banks	H
TVM Certification of Compliance	I ***

***Exhibit C** (To be included in construction contracts only)

****Exhibit G** (To be included only in contracts with DBE goals)

***** Exhibit I** (To be included in TVM contracts only)

**METROPOLITAN ATLANTA RAPID TRANSIT AUTHORITY
RESOLUTION: EQUAL EMPLOYMENT OPPORTUNITIES
ADOPTED BY THE MARTA BOARD AUGUST 9, 1971**

The Metropolitan Atlanta Rapid Transit Authority (MARTA) desires to give all citizens equal opportunities in the building and operation of its transit system; and

Discrimination based on race, color, sex and religion or national origin is prohibited by Title VII of the Civil Rights Act of 1964 and Executive Order 11246 prohibits discrimination in federally funded and federally-assisted projects; and

MARTA has an obligation concerning its employment practices and the employment practices of its contractors and their subcontractors to take affirmative action to ensure that applicants and employees are not discriminated against based on race, color, religion, sex or national origin.

NOW, THEREFORE, BE IT RESOLVED, that MARTA shall recruit, screen, hire and promote its personnel and require all of its contractors and subcontractors to recruit, screen, hire and promote their personnel without regard to race, color, sex, religion and national origin; and

It shall be the policy of MARTA to achieve and maintain in all of its organizational units and to require all of its contractors and their subcontractors to achieve and maintain in all of their organizational units, levels of minority manpower utilization at least equal to the goals which MARTA shall establish for each segment of its activities after making appropriate factual determinations through its Department of Equal Opportunity and Compliance Review in accordance with the attached utilization plan, affirmative action plan and guidelines which are made a part of this Resolution by reference. The Department shall be established and it shall make factual findings and set goals as soon as practicable after favorable vote at the referenda and in any case before MARTA lets contracts for construction of its rapid transit system. The goals as they relate to those job categories which are enumerated in the Atlanta Plan of the Department of Labor shall in no case be less than the numbers specified in said Atlanta Plan. As to the other job categories, goals must be targets reasonably attainable by means of applying every good faith effort to make all aspects of the entire program work effectively; and

In any situation of under-utilization of minority manpower, MARTA and its contractors and their subcontractors shall undertake affirmative action programs, within contemplation of Executive Order 11246, including the provision of training to minority workers, to achieve and maintain the objectives of this policy.

This policy statement shall be distributed, both internally and externally, and shall be made a part of all of the Authority's invitations to bid.

**METROPOLITAN ATLANTA RAPID TRANSIT AUTHORITY
RESOLUTION: ADOPTION OF REVISED MINORITY BUSINESS
ENTERPRISE
CONTRACTING GOALS ADOPTED BY THE MARTA BOARD
DECEMBER 22, 1980**

WHEREAS the Metropolitan Atlanta Rapid Transit Authority (MARTA) desires to afford all citizens equal opportunity to participate in the design, construction and operation of the transit system; and

WHEREAS discrimination based on race, color, sex, religion and national origin is prohibited by the Civil Rights Act of 1964 and Executive Order 11246, as amended; and

WHEREAS Executive Order 11625 of 1971 prescribes the development of a program to achieve full participation of minority businesses in the free enterprise system; and

WHEREAS Title VI of the Civil Rights Act requires that appropriate steps be taken to ensure access of all citizens to the services derived from federally assisted programs; and

WHEREAS the U.S. Department of Transportation Administration has promulgated regulation (49CFR 23) for implementation of programs by transit properties to ensure participation by businesses owned and controlled by minorities and women; and

WHEREAS MARTA recognizes its obligations concerning practices and the contracting practices of its contractors and subcontractors to take affirmative action to ensure that minority and women-owned businesses are given an equitable opportunity to share in contract opportunities.

NOW, THEREFORE, be it resolved, that MARTA shall continue to assure that minority business enterprises have the maximum practicable opportunity to participate in all MARTA contracting opportunities and to that end the MARTA Board of Directors hereby establishes overall contracting goals of 20 percent for the participation of firms owned and controlled by minorities and 5 percent for the participation of firms owned and controlled by women.

RESOLVED, FURTHER, that the General Manager, through the Office of Equal Employment Opportunity, is directed to administer the implementation of this Resolution in accordance with the Authority's Minority Business Enterprise Program and applicable federal guidelines which are made a part of this Resolution by reference.

**METROPOLITAN ATLANTA RAPID TRANSIT AUTHORITY
RESOLUTION: DISADVANTAGED BUSINESS ENTERPRISE**

WHEREAS, the Metropolitan Atlanta Rapid Transit Authority (MARTA) desires to afford all citizens equal opportunity to participate in the design, construction and operation of the transit system; and

WHEREAS, Executive Order 11625 of 1971 prescribe the development of a program to achieve full participation of disadvantaged businesses in the free enterprise system; and

WHEREAS, Title VI of the Civil Rights Act 8 requires that appropriate steps be taken to ensure access of all citizens to the services delivered from federally-assisted programs; and

WHEREAS, the U.S. Department of Transportation has promulgated regulations 49 CFR 23 for implementation of programs by transit properties to ensure participation by businesses owned and controlled by disadvantaged persons; and

WHEREAS, MARTA recognizes the obligation of its contractors and subcontractors to take affirmative action to ensure that disadvantaged businesses are given equitable opportunity to share in contract opportunities.

NOW, THEREFORE, be it resolved, that MARTA shall continue to assure that disadvantaged business enterprises have the maximum practicable opportunity to participate in all MARTA contracting opportunities and all contracts, whether funded with federal or local monies, shall be subject to MARTA's Disadvantaged Business Enterprise Program and shall have a 25% goal for the utilization of disadvantaged businesses.

RESOLVED, FURTHER, that the General Manager, through the office of Equal Opportunity is directed to administer the implementation of this Resolution in accordance with the Authority's Disadvantaged Business Enterprise Program and applicable federal guidelines which are made a part of this Resolution by reference.

Contract Number: _____

III. MINORITY-OWNED BANKING

Instructions: List all minority-owned banking institutions in which dollars were deposited during the quarter. Dollars should reflect the contractor's average balance during the quarter in Both "time" and "demand" accounts.

NAME OF MINORITY-OWNED BANKING INSTITUTIONS

DOLLARS DEPOSITED IN TIME ACCOUNTS

DOLLARS DEPOSITED IN DEMAND ACCOUNTS

IV. CERTIFICATION

Sworn to and subscribed before me this _____ day of _____, 20____.

Notary Public

(Notary Seal)

My Commission Expires _____

Firm or Corporate Name

Signature of Firm's EEO Officer

Telephone Number

Fax Number

Email Address

Contract Number: _____

**QUARTERLY REPORT ON DISADVANTAGED BUSINESS ENTERPRISES
EEO ACTIVITIES OF THE PRIME CONTRACTOR ONLY**

Calendar Quarter covered by this report:

___ 1st ___ 3rd 20___
___ 2nd ___ 4th Year

1. How many positions were filled in the last quarter? _____
2. How many positions were filled with minorities in the last quarter? _____
3. How many positions were filled with women in the last quarter? _____
4. What efforts were made to recruit minorities and/or women? _____
5. Please list all minorities promoted in the last quarter, including their former and current positions.

Former Position	Current Position

6. Please list all women promoted in the last quarter, including their former and current positions.

Former Position	Current Position

7. Comments (optional). _____

Contract Number: _____

Employment Data as of: _____

EEO STATISTICAL DATA ON THE PRIME CONTRACTOR'S STAFF ONLY

JOB CATEGORIES	ALL EMPLOYEES				TOTAL MINORITY EMPLOYEES									
	TOTAL MALES AND FEMALES		FEMALES		MALES				FEMALES					
	MALES	FEMALES	BLACK	ASIAN AMERICAN	AMERICAN INDIAN	HISPANIC	BLACK	AMERICAN	ASIAN AMERICAN	AMERICAN INDIAN	HISPANIC			
Officers														
Managers														
Supervisors														
Professionals														
Technicians														
Sales Workers														
Office & Clerical														
Craftsman (skilled)														
Operatives (semi-skilled)														
Laborers (unskilled)														
Service Workers														
Apprentices														
TOTALS														

The above reflects (check one):

Atlanta-area workforce

Total permanent workforce (outside Atlanta area)

The undersigned certifies that he/she is legally authorized by the bidder to make the statements and representations contained in this report; that he/she has read all of the foregoing Statements and representations, and they are true and correct to the best of his/her knowledge and belief. The undersigned understands that if any of the statements and representations are made knowing them to be false or there is a failure to implement any of the stated intentions or objectives, set forth herein, without prior notice to the Executive Director of Diversity And Equal Opportunity or the Manager of Economic Opportunity, the contractor will be subject to the loss of any existing contracts and all future contract awards.

Signature: _____ Title: _____

Firm Corporate Name: _____

Name of MARTA DBE Analyst assigned this contract: _____



JOINT VENTURE DISCLOSURE OF REQUIREMENTS

In order to evaluate the extent of the meaningful disadvantaged involvement being proposed by a Joint Venture proponent in satisfaction of its affirmative actions obligation, the Authority requires that certain relevant information be provided initially, prior to award, and be continually updated throughout contract performance. This information must be in the form of an affidavit and submitted through the prime contractor by the Joint Venture. The statements should clearly identify and explain the extent of the disadvantaged business participation in the joint venture including, but not limited to, the information on this form. All information must be furnished or properly addressed before the business entity can be evaluated and approved as an acceptable Joint Venture that meets DBE contract goal requirements.

Description	Joint Venture Firm #1	Joint Venture Firm #2
Official Name, Address and Telephone Number of Each Joint Venture Firm		
Nature of Business of Each Joint Venture Firm		
Number of Years Each Joint Venture Has Been in Business		
	Joint Venture Firm #1	Joint Venture Firm #2
Official Name, Address and Telephone Number of Each Joint Venture Firm		
Nature of Business of Each Joint Venture Firm		
Number of Years Each Joint Venture Has Been in Business		

2. Percent of disadvantaged ownership in joint venture in terms of profit and loss sharing: _____

3. Capital contributions by each joint venture and accounting therefore: _____

4. Financial controls of joint venture (e.g. will a separate cost center be established; who will be responsible for keeping the books, accounts payable, bank deposits; how will the expense therefore be reimbursed: _____

5. The authority that each joint venture partner has in relation to committing or obligating the other:

6. Describe in specific details the work to be performed on the contract by the disadvantaged business enterprise joint venture firm and the non-minority joint venture firm:

7. Identify and explain the terms of any ownership, options for ownership or loans between the joint ventures partner:

8. Specify the contract cash contributions that will be provided by each joint venture partner in support of the contract:

9. Denote all personnel, their crafts and positions that will be assigned by the disadvantage business enterprise and non-minority joint partner respectively:

10. How and by whom will the on-site work be supervised, carried out and satisfactorily completed. Please itemize and list the SOW requirements that will be respectively carried out by each joint venture partner:

11. How and by whom will the administrative office be supervised and administered:

12. Which joint venture partner will be responsible for material purchases including the estimated cost thereof, as well as, the financing of required purchases:

13. What equipment will each joint venture partner provide for support of the joint venture? Please itemize and list equipment provided by each joint venture partner:

14. The experience and business qualifications of each joint venture: enclosed not enclosed

15. Evidence of authority to do business in the State of Georgia, as well as locally, include all necessary business license: enclosed not enclosed

16. Provide a detailed and delineating copy of the joint venture agreement: enclosed not enclosed

17. Identification of control and participation in venture; list those individual who are responsible for day-to-day management and policy decision making including, but not limited to those with prime responsibility for:

Name	R a c e	S e x	Title	Original Organization Affiliation	*Financial Decisions	*Management Decisions	Supervision of Field Operations	@Human Resources

*(including, but not limited to, estimating, marketing and sale, hiring and firing of management personnel, and purchasing of major items or supplies.)
 @obligation of Human Resources needed to successfully complete this contract.

Brief Summary of information listed above:

Name	Qualifications	Responsibilities	Years of Experience	Person's Experience

I HEREBY DECLARE AND AFFIRM that I am the _____
(title)
duly authorized representative of (the Joint Venture of) _____, I
(name of venture)
hereby declare and affirm that I am a disadvantaged business enterprise (DBE) as defined by
MARTA in the specification for _____.
(contract number and name)

The undersigned does hereby swear that the foregoing statements are true and correct and include all materials and information necessary to identify and explain the operations of our joint venture and the intended participation by each joint venture in the undertaking. Further, the undersigned does covenant and agree to provide to MARTA current, complete, and accurate information regarding actual joint venture work and the payment therefore, and any proposed changes in any of the arrangements hereinabove stated and to permit the audit and examination of the books, records and files to the joint venture, or those of each joint venture, authorized representatives of the Authority or Federal Government. It is recognized and acknowledged that the statements herein are being given under oath and any material misrepresentation will be grounds for terminating any contract which may be awarded in reliance hereon and for initiating action under federal and state laws concerning false statements.

I DO SOLEMNLY DECLARE AND AFFIRM UNDER THE PENALIES OF PERJURY THAT THE CONTENTS OF THE FOREGOING DOCUMENT ARE TRUE AND CORRECT AND THAT I AM AUTHORIZED ON BEHALF OF THE ABOVE FIRM TO MAKE THIS AFFIDAVIT.

Signature of Joint Venture's Authorized Representative(s)

Signature of Joint Venture's Authorized Representative(s)

STATE OF _____

COUNTY (CITY) OF _____

On this ____ day of _____, 20 __, before me _____

personally appeared _____,
know to me to be the person described in the foregoing Affidavit and acknowledge that he/she executed the same in the capacity therein stated and for the purpose therein contained.

In witness thereof, I hereunto set my hand and official seal.

(Notary Public)

My Commission Expires _____

(Seal)

DETERMINATIONS REGARDING DISADVANTAGED BUSINESS ENTERPRISE GOALS

It is the policy of the Authority and the Federal Government to ensure that DBEs have a full opportunity for meaningful participation in work performed under Authority contracts. The Authority views meaningful disadvantaged business enterprise participation as being something more than mere tokenism or feigned DBE involvement and looks to the substance of proposed commitments in terms of the legitimacy of the disadvantaged business enterprise and its actual involvement in performance of the contract work. Thus, meaningful disadvantaged business enterprise participation needs to be defined, understood, and evaluated to determine if the proposed disadvantaged business enterprise involvement will provide opportunities to increase the experience and expertise of the DBE as well as to enhance its potential to achieve economic viability.

Determination of DBE Status

To ensure that the Authority's DBE Program benefits only DBEs which are owned and controlled in both form and substance by one or more disadvantaged persons or women, the Authority requires that each business including the DBE partner in a joint venture, wishing to participate as a joint venture DBE complete and submit Disadvantaged Business Enterprise Business Disclosure Requirements (Exhibit D). Additionally each entity wishing to participate as a joint venture DBE must complete and submit Joint Venture Disclosure Requirements (Exhibit E). The Disclosure Requirements are to be signed and notarized by the authorized representatives of the business entity and are to be submitted through the Bidder to the Authority prior to contract award. Under the following circumstances, a business seeking to participate as a DBE need not to submit Exhibits D and E.

1. If the potential DBE contractor states in writing that it has submitted the same information to or has been certified by the Authority, any U.S. Department of Transportation element, or another Federal Agency that uses essentially the same disadvantaged business enterprise definition and ownership and control criteria as U.S. D.O.T. The potential DBE contractor is to obtain the information and certification (if any) from the other agency and submit to the Authority or cause the other agency to submit it. The Authority may rely upon such a certification, but the authority reserves the right to require that additional information be submitted and to make an independent determination. Where another agency has collected information but not made a determination concerning eligibility, the Authority will make its own determination based on the information it has obtained from the other agency.

(d) A UCP is not required to process an application for certification from a firm having its principal place of business outside the state if the firm is not certified by the UCP in the state in which it maintains its principal place of business. The "home state" UCP shall share its information and documents concerning the firm with other UCPs that are considering the firm's application.

2. If the potential DBE contractor has been determined by the Small Business Administration to be owned and controlled by socially and economically disadvantaged individuals under Section 8 (a) of the Small Business Act, as amended. In this circumstance, the potential DBE contractor is to furnish conclusive evidence of the SBA determination to the Authority.

The Authority reserves the right to request and review additional relevant information pertaining to the legitimacy of any purported DBE.

DBE Eligibility Standards

In general, to be eligible for the DBE program, persons must own 51% or more of a "small business," establish that they are disadvantaged within the meaning of DOT regulations, and prove they control their business. The following general guidelines, taken in part from the applicable regulation (49 CFR Part 26), will help business owners determine whether they are eligible for the DBE program:

Eligibility Guidelines (in general):

1. **Ownership** - Your business must be 51% owned by a socially and economically *disadvantaged* individual(s).
2. **"Disadvantaged"** - You may be eligible if you are a member of a group of persons the Department considers as disadvantaged. The Department presumes certain groups are disadvantaged, including women, Black Americans, Hispanic Americans, Native Americans, Asian-Pacific Americans, Subcontinent Asian-Pacific Americans, or other minorities found to be disadvantaged by the U.S. Small Business Administration (SBA). Persons who are not members of one of the above groups and own and control their business may also be eligible if they establish their "social" and "economic" disadvantage. The Department notes, for example, that people with disabilities have disproportionately low incomes and high rates of unemployment, and that many may be socially and economically disadvantaged. A determination of whether an individual with a disability meets DBE eligibility criteria is made on a case-by-case basis. More information on how social and economic disadvantage is determined can be found in Appendix E to 49 CFR Part 26.

3. **Business Size Determination** - A firm (including its affiliates) must be a small business as defined by SBA standards. It must not have annual gross receipts over \$22,410,000 in the previous three fiscal years (\$52,470,000 for airport concessionaires in general with some exceptions). Under SAFETEA-LU, this threshold will be adjusted annually for inflation by the Secretary.
4. **Personal Net Worth** - Only disadvantaged persons having a personal net worth (PNW) of less than \$1,320,000 can be considered as a potential qualified DBE. Items excluded from a person's net worth calculation include an individual's ownership interest in the applicant firm, and his or her equity in their primary residence. Additional exclusions are available for owners of airport concessionaires (See 49 CFR Part 23).
5. **Independence** - The business must not be tied to another firm in such a way as to compromise its independence and control.
6. **Control** - A disadvantaged owner seeking certification must possess the power to direct or cause the direction of the management and policies of the firm. The owner must also have an overall understanding of, and managerial and technical competence and experience directly related to, the type of business in which the firm is engaged.
7. **Burden of Proof Allocation** - Applicants carry the initial burden of proof regarding their eligibility and must demonstrate that they meet all requirements concerning group membership or individual disadvantage, business size, ownership, and control.

Additional program requirements and certification procedures are found in the Department's regulations 49 CFR Parts 23 and 26. Specific information can also be found within the Department of Transportation's Office of Small and Disadvantaged Business Utilization. In addition to the foregoing standards, the Authority gives special consideration to the following circumstances in determining DBE eligibility.

1. Newly formed firms and firms whose ownership and/or control have changed since the date of the advertisement of the contract are closely scrutinized to determine the reasons for the timing of the formation of or change in the firm.
2. A previous and/or continuing employer-employee relationship between or among present owners are carefully reviewed to ensure that the employee-owner has management responsibilities and capabilities discussed herein.
3. Any relationship between a DBE and a business which is not a DBE which has an interest in the DBE is carefully reviewed to determine if the interest of the non-DBE conflicts with the ownership and control requirements of the DBE definition and guidelines.

Once approved by the Georgia Uniform Certification Program (GUCP) as a DBE, each DBE is expected to update its submission annually by submitting, Exhibit D and/or E, as appropriate, certifying that Exhibit D and/or E on file is still accurate. At any time there is a change in ownership or control of the firm, the DBE is to submit a new Exhibit D and/or E, at the time of such occurrences.

The denial of DBE status to an entity by the U.S. D.O.T. or the GUCP is to be considered final, for the contract and other contracts being led by the Authority at the time of denial of DBE certification, except that any firm which believes that it has been wrongly denied certification as a DBE may file an appeal with the U.S. Department of Transportation pursuant to 49 CFR 26.89. DBEs and joint ventures denied certification may correct deficiencies in their ownership and control and apply for DBE status one year from the date of denial.

Counting DBE Participation Toward DBE Goals

DBE participation is counted toward meeting DBE goals as follows:

1. Once a firm is determined to be an eligible DBE, the total dollar value of the contract awarded to the DBE is counted toward the applicable DBE goal. If a DBE is found to be ineligible after contract award, the prime contractor is not relieved of the DBE requirement. When a prime contractor has made a commitment to using the ineligible firm, or you have made a commitment to using a DBE prime contractor, but a subcontract or contract has not been executed before you issue the decertification notice provided for in paragraph (g) of this section, the ineligible firm does not count toward the contract goal or overall goal. You must direct the prime contractor to meet the contract goal with an eligible DBE firm or demonstrate to you that it has made a good faith effort to do so. The contractor may substitute or provide good faith efforts as stated in 49 CFR Part 26.87 i (1).
2. The total dollar value of a contract to a DBE owned and controlled by both disadvantaged males and non-minority females is counted toward the goals for disadvantaged and women, respectively, in proportion to the percentage of ownership and control of each group in the business. The total dollar value of a contract with a DBE owned and controlled by disadvantaged women is counted toward either the disadvantaged goal or the goal for women, but not for both. The contractor employing the firm may chose the goal to which the contract value is applied.
3. When a DBE subcontracts part of the work of its contract to another firm, the value of the subcontracted work may be counted toward DBE goals only if the DBE's subcontractor is itself a DBE. Work that a DBE subcontracts to a non-DBE firm does not count toward DBE goals.

4. A contractor may count toward the DBE goals a portion of the total dollar value of contract with a joint venture equal to the percentage of the ownership and control of the DBE partner in the joint venture.
5. A contractor may count toward the DBE goals only expenditures to DBEs that perform a commercially useful function in the work of a contract. A DBE is considered to perform a commercially useful function when it is responsible for execution of a distinct element of the work of a contract and carrying out its responsibilities by actually performing, managing, and supervising the work involved. To determine whether a DBE is performing a commercially useful function, the Authority will evaluate the amount of work subcontracted, industry practices and other relevant factors.
6. Consistent with normal industry practices a DBE may enter in subcontracts. If a DBE contractor subcontracts a significantly greater portion of the work of the contract than would be expected on the basis of normal industry practices, the DBE shall be presumed not to be performing a commercially useful function. The DBE may present evidence to rebut this presumption to the Authority. The Authority's decision on the rebuttal of this presumption is subject to review by the U.S. Department of Transportation.
7. A DBE trucking company is performing a commercially useful function: The DBE may also lease trucks from a non-DBE firm, including an owner-operator. The DBE who leases trucks from a non-DBE is entitled to credit only for the fee or commission it receives as a result of the lease arrangement. The DBE does not receive credit for the total value of the transportation services provided by the lessee, since these services are not provided by a DBE.
8. A contractor may count toward its DBE goal expenditures for materials and supplies obtain from DBE suppliers and manufactures, provided that the DBEs assume the actual contractual responsibility for the provision of the materials and supplies. The contractor may count its entire expenditure to a DBE manufacture (i.e., a supplier that produces goods from raw materials or substantially alters them before resale). The contractor may count 60 percent of its expenditures to DBE suppliers that are not manufactures, provided that the DBE supplier performs a commercially useful function in the supply process. No percentage amount will be authorized by the Authority to be counted if DBE suppliers do not perform a commercially useful function and are a totally passive conduit.

Examples of DBE Participation

The degree of DBE goal attainment through utilization of DBEs and disadvantaged-majority joint ventures will be calculated as in the following examples.

A joint venture consisting of a disadvantaged business and a majority business, functioning as a prime contractor, will be credited with disadvantaged participation on the basis of percentage of profit to accrue to the DBE. For example, if a joint venture composed of a disadvantaged business and a majority business proposes to perform 50 percent of a project quoted at \$500,000 and 50 percent of the profits are to accrue to disadvantaged partner in the joint venture, disadvantaged participation will be credited as 25 percent of the work, or 125,000.

A DBE distributor or supplier, which performs a commercially useful function, will be credited with 60 percent of the total dollar value of an order toward the DBE goal. For example, A DBE supplier which plays a substantial role in the delivery arrangements and which actually possesses risk of liability for defective products or late delivery may credit \$ 300,000 or 60 percent of a total supply order of \$500,000.

No meaningful DBE goal is achievable unless great care is taken to ensure that contracts let pursuant to the goal requirements are let only to bona fide DBEs. MARTA bidders and contractors are expected to exercise the greatest possible care that disadvantaged firms with whom joint ventures are formed and subcontracts are let and bon fide.

METROPOLITAN ATLANTA RAPID TRANSIT AUTHORITY GOOD FAITH EFFORTS

In order to evaluate the extent of the meaningful Good Faith Efforts being submitted by a bidder/proposer in satisfaction of the contract requirements, the Authority requires that certain relevant information be provided prior to contract award. This information must be in the form of an affidavit and submitted by the prime contractor. A bidder/proponent must show reasonable good faith efforts to obtain DBE participation. MARTA treats bidder's/proponent's compliance with good faith efforts requirements as a matter of responsiveness. Such reasonable efforts may include, but are not limited to, some or all of the following:

- Utilization of the Georgia Unified Certification Program DBE Directory to identify currently certified DBEs:
www.dot.ga.gov/doingbusiness/dbeprograms
- Attendance at pre-bid/pre-proposal meetings, advertising and/or written notices;
- Follow-up of initial solicitations of interest by contacting DBE's to determine with certainty whether the DBE's are interested;
- Efforts to provide DBE's with adequate information about the plans, specifications, and requirements of the contract in a timely manner to assist them in responding to a solicitation;
- Efforts made to select portions of the work (including, where appropriate, breaking down the contract into economically feasible units) proposed to be performed by DBE's in order to increase the likelihood of achieving the DBE goal;
- Efforts to negotiate with DBE's for specific sub-bids, including at a minimum;
- The names, addresses, and telephone numbers of DBE's that were contacted;
- A description of the information provided to DBE's regarding the plans and specifications for portions of the work to be performed and;
- A detailed statement of the reasons why additional prospective agreements with DBE's needed to meet the stated goals, were not reached.

Administrative Reconsideration

The bidder/proponent must make a written request for administrative reconsideration five (5) days prior to the award of the contract for lack of good faith efforts. That notice may be faxed to:

**Mr. Jonathan Hunt
Chief of Corporate Law
MARTA - Legal Services Department
2424 Piedmont Road, NE
Atlanta, GA 30324
Fax: (404) 848-5225**

I HEREBY DECLARE AND AFFIRM that I am the _____
(title)

duly authorized representative of _____
(name of firm)

The undersigned does hereby swear that the foregoing statements are true and correct and include all materials and information necessary to identify and explain the efforts put forth to meet the DBE goal requirements of this contract. Further, the undersigned does covenant and agree to provide to MARTA current, complete, and accurate information regarding good faith efforts. It is recognized and acknowledged that the statements herein are being given under oath and any material misrepresentation will be grounds for terminating any contract which may be awarded in reliance hereon and for initiating action under federal and state laws concerning false statements.

I DO SOLEMNLY DECLARE AND AFFIRM UNDER THE PENALIES OF PERJURY THAT THE CONTENTS OF THE FOREGOING DOCUMENT ARE TRUE AND CORRECT AND THAT I AM AUTHORIZED ON BEHALF OF THE ABOVE FIRM TO MAKE THIS AFFIDAVIT.

Signature of Authorized Representative(s)

STATE OF _____

COUNTY (CITY) OF _____

On this ____ day of _____, 20____, before me personally appeared

know to me to be the person described in the foregoing Affidavit and acknowledge that he/she executed the same in the capacity therein stated and for the purpose therein contained.

In witness thereof, I hereunto set my hand and official seal.

(Notary Public)

My Commission Expires _____

(Seal)

**METROPOLITAN ATLANTA RAPID TRANSIT AUTHORITY
OFFICE OF DIVERSITY AND EQUAL OPPORTUNITY
MINORITY- OWNED BANKS RECOMMENDED
FOR CONSIDERATION**

MINORITY-OWNED BANKS STATE OF GEORGIA

Bank Name	Address	Telephone/Fax	Contact/Title
Capitol City Bank and Trust Company	562 Lee Street S.W. Atlanta, GA 30310	T: (404) 752-6067 F: (404) 752-5862	Mr. George Andrews President & CEO
Carver State Bank	701 MLK Jr., Blvd, Savannah, GA 31402	T: (912) 233-9971 F: (912) 232-8666	Mr. Robert E. James President
Citizens Trust Bank	756 Piedmont Ave., Ste. 1200, Atlanta, GA 30303	T: (404) 575-8306 F: (404) 575-8311	Ms. Cynthia Day Senior EVP & COO
Global Commerce Bank	5150 Buford Hwy., Ste., B130, Doraville, GA 30340	T: (770) 457-5858 F: (770) 457-1410	Ms. Silvia E. Belen CFO & SVP
Metro City Bank	5441 Buford Hwy, Ste. 109, Doraville, GA 30340	T: (770) 455-4989 F: (770) 945-4988	Mr. Farid Tan President & CEO
Quantum National Bank	505 Peachtree Industrial Blvd, Suwanee, GA 30024	T: (770) 845-8300 F: (770) 945-4888	Mr. Bradley D. Bishoff SVP & CFO
State Bank of Georgia	131 Gingercake Road, Fayetteville, GA 30214	T: (770) 719-1200 F: (770) 716-0024	Mr. Kevin M. Sharpe SVE & CFO

UTILIZATION OF MINORITY-OWNED BANKS DISCLAIMER

MARTA encourages all of its contactors and their subcontractors, suppliers and vendors to consider utilizing the services of Minority-owned Banks for funds received from Authority projects. Failure to investigate the opportunities to use banking institutions owned and controlled by minorities and women in good faith may cause a contractor to be in non-compliance with 49 CFR 26.27. The Federal requirement states that deposits in banking institutions are not to be considered toward the fulfillment of DBE goals.

Source: www.fms.treas.gov

Revised: (02/2009; 01/2012)

**Exhibit H
Page 1 of 1**

The link to the Georgia Uniform Certification Program (GUCP) which has a complete DBE listing may be accessed below:

The Complete Listing of DBEs can be found at:

<http://www.dot.ga.gov/doingbusiness/dbePrograms/Pages/default.aspx>

RFP P30186 MARTA Paid Parking Services

Primary NAICS Codes: The solicitation should be reviewed in its entirety for additional NAICS codes.

561790	Other services to Buildings and Dwellings
561612	Security Guards and Patrol Services
812930	Parking Lots and Garages
541519	Other Computer Related Services
541511	Custom Computer Programming Services

DISCLAIMER

The inclusion of a firm on this list is for informational purposes only and does not constitute an endorsement of any contractor, manufacturer or supplier.

The listing represent firms certified under the Georgia Unified Certification Program (GUCP) and have represented themselves as socially and economically disadvantaged minority or women-owned business enterprises. In addition, they have expressed an interest in doing business with the Authority and/or its contractors and have provided the information on their firms as presented.

The information on GUCP/MARTA certified firms has been validated and should be considered accurate to date. The firms identified provided the information listed and it should not be construed as authoritative. MARTA cannot guarantee the accuracy or validity of the information on non-certified firms.

MARTA assumes no responsibility for transactions resulting from the use of this information and does not guarantee the quality or reliability of the firms listed, or their products or services.

EXHIBIT E
MARTA TESTING PROGRAM PLAN

See attached.

EXHIBIT E
MARTA TESTING PROGRAM PLAN

See attached.

MARTA TESTING PROGRAM PLAN

Revision 10

APPROVED BY



Annette Moultrie
Manager of Quality Assurance
Office of Quality Assurance and Configuration Management

APRIL 30, 2014
Date



Rod Hembree
Director
Office of Quality Assurance and Configuration Management

APRIL 30, 2014
Date



Document Revision History

Revision	Description	Date
0	Original document.	March 19, 1984
1	Revise content.	September 1990
2	Revised content.	October 19, 1993
3	Revised content.	September 1997
4	Revised content.	April 1, 1999
5	Revised content.	January 1, 2003
6	Revised content.	January 1, 2006
7	Revised content.	April 18, 2007
8	Revised content.	June 25, 2008
9	Revised content.	February 23, 2010
10	Re-formatted document; updated and revised content.	April 25, 2014

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1 General

1.1 Introduction

The Office of Quality Assurance and Configuration Management is responsible for the development and implementation of the comprehensive Testing Program Plan for the Metropolitan Atlanta Rapid Transit Authority (MARTA) system. This Plan details the process for conducting, monitoring, and coordinating test activities.

1.2 Scope

The MARTA Testing Program Plan (MTPP) establishes the responsibilities and procedures for administering a uniform program to test equipment and/or systems, which are procured, installed under contracts for new facilities and systems, or to upgrade or refurbish existing facilities and systems. These requirements include the documentation, management, scheduling, witnessing, and approval of test activities for new or modified systems, subsystems, and components.

1.3 Applicability

This Plan identifies and describes the tests to be performed on hardware and software where relevant. This Plan is applicable to the entire MARTA system, but is not limited to, the following test types:

Test Type

- Factory
- Prototype Demonstration
- First Article
- Production
- Installation
- Qualification
- Availability/ Reliability
- System Integration
- Functional Performance
- Regression

Systems to be tested include, but are not limited to:

- Main and Standby Power Systems
- Motor Control Centers
- Distribution and Branch Circuit Panelboards
- Lighting Fixtures and Controls
- Lightning Protection Equipment and Lightning Protection Systems
- Elevator and Escalator Systems
- Fire Alarm Equipment/ Fire Alarm Equipment Monitoring System
- Fan/ AC Motors

- Equipment Grounding and Building Grounding System
- Security System
- Emergency Generators and Distribution System
- Uninterruptible Power Systems
- Communications Systems
- Automatic Train Control System
- Supervisory and Control System
- Traction Power
- Cabling
- Automated Vehicle Location Systems
- Closed Circuit Television (CCTV)

1.4 Reference Documents

- Applicable Conformed Contract Documents
- Quality Assurance Procedures and Guidelines
- Standard Operating Procedures
 - QACM-SOP-1002 Test Procedure Development
 - QACM-SOP-1003 Test Verification and Documentation Procedure

1.5 Abbreviations and Definitions

The following abbreviations and definitions are used throughout this document, unless otherwise specified.

TERM	DEFINITION
Authority	Metropolitan Atlanta Rapid Transit Authority (MARTA) is referred to as the Authority throughout this document.
Chief of QA-Contracts Management	Responsible for ensuring the requirements detailed in this Plan are met during the test activity process.
Contracting Officer's Representative (COR)	The individual authorized to represent the Authority in the day-to-day activities of the administration of the contract. This individual's title may vary from Resident Engineer, Contract Administrator, Project Manager, Program Manager, or similar title.
Contractor's Test Manager	The person representing the Contractor in the management of testing activities for a specific contract.
Contractor's Test Plan	Developed by the Contractor, and approved by the Authority, for a specific contract.
Contractor's Test Representative	Assigned by the Contractor's Test Manager to conduct the test.

TERM	DEFINITION
Equipment	Fixed assets (other than land and buildings), rolling stock, communication systems, electrical systems, mechanical systems, etc.
GEC	Firm designated by MARTA that is responsible for planning, design, and program management on a specific contract or project.
Inspector	Designated by the COR to verify that the Contractor's work complies with the Contract requirements and documentation. May serve as a Test Witness.
Manager of Quality Assurance	Responsible for approval of development and implementation relating to this Plan including the requirements for test documentation, management, scheduling, witnessing, and data approval for all test activities.
Prerequisites	Requirements which must be met prior to conducting the test activity.
Punchlist (Discrepancy List)	List of discrepancies compiled during an inspection or testing.
QA Representative	Responsible for evaluating or investigating the quality compliance with contractual, procedural, and/or reference standard requirements. Also inspects/ verifies device, equipment, location, or system conforms to applicable requirements.
Test Activity	Demonstration that equipment and/or systems are in compliance with approved contract documents and function as intended. This includes all complete, partial, and retest activities.
Test Activity Request	Document completed by the Contractor and the COR to schedule field test activity.
Test Activity Schedule	Process by which the Test Engineer notifies other affected offices or departments of a scheduled test activity; also a form that the Test Engineer creates as applicable to the contract.
Test Discrepancy List	Document which lists discrepancies found during the test, including items to be tested or retested.
Test Engineer	Responsible for the day-to-day management of the Authority's testing activities of a specific contract. The Manager of Quality Assurance or Chief of QA-Contracts Management assigns this individual.
Test Procedure	Document containing step-by-step instructions for conducting a test activity. The test procedure includes test data sheets for recording information gathered during the test activity.

TERM	DEFINITION
Test Results Package	Assemblage of completed test data sheets, applicable test report(s), and all other required documents.
Test Witness	Responsible for verifying all data taken is accurately and properly recorded on the test data sheets. The witness is assigned by the Test Engineer and must be present during all test activities.
Test Witness Report	Document completed by the Test Witness following the completion of the test activity, which details specific information and data regarding the test performed.
Tester	Conducts the tests, execute the tests planned, and records the official test results.

2 Responsibilities

The described responsibilities may be assigned to several team members who may perform the same role on a dedicated basis.

2.1 Manager – Quality Assurance

The Manager of Quality Assurance reports to the Director of the Office of Quality Assurance and Configuration Management. This individual is responsible for the supervision and proper execution of the MARTA Test Program Plan.

2.2 Chief of QA – Contracts Management

The Chief of QA-Contracts Management reports to the Manager of Quality Assurance and is responsible for ensuring the requirements detailed in the MARTA Test Program Plan are met.

2.3 Test Engineer

The Test Engineer reports to the Chief of QA-Contracts Management or Manager of Quality Assurance and is responsible for test oversight and administration, including but are not limited to, the following duties and activities:

- Assuring adequate test requirements are included in the contract project manual by being involved during the requirements development phase of the project.
- Assuring annually that the test Standard Operating Procedures (SOPs) are developed, reviewed, revised if needed, and implemented.
- Assuring that training is conducted on SOP.
- Assuring testing activities are in compliance and in adherence with this Plan.
- Facilitating testing meetings.
- Partnering with the QA Representative to verify adherence to contractual requirements and quality requirements.

Before testing:

- Developing Authority-provided test procedures.
- Distributing, reviewing, and approving the Contractor-provided test procedures.
- Receiving requests for testing activities.

- Verifying the prerequisites is completed before scheduling test.
- Verifying that all Installation Verification punchlist items, which would have a detrimental effect on the test, have been resolved.
- Scheduling tests.
- Preparing the Test Activity Schedule (see Appendix E) as appropriate.
- Distributing to applicable parties the Test Activity Schedule.

After testing:

- Reviewing the Test Results Submittal
- Reviewing the Test Witness Report (see Appendix C).
- Verifying that the Test Discrepancy List (see Appendix D) has been cleared.
- Determining the recommended disposition of the test results.
- Keeping track of completed tests and tests successfulness.
- Keeping track of defects found and resolved.
- Notifying the COR of the test status.

2.4 QA Representative

The QA Representative reports to the Chief of QA-Contracts Management or Manager of Quality Assurance and is responsible for quality oversight, including but are not limited to, the following duties and activities:

- Verifying device, equipment, location, or system conforms to applicable requirements.
- Documenting quality and inspection events.
- Evaluating or investigating the quality compliance with contractual requirements Contracting Officer's Representative.
- Partnering with the Test Engineer to verify adherence to contractual requirements and quality requirements.

2.5 Contracting Officer's Representative

The Contracting Officer's Representative (COR) serves as the liaison between the Contractor and the Test Engineer. The COR duties include, but are not limited to, the following activities:

- Ensuring the Contractor's test schedule complies with contract milestones.
- Receiving the Test Activity Request from the Contractor, completing the COR section, and forwarding the completed report to the Test Engineer.
- Coordinating all resources, equipment, and personnel required to be provided by the Authority in support of a test activity.
- Coordinating access to areas and equipment which are not part of the scope of the contract.
- Informing the Test Engineer of any cancellations, delays, or other issues that would affect the test schedule.
- Participating in contract testing related meetings.
- Maintaining a Test Register and Testing Log as specified in the Resident Engineer's Manual.
- Assisting in determining the final disposition of test results.

2.6 Test Witness

The Test Engineer assigns the Test Witness. The Test Witness' duties include, but are not limited to, the following activities:

- Verifying the test procedure being used has been approved by the Authority.
- Ensuring all steps required by the test procedure are followed.

- Verifying all data collected is accurately and properly recorded on the test data sheets and in blue ink.
- Witnessing and attesting to the integrity of all recorded results.
- Signing and dating all completed data sheets.

The Test Witness completes a Test Witness Report (see Appendix C) immediately following testing and submits it to the Test Engineer within three (3) business days after each test activity completion. The Test Witness Report shall include the following:

- Contract number and project location.
- Test title and procedure number.
- Test date(s).
- Test participants (Contractor, Witness, and other personnel).
- Significant findings or recommendations.
- Test Witness' signature (an original signature is required, electronic signatures are not acceptable).

2.7 Contractor's Test Manager

The Contractor Project Manager shall designate a Test Manager and shall submit the name and qualification to the Authority for review and approval. The designated Test Manager's duties include, but are not limited to, the following activities:

- Creating and maintaining test status matrices throughout the life of the contract and making the matrices available to the Authority.
- Creating and submitting a contract specific test program plan, as appropriate.
- Creating and submitting applicable testing procedures.
- Coordinating all the contract testing activities with the COR and Test Engineer.
- Verifying all punchlist items which will prevent conducting a test have been resolved.
- Resolving any escalated test conflict.
- Preparing and submitting Test Activity Requests (see Appendix B).
- Assigning the Contractor's Test Representative.
- Submitting applicable test results package and reports.

2.7.1 Contractor's Test Representative (Tester)

The Contractor's Test Representative duties include, but are not limited to, the following activities:

- Conducting the test
- Receiving direction from the Test Manager to execute the test.
- Providing test briefings to support personnel
- Approving any changes to the test configuration and test procedures.
- Resolving test conflicts.
- Convening a test debriefing as soon as possible following the termination/ conclusion of a test.
- Assigning other Contractor's personnel to record data and complete checklists.

3 Test Support Personnel

Test support personnel performs the test steps per the Contractor's Test Representative directives by operating the test equipment (if any), all system equipment in the test configuration, and the required user interfaces. Test support personnel may be the Contractor personnel or subcontractor personnel whom have completed qualification training. [The Contractor personnel will have the necessary knowledge and experience to operate the test equipment and system equipment, and follow the test procedures.]

4 Contract Specific Test Plan

Some contracts require the Contractor to develop and submit for approval test plans. These Contractor-created test plans shall be subservient to, and compliant with, the MTPP. These test plans shall be submitted for review and approval in accordance to contractual requirements prior to the scheduled start of test activities. All Contract Specific Test Plans shall include at least the following:

- Plan scope and objective.
- List of applicable reference documents.
- List of abbreviations and definitions.
- Responsibilities of the Contractor personnel.
- A detailed list of the test procedures including identification name/ number/ type that will be created.
- Details of the record keeping process (assignments, procedures, forms).
- Procedures for monitoring, correcting, and retesting modifications, changes, and discrepancies.
- Procedures for controlling and documenting all changes made to the hardware and software after the start of testing.
- Test schedule showing all equipment/ systems to be tested and the expected duration of each test.

5 Testing Activities

Before the commencement of testing, all relevant documentation deliverables and other contractual requirements, including drawings, testing documents, lists of system hardware and software components, software functional documents, design documents, applicable user manuals, and pertinent inspections shall have been completed, submitted, reviewed, and approved by the Authority.

5.1 Preliminary Factory Testing/ Factory Acceptance Testing

In some instances, factory testing is conducted twice: (1) a Preliminary Factory Acceptance Test (Pre-FAT) conducted by the Contractor, with the Authority attendance at its option, and (2) a Factory Acceptance Test (FAT) with the Authority's witnesses in attendance to verify the successful operation. The Pre-FAT is conducted and submitted by the Contractor to the Authority for review and approval before scheduling the FAT. Failure to do this can result in the FAT being re-scheduled.

Preliminary Factory Testing (Pre FAT) and Factory Acceptance Testing (FAT) is conducted to determine that equipment operates according to requirements and covers all functional and technical requirements of the contract specifications. The equipment should be fully pretested by the Contractor before the witnessed FAT. The FAT must be witnessed by the Authority or designee unless the Authority waived the right. The FAT includes all equipment being supplied by the Contractor. The Contractor should provide an agenda/ schedule for the FAT showing timing and sequence of testing.

Test software, test equipment, hardware/software simulators, data generators (if any), etc. must have current certifications or calibrations.

5.1.1 Test Procedures

The Contractor or the equipment manufacturer develops and furnishes FAT procedures for all equipment and systems that require factory testing as indicated by the contract specifications. These procedures shall adhere to all technical criteria as listed in the contract specifications. Where required, the Contractor shall submit all FAT procedures to the Authority for review and approval not less than 30 business days prior to a scheduled factory testing activity.

Each procedure shall contain the following:

- Statement of test objective and scope.
- List of equipment required to set up and perform the test.
- List of required equipment and/or facilities.
- List of prerequisites (test authorization, installation complete, test equipment calibrated, pertinent drawings, preliminary tests, work by others, successful completion of prerequisite tests, etc.) that shall be completed before the test can be performed.
- Description of the required test setup, including diagrams illustrating test equipment connections and identifying test points, where applicable.
- Step-by-step instructions for performing the test, identifying the data points, action, and associated locations that are to be recorded, and the limits for acceptable data.
- Instructions for recording data on data sheets and/or verifying that procedure steps have been completed.
- Test data sheets for recording all test results as the test is performed. Test data sheets shall be arranged in tabular form, paginated, and used for recording:
 - Applicable drawing numbers.
 - Test equipment, tools, serial numbers, and calibration dates, where applicable.
 - Contract number, test procedure number (or other identifier), equipment or system tested, location of test, applicable environmental conditions, and date of test.
 - Names and signatures of individuals conducting and witnessing the test.
 - Entries for test data or verification of test items. Data entries shall refer to the applicable procedures (step-by-step instructions). Test parameters (allowable limits) for each entry shall be indicated on the data sheets.

5.1.2 Test Authorization/ Scheduling

A FAT Authorization/ Scheduling occur when all required product submittals and the FAT procedures have been reviewed and approved.

The Contractor shall request (in writing) a date in which the FAT will be performed. This date is subject to the approval of the Project Management and Test Engineer. If the Authority has elected to witness a FAT, it will notify the Contractor not less than 21 business days prior to the scheduled test. Test Witnesses will be assigned. If applicable per the contract specifications, the Contractor shall provide transportation and lodging to the FAT location as needed.

5.1.3 Test Performance

After the QA Representative conducts the factory inspection of the product against applicable documents, the Contractor shall perform all FATs. The Contractor has the responsibility of ensuring that all data and test results are acceptable, and all discrepant items noted during the test activity are resolved prior to the approval of the test results.

All test activities shall be performed in accordance with the approved test procedures.

The Contractor shall furnish all test equipment as required by the test procedure. All test equipment shall be in good mechanical and electrical condition.

The Contractor shall be responsible for ensuring that all applicable test instruments are properly calibrated. Calibration labels (dated within the past twelve months unless otherwise specified) shall be visible on all applicable test equipment. Evidence of proper calibration shall be made available upon request and shall be acceptable to the Test Witness.

The Contractor shall note the software and firmware versions in the equipment being tested.

The Test Witness will be present for all test activities and serves as liaison between the Contractor and the Authority for all test activity related items.

The Contractor shall prepare a Test Discrepancy List and System Problem Report (SPR) if required. If there are no discrepancies, the list shall so indicate and be submitted with the test package.

5.1.4 Test Results Submittal, Review, and Approval

The Contractor is responsible for the preparation and submittal of test reports to the acquiring Authority approval. The Contractor shall review the test results for completeness and compliance, and shall submit the following to the COR no later than three (3) business days after completion of the test activity, unless otherwise specified by the Contract. Formal test reports are prepared for each functional element or system test. Besides approved test procedures, when applicable, raw data, measured results, calculations, and all data derived from tests shall be included as part of test report and cross referenced in an easily understood manner. As a minimum, the Test Report shall include the following information:

- Identify the test being reported by test title and unique test identification number.
- A listing of test witnesses and observers present.
- An Executive Summary which briefly summarizes the testing activities including time periods; if the objectives and criteria have or have not be met; observed discrepancies, failures and non-conformities; and incomplete items or items not available for inspection or FAT.
- Approved test procedure, marked up if changes were made.
- Completed test datasheets with data recorded during the test, signed and dated by the Contractor and the Test Witness in blue ink (electronic signatures are not acceptable). Note that data from tests not witnessed by the Authority shall have the Contractor Representative's signature only.
- Test Discrepancy List.
- Copies of any SPRs generated.
- Any other pertinent documentation.

Test results shall be submitted to the Authority for approval within the specified timeframe after the completion of each test. The test results submittal is reviewed by the assigned Test Engineer and personnel from all applicable disciplines. No equipment shall be released for shipment until test data is approved by the Authority.

The submittal is returned to the COR indicating the recommended disposition of the completed test activity. Subsequently, the COR with the assigned Test Engineer assistance, accepts or rejects the recommendation and notifies the Contractor.

5.1.5 Other Test Types

The test types defined below shall be administered per the requirements in section 4.1 – Factory Acceptance Testing unless indicated otherwise in the contract specifications.

First Article Testing

First Article Testing is the assessment of a product to determine if it meets contract requirements. This test is performed on products which are being procured by the Authority for the first time, the products have been updated/ reengineered from the previously version procured, or there have been subsequent changes in the products processes or specifications. The Contractor must submit test records and test report which demonstrates the products conformance to technical specifications.

The Contractor must also perform an internal First Article Test and submit the results to the Authority for review before scheduling a First Article Test to be witnessed by the Authority.

Prototype Testing

Prototype Testing is performed on a model to test the validity of the Contractor's design per contract specifications. It is typically performed when the Contractor is required to design a system for the Authority. Testing also helps identify potential faults, which in turn allow the Contractor to make improvements and the Authority to agree on changes and improvements. Within 30 working days after the test period has concluded, the Contractor shall submit a full and relevant detailed written evaluation/ assessment to the Authority for review and evaluation.

Demonstration Testing

Demonstration Testing is performed on products that the Authority is interested in using to determine whether products are operationally effective and suitable for intended use. The product, which is installed on the existing bus and rail system, is monitored and evaluated over a specified period of time. The Contractor submits the test results and product/ system evaluation to the Authority for review and approval.

Qualification Testing

Qualification Testing is performed to verify the design and manufacturing process that a product may need to undergo before being deemed safe and acceptable to be used in the Authority's unique bus and rail transit system environment. The qualification testing is conducted at the unit, subsystem, and system level and is completed before the production begins.

The Contractor shall provide the test facility or at a testing laboratory, which is suitable for all specified qualification tests and shall submit all testing standards and procedures for approval by the Authority prior to proceeding with any of the tests. The Contractor shall notify the Authority in writing of all qualification test dates not less than 14 business days prior to all tests.

The narrative test reports for all qualification tests shall include the raw data as recorded during each test. The Contractor submits testing results to the Authority for review and approval.

Production Testing

Production testing occurs at the manufacturer's facility while products are being manufactured. When 20-25% of batches or lots assigned (being manufactured for the Authority) is completed, randomly selected units are examined and tested for possible defects or any deviations from requirements. If any defects or deviations are found, the Contractor and manufacturer must take corrective measures and re-check the product. The Contractor submits the test results to the Authority for review and approval.

5.2 Field Testing/ Installation Testing

Field or Installation testing shall be performed by the Contractor to demonstrate to the Authority that the installed systems are fully functional and meets the contract specifications. Test software, test equipment, data generators (if any), etc. must have current certifications and calibrations.

When Pre Acceptance Testing (to verify that the system functions per the designed requirements and faults/ failures are corrected) is performed before Field or Installation Acceptance Testing is scheduled, the same criteria for Field or Installation Acceptance Testing, as listed below, must be met.

5.2.1 Test Procedures

Unless otherwise specified in the contract documents, the Test Engineer develops and furnishes contract specific test procedures for the testing in all specification sections that reference the MARTA Testing Program Plan. These procedures include, but are not limited to, site-specific tests for Grounding, Electrical, Communications, Access Control, Security, HVAC, Traction Power, Elevators and Escalators, and other similar equipment and systems which are part of the Authority contracting actions.

Test procedures for certain specific and specialized equipment/ system, as defined by contract documents, shall be developed by the Contractor or the equipment manufacturer and submitted to the Authority for review and approval by the Contractor. Contractor-provided tests, however, must conform to all content and formatting requirements of Authority-provided test procedures. Each procedure shall contain the following:

- Statement of test objective and scope.
- List of equipment required to set up and perform the test.
- List of required equipment and/or facilities available only from the Authority.
- List of prerequisites (test authorization, installation complete, test equipment calibrated, pertinent drawings, preliminary tests, work by others, successful completion of prerequisite tests, etc.) which shall be completed before the test can be performed.
- Description of the required test setup, including diagrams illustrating test equipment connections and identifying test points, where applicable.
- Step-by-step instructions for performing the test, identifying the data points, action, and associated locations that are to be recorded, and the limits for acceptable data.
- Instructions for recording data on data sheets and/or verifying that procedure steps have been completed.
- Test data sheets for recording all test results as the test is performed. Test data sheets shall be arranged in tabular form, paginated, and used for recording:
 - Applicable drawing numbers.
 - Test equipment, tools, serial numbers, and calibration dates, where applicable.
 - Contract number, test procedure number (or other identifier), equipment or system tested, location of test, applicable environmental conditions, and date of test.
 - Area for names and signatures of individuals conducting and witnessing the test.
 - Area for entering test data or verification of test items. Data entries shall refer to the applicable procedures (step-by-step instructions). Test parameters (allowable limits) for each entry shall be indicated on the data sheets.

5.2.2 Test Authorization and Scheduling

Test planning and schedules must allow for test procedure review, correction and subsequent approval, re-testing after test failures, and rescheduling for unforeseen events. The scheduling of a test activity is a joint effort of the Contractor, the COR, and the Test Engineer. The following prerequisites shall be completed before a test activity is scheduled:

- The test procedure must have been submitted by the Contractor and reviewed and approved by the Authority
- The QA Representative has verified through Installation Verification inspection(s) that all systems and/or equipment are in compliance with contract requirements.
- A Test Activity Request has been forwarded to the Test Engineer via the COR.
- The Test Engineer has confirmed that the request date is acceptable.
- A Test Witness has been assigned.

5.2.2.1 Test Activity Request

The Test Activity Request is submitted by the Contractor to the COR by noon on Wednesdays to be included in the following week's test schedule. The Test Activity Request shall include the following information:

- The test number to be performed.
- The contract number and location of the test.
- The requested date and time.
- Whether the test is a complete or partial test.
- The Contractor's test personnel.
- Any special requirements.

If the test is to be conducted in multiple parts, a separate request shall be required for each part. The Test Engineer, with input from the COR, will determine when a partial test is appropriate. The COR indicates on the Test Activity Request when the last in a series of partial tests is requested and the number of partial tests that make up the complete test.

The COR completes the report (electronic signature is acceptable), and indicates any punchlist items, in accordance with applicable contractual requirements, need to be resolved prior to starting the test. The COR then forwards the Test Activity Request to the Test Engineer once all punchlist items are resolved.

The Test Engineer reviews the completed Test Activity Request. If all is acceptable and prerequisites met, the Test Engineer authorizes the test by scheduling the test activity. The Test Engineer notifies the COR of the scheduling disposition of the test activity. The COR notifies the Contractor.

5.2.2.2 Test Activity Schedule

The Test Engineer notifies other affected branches or offices of a scheduled test activity and issues a weekly Test Activity Schedule as applicable. If other personnel desire to observe a test activity, arrangements must be made with the COR.

The Test Activity Schedule identifies or indicates the following:

- Authorized test procedure.
- Contract for which the test is to be performed.
- Test Witness.
- Scheduled test activity date and time.
- Special instructions or deviations affecting the test activity.

5.2.3 Test Performance

The Contractor shall perform or support, as applicable, all test activities relating to this Plan. The Contractor has the responsibility of ensuring that all data and test results are acceptable, and all discrepant items noted during the test activity are resolved prior to the approval of the test results.

All test activities shall be performed in accordance with the approved test procedures.

The Contractor shall furnish all test equipment as required by the test procedure. All test equipment shall be in good mechanical and electrical condition.

The Contractor shall be responsible for ensuring that all applicable test instruments are properly calibrated and documented in the test records. Calibration labels (dated within the past twelve

months unless otherwise specified) shall be visible on all applicable test equipment. Evidence of proper calibration shall be made available upon request and shall be acceptable to the Test Witness.

The Test Witness shall be present for all test activities and serves as liaison between the Contractor and the Authority for all test activity related items.

The Contractor shall prepare a Test Discrepancy List. If there are no discrepancies, the list shall so indicate and be submitted with the test package.

5.2.4 Test Results Package Submittal, Review, and Approval

The Contractor shall maintain complete records of all test results. The Contractor shall review the test results for completeness and compliance, and shall submit the following to the COR no later than three (3) business days after completion of the test activity, unless otherwise specified by the Contract. The Test Results Package shall include the following information:

- Approved Test Procedure.
- Completed Test Data Sheets, signed and dated by the Contractor and the Test Witness (electronic signatures are not acceptable).
- Test Discrepancy List.
- Any other pertinent documentation.

The COR submits the complete package to the Test Engineer for review and recommendation and assists the Test Engineer in resolving all comments and discrepancies.

After review has been completed and all comments are resolved, the Test Engineer returns the Test Results Package and the Test Witness Report to the COR indicating the recommended disposition of the completed test activity. Subsequently, the COR accepts or rejects the recommendation and notifies the Contractor.

5.2.5 Other Test Types

The test types defined below shall be administered per the requirements in section 5.2 – Field Testing/ Installation Testing unless indicated otherwise in the contract specifications.

System Testing

System testing is the phase of testing performed after field testing of individual equipment has been completed. Testing is conducted on a complete, integrated system to evaluate the system's compliance with the contract specifications. System testing verifies that a system has been properly installed at all applicable facilities and to demonstrate that it satisfies all performance, reliability, and functional requirements while communicating with a full complement of devices under actual service conditions.

Integration Testing

Integration testing verifies functional, performance, and reliability requirements when the individual equipment are connected together with other subsystems/ systems. The responsibility for the development of test plans and procedures, conduct the integration test(s), test records, test initiation, and test completion rest with the Contractor. However, the Authority will witness all tests and may perform some of the hands-on actions of the test.

Availability/ Reliability Testing

Availability/ Reliability testing is performed to measure determine whether the installed systems meets the availability parameters specified in the contract. Testing occurs for a planned period of

time, collecting failure events and repair times, and measuring and comparing the availability percentage to the original contractual requirements as well as finding defects, reducing the number of failures, and taking corrective action.

The Contractor shall provide a Test Report which tracks the status of all availability criteria items and any failures. The report shall be submitted to the Authority for review and approval.

After the elapse of the cumulative test time, test records will be examined to determine conformance with availability criteria. If test objectives have not been met and no major changes are required that would make it necessary to discontinue the test, the test shall continue until the specified availability is achieved.

5.3 Special Testing

Special testing shall be performed by the Contractor to demonstrate to the Authority fixes or newly added features have not created any problem and the system is fully functional and meets the contract specifications.

Unstructured Testing

Unstructured Testing complements factory or field testing and is performed without planned activities or written procedure steps. It is performed with improvisation and seeks to detect unspecified issues without detailed steps and a clear expected result. The results are documented as part of the applicable test.

Regression Testing

Additional testing is required whenever new components and/or subsystems are incorporated into the existing system. These tests are necessary to assure that the added components comply with the procurement, installation, and functional specification requirements

Regression Testing is also used to check the product's integrity or detect unexpected faults which occurs during functional testing when modifications are made to a product or the product is used in a new environment.

Regression testing should be used to verify a product's behavior or functionality work correctly as modifications or new environment(s) is added. During regression testing, current outcomes are compared to previously-recorded outcomes and the expected outcomes. Regression testing is performed until the product returns the expected result.

Regression testing shall be documented and submitted to the Authority for review and approval.

5.4 Other Methods Used to Conduct Testing

Certificate of Compliance

Certificate of Compliance is a means of verifying compliance for items that are standard products or certificates for the materials and components provided. Signed certificates from manufacturers state that the purchased items meet procurement specifications, standards, and other requirements as defined in the technical requirements. Records of tests performed to verify specifications are retained by the manufacturer as evidence that the requirements were met and are made available by the manufacturer for the Authority review.

Demonstration

Demonstration is the functional verification that a specification requirement is met by observing the qualitative results of an operation or exercise performed under specific condition. This includes content and accuracy of displays, comparison of system outputs with independently derived test cases, and system recovery from induced failure conditions.

6 Problems Occurring During Testing

A test discrepancy and System Problem Report (SPR), if applicable, are written for hardware and/ or software that malfunction or fail during testing. To continue testing, the Contractor Test Representative should attempt to restore functionality. The Software lead/ developer may also make a determination whether or not to attempt a retry of the software function. No software corrections may be made during the test.

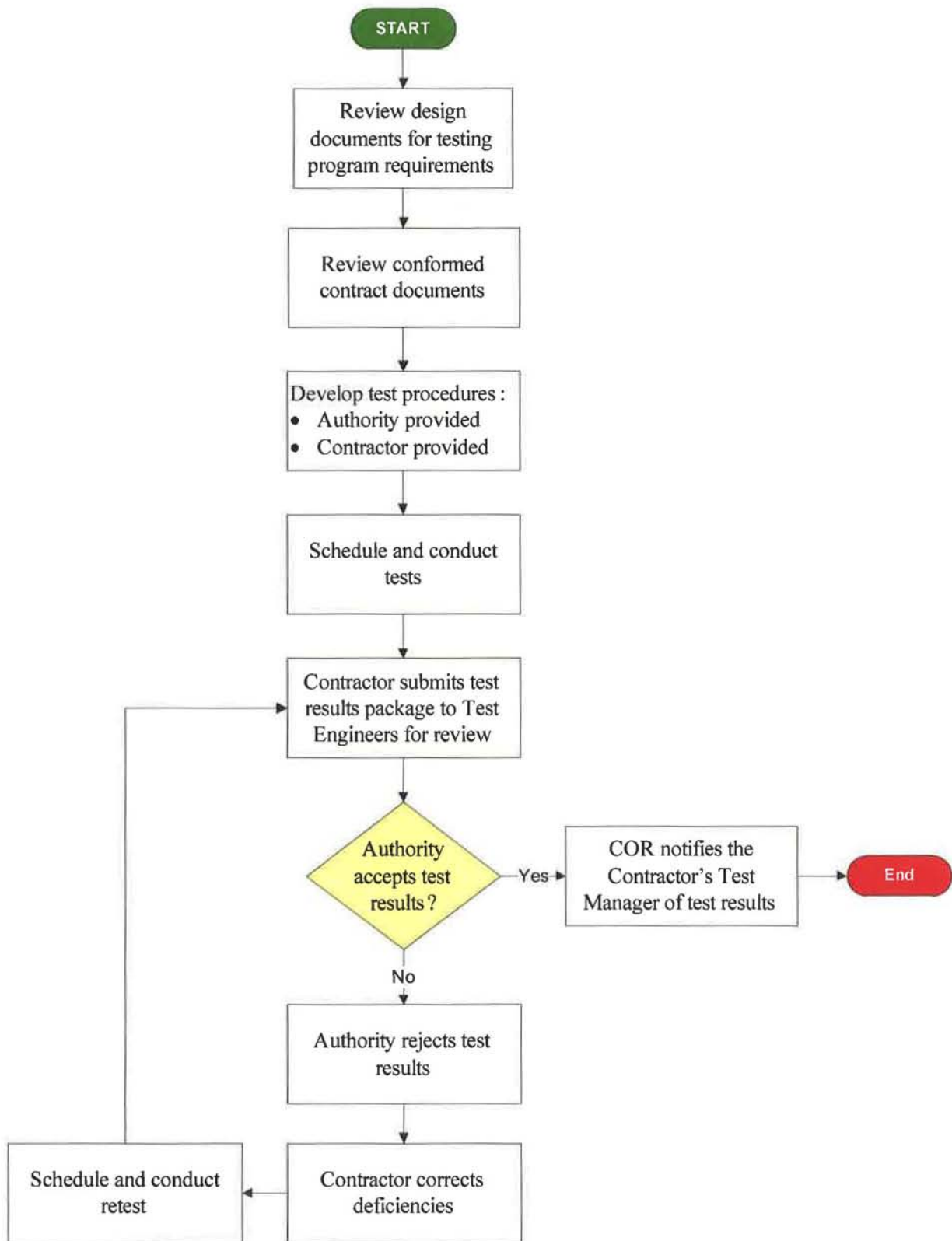
Data problems may be corrected if necessary with the Authority approval to continue the test and meet the test objectives, only if and where redlined provisions are made to edit, or update the test procedure. Noted changes to the test procedure must be submitted to the Authority for formal approval.

No software changes, data or code, should be made during the test using software-debugging tools.

7 Test Suspension

If the Authority believes, at any time, that the quantity or severity of discrepancies or deficiencies warrants suspension of any or all testing, testing shall be halted, remedial work shall be performed, and the complete test shall be repeated at the Contractor's sole expense. The repeat of the test shall be scheduled for a date and time agreed upon by both the Contractor and the Authority.

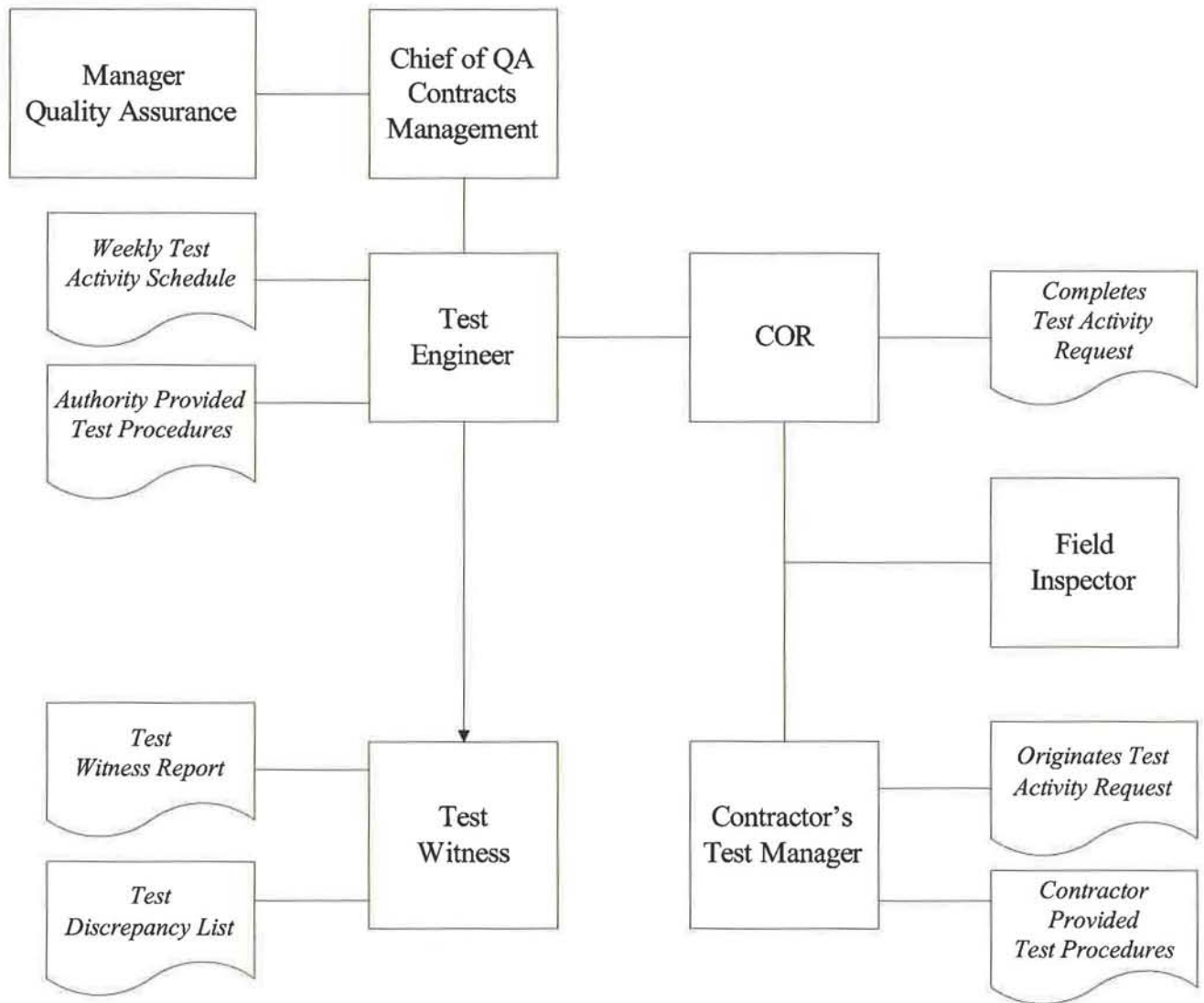
8 Process Flow Chart



9 APPENDICES

- A. MTPP Organization and Documentation Responsibility Chart
- B. Test Activity Request Form
- C. Test Witness Report Form
- D. Test Discrepancy List Form
- E. Weekly Test Activity Schedule

Appendix A – MTPP Organization and Documentation Responsibility Chart



Appendix B – Test Activity Request



TEST ACTIVITY REQUEST		DATE:	
Project Number/ Name			
Test Procedure Number/ Name			
Test Location/ Equipment To Be Tested			
Requested Date/Time		Complete or Partial Test / Number	
Contractor's Company Name		Contractor's Test Representative	
Accepted IV Date/ Time		Authority QA IV Representative	
Any Outstanding Issues:			
Is remote monitoring functioning (i.e. RSCC/PCC/SCADA)?		<input type="checkbox"/> YES (check)	<input type="checkbox"/> NO (check)
Is the system completely interfaced with the MARTA infrastructure/equipment and properly functioning?		<input type="checkbox"/> YES (check)	<input type="checkbox"/> NO (check)
Are all devices in normal operating mode?		<input type="checkbox"/> YES (check)	<input type="checkbox"/> NO (check)
Special Requirements/ Additional Comments:			
<p><i>We attest that all prerequisites and/or items relating to this test have been verified to be complete and in compliance with all requirements of the Contract.</i></p>			
<hr style="border: none; border-top: 1px solid black;"/> Contractor's Test Manager <i>(Signature)</i>		<hr style="border: none; border-top: 1px solid black;"/> Contracting Officer's Representative <i>(Signature)</i>	

